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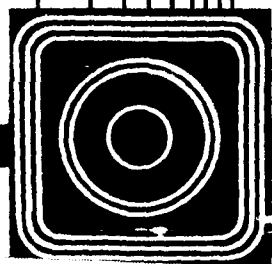
# **ELECTROSTATIC DISCHARGE SUSCEPTIBILITY DATA**

## **Volume I**

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Ordering No. VZAP-2

# **ELECTROSTATIC DISCHARGE SUSCEPTIBILITY DATA OF MICROCIRCUIT DEVICES**



**Volume I  
1989**

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Reliability Analysis Center

Under contract to:

Rome Air Development Center  
Griffis AFB, NY 13441-5700

Accession For:	
NTIS CRA&I	<input checked="" type="checkbox"/>
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Availability Codes	
Dist	Avail and/or Special
A-1	24

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## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited. Available from RAC or <del>DEF</del> NTIS Microfiche only available from DTIC.	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		4. PERFORMING ORGANIZATION REPORT NUMBER(S) VZAP-2	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) VZAP-2		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION Reliability Analysis Ctr.	6b. OFFICE SYMBOL (if applicable)	7a. NAME OF MONITORING ORGANIZATION RADC/RBE	
6c. ADDRESS (City, State, and ZIP Code) PO Box 4700 Rome, NY 13440-8200		7b. ADDRESS (City, State, and ZIP Code) Griffiss AFB, NY 13441-5700	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION DLA/DTIC	8b. OFFICE SYMBOL (if applicable) DTIC/DF	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER F30602-87-C-0228	
8c. ADDRESS (City, State, and ZIP Code) DTIC Cameron Station Alexandria, VA 22314-6145		10. SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO. 65802S	TASK NO. 1.0
		PROJECT NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Electrostatic Discharge Susceptibility Data			
12. PERSONAL AUTHOR(S) William H. Crowell			
13a. TYPE OF REPORT	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 1989, March 13	15. PAGE COUNT
16. SUPPLEMENTARY NOTATION Hard copies available from Reliability Analysis Center, PO Box 4700, Rome, NY 13440-8200 (Price: \$125) DTIC will provide microfiche copies at standard microfiche price. DTIC source code:			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	Electrostatic Discharge (ESD)	
		Electrostatic Discharge Sensitive (ESDS)	
		Integrated Circuits; Discrete Semiconductor	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This publication contains Electrostatic Discharge (ESD) susceptibility data of electronic devices and is an update to the VZAP-1, the 1983 RAC ESD data compendium. Detailed susceptibility data is presented along with the ESD classification in accordance with MIL-HDBK-263 and MIL-STD-1686A for approximately 4,300 devices. This data is useful in the establishment of an ESD control program. The data contained in this publication is a product of the Reliability Analysis Center's VZAP data base, which is intended to be a central repository of ESD Susceptibility Data.			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION	
22a. NAME OF RESPONSIBLE INDIVIDUAL Steven J. Flint, RAC Technical Director		22b. TELEPHONE (Include Area Code) (315) 337-0900	22c. OFFICE SYMBOL



## PREFACE

The purpose of this document is to make available electrostatic discharge (ESD) susceptibility test and classification data. This data is much needed by industry and government equipment designers to enable them to assess their equipments' vulnerability to the ESD threat, to assist in the establishment of ESD control programs, and to comply with such requirements as MIL-STD-1686A, "Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts Assemblies and Equipment (Excluding Electrically Initiated Explosives Devices)."

This document was prepared as part of the Reliability Analysis Center's efforts to provide its user community with new and needed information in the field of electronic device reliability.

Contributing to this effort were William Denson, David Mahar, John Puleo and Shawn Gentile.





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**SECTION 1.0**

**INTRODUCTION**



## 1.0 INTRODUCTION

This databook makes available ESD susceptibility test data that the RAC has collected from a variety of sources over the past few years on integrated circuits, discrete semiconductors and resistors.

The introductory material of this publication is not intended to provide a tutorial on ESD testing or the physics of ESD failures, but rather to provide enough information to allow the user of this document to effectively interpret the presented data. This information will also give the user some insight into the usefulness and limitations of the data.

### 1.1 BACKGROUND

When VZAP-1 was published in 1983, ESD was a relatively immature field with a serious lack of standardization, especially in the area of ESD susceptibility testing. Much of the VZAP-1 data was taken with non-standard ESD simulator circuits that deviated from the use of a 100 pF, 1500 ohm discharge model. Additionally, it was discovered subsequent to VZAP-1 that many of these simulators, either commercially available or built in-house, have low degrees of repeatability, due to many uncontrolled variables. Although many of the reasons for this nonrepeatability have been studied, understood, and corrected, there potentially still exists sources for large degrees of variation in the test results. A discussion of typical variability that exist in test results is given in Section 1.5

VZAP-2 is intended to be an update to VZAP-1, and presents more data of higher quality. These improvements are possible because much has been learned in the field of electrostatic discharge since VZAP-1 was issued.

### 1.2 USE OF THIS DATA

MIL-STD-1686A covers the requirements for the establishment and implementation of an ESD control program, including identification of ESD Sensitive (ESDS) parts, assemblies, and equipments. Any organization that designs, tests, inspects, services, manufacturers, processes, assembles, installs, packages, labels, or otherwise handles electronic parts, assemblies, and equipment susceptible to ESD damage should consider implementation of an ESD control program.

The first consideration in establishing an ESD control program in a specific application is the identification of the susceptibility levels of the specific parts being used. This is true whether the program is being implemented as a result of MIL-STD-1686A or not. Based on this information, an effective program can then be designed and implemented without expensive overkill.

MIL-STD-1686A, Paragraph 5.2 states, "The contractor shall identify each ESD Sensitive (ESDS) part, assembly, and equipment applicable to the contract as Class 1 or 2." In some cases Class 3 parts must also be identified. Paragraph 5.2.1.1 further states "ESD sensitivity classification for parts shall be determined as follows:

- (a) ESD sensitivity as specified in the applicable part specification, or
- (b) ESD sensitivity in accordance with Appendix A test data contained in the Reliability Analysis Center (RAC) ESD Sensitive Items List (ESDSIL), or
- (c) Classified in accordance with Appendix B, or,
- (d) When specified, or at the option of the contractor, determine sensitivity by test (See Appendix A). ESD sensitivity test data reporting shall be in accordance with the data ordering document included in the contract or order (See 6.2)."

The data contained in this databook is essentially a compilation of ESD test data taken from a wide variety of sources. The ESDSIL database referred to in item (b) above is entitled the "Electrostatic Discharge Sensitive Items List." The intent of the ESDSIL database is to be a central repository of data taken as a result of the requirements of MIL-STD-1686A and Data Item Description (DID-RELI-80670). The classification test procedure of MIL-STD-1686A, Appendix A, requires the use of the test circuit of MIL-STD-883, Method 3015. At the time MIL-STD-1686A was issued the MIL-STD-883 test method in effect was Method 3015.6. Since there is no data in this publication which resulted from testing as required by Method 3015.6 or later, the data contained herein does not fulfill the requirements of (b) above.

However, the data in this publication is more desirable than the use of (c) above which generically classifies components based on part type. Since 3015.6 was the first MIL-STD-883 ESD test method to ensure reasonable confidence in test waveform characteristics, it is the most desirable test data available. The data types, in order of preference, can be summarized as follows:



- 1) MIL-STD-883, Method 3015.6 or later
- 2) MIL-STD-883, Method 3015.5 or earlier, or other 100pF, 1500 ohm Human Body Model (HBM) tests, such as DOD-STD-1686
- 3) Non 100pF, 1500 ohm HBM tests converted to an ESD susceptibility level consistent with the 100 pF, 1500 ohm model
- 4) Electromagnetic Pulse (EMP) data converted to an ESD susceptibility level.

The data contained in this document are from items 2, 3 and 4. This is also the order of preference which was used in determining the ESD classification of each part listed.

A more detailed description of the test method used for each data entry is given in the remarks field of Section 3 and also in Section 5 (Volume II) of this document.

Before the updates of DOD-STD-1686 to MIL-STD-1686A and MIL-STD-883 Method 3015.5 to 3015.6, there were inconsistencies between DOD-STD-1686 and the MIL-STD-883 method of reporting ESD test results. Specifically, the voltage susceptibility ranges were different, making it impossible to cross-correlate test data. Both MIL-STD-1686A and MIL-STD-883, Method 3015.6 have been coordinated, thereby making data taken from either useable for either purpose. In fact MIL-STD-1686A invokes the procedure of MIL-STD-883 Method 3015.6. The classification ranges in these documents are as follows:

Class 1	0-1999
Class 2	2000-3999
Class 3	4000-15999

This is the classification scheme that is used in this publication. In addition to these, RAC has defined Class N to mean devices susceptible to levels above 15999 volts.

Since much of the data in this publication was obtained from tests performed not in accordance with MIL-STD-1686A or MIL-STD-883, classification in accordance with these standards becomes difficult. For example, if testing was performed that yielded devices passing a test at 1000 volts but failing the test at 3000, although it is known that the susceptibility level is 1000-3000 volts, the MIL-STD-1686A classification cannot be precisely determined. In this example it is not known whether the device is Class 1 or 2. The classification criteria used in this publication was to use the lowest failure voltage or the highest voltage at which the device passed if

no failure data existed. For example, if a device was observed to fail when tested at 2000 volts only, it was classified as Class 1 since the actual threshold voltage is between 1 and 2000 volts.

As stated previously, all data present in this document was not taken from specific test methods, such as method 3015 of MIL-STD-883 but rather from a variety of test methods. Contained in this document are the results of tests done in accordance with MIL-STD-883, test method 3015; tests similar to MIL-STD-883 Method 3015 but not strictly in accordance with it; tests using nonstandard simulation models and methods; and EMP data that was converted to reflect ESD susceptibility levels. The EMP data was only used for classification purposes in the cases in which there was no other empirical ESD susceptibility data. The methodology used to convert EMP data to ESD susceptibility levels is given in Section 1.5.

*In future revisions to this publication, it will be interesting to note the differences in ESD susceptibility data between Method 3015.6 and earlier versions in which the waveform was not tightly controlled. However, in general data taken from circuits in which the high frequency (i.e. > 100 MHz) performance has not been characterized will lower failure thresholds. This potential exists due to the fact that there can exist high frequency, high amplitude oscillations in some circuits which yield higher stressing amplitudes than that of the ideal RC discharge waveform.*

Additionally, there is a limited amount of Charged Device Model (CDM) test results. Even though CDM tests are not yet incorporated into the ESD testing standards, there has been some data included which were taken using this model. Although the device classification schemes are only applicable for the HBM, the CDM data that was available is included for completeness, considering that conventional classifications with CDM data cannot be done.

Individuals or firms testing devices for ESD susceptibility are encouraged to submit the resulting data to the Reliability Analysis Center for inclusion into the database. If desired, the source of data will be held proprietary by RAC. This data does not need to be taken in accordance with the MIL-STD-883 test method, but can be any empirical ESD susceptibility data. A recommended format for this data is given in Appendix B (Volume II). Also given in Appendix B, for information purposes only, is the Data Item Description (DID) DI-RELI-80670 called out in MIL-STD-1686A for submission of ESD sensitivity data.

### 1.3 INTERPRETATION OF DATA

The data contained herein is intended to present the results of empirical tests performed. Ideally, in addition to voltage susceptibility levels, one would like to know specific failure mechanisms that caused the device to fail. While manufacturers typically know the manner in which their part will fail when exposed to an ESD transient, this data is not normally available to outside organizations. Therefore, the specific failure mechanisms are not known. What is usually known is the failure mode (that is, the measurable effect of damage), since in any ESD test there must be a means of detecting failure. Examples of typical failure modes (or failure criteria) included excessive input leakage, input stuck high, functional failure, etc.

The failure criterion used in establishing an ESD failure is critical to the outcome of the testing. This may be illustrated by the use of two examples. In the first example, let us assume that the failure criterion for a bipolar device is defined as a certain percentage change in leakage current. This may be a difficult failure criterion to implement, because the relationship of leakage current versus stress voltage itself is not well-defined. In the second example, let us assume that the leakage current specification limits are used as the failure criterion for the same parts. The device which we are testing is relatively tolerant to ESD and remains within the specification limits when stressed with a pulse well below the damage threshold. Nevertheless, there is a measurable change in the leakage current, i.e., the device has been degraded; however, it does not exceed the specification until it is subsequently pulsed with a much higher energy pulse. Since we know that some degradation has occurred, we can measure the degradation, but, because of the failure criterion, the device is not considered susceptible to ESD damage at the lower level. For this reason, the criterion used to detect device failure must also be selected in accordance with the device operating characteristics and the manner in which the device is designed into a circuit; that is, if a certain circuit configuration can tolerate a parameter shift or even an out-of-specification condition of this component. Since it is impractical to require unique failure criteria based on the manner in which the part is used in the circuit, MIL-STD-883, Method 3015.6 states the devices shall be tested for failure following stressing by performing room temperature DC parametric and functional tests. Performing both parametric and functional tests should identify any degradation or failure of the device.

It is also recognized that failure modes and mechanisms are highly dependent on the simulation circuit used to stress the device. There are various circuits being used in industry to simulate different ESD scenarios. The most standard of these is the Human Body Model, in which a charged capacitance is discharged through a resistor to the device under test. This Human Body

Model is the most commonly used simulation model and is specified in MIL-STD-1686A and MIL-STD-883 Method 3015. The resistance and capacitance values specified in these standards are 100 pF and 1500 ohms, respectively. Other values are often used and some data in this publication use these values. The values used are listed in the detailed data (Section 3.0). It should be noted that devices can exhibit different susceptibility characteristics depending on the values used. Since there is a need to classify devices in a consistent manner, the RAC derived a conversion method for data that was taken using a Human Body Model with resistance and capacitance values other than 100 pF, 1500 ohms.

Using semi-empirical methods, the RAC has established the following formula for the conversion:

$$V_1 = V_2 (3.87) \sqrt{\frac{C_2}{R_2}}$$

where:

- $V_1$  = standard human body model damage threshold
- $R_2$  = nonstandard value of resistance used (in ohms)
- $C_2$  = nonstandard value of capacitance used (in pF)
- $V_2$  = measured damage threshold using  $C_2$  and  $R_2$

The derivation of this equation may be found in Appendix A.

This method is only used so that a classification in accordance with the susceptibility levels of MIL-STD-1686A can be made. The data in Section 3.0 presents both the classification of each part and the data as it was obtained, i.e., the failure voltages of the actual model used during testing.

Other ESD simulation models sometimes used are the charged device model and the machine model. The charged device model simulates the situation in which a device, after being charged, contacts a conductive object, thereby causing a high amplitude, short duration discharge pulse. The machine model simulates a situation in which a device is contacted with a charged capacitance through a very low resistance. This model is intended to simulate a conductive object, like parts of a machine, that contact the device.

The purpose of this book is not to provide background on the physics of ESD failures, as this has been done extensively in the literature, but rather to present the data collected by RAC and give the reader enough information so that the limitations of the data are fully understood. If

further information is required, DOD-HDBK-263, "Electrostatic Discharge Control Handbook for the Protection of Electrical and Electronic Parts, Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices)" and the proceedings of the Annual EOS/ESD Symposium provide much information on all aspects of ESD.

#### 1.4 CONVERSION OF EMP OVERSTRESS TEST DATA TO THE ESD HUMAN BODY MODEL

A vast amount of electrical overstress data has been compiled from Electromagnetic Pulse (EMP) studies. It would be negligent to disregard this potential data source. By knowing certain parameters of a device, a theoretical ESD failure can be calculated using the Wunsch-Bell model (Reference 28) as the starting point. The following equation has been established to convert EMP overstress data to the ESD human body model equivalent:

$$V = \left[ \frac{-2V_D + \sqrt{4V_D^2 + 1200 K_1 (7.675 \times 10^{-7})^{-K_2}}}{60} \right] 1530 + V_D$$

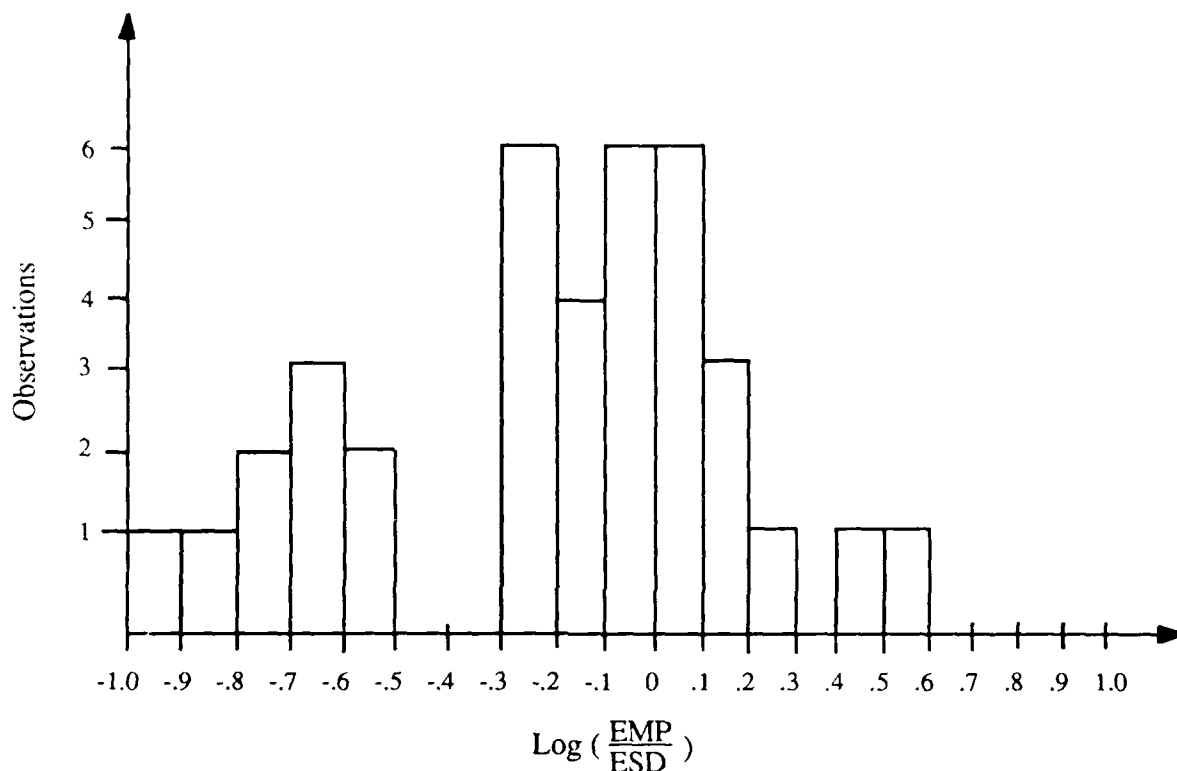
where:

- V = ESD threshold voltage
- $V_D$  = measured overstress breakdown voltage
- $K_1$  = failure constant 1
- $K_2$  = failure constant 2

The derivation of this equation may be found in Appendix A (Volume II).

To further verify the validity of the calculated ESD levels presented in this book, data was compared for specific devices which had both empirical ESD threshold data and ESD threshold levels calculated from EMP data. The log of the ratio of ESD to EMP failure voltages was plotted such that a given percentage of discrepancy (i.e., if the EMP level was the same percentage higher or lower than the ESD level) would be equidistant from the 0 line. Figure 1 is a histogram illustrating the relationship between the  $\log \left( \frac{EMP}{ESD} \right)$  and frequency of occurrence. If the datapoints were randomly distributed about the 0 line and the data did not show a shift in distribution against any parameter, it could be concluded that the failure levels obtained from EMP data were a fairly good indication of the actual susceptibility levels of the devices (not taking into account random

variations and noise in the data for any given device). Analysis of this data however, indicated that the  $\log\left(\frac{\text{EMP}}{\text{ESD}}\right)$  datapoints were not randomly distributed but rather correlated to the susceptibility level. This indicates that the conversion algorithm is not perfectly accurate.



**FIGURE 1: EMP VS. ESD DATA**

Based on this information it should be emphasized that the ESD susceptibility levels obtained from EMP data are necessarily only approximate values. It can be seen from Figure 1 that the EMP to ESD levels can differ by as much as a factor of 10. There are various sources of error in converting EMP data to ESD data. Two of these error sources are the uncertainty in the damage constants and the uncertainty in the device parameters (bulk resistance and breakdown voltage). These uncertainties can stem from normal lot to lot variations and differences among manufacturers. Additionally, it is known that damage from EMP test pulses may manifest itself as different failure mechanisms than damage from an ESD pulse. This is due to the fact that an ESD pulse may be a shorter duration, higher current pulse relative to an EMP event. These variations can easily cause a factor of 10 difference in the susceptibility levels. For this reason, EMP data is used in this publication for classification purposes only in those cases where ESD data

is not available. The EMP data is identified as such in the remarks field (field no. 18) of the detailed data section.

### 1.5 VARIABILITY ASSOCIATED WITH CONVENTIONAL TEST METHODS

Since ESD testing began, it has been recognized that there was a certain degree of variability in test results due to the test apparatus itself. These variations were attributed to:

- Arcing of the high voltage switching relay.
- Errors in calibration of the test voltages.
- Leakage of the capacitor.
- Parasitic inductances and capacitances.
- Inconsistencies in the criteria used to detect failure.
- Incomplete characterization of worst case pin combinations.

Conventional ESD simulators probably effectively simulate a real ESD event from a charged person or object, since a real ESD would have many of the parasitic R, L, and C values similar to that of the simulator (Reference 8). The problem is, however, that the discharge waveform produced is uncontrolled and cannot be used to obtain repeatable results.

To illustrate the repeatability of tests using a conventional circuit, Figures 2 and 3 present the data RAC has taken from two different conventional ESD simulators. A sampling of 74LS08 devices were obtained of the same date code, attempting to minimize variations in the device under test population. The most susceptible pin was found by step stressing a small sample of devices on each pin until failure. Failures were detected with a curve tracer indicating a change in reverse breakdown voltage characteristics between the pin under test and the substrate of the device.

Once the most susceptible pin was found, a sampling of 30 devices were step stressed to failure on this pin for each of the two simulators. Voltage step increments of 25 volts were used to maximize the resolution of failure voltage distributions. The intent of the study was to:

- (1) Determine the failure voltage distribution of a typical device stressed with a conventional test apparatus.
- (2) Identify differences in these distributions between two typical simulators.

Another study (Reference 26) with similar objectives yielded even a higher degree of variability. In this study, a sampling of 74F04 and 74F175 devices were tested by three independent test labs. Figures 4 and 5 summarize these results.

These results were taken when ESD testing technology was less mature and testers were being built with little regard for the subtleties involved in making an accurate and repeatable test circuit. Since the data contained in this publication was obtained from a variety of testers, it is apparent that this inherent variability is present in it.

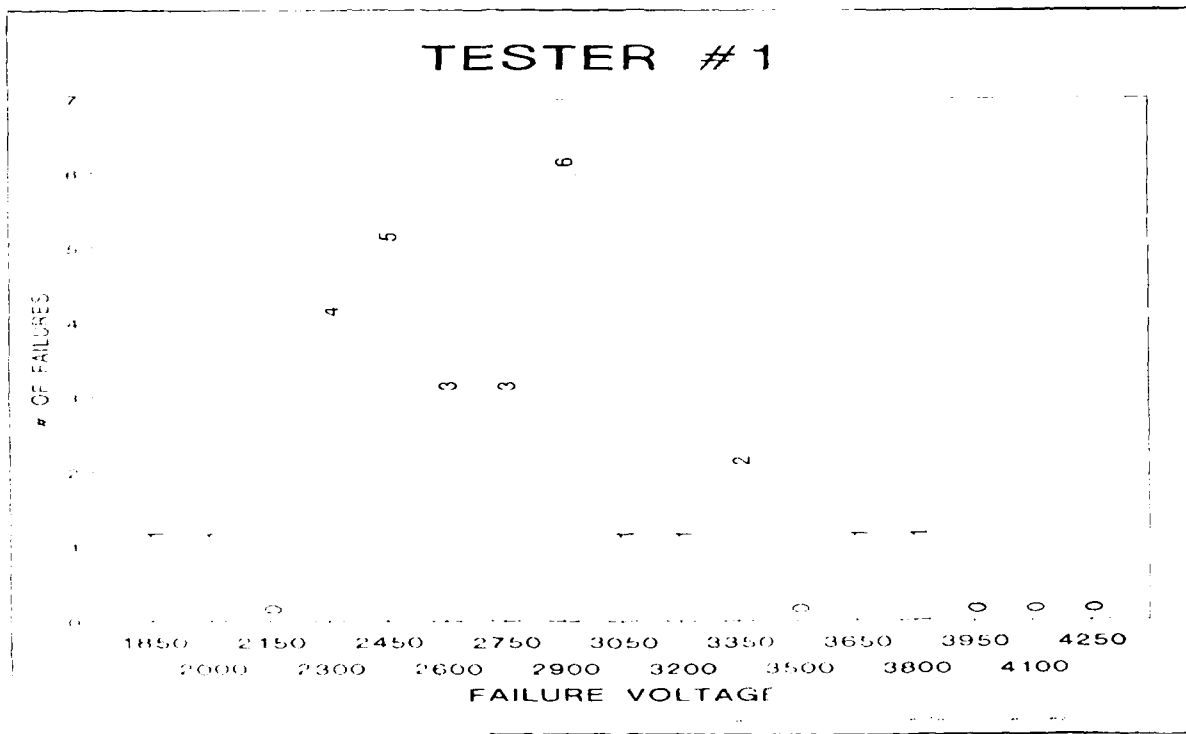
In addition to the inherent variation in test apparatus and devices themselves, there can also exist large variations between manufacturers. This is due to the fact that each manufacturer employs their own unique methodologies and circuitry to protect devices, each with their own protection capability. If the manufacturer was known, it is reported in the detailed data section of this publication.

## 1.6 SUMMARY AND CONCLUSIONS

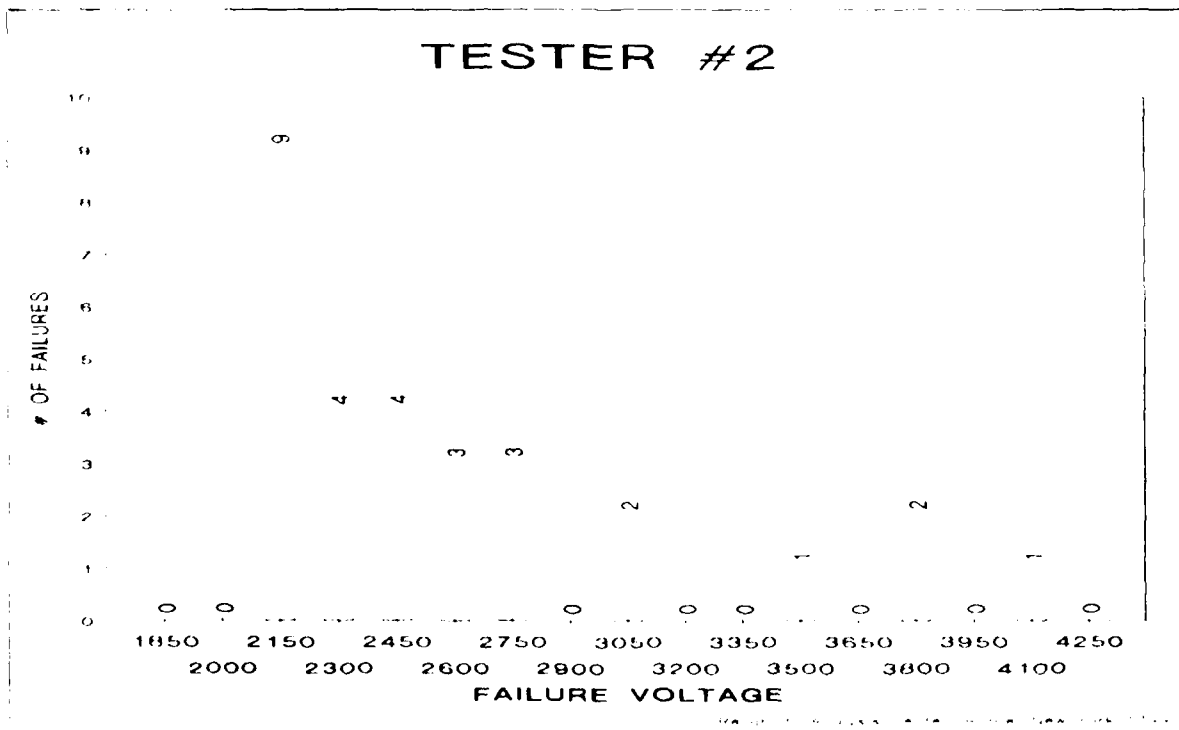
This publication presents the most comprehensive compendium of electrostatic discharge susceptibility test data currently available. This data is useful (and mandated by MIL-STD-1686A) for the establishment of ESD control procedures based on the susceptibility of devices being handled, assembled, stored, etc. It is important for the users of this information to understand the limitations of the data contained herein. To accomplish this, previous discussions have addressed the different types of data included in this publication as well as the variation inherent in it.

RAC also strongly encourages any one performing ESD susceptibility tests to submit the results of those tests to RAC for inclusion in the database and dissemination in future editions of this publication. If tests are performed in accordance with MIL-STD-1686A, the results are required to be submitted to RAC as outlined in the Data Item Description DI-RELI-80670 (given in Appendix B, Volume II). Also, given in Appendix B is a format for submitting data if not done in accordance with a specific test method.





**FIGURE 2: FAILURE DISTRIBUTION FOR TESTER #1**



**FIGURE 3: FAILURE DISTRIBUTION FOR TESTER #2**

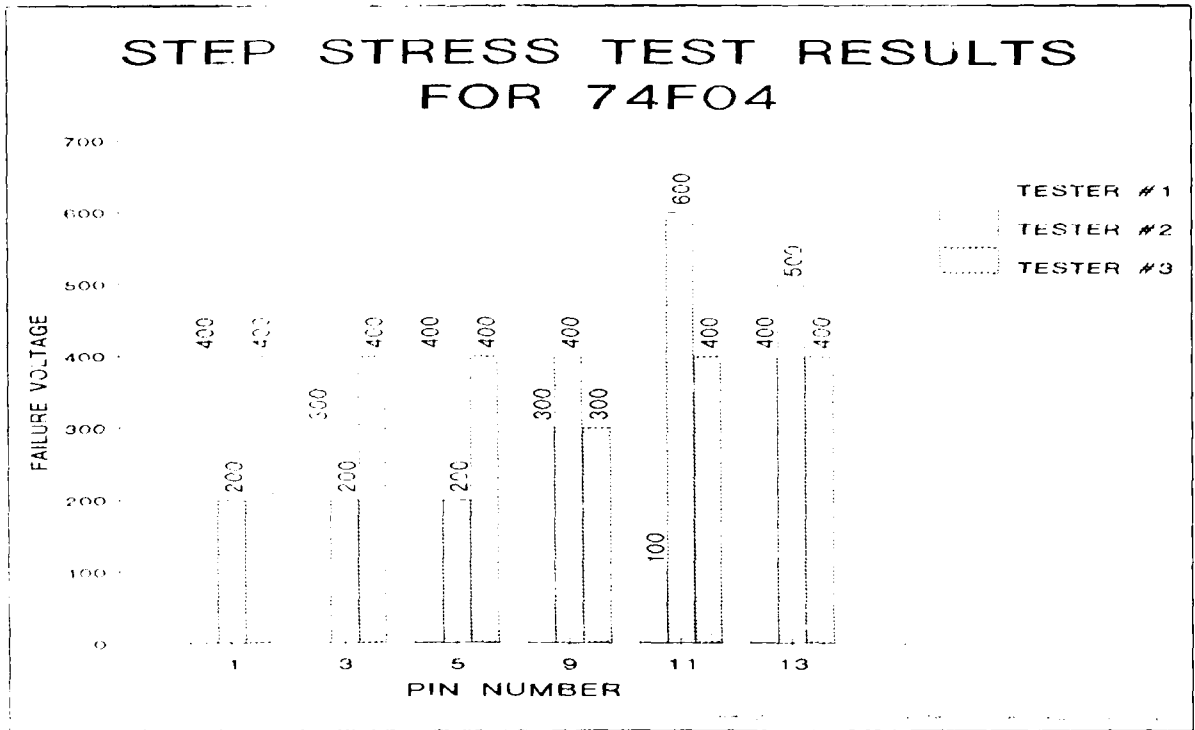


FIGURE 4: STEP-STRESS RESULTS FOR 74F04

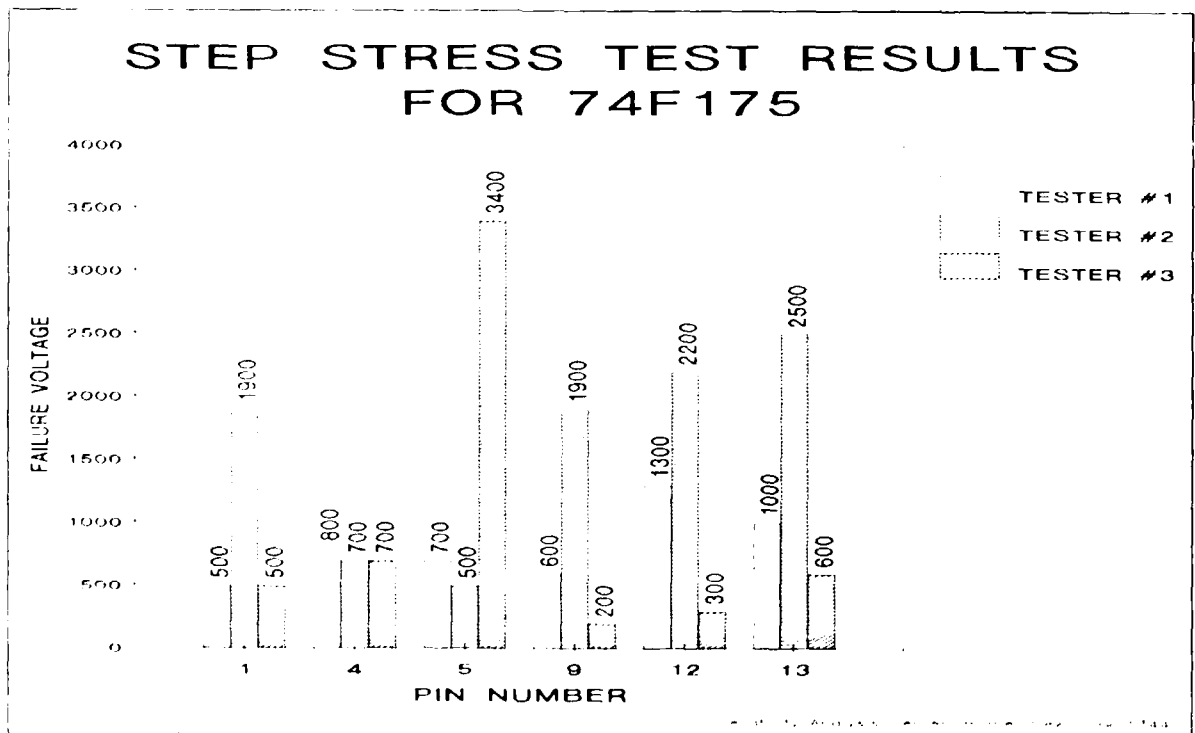


FIGURE 5: STEP-STRESS RESULTS FOR 74F175

**SECTION 2.0**

**FAILURE VOLTAGE PROFILE**



## 2.1 SUSCEPTIBILITIES OF VARIOUS TECHNOLOGIES

The relative susceptibilities of various technologies can be seen from the following histograms (Figure 6 through 35). Cases where there are large peaks in the histogram are indicative of a particular data source or test method. For example, the peaks at 1000-1499 volts for CMOS, 2000-2499 volts for TTL, 1000-1499 volts for STTL, etc., were primarily from data contained in Source Code 030 (Section 5.0). However, when observing the histogram (Figure 19) for failure voltages of all microcircuit technologies combined, a much larger sample size was available and a fairly well-defined curve was obtained.



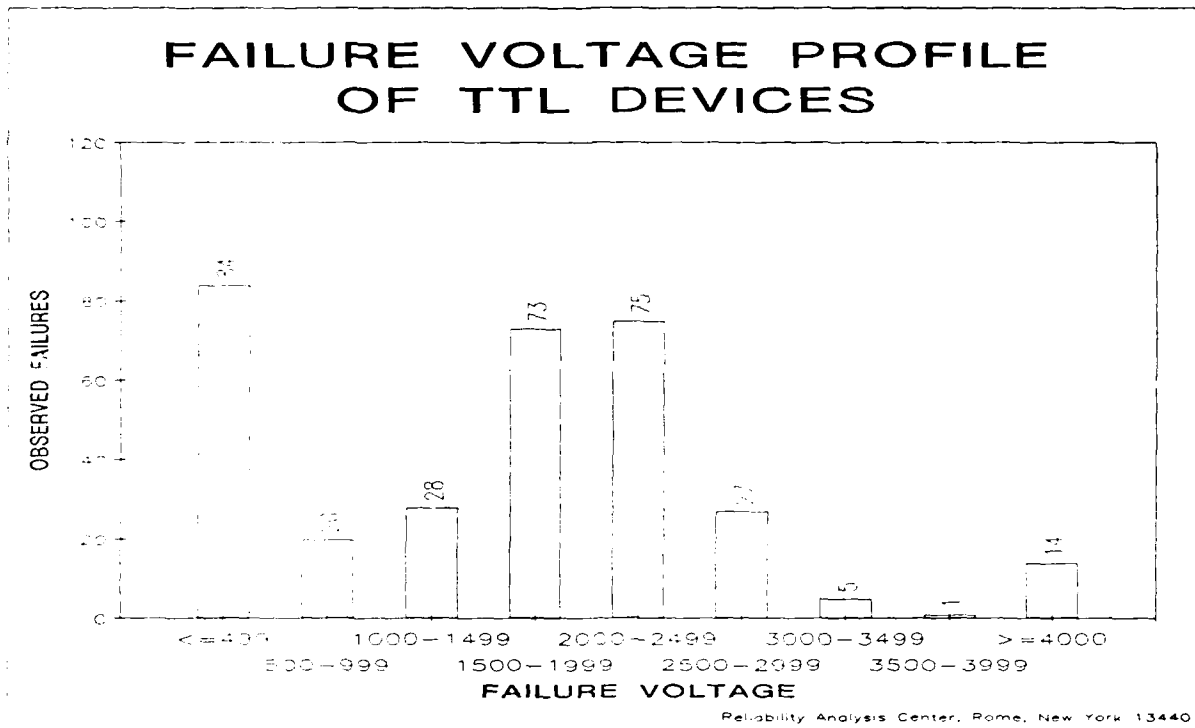


FIGURE 6

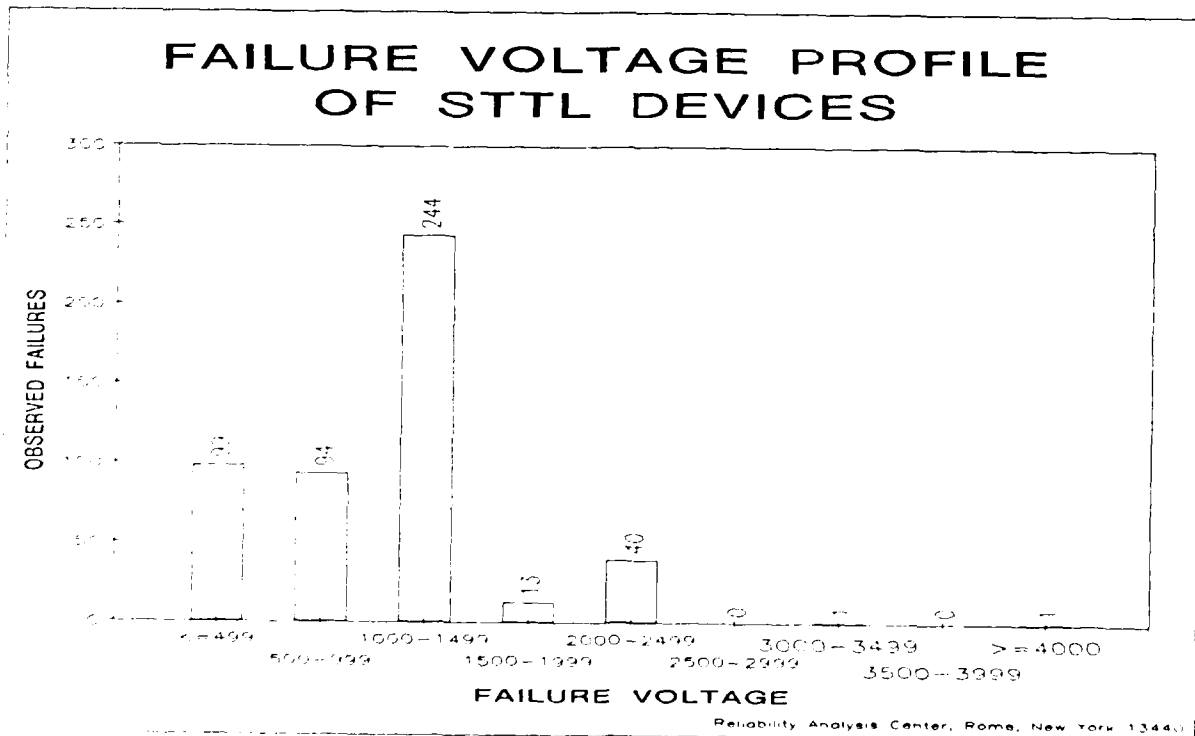
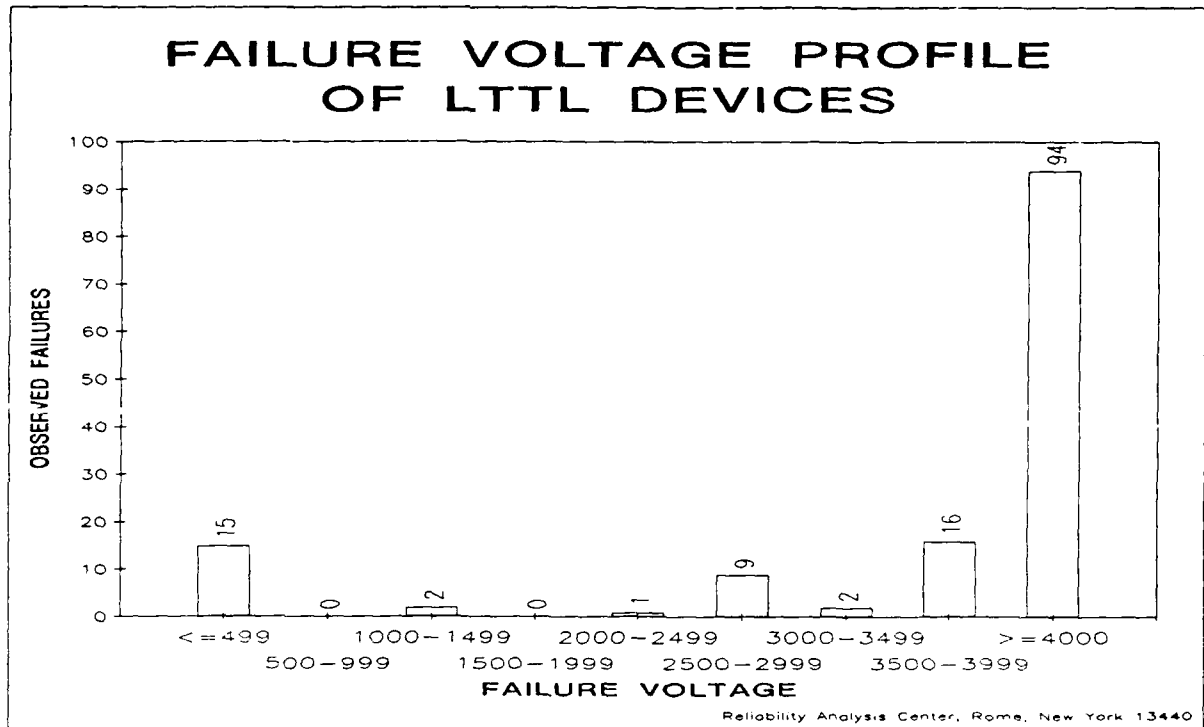
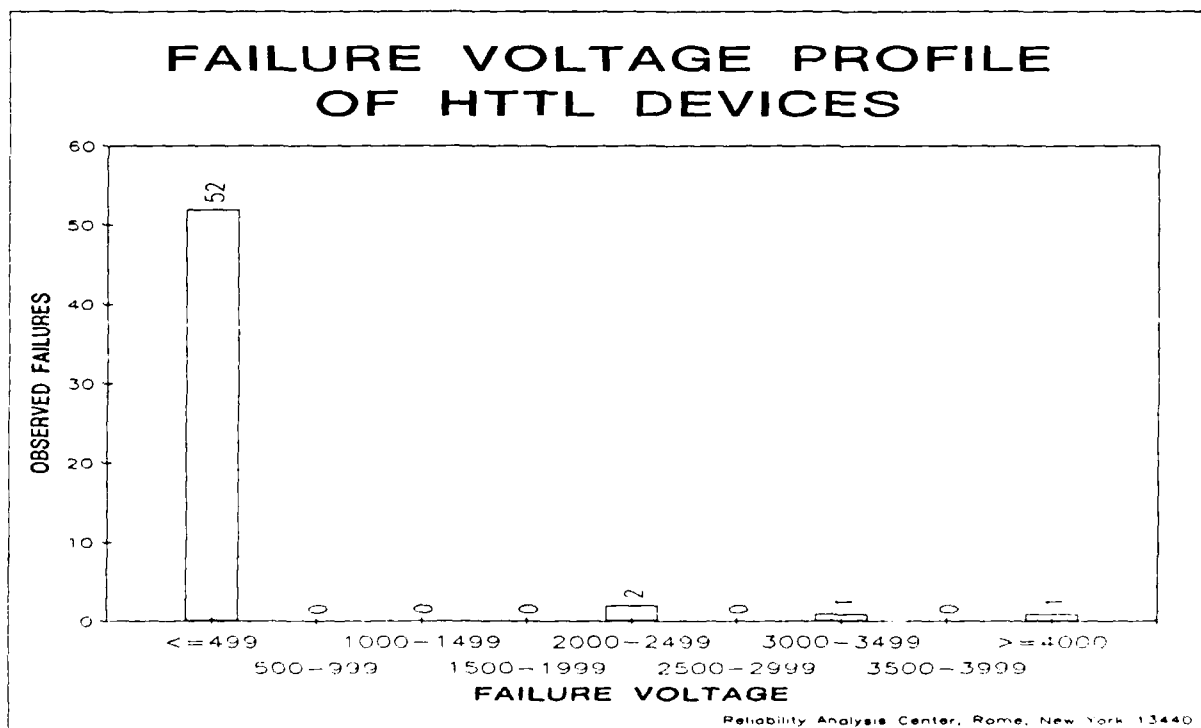


FIGURE 7

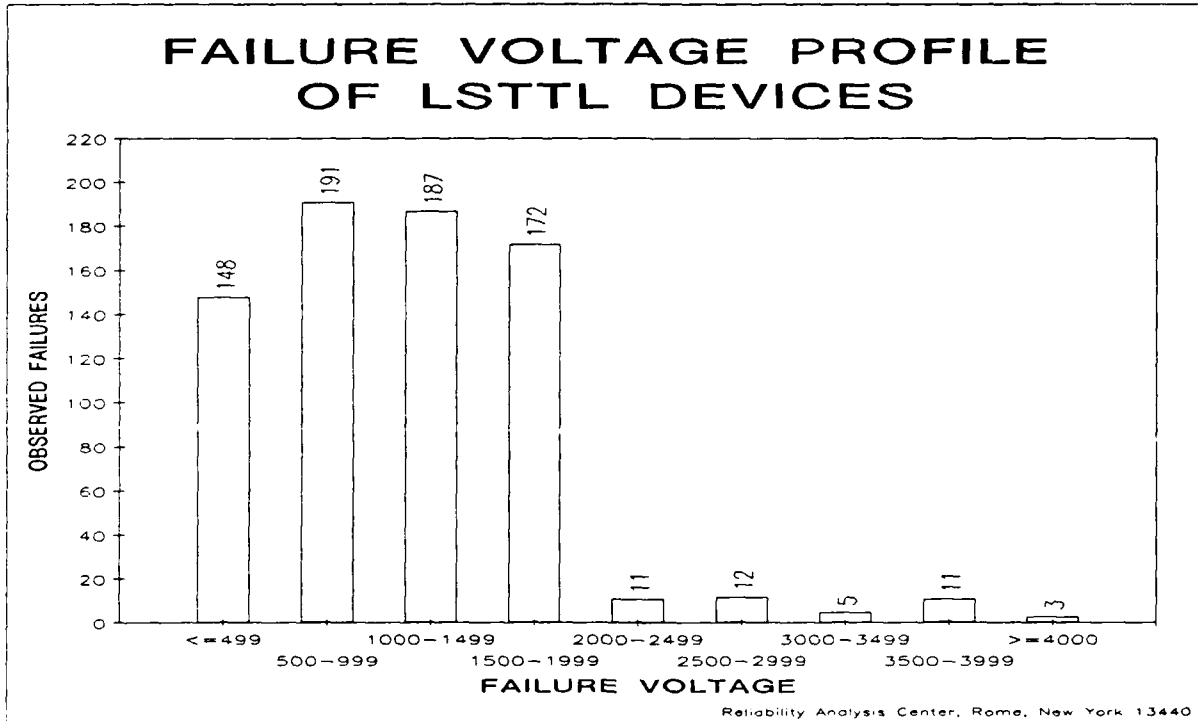


**FIGURE 8**

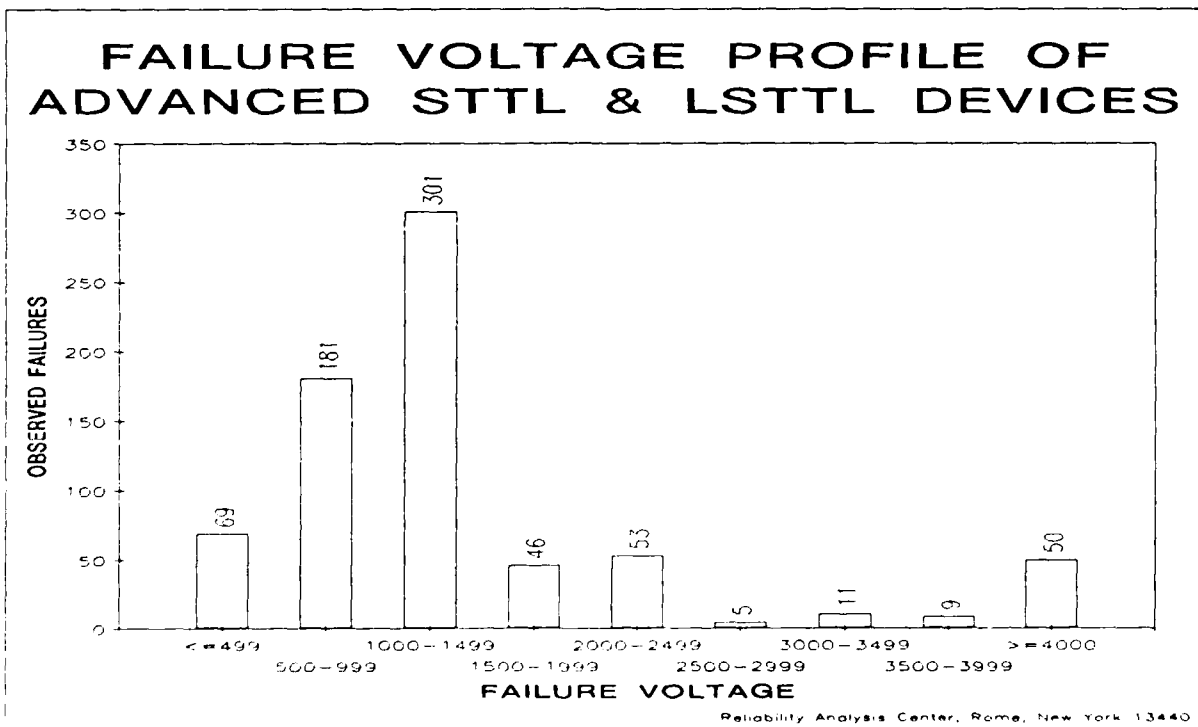


**FIGURE 9**





**FIGURE 10**



**FIGURE 11**

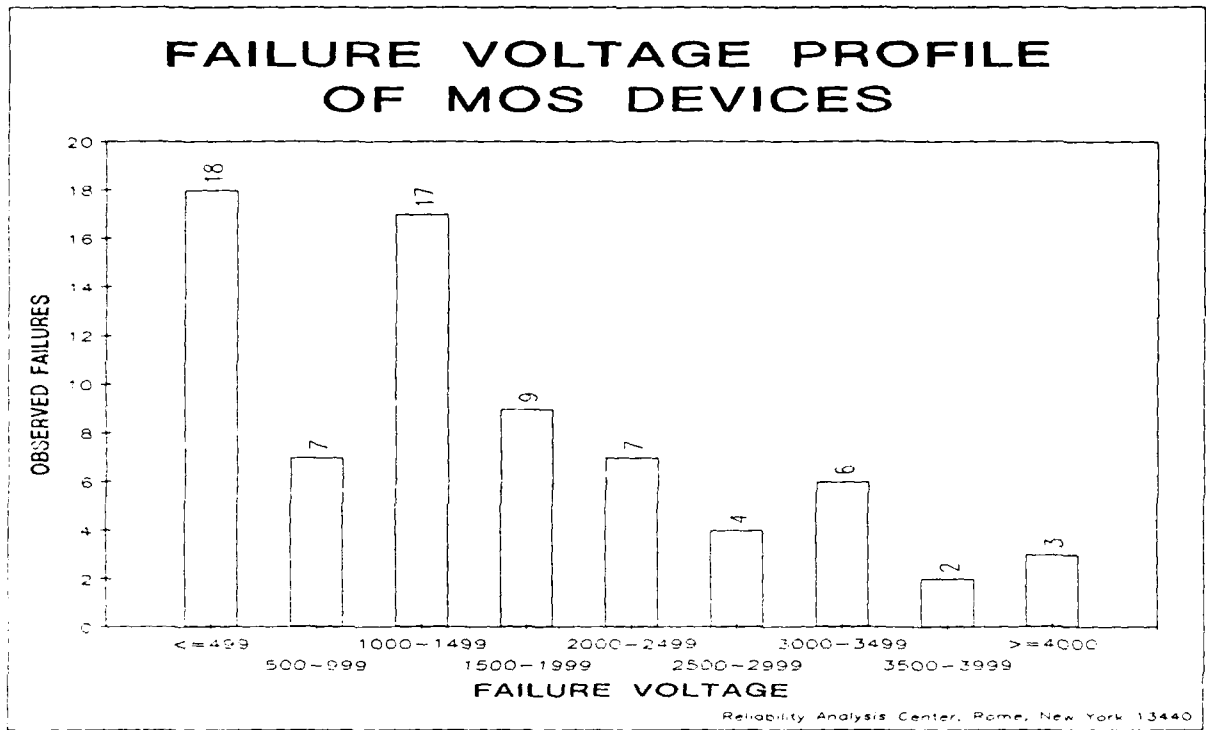


FIGURE 12

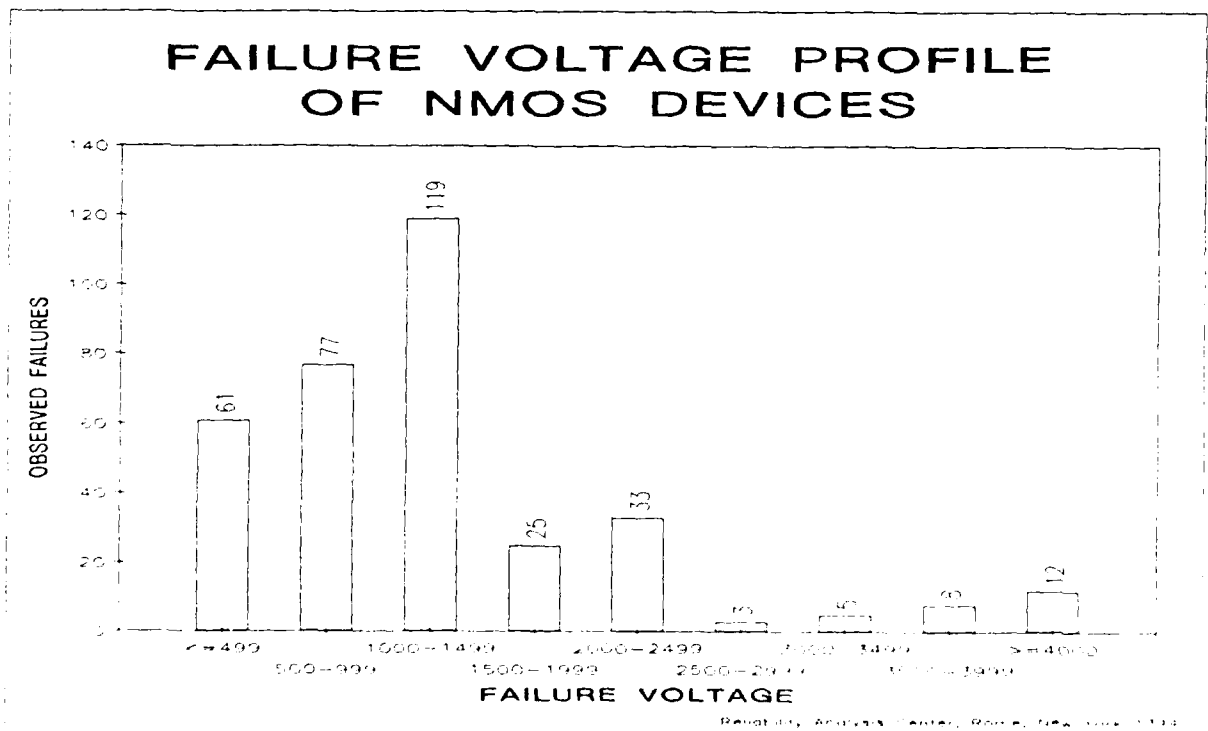
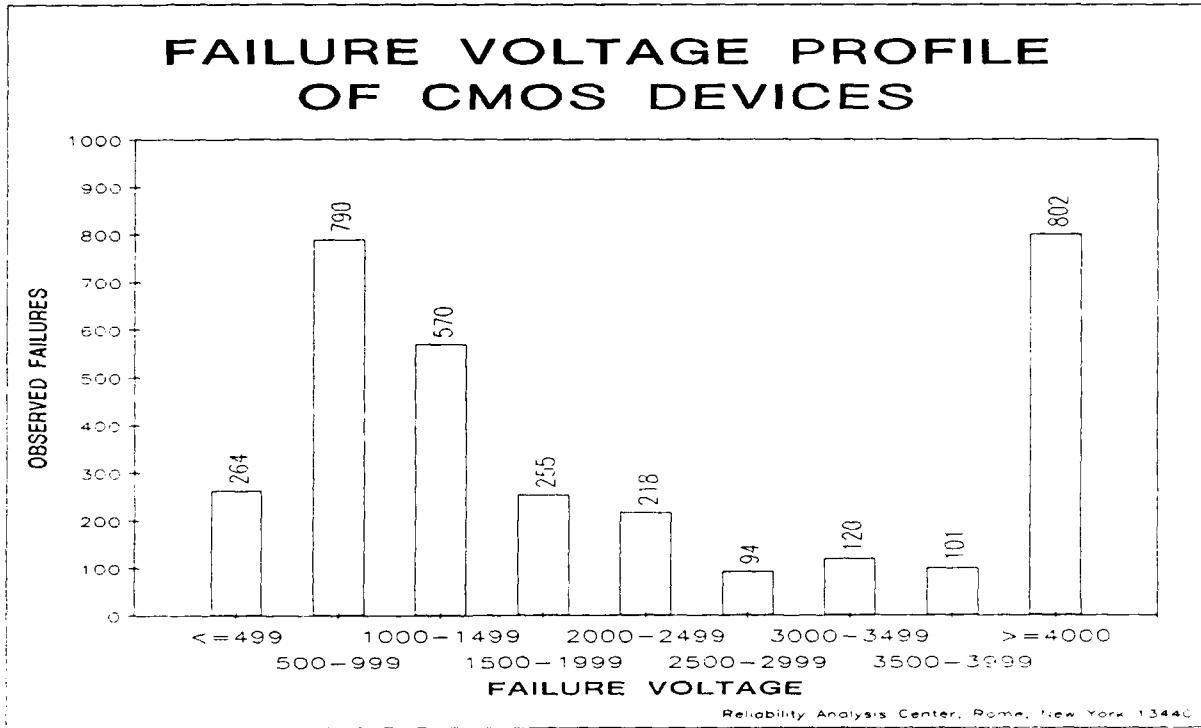
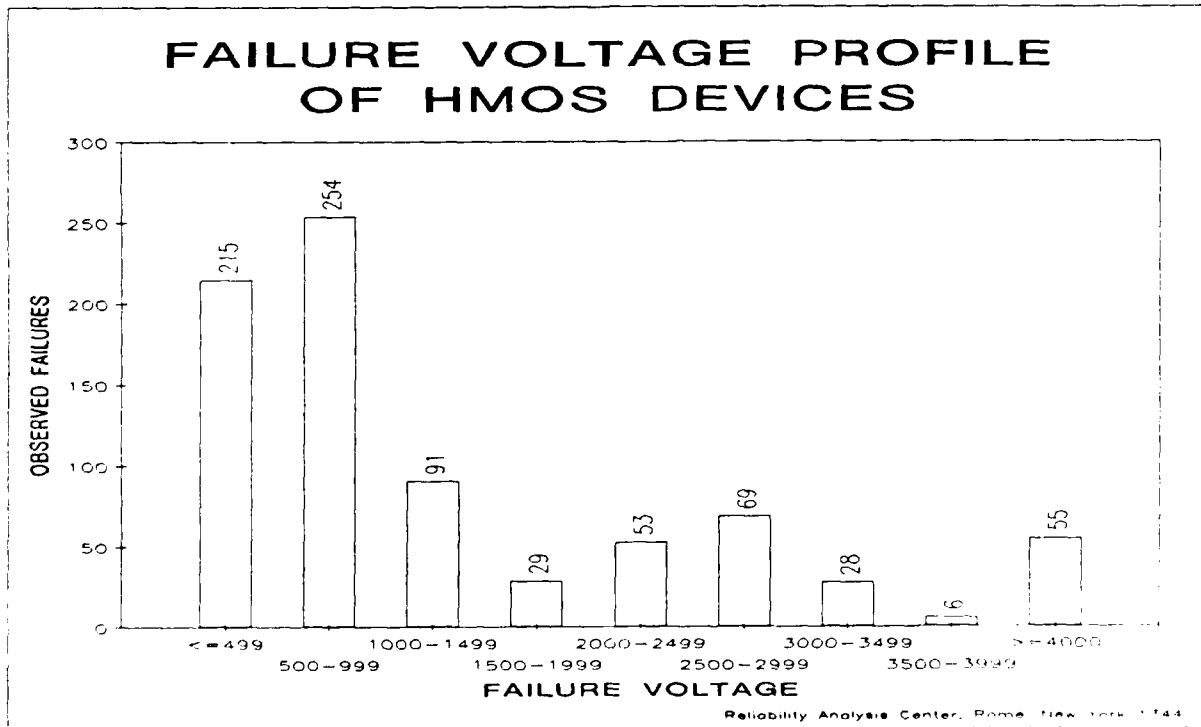


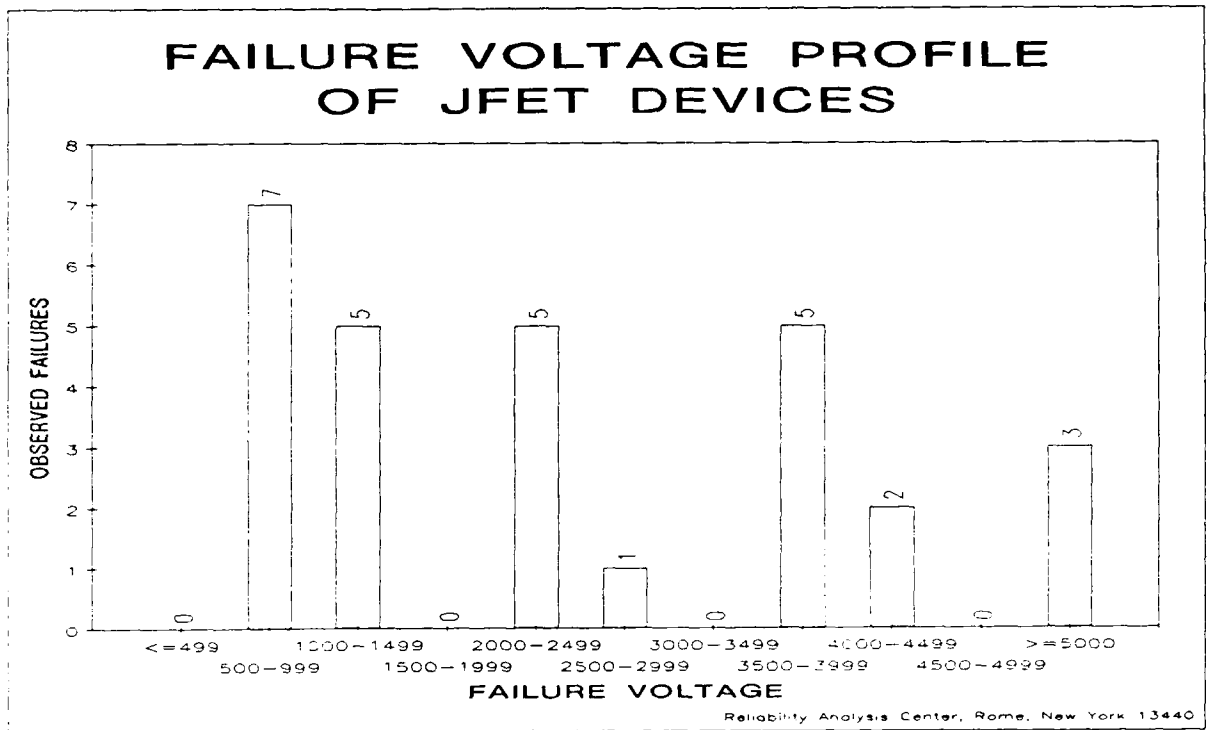
FIGURE 13



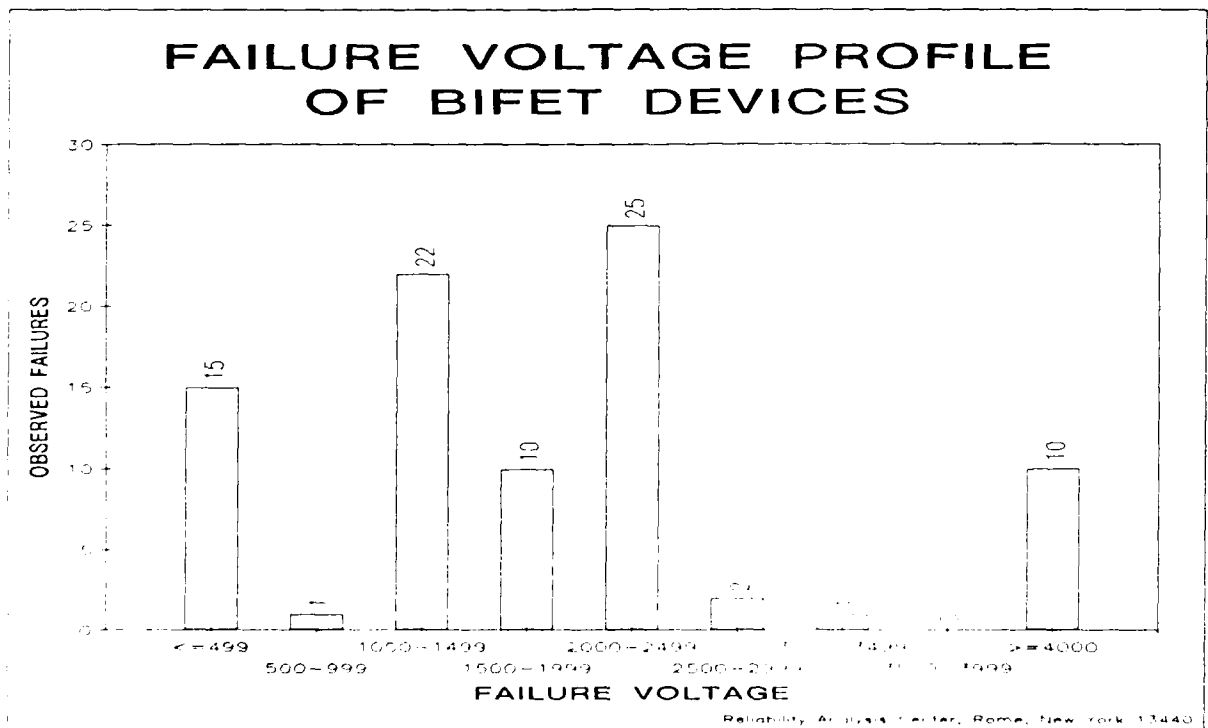
**FIGURE 14**



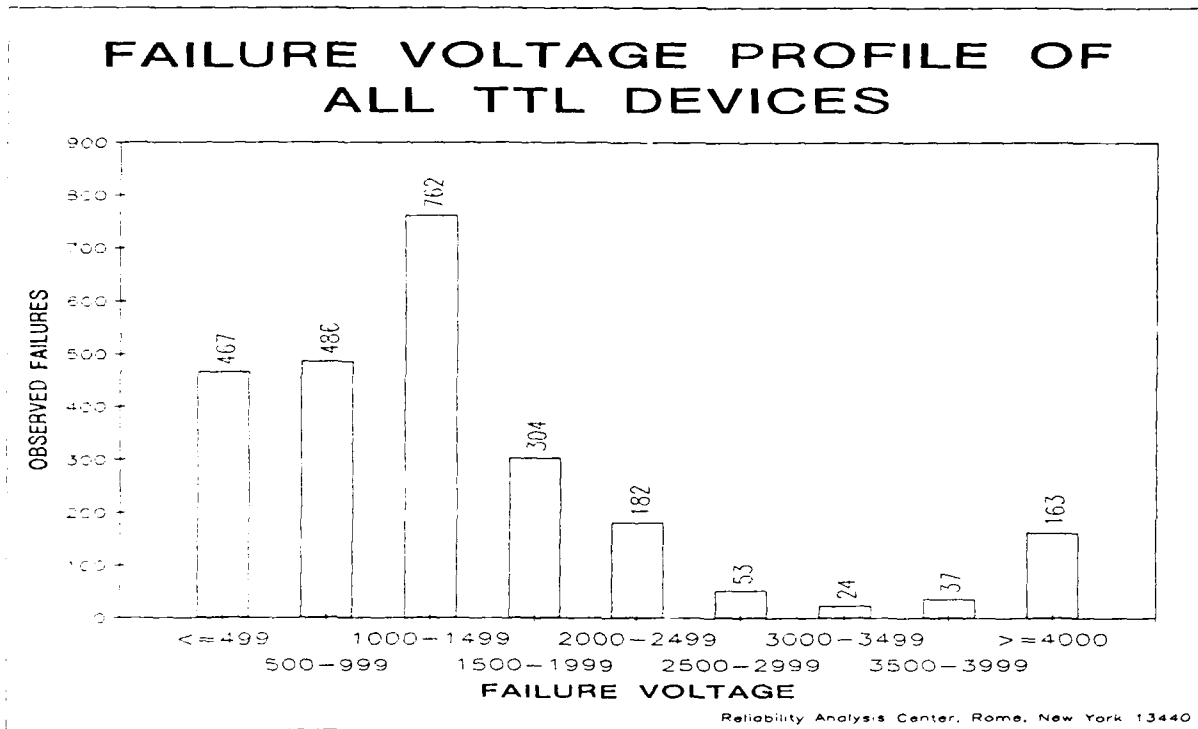
**FIGURE 15**



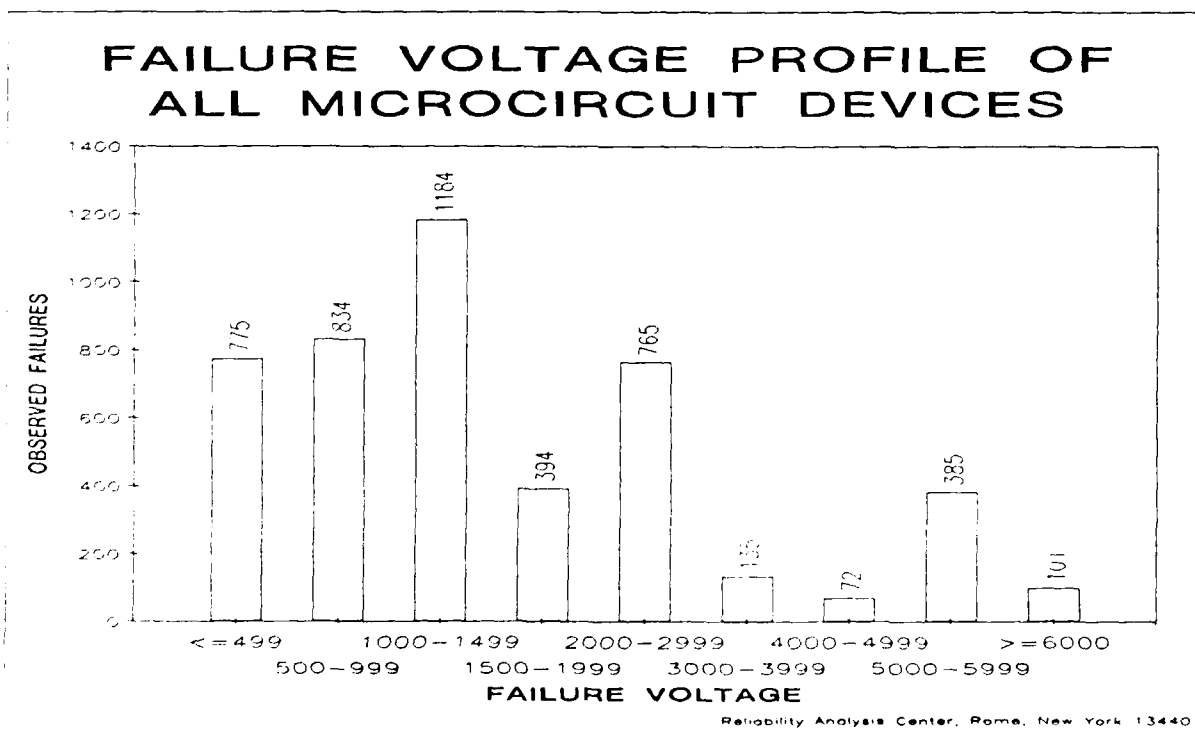
**FIGURE 16**



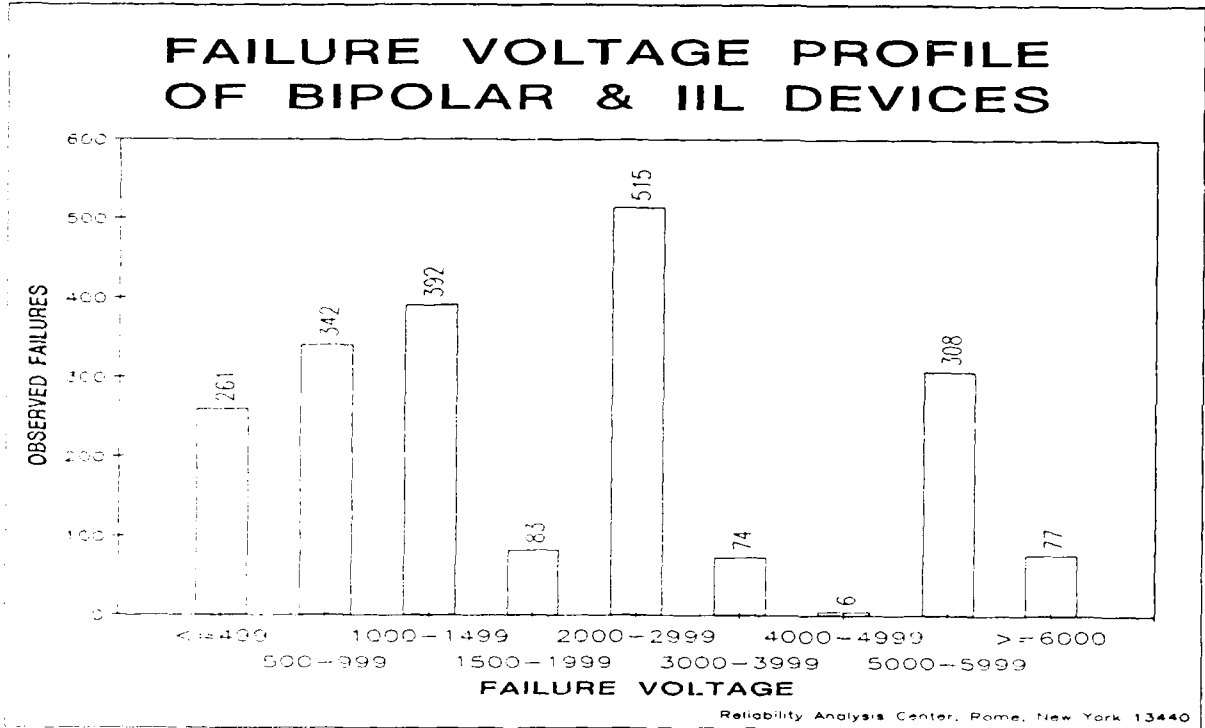
**FIGURE 17**



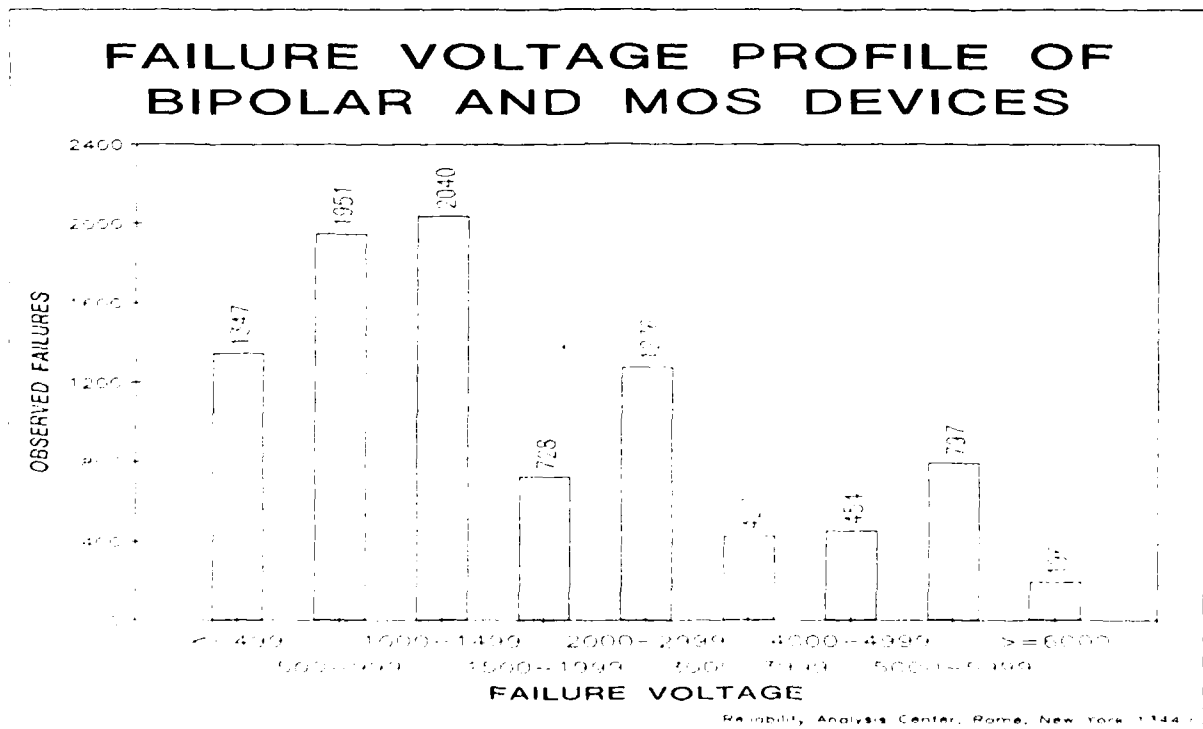
**FIGURE 18**



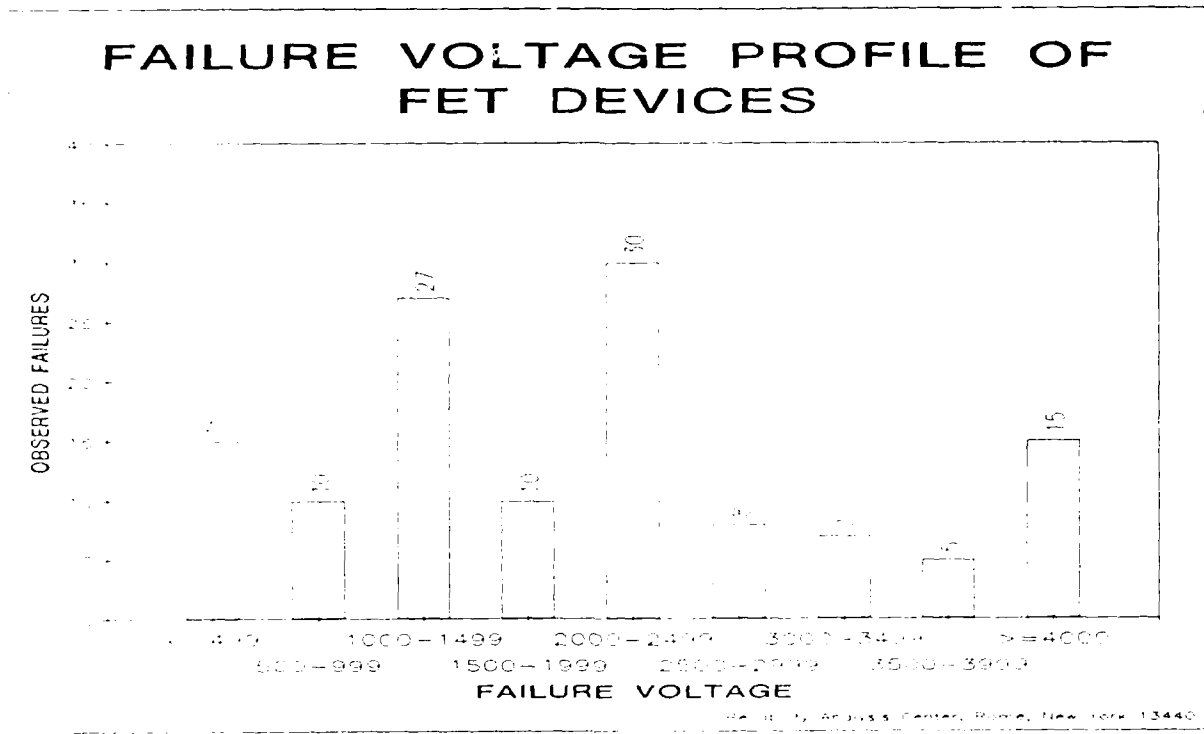
**FIGURE 19**



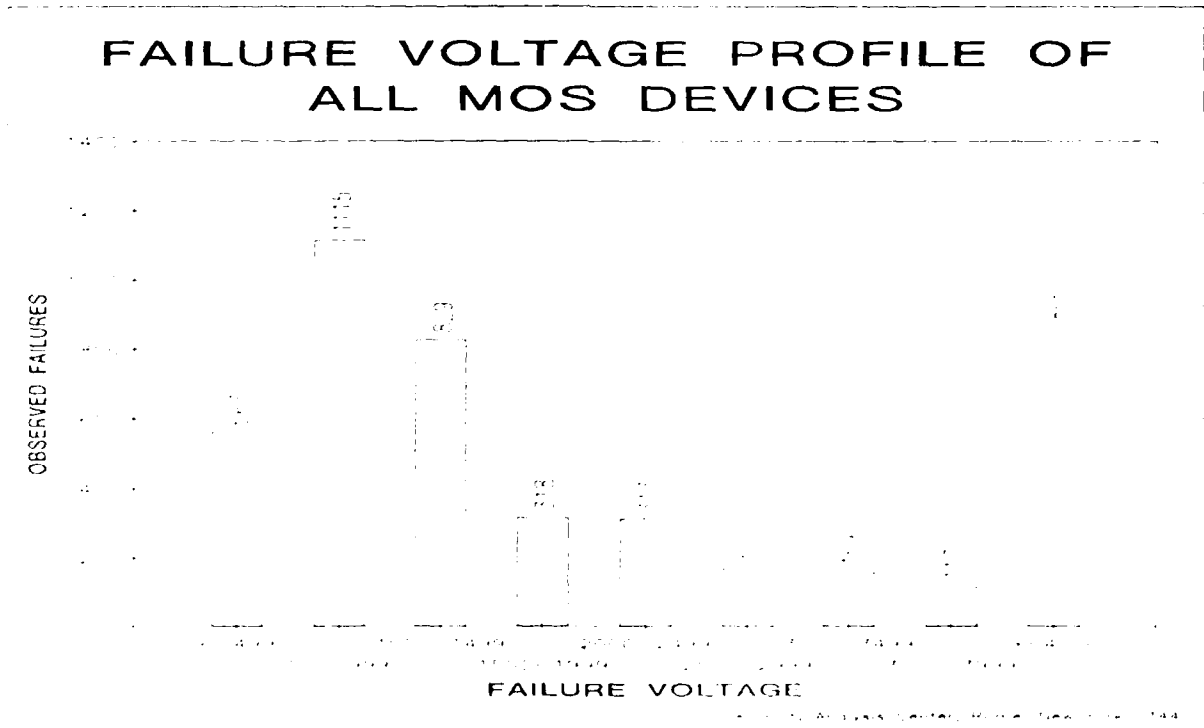
**FIGURE 20**



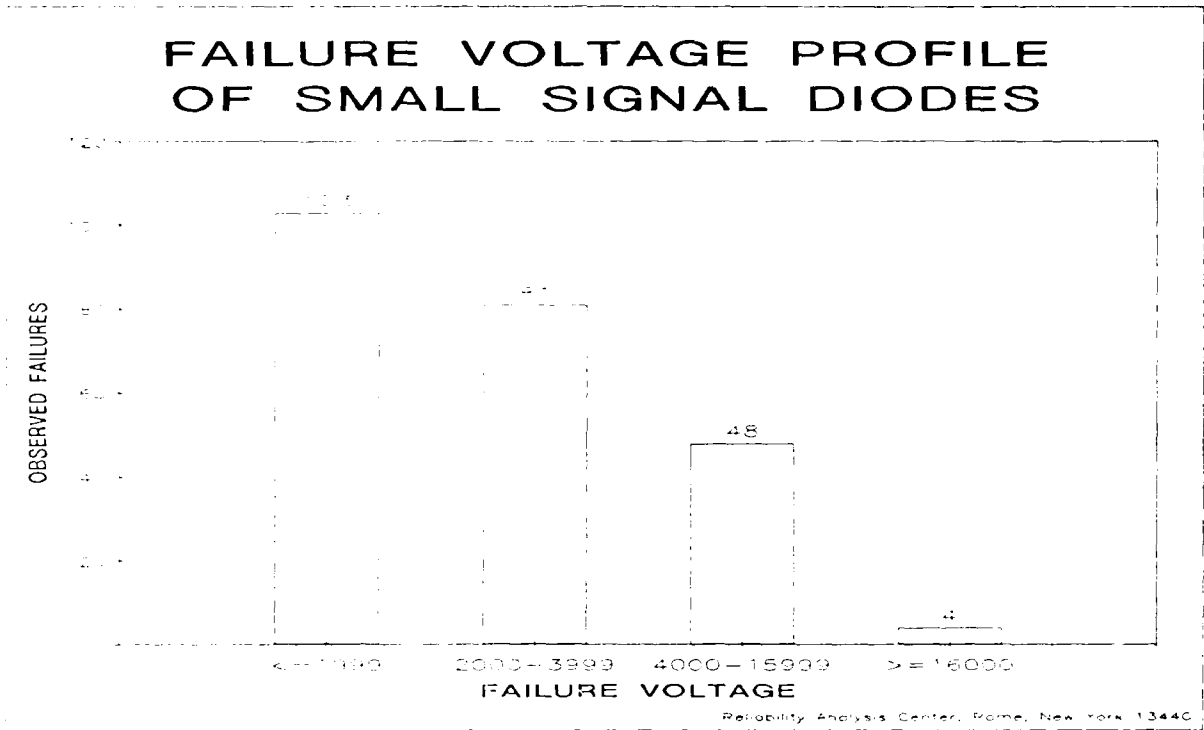
**FIGURE 21**



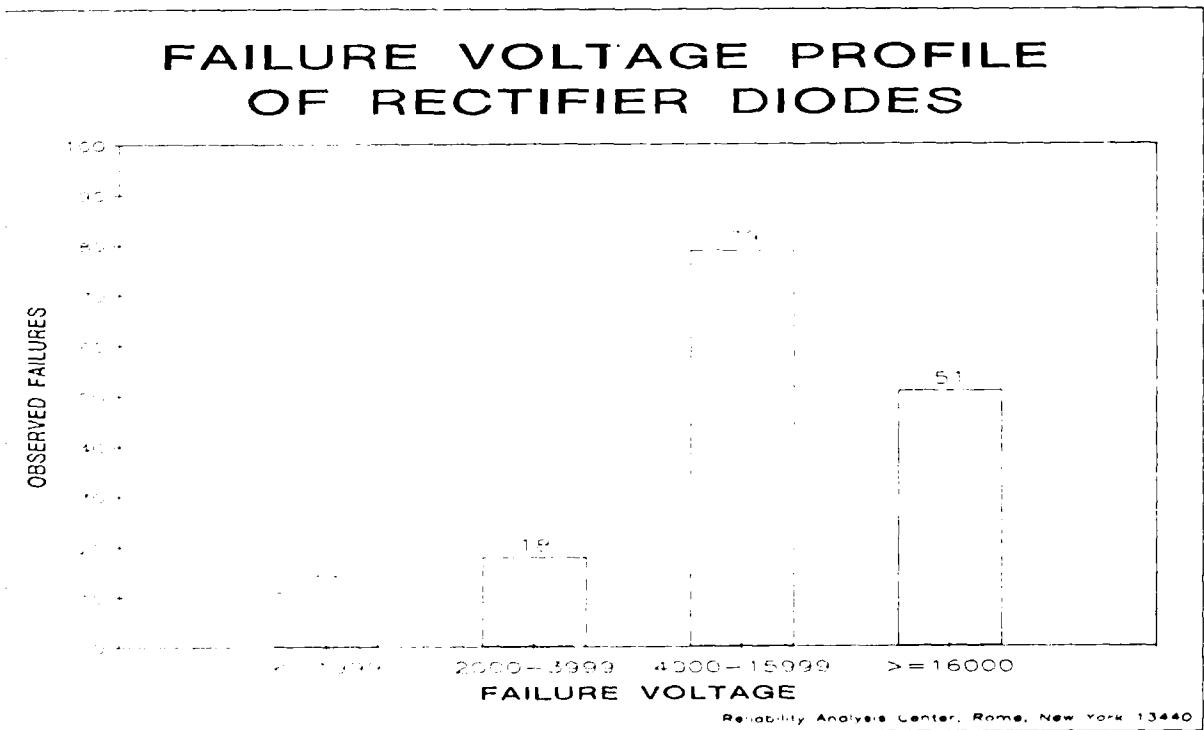
**FIGURE 22**



**FIGURE 23**



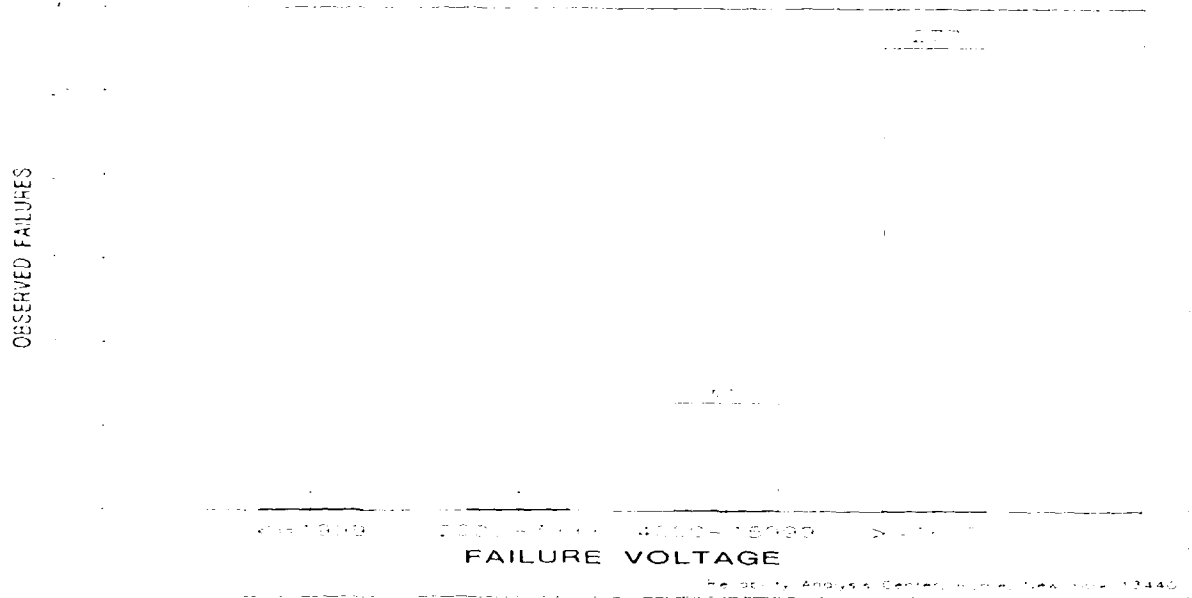
**FIGURE 24**



**FIGURE 25**

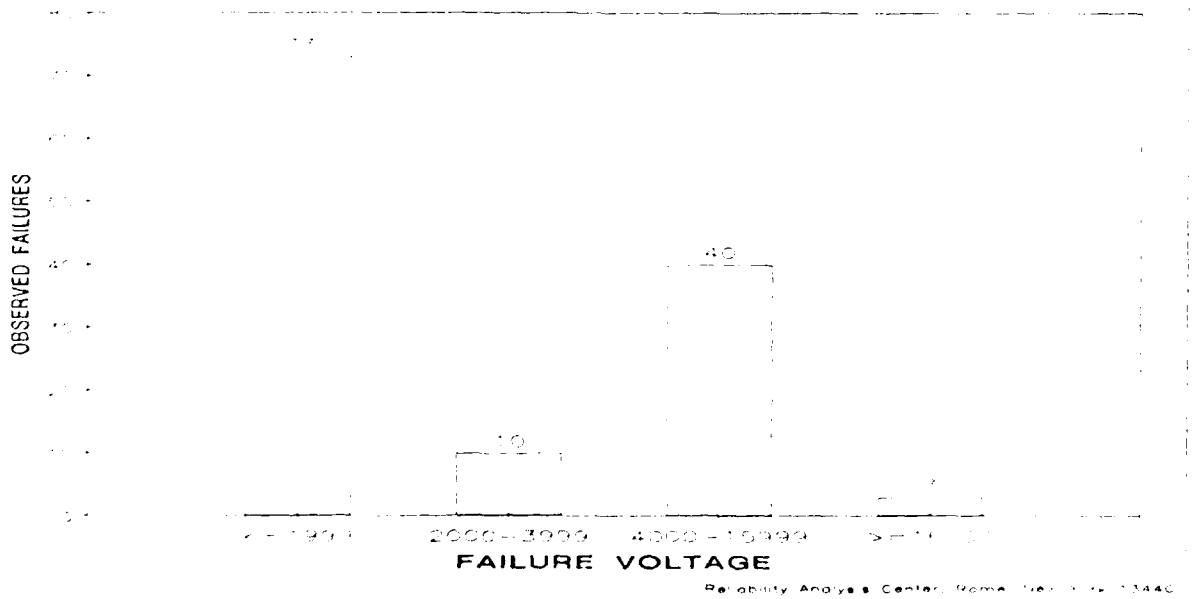


## FAILURE VOLTAGE PROFILE OF ZENER DIODES

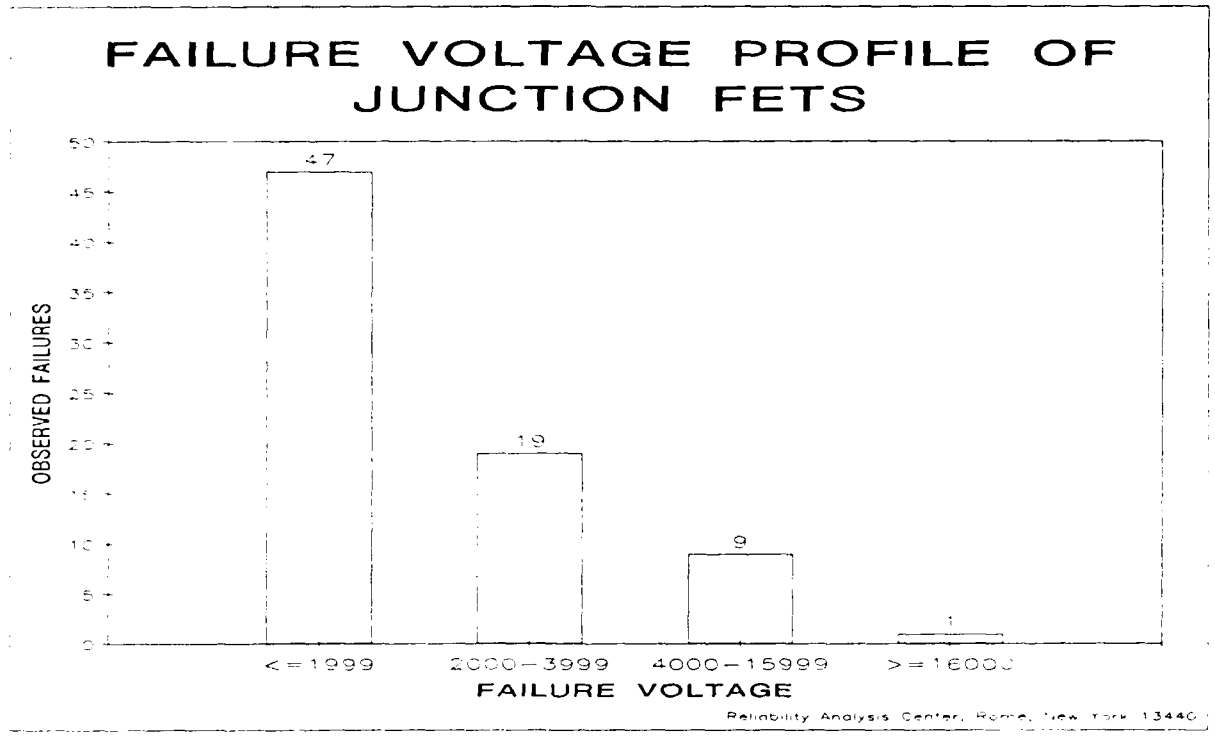


**FIGURE 26**

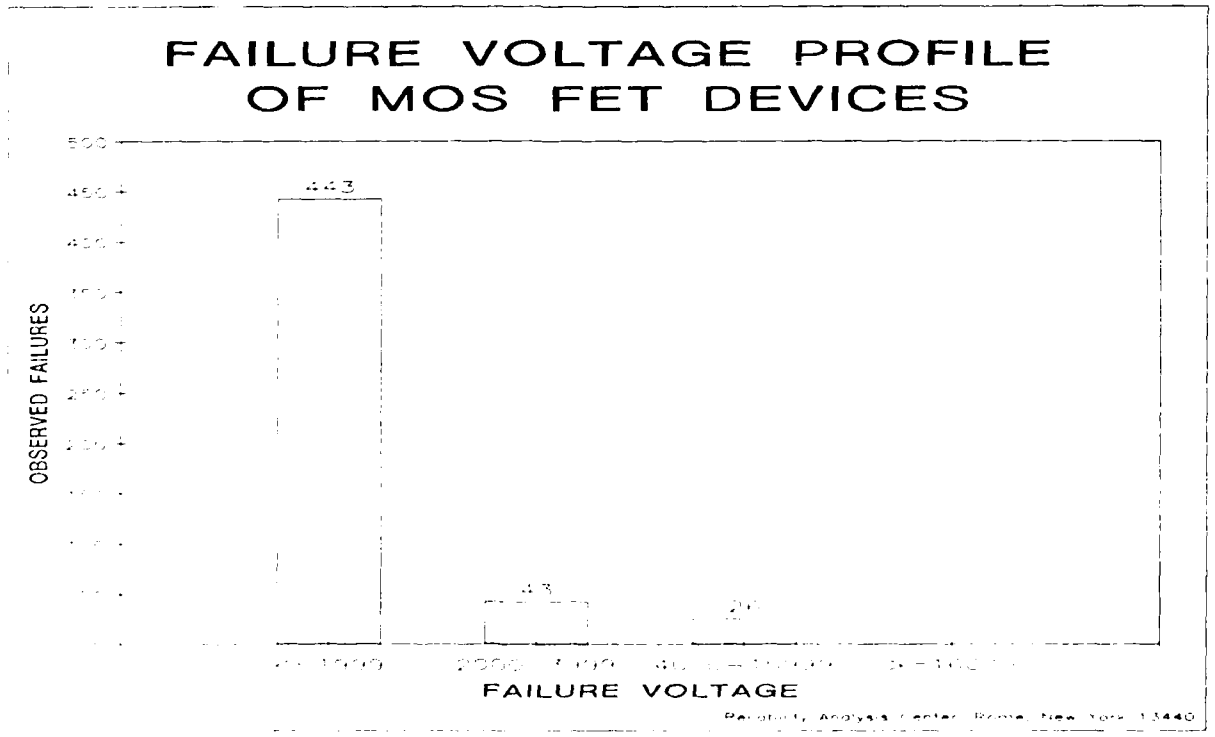
## FAILURE VOLTAGE PROFILE OF MICROWAVE DIODES



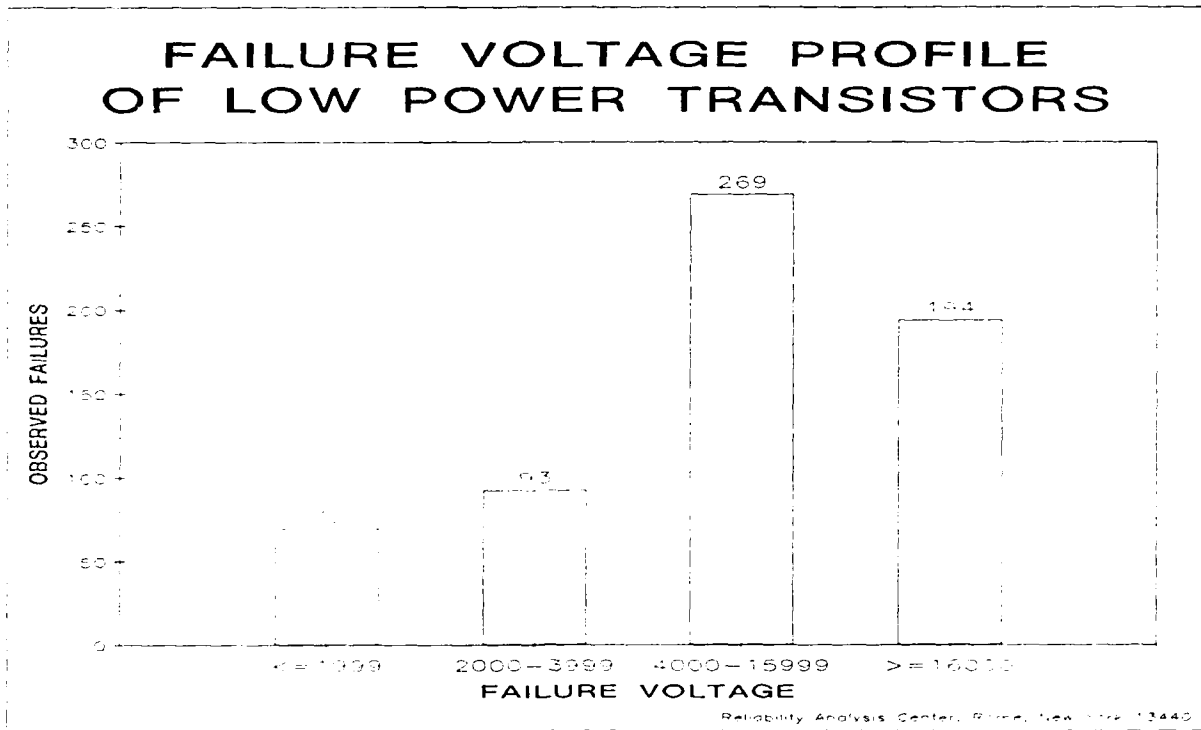
**FIGURE 27**



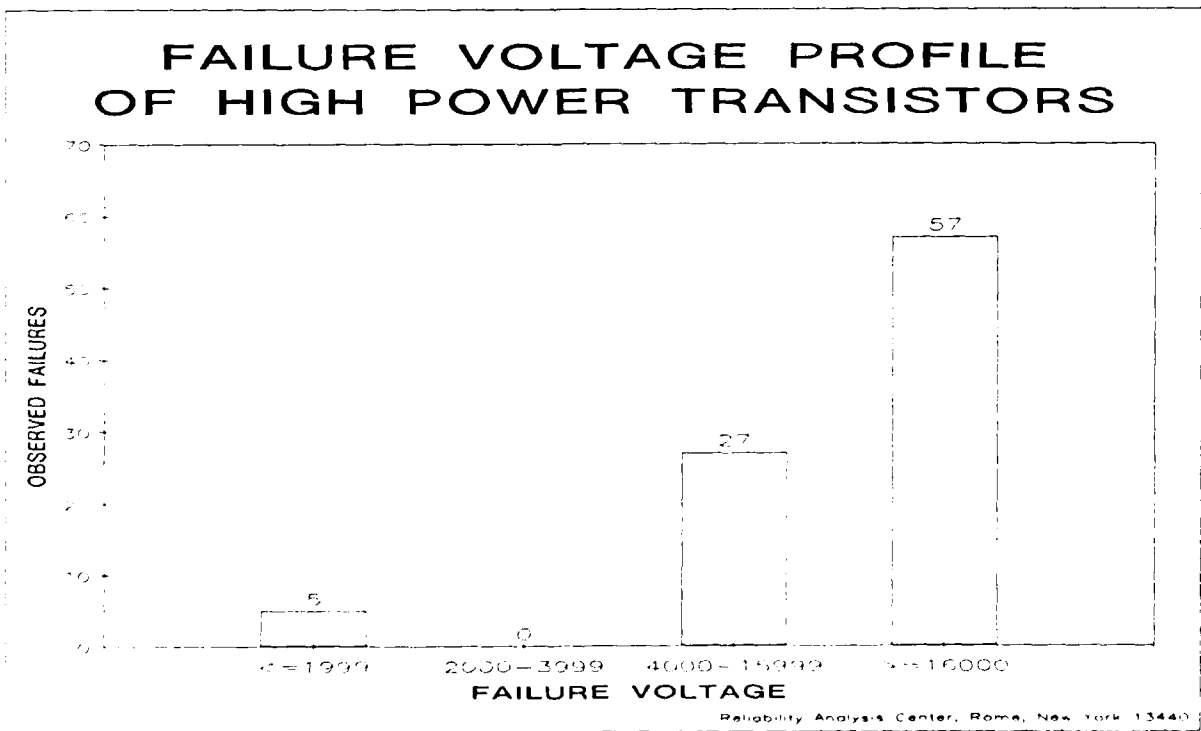
**FIGURE 28**



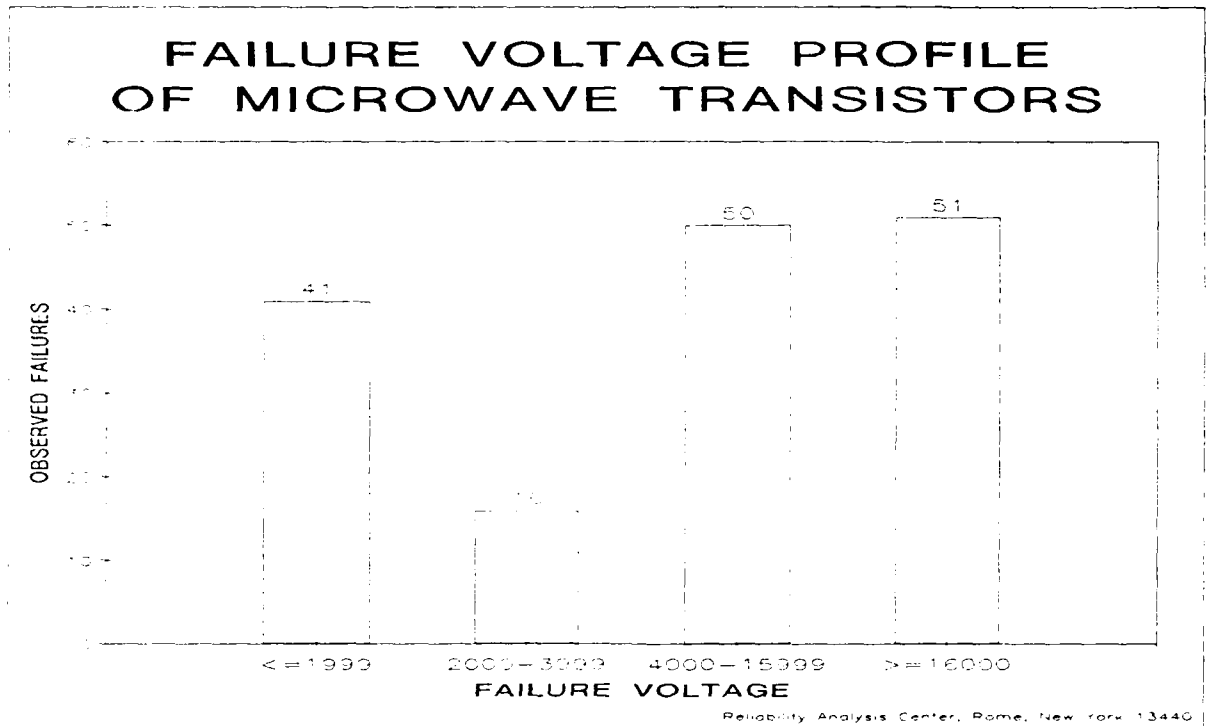
**FIGURE 29**



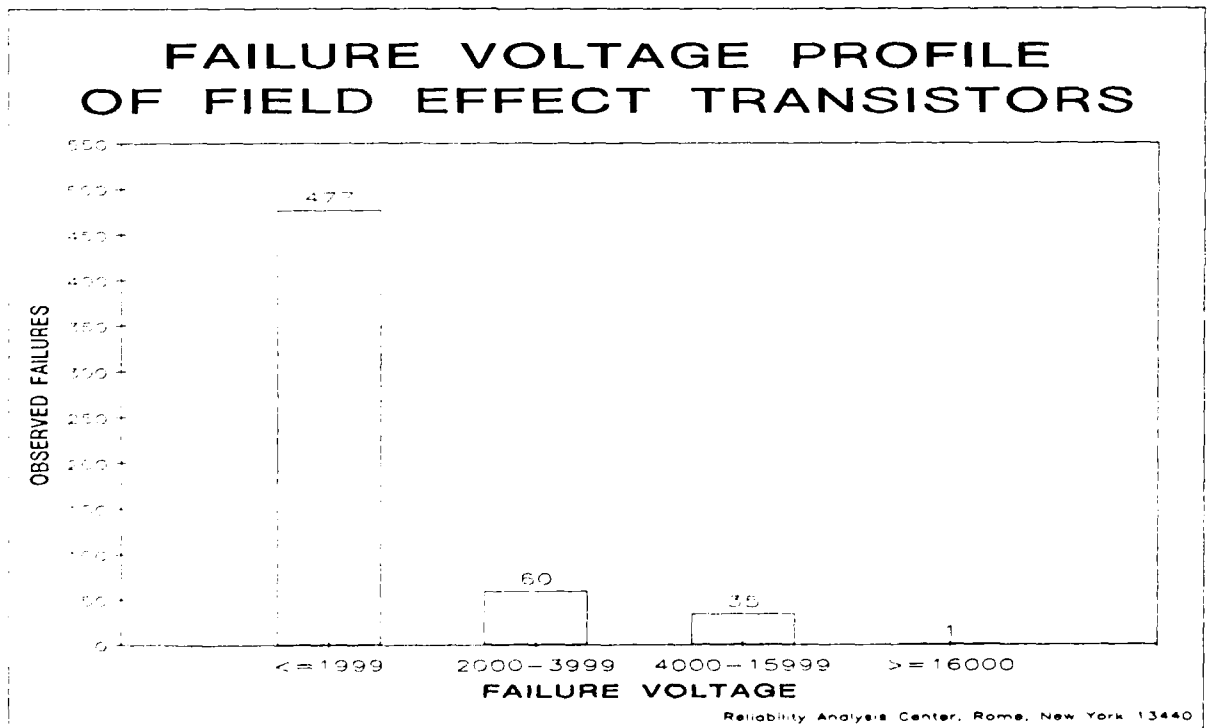
**FIGURE 30**



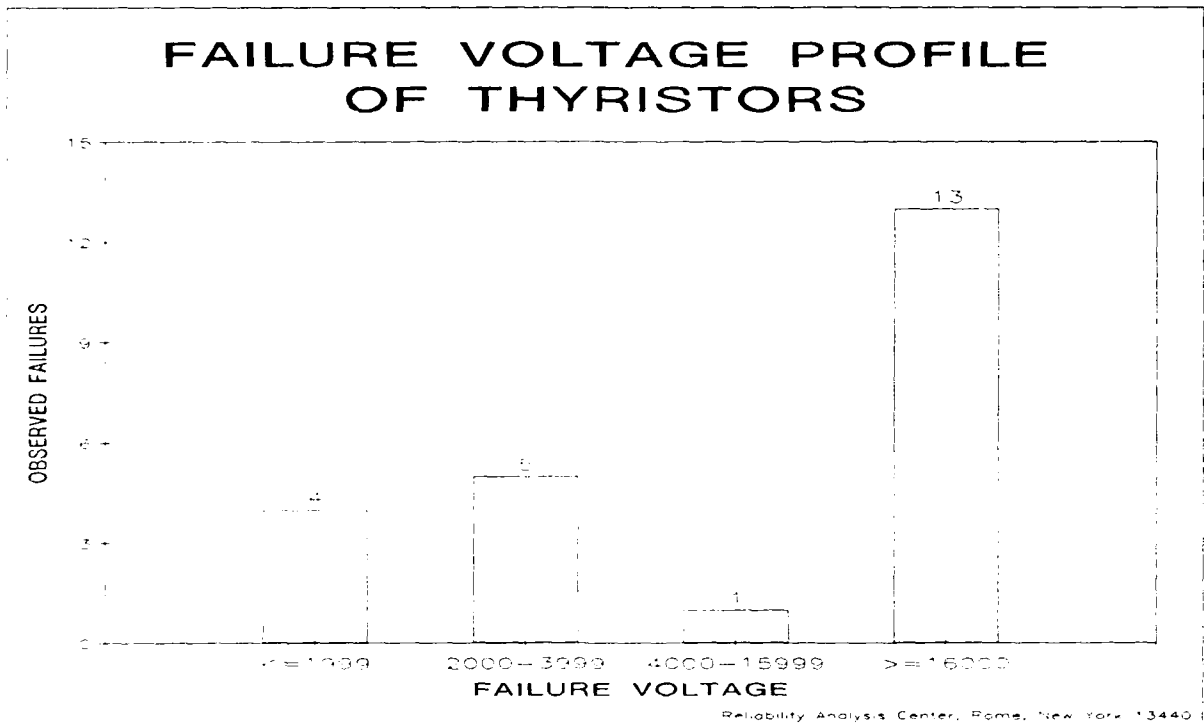
**FIGURE 31**



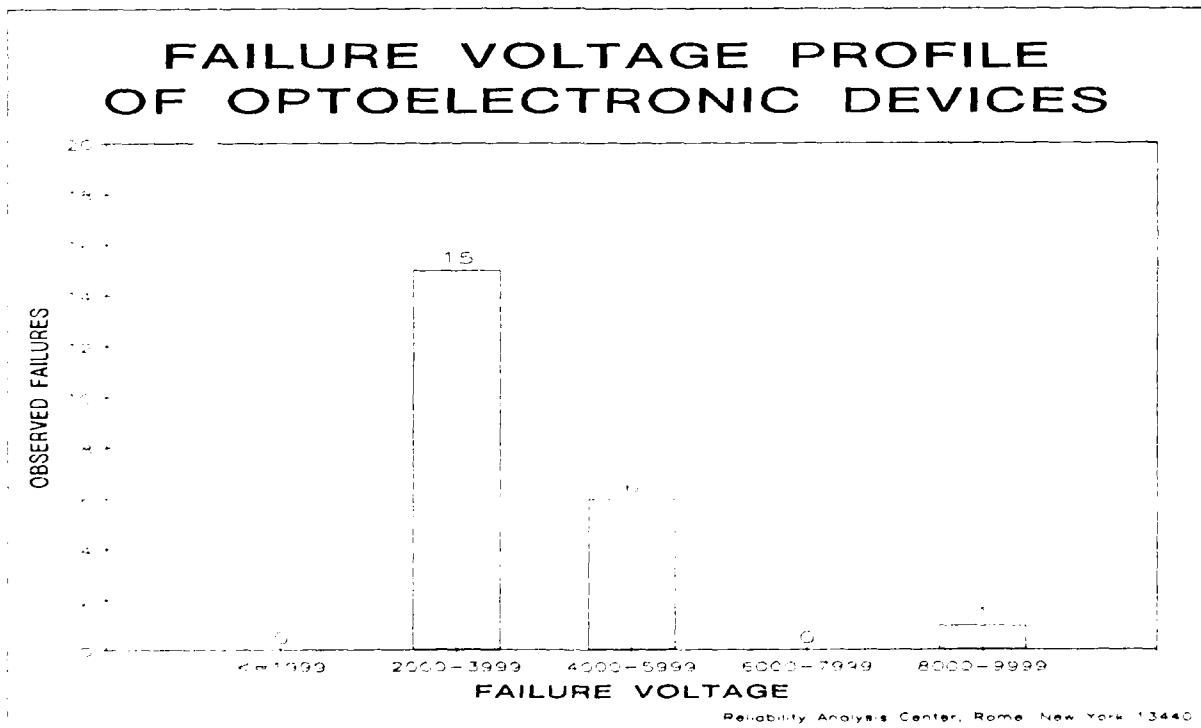
**FIGURE 32**



**FIGURE 33**



**FIGURE 34**



**FIGURE 35**

## 2.2 SUMMARIZED DATA - VOLTAGE VS. TECHNOLOGY

The data in this section was generated from the failure voltages of each entry in the Detailed Device Susceptibility Test Data of Section 3.0. Where necessary, the actual test voltages were converted to levels consistent with the widely recognized 100 pF, 1500 ohm human body model since mixing failure voltages of data obtained with different resistor-capacitor values and different discharge models would confound the data significantly. This data conversion methodology was discussed in Section 1.4.

It should be noted that data was also included which represents an approximate upper bound of threshold voltages (i.e., one test at one voltage was carried out on a device and a failure resulted). Thus, although exact damage threshold voltage of the device could not be determined from that one data point, it is known that the threshold is equal to or less than the test voltage.

The data as presented in this section may be somewhat biased since all data entries from the detailed data section were used. This bias comes from the fact that where one data source may have included all of the data (on all pins, for example) another may have only presented the worst-case failures (i.e., the most sensitive pin).

### 2.3 PERCENTAGE OF FAILURES PER TECHNOLOGY

A total of 5,501 device records were categorized during the preparation of this databook. Table 1 and 2 summarizes the percentages of each technology family, (integrated circuits and discrete semiconductors respectively) in each category of ESD classification. Section 3.0 contains the complete categorization data by part numbers.





TABLE 1: PERCENTAGE OF FAILURE RECORDS PER TECHNOLOGY-IC

1

2

3

TECHNOLOGY	1					2					3
	(<=499)	(500-999)	(1000-1499)	(1500-1999)	(2000-2499)	(2500-2999)	(3000-3499)	(3500-3999)	(>=4000)		
FIL	25.7% (84)	6.1% (20)	8.6% (28)	22.3% (73)	22.9% (75)	8.3% (27)	1.5% (5)	0.3% (1)	4.3% (14)		
STTL	20.1% (99)	19.1% (94)	49.6% (244)	2.7% (13)	8.1% (40)	0.0% (0)	0.2% (1)	0.0% (0)	0.2% (1)		
LTTL	10.8% (15)	0.0% (0)	1.4% (2)	0.0% (0)	0.7% (1)	6.5% (9)	1.4% (2)	11.5% (16)	67.7% (94)		
HTTL	92.8% (52)	0.0% (0)	0.0% (0)	0.0% (0)	3.6% (2)	0.0% (0)	1.8% (1)	0.0% (0)	1.8% (1)		
LSTTL	20.0% (148)	25.8% (191)	25.3% (187)	23.2% (172)	1.5% (11)	1.6% (12)	0.7% (5)	1.5% (11)	0.4% (3)		
Advanced STTL and LSTTL	9.5% (69)	25.0% (181)	41.6% (301)	6.3% (46)	7.3% (53)	0.7% (5)	1.4% (10)	1.2% (9)	7.0% (50)		
MOS	24.7% (18)	9.6% (7)	23.3% (17)	12.3% (9)	9.6% (7)	5.5% (4)	8.2% (6)	2.7% (2)	4.1% (3)		
NMOS	17.8% (61)	22.4% (77)	34.7% (119)	7.3% (25)	9.6% (33)	0.9% (3)	1.5% (5)	2.3% (8)	3.5% (12)		
CMOS	8.2% (264)	24.4% (790)	18.6% (601)	7.9% (240)	6.7% (218)	2.9% (94)	3.7% (120)	3.1% (101)	24.5% (792)		
HMOS	26.9% (215)	31.7% (254)	11.4% (91)	3.6% (29)	6.6% (53)	8.6% (69)	3.5% (28)	0.8% (6)	6.9% (55)		
JFET	0.0% (0)	26.0% (7)	14.8% (4)	0.0% (0)	18.5% (5)	3.7% (1)	0.0% (0)	18.5% (5)	18.5% (5)		
BIFET	17.4% (15)	1.2% (1)	25.6% (22)	11.6% (10)	29.1% (25)	2.3% (2)	1.2% (1)	0.0% (0)	11.6% (10)		
All TTL's	18.8% (467)	19.6% (486)	30.8% (762)	12.3% (304)	7.3% (182)	2.1% (53)	1.0% (24)	1.5% (37)	6.6% (163)		
Bipolar Microcircuits	16.0% (726)	18.3% (828)	25.4% (1154)	8.5% (387)	13.6% (618)	2.9% (132)	1.9% (85)	1.1% (50)	12.3% (556)		
Bipolar and IIL	12.6% (259)	16.6% (342)	19.1% (392)	4.0% (83)	21.2% (436)	3.8% (79)	3.0% (61)	0.6% (13)	19.1% (393)		
Bipolar and MOS	14.3% (1284)	21.8% (1956)	22.0% (1982)	7.8% (705)	10.3% (929)	3.4% (302)	2.7% (244)	1.9% (167)	15.8% (1418)		
All FET's	13.3% (15)	7.1% (8)	23.0% (26)	8.9% (10)	26.5% (30)	2.6% (3)	0.9% (1)	4.4% (5)	13.3% (15)		
All MOS's	12.5% (558)	25.3% (1128)	18.6% (828)	7.1% (318)	7.0% (311)	3.8% (170)	3.6% (159)	2.7% (117)	19.4% (862)		

TABLE 2: PERCENTAGE OF FAILURE RECORDS PER CIRCUIT TYPE-DISCRETE

CIRCUIT TYPE	N		
	1   < = 1999	2   2000-3999	3   4000-15999
Small Signal Diode	43.7% (103)	34.3% (81)	20.3% (48)
Rectifier	6.9% (11)	11.3% (18)	49.7% (79)
Zener	0.3% (1)	0.3% (1)	18.9% (65)
Microwave Diode	57.9% (73)	7.9% (10)	31.8% (40)
Junction FET	61.8% (47)	25.1% (19)	11.8% (9)
MOS FET	86.5% (443)	8.4% (43)	5.1% (26)
Low Power Transistor	11.4% (70)	15.1% (93)	42.0% (259)
High Power Transistor	5.6% (5)	0.0% (0)	30.3% (27)
Microwave Transistor	25.9% (41)	10.1% (16)	31.7% (50)
Field Effect Transistor	83.5% (497)	10.4% (62)	5.9% (35)
Thyristor	17.4% (4)	21.7% (5)	4.4% (1)
Optoelectronic Device	0.0% (0)	68.2% (15)	31.8% (7)
			> = 16000

**SECTION 3.0**

**DETAILED DEVICE SUSCEPTIBILITY TEST DATA**



## RAC ESD DATABASE

(1) Part Number	(2) Part Mfr	(3) ESD Class	(4) Part Description	(5) Test Pair	(6) Test Source	(7) Test Type	(8) Test Resistance	(9) Test Capacitance	(10) Test Pulses	(11) Date Code	(12) Number Devices	(13) Test Result	(14) Test Voltage	(15) Pin Combination	(16) Failure Criteria	(17) Test Remarks	(18) General Remarks	

- (1) BASIC PART NUMBER. The part number of the device.
- (2) MANUFACTURER. Manufacturer of the device (see Table 3).
- (3) ESD CLASSIFICATION. The classification per MIL-STD-1686A and MIL-STD-883 based on the best available data.
- (4) DESCRIPTION. Basic function of the device.
- (5) TECHNOLOGY. The basic technology of the device.
- (6) TEST SOURCE. Source code - identifies the data source (see Section 5.0).
- (7) TEST DATE. Date (month and year) the test was performed.
- (8) TEST TYPE. SS = Step Stress, i.e., the device was stressed in incremental voltages and tested for failure between each one. GN = Go/No-Go, i.e., one voltage level only applied to the device and then tested for failure.
- (9) RFS. Resistance (in ohms) used in the discharge circuit.
- (10) CAP. Capacitance used in the discharge circuit ( $10^{-6}$  = microfarads,  $10^{-12}$  = picofarads).
- (11) NUMBER PULSES. The total number of pulses applied to the device at the voltage (field no. 15) before failure (if result = fail) or before testing for failure (if result = pass).
- (12) DATE CODE. Date code as it appeared on the device.
- (13) NUM. DEV. The number of devices which were tested to the same stresses results (i.e., all other fields the same).
- (14) RESULT. Whether the device passed or failed testing at the given test conditions.

## RAC ESD DATABASE

(1) Part Number	(2) Part Mfr	(3) ESD Class	(4) Part Description	(5) Technology	(6) Test Source	(7) Test Date	(8) Test Type	(9) Test Resistance	(10) Test Capacitance	(11) Number Pulses	(12) Date Code	(13) Number Devices	(14) Test Result	(15) Test Voltage	(16) Pin Combination	(17) Failure Criteria	(18) Test Remarks	(19) General Remarks
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(15) VOLTAGE. The voltage applied to the device (if the device was step-stressed and it failed during stepping, the failure voltage is given).

(16) PIN COMBINATION. The pin combination tested: function, pin number, and polarity (if known).

(17) FAILURE CRITERIA. Criteria used to detect device failure (see Table 4).

(18) TEST REMARK. Any comment which clarifies the data with respect to the specific test record (see Table 5).

(19) GENERAL REMARK. Any comment which clarifies the test procedures or results (see Table 6).

RAC ESD DATABASE

Table 3 - MANUFACTURER LISTING

<u>CODE</u>	<u>MANUFACTURER NAME</u>	<u>CODE</u>	<u>MANUFACTURER NAME</u>
ALP	Alpha Industries	MOT	Motorola Semi
AM	American Microcircuits	MPI	Micropac Industries
AMD	Advanced Micro Devices	MSC	Microwave Semi Corp
AMP	Amperex Electronics	MSI	Microsystems International
ANA	Analog Devices	N/R	Not Reported
ANZ	Anzac Electronics	NCR	National Cash Register
ATM	ATMEL	NEC	Nippon Electric Company (NEC)
BEC	Beckman Instruments	NIT	Nitron
BEN	Bendix	NSC	National Semi
CCL	Croven Crystal Ltd.	NUC	Nucleonic Prod
CEN	Centralab	PLE	Plessey
CMP	Component Device Inc.	PPC	PPC Products
COD	Codi Semiconductor	PPI	Precision Products Inc.
CSI	Continental Semi. Inc.	PRE	Precision Monolithics
CYP	Cypress Semiconductor	RAY	Raytheon
DAL	Dale Electronics	RCA	RCA
DCC	Dynamic Control Corp	RI	Rockwell Intl (Includes Collins)
DEL	Delco Electronics	SCN	Semicon
DIC	Dickson Elec. Corp.	SEM	Semtech Corp.
ETC	Elec. Transistor Corp.	SEN	Sensitron Semi.
FSC	Fairchild	SEQ	SEEQ
GE	General Electric	SGS	SGS ATES
GEN	General Semiconductor	SIE	Siemens
GI	General Instruments	SIG	Signetics
GTL	Gilway Technical Lamp	SIL	Silicon General
HAR	Harris	SIX	Siliconix
HAU	Haufman	SOL	Solitron Devices
HEW	Hewlett Packard	SPR	Sprague Electric
HIT	Hitachi	SSD	Solid State Devices
HON	Honeywell	SSS	Solid State Scientific
HYB	Hybrid Systems	SUP	Supertex
HYC	Hycomp Inc.	SYN	Syntron
IDT	International Device Technologies	TEC	Teledyne Crystalonics
ITT	ITT Semiconductor	TEK	Tektronix
INM	INMOS	TEL	Teledyne
INS	Inselek	TEX	Texas Instruments
INT	Intel	THC	Thermometrics
IRC	Intl. Rectifier Corp.	TRC	Transition Elec. Corp.
ISL	Intersil	TRW	TRW
ITE	Intech	UDT	United Detector Technology
KSC	KSC Semiconductor Corp.	ULT	Ultronix Inc.
LEA	Lear Siegler	UNI	Unitrode
LTC	Linear Technology Corp.	VAR	Various
MAC	MACOM	VIS	Vishay
MAS	Microwave Associates	WES	Westinghouse
MCC	McCoy Electronics	XIC	Xicor
MIT	Micro Power Systems	ZIL	Zilog
MGN	Monolithic Memories		
MOS	Mentek		

## RAC ESD DATABASE

Table 4 - FAILURE CRITERIA LISTING

CODE	FAILURE CRITERIA
1	1 UA LEAKAGE AT 10V.
2	1 UA LEAKAGE AT 20V.
3	10 UA INPUT LEAKAGE PREVIOUSLY MEASURED TO BE 1 UA.
4	10% CHANGE IN ELECTRICAL PARAMETERS.
5	10% CHANGE IN LEAKAGE CURRENT.
6	10% PARAMETER CHANGE.
7	110= 4 UA.
8	2 MA LEAKAGE CURRENT OR OPEN CONDUCTOR LINES.
9	2 UA LEAKAGE CURRENT OR OPEN CONDUCTOR LINES.
10	2% CHANGE OF VOUT AT IL= 50UA.
11	20 UA LEAKAGE CURRENT OR OPEN CONDUCTOR LINES.
12	200 NA LEAKAGE CURRENT OR OPEN CONDUCTOR LINES.
13	25% LEAKAGE, 1UA LEAKAGE, FUNCTION FAILS.
14	50% DROP IN REVERSE VOLTAGE AT IR= 5UA.
15	50% DROP IN V(BR) CBO AT IB= 5UA.
16	50% DROP IN V(BR) GSS AT IG= 5UA.
17	50% INCREASE IN GATE LEAKAGE CURRENT.
18	A 10% CHANGE IN INPUT OFFSET VOLTAGE AND INPUT BIAS CURRENT.
19	A 10% OR > CHANGE IN ANY MEASURED ELECTRICAL PARAMETER WAS CONSIDERED A FAILURE.
20	A 10% OR > INC. IN MEAS. LEAKAGE CURRENT @OR < A VOLT 10% < THE INITIAL BRKDNVOLT.
21	A CHANGE OF 0.5% OR GREATER TOLERANCE.
22	A SHIFT OF 10% OF INPUT OFFSET VOLTAGE AND INPUT BIAS CURRENT.
23	ANY MEASURABLE CHANGE IN AN ELECTRICAL PARAMETER.
24	BVBE AT IR= 100NA.
25	CATASTROPHIC FAILURE (INPUT CURRENT).
26	CATASTROPHIC.
27	CHANGE IN IGSS.
28	CHANGE IN IIH OF 10%.
29	CHANGE IN IIH OF 20NA AT VCC= 5.5V AND VIN= 2.4V.
30	CHANGE IN IIH OF 500% AT VIN= 2.7V.
31	CHANGE IN IIL OF +500% AT VIN= .45V.
32	CHANGE IN IIL OF 500% AT VIN= 5V.
33	CHANGE IN IIO OF 500%.
34	CHANGE IN IL OF +500% AT VIN= 1V.
35	CHANGE IN IR OF +500% AT VBR= 30V.
36	CHANGE IN IR OF +500% AT VR= 50V.
37	CHANGE IN IR OF 500% AT VBR= 10V.
38	CHANGE IN IR OF 500% AT VR= 35V.
39	CHANGE IN IS OF 500% AT VS= -10V.
40	CHANGE IN RESISTANCE OF .1%.
41	CHANGE IN RESISTANCE OF 2%.
42	CHANGE IN VOL OF .050V AT VCC= 4.5V, IOL= 2MA AND VIN= 2 OV.
43	CHANGE OF 0.5% OR GREATER TOLERANCE.
44	CHANGED IN IV CHARACTERISTICS WITH INPUTS HIGH.
45	CHECK FOR ANY CHANGE IN FORWARD VOLTAGE AND REVERSE LEAKAGE CURRENT.
46	CUMULATIVE LEAKAGE CURRENT.
47	D.C. PARAMETER OUT OF SPEC.
48	DAMAGE TO INPUT DIODE.
49	DEGRADATION OF V-I CURVE OR FUNCTIONAL FAILURE.
50	DEVICE CONSIDERED ESD SENSITIVE WHEN A 10%CHANGE IN ELECT. CHAR. WAS OBSERVED.
51	ELECTRICAL PARAMETERS OUT OF SPEC.
52	EXCESSIVE LEAKAGE CURRENT OR OPEN CONDUCTOR LINES.
53	FAILED THE DC ELECTRICAL PARAMETERS TEST LIMITS.



## RAC ESD DATABASE

Table 4 - FAILURE CRITERIA LISTING (Cont'd)

<u>CODE</u>	<u>FAILURE CRITERIA</u>
54	FAILED VOLTAGE IS THE AVERAGE OF PARTS SAMPLED.
55	FAILS TO MEET ELECTRICAL SPECIFICATION.
56	FUNCTION FAILURE OR D.C. PARAMETER OUT OF SPEC.
57	FUNCTIONAL FAILURE.
58	GATE CURRENT GREATER THAN 5UA AT A GATE/SOURCE VOLTAGE OF 22 VOLTS.
59	GREATER THAN .5UA INPUT AT 10V.
60	GREATER THAN 1UA LEAKAGE CURRENT AT 1.5 VOLTS.
61	GREATER THAN 5UA LEAKAGE CURRENT AT 0.5 VOLTS.
62	ID= SHORT.
63	IDSS OUT OF SPEC.
64	IEB AT VEB= +6V +1000% CHANGE.
65	IEBO AT VEB= -6V +1000% CHANGE.
66	IEBO AT VEB= 2.5V +1000% CHANGE.
67	IEBO AT VEB= 3.5V 1000% CHANGE.
68	IF AC,DC,OR FUNCTIONAL PARAMETERS FAILS THE MIN. OR MAX. LIMITS.
69	IGSS AND V(BR)GSS OUT OF SPEC.
70	IGSS AT VGS= -20V +1000% CHANGE.
71	IGSS OUT OF SPEC.
72	IGSSR >25PA AT VGS= 8V AND VDS= 0V.
73	IGSSR AND IDSS OUT OF SPEC.
74	IGSSR AND VGS(TH) OUT OF SPEC.
75	IGSSR OUT OF SPEC.
76	IGSSR,VGS(TH) OR IDSS OUT OF SPEC.
77	I <sub>IH</sub> AND V <sub>R</sub> OUT OF SPEC.
78	I <sub>IH</sub> AND/OR V <sub>OL</sub> OUT OF SPEC.
79	I <sub>IH</sub> AND/OR V <sub>R</sub> OUT OF SPEC.
80	I <sub>IH</sub> OUT OF SPEC.
81	I <sub>IH</sub> , I <sub>IL</sub> , OR I <sub>SS</sub> OUT OF SPEC AT VDD=15V.
82	I <sub>IH</sub> , I <sub>IL</sub> , I <sub>SS</sub> OUT OF SPEC.
83	I <sub>IH</sub> , I <sub>IL</sub> , OR I <sub>SS</sub> OUT OF SPEC.
84	I <sub>IH</sub> , V <sub>F</sub> , OR V <sub>R</sub> OUT OF SPEC.
85	I <sub>IH</sub> = 10MA.
86	I <sub>IH</sub> = 16MA.
87	I <sub>IH</sub> = 97UA.
88	I <sub>IL</sub> OUT OF SPEC.
89	I <sub>L</sub> AT V <sub>R</sub> = .5V +300%.
90	I <sub>L</sub> AT V <sub>R</sub> = 50V +1000% CHANGE.
91	INPUT BREAKDOWN OF 5MV.
92	INPUT SHORTED TO VCC.
93	INPUTS SHORTED TO GROUND.
94	I <sub>R</sub> AND V <sub>B</sub> OUT OF SPEC.
95	I <sub>R</sub> GREATER THAN 100% CHANGE.
96	I <sub>R</sub> OUT OF SPEC.
97	I <sub>R</sub> = 300UA AT 50 VOLTS.
98	I <sub>Z</sub> AT V <sub>R</sub> = 5V +1000% CHANGE.
99	I <sub>Z</sub> AT V <sub>R</sub> = 6.5V +1000% CHANGE.
100	LEAKAGE CURRENT.
101	LIGHT OUTPUT DEGRADATION AT CONSTANT CURRENT.
102	N/R.
103	PARAMETER CHANGE OF GREATER THAN 10%.
104	PARAMETER SHIFT OF GREATER THAN 10%.
105	PASSED FUNCTIONALLY OR DC ELECTRICAL PARAMETERS.
106	RESISTANCE CHANGE OF 1%.

## RAC ESD DATABASE

Table 4 - FAILURE CRITERIA LISTING (Cont'd)

<u>CODE</u>	<u>FAILURE CRITERIA</u>
107	RESISTANCE OUT OF SPEC.
108	SIGNIFICANT AMOUNT OF DEGRADATION TO V-I CURVE.
109	SIGNIFICANT CHANGE IN THE +INPUT -GROUND V-I CURVE.
110	STUDY OF BREAKDOWN CHARACTERISTIC OF INPUT AND OUTPUT PINS.
111	TEST LEAKAGE CURRENT.
112	TESTED TO 2000 VOLTS PER METHOD 3015.2 OF MIL-STD-883.
113	V(BR)GSS OUT OF SPEC.
114	VB OUT OF SPEC.
115	VEBO= IV. TYPICALLY 5 VOLTS.
116	VGS(OFF) OUT OF SPEC AND IGSSR >25PA AT VGS= 8V AND VDS= 0V.
117	VGS(OFF) OUT OF SPEC AND/OR IGSSR >25PA AT VGS= 8V AND VDS= 0V.
118	VGS(OFF) OUT OF SPEC AT VDS= 15V AND ID= 50UA.
119	VGS(TH) AND IDSS OUT OF SPEC.
120	VGS(TH) OUT OF SPEC.
121	VR OUT OF SPEC.
122	WHEN ONE PULSE RESULTED IN DECREASE REV. LEAKAGE OR DECREASE IN JUNC. BRKDN. VOLT.
123	WHEN ONE PULSE RESULTED IN INCREASE REV. LEAKAGE OR DECREASE IN JUNC. BRKDN. VOLT.

RAC ESD DATABASE

Table 5 - TEST REMARKS LISTING

<u>CODE</u>	<u>TEST REMARKS</u>
1	1-DEV. IR SHORT, 3-100% CHANGE, 1-25% CHANGE, 5- NO CHANGE. 5 PULSES FWD & REV.
2	1.13M OHM MODEL.
3	1.1M OHM MODEL.
4	1.21M OHM MODEL.
5	1.58M OHM MODEL.
6	1.69M OHM MODEL.
7	1.78M OHM MODEL.
8	10 MHZ CRYSTAL OSCILLATOR.
9	10 OHM MODEL.
10	10000 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
11	107 OHM MODEL.
12	11.8 OHM MODEL.
13	12 MHZ CRYSTAL OSCILLATOR.
14	133K OHM MODEL.
15	1400 VOLTS IS AN AVERAGE OF 3 DEVICES.
16	140K OHM MODEL.
17	15 MHZ CRYSTAL OSCILLATOR.
18	150K OHM MODEL.
19	16 MHZ CRYSTAL OSCILLATOR.
20	1625 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
21	16300 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
22	1900 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
23	1M OHM MODEL.
24	2 DEVICES INCREASED IR FROM .09, .095 TO .85, .65UA. 5 PULSES FWD & REVERSE.
25	2 OUT OF 9 DEVICES TESTED FAILED.
26	2.1M OHM MODEL.
27	2.49M OHM MODEL.
28	2.6% OF TOTAL NUMBER OF PINS FAILED.
29	2.94M OHM MODEL.
30	20.5 OHM MODEL.
31	220 OHM MODEL.
32	232K OHM MODEL.
33	24.9 OHM MODEL.
34	240K OHM MODEL.
35	250 OHM MODEL.
36	250K OHM MODEL.
37	27.2% OF TOTAL NUMBER OF PINS FAILED.
38	270K OHM MODEL.
39	294K OHM MODEL.
40	297K OHM MODEL.
41	3.01M OHM MODEL.
42	301 OHM MODEL.
43	3200 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
44	330 OHM MODEL.
45	360.1K OHM MODEL.
46	38/PIN DEVICE CMOS, GATE ARRAY, SEMICUSTOM, MONOLITHIC.
47	383 OHM MODEL.
48	392K OHM MODEL.
49	4.37 OHM MODEL.
50	4.7% OF TOTAL NUMBER OF PINS FAILED.
51	400K OHM MODEL.
52	450 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
53	47.5 OHM MODEL.

## RAC ESD DATABASE

Table 5 - TEST REMARKS LISTING (Cont'd)

CODE	TEST REMARKS
54	475 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
55	475K OHM MODEL.
56	49.9 OHM MODEL.
57	499 OHM MODEL.
58	5 PULSES APPLIED AT BOTH FORWARD AND REVERSE POLARITIES.
59	5 PULSES FORWARD, 5 PULSES REVERSE.
60	5 PULSES PER POLARITY. DEVICES HAD METAL LID.
61	50 OHM MODEL.
62	50% FAILURE RATE WITH ARCING BETWEEN LEADS.
63	5000 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
64	511K OHM RESISTOR.
65	5500 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
66	57.6 OHM MODEL.
67	590 OHM MODEL.
68	600 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
69	604K OHM MODEL.
70	665K OHM MODEL.
71	7 OUT OF 10 DEVICES FAILED COLLECTOR TO BASE.
72	768K OHM MODEL.
73	7800 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
74	850 VOLTS IS AN AVERAGE OF AN UNKNOWN NUMBER OF DEVICES.
75	ALL 10 INPUTS FAILED TO VSS AT 800 VOLTS.
76	ALL UNUSED INPUTS AT 5.5 VOLTS.
77	ALL UNUSED INPUTS AT GROUND.
78	ALSO DEGRADATION FROM COMMON TO OUTPUT OF 4000 VOLTS.
79	ALSO FAILED 4,5,7-13 TO VDD AT 500 VOLTS.
80	ALSO FAILED FROM 5,6 & 7 TO VSS AT 800 VOLTS.
81	ALSO FAILED FROM ALL OTHER INPUTS TO VSS AT 800 VOLTS.
82	ALSO FAILED FROM INPUT PINS 5,6,8-13 TO VSS AT 800 VOLTS.
83	ALSO FAILED FROM PIN 7 TO OUTPUT AT 1000 VOLTS.
84	ALSO FAILED FROM PINS 4-8 AND 11-13 TO VSS AT 800 VOLTS.
85	ALSO FAILED FROM PINS 5,6,7,11 TO VDD AT 1000 VOLTS.
86	ALSO FAILED FROM PINS 5-13 TO VSS AT 800 VOLTS.
87	ALSO FAILED FROM PINS 8-13 TO VSS AT 800 VOLTS.
88	ALSO FAILED PIN 12 TO VDD AT 500 VOLTS.
89	ALSO FAILED PIN 4 TO VDD, 5-7,9-13 TO OUTPUT AT 500 VOLTS
90	ALSO FAILED PIN 9 TO OUTPUT AT 800 VOLTS.
91	ALSO FAILED PIN 9 TO VDD AND 8 TO OUTPUT AT 1000 VOLTS.
92	ALSO FAILED PIN 9 TO VSS AT 800 VOLTS.
93	ALSO FAILED PINS 4,5 & 9 TO VSS AT 800 VOLTS.
94	ALSO FAILED PINS 5 AND 10 TO VDD AT 800 VOLTS.
95	ALSO FAILED PINS 5-13 TO OUTPUT AT 500 VOLTS
96	ALSO FAILED PINS 5-13 TO VSS AT 800 VOLTS
97	ALSO INPUT TO GND DEGRADED AT 1800 VOLTS.
98	ALSO SHOWED DEGRADATION ON INPUT TO INPUT AT 2000 VOLTS.
99	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1000V.
100	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1020V.
101	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1025V.
102	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1060V.
103	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1070V.
104	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1080V.
105	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1100V.
106	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1125V.

RAC ESD DATABASE

Table 5 - TEST REMARKS LISTING (Cont'd)

CODE	TEST REMARKS
107	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1170V.
108	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1200V.
109	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1310V.
110	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1325V.
111	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1350V.
112	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1360V.
113	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1600V.
114	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1675V.
115	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1700V.
116	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 1750V.
117	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2300V.
118	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2400V.
119	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2450V.
120	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2500V.
121	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2600V.
122	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2700V.
123	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 2900V.
124	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3000V.
125	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3200V.
126	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3444V.
127	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3500V.
128	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3550V.
129	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3700V.
130	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3760V.
131	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3800V.
132	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 3900V.
133	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 4550V.
134	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 5200V.
135	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 550V.
136	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 600V.
137	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 700V.
138	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 725V.
139	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 750V.
140	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 800V.
141	AVERAGE FAILURE VOLTAGE FOR ALL PINS IS 850V.
142	AVG OF ALL INPUTS 940V, PINS 1,2,15 MOST SUSCEPTIBLE.
143	AVG OF ALL INPUTS 960V, PIN 15 MOST SUSCEPTIBLE.
144	AVG OF ALL INPUTS 960V, PINS 11,14 MOST SUSCEPTIBLE.
145	BOTH POLARITIES WERE TESTED.
146	BREAKDOWN VOLTAGE CHARACTERISTICS WERE DEGRADED.
147	CARRY LOOK AHEAD GENERATOR.
148	CATASTROPHIC FAILURES OBSERVED ARE DUE TO EMIT. CONTACT PENETRATING THE SILICON.
149	CHARGED DEVICE MODEL.
150	COLLECTOR TO BASE FOUND TO BE MOST SENSITIVE (BOTH POLARITIES).
151	COMMON TO OUTPUT SHOWED DEGRADATION AT 4000 VOLTS.
152	CRYSTAL (4 Mhz).
153	DAMAGE OBSERVED AT -700 VOLTS, FAILED AT 1100 VOLTS.
154	DAMAGE OBSERVED AT 1000 VOLTS, ALL PINS FAILED AT OR BEFORE 3500 VOLTS.
155	DAMAGE OBSERVED AT 1050 VOLTS, ALL INPUT PINS FAILED AT OR BEFORE 2000 VOLTS.
156	DAMAGE OBSERVED AT 150 VOLTS, ALL DEVICES FAILED AT OR BEFORE 400 VOLTS.
157	DATE CODE TESTED WERE BETWEEN 8134 TO 8715.
158	DEGRADATION OCCURRED AT 1000V.
159	DEGRADATION OCCURRED AT 1500V.

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Table 5 - TEST REMARKS LISTING (Cont'd)

CODE	TEST REMARKS
160	DEGRADATION OCCURRED AT 2000V.
161	DEGRADATION OCCURRED AT 3000V.
162	DEGRADATION OCCURRED AT 3500V.
163	DEGRADATION OCCURRED AT 4500V.
164	DEGRADATION OCCURRED AT THE APPLIED VOLTAGE.
165	DELAY LINE, PULSE, ELECTROMAGNETIC, LUMPED CONSTANT, 16 PIN DIP.
166	DEVICE PASSED THE REVERSE V-I CURVE AFTER TESTING.
167	DIFFERENT PIN COMB. TESTED AT EACH VOLTAGE STEP.
168	DRIVER / RECEIVER.
169	DUAL PNP TRANSISTOR.
170	EACH PIN STRESSED WITH ALL OTHER PINS CONNECTED TO GROUND.
171	EACH PIN TESTED TO ALL OTHERS TIED TOGETHER.
172	EMITTER TO BASE FAILED AT 3500 VOLTS.
173	FAILED FROM PINS 4,8,13 TO VDD AND 10 TO OUTPUT AT 500 V.
174	FAILED INPUTS TO GND. VOLT IS AVG. OF 4 DEV. MEAN ENGY=16UJ.
175	FAILED PIN 13 TO VDD AT 500 V, 8 TO VSS, 6 TO VDD AT 800 V.
176	FAILED PIN 16 TO VDD AT 500 V & PIN 5 TO VSS AT 800 V.
177	FAILED PINS 13 TO VDD AND PIN 4 TO OUTPUT AT 800 VOLTS.
178	FAILED PINS 5-6,11-13 TO VSS 7 TO VDD & 8-10 TO OUTPUT 500V.
179	FAILED PINS 5-7,9,11 TO VSS 8,10,12 TO VDD AT 500 VOLTS.
180	FAILED PINS 5-8 & 10-13 TO VSS & PIN 9 TO VDD AT 500 VOLTS.
181	FAILED PINS 5-8 & 10-13 TO VSS AT 500V & 9 TO VSS AT 800 V.
182	FAILED PINS 8,13 TO VSS, 15 TO VSS AND 6 TO VDD, ALL AT 800V.
183	FAILED PINS 8-13 TO VSS AT 300V & PINS 4,6 TO OUTPUT AT 500V
184	FAILURE VOLTAGE FROM EMP DATA & WUNSCH MODEL. (SUPERSAP 2).
185	FAILURE VOLTAGE GIVEN IS APPROXIMATE VALUE ONLY.
186	FAILURE VOLTAGE IS AN AVERAGE OF 15 DEVICES.
187	FAILURE VOLTAGE IS AN AVERAGE.
188	FAILURE VOLTAGE OBTAINED FROM EMP DATA AND EXPONENTIAL MODEL.
189	FAILURE VOLTAGE OBTAINED FROM EMP DATA AND WUNSCH MODEL.
190	FAILURE VOLTAGE OBTAINED FROM EMP DATA.
191	FAILURES WERE DUE TO INCREASED CONTACT RESISTANCE.
192	FIVE PULSES BOTH POLARITY ACROSS EACH PIN COMBINATION.
193	FREQUENCY SYNTHESIZER.
194	HEX SCHMIDT TRIGGER.
195	HYBRID, OSCILLATOR.
196	IMCS TO >17.5KV, PAL TESTER TO >43KV. PAL IS A MOTOROLA IN HOUSE BUILT TESTER.
197	IN MOST FAILURES, Vos STARTS FAILING FIRST. THEN, Ios,IB,AND Icc.
198	INITIAL IGSS IS 0.1uA AND FINAL IGSS IS 10uA.
199	INITIAL IGSS IS 3.8uA AND FINAL IGSS IS 10uA.
200	INITIAL IGSS WAS 0.1uA AND FINAL IGSS WAS 1.0uA.
201	INITIAL IGSS WAS 0.1uA AND THE FINAL IGSS WAS 0.7uA.
202	INITIAL IGSS WAS 1.0uA AND FINAL IGSS WAS 3.4uA.
203	INITIAL IGSS WAS 1uA AND FINAL IGSS WAS 10uA.
204	INPUT AND CLAMPING DIODES WERE TYPICAL FAILURES.
205	INPUT FAILED AT 2500 AND 3000 VOLTS, OUTPUT DID NOT FAIL.
206	INPUT PIN 1 FAILED AT 200V AND INPUT PIN 8 FAILED AT 300V.
207	INPUT PIN 1 FAILED AT 200V AND INPUT PIN 8 FAILED AT 400V.
208	INPUT PIN 1 FAILED AT 200V.
209	INPUT PIN 1 FAILED AT 300V.
210	INPUT PIN 1 FAILED AT 400V AND INPUT PIN 8 FAILED AT 500V.
211	INPUT PIN 1 FAILED AT 500V.
212	INPUT PIN 10 FAILED AT 300V.

## RAC ESD DATABASE

Table 5 - TEST REMARKS LISTING (Cont'd)

CODE	TEST REMARKS
213	INPUT PIN 2 FAILED AT 200V.
214	INPUT PIN 2 FAILED AT 300V.
215	INPUT PIN 2 FAILED AT 400V.
216	INPUT PIN 2 FAILED AT 500V.
217	INPUT PIN 7 FAILED AT 200V.
218	INPUT PIN 8 FAILED AT 400V.
219	INPUT PIN 9 FAILED AT 400V.
220	INPUT PINS 1 AND 8 FAILED AT 300V.
221	INPUT PINS 1 AND 8 FAILED AT 400V.
222	INPUT PINS 1 AND 8 FAILED AT 500V.
223	INPUT PINS 1 AND 9 FAILED AT 200V.
224	INPUT PINS 11 AND 15 FAILED AT 200V.
225	INPUT PINS 2 AND 10 FAILED AT 200V.
226	INPUT PINS 2 AND 6 FAILED AT 200V.
227	INPUT PINS 2 AND 6 FAILED AT 300V.
228	INPUT PINS 7 AND 15 FAILED AT 300V.
229	INPUT TO COM. 3000 V, OUTPUT TO COMMON FAIL AT 1600 VOLTS.
230	INPUT TO OUTPUT DEGRADATED AT 600 VOLTS.
231	INPUTS STRESSED NO PINS GND CAP. OF PACKAGE TO GND IS 290PF.
232	INPUTS STRESSED NO PINS GND CAP. OF PACKAGE TO GND IS 3.5PF.
233	INPUTS STRESSED NO PINS GND CAP. OF PACKAGE TO GND IS 37PF.
234	INPUTS STRESSED NO PINS GND CAP. OF PACKAGE TO GND IS 3PF.
235	INPUTS STRESSED NO PINS GND CAP. OF PACKAGE TO GND IS 6.5PF.
236	INTEL METHOD.
237	INTEL MODEL.
238	IR CHANGED FROM .045 $\mu$ A TO 22.7 $\mu$ A ON ONE DEVICE. 5 PULSES FORWARD AND REVERSE.
239	IR CHANGED FROM .103 $\mu$ A, 200V TO .4 $\mu$ A, 80 VOLTS. 5 PULSES FORWARD & REVERSE.
240	IR DOUBLED AFTER 400 VOLTS, SHORTED AFTER 500 VOLTS.
241	IR INCREASED FROM .05 $\mu$ A TO 148 $\mu$ A. 5 PULSES FORWARD, 5 PULSES REVERSE.
242	IR INCREASED FROM .19mA TO .23mA. 5 PULSES FORWARD, 5 PULSES REVERSE.
243	IR INCREASED ON 3 DEVICES; 5.4 TO 6.2 $\mu$ A, 3.7 TO 4.1 $\mu$ A, AND 4.6 TO 5.6 $\mu$ A.
244	JUNCTION IS DAMAGED BEFORE DEVICE FAILS ELECTRICALLY.
245	LED DEVICES WHICH HAVE REV BRKDNW DAMAGE CAUSED BY ESD MAY FUNC NORM IN FWD DIR.
246	MICROCONTROLLER.
247	MIL-STD-883B METHOD 3015 (CAT B), DEVICE PASSED 2000V TEST.
248	MINIMUM OBSERVED DAMAGE WAS 200 VOLTS ALL DEVICES FAILED AT OR BELOW 300 VOLTS.
249	MINIMUM OBSERVED DAMAGE WAS 500 VOLTS ALL INPUT PINS FAILED AT OR BEFORE 700 V.
250	MINIMUM OBSERVED WAS 2600 VOLTS, ALL DEVICES FAILED AT OR BEFORE 3000 VOLTS.
251	MODULATOR.
252	N/R.
253	NO DEGRADATION TO OUTPUT AT 4000 VOLTS.
254	NO DEGRADATION TO OUTPUT PINS.
255	NO FAILURES OBSERVED GATE TO CATHODE.
256	OF 4 DEVICES FAILURE VOLTAGE WAS FROM 1400V TO 6000 VOLTS.
257	OF THE FOUR DEVICES TESTED TWO DEVICE DATE CODES WERE GIVEN AS 8615 AND 8501.
258	ONE DEVICE IR SHORTED. 5 PULSES FORWARD, 5 PULSES REVERSE.
259	OTHER PINS OPEN.
260	OTHER PINS TIED TO GND.
261	PAL TESTER IS A MOTOROLA IN HOUSE BUILT IMCS TO >17.5KV, PAL TO >43KV.
262	PIN UNDER TEST STRESSED WITH ALL OTHERS TIED TOGETHER FLOATING.
263	PINS 1 AND 2 FAILED AT 1100 VOLTS.
264	PINS 11-14 TO VSS, 15 TO VDD AT 800V, 8, 13 TO OUTPUT AT 1000V.
265	PINS 13 TO VSS, 9 TO VSS AT 1000V, 8 TO VDD AT 1000 VOLTS.

RAC ESD DATABASE

Table 5 - TEST REMARKS LISTING (Cont'd)

QIDE TEST REMARKS

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266 PINS 3,4,5, AND 22 FAILED AT 1200 VOLTS.  
267 PINS 8-15 TO VSS AT 500V, 11 TO OUTPUT AT 500 VOLTS.  
268 PINS THAT FAILED 3,6-8,11,14,15,17-21, AND 23.  
269 PRECISION MOTION CONTROLLER.  
270 PROGRAMMABLE BAND PASS FILTER.  
271 PROGRAMMABLE INTERVAL TIMER.  
272 QUAD DEVICE, ONE DIODE PER DEVICE TESTED.  
273 SEMI-CUSTOM GATE ARRAY.  
274 SERIAL INPUT PLL FREQUENCY SYNTHESIZER.  
275 TEST PREPARED AT 25 DEGREES C.  
276 THE MOST SENSITIVE PIN TESTED IS B.  
277 THE MOST SENSITIVE PIN TESTED IS G.  
278 THE MOST SENSITIV PINS TESTED ARE C TO B.  
279 THE MOST SENSITIVE PINS TESTED ARE C TO E.  
280 THE MOST SENSITIVE PINS TESTED ARE E TO B.  
281 THE MOST SENSITIVE PINS TESTED ARE G AND D TO S.  
282 THE MOST SENSITIVE PINS TESTED ARE S AND D TO G.  
283 THE MOST SENSITIVE PINS TESTED ARE S AND G TO D.  
284 VOLTAGE IS AN AVERAGE OF 12 RESISTORS. MEAN ENERGY OF 48UJ.  
285 VOLTAGE IS AN AVERAGE OF 4 DEVICES.  
286 VOLTAGE IS AN AVERAGE OF ALL INPUTS.  
287 WORST CASE PINS (+) 1-4,9,10,20,23-27(-)1,10.LOT # (413,410-1).  
288 WORST CASE PINS (+) 4-6,22,23,25-27 (-) 20,21. LOT # (284/006,285/008,416-3).  
289 ZERO OHMS MODEL.



## RAC ESD DATABASE

### Table 6 - GENERAL REMARKS LISTING

CODE GENERAL REMARKS

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- 1 5 PULSES +/-.
- 2 ALL PINS BUT PIN UNDER TEST CONNECTED TO GND VIA RESISTOR. VDD AND VSS GROUNDED.
- 3 BEGIN WITH 200V, INCR. 100V TO 1000V, INCR. 200V TO 2000V, INCR 500V TO 4000V.
- 4 CHARGED DEVICE MODEL.
- 5 DATA OBTAINED FROM WEIBULL PLOTS. STEPS WERE 20% OF AN UNKNOWN STARTING VOLTAGE.
- 6 DEVICE PASSED REVERSE V-I CURVE. FORWARD AND REVERSE POLARITY TESTED.
- 7 FAILED VOLTAGE IS THE AVERAGE OF PARTS SAMPLED.
- 8 FAILURE VOLTAGE OBTAINED FROM EMP DATA AND EXPONENTIAL MODEL.
- 9 FAILURE VOLTAGES GIVEN ARE VOLTAGE TO CAUSE 30% FAILURE. DETAILS UNKNOWN.
- 10 IMCS TESTER TO >17.5KV, PAL TESTER TO >43KV. ONE PULSE PER VOLTAGE INCREMENT.
- 11 IN ACCORDANCE WITH MIL-STD-883B METHOD 3015 (CAT B), DEVICE PASSED 2000V TESTING.
- 12 MODEL 900.
- 13 N/R.
- 14 PIN COMBINATIONS AND POLARITY DIFFER FOR EACH OF THE FOUR PULSES.
- 15 PIN UNDER TEST STRESSED WITH ALL OTHER PINS TIED TOGETHER GROUNDED.
- 16 PIN UNDER TEST STRESSED WITH ALL OTHER PINS.
- 17 START 100V WITH INCREMENTS OF 100V TO 1000V. THEN INCREMENTS OF 250V TO FAILURE.
- 18 STEP STRESS TEST WAS PERFORMED HOWEVER ACTUAL VOLTAGE STEPS WERE UNKNOWN.
- 19 STEPPED FROM 1800 VOLTS TO FAILURE IN 25 VOLT INCREMENTS.
- 20 STEPPED IN 100 VOLT INCREMENTS STARTING AT 400 VOLTS.
- 21 STEPPED IN 2.5 VOLT INCREMENTS.
- 22 STEPPED IN 25 VOLT INCREMENTS.
- 23 STRESSED IN INCREMENTS OF 20% STARTING AT 16V FOR MOS DEVICES AND 70V FOR OTHERS.
- 24 TEST VOLTAGE WAS INCREMENTED FROM 100V TO 5500V IN 100V STEPS.
- 25 TESTED TO 2000 VOLTS PER METHOD 3015.2 OF MIL-STD-883.
- 26 TESTER IS A MARTIN MARIETTA IN HOUSE BUILT.
- 27 THERE WERE ALSO 100V INCREMENTS STEPPED FROM 100V TO 800V.
- 28 VOLT INCREMENTS AS FOLLOWS:100V TO 1KV,250V TO 3KV,500V TO 6KV,AND 1KV TO 16KV.
- 29 VOLTAGE STEP LEVELS 100 VOLT INCREMENTS UP TO 4000 VOLTS.



SECTION 3.1

MICROCIRCUIT SUSCEPTIBILITY TEST DATA



RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Devices	Pin	Combination	Voltage	Test	Failure Criteria	Test Remarks	General Remarks				
				Type	Resistance												Capacitance	Pulses	Result	Test
0042	INT	1 Linear, Operational Amplifier	Bipolar	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	236	13	
				428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	1100	N/R	13	252	13	
04580		RCA 3 Digital	PMOS																	
				029	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	5958	N/R	102	189	13	
072		TEX 2 Linear, Operational Amplifier	JFET																	
				393	0984	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	4000	N/R	102	252	13	
084		TEX 2 Linear, Operational Amplifier	JFET																	
				393	0183	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2500	N/R	102	252	13	
100		N/R 2 Digital, Converter, A/D-D/A	CMOS																	
				030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	3000	N/R	103	252	13	
10078119		UDT 3 Digital	Bipolar																	
				436	1186	SS	1500	Ohms	100E-12	F	18	N/R	6	PASSED	4000	N/R	5	252	3	
10082603		HON 2 Linear, Comparator	Bipolar																	
				436	1186	SS	1500	Ohms	100E-12	F	17	N/R	2	FAILED	3500	INPUT AND GROUND	5	252	3	

RAC ESD Database

Part Number	Part Description	Technology	Failure Criteria	Test Remarks	General Remarks
10101	10101 ESD Part MOS Class Description 10101 1 2 Linear, Comparator	Bipolar	5	252	3
10102	10102 ESD Part MOS Class Description 10102 1 1 Linear, Operational Amplifier	Bipolar	5	252	3
10103	10103 ESD Part MOS Class Description 10103 1 3 Digital, Gate	ECL	47	186	21
10104	10104 ESD Part MOS Class Description 10104 1 1 Linear, Operational Amplifier	Bipolar	33	285	13

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RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Class			Type	Resistance											
105	N3C	3	Linear, Voltage Regulator	Bipolar	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	6767	N/R	102	188	13
105	N/R	2	Linear, Voltage Regulator	Bipolar	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	4000	N/R	103	252	13
10501	MOT	2	Digital, Gate	ECL	026	0281 SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	440	N/R	32	285	13
10502	MOT	1	Digital, Gate	ECL	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1250	EACH PIN TO 4 & 12 (+ -)	19	252	13
10503	MOT	1	Digital, Flip-Flop	ECL	392	1096 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1500	EACH PIN TO 4 & 12 (+ -)	19	252	13
10505	MOT	1	Digital, Gate	ECL	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	850	EACH PIN TO 8 & 16 (+ -)	19	252	13
10507	MOT	1	Digital, Gate	ECL	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1000	EACH PIN TO 4 & 12 (+ -)	19	252	13
10513	N/R	1	Digital, Gate	ECL	023	N/R	1500 Ohms	117E-12 F	30	N/R	5	FAILED	1500	N/R	85	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology		Failure Test Criteria	Test Voltage	Pin Combination	General Remarks
			10524	ECL				
10525	MOT	1 Digital, Gate	1	1	ECL			
392	1086 SS	1500 Ohms 100E-12 F	1	N/R		2000 EACH PIN TO 4, 12 & 13 (+ -)	19	252
			5	FAILED		2000 EACH PIN TO 8 & 9 THAN 16	19	145
108	N/R	1 Linear, Operational Amplifier			Bipolar			
030	N/R	1500 Ohms 100E-12 F	1	N/R		1250 N/R	103	252
			1	FAILED		1250 N/R	103	252
			1	FAILED		1250 N/R	103	252
245	N/R SS	100 Ohms N/R	1	N/R		214 INPUT(+) INPUT(-)	47	186
109	N/R	3 Linear, Voltage Regulator			Bipolar			
030	N/R	1500 Ohms 100E-12 F	1	N/R		10000 N/R	103	252
			1	FAILED		10000 N/R	103	252
109	FS	2 Linear, Voltage Regulator			Bipolar			
390	N/R GN	1500 Ohms 100E-12 F	5	N/R		2000 S/R	105	247
11011	INT	2 Digital, Memory, RAM, Static			PMOS			
029	N/R	1500 Ohms 100E-12 F	1	N/R		2109 N/R	102	189
11201	N/R	3 Linear, Switch			JFET			
030	N/R	1500 Ohms 100E-12 F	1	N/R		6000 N/R	103	252



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Type	Test	Voltage	Pin	Combination	Test Result	Devices	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Source	Date																
11331	N/R	3	Linear, Switch	JFET	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	6000	N/R	6000 N/R	1	FAILED	103	252	13
117	N/R	3	Linear, Voltage Regulator	Bipolar	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	10000	N/R	10000 N/R	1	FAILED	103	252	13
118	N/R	3	Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	10000	N/R	10000 N/R	1	FAILED	103	252	13
119	N/R	1	Linear, Comparator	Bipolar	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	1500	N/R	1500 N/R	1	FAILED	103	252	13
120	N/R	3	Linear, Voltage Regulator	Bipolar	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	11000	N/R	11000 N/R	1	FAILED	103	252	13
124	N/R	1	Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	10000	N/R	10000 N/R	1	FAILED	103	252	13
245	N/R	SS	100 Ohms N/R		N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	N/R	1	1500	N/R	1500 N/R	1	FAILED	103	252	13
	N/R	SS	100 Ohms N/R		N/R	N/R	1	N/R	15	FAILED	164	INPUT(+)	GND(-)						47	186	21	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure Test		General Remarks				
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result		Voltage	Pin Combination	Criteria	Remarks
13201	N/R	3 Linear, Switch	JFET	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000	N/R	103	252	13
139	N/R	1 Linear, Comparator	Bipolar	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2000	N/R	103	252	13
								1		1	FAILED	2000	N/R	103	252	13
				245	N/R	SS	100 Ohms	N/R	1	N/R	15	FAILED	102 V+(+) INPUT(-)	47	186	21
14000	MOT	2 Digital, Gate	CMOS	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3301	N/R	102	188	13
								1		1	FAILED	2856	N/R	102	188	13
14001A	MOT	1 Digital, Gate	CMOS	111	0478	SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	850 INPUT A(+) INPUT B(-)	56	252	5
											10	FAILED	1450 INPUT A(+) INPUT B(-)	56	252	5
											10	FAILED	2060 INPUT A(+) INPUT B(-)	56	252	5
											2	PASSED	2060 INPUT A(+) INPUT B(-)	56	252	5
14001B	MOT	1 Digital, Gate	CMOS	112	0478	SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	1630 INPUT A(+) INPUT B(-)	56	252	5
											10	FAILED	2400 INPUT A(+) INPUT B(-)	56	252	5
											10	FAILED	3100 INPUT A(+) INPUT B(-)	56	252	5
											2	PASSED	3100 INPUT A(+) INPUT B(-)	56	252	5
14006B	MOT	2 Digital, Register, Shift	CMOS	436	1486	SS	1500 Ohms	100E-12 F	16	8640	3	FAILED	3000 INPUT TO GND	5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology		Failure Criteria	Test Remarks	General Remarks									
			CMOS	CMOS												
14013A	MOT	1 Digital, Flip-Flop	Test Date	Test Resistance	Capacitance	Number Pulses	Date	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Test Criteria	General Remarks			
			113	0478 SS	1500 Ohms	150E-12 F	1	N/R	1	3	FAILED	1200 RESET(+) CLOCK(-)	56	252	5	
										10	FAILED	1560 RESET(+) CLOCK(-)		56	252	5
										10	FAILED	2150 RESET(+) CLOCK(-)		56	252	5
										2	PASSED	2150 RESET(+) CLOCK(-)		56	252	5
14013B	MOT	1 Digital, Flip-Flop	CMOS													
			114	0478 SS	1500 Ohms	150E-12 F	1	N/R	1	3	FAILED	1550 DATA(+) RESET(-)	56	252	5	
										10	FAILED	2100 DATA(+) RESET(-)		56	252	5
										10	FAILED	2500 DATA(+) RESET(-)		56	252	5
										2	PASSED	2500 DATA(+) RESET(-)		56	252	5
14018	MOT	1 Digital, Counter/Divider	CMOS													
			007	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	2	PASSED	400 N/R	82	252	13
			008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	2	PASSED	600 N/R	82	252	13
			009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	2	PASSED	800 N/R	82	252	13
			010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	2	PASSED	1000 N/R	82	252	13
14021	INT	3 Digital, Register, Shift	CMOS													
			029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	4733 N/R	102	189	13
14046	MOT	1 Linear, Phase Lock Loop	CMOS													
			007	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	2	FAILED	400 N/R	82	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Test		Test						
				Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Result	Voltage	Pin	Combination	Criteria	Remarks
14046	MOT	1	CMOS	008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	600	N/R	82	252	13	
				009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	800	N/R	82	252	13	
				010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000	N/R	82	252	13	
14049	MOT	1	CMOS															
				098	0278	GN	1500 Ohms	150E-12 F	15	N/R	1	FAILED	4500	ALL LEADS(+)	56	252	13	
				098	0278	GN	1500 Ohms	150E-12 F	40	N/R	29	PASSED	4500	ALL LEADS(+)	56	252	13	
				099	0278	GN	1500 Ohms	150E-12 F	5	N/R	2	FAILED	6000	ALL LEADS(+)	56	252	13	
				099	0278	GN	1500 Ohms	150E-12 F	15	N/R	4	FAILED	6000	ALL LEADS(+)	56	252	13	
				099	0278	GN	1500 Ohms	150E-12 F	25	N/R	1	FAILED	6000	ALL LEADS(+)	56	252	13	
				099	0278	GN	1500 Ohms	150E-12 F	40	N/R	3	FAILED	6000	ALL LEADS(+)	56	252	13	
											15	PASSED	6000	ALL LEADS(+)	56	252	13	
				100	0278	GN	1500 Ohms	150E-12 F	5	N/R	4	FAILED	7000	ALL LEADS(+)	56	252	13	
				100	0278	GN	1500 Ohms	150E-12 F	15	N/R	10	FAILED	7000	ALL LEADS(+)	56	252	13	
				100	0278	GN	1500 Ohms	150E-12 F	25	N/R	5	FAILED	7000	ALL LEADS(+)	56	252	13	
				100	0278	GN	1500 Ohms	150E-12 F	40	N/R	9	FAILED	7000	ALL LEADS(+)	56	252	13	
											2	PASSED	7000	ALL LEADS(+)	56	252	13	
				101	0278	GN	1500 Ohms	150E-12 F	15	N/R	2	FAILED	7000	GATE(+)	56	252	13	
				101	0278	GN	1500 Ohms	150E-12 F	40	N/R	10	PASSED	700	GATE(+)	56	252	13	

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Test	Voltage	Pin Combination	Test Result	Devices	Failure Criteria	Test Remarks	General Remarks
				Source	Type													
14049	MOT	1 Digital, Inverter, Buffer	CMOS	102	0278 GN	1500 Ohms	150E-12 F	5	N/R	5	FAILED	900	GATE(+)	ALL LEADS(-)	5	56	252	13
				102	0278 GN	1500 Ohms	150E-12 F	40	N/R	2	FAILED	900	GATE(+)	ALL LEADS(-)	2	56	252	13
				103	0278 GN	1500 Ohms	150E-12 F	5	N/R	5	PASSED	900	GATE(+)	ALL LEADS(-)	5	56	252	13
				103	0278 GN	1500 Ohms	150E-12 F	5	N/R	10	FAILED	1100	GATE(+)	ALL LEADS(-)	10	56	252	13
				103	0278 GN	1500 Ohms	150E-12 F	25	N/R	1	FAILED	1100	GATE(+)	ALL LEADS(-)	1	56	252	13
				103	0278 GN	1500 Ohms	150E-12 F	40	N/R	1	PASSED	1100	GATE(+)	ALL LEADS(-)	1	56	252	13
				007	N/R GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400	N/R		2	82	252	13
				008	N/R GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	600	N/R		2	82	252	13
				009	N/R GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	800	N/R		2	82	252	13
				010	N/R GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000	N/R		2	82	252	13
14049A	MOT	1 Digital, Inverter, Buffer	CMOS	115	0478 SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	790	INPUT(+)	VCC(-)	3	56	252	5
										10	FAILED	900	INPUT(+)	VCC(-)	10	56	252	5
										10	FAILED	980	INPUT(+)	VCC(-)	10	56	252	5
										2	PASSED	980	INPUT(+)	VCC(-)	2	56	252	5
14049B	MOT	1 Digital, Inverter, Buffer	CMOS	093	0278 SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	860	GATE(+)	VSS(-)	3	56	252	5
										10	FAILED	1030	GATE(+)	VSS(-)	10	56	252	5
											PASSED	1150	GATE(+)	VSS(-)		56	252	5

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Voltage	Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Source	Type												
14-0538	MOT	1 Digital, Inverter, Buffer	CMOS	116	0478 SS	1500 Ohms	150E-12 F	1	N/R			730 INPUT(+) VCC(-)	3 FAILED	56	252	5	
				093	0278 SS	1500 Ohms	150E-12 F	1	N/R			920 INPUT(+) VCC(-)	10 FAILED	56	252	5	
												1070 INPUT(+) VCC(-)	10 FAILED	56	252	5	
												1070 INPUT(+) VCC(-)	2 PASSED	56	252	5	
												1150 GATE(+) VSS(-)	10 FAILED	56	252	5	
14-050	MOT	1 Digital, Inverter, Buffer	CMOS	007	N/R	GN	1500 Ohms	100E-12 F	1	N/R		400 N/R	2 PASSED	82	252	13	
				008	N/R	GN	1500 Ohms	100E-12 F	1	N/R		600 N/R	2 PASSED	82	252	13	
				009	N/R	GN	1500 Ohms	100E-12 F	1	N/R		800 N/R	1 FAILED	82	252	13	
												800 N/R	1 PASSED	82	252	13	
				010	N/R	GN	1500 Ohms	100E-12 F	1	N/R		1000 N/R	2 FAILED	82	252	13	
14-0538	MOT	1 Linear, Switch	CMOS	117	0478 SS	1500 Ohms	150E-12 F	1	N/R			1360 VEE(+) SELECT A(-)	3 FAILED	56	252	5	
												2000 VEE(+) SELECT A(-)	10 FAILED	56	252	5	
												2510 VEE(+) SELECT A(-)	10 FAILED	56	252	5	
												2510 VEE(+) SELECT A(-)	2 PASSED	56	252	5	
14-0538	MOT	1 Digital, Inverter, Buffer	CMOS	127	0278 SS	1500 Ohms	150E-12 F	1	N/R			700 VDD(+) GATE(-)	3 FAILED	56	252	5	
												1370 VDD(+) GATE(-)	10 FAILED	56	252	5	
												1720 VDD(+) GATE(-)	10 FAILED	56	252	5	

## RAC ESD Database

Part Number	Part ESD Class	Part Description	Test		Number	Date	Code	Devices	Pin Combination	Voltage	Test Result	Failure Criteria	Test Remarks	General Remarks
			Type	Resistance										
1408	MOT	Digital, Inverter, Buifer	CMOS											
	097	0278 GN	1500 Ohms	150E-12 F	1	N/R	2	1720 VDD(+)	GATE(-)		PASSED	56	252	5
	091	0278 GN	1500 Ohms	150E-12 F	1	N/R	18	1125 VDD(+)	GATE(-)		FAILED	56	252	13
	094	0278 SS	1500 Ohms	150E-12 F	1	N/R	7	1125 VDD(+)	GATE(-)		PASSED	56	252	13
	095	0278 GN	1500 Ohms	150E-12 F	1	N/R	3	760 VDD(+)	GATE(-)		FAILED	56	252	5
	096	0278 GN	1500 Ohms	150E-12 F	1	N/R	10	1380 VDD(+)	GATE(-)		FAILED	56	252	5
	097	0278 GN	1500 Ohms	150E-12 F	1	N/R	10	1800 VDD(+)	GATE(-)		FAILED	56	252	5
	095	0278 GN	1500 Ohms	150E-12 F	1	N/R	2	1800 VDD(+)	GATE(-)		PASSED	56	252	5
	096	0278 GN	1500 Ohms	150E-12 F	1	N/R	25	600 VDD(+)	GATE(-)		PASSED	56	252	13
	097	0278 GN	1500 Ohms	150E-12 F	1	N/R	7	1125 VDD(+)	GATE(-)		FAILED	56	252	13
	097	0278 GN	1500 Ohms	150E-12 F	1	N/R	18	740 VDD(+)	GATE(-)		PASSED	56	252	13
	030	N/R	1500 Ohms	100E-12 F	1	N/R	14	920 VDD(+)	GATE(-)		FAILED	56	252	13
	030	N/R	1500 Ohms	100E-12 F	1	N/R	11	920 VDD(+)	GATE(-)		PASSED	56	252	13
141	FSC	2 Linear, Voltage Regulator	Bipolar											
	390	N/R	1500 Ohms	100E-12 F	5	N/R	1	5000 N/R			FAILED	103	252	13
	390	N/R	1500 Ohms	100E-12 F	5	N/R	1	5000 N/R			FAILED	103	252	13
	390	N/R	1500 Ohms	100E-12 F	5	N/R	1	5000 N/R			FAILED	103	252	13
14511	MOT	2 Digital, Decoder	CMOS											
	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	3000 INPUT(1)(+)	OUT(15)(-)		FAILED	81	167	13

RAC ESD Database

Part Number	(Cont'd)	Part ESD		Part Description	Technology	Test		Number	Date	Number	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
		Mfc	Class			Test Date	Test Type												Resistance
14511		MOT	2	Digital, Decoder	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3500	INPUT(3)(+)	OUT(13)(-)	81	167	13
145155		MOT	1	Digital, Transceiver	CMOS	393	0984 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	600	6(INPUT) 5(VDD)		102	274	13
14519		MOT	1	Digital, Gate	CMOS	007	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400	N/R	82	252	13
		MOT	1	Digital, Gate	CMOS	008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	600	N/R	82	252	13
		MOT	1	Digital, Gate	CMOS	009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	800	N/R	82	252	13
		MOT	1	Digital, Gate	CMOS	010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	1000	N/R	82	252	13
14524		MOT	2	Digital, Memory, PROM	CMOS	393	0385 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	3000	15(INPUT) 16(VDD)		102	252	13
		MOT	2	Digital, Memory, PROM	CMOS							3	FAILED	4000	2(INPUT) 16(VDD)		102	252	13
14568		MOT	2	Digital, Counter/Divider	CMOS	393	0984 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3000	N/R		102	252	13
1458		N/R	2	Linear, Operational Amplifier	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	103	252	13



RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
				Source	030															
1-58	N/R	2	Linear, Operational Amplifier	Bipolar																
1463	N/R	3	Linear, Voltage Regulator	Bipolar																
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	2500	N/R		103	252	13	
		N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	10000	N/R		103	252	13	
		N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	10000	N/R		103	252	13	
148	N/R	2	Linear, Operational Amplifier	Bipolar																
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	2500	N/R		103	252	13	
148	FSC	2	Linear, Operational Amplifier	Bipolar																
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R						1 PASSED	2000	S/R		105	247	11	
1488	MOT	3	Digital, Line/Bus Driver	Bipolar																
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	5546	N/R		102	188	13	
1488	N/R	3	Digital, Line/Bus Driver	Bipolar																
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	6000	N/R		103	252	13	
		N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	6000	N/R		103	252	13	
1489	MOT	3	Digital, Line/Bus Receiver	Bipolar																
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R						1 FAILED	4491	N/R		102	188	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Date	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Test															
1489	N/R	3 Digital, Line/Bus Receiver	Bipolar	030	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	N/R	030	1 FAILED	6000 N/R	103	252	13		
1494	N/R	1 Linear	Bipolar	030	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	N/R	030	1 FAILED	2000 N/R	103	252	13		
1496	N/R	2 Linear	Bipolar	030	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	N/R	030	1 FAILED	2000 N/R	103	252	13		
1506	MOT	2 Digital, Converter, A/D-D/A	Bipolar	026	0281 SS	1	N/R	1	200E-12 F	100 Ohms	200E-12 F	N/R	026	4 FAILED	520 INPUT(5)(+)GND(2)(-)	37	174	13		
1508	N/R	3 Digital, Converter, A/D-D/A	Bipolar	030	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	N/R	030	1 FAILED	5000 N/R	103	252	13		
150K	SIL	2 Linear, Voltage Regulator	Bipolar	436	1186 SS	15	8631	5	100E-12 F	1500 Ohms	100E-12 F	N/R	436	5 FAILED	2500 INPUT TO OUTPUT	5	252	3		
1530	MOT	1 Linear, Operational Amplifier	Bipolar	029	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	N/R	029	1 FAILED	2159 N/R	102	188	13		

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Resistance	Capacitance	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Result											
1530	MOT	1 Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	1887 N/R	1887 N/R	102	188	13
1533	MOT	1 Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	100E-12 F	1413 N/R	1413 N/R	102	188	13
155	N/R	3 Linear, Operational Amplifier	BIFET	N/R	N/R	3	N/R	1	100E-12 F	1500 Ohms	100E-12 F	6000 N/R	6000 N/R	103	252	13
1553	HAR	2 Digital, Decoder	CMOS	N/R	N/R	2	N/R	2	100E-12 F	1500 Ohms	100E-12 F	2500 INPUT TO OUTPUT	2500 INPUT TO OUTPUT	5	78	3
1558	N/R	2 Linear, Operational Amplifier	Bipolar	N/R	N/R	2	N/R	2	100E-12 F	1500 Ohms	100E-12 F	4000 INPUT TO COMMON	4000 INPUT TO COMMON	5	252	3
156	N/R	3 Linear, Operational Amplifier	BIFET	N/R	N/R	3	N/R	1	100E-12 F	1500 Ohms	100E-12 F	2500 N/R	2500 N/R	103	252	13
156	SIG	2 Linear, Operational Amplifier	Bipolar	N/R	N/R	2	N/R	1	100E-12 F	1500 Ohms	100E-12 F	6000 N/R	6000 N/R	103	252	13
156	N/R	3 Linear, Operational Amplifier	BIFET	N/R	N/R	3	N/R	1	100E-12 F	1500 Ohms	100E-12 F	3945 N/R	3945 N/R	102	188	13

RAC ESD Database

Part Number (Cont'd)	Part Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks			
				Type	Resistance										Capacitance	Test	
155	AMD	2 Linear, Operational Amplifier	Bipolar	0281	SS	100	Ohms	200E-12	F	1	N/R	4	FAILED	636 INPUT(2)(+) V(-)(4)(-)	33	285	13
1563	N/R	2 Linear, Voltage Regulator	Bipolar	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	3000 N/R	103	252	13
156A	N/R	3 Linear, Operational Amplifier	Bipolar	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	6000 N/R	103	252	13
1590	N/R	3 Linear, Operational Amplifier	Bipolar	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	7000 N/R	103	252	13
1594	N/R	1 Linear	Bipolar	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2000 N/R	103	252	13
15946	TEX	N Digital, Gate	DTL	029	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	342741 N/R	102	188	13
1596	N/R	2 Linear	Bipolar	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	3000 N/R	103	252	13
1673	MOT	3 Digital, Counter/Divider	ECL	029	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	11934 N/R	102	189	13

RAC ESD Database

Part Number	Part ESD Mfg Class	Part Description	Technology	Test Date	Test Type	Test Ohms	Test Capacitance	Number of Devices	Date Code	Unit Description	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
1922	N/R	1 Digital, Processing Unit, Central	CMOS	029	N/R	1500	100E-12 F	1	N/R		1 FAILED	7274 N/R		102	188	13
1932	N/R	1 Digital, Processing Unit, Central	CMOS	030	N/R	1500	100E-12 F	1	N/R		1 FAILED	1000 N/R		103	252	13
1922	RCA	2 Digital, Memory, RAM, Static	CMOS	393	N/R	SS	100E-12 F	1	N/R		1 FAILED	2018 OUT.(8)(+) APTT(-)		49	188	8
1952	N/R	1 Digital, Transceiver, Input-Output Port	CMOS	030	N/R	N/R	100E-12 F	1	N/R		1 FAILED	1000 N/R		103	252	13
192	SIX	3 Linear, Switch	JFET	026	N/R	SS	200E-12 F	1	N/R		4 FAILED	750 V(-)(14)(+) INPUT(-)		39	285	13
198	N/R	2 Linear	BIFET	030	N/R	N/R	100E-12 F	1	N/R		1 FAILED	2500 N/R		103	252	13
2001	TEX	3 Digital, Register, Shift	TTL	029	N/R	N/R	100E-12 F	1	N/R		1 FAILED	7583 N/R		102	189	13
201	SIX	1 Linear, Switch	CMOS	436	N/R	SS	100E-12 F	18	N/R		5 PASSED	4000 N/R		5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure Test							
				Date	Type	Resistance	Capacitance	Pulses	Code	Date	Devices	Result	Voltage	Pin Combination	Criteria	Remarks	General Remarks
201	SIX	1 Linear, Switch	CMOS	436	1186 SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	600	INPUT TO OUTPUT	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	18	N/R	5	PASSED	4000	N/R	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	3	N/R	5	FAILED	400	INPUT TO OUTPUT	5	252	3	
201	SIL	1 Linear, Switch	CMOS														
				436	1186 SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	600	INPUT TO OUTPUT	5	252	3	
2051	N/R	1 Digital, Memory, EAROM	MNOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13	
20LID	MON	1 Digital	TTL														
				436	1186 SS	1500 Ohms	100E-12 F	7	8649	1	FAILED	800	INPUT TO OUTPUT	5	252	3	
2102	INT	1 Digital, Memory, RAM, Stat c	NMOS														
				041	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	700	N/R	1	252	20
				045	N/R	SS	1000 Ohms	200E-12 F	4	N/R	3	FAILED	1400	N/R	1	15	13
				046	N/R	GN	1000 Ohms	200E-12 F	200	N/R	1	PASSED	500	N/R	1	252	13
				047	N/R	GN	1000 Ohms	200E-12 F	25	N/R	1	FAILED	1000	N/R	1	252	13
				026	0281	SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	535 INPUT(1)(+) GND(9)(-)		32	285	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Test		Number	Date	Number	Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
			Test	Test										
2102	FSC	1 Digital, Memory, RAM, Static	001	0980 SS	1500 Ohms	100E-12 F	3 N/R	2 FAILED	300 N/R			48	252	13
							1 FAILED	400 N/R				48	252	13
2102	SIG	1 Digital, Memory, RAM, Static	046	N/R GN	1000 Ohms	200E-12 F	20 N/R	1 FAILED	500 N/R			1	252	13
2102	N/R	3 Digital, Memory, RAM, Static	245	N/R SS	100 Ohms	N/R	1 N/R	15 FAILED	45 INPUT(+)	GND(-)		47	186	21
211	N/R	3 Linear, Comparator	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	11000 N/R			103	252	13
2111	N/R	1 Digital, Memory, RAM, Static	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1000 N/R			103	252	13
2114	N/R	1 Digital, Memory, RAM, Static	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1000 N/R			103	252	13
2141	N/R	1 Digital, Memory, RAM, Static	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1000 N/R			103	252	13
2147	N/R	1 Digital, Memory, RAM, Static	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1000 N/R			103	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Code	Date Devices	Test Result	Test Voltage	Pin Combination	Technology	
													Failure Criteria	Test Remarks
2255	MOT	1 Digital, Gate	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	268 N/R		102	189
2401	N/R	1 Digital, Memory, EPROM	N/R	SS	1500 Ohms	117E-12 F	30	N/R	5	5 FAILED	750 N/R		91	252
2516	N/R	1 Digital, Memory, EPROM	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	1000 N/R		103	252
2520HA	HAR	1 Linear, Operational Amplifier	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1 FAILED	300 EACH PIN(+)		52	140
2622	HAR	1 Linear, Operational Amplifier	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	700 EACH PIN(+)		52	117
2622	ISL	1 Linear, Operational Amplifier	N/R	SS	1500 Ohms	100E-12 F	11	8625	1	1 FAILED	1400 INPUT TO INPUT		5	229
2622	N/R	2 Linear, Operational Amplifier	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	2000 N/R		103	252
2622	N/R	2 Linear, Operational Amplifier	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	2000 N/R		103	252
2622	N/R	2 Linear, Operational Amplifier	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	3000 N/R		103	252



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Test Type	Test Resistance										
2650	N/R	1	Linear, Operational Amplifier	Bipolar	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
26LS31	N/R	1	Digital, Line/Bus Driver	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
26LS31	NSC	1	Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	600 INPUT TO COMMON	5	252	3
26LS31	AMD	1	Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	3	N/R	2	FAILED	400 INPUT TO OUTPUT	5	252	3
26LS32	N/R	1	Digital, Line/Bus Receiver	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
26LS32	AMD	1	Digital, Line/Bus Receiver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	4	N/R	2	FAILED	500 INPUT TO COMMON	5	230	3
26LS33	AMD	1	Digital, Line/Bus Receiver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	4	8420	2	FAILED	500 INPUT TO OUTPUT & COMMON	5	252	3
26LS33	AMD	1	Digital, Line/Bus Receiver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	6	8420	2	FAILED	700 OUTPUT TO COMMON	5	252	3

RAC ESD Database

Part Number	(Cont'd)	Part ESD Mfr Class	Part Description	Technology		Failure Test Criteria	Test Voltage	Pin Combination	General Remarks
				LS TTL	General				
26LS33		NSC	1 Digital, Line/Bus Receiver	1	14	1	2000	INPUT TO COMMON	5 252 3
2702		N/R	1 Linear, Voltage Reference						Bipolar 103 252 13
030		N/R	N/R 1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	
2708		N/R	1 Digital, Memory, EPROM						NMOS 103 252 13
030		N/R	N/R 1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	
384		N/R	SS 1000 Ohms	200E-12 F	1	N/R	1	800 EACH PIN(+) 400 EACH PIN(+) 1500 EACH PIN(+) 500 EACH PIN(+)	52 121 24 52 135 24 52 121 24 52 136 24
27128		INT	2 Digital, Memory, EAROM						NMOS 102 252 13
393		0984	SS 1500 Ohms	100E-12 F	1	N/R	1	3500 N/R	
429		N/R	GN 0 Ohms	50E-12 F	3	N/R	10	PASSED 600 N/R	13 237 13
2716		N/R	1 Digital, Memory, EPROM						NMOS 103 252 13
030		N/R	N/R 1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	
384		N/R	SS 1000 Ohms	200E-12 F	1	N/R	1	600 EACH PIN(+) 3000 EACH PIN(+)	52 117 24 52 132 24
27256		INT	1 Digital, Memory, EPROM						NMOS 103 252 13
428		N/R	GN 1500 Ohms	100E-12 F	5	N/R	10	PASSED 1200 N/R	13 252 13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Voltage	Test Result	Number Devices	Date Code	Pulses	Resistance	Capacitance	Test Type	Test Date	Source	General Remarks	
	Mfr Class	Part															Failure Test Remarks
27256	INT	1	Digital, Memory, EPROM	HMOS	13	600 N/R	10 PASSED	3 N/R			0 Ohms	50E-12 F				237	
2732	INT	2	Digital, Memory, EPROM	NMOS	102	2500 N/R	1 FAILED	1 N/R			1500 Ohms	100E-12 F				252	
2732	N/R	1	Digital, Memory, EPROM	NMOS													
384	N/R	SS	1000 Ohms		52	1500 EACH PIN(+)	1 FAILED	1 N/R			1000 Ohms	200E-12 F				122	
					52	500 EACH PIN(+)	1 FAILED									99	
27512	INT	1	Digital, Memory, EPROM	HMOS	13	1200 N/R	10 PASSED	5 N/R			1500 Ohms	100E-12 F				252	
428	N/R	GN	1500 Ohms		13	600 N/R	10 PASSED	3 N/R			0 Ohms	50E-12 F				237	
429	N/R	GN	0 Ohms														
2764	INT	1	Digital, Memory, EPROM	HMOS													
428	N/R	GN	1500 Ohms		13	1200 N/R	10 PASSED	5 N/R			1500 Ohms	100E-12 F				252	
429	N/R	GN	0 Ohms		13	600 N/R	10 PASSED	3 N/R			0 Ohms	50E-12 F				237	
27513	N/R	1	Digital, Memory, PROM	STTL													
030	N/R	N/R	1500 Ohms		103	1000 N/R	1 FAILED	1 N/R			1500 Ohms	100E-12 F				252	
27519C	N/R	1	Digital, Memory, PROM	STTL													
030	N/R	N/R	1500 Ohms		103	1000 N/R	1 FAILED	1 N/R			1500 Ohms	100E-12 F				252	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
			Test Type	Test Resistance											
27S20	N/R	1 Digital, Memory, PROM	026	0281 SS	100 Ohms	200E-12 F	1	N/R	1	4 FAILED	263 N/R	263 N/R	31	285	13
27S291	AMD	1 Digital, Memory, PROM	393	0984 SS	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	500 5(INPUT) 12(GND)	500 5(INPUT) 12(GND)	102	252	13
28C256	SEQ	2 Digital, Memory, PROM	436	1186 SS	1500 Ohms	100E-12 F	16	8718	1	1 FAILED	3000 INPUT TO OUTPUT	3000 INPUT TO COMMON	5	252	3
2901	AMD	1 Digital, Processing Unit, Central	383	N/R SS	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	774 CP(+) APTT(-)	774 CP(+) APTT(-)	49	188	8
2901	N/R	1 Digital, Processing Unit, Central	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	183 F=0(+) APTT(-)	183 F=0(+) APTT(-)	49	188	8
2901	N/R	1 Digital, Processing Unit, Central	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	57286 VCC(+) APTT(-)	57286 VCC(+) APTT(-)	49	188	8
2909	N/R	1 Digital, Processing Unit, Central	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	1500 N/R	1500 N/R	103	252	13
2910	N/R	1 Digital, Processing Unit, Central	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	1500 N/R	1500 N/R	103	252	13

RAC ESD Database

Part Number	Part Mfg Class	Part Description	Technology	Test		Number Date	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance							
2930	N/R	1 Digital, Processing Unit, Central	LSTTL	N/R	1500 Ohms	100E-12 F	1 FAILED	1500 N/R		103	252	13
3001	INT	1 Digital	Bipolar	N/R	GN	1500 Ohms	100E-12 F	5 N/R	412 PINS 23 AND 24	13	252	13
3002	INT	1 Digital	Bipolar	N/R	GN	1500 Ohms	100E-12 F	5 N/R	425 PINS 16,24,26, AND 27	13	252	13
3003	INT	1 Digital	Bipolar	N/R	GN	1500 Ohms	100E-12 F	5 N/R	512 PINS 2 AND 17	13	252	13
301	N/R	1 Linear, Operational Amplifier	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	1250 N/R	103	252	13
301	MOT	N Linear, Operational Amplifier	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	82092 N/R	102	188	13
3015	RCA	1 Linear, Operational Amplifier	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	1958 N/R	102	189	13
302	NSC	3 Linear, Operational Amplifier	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	10099 N/R	102	188	13

RAC ESD Database

Part Number	Part	ESD	Part	Mfr	Class	Description	Technology	Test		Number	Date	Pulses	Code	Devices	Pin	Combination	Voltage	Test	Result	Failure	Test	General
								Test	Test													
304				MOT	3	Digital, Line/Bus Driver	ECL	N/R	N/R	1	N/R	1	N/R	1	FAILED	13991	N/R	102	188	102	188	13
308				MOT	3	Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	6257	N/R	102	188	102	188	13
303				N/R	1	Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	1250	N/R	103	252	103	252	13
309				N/R	3	Linear, Voltage Regulator	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	10000	N/R	103	252	103	252	13
3101				INT	3	Digital, Memory, RAM, Static	STTL	N/R	N/R	1	N/R	1	N/R	1	FAILED	8060	N/R	102	189	102	189	13
311				FSC	1	Linear, Comparator	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	295 IN.(+) APTT(-)		49	188	49	188	8
311				N/R	3	Linear, Comparator	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	23485 CLOCK(+) APTT(-)		49	188	49	188	8
303				N/R	3	Linear, Operational Amplifier	Bipolar	N/R	N/R	1	N/R	1	N/R	1	FAILED	11000	N/R	103	252	103	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test Source	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Current	Test Time	Test Result	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks
311	N/R	3 Linear, Comparator	Bipolar	030	N/R	1500 Ohms	100E-12 F	10000	10000	10000	1 FAILED	10000	N/R	N/R	103	252	13
3158	HON	1 Linear, Comparator	Bipolar														
	436	SS	1500 Ohms	100E-12 F	16	N/R					1 FAILED	3000	COMMON TO OUTPUT	5	252	3	
											1 FAILED	3000	INPUT TO COMMON	5	252	3	
	436	SS	1500 Ohms	100E-12 F	9	N/R					1 FAILED	1000	VCC TO GND	5	252	3	
	436	SS	1500 Ohms	100E-12 F	11	N/R					1 FAILED	1400	VCC TO GND	5	252	3	
317	MOT	3 Linear, Voltage Regulator	Bipolar	029	N/R	1500 Ohms	100E-12 F	6253	6253	6253	1 FAILED	6253	N/R	102	188	13	
317	N/R	3 Linear, Voltage Regulator	Bipolar														
	030	N/R	1500 Ohms	100E-12 F	1	N/R					1 FAILED	10000	N/R	103	252	13	
318	N/R	3 Linear, Operational Amplifier	Bipolar														
	030	N/R	1500 Ohms	100E-12 F	1	N/R					1 FAILED	11000	N/R	103	252	12	
319	N/R	1 Linear, Comparator	Bipolar														
	030	N/R	1500 Ohms	100E-12 F	1	N/R					1 FAILED	1500	N/R	103	252	13	
320	N/R	3 Linear, Voltage Regulator	Bipolar														
	030	N/R	1500 Ohms	100E-12 F	1	N/R					1 FAILED	10000	N/R	103	252	13	

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology
323	3	Linear, Voltage Regulator	Bipolar
324	1	Linear, Operational Amplifier	Bipolar
331	1	Digital, Converter, A/D-D/A	CMOS
334	1	Linear, Comparator	Bipolar
340	3	Linear, Voltage Regulator	Bipolar
3400	1	Digital, Memory, EA™CM	CMOS

Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Devices	Test Code	Test Date	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
030	N/R	N/R	1500 Ohms	100E-12 F	1	1	N/R		10000 V/R	1 FAILED	103	252	13
									10000 N/R	1 FAILED	103	252	13
									10000 N/R	1 FAILED	103	252	13
030	N/R	N/R	1500 Ohms	100E-12 F	1	1	N/R		1500 N/R	1 FAILED	103	252	13
005	0980	SS	1500 Ohms	10CE-12 F	1	1	N/R		500 INPUT(6)(+) VSS(3)(-)	1 FAILED	04	79	13
									800 INPUT(4)(+) VSS(3)(-)	1 FAILED	104	96	13
									500 INPUT(8)(+) VSS(3)(-)	1 FAILED	104	89	13
									300 INPUT(7)(+) VSS(3)(-)	1 FAILED	104	183	13
									500 INPUT(4)(+) OUTPUT(-)	1 FAILED	104	95	13
									800 INPUT(+)(+) VSS(3)(-)	1 FAILED	104	96	13
030	N/R	N/R	1500 Ohms	100E-12 F	1	1	N/R		2000 N/R	1 FAILED	103	252	13
030	N/R	N/R	1500 Ohms	100E-12 F	1	1	N/R		10000 N/R	1 FAILED	103	252	13
									10000 N/R	1 FAILED	103	252	13
									10000 N/R	1 FAILED	103	252	13
									10000 N/R	1 FAILED	103	252	13
383	N/R	SS	1500 Ohms	100E-12 F	1	1	N/R		81 VCC(+)	1 FAILED	49	188	8
									APTT(-)				



RAC ESD Database

Part Number	Part ES	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Test Date	Test Type													
3400	GI	1 Digital, Memory, EAROM	CMOS	383	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	144	VDD(+)	APTT(-)	49	188	8
34001	MOT	1 Linear, Operational Amplifier	BIFET	027	N/R	GN	1500 Ohms	100E-12 F	1	N/R	8	FAILED	1000	N/R		47	252	12
34001	FSC	1 Linear, Operational Amplifier	BIFET	123	0478	SS	1500 Ohms	150E-12 F	1	N/R	10	FAILED	1800	INPUT B(+)	INPUT A(-)	56	252	5
3403	MOT	1 Linear, Operational Amplifier	Bipolar	027	N/R	GN	1500 Ohms	100E-12 F	1	N/R	6	FAILED	1000	N/R		47	252	12
340498	FSC	1 Digital, Inverter, Buffer	CMOS	125	0478	SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	1100	INPUT(+)	OUTPUT(-)	56	252	5
34050941-001	HVC	1 Digital, Converter, A/D-D/A	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	14	N/R	1	FAILED	2000	INPUT-GND	AND GND-OUTPUT	5	252	3

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance											
34054597	HON	1 Linear, Operational Amplifier	Bipolar													
34054597-001	HON	1 Linear, Operational Amplifier	Bipolar													
436	1186 SS	1500 Ohms		100E-12 F	12 N/R	1					1 FAILED	1500 INPUT TO GND	5	252	3	
34056230-001	LTC	3 Linear, Operational Amplifier	Bipolar													
436	1186 SS	1500 Ohms		100E-12 F	18 N/R	1					1 PASSED	4060 N/R	5	252	3	
34069508-100	IDT	1 Digital, Memory, RAM, Static	CMOS													
436	1186 SS	1500 Ohms		100E-12 F	5 8641	1					1 FAILED	600 INPUT AND COMMON TO GND	5	252	3	
34371	HAR	1 Digital, Memory, PROM	Bipolar													
392	0886 SS	1500 Ohms		100E-12 F	1 N/R	3					3 FAILED	1000 EACH PIN TO GND & VCC	19	154	13	
344	NSC	1 Linear, Operational Amplifier	Bipolar													
052	0681 SS	0 Ohms		100E-12 F	1 N/R	1					1 FAILED	400 EACH PIN	51	171	13	
											1 FAILED	500 EACH PIN	51	171	13	
											3 FAILED	600 EACH PIN	51	171	13	
053	0681 SS	1500 Ohms		100E-12 F	1 N/R	2					2 PASSED	1500 EACH PIN	51	171	13	
420	0581 SS	0 Ohms		125E-12 F	12 N/R	1					1 FAILED	600 N/R	18	170	13	
348	N/R	2 Linear, Operational Amplifier	Bipolar													
030	N/R	N/R		1500 Ohms	100E-12 F	1					1 FAILED	2500 N/R	103	252	13	

RAC ESD Database

Part Number	Part Class	Part Description	Mfr	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Technology	
													Failure Criteria	General Remarks
351	MOT	1 Digital, Gate		N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1576 N/R		102	189
029	N/R			N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1576 N/R		102	189
355	N/R	3 Linear, Operational Amplifier		N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
030	N/R			N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
356	N/R	3 Linear, Operational Amplifier		N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
030	N/R			N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
357	N/R	3 Linear, Operational Amplifier		N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
030	N/R			N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 N/R		103	252
3600	TEX	3 Digital, Converter, A/D-D/A		N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	12930 N/R		102	188
029	N/R			N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	12930 N/R		102	188
373	VAR	2 Digital, Latch		N/R	1500 Ohms	100E-12 F	7	N/R	2	FAILED	1000 PINS 1 AND 11		46	149
424	1083 SS			N/R	1500 Ohms	100E-12 F	9	N/R	8	FAILED	1250 PINS 1 AND 11		46	149
424	1083 SS			N/R	1500 Ohms	100E-12 F	12	N/R	4	FAILED	1500 PINS 1 AND 11		46	149
423	1083 SS	0 Ohms 0 F		N/R	1500 Ohms	100E-12 F	6	N/R	2	FAILED	750 PINS 1 AND 11		46	252

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Date		Pulses		Code		Devices		Result		Voltage		Pin Combination		Failure Criteria		Test Remarks		General Remarks	
				Source	Type	Resistance	Capacitance	Ohms	F	18	N/R	20	N/R	22	N/R	2250	PINS	1	AND	11	46	252	4				
373	VAR	2 Digital, Latch	Bipolar	423	1083	SS	0	Ohms	0	F	18	N/R	2	FAILED	2250	PINS	1	AND	11	46	252	4					
				423	1083	SS	0	Ohms	0	F	20	N/R	4	FAILED	2500	PINS	1	AND	11	46	252	4					
				423	1083	SS	0	Ohms	0	F	22	N/R	4	FAILED	2750	PINS	1	AND	11	46	252	4					
3870	MOS	1 Digital, Micro Computer	NMOS																								
				134	N/R	GN	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1000	PIN(23)	(+)	APTT(-)	102	252	13						
				138	N/R	GN	1500	Ohms	100E-12	F	1	N/R	5	FAILED	2000	EACH	PIN(+)	APTT(-)	102	252	13						
				139	N/R	GN	1500	Ohms	100E-12	F	1	N/R	4	FAILED	3500	EACH	PIN(+)	APTT(-)	102	252	13						
3873	MOS	1 Digital, Micro Computer	NMOS																								
				140	0780	SS	1300	Ohms	100E-12	F	1	N/R	24	FAILED	300	EACH	PIN(+)	APTT(-)	102	28	13						
				140	0780	SS	1300	Ohms	100E-12	F	3	N/R	15	FAILED	300	EACH	PIN(+)	APTT(-)	102	50	13						
				140	0780	SS	1300	Ohms	100E-12	F	1	N/R	1	FAILED	1000	EACH	PIN(+)	APTT(-)	102	37	13						
398	N/R	2 Linear	BiFET																								
				030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2500	N/R			103	252	13						
4000	HAR	3 Digital, Gate	CMOS																								
				029	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	7119	N/R			102	188	13						

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Failure													
4000	N/R	1 Digital, Gate	CMOS	028	N/R	SS	1500 Ohms	117E-12 F	30	N/R	5	FAILED	1000	INPUT VCC	92	252	13	
4001	NSC	1 Digital, Gate	CMOS	118	0478	SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	1220	VSS(+) INPUT A(-)	56	252	5	
											10	FAILED	1530	VSS(+) INPUT A(-)	56	252	5	
											10	FAILED	1750	VSS(+) INPUT A(-)	56	252	5	
											2	PASSED	1750	VSS(+) INPUT A(-)	56	252	5	
4001	RCA	1 Digital, Gate	CMOS	048	N/R	SS	100 Ohms	218E-12 F	1	N/R	1	FAILED	250	N/R	59	252	23	
4001	N/R	1 Digital, Gate	CMOS	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1300	N/R	103	252	13	
											1	FAILED	1300	N/R	103	252	13	
											1	FAILED	950	INPUT(+) OUTPUT(-)	47	252	22	
											13	PASSED	1000	INPUT(+) OUTPUT(-)	47	252	22	
											15	FAILED	66	VSS(+) INPUT(-)	47	186	21	
40014	N/R	1 Digital, Gate	CMOS	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	900	EACH PIN(+)	52	102	24	
4001A	RCA	1 Digital, Gate	CMOS	104	0478	SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	580	INPUT B(+) INPUT A(-)	56	252	5	

RAC ESD Database

Part Number (Cont'd)	Part Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
				Test Type	Test Resistance												
4001A	RCA	1 Digital, Gate	CMOS	104	0478 SS	1500 Ohms	150E-12 F	1	N/R	10	FAILED	780	INPUT B(+)	INPUT A(-)	56	252	5
										10	FAILED	980	INPUT B(+)	INPUT A(-)	56	252	5
										2	PASSED	980	INPUT B(+)	INPUT A(-)	56	252	5
293	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	750	VDD(14)(+)	IN.(1)(-)	88	252	13
294	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	775	VDD(14)(+)	IN.(1)(-)	88	252	13
295	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	2	PASSED	790	VDD(14)(+)	IN.(1)(-)	88	252	13
296	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	795	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	1	N/R			N/R	2	FAILED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	500	N/R			N/R	5	PASSED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	300	N/R			N/R	1	FAILED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	10	N/R			N/R	1	FAILED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	80	N/R			N/R	1	FAILED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	800	VDD(14)(+)	IN.(1)(-)	88	252	13
297	N/R	GN	1500 Ohms	100E-12 F	1	N/R			N/R	2	FAILED	800	VDD(14)(+)	IN.(1)(-)	51	252	13
299	N/R	GN	1500 Ohms	100E-12 F	1	N/R			N/R	1	FAILED	805	VDD(14)(+)	IN.(1)(-)	88	252	13
300	N/R	GN	1500 Ohms	100E-12 F	1	N/R			N/R	1	FAILED	810	VDD(14)(+)	IN.(1)(-)	88	252	13
301	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	815	VDD(14)(+)	IN.(1)(-)	88	252	13
302	N/R	GN	1500 Ohms	100E-12 F	200	N/R			N/R	1	PASSED	825	VDD(14)(+)	IN.(1)(-)	88	252	13

RAC ESD Database

Part Number (Cont'd)	Part Mfr Class	ESD Description	Part Technology	Test		Number		Test		Voltage Pin Combination		Failure Test		General Remarks				
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Criteria	Remarks					
4001A	RCA	1 Digital, Gate	CMOS	303	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	1	PASSED	830 VDD(14)(+) IN.(1)(-)	88	252	13
				304	N/R	GN	1500 Ohms	100E-12 F	500	N/R	500	N/R	3	PASSED	833 VDD(14)(+) IN.(1)(-)	88	252	13
				304	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	FAILED	833 VDD(14)(+) IN.(1)(-)	88	252	13
				304	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	1	FAILED	833 VDD(14)(+) IN.(1)(-)	88	252	13
				304	N/R	GN	1500 Ohms	100E-12 F	4	N/R	4	N/R	1	FAILED	833 VDD(14)(+) IN.(1)(-)	88	252	13
				305	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	1	PASSED	840 VDD(14)(+) IN.(1)(-)	88	252	13
				306	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	1	PASSED	845 VDD(14)(+) IN.(1)(-)	88	252	13
				307	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	N/R	2	FAILED	850 VDD(14)(+) IN.(1)(-)	88	252	13
				307	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	3	PASSED	850 VDD(14)(+) IN.(1)(-)	88	252	13
				307	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	1	FAILED	850 VDD(14)(+) IN.(1)(-)	88	252	13
				307	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	1	PASSED	850 VDD(14)(+) IN.(1)(-)	88	252	13
				308	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	6	FAILED	865 VDD(14)(+) IN.(1)(-)	88	252	13
				308	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	3	PASSED	865 VDD(14)(+) IN.(1)(-)	88	252	13
				308	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	N/R	2	FAILED	865 VDD(14)(+) IN.(1)(-)	88	252	13
													8	PASSED	865 VDD(14)(+) IN.(1)(-)	88	252	13
				309	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	870 VDD(14)(+) IN.(1)(-)	88	252	13
				310	N/R	GN	1500 Ohms	100E-12 F	4	N/R	4	N/R	1	FAILED	875 VDD(14)(+) IN.(1)(-)	88	252	13
				310	N/R	GN	1500 Ohms	100E-12 F	200	N/R	200	N/R	1	PASSED	875 VDD(14)(+) IN.(1)(-)	88	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks			
				Date	Type	Resistance	Capacitance	Pulses	Code				Number	Date	Devices
4001A	RCA	1 Digital, Gate	CMOS	N/R	GN	1500 Ohms	100E-12 F	25	N/R	1	FAILED	880 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	890 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	7	FAILED	898 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	2	N/R	1	FAILED	898 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	2	PASSED	898 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	6	FAILED	898 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	4	N/R	4	PASSED	898 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	900 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	900 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	910 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	3	N/R	1	FAILED	915 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	10	N/R	1	FAILED	915 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	3	PASSED	915 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	3	FAILED	920 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	920 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	13	FAILED	930 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	930 VDD(14)(+) IN.(1)(-)	88	252	13
				N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1250 VDD(14)(+) IN.(1)(-)	88	252	13



RAC ESD Database

Part Number	(Cont'd)	Part ESD		Part Description	Technology																
		Mfr Class	Part			Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
4001A		RCA	1	Digital, Gate	CMOS																
		N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	FAILED	1500	VDD(14)(+)	IN.(1)(-)	88	252	13						
		N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	1500	VDD(14)(+)	IN.(1)(-)	88	252	13						
		N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	2000	VDD(14)(+)	IN.(1)(-)	88	252	13						
		N/R	GN	1500 Ohms	100E-12 F	500	N/R	1	PASSED	865	VDD(14)(+)	IN.(1)(-)	88	252	13						
4001A		N/R	1	Digital, Gate																	
		N/R	SS	100 Ohms	250E-12 F	1	N/R	1	FAILED	300	N/R		102	185	13						
		N/R	SS	250 Ohms	250E-12 F	1	N/R	1	FAILED	600	N/R		102	185	13						
		N/R	SS	500 Ohms	250E-12 F	1	N/R	1	FAILED	400	N/R		102	185	13						
		N/R	SS	1000 Ohms	250E-12 F	1	N/R	1	FAILED	1000	N/R		102	185	13						
		N/R	SS	2000 Ohms	250E-12 F	1	N/R	1	FAILED	1200	N/R		102	185	13						
		N/R	SS	3000 Ohms	250E-12 F	1	N/R	1	FAILED	2000	N/R		102	185	13						
		N/R	SS	5000 Ohms	250E-12 F	1	N/R	1	FAILED	4000	N/R		102	185	13						
		N/R	SS	500 Ohms	N/R	1	N/R	1	FAILED	2000	N/R		102	185	13						
		N/R	SS	500 Ohms	N/R	1	N/R	1	FAILED	2500	N/R		102	185	13						

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Test Criteria	General Remarks	
				Type	Resistance	Capacitance	Number	Date	Code			Devices
4001A	N/R	1 Digital, Gate	CMOS	SS	500 Ohms	N/R	1	N/R	1	1750 N/R	102 185	13
				SS	500 Ohms	N/R	1	N/R	1	2000 N/R	102 185	13
				SS	500 Ohms	N/R	1	N/R	1	1000 N/R	102 185	13
				SS	500 Ohms	100E-12 F	1	N/R	1	1500 N/R	102 185	13
				SS	500 Ohms	250E-12 F	1	N/R	1	700 N/R	102 185	13
				SS	500 Ohms	500E-12 F	1	N/R	1	950 N/R	102 185	13
				SS	500 Ohms	150E-12 F	1	N/R	1	600 N/R	102 185	13
				SS	500 Ohms	150E-12 F	1	N/R	1	700 N/R	102 185	13
				SS	500 Ohms	500E-12 F	1	N/R	1	300 N/R	102 185	13
				SS	500 Ohms	500E-12 F	1	N/R	1	400 N/R	102 185	13
4001B	NSC	1 Digital, Gate	CMOS	SS	1500 Ohms	150E-12 F	1	N/R	3	1220 VSS(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	10	1570 VSS(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	10	1830 VSS(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	2	1830 VSS(+) INPUT A(-)	56 252	5
4001B	RCA	1 Digital, Gate	CMOS	SS	1500 Ohms	150E-12 F	1	N/R	3	1300 INPUT B(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	10	3100 INPUT B(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	10	4050 INPUT B(+) INPUT A(-)	56 252	5
				SS	1500 Ohms	150E-12 F	1	N/R	2	4050 INPUT B(+) INPUT A(-)	56 252	5
4001B	N/R	1 Digital, Gate	CMOS	N/R	1500 Ohms	100E-12 F	1	N/R	1	1300 N/R	103 252	13

RAC ESD Database

Part Number	ESD Part	Mfr Class	Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devs	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
40018		N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1			1300 N/R	103	252	13	
40028		N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1			1000 N/R	103	252	13	
4006		MOT	2 Digital, Register, Shift	CMOS	029	N/R	1500 Ohms	100E-12 F	1	N/R	1			4951 N/R	102	188	13	
		436	1186 SS	1500 Ohms	100E-12 F	17	N/R		3	FAILED	3			3500 OUTPUT TO GND	5	252	3	
4006A		NSC	1 Digital, Register, Shift	CMOS	436	1186 SS	1500 Ohms	100E-12 F	14	8552	1			2000 INPUT TO OUTPUT	5	252	3	
		436	1186 SS	1500 Ohms	100E-12 F	11	8552		1	FAILED	1			1400 INPUT TO OUTPUT	5	252	3	
		436	1186 SS	1500 Ohms	100E-12 F	7	8552		1	FAILED	1			800 INPUT TO GND	5	252	3	
4006B		N/R	1 Digital, Register, Shift	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1			1000 N/R	103	252	13	
									1	FAILED	1			1000 N/R	103	252	13	
4006B		RCA	2 Digital, Register, Shift	CMOS	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1			3000 INPUT TO OUTPUT	5	252	3	

RAC ESD Database

Part Number	Part ESD		Part Description		Technology								
	Mfr Class	Part Class	Description	Technology									
4007	N/R	1	Digital, Inverter, Buffer		CMOS								
	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Code	Date	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	1 FAILED	103	252	13
4007B	N/R	1	Digital, Inverter, Buffer								CMOS		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	1 FAILED	103	252	13
						1		1000	N/R	1 FAILED	103	252	13
4008B	N/R	1	Digital, Arithmetic, Adder, Full								CMOS		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	1 FAILED	103	252	13
						1		1000	N/R	1 FAILED	103	252	13
40101B	N/R	1	Digital, Arithmetic, Parity Gen. & Check								CMOS		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	1 FAILED	103	252	13
						1		1000	N/R	1 FAILED	103	252	13
4011	MOT	1	Digital, Gate								CMOS		
	141	0575	SS	560 Ohms	100E-12 F	1	N/R	1000	VDD(+)	INPUT(-)	102	252	13
						1		4000	INPUT(+)	VDD(-)	102	252	13
						1		1000	VSS(+)	INPUT(-)	102	252	13
						1		2000	INPUT(+)	VSS(-)	102	252	13
						1		2000	INPUT(+)	OUTPUT(-)	102	252	13
						1		500	OUTPUT(+)	INPUT(-)	102	252	13
						1		2000	VDD(+)	OUTPUT(-)	102	252	13
						1		5000	OUTPUT(+)	VDD(-)	102	252	13
						1		4500	VSS(+)	OUTPUT(-)	102	252	13
						1		3000	OUTPUT(+)	VSS(-)	102	252	13

RAC ESD Database

Part Number	ESD Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance											
4011	MOT	1 Digital, Gate	CMOS	SS	560 Ohms	1	N/R	1	N/R	1	1	4000 VDD(+)	VSS(-)	102	252	13
											1	5000 VSS(+)	VDD(-)	102	252	13
											1	3500 VDD(+)	INPUT(-)	102	252	13
											1	5000 INPUT(+)	VDD(-)	102	252	13
											1	2500 VSS(+)	INPUT(-)	102	252	13
											1	3000 INPUT(+)	VSS(-)	102	252	13
											1	3000 INPUT(+)	OUTPUT(-)	102	252	13
											1	1000 OUTPUT(+)	INPUT(-)	102	252	13
											1	1500 VDD(+)	OUTPUT(-)	102	252	13
											1	2500 OUTPUT(+)	VDD(-)	102	252	13
											1	2000 VSS(+)	OUTPUT(-)	102	252	13
											1	2000 OUTPUT(+)	VSS(-)	102	252	13
											1	2000 VDD(+)	VSS(-)	102	252	13
1	5000 VSS(+)	VDD(-)	102	252	13											
4011	NSC	1 Digital, Gate	CMOS	SS	560 Ohms	1	N/F	1	N/F	1	1	500 VDD(+)	INPUT(-)	102	252	13
											1	5000 INPUT(+)	VDD(-)	102	252	13
											1	500 VSS(+)	INPUT(-)	102	252	13
											1	2500 INPUT(+)	VSS(-)	102	252	13
											1	2500 INPUT(+)	OUTPUT(-)	102	252	13
											1	500 OUTPUT(+)	INPUT(-)	102	252	13
											1	3000 VDD(-)	OUTPUT(-)	102	252	13
											1	1500 OUTPUT(+)	VDD(-)	102	252	13
											1	5000 VSS(+)	OUTPUT(-)	102	252	13
											1	2000 OUTPUT(+)	VSS(-)	102	252	13
											1	1000 VDD(+)	VSS(-)	102	252	13
											1	1000 VDD(+)	VSS(-)	102	252	13
											1	1000 VDD(+)	VSS(-)	102	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class Description	Part ESD Mfr Class Description	Technology	Test		Number Devices	Date Code	Pulses	Capacitance	Resistance	Test Voltage	Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test											
4011	NSC	1 Digital, Gate	CMOS	141	0575 SS	560 Ohms	100E-12 F	1	N/R	1	5000 VSS(+)	VDD(-)	1 FAILED	102	252	13
4011	N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1300 N/R		1 FAILED	103	252	13
4011	N/R	1 Digital, Gate	CMOS	142	0575 SS	560 Ohms	100E-12 F	1	N/R	1	500 VDD(+)	INPUT(-)	1 FAILED	102	252	13
											1000 INPUT(+)	VDD(-)	1 FAILED	102	252	13
											1000 VSS(+)	INPUT(-)	1 FAILED	102	252	13
											1000 INPUT(+)	VSS(-)	1 FAILED	102	252	13
											1000 INPUT(+)	OUTPUT(-)	1 FAILED	102	252	13
											1000 OUTPUT(+)	INPUT(-)	1 FAILED	102	252	13
											4000 VDD(+)	OUTPUT(-)	1 FAILED	102	252	13
											4500 OUTPUT(+)	VDD(-)	1 FAILED	102	252	13
											5000 VSS(+)	OUTPUT(-)	1 FAILED	102	252	13
											2000 OUTPUT(+)	VSS(-)	1 FAILED	102	252	13
											4000 VDD(+)	VSS(-)	1 FAILED	102	252	13
											5000 VSS(+)	VDD(-)	1 FAILED	102	252	13
4011	N/R	SS	1000 Ohms	200E-12 F	1	N/R					500 EACH PIN(+)		1 FAILED	52	103	24
											500 EACH PIN(+)		1 FAILED	52	140	24
											800 EACH PIN(+)		1 FAILED	52	130	24
											2300 EACH PIN(+)		1 FAILED	52	126	24
											2900 EACH PIN(+)		1 FAILED	52	134	24
											500 EACH PIN(+)		1 FAILED	52	119	24
4011	SSS	2 Digital, Gate	CMOS	003	1175 SS	0 Ohms	100E-12 F	1	N/R	1	600 INPUT(+)	PR. SUPPLY(-)	1 FAILED	102	252	13
				004	1175 SS	0 Ohms	125E-12 F	1	N/R	1	4000 INPUT		1 FAILED	102	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Devices	Code	Pulses	Capacitance	Resistance	Ohms	Test	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks							
				Source	Type																							
4011A	RCA	2 Digital, Gate	CMOS	163	N/R	SS	610	Ohms	100E-12	F	1	N/R	1	PASSED	4000	VSS(7)	(+)	57	252	2								
				1	FAILED	2500	VSS(7)	(-)	57	160	2																	
				1	FAILED	2000	INPUT(1)	(+)	57	159	2																	
				1	FAILED	4000	INPUT(1)	(-)	57	159	2																	
				1	FAILED	4000	OUTPUT(4)	(+)	57	252	2																	
				1	FAILED	3500	OUTPUT(4)	(-)	57	252	2																	
				1	FAILED	1500	VDD(14)	(+)	57	252	2																	
				1	PASSED	4000	VDD(14)	(-)	57	252	2																	
4011B	N/R	1	Digital, Gate	CMOS																								
4012	N/R	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	N/R	1	FAILED	1300	N/R	103	252	13	103	252	13							
																						1	FAILED	1300	N/R	103	252	13
4012	INS	2	Digital, Gate	CMOS																								
																						029	N/R	N/R	1500	Ohms	100E-12	F
4012B	N/R	1	Digital, Gate	CMOS																								
																						030	N/R	N/R	1500	Ohms	100E-12	F
4013	FSC	1	Digital, Flip-Flop	CMOS																								
																						124	0478	SS	1500	Ohms	150E-12	F
																					10	FAILED	1570	VDD(+)	SET(-)	56	252	5
																					10	FAILED	1830	VDD(+)	SET(-)	56	252	5
																					2	PASSED	1830	VDD(+)	SET(-)	56	252	5

RAC ESD Database

Part Number (Cont'd.)	Part ESD Mfr Class	Part Description	Technology	Test		Number		Date		Pulses		Code		Devices		Voltage		Pin		Combination		Failure Criteria	Test Remarks	General Remarks	
				Source	Date	Type	Resistance	Capacitance	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R				1
4013	FSC	1 Digital, Flip-Flop	CMOS	165	0676	GN	1500	Ohms	100E-12	F	2	PASSED	400	N/R								57	146	14	
4013	RCA	1 Digital, Flip-Flop	CMOS	436	1186	SS	1500	Ohms	100E-12	F	13	N/R	1	1	1	1	1800	OUTPUT TO GND			5	252	3		
4013A	RCA	2 Digital, Flip-Flop	CMOS	436	1186	SS	1500	Ohms	100E-12	F	12	N/R	1	1	1	1	1600	OUTPUT TO GND			5	252	3		
				106	0478	SS	1500	Ohms	150E-12	F	1	N/R	3	10	10	2	710	RESET(+)	CLOCK(-)		56	252	5		
				164	N/R	SS	610	Ohms	100E-12	F	1	N/R	1	1	1	1	3500	OUTPUT(1)(+)			57	252	2		
				026	0178	SS	100	Ohms	200E-12	F	1	N/R	4	1	1	1	373	INPUT(5)(+)	VSS(7)(-)		6	285	13		
				026	0281	SS	100	Ohms	200E-12	F	1	N/R	4	1	1	1	205	VDD(14)(+)	INPUT(3)(-)		34	285	13		
				393	1284	SS	1500	Ohms	100E-12	F	1	N/R	2	1	1	1	3500	11(INPUT)	7(VSS)		102	252	13		
4013B	NSC	1 Digital, Flip-Flop	CMOS	120	0478	SS	1500	Ohms	150E-12	F	1	N/R	3	1	1	1	980	DATA(+)	CLOCK(-)		56	252	5		



RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology		Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
			NSC	1																
40138	NSC	1 Digital, Flip-Flop			120	0478 SS	1500 Ohms	150E-12 F	1	1	N/R		10	FAILED	1350	DATA(+)	CLOCK(-)	56	252	5
									10	FAILED	1620	DATA(+)	CLOCK(-)	56	252			56	252	5
									2	PASSED	1620	DATA(+)	CLOCK(-)	56	252			56	252	5
40138	RCA	1 Digital, Flip-Flop																CMOS		
					107	0478 SS	1500 Ohms	150E-12 F	1	1	N/R		3	FAILED	860	SET(+)	DATA(-)	56	252	5
									10	FAILED	2200	SET(+)	DATA(-)	56	252			56	252	5
									10	FAILED	4000	SET(+)	DATA(-)	56	252			56	252	5
									2	PASSED	4000	SET(+)	DATA(-)	56	252			56	252	5
					436	0488 SS	1500 Ohms	100E-12 F	14	14	N/R		5	FAILED	2000	COMMON	TO OUTPUT	5	252	3
					436	0488 SS	1500 Ohms	100E-12 F	12	12	N/R		5	FAILED	1500	COMMON	TO OUTPUT	5	252	3
					436	1186 SS	1500 Ohms	100E-12 F	12	12	N/R		1	FAILED	1600	OUTPUT	TO GND	5	252	3
					436	1186 SS	1500 Ohms	100E-12 F	13	13	N/R		1	FAILED	1800	GND	TO OUTPUT	5	252	3
					436	1186 SS	1500 Ohms	100E-12 F	14	14	N/R		5	FAILED	2000	INPUT	AND OUTPUT	5	252	3
40138	N/R	1 Digital, Flip-Flop																CMOS		
					030	N/R	1500 Ohms	100E-12 F	1	1	N/R		1	FAILED	1000	N/R		103	252	13
									1	FAILED	1000	N/R						103	252	13
40148	N/R	1 Digital, Register, Shift																CMOS		
					030	N/R	1500 Ohms	100E-12 F	1	1	N/R		1	FAILED	1000	N/R		103	252	13
4015	MOT	2 Digital, Register, Shift																CMOS		
					392	1086 SS	1500 Ohms	100E-12 F	1	1	N/R		5	FAILED	2750	EACH	PIN TO 8 & 16 (+ -)	19	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Type	Resistance												
4015B	N/R	1	Digital, Register, Shift	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
4015B	RCA	2	Digital, Register, Shift	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40160B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	10	FAILED	4000	COMMON TO OUTPUT	5	252	3	
40160B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	10	FAILED	4000	INPUT TO COMMON	5	252	3	
40161B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40161B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40161B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40161B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40162B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40162B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40162B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40162B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40163B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	
40163B	N/R	1	Digital, Counter/Divider	CMOS	N/R	N/R	1	N/R	100E-12 F	100E-12 F	1	FAILED	1000	N/R	103	252	13	

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Part Number (Cont'd)	Part Mfr	ESD Class	Part Description	Technology	Test		Test		Failure Criteria	Test Remarks	General Remarks				
					Type	Resistance	Capacitance	Pulses				Code	Number	Date	Devices
40163B	N/R	1	Digital, Counter/Divider	CMOS	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000 N/R	103	252	13
4016A	RCA	1	Linear, Switch	CMOS	0884	SS	1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	102	252	13
40174B	N/R	1	Digital, Flip-Flop	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	103	252	13
4017A	RCA	1	Digital, Counter/Divider	CMOS	393	1284	SS	1500 Ohms	100E-12 F	1	N/R	750 13(INPUT) 16(VDD)	102	252	13
4017B	N/R	1	Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000 N/R	103	252	13
4018	FSC	1	Digital, Counter/Divider	CMOS	007	N/R	GN	1500 Ohms	100E-12 F	1	N/R	400 N/R	82	252	13
					008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	600 N/R	82	252	13
					009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	800 N/R	82	252	13
					010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1000 N/R	82	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance										
4018	NSC	2 Digital, Counter/Divider	CMOS	393	0784 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500 N/R	102	252	13
4019	FSC	1 Digital, Gate	CMOS	165	0676 GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400 N/R	57	146	14
	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	2000 INPUT(3)(+) OUT(12)(-)	81	167	13	
									4	FAILED	2500 INPUT(5)(+) OUT(11)(-)	81	167	13	
	007	N/R GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	2	PASSED	400 N/R	82	252	13	
	008	N/R GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	2	PASSED	600 N/R	32	252	13	
	009	N/R GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	2	PASSED	800 N/R	82	252	13	
	010	N/R GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	PASSED	1000 N/R	82	252	13	
									1	FAILED	1000 N/R	82	252	13	
4019	NSC	1 Digital, Gate	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	4	FAILED	2000 INPUT(3)(+) OUT(12)(-)	81	167	13
	012	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	PASSED	400 N/R	83	252	13	
	013	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	PASSED	600 N/R	83	252	13	
4019	SSS	1 Digital, Gate	CMOS	011	0878 GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	200 N/R	83	252	13
	012	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	PASSED	400 N/R	83	252	13	

RAC ESD Database

Part Number	ESD Class	Part Description	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
			Type	Test												
4019	SSS	1	Digital, Gate	GN	1500 Ohms	100E-12 F	1	N/R	5	FAILED	600	N/R	83	252	13	
401948	N/R	1	Digital, Register, Shift											CMOS		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000	N/R	103	252	13	
					1	N/R	1	N/R	1	FAILED	1000	N/R	103	252	13	
401958	N/R	1	Digital, Register, Shift											CMOS		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000	N/R	103	252	13	
					1	N/R	1	N/R	1	FAILED	1000	N/R	103	252	13	
4019A	NSC	1	Digital, Gate											CMOS		
393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	1	FAILED	1200	N/R	102	252	13	
4019B	RCA	1	Digital, Gate											CMOS		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000	pin 4 (input) to VDD	103	157	13	
436	0688 SS	1500 Ohms	100E-12 F	18	N/R	18	N/R	5	5	FAILED	4000	OUTPUT TO + VSS (GROUND)	5	252	3	
4019B	N/R	1	Digital, Gate											CMOS		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000	N/R	103	252	13	
4020	SSS	2	Digital, Counter/Divider											CMOS		
003	1175 SS	0	Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	900	INPUT(+) PR. SUPPLY(-)	102	252	13	

RAC ESD Database

Part Number	Part ESD Mtr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pir. Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Test											
40208	N/R	1 Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13	
								1		1	FAILED	1000 N/R	103	252	13	
40208	RCA	2 Digital, Counter/Divider	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000 N/R	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO OUTPUT	5	252	3	
								1		1	FAILED	3000 INPUT TO GND	5	252	3	
								1		1	FAILED	3000 INPUT TO OUTPUT	5	252	3	
								1		1	FAILED	3000 INPUT TO OUTPUT	5	252	3	
4021	NSC	1 Digital, Register, Shift	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	2000 INPUT(13)(+) OUT(12)	81	167	13	
								1		1	FAILED	800 INPUT(11)(+) OUT(12)	81	167	13	
4021A	RCA	1 Digital, Register, Shift	CMOS	156	N/R	SS	610 Ohms	100E-12 F	1	N/R	2	PASSED	1500 OUTPUT(3)(+)	57	252	2
										1	FAILED	1500 OUTPUT(3)(-)	57	252	2	
										1	PASSED	1500 OUTPUT(3)(-)	57	252	2	
										2	PASSED	1500 VSS(8)(+)	57	252	2	
										2	PASSED	1500 PSC(9)(+)	57	252	2	
										2	PASSED	1500 P17(15)(+)	57	252	2	
										1	PASSED	1500 P17(15)(-)	57	159	2	
										1	PASSED	1500 VDD(16)(+)	57	159	2	
										1	PASSED	1500 VDD(16)(+)	57	252	2	
										2	PASSED	1500 VDD(16)(-)	57	252	2	
157	N/R	GN	610 Ohms	100E-12 F	1	N/R	6	PASSED	1000 VSS(8)(-)	57	164	2				

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Capacitance	Resistance	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks							
				Type	Test																	
4021A	RCA	1 Digital, Register, Shift	CMOS	158	N/R	GN	610	Ohms	100E-12 F	610	Test	1200 OUTPUT(3)(-)	PASSED	57	252							
																2	PASSED	57	164			
																1	FAILED	57	252			
				159	N/R	GN	610	Ohms	100E-12 F	610	Test	1500 VSS(8)(-)	PASSED	1500	VSS(8)(-)	PASSED	57	164				
																			2	PASSED	57	252
																			1	PASSED	57	164
																			4	PASSED	57	164
																			2	PASSED	57	252
																			2	PASSED	57	164
				160	N/R	SS	610	Ohms	100E-12 F	610	Test	3208 VDD(16)(+)	FAILED	3208	VDD(16)(+)	FAILED	57	187				
																			2	FAILED	57	187
																			2	FAILED	57	187
																			14	FAILED	57	187
																			2	FAILED	57	187
																			12	FAILED	57	187
233	N/R	SS	610	Ohms	100E-12 F	610	Test	1000 VSS(8)(-)	PASSED	1000	VSS(8)(-)	PASSED	57	158								
															2	PASSED	57	158				
															1	PASSED	57	158				
															5	FAILED	57	187				
															5	FAILED	57	187				
4021A	NSC	1 Digital, Register, Shift	CMOS	393	0180	SS	1500	Ohms	100E-12 F	1500	PSC(9)(-)	PASSED	102	252	13							
																1	FAILED	102	252			

### RAC ESD Database

Part Number	Part ESD Mtr Class	Part Description	Technology	Test		Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks				
				Source	Result																	
4021B	FSC	2 Digital, Register, Shift	CMOS	161	N/R	SS	610	Ohms	100E-12 F	1	N/R	1	N/R	4000	VSS(+)	57	252	2				
				161	N/R	SS	610	Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	4000	VSS(-)	57	162	2		
4021B	N/R	1 Digital, Register, Shift	CMOS	030	N/R	N/R	1500	Ohms	100E-12 F	1	N/R	1	N/R	1000	N/R	103	252	13				
				030	N/R	N/R	1500	Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1000	N/R	103	252	13		
				244	N/R	SS	1500	Ohms	100E-12 F	1	7614	1	7614	1	7614	975	OUTPUT(+)	47	252	22		
				244	N/R	SS	1500	Ohms	100E-12 F	1	7614	1	7614	1	7614	1000	OUTPUT(+)	47	252	22		
				244	N/R	SS	1500	Ohms	100E-12 F	1	7614	12	7614	12	7614	1000	OUTPUT(+)	47	252	22		
				245	N/R	SS	100	Ohms	N/R	1	7614	15	7614	15	7614	203	VSS(+)	47	186	21		
				245	N/R	SS	100	Ohms	N/R	1	7614	15	7614	15	7614	203	VSS(+)	47	186	21		
				4023B	N/R	1 Digital, Gate	CMOS															
				030	N/R	N/R	1500	Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1000	N/R	103	252	13
				030	N/R	N/R	1500	Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1000	N/R	103	252	13



RAC ESD Database

Part Number	ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Ohms	Test	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Date	Type															
4023B	N/R	1 Digital, Gate	CMOS	030	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000 N/R	1 FAILED	1000 N/R			103	252	13	
	N/R	SS		245	N/R	1	N/R	1	N/R	100 Ohms	N/R	232 VSS(+)	15 FAILED	232 VSS(+)	INPUT(-)		47	186	21	
4023D	N/R	1 Digital, Gate	CMOS																	
	N/R	SS		244	N/R	1	N/R	1	N/R	1500 Ohms	100E-12 F	1000 VSS(+)	3 FAILED	1000 VSS(+)	INPUT(-)		47	252	22	
	N/R	SS			N/R							1000 VSS(+)	11 PASSED	1000 VSS(+)	INPUT(-)		47	252	22	
	N/R	SS			N/R							950 OUTPUT(+)	1 FAILED	950 OUTPUT(+)	INPUT(-)		47	252	22	
	N/R	SS			N/R							1000 OUTPUT(+)	1 FAILED	1000 OUTPUT(+)	INPUT(-)		47	252	22	
	N/R	SS			N/R							1000 OUTPUT(+)	12 PASSED	1000 OUTPUT(+)	INPUT(-)		47	252	22	
	N/R	SS		245	N/R	1	N/R	1	N/R	100 Ohms	N/R	61 VSS(+)	15 FAILED	61 VSS(+)	INPUT(-)		47	186	21	
4024	SSS	1 Digital, Counter/Divider	CMOS																	
	SSS	1 Digital, Counter/Divider	CMOS	003	1175	SS	0	Ohms	100E-12 F	1	7508	400 INPUT(+)	1 FAILED	400 INPUT(+)	PR. SUPPLY(-)		102	252	13	
4024B	N/R	1 Digital, Counter/Divider	CMOS																	
	N/R	1 Digital, Counter/Divider	CMOS	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000 N/R	1000 N/R	1 FAILED	1000 N/R			103	252	13	
	N/R	1 Digital, Counter/Divider	CMOS									1000 N/R	1 FAILED	1000 N/R			103	252	13	
4024B	RCA	2 Digital, Counter/Divider	CMOS																	
	1186	SS		436	1186	SS	1500 Ohms	100E-12 F	18	N/R	4000 N/R	4000 N/R	5 PASSED	4000 N/R			5	252	3	
	1186	SS		436	1186	SS	1500 Ohms	100E-12 F	16	N/R	3000 INPUT-GND AND INPUT-OUTPUT	3000 INPUT TO OUTPUT	5 FAILED	3000 INPUT-GND AND INPUT-OUTPUT			5	252	3	
	1186	SS										3000 INPUT TO OUTPUT	5 FAILED	3000 INPUT TO OUTPUT			5	252	3	

RAC ESD Database

Part Number	Part ESD	Part Description	Technology	Test		Test		Test		Test		Failure Test		General	
				Source	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Result	Voltage	Pin
40276	N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
	N/R	2 Digital, Flip-Flop	CMOS					1	FAILED	1000 N/R		103	252	13	
	N/R	1500 Ohms		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2100 N/R	103	252	13
	N/R	1500 Ohms						1	FAILED	2100 N/R		103	252	13	
40276	RCA	2 Digital, Flip-Flop	CMOS	436	0488 SS	1500 Ohms	100E-12 F	16	N/R	5	FAILED	3000 OUTPUT TO GROUND	5	252	3
4028A	NSC	2 Digital, Decoder	CMOS	393	0395 SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	3000 13(INPUT) 16(VCC)	102	252	13
40288	N/R	1 Digital, Decoder	CMOS												
	N/R	1500 Ohms		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
	N/R	1500 Ohms						1	FAILED	1000 N/R		103	252	13	
4029	FSC	1 Digital, Counter/Divider	CMOS	165	0676 GN	1500 Ohms	100E-12 F	1	7546	2	PASSED	400 N/R	57	146	14
4029B	N/R	1 Digital, Counter/Divider	CMOS												
	N/R	1500 Ohms		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number		Test		Failure Criteria	Test Remarks	General Remarks			
				Type	Resistance	Capacitance	Pulses	Code	Devi				Result	Voltage	
40298	N/R	1 Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
40308	N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
40308	SPR	2 Digital, Gate	CMOS	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO OUTPUT	5	252	3
40308	RCA	2 Digital, Gate	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	FAILED	4000 INPUT & OUTPUT TO COMMON	5	252	3
40318	N/R	1 Digital, Register, Shift	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
40338	N/R	1 Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
40348	N/R	1 Digital, Register, Shift, Combination	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Pin	Combination	Voltage	Test	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Test Date	Test Type												
4034B	N/R	1	Digital, Register, Shift, Combination	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13	
4035	NSC	1	Digital, Register, Shift	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1200 INPUT(2)(+) OUT(1)(-)		81	167	13	
											1	FAILED	2000 INPUT(3)(+) OUT(13)(-)		81	167	13	
4035	SSS	1	Digital, Register, Shift	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1200 INPUT(2)(+) OUT(1)(-)		81	167	13	
											1	FAILED	1000 IN(10)(+) OUT(15)(-)		81	167	13	
4035A	NSC	1	Digital, Register, Shift	CMOS	393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		102	252	13	
4035B	N/R	1	Digital, Register, Shift	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13	
											1	FAILED	1000 N/R		103	252	13	
4040	FSC	1	Digital, Counter/Divider	CMOS	165	0676 GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400 N/R		57	146	14	
4040A	RCA	2	Digital, Counter/Divider	CMOS	393	1284 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4000 N/R		102	252	13	

RAC ESD Database

Part Number	Part	ESD Class	Part Description	Technology	Test		Number		Test		Failure		General				
					Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Voltage	Pin	Combination	Criteria	Remarks
4040B		N/R	1 Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13	
		N/R										1	FAILED	1000 N/R	103	252	13
4042B		N/R	1 Digital, Latch	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13	
		N/R										1	FAILED	1000 N/R	103	252	13
4043		MOT	3 Digital, Latch	CMOS	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6783 N/R	102	188	13	
4043B		N/R	1 Digital, Latch	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13	
4044		NSC	1 Digital, Latch	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	1000 INPUT(14)(+) OUT(1)(-)	81	167	13	
4044		SSS	1 Digital, Latch	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1200 INPUT(3)(+) OUT(13)(-)	81	167	13	
												1	FAILED	2000 INPUT(7)(+) OUT(9)(-)	81	167	13
												1	FAILED	600 INPUT(6)(+) OUT(9)(-)	81	167	13
4044A		SSS	1 Digital, Latch	CMOS	393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	600 N/R	102	252	13	

RAC ESD Database

Part Number	ESD Part	Mfr Class	Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
					Source	Type													
4044A	NSC	1	Digital, Latch	CMOS	393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		102	252	13	
4046B	N/R	1	Linear, Phase Lock Loop	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		103	252	13	
4046B	SSS	1	Linear, Phase Lock Loop	CMOS	436	1186 SS	1500 Ohms	100E-12 F	9	N/R	1	FAILED	1000	INPUT TO COMMON		5	151	3	
4047	N/R	1	Digital, Multivibrator	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		103	252	13	
4049	FSC	1	Digital, Inverter, Buffer	CMOS	007	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400	N/R	82	252	13	
4049	N/R	GN	1500 Ohms	100E-12 F	008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	600	N/R	82	252	13	
4049	N/R	GN	1500 Ohms	100E-12 F	009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	200	N/R	82	252	13	
4049	N/R	GN	1500 Ohms	100E-12 F	010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	PASSED	800	N/R	82	252	13	
4049	N/R	GN	1500 Ohms	100E-12 F	010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	200	N/R	82	252	13	
4049	SSS	1	Digital, Inverter, Buffer	CMOS	003	1175 SS	0	Ohms	100E-12 F	1	N/R	1	FAILED	200	INPUT(+)	PR. SUPPLY(-)	102	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test	Voltage	Pin	Combination	Test Result	Devi	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test															
4049	SSS	1 Digital, Inverter, Buffer	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	3 FAILED	1000 INPUT(9)(+) OUT(10)(-)	81	167	13		81	167	13
				011	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	200 N/R	83	252	13		83	252	13
				012	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	400 N/R	83	252	13		83	252	13
				013	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	600 N/R	83	252	13		83	252	13
4049	NSC	1 Digital, Inverter, Buffer	CMOS	090	0278 SS	1500 Ohms	150E-12 F	1	N/R	1	N/R	3 FAILED	900 GATE(+) VSS(-)	56	252	5		56	252	5
												10 FAILED	1250 GATE(+) VSS(-)	56	252	5		56	252	5
												10 FAILED	1520 GATE(+) VSS(-)	56	252	5		56	252	5
												2 PASSED	1520 GATE(+) VSS(-)	56	252	5		56	252	5
				091	0278 GN	1500 Ohms	150E-12 F	1	N/R	1	N/R	7 FAILED	1125 GATE(+) VSS(-)	56	252	13		56	252	13
												18 PASSED	1125 GATE(+) VSS(-)	56	252	13		56	252	13
				092	0278 GN	1500 Ohms	150E-12 F	1	N/R	1	N/R	16 FAILED	1350 GATE(+) VSS(-)	56	252	13		56	252	13
												9 PASSED	1350 GATE(+) VSS(-)	56	252	13		56	252	13
				121	0478 SS	1500 Ohms	150E-12 F	1	N/R	1	N/R	3 FAILED	900 INPUT(+) VSS(-)	56	252	5		56	252	5
												10 FAILED	1250 INPUT(+) VSS(-)	56	252	5		56	252	5
												10 FAILED	1520 INPUT(+) VSS(-)	56	252	5		56	252	5
												2 PASSED	1520 INPUT(+) VSS(-)	56	252	5		56	252	5
				011	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	200 N/R	83	252	13		83	252	13
				012	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	400 N/R	83	252	13		83	252	13
				013	0878 GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5 PASSED	600 N/R	83	252	13		83	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Type											
4049A	RCA	1 Digital, Inverter, Buffer	CMOS	108	0478 SS	1500 Ohms	150E-12 F	1	N/R	3 FAILED	1200	INPUT(+)	VCC(-)	56	252	5
										10 FAILED	1750	INPUT(+)	VCC(-)	56	252	5
										10 FAILED	2200	INPUT(+)	VCC(-)	56	252	5
										2 PASSED	2200	INPUT(+)	VCC(-)	56	252	5
4049A	SSS	1 Digital, Inverter, Buffer	CMOS													
				393	0878 SS	1500 Ohms	100E-12 F	1	N/R	1 FAILED	1500	N/R		102	252	13
				393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1 FAILED	1000	N/R		102	252	13
				393	0784 SS	1500 Ohms	100E-12 F	1	N/R	1 FAILED	800	N/R		102	252	13
4049UB	RCA	1 Digital, Inverter, Buffer	CMOS													
				109	0478 SS	1500 Ohms	150E-12 F	1	N/R	3 FAILED	980	INPUT(+)	VCC(-)	56	252	5
										10 FAILED	1460	INPUT(+)	VCC(-)	56	252	5
										10 FAILED	1950	INPUT(+)	VCC(-)	56	252	5
										2 PASSED	1950	INPUT(+)	VCC(-)	56	252	5
4049UB	N/R	1 Digital, Inverter, Buffer	CMOS													
				030	N/R	1500 Ohms	100E-12 F	1	N/R	1 FAILED	1000	N/R		103	252	13
										1 FAILED	1000	N/R		103	252	13
4050	FSC	1 Digital, Inverter, Buffer	CMOS													
				165	0676 GN	1500 Ohms	100E-12 F	1	N/R	2 PASSED	400	N/R		57	146	14
				007	N/R	1500 Ohms	100E-12 F	1	N/R	2 PASSED	400	N/R		82	252	13



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Type											
4050	FSC	1 Digital, Inverter, Buffer	CMOS	008	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	600 N/R	82	252	13
				009	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000 N/R	82	252	13
				010	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	82	252	13
									1	N/R	1	PASSED	1000 N/R	82	252	13
4050	SSS	1 Digital, Inverter, Buffer	CMOS	165	0676	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	400 N/R	57	146	14
				006	0878	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1200 INPUT(11)(+) OUT(12)	81	167	13
									2	N/R	2	FAILED	1500 INPUT(14)(+) OUT(15)	81	167	13
									1	N/R	1	FAILED	2000 INPUT(14)(+) OUT(15)	81	167	13
				011	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	200 N/R	83	252	13
				012	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	400 N/R	83	252	13
				013	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	FAILED	600 N/R	83	252	13
4050	NSC	1 Digital, Inverter, Buffer	CMOS	011	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	200 N/R	83	252	13
				012	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	400 N/R	83	252	13
				013	0878	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	600 N/R	83	252	13
4050	N/R	1 Digital, Inverter, Buffer	CMOS	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	500 EACH PIN(+)	52	100	24

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance												
4050A	SSS	1 Digital, Inverter, Buffer	CMOS	0878	SS	1	N/R	100E-12 F	1500 Ohms	1	FAILED	600	N/R	102	252	13	
4050A	NSC	1 Digital, Inverter, Buffer	CMOS	0878	SS	1	N/R	100E-12 F	1500 Ohms	1	FAILED	2000	N/R	102	252	13	
4050A	LEA	1 Digital, Inverter, Buffer	CMOS	0180	SS	1	N/R	100E-12 F	1500 Ohms	1	FAILED	1200	N/R	102	252	13	
4050B	N/R	1 Digital, Inverter, Buffer	CMOS	N/R	N/R	1	N/R	100E-12 F	1500 Ohms	1	FAILED	1000	N/R	103	252	13	
4050B	RCA	1 Digital, Inverter, Buffer	CMOS	0588	SS	5	N/R	100E-12 F	1500 Ohms	5	FAILED	2000	INPUT TO OUTPUT	5	252	3	
4050B	SS	1 Digital, Inverter, Buffer	CMOS	0588	SS	5	N/R	100E-12 F	1500 Ohms	5	FAILED	1400	INPUT TO COMMON	5	252	3	
4050B	SS	1 Digital, Inverter, Buffer	CMOS	1186	SS	1	N/R	100E-12 F	1500 Ohms	1	FAILED	500	INPUT TO OUTPUT	5	252	3	
4050B	SS	1 Digital, Inverter, Buffer	CMOS	1186	SS	1	N/R	100E-12 F	1500 Ohms	1	PASSED	4000	N/R	5	252	3	
4050B	SS	1 Digital, Inverter, Buffer	CMOS	1186	SS	1	N/R	100E-12 F	1500 Ohms	1	PASSED	4000	N/R	5	252	3	
4051	RCA	2 Digital, Multiplexer	CMOS	0784	SS	1	N/R	100E-12 F	1500 Ohms	1	FAILED	3000	N/R	102	252	13	

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Test		Test		Failure Test		General					
				Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Result	Voltage	Pin	Combination	Criteria	Remarks
4051B	N/R	1 Digital, Multiplexer	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13		
4052B	N/R	1 Digital, Multiplexer	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13		
4053	NSC	1 Digital, Multiplexer	CMOS	122	0478 SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	720 VEE(+)	56	252	5		
										10	FAILED	1070 VEE(+)	56	252	5		
										10	FAILED	1400 VEE(+)	56	252	5		
										2	PASSED	1400 VEE(+)	56	252	5		
4053B	RCA	1 Digital, Multiplexer	CMOS	110	0478 SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	435 VEE(+)	56	252	5		
										10	FAILED	740 VEE(+)	56	252	5		
										10	FAILED	1020 VEE(+)	56	252	5		
										2	PASSED	1020 VEE(+)	56	252	5		
4053B	FSC	1 Digital, Multiplexer	CMOS	126	0478 SS	1500 Ohms	150E-12 F	1	N/R	3	FAILED	1610 VEE(+)	56	252	5		
										10	FAILED	1950 VEE(+)	56	252	5		
										10	FAILED	2200 VEE(+)	56	252	5		
										2	PASSED	2200 VEE(+)	56	252	5		
4053B	N/R	1 Digital, Multiplexer	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13		

RAC ESD Database

Part Number	ESD Class	Part Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number of Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
40538	N/R	1 Digital, Multiplexer	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13
4066	N/R	3 Linear, Switch	CMOS	245	N/R	100 Ohms	N/R	1	N/R	15	FAILED	76 VSS(+) INPUT(-)		47	186	21
4066	NSC	1 Linear, Switch	CMOS	416	0184 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400 N/R		25	252	13
40668	N/R	1 Linear, switch	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13
40668	RCA	1 Linear, Switch	CMOS	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO GND		5	252	3
40678	N/R	1 Digital, Multiplexer	CMOS	436	1186 SS	1500 Ohms	100E-12 F	17	N/R	1	FAILED	3500 INPUT TO GND		5	252	3
40688	N/R	1 Digital, Gate	CMOS	436	1186 SS	1500 Ohms	100E-12 F	14	N/R	1	FAILED	2000 INPUT TO GND		5	252	3
40688	N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13
40688	N/R	1 Digital, Gate	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R		103	252	13

RAC ESD Database

Part Number	Part ESD Part		Test	Test Type	Test Resistance	Test Capacitance	Pulses	Number	Date	Devices	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks	
	Mfr Class	Description															Technology
40688	N/R	1	Digital, Gate								1000	N/R		103	252	3	
4069	FSC	1	Digital, Inverter, Buffer								400	N/R		CMOS	57	146	4
4069	SSS	1	Digital, Inverter, Buffer								400	N/R		CMOS	57	146	14
40698	NSC	1	Digital, Inverter, Buffer								960	VDD(+)	GATE(-)	CMOS	56	252	5
	089	0278	SS	1500	Ohms	150E-12	F	1	N/R		1300	VDD(+)	GATE(-)		56	252	5
											1600	VDD(+)	GATE(-)		56	252	5
											1600	VDD(+)	GATE(-)		56	252	5
40698	N/R	1	Digital, Inverter, Buffer								1000	N/R		CMOS	103	252	13
	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R		1000	N/R			103	252	13
4069UB	RCA	1	Digital, Inverter, Buffer								730	VDD(+)	GATE(-)	CMOS	56	252	5
	088	0278	SS	1500	Ohms	150E-12	F	1	N/R		1080	VDD(+)	GATE(-)		56	252	5
											1510	VDD(+)	GATE(-)		56	252	5
											1510	VDD(+)	GATE(-)		56	252	5

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Ohms	Test	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Source	Date															
4069UB	RCA	1 Digital, Inverter, Buffer	CMOS	436	1186	SS	1500	Ohms	100E-12	F	18	N/R	1 PASSED	4000	N/R	5	252	3		
													1 PASSED	4000	N/R	5	252	3		
4069UB	N/R	1 Digital, Inverter, Buffer	CMOS	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1 FAILED	1000	N/R	103	252	13		
4070	FSC	1 Digital, Gate	CMOS	165	0676	GN	1500	Ohms	100E-12	F	1	7602	2 PASSED	400	N/R	57	146	14		
4070B	SSS	2 Digital, Gate	CMOS	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1 PASSED	2000	S/R	105	247	11		
4071B	N/R	1 Digital, Gate	CMOS	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1 FAILED	1000	N/R	103	252	13		
													1 FAILED	1000	N/R	103	252	13		
4073B	N/R	1 Digital, Gate	CMOS	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1 FAILED	1000	N/R	103	252	13		
													1 FAILED	1000	N/R	103	252	13		
4076B	N/R	1 Digital, Flip-Flop	CMOS	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1 FAILED	1000	N/R	103	252	13		
													1 FAILED	1000	N/R	103	252	13		

RAC ESD Database

Part Number (Cont'd)	Part ESD		Mfr Class	Part Description	Technology	Test		Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	N/R	N/R				1	100E-12 F														
40769	N/R	N/R	1	Digital, Flip-Flop	CMOS																
40778	N/R	N/R	1	Digital, Gate	CMOS																
030	N/R	N/R	N/R	1500 Ohms		100E-12 F	1	N/R					1	N/R		1	1000 N/R		103	252	13
													1	N/R		1	1000 N/R		103	252	13
4081B	RCA	N/R	2	Digital, Gate	CMOS																
162	N/R	SS	610	Ohms		100E-12 F	1	N/R					2	N/R		2	4500 INPUT(1)(+)		57	252	2
													2	N/R		2	4500 INPUT(1)(-)		57	252	2
													2	N/R		2	4500 OUTPUT(4)(+)		57	252	2
													1	N/R		1	4500 OUTPUT(4)(-)		57	163	2
													1	N/R		1	4500 OUTPUT(4)(-)		57	252	2
													2	N/R		2	4500 VSS(7)(+)		57	252	2
													1	N/R		1	4000 VSS(7)(-)		57	252	2
													1	N/R		1	4500 VSS(7)(-)		57	162	2
													2	N/R		2	4500 VDD(14)(+)		57	252	2
													2	N/R		2	4500 VDD(14)(-)		57	252	2
436	0488	SS	1500	Ohms		100E-12 F	17	N/R					5	N/R		5	3500 INPUT TO COMMON		5	252	3
436	1186	SS	1500	Ohms		100E-12 F	17	N/R					5	N/R		5	3500 INPUT TO GND		5	252	3
4081B	N/R	N/R	1	Digital, Gate	CMOS																
030	N/R	N/R	N/R	1500 Ohms		100E-12 F	1	N/R					1	N/R		1	1000 N/R		103	252	13
													1	N/R		1	1000 N/R		103	252	13
40810B	RCA	0788	SS	1500 Ohms		100E-12 F	17	8729					5	N/R		5	3500 INPUT TO VSS		5	252	3

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Class			Date	Type							
40828	N/R	1	Digital, Gate	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	103 252 13
												1 FAILED	103 252 13
40858	N/R	1	Digital, Gate	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	103 252 13
												1 FAILED	103 252 13
40868	N/R	1	Digital, Gate	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	103 252 13
												1 FAILED	103 252 13
4093	NSC	1	Digital, Gate	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	103 252 13
												1 FAILED	103 252 13
	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	2000 INPUT(9)(+) OUT(10)(-)				1	1 FAILED	81 167 13
							2500 INPUT(13)(+) OUT(11)				2	2 FAILED	81 167 13
							1500 INPUT(5)(+) OUT(4)(-)				1	1 FAILED	81 167 13
	393	0180 SS	1500 Ohms	100E-12 F	1	N/R	1500 N/R				1	1 FAILED	102 252 13
40938	N/R	1	Digital, Gate	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	103 252 13
												1 FAILED	103 252 13
4094	RCA	2	Digital, Register, Shift	CMOS	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	2	2 FAILED	102 252 13
												2 FAILED	102 252 13
	393	1284 SS	1500 Ohms	100E-12 F	1	N/R	3500 1(INPUT) 16(VDD)				2	2 FAILED	102 252 13



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr N/R	Class N/R																
40998	N/R	1	Digital, Latch	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	1000 N/R		103	252	13
4116	MO5	1	Digital, Memory, RAM, Dynamic	NMOS														
061	0978	SS	1000 Ohms	220E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	500 N/R		2	252	13
														1000 N/R		2	252	13
														1000 N/R		2	252	13
062	1079	GN	1000 Ohms	220E-12 F	1	N/R	6	FAILED	1000 VCC(+)	VBB, VDD(-)						102	252	13
							4	PASSED	1000 VCC(+)	VBB, VDD(-)						102	252	13
062	1079	GN	1000 Ohms	220E-12 F	5	N/R	3	FAILED	1000 VCC(+)	VDD, VSS(-)						102	252	13
							2	PASSED	1000 VCC(+)	VDD, VSS(-)						102	252	13
063	1079	SS	1000 Ohms	220E-12 F	1	N/R	4	FAILED	800 VCC(+)	VBB, VDD(-)						102	252	13
							4	FAILED	1000 VCC(+)	VBB, VDD(-)						102	252	13
							2	PASSED	1000 VCC(+)	VBB, VDD(-)						102	252	13
064	1079	SS	100 Ohms	200E-12 F	1	N/R	1	FAILED	1000 VCC(+)	VBB, VDD(-)						102	252	13
							4	FAILED	1200 VCC(+)	VBB, VDD(-)						102	252	13
065	1079	GN	100 Ohms	220E-12 F	1	N/K	2	FAILED	1000 VCC(+)	VBB, VDD(-)						102	252	13
065	1079	GN	100 Ohms	220E-12 F	2	N/R	7	FAILED	1000 VCC(+)	VBB, VDD(-)						102	252	13
							1	PASSED	1000 VCC(+)	VBB, VDD(-)						102	252	13
065	1079	GN	100 Ohms	220E-12 F	1	N/R	4	FAILED	1000 VCC(+)	VDD, VSS(-)						102	252	13
							1	PASSED	1000 VCC(+)	VDD, VSS(-)						102	252	13
066	1079	GN	1000 Ohms	220E-12 F	1	N/R	2	FAILED	1200 VCC(+)	VDD, VSS(-)						102	252	13
							3	PASSED	1200 VCC(+)	VDD, VSS(-)						102	252	13
129	0780	GN	1500 Ohms	100E-12 F	1	N/R	5	PASSED	500 EACH	PIN(+)	APTT(-)					102	252	13

RAC ESD Database

Part Number	Part ESD Part Number	Part Class	Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Devices	Pin	Combination	Voltage	Test Result	Test	Failure Criteria	Test Remarks	General Remarks
4116	MOS	1	Digital, Memory, RAM, Dynamic	NMOS	0780	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	700	EACH PIN(+)	APTT(-)	5 PASSED	1000 N/R	102	252	13
					0780	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	800	EACH PIN(+)	APTT(-)	1 FAILED	1000 N/R	102	252	13
					0780	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	4	800	EACH PIN(+)	APTT(-)	4 PASSED	1000 N/R	102	252	13
					0780	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	1000	EACH PIN(+)	APTT(-)	5 FAILED	1000 N/R	102	252	13
					0780	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	1500	EACH PIN(+)	APTT(-)	5 FAILED	1000 N/R	102	252	13
4131	TEX	1	Digital, Memory, RAM, Dynamic	NMOS	0978	SS	1000 Ohms	220E-12 F	1	N/R	1	N/R	5	1000	N/R	5 FAILED	1000 N/R	2	252	13	
4136	N/R	2	Linear, Operational Amplifier	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	2500	N/R	1 FAILED	2500 N/R	103	252	13	
4136	FSC	2	Linear, Operational Amplifier	Bipolar	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	N/R	1	2000	S/R	1 PASSED	2000 S/R	105	247	11	
416	NEC	1	Digital, Memory, RAM, Dynamic	NMOS	0978	SS	1000 Ohms	220E-12 F	1	N/R	1	N/R	4	500	N/R	4 FAILED	500 N/R	2	252	13	
					0880	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	5	500	EACH PIN(+)	APTT(-)	5 PASSED	500 N/R	102	252	13
					0880	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	3	700	EACH PIN(+)	APTT(-)	3 FAILED	700 N/R	102	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description		Technology		Failure Criteria	Test Remarks	General Remarks				
	Mfr Class	Part Class	Description	Technology									
416	NEC	1	Digital, Memory, RAM, Dynamic			NMOS							
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Test	General Remarks	
132	0880	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	700	EACH PIN(+)	102	252	13
136	0880	GN	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1000	EACH PIN(+)	102	252	13
4164	TEX	2	Digital, Memory, RAM, Dynamic										
393	0884	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	10(INPUT)	102	252	13
420	NSC	2	Digital, Processing Unit, Central										
393	0383	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	102	246	13
4502B	N/R	1	Digital, Inverter, Buffer										
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
							1	FAILED	1000	N/R	103	252	13
4503B	N/R	1	Digital, Inverter, Buffer										
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
							1	FAILED	1000	N/R	103	252	13
4508B	N/R	1	Digital, Latch										
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
							1	FAILED	1000	N/R	103	252	13
4511	RCA	1	Digital, Decoder										
006	0878	SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1500	INPUT(6)(+) OUT(10)(-)	81	167	13

RAC ESD Database

Part Number	Part ES0	Part Mfr Class	Part Description	Technology	Test		Number		Test		Failure Criteria	Test Remarks	General Remarks			
					Date	Type	Resistance	Capacitance	Pulses	Code				Date	Devices	Result
4511	RCA	1	Digital, Decoder	CMOS	006	0878 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2000 INPUT(7)(+) OUT(9)(-)	81	167	13
4511B	N/R	1	Digital, Decoder	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
4512B	N/R	1	Digital, Multiplexer	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
4514B	N/R	1	Digital, Decoder	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
4515B	N/R	1	Digital, Decoder	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
4516B	N/R	1	Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
4518B	N/R	1	Digital, Counter/Divider	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13

RAC ESD Database

Part Number	ESD Class	Part Description	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	Technology
			Type	Test													
45188	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
45198	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
45208	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
45288	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
45398	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
45558	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	CMOS	
4558	N/R	1	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	1000	N/R	103	252	13	Bipolar	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology		Failure Criteria	Test Voltage	Pin Combination	General Remarks
			Bipolar	CMOS				
4559	RAY	1 Linear, Operational Amplifier	100	244	100	244	13	
435	0483 SS	1500 Ohms 100E-12 F	4 N/R	20 N/R	1 FAILED	1000 PINS 5 TO 6	13	
435	0483 SS	1500 Ohms 100E-12 F	20 N/R	20 N/R	1 FAILED	1750 PINS 2 TO 4	13	
435	0483 SS	1500 Ohms 100E-12 F	16 N/R	16 N/R	1 FAILED	1500 PIN 2 TO 4	13	
435	0483 SS	1500 Ohms 100E-12 F	24 N/R	24 N/R	1 FAILED	2000 PINS 2 TO 4	13	
435	0483 SS	1500 Ohms 100E-12 F	28 N/R	28 N/R	1 FAILED	2250 PINS 2 TO 4	13	
434	0483 GN	1500 Ohms 100E-12 F	10 N/R	10 N/R	3 FAILED	2000 INPUT TO GND	13	
435	0483 SS	1500 Ohms 100E-12 F	12 N/R	12 N/R	4 FAILED	1250 PINS 2 TO 4	13	
435	0483 SS	1500 Ohms 100E-12 F	8 N/R	8 N/R	1 FAILED	1250 PINS 5 TO 6	13	
435	0483 SS	1500 Ohms 100E-12 F	12 N/R	12 N/R	2 FAILED	1500 PINS 5 TO 6	13	
435	0483 SS	1500 Ohms 100E-12 F	16 N/R	16 N/R	3 FAILED	1750 PINS 5 TO 6	13	
435	0483 SS	1500 Ohms 100E-12 F	20 N/R	20 N/R	2 FAILED	2000 PINS 5 TO 6	13	
435	0483 SS	1500 Ohms 100E-12 F	24 N/R	24 N/R	1 FAILED	2250 PINS 5 TO 6	13	
434	0483 GN	1500 Ohms 100E-12 F	10 N/R	10 N/R	6 PASSED	2000 N/R	13	
4581B	N/R	1 Digital, Arithmetic, Logic Unit						
030	N/R	1500 Ohms 100E-12 F	1 N/R	1 N/R	1 FAILED	1000 N/R	13	
					1 FAILED	1000 N/R	13	
4585B	N/R	1 Linear, Comparator						
030	N/R	1500 Ohms 100E-12 F	1 N/R	1 N/R	1 FAILED	1000 N/R	13	

RAC ESD Database

Part Number	Part ESD Mir Class	Part Description	Technology	Test		Number Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test	Test												
45858	N/R	1 Linear, Comparator	CMOS	030	N/R	100E-12 F	1	N/R	1500 Ohms	100E-12 F	1	FAILED	1000 N/R	103	252	13	
4716	HIT	1 Digital, Memory, RAM, Dynamic	NMOS														
130	0780 GN	1500 Ohms				100E-12 F	1	N/R				4	FAILED	500 EACH PIN(+)	102	252	13
							1	N/R				1	PASSED	500 EACH PIN(+)	102	252	13
132	0780 GN	1500 Ohms				100E-12 F	1	N/R				5	FAILED	700 EACH PIN(+)	102	252	13
4724	FSC	1 Digital, Latch	CMOS														
165	0676 GN	1500 Ohms				100E-12 F	1	7603				2	PASSED	400 N/R	57	146	14
4741	RAY	1 Linear, Operational Amplifier	Bipolar														
392	1086 SS	1500 Ohms				100E-12 F	1	N/R				5	FAILED	850 EACH PIN TO 4 & 11 (+ -)	19	252	13
4801	VAR	3 Digital, Memory, RAM, Static	NMOS														
424	0683 SS	1500 Ohms				100E-12 F	6	N/R				8	FAILED	750 PIN 5	46	149	13
424	0683 SS	1500 Ohms				100E-12 F	8	N/R				7	FAILED	1000 PIN 5	46	149	13
423	0683 SS	0 Ohms				0	12	N/R				2	FAILED	1500 PIN 5	46	252	4
423	0683 SS	0 Ohms				0	14	N/R				5	FAILED	1750 PIN 5	46	252	4
423	0683 SS	0 Ohms				0	16	N/R				7	FAILED	2000 PIN 5	46	252	4
423	0683 SS	0 Ohms				0	15	N/R				1	FAILED	2000 PIN 5	46	252	4

RAC ESD Database

Part Number	Part ESO	Part Description	Mfr Class	Technoogy	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
					Type	Resistance										
506		1 Digital, Multiplexer	N/R	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13	
507A		1 Digital, Multiplexer	HAR	CMOS	436	1186 SS	1500 Ohms	100E-12 F	7	8712	800	INPUT TO OUTPUT	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	17	8712	3500	OUTPUT TO GND	5	252	3	
508		1 Digital, Multiplexer	N/R	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13	
508/6108		1 Digital, Multiplexer	SIX	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	8651	4000	N/R	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	16	8651	3000	OUTPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	18	8651	4000	N/R	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	3	8651	400	INPUT TO OUTPUT	5	252	3	
51C86		1 Digital	INT	CMOS	428	N/R	1500 Ohms	100E-12 F	5	N/R	1200	N/R	13	252	13	
5214		3 Digital, Converter, A/D-D/A	HYB	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18	8628	4000	N/R	5	252	3	



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technoogy	Test		Number	Date	Pulses	Code	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance										
52168	HYB	1 Digital, Converter, A/D-D/A	Bipolar	1186	SS	1500 Ohms	100E-12 F	13	N/R	2	FAILED	1800 INPUT TO GND	5	252	3
32832	NCR	1 Digital, Memory, EAROM, EEPROM	MOS	1186	SS	1500 Ohms	100E-12 F	14	N/R	2	FAILED	2000 INPUT TO GND	5	252	3
5309-1	MON	1 Digital, Memory, PROM	STTL	1086	SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	450 EACH PIN TO 10 & 20 (+ -)	19	252	13
532	N/R	1 Linear	Bipolar	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1250 N/R	103	252	13
				N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1250 N/R	103	252	13
				N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1250 N/R	103	252	13
5400	FSC	1 Digital, Gate	TTL	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
				1186	SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	2600 INPUT TO GND	5	252	5
				1186	SS	1500 Ohms	100E-12 F	14	N/R	1	FAILED	2000 INPUT TO OUTPUT	5	252	3
				1186	SS	1500 Ohms	100E-12 F	15	N/R	1	FAILED	2500 INPUT TO GND	5	252	3
				1186	SS	1500 Ohms	100E-12 F	12	N/R	2	FAILED	1600 INPUT	5	252	3
5400	TEX	3 Digital, Gate	TTL	0178	SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	763 INPUT(1)(+) GND(7)(-)	5	285	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology		Failure Test Criteria	Test Remarks	General Remarks	
			390	247				
5400	TEX	3 Digital, Gate	NSC	1 Digital, Gate	TTL			
			026	0178 SS 100 Ohms 200E-12 F	1 N/R	4 FAILED	625 INPUT(1)(+) GND(7)(-)	6 285 13
			436	1186 SS 1500 Ohms 100E-12 F	12 N/R	5 FAILED	1500 INPUT TO OUTPUT	5 252 3
5400	N/R	3 Digital, Gate	N/R	1 N/R	15 FAILED	99 INPUT(+) GND(-)		TTL 4 186 21
5401	TEX	2 Digital, Gate	TEX	2 Digital, Gate	TTL			
			390	N/R GN 1500 Ohms 100E-12 F	5 N/R	1 PASSED	2000 S/R	10 247 11
5402	FSC	2 Digital, Gate	FSC	2 Digital, Gate	TTL			
			390	N/R GN 1500 Ohms 100E-12 F	5 N/R	1 PASSED	2000 S/R	105 247 11
5402	NSC	1 Digital, Gate	NSC	1 Digital, Gate	TTL			
			436	1186 SS 1500 Ohms 100E-12 F	12 N/R	3 FAILED	1600 INPUT TO GND	5 252 3
5404	FSC	2 Digital, Inverter, Buffer	FSC	2 Digital, Inverter, Buffer	TTL			
			390	N/R GN 1500 Ohms 100E-12 F	5 N/R	1 PASSED	2000 S/R	105 247 11

RAC ESD Database

Part Number (Cont'd)	Part Class	Part Description	Technology		Test Type	Test Resistance	Test Capacitance	Pulses	Number	Date	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
			105	247															
5404	TEX	2 Digital, Inverter, Buffer	TTL	TTL	390	1500 Ohms	100E-12 F	5	N/R			1	PASSED	2000	S/R				11
	N/R	2 Digital, Inverter, Buffer																	
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R		1	N/R			1	FAILED	2500	N/R		1J3	252	13
321	N/R	GN	1500 Ohms	100E-12 F	200	N/R		2	N/R			2	PASSED	1000	VCC(14)(+)	IN.(1)(-)	79	252	13
331	N/R	GN	1500 Ohms	200E-12 F	200	N/R		1	N/R			1	PASSED	1500	VCC(14)(+)	IN.(1)(-)	79	252	13
332	N/R	GN	1500 Ohms	N/R	F	200	N/R	1	N/R			1	PASSED	1575	VCC(14)(+)	IN.(1)(-)	79	252	13
333	N/R	GN	1500 Ohms	200E-12 F	1	N/R		1	N/R			1	FAILED	1615	VCC(14)(+)	IN.(1)(-)	77	252	13
334	N/R	GN	1500 Ohms	200E-12 F	1	N/R		1	N/R			1	PASSED	1630	VCC(14)(+)	IN.(1)(-)	79	252	13
335	N/R	GN	1500 Ohms	200E-12 F	2	N/R		1	N/R			1	FAILED	1650	VCC(14)(+)	IN.(1)(-)	121	252	13
336	N/R	GN	1500 Ohms	200E-12 F	3	N/R		2	N/R			2	FAILED	1650	VCC(14)(+)	IN.(1)(-)	121	252	13
337	N/R	GN	1500 Ohms	200E-12 F	4	N/R		1	N/R			1	FAILED	1650	VCC(14)(+)	IN.(1)(-)	121	252	13
338	N/R	GN	1500 Ohms	200E-12 F	5	N/R		1	N/R			1	FAILED	1650	VCC(14)(+)	IN.(1)(-)	77	252	13
339	N/R	GN	1500 Ohms	200E-12 F	150	N/R		1	N/R			1	FAILED	1650	VCC(14)(+)	IN.(1)(-)	77	252	13
335	N/R	GN	1500 Ohms	200E-12 F	2	N/R		1	N/R			1	PASSED	1650	VCC(14)(+)	IN.(1)(-)	121	252	13
336	N/R	GN	1500 Ohms	200E-12 F		N/R		1	N/R			1	PASSED	1670	VCC(14)(+)	IN.(1)(-)	79	252	13
337	N/R	GN	1500 Ohms	200E-12 F	3	N/R		1	N/R			1	FAILED	1675	VCC(14)(+)	IN.(1)(-)	121	252	13
337	N/R	GN	1500 Ohms	200E-12 F	2	N/R		1	N/R			1	FAILED	1675	VCC(14)(+)	IN.(1)(-)	77	252	13

RAC ESD Database

Part Number	Part ESD Mfg Class	Part Description	Technology										
5404	2	Digital, Inverter, Buffer	TL										
Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
337	N/R	GN	1500 Ohms	200E-12 F	200	N/R	1	PASSED	1675	VCC(14)(+) IN.(1)(-)	79	252	13
338	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	FAILED	1700	VCC(14)(+) IN.(1)(-)	121	252	13
338	N/R	GN	1500 Ohms	200E-12 F	2	N/R	2	FAILED	1700	VCC(14)(+) IN.(1)(-)	121	252	13
338	N/R	GN	1500 Ohms	200E-12 F	4	N/R	2	FAILED	1700	VCC(14)(+) IN.(1)(-)	77	252	13
							1	FAILED	1700	VCC(14)(+) IN.(1)(-)	121	252	13
338	N/R	GN	1500 Ohms	200E-12 F	200	N/R	1	PASSED	1700	VCC(14)(+) IN.(1)(-)	79	252	13
338	N/R	GN	1500 Ohms	200E-12 F	2	N/R	1	FAILED	1700	VCC(14)(+) IN.(1)(-)	121	252	13
339	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	PASSED	1750	VCC(14)(+) IN.(1)(-)	79	252	13
340	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	PASSED	1750	VCC(14)(+) IN.(1)(-)	79	252	13
340	N/R	GN	1500 Ohms	200E-12 F	50	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	121	252	13
							1	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	2	N/R	3	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	3	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	4	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	121	252	13
							6	PASSED	1750	VCC(14)(+) IN.(1)(-)	79	252	13
340	N/R	GN	1500 Ohms	200E-12 F	3	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	77	252	13
340	N/R	GN	1500 Ohms	200E-12 F	4	N/R	1	FAILED	1750	VCC(14)(+) IN.(1)(-)	121	252	13

## RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test				Failure Test									
				Date	Type	Resistance	Capacitance	Number	Date	Code	Devices	Result	Voltage	Pin Combination	Criteria	Remarks	General
5434	N/R	2	Digital, Inverter, Buffer	TTL													
341	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	1760 VCC(14)(+)	IN.(1)(-)	77	252	13		
342	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	N/R	1	PASSED	1775 VCC(14)(+)	IN.(1)(-)	79	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	N/R	1	PASSED	1800 VCC(14)(+)	IN.(1)(-)	79	252	13		
							1		1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	121	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	2	N/R	1	N/R	1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	121	252	13		
							1		1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	77	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	3	N/R	1	N/R	1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	77	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	5	N/R	1	N/R	1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	121	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	9	N/R	1	N/R	1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	121	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	200	N/R	1	N/R	1	PASSED	1800 VCC(14)(+)	IN.(1)(-)	79	252	13		
343	N/R	GN	1500 Ohms	200E-12 F	1	N/R	2	N/R	2	FAILED	1800 VCC(14)(+)	IN.(1)(-)	80	252	13		
							1		1	FAILED	1800 VCC(14)(+)	IN.(1)(-)	77	252	13		
							4		4	PASSED	1800 VCC(14)(+)	IN.(1)(-)	79	252	13		
344	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	N/R	1	PASSED	1850 VCC(14)(+)	IN.(1)(-)	79	252	13		
							3		3	FAILED	1850 VCC(14)(+)	IN.(1)(-)	121	252	13		
344	N/R	GN	1500 Ohms	200E-12 F	2	N/R	2	N/R	2	FAILED	1850 VCC(14)(+)	IN.(1)(-)	121	252	13		
344	N/R	GN	1500 Ohms	200E-12 F	3	N/R	1	N/R	1	PASSED	1850 VCC(14)(+)	IN.(1)(-)	79	252	13		
344	N/R	GN	1500 Ohms	200E-12 F	6	N/R	1	N/R	1	FAILED	1850 VCC(14)(+)	IN.(1)(-)	77	252	13		
345	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	1900 VCC(14)(+)	IN.(1)(-)	121	252	13		
346	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	N/R	1	PASSED	2000 VCC(14)(+)	IN.(1)(-)	79	252	13		

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Remarks	General Remarks							
	Mfr	Class												
5404	N/R	2	Digital, Inverter, Buffer	TTL										
	Test Source	Test Type	Test Resistance	Number Pulses	Date Code	Number Devices	Date	Test Voltage	Pin Combination	Test Result	Test	Failure Criteria	Test Remarks	General Remarks
	347	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	2000 VCC(14)(+)	IN.(1)(-)	1	252	13	
5405	TEX	2	Digital, Inverter, Buffer	TTL										
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	2000 S	R	1	105	247	11
5406	TEX	2	Digital, Line/Bus Driver	TTL										
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	2000 S	R	1	105	247	11
5406	NSC	2	Digital, Line/Bus Driver	TTL										
	436	1186	SS	1500 Ohms	100E-12 F	15	N/R	1	2500	INPUT TO GND	1	5	252	3
5406	N/R	2	Digital, Line/Bus Driver	TTL										
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	2500	N/R	1	103	252	13
5407	N/R	2	Digital, Line/Bus Driver	TTL										
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	2500	N/R	1	103	252	13
5408	FSC	2	Digital, Gate	TTL										
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	2000	S/R	1	105	247	11
5409	FSC	2	Digital, Gate	TTL										
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	2000	S/R	1	105	247	11

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Class			Test Type	Test Type											
5410	NSC	1	Digital, Gate	TTL	436	0788 SS	1500 Ohms	100E-12 F	18	8711	5	FAILED	4000	OUTPUT TO COMMON	5	252	3
					436	0788 SS	1500 Ohms	100E-12 F	12	8711	5	FAILED	1500	INPUT TO OUTPUT	5	252	3
					436	0788 SS	1500 Ohms	100E-12 F	7	8711	5	FAILED	800	INPUT TO COMMON	5	252	3
5410	FSC	2	Digital, Gate	TTL	390	N/R GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
54107	TEX	2	Digital, Flip-Flop	TTL	390	N/R GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
5412	TEX	2	Digital, Gate	TTL	390	N/R GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
54120	N/R	2	Digital, Line/Bus Driver	TTL	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	103	252	13
54120	TEX	1	Digital, Line/Bus Driver	TTL	436	1186 SS	1500 Ohms	100E-12 F	10	N/R	2	FAILED	1200	INPUT TO OUTPUT	5	252	3
54121	FSC	1	Digital, Multivibrator	TTL	390	N/R GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Failure Test		General									
				Date	Type	Resistance	Capacitance	Number	Date	Number	Date	Criteria	Remarks	Remarks			
54121	FSC	1 Digital, Multivibrator	TTL	1086	SS	1500	Ohms	100E-12	F	1	N/R	5	FAILED	2000 EACH PIN TO 7 & 14 (+ -)	19	252	13
54122	FSC	1 Digital, Multivibrator	TTL														
390	N/R	GN		1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R		105	247	11
436	1186	SS		1500	Ohms	100E-12	F	14	N/R	2	FAILED	2000	INPUT TO OUTPUT		5	252	3
54123	FSC	2 Digital, Multivibrator	TTL														
390	N/R	GN		1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R		105	247	11
54128	N/R	2 Digital, Line/Bus Driver	TTL														
030	N/R	N/R		1500	Ohms	100E-12	F	1	N/R	1	FAILED	2500	N/R		103	252	13
54150	FSC	1 Digital, Multiplexer	TTL														
436	1186	SS		1500	Ohms	100E-12	F	11	8704	1	FAILED	1400	INPUT TO GND		5	252	3
54151	FSC	2 Digital, Multivibrator	TTL														
390	N/R	GN		1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R		105	247	11
54153	FSC	2 Digital, Multiplexer	TTL														
390	N/R	GN		1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R		105	247	11



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks			
	Mfr Class	Class			Date	Type										Resistance	Capacitance	Pulses
54153	N/R	3	Digital, Multiplexer	TTL	245	N/R	SS	100	Ohms	N/R	1	N/R	15	FAILED	78 INPUT(+) GND(-)	47	186	21
54154	N/R	2	Digital, Decoder	TTL	030	N/R	N/R	1500	Ohms	100E-12 F	1	N/R	1	FAILED	2500 N/R	103	252	13
5416	TEX	2	Digital, Inverter, Buffer	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
5416	FSC	2	Digital, Inverter, Buffer	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54161	TEX	2	Digital, Counter/Divider	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54174	TEX	2	Digital, Flip-flop	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54174	FSC	2	Digital, Flip-flop	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54175	TEX	2	Digital, Flip-flop	TTL	390	N/R	GN	1500	Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54175	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11						

RAC ESD Database

Part Number	Part ESD	Part Description	Mfc Class	Technology	Test		Number		Test		Failure Criteria	Test Remarks	General Remarks			
					Type	Resistance	Capacitance	Pulses	Code	Devices				Result	Voltage	Pin. Combination
54175	FSC	2 Digital, Flip-Flop		TTL	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54182	N/R	1 Digital, Arithmetic, Carry Generator		TTL												
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13			
					1		1	FAILED	2500	N/R	103	252	13			
5420	FSC	2 Digital, Gate		TTL												
	N/R	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11			
5420	TEX	2 Digital, Gate		TTL												
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2230	N/R	102	189	13			
	N/R	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11			
5421	SIG	2 Digital, Gate		TTL												
	003	1175 SS	0 Ohms	100E-12 F	1	N/R	1	FAILED	700	INPUT(+)	PR.	SUPPLY(-)	102	252	13	
	004	1175 SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	1400	INPUT	102	233	13			
5423	TEX	2 Digital, Gate		TTL												
	N/R	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11			
5425	N/R	2 Digital, Gate		TTL												
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	103	252	13			

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks				
	Mfr Class	Class			Source Date	Test Type											Resistance	Capacitance	Pulses	Test Voltage
5427	FSC	2	Digital, Gate	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11
5427	TEX	2	Digital, Gate	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11
54273	TEX	1	Digital, Flip-Flop	TTL	392	1086	SS	1500	Ohms	100E-12	F	1	N/R	5	FAILED	2000	EACH PIN TO 10 & 20 (+ -)	19	252	13
5430	FSC	2	Digital, Gate	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11
5430	TEX	2	Digital, Gate	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11
5437	N/R	2	Digital, Inverter, Buffer	TTL	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2500	N/R	103	252	13
5437	FSC	2	Digital, Inverter, Buffer	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11
5437	TEX	2	Digital, Inverter, Buffer	TTL	390	N/R	GN	1500	Ohms	100E-12	F	5	N/R	1	PASSED	2000	S/R	105	247	11

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Pin	Combination	Voltage	Test Result	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Test Type	Test Resistance												
5438	N/R	2	Digital, Gate	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	103	252	13		
5440	FSC	2	Digital, Inverter, Buffer	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		
5440	TEX	2	Digital, Inverter, Buffer	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		
5442	FSC	2	Digital, Decoder	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		
5445	N/R	2	Digital, Decoder	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		
5446	N/R	2	Digital, Line/Bus Driver	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	103	252	13		
5450	TEX	2	Digital, Gate	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		
5451	TEX	2	Digital, Gate	TTL	N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11		

RAC ESD Database

Part Number	Part ESD		Part		Technology						
	Mfr Class	Description	Test Date	Test Type	Failure Criteria	General Remarks					
5453	TEX	2 Digital, Gate			TTL						
	TEX	2 Digital, Gate			TTL						
5454	TEX	2 Digital, Gate			TTL						
390	N/R	GN 1500 Ohms	100E-12 F	5 N/R	5 N/R	1 PASSED	2000 S/R	105	247	11	
5470	TEX	2 Digital, Flip-Flop			TTL						
390	N/R	GN 1500 Ohms	100E-12 F	5 N/R	5 N/R	1 PASSED	2000 S/R	105	247	11	
5472	TEX	2 Digital, Flip-Flop			TTL						
390	N/R	GN 1500 Ohms	100E-12 F	5 N/R	5 N/R	1 PASSED	2000 S/R	105	247	11	
5472	NSC	1 Digital, Flip-Flop			TTL						
436	1186	SS 1500 Ohms	100E-12 F	12 N/R	5	5 FAILED	1600 INPUT TO GND	5	252	3	
5473	NSC	1 Digital, Flip-Flop			TTL						
436	0488	SS 1500 Ohms	100E-12 F	12	8726	2	FAILED	1500 INPUT TO OUTPUT	5	252	3
436	0488	SS 1500 Ohms	100E-12 F	7	8726	2	FAILED	800 INPUT TO COMMON	5	252	3
5473	TEX	2 Digital, Flip-Flop			TTL						
390	N/R	GN 1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test Type	Test Resistance	Capacitance	Pulses	Code	Number of Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	FSC														
5474			2 Digital, Flip-Flop	TTL										105	247	11
5476	TEX		2 Digital, Flip-Flop	TTL												
390	N/R	GN	1500 Ohms 100E-12 F		5	N/R	1	PASSED	2000	S/R				105	247	11
5476	NSC		1 Digital, Flip-Flop	TTL												
392	1086	SS	1500 Ohms 100E-12 F		1	N/R	5	FAILED	2000	EACH PIN TO 5 & 13 (+ -)				19	252	13
5476	TEX		2 Digital, Flip-Flop	TTL												
390	N/R	GN	1500 Ohms 100E-12 F		5	N/R	1	PASSED	2000	S/R				105	247	11
5483	N/R		3 Digital, Error Detect/Correct, Parity/Carry Gen	TTL												
245	N/R	SS	100 Ohms N/R		1	N/R	15	FAILED	65	INPUT(+) GND(-)				47	186	21
5483	TEX		2 Digital, Error Detect/Correct, Parity/Carry Gen	TTL												
390	N/R	GN	1500 Ohms 100E-12 F		5	N/R	1	PASSED	2000	S/R				105	247	11
5483	FSC		2 Digital, Error Detect/Correct, Parity/Carry Gen	TTL												
390	N/R	GN	1500 Ohms 100E-12 F		5	N/R	1	PASSED	2000	S/R				105	247	11
5486	FSC		2 Digital, Gate	TTL												
390	N/R	GN	1500 Ohms 100E-12 F		5	N/R	1	PASSED	2000	S/R				105	247	11

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Failure Test		General						
				Test Date	Test Type	Resistance	Capacitance	Number Pulses	Date Code	Test Voltage	Test Result	Criteria	Remarks	
5486	TEX	2 Digital, Gate	TTL	390	N/R	GN	1500 Ohms	100E-12 F	5 N/R	2000 S/R	2000 S/R	105	247	11
54C00	NSC	1 Digital, Gate	CMOS	393	0485	SS	1500 Ohms	100E-12 F	1 N/R	2000 2(INPUT) 7(GND)	2000 2(INPUT) 7(GND)	102	252	13
54C02	NSC	1 Digital, Gate	CMOS	393	0285	SS	1500 Ohms	100E-12 F	1 N/R	2000 3(INPUT) 14(VCC)	2000 3(INPUT) 14(VCC)	102	252	13
54C04	NSC	2 Digital, Inverter, Buffer	CMOS	393	0285	SS	1500 Ohms	100E-12 F	1 N/R	4000 11(INPUT) 10(OUTPUT)	4000 11(INPUT) 10(OUTPUT)	102	252	13
54C08	NSC	2 Digital, Gate	CMOS	393	0285	SS	1500 Ohms	100E-12 F	1 N/R	4000 1(INPUT) 3(OUTPUT)	4000 1(INPUT) 3(OUTPUT)	102	252	13
54C14	NSC	2 Digital, Inverter, Schmitt Trigger	CMOS	393	0784	SS	1500 Ohms	100E-12 F	1 N/R	2250 N/R	2250 N/R	102	194	13
54C157	NSC	2 Digital, Multiplexer	CMOS	393	0385	SS	1500 Ohms	100E-12 F	1 N/R	2500 2(INPUT) 8(GND)	2500 2(INPUT) 8(GND)	102	252	13
54C163	NSC	2 Digital, Counter/Divider	CMOS	393	0385	SS	1500 Ohms	100E-12 F	1 N/R	3000 6(INPUT) 8(GND)	3000 6(INPUT) 8(GND)	102	252	13

RAC ESD Database

Part Number	Part ESD Part		Mfr. Class Description		Technology											
	NSC	2	Digital, Register, Shift		Failure Criteria	Test Remarks	General Remarks									
54C164	NSC	2	Digital, Register, Shift		102	252	13									
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Date	Test Voltage	Pin Combination	Test Result	Test Voltage	Pin Combination	Test Remarks	General Remarks		
	393	0984	SS	1500 Ohms	100E-12 F	1	N/R	2	2500	8(INPUT) 7(GND)	2	FAILED	102	252	13	
54C174	NSC	2	Digital, Flip-Flop										CMOS			
	393	0485	SS	1500 Ohms	100E-12 F	1	N/R	2	2500	1(INPUT) 15(VCC)	2	FAILED	102	252	13	
54C193	NSC	1	Digital, Counter/Divider										CMOS			
	393	0385	SS	1500 Ohms	100E-12 F	1	N/R	2	1500	9(INPUT) 16(VCC)	2	FAILED	102	252	13	
54C30	NSC	2	Digital, Gate										CMOS			
	393	0285	SS	1500 Ohms	100E-12 F	1	N/R	4	3000	1(INPUT) 7(GND)	4	FAILED	102	252	13	
54C42	NSC	1	Digital, Decoder										CMOS			
	393	0984	SS	1500 Ohms	100E-12 F	1	N/R	2	1500	12(INPUT) 8(GND)	2	FAILED	102	252	13	
54C52	NSC	1	Digital, Line/Bus Driver										CMOS			
	393	0882	SS	1500 Ohms	100E-12 F	1	N/R	1	400	N/R	1	FAILED	102	252	13	
54C74	NSC	2	Digital, Flip-Flop										CMOS			
	393	0285	SS	1500 Ohms	100E-12 F	1	N/R	4	3000	12(INPUT) 8(OUTPUT)	4	FAILED	102	252	13	
54C76	NSC	2	Digital, Flip-Flop										CMOS			
	393	0385	SS	1500 Ohms	100E-12 F	1	N/R	2	4000	4(INPUT) 5(VCC)	2	FAILED	102	252	13	



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Device	Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Test Type	Test Resistance												
54C83	NSC	2	Digital, Gate	CMOS	393	0385 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	2500	4	(INPUT) 5(VCC)	102	252	13
54C85	NSC	1	Linear, Comparator	CMOS	393	0385 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	2000	1	(INPUT) 8(GND)	102	252	13
54C901	NSC	1	Digital, Inverter, Buffer	CMOS	393	0285 SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	2000	4	(INPUT) 7(GND)	102	252	13
54C902	NSC	1	Digital, Inverter, Buffer	CMOS	393	0285 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	2000	2	(INPUT) 1(OUTPUT)	102	252	13
54C906	NSC	2	Digital, Inverter, Buffer	CMOS	436	1186 SS	1500 Ohms	100E-12 F	5	N/R	2	FAILED	600		INPUT TO OUTPUT	5	252	3
54C922	NSC	1	Digital, Encoder	CMOS	393	0285 SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	3000	4	(INPUT) 3(OUTPUT)	102	252	13
54F00	SIG	1	Digital, Gate	Advanced STTL	436	0688 SS	1500 Ohms	100E-12 F	12	8741	5	FAILED	1500		INPUT TO OUTPUT	5	252	3

RAC ESD Database

Part Number	Part ESD	Part	Mfr Class		Description	Technology	
			1	1		Advanced	STTL
54F00	FSC	1	Digital, Gate				
	Test	Test	Test	Number	Date	Number	Test
	Source	Date	Type	Resistance	Capacitance	Pulses	Code
436	0788	SS	1500 Ohms	100E-12 F	7	N/R	7
							Result
							5 FAILED
							800 INPUT TO GROUND
							2000 1(INPUT) 7(GND)
393	0784	SS	1500 Ohms	100E-12 F	1	N/R	1
							1 FAILED
							102
							252
							13
54F02	SIG	1	Digital, Gate				
	Test	Test	Test	Number	Date	Number	Test
436	0788	SS	1500 Ohms	100E-12 F	7	8737	5
							5 FAILED
							800 INPUT TO OUTPUT
							Advanced STTL
54F02	FSC	1	Digital, Gate				
	Test	Test	Test	Number	Date	Number	Test
393	0784	SS	1500 Ohms	100E-12 F	1	N/R	1
							1 FAILED
							1000 8(INPUT) 10(OUTPUT)
							102
							252
							13
436	1186	SS	1500 Ohms	100E-12 F	7	N/R	5
							5 FAILED
							800 INPUT TO OUTPUT
							5 FAILED
							800 INPUT TO GND
							5 FAILED
							800 INPUT TO OUTPUT
							5
							252
							3
54F04	FSC	1	Digital, Inverter, Buffer				
	Test	Test	Test	Number	Date	Number	Test
393	0784	SS	1500 Ohms	100E-12 F	1	N/R	1
							1 FAILED
							1500 9(INPUT) 7(GND)
							102
							252
							13
436	1186	SS	1500 Ohms	100E-12 F	11	N/R	1
							1 FAILED
							1400 VCC TO INPUT
							5
							252
							3
54F08	FSC	1	Digital, Gate				
	Test	Test	Test	Number	Date	Number	Test
393	0984	SS	1500 Ohms	100E-12 F	1	N/R	2
							2 FAILED
							500 10(INPUT) 7(GND)
							102
							252
							13
54F11	FSC	1	Digital, Gate				
	Test	Test	Test	Number	Date	Number	Test
393	0984	SS	1500 Ohms	100E-12 F	1	N/R	1
							1 FAILED
							200 10(INPUT) 7(GND)
							102
							252
							13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure Test		General Remarks					
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result		Voltage	Pin Combination	Criteria	Remarks	
54F138	FSC	1 Digital, Decoder	Advanced STTL	393	0784	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	N/R	102	252	13
	436	1186	SS	1500	Ohms	100E-12	F	14	N/R	5	FAILED	2000	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	10	N/R	5	FAILED	1200	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	9	N/R	5	FAILED	1000	INPUT TO OUTPUT	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	17	N/R	5	FAILED	3500	OUTPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	9	N/R	5	FAILED	1000	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	9	N/R	5	FAILED	1000	INPUT TO OUTPUT	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3	
54F138	SIG	1 Digital, Decoder	Advanced STTL														
	436	1186	SS	1500	Ohms	100E-12	F	12	N/R	5	FAILED	1500	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	9	N/R	5	FAILED	1000	INPUT TO GND	5	252	3	
	436	1186	SS	1500	Ohms	100E-12	F	10	N/R	5	FAILED	1200	INPUT TO OUTPUT	5	252	3	
54F153	FSC	2 Digital, Multiplexer	Advanced STTL														
	393	0124	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2500	6(INPUT) 8(GND)	102	252	13	
54F163	FSC	1 Digital, Counter/Divider	Advanced STTL														
	393	0284	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	2000	5(INPUT) 8(GND)	102	252	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Date		Pulses		Capacitance		Resistance		Voltage		Pin		Combination		Failure Test		General			
				Source	Type	Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	102	147	102	147
54F182	FSC	1 Digital, Arithmetic, Carry Generator	Advanced STTL	393	0284 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	2000	N/R	2000	N/R	102	147	102	147	13	13
54F194	FSC	2 Digital, Register, Shift	Advanced STTL	393	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	3000	1(INPUT)	8(GND)	8(GND)	102	252	102	252	13	13
54F20	FSC	1 Digital, Gate	Advanced STTL	436	1186 SS	1500 Ohms	100E-12 F	12	N/R	1	N/R	1	N/R	1	N/R	1	N/R	1600	INPUT TO GND	1600	INPUT TO GND	5	252	5	252	3	3
54F21	FSC	3 Digital, Gate	Advanced STTL	436	1186 SS	1500 Ohms	100E-12 F	7	N/R	5	N/R	5	N/R	5	N/R	5	N/R	800	INPUT TO GND	800	INPUT TO GND	5	252	5	252	3	3
54F240	FSC	2 Digital, Inverter, Buffer	Advanced STTL	436	1186 SS	1500 Ohms	100E-12 F	18	8617	1	8617	1	8617	1	8617	1	8617	4000	N/R	4000	N/R	5	252	5	252	3	3
54F240	FSC	2 Digital, Inverter, Buffer	Advanced STTL	393	0284 SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	N/R	1	N/R	3000	15(INPUT)	10(GND)	10(GND)	102	252	102	252	13	13
54F244	FSC	1 Digital, Inverter, Buffer	Advanced STTL	393	0784 SS	1500 Ohms	100E-12 F	1	8348	1	8348	1	8348	1	8348	1	8348	350	8(INPUT)	10(GND)	10(GND)	102	252	102	252	13	13
54F253	FSC	1 Digital, Multiplexer	Advanced STTL	393	0984 SS	1500 Ohms	100E-12 F	1	8338	1	8338	1	8338	1	8338	1	8338	750	11(INPUT)	8(GND)	8(GND)	102	252	102	252	13	13

RAC ESD Database

Part Number	Part	ESD	Part	ESD	Test	Test	Number	Date	Number	Test	Failure	Test	General			
54-532	54-532	SS	SS	SS	SS	SS	12	875	12	875	5	252	3			
54-532	54-532	SS	SS	SS	SS	SS	13	N/R	13	N/R	5	252	3			
54-532	54-532	SS	SS	SS	SS	SS	11	N/R	11	N/R	5	252	3			
54-532	54-532	SS	SS	SS	SS	SS	11	N/R	11	N/R	5	252	3			
54-533	54-533	SS	SS	SS	SS	SS	9	N/R	9	N/R	5	252	3			
54-533	54-533	SS	SS	SS	SS	SS	8	N/R	8	N/R	5	252	3			
54-533	54-533	SS	SS	SS	SS	SS	8	N/R	8	N/R	5	252	3			
54-532	54-532	SS	SS	SS	SS	SS	12	875	12	875	4	FAILED	1500 + INPUT TO - OUTPUT	5	252	3
54-532	54-532	SS	SS	SS	SS	SS	13	N/R	13	N/R	4	FAILED	1500 INPUT TO GROUND	5	252	3
54-532	54-532	SS	SS	SS	SS	SS	11	N/R	11	N/R	5	FAILED	1400 INPUT TO GND	5	252	3
54-532	54-532	SS	SS	SS	SS	SS	11	N/R	11	N/R	5	FAILED	1400 INPUT TO GND	5	252	3
54-533	54-533	SS	SS	SS	SS	SS	9	N/R	9	N/R	5	FAILED	600 INPUT TO OUTPUT	5	252	3
54-533	54-533	SS	SS	SS	SS	SS	8	N/R	8	N/R	5	PASSED	4000 N/R	5	252	3
54-533	54-533	SS	SS	SS	SS	SS	8	N/R	8	N/R	5	FAILED	900 INPUT TO GND	5	252	3

RAC ESD Database

Part Number (Cont'd.)	Part ESD		Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Test Result	Voltage	Pin	Combination	Technology			
	Mtr Class	Description													Failure Criteria	Test Remarks	General Remarks	
54F373	FSC	1	1186	SS	1500	Ohms	100E-12	F	5	N/R	5	FAILED	600	INPUT TO GND	5	252	3	
			436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	12	N/R	5	FAILED	800	INPUT TO OUTPUT	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	18	N/R	5	PASSED	4000	N/R	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3
54F374	FSC	2																
			393	0284	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	3000	4 INPUT) 10(GND)	102	252	13
54F521	FSC	1																
			436	1186	SS	1500	Ohms	100E-12	F	9	8551	5	FAILED	1000	INPUT TO GND	5	252	3
												1	FAILED	1000	INPUT TO GND	5	252	3
												5	FAILED	1000	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	7	8551	5	FAILED	800	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	3	8551	1	FAILED	400	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	11	8551	5	FAILED	1400	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	9	8551	5	FAILED	1000	INPUT TO GND	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	5	8551	5	FAILED	600	INPUT TO OUTPUT	5	252	3
			436	1186	SS	1500	Ohms	100E-12	F	18	8551	5	PASSED	4000	N/R	5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology		Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
			Advanced	STTL												
54F64	FSC	2 Digital, Gate														
			393	0184	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500	11(INPUT) 7(GND)	102	252	13
54F74	FSC	1 Digital, Flip-Flop														
			393	0984	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	400	4(INPUT) 7(GND)	102	252	13
			436	1186	SS	1500 Ohms	100E-12 F	6	N/R	5	FAILED	700	INPUT TO OUTPUT	5	252	3
										5	FAILED	700	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	4	N/R	5	FAILED	500	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	400	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	9	N/R	5	FAILED	1000	INPUT TO GND	5	252	3
										5	FAILED	1000	INPUT TO GND	5	252	3
54F74	SIG	1 Digital, Flip-Flop														
			436	1186	SS	1500 Ohms	100E-12 F	10	N/R	5	FAILED	1200	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	12	N/R	5	FAILED	1600	INPUT TO OUTPUT	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	18	N/R	5	PASSED	4000	N/R	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	12	N/R	1	FAILED	1600	INPUT TO GND	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	13	N/R	5	FAILED	1800	INPUT TO OUTPUT	5	252	3
			436	1186	SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	1200	INPUT TO OUTPUT	5	252	3

RAC ESD Database

Part Number 5474	Part ESD Class SIG	Part Description 1 Digital, Flip-Flop	Test		Number of Devices 10	Date N/R	Pulses N/R	Capacitance 100E-12 F	Resistance 1500 Ohms	Test Type SS	Source 436	Test Voltage 1200 INPUT	Pin Combination 1200 INPUT	Test Result 5 FAILED	Failure Criteria 5	Test Remarks 252	General Remarks 3
			Test Type	Test													
54H00	FSC	2 Digital, Gate	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	SS	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11
54H00	N/R	3 Digital, Gate	N/R	SS	1	N/R	1	100 Ohms	100 Ohms	SS	245	93 INPUT(+)	93 INPUT(+)	15 FAILED	HTTL	186	21
54H01	TEX	2 Digital, Gate	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	GN	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11
54H04	TEX	2 Digital, Inverter, Buffer	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	GN	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11
54H04	FSC	2 Digital, Inverter, Buffer	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	GN	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11
54H04	RCA	1 Digital, Inverter, Buffer	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	GN	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11
54H10	TEX	2 Digital, Gate	N/R	SS	14	N/R	2	100E-12 F	1500 Ohms	SS	436	2000 INPUT TO GND	2000 INPUT TO GND	2 FAILED	HTTL	252	3
54H10	N/R	1500 Ohms 100E-12 F	N/R	GN	5	N/R	1	100E-12 F	1500 Ohms	GN	390	2000 S/R	2000 S/R	1 PASSED	HTTL	247	11



RAC ESD Database

Part Number	ESD Class	Part Description	Mfr	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Devices	Test Voltage	Pin Combination	Technology	
												Failure Criteria	Test Remarks
54H10	FSC	2 Digital, Gate		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54H183	N/R	3 Digital, Arithmetic, Adder, Full		N/R	100 Ohms	N/R	1	N/R	15	FAILED	98 INPUT(+) GND(-)	47	186
54H20	TEX	2 Digital, Gate		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54H20	FSC	2 Digital, Gate		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54H30	FSC	2 Digital, Gate		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54H40	TEX	? Digital, Inverter, Buffer		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54H76	TEX	2 Digital, Flip-Flop		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
54HC00	MOT	1 Digital, Gate		N/R	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247
397	N/R	SS		N/R	1500 Ohms	100E-12 F	5	N/R	10	FAILED	1800 INPUT TO GND (+ -)	54	252

RAC ESD Database

Part Number	Part ESD Mir Class	Part Description	Technology		Test Source	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Test Voltage	Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
			MOT	1															
54HC00	MOT	1 Digital, Gate	RCA	2	Digital, Gate	397	N/R	SS	1500 Ohms	100E-12 F	5	N/R		3'00	OU*PUT TO GND (+ -)	10 FAILED	54	252	7
														2100	IN*UT TO OUTPUT (+ -)	10 FAILED	54	252	7
														9000	VCC TO GND (+ -)	10 PASSED	102	252	7
														9000	GND TO VCC (+ -)	10 PASSED	102	252	7
54HC00	NSC	2 Digital, Gate	RCA	2	Digital, Gate	397	N/R	SS	1500 Ohms	100E-12 F	1	N/R		2800	INPUT TO GND (+ -)	10 FAILED	54	252	7
														6125	OUTPUT TO GND (+ -)	10 FAILED	54	252	7
														2050	INPUT TO OUTPUT (+ -)	10 FAILED	54	252	7
														9000	VCC TO GND (+ -)	10 PASSED	102	252	7
54HC00	TEX	2 Digital, Gate	NSC	2	Digital, Gate	397	N/R	SS	1500 Ohms	100E-12 F	5	N/R		3100	INPUT TO GND (+ -)	10 FAILED	54	252	7
														5300	OUTPUT TO GND (+ -)	10 FAILED	54	252	7
														2500	INPUT TO OUTPUT (+ -)	10 FAILED	54	252	7
														9000	VCC TO GND (+ -)	10 PASSED	102	252	7
54HC00	TEX	2 Digital, Gate	TEX	2	Digital, Gate	397	N/R	SS	1500 Ohms	100E-12 F	5	N/R		9000	GND TO VCC (+ -)	10 PASSED	102	252	7
														9000	GND TO VCC (+ -)	10 PASSED	102	252	7
														9000	INPUT TO GND (+ -)	10 PASSED	102	252	7
														5800	OUTPUT TO GND (+ -)	10 FAILED	54	252	7
54HC04	TEX	1 Digital, Inverter, Buffer	TEX	1	Digital, Inverter, Buffer	436	1186	SS	1500 Ohms	100E-12 F	12	8648		1600	OUTPUT TO GND	2 FAILED	5	252	3

RAC ESD Database

Part Number	Part ESD		Part Description	Technology								
	Mfr Class	1		HMOS	HMOS							
54HC14	NSC	1	Digital, Inverter, Buffer									
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	9	8627	1000	INPUT TO OUTPUT	5	252	3
54HC161	TEX	1	Digital, Counter/Divider									
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	2	8535	300	INPUT TO OUTPUT	5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	15	8535	2500	INPUT TO OUTPUT	5	252	3
54HC390	MOT	1	Digital, Counter/Divider									
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	10	8703	1200	INPUT TO GND	5	252	3
54HC42	MOT	1	Digital, Decoder									
	436	0588 SS	1500 Ohms	100E-12 F	100E-12 F	12	N/R	1500	INPUT TO COMMON	5	252	3
	436	0588 SS	1500 Ohms	100E-12 F	100E-12 F	9	N/R	1000	INPUT TO OUTPUT	5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	9	N/R	1000	INPUT TO GND	5	252	3
54L03	NSC	1	Digital, Gate									
	436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	11	N/R	1400	INPUT TO GND	5	252	3
54L04	N/R	2	Digital, Inverter, Buffer									
	361	N/R	GN	1500 Ohms	100E-12 F	200	N/R	2000	GND.(1)(+); IN.(7)(-)	78	252	13
	362	N/R	GN	1500 Ohms	100E-12 F	200	N/R	2250	GND.(1)(+); IN.(7)(-)	78	252	13

RF ESD Database

Part Number 5404	Part ESD Class N/R	Part Description 2 Digital, Inverter, Buffer	Technology LTTL	Test		Number of Devices 10 N/R	Number of Pulses 200 N/R	Test Capacitance 100E-12 F	Test Resistance 1500 Ohms	Test Voltage 2500 GND.(1)(+) IN.(7)(-)	Test Result 1 FAILED	Test Voltage 2500 GND.(1)(+) IN.(7)(-)	Pin Combination GND.(1)(+) IN.(7)(-)	Failure Criteria 78	Test Remarks 252	General Remarks 13
				Test Date N/R	Test Type GN											
363	N/R	GN		1500 Ohms	100E-12 F	10	200	100E-12 F	1500 Ohms	2500 GND.(1)(+) IN.(7)(-)	1 PASSED	2500 GND.(1)(+) IN.(7)(-)		78	252	13
363	N/R	GN		1500 Ohms	100E-12 F	10	200	100E-12 F	1500 Ohms	2500 GND.(1)(+) IN.(7)(-)	1 PASSED	2500 GND.(1)(+) IN.(7)(-)		78	252	13
364	N/R	GN		1500 Ohms	100E-12 F	1	1	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		29	77	13
364	N/R	GN		1500 Ohms	100E-12 F	3	3	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		29	77	13
364	N/R	GN		1500 Ohms	100E-12 F	5	5	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		42	76	13
364	N/R	GN		1500 Ohms	100E-12 F	8	8	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		42	76	13
364	N/R	GN		1500 Ohms	100E-12 F	50	50	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		42	76	13
364	N/R	GN		1500 Ohms	100E-12 F	75	75	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		29	77	13
364	N/R	GN		1500 Ohms	100E-12 F	125	125	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		42	76	13
364	N/R	GN		1500 Ohms	100E-12 F	175	175	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 FAILED	2750 GND.(1)(+) IN.(7)(-)		42	76	13
364	N/R	GN		1500 Ohms	100E-12 F	1	1	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	1 PASSED	2750 GND.(1)(+) IN.(7)(-)		78	252	13
364	N/R	GN		1500 Ohms	100E-12 F	11	11	100E-12 F	1500 Ohms	2750 GND.(1)(+) IN.(7)(-)	11 PASSED	2750 GND.(1)(+) IN.(7)(-)		78	252	13
365	N/R	GN		1500 Ohms	100E-12 F	200	200	100E-12 F	1500 Ohms	3000 GND.(1)(+) IN.(7)(-)	1 PASSED	3000 GND.(1)(+) IN.(7)(-)		78	252	13
365	N/R	GN		1500 Ohms	100E-12 F	5	5	100E-12 F	1500 Ohms	3000 GND.(1)(+) IN.(7)(-)	1 FAILED	3000 GND.(1)(+) IN.(7)(-)		42	76	13
366	N/R	GN		1500 Ohms	100E-12 F	10	10	100E-12 F	1500 Ohms	3250 GND.(1)(+) IN.(7)(-)	1 FAILED	3250 GND.(1)(+) IN.(7)(-)		42	76	13
367	N/R	GN		1500 Ohms	100E-12 F	1	1	100E-12 F	1500 Ohms	3500 GND.(1)(+) IN.(7)(-)	4 FAILED	3500 GND.(1)(+) IN.(7)(-)		78	252	13
											2 FAILED	3500 GND.(1)(+) IN.(7)(-)		29	77	13
											6 FAILED	3500 GND.(1)(+) IN.(7)(-)		42	76	13
367	N/R	GN		1500 Ohms	100E-12 F	4	4	100E-12 F	1500 Ohms	3500 GND.(1)(+) IN.(7)(-)	2 FAILED	3500 GND.(1)(+) IN.(7)(-)		42	76	13

RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description	Technology														
	M-F	Class			LTTL													
54L04	N/R	2	Digital, Inverter, Buffer		Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
367	N/R	GN	1500 Ohms	100E-12 F	8	N/R	1	FAILED	3500 GND.(1)(+)	IN.(7)(-)	42	76	13					
367	N/R	GN	1500 Ohms	100E-12 F	25	N/R	1	FAILED	3500 GND.(1)(+)	IN.(7)(-)	78	252	13					
367	N/R	GN	1500 Ohms	100E-12 F	200	N/R	8	PASSED	3500 GND.(1)(+)	IN.(7)(-)	78	252	13					
368	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	4000 GND.(1)(+)	IN.(7)(-)	78	252	13					
							4	FAILED	4000 GND.(1)(+)	IN.(7)(-)	29	77	13					
							7	FAILED	4000 GND.(1)(+)	IN.(7)(-)	42	76	13					
368	N/R	GN	1500 Ohms	100E-12 F	50	N/R	1	FAILED	4000 GND.(1)(+)	IN.(7)(-)	78	252	13					
368	N/R	GN	1500 Ohms	100E-12 F	1	N/R	8	PASSED	4000 GND.(1)(+)	IN.(7)(-)	78	252	13					
369	N/R	GN	1500 Ohms	100E-12 F	1	N/R	10	FAILED	4250 GND.(1)(+)	IN.(7)(-)	42	76	13					
							2	FAILED	4250 GND.(1)(+)	IN.(7)(-)	78	252	13					
							5	FAILED	4250 GND.(1)(+)	IN.(7)(-)	29	77	13					
369	N/R	GN	1500 Ohms	100E-12 F	8	N/R	1	FAILED	4250 GND.(1)(+)	IN.(7)(-)	29	77	13					
369	N/R	GN	1500 Ohms	100E-12 F	200	N/R	3	PASSED	4250 GND.(1)(+)	IN.(7)(-)	78	252	13					
370	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	4500 GND.(1)(+)	IN.(7)(-)	29	77	13					
							7	FAILED	4500 GND.(1)(+)	IN.(7)(-)	78	252	13					
							8	FAILED	4500 GND.(1)(+)	IN.(7)(-)	42	76	13					
							3	PASSED	4500 GND.(1)(+)	IN.(7)(-)	78	252	13					
371	N/R	GN	1500 Ohms	100E-12 F	1	N/R	7	FAILED	5000 GND.(1)(+)	IN.(7)(-)	42	76	13					
							5	FAILED	5000 GND.(1)(+)	IN.(7)(-)	78	252	13					
							4	FAILED	5000 GND.(1)(+)	IN.(7)(-)	29	77	13					
371	N/R	GN	1500 Ohms	100E-12 F	2	N/R	1	FAILED	5000 GND.(1)(+)	IN.(7)(-)	78	252	13					
371	N/R	GN	1500 Ohms	100E-12 F	6	N/R	1	FAILED	5000 GND.(1)(+)	IN.(7)(-)	42	76	13					

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Resistance											
54L04	N/R	2 Digital, Inverter, Buffer	LTTL	371	N/R	GN	1500 Ohms	100E-12 F	7	N/R	1	FAILED	5000 GND.(1)(+) IN.(7)(-)	42	76	13
	N/R			371	N/R	GN	1500 Ohms	100E-12 F	175	N/R	1	FAILED	5000 GND.(1)(+) IN.(7)(-)	42	76	13
	N/R			371	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	FAILED	5000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			371	N/R	GN	1500 Ohms	100E-12 F	200	N/R	4	PASSED	5000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			372	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	FAILED	5500 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			373	N/R	GN	1500 Ohms	100E-12 F	1	N/R	3	FAILED	5750 GND.(1)(+) IN.(7)(-)	42	76	13
	N/R			373	N/R	GN	1500 Ohms	100E-12 F	1	N/R	3	FAILED	5750 GND.(1)(+) IN.(7)(-)	29	77	13
	N/R			373	N/R	GN	1500 Ohms	100E-12 F	1	N/R	4	FAILED	5750 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			374	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			374	N/R	GN	1500 Ohms	100E-12 F	25	N/R	1	FAILED	6000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			375	N/R	GN	1500 Ohms	100E-12 F	20	N/R	1	FAILED	6500 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			375	N/R	GN	1500 Ohms	100E-12 F	25	N/R	1	FAILED	6500 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			376	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	7000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			376	N/R	GN	1500 Ohms	100E-12 F	2	N/R	1	FAILED	7000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			376	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	FAILED	7000 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			377	N/R	GN	1500 Ohms	100E-12 F	50	N/R	1	FAILED	7200 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			378	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	7500 GND.(1)(+) IN.(7)(-)	78	252	13
	N/R			379	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	8000 GND.(1)(+) IN.(7)(-)	78	252	13
54L74	N/R	3 Digital, Flip-Flop	LTTL	245	N/R	SS	100 Ohms	N/R	1	N/R	15	FAILED	77 INPUT(+) GND(-)	47	186	21

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks			
	Mfr Class	1			Resistance	Capacitance												Ohms	Type	Test Date
54LS00	NSC	1	Digital, Gate	LSTTL																
					383	N/R	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	8132 IN.(+) APTI(-)	49	188	8	
					026	0178	SS	100	Ohms	200E-12	F	1	N/R	1	FAILED	366 INPUT(1)(+) GND(7)(-)	6	285	13	
					436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800 INPUT TO GND	5	252	3	
54LS00			SIG 2 Digital, Gate	LSTTL																
					026	0178	SS	100	Ohms	200E-12	F	1	N/R	4	FAILED	513 INPUT(1)(+) GND(7)(-)	6	285	13	
54LS00			N/R 1 Digital, Gate	LSTTL																
					030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500 N/R	103	252	13	
					245	N/R	SS	100	Ohms	N/R	N/R	1	N/R	15	FAILED	85 INPUT(+) GND(-)	47	186	21	
54LS02			N/R 1 Digital, Gate	LSTTL																
					030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500 N/R	103	252	13	
54LS02			FSC 1 Digital, Gate	LSTTL																
					436	1186	SS	1500	Ohms	100E-12	F	5	N/R	1	FAILED	600 INPUT TO GND	5	252	3	
54LS03			N/R 1 Digital, Gate	LSTTL																
					030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500 N/R	103	252	13	

RAC ESD Database

Part Number	Part ESD Part		Mfr Class Description		Technology								
	N/R	1	Digital, Inverter, Buffer		Failure Criteria	Test Remarks	General Remarks						
54LS04													
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Date	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS04	FSC		1	Digital, Inverter, Buffer							LS TTL		
	436	1186	SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	900 INPUT TO GND	5	252	3
54LS04	NSC		1	Digital, Inverter, Buffer							LS TTL		
	383	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1263 OUT.(+) APTI(-)	49	188	8
	436	1186	SS	1500 Ohms	100E-12 F	7	N/R	5	FAILED	800 INPUT TO GND	5	252	3
54LS04	TEX		1	Digital, Inverter, Buffer							LS TTL		
	436	1186	SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	500 INPUT TO OUTPUT	5	252	3
54LS05	N/R		1	Digital, Inverter, Buffer							LS TTL		
	130	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	900 EACH PIN(+)	12	99	24
								1	FAILED	800 EACH PIN(+)	9	104	24
								1	FAILED	900 EACH PIN(+)	11	106	24
54LS08	N/R		1	Digital, Gate							LS TTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS08	SIG		1	Digital, Gate							LS TTL		
	436	1186	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	600 INPUT TO GND	5	252	3



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Date	Test Type	Test Resistance	Test Capacitance	Number of Pulses	Date Code	Number of Devices	Test Result	Test Voltage	Pin Combination	Test Remarks	General Remarks
	Mfr Class	1															
54LS09	N/R	1	Digital, Gate	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS10	N/R	1	Digital, Gate	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS10	NSC	1	Digital, Gate	LSTTL	5	435	1186 SS	1500 Ohms	100E-12 F	7	N/R	5	FAILED	800 INPUT TO GND		252	3
54LS107	N/R	1	Digital, Flip-Flop	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS109	N/R	1	Digital, Flip-Flop	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS11	N/R	1	Digital, Gate	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS112	N/R	1	Digital, Flip-Flop	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13
54LS12	N/R	1	Digital, Gate	LSTTL	103	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks		
	Mfr	Class			Test Type	Resistance													Capacitance	
54LS123	N/R	1	Digital, Multivibrator	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	8	N/R	5	FAILED	900	OUTPUT TO GND	5	252	3
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	5	N/R	1	FAILED	600	INPUT TO OUTPUT	5	252	3
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	7	N/R	5	FAILED	800	INPUT TO GND	5	252	3
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	4	N/R	5	FAILED	500	INPUT TO GND	5	252	3
54LS123	MOT	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	3	N/R	5	FAILED	400	INPUT TO OUTPUT	5	252	3
54LS123	TEX	1	Digital, Multivibrator	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	10	N/R	1	FAILED	1200	INPUT TO GND	5	252	3
54LS125	N/R	1	Digital, Inverter, Buffer	LSTTL	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13
54LS125	MOT	1	Digital, Inverter, Buffer	LSTTL	436	1186	SS	1500	Ohms	100E-12	F	7	N/R	1	FAILED	800	INPUT TO GND	5	252	3
54LS126	N/R	1	Digital, Inverter, Buffer	LSTTL	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13

RAC ESD Database

Part ESD Part	Class	Configuration	Technology
54-S138	N/R	1 Digital, Decoder	LSTTL
54-S139	N/R	1 Digital, Decoder	LSTTL
54-S140	N/R	1 Digital, Inverter, Buffer	LSTTL
54-S141	N/R	1 Digital, Inverter, Buffer	LSTTL
54-S142	N/R	1 Digital, Encoder	LSTTL
54-S143	N/R	1 Digital, Gate	LSTTL
54-S144	N/R	1 Digital, Multiplexer	LSTTL

Part	Test Type	Test Resistance	Capacitance	Pulses	Code	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
54-S138	ESD	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	103	252	13
54-S139	ESD	1500 Ohms	100E-12 F	8	N/R	1	900	INPUT TO GND	5	252	3
54-S140	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	103	252	13
54-S141	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	103	252	13
54-S142	N/R	1500 Ohms	100E-12 F	9	N/R	1	1000	INPUT TO GND	5	252	3
54-S143	N/R	1500 Ohms	100E-12 F	5	N/R	5	1000	INPUT TO COMMON	5	252	3
54-S144	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	103	252	13
54-S145	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	103	252	13
54-S146	N/R	1500 Ohms	100E-12 F	5	N/R	5	1117	INPUTS(+) GROUND(-)	109	143	13

RAC ESD Database

Part		Part ESD Part		Technology	
Number (Cont'd)	Mfg	Class	Description	Failure Test	General
54-S151	MOT	1	Digital, Multiplexer	Criteria	Remarks
128	0381 SS	1000 Ohms	200E-12 F	133 INPUTS(+) GROUND(-)	109 143
				1142 INPUTS(+) GROUND(-)	109 143
				973 INPUTS(+) GROUND(-)	109 142
				1045 INPUTS(+) GROUND(-)	109 142
54-S151	NSC	1	Digital, Multiplexer	LS TTL	
128	0381 SS	1000 Ohms	200E-12 F	1127 INPUTS(+) GROUND(-)	109 143
				1033 INPUTS(+) GROUND(-)	109 143
				950 INPUTS(+) GROUND(-)	109 143
				1042 INPUTS(+) GROUND(-)	109 143
				1075 INPUTS(+) GROUND(-)	109 143
				700 INPUT(15)(+) GROUND(-)	109 252
				1000 INPUT(15)(+) GROUND(-)	109 252
				1100 INPUT(15)(-) GROUND(-)	109 252
54-S151	N/R	1	Digital, Multiplexer	LS TTL	
070	N/R	1500 Ohms	100E-12 F	1500 N/R	103 252
54-S153	N/R	1	Digital, Multiplexer	LS TTL	
030	N/R	1500 Ohms	100E-12 F	1500 N/R	103 252
2-5	N/P	SS	100 Ohms N/R	95 INPUT(+) GND(-)	47 186
54-S153	SIG	2	Digital, Multiplexer	LS TTL	
128	0381 SS	1000 Ohms	200E-12 F	1500 INPUTS(+) GROUND(-)	109 286

RAC ESD Database

Part Number	Part	Part ESD		Technology																	
		Class	Description																		
54LS155	54LS155	N/R	Digital, Decoder	LS TTL																	
		Test Date	Test Type	Test Resistance	Capacitance	100E-12 F	Number Pulses	1	Date	Code	Devices	1	N/R	1500 Ohms	100E-12 F	1	FAILED	1500 N/R	103	252	13
		Source	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	N/R	1	1500 Ohms	100E-12 F	1	FAILED	1500 N/R	103	252	13
54LS157	54LS157	AMD	2	Digital, Multiplexer																	
		Test Date	026	0291 SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	433 INPUT(15)(+) GND(8)(-)	50	285	13							
54LS157	54LS157	NSC	1	Digital, Multiplexer																	
		Test Date	436	0488 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	200 INPUT TO OUTPUT	5	252	3							
54LS160	54LS160	N/R	1	Digital, Counter/Divider																	
		Test Date	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13							
54LS161	54LS161	N/R	1	Digital, Counter/Divider																	
		Test Date	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13							
54LS161	54LS161	SIG	1	Digital, Counter/Divider																	
		Test Date	436	1186 SS	1500 Ohms	100E-12 F	9	N/R	5	FAILED	1000 INPUT TO GND	5	252	3							

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Devices	Code	Pulses	Capacitance	Resistance	Test Type	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Test	Test															
54LS161A	MOT	1 Digital, Counter/Divider	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	6	8612	1	FAILED	700	INPUT TO GND	5	252	3				
54LS162	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13				
54LS163	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13				
54LS164	TEX	2 Digital, Register, Shift	LSTTL	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11			
54LS164	N/R	1 Digital, Register, Shift	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13			
54LS164	SIG	1 Digital, Register, Shift	LSTTL	026	0281 SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	228	INPUT(1)(+) OUT(7)(-)	35	285	13				
54LS165	N/R	1 Digital, Register, Shift	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13			
54LS166	N/R	1 Digital, Register, Shift	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13			

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Test		General Remarks						
	Mfr Class	Class			Criteria	Remarks							
54LS166	TEX	1	Digital, Register, Shift	LSTTL	5	252	3						
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Voltage	Pin Combination	Test Result	Test Failed	Test Passed	General Remarks
436	1186	SS	1500 Ohms	100E-12 F	17	N/R	5	3500	INPUT TO GND	5 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	5	N/R	5	600	INPUT TO OUTPUT	5 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	9	N/R	1	1000	INPUT TO GND	1 FAILED	5	252	3
54LS166	MOT	1	Digital, Register, Shift	LSTTL									
436	1186	SS	1500 Ohms	100E-12 F	3	N/R	1	400	INPUT TO GND	1 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	1	N/R	5	200	INPUT TO GND	5 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	5	N/R	5	600	INPUT TO OUTPUT	5 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	6	N/R	5	700	INPUT TO OUTPUT	5 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	5	N/R	1	600	INPUT TO OUTPUT	1 FAILED	5	252	3
436	1186	SS	1500 Ohms	100E-12 F	4	N/R	5	500	INPUT TO OUTPUT	5 FAILED	5	252	3
54LS173	N/R	1	Digital, Flip-Flop	LSTTL									
03J	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13
54LS174	N/R	1	Digital, Flip-Flop	LSTTL									
03C	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13
54LS175	N/R	1	Digital, Flip-Flop	LSTTL									
03O	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology		Failure Criteria	Test Remarks	General Remarks								
			LS TTL	LS TTL											
54LS175	SIG	1 Digital, Flip-Flop	Test Date	Test Type	Test Resistance	Capacitance	Number of Pulses	Date	Number of Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
436	1186 SS	1500 Ohms	100E-12 F	18 N/R	5 PASSED	4000 N/R	5	252	3						
436	1186 SS	1500 Ohms	100E-12 F	7 N/R	1 FAILED	800 INPUT TO GND	1	252	3						
54LS175	FSC	1 Digital, Flip-Flop											LS TTL		
390	N/R GN	1500 Ohms	100E-12 F	5 N/R	1 PASSED	2000 S/R	1	247	11						
436	1186 SS	1500 Ohms	100E-12 F	9 N/R	1 FAILED	1000 INPUT TO OUTPUT	1	252	3						
436	1186 SS	1500 Ohms	100E-12 F	4 N/R	1 FAILED	500 INPUT TO GND	1	252	3						
54LS181	N/R	1 Digital, Arithmetic, Logic Unit											LS TTL		
030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	1	252	13						
54LS192	N/R	1 Digital, Counter/Divider											LS TTL		
030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	1	252	13						
245	N/R SS	100 Ohms	N/R	1 N/R	15 FAILED	59 INPUT(+) GND(-)	15	186	21						
54LS193	N/R	1 Digital, Counter/Divider											LS TTL		
030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	1	252	13						
54LS194	N/R	1 Digital, Register, Shift											LS TTL		
030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	1	252	13						



RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number		Date		Pulses		Capacitance		Resistance		Voltage		Pin Combination		Failure Criteria		General Remarks	
				Type	Ohms	N/R	N/R	1	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252
54LS196	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS197	N/F	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS20	N/R	1 Digital, Gate	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS20	S13	1 Digital, Gate	LSTTL	436	N/R	1500 Ohms	N/R	9	N/R	5	N/R	100E-12 F	1000	INPUT TO INPUT	5	1000	5	252	3	5	252	3	
54LS21	N/R	1 Digital, Gate	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS221	N/R	1 Digital, Multivibrator	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS240	N/R	1 Digital, Line/Bus Driver	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS244	N/R	1 Digital, Line/Bus Driver	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	
54LS244	N/R	1 Digital, Line/Bus Driver	LSTTL	030	N/R	1500 Ohms	N/R	1	N/R	1	N/R	100E-12 F	1500	1500 N/R	1	1500 N/R	103	252	13	103	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part Description	Technology	Test		Number		Test		Failure Test		General Remarks			
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Voltage		Pin Combination	Criteria	Remarks
54LS244	TEX	1 Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	11	N/R	1	FAILED	1400 INPUT TO GND	5	252	3
54LS244	SIG	1 Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	600 INPUT TO GND	5	252	3
54LS245	N/R	1 Digital, Transceiver	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS245	TEX	1 Digital, Transceiver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	700 INPUT TO OUTPUT	5	252	3
54LS251	N/R	1 Digital, Multiplexer	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS253	N/R	1 Digital, Multiplexer	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS253	FSC	1 Digital, Multiplexer	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	5	FAILED	700 INPUT TO GND	5	252	3
54LS253	N/R	1500 Ohms	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	600 INPUT TO GND	5	252	3

RAC ESD Database

Part Number	ESD Part	Part Description	Mfr Class	Technology	Test		Number	Date	Pulses	Code	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks		
					Type	Resis											Devices	Result
54LS253	MOT	1 Digital, Multiplexer		LS TTL	436	1186 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	800	INPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	10	N/R	5	FAILED	1200	INPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	500	INPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	600	INPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	4	N/R	5	FAILED	500	INPUT TO GND	5	252	3	
54LS253	NSC	1 Digital, Multiplexer		LS TTL														
					436	1186 SS	1500 Ohms	100E-12 F	4	N/R	5	FAILED	500	INPUT TO GND	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	400	INPUT TO OUTPUT	5	252	3	
					436	1186 SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	900	INPUT TO GND	5	252	3	
54LS257	N/R	1 Digital, Multiplexer		LS TTL														
					030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
54LS259	N/R	1 Digital, Latch		LS TTL														
					030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
54LS26	MOT	1 Digital, Line/Bus Driver		LS TTL														
					436	1186 SS	1500 Ohms	100E-12 F	7	8534	1	FAILED	800	INPUT TO GND	5	252	3	

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Test Voltage	Pin Combination	Failure Criteria	General Remarks				
	Mfr Class	Part Class			Test Type	Test Resistance								
54LS266	N/R	1	Digital, Gate	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS27	N/R	1	Digital, Gate	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS279	N/R	1	Digital, Latch	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS280	N/R	1	Digital, Error Detect/Correct, Parity/Carry Gen	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS283	N/R	1	Digital, Arithmetic, Adder, Full	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS295	N/R	1	Digital, Register, Shift	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS298	N/R	1	Digital, Multiplexer	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
54LS299	N/R	1	Digital, Register, Shift	LS TTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD	Part	Mfr Class Description		Technology								
			Mfr Class	Description									
54LS209	TFX	1	Digital, Register, Shift		LSTTL								
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Code	Test Voltage	Test Result	Devices	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	436	1186 SS	1500 Ohms	100E-12 F	4	N/R	500	2 FAILED		INPUT TO OUTPUT	5	252	3
54LS30	N/R	1	Digital, Gate								LSTTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	15.00	103	252	13
54LS32	N/R	1	Digital, Gate								LSTTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	15.00	103	252	13
54LS32	FSC	1	Digital, Gate								LSTTL		
	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	700	1 FAILED		INPUT	5	252	3
54LS33	N/R	1	Digital, Multiplexer								LSTTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1 FAILED	15.00	103	252	13
54LS35	NSC	1	Digital, Line/Bus Driver								LSTTL		
	435	1186 SS	1500 Ohms	100E-12 F	18	8426	4000	1 PASSED		N/R	5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	7	8426	800	1 FAILED		INPUT TO OUTPUT	5	252	3
								5 FAILED		INPUT TO OUTPUT	5	252	3
54LS35A	NSC	2	Digital Line/Bus Driver								LSTTL		
	436	1186 SS	1500 Ohms	100E-12 F	17	N/R	3500	5 FAILED		N/R	5	252	3

RAC ESD Database

Part Number	Part ESD Part		Test	Test	Test	Number	Date	Pulses	Code	Devices	Test	Test	Voltage	Pin	Combination	Failure Criteria	Test	General
	Mfr Class	Description																
54LS367	N/R	1	1500 Ohms	100E-12 F	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	1500 N/R		103	252	13	LSTTL
54LS368	N/R	1	1500 Ohms	100E-12 F	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	1500 N/R		103	252	13	LSTTL
54LS37	N/R	1	1500 Ohms	100E-12 F	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	1500 N/R		103	252	13	LSTTL
54LS37	SIG	1	1500 Ohms	100E-12 F	100E-12 F	5	N/R	1	N/R	1	FAILED	600 INPUT TO GND	600 INPUT TO GND		5	252	3	LSTTL
54LS373	N/R	1	1500 Ohms	100E-12 F	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	1500 N/R		103	252	13	LSTTL
54LS373	TEX	1	1500 Ohms	100E-12 F	100E-12 F	3	N/R	1	N/R	1	FAILED	400 INPUT TO GND	400 INPUT TO GND		5	252	3	LSTTL
54LS374	N/R	1	1500 Ohms	100E-12 F	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	1500 N/R		103	252	13	LSTTL

RAC ESD Database

Part Number (Cont'd)	Part ESD Mic Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Number of Devices	Date	Pulses	Code	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
54LS38	N/R	1 Digital, Inverter, Buffer	LSTTL	030	N/R	1500 Ohms	100E-12 F	1500	1	N/R	1	N/R	1	1500	N/R	103	252	13
54LS390	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1500	1	N/R	1	N/R	1	1500	N/R	103	252	13
54LS390	TEX	1 Digital, Counter/Divider	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	1800	1	N/R	1	N/R	1	1800	INPUT TO GND	5	252	3
54LS393	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1500	1	N/R	1	N/R	1	1500	N/R	103	252	13
54LS393	MOT	1 Digital, Counter/Divider	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	1200	1	N/R	1	N/R	1	1200	INPUT TO OUTPUT	5	252	3
54LS393	TEX	1 Digital, Counter/Divider	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	600	1	N/R	1	N/R	1	600	INPUT TO OUTPUT	5	252	3
54LS40	N/R	1 Digital, Inverter, Buffer	LSTTL	030	N/R	1500 Ohms	100E-12 F	1500	1	N/R	1	N/R	1	1500	N/R	103	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr. Class	Part Description	Technology											
54540	NSC	1 Digital, Inverter, Buffer	LSTTL											
		Test Date	Test Type	Test Resistance	Capacitance	Number Pulses	Date	Number Devices	Code	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
436	0588 SS	1500 Ohms	100E-12 F	100E-12 F	9	N/R	5	FAILED	1000	INPUT TO OUTPUT	5	252	3	
436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	11	N/R	5	FAILED	1000	INPUT TO COMMON	5	252	3	
54542	N/R	1 Digital, Decoder										LSTTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13	
54551	N/R	1 Digital, Gate										LSTTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13	
54554	N/R	1 Digital, Gate										LSTTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13	
54557	N/R	1 Digital, Register, File										LSTTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13	
54569	TEX	1 Linear, Comparator										LSTTL		
436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	5	9624	2	FAILED	600	INPUT TO OUTPUT	5	252	3	
54577	TEX	1 Digital, Counter/Divider										LSTTL		
436	1186 SS	1500 Ohms	100E-12 F	100E-12 F	7	N/R	2	FAILED	800	INPUT TO GND	5	252	3	



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks				
				Type	Resistance	Capacitance	Pulses	Date	Number				Result	Voltage	Pin	Combination
54LS73	SIG	1 Digital, Flip-Flop	LS TTL	SS	1500 Ohms	100E-12 F	15	8519	5	FAILED	2500	INPUT TO GND	5	252	3	
436	1186	SS	1500 Ohms	100E-12 F	10	8519	5	FAILED	1200	INPUT TO GND	5	252	5	252	3	
54LS74	NSC	1 Digital, Flip-Flop	LS TTL													
383	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	133	IN.(+) APTT(-)	49	188	49	188	3	
								1	FAILED	280	OUT.(+) APTT(-)	49	188	49	188	3
								1	FAILED	483	VCC(+) APTT(-)	49	188	49	188	8
54LS74	FSC	1 Digital, Flip-Flop	LS TTL													
436	1186	SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	900	INPUT TO OUTPUT	5	252	5	252	3	
436	1186	SS	1500 Ohms	100E-12 F	12	N/R	1	FAILED	1600	INPUT TO GND	5	252	5	252	3	
54LS74	SIG	2 Digital, Flip-Flop	LS TTL													
436	1186	SS	1500 Ohms	100E-12 F	15	N/R	1	FAILED	2500	INPUT TO GND	5	252	5	252	3	
54LS74	N/R	1 Digital, Flip-Flop	LS TTL													
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	103	252	13	
54LS74A	SIG	2 Digital, Flip-Flop	LS TTL													
436	1186	SS	1500 Ohms	100E-12 F	15	N/R	5	FAILED	2500	INPUT TO GND	5	252	5	252	3	
54LS75	N/R	1 Digital, Latch	LS TTL													
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	103	252	13	

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number		Test		Failure						
				Date	Type	Resistance	Capacitance	Pulses	Code	Date	Number	Criteria	Test			
54LS76	MOT	1 Digital, Flip-Flop	LSTTL	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1250 EACH PIN TO 5 & 13 (+ -)	19	252	13	
54LS85	N/R	1 Linear, Comparator	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13	
54LS85	MOT	1 Linear, Comparator	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	800 VCC TO GND	5	252	3	
54LS86	TEX	2 Digital, Gate	LSTTL	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
54LS86	N/R	1 Digital, Gate	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
54LS90	NSC	1 Digital, Counter/Divider	LSTTL	383	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2692 IN.(-) APTT(+)	49	188	8
54LS90	MOT	1 Digital, Counter/Divider	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	700 INPUT TO GND	5	252	3	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Part Technology	Test		Number		Date		Pulses		Capacitance		Resistance		Voltage		Pin Combination		Test Result		Failure Criteria		General Remarks	
				Type	Test	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code
54LS92	N/R	1 Digital, Counter/Divider	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1500 N/R	1	FAILED	1800	INPUT TO GND	1	FAILED	103	252	13					
54LS92	TEX	1 Digital, Counter/Divider	LSTTL																						
	436	1186 SS	1500 Ohms	100E-12 F	13	N/R	1	N/R	1	FAILED	1800	INPUT TO GND	1	FAILED	5	252	3								
54LS93	MOT	1 Digital, Counter/Divider	LSTTL																						
	435	1186 SS	1500 Ohms	100E-12 F	3	8535	1	FAILED	400	INPUT TO GND	1	FAILED	5	252	3										
54S00	TEX	2 Digital, Gate	STTL																						
	390	N/R GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	1	PASSED	105	247	11										
54S00	N/R	1 Digital, Gate	STTL																						
	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	1	FAILED	103	252	13										
	245	N/R SS	100 Ohms	N/R	1	N/R	15	FAILED	36	INPUT(+) GND(-)	1	FAILED	47	186	21										
54S00	SIG	1 Digital, Gate	STTL																						
	026	0178 SS	100 Ohms	200E-12 F	1	N/R	4	FAILED	228	INPUT(1)(+) GND(7)(-)	1	FAILED	6	285	13										
54S02	N/R	1 Digital, Gate	STTL																						
	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	1	FAILED	103	252	13										

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Source	Type											
54S03	N/R	1	Digital, Gate	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
54S04	TEX	1	Digital, Inverter, Buffer	STTL													
298	N/R	GN	1500 Ohms	200E-12 F	200	N/R	1	PASSED	600	VCC(14)(+)	IN.(1)(-)	84	252	13			
297	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	800	VCC(14)(+)	IN.(1)(-)	84	252	13			
298	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	PASSED	800	VCC(14)(+)	IN.(1)(-)	84	252	13			
314	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	900	VCC(14)(+)	IN.(1)(-)	84	252	13			
319	N/R	GN	1500 Ohms	100E-12 F	200	N/R	1	PASSED	975	VCC(14)(+)	IN.(1)(-)	84	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	VCC(14)(+)	IN.(1)(-)	77	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	200	N/R	2	PASSED	1000	VCC(14)(+)	IN.(1)(-)	84	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	1	N/R	4	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	2	N/R	3	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	9	N/R	1	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	30	N/R	1	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	500	N/R	1	PASSED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
320	N/R	GN	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1000	VCC(14)(+)	IN.(1)(-)	121	252	13			
321	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	VCC(14)(+)	IN.(1)(-)	77	252	13			

RAC ESD Database

Part Number (Cont'd)	Part Class	Part Description	Technology	Test			Number of Devices	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Test Date	Result												
5444	TEX	1 Digital, Inverter, Buffer	STTL	322	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	1 FAILED	1100 VCC(14)(+) IN.(1)(-)	77	252	13	
					N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1100 VCC(14)(+) IN.(1)(-)	121	252	13	
					N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1 FAILED	1100 VCC(14)(+) IN.(1)(-)	77	252	13	
				323	N/R	GN	1500 Ohms	100E-12 F	1	N/R	4	N/R	4 FAILED	1125 VCC(14)(+) IN.(1)(-)	121	252	13	
				323	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1125 VCC(14)(-) IN.(1)(-)	121	252	13	
					N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1125 VCC(14)(-) IN.(1)(-)	77	252	13	
				323	N/R	GN	1500 Ohms	100E-12 F	3	N/R	1	N/R	1 FAILED	1125 VCC(14)(+) IN.(1)(-)	121	252	13	
				323	N/R	GN	1500 Ohms	100E-12 F	40	N/R	1	N/R	1 FAILED	1125 VCC(14)(+) IN.(1)(-)	121	252	13	
				324	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1 FAILED	1150 VCC(14)(-) IN.(1)(-)	121	252	13	
				325	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	N/R	2 FAILED	1200 VCC(14)(+) IN.(1)(-)	121	252	13	
					N/R	GN	1500 Ohms	100E-12 F	4	N/R	4	N/R	4 FAILED	1200 VCC(14)(+) IN.(1)(-)	121	252	13	
					N/R	GN	1500 Ohms	100E-12 F	6	N/R	6	N/R	6 PASSED	1200 VCC(14)(+) IN.(1)(-)	84	252	13	
				325	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	N/R	1 PASSED	1200 VCC(14)(+) IN.(1)(-)	121	252	13	
				325	N/R	GN	1500 Ohms	100E-12 F	2	N/R	1	N/R	1 PASSED	1200 VCC(14)(+) IN.(1)(-)	84	252	13	
					N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1200 VCC(14)(+) IN.(1)(-)	121	252	13	
				326	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1 FAILED	1250 VCC(14)(+) IN.(1)(-)	77	252	13	
					N/R	GN	1500 Ohms	100E-12 F	5	N/R	5	N/R	5 FAILED	1250 VCC(14)(+) IN.(1)(-)	121	252	13	
					N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1250 VCC(14)(+) IN.(1)(-)	77	252	13	
				326	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	N/R	2 FAILED	1250 VCC(14)(+) IN.(1)(-)	121	252	13	
				326	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	N/R	1 FAILED	1250 VCC(14)(+) IN.(1)(-)	77	252	13	
				327	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	N/R	1 PASSED	1300 VCC(14)(+) IN.(1)(-)	84	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure		General				
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Voltage	Pin Combination	Criteria	Test Remarks	Remarks
54S04	TEX	1 Digital, Inverter, Buffer	STTL	328	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1350 VCC(14)(+) IN.(1)(-)	121	252	13
									1	N/R	1	FAILED	1350 VCC(14)(+) IN.(1)(-)	77	252	13
				329	N/R	GN	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1375 VCC(14)(+) IN.(1)(-)	121	252	13
				329	N/R	GN	1500 Ohms	100E-12 F	2	N/R	2	FAILED	1375 VCC(14)(+) IN.(1)(-)	121	252	13
				329	N/R	GN	1500 Ohms	100E-12 F	3	N/R	2	FAILED	1375 VCC(14)(+) IN.(1)(-)	121	252	13
				329	N/R	GN	1500 Ohms	100E-12 F	4	N/R	1	FAILED	1375 VCC(14)(+) IN.(1)(-)	77	252	13
				329	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILEC	1375 VCC(14)(+) IN.(1)(-)	121	252	13
									4	N/R	4	FAILED	1375 VCC(14)(+) IN.(1)(-)	77	252	13
									2	N/R	2	PASSED	1375 VCC(14)(+) IN.(1)(-)	84	252	13
				330	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	PASSED	1500 VCC(14)(+) IN.(1)(-)	84	252	13
									7	N/R	7	FAILED	1500 VCC(14)(+) IN.(1)(-)	121	252	13
				330	N/R	GN	1500 Ohms	100E-12 F	2	N/R	1	FAILED	1500 VCC(14)(+) IN.(1)(-)	121	252	13
				330	N/R	GN	1500 Ohms	100E-12 F	3	N/R	1	FAILED	1500 VCC(14)(+) IN.(1)(-)	121	252	13
									1	N/R	1	FAILED	1500 VCC(14)(+) IN.(1)(-)	77	252	13
				331	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	FAILED	1500 VCC(14)(+) IN.(1)(-)	77	252	13
				346	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2000 VCC(14)(+) IN.(1)(-)	77	252	13
				347	N/R	GN	1500 Ohms	200E-12 F	1	N/R	1	FAILED	2000 VCC(14)(+) IN.(1)(-)	77	252	13
54S04	FSC	2 Digital, Inverter, Buffer	STTL													
				390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11

RAC ESD Database

Part Number (Cont'd.)	Part Mfr	ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Date	Test Result	Devices	Pin Combination	Voltage	Test	Failure Criteria	Test Remarks	General Remarks	
					030	030																	103
54S05	N/R	1	Digital, Inverter, Buffer	STTL	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	100E-12 F	030	1 FAILED	1	1000 N/R	1000 N/R	103	252	13		
54S08	N/R	1	Digital, Gate	STTL	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	100E-12 F	030	1 FAILED	1	1000 N/R	1000 N/R	103	252	13		
54S10	TEX	2	Digital, Gate	STTL	N/R	N/R	1	N/R	1	N/R	125E-12 F	0 Ohms	100E-12 F	004	1 FAILED	1	600 INPUT	600 INPUT	102	231	13		
54S10	N/R	1	Digital, Gate	STTL	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	100E-12 F	030	1 FAILED	1	1000 N/R	1000 N/R	103	252	13		
54S11	N/R	1	Digital, Gate	STTL	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	100E-12 F	030	1 FAILED	1	1000 N/R	1000 N/R	103	252	13		
54S12	N/R	1	Digital, Flip-Flop	STTL	N/R	N/R	1	N/R	1	N/R	100E-12 F	1500 Ohms	100E-12 F	030	1 FAILED	1	1000 N/R	1000 N/R	103	252	13		

RAC ESD Database

Part: 54S135  
 Mfr: Philips  
 Description: Digital, Gate  
 Part: 54S135  
 Mfr: Philips  
 Description: Digital, Gate

Test Date: 030  
 Test Type: N/R  
 Test Result: N/R  
 Test Description: 1500 Ohms  
 Test Voltage: 100E-12 F  
 Test Result: 1 FAILED  
 Test Voltage: 1000 N/R

Failure Criteria: 103  
 Test Remarks: 252  
 General Remarks: 13

54S135 N/R 1 Digital, Error Detect/Correct, Parity/Carry Gen  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13

54S138 N/R 1 Digital, Decoder  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13

245 N/R SS 100 Ohms N/R 1 N/R 15 FAILED 40 INPUT(+) GND(-) 186 21

54S140 N/R 1 Digital, Line/Bus Driver  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13

54S151 N/R 1 Digital, Multiplexer  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13

54S153 FSC 2 Digital, Multiplexer  
 390 N/R GN 1500 Ohms 100E-12 F 5 N/R 1 PASSED 2000 S/R 11

54S153 N/R 1 Digital, Multiplexer  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13

54S153 N/R 1 Digital, Multiplexer  
 030 N/R N/R 1500 Ohms 100E-12 F 1 N/R 1 FAILED 1000 N/R 13



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Part			Test Type	Test Resistance											
54S157	SIG	1	Digital, Multiplexer	STTL	128	0381 SS	1000 Ohms	200E-12 F	5	N/R	5	2 FAILED	1100	INPUTS(+) GROUND(-)	109	144	13
54S157	N/R	1	Digital, Multiplexer									1 FAILED	888	INPUTS(+) GROUND(-)	109	144	13
54S157	N/R	1	Digital, Multiplexer									1 FAILED	1138	INPUTS(+) GROUND(-)	109	144	13
54S157	N/R	1	Digital, Multiplexer									1 FAILED	988	INPUTS(+) GROUND(-)	109	144	13
54S160	N/R	1	Digital, Counter/Divider									1 FAILED	1000	N/R	103	252	13
54S160	N/R	1	Digital, Counter/Divider									1 FAILED	1000	N/R	103	252	13
54S161	N/R	1	Digital, Counter/Divider									1 FAILED	1000	N/R	103	252	13
54S161	N/R	1	Digital, Counter/Divider									1 FAILED	1000	N/R	103	252	13
54S169	TEX	1	Digital, Counter/Divider									5 FAILED	850	EACH PIN TO 8 & 16 (+ -)	19	252	13
54S174	AMD	2	Digital, Flip-Flop									1 PASSED	2000	S/R	105	247	11
54S174	TEX	2	Digital, Flip-Flop									1 PASSED	2000	S/R	105	247	11

RAC ESD Database

Part Number	Part ESD		Test Date	Test Type	Test Resistance	Test Capacitance	Number	Date	Pulses	Code	Devises	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class															
54S174	N/R	1													103	252	13
															103	252	13
54S175	N/R	1													STTL		
															103	252	13
54S181	TEX	1													STTL		
															102	189	13
54S181	N/R	1													STTL		
															103	252	13
54S182	TEX	2													STTL		
															105	247	11
54S189	N/R	1													STTL		
															103	252	13
54S20	N/R	1													STTL		
															103	252	13
54S200	N/R	1													STTL		
															103	252	13

RAC ESD Database

Part Number	Part ESD Part		Technology		Test		Failure Test		General	
	Mr	Class	Description	Technology	Test	Test	Criteria	Test	Remarks	Remarks
54S22	N/R	1	Digital, Gate	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13
54S251	N/R	1	Digital, Multiplexer	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13
54S257	N/R	1	Digital, Multiplexer	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13
54S258	N/R	1	Digital, Multiplexer	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13
54S280	TEX	1	Digital, Gate	STTL						
	0688	SS	1500 Ohms	100E-12 F	4	N/R	4	FAILED	500 INPUT TO OUTPUT	5 252 3
	1186	SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	600 INPUT TO GND	5 252 3
54S297	N/R	1	Digital, Memory, PROM	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13
54S288	N/R	1	Digital, Memory, PROM	STTL						
	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103 252 13

RAC ESD Database

Part Number (Cont'd)	Part Class	Part Description	Technology
54S30	NSC	1 Digital, Memory, PROM	STTL
54S30	N/R	1 Digital, Gate	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103
54S32	N/R	1 Digital, Gate	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103
54S32	TEX	1 Digital, Gate	STTL
436	1186 SS	1500 Ohms 100E-12 F	5
54S31	N/R	1 Digital, Memory, PROM	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103
54S472	N/R	1 Digital, Memory, PROM	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103
54S51	N/R	1 Digital, Gate	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103
54S573	N/R	1 Digital, Memory, PROM	STTL
030	N/R	N/R 1500 Ohms 100E-12 F	103

RAC ESD Database

Part Number	Part ESD Part	MSD	MSD Description	NSC	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date	Code	Devices	Test Voltage	Test Result	Failure Count	Test Remarks	General Remarks
54573			Digital, Gate		1086	SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	951 EACH PIN TO 7 & 14 (+)	5 FAILED	19	252	13
54573		MON	Digital, Memory, RAM, Dynamic												STTL		
54574			Digital, Flip-Flop		1186	SS	1500 Ohms	100E-12 F	8	N/R	1	N/R	900 INPUT TO GND	1 FAILED	5	252	3
54574			Digital, Flip-Flop		1186	SS	1500 Ohms	100E-12 F	11	N/R	1	N/R	1400 INPUT TO GND	1 FAILED	5	252	3
54585			Digital, Arithmetic, Magnitude Comparator		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000 N/R	1 FAILED	103	252	13
54585			Digital, Arithmetic, Magnitude Comparator		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000 N/R	1 FAILED	103	252	13
54586			Digital, Gate												STTL		
54586			Digital, Gate		030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000 N/R	1 FAILED	103	252	13
55107			Digital, Line/Bus Receiver												STTL		
55107			Digital, Line/Bus Receiver		245	N/R	100 Ohms	N/R	1	N/R	15	N/R	41 INPUT(+) INPUT(-)	15 FAILED	47	186	21
55109			Digital, Line/Bus Driver												Bipolar		
55109			Digital, Line/Bus Driver		245	N/R	100 Ohms	N/R	1	N/R	15	N/R	84 INPUT(+) GND(-)	15 FAILED	47	186	21

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Type	Resistance										
55113	TEX	2	Digital, Line/Bus Driver	Bipolar	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
55114	TEX	3	Digital, Line/Bus Driver	Bipolar	CN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
436	1186	SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000	N/R	5	252	3			
55114	FSC	1	Digital, Line/Bus Driver	Bipolar	SS	1500 Ohms	100E-12 F	14	N/R	1	FAILED	2000	INPUT TO OUTPUT	5	252	3
55326	TEX	2	Digital, Line/Bus Driver	Bipolar	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
55327	TEX	2	Digital, Line/Bus Driver	Bipolar	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
55454	TEX	1	Digital, Line/Bus Driver	Bipolar	SS	1500 Ohms	100E-12 F	11	N/R	1	FAILED	1400	INPUT TO GND	5	252	3
55461	N/R	2	Digital, Line/Bus Driver	Bipolar	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3000	N/R	103	252	13

RAC ESD Database

Part Number	Part	ESD Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
55462		N/R	2 Digital, Line/Bus Driver	Bipolar													
55463		N/R	2 Digital, Line/Bus Driver	Bipolar													
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	3000	N/R	103	252	13
55464		N/R	2 Digital, Line/Bus Driver	Bipolar													
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	3000	N/R	103	252	13
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	3000	N/R	103	252	13
555		SIG	1 Linear	Bipolar													
		026	0178 SS	100 Ohms	200E-12 F	1	N/R	1	N/R	4	FAILED	296	N/R	6	285	13	
555		N/R	1 Linear	Bipolar													
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1700	N/R	103	252	13
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1700	N/R	103	252	13
556		N/R	1 Linear	Bipolar													
		030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1700	N/R	103	252	13
5710		SIG	3 Linear, Comparator	ILL													
		029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	6910	N/R	102	188	13

RAC ESD Database

Part Number	Part ESD Part		Description		Technology							
	Mfr Class	VAR	2	Digital, Latch	Bipolar	Bipolar						
573	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Date	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	0983	SS	1500 Ohms	100E-12 F	8 N/R	8 N/R	3 FAILED	1000 PINS	4, 5, 6, AND 7	46	149	13
	0983	SS	1500 Ohms	100E-12 F	7 N/R	7 N/R	12 FAILED	1000 PINS	4, 5, 6, AND 7	46	149	13
	0983	SS	0 Ohms	0 F	8 N/R	8 N/R	3 FAILED	1000 N/R		111	252	4
	0983	SS	0 Ohms	0 F	10 N/R	10 N/R	2 FAILED	1250 N/R		111	252	4
	0983	SS	0 Ohms	0 F	12 N/R	12 N/R	10 FAILED	1500 N/R		111	252	4
5845	MOT	1	Linear, Voltage Reference							Bipolar		
	1186	SS	1500 Ohms	100E-12 F	11 N/R	11 N/R	1 FAILED	1400 INPUT TO GND		5	252	3
6116	IDT	1	Digital, Memory, RAM, Static							CMOS		
	0588	SS	1500 Ohms	100E-12 F	5 8746	5 8746	1 FAILED	600 INPUT TO OUTPUT		5	252	3
	0588	SS	1500 Ohms	100E-12 F	11 8746	11 8746	1 FAILED	600 INPUT TO COMMON		5	252	3
	0588	SS	1500 Ohms	100E-12 F	12 8746	12 8746	1 FAILED	600 INPUT TO OUTPUT		5	252	3
	0588	SS	1500 Ohms	100E-12 F	10 8746	10 8746	1 FAILED	1200 INPUT TO COMMON		5	252	3
	0588	SS	1500 Ohms	100E-12 F	11 8746	11 8746	1 FAILED	1400 INPUT TO COMMON		5	252	3
	0588	SS	1500 Ohms	100E-12 F	12 8746	12 8746	1 FAILED	1500 INPUT TO COMMON		5	252	3
6116590	IDT	1	Digital, Memory, RAM, Static							CMOS		
	0184	SS	1500 Ohms	100E-12 F	1 N/R	1 N/R	1 FAILED	750 N/R		102	252	13
63983	NSC	1	Digital, Memory, RAM							CMOS		
	0383	SS	1500 Ohms	100E-12 F	1 N/R	1 N/R	1 FAILED	1000 N/R		102	252	13



RAC ESD Database

Part Number	Part ESD		Part Description		Technology							
	Mfr Class	Part	Description		Failure Criteria	General Remarks						
6504	VAR	2	Digital, Memory, RAM, Static	CMOS								
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	General Remarks
	424	0983 SS	1500 Ohms	100E-12 F	2	N/R	4	FAILED	250	PIN 13	46	149 13
	424	0983 SS	1500 Ohms	100E-12 F	1	N/R	4	FAILED	250	PIN 13	46	149 13
	424	0983 SS	1500 Ohms	100E-12 F	4	N/R	7	FAILED	500	PIN 13	46	149 13
	423	0983 SS	0 Ohms	0 F	6	N/R	5	FAILED	750	PINS 1-3, AND 15-17	46	252 4
	423	0983 SS	0 Ohms	0 F	5	N/R	4	FAILED	43000	PINS 1-3 AND 15-17	46	252 4
	423	0983 SS	0 Ohms	0 F	7	N/R	6	FAILED	43000	PINS 1-3 AND 15-17	46	252 4
6514	NSC	2	Digital, Memory, RAM, Static	CMOS								
	055	0681 GN	1000 Ohms	200E-12 F	5	N/R	2	PASSED	250	LID TO ALL PINS	57	60 13
	056	0681 GN	1000 Ohms	200E-12 F	5	N/R	2	PASSED	500	LID TO ALL PINS	57	60 13
	057	0681 GN	1000 Ohms	200E-12 F	5	N/R	2	PASSED	1000	LID TO ALL PINS	57	60 13
	058	0681 GN	1000 Ohms	200E-12 F	5	N/R	2	FAILED	2000	LID TO ALL PINS	57	60 13
	059	0681 GN	1000 Ohms	200E-12 F	5	N/R	2	FAILED	4000	LID TO ALL PINS	57	60 13
6514	MON	1	Digital, Memory, RAM, Static	CMOS								
	002	0679 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	48	252 13
6514	RCA	1	Digital, Memory, RAM, Static	CMOS								
	002	0679 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1400	N/R	48	252 13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology															
			CMOS	CMOS	Failure Criteria	Test Remarks	General Remarks											
6518	N/R	1 Digital, Memory, RAM, Static	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Code	Date	Test Devices	Test Result	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks	
			028	N/R	SS	1500 Ohms	117E-12 F	30	N/R	5	FAILED	750	N/R		93	252	13	
6561	HAR	1 Digital, Memory, RAM	393	0881	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2000	N/R		102	252	13	
6654	ISL	1 Digital, Memory, PROM	393	1182	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R		102	252	13	
6800	N/R	1 Digital, Processing Unit, Central	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		103	252	13	
										1	FAILED	1000	N/R		103	252	13	
										1	FAILED	1000	N/R		103	252	13	
68000	VAR	3 Digital, Processing Unit, Central	424	1283	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	250	PINS 17 AND 18		100	149	13	
			424	1283	SS	1500 Ohms	100E-12 F	4	N/R	5	FAILED	500	PINS 17 AND 18		100	149	13	
			424	1283	SS	1500 Ohms	100E-12 F	3	N/R	5	FAILED	500	PINS 17 AND 18		100	149	13	
			424	1283	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	750	PINS 17 AND 18		100	149	13	
			424	1283	SS	1500 Ohms	100E-12 F	5	N/R	3	FAILED	750	PINS 17 AND 18		100	149	13	
			423	1283	SS	0	Ohms 0	F	9	N/R	2	FAILED	1250	PINS 10 AND 12		100	252	4

RAC ESD Database

Part Number	Part ESD	Part Description	Mfr Class	VAR	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Devices	Date	Code	Test Voltage	Test Result	Pin Combination	Failure Criteria	Test Remarks	General Remarks	Technology
68000	3	Digital, Processing Unit, Central																	HMOS
					1283	SS	0	Ohms	0	F	17	N/R	3	FAILED	2250 PINS 10 AND 12	100	252	4	
					1283	SS	0	Ohms	0	F	19	N/R	1	FAILED	2500 PINS 10 AND 12	100	252	4	
					1283	SS	0	Ohms	0	F	22	N/R	5	FAILED	2750 PINS 10 AND 12	100	252	4	
					1283	SS	0	Ohms	0	F	21	N/R	3	FAILED	2750 PINS 10 AND 12	100	252	4	
					1283	SS	0	Ohms	0	F	24	N/R	1	FAILED	3000 PINS 10 AND 12	100	252	4	
68000	1	Digital, Processing Unit, Central																	HMOS
					1186	SS	1500	Ohms	100E-12	F	15	N/R	1	FAILED	2500 INPUT TO GND	5	252	3	
					1186	SS	1500	Ohms	100E-12	F	12	N/R	1	FAILED	1500 INPUT TO GND	5	252	3	
					1186	SS	1500	Ohms	100E-12	F	16	N/R	1	FAILED	3000 INPUT TO OUTPUT	5	252	3	
6802	1	Digital, Processing Unit, Central																	NMOS
					030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1000 N/R	103	252	13	
6821	1	Digital, Processing Unit, Central																	NMOS
					030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1000 N/R	103	252	13	
					030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1000 N/R	103	252	13	
6828	1	Digital, Processing Unit, Central																	NMOS
					030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1000 N/R	103	252	13	

RAC ESD Database

Part Number	Part ESD		Part Description		Technology									
	Mfc	Class	Description											
6844	N/R	1	Digital, Processing Unit, Central		NMOS									
	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Code	Date	Number	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000	N/R	1 FAILED	103	252	13
6845	N/R	1	Digital, Processing Unit, Central											
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000	N/R	1 FAILED	103	252	13
6850	N/R	1	Digital, Processing Unit, Central											
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000	N/R	1 FAILED	103	252	13
6875	N/R	1	Digital, Processing Unit, Central											
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1000	N/R	1 FAILED	103	252	13
7040	NIT	2	Digital, Memory, EAROM											
	383	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	2308	D04(10)(+) APTT(-)	1 FAILED	49	188	8
									128398	A0(-) APTT(+)	1 FAILED	49	188	8
									27769	VSS(-) APTT(+)	1 FAILED	49	188	8
709	FSC	1	Linear, Operational Amplifier											
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1984	N/R	1 FAILED	102	189	13
									1565	N/R	1 FAILED	102	188	13
70C97	NSC	1	Digital, Inverter, Buffer											
	393	0285	SS	1500 Ohms	100E-12 F	1	N/R	2	1000	4(INPUT) 5(OUTPUT)	2 FAILED	102	252	13

RAC ESD Database

Part Number	Part Description	Part Class	Part	Test	Test Type	Test Value	Number of Devices	Number of Pulses	Device Code	Device Range	Test Result	Count	Device Type
710	Linear, Comparator	FSC	1	Test	Resistance	100 Ohms	1	N/R	200E-12 F	200E-12 F	1	1	Bipolar
029	Linear, Operational Amplifier	FSC	3	Test	Capacitance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar
428	Digital, Memory, Bubble	INT	1	Test	Capacitance	1500 Ohms	5	N/R	100E-12 F	100E-12 F	10	10	MOS
723	Linear, Voltage Regulator	FSC	1	Test	Resistance	100 Ohms	1	N/R	200E-12 F	200E-12 F	4	4	Bipolar
026	Linear, Voltage Regulator	FSC	1	Test	Resistance	100 Ohms	1	N/R	200E-12 F	200E-12 F	4	4	Bipolar
392	Linear, Voltage Regulator	FSC	1	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	5	5	Bipolar
723	Linear, Voltage Regulator	N/R	1	Test	Resistance	100 Ohms	1	N/R	200E-12 F	200E-12 F	15	15	Bipolar
030	Linear, Voltage Regulator	N/R	N	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar
245	Linear, Voltage Regulator	N/R	N	Test	Resistance	100 Ohms	1	N/R	200E-12 F	200E-12 F	1	1	Bipolar
72709	Linear, Operational Amplifier	TEX	N	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar
029	Linear, Operational Amplifier	N/R	N	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar
733	Digital, Multivibrator	N/R	1	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar
030	Digital, Multivibrator	N/R	N	Test	Resistance	1500 Ohms	1	N/R	100E-12 F	100E-12 F	1	1	Bipolar

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Remarks	General Remarks						
	Mfr	Class											
733	N/R	1	Digital, Multivibrator	Bipolar	103	252	13						
	<u>Test Date</u>	<u>Test Type</u>	<u>Test Resistance</u>	<u>Test Capacitance</u>	<u>Number Pulses</u>	<u>Date Code</u>	<u>Number Devices</u>	<u>Test Result</u>	<u>Test Voltage</u>	<u>Test Pin Combination</u>	<u>Failure Test Remarks</u>	<u>General Remarks</u>	
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R			
740	FSC	3	Linear, Operational Amplifier								BIFET		
	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	14270	N/R	102	188	13
7400	FSC	1	Digital, Gate								TTL		
	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3234	N/R	102	188	13
	426	0986 SS	1500 Ohms	100E-12 F	30	N/R	3	FAILED	2000	INPUT TO GND.	61	204	13
7400	MOT	2	Digital, Gate								TTL		
	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2460	N/R	102	188	13
7400	TEX	3	Digital, Gate								TTL		
	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4401	N/R	102	188	13
7400	SIG	3	Digital, Gate								TTL		
	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	9032	N/R	102	188	13
7400	N/R	1	Digital, Gate								TTL		
	028	N/R	1500 Ohms	117E-12 F	30	N/R	5	FAILED	1500	N/R	87	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Pin Combination	Voltage	Test Result	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance											
7402	3	Digital, Gate	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	5485	N/R	1	102	188	13
7402	1	Digital, Gate	TTL	FSC	1500 Ohms	100E-12 F	30	N/R	3	N/R	2000	INPUT TO GND.	3	61	204	13
7404	2	Digital, Inverter, Buffer	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	2500	N/R	1	103	252	13
7404	1	Digital, Inverter, Buffer	TTL	FSC	1500 Ohms	100E-12 F	30	N/R	3	N/R	2000	INPUT TO GND.	3	61	204	13
7406	2	Digital, Line/Bus Driver	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	2500	N/R	1	103	252	13
7407	2	Digital, Line/Bus Driver	TTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	2500	N/R	1	103	252	13
741	1	Linear, Operational Amplifier	Bipolar	FSC	1500 Ohms	100E-12 F	1	N/R	1	N/R	5958	N/R	1	102	188	13
741	1	Linear, Operational Amplifier	Bipolar	N/R	1500 Ohms	100E-12 F	1	N/R	2	N/R	1000	EACH PIN	2	51	171	13

RAC ESD Database

Part Number	Part ESD Part	Part Description	Technology
026	0178 SS	100 Ohms 200E-12 F	1 N/R
018	0880 SS	1500 Ohms 125E-12 F	1 N/R
018	0880 SS	1500 Ohms 125E-12 F	2 N/R
018	0880 SS	1500 Ohms 125E-12 F	4 N/R
018	0880 SS	1500 Ohms 125E-12 F	5 N/R
054	0181 SS	1500 Ohms 100E-12 F	1 N/R
054	0181 SS	1500 Ohms 100E-12 F	1 N/R
050	0780 GN	1500 Ohms 125E-12 F	1 N/R
419	0880 SS	1500 Ohms 125E-12 F	1 N/R
741	TEX	1 Linear, Operational Amplifier	
741	MOT	1 Linear, Operational Amplifier	
741	N/R	2 Linear, Operational Amplifier	

Test	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Voltage	Pin Combination	Failures Criteria	Test Remarks	General Remarks
026	0178 SS	100 Ohms	200E-12 F	1	N/R	1		1	FAILED	315 OFF	NULL(5)(+) V(-)(4)	33	285	13
018	0880 SS	1500 Ohms	125E-12 F	1	N/R	100		100	FAILED	500	NON-INVERTING INPUT	22	252	13
018	0880 SS	1500 Ohms	125E-12 F	2	N/R	100		100	FAILED	750	INVERTING INPUT	22	252	13
018	0880 SS	1500 Ohms	125E-12 F	4	N/R	100		100	FAILED	1250	POSITIVE NULL	22	252	13
018	0880 SS	1500 Ohms	125E-12 F	4	N/R	100		100	FAILED	1250	NEGATIVE NULL	22	252	13
018	0880 SS	1500 Ohms	125E-12 F	5	N/R	100		100	FAILED	5000	NEGATIVE SUPPLY	22	252	13
054	0181 SS	1500 Ohms	100E-12 F	1	N/R	100		100	FAILED	5000	POSITIVE SUPPLY	22	252	13
054	0181 SS	1500 Ohms	100E-12 F	1	N/R	100		100	FAILED	5000	POSITIVE SUPPLY	22	252	13
050	0780 GN	1500 Ohms	125E-12 F	1	N/R	15		15	FAILED	5000	OFFSET(+) APTT(-)	26	252	13
419	0880 SS	1500 Ohms	125E-12 F	1	N/R	23		23	FAILED	1250	INVERTING INPUT	22	252	13
741	TEX	1 Linear, Operational Amplifier												
741	MOT	1 Linear, Operational Amplifier												
741	N/R	2 Linear, Operational Amplifier												



RAC ESD Database

Part Number	Quantity	Lot Number	Manufacturer	Part Description	Test Type	Test Voltage	Test Current	Test Duration	Test Results	Test Voltage	Test Current	Test Duration	Failure Criteria	Test Remarks	General Remarks
741	1	0181 SS	RAY	Linear, Operational Amplifier	1500 Ohms	100E-12 F	1 N/R	2 FAILED	2000 EACH PIN	51	171	13	22	252	13
7410	1	FSC		Digital, Gate	1500 Ohms	100E-12 F	30 8625	3 FAILED	2000 INPUT TO GND.	61	204	13	22	252	13
7411	1	FSC		Digital, Gate	1500 Ohms	100E-12 F	30 8613	3 FAILED	2000 INPUT TO GND.	61	204	13	22	252	13
74120	2	N/R		Digital, Lim-/Bus Driver	1500 Ohms	100E-12 F	1 N/R	1 FAILED	2500 N/R	103	252	13	22	252	13
74129	2	N/R		Digital, Lim-/Bus Driver	1500 Ohms	100E-12 F	1 N/R	1 FAILED	2500 N/R	103	252	13	22	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology						
	Mfr Class	Part		Technology	Technology					
7413	TEX	3	Digital, Gate, NAND, Schmitt Trigger	TTL	TTL					
74132	FSC	1	Digital, Multivibrator	TTL	TTL					
426	0986 SS	1500 Ohms	100E-12 F	30 8613	3 FAILED	2000 INPUT TO GND.	61	204	13	
7414	FSC	1	Digital, Multivibrator	TTL	TTL					
426	0986 SS	1500 Ohms	100E-12 F	30 8633	3 FAILED	2000 INPUT TO GND.	61	204	13	
74151	FSC	1	Digital, Multiplexer	TTL	TTL					
426	0686 SS	1500 Ohms	100E-12 F	30 8552	3 FAILED	2000 INPUT TO GND.	61	204	13	
74153	FSC	1	Digital, Multiplexer	TTL	TTL					
426	0886 SS	1500 Ohms	100E-12 F	30 8624	3 FAILED	2000 INPUT TO GND.	61	204	13	
74154	N/R	2	Digital, Decoder	TTL	TTL					
030	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	2500 N/R	103	252	13
74157	FSC	1	Digital, Multiplexer	TTL	TTL					
426	0786 SS	1500 Ohms	100E-12 F	30 8621	3 FAILED	2000 INPUT TO GND.	61	204	13	
74163	TEX	2	Digital, Counter/Divider	TTL	TTL					
029	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	3733 N/R	102	188	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance												
74163	N/R	1 Digital, Counter/Divider	TTL	SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	300 IN.(6)(+) GND(8)(-)	108	215	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	500 IN.(6)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	300 IN.(6)(+) GND(8)(-)	108	216	13	
	N/R			SS	0 Ohms	N/R	1	N/R	2	N/R	2	FAILED	200 IN.(6)(+) GND(8)(-)	108	214	13	
	N/R			SS	0 Ohms	N/R	1	N/R	3	N/R	3	FAILED	200 IN.(6)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	2	N/R	2	FAILED	100 IN.(6)(+) GND(8)(-)	108	213	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	200 IN.(2,6,10)(+) GND(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	200 IN.(2,6)(+) GND(8)(-)	108	212	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	300 IN.(2,6)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	2	N/R	2	FAILED	100 IN.(10)(+) GND(8)(-)	108	226	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	100 IN.(6,10)(+) GND(8)(-)	108	213	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	200 IN.(2,6)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	100 IN.(6)(+) GND(8)(-)	108	225	13	
	N/R			SS	0 Ohms	N/R	1	N/R	4	N/R	4	FAILED	100 IN.(2,6,10)(+) GND(-)	108	252	13	
74164	FSC	1 Digital, Register, Shift	TTL	SS	1500 Ohms	N/R	30	N/R	3	N/R	3	FAILED	2000 INPUT TO GND.	61	204	13	
74173	N/R	1 Digital, Flip-Flop	TTL	SS	0 Ohms	N/R	1	N/R	3	N/R	3	PASSED	500 IN.(7,11,15)(+) GND(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	3	N/R	3	PASSED	500 IN.(7,11,15)(+) GND(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	400 IN.(7)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	1	N/R	1	FAILED	500 IN.(7)(+) GND(8)(-)	108	252	13	
	N/R			SS	0 Ohms	N/R	1	N/R	4	N/R	4	FAILED	300 IN.(7,11,15)(+) GND(-)	108	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD Part	Part Class	Description	Technology				
74175	N/C	2	Digital, Flip-Flop	TTL				
127	N/R	SS	1000 Ohms 200E-12 F	1 FAILED	1400 INPUTS(+) GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms 200E-12 F	1 PASSED	1500 INPUTS(+) GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms 200E-12 F	2 PASSED	1500 INPUTS(+) GROUND(-)	3	252	13
74175	TEX	2	Digital, Flip-Flop	TTL				
127	N/R	SS	1000 Ohms 200E-12 F	1 FAILED	1500 INPUTS(+) GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms 200E-12 F	1 PASSED	1500 INPUTS(+) GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms 200E-12 F	1 FAILED	1500 INPUTS(+) GROUND(+)	3	252	13
127	N/R	SS	1000 Ohms 200E-12 F	1 PASSED	1500 INPUTS(+) GROUND(+)	3	252	13
74175	FSC	1	Digital, Flip-Flop	TTL				
426	0786	SS	1500 Ohms 100E-12 F	3 FAILED	2000 INPUT TO GND.	61	204	13
74182	N/R	2	Digital, Arithmetic, Carry Generator	TTL				
930	N/R	N/R	1500 Ohms 100E-12 F	1 FAILED	2500 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD		Part		Technology									
	Mfr	Class	Description											
74191	FSC	1	Digital, Counter/Divider			TTL								
	Test	Test	Test	Number	Date	Number	Test	Failure	Test	General				
	Source	Date	Type	Resistance	Capacitance	Devices	Code	Result	Voltage	Pin	Combination	Criteria	Remarks	Remarks
	426	1086	SS	1500 Ohms	100E-12 F	30	8634	3 FAILED	2000	INPUT TO GND.		61	204	13
7420	FSC	1	Digital, Gate									TTL		
	426	0686	SS	1500 Ohms	100E-12 F	30	8613	3 FAILED	2000	INPUT TO GND.		61	204	13
7425	N/R	2	Digital, Gate									TTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1 FAILED	2500	N/R		103	252	13
7432	FSC	1	Digital, Gate									TTL		
	425	0786	SS	1500 Ohms	100E-12 F	30	8621	3 FAILED	2000	INPUT TO GND.		61	204	13
7437	N/R	2	Digital, Gate									TTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1 FAILED	2500	N/R		103	252	13
	067	N/R	N/R	0 Ohms	N/R	1	N/R	1 FAILED	750	INPUT		102	252	9
	068	N/R	N/R	0 Ohms	100E-12 F	1	N/R	1 FAILED	475	INPUT		102	252	9
	069	N/R	N/R	0 Ohms	15UE-12 F	1	N/R	1 FAILED	400	INPUT		102	252	9
	070	N/R	N/R	0 Ohms	200E-12 F	1	N/R	1 FAILED	300	INPUT		102	252	9
7438	N/R	2	Digital, Gate									TTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1 FAILED	2500	N/R		103	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Remarks	General Remarks								
	Mfr Class	Part													
7440	FSC	1	Digital, Inverter, Buffer	TTL											
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Test Number	Test Date	Test Result	Test Voltage	Test Pin Combination	Test Remarks			
	426	0786	SS	1500 Ohms	100E-12 F	30	8606		3	FAIL'D	2000	INPUT TO GND.	61	204	13
7445	N/R	2	Digital, Decoder	TTL											
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	2500	N/R	103	252	13
7446	N/R	2	Digital, Decoder	TTL											
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	2500	N/R	103	252	13
747	FSC	3	Linear, Operational Amplifier	Bipolar											
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	13675	N/R	102	188	13
747	N/R	2	Linear, Operational Amplifier	Bipolar											
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	2500	N/R	103	252	13
7474	FSC	1	Digital, Flip-Flop	TTL											
	426	0986	SS	1500 Ohms	100E-12 F	30	8626		3	FAILED	2000	INPUT TO GND.	61	204	13
747A	RAY	2	Linear, Operational Amplifier	Bipolar											
	392	0986	SS	1500 Ohms	100E-12 F	1	N/R	5	5	FAILED	2750	PINS 1,2 & 10,12 TO 4,9,13	19	145	13
7486	FSC	1	Digital, Gate	TTL											
	426	0886	SS	1500 Ohms	100E-12 F	30	8619		3	FAILED	2000	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Resistance								
7490	3	Digital, Counter/Divider	TTL	029	1500 Ohms	100E-12 F	1	N/R	4987	N/R	102	188	13
74AC00	FSC	2 Digital, Gate	CMOS	427	0886 SS	1500 Ohms	40	N/R	4000	INPUT TO OUTPUT	100	275	13
				427	0886 SS	1500 Ohms	50	N/R	5000	INPUT TO GND.	100	275	13
				426	0886 SS	1500 Ohms	40	N/R	3500	VCC TO OUTPUT	100	275	13
				427	0587 SS	1500 Ohms	50	N/R	5000	OUTPUT TO GND.	100	275	13
74AC109	FSC	3 Digital, Flip-Flop	CMOS	427	0886 SS	1500 Ohms	50	N/R	5000	INPUT TO GND.	100	275	13
				427	0587 SS	1500 Ohms	50	N/R	5000	OUTPUT TO GND.	100	275	13
				426	0587 SS	1500 Ohms	50	N/R	4850	INPUT TO VCC	100	275	13
				427	0587 SS	1500 Ohms	50	N/R	5000	OUTPUT TO VCC	100	275	13
				427	0587 SS	1500 Ohms	50	N/R	4850	INPUT TO OUTPUT.	100	275	13
				427	0587 SS	1500 Ohms	50	N/R	5000	VCC TO GND.	100	275	13
74AC153	FSC	2 Digital, Multiplexer	CMOS	427	1186 SS	1500 Ohms	50	N/R	4250	INPUT TO GND.	100	275	13
				427	1186 SS	1500 Ohms	40	N/R	4950	OUTPUT TO GND.	100	275	13
				427	1186 SS	1500 Ohms	50	N/R	3950	INPUT TO VCC	100	275	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Capacitance	Resistance	Test Voltage	Test Result	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Date	Type											
74AC153	FSC	2 Digital, Multiplexer	CMOS	427	1186 SS	50	N/R	100E-12 F	1500 Ohms	100E-12 F	5000	3 FAILED	5000 OUTPUT TO VCC	100	275	13
						3					4450	3 FAILED	4450 INPUT TO OUTPUT	100	275	13
						3					5000	3 FAILED	5000 VCC TO GND	100	275	13
74AC163	FSC	2 Digital, Counter/Divider	CMOS	427	0387 SS	40	N/R	100E-12 F	1500 Ohms	100E-12 F	4000	3 FAILED	4000 INPUT TO GND	100	275	13
						3					4800	3 FAILED	4800 INPUT TO VCC	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO GND.	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO VCC	100	275	13
						3					5000	3 FAILED	5000 INPUT TO OUTPUT	100	275	13
						3					5000	3 FAILED	5000 VCC TO GND.	100	275	13
74AC169	FSC	2 Digital, Counter/Divider	CMOS	427	0786 SS	40	N/R	100E-12 F	1500 Ohms	100E-12 F	3700	3 FAILED	3700 INPUT TO GND	100	275	13
						3					4800	3 FAILED	4800 INPUT TO VCC	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO GND	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO VCC	100	275	13
						3					4800	3 FAILED	4800 INPUT TO OUTPUT	100	275	13
						3					5000	3 FAILED	5000 VCC TO GND	100	275	13
74AC191	FSC	3 Digital, Counter/Divider	CMOS	427	0287 SS	50	N/R	100E-12 F	1500 Ohms	100E-12 F	4800	3 FAILED	4800 INPUT TO VCC	100	275	13
						3					4875	3 FAILED	4875 INPUT TO GND	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO VCC	100	275	13
						3					5000	3 FAILED	5000 OUTPUT TO GND	100	275	13



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Type												
74AC191	FSC	3 Digital, Counter/Divider	CMOS	427	0287 SS	1500 Ohms	100E-12 F	50	N/R	3 FAILED	4825	INPUT TO OUTPUT	100	275	13		
74AC245	FSC	3 Digital, Transceiver	CMOS	427	1286 SS	1500 Ohms	100E-12 F	50	N/R	3 FAILED	5000	VCC TO GND	100	275	13		
74AC251	FSC	2 Digital, Multiplexer	CMOS	427	0586 SS	1500 Ohms	100E-12 F	40	N/R	3 FAILED	3800	INPUT TO OUTPUT	100	275	13		
74AC253	FSC	2 Digital, Multiplexer	CMOS	427	0986 SS	1500 Ohms	100E-12 F	40	N/R	3 FAILED	4750	INPUT TO GND	100	275	13		
				427	0986 SS	1500 Ohms	100E-12 F	40	N/R	3 FAILED	4000	INPUT TO VCC	100	275	13		
				427	0986 SS	1500 Ohms	100E-12 F	50	N/R	3 FAILED	5000	OUTPUT TO GND	100	275	13		

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part	Mfr Class Description		Technology							
74AC253	FSC	2	Digital, Multiplexer		CMOS							
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
74AC258	427	0986 SS	1500 Ohms	100E-12 F	50	N/R	3	5000	INPUT TO OUTPUT	100	275	13
							3	5000	VCC TO GND	100	275	13
										CMOS		
74AC258	427	1186 SS	1500 Ohms	100E-12 F	50	N/R	3	5000	INPUT TO GND	100	275	13
74AC258	427	1186 SS	1500 Ohms	100E-12 F	40	N/R	3	3650	INPUT TO VCC	100	275	13
74AC258	427	1186 SS	1500 Ohms	100E-12 F	50	N/R	3	5000	OUTPUT TO GND	100	275	13
							3	5000	OUTPUT TO GND	100	275	13
							3	4500	INPUT TO OUTPUT	100	275	13
							3	5000	VCC TO GND	100	275	13
										CMOS		
74AC299	427	0986 SS	1500 Ohms	100E-12 F	50	N/R	3	5000	INPUT TO GND	100	275	13
							3	5000	INPUT TO VCC	100	275	13
							3	4800	OUTPUT TO GND	100	275	13
							3	5000	OUTPUT TO VCC	100	275	13
							3	5000	INPUT TO OUTPUT	100	275	13
							3	4600	GND TO VCC	100	275	13
										CMOS		
74AC323	427	0986 SS	1500 Ohms	100E-12 F	50	N/R	3	5000	INPUT TO GND	100	275	13
							3	5000	INPUT TO VCC	100	275	13
							3	4700	OUTPUT TO GND	100	275	13
							3	5000	OUTPUT TO VCC	100	275	13
							3	5000	INPUT TO OUTPUT	100	275	13

RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description		Technology					
	Mfr Class	3	Digital, Register, Shift	CMOS	Failure Criteria	Test Remarks	General Remarks			
74AC323	FSC	0986 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4600 GND TO VCC	100	275	13
74AC521	FSC	1086 SS	1500 Ohms	100E-12 F	30 N/R	3 FAILED	1890 INPUT TO GND	100	275	13
74AC540	FSC	0886 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	2850 INPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4950 OUTPUT TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	3800 OUTPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	3100 INPUT TO OUTPUT	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	2150 VCC TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 INPUT TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4900 INPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 OUTPUT TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 OUTPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4600 INPUT TO OUTPUT	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 VCC TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4999 INPUT TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4550 INPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4950 OUTPUT TO GND	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4999 OUTPUT TO VCC	100	275	13
74AC541	FSC	1086 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4950 INPUT TP OUTPUT	100	275	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mir Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Test											
74AC541	FSC	3 Digital, Line/Bus Driver	CMOS	427	1086 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	4999	OUTPUT TO VCC	100	275	13
74AC646	FSC	2 Digital, Transceiver	CMOS	427	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	INPUT TO GND	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	40	N/R	3	FAILED	4000	INPUT TO VCC	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	I-O TO GND	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	I-O TO VCC	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	40	N/R	3	FAILED	3750	I TO I-O	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	VCC TO GND	100	275	13
74AC708	FSC	3 Digital, Memory	CMOS	427	0687 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	INPUT TO GND	100	275	13
										3	FAILED	5000	OUTPUT TO GND	100	275	13
										3	FAILED	4950	INPUT TO VCC	100	275	13
										3	FAILED	4950	OUTPUT TO VCC	100	275	13
										3	FAILED	5000	INPUT TO OUTPUT	100	275	13
										3	FAILED	5000	VCC TO GND	100	275	13
74AC74	FSC	3 Digital, Flip-Flop	CMOS	426	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	4950	INPUT TO OUTPUT	100	275	13
										3	FAILED	5000	INPUT TO GND.	100	275	13
				427	0886 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	OUTPUT TO GND.	100	275	13

RAC ESD Database

Part Number	(Cont'd)	Part ESD Part		Mfr Class	Description	Technology	
		74ACT74	3			Digital, Flip-Flop	CMOS
426	0886 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 OUTPUT TO VCC	100 275 13
					3 FAILED	5000 OUTPUT TO GND.	100 275 13
					3 FAILED	5000 VCC TO GND.	100 275 13
427	0886 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 INPUT TO OUTPUT	100 275 13
74ACT00	FSC	2	Digital, Gate				CMOS
427	0187 SS	1500 Ohms	100E-12 F	40 N/R	3 FAILED	2600 INPUT TO GND	100 275 13
					3 FAILED	3100 OUTPUT TO GND	100 275 13
427	0187 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4250 INPUT TO VCC	100 275 13
					3 FAILED	4950 OUTPUT TO VCC	100 275 13
427	0187 SS	1500 Ohms	100E-12 F	40 N/R	3 FAILED	2700 INPUT TO OUTPUT	100 275 13
427	0187 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 VCC TO GND	100 275 13
74ACT03	FSC	3	Digital, Gate				CMOS
427	0986 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	4500 INPUT TO GND	100 275 13
					3 FAILED	4250 INPUT TO VCC	100 275 13
					3 FAILED	5000 OUTPUT TO GND	100 275 13
					3 FAILED	5000 OUTPUT TO VCC	100 275 13
					3 FAILED	4500 INPUT TO OUTPUT	100 275 13
					3 FAILED	5000 VCC TO GND	100 275 13
74ACT109	FSC	3	Digital, Flip-Flop				CMOS
427	0487 SS	1500 Ohms	100E-12 F	50 N/R	3 FAILED	5000 INPUT TO GND	100 275 13

## RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
74ACT109	FSC	3	Digital, Flip-Flop													100	275	13
																100	275	13
																100	275	13
																100	275	13
																100	275	13
74ACT151	FSC	3	Digital, Multiplexer													100	275	13
																100	275	13
																100	275	13
																100	275	13
																100	275	13
74ACT153	FSC	3	Digital, Multiplexer													100	275	13
																100	275	13
																100	275	13
																100	275	13
																100	275	13
74ACT157	FSC	2	Digital, Multiplexer													100	275	13
																100	275	13
																100	275	13
																100	275	13
																100	275	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure		General							
				Date	Type	Resistance	Capacitance	Pulses	Code	Date	Number	Result	Voltage	Pin	Combination	Criteria	Test	Remarks	Remarks
74ACT157	FSC	2	Digital, Multiplexer	CMOS	1086	SS	1500	Ohms	100E-12	F	50	N/R	3	FAILED	5000	OUTPUT TO VCC	100	275	13
													3	FAILED	4450	INPUT TO OUTPUT	100	275	13
													3	FAILED	4800	VCC TO GND	100	275	13
74ACT158	FSC	2	Digital, Multiplexer	CMOS									3	FAILED	4450	INPUT TO GND	100	275	13
													3	FAILED	3800	INPUT TO VCC	100	275	13
													3	FAILED	5000	OUTPUT TO GND	100	275	13
													3	FAILED	5000	OUTPUT TO VCC	100	275	13
													3	FAILED	5000	INPUT TO OUTPUT	100	275	13
													3	FAILED	4950	VCC TO GND	100	275	13
74ACT175	FSC	3	Digital, Flip-Flop	CMOS									3	FAILED	4900	INPUT TO VCC	100	275	13
													3	FAILED	5000	INPUT TO GND	100	275	13
													3	FAILED	50000	OUTPUT TO VCC	100	275	13
													3	FAILED	5000	OUTPUT TO GND	100	275	13
													3	FAILED	5000	INPUT TO OUTPUT	100	275	13
													3	FAILED	5000	VCC TO GND	100	275	13
74ACT245	FSC	3	Digital, Transceiver	CMOS									3	FAILED	5000	INPUT TO GND	100	275	13
													3	FAILED	4550	INPUT TO VCC	100	275	13
													3	FAILED	5000	I-O TO GND	100	275	13
													3	FAILED	5000	I-O TO VCC	100	275	13

RAC ESD Database

Part Number	Part ESD Part Number	MIL Class	Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks											
																				Source	Test	Test	Remarks	Remarks						
74ACT253	FSC	3	Digital, Multiplexer	CMOS	+27	1286 SS	1500 Ohms	100E-12 F	50	N/R			3	FAILED	5000	INPUT TO I-O	100	275	13											
														3	FAILED	5000	VCC TO GND	100	275	13										
														CMOS																
														3	FAILED	4900	INPUT TO GND	100	275	13										
														3	FAILED	4400	INPUT TO VCC	100	275	13										
														3	FAILED	5000	OUTPUT TO GND	100	275	13										
														3	FAILED	5000	OUTPUT TO VCC	100	275	13										
														3	FAILED	5000	INPUT TO OUTPUT	100	275	13										
														3	FAILED	4900	VCC TO GND	100	275	13										
														74ACT257	FSC	3	Digital, Multiplexer	CMOS	+27	0986 SS	1500 Ohms	100E-12 F	50	N/R			3	FAILED	5000	INPUT TO GND
													3	FAILED	4550	INPUT TO VCC	100	275	13											
													3	FAILED	5000	OUTPUT TO GND	100	275	13											
													3	FAILED	5000	OUTPUT TO VCC	100	275	13											
													3	FAILED	4900	INPUT TO OUTPUT	100	275	13											
													3	FAILED	5000	VCC TO GND	100	275	13											
74ACT258	FSC	3	Digital, Multiplexer	CMOS	427	1186 SS	1500 Ohms	100E-12 F	50	N/R			3	FAILED	4950	INPUT TO GND	100	275	13											
													3	FAILED	4200	INPUT TO VCC	100	275	13											
													3	FAILED	5000	OUTPUT TO VCC	100	275	13											
													3	FAILED	5000	OUTPUT TO GND	100	275	13											
													3	FAILED	5000	INPUT TO OUTPUT	100	275	13											
													3	FAILED	5000	VCC TO GND	100	275	13											
74ACT510	FSC	2	Digital	CMOS	427	0886 SS	1500 Ohms	100E-12 F	40	N/R			3	FAILED	3500	X14 TO GND	100	275	13											



## RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance											
74ACT510	FSC	2 Digital	CMOS	427	0886 SS	1500 Ohms	100E-12 F	40	N/R	3	FAILED	3500 X14 TO VCC	100	275	13	
										3	FAILED	3500 ACC TO GND	100	275	13	
										3	FAILED	3500 ACC TO VCC	100	275	13	
										3	FAILED	3500 P11 TO GND	100	275	13	
										3	FAILED	3500 P11 TO VCC	100	275	13	
										3	FAILED	3500 P34 TO GND	100	275	13	
										3	FAILED	3500 P34 TO VCC	100	275	13	
74ACT534	FSC	2 Digital, Flip-Flop, D	CMOS	427	0687 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000 INPUT TO VCC	100	275	13	
										3	FAILED	4500 INPUT TO GND	100	275	13	
										3	FAILED	4200 OUTPUT TO VCC	100	275	13	
										3	FAILED	4000 OUTPUT TO GND	100	275	13	
										3	FAILED	5000 INPUT TO OUTPUT	100	275	13	
										3	FAILED	4700 VCC TO GND	100	275	13	
74ACT540	FSC	3 Digital, Line/Bus Driver	CMOS	427	0687 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000 INPUT TO GND	100	275	13	
										3	FAILED	5000 OUTPUT TO GND	100	275	13	
										3	FAILED	4950 INPUT TO VCC	100	275	13	
										3	FAILED	5000 OUTPUT TO VCC	100	275	13	
										3	FAILED	4850 INPUT TO OUTPUT	100	275	13	
										3	FAILED	5000 VCC TO GND	100	275	13	
74ACT563	FSC	3 Digital, Latch	CMOS	427	1186 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	4900 INPUT TO GND	100	275	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks
				Date	Type	Resistance	Capacitance	Pulses	Code			
74ACT563	FSC	3 Digital, Latch	CMOS	427	1186 SS	1500 Ohms	100E-12 F	50	N/R	3	5000 OUTPUT TO GND	100 275 13
										3	4850 INPUT TO VCC	100 275 13
										3	5000 OUTPUT TO VCC	100 275 13
										3	4550 INPUT TO OUTPUT	100 275 13
										3	5000 VCC TO GND	100 275 13
74ACT564	FSC	3 Digital, Flip-Flop	CMOS	427	1186 SS	1500 Ohms	100E-12 F	50	N/R	3	4950 INPUT TO VCC	100 275 13
										3	4300 INPUT TO GND	100 275 13
										3	5000 OUTPUT TO VCC	100 275 13
										3	5000 OUTPUT TO GND	100 275 13
										3	4450 INPUT TO OUTPUT	100 275 13
										3	5000 VCC TO GND	100 275 13
74ACT573	FSC	3 Digital, Latch	CMOS	427	0986 SS	1500 Ohms	100E-12 F	50	N/R	3	5000 INPUT TO GND	100 275 13
										3	4873 INPUT TO VCC	100 275 13
										3	5000 OUTPUT TO GND	100 275 13
										3	5000 OUTPUT TO VCC	100 275 13
										3	4750 INPUT TO OUTPUT	100 275 13
										3	5000 VCC TO GND	100 275 13
74ACT574	FSC	3 Digital, Latch	CMOS	427	1086 SS	1500 Ohms	100E-12 F	50	N/R	3	5000 INPUT TO GND	100 275 13
										3	5000 INPUT TO VCC	100 275 13
										3	5000 OUTPUT TO GND	100 275 13
										3	5000 OUTPUT TO VCC	100 275 13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number of Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
74ACT574	FSC	3 Digital, Latch	CMOS	427	1086 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	INPUT TO OUTPUT	100	275	13
														100	275	13
74ACT708	FSC	3 Digital, Memory	CMOS	427	0387 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	4950	INPUT TO GND	100	275	13
														100	275	13
				427	1087 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	OUTPUT TO VCC	100	275	13
				427	1086 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	4950	OUTPUT TO GND	100	275	13
				427	0387 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	INPUT TO OUTPUT	100	275	13
														100	275	13
74ACT74	FSC	3 Digital, Flip-Flop	CMOS	427	0487 SS	1500 Ohms	100E-12 F	50	N/R	3	FAILED	5000	INPUT TO GND	100	275	13
														100	275	13
														100	275	13
														100	275	13
														100	275	13
														100	275	13
74F00	FSC	1 Digital, Gate	Advanced STTL	049	0681 GN	1500 Ohms	100E-12 F	1	N/R	3	FAILED	500	INPUT(+) INPUT(-)	51	252	13
				426	0986 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	61	204	13
74F02	FSC	1 Digital, Gate	Advanced STTL	426	0786 SS	1500 Ohms	100E-12 F	20	8624	3	FAILED	1000	INPUT TO GND.	61	204	13

## RAC ESD Database

Part Number	Part ESD Number	Part Description	Technology		Test Results										Failure Test		General				
			Mfr Class	Description	Source	Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Voltage	Pin Combination	Criteria	Remarks	Remarks	
74F04		1 Digital, Inverter, Buffer	FSC		170	0881	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1250	INPUT(1)(+)	COM.(7)(-)	51	252	13		
												1	FAILED	1250	INPUT(3)(+)	COM.(7)(-)	51	252	13		
												1	PASSED	1250	INPUT(3)(+)	COM.(7)(-)	51	252	13		
												2	FAILED	1250	INPUT(5)(+)	COM.(7)(-)	51	252	13		
												2	FAILED	1250	INPUT(9)(+)	COM.(7)(-)	51	252	13		
												2	FAILED	1250	INPUT(11)(+)	COM.(7)(-)	51	252	13		
												2	FAILED	1250	INPUT(13)(+)	COM.(7)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(4)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(6)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(8)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(8)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(10)(-)	51	252	13		
												1	PASSED	1250	COM(7)(+)	OUT.(12)(-)	51	252	13		
												2	FAILED	1250	INPUT(1)(+)	OUT.(2)(-)	51	252	13		
												2	FAILED	1250	INPUT(3)(+)	OUT.(4)(-)	51	252	13		
												2	FAILED	1250	INPUT(5)(+)	OUT.(6)(-)	51	252	13		
												1	PASSED	1250	INPUT(9)(+)	OUT.(8)(-)	51	252	13		
												2	FAILED	1250	IN.(11)(+)	OUT.(10)(-)	51	252	13		
												2	FAILED	1250	IN.(13)(+)	OUT.(12)(-)	51	252	13		
												1	PASSED	1250	VCC(-)	COM.(7)(+)	51	252	13		
												2	FAILED	1250	INPUT(1)(+)	COM.(7)(-)	4	252	13		
												2	FAILED	1250	INPUT(3)(+)	COM.(7)(-)	4	252	13		
												2	FAILED	1250	INPUT(5)(+)	COM.(7)(-)	4	252	13		
												2	FAILED	1250	INPUT(9)(+)	COM.(7)(-)	4	252	13		
												2	FAILED	1250	IN.(11)(+)	COM.(7)(-)	4	252	13		
												2	FAILED	1250	IN.(13)(+)	COM.(7)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(2)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(4)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(6)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(6)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(8)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(10)(-)	4	252	13		
												1	PASSED	1250	COM.(7)(+)	OUT.(12)(-)	4	252	13		
												2	FAILED	1250	IN.(1)(+)	OUT.(2)(-)	4	252	13		
												1	N/R	171	N/R	GN	1500 Ohms	100E-12 F	1	N/R	

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks												
																		FSC	1	Digital, Inverter, Buffer	Advanced STTL								
74F04	GN	1500 Ohms	100E-12 F	N/R	GN	1500 Ohms	100E-12 F	1	N/R		1	2	FAILED	1250 IN.(3)(+) OUT.(4)(-)	4	252	13												
												2	FAILED	1250 IN.(5)(+) OUT.(6)(-)	4	252	13												
												2	FAILED	1250 IN.(9)(+) OUT.(8)(-)	4	252	13												
												2	FAILED	1250 IN.(11)(+) OUT.(10)(-)	4	252	13												
												2	FAILED	1250 IN.(13)(+) OUT.(12)(-)	4	252	13												
												1	PASSED	1250 COM.(7)(+) VCC(-)	4	252	13												
												172	N/R	1500 Ohms	100E-12 F	N/R	GN	1500 Ohms	100E-12 F	1	N/R		2	2	FAILED	1250 COM.(7)(+) OUT.(2)(-)	4	252	13
																								1	PASSED	5000 COM.(7)(+) OUT.(4)(-)	4	252	13
																								1	PASSED	5000 COM.(7)(+) OUT.(6)(-)	4	252	13
																								1	PASSED	5000 COM.(7)(+) OUT.(8)(-)	4	252	13
1	PASSED	5000 COM.(7)(+) OUT.(10)(-)	4	252	13																								
173	N/R	1500 Ohms	100E-12 F	N/R	GN	1500 Ohms	100E-12 F	1	N/R		2	2	FAILED	1250 IN.(1)(+) COM.(7)(-)	51	252	13												
												2	FAILED	1250 IN.(3)(+) COM.(7)(-)	51	252	13												
												2	FAILED	1250 IN.(5)(+) COM.(7)(-)	51	252	13												
												2	FAILED	1250 IN.(9)(+) COM.(7)(-)	51	252	13												
												2	FAILED	1250 IN.(11)(+) COM.(7)(-)	51	252	13												
												2	FAILED	1250 IN.(13)(+) COM.(7)(-)	51	252	13												
												2	PASSED	1250 COM.(7)(+) OUT.(2)(-)	51	252	13												
												2	PASSED	1250 COM.(7)(+) OUT.(4)(-)	51	252	13												
												2	PASSED	1250 COM.(7)(+) OUT.(6)(-)	51	252	13												
												2	PASSED	1250 COM.(7)(+) OUT.(8)(-)	51	252	13												
173	N/R	1500 Ohms	100E-12 F	N/R	GN	1500 Ohms	100E-12 F	1	N/R		2	2	FAILED	1250 COM.(7)(+) OUT.(10)(-)	51	252	13												
												2	PASSED	1250 COM.(7)(+) OUT.(12)(-)	51	252	13												
												2	FAILED	1250 IN.(1)(+) OUT.(2)(-)	51	252	13												
												2	FAILED	1250 IN.(3)(+) OUT.(4)(-)	51	252	13												
												2	FAILED	1250 IN.(5)(+) OUT.(6)(-)	51	252	13												
												2	FAILED	1250 IN.(9)(+) OUT.(8)(-)	51	252	13												
												2	FAILED	1250 IN.(11)(+) OUT.(10)(-)	51	252	13												
												2	FAILED	1250 IN.(13)(+) OUT.(12)(-)	51	252	13												

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
			Type	Test												
74FD4	FSC	1 Digital, Inverter, Buffer														
173	N/R	GN	1500 Ohms	100E-12 F	1	N/R					2 PASSED	1250 COM.(7)(+) VCC(-)	51	252	13	
174	N/R	GN	1500 Ohms	100E-12 F	1	N/R					2 PASSED	5000 COM.(7)(+) OUT.(2)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) OUT.(4)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) OUT.(6)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) OUT.(8)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) OUT.(10)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) OUT.(12)(-)	51	252	13	
											2 PASSED	5000 COM.(7)(+) VCC(-)	51	252	13	
175	0881	GN	1500 Ohms	100E-12 F	1	N/R					2 FAILED	1000 IN.(1)(+) COM.(7)(-)	51	252	13	
176	N/R	GN	1500 Ohms	100E-12 F	1	N/R					2 FAILED	1000 IN.(1)(+) COM.(7)(-)	51	252	13	
177	N/R	GN	1500 Ohms	100E-12 F	1	N/R					2 FAILED	1000 IN.(1)(+) COM.(7)(-)	51	252	13	
178	0981	SS	1500 Ohms	100E-12 F	1	N/R					1 FAILED	400 IN.(1)(+) APTT(-)	51	252	13	
											1 FAILED	300 IN.(3)(+) APTT(-)	51	252	13	
											1 FAILED	400 IN.(5)(+) APTT(-)	51	252	13	
											1 FAILED	300 IN.(9)(+) APTT(-)	51	252	13	
											1 FAILED	100 IN.(11)(+) APTT(-)	51	252	13	
											1 FAILED	400 IN.(13)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(2)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(4)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(6)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(8)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(10)(+) APTT(-)	51	252	13	
											1 PASSED	1250 OUT.(12)(+) APTT(-)	51	252	13	
											1 PASSED	1250 VCC(14)(+) APTT(-)	51	252	13	
179	N/R	SS	1500 Ohms	100E-12 F	1	N/R					1 FAILED	200 IN.(1)(+) APTT(-)	4	252	27	
											1 FAILED	200 IN.(3)(+) APTT(-)	4	252	27	
											1 FAILED	200 IN.(5)(+) APTT(-)	4	252	27	

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	FSC	1	Digital, Inverter, Buffer	Technology	Advanced STTL	Test		Test		Test		Failure Test		General					
								Date	Type	Resistance	Capacitance	Pulses	Number	Date	Devices	Result	Voltage	Pin Combination	Criteria	Remarks	Criteria
74F04								179	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	400 IN.(9)(+) APTT(-)	4	252	27	
																1	FAILED	600 IN.(11)(+) APTT(-)	4	252	27
																1	FAILED	500 IN.(13)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(2)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(4)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(6)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(8)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(10)(+) APTT(-)	4	252	27
																1	PASSED	5000 OUT.(12)(+) APTT(-)	4	252	27
																1	PASSED	5000 VCC(14)(+) APTT(-)	4	252	27
								180	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	400 IN.(1)(+) APTT(-)	51	252	27	
																1	FAILED	400 IN.(3)(+) APTT(-)	51	252	27
																1	FAILED	400 IN.(5)(+) APTT(-)	51	252	27
																1	FAILED	300 IN.(9)(+) APTT(-)	51	252	27
																1	FAILED	400 IN.(11)(+) APTT(-)	51	252	27
																1	FAILED	400 IN.(13)(+) APTT(-)	51	252	27
																2	PASSED	5000 OUT.(2)(+) APTT(-)	51	252	27
																1	PASSED	5000 OUT.(6)(+) APTT(-)	51	252	27
																1	PASSED	5000 OUT.(8)(+) APTT(-)	51	252	27
																1	PASSED	5000 OUT.(10)(+) APTT(-)	51	252	27
																1	PASSED	5000 OUT.(12)(+) APTT(-)	51	252	27
																1	PASSED	5000 VCC(14)(+) APTT(-)	51	252	27
								181	0981	SS	1500 Ohms	100E-12 F	1	N/R	1	PASSED	1250 IN.(1)(+)	51	262	0	
																1	PASSED	1250 IN.(3)(+)	51	262	0
																1	FAILED	800 IN.(5)(+)	51	262	0
																1	PASSED	1250 IN.(9)(+)	51	262	0
																1	PASSED	1250 IN.(11)(+)	51	262	0
																1	FAILED	1250 IN.(13)(+)	51	262	0
																1	PASSED	1250 OUT.(2)(+)	51	262	0
																1	PASSED	1250 OUT.(4)(+)	51	262	0
																1	PASSED	1250 OUT.(6)(+)	51	262	0

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part	Mfr Class		Description	Technology		Advanced STTL							
			FSC	1		Digital, Inverter, Buffer	Failure Criteria	Test Remarks	General Remarks						
181	0981	SS	1500	Ohms	100E-12	F	1	N/R	1	PASSED	1250	OUT.(8)(+)	51	262	0
							1		1	PASSED	1250	OUT.(10)(+)	51	262	0
							1		1	PASSED	1250	OUT.(12)(+)	51	262	0
							1		1	PASSED	1250	VCC(14)(+)	51	262	0
182	N/R	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1800	IN.(1)(+)	4	262	0
							1		1	FAILED	800	IN.(3)(+)	4	262	0
							1		1	FAILED	700	IN.(5)(+)	4	262	0
							1		1	FAILED	1800	IN.(9)(+)	4	262	0
							1		1	FAILED	1400	IN.(11)(+)	4	262	0
							1		1	FAILED	1400	IN.(13)(+)	4	262	0
							1		1	FAILED	5000	OUT.(2)(+)	4	262	0
							1		1	FAILED	5000	OUT.(4)(+)	4	262	0
							1		1	PASSED	5000	OUT.(6)(+)	4	262	0
							1		1	PASSED	5000	OUT.(8)(+)	4	262	0
							1		1	PASSED	5000	OUT.(10)(+)	4	262	0
							1		1	PASSED	5000	OUT.(12)(+)	4	262	0
							1		1	PASSED	5000	VCC(14)(+)	4	262	0
183	N/R	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	3000	IN.(1)(+)	51	262	0
							1		1	FAILED	2200	IN.(3)(+)	51	262	0
							1		1	FAILED	2200	IN.(5)(+)	51	262	0
							1		1	FAILED	1400	IN.(9)(+)	51	262	0
							1		1	FAILED	900	IN.(11)(+)	51	262	0
							1		1	FAILED	900	IN.(13)(+)	51	262	0
							1		1	PASSED	5000	OUT.(2)(+)	51	262	0
							1		1	PASSED	5000	OUT.(4)(+)	51	262	0
							1		1	PASSED	5000	OUT.(6)(+)	51	262	0
							1		1	PASSED	5000	OUT.(8)(+)	51	262	0
							1		1	PASSED	5000	OUT.(10)(+)	51	262	0
							1		1	PASSED	5000	OUT.(12)(+)	51	262	0
							1		1	PASSED	5000	VCC(14)(+)	51	262	0
184	0981	SS	1500	Ohms	100E-12	F	10	N/R	1	FAILED	60	IN.(11)(+)	51	252	13



RAC ESD Database

										Technology	
										Advanced STILL	
Lot	Part	Test	Capacitance	Failure Code	Device Number	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
184	981 SS	1500 Ohms	100E-12 F	100 N/R	1	PASSED	60	IN.(11)(+) APTT(-)	51	252	13
185	N/R GN	1500 Ohms	100E-12 F	30 N/R	5	FAILED	60	IN.(1)(+) APTT(-)	4	252	13
186	N/R GN	1500 Ohms	100E-12 F	10 N/R	7	FAILED	120	IN.(1)(+) APTT(-)	4	252	13
186	N/R GN	1500 Ohms	100E-12 F	100 N/R	1	FAILED	120	IN.(1)(+) APTT(-)	4	252	13
187	N/R SS	1500 Ohms	100E-12 F	300 N/R	1	PASSED	160	IN.(1)(+) APTT(-)	4	252	13
188	N/R GN	1500 Ohms	100E-12 F	10 N/R	4	FAILED	160	IN.(1)(+) APTT(-)	4	252	13
189	N/R SS	1500 Ohms	100E-12 F	30 N/R	1	FAILED	240	IN.(9)(+) APTT(-)	51	252	13
189	N/R SS	1500 Ohms	100E-12 F	300 N/R	1	FAILED	240	IN.(9)(+) APTT(-)	51	252	13
					3	PASSED	240	IN.(9)(+) APTT(-)	51	252	13
190	0981 SS	1500 Ohms	100E-12 F	300 N/R	2	FAILED	480	IN.(5)(+)	51	262	0
190	0981 SS	1500 Ohms	100E-12 F	30 N/R	1	PASSED	480	IN.(5)(+)	51	262	0
191	0981 SS	1500 Ohms	100E-12 F	300 N/R	1	PASSED	640	IN.(5)(+)	51	262	0
192	0981 GN	1500 Ohms	100E-12 F	300 N/R	1	PASSED	240	IN.(5)(+)	51	262	0
193	0981 GN	1500 Ohms	100E-12 F	100 N/R	1	PASSED	480	IN.(5)(+)	51	262	0
194	0981 GN	1500 Ohms	100E-12 F	10 N/R	3	PASSED	640	IN.(5)(+)	51	262	0
194	0981 GN	1500 Ohms	100E-12 F	30 N/R	1	PASSED	640	IN.(5)(+)	51	262	0
195	N/R SS	1500 Ohms	100E-12 F	300 N/R	4	PASSED	560	IN.(5)(+)	4	262	15

RAC ESD Database

										Technology		
										Advanced STTL		
Test	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
196	N/R	SS	1500 Ohms	100E-12 F	10	N/R	1 FAILED	420	IN.(5)(+)	4	262	0
197	N/R	GN	1500 Ohms	100E-12 F	30	N/R	1 FAILED	560	IN.(5)(+)	4	262	0
170	0881	GN	1500 Ohms	100E-12 F	1	N/R	1 PASSED	1250	COM(7)(+) OUT.(2)(-)	51	252	13
426	0612	SS	1500 Ohms	100E-12 F	20	N/R	3 FAILED	1000	INPUT TO GND.	61	204	13
74F04	N/R	3	Digital, Inverter, Buffer								Advanced STTL	
180	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1 PASSED	5000	OUT.(4)(+) APTT(-)	51	252	27
74F08	FSC	1	Digital, Gate								Advanced STTL	
426	1286	SS	1500 Ohms	100E-12 F	10	8624	3 FAILED	600	INPUT TO GND.	61	204	13
74F10	FSC	1	Digital, Gate								Advanced STTL	
426	0786	SS	1500 Ohms	100E-12 F	20	8622	3 FAILED	1000	INPUT TO GND.	61	204	13
74F109	FSC	1	Digital, Flip-Flop								Advanced STTL	
426	0986	SS	1500 Ohms	100E-12 F	10	8632	3 FAILED	600	INPUT TO GND.	61	204	13
74F11	FSC	1	Digital, Gate								Advanced STTL	
426	0786	SS	1500 Ohms	100E-12 F	10	8622	3 FAILED	600	INPUT TO GND.	61	204	13
74F112	FSC	1	Digital, Flip-flop								Advanced STTL	
426	0686	SS	1500 Ohms	100E-12 F	30	8617	3 FAILED	2000	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Advanced STTL	Failure Test Criteria	Test Remarks	General Remarks
	Mfr Class	Part						
74F113	FSC	1	Digital, Flip-Flop	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0986	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F138	FSC	1	Digital, Decoder	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0686	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F139	FSC	1	Digital, Decoder	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0786	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F151	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0686	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F153	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0886	SS	1500 Ohms	100E-12 F	2000 INPUT TO GND.	3 FAILED	2000 INPUT TO GND.
74F157	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0786	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F158	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	1086	SS	1500 Ohms	100E-12 F	1000 INPUT TO GND.	3 FAILED	1000 INPUT TO GND.
74F160	FSC	1	Digital, Counter/Divider	Advanced STTL	61	204	13	
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage
	426	0686	SS	1500 Ohms	100E-12 F	2000 INPUT TO GND.	3 FAILED	2000 INPUT TO GND.

RAC ESD Database

Part Number	Part ESD		Part Description	Technology		Failure Test Criteria	Test Voltage	Pin	General Remarks		
	Mfr Class	Class		Advanced	STTL						
74F161	FSC	1	Digital, Counter/Divider	Advanced	STTL	61	204	13			
74F163	FSC	1	Digital, Counter/Divider	Advanced	STTL	61	204	13			
74F164	FSC	1	Digital, Register, Shift	Advanced	STTL	61	204	13			
74F168	FSC	1	Digital, Counter/Divider	Advanced	STTL	61	204	13			
74F169	FSC	1	Digital, Counter/Divider	Advanced	STTL	61	204	13			
74F174	FSC	1	Digital, Flip-Flop	Advanced	STTL	61	204	13			
74F175	FSC	1	Digital, Flip-Flop	Advanced	STTL	61	204	13			
198	0881	GN	1500 Ohms 100E-12 F	1	N/R	1	PASSED	1250 IN.(1)(+) COM.(8)(-)	51	252	13
						1	PASSED	1250 IN.(4)(+) COM.(8)(-)	51	252	13
						2	FAILED	1250 IN.(5)(+) COM.(8)(-)	51	252	13

# RAC ESD Database

Part No.	Lot No.	Rev.	QTY	Test Date	Test Type	Test Result	Number of Tests	Number of Failures	Failure Criteria	General Remarks
199	N/R	GN	1500 Ohms	100E-12 F	1 PASSED 2 FAILED	1 N/R	1	2	51	252
200	N/R	GN	1500 Ohms	100E-12 F	2 FAILED	1 N/R	1	4	51	252

RAC ESD Database

Technology  
Advanced STTL

Part ESD Part  
MFR Class Description  
FSC Digital, flip-flop

Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Devices	Code	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
200	N/R	GN	1500 Ohms	100E-12 F	1	N/R			1 PASSED	5000 OUT.	(3)(+) COM.(8)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(6)(+) COM.(-)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(7)(+) COM.(8)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(10)(+) COM.(8)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(11)(+) COM.(8)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(14)(+) COM.(8)(-)	4	252	13
					1				1 PASSED	5000 OUT.	(15)(+) COM.(8)(-)	4	252	13
					2				2 FAILED	5000 IN.	(4)(+) OUT.(2)(-)	4	252	13
					2				2 FAILED	5000 IN.	(5)(+) OUT.(7)(-)	4	252	13
					2				2 FAILED	5000 IN.	(9)(+) OUT.(2)(-)	4	252	13
					2				2 FAILED	5000 IN.	(12)(+) OUT.(11)(-)	4	252	13
					2				2 FAILED	5000 IN.	(13)(+) OUT.(4)(-)	4	252	13
					1				1 PASSED	5000 VCC	(16)(+) COM.(8)(-)	4	252	13
201	N/R	GN	1500 Ohms	100E-12 F	1	N/R			2 FAILED	1250 IN.	(2)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 IN.	(4)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 IN.	(5)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 IN.	(9)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 IN.	(12)(+) COM.(8)(-)	51	252	13
					1				1 PASSED	1250 IN.	(13)(+) COM.(8)(-)	51	252	13
					1				1 FAILED	1250 IN.	(13)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(2)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(3)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(6)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(7)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(10)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(11)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(14)(+) COM.(8)(-)	51	252	13
					2				2 PASSED	1250 OUT.	(15)(+) COM.(8)(-)	51	252	13
					2				2 FAILED	1250 IN.	(1)(+) OUT.(2)(-)	51	252	13
					2				2 PASSED	1250 IN.	(4)(+) OUT.(2)(-)	51	252	13
					2				2 PASSED	1250 IN.	(5)(+) OUT.(7)(-)	51	252	13
					1				1 FAILED	1250 IN.	(9)(+) OUT.(7)(-)	51	252	13

RAC ESD Database

Part Number 74F175	Part ESD Mir Class FSC 1	Part Description Digital, Flip-Flop	Technology		Failure Test Criteria	General Remarks						
			Advanced	STTL								
Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Test Criteria	General Remarks	
201	N/R	GN	1500 Ohms	100E-12 F	1	N/R	1	PASSED	1250 IN.(9)(+) OUT.(7)(-)	51	252	13
							2	PASSED	1250 IN.(12)(+) OUT.(10)(-)	51	252	13
							2	PASSED	1250 IN.(13)(+) OUT.(15)(-)	51	252	13
							2	PASSED	1250 VCC(16)(+) COM.(8)(-)	51	252	13
202	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	5000 IN.(4)(+) COM.(8)(-)	51	252	13
							2	FAILED	5000 IN.(5)(+) COM.(8)(-)	51	252	13
							2	FAILED	5000 IN.(9)(+) COM.(8)(-)	51	252	13
							2	FAILED	5000 IN.(12)(+) COM.(8)(-)	51	252	13
							1	FAILED	5000 IN.(13)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(2)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(3)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(6)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(7)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(10)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(11)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(14)(+) COM.(8)(-)	51	252	13
							2	PASSED	5000 OUT.(15)(+) COM.(8)(-)	51	252	13
							2	FAILED	5000 IN.(4)(+) OUT.(2)(-)	51	252	13
							2	FAILED	5000 IN.(5)(+) OUT.(7)(-)	51	252	13
							1	FAILED	5000 IN.(9)(+) OUT.(7)(-)	51	252	13
							2	FAILED	5000 IN.(12)(+) OUT.(10)(-)	51	252	13
							2	FAILED	5000 IN.(13)(+) OUT.(15)(-)	51	252	13
							2	PASSED	5000 VCC(16)(+) COM.(8)(-)	51	252	13
203	0881	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000 IN.(5)(+) COM.(8)(-)	51	252	13
							8	PASSED	1000 IN.(5)(+) COM.(8)(-)	51	252	13
204	N/R	GN	1500 Ohms	100E-12 F	1	N/R	10	PASSED	1000 IN.(1)(+) OUT.(2)(-)	4	252	13
205	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	4000 IN.(4)(+) COM.(8)(-)	4	252	13
206	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000 IN.(1)(+) COM.(8)(-)	51	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part Description	Mfr Class	FSC	1	Digital, Flip-Flap	Technology	Advanced STTL	Test			Failure Criteria	Test Remarks	General Remarks
									Test Date	Type	Resistance			
207	0981 SS	1500 Ohms	100E-12 F	1	N/R	1			Test Result	Test Voltage	Pin Combination			
									1 FAILED	500	IN.(1)(+) APTT(-)	51	252	13
									1 FAILED	800	IN.(4)(+) APTT(-)	51	252	13
									1 FAILED	700	IN.(5)(+) APTT(-)	51	252	13
									1 FAILED	600	IN.(9)(+) APTT(-)	51	252	13
									1 FAILED	1250	IN.(12)(+) APTT(-)	51	252	13
									1 FAILED	1000	IN.(13)(-) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(2)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(3)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(6)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(7)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(10)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(11)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(14)(+) APTT(-)	51	252	13
									1 PASSED	1250	OUT.(15)(+) APTT(-)	51	252	13
									1 PASSED	1250	VCC(16)(+) APTT(-)	51	252	13
208	N/R SS	1500 Ohms	100E-12 F	1	N/R	1			Test Result	Test Voltage	Pin Combination			
									1 FAILED	1800	IN.(1)(+) APTT(-)	4	252	13
									4 FAILED	700	IN.(4)(+) APTT(-)	4	252	13
									1 FAILED	500	IN.(5)(+) APTT(-)	4	252	13
									1 FAILED	1800	IN.(9)(+) APTT(-)	4	252	13
									1 FAILED	2200	IN.(12)(+) APTT(-)	4	252	13
									1 FAILED	2600	IN.(13)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(2)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(3)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(6)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(7)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(10)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(11)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(14)(+) APTT(-)	4	252	13
									1 PASSED	5000	OUT.(15)(+) APTT(-)	4	252	13
									1 PASSED	5000	VCC(16)(+) APTT(-)	4	252	13
209	N/R SS	1500 Ohms	100E-12 F	1	N/R	1			Test Result	Test Voltage	Pin Combination			
									1 FAILED	500	IN.(1)(+) APTT(-)	51	252	13



RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test		Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance						Capacitance	Result						
74F175	1	Digital, Flip-Flop	Advanced STTL	SS	1500 Ohms	100E-12 F	N/R	1	N/R	1	N/R	FAILED	700	IN.(4)(+)	APTT(-)	51	252	13
												FAILED	3400	IN.(5)(+)	APTT(-)	51	252	13
												FAILED	300	IN.(9)(+)	APTT(-)	51	252	13
												FAILED	400	IN.(12)(+)	APTT(-)	51	252	13
												FAILED	800	IN.(13)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(2)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(3)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(6)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(7)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(10)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(11)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(14)(+)	APTT(-)	51	252	13
												PASSED	5000	OUT.(15)(+)	APTT(-)	51	252	13
												PASSED	5000	VCC(16)(+)	APTT(-)	51	252	13
210	0981	SS	1500 Ohms	100E-12 F			N/R	1	N/R	1	N/R	PASSED	1250	IN.(1)(+)		51	262	0
												PASSED	1250	IN.(4)(+)		51	262	0
												PASSED	1250	IN.(5)(+)		51	262	0
												FAILED	1000	IN.(9)(+)		51	262	0
												PASSED	1250	INPUT(12)(+)		51	262	0
												PASSED	1250	IN.(13)(+)		51	262	0
												PASSED	1250	OUT.(2)(+)		51	262	0
												PASSED	1250	OUT.(3)(+)		51	262	0
												PASSED	1250	OUT.(6)(+)		51	262	0
												PASSED	1250	OUT.(7)(+)		51	262	0
												PASSED	1250	OUT.(10)(+)		51	262	0
												PASSED	1250	OUT.(11)(+)		51	262	0
												PASSED	1250	OUT.(14)(+)		51	262	0
												PASSED	1250	OUT.(15)(+)		51	262	0
												PASSED	1250	VCC(16)(+)		51	262	0
211	N/R	SS	1500 Ohms	100E-12 F			N/R	1	N/R	1	N/R	FAILED	2200	IN.(1)(+)		4	262	0
												FAILED	1400	IN.(4)(+)		4	262	0

RAC ESD Database

Part Number 74175	Part ESD Part		Mfr Class Description		Technology						
	SS	SS	1	Digital, Flip-flop	Advanced STTL						
211	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	2200 IN.(5)(+)	4	262	0
					1	N/R	1	2200 IN.(9)(+)	4	262	0
					1	N/R	1	3000 IN.(12)(+)	4	262	0
					1	N/R	1	2200 IN.(13)(+)	4	262	0
					1	N/R	1	5000 OUT.(2)(+)	4	262	0
					1	N/R	1	5000 OUT.(3)(+)	4	262	0
					1	N/R	1	5000 OUT.(6)(+)	4	262	0
					1	N/R	1	5000 OUT.(7)(+)	4	262	0
					1	N/R	1	5000 OUT.(10)(+)	4	262	0
					1	N/R	1	5000 OUT.(11)(+)	4	262	0
					1	N/R	1	5000 OUT.(14)(+)	4	262	0
					1	N/R	1	5000 OUT.(15)(+)	4	262	0
					1	N/R	1	5000 VCC(16)(+)	4	262	0
212	N/R	SS	1500 Ohms	100E-12 F	1	N/R	1	4700 IN.(1)(+)	51	262	0
					1	N/R	1	4600 IN.(4)(+)	51	262	0
					1	N/R	1	4600 IN.(5)(+)	51	262	0
					1	N/R	1	2200 IN.(9)(+)	51	262	0
					1	N/R	1	3000 IN.(12)(+)	51	262	0
					1	N/R	1	4600 IN.(13)(+)	51	262	0
					1	N/R	1	5000 OUT.(2)(+)	51	262	0
					1	N/R	1	5000 OUT.(3)(+)	51	262	0
					1	N/R	1	5000 OUT.(6)(+)	51	262	0
					1	N/R	1	5000 OUT.(7)(+)	51	262	0
					1	N/R	1	5000 OUT.(10)(+)	51	262	0
					1	N/R	1	5000 OUT.(11)(+)	51	262	0
					1	N/R	1	5000 OUT.(14)(+)	51	262	0
					1	N/R	1	5000 OUT.(15)(+)	51	262	0
					1	N/R	1	5000 VCC(16)(+)	51	262	0
213	0981	SS	1500 Ohms	100E-12 F	100	N/R	1	360 IN.(9)(+)	51	252	13
214	0981	SS	1500 Ohms	100E-12 F	100	N/R	1	480 IN.(9)(+)	51	252	13

RAC ESD Database

Part Number (Cont'd) 74F175	Part ESD Class FSC 1	Part Description Digital, Flip-Flop	Technology Advanced STTL	Test		Test		Test		Test		Failure Test		General				
				Source	Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Result	Voltage	Pin	Combination	Criteria
215	0981 GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	PASSED	180	IN.(9)(+)	APTT(-)	51	252	13			
215	0981 GN	1500 Ohms	100E-12 F	100	N/R	100	N/R	1	PASSED	180	IN.(9)(+)	APTT(-)	51	252	13			
215	0981 GN	1500 Ohms	100E-12 F	300	N/R	300	N/R	1	PASSED	180	IN.(9)(+)	APTT(-)	51	252	13			
216	0981 SS	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	480	IN.(9)(+)	APTT(-)	51	252	13			
217	0981 GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	600	IN.(9)(+)	APTT(-)	51	252	13			
217	0981 GN	1500 Ohms	100E-12 F	100	N/R	100	N/R	1	FAILED	360	IN.(9)(+)	APTT(-)	51	252	13			
218	0981 GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	480	IN.(9)(+)	APTT(-)	51	252	13			
218	0981 GN	1500 Ohms	100E-12 F	300	N/R	300	N/R	1	PASSED	480	IN.(9)(+)	APTT(-)	51	252	13			
219	N/R	SS	1500 Ohms	100E-12 F	100	N/R	100	N/R	2	FAILED	300	IN.(5)(+)	APTT(-)	4	252	13		
220	N/R	GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	150	IN.(5)(+)	APTT(-)	4	252	13		
220	N/R	GN	1500 Ohms	100E-12 F	100	N/R	100	N/R	1	FAILED	150	IN.(5)(+)	APTT(-)	4	252	13		
221	N/R	SS	1500 Ohms	100E-12 F	10	N/R	10	N/R	1	FAILED	300	IN.(5)(+)	APTT(-)	4	252	13		
222	N/R	GN	1500 Ohms	100E-12 F	10	N/R	10	N/R	1	FAILED	300	IN.(5)(+)	APTT(-)	4	252	13		
222	N/R	GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	300	IN.(5)(+)	APTT(-)	4	252	13		
223	N/R	GN	1500 Ohms	100E-12 F	30	N/R	30	N/R	1	FAILED	400	IN.(5)(+)	APTT(-)	4	252	13		
223	N/R	GN	1500 Ohms	100E-12 F	100	N/R	100	N/R	4	FAILED	400	IN.(5)(+)	APTT(-)	4	252	13		
224	N/R	SS	1500 Ohms	100E-12 F	300	N/R	300	N/R	2	FAILED	320	IN.(9)(+)	APTT(-)	51	252	13		

RAC ESD Database

Part Number	Part ES0	Part Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks				
					Source	Test												Resistance	Capacitance	Ohms	Test
74F175	FSC	1	Digital, Flip-Flop	Advanced STTL	224	N/R	SS	1500	Ohms	100E-12	F	3	N/R	300	N/R	3	PASSED	320 IN.(9)(+) APIT(-)	51	252	13
					225	0981	SS	1500	Ohms	100F-12	F	5	N/R	300	N/R	5	PASSED	800 IN.(9)(+)	51	262	0
					226	N/R	SS	1500	Ohms	100E-12	F	1	N/R	30	N/R	1	FAILED	1120 IN.(4)(+)	4	262	15
					226	N/R	SS	1500	Ohms	100E-12	F	2	N/R	300	N/R	2	PASSED	1120 IN.(4)(+)	4	262	15
					227	N/R	SS	1500	Ohms	100E-12	F	1	N/R	10	N/R	1	FAILED	840 IN.(4)(+)	4	262	0
					228	N/R	SS	1500	Ohms	100E-12	F	1	N/R	300	N/R	1	PASSED	1120 IN.(4)(+)	4	262	0
					229	N/R	GN	1500	Ohms	100E-12	F	1	N/R	300	N/R	1	FAILED	420 IN.(4)(+)	4	262	16
					230	N/R	GN	1500	Ohms	100E-12	F	1	N/R	300	N/R	1	PASSED	1120 IN.(4)(+)	4	262	0
					426	0786	SS	1500	Ohms	100E-12	F	3	N/R	10	N/R	3	FAILED	600 INPUT TO GND.	61	204	13
74F190	FSC	1	Digital, Counter/Divider	Advanced STTL	426	0986	SS	1500	Ohms	100E-12	F	3	8503	20	8503	3	FAILED	1000 INPUT TO GND.	61	204	13
74F191	FSC	1	Digital, Counter/Divider	Advanced STTL	426	1086	SS	1500	Ohms	100E-12	F	3	8637	20	8637	3	FAILED	1000 INPUT TO GND.	61	204	13
74F192	FSC	1	Digital, Counter/Divider	Advanced STTL	426	0986	SS	1500	Ohms	100E-12	F	3	8446	30	8446	3	FAILED	2000 INPUT TO GND.	61	204	13
74F193	FSC	1	Digital, Counter/Divider	Advanced STTL	426	1086	SS	1500	Ohms	100E-12	F	3	8635	30	8635	3	FAILED	2000 INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Resistance	Capacitance	Test Voltage	Pin Combination	Test Result	Devices	Failure Criteria	Test Remarks	General Remarks
				Type	Gate													
74F20	FSC	1 Digital, Gate	Advanced STTL	049	0681	GN	1500 Ohms	100E-12 F	1	N/R	1	500	INPUT(4)(+) VCC(14)(-)	1	FAILED	51	252	13
				426	0786	SS	1500 Ohms	100E-12 F	10	N/R	3	600	INPUT TO GND.	3	FAILED	61	204	13
				426	0686	SS	1500 Ohms	100E-12 F	20	N/R	3	1000	INPUT TO GND.	3	FAILED	61	204	13
74F240	FSC	1 Digital, Line/Bus Driver	Advanced STTL															
				426	0686	SS	1500 Ohms	100E-12 F	10	8616	3	600	INPUT TO GND.	3	FAILED	61	204	13
74F241	FSC	1 Digital, Line/Bus Driver	Advanced STTL															
				426	1086	SS	1500 Ohms	100E-12 F	10	8637	3	600	INPUT TO GND.	3	FAILED	61	204	13
74F243	FSC	1 Digital, Transceiver	Advanced STTL															
				426	0986	SS	1500 Ohms	100E-12 F	20	8450	3	1000	INPUT TO GND.	3	FAILED	61	204	13
74F244	FSC	1 Digital, Line/Bus Driver	Advanced STTL															
				426	0886	SS	1500 Ohms	100E-12 F	20	8629	3	1000	INPUT TO GND.	3	FAILED	61	204	13
74F245	FSC	1 Digital, Transceiver	Advanced STTL															
				426	0886	SS	1500 Ohms	100E-12 F	30	8629	3	2000	INPUT TO GND.	3	FAILED	61	204	13
74F251	FSC	1 Digital, Multiplexer	Advanced STTL															
				426	1186	SS	1500 Ohms	100E-12 F	10	8414	3	600	INPUT TO GND.	3	FAILED	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test	General Remarks
	Mfr Class	Part Class					
74F253	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13
74F257	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13
74F258	FSC	1	Digital, Multiplexer	Advanced STTL	61	204	13
74F283	FSC	1	Digital, Counter/Divider	Advanced STTL	61	204	13
74F299	FSC	1	Digital, Register, Shift	Advanced STTL	61	204	13
74F32	FSC	1	Digital, Gate	Advanced STTL	61	204	13
74F322	FSC	1	Digital, Arithmetic, Logic Unit	Advanced STTL	61	204	13
74F323	FSC	1	Digital, Register, Shift	Advanced STTL	61	204	13

RAC ESD Database

Part Number	Part ESD Part		Test	Test Type	Resistance	Capacitance	Test	Number	Date	Pulses	Code	Devices	Test	Voltage	Pin Combination	Failure Test	Criteria	Technology
	Mfr Class	Description																
74F350	FSC	1	Digital, Register, Shift	1500 Ohms	100E-12 F	100E-12 F	10	8604	3	FAILED	600	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F352	FSC	1	Digital, Multiplexer	1500 Ohms	100E-12 F	100E-12 F	20	8452	3	FAILED	1000	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F353	FSC	1	Digital, Multiplexer	1500 Ohms	100E-12 F	100E-12 F	20	8616	3	FAILED	1000	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F373	FSC	1	Digital, Latch	1500 Ohms	100E-12 F	100E-12 F	20	8628	3	FAILED	1000	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F374	FSC	1	Digital, Flip-Flop	1500 Ohms	100E-12 F	100E-12 F	10	8635	3	FAILED	600	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F378	FSC	1	Digital, Flip-Flop, D	1500 Ohms	100E-12 F	100E-12 F	30	8636	3	FAILED	2000	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F379	FSC	1	Digital, Flip-Flop, D	1500 Ohms	100E-12 F	100E-12 F	10	8634	3	FAILED	600	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	
74F398	FSC	1	Digital, Multiplexer	1500 Ohms	100E-12 F	100E-12 F	10	8408	3	FAILED	600	INPUT TO GND.	61	204	13	Advanced STTL	Advanced STTL	

RAC ESD Database

Part Number	Part ESD Mfg Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance										
74F539	FSC	1 Digital, Multiplexer	Advanced STTL	426	1C86 SS	1500 Ohms	100E-12 F	10	8637	3 FAILED	600	INPUT TO GND.	61	204	13
74F533	FSC	1 Digital, Latch	Advanced STTL	426	0786 SS	1500 Ohms	100E-12 F	20	8616	3 FAILED	1000	INPUT TO GND.	61	204	13
74F534	FSC	1 Digital, Flip-Flop	Advanced STTL	426	1086 SS	1500 Ohms	100E-12 F	20	8632	3 FAILED	1000	INPUT TO GND.	61	204	13
74F543	FSC	1 Digital, Transceiver	Advanced STTL	426	0686 SS	1500 Ohms	100E-12 F	30	8610	3 FAILED	2000	INPUT TO GND.	61	204	13
74F547	FSC	1 Digital, Decoder	Advanced STTL	426	0986 SS	1500 Ohms	100E-12 F	10	8502	3 FAILED	600	INPUT TO GND.	61	204	13
74F548	FSC	1 Digital, Decoder	Advanced STTL	426	0986 SS	1500 Ohms	100E-12 F	20	8630	3 FAILED	1000	INPUT TO GND.	61	204	13
74F569	FSC	1 Digital, Counter/Divider	Advanced STTL	426	0986 SS	1500 Ohms	100E-12 F	20	M/R	3 FAILED	1000	INPUT TO GND.	61	204	13
74F64	FSC	1 Digital, Gate	Advanced STTL	426	0886 SS	1500 Ohms	100E-12 F	20	8629	3 FAILED	1000	INPUT MTO GND.	61	204	13



RAC ESD Database

Part Number	Part ESD		Part Description		Technology	
	Mfr Class	1	Digital, Flip-Flop	Advanced STTL	Failure Test Criteria	General Remarks
74F74	FSC	1	Digital, Flip-Flop	Advanced STTL	61	204 13
74F86	FSC	1	Digital, Gate	Advanced STTL	61	204 13
74H00	TEX	2	Digital, Gate	HTTL	102	188 13
74H05	TEX	N	Digital, Inverter, Buffer	HTTL	102	188 13
74H106	N/R	1	Digital, Flip-Flop	HTTL	108	222 13
234	N/R	SS	0 Ohms N/R	1 N/R	1 FAILED	300 IN.(9)(+) GND(13)(-)
235	N/R	SS	0 Ohms 120E-12 F	1 N/R	1 FAILED	300 IN.(9)(+) GND(13)(-)
236	N/R	SS	0 Ohms 510E-12 F	1 N/R	1 FAILED	300 IN.(9)(+) GND(13)(-)
237	N/R	SS	0 Ohms .01E-07 F	1 N/R	1 FAILED	300 IN.(9)(+) GND(13)(-)

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Resistance	Capacitance	Pulses	Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Test												
74H106	N/R	1 Digital, Flip-Flop	HTTL	SS	0	Ohms	.01E-07 F	1	N/R	1	N/R	1 FAILED	200	IN.(8,9)(+) GND(13)(-)	108	209	13
												1 FAILED	100	IN.(9)(+) GND(13)(-)	108	207	13
												1 FAILED	100	IN.(8,9)(+) GND(13)(-)	108	209	13
												1 FAILED	100	IN(1,8,9)(+) GND(-)	108	252	13
												2 FAILED	100	IN(1,8,9)(+) GND(-)	108	252	13
												2 FAILED	100	IN(8,9)(+) GND(13)(-)	108	252	13
74HC00	MOT	1 Digital, Gate													HMOS		
399	0883 GN	1500 Ohms					100E-12 F	5	N/R	10	N/R	10 PASSED	2000	N/R	102	252	13
												2 FAILED	1100	N/R	102	252	13
74HC00	NSC	2 Digital, Gate													HMOS		
399	0883 GN	1500 Ohms					100E-12 F	5	N/R	10	N/R	10 PASSED	2000	N/R	102	252	13
												10 PASSED	2000	N/R	102	252	13
74HC00	RCA	3 Digital, Gate													HMOS		
399	0684 GN	1500 Ohms					100E-12 F	5	N/R	15	N/R	15 PASSED	2000	N/R	102	252	13
												6 FAILED	4120	PINS 4-7 & 1-3	102	252	13
74HC00	TEX	3 Digital, Gate													HMOS		
399	0684 GN	1500 Ohms					100E-12 F	5	N/R	15	N/R	15 PASSED	2000	N/R	102	252	13
												1 FAILED	4120	PINS 7-8	102	252	13
74HC00	SIG	2 Digital, Gate													HMOS		
399	0185 GN	1500 Ohms					100E-12 F	5	N/R	15	N/R	15 PASSED	2000	N/R	102	252	13

# RAC ESD Database

Part Number	Part ESO	Part Description	Mfr Class	1	Test Type	Test Resistance	Capacitance	Test Voltage	Test Result	Number Devices	Date	Pulses	Code	Pin Combination	Failure Criteria	Test Remarks	General Remarks
74HC04		Digital, Inverter, Buffer	SIG	0886	SS	1500 Ohms	100E-12 F	2150	FAILED	1	N/R	1		INPUT(13)(+) GND(7)(-)	44	252	19
								2150	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2150	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2175	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2225	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2225	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2250	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2275	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2275	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2300	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2350	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2425	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2425	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2450	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2475	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2550	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2575	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2600	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2675	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2675	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2775	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2775	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2850	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								3950	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								3050	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								3600	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								3850	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								3925	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								4150	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								1975	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2100	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2300	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19
								2325	FAILED	1				INPUT(13)(+) GND(7)(-)	44	252	19

Technology  
HMOS

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Date Code	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
7-HC04	SIG	1 Digital, Inverter, Buffer	HMOS	0886	SS	1500 Ohms	100E-12 F	1	1	N/R	1 FAILED	2350 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2425 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2475 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2500 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2525 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2575 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2575 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2675 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2675 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2675 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2700 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2775 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2850 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2900 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2925 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2925 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2950 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2975 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	2975 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3050 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3225 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3225 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3400 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3450 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3750 INPUT(13)(+) GND(7)(-)	44	252	19	
											1 FAILED	3800 INPUT(13)(+) GND(7)(-)	44	252	19	
7-HC161	MOT	1 Digital, Counter/Divider	HMOS													
399	0883	GN				1500 Ohms	100E-12 F	5	10	N/R	10 PASSED	2000 N/R	102	252	13	
399	0886	GN				1500 Ohms	100E-12 F	5	1	N/R	1 FAILED	1100 N/R	102	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part	Technology		Failure Criteria	Test Remarks	General Remarks							
			Mfr. Class	Description				Remarks	Remarks					
74HC161	NSC	2 Digital, Counter/Divider	Test Date	Test Type	Test Resistance	Test Capacitance	Test Number	Test Pulses	Test Code	Test Voltage	Test Pin Combination	Failure Test	General	
			0883	GN	1500 Ohms	100E-12 F	10 PASSED	2000 N/R	2000 N/R	2000 N/R	2000 N/R	102	252	13
							10 PASSED	2000 N/R	2000 N/R	2000 N/R	4-12, & 4-13	102	252	13
74HC161	TEX	3 Digital, Counter/Divider										HMOS		
			0684	GN	1500 Ohms	100E-12 F	15 PASSED	2000 N/R	2000 N/R	2000 N/R	2000 N/R	102	252	13
							9 FAILED	4120 PINS	8-9, 8-12, & 4-13	4120 PINS	8-9, 8-12, & 4-13	102	252	13
74HC195	RCA	3 Digital, Register, Shift										HMOS		
			0684	GN	1500 Ohms	100E-12 F	15 PASSED	2000 N/R	2000 N/R	2000 N/R	2000 N/R	102	252	13
							6 FAILED	4120 PINS	8-9 & 4-15	4120 PINS	8-9 & 4-15	102	252	13
74HC195	SIG	2 Digital, Register, Shift										HMOS		
			0185	GN	1500 Ohms	100E-12 F	15 PASSED	2000 N/R	2000 N/R	2000 N/R	2000 N/R	102	252	13
74L00	TEX	3 Digital, Gate										L TTL		
			N/R	N/R	1500 Ohms	100E-12 F	1 FAILED	4031 N/R	4031 N/R	4031 N/R	4031 N/R	102	188	13
74L71	TEX	3 Digital, Flip-Flop										L TTL		
			N/R	N/R	1500 Ohms	100E-12 F	1 FAILED	4692 N/R	4692 N/R	4692 N/R	4692 N/R	102	188	13
74L73	TEX	2 Digital, Flip-Flop										L TTL		
			N/R	N/R	1500 Ohms	100E-12 F	1 FAILED	2139 N/R	2139 N/R	2139 N/R	2139 N/R	102	188	13

RAC ESD Database

Part Number	Part ESD Part	Mir Class	Description	Technology	Test		Test		Test		Test		Test		Test			
					Source	Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Result	Voltage	Pin	Combination
74LS00	MOT	3	Digital, Register, Shift	LSTTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4642	N/R	102	188	13
74LS00																		
74LS00					027	N/R	GN	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1000	N/R	47	252	12
74LS00												13	PASSED	1000	N/R	47	252	12
74LS00	FSC	1	Digital, Gate	LSTTL	426	0986	SS	1500 Ohms	100E-12 F	10	N/R	3	FAILED	600	INPUT TO GND.	61	204	13
74LS00																		
74LS00																		
74LS00					030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS00					384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	400	EACH PIN(+)	52	99	24
74LS00												1	FAILED	400	EACH PIN(+)	52	137	24
74LS00												1	FAILED	950	EACH PIN(+)	52	110	24
74LS00					028	N/R	SS	1500 Ohms	117E 12 F	30	N/R	5	FAILED	1000	N/R	28	252	13
74LS02																		
74LS02																		
74LS02					030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS02	FSC	1	Digital, Gate	LSTTL	426	0786	SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description		Technology									
	Mfr Class	Part	Description											
74LS03	N/R	1	Digital, Gate		LSTTL									
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Devices	Number Date	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	1000	EACH PIN(+)	52	110	24
74LS04	FSC	1	Digital, Inverter, Buffer									LSTTL		
	426	0686	SS	1500 Ohms	100E-12 F	20	8620	3	FAILED	1000	INPUT TO GND.	61	204	13
74LS05	N/R	1	Digital, Inverter, Buffer									LSTTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS08	N/R	1	Digital, Gate									LSTTL		
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS09	FSC	1	Digital, Gate									LSTTL		
	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	800	INPUTS(+) GROUND(-)	3	252	13
	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	1200	INPUTS(+) GROUND(-)	3	252	13
	127	N/R	SS	1000 Ohms	200E-12 F	10	N/R	1	FAILED	800	INPUTS(+) GROUND(-)	3	252	13
	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	1000	INPUTS(+) GROUND(-)	3	252	13
74LS09	TEX	1	Digital, Gate									LSTTL		
	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	800	INPUTS(+) GROUND(-)	3	252	13
	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	1500	INPUTS(+) GROUND(-)	3	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test Date		Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	127														
74LS09	TEK	1 Digital, Gate	LSTTL			SS	1000 Ohms	200E-12 F	10	N/R	1	N/R	1	FAILED	400 INPUTS(+) GROUND(-)	3	252	13	
						SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	800 INPUTS(+) GROUND(-)	3	252	13	
74LS09	SIG	2 Digital, Gate	LSTTL			SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	1400 INPUTS(+) GROUND(-)	3	252	13	
						SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	PASSED	1500 INPUTS(+) GROUND(-)	3	252	13	
74LS09						SS	1000 Ohms	200E-12 F	10	N/R	1	N/R	1	FAILED	1400 INPUTS(+) GROUND(-)	3	252	13	
						SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	PASSED	1500 INPUTS(+) GROUND(-)	3	252	13	
74LS09	N/R	1 Digital, Gate	LSTTL																
74LS10	N/R	1 Digital, Gate	LSTTL																
74LS10	N/R	1 Digital, Gate	LSTTL																
74LS10	FSC	1 Digital, Gate	LSTTL																
						SS	1500 Ohms	100E-12 F	20	N/R	3	N/R	3	FAILED	1000 INPUT TO GND.	61	204	13	
74LS107	N/R	1 Digital, Flip-Flop	LSTTL																
						N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	103	252	13	
74LS109	N/R	1 Digital, Flip-Flop	LSTTL																
						N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1500 N/R	103	252	13	



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Class			Test Type	Test											
74LS11	N/R	1	Digital, Gate	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13	
74LS11	FSC	1	Digital, Gate	LSTTL	N/R	1500 Ohms	100E-12 F	20	N/R	3	1000	INPUT TO GND.	3 FAILED	61	204	13	
74LS112	N/R	1	Digital, Flip-Flop	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13	
74LS112	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	800	EACH PIN(+)	1 FAILED	52	101	24		
74LS112	FSC	1	Digital, Flip-Flop	LSTTL	N/R	1500 Ohms	100E-12 F	20	N/R	3	1000	INPUT TO GND.	3 FAILED	61	204	13	
74LS12	N/R	1	Digital, Gate	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13	
74LS123	N/R	1	Digital, Multivibrator	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13	
74LS125	N/R	1	Digital, Inverter, Buffer	LSTTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R	1 FAILED	103	252	13	

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Remarks	General Remarks																												
	Mfr	Class																																	
74LS126	N/R	1	Digital, Inverter, Buffer	LSTTL	103	252	13																												
<table border="1"> <thead> <tr> <th>Test Source</th> <th>Test Date</th> <th>Test Type</th> <th>Test Tr</th> <th>Test</th> <th>Capacitance</th> <th>Resistance</th> <th>Number of Devices</th> <th>Number of Pulses</th> <th>Date</th> <th>Code</th> <th>Test Voltage</th> <th>Test Result</th> <th>Pin Combination</th> </tr> </thead> <tbody> <tr> <td>030</td> <td>N/R</td> <td>N/R</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1500</td> <td>FAILED</td> <td>N/R</td> </tr> </tbody> </table>								Test Source	Test Date	Test Type	Test Tr	Test	Capacitance	Resistance	Number of Devices	Number of Pulses	Date	Code	Test Voltage	Test Result	Pin Combination	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	N/R	1	1500	FAILED	N/R
Test Source	Test Date	Test Type	Test Tr	Test	Capacitance	Resistance	Number of Devices	Number of Pulses	Date	Code	Test Voltage	Test Result	Pin Combination																						
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	N/R	1	1500	FAILED	N/R																						
74LS132	FSC	1	Digital, Multivibrator	LSTTL	61	204	13																												
<table border="1"> <tbody> <tr> <td>426</td> <td>0986</td> <td>SS</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>20</td> <td>8631</td> <td>3</td> <td>3</td> <td>FAILED</td> <td>1000</td> <td>INPUT TO GND.</td> </tr> </tbody> </table>								426	0986	SS	1500 Ohms	100E-12 F	20	8631	3	3	FAILED	1000	INPUT TO GND.																
426	0986	SS	1500 Ohms	100E-12 F	20	8631	3	3	FAILED	1000	INPUT TO GND.																								
74LS138	N/R	1	Digital, Decoder	LSTTL	103	252	13																												
<table border="1"> <tbody> <tr> <td>030</td> <td>N/R</td> <td>N/R</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1</td> <td>FAILED</td> <td>1500</td> <td>N/R</td> </tr> </tbody> </table>								030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																								
74LS138	FSC	1	Digital, Decoder	LSTTL	61	204	13																												
<table border="1"> <tbody> <tr> <td>426</td> <td>0686</td> <td>SS</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>20</td> <td>N/R</td> <td>3</td> <td>3</td> <td>FAILED</td> <td>1000</td> <td>INPUT TO GND.</td> </tr> </tbody> </table>								426	0686	SS	1500 Ohms	100E-12 F	20	N/R	3	3	FAILED	1000	INPUT TO GND.																
426	0686	SS	1500 Ohms	100E-12 F	20	N/R	3	3	FAILED	1000	INPUT TO GND.																								
74LS139	N/R	1	Digital, Decoder	LSTTL	103	252	13																												
<table border="1"> <tbody> <tr> <td>030</td> <td>N/R</td> <td>N/R</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1</td> <td>FAILED</td> <td>1500</td> <td>N/R</td> </tr> </tbody> </table>								030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																								
74LS139	FSC	1	Digital, Decoder	LSTTL	61	204	13																												
<table border="1"> <tbody> <tr> <td>426</td> <td>0786</td> <td>SS</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>20</td> <td>N/R</td> <td>3</td> <td>3</td> <td>FAILED</td> <td>1000</td> <td>INPUT TO GND.</td> </tr> </tbody> </table>								426	0786	SS	1500 Ohms	100E-12 F	20	N/R	3	3	FAILED	1000	INPUT TO GND.																
426	0786	SS	1500 Ohms	100E-12 F	20	N/R	3	3	FAILED	1000	INPUT TO GND.																								
74LS14	N/R	1	Digital, Inverter, Schmitt Trigger	LSTTL	103	252	13																												
<table border="1"> <tbody> <tr> <td>030</td> <td>N/R</td> <td>N/R</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1</td> <td>FAILED</td> <td>1500</td> <td>N/R</td> </tr> </tbody> </table>								030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																								
74LS148	N/R	1	Digital, Encoder	LSTTL	103	252	13																												
<table border="1"> <tbody> <tr> <td>030</td> <td>N/R</td> <td>N/R</td> <td>1500 Ohms</td> <td>100E-12 F</td> <td>1</td> <td>N/R</td> <td>1</td> <td>1</td> <td>FAILED</td> <td>1500</td> <td>N/R</td> </tr> </tbody> </table>								030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	FAILED	1500	N/R																								

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Capacitance	Resistance	Voltage	Pin	Combination	Test Result	Test	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Source	Date														
74LS15	N/R	1	Digital, Gate	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS151	N/R	1	Digital, Multiplexer	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS151	FSC	1	Digital, Multiplexer	LSTTL	426	0886 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	3	FAILED	1000	61	204	13
74LS153	N/R	1	Digital, Multiplexer	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS154	N/R	1	Digital, Decoder	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS155	N/R	1	Digital, Decoder	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS157	N/R	1	Digital, Multiplexer	LSTTL	030	N/R	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500	N/R	1	FAILED	1500 N/R	103	252	13
74LS157	FSC	1	Digital, Multiplexer	LSTTL	426	0786 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	3	FAILED	1000	61	204	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Test												
74LS158	FSC	1 Digital, Multiplexer	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	3	FAILED	20	8636	1000	INPUT TO GND.	61	204	13	
74LS160	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	FAILED	1	N/R	1500	N/R	103	252	13	
74LS160	FSC	1 Digital, Counter/Divider	LSTTL	426	0686 SS	1500 Ohms	100E-12 F	3	FAILED	20	N/R	1000	INPUT TO GND.	61	204	13	
74LS161	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	FAILED	1	N/R	1500	N/R	103	252	13	
74LS161	FSC	1 Digital, Counter/Divider	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	3	FAILED	20	N/R	1000	INPUT TO GND.	61	204	13	
74LS162	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	FAILED	1	N/R	1500	N/R	103	252	13	
74LS163	N/R	1 Digital, Counter/Divider	LSTTL	239	N/R	0 Ohms	N/R	1	FAILED	1	N/R	400	IN.(2)(+) GND(8)(-)	108	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ES0 Mfg Class	Part Description	Technology		Failure Criteria	Test Remarks	General Remarks
			LS TTL	LS TTL			
74LS153	N/R	1	Digital, Counter/Divider				
239	N/R	SS	0	Ohms	N/R	1 FAILED	400 IN.(6,10)(+) GND(8)(-)
					N/R	1 FAILED	400 IN.(2,6,10)(+) GND(-)
240	N/R	SS	0	Ohms	120E-12 F	1 FAILED	300 IN.(2,6)(+) GND(8)(-)
					N/R	1 FAILED	100 IN.(10)(+) GND(8)(-)
					N/R	3 FAILED	200 IN.(10)(+) GND(8)(-)
241	N/R	SS	0	Ohms	510E-12 F	2 FAILED	200 IN.(2,6,10)(+) GND(-)
					N/R	3 FAILED	100 IN.(10)(+) GND(8)(-)
242	N/R	SS	0	Ohms	.01E-07 F	1 FAILED	100 IN.(10)(+) GND(8)(-)
					N/R	2 FAILED	100 IN.(2,10)(+) GND(8)(-)
					N/R	1 FAILED	100 IN.(6,10)(+) GND(8)(-)
					N/R	1 FAILED	100 IN.(10)(+) GND(8)(-)
243	N/R	SS	0	Ohms	.01E-06 F	1 PASSED	400 IN.(2,6,10)(+) GND(-)
					N/R	1 FAILED	75 IN.(6,10)(+) GND(8)(-)
					N/R	2 FAILED	100 IN.(2,6,10)(+) GND(-)
74LS164	N/R	1	Digital, Register, Shift				
030	N/R	N/R	1500 Ohms	100E-12 F		1 FAILED	1500 N/R
74LS164	FSC	1	Digital, Register, Shift				
426	0686	SS	1500 Ohms	100E-12 F		3 FAILED	1000 INPUT TO GND.
74LS165	N/R	1	Digital, Register, Shift				
030	N/R	N/R	1500 Ohms	100E-12 F		1 FAILED	1500 N/R

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Part Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Resistance												
74LS169	FSC	1 Digital, Counter/Divider	LSTTL	N/R	1500 Ohms	1	N/R	100E-12 F		1	FAILED	1500 N/R		103	252	13	
426	1086 SS	1500 Ohms		N/R	100E-12 F	30	N/R			3	FAILED	2000 INPUT TO GND.		61	204	13	
74LS173	N/R	1 Digital, Flip-Flop	LSTTL	N/R	1500 Ohms	1	N/R	100E-12 F		1	FAILED	1500 N/P		103	252	13	
030	N/R	1500 Ohms		N/R	100E-12 F	1	N/R			1	FAILED	1500 N/R		103	252	13	
74LS174	N/R	1 Digital, Flip-Flop	LSTTL	N/R	1500 Ohms	1	N/R	100E-12 F		1	FAILED	1500 N/R		103	252	13	
030	N/R	1500 Ohms		N/R	100E-12 F	1	N/R			1	FAILED	1500 N/R		103	252	13	
74LS174	FSC	1 Digital, Flip-Flop	LSTTL	N/R	1500 Ohms	1	N/R	100E-12 F		1	FAILED	1500 N/R		103	252	13	
426	0986 SS	1500 Ohms		N/R	100E-12 F	20	N/R			3	FAILED	1000 INPUT TO GND.		61	204	13	
74LS175	AMD	1 Digital, Flip-Flop	LSTTL	N/R	1000 Ohms	1	N/R	200E-12 F		1	FAILED	800 INPUTS(+) GROUND(-)		3	252	13	
127	N/R	1000 Ohms		N/R	200E-12 F	1	N/R			1	FAILED	1000 INPUTS(+) GROUND(-)		3	252	13	
74LS175	SIG	1 Digital, Flip-Flop	LSTTL	N/R	1000 Ohms	10	N/R	200E-12 F		1	FAILED	800 INPUTS(+) GROUND(-)		3	252	13	
127	N/R	1000 Ohms		N/R	200E-12 F	1	N/R			1	FAILED	1000 INPUTS(+) GROUND(-)		3	252	13	
127	N/R	1000 Ohms		N/R	200E-12 F	1	N/R			1	FAILED	800 INPUTS(+) GROUND(-)		3	252	13	

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfg Class	Part Description	Technology		Test Date	Test Type	Test Resistance	Capacitance	Pulses	Number	Date	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
			SIG	1														LSTTL
74LS175	N/R	1 Digital, Flip-Flop	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	N/R	1	1400	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	10	N/R	1	1	1	1	N/R	1	1000	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	1	N/R	1	1400	INPUTS(+)	GROUND(-)	3	252	13
74LS175	FSC	1 Digital, Flip-Flop													LSTTL			
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	1	N/R	1	800	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	1	N/R	1	1400	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	1	N/R	1	600	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	1	1	N/R	1	1000	INPUTS(+)	GROUND(-)	3	252	13
426	0786	SS	1500 Ohms	100E-12 F	20	N/R	20	N/R	3	3	N/R	3	1000	INPUT TO GND.	61	204	13	
74LS175	N/R	1 Digital, Flip-Flop													LSTTL			
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	1	1	N/R	1	1500	N/R	103	252	13	
74LS175	MOT	1 Digital, Flip-Flop													LSTTL			
127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1	2	2	N/R	2	800	INPUTS(+)	GROUND(-)	3	252	13
127	N/R	SS	1000 Ohms	200E-12 F	10	N/R	10	N/R	2	2	N/R	2	1000	INPUTS(+)	GROUND(-)	3	252	13
74LS181	N/R	1 Digital, Arithmetic, Logic Unit													LSTTL			
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1	1	1	N/R	1	1500	N/R	103	252	13	
74LS191	FSC	1 Digital, Counter/Divider													LSTTL			
426	1086	SS	1500 Ohms	100E-12 F	10	8634	10	8634	3	3	N/R	3	600	INPUT TO GND.	61	204	13	

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Devs	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Type	Resistance										
74LS192	N/R	1	Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	103	252	13	
74LS192	FSC	1	Digital, Counter/Divider	LSTTL	+26	0986 SS	1500 Ohms	100E-12 F	10	N/R	3	600 INPUT TO GND.	61	204	13	
74LS193	N/R	1	Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	103	252	13	
74LS193	FSC	1	Digital, Counter/Divider	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	10	N/R	3	600 INPUT TO GND.	61	204	13	
74LS194	N/R	1	Digital, Register, Shift	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	103	252	13	
74LS194	FSC	1	Digital, Register, Shift	LSTTL	426	0986 SS	1500 Ohms	100E-12 F	20	N/R	3	600 INPUT TO GND.	61	204	13	
74LS195	FSC	1	Digital, Register, Shift	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	20	8635	3	1000 INPUT TO GND.	61	204	13	
74LS196	N/R	1	Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	103	252	13	



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test Source	Test Type	Test Resistance	Test Capacitance	Number of Devices	Number of Pulses	Test Date	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class															
74LS197	N/R	1	Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		103	252	13
74LS20	N/R	1	Digital, Gate	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		103	252	13
74LS20	FSC	1	Digital, Gate	LSTTL	426	0686 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000 INPUT TO GND.		61	204	13
74LS21	N/R	1	Digital, Gate	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		103	252	13
74LS221	N/R	1	Digital, Multivibrator	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R		103	252	13
74LS240	SIG	1	Digital, Line/Bus Driver	LSTTL	127	N/R SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	800 INPUTS(+) GROUND(-)		3	252	13
											1	FAILED	1500 INPUTS(+) GROUND(-)		3	252	13
74LS240	TEX	1	Digital, Line/Bus Driver	LSTTL	127	N/R SS	1000 Ohms	200E-12 F	10	N/R	1	FAILED	800 INPUTS(+) GROUND(-)		3	252	13
											1	FAILED	1400 INPUTS(+) GROUND(-)		3	252	13
											1	FAILED	1000 INPUTS(+) GROUND(-)		3	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks			
				Source	Test												
74LS240	1	Digital, Line/Bus Driver	LSTTL	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1500	INPUTS(+)	GROUND(-)	3	252	13
				127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1000	INPUTS(+)	GROUND(-)	3	252	13
				127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1500	INPUTS(+)	GROUND(-)	3	252	13
74LS240	2	Digital, Line/Bus Driver	LSTTL	127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1200	INPUTS(+)	GROUND(-)	3	252	13
				127	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	1400	INPUTS(+)	GROUND(-)	3	252	13
				127	N/R	SS	1000 Ohms	200E-12 F	2	N/R	2	1200	INPUTS(+)	GROUND(-)	3	252	13
74LS240	1	Digital, Line/Bus Driver	LSTTL	426	0786	SS	1500 Ohms	100E-12 F	10	N/R	3	600	INPUT TO GND.		61	204	13
74LS240	1	Digital, Line/Bus Driver	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R		103	252	13
74LS241	1	Digital, Line/Bus Driver	LSTTL	426	1086	SS	1500 Ohms	100E-12 F	10	8632	3	600	INPUT TO GND.		61	204	13
74LS244	1	Digital, Line/Bus Driver	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500	N/R		103	252	13
74LS244	1	Digital, Line/Bus Driver	LSTTL	027	N/R	GN	1500 Ohms	100E-12 F	1	N/R	15	1000	N/R		47	252	12

RAC ESD Database

Part Number	Part ESD		Part		Technology							
	Mfr	Class	Description									
74LS245	N/R	1	Digital, Transceiver			LSTTL						
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
74LS245	FSC	1	Digital, Transceiver							LSTTL		
	426	0886 SS	1500 Ohms	100E-12 F	10	N/R	3	FAILED	600 INPUT TO GND.	61	204	13
74LS251	N/R	1	Digital, Multiplexer							LSTTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
	384	N/R	1000 Ohms	200E-12 F	1	N/R	1	FAILED	550 EACH PIN(+)	52	139	24
							1	FAILED	1150 EACH PIN(+)	52	113	24
							1	FAILED	1100 EACH PIN(+)	52	111	24
74LS251	FSC	1	Digital, Multiplexer							LSTTL		
	426	1186 SS	1500 Ohms	100E-12 F	30	N/R	3	FAILED	2000 INPUT TO GND.	61	204	13
74LS253	N/R	1	Digital, Multiplexer							LSTTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
74LS253	FSC	1	Digital, Multiplexer							LSTTL		
	426	1086 SS	1500 Ohms	100E-12 F	10	N/R	3	FAILED	600 INPUT TO GND.	61	204	13
74LS257	N/R	1	Digital, Multiplexer							LSTTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Number	Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Source	Type										
74LS259	N/R	1	Digital, Latch	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS266	N/R	1	Digital, Gate	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS27	N/R	1	Digital, Gate	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS279	N/R	1	Digital, Latch	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS280	N/R	1	Digital, Error Detect/Correct, Parity/Carry Gen	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS293	N/R	1	Digital, Arithmetic, Adder, Full	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS295	N/R	1	Digital, Register, Shift	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13
74LS298	N/R	1	Digital, Latch	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Failure Test		General					
				Source	Date	Criteria	Remarks	Failure	Test	Criteria	Remarks		
74LS298	FSC	1 Digital, Latch	LSTTL	426	0786 SS	1500 Ohms	100E-12 F	30 N/R	3 FAILED	2000 INPUT TO GND.	61	204	13
74LS299	N/R	1 Digital, Register, Shift	LSTTL	384	N/R SS	1000 Ohms	200E-12 F	1 N/R	1 FAILED	600 EACH PIN(+)	52	141	24
74LS299	FSC	1 Digital, Register, Shift	LSTTL	426	0786 SS	1500 Ohms	100E-12 F	20 N/R	3 FAILED	1000 INPUT TO GND.	61	204	13
74LS30	N/R	1 Digital, Gate	LSTTL	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
74LS32	N/R	1 Digital, Gate	LSTTL	030	N/R N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	1500 N/R	103	252	13
74LS32	FSC	1 Digital, Gate	LSTTL	426	0786 SS	1500 Ohms	100E-12 F	20 N/R	3 FAILED	1000 INPUT TO GND.	61	204	13
74LS33	FSC	1 Digital, Register, Shift	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	20 8633	3 FAILED	1000 INPUT TO GND.	61	204	13
74LS352	FSC	1 Digital, Multiplexer	LSTTL	426	0986 SS	1500 Ohms	100E-12 F	20 8514	3 FAILED	1000 INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test										Failure Criteria	Test Remarks	General Remarks			
	Mfr	Class			Source	Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices				Result	Test Voltage	Pin Combination
74LS353	N/R	1	Digital, Multiplexer	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	
74LS353	FSC	1	Digital, Multiplexer	LSTTL	426	1086	SS	1500	Ohms	100E-12	F	20	N/R	3	FAILED	1000	INPUT TO GND.	61	204	13
74LS365	FSC	1	Digital, Inverter, Buffer	LSTTL	426	0886	SS	1500	Ohms	100E-12	F	10	8623	3	FAILED	600	INPUT TO GND.	61	204	13
74LS366	FSC	1	Digital, Inverter, Buffer	LSTTL	426	0886	SS	1500	Ohms	100E-12	F	10	8614	3	FAILED	600	INPUT TO GND.	61	204	13
74LS367	N/R	1	Digital, Line/Bus Driver	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	
74LS368	N/R	1	Digital, Inverter, Buffer	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	
74LS37	N/R	1	Digital, Inverter, Buffer	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	
74LS373	N/R	1	Digital, Latch	LSTTL	030	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	1500	N/R	103	252	13	

RAC ESD Database

Part Number	ESD Class	Part Description	Technology	Test		Number		Test		Failure Test		General				
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Voltage	Pin	Combination	Criteria	Remarks
74LS373	FSC	1 Digital, Latch	LSTTL	426	0886 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	61	204	13
74LS374	N/R	1 Digital, Flip-Flop	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS374	FSC	1 Digital, Flip-Flop	LSTTL	426	0986 SS	1500 Ohms	100E-12 F	10	N/R	3	FAILED	600	INPUT TO GND.	61	204	13
74LS379	FSC	1 Digital, Flip-Flop	LSTTL	426	1086 SS	1500 Ohms	100E-12 F	20	8613	3	FAILED	1000	INPUT TO GND.	61	204	13
74LS38	N/R	1 Digital, Inverter, Buffer	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS390	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS393	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500	N/R	103	252	13
74LS395	FSC	1 Digital, Register, Shift	LSTTL	426	0886 SS	1500 Ohms	100E-12 F	10	8449	3	FAILED	600	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Devices	Pulses	Capacitance	Resistance	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
	Mfr	Class			Type	Test														
74LS40	N/R	1	Digital, Inverter, Buffer	LSTTL	N/R	N/R	1	N/R	1	N/R	1	100E-12 F	1500 Ohms	1500 N/R	1500 N/R	1	FAILED	103	252	13
74LS40	FSC	1	Digital, Inverter, Buffer	LSTTL	426	0786 SS	1500 Ohms	100E-12 F	20	N/R	3	1000 INPUT TO GND.				3	FAILED	61	204	13
74LS42	N/R	1	Digital, Encoder	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1500 N/R	1	FAILED	103	252	13	
74LS51	N/R	1	Digital, Gate	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1500 N/R	1	FAILED	103	252	13	
74LS54	N/R	1	Digital, Gate	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1500 N/R	1	FAILED	103	252	13	
74LS574	FSC	1	Digital, Flip-Flop	LSTTL	426	0886 SS	1500 Ohms	100E-12 F	20	8626	3	1000 INPUT TO GND.				3	FAILED	61	204	13
74LS670	N/R	1	Digital, Register, File	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1500 N/R	1	FAILED	103	252	13	
74LS74	N/R	1	Digital, Flip-Flop	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1500 N/R	1	FAILED	103	252	13	



RAC ESD Database

Part Number	ESD Class	Part Description	Technology	Test		Number of Devices	Date Code	Pulses	Capacitance	Resistance	Test Type	Test Voltage	Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Source	Failure												
74LS74	N/R	1 Digital, Flip-Flop	LSTTL	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	700 EACH PIN(+)	1	FAILED	12	109	24
												900 EACH PIN(+)	1	FAILED	9	112	24
												1200 EACH PIN(+)	1	FAILED	11	114	24
												3700 EACH PIN(+)	1	FAILED	8	133	24
74LS75	N/R	1 Digital, Latch	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	103	252	13
74LS86	N/R	1 Digital, Gate	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	103	252	13
74LS86	FSC	1 Digital, Gate	LSTTL	426	0886	SS	1500 Ohms	100E-12 F	20	N/R	3	1000 INPUT TO GND.	3	FAILED	61	204	13
74LS92	N/R	1 Digital, Counter/Divider	LSTTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	1500 N/R	1	FAILED	103	252	13
74S00	TEX	1 Digital, Gate	STTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	2144 N/R	1	FAILED	102	188	13
				003	1175	SS	0 Ohms	100E-12 F	1	N/R	1	250 INPUT(+) PR. SUPPLY(-)	1	FAILED	102	252	13
74S00	FSC	1 Digital, Gate	STTL	426	0986	SS	1500 Ohms	100E-12 F	20	N/R	3	1000 INPUT TO GND.	3	FAILED	61	204	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology													
	Class	Gate			Test Date	Test Type	Resistance	Capacitance	Num. Pulses	Date	Num. Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
74S00	N/R	1	Digital, Gate	STTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
	067	N/R	N/R	0	Ohms	N/R	1	N/R	1	N/R	1	FAILED	375 INPUT	102	252	9	
	068	N/R	N/R	0	Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	250 INPUT	102	252	9	
	069	N/R	N/R	0	Ohms	150E-12 F	1	N/R	1	N/R	1	FAILED	200 INPUT	102	252	9	
	070	N/R	N/R	0	Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	175 INPUT	102	252	9	
	384	N/R	SS	1000 Ohms	200E-12 F	1	N/R	1	N/R	1	FAILED	800 EACH PIN(+)	52	105	24		
	028	N/R	SS	1500 Ohms	117E-12 F	30	N/R	5	FAILED	1000 N/R	86	252	13				
74S02	N/R	1	Digital, Gate	STTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
74S02	FSC	1	Digital, Gate	STTL	426	0786 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000 INPUT TO GND.	61	204	13	
74S03	N/R	1	Digital, Gate	STTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13
74S04	N/R	1	Digital, Inverter, Buffer	STTL	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Devices	Test Result	Voltage	Pin Combination	Failure Test		General Remarks
	Mfr Class	Class			Criteria	Remarks										
74S04	FSC	1	Digital, Inverter, Buffer	STTL	426	0686 SS	1500 Ohms	100E-12 F	30 N/R	3	FAILED	2000	INPUT TO GND.	61	204	13
74S05	N/R	1	Digital, Inverter, Buffer	STTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1	FAILED	1000	N/R	103	252	13
74S08	N/R	1	Digital, Gate	STTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1	FAILED	1000	N/R	103	252	13
74S10	N/R	1	Digital, Gate	STTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1	FAILED	1000	N/R	103	252	13
74S10	FSC	1	Digital, Gate	STTL	426	0786 SS	1500 Ohms	100E-12 F	30 N/R	3	FAILED	2000	INPUT TO GND.	61	204	13
74S109	FSC	1	Digital, Flip-Flop	STTL	426	1086 SS	1500 Ohms	100E-12 F	30 N/R	3	FAILED	2000	INPUT TO GND.	61	204	13
74S11	N/R	1	Digital, Gate	STTL	030	N/R	1500 Ohms	100E-12 F	1 N/R	1	FAILED	1000	N/R	103	252	13
74S11	FSC	1	Digital, Gate	STTL	426	0786 SS	1500 Ohms	100E-12 F	30 N/R	3	FAILED	2000	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part Class	Part Description	Test		Test Type	Resistance	Capacitance	Pulses	Code	Date	Number of Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
			Source	Date													
74S112	N/R	1 Digital, Flip-Flop	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000 N/R	103	252	13	
74S112	FSC	1 Digital, Flip-Flop	426	0686 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	3	FAILED	1000 INPUT TO GND.	61	204	13	
74S133	N/R	1 Digital, Gate	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000 N/R	103	252	13	
74S135	N/R	1 Digital, Gate	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000 N/R	103	252	13	
74S138	FSC	1 Digital, Decoder	426	0686 SS	1500 Ohms	100E-12 F	30	N/R	3	FAILED	3	FAILED	2000 INPUT TO GND.	61	204	13	
74S139	FSC	1 Digital, Decoder	426	1086 SS	1500 Ohms	100E-12 F	30	N/R	3	FAILED	3	FAILED	2000 INPUT TO GND.	61	204	13	
74S140	N/R	1 Digital, Line/Bus Driver	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000 N/R	103	252	13	
74S151	N/R	1 Digital, Multiplexer	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000 N/R	103	252	13	

RAC ESD Database

Part Number	Part ESD Number (Cont'd)	Part Class	Part Description	Technology	Test		Number of Devices	Date	Pulses	Code	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
					Type	Result									
74S151	FSC	1	Digital, Multiplexer	STTL	0686	SS	3	N/R	20	N/R	1000	INPUT TO GND.	61	204	13
74S153	N/R	1	Digital, Multiplexer	STTL	030	N/R	1	N/R	1	N/R	1000	N/R	103	252	13
74S153	FSC	1	Digital, Multiplexer	STTL	426	0886	SS	3	N/R	30	2000	INPUT TO GND.	61	204	13
74S157	N/R	1	Digital, Multiplexer	STTL	030	N/R	1	N/R	1	N/R	1000	N/R	103	252	13
74S157	FSC	1	Digital, Multiplexer	STTL	426	0786	SS	3	N/R	50	2000	INPUT TO GND.	61	204	13
74S158	FSC	1	Digital, Multiplexer	STTL	426	1086	SS	3	N/R	20	1000	INPUT TO GND.	61	204	13
74S160	N/R	1	Digital, Counter/Divider	STTL	030	N/R	1	N/R	1	N/R	1000	N/R	103	252	13
74S161	N/R	1	Digital, Counter/Divider	STTL	030	N/R	1	N/R	1	N/R	1000	N/R	103	252	13

RAC ESD Database

Part Number	Part ESD		Part Description		Technology								
	Mfr	Class	Description										
74S174	N/R	1	Digital, Flip-Flop			STTL							
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	030	N/R	1500 Ohms	10CE-2 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S175	N/R	1	Digital, Flip-Flop								STTL		
	030	N/R	1500 Ohms	100E-2 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S175	FSC	1	Digital, Flip-Flop								STTL		
	426	0786 SS	1500 Ohms	100E-12 F	20	N/R	3	FAILED	1000	INPUT TO GND.	61	204	13
74S181	N/R	1	Digital, Arithmetic, Logic Unit								STTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S182	N/R	1	Digital, Arithmetic, Carry Generator								STTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S189	N/R	1	Digital, Memory, RAM, Static								STTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S20	N/R	1	Digital, Gate								STTL		
	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
74S20	FSC	1	Digital, Gate								STTL		
	426	0686 SS	1500 Ohms	100E-12 F	30	N/R	3	FAILED	2000	INPUT TO GND.	61	204	13

RAC ESD Database

Part Number	Part ESD Part		Mfr. Class Description		Technology						
	N/R	1	Digital, Memory, RAM	STTL	Failure Criteria	General Remarks					
Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Number Devices	Date	Test Voltage	Test Pin	Test Combination	Failure Test	General Remarks
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13
7+S22	N/R	1	Digital, Gate						STTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13
7+S251	N/R	1	Digital, Multiplexer						STTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13
7+S257	N/R	1	Digital, Multiplexer						STTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13
7+S257	FSC	1	Digital, Multiplexer						STTL		
426	1086 SS	1500 Ohms	100E-12 F		20	N/R	1000	INPUT TO GND.	61	204	13
7+S258	N/R	1	Digital, Multiplexer						STTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13
7+S258	FSC	1	Digital, Multiplexer						STTL		
426	1086 SS	1500 Ohms	100E-12 F		30	N/R	2000	INPUT TO GND.	61	204	13
7+S30	N/R	1	Digital, Gate						STTL		
030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1000	N/R	103	252	13

RAC ESD Database

Part Number	Part Description	Technology	Test		Number	Date	Devices	Test Result	Voltage	Pulse	Combination	Failure Criteria	Test Remarks	General Remarks
			Type	Resistance										
7-532	1 Digital, Gate	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-532	FSC 1 Digital, Gate	STTL	FSC	1500 Ohms	100E-12 F	30	N/R	3	2000	INPUT TO GND.		61	204	13
7-540	1 Digital, Inverter, Buffer	STTL	FSC	1500 Ohms	100E-12 F	20	N/R	3	1000	INPUT TO GND.		61	204	13
7-542	1 Digital, Memory, PROM	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-551	1 Digital, Gate	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-574	1 Digital, Flip-Flop	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-595	1 Digital, Arithmetic, Magnitude Comparator	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-596	1 Digital, Gate	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13
7-596	1 Digital, Gate	STTL	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R		103	252	13



RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Devices	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
74886	FSC	1 Digital, Gate	STTL														
75107	TEX	3 Digital, Line/Bus Receiver	TTL														
029	N/R	1500 Ohms		100E-12	F	1	N/R	1	N/R		1	FAILED	4907	N/R	102	188	13
7520	ANA	1 Digital, Converter, A/D-D/A	CMOS														
005	0980	SS		1500	Ohms	100E-12	F	1	N/R		1	FAILED	500	INPUT(4)(+) VSS(3)(-)	104	180	13
											1	FAILED	500	INPUT(4)(+) VSS(3)(-)	104	179	13
											1	FAILED	500	INPUT(4)(+) VDD(14)(-)	104	86	13
											1	FAILED	800	INPUT(4)(+) VSS(3)(-)	104	80	13
											1	FAILED	500	INPUT(4)(+) VSS(3)(-)	104	178	13
											1	FAILED	500	INPUT(4)(+) VSS(3)(-)	104	181	13
7520	ISL	1 Digital, Converter, A/D-D/A	CMOS														
005	0980	SS		1500	Ohms	100E-12	F	1	N/R		1	FAILED	800	RREF(15)(+) VSS(3)(-)	104	94	13
											1	FAILED	500	INPUT(8)(+) VDD(14)(-)	104	176	13
											1	FAILED	500	RFB(16)(+) VDD(14)(-)	104	93	13
											1	FAILED	500	RFB(16)(+) VSS(3)(-)	104	173	13
											1	FAILED	800	INPUT(4)(-) VSS(3)(-)	104	182	13
											1	FAILED	500	RFB(16)(+) VSS(3)(-)	104	175	13
7520	MIT	1 Digital, Converter, A/D-D/A	CMOS														
005	0980	SS		1500	Ohms	100E-12	F	1	N/R		1	FAILED	800	INPUT(+) VSS(-)	104	75	13
											1	FAILED	800	INPUT(4)(+) VSS(3)(-)	104	75	13
											1	FAILED	500	INPUT(9)(+) VSS(3)(-)	104	81	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Resistance												
7520	MIT	1 Digital, Converter, A/D-D/A	CMOS	005	0980 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	800	INPUT(4)(+)	VSS(3)(-)	104	82	13
										1	FAILED	500	INPUT(9)(+)	VSS(3)(-)	104	84	13
										1	FAILED	800	INPUT(6)(+)	VSS(3)(-)	104	87	13
7520	N/R	1 Digital, Converter, A/D-D/A	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		103	252	13
										1	FAILED	1000	N/R		103	252	13
										1	FAILED	1000	N/R		103	252	13
7521	NSC	1 Digital, Converter, A/D-D/A	CMOS	005	0980 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	800	INPUT(6)(+)	VSS(-)	104	264	13
										1	FAILED	800	INPUT(6)(+)	VSS(-)	104	265	13
										1	FAILED	800	INPUT(6)(+)	VDD(-)	104	177	13
										1	FAILED	800	RFB(18)(+)	OUTPUT(-)	104	91	13
										1	FAILED	800	INPUT(7)(+)	OUTPUT(-)	104	252	13
										1	FAILED	800	INPUT(4)(+)	VDD(-)	104	90	13
7521	RAY	1 Digital, Converter, A/D-D/A	CMOS	005	0980 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	500	RFB(818)(+)	VSS(-)	104	88	13
										1	FAILED	500	INPUT(7)(+)	VSS(-)	104	267	13
										1	FAILED	500	RREF(17)(+)	VSS(-)	104	92	13
										1	FAILED	500	RFB(18)(+)	VSS(-)	104	252	13
										1	FAILED	500	RREF(17)(+)	VSS(-)	104	252	13
7521	N/R	1 Digital, Converter, A/D-D/A	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R		103	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	A/D-D/A	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Resistance											
7522	N/R	1 Digital, Converter, A/D-D/A	CMOS	030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	1000 N/R	103	252	13	
				030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	1000 N/R	103	252	13	
7533	ANA	1 Digital, Converter, A/D-D/A	CMOS	005	0980 SS	1500 Ohms	100E-12 F	1	N/R		1 FAILED	1000 INPUT(4)(+) VDD(14)(-)	104	252	13	
											1 FAILED	1000 INPUT(7)(+) VDD(14)(-)	104	252	13	
											1 PASSED	1000 N/R	104	252	13	
											1 FAILED	800 INPUT(10)(+) OUTPUT(-)	104	83	13	
											1 FAILED	1000 INPUT(6)(+) VDD(14)(-)	104	252	13	
											1 FAILED	1000 INPUT(4)(+) VSS(-)	104	85	13	
75461	N/R	2 Digital, Line/Bus Driver	TTL	030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	3000 N/R	103	252	13	
75462	N/R	2 Digital, Line/Bus Driver	TTL	030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	3000 N/R	103	252	13	
75463	N/R	2 Digital, Line/Bus Driver	TTL	030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	3000 N/R	103	252	13	
75464	N/R	2 Digital, Line/Bus Driver	TTL	030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	3000 N/R	103	252	13	
				030	N/R	1500 Ohms	100E-12 F	1	N/R		1 FAILED	3000 N/R	103	252	13	
7552	ISL	1 Digital, Memory, RAM, Static	MOS	003	1175 SS	0 Ohms	100E-12 F	1	N/R		1 FAILED	400 INPUT(+) PR. SUPPLY(-)	102	252	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Failure Test		General							
				Source Date	Test Type	Resistance	Capacitance	Number	Date	Test Voltage	Pin Combination	Criteria	Remarks	Remarks	
75LS85	N/R	1 Digital, Arithmetic, Magnitude Comparator	LS TTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1500 N/R	103	252	13
76161	HAR	1 Digital, Memory, PROM	STTL	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1050 EACH PIN TO 12 & 24 .+ -)	19	252	13
76161	N/R	2 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3000 N/R	103	252	13
7620	N/R	3 Digital, Memory, PROM	STTL	245	N/R	100 Ohms	N/R	1	N/R	15	FAILED	83 INPUT(+) GND(-)	47	186	21
76321	HAR	1 Digital, Memory, PROM	STTL	392	0886 SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	1000 EACH PIN TO GND,VCC (+ -)	19	252	13
776	FSC	3 Linear, Operational Amplifier	Bipolar	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	5932 N/R	102	188	13
776	N/R	2 Linear, Operational Amplifier	Bipolar	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2500 N/R	103	252	13
7805	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Devices	Pin	Combination	Failure Test		General Remarks			
				Source	Type							Resistance	Capacitance		Pulses	Criteria	Remarks
7812	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
7812	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
7812	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	10000 N/R	1	FAILED	10000	N/R	103	252	103	252	13
7815	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	10000 N/R	1	FAILED	10000	N/R	103	252	103	252	13
78H05	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
78M05	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
78M05	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
78M12	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11

RAC ESD Database

Part Number	ESD Class	Part Description	Mfg	Test Type	Test Resistance	Test Capacitance	Pulses	Number	Date	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	Technology
78M12	N/R	3																Bipolar
78M15	N/R	3																Bipolar
7905	N/R	3																Bipolar
7912	N/R	3																Bipolar
7915	N/R	3																Bipolar
7924	N/R	3																Bipolar
79M12	FSC	2																Bipolar

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number		Test		Failure Criteria	Test Remarks	General Remarks				
				Date	Type	Date	Code	Result	Voltage							
79M12	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000 N/R	103	252	13	
79M15	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	24.7	11
79M15	N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000 N/R	103	252	13
7M853S65	IOT	3 Digital, Memory, RAM, Static	CMOS	436	1186	SS	1500 Ohms	100E-12 F	18	N/R	2	PASSED	4000 INPUT TO GND	5	252	3
80186	INT	1 Digital, Processing Unit, Central	HMOS	429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600 N/R	13	237	13
				428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200 N/R	13	252	13
				429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	1200 N/R	13	252	13
80188	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200 N/R	13	252	13
				429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600 N/R	13	237	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number Date	Pulses Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Date	Type									
80286	INT	1 Digital, Processing Unit, Central	HMOS	429	N/R	GN	0 Ohms	50E-12 F	3 N/R	10 PASSED	600 N/R	13	237	13
				428	N/R	GN	1500 Ohms	100E-12 F	5 N/R	10 PASSED	1200 N/R	13	252	13
80287	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5 N/R	10 PASSED	1200 N/R	13	252	13
				430	N/R	GN	10M Ohms	N/R	3 N/R	10 FAILED	1800 PIN 39	13	149	13
										10 PASSED	1500 N/R	13	149	13
				429	N/R	GN	0 Ohms	50E-12 F	3 N/R	10 PASSED	600 PIN 39	13	237	13
8031	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5 N/R	10 PASSED	1200 N/R	13	252	13
				429	N/R	GN	0 Ohms	50E-12 F	3 N/R	10 FAILED	300 N/R	13	237	13
										10 FAILED	350 N/R	13	237	13
8032	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5 N/R	10 PASSED	1200 N/R	13	252	13
				429	N/R	GN	0 Ohms	50E-12 F	3 N/R	10 FAILED	400 N/R	13	237	13
										10 FAILED	450 N/R	13	237	13
8039	N/R	1 Digital, Micro Computer	NMOS	384	N/R	SS	1000 Ohms	200E-12 F	1 N/R	1 FAILED	1700 EACH PIN(+)	52	116	24





RAC ESD Database

Part Number	Part ES0	Part Description	Technology	Test		Number	Date	Pulses	Code	Capacitance	Resistance	Test	Voltage	Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks	
				Source	Test														
9085	INT	1 Digital, Processing Unit, Central	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	220	N/R	13	237	13
													10	PASSED	600	N/R	13	237	13
8086	VAR	3 Digital, Processing Unit, Central	HMOS	424	1283	SS	1500	Ohms	100E-12	F	11	N/R	1	FAILED	1500	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	14	N/R	1	FAILED	1750	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	16	N/R	2	FAILED	2000	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	15	N/R	2	FAILED	2000	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	18	N/R	1	FAILED	2250	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	17	N/R	4	FAILED	2250	PINS 5,21, AND 32	100	149	13
				424	1283	SS	1500	Ohms	100E-12	F	20	N/R	3	FAILED	2500	PINS 5,21, AND 32	100	149	13
				423	1283	SS	0	Ohms	0	F	22	N/R	1	FAILED	2750	PIN21	100	252	4
				423	1283	SS	0	Ohms	0	F	30	N/R	1	FAILED	4500	PIN 21	100	252	4
				423	1283	SS	0	Ohms	0	F	32	N/R	1	FAILED	5000	PIN 21	100	252	4
8086	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	1000	PIN 2	13	252	13
													10	FAILED	950	PIN 4	13	252	13
													10	FAILED	1050	PIN 11	13	252	13
													10	FAILED	1000	PIN 34	13	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test			Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
	Mfr Class	Part Class			Date	Number	Devices						
8086	INT	1	Digital, Processing Unit, Central	HMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	PIN 39	13	252	
	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	
8087	INT	1	Digital, Processing Unit, Central	HMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237
	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	
8088	INT	1	Digital, Processing Unit, Central	HMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	
	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237
8089	INT	1	Digital, Processing Unit, Central	HMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	
	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237
80C86	HAR	3	Digital, Processing Unit, Central	CMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	1186	SS	1500 Ohms	100E-12 F	18	8706	2	PASSED	4000	INPUT TO GND	5	252	
810	VAR	2	Digital, Multifunction, RAM, I/O, Timer	CMOS	Source	Resistance	Capacitance	Pulses	Code	Date	Test	Test	
	0983	SS	1500 Ohms	100E-12 F	6	N/R	5	FAILED	750	PIN, 9 AND 3	46	149	

RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description	Technoogy								
	Mfr Class	Part		Failure Criteria	Test Remarks	General Remarks						
810	VAP	2	Digital, Multifunction, RAM, I/O, Timer	CMOS								
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	424	0983	SS	1500 Ohms	100E-12 F	5 N/R	10 FAILED	750	PINS 9 AND 3	46	149	13
	423	0983	SS	0 Ohms	0 F	5 N/R	1 FAILED	750	PINS 9 AND 3	46	252	4
	423	0983	SS	0 Ohms	0 F	8 N/R	1 FAILED	1000	PINS 9 AND 3	46	252	4
	423	0983	SS	0 Ohms	0 F	9 N/R	2 FAILED	1250	PINS 9 AND 3	46	252	4
	423	0983	SS	0 Ohms	0 F	12 N/R	1 FAILED	1500	PINS 9 AND 3	46	252	4
	423	0983	SS	0 Ohms	0 F	11 N/R	10 FAILED	1500	PINS 9 AND 3	46	252	4
8155	N/R			1	Digital, Memory, RAM					NMOS		
	384	N/R	SS	1000 Ohms	200E-12 F	1 N/R	1 FAILED	700	EACH PIN(+)	52	123	24
							1 FAILED	900	EACH PIN(+)	52	123	24
							1 FAILED	600	EACH PIN(+)	52	120	24
							1 FAILED	500	EACH PIN(+)	52	108	24
8155	VAR			3	Digital, Memory, RAM					NMOS		
	424	1083	SS	1500 Ohms	100E-12 F	14 N/R	1 FAILED	1750	PINS 4,7,9, AND 10	46	149	13
	424	1083	SS	1500 Ohms	100E-12 F	13 N/R	3 FAILED	1750	PINS 4,7,9, AND 10	46	149	13
	424	1083	SS	1500 Ohms	100E-12 F	16 N/R	10 FAILED	2000	PINS 4,7,9, AND 10	46	149	13
	423	1083	SS	0 Ohms	0 F	16 N/R	1 FAILED	2000	PINS 1,2,12, AND 37	100	252	4
	423	1083	SS	0 Ohms	0 F	26 N/R	1 FAILED	3250	PINS 1,2,12, AND 37	100	252	4
	423	1083	SS	0 Ohms	0 F	30 N/R	1 FAILED	3750	PINS 1,2,12, AND 37	100	252	4

RAC ESD Database

Part Number	Part ESD	Part	Technology												
			Mfr Class	Description	Failure Criteria	Test Remarks	General Remarks								
8155	VAR	3	Digital, Memory, RAM	MMOS	100	252	4								
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks		
	423	1083	SS	0	Ohms	0	F	29	N/R	2	FAILED	3750 PINS 1,2,12, AND 37	4		
	423	1083	SS	0	Ohms	0	F	32	N/R	2	FAILED	4000 PINS 1,2,12, AND 37	4		
	423	1083	SS	0	Ohms	0	F	33	N/R	1	FAILED	4250 PINS 1,2,12, AND 37	4		
	423	1083	SS	0	Ohms	0	F	35	N/R	1	FAILED	4500 PINS 1,2,12, AND 37	4		
	423	1083	SS	0	Ohms	0	F	37	N/R	2	FAILED	4750 PINS 1,2,12, AND 37	4		
8155	INT	1	Digital, Memory, RAM	HMOS											
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600 PINS 8,9,AND 11	13	237	13
8156	INT	1	Digital, Memory, RAM	HMOS											
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600 N/R	13	237	13
8185	INT	1	Digital, Memory, RAM	HMOS											
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200 PINS 13,15,16,AND 17	13	252	13
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600 PINS 10,11,12,15,16,AND 17	13	237	13
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200 N/R	13	252	13
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600 N/R	13	237	13
8202	INT	1	Digital, Memory, RAM, Dynamic	HMOS											
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200 N/R	13	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
8202	INT	1	Digital, Memory, RAM, Dynamic													
8203	INT	1	Digital, Memory, RAM, Dynamic													
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
										10	PASSED	1200	N/R	13	252	13
8206	INT	1	Digital, Error Detect/Correct													
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13
	428	N/R	GN	1500	Ohms	100E-12	F	3	N/R	10	PASSED	1200	N/R	13	252	13
8207	INT	1	Digital, Memory, RAM, Dynamic													
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	500	N/R	13	237	13
	429	N/R	GN	0	Ohms	50E-12	F	5	N/R	10	FAILED	1100	N/R	13	252	13
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	450	N/R	13	237	13
										10	FAILED	550	N/R	13	237	13
8208	INT	1	Digital, Memory, RAM, Dynamic													
	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	450	N/R	13	237	13
	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Failure Test				
				Type	Result	Criteria	Remarks			
8212	INT 1	Digital, Transceiver, Input-Output Port	STTL	1500 Ohms	100E-12 F	5 N/R	560 PIN 11	13	252	13
8214	INT 1	Digital, Controller	Bipolar	1500 Ohms	100E-12 F	5 N/R	775 PINS 2,6,7, AND 20	13	252	13
8224	INT 1	Digital, Multivibrator	HMOS	1500 Ohms	100E-12 F	5 N/R	620 PINS 2 AND 5	13	252	13
8228	INT 1	Digital, Line/Bus Driver	HMOS	1500 Ohms	100E-12 F	5 N/R	512 PINS 1,6, AND 7	13	252	13
82284	INT 1	Digital, Multivibrator	HMOS	1500 Ohms	100E-12 F	5 N/R	1200 2,3,4,6,7,11,12,13,16,17	13	252	13
82288	SIG 1	Digital, Controller	HMOS	1500 Ohms	100E-12 F	1 N/R	1576 N/R	102	189	13
82288	INT 1	Digital, Controller	HMOS	1500 Ohms	100E-12 F	3 N/R	600 ALL INPUT PINS	13	237	13
82288	INT 1	Digital, Controller	HMOS	1500 Ohms	100E-12 F	5 N/R	600 ALL INPUT PINS	13	237	13
82288	INT 1	Digital, Controller	HMOS	1500 Ohms	100E-12 F	5 N/R	600 ALL INPUT PINS	13	237	13
82288	INT 1	Digital, Controller	HMOS	1500 Ohms	100E-12 F	5 N/R	600 ALL INPUT PINS	13	237	13

RAC ESD Database

Part Number	ESD Class	Part Description	Technology		Test Date	Test Type	Test Resistance	Capacitance	Pulses	Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
			Mfr	Technology														
82288	INT	1 Digital, Controller	INT	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
82289	INT	1 Digital	INT	HMOS	429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237	13
					428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
					430	N/R	GN	10M Ohms	N/R	3	N/R	10	PASSED	1500	N/R	13	149	13
8237	INT	1 Digital, Controller	INT	HMOS	429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	FAILED	400	N/R	13	237	13
					428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
					428	N/R	GN	1500 Ohms	100E-12 F	3	N/R	10	PASSED	1200	PIN 5	13	149	13
					428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	PINS 11,12,13,16,17,AND 18	13	149	13
					428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
					429	N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237	13
8238	INT	1 Digital, Line/Bus Driver	INT	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	FAILED	512	PINS 2,3, AND 22	13	252	13
8243	INT	1 Digital, Expander, Input-Output	INT	HMOS	428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13



RAC ESD Database

Part Number (Cont'd)	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Class			Type	Test												
8243	INT	1	Digital, Expander, Input-Output	HMOS	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13
82501	INT	1	Digital, Transceiver, Ethernet	Bipolar	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	350	N/R	13	237	13
8251	INT	1	Digital, Controller, Communications, Programmable	HMOS	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	550	N/R	13	237	13
8253	INT	1	Digital, Timer, Programmable Interval	NMOS	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	550	N/R	13	237	13
393	0984	SS	1500 Ohms	100E-12	F	1	N/R	2	FAILED	2000	15(INPUT)	24(VCC)	102	271	13			
429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13			
428	N/R	GN	1500 Ohms	100E-12	F	5	N/R	10	FAILED	1100	N/R	13	252	13				
8253	N/R	1	Digital, Timer, Programmable Interval	NMOS	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	550	N/R	13	237	13
384	N/R	SS	1000 Ohms	200E-12	F	1	N/R	1	FAILED	1400	EACH PIN(+)	52	121	24				
8254	INT	1	Digital, Counter/Divider	HMOS	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	500	N/R	13	237	13
429	N/R	GN	0	Ohms	50E-12	F	3	N/R	1	FAILED	800	EACH PIN(+)	52	129	24			

RAC ESD Database

Part Number	Part 55C	Part Mfr	Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Resistance	Capacitance	Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
						Source	Date														Type
8254	INT	1	1	Digital, Counter/Divider	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
						429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	1200	N/R	13	252	13
8255	INT	1	1	Digital, Buffer, Schmitt Trigger	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	550	N/R	13	237	13
8256	INT	1	1	Digital, Transceiver	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13
						428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
8257	INT	1	1	Digital, Controller	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	380	N/R	13	237	13
82586	INT	1	1	Digital, Processing Unit, Central	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	400	N/R	13	237	13
						428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	400	N/R	13	252	13
						429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	400	N/R	13	237	13
82588	INT	1	1	Digital, Controller	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	450	N/R	13	237	13

RAC ESD Database

Part Number	(Cont'd)	Part ESD		Part Description	Technology	Test				Failure Test		General Remarks		
		Mfr Class	1			Test Type	Test Resistance	Capacitance	Number Pulses	Date Code	Devices		Number	Test Voltage
82588		INT	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
8259		INT	1	Digital, Controller								HMOS		
428		N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	FAILED	950	PINS 3,26,AND 27	13	252	13
								10	PASSED	1200	N/R	13	252	13
								10	PASSED	1200	N/R	13	252	13
429		N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237	13
8259A		AMD	1	Digital, Processing Unit, Central								MOS		
392		1186	SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	450	EACH PIN TO 14 & 28 (+ -)	19	252	13
8272		INT	1	Digital, Controller								HMOS		
428		N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
429		N/R	GN	0 Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R	13	237	13
8274		INT	1	Digital, Controller								HMOS		
429		N/R	GN	0 Ohms	50E-12 F	3	N/R	10	FAILED	550	N/R	13	237	13
								10	FAILED	550	N/R	13	237	13
8276		INT	1	Digital, Controller								HMOS		
428		N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13

RAC ESD Database

Part Number	Part ESD Number	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Voltage	Test Pin	Test Combination	Failure Criteria	Test Remarks	General Remarks	
				Source	Test														
8279	INT	1 Digital, Controller, Keyboard	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13
8282	INT	1 Digital, Latch	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
8283	INT	1 Digital, Latch	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	669	PINS 1,2, AND 19	13	252	13
													10	PASSED	1200	N/R	13	252	13
8284	INT	1 Digital, Multivibrator	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	325	PIN 11	13	252	13
													10	FAILED	887	PIN 11	13	252	13
													10	PASSED	1200	N/R	13	252	13
													10	FAILED	300	N/R	13	252	13
8286	INT	1 Digital, Transceiver	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	150	N/R	13	237	13
8287	INT	1 Digital, Transceiver	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
8288	INT	1 Digital, Controller	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
													10	FAILED	1193	PINS 1,2, AND 19	13	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number Devices	Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks		
				Source	Test														
8288	INT	1 Digital, Controller	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	PASSED	1200	N/R	13	252	13
				429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	FAILED	150	N/R	13	237	13
8289	INT	1 Digital, Controller, Bus Arbitrator	HMOS	428	N/R	GN	1500	Ohms	100E-12	F	5	N/R	10	FAILED	887	PINS 4,5,AND 6	13	252	13
8291	INT	1 Digital, Controller, Bus Arbitrator	HMOS	429	N/R	GN	0	Ohms	50E-12	F	25	N/R	10	PASSED	600	N/R	13	237	13
8293	INT	1 Digital, Transceiver	HMOS	429	N/R	GN	0	Ohms	50E-12	F	3	N/R	10	PASSED	600	N/R	13	237	13
82C52	HAR	1 Digital, Transceiver	CMOS	436	1186	SS	1500	Ohms	100E-12	F	10	N/R	1	FAILED	1200	INPUT TO GND	5	252	3
				436	1186	SS	1500	Ohms	100E-12	F	5	N/R	1	FAILED	600	INPUT TO GND	5	252	3
				436	1186	SS	1500	Ohms	100E-12	F	7	N/R	1	FAILED	800	OUTPUT TO INPUT	5	252	3
				436	1186	SS	1500	Ohms	100E-12	F	5	N/R	1	FAILED	600	INPUT TO OUTPUT	5	252	3
				436	1186	SS	1500	Ohms	100E-12	F	9	N/R	1	FAILED	1000	INPUT TO GND	5	252	3

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Pulses	Code	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfc	Class			Type	Resistance									
82C59A	HAR	1	Digital, Controller	CMOS	1186 SS	1500 Ohms	100E-12 F	3	8709		400 VCC TO OUTPUT	400 VCC TO OUTPUT	5	252	3
82C82	HAR	1	Digital, Line/Bus Driver	CMOS	1186 SS	1500 Ohms	100E-12 F	5	8720		600 INPUT TO GND	600 INPUT TO GND	5	252	3
82C84A	HAR	1	Digital, Line/Bus Driver	CMOS	1186 SS	1500 Ohms	100E-12 F	6	8720		700 INPUT TO GND	700 INPUT TO GND	5	252	3
82C88	INT	1	Digital, Controller	CMOS	1186 SS	1500 Ohms	100E-12 F	6	8710		700 INPUT TO GND	700 INPUT TO GND	5	252	3
	N/R	GN	10M Ohms	N/R	F	5	N/R				1500 PIN 11	1500 PIN 11	13	252	13
	N/R	GN	0 Ohms	50E-12 F	F	3	N/R				600 N/R	600 N/R	13	149	13
	N/R	GN	1500 Ohms	100E-12 F	F	3	N/R				1200 PINS 1,2,3,6,15,18,AND 19	1200 PINS 1,2,3,6,15,18,AND 19	13	237	13
82C88	HAR	1	Digital, Controller	CMOS	1186 SS	1500 Ohms	100E-12 F	7	N/R		800 INPUT TO GND	800 INPUT TO GND	5	252	3
	N/R	GN	0 Ohms	50E-12 F	F	2	N/R				800 INPUT TO GND	800 INPUT TO GND	5	252	3
	N/R	GN	1500 Ohms	100E-12 F	F	2	N/R				800 INPUT TO GND	800 INPUT TO GND	5	252	3
82S114	N/R	1	Digital, Memory, PROM	DTL	1186 SS	1500 Ohms	100E-12 F	1	N/R		1000 N/R	1000 N/R	103	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Resistance										
82S123	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13
82S129	N/R	1 Digital, Memory, PROM	STTL	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	1	700	INPUT TO OUTPUT	5	252	3
82S129	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13
82S131	N/R	1 Digital, Memory, PROM	STTL	436	1186 SS	1500 Ohms	100E-12 F	6	N/R	5	700	INPUT TO GND	5	252	3
82S137	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13
82S141	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13
82S181	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13
82S181	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	1000	N/R	103	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test Type	Test Resistance	Test Capacitance	Pulses	Number of Devices	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Date	Test											
82S185	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	1	1	FAILED	1000 N/R	103	252	13	
82S191	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	1	1	FAILED					
82S191	SIG	1 Digital, Memory, PROM	STTL	36	1186 SS	1500 Ohms	100E-12 F	5	5	5	FAILED	600 INPUT TO GND	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	3	3	1	FAILED	400 INPUT TO GND	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	5	5	5	FAILED	600 INPUT TO GND	5	252	3	
				436	1185 SS	1500 Ohms	100E-12 F	7	7	5	FAILED	800 INPUT TO GND	5	252	3	
82S2708	N/R	1 Digital, Memory, PROM	STTL	030	N/R	1500 Ohms	100E-12 F	1	1	1	FAILED	1000 N/R	103	252	13	
82S34	N/R	2 Digital, Multiplexer	STTL	245	N/R	100 Ohms	N/R	1	1	15	FAILED	31 INPUT(+) GND(-)	47	186	21	
82S67	N/R	3 Digital, Multiplexer	STTL	245	N/R	100 Ohms	N/R	1	1	15	FAILED	41 INPUT(+) GND(-)	47	186	21	



RAC ESD Database

Part Number	Part ESD		Part		Description		Technology												
	Mfr	Class	Test	Type	Resistance	Capacitance	Number	Date											
8-81	SIG	N	N	Digital, Gate	1500 Ohms	100E-12 F	1	N/R											
029	N/R	N/R	N/R	N/R	1500 Ohms <td>100E-12 F <td>1</td> <td>N/R</td> <td>164722</td> <td>N/R</td> <td>Test</td> <td>Result</td> <td>Voltage</td> <td>Pin</td> <td>Combination</td> <td>Failure</td> <td>Test</td> <td>General</td> </td>	100E-12 F <td>1</td> <td>N/R</td> <td>164722</td> <td>N/R</td> <td>Test</td> <td>Result</td> <td>Voltage</td> <td>Pin</td> <td>Combination</td> <td>Failure</td> <td>Test</td> <td>General</td>	1	N/R	164722	N/R	Test	Result	Voltage	Pin	Combination	Failure	Test	General	
																102	188	13	
8656	PLE	1	Digital, Line/Bus Driver																
393	0385	SS	1500 Ohms	100E-12 F	1	N/R	1	N/R	1	FAILED	1000	8(INPUT)	2(VCC)			102	252	13	
8685	PLE	1	Digital, Counter/Divider																
393	1184	SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	1500	15(INPUT)	8(VCC)					102	252	13	
8741	INT	1	Digital, Transceiver, Input-Output, RAM																
429	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	FAILED	500	N/R					13	237	13	
428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	FAILED	1050	N/R						13	252	13	
429	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	FAILED	550	N/R					13	237	13	
8742	INT	1	Digital, Controller, Peripheral Interface																
429	N/R	GN	0	Ohms	50E-12 F	3	N/R	10	PASSED	600	N/R					13	237	13	
428	N/R	GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R						13	252	13	
8744	INT	1	Digital, Memory, EPROM																
429	N/R	GN	0	Ohms	50E 12 F	3	N/R	10	PASSED	600	N/R					13	237	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Test Criteria	General Remarks					
				Date	Type	Resistance	Capacitance	Number	Date			Number	Date			
8744	INT	1 Digital, Memory, EPROM	HMOS	428	N/R GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
8748	INT	1 Digital, Processing Unit, Central	HMOS	428	N/R GN	1500 Ohms	100E-12 F	5	N/R	10	PASSED	1200	N/R	13	252	13
				429	N/R GN	0 Ohms	50E-12 F	3	N/R	10	FAILED	500	N/R	13	237	13
								10	FAILED	400	N/R	400	N/R	13	237	13
8755	N/R	1 Digital, Memory, EPROM	NMOS	384	N/R SS	1000 Ohms	200E-12 F	1	N/R	1	FAILED	1900	EACH PIN(+)	52	125	24
								1	FAILED	500	EACH PIN(+)	500	EACH PIN(+)	52	113	24
8T26	N/R	1 Digital, Transceiver	STTL	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
8T26C	N/R	1 Digital, Transceiver	STTL	030	N/R N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1000	N/R	103	252	13
8X01	SIG	1 Digital	IIL	383	N/R SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1728	IN.(+) APTT(-)	49	188	8
								1	FAILED	507	OUT.(+) APTT(-)	507	OUT.(+) APTT(-)	49	188	8
								1	FAILED	459	VCC(+) APTT(-)	459	VCC(+) APTT(-)	49	188	8

RAC ESD Database

Part Number	Part ESD Part		Description		Technology												
	Mfr Class	Part	Mfr Class	Part													
9093	FSC	3	Digital, Flip-Flop	DTL													
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Pin Combination	Test Result	Test Devices	Test Number	Test Date	Test Code	Test Pulses	Test Description	Failure Criteria	Test Remarks	General Remarks
	029	N/R	N/R	1500 Ohms	100E-12 F	6123 N/R	6123 N/R	1 FAILED	1	N/R	1	N/R	1	300 INPUT(+) PR. SUPPLY(-)	102	188	13
9102	AMD	1	Digital, Memory, RAM, Static	NMOS													
	003	N/R	SS	0	Ohms	100E-12 F	300 INPUT(+) PR. SUPPLY(-)	1 FAILED	1	N/R	1	N/R	1	300 INPUT(+) PR. SUPPLY(-)	102	252	13
914	MOT	3	Digital, Gate	RTL													
	029	N/R	N/R	1500 Ohms	100E-12 F	5848 N/R	5848 N/R	1 FAILED	1	N/R	1	N/R	1	5848 N/R	102	189	13
930	RAY	3	Digital, Gate	DTL													
	029	N/R	N/R	1500 Ohms	100E-12 F	4283 N/R	4283 N/R	1 FAILED	1	N/R	1	N/R	1	4283 N/R	102	188	13
9309	FSC	2	Digital, Multiplexer	TTL													
	390	N/R	GN	1500 Ohms	100E-12 F	2000 S/R	2000 S/R	1 PASSED	1	N/R	5	N/R	1	2000 S/R	105	247	11
93415	MOT	1	Digital, Memory, RAM, Static	TTL													
	027	N/R	GN	1500 Ohms	100E-12 F	1000 N/R	1000 N/R	1 FAILED	1	N/R	1	N/R	1	1000 N/R	47	252	12
						1000 N/R	1000 N/R	13 PASSED	13		5			1000 N/R	47	252	12
93449	FSC	3	Digital	iTL													
	029	N/R	N/R	1500 Ohms	100E-12 F	806J N/R	806J N/R	1 FAILED	1	N/R	1	N/R	1	806J N/R	102	189	13
935	FSC	2	Digital, Inverter, Buffer	DTL													
	390	N/R	GN	1500 Ohms	100E-12 F	2000 S/R	2000 S/R	1 PASSED	1	N/R	5	N/R	1	2000 S/R	105	247	11

RAC ESD Database

Part Number	Part ESD Part		Description		Technology								
	Mfr Class	2	Digital		Failure Test	General							
9383	FSC	2	Digital		Criteria	Remarks							
	Test Date	Test Type	Resistance	Capacitance	Number Devices	Number Test	Test Voltage	Pin Combination	Failure Test	General			
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
940	FSC	2	Digital, Inverter, Buffer						DTL				
	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000 S/R	105	247	11
9428-037	AM	2	Digital, Array, PAL						CMOS				
	392	0986	SS	1500 Ohms	100E-12 F	1	N/R	3	FAILED	2500 EACH PIN TO 10 & 20 (+ -)	19	273	13
								3	FAILED	2500 EACH PIN TO 10 & 20 (+ -)	19	46	13
94459	FSC	3	Digital, Gate						DTL				
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	13426 N/R	102	188	13
946	NSC	3	Digital, Gate						DTL				
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	5237 N/R	102	188	13
								1	FAILED	4192 N/R	102	188	13
946	N/R	3	Digital, Gate						DTL				
	245	N/R	SS	100 Ohms	N/R	1	N/R	15	FAILED	58 INPUT(+) GND(-)	47	186	21
948	NSC	3	Digital, Flip-Flop						DTL				
	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	5227 N/R	102	188	13

RAC ESD Database

Part Number	Part ESD Part		Description		Technology															
	Mfr Class	Part			Failure Criteria	General Remarks														
9601	FSC	2	Digital, Multivibrator	TTL	105	247														
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Test Voltage	Test Result	Test Devices	Test Date	Test Number	Test Pin Combination	Test Voltage	Test Result	Test Devices	Test Date	Test Number	Test Remarks	Test General Remarks	
	390	N/R	GN	1500 Ohms	100E-12 F	5	2000	1 PASSED	5	N/R	1	2000 S/R	2000	1	5	N/R	1	105	247	11
9602	FSC	1	Digital, Multivibrator	TTL																
	390	N/R	GN	1500 Ohms	100E-12 F	5	2000	1 PASSED	5	N/R	1	2000 S/R	2000	1	5	N/R	1	105	247	11
	392	0886	SS	1500 Ohms	100E-12 F	5	1050	5 FAILED	5	N/R	5	1050 PINS 3-5,11-13 TO GND,VCC	1050	5	5	N/R	5	19	145	13
	392	1086	SS	1500 Ohms	100E-12 F	1	1125	5 FAILED	5	N/R	5	1125 EACH PIN TO 8 & 16 (+ -)	1125	5	5	N/R	5	19	252	13
	392	0886	SS	1500 Ohms	100E-12 F	1	1250	5 FAILED	5	N/R	5	1250 EACH PIN TO 8 & 16 (+ -)	1250	5	5	N/R	5	19	252	13
	392	0886	SS	1500 Ohms	100E-12 F	1	1050	5 FAILED	5	N/R	5	1050 INPUT PINS TO GND & VCC	1050	5	5	N/R	5	19	155	13
9614	FSC	1	Digital, Line/Bus Driver	Bipolar																
	026	0178	SS	100 Ohms	200E-12 F	1	963	4 FAILED	4	N/R	4	963 INPUT(5)(+) GND(8)(-)	963	4	4	N/R	4	6	285	13
	390	N/R	GN	1500 Ohms	100E-12 F	5	2000	1 PASSED	5	N/R	1	2000 S/R	2000	1	5	N/R	1	105	247	11
	436	1186	SS	1500 Ohms	100E-12 F	9	1000	5 FAILED	5	N/R	5	1000 INPUT TO OUTPUT	1000	5	5	N/R	5	5	252	3
	436	1186	SS	1500 Ohms	100E-12 F	12	1600	5 FAILED	5	N/R	5	1600 INPUT TO OUTPUT	1600	5	5	N/R	5	5	252	3
	436	1186	SS	1500 Ohms	100E-12 F	13	1800	5 FAILED	5	N/R	5	1800 INPUT TO GND	1800	5	5	N/R	5	5	252	3
9614	TEX	2	Digital, Line/Bus Driver	Bipolar																
	390	N/R	GN	1500 Ohms	100E-12 F	5	2000	1 PASSED	5	N/R	1	2000 S/R	2000	1	5	N/R	1	105	247	11
9614	MOT	3	Digital, Line/Bus Driver	Bipolar																
	436	1186	SS	1500 Ohms	100E-12 F	18	4000	5 PASSED	5	N/R	5	4000 N/R	4000	5	5	N/R	5	5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devi	Test	Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks	
				Test Type	Resistance														Capacitance
9614	N/R	1 Digital, Line/Bus Driver	Bipolar	030	N/R	1	N/R	1	N/R	1	FAILED	2000	N/R	103	252	13			
9615	FSC	1 Digital, Line/Bus Receiver	Bipolar	026	0178 SS	100	Ohms	200E-12	F	1	N/R	4	FAILED	230	N/R	6	285	13	
				436	1186 SS	1500	Ohms	100E-12	F	10	N/R	5	FAILED	1200	INPUT TO GND	5	252	3	
9615	TEX	1 Digital, Line/Bus Receiver	Bipolar	436	1186 SS	1500	Ohms	100E-12	F	8	N/R	5	FAILED	900	INPUT TO OUTPUT	5	252	3	
9615	N/R	3 Digital, Line/Bus Receiver	Bipolar	030	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	12000	N/R	103	252	13
				245	N/R	SS	100	Ohms	N/R	1	N/R	15	FAILED	90	INPUT(+) INPUT(-)	47	186	21	
9616	N/R	3 Digital, Line/Bus Driver	Bipolar	245	N/R	SS	100	Ohms	N/R	1	N/R	15	FAILED	112	INPUT(+) INPUT(-)	47	186	21	
9900	TEX	1 Digital, Processing Unit, Central	IIL	383	N/R	SS	1500	Ohms	100E-12	F	1	N/R	1	FAILED	113	INJ.(-) APTT(+)	49	188	8
9908	FSC	3 Digital, Encoder, Octal/Binary	DTL	029	N/R	N/R	1500	Ohms	100E-12	F	1	N/R	1	FAILED	9561	N/R	102	188	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test Results												
	Mfr Class	Class			Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
9909	FSC	3	Digital, Gate	RTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	7342 N/R	102	188	13
9910	FSC	3	Digital, Gate	RTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4595 N/R	102	188	13
9911	FSC	3	Digital, Gate	RTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6371 N/R	102	188	13
9912	FSC	3	Digital	RTL	029	N/R	N/R	1500 Ohms	1.0E-12 F	1	N/R	1	FAILED	14260 N/R	102	188	13
9930	FSC	2	Digital, Gate	DTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3514 N/R	102	188	13
9932	FSC	2	Digital, Gate	DTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3883 N/R	102	188	13
9944	NSC	2	Digital, Gate	DTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3444 N/R	102	188	13
9945	NSC	2	Digital, Flip-Flop	DTL	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	3708 N/R	102	188	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number		Test		Failure Test						
				Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Voltage	Pin Combination	Criteria	Remarks	General
9945	FSC	3 Digital, Flip-Flop	DTL	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4481	N/R	102	188	13
9946	FSC	3 Digital, Gate	DTL	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	7970	N/R	102	188	13
9948	FSC	3 Digital, Flip-Flop	DTL	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	4774	N/R	102	188	13
AD5216	ITE	1 Digital, Converter, A/D-D/A	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	9	N/R	2	FAILED	1000 INPJT TO GND	5	252	3
AD558T	ANA	1 Digital, Converter, A/D-D/A	Bipolar	392	1086	SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	450 EACH PIN TO 11 & 12 (+ -)	19	252	13
AD574	ANA	3 Digital, Converter, A/D-D/A	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	18	8633	1	PASSED	4000 N/R	5	252	3
AD581	ANA	1 Linear, Voltage Reference	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	10	8644	2	FAILED	1200 INPUT TO GND	5	252	3
AD584SH	ANA	1 Linear, Voltage Reference	Bipolar	392	1086	SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	1050 EACH PIN TO 8 (+ -)	19	252	13



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number Date	Pulses Code	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Type	Test Resistance									
AJ584TH	ANA	3 Linear, Voltage Reference	Bipolar	0788 SS	1500 Ohms	100E-12 F	18 N/R	2	PASSED	4000 N/R		5	252	3
AD590	ANA	1 Digital, Converter, A/D-D/A	Bipolar	1186 SS	1500 Ohms	100E-12 F	12 N/R	2	FAILED	1600 INPUT TO GND		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	11 N/R			1	FAILED	1400 INPUT TO INPUT		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	11 N/R			2	FAILED	1400 INPUT TO OUTPUT		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	1 N/R			1	FAILED	200 INPUT TO INPUT		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	12 N/R			1	FAILED	1600 INPUT TO INPUT		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	15 N/R			3	FAILED	2500 OUTPUT TO INPUT		5	252	3
ADC0800	NSC	1 Digital, Converter, A/D-D/A	CMOS	0184 SS	1500 Ohms	100E-12 F	3 N/R	1	FAILED	500 PINS 5,6,AND 7		102	252	13
ADC0808CJ	NSC	1 Digital, Converter, A/D-D/A	Bipolar	1186 SS	1500 Ohms	100E-12 F	1 N/R	5	FAILED	1050 EACH PIN TO 11 & 13 (+ -)		19	252	13
ADC0811	NSC	2 Digital, Converter, A/D-D/A	CMOS	0184 SS	1500 Ohms	100E-12 F	11 8436	1	FAILED	2500 PINS 11,15,AND 17-19		102	252	13
ADC0819	NSC	2 Digital, Converter, A/D-D/A	CMOS	0184 SS	1500 Ohms	100E-12 F	18 N/R	1	FAILED	3500 PINS 4,9,23,24,AND 26		102	252	13

RAC ESD Database

Part Number	Part Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
				Source	Resistance											Capacitance
ADC0819	NSC	2 Digital, Converter, A/D-D/A	CMOS	422	0184 SS	0	Ohms	125E-12 F	3	N/R	1	FAILED	500 PINS 4,9,23,24, AND 26	102	289	13
ADC0820	NSC	1 Digital, Converter, A/D-D/A	CMOS	421	0184 SS	1500	Ohms	100E-12 F	6	N/R	1	FAILED	1200 PINS 6-8, 11-13	102	252	13
				422	0184 SS	0	Ohms	125E-12 F	2	N/R	1	FAILED	350 PINS 6-8, 11-13	102	289	13
ADC0838	NSC	1 Digital, Converter, A/D-D/A	CMOS	421	0184 SS	1500	Ohms	100E-12 F	4	N/R	1	FAILED	700 PINS 13,16,17,AND 18	102	252	13
				421	0184 SS	1500	Ohms	100E-12 F	18	N/R	1	FAILED	3500 N/R	102	252	13
AM111	AMD	1 Linear, Comparator	Bipolar	029	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	611 N/R	102	188	13
AM111	N/R	3 Linear, Comparator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	11000 N/R	103	252	13
											1	FAILED	11000 N/R	103	252	13
AM26LS29	AMD	2 Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500	Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO OUTPUT	5	252	3
											1	FAILED	3000 INPUT TO OUTPUT	5	252	3
AM26LS31	AMD	1 Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500	Ohms	100E-12 F	11	N/R	5	FAILED	1400 INPUT TO GND	5	252	3

RAC ESD Database

Part Number (Cont'd)	Part Mfr Class	Part Description	Technology	Test		Failure Test		General					
				Test Type	Test Resistance	Test Capacitance	Test Voltage	Test Result	Test Voltage	Test Result	Test Remarks	Test Remarks	
AM26LS31	AMD	1 Digital, Line/Bus Driver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	8 N/R	1 FAILED	900 INPUT TO OUTPUT	5	252	3
AM26LS32	AMD	1 Digital, Line/Bus Receiver	LSTTL	436	0588 SS	1500 Ohms	100E-12 F	16 N/R	3 FAILED	3000 OUTPUT TO GROUND	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	14 N/R	1 FAILED	2000 OUTPUT TO GND	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	9 N/R	1 FAILED	1000 INPUT TO GND	5	252	3
AM26LS33	AMD	1 Digital, Line/Bus Receiver	LSTTL	436	1186 SS	1500 Ohms	100E-12 F	5 8622	1 FAILED	600 INPUT TO GND	5	252	3
AM687	AMD	1 Linear, Comparator	Bipolar	392	1186 SS	1500 Ohms	100E-12 F	1 N/R	5 FAILED	850 EACH PIN TO 6, 11 THEN 3,14	19	145	13
AT27C256	ATM	2 Digital, Memory, EPROM	CMOS	401	0187 SS	1500 Ohms	100E-12 F	5 N/R	1 PASSED	6200 PIN # 01 (Vpp), (+V)	60	288	1
									1 PASSED	6200 PIN # 02 (A12), (+V)	60	288	1
									1 PASSED	6200 PIN # 03 (A7), (+V)	60	288	1
									1 FAILED	3000 PIN # 04 (A6), (+V)	60	288	1
									1 PASSED	6200 PIN # 07 (A3), (+V)	60	288	1
									1 PASSED	6200 PIN # 08 (A2), (+V)	60	288	1
									1 PASSED	6200 PIN # (09), (+V)	60	288	1
									1 PASSED	6200 PIN # 10 (A0), (+V)	60	288	1
									1 PASSED	6200 PIN # 11 (00), (+V)	60	288	1

RAC ESD Database

Part Number (Cont'd) ATM 2 Digital, Memory, EPROM  
 Part ESD Part Description  
 Mfr Class 2 Digital, Memory, EPROM  
 Technology  
 CMOS

Source	Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
401	0187	SS	1500 Ohms	100E-12 F	5	N/R				1 PASSED	6200	PIN # 12 (01),(+V)	60	288	1
										1 PASSED	6200	PIN # 13 (02),(+V)	60	288	1
										1 PASSED	6200	PIN # 15 (03),(+V)	60	288	1
										1 PASSED	6200	PIN # 16 (04),(+V)	60	288	1
										1 PASSED	6200	PIN # 17 (05),(+V)	60	288	1
										1 PASSED	6200	PIN # 18 (06),(+V)	60	288	1
										1 PASSED	6200	PIN # 19 (07),(+V)	60	288	1
										1 PASSED	6200	PIN # 20 (CE),(+V)	60	288	1
										1 PASSED	6200	PIN # 21 (A10),(+V)	60	288	1
										1 FAILED	3000	PIN # 22 (CE),(+V)	60	288	1
										1 FAILED	2800	PIN # 23 (A11),(+V)	60	288	1
										1 PASSED	6200	PIN # 24 (A9),(+V)	60	288	1
										1 FAILED	2400	PIN # 25 (A8),(+V)	60	288	1
										1 FAILED	2400	PIN # 26 (A13),(+V)	60	288	1
										1 FAILED	2800	PIN # 27 (A14),(+V)	60	288	1
										1 PASSED	6200	PIN # 28 (Vcc),(+V)	60	288	1
										1 PASSED	6200	PIN # 01 (Vpp),(-V)	60	288	1
										1 PASSED	6200	PIN # 02 (A12),(-V)	60	288	1
										1 PASSED	6200	PIN # 03 (A7),(-V)	60	288	1
										1 PASSED	6200	PIN # 04 (A6),(-V)	60	288	1
										1 PASSED	6200	PIN # 05 (A5),(-V)	60	288	1
										1 PASSED	6200	PIN # 06 (A4),(-V)	60	288	1
										1 PASSED	6200	PIN # 07 (A3),(-V)	60	288	1
										1 PASSED	6200	PIN # 08 (A2),(-V)	60	288	1
										1 PASSED	6200	PIN # 09 (A1),(-V)	60	288	1
										1 PASSED	6200	PIN # 10 (A0),(-V)	60	288	1
										1 PASSED	6200	PIN # 11 (00),(-V)	60	288	1
										1 PASSED	6200	PIN # 12 (01),(-V)	60	288	1
										1 PASSED	6200	PIN # 13 (02),(-V)	60	288	1
										1 PASSED	6200	PIN # 15 (03),(-V)	60	288	1
										1 PASSED	6200	PIN # 16 (04),(-V)	60	288	1
										1 PASSED	6200	PIN # 17 (05),(-V)	60	288	1
										1 PASSED	6200	PIN # 18 (06),(-V)	60	288	1

RAC ESD Database

Part Number (Cont'd)	Part ESD	Part	Mfr Class	Description	Technology	Test		Number	Date	Code	Devices	Pulses	Capacitance	Resistance	Test	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
						Test Date	Test Type														
AT27C256	ATM	2	Digital, Memory, EPROM	CMOS	1500 Ohms	100E-12 F	5	M/R											60	288	1
															1 PASSED	6200	PIN # 19	(07), (-V)			
															1 FAILED	3000	PIN # 20	(CE), (-V)			
															1 FAILED	3000	PIN # 21	(A10), (-V)			
															1 PASSED	6200	PIN # 22	(0E), (-V)			
															1 PASSED	6200	PIN # 23	(A11), (-V)			
															1 PASSED	6200	PIN # 24	(A9), (-V)			
															1 PASSED	6200	PIN # 25	(A8), (-V)			
															1 PASSED	6200	PIN # 26	(A13), (-V)			
															1 PASSED	6200	PIN # 27	(A14), (-V)			
AT27C512	ATM	2	Digital, Memory, EPROM	CMOS	1500 Ohms	100E-12 F	5	M/R											60	287	1
															1 FAILED	2600	PIN # 01	(A15), (+V)			
															1 FAILED	2800	PIN # 02	(A12), (+V)			
															1 FAILED	3000	PIN # 03	(A7), (+V)			
															1 FAILED	2800	PIN # 04	(A6), (+V)			
															1 PASSED	6200	PIN # 05	(A5), (+V)			
															1 PASSED	6200	PIN # 06	(A4), (+V)			
															1 PASSED	6200	PIN # 07	(A3), (+V)			
															1 PASSED	6200	PIN # 08	(A2), (+V)			
															1 FAILED	2800	PIN # 09	(A1), (+V)			
															1 FAILED	2600	PIN # 10	(A0), (+V)			
															1 PASSED	6200	PIN # 11	(00), (+V)			
															1 PASSED	6200	PIN # 12	(01), (+V)			
															1 PASSED	6200	PIN # 13	(02), (+V)			
															1 PASSED	6200	PIN # 15	(03), (+V)			
															1 PASSED	6200	PIN # 16	(04), (+V)			
															1 PASSED	6200	PIN # 17	(05), (+V)			
															1 PASSED	6200	PIN # 18	(06), (+V)			
															1 PASSED	6200	PIN # 19	(07), (+V)			
															1 FAILED	2400	PIN # 20	(CE), (+V)			
															1 PASSED	6200	PIN # 21	(A10), (+V)			

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Pulses	Code	Date	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
AT27C512	ATM	2 Digital, Memory, EPROM	CMOS									1 PASSED	6200	PIN # 22 (OE/Vpp), (+V)	60	287	1
												1 FAILED	2600	PIN # 23 (A11), (+V)	60	287	1
												1 FAILED	3000	PIN # 24 (A9), (+V)	60	287	1
												1 FAILED	2600	PIN # 25 (A8), (+V)	60	287	1
												1 FAILED	2600	PIN # 26 (A13), (+V)	60	287	1
												1 FAILED	2400	PIN # 27 (A14), (+V)	60	287	1
												1 FAILED	4200	PIN # 01 (A15), (-V)	60	287	1
												1 PASSED	6200	PIN # 02 (A12), (-V)	60	287	1
												1 PASSED	6200	PIN # 03 (A7), (-V)	60	287	1
												1 PASSED	6200	PIN # 04 (A6), (-V)	60	287	1
												1 PASSED	6200	PIN # 05 (A5), (-V)	60	287	1
												1 PASSED	6200	PIN # 06 (A4), (-V)	60	287	1
												1 PASSED	6200	PIN # 07 (A3), (-V)	60	287	1
												1 PASSED	6200	PIN # 08 (A2), (-V)	60	287	1
												1 PASSED	6200	PIN # 09 (A1), (-V)	60	287	1
												1 FAILED	4200	PIN # 10 (A0), (-V)	60	287	1
												1 PASSED	6200	PIN # 11 (00), (-V)	60	287	1
												1 PASSED	6200	PIN # 13 (02), (-V)	60	287	1
												1 PASSED	6200	PIN # 13 (02), (-V)	60	287	1
												1 PASSED	6200	PIN # 15 (03), (-V)	60	287	1
												1 PASSED	6200	PIN # 16 (04), (-V)	60	287	1
												1 PASSED	6200	PIN # 17 (05), (-V)	60	287	1
												1 PASSED	6200	PIN # 18 (06), (-V)	60	287	1
												1 PASSED	6200	PIN # 19 (07), (-V)	60	287	1
												1 PASSED	6200	PIN # 20 (CE), (-V)	60	287	1
												1 PASSED	6200	PIN # 21 (A10), (-V)	60	287	1
												1 PASSED	6200	PIN # 22 (OE/V), (-V)	60	287	1
												1 PASSED	6200	PIN # 23 (A11), (-V)	60	287	1
												1 PASSED	6200	PIN # 24 (A9), (-V)	60	287	1
												1 PASSED	6200	PIN # 25 (A8), (-V)	60	287	1
												1 PASSED	6200	PIN # 26 (A13), (-V)	60	287	1
												1 PASSED	6200	PIN # 27 (A14), (-V)	60	287	1
												1 PASSED	6200	PIN # 27 (A14), (-V)	60	287	1

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Ohms	Test Type	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks		
				Test	Test																	
CD4000A	RCA	3 Digital, Gate	CMOS	029	N/R	N/R	1	N/R	1	100E-12 F	1500	Ohms	100E-12 F	1 FAILED	6985	N/R	102	188	13			
					N/R	N/R	1	N/R	1	100E-12 F	1500	Ohms	100E-12 F	1 FAILED	8010	N/R	102	188	13			
					N/R	N/R	1	N/R	1	100E-12 F	1500	Ohms	100E-12 F	1 FAILED	10533	N/R	102	188	13			
CD4001	RCA	2 Digital, Gate	CMOS	436	0788	SS	16	8739	16	100E-12 F	1500	Ohms	100E-12 F	8 FAILED	3000	INPUT TO COMMON	5	252	3			
CD4002BE	RCA	1 Digital, Gate	CMOS	416	0586	SS	1	8610	1	100E-12 F	1500	Ohms	100E-12 F	10 FAILED	1000	N/R	25	252	13			
CD4006B	RCA	1 Digital, Register, Shift	CMOS	436	1186	SS	7	8720	7	100E-12 F	1500	Ohms	100E-12 F	1 FAILED	800	INPUT TO OUTPUT	5	252	3			
CD4011	RCA	1 Digital, Gate	CMOS	414	0783	SS	5	N/R	5	100E-12 F	1500	Ohms	100E-12 F	1 FAILED	700	NEG INPUT, POS OUTPUT	102	259	26			
CD4011	N/R	1 Digital, Gate	CMOS	414	0783	SS	5	N/R	5	100E-12 F	1500	Ohms	100E-12 F	5 FAILED	800	NEG INPUT, POS OUTPUT	102	259	26			

RAC ESD Database

Part Number		Technology		Test		Number		Date		Pulses		Code		Devices		Test		Voltage		Pin Combination		Failure		Test		General		
Part	Code	Part	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test	Code	Test
436	0788	SS	1500	Ohms	100E-12	F	5	N/R	5	N/R	5	N/R	5	N/R	1	FAILED	500	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
436	0788	SS	1500	Ohms	100E-12	F	5	N/R	5	N/R	5	N/R	5	N/R	1	FAILED	500	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
436	0788	SS	1500	Ohms	100E-12	F	5	N/R	5	N/R	5	N/R	5	N/R	11	FAILED	600	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															15	FAILED	700	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															24	FAILED	800	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															20	FAILED	900	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															8	FAILED	1000	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															1	FAILED	1100	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															25	FAILED	500	ALL				102	260	26	26	26		
															29	FAILED	600	ALL				102	260	26	26	26		
															14	FAILED	700	ALL				102	260	26	26	26		
															9	FAILED	800	ALL				102	260	26	26	26		
															3	FAILED	900	ALL				102	260	26	26	26		
															1	FAILED	500	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															11	FAILED	600	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															15	FAILED	700	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															24	FAILED	800	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															8	FAILED	1000	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															1	FAILED	1100	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															20	FAILED	900	NEG	INPUT,	POS	OUTPUT	102	259	26	26	26		
															24	FAILED	500	ALL				102	260	26	26	26		
															29	FAILED	600	ALL				102	260	26	26	26		
															13	FAILED	700	ALL				102	260	26	26	26		
															8	FAILED	800	ALL				102	260	26	26	26		
															3	FAILED	900	ALL				102	260	26	26	26		
CD4011UB	RCA	1	Digital,	Gate																		CMOS						
436	0788	SS	1500	Ohms	100E-12	F	12	8742	12	8742	12	8742	12	8742	2	FAILED	1500	OUTPUT	TO	COMMON		5	252	3	3			
CD4012UBF	RCA	1	Digital,	Gate																		CMOS						
436	0788	SS	1500	Ohms	100E-12	F	5	8742	5	8742	5	8742	5	8742	5	FAILED	600	INPUT	TO	OUTPUT		5	252	3	3			



RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
CD4012UBF	RCA	1 Digital, Gate	CMOS	436	0788 SS	1500 Ohms	100E-12 F	15	8742	5	FAILED	2500	INPUT TO GROUND	5	252	3
CD4015B	RCA	1 Digital, Register, Shift	CMOS	436	0284 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13
CD4017B: X	RCA	1 Digital, Counter/Divider	CMOS	436	0185 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	2000	N/R	25	252	13
CD4024	RCA	2 Digital, Counter/Divider, Binary	CMOS	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	36281	N/R	102	189	13
CD4024BCN	NSC	1 Digital, Counter/Divider, Binary	CMOS	436	0488 SS	1500 Ohms	100E-12 F	17	N/R	5	FAILED	3500	INPUT TO COMMON	5	252	3
				416	1285 SS	1500 Ohms	100E-12 F	1	N/R	10	FAILED	400	N/R	25	252	13
				417	0386 SS	0 Ohms	200E-12 F	4	N/R	5	FAILED	1000	N/R	25	252	13
				416	0486 SS	1500 Ohms	100E-12 F	4	N/R	10	FAILED	1000	N/R	25	252	13
CD40248EX	RCA	1 Digital, Counter/Divider, Binary	CMOS	416	0386 SS	1500 Ohms	100E-12 F	1	N/R	10	FAILED	1000	N/R	25	252	13
CD4030B	RCA	3 Digital, Gate	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	8633	1	PASSED	4000	INPUT TO GND	5	252	3

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Failure Criteria	Test Voltage	Test Result	Number of Devices	Pulses	Code	Date	Source	Test Type	Resistance	Capacitance	Test Voltage	Test Result	Pin Combination	General Remarks	
																			Failure Criteria
CD40508	RCA	1 Digital, Inverter, Buffer	CMOS	5	1800	1 FAILED	1	1800							1800	INPUT TO GND	3	252	3
CD4051BCN	NSC	1 Digital, Multiplexer	CMOS	5	400	5 FAILED	5	400							400	N/R	13	252	13
CD4066	RCA	2 Linear, Switch	CMOS	5	2500	1 FAILED	1	2500							2500	INPUT TO GND	3	252	3
CD4069UB	RCA	2 Digital, Inverter, Buffer	CMOS	5	2500	1 FAILED	1	2500							2500	INPUT TO OUTPUT	3	252	3
CD4072BEX	RCA	1 Digital, Gate	CMOS	25	1800	5 FAILED	5	1800							1800	N/R	13	252	13
CD4072BEX	N/R	1 Digital, Gate	CMOS	25	1800	5 FAILED	5	1800							1800	N/R	13	252	13
CD4072BEX	N/R	1 Digital, Gate	CMOS	25	1800	10 FAILED	10	1800							1800	N/R	13	252	13
CD4081BEX	RCA	1 Digital, Gate	CMOS	25	2000	10 FAILED	10	2000							2000	N/R	13	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class Description	Part Technology	Test		Number Date		Test		Failure Test Criteria	General Remarks						
			Test Type	Resistance	Capacitance	Pulses	Code	Devices			Result	Voltage	Pin Combination			
C04081BEX	PLE 2 Digital, Gate	CMOS	1184	SS	1500 Ohms	100E-12 F	1	N/R	2	FAILED	2500	12(INPUT)	14(VDD)	102	252	13
COP370	NSC 1 Digital, Line/Bus Driver	CMOS	0184	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1200	N/R		102	252	13
			0184	SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200	N/R		102	289	13
COP409	NSC 1 Digital, Processing Unit, Central	CMOS	0184	SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	N/R		102	252	13
COP411	NSC 1 Digital, Processing Unit, Central	CMOS	0184	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	1000	N/R		102	252	13
			0184	SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200	N/R		102	289	13
COP420	NSC 1 Digital, Processing Unit, Central	CMOS	0184	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1100	N/R		102	252	13
COP420L	NSC 1 Digital, Processing Unit, Central	CMOS	0184	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900	N/R		102	252	13
COP420W	NSC 1 Digital, Processing Unit, Central	CMOS	0184	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	1000	N/R		102	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks							
				Source	Date	Type	Resistance	Capacitance	Number				Date	Number	Devices	Voltage	Pin	Combination	
COP420W	NSC	1 Digital, Processing Unit, Central	CMOS	422	0184	SS	0	Ohms	125E-12	F	1	N/R	1	FAILED	100	N/R	102	289	13
COP444C	NSC	1 Digital, Processing Unit, Central	CMOS	421	0184	SS	1500	Ohms	100E-12	F	4	N/R	1	FAILED	800	N/R	102	252	13
COP470	NSC	1 Digital, Line/Bus Driver	CMOS	421	0184	SS	1500	Ohms	100E-12	F	6	N/R	1	FAILED	1100	N/R	102	252	13
COP484	NSC	1 Digital, Processing Unit, Central	CMOS	421	0184	SS	1500	Ohms	100E-12	F	2	N/R	1	FAILED	400	N/R	102	252	13
				422	0184	SS	0	Ohms	125E-12	F	1	N/R	1	FAILED	150	N/R	102	289	13
				421	0184	SS	1500	Ohms	100E-12	F	3	N/R	1	FAILED	600	N/R	102	252	13
COP498	NSC	1 Digital, Memory, RAM	CMOS	421	0184	SS	1500	Ohms	100E-12	F	5	N/R	1	FAILED	1000	N/R	102	252	13
COP920	NSC	1 Digital, Gate	NMOS	421	0184	SS	1500	Ohms	100E-12	F	9	N/R	1	FAILED	1800	N/R	102	252	13
COP944	NSC	1 Digital, Gate	NMOS	421	0184	SS	1500	Ohms	100E-12	F	9	N/R	1	FAILED	1700	N/R	102	252	13

RAC ESD Database

Part Number	Part ESD	Part	Mfr Class Description		Technology							
			Mfr	Class	Description	Technology						
CY7C401	CYP	2	Digital, Memory			MOS						
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Test Voltage	Test Pin Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
	436	1186 SS	1500 Ohms	100E-12 F	16	8701	3000 GND TO OUTPUT	2 FAILED	5	252	3	
CY7C403	CYP	2	Digital, Memory							MOS		
	436	1186 SS	1500 Ohms	100E-12 F	17	8637	3500 INPUT TO GND	1 FAILED	5	252	3	
D2817A	INT	1	Digital, Memory, EAROM, EEPROM							HMOS		
	429	N/R GN	0 Ohms	50E-12 F	3	N/R	600 N/R	10 PASSED	13	237	13	
DAC-08	PRE	1	Digital, Converter, A/D-D/A							Bipolar		
	436	1186 SS	1500 Ohms	100E-12 F	14	N/R	2000 INPUT TO GND	1 FAILED	5	252	3	
DAC0830	NSC	1	Digital, Converter, A/D-D/A							CMOS		
	421	0184 SS	1500 Ohms	100E-12 F	5	N/R	900 PINS 17 AND 19	1 FAILED	102	252	13	
DAC10	RAY	1	Linear, Operational Amplifier							Bipolar		
	437	1083 GN	1500 Ohms	100E-12 F	10	N/R	2000 PINS 2 TO 4	3 FAILED	100	252	13	
							2000 PINS 5 TO 3	3 FAILED	100	252	13	
							2000 PINS 15 TO 3	3 FAILED	100	252	13	
							2000 N/R	8 PASSED	100	252	13	
DAC1006	NSC	1	Digital, Converter, A/D-D/A							CMOS		
	421	0184 SS	1500 Ohms	100E-12 F	3	N/R	600 PIN 16	1 FAILED	102	252	13	

RAC ESD Database

Part Number	Part ESD		Part Description	Technology								
	Mfr Class	1		CMOS	CMOS							
DAC1230	NSC	1	Digital, Converter, A/D-0/A									
	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Number Devices	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
	421	0184	SS	1500 Ohms	100E-12 F	5	N/R	1000	N/R	102	252	13
DG140	SIX	1	Linear, Switch							BIFET		
	436	1186	SS	1500 Ohms	100E-12 F	10	N/R	1200	GND TO OUTPUT	5	252	3
DG184	SIX	2	Linear, Switch							JFET		
	436	1186	SS	1500 Ohms	100E-12 F	17	8722	3500	SOURCE TO GATE	5	252	3
DG184A	INT	1	Linear, Switch							JFET		
	436	1186	SS	1500 Ohms	100E-12 F	7	N/R	800	VGS TO GND	5	252	3
DG184A	SIL	3	Linear, Switch							JFET		
	436	1186	SS	1500 Ohms	100E-12 F	18	N/R	4000	N/R	5	252	3
DG187A	SIX	1	Linear, Switch							JFET		
	392	1086	SS	1500 Ohms	100E-12 F	1	N/R	2000	EACH PIN TO 4 & 7 (+ -)	19	252	13
DG201	SIX	1	Linear, Switch							CMOS		
	436	1186	SS	1500 Ohms	100E-12 F	5	N/R	600	INPUT TO COMMON AND OUTPUT	5	252	3
	436	1186	SS	1500 Ohms	100E-12 F	6	N/R	700	INPUT TO GND	5	252	3

RAC ESD Database

Part Number (Cont'd)	Part Mfr Class	Part Description	Technology	Test		Number		Test		Failure Criteria	Test Remarks	General Remarks			
				Date	Type	Resistance	Capacitance	Pulses	Code				Devices	Result	Voltage Pin Combination
DG201	SIX	1 Linear, Switch	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	5	PASSED	4000 N/R	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	600 INPUT TO OUTPUT	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	6	N/R	5	FAILED	700 INPUT TO GND	5	252	3
DG201	SIL	1 Linear, Switch	CMOS												
				436	1186 SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	600 INPUT TO V(-)	5	252	3
DG201	N/R	1 Linear, Switch	CMOS												
				030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1100 N/R	103	252	13
DG403	SIX	1 Linear, Switch	FET												
				436	1186 SS	1500 Ohms	100E-12 F	6	8548	2	FAILED	700 INPUT TO GND	5	252	3
DLZ-5	GEN	3 Linear, Voltage Regulator	TTL												
				412	1286 SS	1500 Ohms	100E-12 F	15	N/R	5	PASSED	15000 PIN 1 (GND) +/-	20	252	13
DM28C256	SEO	2 Digital, Memory, PROM	MOS												
				436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO OUTPUT	5	252	3
DM74ALS00	NSC	1 Digital, Gate	Advanced LSTTL												
				421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 INPUTS	102	252	13

RAC ESD Database

Part Number	Part ESD		Test Date	Test Type	Test Resistance	Test Capacitance	Pulses	Code	Number	Date	Devises	Test Result	Test Voltage	Pin Combination	Technology	
	Mfr Class	Description													Failure Criteria	Test
DM74ALS138	NSC	2	0184	SS	1500 Ohms	100E-12 F	16	N/R	1	N/R	1	FAILED	3200	N/R	102	Advanced LS TTL
DM74ALS14	NSC	2	0184	SS	1500 Ohms	100E-12 F	18	N/R	1	N/R	1	FAILED	3500	N/R	102	Advanced LS TTL
DM74ALS157	NSC	2	0184	SS	1500 Ohms	100E-12 F	15	N/R	1	N/R	1	FAILED	3000	N/R	102	Advanced LS TTL
DM74ALS245	NSC	2	0184	SS	1500 Ohms	100E-12 F	18	N/R	1	N/R	1	FAILED	3500	N/R	102	Advanced LS TTL
DM74ALS258	NSC	2	0184	SS	1500 Ohms	100E-12 F	15	N/R	1	N/R	1	FAILED	3000	N/R	102	Advanced LS TTL
DM74ALS373	NSC	3	0184	SS	1500 Ohms	100E-12 F	25	N/R	1	N/R	1	FAILED	5000	N/R	102	Advanced LS TTL
DM74ALS541	NSC	2	0184	SS	1500 Ohms	100E-12 F	13	N/R	1	N/R	1	FAILED	2500	N/R	102	Advanced LS TTL
DM74AS174	NSC	2	0184	SS	1500 Ohms	100E-12 F	18	N/R	1	N/R	1	FAILED	3500	N/R	102	Advanced STTL



RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology/Advanced TTL	Test		Test		Test		Test		Failure Test		General		
				Date	Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Voltage	Pin	Combination	Criteria
DM74AS282	NSC	2 Digital		0184	SS	1500 Ohms	100E-12 F	18	N/R	1	FAILED	3500	N/R	102	252	13
DM74AS640	NSC	3 Digital, Transceiver	Advanced TTL													
				0184	SS	1500 Ohms	100E-12 F	25	N/R	1	FAILED	5000	N/R	102	252	13
DM74LS00	NSC	1 Digital, Gate	LSTTL													
				0184	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1200	N/R	102	252	13
DM74S195	NSC	1 Digital, Register, Shift	STTL													
				0184	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900	N/R	102	252	13
DM8820AJ	NSC	1 Digital, Line/Bus Receiver	Bipolar													
				N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	1707	N/R	102	188	13
DM933N	NSC	3 Digital, Timer, Programmable Interval	DTL													
				N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6748	N/R	102	188	13
DMPAL16L8ANC	NSC	1 Digital, Array, PAL	Bipolar													
				0184	SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	1600	N/R	102	252	13
DMPAL16L8B2	NSC	2 Digital, Array, PAL	Bipolar													
				0184	SS	1500 Ohms	100E-12 F	10	N/R	1	PASSED	2000	N/R	102	252	13

RAC ESD Database

Part Number	Part ESD Part		Test Date	Test Type	Test Resistance	Capacitance	Test Voltage	Number of Pulses	Date Code	Number of Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Description													
EP8340	NSC	1 Digital, Encoder	0184	SS	1500 Ohms	100E-12 F	2000 N/R	10 N/R	10 N/R	1	2000 N/R	2000 N/R	102	252	13
DP8341	NSC	1 Digital, Decoder	0184	SS	1500 Ohms	100E-12 F	1400 N/R	7 N/R	7 N/R	1	1400 N/R	1400 N/R	102	252	13
DP8464BN	NSC	1 Digital, Controller, Fixed Disk Pulse Det	0184	SS	1500 Ohms	100E-12 F	350 PINS	2 N/R	2 N/R	1	350 PINS	350 PINS 2,3 AND 10	102	252	13
DP8466	NSC	1 Digital, Controller, Disk Drive Data	0184	SS	1500 Ohms	100E-12 F	1400 N/R	8 N/R	8 N/R	1	1400 N/R	1400 N/R	102	252	13
DS3896	NSC	1 Digital, Line/Bus Driver	0184	SS	1500 Ohms	100E-12 F	2000 N/R	10 N/R	10 N/R	1	2000 N/R	2000 N/R	102	252	13
DS3897	NSC	1 Digital, Transceiver	0184	SS	1500 Ohms	100E-12 F	2000 N/R	10 N/R	10 N/R	1	2000 N/R	2000 N/R	102	252	13
DS8908	NSC	1 Linear, Phase Lock Loop	0184	SS	1500 Ohms	100E-12 F	400 N/R	2 N/R	2 N/R	1	400 N/R	400 N/R	102	193	13
DS9221	NSC	2 Digital, Line/Bus Receiver	0184	SS	1500 Ohms	100E-12 F	250 N/R	13 N/R	13 N/R	1	250 N/R	250 N/R 8	102	168	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology											
HEF4001BT6	SGS 1	Digital, Gate	CMOS											
	Test Date	Test Type	Test Resistance	Test Capacitance	Number Pulses	Date Code	Number Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	
	416	0685 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13	
HEF4028P	SGS	1 Digital, Gate	CMOS											
	416	0586 SS	1500 Ohms	100E-12 F	3	N/R	10	FA LED	400	N/R	25	252	13	
HEF4048P	SGS	1 Digital, Gate, NAND	CMOS											
	416	0685 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13	
HEF4081B	SGS	1 Digital, Flip-Flop	CMOS											
	416	0486 SS	1500 Ohms	100E-12 F	3	N/R	3	FAILED	400	N/R	25	252	13	
HEF40408TB	SGS	1 Digital, Counter/Divider	CMOS											
	416	0785 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13	
HEF4081BT	SGS	1 Digital, Gate	CMOS											
	416	0485 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13	
HEF45208P	SGS	1 Digital, Counter/Divider	CMOS											
	416	0986 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13	
H1201	HAR	1 Linear, Switch	CMOS											
	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	2000	N/R	105	252	13

RAC ESD Database

Part Number	Part Class	Part Description	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Devices	Date	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
H1538A-B	HAR	1 Digital, Multiplexer	1186 SS	SS	1500 Ohms	100E-12 F	4	8616	4	1 FAILED	500	INPUT TO GND	5	252	3
CMO															
436	0787 SS	1 Digital, Converter, A/D-D/A	1186 SS	SS	1500 Ohms	100E-12 F	6	N/R	6	2 FAILED	700	INPUT TO OUTPUT	5	252	3
CMOS															
436	1186 SS	1 Digital, Converter, BUS	1186 SS	SS	1500 Ohms	100E-12 F	6	N/R	6	2 FAILED	700	INPUT TO OUTPUT	5	252	3
CMOS															
IDL6116	IDT	1 Digital, Memory, RAM, Static	1186 SS	SS	1500 Ohms	100E-12 F	6	8548	6	1 FAILED	700	INPUT TO GND	5	252	3
CMOS															
IDL7201500B	IDT	1 Digital, Memory	1186 SS	SS	1500 Ohms	100E-12 F	7	N/R	7	1 FAILED	800	INPUT TO GND	5	252	3
CMOS															
IDT6116	IDT	1 Digital, Memory, RAM, Static	0788 SS	SS	1500 Ohms	100E-12 F	7	8745	7	1 FAILED	800	INPUT TO OUTPUT	5	252	3
436	0788 SS	1 Digital, Memory, RAM, Static	0788 SS	SS	1500 Ohms	100E-12 F	5	8745	5	1 FAILED	600	INPUT TO GROUND	5	252	3
436	0788 SS	1 Digital, Memory, RAM, Static	0788 SS	SS	1500 Ohms	100E-12 F	7	8745	7	1 FAILED	800	INPUT TO GROUND	5	252	3
436	0788 SS	1 Digital, Memory, RAM, Static	0788 SS	SS	1500 Ohms	100E-12 F	5	8745	5	1 FAILED	600	INPUT TO GROUND	5	252	3

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Voltage	Pin	Combination	Test Result	Test Voltage	Test Result	Failure Criteria	Test Remarks	General Remarks	
				Type	SS																Ohms
1DT5116	1	Digital, Memory, RAM, Static	CMOS	436	0788	SS	1500	Ohms	100E-12	F	7	8745	1	FAILED	300	OUTPUT TO GROUND	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	5	8745	1	FAILED	600	INPUT TO GROUND	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	5	8745	1	FAILED	600	INPUT TO GROUND	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	5	8745	1	FAILED	600	INPUT TO GROUND	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	9	8745	1	FAILED	600	INPUT TO GROUND	1	FAILED	5	252	3
1H5216	1	Digital, Multiplexer	CMOS	436	0788	SS	1500	Ohms	100E-12	F	7	8745	1	FAILED	800	INPUT TO OUTPUT	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	5	8745	1	FAILED	600	INPUT TO GROUND	1	FAILED	5	252	3
				436	0788	SS	1500	Ohms	100E-12	F	9	8745	1	FAILED	1000	INPUT TO GROUND	1	FAILED	5	252	3
1MS-1203	1	Digital, Memory, RAM, Static	CMOS	425	0487	SS	1500	Ohms	100E-12	F	110	N/R	3	FAILED	1250	PINS 5 AND 17	3	FAILED	53	252	17
				425	0487	SS	1500	Ohms	100E-12	F	220	N/R	3	FAILED	4000	PIN 7	3	FAILED	53	252	17
1MS-1400	1	Digital, Memory, RAM, Static	NMOS	425	0887	SS	1500	Ohms	100E-12	F	110	N/R	3	FAILED	1100	PINS 1 AND 3	3	FAILED	53	252	17

RAC ESD Database

Part Number	Part ESD MFR Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
				Source	Type											
IMS-1400	INM	1 Digital, Memory, RAM, Static	NMOS	425	0887 SS	1500 Ohms	100E-12 F	140	N/R	2000	N/R	3 FAILED	53	252	17	
IMS-1403	INM	1 Digital, Memory, RAM, Static	NMOS	425	N/R	SS	1500 Ohms	100E-12 F	50	N/R	500	N/R	3 FAILED	53	252	17
IMS-1420	INM	1 Digital, Memory, RAM, Static	NMOS	425	1086 SS	1500 Ohms	100E-12 F	110	N/R	1250	PINS 17 AND 18	3 FAILED	53	252	17	
				425	1086 SS	1500 Ohms	100E-12 F	140	N/R	2000	N/R	3 FAILED	53	252	17	
IMS-1423	INM	1 Digital, Memory, RAM, Static	CMOS	425	0887 SS	1500 Ohms	100E-12 F	80	N/R	800	PINS 2,4,6,9, AND 11	3 FAILED	53	252	17	
				425	0887 SS	1500 Ohms	100E-12 F	220	N/R	4000	PINS 12,13 AND 14	3 FAILED	53	252	17	
IMS-1600	INM	1 Digital, Memory, RAM, Static	NMOS	425	0587 SS	1500 Ohms	100E-12 F	50	N/R	500	PINS 3,6,8,9,10 AND 19	3 FAILED	53	252	17	
IMS-1601	INM	1 Digital, Memory, RAM, Static	NMOS	425	0187 SS	1500 Ohms	100E-12 F	70	N/R	700	1,3,5,6,10, AND 19	3 FAILED	53	252	17	
				425	0187 SS	1500 Ohms	100E-12 F	220	N/R	4000	PIN 9	3 FAILED	53	252	17	
IMS-1620	INM	1 Digital, Memory, RAM, Static	NMOS	425	0187 SS	1500 Ohms	100E-12 F	90	N/R	900	PINS 3 AND 13	3 FAILED	53	252	17	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Failure Criteria	Test Remarks	General Remarks			
							Test Type	Test Resistance	Test Capacitance
IMS-1624	INM	1 Digital, Memory, RAM, Static	NMOS	53	252	17			
IMS-1625	INM	1 Digital, Memory, RAM, Static	NMOS	53	252	17			
IMS-1630	INM	1 Digital, Memory, RAM, Static	NMOS	53	252	17			
IMS-1800	INM	1 Digital, Memory, RAM, Static	NMOS	53	268	17			
IMS-2600	INM	2 Digital, Memory, RAM, Dynamic	NMOS	53	252	17			
IMS-A100	INM	1 Digital	CMOS	53	252	17			
IMS-C004	INM	1 Digital	CMOS	53	252	17			

RAC ESD Database

Part		Part		Technology							
MS-C011	IMS-C011	MS-C011	IMS-C011	MS-C011	IMS-C011						
Source	Date	Type	Test	Resistance	Capacitance						
425	0887	SS	1500 Ohms	100E-12 F	100E-12 F						
IMS-C012	425	0887	SS	1500 Ohms	100E-12 F	110 N/R	3 FAILED	1250 PIN 4	53	252	17
	425	0887	SS	1500 Ohms	100E-12 F	120 N/R	3 FAILED	1500 PINS 15-20	53	252	17
	425	0887	SS	1500 Ohms	100E-12 F	220 N/R	3 FAILED	4000 N/R	53	252	17
	INM	1	Digital						MOS		
IMS-G171	425	0887	SS	1500 Ohms	100E-12 F	110 N/R	3 FAILED	1250 PIN 4	53	252	17
	425	0887	SS	1500 Ohms	100E-12 F	120 N/R	3 FAILED	1500 PINS 15-20	53	252	17
	425	0887	SS	1500 Ohms	100E-12 F	220 N/R	3 FAILED	4000 N/R	53	252	17
	INM	2	Digital						CMOS		
IMS-T800	425	0188	SS	1500 Ohms	100E-12 F	150 N/R	3 FAILED	2050 PIN 16	53	252	17
	425	0287	SS	1500 Ohms	100E-12 F	220 N/R	3 PASSED	4000 N/R	53	252	17
	INM	3	Digital, Processing Unit, Central						NMOS		
INS8050	421	0184	SS	1500 Ohms	100E-12 F	10 N/R	1 FAILED	2000 N/R	102	252	13
	421	0184	SS	1500 Ohms	100E-12 F	8 N/R	1 FAILED	1500 N/R	102	252	13
	NSC	1	Digital, Processing Unit, Central						CMOS		



RAC ESD Database

Part Number	Part ESD Part		Description		Technology		Failure Test		General				
	Mfr Class	1	Linear, Switch	NSC	FET	Criteria	Remarks	Test	Remarks				
LF11202	Test Date	Test Type	Test Resistance	Test Capacitance	Number Devices	Number Date	Test Result	Test Voltage	Test Pin	Test Combination	Failure Test	General	
	436	1186 SS	1500 Ohms	100E-12 F	18 N/R	5	PASSED	4000	N/R		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	11 N/R	1	FAILED	1400	INPUT TO OUTPUT		5	252	3
LF11202	436	1186 SS	1500 Ohms	100E-12 F	16 N/R	1	FAILED	3000	INPUT TO GND		5	252	3
	436	1186 SS	1500 Ohms	100E-12 F	15 N/R	5	FAILED	2500	INPUT TO GND		5	252	3
LF155	LTC	1	Linear, Operational Amplifier								BIFET		
	438	0587 GN	1500 Ohms	100E-12 F	10 N/R	8	FAILED	2000	IN TO V(-)		55	252	13
LF155A	LTC	1	Linear, Operational Amplifier								BIFET		
	438	0587 GN	1500 Ohms	100E-12 F	10 N/R	9	FAILED	2000	IN TO V(-)		55	252	13
LF156	LTC	N	Linear, Operational Amplifier								BIFET		
	245	N/R SS	100 Ohms	N/R	1 N/R	15	FAILED	169	INPUT(+) INPUT(-)		47	186	21
	436	1186 SS	1500 Ohms	100E-12 F	18 N/R	1	PASSED	4000	N/R		5	252	3
LF156A	LTC	1	Linear, Operational Amplifier								BIFET		
	438	1185 GN	1500 Ohms	100E-12 F	10 N/R	8	FAILED	2000	INPUT TO V(-)		55	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks				
				Type	Resistance	Capacitance	Pulses							Code	Devices	Result	
LF157	N/R	3 Linear, Operational Amplifier	BJFET	030	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	6000	N/R	103	252	13	
LF198	NSC	2 Linear, Operational Amplifier, Sample and Hold	BIFET	421	0184	SS	1500 Ohms	100E-12 F	15	N/R	1	FAILED	3000	PIN 8	102	252	13
LF198A	LTC	1 Linear, Operational Amplifier, Sample and Hold	BIFET	436	1186	SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	800	N/R	5	252	3
LF198AH	LTC	1 Linear, Operational Amplifier, Sample and Hold	Bipolar	438	0285	GN	1500 Ohms	100E-12 F	10	N/R	5	FAILED	2000	IN TO V(-), CH TO V(-)	55	252	13
LF298	NSC	2 Linear, Operational Amplifier, Sample and Hold	BIFET	421	0184	SS	1500 Ohms	100E-12 F	20	N/R	1	FAILED	4000	PIN 8	102	252	13
LF353	NSC	1 Linear, Operational Amplifier	JFET	421	0184	SS	1500 Ohms	100E-12 F	7	8424	1	FAILED	1400	PINS 2,3,5, AND 6	102	252	13
LF356	N/R	1 Linear	JFET	421	0184	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1200	PINS 2 AND 3	102	252	13
LF357	NSC	1 Linear	JFET	421	0184	SS	1500 Ohms	100E-12 F	6	N/R	1	FAILED	1200	PINS 2 AND 3	102	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Code	Pulses	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Test Type			Test Type	Test Result										
LF398	NSC	2	Linear, Operational Amplifier, Sample and Hold	JFET	Test	Test										
					Source Date	Resistance	Capacitance	1500 Ohms	100E-12 F	20	8512	1	FAILED	4000	PIN 8	102
LF412	NSC	1	Linear, Operational Amplifier	JFET												
		421	0184 SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	PINS 2,3,5, AND 6	102	252	13		
LF441	NSC	1	Linear, Operational Amplifier	JFET												
		421	0184 SS	1500 Ohms	100E-12 F	3	8416	1	FAILED	600	PINS 2 AND 3	102	252	13		
LF442	NSC	1	Linear, Operational Amplifier	JFET												
		421	0184 SS	1500 Ohms	100E-12 F	5	8440	1	FAILED	1000	PINS 2,3,5, AND 6	102	252	13		
LH0033	DCC	1	Digital, Multivibrator	Bipolar												
		392	1186 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	650	EACH PIN TESTED TO 10 & 12	19	145	13		
LH0070-2H	LTC	2	Linear, Voltage Reference	Bipolar												
		438	0285 GN	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000	N/R	55	252	13		
LH2101A	SIG	1	Linear, Operational Amplifier	Bipolar												
		392	0986 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	2000	EACH PIN TO 1,6 & 9 (+ -)	19	252	13		
LH2108A	LTC	2	Linear, Operational Amplifier	Bipolar												
		438	1185 GN	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000	N/R	55	252	13		

RAC ESD Database

Part Number	Part ESD	Part	Mfr Class		Description	Technology	Test		Number	Date	Code	Pulses	Capacitance	Resistance	Voltage	Pin	Combination	Test Result	Failure Criteria	Test Remarks	General Remarks
			Source	Type			Devices	Remarks													
LM2109AD	LTC	2	Linear, Operational Amplifier		Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10	N/R	15	100E-12 F	1500 Ohms	2000	N/R	PASSED	55	252	13	
LM101A	FSC	1	Linear, Operational Amplifier		Bipolar	436	1186 SS	1500 Ohms	100E-12 F	14	N/R	5	100E-12 F	1500 Ohms	2000	INPUT	FAILED	5	252	3	
						436	1186 SS	1500 Ohms	100E-12 F	18	N/R	5	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
						436	1186 SS	1500 Ohms	100E-12 F	14	N/R	5	100E-12 F	1500 Ohms	2000	OUTPUT TO GND	FAILED	5	252	3	
						436	1186 SS	1500 Ohms	100E-12 F	15	N/R	5	100E-12 F	1500 Ohms	2500	INPUT TO OUTPUT	FAILED	5	252	3	
						436	1186 SS	1500 Ohms	100E-12 F	18	N/R	5	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
												5	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
LM101A	NSC	3	Linear, Operational Amplifier		Bipolar	436	0788 SS	1500 Ohms	100E-12 F	18	N/R	5	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
						436	0588 SS	1500 Ohms	100E-12 F	18	N/R	5	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
						436	1186 SS	1500 Ohms	100E-12 F	18	N/R	3	100E-12 F	1500 Ohms	4000	N/R	PASSED	5	252	3	
LM101AH	LTC	1	Linear, Operational Amplifier		Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10	N/R	9	100E-12 F	1500 Ohms	2000	IN TO V(-), IN TO OUT	FAILED	55	252	13	
LM103	NSC	3	Linear, Voltage Regulator		Bipolar	029	N/R	1500 Ohms	100E-12 F	1	N/R	1	100E-12 F	1500 Ohms	6152	N/R	FAILED	102	188	13	

RAC ESD Database

Part Number	(Cont'd)	Part Mfr	ESD Class	Part Description	Technology	Test		Test		Failure Criteria	Test Remarks	General Remarks					
						Date	Type	Resistance	Capacitance				Number of Devices	Date	Code	Result	Voltage
LM103		NSC	3	Linear, Voltage Regulator	Bipolar	029	N/R	1500 Ohms	100E-12 F	1	N/R	102	188	13			
LM105H		NSC	2	Linear, Voltage Regulator	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	16	8707	2	FAILED	3000 INPUT TO COMMON	5	252	3
LM108		NSC	1	Linear, Operational Amplifier	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 PIN 1	102	252	13
LM108		LTC	3	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	5	PASSED	4000 N/R	5	252	3
LM108		FSC	2	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	PASSED	4000 N/R	5	252	3
LM108A		FSC	2	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO GND	5	252	3
LM108A		FSC	2	Linear, Operational Amplifier	Bipolar	436	0788 SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000 N/R	5	252	3
LM108A		FSC	2	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	15	N/R	18	FAILED	2500 INPUT	5	205	3
LM108A		FSC	2	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000 INPUT TO INPUT	5	252	3
LM108A		FSC	2	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000 N/R	5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	FSC	Test Date	Test Type	Test Resistance	Test Capacitance	Pulses	Code	Number Devices	Date	Test Voltage	Test Result	P/n Combination	Failure Criteria	Test Remarks	General Remarks
LM108A		2 Linear, Operational Amplifier															
				436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	N/R	3000	FAILED	INPUT TO INPUT	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	N/R	4000	PASSED	N/R	5	252	3
										5		4000	PASSED	N/R	5	252	3
				436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	N/R	3000	FAILED	INPUT TO INPUT	5	252	3
										5		3000	FAILED	INPUT TO GND	5	252	3
										1		3000	FAILED	+/- INPUT	5	252	3
LM108A		2 Linear, Operational Amplifier															
				436	1186 SS	1500 Ohms	100E-12 F	18	N/R	4	N/R	4000	PASSED	N/R	5	252	3
										1		4000	FAILED	INPUT TO INPUT	5	252	3
										1		4000	FAILED	INPUT TO COMMON	5	252	3
										5		4000	PASSED	N/R	5	252	3
										9		4000	PASSED	N/R	5	252	3
LM10H		1 Linear, Operational Amplifier															
				438	0285 GN	1500 Ohms	100E-12 F	10	N/R	3	N/R	2000	FAILED	REF. F/B TO REF. OUT	55	252	13
LM11		1 Linear, Operational Amplifier															
				421	0184 SS	1500 Ohms	100E-12 F	10	8420	1	N/R	2000	FAILED	PINS 1 AND 8	102	252	13
LM110H		3 Linear, Voltage Follower															
				436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	N/R	4000	PASSED	N/R	5	252	3
										5		4000	PASSED	N/R	5	252	3

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Code	Date N/R	Devices	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	Technology
LM110H	NSC	3 Linear, Voltage Follower	436	1186 SS	1500 Ohms	100E-12 F	18 N/R	5	18 N/R	5	PASSED	4000 N/R		5	252	3	Bipolar
LM111	FSC	1 Linear, Comparator	436	1186 SS	1500 Ohms	100E-12 F	18 N/R	2	18 N/R	2	PASSED	4000 N/R		5	252	3	Bipolar
			436	1186 SS	1500 Ohms	100E-12 F	7 N/R	5	7 N/R	5	FAILED	800 INPUT TO INPUT		5	252	3	
			436	1186 SS	1500 Ohms	100E-12 F	18 N/R	1	18 N/R	1	PASSED	4000 N/R		5	252	3	
								5		5	PASSED	4000 N/R		5	252	3	
LM111	NSC	1 Linear, Comparator	436	1186 SS	1500 Ohms	100E-12 F	18 N/R	2	18 N/R	2	PASSED	4000 N/R		5	252	3	Bipolar
			436	1186 SS	1500 Ohms	100E-12 F	10 N/R	5	10 N/R	5	FAILED	1200 INPUT TO INPUT		5	252	3	
LM111	RAY	3 Linear, Comparator	436	0588 SS	1500 Ohms	100E-12 F	18 N/R	2	18 N/R	2	PASSED	4000 N/R		5	252	3	Bipolar
			436	1186 SS	1500 Ohms	100E-12 F	18 N/R	2	18 N/R	2	PASSED	4000 N/R		5	252	3	
LM111	N/R	3 Linear, Comparator	030	N/R	1500 Ohms	100E-12 F	1 N/R	1	1 N/R	1	FAILED	11000 N/R		103	252	13	Bipolar
LM117	NSC	2 Linear, Voltage Regulator	421	0184 SS	1500 Ohms	100E-12 F	15 N/R	1	15 N/R	1	FAILED	3000 N/R		102	252	13	Bipolar





RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Devices	Result	Voltage	Pin	Combination	Failure Criteria	Test: Remarks	General Remarks
				Test Type	Test Resistance											
LM119H	LTC	3 Linear, Comparator	Bipolar	436	1186 SS	1	18	N/R	1	PASSED	4000	N/R		5	252	3
LM120H	FSC	3 Linear, Voltage Regulator	Bipolar	436	1186 SS	1	18	8447	1	PASSED	4000	N/R		5	252	3
LM120H-12	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R GN	1	5	N/R	1	PASSED	2000	S/R		105	247	11
LM120H-15	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R GN	1	5	N/R	1	PASSED	2000	S/R		105	247	11
LM120K-05	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R GN	1	5	N/R	1	PASSED	2000	S/R		105	247	11
LM120K-12	FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R GN	1	5	N/R	1	PASSED	2000	S/R		105	247	11
LM1211	NSC	1 Linear	Bipolar	421	0184 SS	1	6	N/R	1	FAILED	1200	PINS 9 AND 10		102	252	13
LM123K	LTC	2 Linear, Operational Amplifier	Bipolar	438	0285 GN	15	10	N/R	15	PASSED	2000	N/R		55	252	13

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Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance										
LM124	FSC 1	Linear, Operational Amplifier	Bipolar	SS	1500 Ohms	100E-12 F	7	8620	5	5	800 INPUT TO COMMON	5	252	3	
				SS	1500 Ohms	100E-12 F	4	8620	5	5	500 INPUT TO INPUT	5	252	3	
LM129AH	LTC 2	Linear, Voltage Regulator	Bipolar	GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
				GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
LM134H	LTC 2	Linear	Bipolar	GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
				GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
LM137H	LTC 2	Linear, Voltage Regulator	Bipolar	GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
				GN	1500 Ohms	100E-12 F	10	N/R	15	15	2000 N/R				
LM137K	LTC 1	Linear, Voltage Regulator	Bipolar	GN	1500 Ohms	100E-12 F	10	N/R	5	5	2000 ADJ. TO VIN, ADJ. TO VOUT				
				GN	1500 Ohms	100E-12 F	10	N/R	5	5	2000 ADJ. TO VIN, ADJ. TO VOUT				
LM139	RAY 1	Linear, Comparator	Bipolar	SS	1500 Ohms	100E-12 F	14	N/R	1	1	2000 OUTPUT TO GND				
				SS	1500 Ohms	100E-12 F	14	N/R	1	1	2000 OUTPUT TO GND				
LM139	FSC 1	Linear, Comparator	Bipolar	SS	1500 Ohms	100E-12 F	18	N/R	5	5	4000 N/R				
				SS	1500 Ohms	100E-12 F	18	N/R	5	5	4000 N/R				

RAC ESD Database

Part Number	Part ESD Number (Cont'd)	Part Mfr Class	Part Description	Technology	Test		Test		Failure Test Criteria	General Remarks							
					Date	Type	Resistance	Cap. Impedance			Number	Date	Devices	Code	Result	Voltage	Pin Combination
LM139		FSC	1 Linear, Comparator	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	10 N/R	1	FAILED	1200	INPUT TO GND	5	252	3	
LM139A		NSC	1 Linear, Comparator	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	6 8712	5	FAILED	700	INPUT TO COMMON	5	254	3	
					436	1186 SS	1500 Ohms	100E-12 F	7 8712	5	FAILED	800	INPUT TO COMMON	5	98	3	
LM140H		FSC	3 Linear, Voltage Regulator	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18 8632	1	PASSED	4000	N/R	5	252	3	
LM140H-05		FSC	3 Linear, Voltage Regulator	Bipolar	436	0788 SS	1500 Ohms	100E-12 F	18 N/R	1	PASSED	4000	N/R	5	252	3	
LM140H-05		N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	100E-12 F	1 N/R	1	FAILED	10000	N/R	103	252	13	
LM140K-05		FSC	2 Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5 N/R	1	PASSED	2000	S/R	105	247	11
LM140K-05		N/R	3 Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1 N/R	1	FAILED	10000	N/R	103	252	13

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Part Number	Part ESD		Part Description	Technology	Test		Number	Date	Number	Test	Test	Test	Failure Criteria	Test Remarks	General Remarks			
	Mfr Class	Class			Source	Type										Resistance	Capacitance	Pulses
LM140K-12	FSC	2	Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
LM140K-12	N/R	3	Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
LM140K-15	N/R	3	Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
LM140K-24	FSC	2	Linear, Voltage Regulator	Bipolar	390	N/R	GN	1500 Ohms	100E-12 F	5	N/R	1	PASSED	2000	S/R	105	247	11
LM140K-24	N/R	3	Linear, Voltage Regulator	Bipolar	030	N/R	N/R	1500 Ohms	100E-12 F	1	N/R	1	FAILED	10000	N/R	103	252	13
LM148	FSC	1	Linear, Operational Amplifier	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	13	N/R	1	FAILED	1800	INPUT TO INPUT	5	252	3
LM148	NSC	1	Linear	Bipolar	436	1186	SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000	N/R	5	252	3
LM1822	NSC	1	Linear	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	2	N/R	1	FAILED	400	PIN 12	102	252	13

RAC ESD Database

Part Number	Part ESD	Part	Technology	Test	Test Type	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
M1823	NSC	Linear	Bipolar	100 Ohms	100E-12 F	1 FAILED	800	PIN 12, 14, 17, AND 22	102	252	13
M1823	NSC	Linear, Operational Amplifier	Bipolar	1000 Ohms	100E-12 F	15 PASSED	2000	N/R	55	252	13
M1823	NSC	Digital, Multiplicator	Bipolar	500 Ohms	100E-12 F	1 FAILED	600	PINS 1 AND 2	102	252	13
M1823	NSC	Linear	Bipolar	1500 Ohms	100E-12 F	1 FAILED	600	PIN 9	102	251	13
M1823	NSC	Digital, Transceiver	Bipolar	500 Ohms	100E-12 F	1 FAILED	800	PIN 5 AND 17	102	252	13
M1823	NSC	Linear	Bipolar	1500 Ohms	100E-12 F	1 FAILED	11500	PIN 9	102	252	13
M1823	NSC	Linear, Comparator	bipolar	1500 Ohms	100E-12 F	8 FAILED	1250	EACH PIN TO 4 & 8 (+)	19	252	13
M1823	NSC	Linear, Voltage Reference	Bipolar	1500 Ohms	100E-12 F	1 FAILED	3000	PIN 1	102	252	13

RAC ESD Database

Part Number	Part ESD	Part Description	Technology	Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Test Code	Test Number	Test Result	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
LM199A	LTC	2 Linear, Comparator	Bipolar	+38	0385	GV	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000	N/R	55	252	13
LM199H	NSC	3 Linear, Voltage Regulator	Bipolar	-36	1186	SS	1500 Ohms	100E-12 F	18	8609	2	PASSED	4000	N/R	5	252	3
LM285	NSC	1 Linear, Voltage Reference	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000	N/R	102	252	13
				422	0184	SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200	N/R	102	289	13
LM289	NSC	1 Linear	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	500 PINS	10 AND 11	102	251	13
LM2900	NSC	1 Linear, Operational Amplifier	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000	N/R	102	252	13
LM2930	NSC	3 Linear, Voltage Regulator	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	40	8421	1	FAILED	8000	N/R	102	252	13
LM2931	NSC	2 Linear, Voltage Regulator	Bipolar	421	0184	SS	1500 Ohms	100E-12 F	18	N/R	1	FAILED	3500	PIN 1	102	252	13

RAC ESD Database

Part Number	Part ESD		Part Description	Technology								
	Mfr Class	Class										
LM2935	NSC	1	Linear, Voltage Regulator	Bipolar								
	Test Date	Test Type	Test Resistance	Test Capacitance	Test Pulses	Number Date	Test Result	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	422	0184 SS	0 Ohms	125E-12 F	1 N/R	1	FAILED	200 N/R		102	289	13
LM305	NSC	1	Linear, Voltage Regulator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	6 8344	1	FAILED	1200 PIN 6		102	252	13
LM309	NSC	2	Linear, Voltage Regulator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	18 8524	1	FAILED	3500 N/R		102	252	13
LM311	NSC	1	Linear, Comparator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	2 8540	1	FAILED	300 PINS 2 AND 3		102	252	13
LM317	NSC	2	Linear, Voltage Regulator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	15 N/R	1	FAILED	3000 N/R		102	252	13
LM318	NSC	2	Linear, Operational Amplifier	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	11 N/R	1	FAILED	2100 N/R		102	252	13
LM319	NSC	1	Linear, Comparator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	4 8608	1	FAILED	800 PINS 4, 5, 98, AND 10		102	252	13
LM320	NSC	2	Linear, Voltage Regulator	Bipolar								
	421	0184 SS	1500 Ohms	100E-12 F	18 8344	1	FAILED	3500 N/R		102	252	13

RAC ESD Database

Part Number	Part ESD Part	Mfr Class	Description	Technology	Test		Number	Date	Pulses	Code	Devices	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
					Type	Resistance											
LM323	NSC	2	Linear, Voltage Regulator	Bipolar	421	0184 SS	1	18	8616	1	1	3500	N/R	102	252	13	
LM324	NSC	1	Linear, Operational Amplifier	Bipolar	421	0184 SS	1	2	8504	1	1	250	INPUTS	102	252	13	
LM32800	NSC	2	Linear	Bipolar	421	0184 SS	1	15	N/R	1	1	3000	N/R	102	252	13	
LM339	NSC	1	Linear, Comparator	Bipolar	421	0184 SS	1	3	8428	1	1	600	INPUTS	102	252	13	
LM340	NSC	3	Linear, Voltage Regulator	Bipolar	421	0184 SS	1	40	8416	1	1	8000	N/R	102	252	13	
LM3524	NSC	1	Linear	Bipolar	421	0184 SS	1	3	N/R	1	1	600	PINS 1,2,4,5, AND 16	102	251	13	
LM358	NSC	1	Linear, Operational Amplifier	Bipolar	421	0184 SS	1	2	N/R	1	1	250	PINS 2,3,5, AND 6	102	252	13	
LM365	NSC	2	Linear, Comparator	Bipolar	421	0184 SS	1	20	8404	1	1	4000	N/R	102	252	13	



RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Failure Criteria	Test Remarks	General Remarks			
	Mfr Class	1								
LM393	NSC	1	Linear, Operational Amplifier	Bipolar	102	252	13			
	Test	Test	Test							
	Source Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Test Result	Voltage	Pin Combination
421	0184	SS	1500 Ohms	100E-12 F	7	8604	1	FAILED	1300	PINS 2,3,5, AND 6
LM398	NSC	2	Linear, Operational Amplifier	Bipolar	102	252	13			
421	0184	SS	1500 Ohms	100E-12 F	20	8512	1	FAILED	4000	PIN 8
LM4250	NSC	1	Linear, Operational Amplifier	Bipolar	102	252	13			
421	0184	SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	PINS 2 AND 3
LM567	NSC	1	Digital, Decoder	Bipolar	102	252	13			
421	0184	SS	1500 Ohms	100E-12 F	4	8404	1	FAILED	750	PIN 6
LM592	NSC	1	Digital, Multivibrator	Bipolar	102	252	13			
421	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600	PIN 1 AND 14
LM628	NSC	1	Linear	Bipolar	102	269	13			
421	0184	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	100	PIN 26
LM723	FSC	1	Linear, Voltage Regulator	Bipolar	5	252	3			
436	0788	SS	1500 Ohms	100E-12 F	7	N/R	2	FAILED	800	INPUT TO INPUT
436	1186	SS	1500 Ohms	100E-12 F	18	N/R	2	PASSED	4000	N/R

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Test Date	Test Type	Resistance	Capacitance	Pulses	Number	Date	Code	Devises	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks	Technology
LM723	FSC	1	Linear, Voltage Regulator	436	1186 SS	1500 Ohms	100E-12 F	12	N/R		2	FAILED	1600	INPUT TO GND	5	252	3	Bipolar
				436	1186 SS	1500 Ohms	100E-12 F	6	N/R		1	FAILED	700	INPUT TO INPUT	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	4	N/R		2	FAILED	500	INPUT TO INPUT	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	9	N/R		1	FAILED	1000	INPUT TO INPUT	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	18	N/R		2	PASSED	4000	N/R	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	17	N/R		2	PASSED	4000	N/R	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	11	N/R		2	FAILED	1400	INPUT TO INPUT	5	252	3	
LM723	NSC	1	Linear, Voltage Regulator	436	0688 SS	1500 Ohms	100E-12 F	18	N/R		5	PASSED	4000	N/R	5	252	3	Bipolar
				421	0184 SS	1500 Ohms	100E-12 F	6	N/R		1	FAILED	1200	PIN 4 AND 5	102	252	13	
LM733	NSC	1	Digital, Multivibrator	421	0184 SS	1500 Ohms	100E-12 F	5	8520		1	FAILED	900	PIN 1 AND 14	102	252	13	Bipolar
LM741A	RAY	2	Linear, Operational Amplifier	436	1186 SS	1500 Ohms	100E-12 F	16	N/R		1	FAILED	3000	INPUT TO INPUT	5	252	3	Bipolar
LM741CN	NSC	1	Linear, Operational Amplifier	421	0184 SS	1500 Ohms	100E-12 F	2	8420		1	FAILED	400	PINS 2 AND 3	102	252	13	Bipolar

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number Date	Code	Pulses	Capacitance	Resistance	Test Type	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Date	Test Type												
LM747A	FSC	1 Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	1	FAILED	3000	INPUT TO INPUT	5	252	3	
				436	1186 SS	1500 Ohms	100E-12 F	13	N/R	2	FAILED	1800	INPUT TO INPUT	5	252	3	
										6	FAILED	1800	INPUT TO GND	5	252	3	
LM747A	RAY	3 Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	1	PASSED	4000	N/R	5	252	3	
LM747A	NSC	1 Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	14	N/R	5	FAILED	2000	INPUT TO INPUT	5	252	3	
LM747CN	NSC	1 Linear, Operational Amplifier	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	500	PINS 1,2,6, AND 7	102	252	13	
LM78L05	NSC	2 Linear, Voltage Regulator	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	12	8444	1	FAILED	2300	N/R	102	252	13	
LM833	NSC	1 Linear, Operational Amplifier	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	1600	PIN 2 AND 6	102	252	13	
LM835	NSC	1 Linear	Bipolar	421	0185 SS	1500 Ohms	100E-12 F	2	N/R	1	FAILED	400	PINS 2 AND 3	102	252	13	

RAC ESD Database

Part Number	Part ESD Part		Test Source	Test Date	Test Type	Test Resistance	Test Capacitance	Pulses	Code	Number	Date	Test Voltage	Test Pin Combination	Failure Criteria	Test Remarks	General Remarks
	Mfr Class	Description														
LMC13421	NSC	2	Linear, Switch	421	0184	SS	1500 Ohms	100E-12 F	13	N/R	1	FAILED	2500 N/R	102	252	13
LMC628	NSC	1	Linear	421	0184	SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	100 PIN 26	102	252	13
LMC660	NSC	1	Linear, Operational Amplifier	421	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	500 INPUTS	102	252	13
LMC668	NSC	1	Linear	421	0184	SS	1500 Ohms	100E-12 F	8	N/R	1	FAILED	1500 PINS 1,2, AND 12-14	102	252	13
LMC669	NSC	1	Linear	421	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600 PIN 2	102	252	13
LMC7660	NSC	2	Linear	412	0184	SS	1500 Ohms	100E-12 F	18	N/R	1	FAILED	3500 PINS 2-8	102	252	13
LMF100	NSC	1	Linear, Switch	421	0184	SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900 PINS 1-3,19, AND 20	102	252	13
LSI29681	RAY	1	Digital, Memory, PROM	431	N/R	SS	1500 Ohms	100E-12 F	20	N/R	12	FAILED	900 PIN 23	110	252	13

RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Technology	Test		Number Date	Pulses Code	Capacitance	Resistance	Test Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Test Date	Test Type									
LS129681	RAY	1 Digital, Memory, PROM	STTL	431	N/R SS	1500 Ohms	100E-12 F	40 N/R	12 FAILED	1100 PINS 1 AND 2	110	263	13	
				431	N/R SS	1500 Ohms	100E-12 F	50 N/R	12 FAILED	1200 PINS 3,4,5,AND 22	110	266	13	
				431	N/R SS	1500 Ohms	100E-12 F	60 N/R	12 FAILED	1300 PIN 7	110	252	13	
				431	N/R SS	1500 Ohms	100E-12 F	70 N/R	12 FAILED	1400 PIN 6	110	252	13	
				431	N/R SS	1500 Ohms	100E-12 F	160 N/R	12 PASSED	22*8 PINS 9,10,11,12,AND 13	110	252	13	
LT11001MJ8	LTC	1 Linear	Bipolar	438	0285 GN	1500 Ohms	100E-12 F	10 N/R	5 FAILED	2000 IN TO V(-), IN(-) TO IN(+)	55	252	13	
LT11002MJ	LTC	1 Linear	Bipolar	438	0585 GN	1500 Ohms	100E-12 F	10 N/R	5 FAILED	2000 IN(A),IN(B),IN(A) TO V-A	55	252	13	
LT11004MH-1.2	LTC	2 Linear	Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13	
LT11005MK	LTC	1 Linear, Operational Amplifier	Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10 N/R	4 FAILED	2000 VIN TO VEN, VEN TO GND.	55	252	13	
									4 FAILED	2000 VIN TO VEN, VEN TO GND.	55	252	13	
LT11007AMJ8	LTC	2 Linear, Voltage Regulator	Bipolar	438	0285 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13	

RAC ESD Database

Part Number	Part ESD		Mfr Class	Description	Technology	Test		Test Date	Number	Code	Pulses	Capacitance	Resistance	Ohms	Test Source	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
	LT1009CZ	1				Linear, Operational Amplifier	438														
LT1009MH	LTC	1	Linear		Bipolar	438	0585 GN	1500	Ohms	100E-12	F	10	N/R	15	FAILED	2000	ADJ. TO V(-),V(+),V(-)-V(+)	55	252	13	
LT1010MH	LTC	2	Linear, Voltage Regulator		Bipolar	438	0385 GN	1500	Ohms	100E-12	F	10	N/R	15	PASSED	2000	N/R	55	252	13	
LT1011MH	LTC	1	Linear, Operational Amplifier		Bipolar	438	0585 GN	1500	Ohms	100E-12	F	10	N/R	15	FAILED	2000	ALL PINS	55	252	13	
LT1012MH	LTC	1	Linear, Voltage Regulator		Bipolar	438	0385 GN	1500	Ohms	100E-12	F	10	N/R	2	FAILED	2000	IN TO V(-)	55	252	13	
LT1013MH	LTC	1	Linear, Voltage Regulator		Bipolar	438	0585 GN	1500	Ohms	100E-12	F	10	N/R	12	FAILED	2000	IN +/-,V-A,V-B,IN A AND B	55	252	13	
LT1014ACJ	LTC	1	Linear, Voltage Regulator		Bipolar	438	0485 GN	1500	Ohms	100E-12	F	10	N/R	15	FAILED	2000	ALL PINS	55	252	13	
LT1024ACN	LTC	1	Linear, Voltage Regulator		Bipolar	438	0585 GN	1500	Ohms	100E-12	F	10	N/R	1	FAILED	2000	IN TO V(-)	55	252	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks			
				Date	Type	Resistance	Capacitance	Number	Date				Devices	Result	Voltage
LT1032CJ	LTC	1 Linear, Operational Amplifier	Bipolar	438	0585 GN	1500 Ohms	100E-12 F	10	N/R	8	FAILED	2000 IN, STRB., RESP. TO V(-)	55	252	13
LT1033MK	LTC	2 Linear, Operational Amplifier	Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000 N/R	55	252	13
LT1037MJ8	LTC	2 Linear	Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000 N/R	55	252	13
LT1055AMH	LTC	1 Linear	Bipolar	438	0485 GN	1500 Ohms	100E-12 F	10	N/R	7	FAILED	2000 IN TO V(-)	55	252	13
LT1055H8	LTC	1 Linear	Bipolar	438	0387 GN	1500 Ohms	100E-12 F	10	N/R	6	FAILED	2000 IN TO V(-), IN TO V(+)	55	252	13
LT107J8	LTC	1 Linear, Operational Amplifier	Bipolar	438	0385 GN	1500 Ohms	100E-12 F	10	N/R	9	FAILED	2000 IN TO V(-), IN TO OUT	55	252	13
LT108H8	LTC	2 Linear, Operational Amplifier	Bipolar	438	0285 GN	1500 Ohms	100E-12 F	10	N/R	15	PASSED	2000 N/R	55	252	13
LT111AJ8	LTC	1 Linear, Comparator	Bipolar	438	0785 GN	1500 Ohms	100E-12 F	10	N/R	6	FAILED	2000 IN TO V(-)	55	252	13

RAC ESD Database

Part Number	Part ESD Mfg Class	Part Description	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Number Devices	Date Code	Test Pulses	Test Voltage	Test Result	Pin Combination	Failure Criteria	Test Remarks	General Remarks
LT117AH	LTC	1 Linear, Voltage Regulator	Bipolar													
LT119H8	LTC	1 Linear, Operational Amplifier	Bipolar													
	438	0385 GN	1500 Ohms	100E-12 F	10 N/R	9 FAILED	2000 IN TO V(-), IN TO IN	55	252	13						
LT118J8	LTC	1 Linear, Operational Amplifier	Bipolar													
	438	1286 GN	1500 Ohms	100E-12 F	10 N/R	9 FAILED	2000 IN TO V(-), IN(-) TO IN(+)	55	252	13						
LT119AH	LTC	2 Linear, Comparator	Bipolar													
	438	0285 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13						
LT137AH	LTC	2 Linear, Voltage Regulator	Bipolar													
	438	0285 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13						
LT138AK	LTC	2 Linear, Operational Amplifier	Bipolar													
	438	0385 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13						
LT15CAK	LTC	2 Linear, Voltage Regulator	Bipolar													
	438	0385 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13						
LT1526J	LTC	1 Linear, Voltage Regulator	TTL													
	436	1186 SS	1500 Ohms	100E-12 F	10 N/R	1 FAILED	1200 INPUT TO GND	5	252	3						



RAC ESD Database

Part Number	Part ESP	Part Description	Technology						
LT317AK	LTC	1 Linear, Voltage Regulator	Bipolar						
	Test Date	Test Type	Test Resistance	Capacitance	Test Voltage	Pin Combination	Failure Criteria	Test Results	General Remarks
	438	0585 GN	1500 Ohms	100E-12 F	2000 ADJ.	TO VIN,ADJ. TO VOUT	55	252	13
LT3525AJ	LTC	1 Linear, Voltage Regulator	Bipolar						
	438	0585 GN	1500 Ohms	100E-12 F	2000 IN-GND,IN(-)-IN(+),OSC-GND	4 FAILED	55	252	13
LT3527AJ	LTC	1 Linear, Voltage Regulator	Bipolar						
	438	0585 GN	1500 Ohms	100E-12 F	2000 IN-GND,IN(-)-IN(+),OSC-GND	4 FAILED	55	252	13
LTC1044CH	LTC	1 Linear, Operational Amplifier	Bipolar						
	438	0385 GN	1500 Ohms	100E-12 F	2000 N/R	18 FAILED	55	252	13
	438	0285 GN	1500 Ohms	100E-12 F	2000 PINS 1-3,7-3,1-7,AND 6-3	7 FAILED	55	252	13
MC14029B	MOT	1 Digital, Flip-Flop	CMOS						
	416	1086 SS	1500 Ohms	100E-12 F	800 N/R	10 FAILED	25	252	13
MC14520BCP	MOT	1 Digital, Counter/Divider	CMOS						
	416	0986 SS	1500 Ohms	100E-12 F	800 N/R	10 FAILED	25	252	13
MC14557B	MOT	1 Digital, Register, Shift	CMOS						
	416	1083 SS	1500 Ohms	100E-12 F	400 N/R	10 FAILED	25	252	13

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number		Date		Pulses		Code		Devi		Pin		Combination		Failure Criteria	Test Remarks	General Remarks	
				Type	Resistance	Capacitance	100E-12 F	1500 Ohms	100E-12 F	1500 Ohms	100E-12 F	1500 Ohms	100E-12 F	1500 Ohms	100E-12 F	1500 Ohms	100E-12 F	1500 Ohms	100E-12 F				1500 Ohms
MCC6850	MOT	2 Digital, Transceiver, ACIA	MOS	436	1186 SS	1500 Ohms	100E-12 F	15	8003	1	FAILED	2500	INPUT TO GND	5	252	3							
MC8087	INT	2 Digital, Processing Unit, Central	MOS	436	1186 SS	1500 Ohms	100E-12 F	15	N/R	1	FAILED	2500	INPUT TO GND	5	252	3							
MCA1300PSJ	NSC	1 Digital, Array, PGA	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900	N/R	102	252	13							
MCC40118F	SGS	1 Digital, Gate	CMOS	416	0184 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13							
MCC4069UBF	SGS	1 Digital, Inverter, Buffer	CMOS	416	0284 SS	1500 Ohms	100E-12 F	3	N/R	10	FAILED	400	N/R	25	252	13							
MD82C55A	HAR	3 Digital, Transceiver, Input-Output Port	CMOS	436	1186 SS	1500 Ohms	100E-12 F	18	8709	2	PASSED	4000	N/R	5	252	3							
MD82C55A	MOT	2 Digital, Transceiver, Input-Output Port	CMOS	436	1186 SS	1500 Ohms	100E-12 F	16	N/R	2	FAILED	3000	GND TO OUTPUT	5	252	3							
MF10	NSC	2 Linear	MOS	421	0184 SS	1500 Ohms	100E-12 F	15	N/R	1	FAILED	3000	N/R	102	252	13							

RAC ESD Database

Part ESD Part	Mfg. Cat. Description	Technology	Failure Test	General	Test		Number Date	Code	Voltage Pin	Combination	Remarks			
					Test	Test						Criteria	Remarks	
Number	NSC	MOS	Failure	General	Source Date	Type	Resistance	Capacitance	Pulses	Code	Devices	Result	Remarks	
421	0184 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900	PIN 19			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900	PIN 19			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	1400	PINS 5 AND 5			102	270	13
421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	200	N/R			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	200	N/R			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	200	N/R			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	2	N/R	1	FAILED	400	N/R			102	252	13
421	0184 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	1400	N/R			102	252	13

RAC ESD Database

Part Number	Part FSD	Part Description	Mfr Class	Technology	Test Date	Test Type	Test Resistance	Test Capacitance	Pulses	Number	Date	Test Voltage	Test Result	Pin Combination	Failure Criteria	Test Remarks	General Remarks
MM5020	NSC	1 Digital	1	MOS	421	0184 SS	0	Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
MM5034		1 Digital, Converter, A/D-D/A		CMOS	421	0184 SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	500 N/R	102	252	13	
MM5051	NSC	1 Digital	1	CMOS	422	0184 SS	0	Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
MM5066	NSC	1 Digital	1	CMOS	421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 N/R	102	252	13	
MM5081	NSC	1 Digital	1	CMOS	422	0184 SS	0	Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
MM5387	NSC	1 Digital	1	MOS	421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 N/R	102	252	13	
					422	0184 SS	0	Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
					421	0184 SS	1500 Ohms	100E-12 F	5	N/R	1	FAILED	900 N/R	102	252	13	

RAC ESD Database

Part Number	Part ESD		Part Description	Technology	Test		Number		Test		Failure Test		General Remarks				
	Mfr Class	Part			Test Type	Resistance	Capacitance	Pulses	Date	Code	Devices	Result		Voltage	Pin Combination	Criteria	Remarks
MM5437	NSC	1	Digital	MOS	421	0184 SS	1500 Ohms	100E-12 F	2	N/R	1	FAILED	350	N/R	102	252	13
MM5450	NSC	1	Digital	MOS	421	0184 SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	N/R	102	252	13
MM5453	NSC	1	Digital	MOS	422	0184 SS	0 Ohms	1.5E-12 F	1	N/R	1	FAILED	50	N/R	102	289	13
MM57408D	NSC	1	Digital, Micro Computer	CMOS	421	0184 SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600	N/R	102	252	13
					421	0184 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	1400	N/R	102	252	13
MM58538	NSC	1	Digital	MOS	392	0886 SS	1500 Ohms	100E-12 F	5	N/R	5	FAILED	500	INPUT PINS AND GND & VCC	19	249	13
											5	FAILED	700	INPUT PINS TO GND & VCC	19	153	13
MM58539	NSC	1	Digital	MOS	421	0184 SS	1500 Ohms	100E-12 F	2	N/R	1	FAILED	300	N/R	102	252	13
MM58540	NSC	1	Digital	MOS	421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	200	N/R	102	252	13
					421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	100	N/R	102	252	13

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks			
				Date	Type	Resistance	Capacitance	Number	Date				Number	Date	Result
MM58548	NSC	1 Digital	MOS	421	0184 SS	1500 Ohms	100E-12 F	1	N/R	1	FAILED	100 N/R	102	252	13
MM74HC4020	NSC	1 Digital, Memory	HMC	422	0184 SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
MM74HC4538	NSC	1 Digital, Memory	HMC	422	0184 SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200 N/R	102	289	13
NMC27C32	NSC	2 Digital, Memory, EPROM	CMOS	421	0184 SS	1500 Ohms	100E-12 F	20	N/R	1	FAILED	4000 N/R	102	252	13
				422	0184 SS	0 Ohms	125E-12 F	3	N/R	1	FAILED	600 N/R	102	289	13
NMC61642	NSC	1 Digital, Memory	MOS	421	0184 SS	1500 Ohms	100E-12 F	9	N/R	1	FAILED	1800 N/R	102	252	13
NMC9346N	NSC	1 Digital, Memory, EAROM, EEPROM	MOS	421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 N/R	102	252	13
NS32082	NSC	1 Digital, Processing Unit, Central	MOS	421	0184 SS	1500 Ohms	100E-12 F	10	N/R	1	FAILED	2000 N/R	102	252	13

RAC ESD Database

Part Number	Part ESD		Part		Description		Technology													
	Mfr	Class	Test	Test	Resistance	Capacitance	Pulses	Code	Number	Date	Number	Test	Test	Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
NS455	NSC	1	0184 SS	1500 Ohms	100E-12 F	10 N/R	10	N/R	1	10	N/R	1	FAILED	2000	N/R			102	252	13
NS8040	NSC	1	0184 SS	1500 Ohms	100E-12 F	5 N/R	5	N/R	1	5	N/R	1	FAILED	900	N/R			102	252	13
NS8049	NSC	1	0184 SS	1500 Ohms	100E-12 F	8 N/R	8	N/R	1	8	N/R	1	FAILED	1600	N/R			102	252	13
NS8050	NSC	1	0184 SS	1500 Ohms	100E-12 F	7 N/R	7	N/R	1	7	N/R	1	FAILED	1400	N/R			102	252	13
NS87P50	NSC	1	0184 SS	1500 Ohms	100E-12 F	8 N/R	8	N/R	1	8	N/R	1	FAILED	1500	N/R			102	252	13
NS913	NSC	1	0184 SS	1500 Ohms	100E-12 F	10 N/R	10	N/R	1	10	N/R	1	FAILED	2000	N/R			102	252	13
OP-07	RAY	1	1083 GN	1500 Ohms	100E-12 F	10 N/R	10	N/R	12	12	N/R	12	FAILED	2000	PINS	2-4,3-4,2-3,6-4, & 7-4		100	252	13

RAC ESD Database

Part Number	Part ES	Part Description	Mfr Class	Technology	Test Source	Test Date	Test Type	Resistance	Capacitance	Pulses	Code	Number	Date	Devices	Test Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
OP07A	LTC	1	Linear, Operational Amplifier	Bipolar																	
OP07AH8	LTC	1	Linear, Operational Amplifier	Bipolar																	
	438	1286	GN	1500	Ohms	100E-12	F	10	N/R	1	FAILED	2000	IN(-)	TO	IN(+)	55	252	13			
OP07H	LTC	1	Linear, Operational Amplifier	Bipolar																	
	438	0285	GN	1500	Ohms	100E-12	F	10	N/R	3	FAILED	2000	IN(+)	TO	IN(-)	55	252	13			
OP16CH	LTC	1	Linear, Operational Amplifier	Bipolar																	
	438	0385	GN	1500	Ohms	100E-12	F	10	N/R	10	FAILED	2000	IN	TO	V(-)	55	252	13			
OP227EJ	LTC	2	Linear, Operational Amplifier	Bipolar																	
	438	0485	GN	1500	Ohms	100E-12	F	10	N/R	15	PASSED	2000	N/R								
OP237AJ	LTC	2	Linear, Operational Amplifier	Bipolar																	
	438	0485	GN	1500	Ohms	100E-12	F	10	N/R	15	PASSED	2000	N/R								
OP27A	PRE	2	Linear, Operational Amplifier	Bipolar																	
	436	1186	SS	1500	Ohms	100E-12	F	16	N/R	1	FAILED	3000	INPUT	TO	GND	5	252	3			
OP27A	LTC	2	Linear, Operational Amplifier	Bipolar																	
	438	0587	GN	1500	Ohms	100E-12	F	10	N/R	15	PASSED	2000	N/R								



RAC ESD Database

Part Number (Cont'd)	Part ESD Mfr Class	Part Description	Tech ology	Test		Failure Test		General					
				Test Date	Test Type	Resistance	Capacitance	Number	Date	Test Result	Test Voltage	Pin	Combination
OP27A	LTC	2 Linear, Operational Amplifier	Bipolar	438	0687 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13
OP27AH8	LTC	2 Linear, Operational Amplifier	Bipolar	438	1286 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13
OP27-H8	LTC	2 Linear, Operational Amplifier	Bipolar	438	1286 GN	1500 Ohms	100E-12 F	10 N/R	15 PASSED	2000 N/R	55	252	13
P51C56	INT	1 Digital, Memory, EARAM, EEPROM	HMOS	428	N/R GN	1500 Ohms	100E-12 F	5 N/R	10 FAILED	1000 N/R	13	252	13
P8751H	INT	1 Digital, Processing Unit, Central	HMOS	429	N/R GN	0 Ohms	50E-12 F	3 N/R	10 FAILED	300 N/R	13	237	13
				428	N/R GN	1500 Ohms	100E-12 F	5 N/R	10 PASSED	1200 N/R	13	252	13
				429	N/R GN	0 Ohms	50E-12 F	3 N/R	10 PASSED	600 N/R	13	237	13
PAL10H8	PRE	1 Linear, Array	STTL	436	1186 SS	1500 Ohms	100E-12 F	5 N/R	1 FAILED	600 INPUT TO GND	5	252	3
PA_10H8	MON	1 Linear, Array	STTL	436	1186 SS	1500 Ohms	100E-12 F	4 N/R	1 FAILED	500 INPUT TO GND	5	252	3

RAC ESD Database

Part Number	Part ESD	Part	Mfr	Class	Description	Technology	Test		Test		Failure Test	General	
							Date	Type	Resistance	Capacitance			Number
PAL12L10	MON	1	Linear, Array	1500 Ohms	100E-12 F	3	N/R	2	FAILED	400 INPUT TO OUTPUT	5	252	3
PAL16H2MJ	MON	1	Linear, Array	1500 Ohms	100E-12 F	4	N/R	1	FAILED	500 INPUT TO OUTPUT	5	252	3
PAL16L2	MON	1	Linear, Array	1500 Ohms	100E-12 F	2	N/R	1	FAILED	300 INPUT TO OUTPUT	5	252	3
PAL16L8	MON	1	Linear, Array	1500 Ohms	100E-12 F	8	N/R	1	FAILED	900 INPUT TO GND	5	252	3
PAL16L8A	MON	1	Linear, Array	1500 Ohms	100E-12 F	7	N/R	1	FAILED	800 INPUT TO GND	5	252	3
PAL16L8B	MON	1	Linear, Array	1500 Ohms	100E-12 F	4	N/R	1	FAILED	500 VCC TO GND	5	252	3
PAL16R4	MON	1	Linear, Array	1500 Ohms	100E-12 F	7	N/R	1	FAILED	800 INPUT TO GND	5	252	3
PAL16R4	MON	1	Linear, Array	1500 Ohms	100E-12 F	4	8623	1	FAILED	500 INPUT TO GND	5	252	3

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Devices	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Type	Resistance											
PAL16R6A	MON	1 Linear, Array	STTL	SS	1500 Ohms	1	1186	F	5	N/R	1	FAILED	600 INPUT TO GND	5	252	3
PAL20RA10	MON	1 Linear, Array	STTL	SS	1500 Ohms	1	1186	F	12	8643	1	FAILED	1600 INPUT TO OUTPUT	5	97	3
RC139	RAY	1 Linear, Comparator	Bipolar	GN	1500 Ohms	3	0783	F	10	N/R	3	FAILED	2000 INPUT TO GND	100	252	13
				SS	1500 Ohms	3	0783	F	10	N/R	3	FAILED	2000 INPUT TO INPUT	100	252	13
				SS	1500 Ohms	5	0783	F	12	N/P	5	FAILED	1000 PINS 6 TO 7	100	252	13
				SS	1500 Ohms	1	0783	F	20	N/R	1	FAILED	2000 PINS 4 TO 12	100	252	13
				SS	1500 Ohms	2	0783	F	24	N/R	2	FAILED	2250 PINS 4 TO 12	100	252	13
				GN	1500 Ohms	6	0783	F	10	N/R	6	PASSED	2000 N/R	100	252	13
RC148	RAY	1 Linear, Operational Amplifier	Bipolar	GN	1500 Ohms	3	0783	F	10	N/R	3	FAILED	2000 INPUT TO V(-)	100	252	13
				SS	1500 Ohms	1	0783	F	4	N/R	1	FAILED	500 PINS 5 TO 6	100	252	13
				SS	1500 Ohms	6	0783	F	8	N/R	6	FAILED	750 PINS 3 TO 11, AND 5 TO 6	100	252	13
				SS	1500 Ohms	3	0783	F	12	N/R	3	FAILED	1000 PINS 3 TO 11, AND 5 TO 6	100	252	13
REF01CM	LTC	1 Linear	Bipolar	GN	1500 Ohms	10	0485	F	10	N/R	10	FAILED	2000 IN TO GND, TRIM, AND OUT	55	252	13

RAC ESD Database

Part Number	Part ESD Number	Part Class	Part Description	Technology	Failure Criteria	Test Remarks	General Remarks	Test						
								Source Date	Test Type	Resistance	Capacitance	Number of Devices	Date	Test Result
REF02CH		LTC	1 Linear	Bipolar	55	252	13	438	0485 GN	1500 Ohms	100E-12 F	10 N/R	10 FAILED	2000 IN TO GND, TRIM, TEMP, & OUT
RF9601		RAY	2 Digital, Register, Shift	Bipolar	100	252	13	437	1083 GN	1500 Ohms	100E-12 F	10 N/R	12 PASSED	2000 N/R
RM4153		RAY	1 Linear, Operational Amplifier	Bipolar	100	252	13	437	1083 GN	1500 Ohms	100E-12 F	10 N/R	2 FAILED 13 PASSED	2000 PINS 11 TO 1 2000 N/R
RM9510C		RAY	2 Digital, Register, Shift	TTL	100	252	13	437	1083 GN	1500 Ohms	100E-12 F	10 N/R	12 PASSED	2000 N/R
SCX62120FU/N5		NSC	1 Digital, Array, PGA	MOS	102	252	13	421	0184 SS	1500 Ohms	100E-12 F	4 N/R	1 FAILED	800 N/R
SE140		N/R	N Linear, Voltage Regulator	TTL	102	188	13	029	N/R	1500 Ohms	100E-12 F	1 N/R	1 FAILED	177676 N/R
SG1524J		LTC	1 Linear, Voltage Regulator	Bipolar	55	252	13	438	0285 GN	1500 Ohms	100E-12 F	10 N/R	12 FAILED	2000 CL-GND, IN-IN, CL-CL, OSC-GND
SG1525AJ		LTC	1 Linear, Voltage Regulator	Bipolar	55	252	13	438	1286 GN	1500 Ohms	100E-12 F	10 N/R	3 FAILED	2000 IN TO GND., 1N(-) TO 1N(+)

RAC ESD Database

Part Number	Part Mfr	ESD Class	Part Description	Technology	Test		Number	Date	Pulses	Code	Devi	Result	Voltage	Pin	Combination	Failure Criteria	Test Remarks	General Remarks
					Test Type	Test Type												
SG1526J	SIL	1	Linear, Voltage Regulator	MOS	436	1186 SS	1500 Ohms	100E-12 F	13	N/R	1	FAILED	1800	INPUT TO GND	5	252	3	
T1L-24	TEX	3	Linear, Operational Amplifier	Bipolar	436	1186 SS	1500 Ohms	100E-12 F	18	N/R	2	PASSED	4000	N/R	5	252	3	
TL084	TEX	1	Linear, Operational Amplifier	Bipolar	392	1086 SS	1500 Ohms	100E-12 F	1	N/R	5	FAILED	2000	FACH PIN TO 4 & 11 (+ -)	19	252	13	
TP3020	NSC	1	Linear, Communications, Auto Dialer	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600	N/R	102	252	13	
TP3040	NSC	1	Linear, Operational Amplifier, General Purpose	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	N/R	102	252	13	
TP3054	NSC	1	Linear, Operational Amplifier, General Purpose	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	4	N/R	1	FAILED	800	N/R	102	252	13	
TP3120	NSC	1	Linear, Communications, Digital Interface	Bipolar	422	0184 SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	200	N/R	102	289	13	
	NSC	1	Linear, Communications, Digital Interface	Bipolar	421	0184 SS	1500 Ohms	100E-12 F	7	N/R	1	FAILED	1400	N/R	102	252	13	

RAC ESD Database

Part Number	Part ESD Mfr Class	Part Description	Part Technology	Test		Test		Test		Failure Criteria	Test Remarks	General Remarks				
				Type	Resistance	Capacitance	Pulses	Code	Devices				Voltage	Pin Combination		
TP3155	NSC	1 Digital, Controller, Time Slot Assigner	Bipolar	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600 N/R	102	252		
				422	0184	SS	0 Ohms	125E-12 F	1	N/R	1	FAILED	50 N/R	102	289	13
TP3320	NSC	1 Linear, Communications, Telecom	Bipolar	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	500 N/R	102	252	13	
TP5088	NSC	2 Linear, Communications, Telecom	Bipolar	0184	SS	1500 Ohms	100E-12 F	14	N/R	1	FAILED	2800 N/R	102	252	13	
TP5116	NSC	1 Linear, Communications, Telecom	Bipolar	0184	SS	1500 Ohms	100E-12 F	3	N/R	1	FAILED	600 N/R	102	252	13	
X28256	XIC	2 Digital, Memory, PROM	MOS	1186	SS	1500 Ohms	100E-12 F	17	N/R	1	FAILED	3500 INPUT TO GND	5	252	3	
XC401	N/R	3 Digital, Gate	11L	N/R	SS	100 Ohms	N/R	1	N/R	15	FAILED	52 OUTPUT(+) GND(-)	47	186	21	
XC402	N/R	3 Digital, Gate	11L	N/R	SS	100 Ohms	N/R	1	N/R	15	FAILED	62 INJECTOR(+) INPUT(-)	47	186	21	

RAC ESD Database

Part Number	Part ESD Class	Part Description	Technology	Test		Number	Date	Code	Pulses	Resistance	Capacitance	Test Result	Voltage	Pin Combination	Failure Criteria	Test Remarks	General Remarks
				Source	Test												
XC404	N/R	3 Digital, Flip-Flop	III	245	N/R	SS	100	Ohms	N/R	N/R	1	15	FAILED	49 INJECTOR(+) INPUT(-)	47	186	21
28581-10CMB	ZIL	1 Digital, Peripheral Driver, Clock	Bipolar	436	1186	SS	1500	Ohms	100E-12 F	1	N/R	1	FAILED	200 INPUT TO GND	5	252	3
				436	1186	SS	1500	Ohms	100E-12 F	8	N/R	1	FAILED	900 INPUT TO GND	5	252	3
				436	1186	SS	1500	Ohms	100E-12 F	3	N/R	1	FAILED	400 INPUT TO GND	5	252	3

RAC ESD Database

END