

ENGINEERING DEPT.	PRODUCT SPECIFICATION	SPEC.NO.: SPCI107C
REVISIONS: ECNT121086	CI10 Series Right Angle Type Connector	PAGE: 1/5

1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

2. APPLICABLE STANDARDS:

MIL - STD - 202	Methods for test of connectors for electronic equipment
EIA - 364	Test methods for electrical connectors
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO: For CI10 Series

Header:CI10**P***0
Housing:A2010H00-**P(JOWLE)
Terminal:A2006TOP-**(JOWLE)

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings



REVIEWED : Eisley APPROVED : Eisley VERIFIED : Sun .

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6. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
6.1	Rated current and voltage		Rated Voltage: 300V AC/DC Rated Current: 3A (AWG#22) 2A (AWG#24) 1A (AWG#26) 0.7A (AWG#28)
6.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.	Less than 10 mΩ
6.3	Dielectric strength	When applied AC 800 V 1 minute between adjacent terminal	No change
6.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ
6.5	Contact resistance on Crimped Portion	Crimp the maximum applicable wire on to the terminal, measure by dry circuit 20mV MAX., 10mA Wire Length : 50mm(AWG#22)	Less than 10 mΩ

7. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Wire size	Specified wire size	Accepts AWG#22~#28
7.2	Terminal crimp Tensile strength	When crimped AWG#22 size wire When crimped AWG#24 size wire When crimped AWG#26 size wire When crimped AWG#28 size wire	More than 4.0 Kgf More than 3.0 Kgf More than 1.8 Kgf More than 1.1 Kgf
7.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.2 Kgf
7.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 1.5 Kgf
7.5	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 1.0 Kgf
7.6	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than 20 mΩ

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8. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Temperature rise	Then carried the rated current	30 °C max.
8.2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions (Based upon MIL-STD-202 Method 201)	Appearance: No damage Contact resistance: Less than 20 mΩ Discontinuity: 1 micro second max.
8.3	Shock	50G, 3 strokes in each X,Y,Z axials (Based upon JIS C0041)	Appearance: No damage Contact resistance: Less than 20 mΩ Discontinuity: 1 micro second max.
8.4	Heat aging	85 ± 2 °C , 96±4 hours (Based upon JIS C5402 7.8)	No damage Contact resistance: Less than 20 mΩ
8.5	Cold aging	-25 ± 3 °C , 96±4 hours (Based upon JIS C5402 7.9)	No damage Contact resistance: Less than 20 mΩ
8.6	Humidity	40 ± 2 °C , 90-95% RH , 240 hours measurement must be taken within 30 min. after tested (Based upon MIL-STD-202 Method 103)	Appearance: No damage Contact resistance: Less than 20 mΩ Insulation resistance More than 500 MΩ Dielectric strength: To pass para 6-3
8.7	Temperature cycling	5 cycle consists of : (1) +25 °C , 3 min. (2) -25 °C , 30 min (1) +25 °C , 3 min. (2) +85 °C , 30 min (Based upon JIS C5402 7.2)	Appearance: No damage Contact resistance: Less than 20 mΩ Insulation resistance More than 500 MΩ Dielectric strength: To pass para 6-3

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	ITEM	TEST CONDITION	REQUIREMENT
8.8	Salt spray	<p>Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed. The specimens shall be suspended from the top using waxed twine, string or nylon thread. The test only define the plating area, without plating area (as copper cross section) will not be defined. (EIA 364-26B / MIL-STD-202 Method 101)</p>	<p>No damage Contact resistance: Less than $20\text{ m}\Omega$</p>
8.9	Solder ability	<p>Lead-Free Process: Soldering time: 3 ~ 5 seconds Soldering pot: $245 \pm 5^{\circ}\text{C}$</p>	<p>Minimum: 95% of immersed area</p>
8.10	Hand Soldering Method	<p>Use a soldering iron that has a sufficient head capacity and high stability of temperature. The tip of the iron should be shaped so as not to touch the part body directly. Temperature : $380 \pm 5^{\circ}\text{C}$ 3~5sec.</p>	<p>No damage</p>
8.11	Resistance to soldering heat	<p>Lead-Free Wave Flow Process: Soldering time: 5 ± 0.5 second Soldering pot: $260 \pm 5^{\circ}\text{C}$</p>	<p>No damage</p>

9. AMBIENT TEMPERATURE RANGE: -25 to $+85^{\circ}\text{C}$

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10. Mating and Un-mating Force:

10.1 WITHOUT LATCH TYPE HOUSING

PIN No.	Mating (kgf max.)	Un-mating (kgf min.)	Un-mating(10th) (kgf min.)	Un-mating(30th) (kgf min.)
2	0.80	0.20	0.16	0.16
3	1.20	0.30	0.24	0.24
4	1.60	0.40	0.32	0.32
5	2.00	0.50	0.40	0.40
6	2.40	0.60	0.48	0.48
7	2.80	0.70	0.56	0.56
8	3.20	0.80	0.64	0.64
9	3.60	0.90	0.72	0.72
10	4.00	1.00	0.80	0.80
11	4.40	1.10	0.88	0.88
12	4.80	1.20	0.96	0.96
13	5.20	1.30	1.04	1.04
14	5.60	1.40	1.12	1.12
15	6.00	1.50	1.20	1.20
16	6.40	1.60	1.28	1.28