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# 17

## EMC, Filters & Suppression

**Filters**

- For maximum efficiency it is recommended that the filter current rating be as close to, but greater than the maximum circuit current, i.e. for a circuit with a maximum current of 0.5A select a 1A filter.
- Attenuation curves shown for filters are measured in the asymmetrical mode (common mode). This is where measurement is carried out between the phase and neutral connected together, and the protection earth.

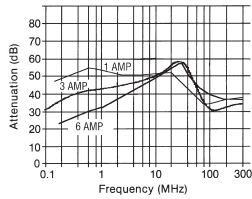
213832

**Equipment Filters**

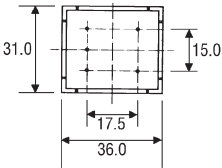
**PCB Mounting**



H=19.5  
Pins: L=7.0, Dia=0.8



- PCB mounted filter designed to provide effective reduction of broadband line-to-ground (common mode) interference.
- VDE, SEV and CSA approved.
- UL recognised
- Designed to meet IEC950.



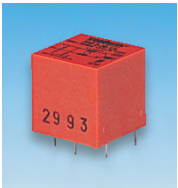
Voltage rating 250V @ 0 to 400Hz  
Earth leakage current 2 x 0.2mA  
@ 250V ac  
Capacitance 1 x 0.015µF(X)  
+ 2 x 2200pF(Y)  
Inductance 24mH (0.5A)  
10mH (1A)  
2mH (3A)  
0.8mH (6A)  
Operating temperature -25°C to +85°C

Mftrs. List No. FN 405-0.5/02 = 119-1332 FN 405-1/02 = 119-1333 FN 405-3/02 = 119-3334  
FN 405-6/02 = 119-1335

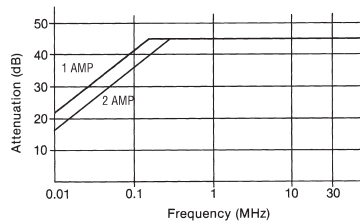
203993

Rating	Order Code	1+	10+	50+	100+
0.5A	119-1332	28.96	26.59	24.13	19.56
1A	119-1333	28.96	26.59	24.13	19.56
3A	119-1334	28.96	26.59	24.13	19.56
6A	119-1335	38.99	31.85	26.59	20.10

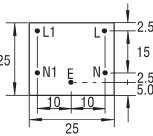
**PCB Mounting, 1" Cube**



H=25,  
Pins: L=15, Dia=0.6



- Compact PCB mounting filter
- Designed to meet the requirements of VDE and IEC.
- Approved to SEV, CSA, VDE and EN 133 200, IEC950 compliant
- UL recognised



Voltage rating 115V to 250V ac Inductance 2 x 10mH (150-490)  
Earth leakage current <0.5mA 2 x 4mH (248-400)  
Capacitance 1 x 0.015µF (X) + 2 x 2200pF (Y) Operating temperature -25 to +85°C  
Mftrs. List No. FPP2-25-1/A=116-2774  
FPP2-25-2/A=116-2775

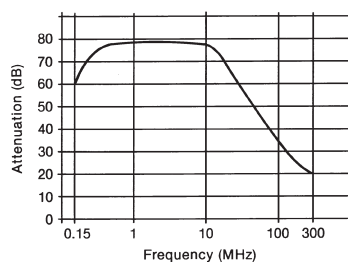
204102

Rating	Order Code	1+	10+	50+	100+	+
1A	116-2774	23.76	22.38	21.06	17.19	--
2A	116-2775	23.76	22.38	21.06	17.19	--

**PCB Mounting, 2 Stage Ultra High Performance**



H=19, W=33, D=72  
Pins L=7.0, Th=0.8 x 0.8.  
Fixing centres = 60 x 30



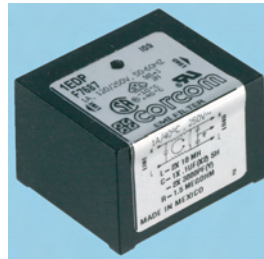
- 2 stage pcb mounting filter designed to provide excellent attenuation over a wide frequency range.

Voltage rating 250V @ 0 to 400Hz Inductance 2 x 2mH + 2 x 2mH  
Earth leakage current 2 x 0.21mA Operating temperature -25°C to +85°C  
Capacitance 0.033µF (x) + 2 x 2200pF (y)  
Mftrs. List No. FN410XX/02 where XX=Rating in Amps

204258

Rating	Order Code	1+	10+	50+	100+
0.5A	119-1343	50.81	43.78	38.87	35.09
3A	119-1344	50.81	43.78	38.87	35.09
6A	119-1345	50.81	43.78	38.87	35.09

**EDP Series**



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- Available up to 10 amps
- Low leakage current for European safety
- Cost effective alternative to on board components
- Compact design allowing PC mounting with minimal space requirements

**NEW**

The EDP series RFI filters provide enhanced differential mode performance for applications requiring more line-to-line protection.

Operating voltage 250VAC  
Operating frequency 50Hz to 60Hz  
Maximum leakage current, each line-to-ground:  
@ 120 VAC 60 Hz: 0.22mA  
@ 250 VAC 50 Hz: 0.38mA

Current Rating	H	W	L	Mftrs. List No.	Order Code
1A	24.15	31.5	36.6	1EDP	958-5788
3A	24.15	31.5	36.6	3EDP	958-5796
6A	24.15	31.5	36.6	6EDP	958-5800
10A	24.15	31.5	36.6	10EDP	958-5818

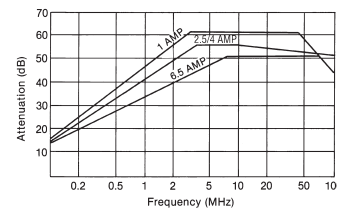
411277

Mftrs List No.	Order Code	1+	10+	50+	100+
1EDP	958-5788	27.73	26.43	23.92	20.64
3EDP	958-5796	27.73	26.43	23.92	20.64
6EDP	958-5800	27.73	26.43	23.92	20.64
10EDP	958-5818	32.62	30.79	27.80	25.26

**Bracket Mounting**



ROXBURGH EMC



Body: L = 49 (excl. 10mm tabs) Thickness = 16 (18 incl. bracket).  
W=30 (45 incl. bracket), Solder terminations.

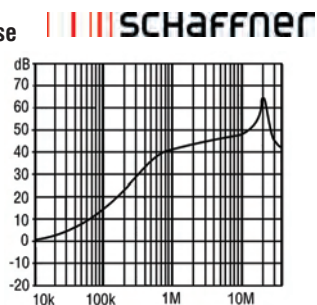
- General purpose filters combining a low profile compact case, with good performance
- Flexible mounting
- Conforms to BS613
- Approved to VDE and CSA
- UL recognised

Voltage rating 250V @ 50 to 400Hz Inductance 6mH (1A), 2mH (2.5A),  
Earth leakage current < 0.25mA @ 250V ac, 50Hz  
Capacitance 1 x 0.1µF(X) Operating temperature -25°C to +85°C  
Mftrs. List No. RX730AE+CLIP=118-7656, RX730R0=118-7663, RX730R0=118-7652,  
RX730CR+CLIP=118-7657,

204228

Rating	Order Code	1+	25+	50+	100+	+
1A	118-7656	22.55	20.25	17.39	15.03	--
2.5A	118-7663	22.55	20.25	17.39	15.03	--
4A	118-7652	22.55	20.25	17.39	15.03	--
6.5A	118-7657	22.55	20.25	17.39	15.03	--

Chassis Mounting - General Purpose  
FN2010 Series

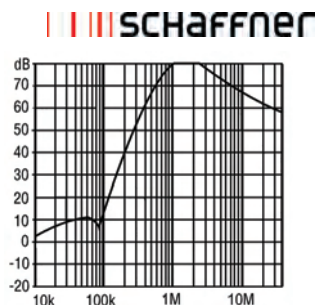


- Economic solution to general purpose filter requirements
- Good attenuation over a wide frequency range
- UL recognised, VDE, CSA and SEV approved, IEC950 compliant

Voltage rating	250Vac	Bleed resistor	1MΩ					
Leakage current	0.4mA/phase	Capacitance	(X)=0.1μF (Y)=2 x 4.7nF					
Frequency range	DC to 400Hz							
Current rating	Inductance (mH)	H	W (excl. tabs)	D	FC	Weight (g)	Mfrs. List No.	Order Code
1	12	24.3	35	64	54	65	FN2010-1/06	119-1358
3	2.5	24.3	35	64	54	65	FN2010-3/06	119-1363
6	1	24.3	35	64	54	65	FN2010-6/06	119-1364
10	0.8	29.3	35	64	54	85	FN2010-10/06	119-1360
16	0.65	29.3	46.6	71	61	140	FN2010-16/06	119-1361

Rating	Order Code	1+	10+	Price Each		+	+
1A	119-1358	25.11	23.88	30+	60+	+	+
3A	119-1363	25.33	23.50	21.55	17.92	--	--
6A	119-1364	25.33	23.50	21.55	17.92	--	--
10A	119-1360	27.09	25.14	23.03	18.87	--	--
16A	119-1361	34.21	30.68	29.39	25.45	--	--

Chassis Mounting  
FN2020 Series



- Similar to the FN2010 Series above but with additional phase to neutral capacitance for improved differential mode performance
- UL recognised, VDE, CSA and SEV approved. IEC950 compliant

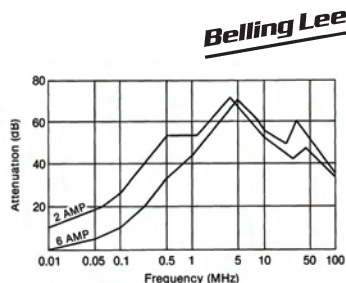
Voltage rating	250Vac	Bleed resistor	1MΩ					
Leakage current	0.4mA/phase	Capacitance	(X)=0.15μF (Y)=2 x 4.7nF					
Frequency range	DC to 400Hz							
Current rating	Inductance (mH)	H	W (excl. tabs)	D	FC	Weight (g)	Mfrs. List No.	Order Code
1A	12	29.3	35	64	54	80	FN2020-1/06	119-1365
3A	2.5	29.3	35	64	54	80	FN2020-3/06	119-1372
6A	1	29.3	35	64	54	80	FN2020-6/06	119-1373
10A	0.8	29.3	35	64	54	85	FN2020-10/06	119-1367
16A	0.65	29.3	46.6	71	61	140	FN2020-16/06	119-1368
20A	0.6	30.3	85	54	75	210	FN2020-20/06	119-1370

Rating	Order Code	1+	10+	Price Each		+	+
1A	119-1365	32.26	31.09	29.48	23.85	--	--
3A	119-1372	32.55	30.59	27.97	23.22	--	--
6A	119-1373	32.55	30.59	27.97	23.22	--	--
10A	119-1367	32.55	30.59	27.97	23.22	--	--
16A	119-1368	40.93	37.04	35.97	31.44	--	--
20A	119-1370	56.87	48.45	46.05	39.53	--	--

Chassis Mounting



H = 21.3, W = 28.5, D = 62,  
Tabs = 6.3 x 0.8 F.C = 37

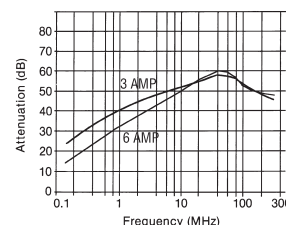


- Compact chassis mounting filter
- Approved to VDE, SEV, UL, and CSA.

Voltage rating	250V ac @ 0 to 400Hz	Inductance	+ 2 x 4700pF (Y)
Earth leakage current	< 0.75mA @ 250V 50Hz	Capacitance	3mH (2A), 700μH (6A)
Capacitance	1 x (X) (Y)	Operating temperature	-25°C to +70°C
Mfrs. List No.	L2140/2L = 318-061 L2140/2L = 943-3767 L2140/6L = 318-073 L2140/6L = 943-3775		

Rating	Order Code	1+	25+	100+	500+	+
2A	318-061	36.56	29.85	28.44	25.22	--
2A	943-3767	36.56	29.85	28.44	25.22	--
6A	318-073	36.24	29.55	28.16	25.24	--
6A	943-3775	36.24	29.55	28.16	25.25	--

Chassis Mounting



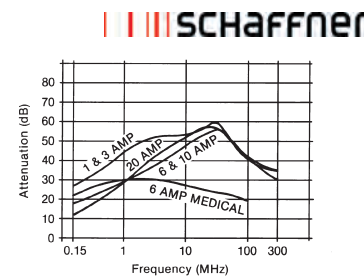
Body: H=23, W=28, D=41 (excl. tabs)  
Fixing centres=37, Tabs=6.3 x 0.8

- Chassis mounting filter providing good attenuation
- Also prevents unwanted equipment generated interference from reaching mains
- Approved to VDE, SEV and CSA
- IEC950 and EN13320 compliant
- UL recognised

Voltage rating	110 - 250V ac 50/60Hz	Capacitance	1 x μF (X) + 2 x 2200pF(Y)
Earth leakage current	<0.5mA	Inductance	2 x 2mH (3A), 2 x 0.8mH (6A)
Operating temperature	-25°C to +85°C		

Rating	Order Code	1+	10+	Price Each		+	+
FMW2-41-3/1	3A 116-2772	31.11	27.69	24.60	19.44	--	--
FMW2-41-6/1	6A 116-2773	31.11	27.69	24.60	19.44	--	--

Chassis Mounting



Tabs=6.3 x 0.8

- General purpose chassis mounting filter providing good attenuation in a compact design
- The 6A device is available in a version suitable for use in medical equipment
- Approved to VDE, SEV, SEMKO and CSA
- Designed to meet IEC95
- UL recognised

Note: The 20A unit carries approvals rated at 16A and does not cover SEMKO.

Voltage rating	250V @ 0 to 400Hz
Earth leakage current	2 x 0.21mA (standard), 2 x 2μA (medical)
Operating temperature	-25°C to +85°C
Capacitance	0.033μF (X) + 2 x 2200pF (Y) (standard), 0.033μF (X) (medical) 0.033μF

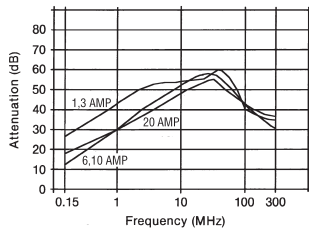
Current rating	Inductance (mH)	Leakage Current	H	W	D	FC	Mfrs. List No.	Order Code
1A	3	19	35	64	54		FN 610-1/06	119-1346
3A	2	19	35	64	54		FN 610-3/06	119-1349
6A	0.75	19	35	64	54		FN 610-6/06	119-1350
6A (Medical)	0.75	19	35	64	54		FN 610B-6/06	119-1351
10A	0.45	29	35	64	54		FN 610-10/06	119-1347
20A	0.48	29	50.5	71	61		FN 610-20/06	119-1348

Rating	Order Code	1+	10+	Price Each		+	+
1A	119-1346	39.87	33.39	25.17	19.06	--	--
3A	119-1349	39.87	33.39	25.17	19.06	--	--
6A	119-1350	39.87	33.39	25.17	19.06	--	--
6A (Medical)	119-1351	46.29	38.65	28.92	21.64	--	--
10A	119-1347	44.05	37.42	29.42	21.61	--	--
20A	119-1348	45.31	41.39	36.70	30.65	--	--

Chassis Mounting, High Performance **SCHAFFNER**



Tabs=6.3 x 0.8



- Chassis mounting filter providing very high attenuation
- Approved to VDE, SEV and CSA

- Designed to meet IEC950.
- UL recognised

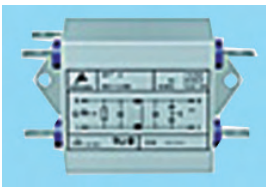
Voltage rating 250V @ 0-400Hz Capacitance 2 x 0.1µF(X) + 2 x 2200pF(Y)  
 Earth leakage current 2 x 0.21mA Operating temperature -25°C to +85°C

Current rating	Inductance (mH)	Dimensions				Mftrs. List No.	Order Code
		H	W	D	FC		
1A	3	22	46.6	71	61	FN 612-1/06	119-1352
6A	0.75	29	46.6	71	61	FN 612-6/06	119-1356
10A	0.45	29	46.6	71	61	FN 612-10/06	119-1353
20A	0.48	40	54	85	75	FN 612-20/06	119-1355

204003

Rating	Order Code	1+	10+	25+	50+	+
1A	119-1352	41.07	39.22	37.80	28.32	--
6A	119-1356	41.07	39.22	37.80	28.32	--
10A	119-1353	41.07	39.22	37.80	28.32	--
20A	119-1355	65.68	57.30	49.42	40.16	--

Single Phase - Chassis Mounting



Case Size	Length	Width	Height
O/A	O/A	O/A	O/A
A1	76.5	70	22.3
B1	76.5	45	28.6
B3	89.5	50.8	28.6
B4	89.5	50.8	38.1
B7	125	84	38.1
B8	159	50.8	44.5



- Chassis mounting filter range offering choice of performance
- Shielded aluminium case
- Approved to EN133 221, CSA and UL recognised

Leakage current <0.5mA  
 IEC climatic category 25/85/21  
 Voltage rating 250V ac 50/60Hz

Rating	Capacitance	L <sub>N</sub>	Case Size	Mftrs. List No.	Order Code
<b>Type A for normal attenuation</b>					
3A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.5mH	A1	B84111AA30	975-1980
2A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.5mH	A1	B84111AA20	975-2099
10A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 820µH	B1	B84111AB110	975-2005
6A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B1	B84111AB60	975-2030
<b>Type B for enhanced attenuation</b>					
6A	2 x 0.33µF(X2) 2 x 4700pF(Y2)	2 x 3.3mH	B1	B84112BB60	975-1920
10A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B1	B84112BB110	975-1939
20A	2 x 0.68µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B3	B84112BB120	975-1955
2A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B3	B84112BB20	975-1998
1A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B4	B84112BB10	975-2064
3A	2 x 0.22µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B7	B84112BB30	975-2072
<b>Type C for high attenuation</b>					
10A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 3.6mH	B4	B84113CB110	975-1963
6A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 4.7mH	B8	B84113CB60	975-2056
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 4.7mH	B8	B84113CB30	975-1912
<b>Type D for high attenuation</b>					
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 5.6mH	B3	B84114DB30	975-1971
10A	2 x 0.68µF(X2) 2 x 4700pF(Y2)	2 x 3.6mH	B8	B84114DB110	975-2013
6A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 4.7mH	B8	B84114DB60	975-2080
<b>Type E for high attenuation below 100KHz</b>					
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 270µH 2 x 16mH	A4	B84115EB30	975-1947
10A	2 x 0.47µF(X2) 2 x 22nF(Y2)	2 x 100µH 2 x 4.7mH	B1	B84115EB110	975-2021
6A	2 x 0.47µF(X2) 2 x 22nF(Y2)	2 x 47µH 2 x 3.6mH	A4	B84115EB60	975-2048

204012

Rating	Order Code	1+	10+	25+	+
<b>Type A</b>					
3A	975-1980	20.28	18.45	16.83	--
2A	975-2099	20.28	18.45	16.83	--
10A	975-2005	27.01	24.58	22.42	--
6A	975-2030	22.54	20.51	18.71	--
<b>Type B</b>					
6A	975-1920	29.79	27.11	24.73	--
10A	975-1939	29.94	27.78	25.34	--
20A	975-1955	85.70	77.99	71.13	--
2A	975-1998	28.67	26.09	23.80	--
1A	975-2064	28.35	25.80	23.53	--
3A	975-2072	29.95	27.25	24.86	--
<b>Type C</b>					
10A	975-1963	71.14	64.74	59.05	--
6A	975-2056	55.38	51.78	47.23	--
3A	975-1912	33.08	30.10	27.46	--
<b>Type D</b>					
3A	975-1971	30.72	27.95	25.49	--
10A	975-2013	58.46	53.20	48.52	--
6A	975-2080	46.07	41.93	38.24	--
<b>Type E</b>					
3A	975-1947	52.01	47.33	43.17	--
10A	975-2021	86.69	78.89	71.95	--
6A	975-2048	65.07	59.22	54.01	--

B Series



tyco Electronics corcom

**NEW**

- General purpose common-mode filters
- Provides RFI control of line-to-ground noise in a small size at low cost
- Available in a broad selection of current ratings and termination styles
- Very low leakage current required by VDE portable equipment, and (120 Volt) UL544 non-patient medical equipment

Operating voltage 250VAC  
 Operating frequency 50Hz to 60Hz  
 Maximum leakage current, each line-to-ground:  
 @ 120 VAC 60 Hz: 0.21mA  
 @ 250 VAC 50 Hz: 0.36mA

Current Rating	L	W	H	Mftrs. List No.	Order Code
1A	16.8	64.3	57.2	1EB1	958-6040
3A	19.8	64.3	66.3	3EB1	958-6059
5A	19.8	64.3	66.3	5EB1	958-6067
10A	29.5	64.3	66.3	10EB1	958-6075
1A	16.8	64.3	24.4	1EB3	958-6083
3A	19.8	64.3	33.5	3EB3	958-6091
5A	19.8	64.3	33.5	5EB3	958-6105
10A	29.5	64.3	33.5	10EB3	958-6113

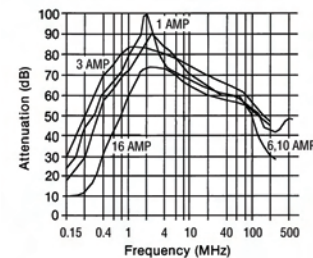
411287

Mftrs List No.	Order Code	1+	10+	50+	100+
1EB1	958-6040	40.17	37.63	34.80	32.03
3EB1	958-6059	40.17	37.63	34.80	32.03
5EB1	958-6067	40.17	37.63	34.80	32.03
10EB1	958-6075	40.17	37.63	34.80	32.03
1EB3	958-6083	40.17	37.63	34.80	32.03
3EB3	958-6091	40.17	37.63	34.80	32.03
5EB3	958-6105	40.17	37.63	34.80	32.03
10EB3	958-6113	40.17	37.63	34.80	32.03

Chassis Mounting, 2 Stage Ultra High Performance



Tabs=6.3 x 0.8



- Two stage chassis mounting filter providing excellent attenuation over a wide frequency range
- Approved to VDE and CSA.
- UL recognised

Prices are in Singapore Dollars and exclusive of GST. Due to the volatile nature of certain products, prices are subject to change without notice.

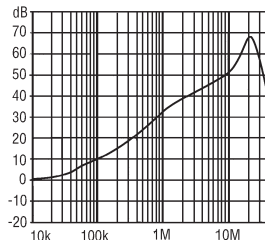
Current Rating	Inductance (mH)	Dimensions			FC	Mfrs. List No.	Order Code
		H	W	D			
1A	2 x 4.3	29	45.5	51.5	61	SF4200-1/01.	453-651
1A	2 x 4.3	29	45.5	51.5	61	SF4200-1/01	943-3830
3A	2 x 2.2	30	51	66	75	SF4200-3/01.	453-663
3A	2 x 2.2	30	51	66	75	SF4200-3/01	943-3848
6A	2 x 1.3	30	51	66	75	SF4200-6/01.	453-675
6A	2 x 1.3	30	51	66	75	SF4200-6/01	943-3856
10A	2 x 1	40	51	66	75	SF4200-10/01.	453-687
10A	2 x 1	40	51	66	75	SF4200-10/01	943-3864
16A	2 x 0.45	40	51	66	75	SF4200-16/01.	453-699
16A	2 x 0.45	40	51	66	75	SF4200-16/01	943-3872

204004

		Price Each				
Rating	Order Code	1+	10+	25+	50+	
SF4200-1/01.	1A	453-651	59.09	45.74	43.25	40.83
SF4200-1/01	1A	943-3830	59.09	45.74	43.25	40.83
SF4200-3/01.	3A	453-663	65.55	53.58	50.62	46.40
SF4200-3/01	3A	943-3848	65.55	53.58	50.62	46.40
SF4200-6/01.	6A	453-675	65.49	53.52	50.59	46.37
SF4200-6/01	6A	943-3856	65.49	53.52	50.59	46.37
SF4200-10/01.	10A	453-687	65.49	53.52	50.56	46.34
SF4200-10/01	10A	943-3864	65.49	53.52	50.56	46.34
SF4200-16/01.	16A	453-699	66.18	54.18	51.19	46.87
SF4200-16/01	16A	943-3872	66.18	54.18	51.19	46.87

Chassis Mounting - Multi Stage

FN2060 Series



- Multi stage general purpose filters with 2 inductors per phase for high common mode attenuation

- UL recognised, VDE, SEV and CSA approved. IEC950 compliant

Current Rating	Inductance (mH)	Capacitors Cx (µF)	H	W	D	FC	Weight (g)	Mfrs. List No.	Order Code
1	12	0.22	29.3	46.6	71	61	120	FN2060-1/06	119-1374
3	2.5	0.22	29.3	46.6	71	61	120	FN2060-3/06	119-1383
6	0.97	0.22	29.3	46.6	71	61	120	FN2060-6/06	119-1385
10	0.8	0.47	30.3	54	85	75	190	FN2060-10/06	119-1375
12	0.58	0.47	30.3	54	85	75	190	FN2060-12/06	119-1376
16	0.65	0.33	40.3	54	85	75	260	FN2060-16/06	119-1381
20	0.6	1	45.4	57.5	113.5	103	480	FN2060-20/06	119-1382

204112

		Price Each					
Rating	Order Code	1+	10+	48+	144+	+	+
1A	119-1374	59.22	50.94	47.72	40.86	--	--
3A	119-1383	60.93	50.12	45.27	38.78	--	--
6A	119-1385	59.22	50.94	47.72	40.86	--	--
10A	119-1375	59.22	50.94	47.72	40.86	--	--
12A	119-1376	59.22	50.94	47.72	40.86	--	--
16A	119-1381	79.38	65.96	59.38	53.61	--	--
20A	119-1382	113.08	98.34	80.04	66.43	--	--

Q Series



tyco electronics | corcom

NEW

The Q Series RFI power line filters has been developed specifically for switching power supplies and is designed to be all the power line filtering needed to control conducted emissions all the way down to 10kHz. High attenuation is provided for both common mode and differential mode interference throughout the frequency range with no degradation of performance due to the large peak currents drawn by switching power supplies.

- Very low leakage current
- Offers higher common mode performance
- Ideal choice for applications meeting emission limits below 150kHz, as well as the limits above 150kHz
- Well suited for bringing ISM equipment into compliance with the limits of FCC Part 18, from 10kHz to 30MHz

Operating voltage	250VAC
Operating frequency	50Hz to 60Hz
Maximum leakage current, each line-to-ground:	
@ 120 VAC 60 Hz:	0.22mA
@ 120 VAC 60 Hz:	0.29mA
@ 250 VAC 50 Hz:	0.38mA
@ 250 VAC 50 Hz:	0.51mA

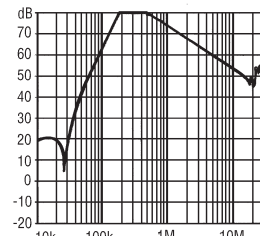
Current Rating	W	H	L	Mfrs. List No.	Order Code
3A	52.6	45.2	97.8	3EQ1	958-6210
6A	57.7	45.7	126.8	6EQ1	958-6229
20A	52.6	57.9	168.1	20EQ1	958-6237

411289

		Price Each			
Mfrs List No.	Order Code	1+	5+	10+	25+
3EQ1	958-6210	133.52	95.01	82.97	76.92
6EQ1	958-6229	140.03	124.31	109.47	98.53
20EQ1	958-6237	181.56	166.75	159.43	147.84

Multi stage - High Performance

FN2070 Series



FN2070 Series insertion loss

- Multi stage filters with high values of capacitors and inductors for excellent differential and common mode attenuation
- 'M' suffix models have higher filter performance and lower leakage current
- UL recognised, VDE, CSA and SEV approved, IEC950 compliant

Current Rating	Inductance (mH)	Capacitor Cx (µF)	H	W	D	FC	Weight (g)	Mfrs. List No.	Order Code
1A	22	0.33	30.3	54	85	75	190	FN2070-1/06	119-1386
3A	9.8	0.47	40.3	54	85	75	250	FN2070-3/06	119-1392
6A	7.8	1	45.4	57.5	113.5	103	450	FN2070-6/06	119-1394
10A	4.5	1	45.4	57.5	156	143	730	FN2070-10/06	119-1387
12A	3.25	1	45.4	57.5	156	143	730	FN2070-12/06	119-1388
16A	2.8	1	57.6	85.5	119	109	1000	FN2070-16/06	119-1389

FN2070M Series : The parameters are the same as the standard range above  
Mfrs. List No. FN2070M-X/06 where X=Rating in Amps

204111

		Price Each					
Rating	Order Code	1+	10+	40+	160+	+	+
<b>FN2070 Series</b>							
1A	119-1386	61.94	61.36	53.42	45.86	--	--
3A	119-1392	75.15	68.07	56.67	48.07	--	--
6A	119-1394	86.85	74.97	64.45	54.81	--	--
10A	119-1387	133.53	121.59	99.82	85.33	--	--
12A	119-1388	142.88	128.87	111.38	93.78	--	--
16A	119-1389	206.48	180.18	167.01	140.05	--	--
<b>FN2070M Series</b>							
6A	119-1395	92.38	81.18	73.96	63.03	--	--

EMC Series

tyco electronics | corcom



NEW

The EMC Series of RFI filters has been developed to reduce conducted noise to acceptable limits for equipment that must comply with the requirements of CISPR in Europe and the FCC specifications in the USA.

The EMC Series was designed to address the need for more differential mode attenuation in the lower frequency range while still maintaining high common mode performance. This type of performance is typically needed for motor drives and switch mode power supplies with increased operating frequencies.

The EMC Series is ideal for applications that require a high level of performance in a compact, cost effective package.

EMC, Filters & Suppression

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Compliant  
Non-compliant  
Limited stock - RoHS replacement available

RoHS



Operating voltage	250VAC				
Operating frequency	50Hz to 60Hz				
Maximum leakage current, each line-to-ground	<b>3, 6, 10 Amp</b>	<b>15, 20, 30 Amp</b>			
@ 120 VAC 60 Hz:	0.21mA	0.73mA			
@ 250 VAC 60 Hz:	0.43mA	1.52mA			

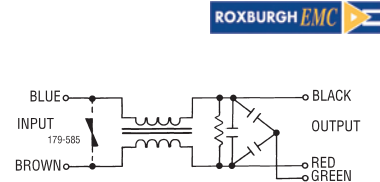
Current Rating	Dimensions (mm)			Mfrs. List No.	Order Code
	H	W	L		
3A	29.5	46	85.1	3EMC1	958-6458
6A	29.5	52.6	97.8	6EMC1	958-6466
10A	38.9	52.6	97.8	10EMC1	958-6474
15A	45.2	57.2	126.2	15EMC1	958-6482
20A	45.2	57.2	126.2	20EMC1	958-6490

Mfrs List No.	Order Code	Price Each			
		1+	10+	50+	100+
3EMC1	<b>958-6458</b>	64.12	53.25	50.00	46.06
6EMC1	<b>958-6466</b>	64.12	53.25	50.00	46.06
10EMC1	<b>958-6474</b>	64.12	53.25	50.00	46.06
15EMC1	<b>958-6482</b>	93.19	85.67	74.28	62.30
20EMC1	<b>958-6490</b>	108.75	94.13	85.67	68.42

Current Rating	Dimensions			Mfrs. List No.	Order Code
	W	H	L		
3A	52.5	81.5	85.6	3AY01	958-6156
6A	52.5	81.5	85.6	6AY01	958-6164
10A	52.5	81.5	85.6	10AY01	958-6172
20A	52.5	81.5	85.6	20AY01	958-6180

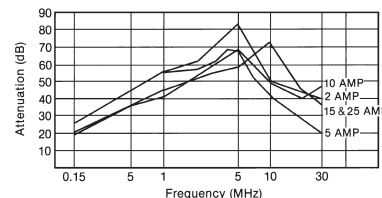
Mfrs. List No.	Order Code	Price Each			
		1+	5+	20+	50+
3AY01	<b>958-6156</b>	76.98	68.09	62.43	60.71
6AY01	<b>958-6164</b>	76.98	68.09	62.43	60.71
10AY01	<b>958-6172</b>	76.98	68.09	62.43	60.71
20AY01	<b>958-6180</b>	76.98	68.09	62.43	60.71

**Cylindrical Can Stud Mounting**



Tabs 2.48mm solder studs (2A and 5A)  
6.3 x 0.8 mm tab (10A and 15A) M5 Stud (25A)

- Mains filters meeting the requirements of **BS613** for general purpose suppression and filter applications.
- Typical applications are for protecting digital and logic circuitry from mains borne transients and communications equipment from mains conducted radio frequency interference.



- By reversing the mains and load connections, the filter can also be effectively used to suppress radio frequency interference generated by equipment.
- Designed to meet **IEC950** and **UL, CSA** and **VDE** requirements

Operating temperature -40°C to +60°C

Current Rating	L	Dia.	Cx	Cy	Inductance (mH)	Mounting Stud	Mfrs. List No.	Order Code
2A	45	38	1 x 0.1µF	2 x 4700pF	3	M8 x 9	SDC021	118-7653
5A	45	38	1 x 0.1µF	2 x 4700pF	2	M8 x 9	SDC051	118-7654
10A	52	51	1 x 0.1µF	2 x 4700nF	1.5	M10x12.7	SDC101	118-7655
15A	52	51	1 x 0.1µF	2 x 4700pF	1	M10x12.7	SDC151	118-7658

Rating	Order Code	Price Each			
		1+	25+	100+	250+
2A	<b>118-7653</b>	33.35	28.85	25.23	23.22
5A	<b>118-7654</b>	42.97	40.69	32.03	28.90
10A	<b>118-7655</b>	47.23	42.25	34.99	29.82
15A	<b>118-7658</b>	56.90	49.48	41.18	36.20

**Filter/Suppression Modules**

**High Performance Modules**



DIN Rail Mounting  
H=93, W=79, D=25

Filter Can  
H=40, W=75, D=40

Plastic Enclosure  
H=28, W=75, D=110

- High quality mains filter combining surge protection
- Provides protection from voltage surges picked up on the power supply from nearby lightning strikes
- Surge protection exceeds limits laid down in **IEC 1000-4-5** (immunity to conducted voltage surges)
- RFI protection to aid compliance with **IRC 1000-4-6** (immunity to conducted RFI)

Voltage rating	240V	Operating temp.	-25°C to +65°C
Earth Leakage	<0.3mA	Clamping voltage	<700V
Peak surge current	6,500A	Stop baud attenuation	Exceeds (8/20µs Waveform) 60dB in the range 100kHz to 50MHz

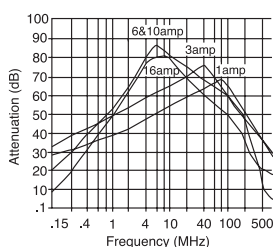
204233

17

**Chassis Mounting, 2 Stage with Earth Line Choke Ultra High Performance**



H=40, W=50, D=65  
Fixing centres=75, Tabs=6.3x0.



- Ultra high performance chassis mounting two stage filter with earth line choke
- Provides excellent attenuation over a wide frequency range on all three mains lines

Current Rating	Inductance (mH)			Mfrs. List No.	Order Code
	L1	L2	L3		
1A	4.3	4.3	0.3	SF4240-1/01.	439-629
1A	4.3	4.3	0.3	SF4240-1/01	943-3783
3A	2.2	2.2	0.3	SF4240-3/01.	439-630
3A	2.2	2.2	0.3	SF4240-3/01	943-3791
6A	1.3	1.3	0.3	SF4240-6/01.	439-642
6A	1.3	1.3	0.3	SF4240-6/01	943-3805
10A	1	1	0.3	SF4240-10/01.	439-654
10A	1	1	0.3	SF4240-10/01	943-3813
16A	0.45	0.45	0.3	SF4240-16/01.	439-666
16A	0.45	0.45	0.3	SF4240-16/01	943-3821

Rating	Order Code	Price Each			
		1+	10+	50+	100+
1A	<b>439-629</b> ‡	79.63	65.33	60.45	50.55
1A	<b>NEW 943-3783</b> ●	79.63	65.33	60.45	50.59
3A	<b>439-630</b> ‡	73.81	59.18	55.99	50.80
3A	<b>NEW 943-3791</b> ●	73.81	59.18	55.99	50.80
6A	<b>439-642</b> ‡	74.19	60.83	56.38	50.99
6A	<b>NEW 943-3805</b> ●	74.19	60.83	56.38	50.99
10A	<b>439-654</b> ‡	83.54	68.45	63.50	51.34
10A	<b>NEW 943-3813</b> ●	83.54	68.45	63.50	51.34
16A	<b>439-666</b> ‡	85.02	69.71	64.58	54.78
16A	<b>NEW 943-3821</b> ●	85.02	69.71	64.58	54.78

**AYO Series**



**NEW**  
The **AYO** series filters are designed for 3-phase, four wire, WYE applications providing filtering in each of the three lines plus neutral. These lower current RFI filters provide filtering to industrial 3-phase applications.

Operating voltage phase-to-phase	440VAC		
Operating voltage phase-to-neutral/ground	250VAC		
Operating frequency	50Hz to 60Hz		
Maximum leakage current, each line-to-ground	<b>3, 6, 10A</b>	<b>20A</b>	
@ 120 VAC 60 Hz:	2mA	3.5mA	
@ 250 VAC 50 Hz:	3mA	5.5mA	

Prices are in Singapore Dollars and exclusive of GST. Due to the volatile nature of certain products, prices are subject to change without notice.

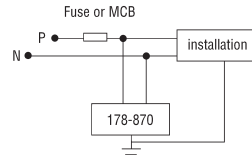
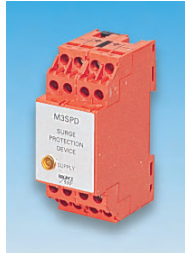


Mfrs List No.	Rating	Order Code	1+	5+	Price Each	10+	25+	+
<b>DIN Rail Mounting</b>								
MA05/D/2	5A	262-640	171.00	162.48	153.93	138.03	--	--
MA10/D/2	10A	772-513	195.00	181.98	170.61	151.68	--	--
<b>Metal Filter Can</b>								
MA05/SC/2	5A	453-640	112.53	105.39	98.85	97.88	--	--
MA10/SC/2	10A	772-525	142.47	135.36	128.22	123.92	--	--
<b>Plastic Enclosure</b>								
MA05/I/2	5A	158-082	109.53	102.96	96.39	95.05	--	--

Current Rating	Leakage	Inductance	Dimensions	Weight	Mfrs. List No.	Order Code	
50°C	40°C	Current (mA)	H W D	(g)			
16A	18.1A	3.4	1.14	80 120 115	1100	FN 256-16/46	120-9485
25A	28.3A	3.4	1.57	115 130 125	1400	FN 256-25/47	120-9487
36A	40.8A	3.4	1.1	115 130 125	1500	FN 256-36/47	120-9488
64A	72.6A	3.4	1	125 140 125	2200	FN 256-64/52	120-9489

204200

**Suppression Module**  
DIN Rail Mounting



H=90, W=35, D=54.5

- Provides over-voltage protection for electronic equipment
- Rapid response time and clear indication of failure (short circuit to earth)
- Rated at 16A when used with suitable MCB
- An amber neon indicates normal supply
- Flame retardant ABS housing conforms to **UL94V-0** and the dimensional requirements of **DIN43880**
- Can either be mounted on symmetric 35mm DIN rail or screw mounted using 2 x M4 screws

Supply Voltage	240V ac @ 50/60 Hz	Operating temperature	-15°C to +55°C
Current rating	16A when used with suitable MCB	Response time	≤25ns
Electrical life	100A for 2ms, 5000A for 8µs		

204243

Mfrs List No.	Order Code	1+	5+	10+
M3SPD	960-9946	157.47	131.32	115.32

**MOV Suppression Modules**  
DIN Rail Mounting



- Slimline DIN rail surge suppressors comprising two isolated high energy metal oxide varistors
- Reduces high transient voltage spikes by connecting across the load or the supply

Line frequency	DC to 440Hz
Operating temperature	-25°C to +85°C

H=55, W=78, D=12.5 Terminals=2.5mm

Operating Voltage (Vac)	Maximum Voltage Ratings (Vdc)	Transient Energy (10/1000µs)	Peak Transient Current (8/20µs) (A)	Mfrs. List No.	Order Code
24	30	38	8.8	1000	DVS024 118-7675
110	150	200	80	6500	DVS110 118-7676
240	275	369	140	6500	DVS240 118-7677

220486

Operating Voltage (Vac)	Order Code	1+	10+	Price Each	25+	50+	+
DVS024	24	118-7675	58.93	53.83	52.13	45.20	--
DVS110	110	118-7676	58.93	53.83	52.13	45.20	--
DVS240	240	118-7677	58.93	53.83	52.13	45.20	--

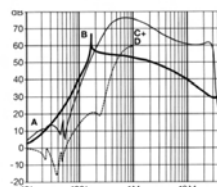
**Installation Filters**



**Three Phase and Neutral**

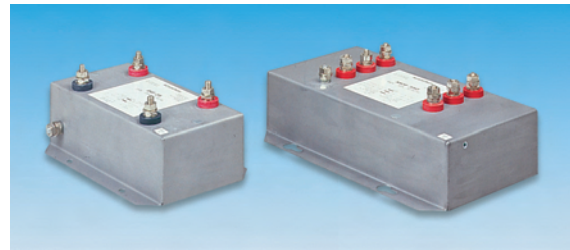


8 amp types



- Designed for asymmetrical loads
- High attenuation
- Small leakage current
- Compact design
- Approved to **SEMKO**

**Single and Three Phase**



Single phase  
H=55, W=116, D=174  
FC=80 x 101

Three phase  
H=55, W=143, D=230  
FC=120 x 128

- Compact high performance industrial filters built to satisfy **IEC950** safety standards which when installed correctly will allow compliance with **VDE0871**, **EN55011** (Industrial) and **EN55022** (Domestic) EMC emission levels
- IHF range is available in single phase or three phase (with neutral), feature a maximum leakage current of 3.5mA and are suitable for all general purpose applications
- The MDF range is available in single phase or three phase (without neutral) and feature higher performance than the standard IHF range
- Primarily designed for use with Motor Drive Inverters they are suitable for all applications without a neutral conductor where leakage current is not a limiting factor

Termination is via colour coded M6 studs.			
Voltage rating	250V ac single phase 440/250V ac three phase	Operating temperature	-25°C to +85°C
Line frequency	50/60Hz	Test voltage	2kV ac

- Compact high performance industrial filters built to satisfy **IEC950** safety standards which when installed correctly will allow compliance with **VDE0871**, **EN55011** (Industrial) and **EN55022** (Domestic) EMC emission levels
- IHF range is available in single phase, features a maximum leakage current of 3.5mA and is suitable for all general purpose applications
- Primarily designed for use with Motor Drive Inverters they are suitable for all applications without a neutral conductor where leakage current is not a limiting factor

Rating	Inductance (mH)	Resistance per Winding (mΩ)	Dimensions H W D	Mfrs. List No.	Order Code
<b>IHF Series</b>					
18A, single phase	6.4	15	55 116 174	IHF18.	118-7699
25A, single phase	4.4	8.5	55 116 174	IHF25.	118-7678
36A, single phase	2.5	3.8	55 116 174	IHF36.	118-7700
50A, single phase	1.1	2	55 116 174	IHF50.	118-7679
8A, three phase with neutral	2.8	64	38 220 120	IHF408.	118-7695
25A, three phase with neutral	1.1	4	55 143 230	IHF425.	118-7680
36A, three phase with neutral	0.55	1.65	55 143 230	IHF436.	118-7696
50A, three phase with neutral	0.28	1	55 143 230	IHF450.	118-7681
70A, three phase with neutral	0.72	0.52	85 182 238	IHF470.	118-7698
100A, three phase with neutral	0.4	0.3	85 238 182	IHF4100.	118-7716
<b>MDF Series</b>					
18A single phase	0.4	15	55 120 174	MDF18.	118-7701
25A, single phase	4.4	8.5	55 120 174	MDF25.	118-7682
36A, single phase	2.5	3.8	55 120 174	MDF36.	118-7702
50A, single phase	1.1	2	55 120 174	MDF50.	118-7684
18A, three phase	2.85	18.6	55 147 230	MDF318.	118-7704
25A, three phase	1.9	5.7	55 147 230	MDF325.	118-7686
36A, three phase	0.96	2.4	55 147 230	MDF336.	118-7705
50A, three phase	0.55	1.8	55 147 230	MDF350.	118-7687
70A, three phase	1.1	2.1	85 180 230	MDF370.	118-7706
100A, three phase	0.71	1.7	85 180 230	MDF3100.	118-7707
150A, three phase	0.45	0.5	80 290 280	MDF3150.	118-7708

203998

	Order Code	1+	5+	Price Each	10+	25+
<b>IHF Series</b>						
100A, single phase	118-7716	663.52	595.66	536.73	467.40	
25A, single phase	118-7678	240.43	202.20	164.49	148.21	
36A, single phase	118-7700	237.09	205.98	177.85	172.65	
50A, single phase	118-7679	258.55	217.44	176.87	159.42	
8A, three phase with neutral	118-7695	186.51	174.98	155.86	135.20	
25A, three phase with neutral	118-7680	397.03	334.03	266.58	226.61	
36A, three phase with neutral	118-7696	391.63	340.17	288.35	263.03	
50A, three phase with neutral	118-7681	428.68	343.51	279.44	251.81	
70A, three phase with neutral	118-7698	597.17	518.68	453.41	401.09	
100A, three phase with neutral	118-7716	663.52	595.66	536.73	467.40	
<b>MDF Series</b>						
18A, single phase	118-7701	190.69	183.30	163.58	153.72	
25A, single phase	118-7682	240.43	202.20	164.52	148.24	
36A, single phase	118-7702	237.15	221.76	197.50	190.98	
50A, single phase	118-7684	261.14	219.61	178.64	161.01	
18A, three phase	118-7704	327.12	311.35	277.29	263.72	
25A, three phase	118-7686	374.84	321.93	264.76	240.12	

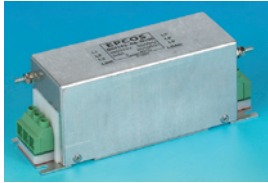
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EMC, Filters & Suppression

Compliant  
Non-compliant  
RoHS  
Limited stock - RoHS replacement available

	Order Code	Price Each			
		1+	5+	10+	25+
<b>MDF Series</b>					
36A, three phase	118-7705	391.63	370.72	323.32	292.26
50A, three phase	118-7687	408.44	343.51	279.44	251.78
70A, three phase	118-7706	597.17	568.95	497.32	445.66
100A, three phase	118-7707	614.32	586.31	522.14	495.24
150A, three phase	118-7708	1,337.79	1,161.97	1,071.66	1,034.90

**Three Phase Filters - B84143 Series**  
8A to 150A



- Low leakage current
- Compact and easy to install
- Optimised for long motor cables and full load operation
- Construction complies with EN 133200, CSA 22.2 No. 8 1986
- UL recognised
- Safe to touch terminal connections

Operating voltage 520V  
 Operating frequency 50Hz to 60Hz  
 Overload capability 1.5 x Rated Current for 3 min/hour or 2.5 x Rated Current for 30 sec/hour  
 Climate category 25/085/21

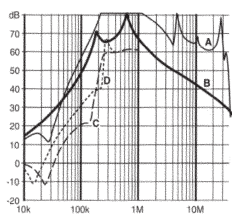
Current Rating @ 40°C	Leakage Current (mA)	Dimensions (O/A)			Fixing Centres	Weight (kg)	Mfrs. List No.	Order Code
		L	W	H				
8A	12	165	51.4	63	155 x 38	0.58	B84143A8R105	975-1157
16A	14	231	46.4	70	221 x 38	0.9	B84143A16R105	975-1165
25A	14	231	46.4	83	221 x 38	1.1	B84143A25R105	975-1173
36A	14	265	58	90	255 x 35	1.75	B84143A36R105	975-1181

Rating	Order Code	Price Each			
		1+	5+	10+	25+
8A	975-1157	125.11	117.86	111.35	100.56
16A	975-1165	136.42	128.51	121.42	109.64
25A	975-1173	157.05	147.95	139.78	126.23
36A	975-1181	235.88	226.44	207.82	193.19

**Motor Drive Filter**  
FN350 Series



**12 amp types**



- Compact design
- Ideal for a large variety of motor drive applications

- Designed to meet IEC950
- Approved to VDE
- UL and CSA recognised

Voltage rating 250V @ 50/60Hz  
 Operating frequency DC to 60Hz  
 Leakage current 4.9mA for 8A, 12A and 20A  
 5.2mA for 30A  
 11mA for 55A

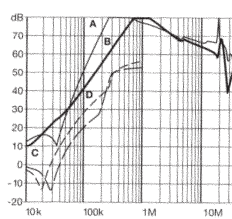
Current Rating	Inductance L (mH)	Dimensions (mm)			Weight (kg)	Fixing Centres	Mfrs. List No.	Order Code	
		H	W	D					
8A	10	57	99.5	84.5	700	95	51	FN 350-8/29	120-9490
12A	7.5	57	99.5	84.5	900	95	51	FN 350-12/29	119-1319
20A	3.2	57	99.5	84.5	950	95	51	FN 350-20/29	119-1320
30A	1.3	60	115	85	950	115	100	FN 350-30/33	119-1321
55A	1	60	115	85	1800	115	100	FN 350-55/33	120-9491

Rating	Order Code	Price Each			
		1+	5+	10+	25+
8A	120-9490	170.99	156.73	150.54	139.80
12A	119-1319	164.90	151.17	139.55	133.87
20A	119-1320	170.35	156.15	144.14	138.29
30A	119-1321	213.54	195.74	180.68	173.35
55A	120-9491	286.70	263.20	253.11	235.30

**Three Phase Motor Drive Filter**  
FN351 Series



**16 amp types**



- High differential/common mode attenuation
- Designed to meet IEC950

- SEMKO approved
- UL and CSA recognised

Voltage rating 440V ac (standard types)  
 520V ac (H type) IP rating IP20

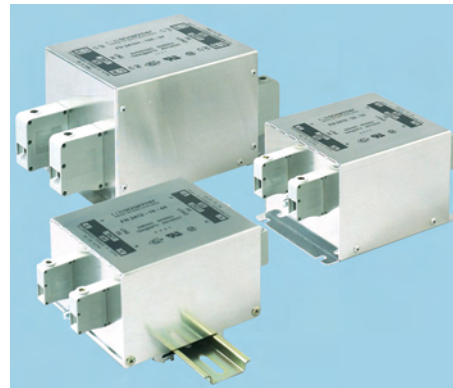
Current Rating	Inductance (mH)/ph	Dimensions (mm)			Weight (g)	Fixing Centres	Mfrs. List No.	Order Code	
		H	W*	D					
5A	12	50	150	105	1100	90	85	FN 351-5/29	120-9492
25A	2.2	65	200	150	3000	136	115	FN 351-25/33	120-9493

\*Excludes terminal blocks

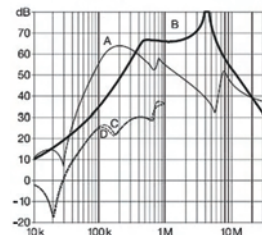
204197

Rating	Order Code	Price Each			
		1+	5+	10+	25+
5A	120-9492	265.67	249.04	243.90	230.36

**Single and two phase EMC/RFI filter**  
FN 2410/2412 Series



**8 to 45A types**



- Excellent filter performance for applications with high interference levels
- Available form 8 to 45A
- Filters for two-phase supply up to 2x 520 VAC
- Industrial grade terminal blocks for unsurpassed electrical safety

**NEW**

Voltage rating 250V  
 Operating temperature -25°C to +100°C

Current rating	Leakage Current			Mfrs. List No.	Order Code
	H	W	D		
8A	130	93	62	FN2410-8-44	110-0353
16A	130	93	62	FN2410-16-44	110-0354
25A	130	93	62	FN2410-25-33	110-0355
32	130	93	76	FN2410-32-33	110-0356
45A	130	93	76	FN2410-45-33	110-0357
60A	165	115	100	FN2410-60-34	110-0358
80A	165	115	100	FN2410-80-34	110-0359
100A	165	115	100	FN2410-100-34	110-0360
8A	110	93	73	FN2412-8-44	110-0362
16	110	93	73	FN2412-16-44	110-0363
25A	110	93	87	FN2412-25-33	110-0364
32A	110	93	87	FN2412-32-33	110-0365
45A	110	93	87	FN2412-45-33	110-0366

419711

Rating	Order Code	Price Each				
		1+	5+	10+	25+	+
8A	110-0353	136.71	125.28	118.84	116.81	--
16A	110-0354	193.84	177.69	168.48	165.63	--
25A	110-0355	236.70	216.98	205.75	202.28	--
32A	110-0356	267.30	245.04	232.34	228.41	--
45A	110-0357	302.03	276.84	262.52	258.08	--
60A	110-0358	350.99	321.76	305.09	299.93	--
80A	110-0359	530.57	486.33	461.20	453.38	--
100A	110-0360	593.81	544.30	516.15	507.41	--
8A	110-0362	147.65	135.31	128.31	126.15	--
16A	110-0363	209.36	191.88	181.95	178.89	--
25A	110-0364	255.68	234.36	222.22	218.46	--
32A	110-0365	288.69	264.63	250.93	246.68	--
45A	110-0366	326.18	299.00	283.51	278.72	--

**DIN Rail Filters**



- General purpose DIN rail mounting filter for use in industrial applications and rack mounted equipment
- Compact design which offers high performance and VDR protection
- Can be used in conjunction with Roxburgh DIN rail surge suppressors
- Designed to meet IEC 950, UL, CSA and VDE requirements.

H=74, W=80, D=22.5

Prices are in Singapore Dollars and exclusive of GST. Due to the volatile nature of certain products, prices are subject to change without notice.





Rating	Inductance (mH)	Resistance Per Winding (MΩ)	Mftrs. List No.	Order Code
1A	18	640	DRF01	118-7690
3A	3.2	71	DRF03	118-7691
6A	1.4	19	DRF06	118-7692
8A	1.5	15	DRF08	118-7694

Voltage rating 250V ac  
Operating temperature -25°C to +85°C

Line frequency DC to 440Hz

204052

Rating	Order Code	Price Each				
		1+	10+	25+	50+	+
1A	118-7690	115.75	107.77	101.00	79.36	--
3A	118-7691	115.75	107.77	101.00	79.36	--
6A	118-7692	115.75	107.77	101.00	79.36	--
8A	118-7694	123.51	114.99	105.73	85.60	--

**Data Line Protectors**

**Data and Signal Line Protectors**



- Use on data and signal lines to protect connected equipment from lightning and transient overvoltage damage
- Ultra low in-line resistance and extra high running current with **ESP 06E, ESP 15E, ESP 30E** and **ESP 50E** versions
- DIN rail or flat base/side mounting
- Simultaneous mounting and earthing kits for up to 4 or 8 protectors

- Colour coded terminals for quick and easy installation check
- **IP66** enclosure available for up to 4 protectors (plus mounting kit)
- Fully tested to **BS 6651** and Ofel approval **NS/G/1235/W/100025**

Mftrs List No.	Max Voltage	In-line Resistance	Max Line Current	Peak let-through voltage	Max Surge Current	Bandwidth	Order Code
ESP06DFN.	7.79V	9.4Ω	300mA	10.5V	10kA	800kHz	188-487
ESP15DFN.	19V	9.4Ω	300mA	23.8V	10kA	2.5MHz	188-499
ESP30DFN.	37.1V	9.4Ω	300mA	43.4V	10kA	4MHz	188-505
ESP06EFN.	7.79V	1Ω	1.25A	10.8V	10kA	1.5MHz	188-529
ESP15EFN.	16.7V	1Ω	1.25A	26.2V	10kA	>10MHz	188-530
ESP30EFN.	36.7V	1Ω	1.25A	44.3V	10kA	>10MHz	188-542
ESP50EFN.	56.7V	1Ω	1.25A	65.8V	10kA	>10MHz	188-554
CME4	Combined mounting/earthing kit for up to 4 protectors						188-669
WBX4	IP66 enclosure for protectors on a CME 4						188-694

204170

Mftrs. List No.	Order Code	1+	5+	10+
ESP06DFN.	188-487	148.05	135.45	
ESP15DFN.	188-499	148.05	135.45	
ESP30DFN.	188-505	148.05	135.45	
ESP06EFN.	188-529	182.70	167.17	
ESP15EFN.	188-530	182.70	167.26	
ESP30EFN.	188-542	182.70	167.26	
ESP50EFN.	188-554	182.70	167.26	
<b>Mounting/Earthing Kits</b>		<b>1+</b>	<b>5+</b>	<b>10+</b>
CME4	188-669	31.22	30.40	29.89
<b>Enclosure-IP66</b>				
WBX4	188-694	84.43	81.42	80.09

**Telephone Line Protectors**



- Use to protect telecom systems and equipment from lightning and transient overvoltage damage
- High performance long lifetime protection
- **ESP TN** for use on single pair telemetry or network lines (Order code: 188-566)
- **ESP TN/B1/S** offers all the protection of ESP TN boxed to **IP66**

- **ESP TN/JP** is ideal for protecting modems and other equipment with BT jack plug to socket connections (protects all 6 wires)
- Fully tested to **BS 6651** and Ofel approval **NS/G/1235/W/100025**

Max. working voltage	145V	Max. line current	300mA
Peak 'let-through' voltage	200V	Max. surge current	10kA
In-line resistance	4-4Ω	Bandwidth	15MHz

204172

Mftrs. List No.	Dimensions			Order Code	Price Each	
	H	W	D		1+	5+
ESPTN/B1S.	58	110	75	188-578	170.10	155.64
ESPTN/JP.	31	132	62	188-580	226.80	207.52
ESPTN.	55	120	19	188-566	148.05	135.45

**CCTV Systems Protector**



H=54, W=19, D=120

- Use to protect CCTV cameras and systems from lightning and transient overvoltage on coaxial CCTV cables
- Provides repeated and impairment free protection and suitable for both earthed/isolated screen systems (188-621) or ESP 415 M1 (188-633)
- Protect external cameras in conjunction with a protector for twisted pair lines (e.g. ESP 15D) for telemetry input and low current protector (e.g. ESP 240-5A) for the mains input

Max. working voltage	6.45V	Max. line current	300mA
Peak 'let-through' voltage	17V	Max. surge current	10kA
In-line resistance	1Ω		

204156

Mftrs. List No.	Order Code	1+	5+
ESP CCTV/B.	188-591	182.70	167.26

**DIN Rail Mounting - 7mm Wide**



H=102, W=7, D=99

- Innovative design of these lightning barriers results in 7mm wide casing
- Exceptionally high packing densities in cabinets
- Proven hybrid multi-stage circuitry for accurate voltage clamping high peak current diversion
- Easy installation onto standard DIN rail which automatically makes the earth connection
- Applications includes processes using RTDs, THCS, 4-20 mA loops, digital signals, shutdown systems, fire and gas detection systems
- Instantaneous operation when surge is detected
- Automatic reset when surge has been diverted to earth

Mftrs. List No.	Clamping Voltage	Order Code	1+	5+	10+	25+	+
SD32X	32V	772-471	214.99	196.88	189.00	181.12	--
SD150X	120V (ac rms)	772-495	198.45	185.63	174.38	168.98	--
SD275X	240V (ac rms)	772-501	201.00	188.01	176.61	156.33	--

204092

**Power Entry Filters**

**Distribution Surge Protectors**

**Bowthorpe**



L=90, W=175, H=60

L=176, W=110, H=72

- Provides an economic means of preventing damage to electrical distribution systems from mains borne transient voltages. These can occur when capacitive or inductive loads are switched, or as a result of a nearby lightning strike.
- Housed in an epoxy painted steel case. Designed to meet **BS6651 1992 Appendix C Location Category C - Primary Protection**

Single current handling	Max. (8/20μs) 20kA	Terminals	16mm <sup>2</sup>
Response time	<10ns	Operating temp	-40°C to 70°C
	Single Phase	Three Phase	
Voltage rating	230V	400V	
Leakage current	200μA	600μA	

Mftrs. List No. DSP1BOW=580-120  
Mftrs. List No. DSP1BOW=580-120, DSP3-BOW=580-132



204038

	Order Code	1+	5+	10+
Single Phase	<b>580-120</b>	595.82	535.15	486.68
Three Phase	<b>580-132</b>	1,042.68	932.59	837.68

**Low Current Mains Protectors**



- Use to protect mains equipment fused at 5A or less from lightning and transient overvoltage damage
- Very low 'let through' voltage between all conductors
- DIN rail mounting, ESP 120-5A & ESP240-5A, with removable foot
- Series connection and long lifetime
- Fully tested to **BS 6651, IEEE C62.41, AS 1768**



Mfrs. List No.	Working Voltage (rms)	Frequency	Max. Operating Current	Peak 'let-through' Voltage	Peak Discharge Current	Outer Enclosure	Order Code
ESP240-5A.	200-280V	40-60Hz	5A	590V	10kA	-	188-645

204171

Mfrs. List No.	Dimensions H x W x D	Order Code	1+	5+	10+
<b>Din Rail Mounting</b>					
ESP240-5A.	38 120 54	<b>188-645</b>	214.20	203.49	192.78

**Mains Distribution Protectors**



- Use on mains distribution systems to protect equipment from lightning and transient overvoltage
- Simple parallel connection makes protectors suitable for all supply currents
- Very low 'let-through' voltage between all conductors
- 3-way visual indication of protector status
- Remote status indication
- Sovtrip<sup>SM</sup> multiple thermal disconnect system
- Flashing warning of neutral to earth supply faults
- Maintenance free and long lifetime
- Optional **IP66** (WBX 4) and **IP67** (WBX3) enclosures available
- Fully tested to **BS 6651, IEEE C62.41, AS1768**



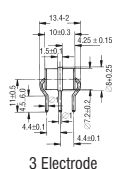
Mfrs. List No.	Working Voltage (rms)	Frequency	Max. Operating Current	Peak 'let-through' Voltage	Peak Discharge Current	Dimensions (mm)	Order Code
ESP240M1.	200-280V	40-60Hz	5A	600V	30kA	180 x 60 x 60	188-621
ESP415M1.	90150V	4060Hz	5A	390V	10kA	180 x 110 x 60	188-633
WBX3	IP67 enclosure for single phase mains wire-in protector					230 x 85 x 80	188-682
WBX4	IP66 enclosure for 3 phase protector					230 x 160 x 117	188-694

204055

Mfrs List No.	Protectors	Order Code	1+	5+	10+
ESP240M1.	Single phase	<b>188-621</b>	614.25	583.54	552.83
ESP415M1.	Three phase	<b>188-633</b>	1,228.50	1,167.07	1,105.65
<b>Enclosures</b>					
WBX3		<b>188-682</b>	68.98	66.51	65.42
WBX4		<b>188-694</b>	84.43	81.42	80.09

**Gas Discharge Tubes**

**Gas Discharge Tubes**



- Gas filled surge arrestors designed to operate as a voltage dependent switch
- Once the applied voltage exceeds the sparkover voltage an arc is formed in nanoseconds within the sealed tube, thus short circuiting the overvoltage
- Internal resistance then returns immediately to several 100MΩ
- Suitable for radio antenna, PABX and telecoms applications.



d.c. Sparkover Voltage	Impulse Sparkover Voltage	Discharge Current A.C.	Capacitance pF	Mfrs. List No.	Order Code
230±20%	<650	10kA	<1	T83-A230X	434-267
230±20%	<450	10kA	<1.5	T23-A230	434-279
350±20%	<700	10kA	<1.5	T23-A350	434-280

Insulation resistance > 10G ohm

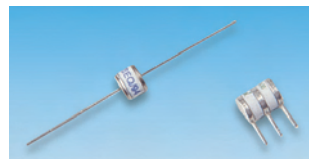
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d.c. Sparkover Voltage	Order Code	1+	10+	50+	100+	+
230	<b>434-267</b>	8.25	7.86	7.41	5.37	--
230	<b>434-279</b>	9.18	8.76	8.25	6.00	--
350	<b>434-280</b>	9.18	8.76	8.25	6.00	--

**Greentube 11A, 14A, and 21A Styles**



Style 11A (Single line)  
L=8.0 max,  
Dia=10 max  
Lead length=25.0,  
Lead dia=0.9



Style 14A, 21A (Double line)  
L=13.0 max,  
Dia=8.25 max  
Lead pitches=4.4,  
Lead dia=1.0

- Used for the suppression of high transient voltages e.g. lightning induced spikes, thyristor control units and contactor changeover induced spikes
- The 21A style has the advantage of a thermally operated short circuiting bar to dissipate extreme transients
- All units use a totally non-radioactive construction.

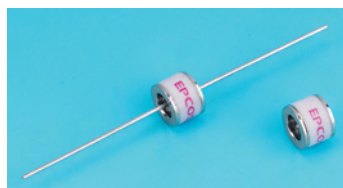
**Note:** When used in conjunction with BT equipment, all appropriate regulations must be adhered to.

Reference	120-0440	121-9727	120-0441
Insulation resistance (min)	<b>GDT11A</b> 100MΩ	<b>GDT14A</b> 100MΩ	<b>GDT21A</b> 100MΩ
dc sparkover voltage	195 to 265V	210 to 310V	150 to 250V
Impulse sparkover voltage (max)	650V	800V	450V
Alternating discharge current	5A	5A	5A
Impulse discharge current	5kA	5kA	5kA
Capacitance (max)	5pF	5pF	5pF
Holdover voltage (max)	100V	100V	100V
Mfrs. List No.	SL1011/230/AA	SL1021/260/RA	SL1021/200/RFA

204214

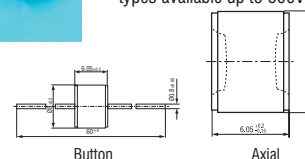
	Order Code	1+	25+	100+	250+
Single, style 11A	<b>120-0440</b>	5.69	5.26	4.76	3.97
Double, style 14A	<b>121-9727</b>	8.00	7.24	6.42	--
Double, style 21A	<b>120-0441</b>	8.42	7.56	6.65	5.98

**Gas Discharge Tubes – 5kA Ceramic**



- Ceramic insulator surge arresters for overvoltage protection in telecom and control systems
- Button cell, radial and axial lead types available up to 600V

Impulse discharge current: 5kA  
Insulation resistance: >10GΩ  
Capacitance: <2pF

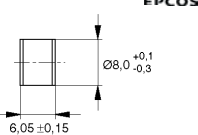


D.C. Sparkover Voltage	Impulse Sparkover Voltage	Type	Mfrs. List No.	Order Code
90	<600	Button	EC90XN	304-3162
150	<600	Button	N80-A150X	304-3186
230	<700	Button	EC230XN	304-3204
90	<600	Axial	EC90X	304-3174
150	<700	Axial	B88069X880S102	121-8962
230	<700	Axial	EC230X	304-3216
350	<900	Axial	EC350X	304-3228
600	<1300	Axial	EC600X	304-3230
260	<600	Radial	ES260XP	521-2467
300	<600	Radial	ES300XP	521-2479

204179

Style	Order Code	1+	25+	50+	100+
<b>Button Cell</b>					
EC90XN	<b>304-3162</b>	3.69	3.45	3.09	2.85
N80-A150X	<b>304-3186</b>	3.69	3.45	3.06	2.76
EC230XN	<b>304-3204</b>	4.47	4.14	3.69	3.27
<b>Axial</b>					
EC90X	<b>304-3174</b>	8.40	8.01	7.50	6.30
B88069X880S102	<b>121-8962</b>	4.69	4.39	4.00	3.68
EC230X	<b>304-3216</b>	4.11	3.81	3.42	3.15
EC350X	<b>304-3228</b>	4.11	3.81	3.42	3.15
EC600X	<b>304-3230</b>	5.07	4.20	4.05	3.39
<b>Radial</b>					
ES260XP	<b>NEW 521-2467</b>	6.18	5.34	4.89	4.41
ES300XP	<b>NEW 521-2479</b>	6.18	5.34	4.89	4.41

Gas Discharge Tubes - 10kA



- Metal ceramic gas discharge tubes
- N80 type is button cell, N81 types axial lead

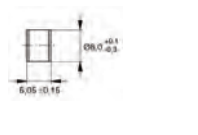
Impulse discharge current 10kA  
Insulation resistance 10GΩ

DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mftrs. List No.	Order Code
90	<600	N81-A90X	564-023
230	<700	N80-A230X	564-035
350	<950	N81-A350X	564-047

220479

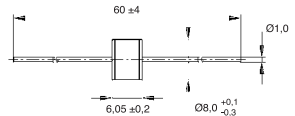
Mftrs. List No.	Order Code	1+	25+	50+	100+
N81-A90X	564-023	5.49	4.35	3.66	3.06
N80-A230X	564-035	4.44	3.39	3.00	2.55
N81-A350X	564-047	7.65	5.88	5.22	4.47

Gas Discharge Tube - 20kA



- 20kA metal ceramic gas discharge tubes
- A81 types have axial leads

Impulse discharge current 20kA  
Insulation resistance >10GΩ  
Capacitance <1.5pF

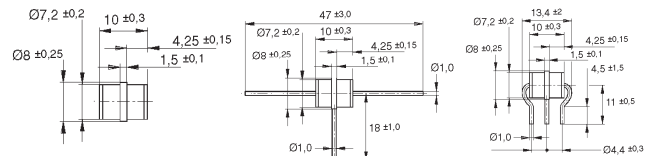


220478

Mftrs. List No.	Order Code	1+	25+	50+	100+
A80-C90X	564-059	4.08	3.69	3.18	2.88
A81-C90X	564-060	7.20	6.66	5.91	5.28
A81-A230X	434-292	8.82	8.43	7.95	5.76
A81-A350X	564-084	6.66	6.00	5.16	4.74

Gas Discharge Tubes

3 Electrode - 20kA



- 3 electrode ceramic insulator gas discharge tubes

Impulse discharge current	20kA	DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mftrs. List No.	Order Code
Insulation resistance	>10GΩ	<350	<350	T20-A230X	976-258
Capacitance	<1.5pF	230	<300	T21-A230X	976-260
		230	<300	T23-A230X	564-199
		350	<700	T23-A350X	564-205

204139

Mftrs. List No.	Order Code	1+	25+	50+	100+
T20-A230X	976-258	8.94	8.04	7.62	6.75
T21-A230X	976-260	8.94	8.04	7.62	6.75
T23-A230X	564-199	11.22	9.18	8.25	6.81
T23-A350X	564-205	8.10	6.63	5.94	4.95

Varistors

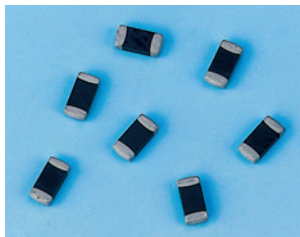
Varistor Safety Precautions

Should the varistor be subjected to surge currents and energy levels in excess of maximum ratings it may physically fail by package rupture or expulsion of material.

If not fused the varistor should be located away from other components or be physically shielded from them.

213829

SMD Varistors- MLV Standard Series



- Suitable for ESD protection
- Surge currents up to 1200 A
- Bidirectional clamping
- Case sizes ranging from 0603 to 1210

Case Size	A	B	C	D
0603	1.0	1.0	0.6	3.0
0805	1.4	1.2	1.0	3.4
1206	1.8	1.2	2.1	4.5
1210	2.8	1.2	2.1	4.5

Max. AC Op. Volt. (V)	Trans. Energy (2ms) (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mftrs List No.	Order Code
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0603 Case Size							
4	5.5	0.003	30	8	19 @ 1A	±20%	B72500T40M60 883-2374
6	8	0.003	30	11	27 @ 1A	±20%	B72500T60M60 883-2382
7	9	0.003	30	12.5	30 @ 1A	±20%	B72500T70M60 883-2390
8	11	0.003	30	15	33 @ 1A	±15%	B72500T80L60 883-2404
11	14	0.003	30	18	35 @ 1A	±10%	B72500T110K60 883-2412
14	18	0.003	30	22	40 @ 1A	±10%	B72500T140K60 883-2420
17	22	0.003	30	27	46 @ 1A	±10%	B72500T170K60 883-2439
20	26	0.003	30	33	56 @ 1A	±10%	B72500T200K60 883-2447
25	31	0.003	30	39	67 @ 1A	±10%	B72500T250K60 883-2455

0805 Case Size							
4	5.5	0.005	100	8	19 @ 1A	±20%	B72510T40M62 883-2463
6	8	0.005	120	11	27 @ 1A	±20%	B72510T60M62 883-2471
8	11	0.005	120	15	33 @ 1A	±20%	B72510T80L62 883-2480
11	14	0.005	120	18	35 @ 1A	±15%	B72510T110K62 883-2498
14	18	0.005	120	22	40 @ 1A	±10%	B72510T140K62 883-2501
17	22	0.005	30	27	50 @ 1A	±10%	B72510T170K62 883-2510
20	26	0.005	80	33	56 @ 1A	±22%	B72510T200K62 883-2528
25	31	0.005	80	39	67 @ 1A	±10%	B72510T250K62 883-2536
30	8	0.005	80	47	77 @ 1A	±10%	B72510T300K62 883-2544

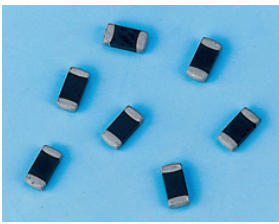
1206 Case Size							
4	5.5	0.008	150	8	17 @ 1A	±20%	B72520T40M62 883-2552
6	8	0.008	200	11	25 @ 1A	±20%	B72520T60M62 883-2560
8	11	0.008	200	15	30 @ 1A	±20%	B72520T80L62 883-2579
11	14	0.008	200	18	33 @ 1A	±15%	B72520T110K62 883-2587
14	18	0.008	200	22	38 @ 1A	±10%	B72520T140K62 883-2595
17	22	0.008	200	27	44 @ 1A	±10%	B72520T170K62 883-2609
20	26	0.008	200	33	54 @ 1A	±10%	B72520T200K62 883-2617
25	31	0.008	200	39	65 @ 1A	±10%	B72520T250K62 883-2625
30	38	0.008	200	47	77 @ 1A	±10%	B72520T300K62 883-2633
35	45	0.008	100	56	90 @ 1A	±10%	B72520T350K62 883-2641
40	56	0.008	100	68	110 @ 1A	±10%	B72520T400K62 883-2650
50	65	0.008	100	82	135 @ 1A	±10%	B72520T500K62 883-2668
60	85	0.008	100	100	165 @ 1A	±10%	B72520T600K62 883-2676

1210 Case Size							
4	5.5	0.01	250	8	17 @ 2.5A	±20%	B72530T40M62 883-2684
6	8	0.01	300	11	25 @ 2.5A	±20%	B72530T60M62 883-2692
8	11	0.01	400	15	30 @ 2.5A	±20%	B72530T80L62 883-2706
11	14	0.01	400	18	33 @ 2.5A	±15%	B72530T110K62 883-2714
14	18	0.01	400	22	38 @ 2.5A	±10%	B72530T140K62 883-2722
17	22	0.01	400	27	44 @ 2.5A	±10%	B72530T170K62 883-2730
20	26	0.01	400	33	54 @ 2.5A	±10%	B72530T200K62 883-2749
25	31	0.01	300	39	65 @ 2.5A	±10%	B72530T250K62 883-2757
30	38	0.01	300	47	77 @ 2.5A	±10%	B72530T300K62 883-2765
35	45	0.01	250	56	90 @ 2.5A	±10%	B72530T350K62 883-2773
40	56	0.01	250	68	110 @ 2.5A	±10%	B72530T400K62 883-2781
50	65	0.01	200	82	135 @ 2.5A	±10%	B72530T500K62 883-2790
60	85	0.01	200	100	165 @ 2.5A	±10%	B72530T600K62 883-2803

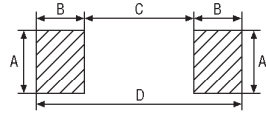
386505

Case Size	Order Code	5+	20+	50+	100+	+	+
0603	All Values	0.94	0.88	0.85	0.75	--	--
0805	All Values	1.11	1.04	0.98	0.88	--	--
1206	All Values	1.27	1.14	1.07	0.98	--	--
1210	All Values	1.56	1.50	1.43	1.27	--	--

SIOV Metal Oxide Varistors – Surface Mount



- Surface mount Metal Oxide Varistors
- Popular surface mount case sizes
- Silver palladium terminations up to 1210 case size, tinned copper above



Case Size	A	B	C	D
0603	1.0	1.0	0.6	3.0
0805	1.4	1.2	1.0	3.4
1206	1.8	1.2	2.1	4.5
1210	2.8	1.2	2.1	4.5
3225	3.5	2.8	4.5	10.1
4032	3.5	2.8	6.5	12.1

Max. AC Op. Volt. (V)	Trans. Energy (J)	Peak Surge Current (A)	Varistor Vv (1mA) (V)	Max. Clamp. Voltage (V)	Toler. Vv (1mA) %	Mfrs. List No.	Order Code
<b>0603 Case Size</b>							
4	5.5	0.1	30	8	19 @ 1A ±20%	B72500V40M60	967-877
6	8	0.1	30	11	27 @ 1A ±20%	B72500V60M60	967-889
7	9	0.1	30	12.5	27 @ 1A ±15%	B72500V70K60	967-890
11	14	0.2	30	18	35 @ 1A ±10%	B72500V110K60	967-919
14	18	0.2	30	22	40 @ 1A ±10%	B72500V140K60	967-920
<b>0805 Case Size</b>							
4	5.5	0.2	100	8	19 @ 1A ±20%	B72510V40M62	967-932
6	8	0.2	120	11	27 @ 1A ±15%	B72510V60M62	967-944
11	14	0.2	120	18	35 @ 1A ±10%	B72510V110K62	967-968
14	18	0.3	120	22	40 @ 1A ±10%	B72510V140K62	967-970
17	22	0.3	200	27	46 @ 1A ±10%	B72510V170K62	967-981
20	26	0.3	200	33	56 @ 1A ±10%	B72510V200K62	967-993
25	31	0.3	200	39	67 @ 1A ±10%	B72510V250K62	968-006
<b>1206 Case Size</b>							
11	14	0.5	200	18	33 @ 1A ±10%	B72520V110K62	968-043
14	18	0.5	200	22	36 @ 1A ±10%	B72520V140K62	968-055
20	26	1.9	400	33	54 @ 1A ±10%	B72520V200K62	968-079
<b>1210 Case Size</b>							
20	26	1.9	400	33	54 @ 2.5A ±10%	B72530V200K62	968-092
30	38	2	300	47	77 @ 2.5A ±10%	B72530V300K62	968-110
<b>3225 Case Size</b>							
130	170	4.2	400	205	340 @ 5A ±10%	B72650M131K72	995-8509
175	225	5.6	400	270	455 @ 5A ±10%	B72650M171K72	995-8517
250	320	8.2	400	390	650 @ 5A ±10%	B72650M251K72	995-8525
275	350	8.6	400	430	710 @ 5A ±10%	B72650M271K72	995-8533
300	385	9.6	400	470	775 @ 5A ±10%	B72650M301K72	995-8541
<b>4032 Case Size</b>							
175	225	13	1200	270	455 @ 10A ±10%	B72660M171K72	995-8550
230	300	17	1200	360	595 @ 10A ±10%	B72660M231K93	995-8568
250	320	19	1200	390	650 @ 10A ±10%	B72660M251K93	995-8576
275	350	21	1200	430	710 @ 10A ±10%	B72660M271K72	995-8584
300	385	23	1200	470	775 @ 10A ±10%	B72660M301K72	995-8592

204133

Case Size	Order Code	5+	20+	50+	100+	+	+
0603	All Values	1.08	1.02	0.96	0.72	--	--
0805	All Values	1.14	1.08	0.99	0.78	--	--
1206	All Values	1.20	1.14	1.05	0.84	--	--
1210	All Values	1.47	1.41	1.32	1.02	--	--
3225	All Values	3.03	3.00	3.00	2.55	--	--
4032	All Values	2.39	2.37	2.37	1.98	--	--

'Transguard' – Surface Mount



0603 case size L=1.6 ± 0.15, W=0.8 ± 0.15, H=0.9 max.  
 0805 case size L=2.0 ± 0.2, W=1.25 ± 0.2, H=1.02 max.  
 1206 case size L=3.2 ± 0.2, W=1.6 ± 0.2, H=1.02 max.  
 1210 case size L=3.2 ± 0.2, W=2.49 ± 0.2, H=1.7 max.  
 Supplied on 8mm embossed tape

- Ultra compact high energy multilayer transient suppressors in four popular SMD case sizes
- Provides an ultra fast clamping time of less than 1ns for all low voltage DC applications.

Working Voltage, V <sub>WM</sub> (V)	Break-down Voltage, V <sub>B</sub> (V)	Clamping Voltage Max. 8/20µs V <sub>C</sub> (V)	Peak Current Max. 8/20µs I <sub>p</sub> (A)	Transient Energy Max. 10/1000µs E <sub>TRAN</sub> (J)	Capa- Induc- tance nF nH	Mfrs. List No.	Order Code
<b>0603 Case Size</b>							
3.6	4.0 - 5.5	10	30	0.1	1.5 1.0	VC060303A100RP	118-9308
5.6	7.6 - 9.3	15.5	30	0.1	1.0 1.0	VC060305A150RP	118-9309
14	16.5 - 20.3	30	30	0.1	0.5 1.0	VC060314A300RP	118-9310
18	22.9 - 28.0	40	30	0.1	0.275 1.0	VC060318A400RP	118-9312
<b>0805 Case Size</b>							
3.6	4.0 - 5.5	10	40	0.1	1.775 1.5	VC080503A100DP	118-9313
5.6	7.6 - 9.3	15.5	40	0.1	1.1 1.5	VC080505A150DP	118-9314
5.6	7.1 - 8.7	15.5	120	0.3	2.75 1.5	VC080505C150DP	118-9315
14	16.5 - 20.3	30	40	0.1	0.43 1.5	VC080514A300DP	118-9316

Working Voltage, V <sub>WM</sub> (V)	Break-down Voltage, V <sub>B</sub> (V)	Clamping Voltage Max. 8/20µs V <sub>C</sub> (V)	Peak Current Max. 8/20µs I <sub>p</sub> (A)	Transient Energy Max. 10/1000µs E <sub>TRAN</sub> (J)	Capa- Induc- tance nF nH	Mfrs. List No.	Order Code
<b>0603 Case Size</b>							
<b>1206 Case Size</b>							
5.6	7.1 - 8.7	15.5	150	0.4	3.0 1.7	VC120605D150DP	118-9317
14	16.5 - 20.3	30	40	0.1	0.6 1.7	VC120614A300DP	118-9318
14	15.9 - 19.4	30	150	0.4	1.4 1.7	VC120614D300DP	118-9319
18	22.5 - 27.5	40	150	0.4	1.0 1.7	VC120618D400DP	118-9320
26	30.5 - 37.3	58	120	0.4	0.55 1.7	VC120626D580DP	118-9321
30	36.0 - 45.0	65	120	0.4	0.5 1.7	VC120630D650DP	118-9322
<b>1210 Case Size</b>							
18*	21.5 - 26.5	39	500	1.5	3.1 2.0	VC121018J390DP	118-9324

\*Withstands 24.5V dc for 5 minutes (automotive applications)

204019

Working Voltage (V)	Order Code	5+	50+	100+	250+	+
<b>Order Multiple=5</b>						
<b>0603 Case Size</b>						
3.6	SMD118-9308	1.03	0.92	0.79	0.66	--
5.6	SMD118-9309	1.03	0.92	0.79	0.66	--
14	SMD118-9310	1.03	0.92	0.79	0.66	--
18	SMD118-9312	1.03	0.92	0.79	0.66	--
<b>0805 Case Size</b>						
3.6	SMD118-9313	1.13	1.02	0.89	0.74	--
5.6	SMD118-9314	1.13	1.02	0.89	0.74	--
5.6	SMD118-9315	1.71	1.52	1.31	1.09	--
14	SMD118-9316	1.15	1.02	0.89	0.74	--
<b>1206 Case Size</b>						
5.6	SMD118-9317	1.84	1.68	1.45	1.20	--
14	SMD118-9318	1.38	1.27	1.10	0.91	--
14	SMD118-9319	1.84	1.68	1.45	1.20	--
18	SMD118-9320	1.88	1.68	1.45	1.20	--
26	SMD118-9321	1.84	1.68	1.45	1.20	--
30	SMD118-9322	1.84	1.68	1.45	1.20	--
<b>1210 Case Size</b>						
18	SMD118-9324	2.82	2.51	2.17	1.81	--

MultiGuard

2 & 4 Elements



AVXs Transient Voltage Suppression (TVS) Arrays address six trends in today's electronic circuits:

- Mandatory ESD protection
- Mandatory EMI control
- Signal integrity improvement
- PCB downsizing
- Reduced component placement costs
- Protection from induced slow speed transient voltages and currents

AVXs MultiGuard products offer numerous advantages, which include a faster turn-on-time (<1ns), repetitive strike capability, and space savings. In some cases, MultiGuard consumes less than 75% of the PCB real estate required for the equivalent number of discrete chips. This size advantage coupled with the savings associated with

placing only one chip, makes MultiGuard the TVS component of choice for ESD protection of I/O lines in portable equipment and programming ports in cellular phones. Other applications include differential data line protection, ASIC protection and LCD driver protection for portable computing devices.

Element	Working Voltage (V)	Breakdown voltage (V)	Clamping voltage (V)	Peak current (A)	Transient energy (J)	Mfrs. List No.	Order Code
2	5.6	6.8 to 10.3	17.5	20	50	MG042S05X150DP	756-8690
2	18	20.4 to 28	42	20	50	MG042L18V500RP	756-8703
4	5.6	6.8 to 9.3	15.5	30	0.1	MG054S05X150DP	756-8711
4	18	20.4 to 28	40	30	0.1	MG054S18X400DP	756-8720
4	5.6	7.6 to 9.3	15.5	20	0.05	MG064S05A150DP	474-2072
4	18	22.5 to 28	50	15	0.02	MG064S18A400DP	474-2096

339460

Elements	Case Size	Order Code	5+	50+	250+	1K+	2K+
2	0405	SMD756-8690	1.14	0.96	0.90	0.72	0.59
2	0405	SMD756-8703	1.08	0.90	0.84	0.66	0.57
4	0508	SMD756-8711	1.68	1.41	1.29	1.08	0.87
4	0508	SMD756-8720	1.68	1.41	1.29	1.08	0.87
4	0612	SMD474-2072	2.31	1.92	1.76	1.46	--
4	0612	SMD474-2096	2.42	--	--	--	--

ML Series – Surface Mount



- Transient surge suppressors to protect electronic devices from high voltage transients
- Manufactured from ceramic which offers rugged protection, excellent energy absorption and high internal heat dissipation



- Chip form eliminates lead conductance which ensures a fast response
- Low capacitance types do not reduce bandwidth of high speed signal lines
- Designed to fail short circuit when over stressed to protect associated equipment

Operating temperature -55° C to +125° C

Maximum Continuous Working Voltage Vdc	Maximum Surge Voltage Vac (8/20µs)	Maximum Non-repetitive Surge Current (A)	Non-repetitive Surge Energy (10/1000µs)	Clamping Voltage at 1mA Min (V)	Nominal Voltage at 1mA DC Test Curr. Min (V)	Maximum Clamping Voltage at 10A (or as noted) (8/20µs)	Typical Cap @ 1MHz nF	Mftrs. List No.	Order Code
<b>0805 Case Size</b>									
3.5	2.5	120	0.3	3.7	5.5	10 at 5A	2.75	V3.5MLA0805H	105-7215
3.5	2.5	40	0.1	3.7	5.5	10 at 2A	1.2	V3.5MLA0805LH	105-7216
5.5	4	120	0.3	7.1	9.3	15.5 at 5A	2.5	V5.5MLA0805H	105-7217
5.5	4	40	0.1	7.1	9.3	15.5 at 2A	1.1	V5.5MLA0805LH	105-7218
14	10	120	0.3	15.9	20.3	30 at 5A	1.2	V14MLA0805H	105-7220
14	10	40	0.1	15.9	20.3	30 at 2A	0.45	V14MLA0805LH	105-7221
18	14	120	0.3	22.5	28	40 at 5A	0.65	V18MLA0805H	105-7222
18	14	40	0.1	22.5	28	40 at 2A	0.35	V18MLA0805LH	105-7223
<b>1206 Case Size</b>									
5.5	4	150	0.4	7.1	8.7	15.5	4.5	V5.5MLA1206H	105-7225
14	10	150	0.4	16.4	20	30	2.1	V14MLA1206H	105-7226
18	14	150	0.4	22	27	40	1.7	V18MLA1206H	105-7227
26	20	150	0.6	29.5	38.5	56	0.8	V26MLA1206H	105-7228
33	26	180	0.8	38	45	72	0.5	V33MLA1206H	105-7229
42	30	180	0.8	46	56	86	0.45	V42MLA1206H	105-7230
56	40	180	1.0	61	76	110	0.35	V56MLA1206H	105-7231
68	50	180	1.0	76	90	130	0.15	V68MLA1206H	105-7232
<b>1210 Case Size</b>									
18	14	250	0.8	22	27	40	1.9	V18MLA1210H	105-7233
26	20	250	1.2	29.5	38.5	54	1	V26MLA1210T23H	105-7234

Working Voltage (V)	Order Code	Price Each			
		5+	25+	100+	1K+
<b>0805 Case Size</b>					
3.5	SMD 105-7215	1.12	0.91	0.76	0.62
3.5	SMD 105-7216	1.02	0.82	0.66	0.52
5.5	SMD 105-7217	1.12	0.91	0.76	0.62
5.5	SMD 105-7218	1.12	0.91	0.76	0.62
14	SMD 105-7220	1.12	0.91	0.76	0.62
14	SMD 105-7221	1.12	0.91	0.76	0.62
18	SMD 105-7222	1.09	0.88	0.72	0.59
18	SMD 105-7223	1.02	0.82	0.66	0.52
<b>1206 Case Size</b>					
5.5	SMD 105-7225	2.10	1.70	1.35	1.10
14	SMD 105-7226	2.10	1.70	1.35	1.10
18	SMD 105-7227	2.10	1.67	1.35	1.10
26	SMD 105-7228	1.51	1.23	1.01	0.82
33	SMD 105-7229	2.10	1.70	1.35	1.10
42	SMD 105-7230	2.10	1.70	1.35	1.10
56	SMD 105-7231	2.10	1.70	1.35	1.10
68	SMD 105-7232	2.10	1.70	1.35	1.10
<b>1210 Case Size</b>					
18	SMD 105-7233	2.05	1.73	1.42	1.30
26	SMD 105-7234	1.90	1.54	1.32	1.04

'Transguard'



L=4.32 (446-762=4.83), Dia.=2.54 (446-762=3.56), Lead length=30min, Lead dia.=0.5

- Ultra compact high energy multilayer transient suppressors providing an ultra fast clamping time of less than 1ns for all low voltage DC applications.

Operating temperature: -55° C to +125° C

Working Voltage, V <sub>WM</sub> (V)	Break-down Voltage, V <sub>B</sub> (V)	Clamping Voltage, V <sub>C</sub> (V)	Peak Current I <sub>P</sub> (A)	Transient Energy E <sub>TRAN</sub> (J)	Capacitance nF	Inductance nH	Mftrs. List No.	Order Code
5.6	7.6 - 9.3	15.5	40	0.1	1.1	1.5	VA100005A150D	446-683
5.6	7.1 - 8.7	15.5	150	0.4	2.8	3.5	VA100005D150D	446-695
14	16.5 - 20.3	30	40	0.1	0.5	3.5	VA100014A300D	446-701
14	15.9 - 19.4	30	150	0.4	1.4	3.5	VA100014D300D	446-713
18	22.9 - 28	40	40	0.1	0.35	3.5	VA100018A400D	446-725
18	22.5 - 27.5	40	150	0.4	1	3.5	VA100018D400D	446-737
26	30.5 - 37.3	58	120	0.4	0.55	3.5	VA100026D580D	446-749
60	67 - 83	120	300	2	0.4	3.5	VA200060K121D	446-762

Working Voltage (V)	Order Code	Price Each			
		1+	50+	100+	500+
5.6	446-683	1.72	1.47	1.17	0.78
5.6	446-695	1.97	1.74	1.32	0.90
14	446-701	1.72	1.47	1.17	0.78
14	446-713	1.97	1.74	1.32	0.90
18	446-725	1.72	1.47	1.17	0.78
18	446-737	1.97	1.74	1.32	0.90
26	446-749	1.97	1.74	1.32	0.90
60	446-762	2.62	2.28	1.80	1.20

Metal Oxide Varistors  
7mm Disc (Nominal Diameter)



Tolerance: ±10%

- The voltage dependent characteristics enable varistors to protect against high transient voltage spikes
- The varistor impedance changes to a low value clamping the transient to a safe level
- UL recognised, CSA approved

Operating Temperature: -40° C to +85° C

Mftrs. List No.	V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>V(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mftrs. List No.	Order Code
SIOV-B72205S111K101-40	11	14	18	0.3	100	B72205S110K101	100-4348
	115	150	180	3.4	400	B72205S111K101	100-4345
	130	170	205	4.2	400	B72205S131K101	100-4315
	20	26	33	0.6	100	B72205S200K101	100-4308
	14	18	22	0.4	100	B72205S140K101	100-4303
	30	38	47	0.9	100	B72205S300K101	100-4279
	150	200	240	4.9	400	B72205S151K101	100-4329
	17	22	27	0.5	100	B72205S170K101	100-4334
	230	300	360	7.2	400	B72205S231K101	100-4353
	25	31	39	0.7	100	B72205S250K101	100-4277
	95	125	150	3.4	400	B72205S950K101	100-4341
	275	350	430	8.6	400	B72205S271K101	100-4358
	35	45	56	1.1	100	B72205S350K101	100-4295
	385	505	620	13.5	400	B72205S381K101	100-4366
	40	56	68	1.3	100	B72205S400K101	100-4330
	175	225	270	5.6	400	B72205S171K101	100-4344
	420	560	680	14	400	B72205S421K101	100-4317
	250	320	390	8.2	400	B72205S251K101	100-4290
	50	65	82	1.8	400	B72205S500K101	100-4313
	300	385	470	9.6	400	B72205S301K101	100-4399
	75	100	120	2.5	400	B72205S750K101	100-4343
	460	615	750	18	400	B72205S461K101	100-4346

AC Voltage	Order Code	Price Each					
		1+	50+	100+	250+	+	+
11	100-4348	0.84	0.71	0.61	0.50	--	--
115	100-4345	0.81	0.71	0.61	0.50	--	--
130	100-4315	0.81	0.71	0.61	0.50	--	--
20	100-4308	0.81	0.71	0.61	0.50	--	--
14	100-4303	0.81	0.71	0.61	0.50	--	--
30	100-4279	0.81	0.71	0.61	0.50	--	--
150	100-4329	0.81	0.71	0.61	0.50	--	--
17	100-4334	0.81	0.71	0.61	0.50	--	--
230	100-4353	0.84	0.71	0.61	0.50	--	--
25	100-4277	0.81	0.71	0.61	0.50	--	--
95	100-4341	0.81	0.71	0.61	0.50	--	--
275	100-4358	0.84	0.71	0.61	0.50	--	--
35	100-4295	0.81	0.71	0.61	0.50	--	--
385	100-4366	0.84	0.71	0.61	0.50	--	--
40	100-4330	0.81	0.71	0.61	0.50	--	--
175	100-4344	0.81	0.71	0.61	0.50	--	--
420	100-4317	0.81	0.71	0.61	0.50	--	--
250	100-4290	0.81	0.71	0.61	0.50	--	--
50	100-4313	0.81	0.71	0.61	0.50	--	--
300	100-4399	0.81	0.71	0.61	0.50	--	--
75	100-4343	0.81	0.71	0.61	0.50	--	--
460	100-4346	0.81	0.71	0.61	0.50	--	--

9mm Disc (Nominal Diameter)

Mftrs. List No.	V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>V(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mftrs. List No.	Order Code
B72207S110K101-40	11	14	18	0.8	250	B72207S110K101	100-4338
	115	150	180	8.4	1200	B72207S111K101	100-4380
	130	170	205	9.5	1200	B72207S131K101	100-4292
	14	18	22	0.9	250	B72207S140K101	100-4369
	17	22	27	1.1	250	B72207S170K101	100-4339
	175	225	270	13.0	1200	B72207S171K101	100-4388
	20	26	33	1.3	250	B72207S200K101	100-4314
	230	300	360	17.0	1200	B72207S231K101	100-4307
	25	31	39	1.6	250	B72207S250K101	100-4370
	250	320	390	19.0	1200	B72207S251K101	100-4276
	275	350	430	21	1200	B72207S271K101	100-4361
	30	38	47	2.0	250	B72207S300K101	100-4350
	300	385	470	23	1200	B72207S301K101	100-4364
	35	45	56	2.5	250	B72207S350K101	100-4373
	40	56	68	3.0	250	B72207S400K101	100-4291
	420	560	680	32.0	1200	B72207S421K101	100-4332
	460	615	750	32.0	1200	B72207S461K101	100-4340
	50	65	82	4.2	1200	B72207S500K101	100-4312
	60	85	100	4.8	1200	B72207S600K101	100-4285
	75	100	120	5.9	1200	B72207S750K101	100-4310

AC Voltage	Order Code	Price Each					
		1+					



AC Voltage	Order Code	Price Each					
		1+	50+	100+	250+	+	+
230	100-4307	0.81	0.70	0.60	0.49	--	--
25	100-4370	0.81	0.70	0.60	0.49	--	--
250	100-4276	0.81	0.70	0.60	0.49	--	--
275	100-4361	0.81	0.70	0.60	0.49	--	--
30	100-4350	0.83	0.70	0.60	0.49	--	--
300	100-4364	0.81	0.70	0.60	0.49	--	--
35	100-4373	0.81	0.70	0.60	0.49	--	--
40	100-4291	0.81	0.70	0.60	0.49	--	--
420	100-4332	0.81	0.70	0.60	0.49	--	--
460	100-4340	0.81	0.70	0.60	0.49	--	--
50	100-4312	0.81	0.70	0.60	0.49	--	--
60	100-4285	0.81	0.70	0.60	0.49	--	--
75	100-4310	0.81	0.70	0.60	0.49	--	--

12mm Disc (Nominal Diameter)

Mfrs. List No.		Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D
B72210S110K101-40		7.5	12.5	4.1-4.8	15	30	0.8

V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>I(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code
11	14	18	1.7	500	B72210S110K101	100-4328
115	150	180	18	2500	B72210S111K101	100-4381
130	170	205	19	2500	B72210S131K101	100-4288
14	18	22	2	500	B72210S140K101	100-4296
140	180	220	22	2500	B72210S141K101	100-4386
150	200	240	24	2500	B72210S151K101	100-4297
17	22	27	2.5	500	B72210S170K101	100-4309
175	225	270	28	2500	B72210S171K101	100-4342
20	26	33	3.1	500	B72210S200K101	100-4320
230	300	360	36	2500	B72210S231K101	100-4354
25	31	39	3.7	500	B72210S250K101	100-4274
250	320	390	38	2500	B72210S251K101	100-4355
275	350	430	43	2500	B72210S271K101	100-4390
30	38	47	4.4	500	B72210S300K101	100-4351
300	385	470	47	2500	B72210S301K101	100-4365
320	420	510	50	2500	B72210S321K101	100-4337
35	45	56	5.4	500	B72210S350K101	100-4286
385	505	620	40	2500	B72210S381K101	100-4398
40	56	68	6.4	500	B72210S400K101	100-4298
420	560	680	45	2500	B72210S421K101	100-4299
460	615	750	50	2500	B72210S461K101	100-4283
50	65	82	8.4	2500	B72210S500K101	100-4278
75	100	120	12	2500	B72210S750K101	100-4326
95	125	150	15	2500	B72210S950K101	100-4322

AC Voltage	Order Code	Price Each					
		1+	50+	100+	250+	+	+
11	100-4328	1.15	0.98	0.83	0.68	--	--
115	100-4381	1.15	0.98	0.83	0.68	--	--
130	100-4288	1.15	0.98	0.83	0.68	--	--
14	100-4296	1.15	0.98	0.83	0.68	--	--
140	100-4386	1.15	0.98	0.83	0.68	--	--
150	100-4297	1.15	0.98	0.83	0.68	--	--
17	100-4309	1.15	0.98	0.83	0.68	--	--
175	100-4342	1.15	0.98	0.83	0.68	--	--
20	100-4320	1.15	0.98	0.83	0.68	--	--
230	100-4354	1.15	0.98	0.83	0.68	--	--
25	100-4274	1.15	0.98	0.83	0.68	--	--
250	100-4355	1.15	0.98	0.83	0.68	--	--
275	100-4390	1.15	0.98	0.83	0.68	--	--
30	100-4351	1.14	0.98	0.83	0.68	--	--
300	100-4365	1.15	0.98	0.83	0.68	--	--
320	100-4337	1.15	0.98	0.83	0.68	--	--
35	100-4286	1.15	0.98	0.83	0.68	--	--
385	100-4398	1.15	0.98	0.83	0.68	--	--
40	100-4298	1.15	0.98	0.83	0.68	--	--
420	100-4299	1.15	0.98	0.83	0.68	--	--
460	100-4283	1.15	0.98	0.83	0.68	--	--
50	100-4278	1.15	0.98	0.83	0.68	--	--
75	100-4326	1.15	0.98	0.83	0.68	--	--
95	100-4322	1.15	0.98	0.83	0.68	--	--

15.5mm Disc (Nominal Diameter)

Mfrs. List No.		Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D
B72214S110K101-40		7.5	16.5	4.1-4.9	19	30	0.8

V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>I(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code
11	14	18	3.2	1000	B72214S110K101	100-4324
115	150	180	30	4500	B72214S111K101	100-4382
130	170	205	34	4500	B72214S131K101	100-4385
14	18	22	4	1000	B72214S140K101	100-4294
140	180	220	36	4500	B72214S141K101	100-4333
175	225	270	46	4500	B72214S171K101	100-4327
20	26	33	6	1000	B72214S200K101	100-4306
230	300	360	60	4500	B72214S231K101	100-4389
25	31	39	7	1000	B72214S250K101	100-4349
250	320	390	65	4500	B72214S251K101	100-4356
275	350	430	71	4500	B72214S271K101	100-4362
30	38	47	9	1000	B72214S300K101	100-4371
300	385	470	76	4500	B72214S301K101	100-4391
320	420	510	84	4500	B72214S321K101	100-4318
35	45	56	10	1000	B72214S350K101	100-4374
385	505	620	80	4500	B72214S381K101	100-4367
40	56	68	13	1000	B72214S400K101	100-4375
420	560	680	90	4500	B72214S421K101	100-4368

V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>I(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code
460	615	750	100	4500	B72214S461K101	100-4273
50	65	82	15	4500	B72214S500K101	100-4376
60	85	100	17	4500	B72214S600K101	100-4377
75	100	120	20	4500	B72214S750K101	100-4378
95	125	150	25	4500	B72214S950K101	100-4379

AC Voltage	Order Code	Price Each					
		1+	50+	100+	250+	+	+
11	100-4324	1.40	1.19	1.01	0.83	--	--
115	100-4382	1.38	1.19	1.01	0.83	--	--
130	100-4385	1.38	1.19	1.01	0.83	--	--
14	100-4294	1.40	1.19	1.01	0.83	--	--
140	100-4333	1.40	1.19	1.01	0.83	--	--
175	100-4327	1.40	1.19	1.01	0.83	--	--
20	100-4306	1.38	1.19	1.01	0.83	--	--
230	100-4389	1.38	1.19	1.01	0.83	--	--
25	100-4349	1.38	1.19	1.01	0.83	--	--
250	100-4356	1.40	1.19	1.01	0.83	--	--
275	100-4362	1.30	1.11	0.94	0.77	--	--
30	100-4371	1.40	1.19	1.01	0.83	--	--
300	100-4391	1.40	1.19	1.01	0.83	--	--
320	100-4318	1.40	1.19	1.01	0.83	--	--
35	100-4374	1.40	1.19	1.01	0.83	--	--
385	100-4367	1.40	1.19	1.01	0.83	--	--
40	100-4375	1.38	1.19	1.01	0.83	--	--
420	100-4368	1.40	1.19	1.01	0.83	--	--
460	100-4273	1.40	1.19	1.01	0.83	--	--
50	100-4376	1.38	1.19	1.01	0.83	--	--
60	100-4377	1.40	1.19	1.01	0.83	--	--
75	100-4378	1.38	1.19	1.01	0.83	--	--
95	100-4379	1.38	1.19	1.01	0.83	--	--

21.5mm Disc (Nominal Diameter)

Mfrs. List No.		Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D
B72220S110K101-40		10	22.5	4.5-5.4	26	30	1

V <sub>RMS</sub>	V <sub>DC</sub>	V <sub>I(1mA)</sub>	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code
11	14	18	10	2000	B72220S110K101	100-4331
115	150	180	60	6500	B72220S111K101	100-4383
130	170	205	74	8000	B72220S131K101	100-4282
14	18	22	12	2000	B72220S140K101	100-4336
140	180	220	78	8000	B72220S141K101	100-4387
150	200	240	85	8000	B72220S151K101	100-4289
17	22	27	14	2000	B72220S170K101	100-4319
175	225	270	98	8000	B72220S171K101	100-4352
20	26	33	18	2000	B72220S200K101	100-4325
230	300	360	130	8000	B72220S231K101	100-4287
25	31	39	26	2000	B72220S250K101	100-4284
250	320	360	140	8000	B72220S251K101	100-4357
275	350	430	151	8000	B72220S271K101	100-4363
30	38	47	26	2000	B72220S300K101	100-4275
300	385	470	173	8000	B72220S301K101	100-4392
320	420	510	184	8000	B72220S321K101	100-4305
35	45	56	33	2000	B72220S350K101	100-4321
385	505	620	150	8000	B72220S381K101	100-4393
40	56	68	37	2000	B72220S400K101	100-4316
420	560	680	175	8000	B72220S421K101	100-4394
460	615	750	195	8000	B72220S461K101	100-4272
50	65	82	27	6500	B72220S500K101	100-4301
510	670	820	190	6500	B72220S511K101	100-4395
60	85	100	33	6500	B72220S600K101	100-4280
625	825	1000	230	6500	B72220S621K101	100-4397
75	100	120	40	6500	B72220S750K101	100-4302
95	125	150	50	6500	B72220S950K101	100-4304

Order Code	Price Each					
	1+	50+	100+	250+	+	+
All Values	1.98	1.69	1.43	1.17	--	--

Littelfuse Varistors



These varistors are voltage dependent, symmetrical, metal oxide semiconductor devices. Their characteristics enable them to protect against high transient voltage spikes (when properly selected) to meet anticipated loads. When the protected equipment or circuit encounters high voltage spikes, the varistor impedance changes from a very high standby value to a very low conducting value, thus clamping the transient voltage to a protective level. The excess energy of the incoming high voltage pulse is absorbed by the varistor, protecting voltage sensitive components against damage.

Metal Oxide Varistors – PA/MA/LA/ZA/HA Series



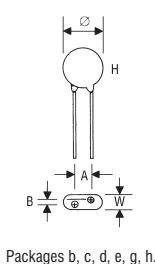
Package k.	Package a		Packages b, c, d, e, g, h.		Packages l, m, n	
	Lead		Lead Spacing			
	W	Dia.	L	Dia.	A	B
a	4	3.68	29	0.83	-	-
b	5.6	12.5	25.4	0.86	7.5	2.5
c	5.6	8.7	25.4	0.68	5.0	2.5
d	5.6	16.4	25.4	0.86	7.5	2.5
e	5.6	22.5	25.4	0.86	7.5	2.5
g	7.3	16.4	25.4	0.86	7.5	4.0
h	7.3	22.5	25.4	0.86	7.5	4.0

	Body Dia.	Body Thickness	Fix Cent	Fix Hole Dia.
k	33.5	14.3	50.8	6
l	35.5	9	25	4.2
m	35.5	10.3	25.0	4.2
n	42.5	9	25	4.2

Operating ambient temperature	PA Series	MA Series	LA/ZA Series	HA Series
Test withstand voltage	-40°C to +85°C	-55°C to +75°C	-55°C to +85°C	-55°C to +85°C
Insulation resistance	-	>1000MΩ	>1000MΩ	>1000MΩ
Voltage temp. coefficient	-	-0.03%/°C	-0.05%/°C	0.01%/°C



PA Series (Bolt Down Package)

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000µs) (Joules)	Peak Transient Current (8/20µs) (A)	Varistor Voltage @ 1mA dc (V min, V nom, V max)	Order Code
130	175	70	6500	184 200 200	318-190
250	330	130	6500	354 390 390	318-206
275	369	140	6500	389 430 430	318-218
480	640	180	6500	670 750 750	318-220

Mfrs. List No. and Device Marking  
 V130PA20A = 318-190, V250PA40A = 318-206, V275PA40A = 318-218, V480PA80A = 318-220

AC Voltage	Energy (Joules)	Package	Order Code	1+	25+	100+	1K+
130	70	k	318-190	34.44	28.54	24.22	19.28
250	130	k	318-206	34.44	28.54	25.81	-
275	140	k	318-218	38.14	31.03	26.30	20.92
480	180	k	318-220	34.44	28.54	24.22	19.28

ZA Series (Radial Lead Package)

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000µs) (Joules)	Peak Transient Current (8/20µs) (A)	Varistor Voltage @ 1mA dc (V min, V nom, V max)	Device Marking	Mfrs. List No.	Order Code
4	5.5	0.4	100	6 8.2 11	08Z1	V8ZA1P	105-7154
4	5.5	0.8	250	6 8.2 11	08Z2	V8ZA2P	105-7155
6	8	1.2	250	9 12 16	12Z2	V12ZA2P	105-7156
10	14	0.8	250	14.4 18 21.6	18Z1	V18ZA1P	105-7158
10	14	3.5	1000	14.4 18 21.6	18Z3	V18ZA3P	105-7159
14	18	0.9	250	18.7 22 26	22Z1	V22ZA1P	105-7160
14	18	4.0	1000	18.7 22 26	22Z3	V22ZA3P	105-7161
14	18	100	2000	19.2 24 26	24Z50	V24ZA50P	105-7162
17	22	1.0	250	23 27 31.1	27Z1	V27ZA1P	105-7137
17	22	5.0	1000	23 27 31.1	27Z4	V27ZA4P	105-7163
20	26	1.2	250	29.5 33 36.5	33Z1	V33ZA1P	105-7164
20	26	6.0	1000	29.5 33 36.5	33Z5	V33ZA5P	105-7166
21	27	150	2000	29.5 33 36.5	P33Z70	V33ZA70P	105-7167
25	31	1.5	250	35 39 43	39Z1	V39ZA1P	105-7168
25	31	7.2	1000	35 39 43	39Z6	V39ZA6P	105-7171
30	38	1.8	250	42 47 52	47Z1	V47ZA1P	105-7172
30	38	8.8	1000	42 47 52	47Z7	V47ZA7P	105-7173
35	45	2.3	250	50 56 62	56Z2	V56ZA2P	105-7174
35	45	10	1000	50 56 62	56Z8	V56ZA8P	105-7175
40	56	3.0	250	61 68 75	68Z2	V68ZA2P	105-7138
40	56	13	1000	61 68 75	68Z10	V68ZA10P	105-7176
50	66	4.0	250	74 82 91	82Z2	V82ZA2P	105-7177
50	66	15	4500	73 82 91	82Z12	V82ZA12P	105-7139
60	81	20	4500	90 100 110	100Z15	V100ZA15P	105-7140
60	81	5.0	1200	90 100 110	100Z	V100ZA3P	105-7178
75	102	6	1200	108 120 132	120Z	V120ZA1P	105-7179
75	102	22	4500	108 120 132	120Z6	V120ZA6P	105-7141
95	127	30	4500	135 150 165	150Z8	V150ZA8P	105-7142
115	153	10	1200	162 180 198	180Z	V180ZA1P	105-7143
115	153	35	4500	162 180 198	180Z10	V180ZA10P	105-7144

Mfrs. List No

AC Voltage	Energy (Joules)	Package	Order Code	5+	25+	100+	1K+
4	0.4	b	105-7154	0.78	0.63	0.57	0.47
4	0.8	b	105-7155	3.23	2.61	2.20	1.76
6	1.2	b	105-7156	3.23	2.61	2.20	1.76
10	0.8	c	105-7158	0.39	0.34	0.29	0.26
10	3.5	d	105-7159	2.45	2.05	1.73	1.35
14	0.9	c	105-7160	0.41	0.34	0.29	0.27
14	4.0	d	105-7161	1.39	1.13	0.98	0.76

AC Voltage	Energy (Joules)	Package	Order Code	5+	25+	100+	1K+
14	100	e	105-7162	1.45	1.20	1.01	0.79
17	1.0	c	105-7137	0.35	0.34	-	-
17	5.0	d	105-7163	1.39	1.13	0.98	0.76
20	1.2	c	105-7164	0.37	0.30	0.25	0.20
20	6.0	d	105-7166	1.28	1.04	0.85	0.72
21	150	e	105-7167	1.45	1.20	1.01	0.79
25	1.5	c	105-7168	0.41	0.33	0.27	0.24
25	7.2	d	105-7171	0.83	0.66	0.56	0.48
30	1.8	c	105-7172	0.40	-	-	-
30	8.8	d	105-7173	0.79	0.63	0.54	0.43
35	2.3	c	105-7174	0.38	0.30	0.26	0.23
35	10	d	105-7175	1.39	1.13	0.98	0.76
40	3.0	c	105-7138	0.38	0.36	0.26	0.23
40	13	d	105-7176	1.39	1.13	0.98	0.76
50	4.0	c	105-7177	0.34	0.27	0.23	0.19
50	15	d	105-7139	2.67	2.17	1.92	1.54
60	20	c	105-7140	0.66	0.52	0.45	0.38
60	5.0	d	105-7178	0.42	0.34	0.30	0.27
75	6	c	105-7179	0.72	0.59	0.48	0.42
75	22	d	105-7141	1.56	1.29	1.10	0.85
95	30	c	105-7142	3.21	2.61	2.20	1.76
115	10	b	105-7143	0.72	0.59	0.48	0.42
115	35	b	105-7144	1.56	1.29	1.10	0.85

LA Series (Radial Lead Package)

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000µs) (Joules)	Peak Transient Current (8/20µs) (A)	Varistor Voltage @ 1mA dc (V min, V nom, V max)	Device Marking	Mfrs. List No.	Order Code
130	175	11	1200	184 200 228	1302	V130LA2P	105-7180
130	175	20	2500	184 200 228	1305	V130LA5P	105-7181
130	175	38	4500	184 200 228	130L10	V130LA10AP	105-7183
130	175	70	6500	184 200 228	130L20	V130LA20AP	105-7184
130	175	70	6500	184 200 220	130L20B	V130LA20BP	105-7185
150	200	13	1200	212 240 268	1502	V150LA2P	105-7186
150	200	25	2500	212 240 268	1505	V150LA5P	105-7187
150	200	45	4500	212 240 268	150L10	V150LA10AP	105-7188
150	200	80	6500	212 240 268	150L20	V150LA20AP	105-7189
150	200	80	6500	212 240 243	150L20B	V150LA20BP	105-7190
175	225	55	4500	247 270 303	175L10	V175LA10AP	105-7146
230	300	20	1200	324 360 396	2304	V230LA4P	105-7147
230	300	70	4500	324 360 396	230L20	V230LA20AP	105-7148
250	330	21	1200	354 390 473	2502	V250LA2P	105-7191
250	330	21	1200	354 390 429	2504	V250LA4P	105-7192
250	330	40	2500	354 390 429	250L	V250LA10P	105-7193
250	330	72	4500	354 390 429	250L20	V250LA20AP	105-7195
250	330	130	6500	354 390 429	250L40	V250LA40AP	105-7197
250	330	130	6500	354 390 413	250L40B	V250LA40BP	105-7198
275	369	23	1200	389 430 515	2752	V275LA2P	105-7149
275	369	23	1200	389 430 473	2754	V275LA4P	105-7199
275	369	45	2500	389 430 473	275L	V275LA10P	105-7201
275	369	75	4500	389 430 473	275L20	V275LA20AP	105-7202
275	369	140	6500	389 430 473	275L40	V275LA40AP	105-7203
275	369	140	6500	389 430 453	275L40B	V275LA40BP	105-7204
320	420	90	4500	462 510 565	320L20	V320LA20AP	105-7205
320	420	160	6500	462 510 540	320L40	V320LA40BP	105-7150
420	560	45	2500	610 680 748	420L	V420LA10P	105-7206
420	560	90	4500	610 680 748	420L20	V420LA20AP	105-7151
420	560	160	6500	610 680 720	420L40	V420LA40BP	105-7152
480	640	105	4500	670 750 825	480L40	V480LA40AP	105-7207
480	640	180	6500	670 750 790	480L80	V480LA80BP	105-7208
510	675	110	4500	735 820 910	510L40	V510LA40AP	105-7209
575	730	120	4500	805 910 1000	575L40	V575LA40AP	105-7210
575	730	220	6500	805 910 960	575L80	V575LA80BP	105-7213
660	850	140	4500	940 1050 1210	660L50	V660LA50AP	105-7214
1000	1200	360	6500	1425 1600 1600	1000L160	V1000LA160BP	105-7153

AC Voltage	Energy (Joules)	Package	Order Code	5+	25+	100+	1K+
130							

AC Voltage	Energy (Joules)	Pack-age	Order Code	5+	25+	100+	1K+
275	23	c	105-7199	0.43	0.36	0.30	0.26
275	45	b	105-7201	0.91	0.63	0.38	0.33
275	75	d	105-7202	0.83	0.66	0.58	0.46
275	140	e	105-7203	1.31	1.07	0.88	0.76
275	140	e	105-7204	1.40	1.13	0.98	0.76
320	90	d	105-7205	0.94	0.79	0.66	0.52
320	160	e	105-7150	1.81	1.45	1.23	0.98
420	45	b	105-7206	0.66	0.54	0.45	0.39
420	90	d	105-7151	0.72	0.59	0.51	--
420	160	e	105-7152	1.75	1.45	1.23	0.98
480	105	g	105-7207	0.88	0.72	0.59	0.56
480	180	h	105-7208	4.22	3.43	2.90	2.30
510	110	g	105-7209	4.69	3.81	3.18	2.74
575	120	g	105-7210	1.28	1.04	0.88	0.79
575	220	h	105-7213	2.19	1.83	1.51	1.23
660	140	g	105-7214	2.84	2.33	2.01	--
1000	360	e	105-7153	5.08	4.16	3.56	3.06

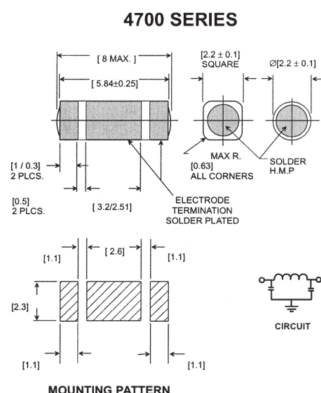
250	33	118-7048	1.32	0.88	0.76	0.66
275	36	118-7050	1.37	0.94	0.78	0.65
300	40	118-7051	1.37	0.94	0.81	0.72
300	40	118-7052	1.26	0.84	0.72	0.63
460	63	118-7054	1.26	0.84	0.72	0.63
60	8.3	118-7055	1.26	0.84	0.69	0.59
275	63	118-7056	1.59	1.11	0.90	0.81
275	104	118-7057	2.71	1.89	1.56	1.32
460	135	319-077	2.71	1.89	1.56	1.32

Capacitive Filters

Surface Mount Pi-Section Filters



Supplied on 16mm blister tape



- Pi-section filters in compact surface mount package
- High current rating 10A
- Designed for use near to noise generating components to suppress interference at source
- Applications include radio and telecommunications, signal processing, disc drives, TV set-top equipment, sensors and instrumentation

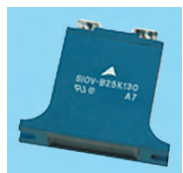
Operating Temperature	-55°C to +125°C				Current Rating	10A
Capacitance (pF)	Voltage Rating @ 125°C (V)	Attenuation dB (50Ω system)			Mfrs. List No.	Order Codes
		10MHz	100MHz	1GHz	10GHz	
1000	100	7	40	65	70	4700-005LF 118-6429
2000	100	10	45	70	70	4700-003LF 118-6430
4000	100	13	52	70	70	4700-008LF 118-6431
8200	100*	20	65	70	70	4701-001LF 118-6432

\*100V @ 85°C

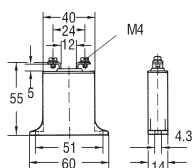
204193

pF	Order Code	Price Each			
		1+	10+	50+	100+
1000	SMD118-6429	6.36	4.38	3.42	2.67
2000	SMD118-6430	6.36	4.38	3.42	2.67
4000	SMD118-6431	6.36	4.38	3.42	2.67
8200	SMD118-6432	6.96	4.71	3.66	2.88

Metal Oxide Block Varistors – SIOV Series



B32/B40 Style



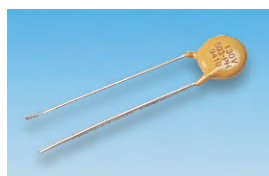
Block encapsulated, symmetrical characteristic, metal oxide varistors for high power transient suppression. Their resistance value decreases with increased voltage, thus 'short-circuiting' a further rise in overvoltage, safeguarding sensitive electronic equipment. UL recognised and CSA approved.

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/200µs) (Joules)	Peak Transient Current (8/20µs) (A)	Nominal Varistor Voltage (V)	Maximum Clamping Voltage (V)	Mfrs List No.	Order Code
130	170	210	25000	205	340	B72232B131K001	120-0450
230	300	300	25000	360	595	B72232B231K001	120-0451
230	300	460	40000	360	595	B72240B231K001	120-0452
250	320	330	25000	390	650	B72232B251K001	120-0453
275	350	550	40000	430	710	B72240B271K001	120-0454

204224

AC Voltage	Energy (Joules)	Order Code	1+	5+	10+
130	210	120-0450	46.67	36.87	28.47
230	300	120-0451	52.41	41.40	31.97
230	460	120-0452	91.46	72.26	55.79
250	330	120-0453	44.50	35.15	27.14
275	550	120-0454	68.81	54.36	41.98

Voltage Dependent Resistors



Body	H	W	D
592 Series	11	7	6
593 Series	13	9	6
594 Series	14	12.5	7
595 Series	19	16	7

Leads	L	Dia.	Spacing
592/593 Series	20	0.6	5
594/595 Series	16	0.8	7.5

- Voltage dependent resistors offering protection against high voltage surges and transients
- Zinc oxide ceramic epoxy coating providing insulation up to 2500V
- UL recognised and VDE approved

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000µs) (Joules)	Varistor Voltage @ 1mA min	Max Clamping V @ 100A (*50A) 8/20ms	Mfrs. List No.	Order Code
60	85	2.9	90	110	165	238159256006 118-7044
275	350	12	387	473	710	238159252716 118-7045
130	170	17	185	225	340	238159351316 118-7046
150	200	20	216	264	400	238159351516 118-7047
250	320	33	351	429	650	238159352516 118-7048
275	350	36	387	473	710	238159352716 118-7050
300	385	40	423	517	800	238159353016 118-7051
460	615	63	675	825	1240	238159354616 118-7052
60	85	8.3	90	110	165	238159356006 118-7054
275	350	63	387	473	710	238159452716 118-7055
275	350	104	387	473	710	238159552716 118-7056
460	615	135	675	825	1240	238159554616 118-7057

204226

AC Voltage	Energy (Joules)	Order Code	5+	100+	1K+	3K+
60	2.9	118-7044	1.04	0.78	0.65	0.55
275	12	118-7045	1.04	0.78	0.65	0.55
130	17	118-7046	1.37	0.94	0.78	0.65
150	20	118-7047	1.37	0.94	0.78	0.65

Sub-miniature Capacitive - 4400 Series



- Sub-miniature ceramic lead-through capacitors for low pass filtering applications
- M3 mounting thread

Operating Temperature -55°C to +125°C  
Current Rating 10A

Mounting hole dia.=3.0, Body length=7.0,  
Body dia.=4.0 (Hex),  
Lead dia.=0.79, Thread=M3 x 0.5

Capacitance (pF)	Voltage Rating @ 125°C (V)	Attenuation dB (50Ω system)				Mfrs. List No.	Order Codes
		1MHz	10MHz	100MHz	1GHz	10GHz	
1000	200	-	5	20	35	45	4400-095LF 118-6433
4700	100	-	15	30	45	55	4400-094LF 118-6434
10000	50	4	21	35	50	55	4400-093LF 118-6435

204192

pF	Order Code	Price Each			
		1+	10+	50+	100+
1000	118-6433	11.38	9.42	8.91	7.95
4700	118-6434	11.20	9.12	8.55	7.65
10000	118-6435	12.52	10.38	9.75	8.79

Capacitive – 2499 Series



- Ceramic lead-through capacitors for low pass filtering applications, where chassis mounting is required and where space is at a premium.

Mounting hole dia.=5.4, Body length=11.9, Body dia.=6.35 (Hex),  
Lead thickness=1.29, Thread=1/8"-NF-2A

Voltage rating	500V	Power Factor	0.03 (106-772=0.001)
Operating Temperature	-55°C to +125°C	Current Rating	10A



Capacitance (pF)	Temperature Coefficient	Insertion Loss (50Ω system)			Mftrs. List No.	Order Code
		10MHz	100MHz	1GHz		
100	±22% to +56% to +85°C	0.1	5	23	2499-003-U2M0-101KLF	118-6421
1000	±22% to +56% to +85°C	5	21	28	2499-003-X5U0-102PLF	118-6422
10000	±22% to +56% to +85°C	22	38	50	2499-003-X5W0-103ZLF	118-6423

pF	Order Code	Price Each			
		1+	10+	50+	100+
100	118-6421	14.10	11.82	7.92	7.08
1000	118-6422	9.24	7.41	4.89	4.38
10000	118-6423	9.24	7.41	4.89	4.38

**Pi-Section – 4101 & 4209 Series**



Solder mount 106-775 106-776 Body length=10.3, Body diameter=4.95, Max height above panel=7.9, Max height below panel= 10.3 (106-775) 18.0 (106-776), Mounting hole dia.=4.0  
 Bush mount 106-777 106-778 Body length=12.3, Body diameter=6.35, Thread=M5 x 0.8, Max height above panel=9.5, Max height below panel=23.4, Mounting hole dia.=5.1

- Pi-section suppression filters in both chassis and solder mount styles
- Combines a ceramic capacitor with a ferrite inductor
- Can be used to suppress unwanted EMI/RFI in a wide range of applications where a high insertion loss is required from 10MHz to 10GHz

Current Rating 10A Operating Temperature -55°C to +125°C °C

Capacitance (pF min)	Voltage Rating		Attenuation dB (50Ω System)				Mftrs. List No.	Order Code
	85°C	125°C	10MHz	100MHz	1GHz	10GHz		
1500	350	200	5	45	70	70	4101-001LF	118-6424
5500	140	70	15	55	70	70	4101-008LF	118-6426

pF	Order Code	Price Each			
		1+	10+	50+	100+
<b>Solder Mount</b>					
1500	118-6424	10.20	8.79	7.53	6.87
5500	118-6426	9.27	8.10	6.96	6.27
<b>Chassis Mount</b>					
1500	118-6427	11.26	9.63	8.28	7.53
5000	118-6428	11.60	10.14	8.52	7.26

**3 Terminal PCB Filters**

**Standard**



H=8, W=8, D=2.54, Lead Length=25, Lead pitch=2.5, Lead dia.=0.6

Capacitance (pF)	Tolerance	Effective Frequency range (50Ω Series) 20dB min) MHz	Voltage Rating dc	Ferrite Beads	Mftrs. List No.	Order Code
47	±20%	800 to 1100	50	No	DSN6NC51H470Q55B	580-831
100	±20%	600 to 1050	50	No	DSN6NC51H101Q55B	580-843
100	±20%	600 to 1050	50	No	DSN6NC51H101Q55B	952-7354
270	±20%	400 to 1000	50	No	DSN6NC51H271Q55B	580-855
1000	±20%	90 to 1000	50	No	DSN6NC51H102Q55B	580-867
1000	±20%	90 to 1000	50	No	DSN6NC51H102Q55B	952-7362
2200	±20%	50 to 1000	50	No	DSN6NC51H222Q55B	580-879
2200	±20%	50 to 1000	50	No	DSN6NC51H222Q55B	952-7370
10000	+80% to -20%	8 to 1000	50	No	DSN6NC51H103Q55B	580-880
10000	+80% to -20%	8 to 1000	50	No	DSN6NC51H103Q55B	952-7389
22000	±50%	40 to 900	50	No	DSN9NC51H223Q55B	952-7400
100000	+20% to -20%	0.8 to 1000	16	No	DSN9NC51C104Q55B	952-7397
22	±20%	800 to 1100	100	Yes	DSS6NC52A220Q55B	580-892
22	±20%	800 to 1100	100	Yes	DSS6NC52A220Q55B	952-7435
47	±20%	400 to 1100	100	Yes	DSS6NC52A470Q55B	580-909
47	±20%	400 to 1100	100	Yes	DSS6NC52A470Q55B	952-7460
100	±20%	200 to 1050	100	Yes	DSS6NC52A101Q55B	108-261
100	±20%	200 to 1050	100	Yes	DSS6NC52A101Q55B	952-7419
220	±20%	110 to 1000	100	Yes	DSS6NC52A221Q55B	108-262
220	±20%	110 to 1000	100	Yes	DSS6NC52A221Q55B	952-7443
270	±20%	90 to 1000	100	Yes	DSS6NC52A271Q55B	580-910
270	±20%	90 to 1000	100	Yes	DSS6NC52A271Q55B	952-7451
270	+20% to -20%	90 to 1000	100	Yes	DSS9NC52A271Q55B	952-7540
470	±20%	70 to 1000	100	Yes	DSS6NC52A471Q55B	580-922
470	±20%	70 to 1000	100	Yes	DSS6NC52A471Q55B	952-7478
1000	±20%	20 to 1000	100	Yes	DSS6NC52A102Q55B	108-263

Sales Tel: (65) 6788 0200

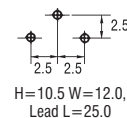
300,000 products, stocked and ready to despatch

637

Capacitance (pF)	Tolerance	Effective Frequency range (50Ω Series) 20dB min) MHz	Voltage Rating dc	Ferrite Beads	Mftrs. List No.	Order Code
1000	±20%	20 to 1000	100	Yes	DSS6NC52A102Q55B	952-7427
2200	+80% to -20%	10 to 1000	100	Yes	DSS6NE52A222Q55B	108-264
2200	+80% to -20%	10 to 1000	100	Yes	DSS6NE52A222Q55B	952-7486
2200	+20% to -20%	20 to 1100	250	Yes	DSS9HB32E222Q55B	952-7516
2200	±20%	20 to 1000	100	Yes	DSS9NC52A222Q55B	952-7532
10000	±30%	7 to 1000	100	Yes	DSS6NZ82A103Q55B	108-265
10000	±30%	7 to 1000	100	Yes	DSS6NZ82A103Q55B	952-7508
22000	+80% to -20%	2 to 1000	16	Yes	DSS6NF31C223Q55B	580-934
22000	+80% to -20%	2 to 1000	16	Yes	DSS6NF31C223Q55B	952-7494
22000	±50%	3 to 1000	50	Yes	DSS9NC51H223Q55B	952-7524

Capacitance (pF)	Order Code	Price Each			
		5+	50+	100+	250+
47	580-831	0.90	0.75	0.66	0.59
100	580-843	0.90	0.75	0.66	0.59
100	952-7354	0.90	0.75	0.66	0.59
270	580-855	0.90	0.75	0.63	0.56
1000	580-867	0.90	0.75	0.66	0.59
1000	952-7362	0.90	0.75	0.66	0.59
2200	580-879	0.90	0.75	0.66	0.59
2200	952-7370	0.90	0.75	0.66	0.59
10000	580-880	0.90	0.75	0.66	0.59
10000	952-7389	0.90	0.75	0.66	0.59

**310 Series**



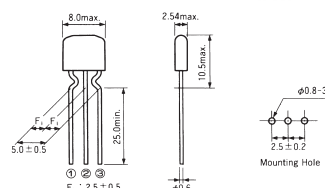
Wide band noise suppression filter made with high performance ferrite material. High attenuation over a wide band. Available with and without ferrite beads.

Rating 7A Operating Temperature -25°C to +85°C

Capacitance (pF)	Tolerance	Effective Frequency range (50Ω Series) 20 dB min) MHz	Voltage Rating dc	Ferrite Beads	Mftrs. List No.	Order Code
22000	+50% to -20%	40 to 900	50	No	DSN9NC51H223Q55B	952-7400
100000	±20%	0.8 to 1000	16	No	DSN9NC51C104Q55B	952-7397
2200	±20%	20 to 1100	250	Yes	DSS9HB32E222Q55B	952-7516
2200	±20%	20 to 1000	100	Yes	DSS9NC52A222Q55B	581-008
22000	+50% to -20%	3 to 1000	50	Yes	DSS9NC51H223Q55B	581-010
2200	±20%	20 to 1100	250	Yes	DSS9HB32E222Q55B	581-057

pF	Volts dc	Price Each			
		Order Code	5+	50+	100+
22000	50	952-7400	0.90	0.75	0.66
100000	16	952-7397	0.90	0.75	0.66
2200	250	952-7516	1.32	0.99	0.84

**Varistor**



EMC, Filters & Suppression

17

Compliant  
 Non-compliant  
 Limited stock - RoHS replacement available  
**RoHS**

- Three terminal T-network consisting of a capacitor which provides a varistor function combined with two internal ferrite bead inductors
- Designed to eliminate noise and protect semiconductors.

Voltage rating	25V dc	Peak pulse current	100A
Varistor voltage	50V dc	Capacitance	220pF ±20%
Current rating	6A	Operating temperature	-40°C to +105°C

Mfrs. List No. VF56VD8E221T51B

204041

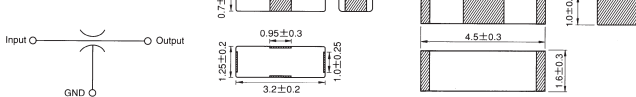
Order Code	Price Each			
	5+	50+	100+	1K+
581-069	1.80	1.32	1.17	0.94

Capacitor – 3 Terminal



- 3 terminal capacitors in chip form which offer a high level of noise suppression and excellent high frequency characteristics
- Applications include suppression of EMI in signal circuits and DC power lines.
- Supplied on tape.

556-701



NFM3212R Series

Voltage rating	50V dc	Current rating	300mA
Capacitance tolerance	1000MΩ min.	Insulation resistance	1000
Operating temperature	125-55°C to +°C	DC resistance	0.3Ω max

Capacitance pF	Mfrs. List No.	Order Code	Capacitance pF	Mfrs. List No.	Order Code
100	NFE61PT101Z1H9L	952-8199	1000	NFE61PT102E1H9L	952-8202
220	NFM3DCC221R1H3L	353-3256	2200	NFM3DCC222R1H3L	353-3281
220	NFM3DCC221R1H3L	952-8253	2200	NFM3DCC222R1H3L	952-8261
360	NFE61PT361B1H9L	952-8210	4700	NFE61PT472C1H9L	952-8229
470	NFM3DCC471R1H3L	353-3268	22000	NFM3DCC223R1H3L	353-3293
1000	NFM3DCC102R1H3L	353-3270	22000	NFM3DCC223R1H3L	952-8270
1000	NFM3DCC102R1H3L	952-8245			

NFM4516R Series

Voltage rating	100V dc	Current rating	300mA
Capacitance tolerance	1000MΩ min.	Insulation resistance	1000MΩ min.
Operating temperature	-55°C to +125°C	DC resistance	0.3Ω max

Capacitance pF	Mfrs. List No.	Order Code	Capacitance pF	Mfrs. List No.	Order Code
470	NFM41CC471R2A3L	353-3300	2200	NFM41CC222R2A3L	353-3323
470	NFM41CC471R2A3L	952-8350	2200	NFM41CC222R2A3L	952-8334
1000	NFM41CC102R2A3L	353-3311	22000	NFM41CC223R2A3L	353-3335
1000	NFM41CC102R2A3L	952-8318	22000	NFM41CC223R2A3L	952-8342

NFM40R Series

Voltage rating	25V dc	Current rating	200mA
Insulation resistance	1000MΩ min.	DC resistance	0.6Ω max
Operating temperature	-55°C to +125°C		

Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
22	+50 to -20	NFM40R01C220T1	952-8300
47	+50 to -20	NFM3DCC470U1H3L	556-713
47	+50 to -20	NFM3DCC470U1H3L	952-8288
100	+50 to -20	NFM3DCC101U1H3L	556-725
100	+50 to -20	NFM3DCC101U1H3L	952-8237
100	+80 to -20	NFE31PT101C1E9L	952-8148
1500	+50 to -20	NFE31PT152Z1E9L	952-8156
220	+50 to -20	NFE31PT221D1E9L	952-8164
470	+50 to -20	NFE31PT471F1E9L	952-8180
470	+50 to -20	NFM3DCC471R1H3L	952-8296
2200	+50 to -50	NFE31PT222Z1E9L	952-8172

NFM41R Series

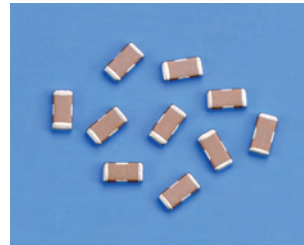
Voltage rating	100V dc	Current rating	300mA dc
Insulation resistance	1000MΩ	DC resistance	0.3Ω max
Operating temperature	-55°C to +125°C		

Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
22	+50 to -20	NFM41CC220U2A3L	556-786
22	+50 to -20	NFM41CC220U2A3L	952-8326

204064

Order Code	Price Each					
	5+	50+	100+	250+ +		
NFM3212R Series	952-8253	1.95	1.80	1.65	0.99	--
NFM3212R Series	NEW 952-8210	2.45	1.80	1.64	1.20	--
NFM4516R Series	952-8350	1.95	1.80	1.65	0.99	--
NFM40R Series	952-8300	1.47	1.08	0.96	0.72	--
NFM41R Series	952-8326	3.15	2.31	2.07	1.59	--

W3F Series



- 1206 case size nickel barrier terminations
- Broad band RFI attenuation
- Ultra low inductance ground connection
- Supplied on tape



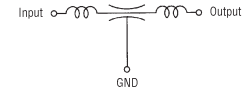
Capacitance pF	Volt dc	Tolerance %	Mfrs. List No.	Order Code
1000	50	+50-20	W3F15C1028AT1A	121-6396
2200	50	+50-20	W3F15C2228AT1A	121-6397
22000	50	+50-20	W3F15C2238AT1A	121-6398
22	100	+50-20	W3F11A2208AT1A	121-6400
47	100	+50-20	W3F11A4708AT1A	121-6401
100	100	+50-20	W3F11A1018AT1A	121-6402
220	100	+50-20	W3F11A2218AT1A	121-6403
470	100	+50-20	W3F11A4718AT1A	121-6404

204159

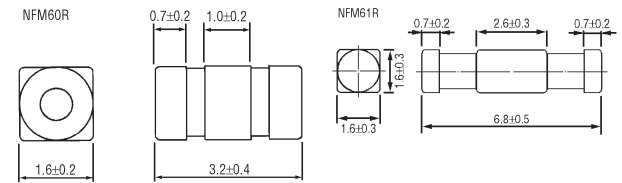
pF	Order Code	Price Each				
		5+	50+	100+	500+	+
<b>50 Volt dc</b>						
1000	SMD 121-6396	1.07	0.97	0.84	0.69	--
2200	SMD 121-6397	1.07	0.97	0.84	0.69	--
22000	SMD 121-6398	1.07	0.97	0.84	0.69	--
<b>100 Volt dc</b>						
22	SMD 121-6400	0.99	0.88	0.76	0.63	--
47	SMD 121-6401	0.99	0.88	0.76	0.63	--
100	SMD 121-6402	0.99	0.88	0.76	0.63	--
220	SMD 121-6403	1.02	0.91	0.79	0.66	--
470	SMD 121-6404	1.02	0.91	0.79	0.66	--

3 Terminal with Ferrite Beads

T Circuit EMFIL®



The NFM 60R/61R has no polarity



- 3 terminal surface mount capacitor with ferrite bead on input and output leads
- High current rating and low DC resistance make them suitable for suppression of DC power rails
- Flow or reflow solder except 869-909 which can only be reflow soldered

NFE31 Series

Voltage rating	25V dc	Current rating	6A dc
Insulation resistance	1000MR	DC resistance	0.01Ω
Operating temperature	-40°C to +85°C	Reel quantity	2000 pcs

Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
100	+80 -20%	NFE31PT101C1E9L	952-8148
220	+50 -20%	NFE31PT221D1E9L	952-8164
470	+50 -20%	NFE31PT471F1E9L	952-8180
1500	+50 -20%	NFE31PT152Z1E9L	952-8156
2200	±50%	NFE31PT222Z1E9L	952-8172

NFE61 Series

Voltage rating	50V dc	Current rating	2A
Insulation resistance	1000MR	Quantity	2500 pcs
Operating temperature	-25°C to +85°C		

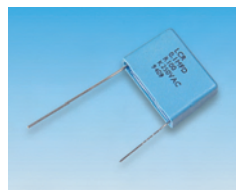
Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
100	±30%	NFE61PT101Z1H9L	952-8199
1000	±80%	NFE61PT102E1H9L	952-8202
4700	+80 -20%	NFE61PT472C1H9L	952-8229

204089

Order Code	Price Each					
	5+	50+	100+	500+	+	+
NFE31Series	All Values	2.34	1.73	1.54	1.13	--
NFE61Series	All Values	2.45	1.80	1.64	1.20	--

Contact Suppressors

RC Network – PCB Mounting



- PCB mounting contact arc suppressor which will suppress interference across switch and relay contacts when switching reactive loads.

H=19, W=25, D=8  
Lead pitch=22.5, Lead dia.=0.8, Lead length=20

Power rating 0.5W @ 250V ac Construction C=0.1µF class x ±10%  
Operating temperature -55°C to +100°C 0.1µF R=100Ω ±10%10

204007

Order Code	Price Each				
	1+	50+	100+	500+	+
952-0996	4.13	3.75	3.40	2.30	--

RC Network – PCB Mounting and Flying Leads



PCB mounting  
H=17.5  
W=23.5  
D=8.5  
Lead pitch=20  
Lead dia.=0.8  
Lead length=15.

Flying leads  
H=23  
W=19  
D=8.5  
Lead pitch=15  
Lead dia.=20 AWG  
Lead length=100.

- RC Networks consisting of a capacitor in series with a high quality metal film resistor
- PCB mounting style or with flying leads
- Applications include suppression when switching reactive loads and as a snubber network in SCR and triac protection. Approved to VDE, SEMKO, DEMKO, NEMKO and CSA.
- UL recognised

Power rating 0.5W @ 250V ac Mfrs. List No. XE1201 = 118-7649  
Operating temperature -40°C to +85°C XEB1201 = 118-7659  
Construction C=0.1µF class X ±20%  
R=120Ω ±30%

204237

	Order Code	Price Each				
		1+	50+	100+	500+	+
PCB Mounting	118-7649	5.34	4.66	4.25	3.02	--
Flying Leads	118-7659	7.57	6.68	6.17	4.47	--

Spark Quenchers - Chassis Mounting



- Single and three phase suppressors designed to reduce arcing when switching inductive loads
- May also be used to reduce dv/dt across thyristors and other solid state devices

Mfrs. List No.	Single Phase FP012	Three Phase FP012
Capacitance	0.33µF	0.33µF x 3
Capacitive Tolerance	±10%	±10%
Resistors	33R ± 30%, 6W	33R ± 30%, 6W x 3
Operating voltage	500V RMS (max)	500V RMS (max)
Supply frequency	50/60Hz	50/60Hz
Operating temperature	-40°C to +70°C	-40°C to +70°C
Insulation resistance	100MR 500V	100MR 500V

233810

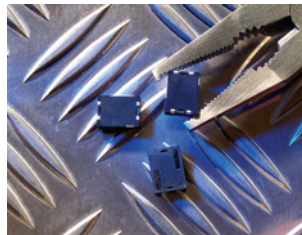
	Mfrs. List No.	Order Code	Price Each				
			1+	10+	50+	100+	+
Single Phase	FP012	952-0864	19.47	18.96	17.36	16.03	--
Three Phase	FP013	952-0872	43.28	41.30	37.86	34.93	--

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[www.farnell-newarkinone.com.sg](http://www.farnell-newarkinone.com.sg)

The very latest NEW products

DC Power Filters

Surface Mount - BNX Series



- Large rated current (10A) and Low DC Resistance
- High insertion loss characteristic over a wide frequency range of 1MHz to 1GHz
- Mounting area and volume is reduced
- Application includes Amusement equipment, PC and peripherals

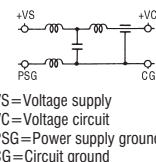
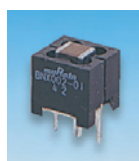


Insulation Resistance	500MΩ
Ratings (dc) Current (A)	10
Voltage (V)	50
Mfrs. List No.	BNX022-01
Order Code	111-4996

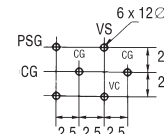
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Order Code	Price Each				
	1+	10+	25+	50+	+
111-4996	12.34	10.29	7.97	7.71	--

Standard BNX Series



H=13.0, W=12.0, D=11.0



- Compact PCB mounting dc power filters incorporating a large value four terminal capacitor, a feed-through capacitor and ferrite bead inductors
- Provides excellent attenuation over a very wide frequency band.
- Typical applications include the suppression of noise in digital equipment, engine control units, computer terminals and the output lines of switching power supplies.

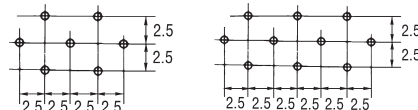
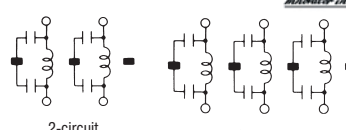
Ratings (dc) Current (A)	Voltage (V)	Dielectric Strength (V)	Insertion Loss	Mfrs. List No.	Order Code
10	50	125	1MHz - 1GHz	BNX002-01	952-6943
10	150	375	5MHz - 1GHz	BNX003-01	952-6951
15	50	125	1MHz - 1GHz	BNX005-01	952-6960

Insulation Resistance 100MΩ Insertion Loss 40dB min

204212

Order Code	Price Each				
	1+	10+	25+	50+	+
952-6943	10.59	9.42	8.61	7.23	--
952-6951	11.81	10.80	9.99	7.89	--
952-6960	14.90	13.17	12.00	10.77	--

Pi-Style BNP Series



- Compact PCB mounting dc power filters incorporating ferrite bead inductors and feed-through capacitors
- Available in two and three circuit styles suitable for multiple supply lines
- They provide excellent attenuation over a wide frequency range of 15MHz to 1GHz and are suitable for use in high impedance circuits.
- Typical applications include the suppression of noise in signal lines and dc power sources in engine control units, digital equipment, computer terminals and car electronics.

Rating 10A @ 50V Operating temperature -40°C to +100°C  
Insulation resistance 100MΩ

No. of Circuits	Attenuation dB (50Ω System)			
	H	W	D	
2	12	12	11	5
3	12	17	11	5

204213

No. of Circuits	Order Code	Price Each			
		1+	10+	25+	+
2	952-6927	6.45	5.82	5.51	--
2	952-6927	6.45	5.82	5.51	--
3	108-272	7.05	6.36	5.87	--
2	952-6935	7.05	6.36	5.87	--

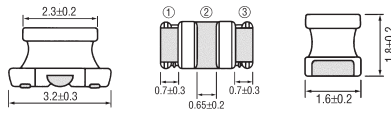
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EMC, Filters & Suppression

Compliant  
Non-compliant  
Limited stock - RoHS replacement available  
**RoHS**

Signal Line Noise Filters

NFW31xxx Series



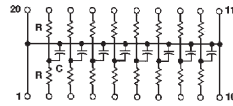
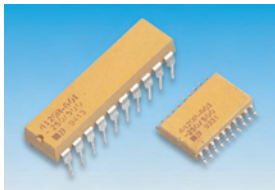
- Chip suppression filter, suitable for high speed digital circuits where signal harmonics are prone to becoming sources of noise
- Effective in applications where signal and noise frequencies are close to each other
- Applications include noise suppression in high speed processing circuits, high frequency clock and RGB circuits.

Rating	200mA @ 25V dc		Reel quantity	2000 pcs
Operating temperature	-40°C to +85°C			
Cut-off Frequency				
MHz	10MHz	20MHz	50MHz	100MHz
	200MHz	500MHz	1GHz	
Order Code	Mfrs. List No.			
10	*	5	25	25
20	-	*	5	25
50	-	-	*	10
100	-	-	-	*
200	-	-	-	*

\* 6dB Max.

Order Code	Price Each					
	5+	50+	100+	500+	+	
NFM51R	All Values ●	2.23	1.65	1.41	1.08	--

601 Series RC Network T-Filter



Standard H=4.57, W=7.87, L=27.05  
Lead spacing = 2.54 x 8.64

Surface Mount H=2.78, W=10.34, L=12.95  
Lead spacing = 1.27 x 10.34

- Low pass noise filters designed to filter out the high frequency noise content of digital signals at board level
- Can be used to filter a maximum of eight signal lines
- Flame retardant case to UL94V-0.

Voltage Rating	50V	Capacitance voltage	25V
Resistance temperature coefficient	±300ppm/°C	Capacitance tolerance	±30%
Capacitance temperature coefficient	Z5U		
Attenuation (dB)			
pF	Ω	10MHz	20MHz
		100MHz	200MHz
		1GHz	
50	25	3dB	4dB
50	25	3dB	4dB
200	25	4dB	7dB
200	25	4dB	7dB
50	25	3dB	4dB
50	25	3dB	4dB
200	25	4dB	7dB
200	25	4dB	7dB

pF	Ω	Order Code	Price Each				
			1+	25+	50+	100+	+
<b>Standard</b>							
50	25	287-076▲‡	7.22	6.21	5.55	4.59	--
50	25	935-6029●	7.22	6.21	5.55	4.59	--
200	25	287-088▲‡	7.22	6.21	5.55	4.59	--
200	25	935-6010●	7.22	6.21	5.55	4.59	--
<b>Surface Mount</b>							
50	25	SMD 508-585▲‡	13.42	11.61	10.32	8.43	--
50	25	SMD 935-6045●	13.42	11.61	10.32	8.43	--
200	25	SMD 508-597▲‡	13.42	11.61	10.32	8.43	--
200	25	SMD 935-6037●	13.42	11.61	10.32	8.43	--

SMD Inductors

MLS Series



0603 case size: L=1.6±0.15, W=0.8±0.15, H=0.74±0.15, Tape width=8.0, Reel=4000pcs  
0805 case size: L=2.0±0.2, W=0.8±0.2, H=0.74±0.2, Tape width=8.0, Reel=3000pcs  
1206 case size: L=3.2±0.2, W=1.6±0.2, H=1.1±0.2, Tape width=8.0, Reel=3000pcs  
1806 case size: L=4.5±0.25, W=1.6±0.25, H=1.6±0.25, Tape width=12, Reel=2000pcs



- Ferrite chip bead suppressors
- 0603, 0805, 1206 and 1806 case sizes
- Suitable for EMI/RFI attenuation in electronic equipment
- Applications include computers, audio/video, automotive, digital communications, mobile phones etc.

Operating temperature	-55°C to +125°C		Impedance tolerance	±25%
Case Size	Impedance @ 100MHz (Ω)	Rated Current Max. (mA)	DC Resistance Max. (Ω)	Mfrs. List No.
0603	60	300	0.4	MLS0603-4S7-600
0603	120	200	0.8	MLS0603-4S7-121
0603	150	200	0.9	MLS0603-4S7-151
0603	300	150	1.2	MLS0603-4S7-301
0603	600	150	1.8	MLS0603-4S7-601
0805	30	600	0.1	MLS0805-4S4-300
0805	60	400	0.2	MLS0805-4S4-600
0805	120	300	0.3	MLS0805-4S7-121
0805	300	200	0.3	MLS0805-4S7-301
0805	600	200	0.6	MLS0805-4S7-601
0805	1000	150	0.8	MLS0805-4S7-102
1206	30	600	0.1	MLS1206-4S4-300
1206	70	400	0.2	MLS1206-4S4-700
1206	90	400	0.2	MLS1206-4S4-900
1206	120	300	0.2	MLS1206-4S4-121
1206	600	200	0.4	MLS1206-4S4-601
1206	1000	150	0.6	MLS1206-4S7-102
1806	80	600	0.1	MLS1806-4S4-800
1806	150	500	0.2	MLS1806-4S4-151

Case size	Order Code	Price Each			
		1+	30+	100+	300+
0603	All Values ●	0.69	0.59	0.53	0.28
0805	All Values ●	0.63	0.56	0.53	0.38
1206	All Values ●	0.63	0.56	0.53	0.38
1806	All Values ●	1.21	0.99	0.84	0.47

BLM18T Series - 0603 Case



The chip ferrite beads BLM series is designed to function nearly as a resistor at noise frequencies, which greatly reduces the possibility of resonance and leaves signal wave forms undistorted. The BLM series is effective in circuits without stable ground lines because the BLM series does not need a connection to ground.



- Excellent solder heat resistance
- Effective in noise suppression in a wide frequency range (10MHz to several hundred MHz)

Impedance	Tolerance	Resistance	Current	Current	Order Code
Ω	%	Ω	A	A	
120	25	0.25	200	BLM18TG121TN1D	111-5048
220	25	0.3	200	BLM18TG221TN1D	111-5049
600	25	0.45	200	BLM18TG601TN1D	111-5050
1000	25	0.6	100	BLM18TG102TN1D	111-5051

Order Code	Price Each			
	10+	50+	100+	500+
All Values ●	0.39	0.33	0.26	0.20

Solid Inductor – Surface Mount



- Solid ferrite inductor, designed to reduce spurious oscillations in high frequency amplifiers.

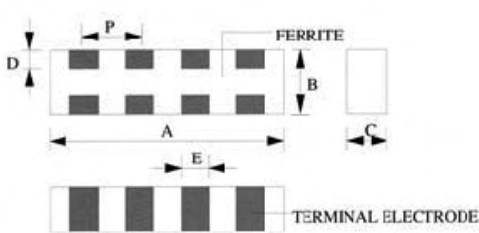
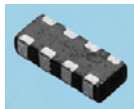


List No.	Impedance. Ω @ 100MHz	Rated Current (mA)	DC Resistance (Ω max.)	L	W	H
BLM31AF700SN1L	70	200	0.5	3.2	1.6	1.1
BLM31AJ601SN1L	600	200	1	3.2	1.6	1.1
BLM41AF151SN1L	150	200	0.7	4.5	1.6	1.6
BLM41PG600SN1L	60	6000	0.01	4.5	1.6	1.6
BLM41PG750SN1L	75	3000	0.03	4.5	1.6	1.6
BLM41PF800SN1L	80	1000	0.15	4.5	1.6	1.6
BLM41AF800SN1L	80	500	0.3	4.5	1.6	1.6

Mfrs. List No.	Order Code	Price Each			
		10+	50+	100+	500+
BLM31AF700SN1L	SMD 581-082‡	0.81	0.60	0.54	0.40
BLM31AF700SN1L	NEW SMD 952-6854●	0.81	0.60	0.54	0.40
BLM31AJ601SN1L	SMD 581-094‡	1.18	0.84	0.72	0.54
BLM31AJ601SN1L	NEW SMD 952-6862●	1.18	0.84	0.72	0.54
BLM41AF151SN1L	SMD 581-100‡	1.11	0.81	0.72	0.55
BLM41AF151SN1L	NEW SMD 952-6870●	1.11	0.81	0.72	0.55
BLM41PG600SN1L	SMD 556-865‡	1.29	0.93	0.84	0.63

Mftrs. List No.	Order Code	10+	50+	100+	500+	+
BLM41PG600SN1L	<b>NEW</b> SMD 952-6900	1.29	0.93	0.84	0.63	--
BLM41PG750SN1L	SMD 556-877	1.20	0.87	0.78	0.60	--
BLM41PG750SN1L	<b>NEW</b> SMD 952-6919	1.20	0.87	0.78	0.60	--
BLM41PF800SN1L	SMD 556-889	0.90	0.66	0.59	0.45	--
BLM41PF800SN1L	<b>NEW</b> SMD 952-6897	0.90	0.66	0.59	0.45	--
BLM41AF800SN1L	SMD 556-890	0.84	0.60	0.55	0.41	--
BLM41AF800SN1L	<b>NEW</b> SMD 952-6889	0.84	0.60	0.55	0.41	--

Ferrite Bead Array



L = 3.2, D = 0.9, W = 0.9 (mm)  
Tol: ±0.20

Features include:

- Combines 4 single ferrite beads into a 1206 package, which reduces board space and placement time
- Wide range of impedance values from 30-1000 ohms
- Wide operating temperature range -55 to 125 °C
- Suitable for Re-flow or flow soldering method

Applications include:

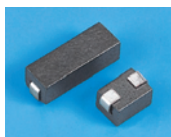
- Filtering between analogue and digital circuits
- Clock generation circuitry
- I/O interconnects
- Isolation between RF noisy circuits and logic devices
- Power supply filtering to prevent RF energy from corrupting the power generation circuitry
- High frequency EMI prevention for computers, TV, mobile phone. etc

Insulation Resistance	IDC	Order
100MHz	(mA) max.	Mftrs List No.
0.4R	30	350
0.4R	60	250
0.8R	120	150
0.8R	240	150
0.8R	300	150
1R	470	100
1.5R	600	100
1.7R	1000	50

Order Multiple=5

Mftrs List No.	Order Code	5+	25+	100+	250+	+
MLB-3216-0030M4-N2	941-5980	1.30	1.20	1.11	1.01	--
MLB-3216-0060M4-N2	941-5998	1.30	1.20	1.11	1.01	--
MLB-3216-0120M4-N2	941-6005	1.30	1.20	1.11	1.01	--
MLB-3216-0240M4-N2	941-6013	1.30	1.20	1.11	1.01	--
MLB-3216-0300M4-N2	941-6021	1.30	1.20	1.11	1.01	--
MLB-3216-0470M4-N2	941-6030	1.30	1.20	1.11	1.01	--
MLB-3216-0600M4-N2	941-6048	1.30	1.20	1.11	1.01	--
MLB-3216-1000M4-N2	941-6056	1.30	1.20	1.11	1.01	--

Ferrite Bead Inductors



- Chip ferrite inductors
- Applications include filtering circuits in digital equipment

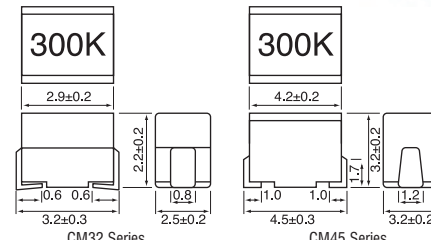
Impedance Min. (Ω)	DC Resistance	Dimensions	Distance	Order Code
@ 25MHz	Max. (mΩ)	L W H	Solder Pad Between Pads	
20	0.6	4 3 2.55	3 x 3	926-5260
45	0.9	8.5 3 2.55	3 x 3	926-5279

Order Code	5+	25+	100+	250+	+
SMD 926-5260	0.81	0.72	0.63	0.48	--
SMD 926-5279	0.78	0.66	0.63	0.48	--

CM32/CM45 Series-Surface Mount



- High reliability wirewound chip inductors offering a small case size and high resistance to both mechanical shock and heat/humidity



Operating temperature -20°C to +100°C (CM32), -25°C to +100°C (CM45)

Inductance (μH)	Tolerance	Q	Test Freq (MHz)	Min. Self Res. Frequency (MHz)	Max. DC Res. Ω	Max DC Current mA	Order Code
0.15	±20%	10	25.2	350	0.72	230	935-7998
0.22	±20%	25	25.2	230	0.29	360	935-8005
0.33	±20%	25	25.2	190	0.35	330	935-8013
0.47	±20%	25	25.2	160	0.44	290	935-8021
0.68	±20%	25	25.2	135	0.55	260	935-8030
1	±20%	30	7.96	115	0.7	230	935-7890
1.5	±20%	30	7.96	90	0.75	210	935-7904
2.2	±20%	30	7.96	80	1	190	935-7920
3.3	±10%	30	7.96	65	1.2	180	935-7947
4.7	±10%	30	7.96	55	1.5	165	935-7963
6.8	±10%	30	7.96	45	1.8	150	935-7980
10	±10%	30	2.52	36	2.1	140	935-7866
15	±10%	30	2.52	30	2.8	120	935-7882
22	±10%	30	2.52	25	3.7	105	935-7912
33	±10%	30	2.52	20	5.6	85	935-7939
47	±10%	30	2.52	15	7	75	935-7955
68	±10%	30	2.52	15	9	65	935-7971
100	±10%	20	0.796	10	10	60	935-7874

Inductance (μH)	Tolerance	Q	Test Freq (MHz)	Min. Self Res. Frequency (MHz)	Max. DC Res. Ω	Max DC Current mA	Order Code
0.1	±20%	35	25.2	300	0.18	800	935-8188
0.22	±20%	40	25.2	200	0.25	665	935-8196
0.33	±20%	40	25.2	165	0.28	605	935-8200
0.47	±20%	40	25.2	145	0.32	545	935-8218
0.68	±20%	40	25.2	135	0.4	500	935-8226
1	±10%	50	7.96	100	0.5	450	935-8072
2.2	±10%	50	7.96	55	0.7	380	935-8102
4.7	±10%	50	7.96	35	1	315	935-8153
10	±10%	50	2.52	20	1.6	250	935-8048
15	±10%	50	2.52	17	2.5	200	935-8064
22	±10%	50	2.52	13	3.2	180	935-8080
33	±10%	50	2.52	11	4	160	935-8110
47	±10%	50	2.52	10	5	140	935-8137
68	±10%	50	2.52	9	6	130	935-8161
100	±10%	40	0.796	8	8	110	935-8056
220	±10%	40	0.796	4	10	100	935-8099
330	±10%	40	0.796	3.5	14	85	935-8129
470	±10%	40	0.796	3	26	62	935-8145
680	±10%	30	0.796	3	30	50	935-8170

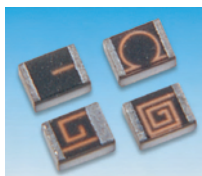
Order Multiple=10

Type	Order Code	10+	50+	100+	500+	+
CM32 Series	All Values	1.23	1.08	1.05	0.90	--
CM45 Series	All Values	0.94	0.90	0.81	0.63	--

Accu-L® Series - Surface Mount



0805 Case Size



- Ultra-compact high frequency SMD inductors especially designed to meet the ever increasing demands within the telecommunications industry for extended frequencies
- Construction based on thin-film multilayer technology which provides a high consistency of physical and electrical characteristics, resulting in reliable batch repeatability.

L=2.11±0.1, W=1.5±0.1, H=0.91±0.13

Inductance (nH)	Q Factor (Test frequency 450MHz)	Typical	Tolerance	Min. Self Res. Frequency (MHz)	Max. DC Res. Ω	Max. DC Current (1) mA	DC Current (2)	Mftrs. List No.	Order Code
2.7	42	±0.5nH	10000	0.08	1000	2000	L08052R7DESTR	110-0442	
3.3	38	±0.5nH	10000	0.11	750	1500	L08053R3DESTR	110-0443	
4.7	43	±0.5nH	5500	0.1	750	1500	L08054R7DESTR	110-0444	
5.6	50	±0.5nH	4600	0.1	750	1500	L08055R6DESTR	110-0445	
6.8	43	±0.5nH	4500	0.11	750	1500	L08056R8DESTR	110-0446	
8.2	43	±0.5nH	3500	0.12	750	1500	L08058R2DESTR	110-0447	
10	46	±5%	2500	0.13	750	1500	L080510QJESTR	110-0448	
15	36	±5%	2200	0.2	750	1500	L080515QJESTR	110-0449	
22	36	±5%	1400	0.4	500	1000	L080522QJESTR	110-0450	

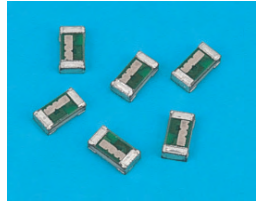
(1) DC current measured for 15°C rise at 25°C ambient temperature  
 (2) DC current measured for 70°C rise at 25°C ambient temperature  
 Operating temperature -55°C to +125°C

204016

Order Multiple=5	Price Each				
Order Code	5+	50+	100+	250+	+
All Values ●	1.83	1.59	1.34	1.10	--

**3640 Series**

0402 & 0603 Case Sizes



- Thin film technology surface mount RF inductors
- 0402 and 0603 case sizes
- Tight tolerances with narrow distributions
- High Q factor
- Suitable for telecommunications applications



Operating temperature -40°C to +125°C  
 Temperature coefficient 0 to +125ppm/°C  
 Self resonant frequency 7000MHz

H=0.5, W=0.8, L=1.6  
 Supplied on 8mm tape (reel=500pcs)

Inductance (nH)	Tolerance	Q Min.	Test. Freq (MHz)	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
<b>0402 Case Size</b>							
1	±0.2%	10	300	0.1	1200	36401E1N0A	117-4118
1.5	±0.2%	10	300	0.15	930	36401E1N5A	117-4119
2.2	±0.2%	10	300	0.2	600	36401E2N2A	117-4120
3.3	±0.2%	10	300	0.3	500	36401E3N3A	117-4121
4.7	±0.2%	10	300	0.6	340	36401E4N7A	117-4122
6.8	±0.2%	10	300	0.8	290	36401E6N8A	117-4123
8.2	±0.2%	10	300	1.3	230	36401E8N2A	117-4124
10	±2%	10	300	1.50	210	36401E10NJ	117-4126
22	±3%	10	300	0.1	1200	36401E22NJ	117-4127
33	±3%	10	200	3.60	130	36401E33NJ	117-4128
<b>0603 Case Size</b>							
1	±0.2nH	20	300	0.1	1000	36401J1N0A	117-4040
1.5	±0.2nH	20	300	0.1	1000	36401J1N5A	117-4041
2.2	±0.2nH	20	300	0.15	800	36401J2N2A	117-4042
3.3	±0.2nH	20	300	0.2	700	36401J3N3A	117-4043
4.7	±0.2nH	20	300	0.25	600	36401J4N7A	117-4044
6.8	±0.2nH	15	300	0.5	400	36401J6N8A	117-4045
10	±0.2%	15	300	1	300	36401J10NG	117-4047
15	±0.2%	15	300	1	300	36401J15NG	117-4048
22	±0.2%	15	300	1.5	250	36401J22NG	117-4049
33	±0.2%	15	200	2	200	36401J33NG	117-4050
39	±0.2%	15	200	3	180	36401J39NG	117-4051
47	±0.2%	15	200	3	180	36401J47NG	117-4052
68	±0.2%	15	200	4.5	140	36401J68NG	117-4053
100	±0.2%	15	200	8.5	100	36401J100G	117-4054

204184

Case Size	Order Code	5+	50+	100+	500+
0402	All Values ●	0.59	0.50	0.44	0.38
0603	All Values ●	0.41	0.38	0.34	0.25

**3640 - Laboratory Kit**



- Surface mount ring binder laboratory kit
- 0603 thin film inductors
- Can be easily restocked
- Also contains 0402 size



Kit contains 20 of each Inductance Value

0603 case size 1.0nH, 1.5nH, 2.2 nH, 3.3nH, 4.7nH, 6.8nH, 10nH, 15nH, 22nH, 33nH, 39nH, 47nH, 68nH, 100nH.  
 0402 case size 1.0nH, 1.5nH, 2.2nH, 3.3nH, 4.7nH, 6.8nH, 8.2nH, 15nH, 22nH, 33nH.

204182

	Order Code	1+	3+
Laboratory kit	117-4055 ●	177.00	147.00

**BMB Series - Ferrite Chip Beads**



0805 Case Size



- Surface mount ferrite noise reduction beads
- 0805 case size
- Types A and L for general use
- Type B for high frequency to minimise signal waveform attenuation
- Type R for low frequency to prevent signal ringing in digital circuits



H=0.9, W=1.2, L=2.0  
 Supplied on 8mm tape (reel=500pcs)

Type	Impedance @ 100MHz (Ω)	DC Res. Max. (Ω)	Current rating (mA)	Mfrs. List No.	Order Code
A	120	0.6	200	BMB2A0120AN1	119-3413
A	120	0.3	300	BMB2A0120AN4	119-3414
A	150	0.6	200	BMB2A0150AN1	119-3415
A	220	0.5	200	BMB2A0220AN4	119-3416

	Impedance @	DC Res.		
A	300	1	200	BMB2A0300AN1 119-3418
L	60	0.1	700	BMB2A0060LN2 119-3419
L	300	0.2	400	BMB2A0300LN2 119-3420
L	1000	0.3	300	BMB2A1000LN2 119-3421
B	120	0.4	300	BMB2A0120BN3 119-3422
B	600	0.5	200	BMB2A0600BN3 119-3423
B	1000	0.7	200	BMB2A1000BN3 119-3424
R	600	0.5	200	BMB2A0600RS2 119-3425

204185

Order Multiple=10	Order Code	10+	100+	500+	1K+
Type A	All Values ●	0.31	0.25	0.19	0.13
Type L and B	All Values ●	0.47	0.38	0.28	0.19
Type R	All Values ●	0.63	0.47	0.41	0.25

**BMB - Laboratory Kit**



- Surface mount ring binder laboratory kit
- 0805 size ferrite beads
- Can be easily restocked
- Also contains 0603 size



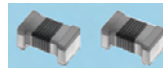
Kit contains 20 of each Inductance Value (Ω)

0805 case size Type A: 120, 120, 150, 220, 330.  
 Type B: 5, 56, 120, 200, 300, 600, 750, 1000  
 Type R: 120, 430, 600  
 Type L: 60, 300, 1000  
 0603 case size Type B: 5, 70, 120, 200, 300, 420, 600,  
 Type R: 120, 240, 600

204183

	Order Code	1+	3+
Laboratory kit	119-3426 ●	225.25	213.27

**LQW04A Series**



H=0.8mm, W=0.4mm,  
 D=0.06mm

The LQW04A series consists of air core chip coil using a miniature alumina core. The LQW04A series has high Q value in high frequency range and high self resonant frequency. It is suitable for high frequency circuits which are used in telecommunications equipment.



**Features:**

- Resin-coated surface enables excellent mounting
- Low DC resistance design is ideal for low loss, high output and low power consumption



**Applications:**

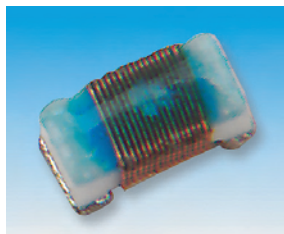
- Mobile phones such as GSM, CDMA, PDC, etc.
- W-LAN & Bluetooth
- High frequency circuits in general

Inductance nH	Resistance Ω	Current mA	Mfrs. List No.	Order Code
1.1	0.028	990	LQW04AN11D00D	111-5001
1.8	0.056	700	LQW04AN18D00D	111-5002
2.7	0.07	570	LQW04AN27D00D	111-5003
3	0.07	620	LQW04AN30D00D	111-5004
3.6	0.098	530	LQW04AN36D00D	111-5006
3.9	0.098	530	LQW04AN39D00D	111-5007
4.3	0.098	530	LQW04AN43D00D	111-5008
4.7	0.14	440	LQW04AN47D00D	111-5009
5.1	0.112	470	LQW04AN51D00D	111-5010
5.6	0.112	470	LQW04AN56D00D	111-5011
6.2	0.182	390	LQW04AN62D00D	111-5012
6.8	0.14	440	LQW04AN68D00D	111-5013
7.5	0.14	440	LQW04AN75D00D	111-5014
8.2	0.224	350	LQW04AN82D00D	111-5015
9.1	0.154	400	LQW04AN91D00D	111-5016
10	0.252	330	LQW04AN10NJ00D	111-5018
11	0.28	310	LQW04AN11NJ00D	111-5019
12	0.28	310	LQW04AN12NJ00D	111-5020
13	0.336	280	LQW04AN13NJ00D	111-5021
15	0.476	240	LQW04AN15NJ00D	111-5022
16	0.378	270	LQW04AN16NJ00D	111-5023
18	0.532	220	LQW04AN18NJ00D	111-5024
20	0.56	210	LQW04AN20NJ00D	111-5025
22	0.63	200	LQW04AN22NJ00D	111-5026

423323

Order Code	10+	100+	500+	1K+	+
All Values ●	0.62	0.52	0.39	0.39	--

**LQW1608A Series**  
0603 Case Size



- Miniature SMD inductors with alumina core
- Unique winding technology minimises stray capacitance leading to increased SRF
- High Q and stable inductance at high frequencies
- Low DC resistance
- 0603 case size allows high density mounting



L=1.6, W=0.8, H=0.8

Inductance		Q Factor	DC Resistance	Self Resonance Freq.	Allowable Current	Order Code
nh	Tolerance	Min.	Ω Max.	MHz Min	mA	
5.6	±2%	35	0.082	6000	750	952-8016
10	±2%	35	0.11	6000	650	952-7958
12	±2%	35	0.13	6000	600	952-7966
15	±2%	40	0.13	6000	600	952-7974
22	±2%	40	0.17	4600	500	952-7982
33	±2%	40	0.23	3200	420	952-7990
47	±2%	38	0.29	2600	380	952-8008
68	±2%	38	0.38	2200	340	952-8024
100	±2%	34	0.68	1800	220	952-8032
150	±2%	32	1.5	1400	160	952-8040
220	±2%	25	2.5	1200	120	952-8059

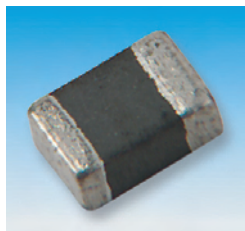
Mfrs. List No.

LQW18AN5N6D00D	=952-8016	LQW18AN22NG00D	=952-7982	LQW18ANR10G00D	=952-8032
LQW18AN10NG00D	=952-7958	LQW18AN33NG00D	=952-7990	LQW18ANR15G00D	=952-8040
LQW18AN12NG00D	=952-7966	LQW18AN47NG00D	=952-8008	LQW18ANR22G00D	=952-8059
LQW18AN15NG00D	=952-7974	LQW18AN68NG00D	=952-8024		

227184

Order Multiple=5	Price Each				
Order Code	5+	50+	100+	500+	+
All Values ●	1.47	1.17	1.11	0.72	--

**LQG21N Series**  
0805 Case Size



- Miniature SMD inductors using multilayer process technology and magnetic materials
- Magnetically shielded design – ideal for high density mounting
- Approximately 1/4 the size of conventional chip coils while still retaining high reliability
- 0805 case size



L=2.0, W=1.25, H=0.85  
(3.3, 4.7μH=1.25)

Inductance		Q Factor	DC Resistance	Self Resonance Freq.	Allowable Current	Order Code
μh	Tolerance	Min.	Ω Max.	MHz Min	mA	
0.1	±10%	20	0.26	340	250	952-7893
0.15	±10%	20	0.32	270	250	952-7907
0.22	±10%	20	0.38	220	250	952-7915
0.33	±10%	20	0.48	180	250	952-7923
0.47	±10%	25	0.57	150	200	952-7931
0.68	±10%	25	0.72	125	150	952-7940
1	±10%	45	0.4	107	50	952-7850
1.5	±10%	45	0.5	87	50	952-7869
3.3	±10%	45	0.8	59	30	952-7877
4.7	±10%	45	1	47	30	952-7885

LQM21N10K10D	952-7893	LQM21N11R47K10D	952-7931	LQM21N11R5K10D	952-7869
LQM21N11R15K10D	952-7907	LQM21N11R68K10D	952-7940	LQM21N11R33K10L	952-7877
LQM21N11R22K10D	952-7915	LQM21N11R10K10D	952-7850	LQM21N11R47K10L	952-7885
LQM21N11R33K10D	952-7923				

227187

Order Multiple=5	Price Each				
Order Code	5+	50+	100+	500+	+
All Values ●	0.75	0.53	0.53	0.33	--

**LQH3C Series**  
1210 Case Size



- 1210 size chip inductors (wire wound on ferrite)
- Features low DC resistance to combine high inductance with high current capacity
- High impedance
- Excellent for use as choke coils in DC power supply circuits



L=3.2, W=2.5, H=2.0

Operating temperature	Test Frequency
-25°C to +85°C	1MHz (1kHz 470μH)

Inductance μH	Inductance Tolerance	Q Factor Min.	DC Resistance Ω Max.	Self Resonance Freq. MHz Min	Allowable Current mA	Order Code
0.15	±20%	20	0.028	400	1450	952-2158
0.47	±20%	20	0.042	150	1100	952-2166
1	±20%	20	0.06	100	1000	952-2174
2.2	±20%	35	0.097	64	790	952-2182
4.7	±20%	35	0.15	43	650	952-2190
10	±10%	35	0.3	26	450	952-2204
47	±10%	40	1.3	15	170	952-2212
100	±10%	40	3.5	10	100	952-2220
220	±10%	40	8.4	6.8	70	952-2239
330	±10%	40	10	5.6	60	952-2247
470	±10%	40	19	5	60	952-2255

\* Low DC resistance types

Mfrs. List No.

LQH32CNR15M33L	=952-2158	LQH32CN4R7M33L	=952-2190	LQH32CN221K23L	=952-2239
LQH32CNR47M33L	=952-2166	LQH32CN100K33L	=952-2204	LQH32CN331K23L	=952-2247
LQH32CN1R0M33L	=952-2174	LQH32CN470K23L	=952-2212	LQH32CN471K23L	=952-2255
LQH32CN2R2M33L	=952-2182	LQH32CN101K23L	=952-2220		

227194

All Values ●	Price Each				
	5+	50+	100+	500+	+
	0.75	0.66	0.63	0.46	--

**ELL6 Series Choke Coils**  
Magnetic shielded type



- Separated terminal and internal connection provides high reliability
- Small physical dimensions
- Capable of handling large currents
- 105°C max. operating temperature (including self-temperature rise)



Suitable for in dc/dc converter circuits and choke coils in chopper circuit decoupling. Applications include videos, audio, mobile communications and electric battery driving equipment.

L = 6mm, W = 6.4mm, H = 2.5mm

Inductance (μH)	Device Marking	Tolerance ±%	DC resistance Max. (Ω)	DC Current Max. (mA)	Mfrs. List No.	Order Code
1	1R0	20	0.019	3000	ELL6RH1R0M	119-8589
2.7	2R7	20	0.039	1800	ELL6RH2R7M	119-8590
3.3	3R3	20	0.044	1600	ELL6RH3R3M	119-8591
6.2	6R2	20	0.062	1400	ELL6RH6R2M	119-8593
8.2	8R2	20	0.087	1200	ELL6RH8R2M	119-8594
10	100	20	0.095	1100	ELL6RH100M	119-8595
15	150	20	0.15	850	ELL6RH150M	119-8596
18	180	20	0.17	800	ELL6RH180M	119-8597
22	220	20	0.22	700	ELL6RH220M	119-8598
33	330	20	0.38	600	ELL6RH330M	119-8599
47	470	20	0.48	500	ELL6RH470M	119-8601
68	680	20	0.77	400	ELL6RH680M	119-8602
82	820	20	0.87	350	ELL6RH820M	119-8603
100	101	20	1.0	300	ELL6RH101M	119-8604
150	151	20	1.80	250	ELL6RH151M	119-8605
220	221	20	2.30	200	ELL6RH221M	119-8606

234166

Order Code	Price Each				
	1+	25+	50+	100+	+
All Values ●	3.39	3.05	2.68	2.31	--

**RF/RE/ND Series**  
Non Magnetic Core



- High Q
- Designed for automatic and high density mounting
- ±5% tolerance
- Suitable for CTV, VTC, HIC, HDD, FDD, pagers, cordless and portable telephones
- Constructed for use in high frequency circuits
- Stable L value against environmental conditions



RF Series - 0402 Case Size		DC Res.	DC current	Mfrs. List No.	Order Code
Inductance (μH)	Q Resonant Freq. (MHz)	(Ω)	Max. (mA)		
12	8	2800	320	ELJRF12NJFB	119-8391
27	8	1800	200	ELJRF27NJFB	119-8395
39	8	1800	150	ELJRF39NJFB	119-8396

Order Multiple=5	Price Each				
Order Code	5+	50+	100+	250+	+
All Values ●	0.66	0.53	0.42	0.33	--

RE Series - 0603 Case Size		DC Res.	DC current	Mfrs. List No.	Order Code
Inductance (μH)	Q Resonant Freq. (MHz)	(Ω)	Max. (mA)		
3.9	9	5500	450	ELJRE39NJFA	119-8370
4.7	9	4800	450	ELJRE47NJFA	119-8371
5.6	9	4600	430	ELJRE56NJFA	119-8372
6.8	9	3500	430	ELJRE68NJFA	119-8374
8.2	9	3500	400	ELJRE82NJFA	119-8375
10	10	2800	400	ELJRE10NJFA	119-8376
12	10	2800	350	ELJRE12NJFA	119-8377
15	10	2500	350	ELJRE15NJFA	119-8378



**RE Series - 0603 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
18	10	2300	0.45	350	ELJRE18NJFA	119-8379
22	10	2000	0.50	300	ELJRE22NJFA	119-8381
27	10	2000	0.55	300	ELJRE27NJFA	119-8382
33	10	1800	0.60	300	ELJRE33NJFA	119-8383
39	11	1800	0.80	300	ELJRE39NJFA	119-8384
47	11	1800	0.95	250	ELJRE47NJFA	119-8386
56	12	1800	1.20	250	ELJRE56NJFA	119-8387
68	12	1500	1.30	250	ELJRE68NJFA	119-8388
82	12	1500	1.50	250	ELJRE82NJFA	119-8389
100	12	1300	1.80	200	ELJRER10JFA	119-8390

Order Multiple=5	Order Code	5+	50+	100+	250+	+
All Values ●		0.39	0.31	0.25	0.19	--

**ND Series - 0805 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
33	15	2050	0.39	395	ELJND33NJF	119-8399
39	15	2000	0.41	390	ELJND39NJF	119-8400
56	15	1550	0.51	360	ELJND56NJF	119-8401
68	15	1450	0.57	340	ELJND68NJF	119-8402
82	15	1100	0.63	330	ELJND82NJF	119-8404
100	8	800	0.86	285	ELJNDR10JF	119-8405
120	8	600	0.99	275	ELJNDR12JF	119-8406
150	10	600	1.47	230	ELJNDR15JF	119-8407
180	10	600	1.61	195	ELJNDR18JF	119-8408
220	10	500	1.40	170	ELJNDR22JF	119-8409
270	10	300	1.95	165	ELJNDR27JF	119-8410
330	10	200	2.16	160	ELJNDR33JF	119-8411
390	10	150	2.37	150	ELJNDR39JF	119-8412
470	10	150	2.56	145	ELJNDR47JF	119-8413
560	10	100	2.69	140	ELJNDR56JF	119-8414
680	10	100	3.02	130	ELJNDR68JF	119-8416
820	10	80	3.38	125	ELJNDR82JF	119-8417
1.00	8	80	3.88	120	ELJND1R0JF	119-8418

Order Code	1+	50+	100+	250+	+
All Values ●	1.35	1.10	0.87	0.68	--

**FA Series - 1210 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
100	20	10	10	60	ELJFA101JF	119-8469
120	20	10	11	55	ELJFA121JF	119-8470
150	20	8	15	50	ELJFA151JF	119-8471
180	20	7	17	50	ELJFA181JF	119-8472
220	20	7	21	45	ELJFA221JF	119-8473

Order Multiple=5	Order Code	5+	50+	100+	250+	+
All Values ●		0.72	0.59	0.46	0.36	--

**FB Series - 1812 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
2.2±10%	30	45	0.61	410	ELJFB2R2KF	119-8486
2.7±10%	50	43	0.61	400	ELJFB2R7KF	119-8487
3.3±10%	50	39	0.66	380	ELJFB3R3KF	119-8489
3.9±10%	50	36	0.74	360	ELJFB3R9KF	119-8491
4.7±10%	50	33	0.81	350	ELJFB4R7KF	119-8492
5.6±10%	50	30	0.88	330	ELJFB5R6KF	119-8493
6.8±10%	50	26	1	310	ELJFB6R8KF	119-8494
15	50	18	2.1	215	ELJFB150JF	119-8496
27	50	13	2.9	185	ELJFB270JF	119-8498
39	50	10	3.6	165	ELJFB390JF	119-8500
47	50	9.7	4.2	130	ELJFB470JF	119-8501
56	40	9	4.7	125	ELJFB560JF	119-8502
68	40	8.2	5.3	115	ELJFB680JF	119-8503
82	40	7.5	5.9	110	ELJFB820JF	119-8504
100	40	6.7	6.8	105	ELJFB101JF	119-8505
150	40	5.5	11	95	ELJFB151JF	119-8507
220	40	4.5	13	85	ELJFB221JF	119-8508
270	40	4.1	14	80	ELJFB271JF	119-8509
390	40	3.3	19	70	ELJFB391JF	119-8511
560	30	2.7	35	50	ELJFB561JF	119-8514
680	30	2.5	39	50	ELJFB681JF	119-8515
820	30	2.4	45	45	ELJFB821JF	119-8516
1000	30	2.1	53	50	ELJFB102JF	119-8517

Order Code	1+	50+	100+	250+	+
All Values ●	1.01	0.82	0.65	0.51	--

**FC/FA/FB Series**  
Regular Type



- High Q
- ±5% tolerance



**PC/PA Series**  
High Power type



- High Power types that can handle large dc currents
- Suitable for use as power line choke coil
- ±10% tolerance

L = 6mm, W = 6.4mm, H = 2.5mm

**FC Series - 1008 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
1.0	25	115	0.65	195	ELJFC1R0JF	119-8419
1.5	25	90	0.85	170	ELJFC1R5JF	119-8420
1.8	25	85	0.95	160	ELJFC1R8JF	119-8421
2.2	25	80	1.05	155	ELJFC2R2JF	119-8422
3.3	25	65	1.3	135	ELJFC3R3JF	119-8423
10	25	32	3.5	80	ELJFC100JF	119-8424
12	25	30	3.8	75	ELJFC120JF	119-8425
22	25	22	5.8	60	ELJFC220JF	119-8426
33	20	20	7.1	110	ELJFC330JF	119-8428

Order Multiple=5	Order Code	5+	50+	100+	250+	+
All Values ●		0.81	0.66	0.52	0.41	--

**PC Series - 1008 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC resistance Max. (Ω)	DC Current Max. (mA)	Mfrs. List No.	Order Code
1.0±20%	10	95	0.45	475	ELJPC1R0MF	119-8430
1.5±20%	10	85	0.55	435	ELJPC1R5MF	119-8431
2.2±20%	10	65	0.65	390	ELJPC2R2MF	119-8432
3.3±20%	8	55	0.85	340	ELJPC3R3MF	119-8433
4.7±20%	8	43	1.2	285	ELJPC4R7MF	119-8434
6.8	8.5	44	1.3	170	ELJPC6R8KF	119-8435
10	20	32	2.2	210	ELJPC100KF	119-8436
12	20	25	2.7	195	ELJPC120KF	119-8437
15	20	21	3.2	175	ELJPC150KF	119-8438
22	20	18	4.0	160	ELJPC220KF	119-8441
33	20	16	6.5	120	ELJPC330KF	119-8442

Order Multiple=5	Order Code	5+	50+	100+	250+	+
All Values ●		1.00	0.81	0.64	0.50	--

**FA Series - 1210 Case Size**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
1.0	30	115	0.69	230	ELJFA1R0JF2	119-8443
1.2	30	100	0.75	215	ELJFA1R2JF2	119-8444
1.5	30	90	0.75	210	ELJFA1R5JF	119-8445
1.8	30	85	0.82	200	ELJFA1R8JF	119-8446
2.2	30	80	0.95	190	ELJFA2R2JF	119-8447
2.7	30	75	1.1	180	ELJFA2R7JF	119-8448
3.3	30	65	1.2	180	ELJFA3R3JF	119-8449
3.9	30	60	1.3	175	ELJFA3R9JF	119-8450
4.7	30	55	1.5	165	ELJFA4R7JF	119-8451
5.6	30	50	1.6	160	ELJFA5R6JFN	119-8453
6.8	30	45	1.8	150	ELJFA6R8JF	119-8454
8.2	30	40	2.0	140	ELJFA8R2JF	119-8455
10	30	36	2.1	140	ELJFA100JF	119-8456
12	30	33	2.5	125	ELJFA120JF	119-8457
15	30	30	2.8	120	ELJFA150JF	119-8458
18	30	27	3.3	110	ELJFA180JF	119-8459
22	30	25	3.7	105	ELJFA220JF	119-8460
27	30	22	5.0	90	ELJFA270JF	119-8461
33	30	20	5.6	85	ELJFA330JF	119-8462
39	30	20	6.4	80	ELJFA390JF	119-8463
47	30	15	7.0	75	ELJFA470JF	119-8465
56	30	15	8.0	70	ELJFA560JF	119-8466
68	30	15	9.0	65	ELJFA680JF	119-8467
82	30	11	10	60	ELJFA820JF	119-8468

**PA 1210 Series**

Inductance (µH)	Q Min.	Resonant Freq. (MHz)	DC resistance Max. (Ω)	DC Current Max. (mA)	Mfrs. List No.	Order Code
10	15	23	0.50	240	ELJPA100KF	119-8474
15	15	18	0.74	220	ELJPA150KF	119-8475
27	15	13	1.45	165	ELJPA270KF	119-8479
33	15	12	1.65	155	ELJPA330KF	119-8480
47	15	9.5	2.25	135	ELJPA470KF	119-8481
100	20	6.5	5.00	90	ELJPA101KF	119-8483

Order Multiple=5	Order Code	5+	50+	100+	250+	+
All Values ●		0.52	0.44	0.37	0.29	--



**SIMID 0603 Series**  
0603 Case Size



- Ceramic cored SMD inductors in 0603 size case
- Same frequency of measure for L and Q values
- Suitable for IR, vapour phase and wave soldering
- Tolerance ±0.3nH up to 3.3nH and 5% above
- Climatic category 40/085/56
- Supplied on 8mm embossed tape

H=0.8, W=1.6, D=0.8

nH	Max. (Ω)	Current mA	(min)	Frequency MHz	Frequency MHz	Order Code
<b>SIMID 0603A Series 0603 Case Size</b>						
1.5	0.07	500	8	100	6000	158-458
1.8	0.08	500	8	100	6000	158-460
2.2	0.09	500	8	100	6000	158-471
2.7	0.1	500	8	100	6000	158-483
3.3	0.12	500	9	100	5500	158-495
3.9	0.15	450	9	100	5500	158-501
4.7	0.17	450	9	100	4800	158-513
5.6	0.18	430	9	100	4600	158-525
6.8	0.2	430	9	100	3550	158-537
8.2	0.28	400	9	100	3500	158-549
10	0.32	400	10	100	2800	158-550
12	0.35	400	10	100	2800	158-562
15	0.41	350	10	100	2500	158-574
18	0.45	350	10	100	2300	158-586
22	0.5	300	10	100	2000	158-598
27	0.55	300	10	100	2000	158-604
33	0.6	300	10	100	1800	158-616
39	0.8	300	11	100	1800	158-628
47	0.95	250	11	100	1800	158-630
56	1.2	250	12	100	1800	158-641
68	1.3	250	12	100	1500	158-653
82	1.5	250	12	100	1500	158-665
100	1.8	250	12	100	1300	158-677
150	4.5	100	5	25.2	1100	387-6901
220	7.5	70	4	25.2	900	387-6925

nH	Max. (Ω)	Current mA	(min)	Frequency MHz	Frequency MHz	Order Code
<b>SIMID 0603C Series 0603 Case Size</b>						
1	0.05	500	7	100	6000	387-6937
1.2	0.06	500	7	100	6000	387-6949
1.5	0.07	500	8	100	6000	387-6950
1.8	0.08	500	8	100	6000	387-6962
2.2	0.09	500	8	100	6000	387-6974
3.3	0.12	500	9	100	5500	387-6986
4.7	0.17	450	9	100	4800	387-6998
5.6	0.18	430	9	100	4600	387-7000
6.8	0.20	430	9	100	3550	387-7012
10	0.32	400	10	100	2800	387-7024
15	0.41	350	10	100	2500	387-7036
22	0.5	300	10	100	2000	387-7048
47	0.95	250	11	100	1800	387-7061
68	1.3	250	12	100	1500	387-7073
100	1.8	200	12	100	1300	387-7085
150	4.5	100	5	25.2	1100	387-7097
180	6.5	80	4	25.2	1000	387-7103
220	7.5	70	4	25.2	900	387-7115

Order Multiple=5	Order Code	5+	100+	250+	500+	+
<b>SIMID 0603A Series</b>	<b>All Values</b>	0.90	0.60	0.58	0.42	--
<b>SIMID 0603C Series</b>	<b>All Values</b>	0.84	0.55	0.49	0.36	--

Available on Full Reels, please call for details

**SIMID 0603C Series Full Reels**  
0603 Case Size



- Ceramic cored SMD inductors in 0603 size case supplied on full reels

Inductance nH	DC Res. Max. (Ω)	Current mA	Q min	Manufacturer's List No.	Order Code
<b>SIMID 0603C Series 0603 Case Size</b>					
1.8	0.08	500	8	B82496C3189A	476-4651
6.8	0.20	430	9	B82496C3689A	476-4705
68	1.3	250	12	B82496C3680J	476-4766
180	6.5	80	4	B82496C3181J	476-4791

Order Code	Reel Quantity	1+	3+	5+
<b>SIMID 0603C Series</b>	<b>All Values</b>	4000	601.68	580.62 561.36

**SIMID 0805B Series**



- Ceramic or ferrite cored inductors in 0805 package
- L and Q values measured at one frequency (fQ/FL)
- Suitable for IR, vapour phase and wave soldering
- Supplied on 8mm embossed tape

Tolerance ±5% Climatic category 55/125/56

H=1.6 W=2.2 D=14

LN nH	Rmax Ω	IN mA	fQ/FL MHz	Frequency MHz	Q	Order Code
2.7	0.03	1000	250	6000	20	400-0341
6.8	0.05	800	250	5500	30	400-0353
8.2	0.06	700	250	5000	35	400-0365
10	0.06	700	250	4500	40	400-0377
12	0.06	700	250	4000	40	400-0389
15	0.07	670	250	3500	45	400-0390
18	0.07	670	250	3300	45	400-0407
22	0.09	600	250	2600	45	400-0419
33	0.12	520	250	2150	45	400-0420
39	0.1	560	250	2050	50	400-0432
47	0.13	500	200	1900	45	400-0444
68	0.19	410	200	1550	45	400-0456
82	0.21	390	150	1430	40	400-0468
100	0.26	350	150	1310	40	400-0470
120	0.44	270	150	1210	40	400-0481
150	0.44	270	100	1120	35	400-0493
180	0.47	260	100	1030	35	400-0500
220	0.55	240	100	950	35	400-0511
330	1	180	100	800	35	400-0523
390	1.9	130	100	730	35	400-0535
470	2.4	115	100	660	35	400-0547
680	0.5	250	25.2	450	20	400-0559
820	0.55	240	25.2	400	20	400-0560
1000	0.5	250	7.96	350	20	400-0572
1200	0.65	220	7.96	300	20	400-0584
1500	0.75	200	7.96	250	20	400-0596
1800	0.85	190	7.96	250	20	400-0602
2200	1.7	130	7.96	200	20	400-0614
3300	3.3	100	7.96	200	20	400-0626
3900	3.6	95	7.96	150	20	400-0638
4700	3.8	90	7.96	150	20	400-0640

Order Code	1+	10+	100+	250+	+	
<b>SIMID 0805B Series</b>	<b>All Values</b>	1.81	1.32	0.93	0.72	--

**SIMID 0805B Series Full Reels**

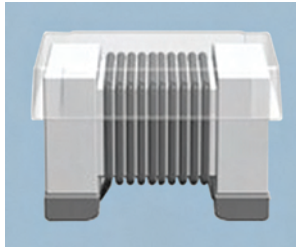


- Ceramic or ferrite cored inductors in 0805 package supplied on full reels

Inductance nH	DC Res. Max. (Ω)	Current (mA)	Q min	Manufacturer's List No.	Order Code
12	0.06	700	40	B82498B3120J	476-5060
22	0.09	600	45	B82498B3220J	476-5096
33	0.12	520	45	B82498B3330J	476-5126
47	0.13	500	45	B82498B3470J	476-5151
1000	0.5	250	20	B82498B1102J	476-5011
4700	3.8	90	20	B82498B1472J	476-5035

Order Code	Reel Quantity	1+	3+	5+
<b>SIMID 0805B Series</b>	<b>All Values</b>	3000	1,496.19	1,443.84 1,395.69

**SIMID 0805F Series**



- Ceramic or ferrite cored inductors in 0805 package
- L and Q values measured at one frequency (fQ/FL)
- Suitable for IR, vapour phase and wave soldering
- Supplied on 8mm embossed tape

Tolerance ±10% Climatic category 55/125/56

H=1.6 W=2.2 D=14

LN nH	Rmax Ω	IN mA	fQ/FL MHz	Frequency MHz	Q	Mfrs. List	Order Code
10	0.09	700	250	500	50	B82498F3100J	880-8112
22	0.08	700	250	500	60	B82498F3220J	880-8120
33	0.11	600	250	500	65	B82498F3330J	880-8139
47	0.13	600	200	500	65	B82498F3470J	880-8147
68	0.18	500	200	500	60	B82498F3680J	880-8155
100	0.28	450	150	500	55	B82498F3101J	880-8163
220	0.7	320	100	250	55	B82498F3221J	880-8171
330	1.5	220	100	250	45	B82498F3331J	880-8180
470	1.9	190	50	100	30	B82498F3471J	880-8198
680	1.7	190	25	50	23	B82498F3681J	880-8201
1000	0.5	250	7.96	7.96	15	B82498F1102J	880-8210
2200	2	120	7.96	7.96	15	B82498F1222J	880-8228
3300	3.3	100	7.96	7.96	15	B82498F1332J	880-8236
4700	3.8	90	7.96	7.96	15	B82498F1472J	880-8244

Order Multiple=5	Order Code	5+	50+	100+	500+	+
<b>SIMID 0805-F Series</b>	<b>All Values</b>	1.33	1.14	0.98	0.85	--

**SIMID 1008, 1812, 1210 & 2220 Series**

SIMID 1008 case size  
H=1.6, W=2.5, D=2



SIMID 1812 case size  
H=3.2, W=4.5, D=3.2

SIMID 2220 case size  
H=5, W=5.6, D=5

SIMID 1210A case size  
H=1.9, W=3.2, D=2.5



- Miniature, encapsulated ferrite and ceramic cored chip inductors sizes
- Suitable for wave and reflow soldering.
- SIMID 2220, 1812 and 1210A series are supplied on 12mm embossed tape in accordance with **IEC286 PT3**
- SIMID 1008 series are supplied on 8mm embossed tape in accordance with **EIAJ-RC-1009B**.
- The inductance value is clearly marked on each component body.

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1008 Series 1008 Case Size</b>							
1	20	0.65	195	25	7.96	115	200-499
1.5	20	0.85	170	25	7.96	85	200-505
2.2	20	1.05	155	25	7.96	80	200-517
3.3	10	1.3	135	25	7.96	65	200-529
4.7	10	1.55	125	25	7.96	55	200-530
6.8	10	1.95	115	25	7.96	45	200-542
10	10	3.7	80	25	2.52	32	200-554
15	10	5	70	25	2.52	28	200-566
22	10	6	60	25	2.52	22	200-578
33	10	5.2	14	40	2.52	18	200-580
47	10	6.6	12	40	2.52	14	200-591
68	10	6.5	17	25	2.52	13	200-608
100	10	8.4	10	25	0.796	12	200-610

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1812A series 1812 Case Size</b>							
10	10	0.98	320	45	2.52	22	200-360
15	10	1.25	280	45	2.52	17	200-372
22	10	1.45	260	45	2.52	13	200-384
33	10	1.85	230	45	2.52	10.5	200-396
47	10	2.3	210	40	2.52	9.5	200-402
68	10	2.8	190	40	2.52	8	200-414
100	10	4.7	145	40	2.52	6.5	200-426
150	10	6.1	130	35	0.796	5.5	200-438
220	10	7.5	115	30	0.796	4.6	200-440
330	10	14.1	85	30	0.796	4.1	200-451
470	10	17.5	75	35	0.796	3.5	200-463
680	10	25	65	30	0.796	2.6	200-475
1000	10	31	55	30	0.796	2.3	200-487

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1812H series High Current 1812 Case Size</b>							
1.0	10	0.11	1100	20	1.0	260	387-6779
2.2	10	0.18	900	20	1.0	95	387-6780
3.3	10	0.22	820	20	1.0	80	387-6792
4.7	10	0.27	740	20	1.0	40	387-6809
10	10	0.5	600	25	1	25	387-6810
22	10	0.9	430	25	0.1	18	387-6834
33	10	1.4	350	25	0.1	15	387-6846
47	10	1.9	310	25	0.1	11.5	387-6858
100	10	4.0	180	25	0.1	8.0	387-6860
150	10	6.1	150	25	0.10	6.5	387-6871
330	10	11	110	25	0.10	3.5	387-6895

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1812T series High Current 1812 Case Size</b>							
1	10	0.08	1300	10	7.96	110	880-8406
2.2	10	0.15	1000	10	7.96	60	880-8414
3.3	10	0.19	900	10	7.96	50	880-8422
4.7	10	0.22	800	10	7.96	40	880-8430
10	10	0.35	650	10	2.52	25	880-8449
15	10	0.5	600	10	2.52	20	880-8457
22	10	0.7	450	10	2.52	15	880-8465
33	10	1.2	400	10	2.52	13	880-8473
47	10	1.35	350	10	2.52	11	880-8481
68	10	2.5	250	10	2.52	8	880-8490
100	10	3.5	200	20	0.796	6.5	880-8503
150	10	6	160	20	0.796	6.1	880-8511
220	10	7.5	130	20	0.796	4.5	880-8520
330	10	11	120	20	0.796	4.1	880-8538
470	10	15	100	20	0.796	3.5	880-8546
560	10	20	90	20	0.796	3	880-8554
680	10	23	80	20	0.796	2.6	880-8562
1000	10	30	70	20	0.252	2.3	880-8570

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1210A Series 1210 Case size</b>							
0.22	10	0.64	280	20	30	700	608-257
0.33	10	1.2	200	20	30	580	608-269
0.47	10	2.2	150	20	30	480	608-270
0.68	10	2.7	140	20	30	400	608-282
1	10	0.34	380	20	7.96	320	608-294
1.5	10	0.42	340	20	7.96	270	608-300
2.2	10	0.75	270	25	7.96	230	608-312
3.3	10	1.2	200	25	7.96	180	608-324
4.7	10	2.2	150	25	7.96	145	608-336
6.8	10	2.8	135	25	7.96	115	608-348
10	10	1.6	180	25	2.52	21	608-350
15	10	1.8	165	25	2.52	17.5	608-361
22	10	2.5	145	25	2.52	14	608-373
33	10	4.4	110	25	2.52	11.5	608-385
47	10	7	85	25	2.52	8	608-397
68	10	7.7	80	25	2.52	7.5	608-403
100	10	11.5	65	20	2.52	6	608-415

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1210T Series 1210 Case size</b>							
0.10	10	0.31	450	28	100	900	387-7127
0.15	10	0.18	450	30	25.2	700	387-7139
0.22	10	0.38	360	20	30	850	608-245
0.33	10	0.23	450	30	25.2	500	387-7140
0.47	10	0.31	450	4	100	900	387-7152
0.68	10	0.34	450	30	25.2	300	387-7164
1.0	10	0.34	450	30	25.2	300	387-7176
0.82	10	0.38	450	30	25.2	300	387-7188

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 1210T Series 1210 Case size</b>							
1.0	10	0.6	400	30	7.96	300	387-7190
2.2	10	0.8	320	30	7.96	100	387-7206
3.3	10	1.2	260	30	7.96	60	387-7218
4.7	10	1.5	220	30	7.96	50	387-7220
10	10	2.1	150	27	2.52	30	387-7231
22	10	3.5	110	27	2.52	20	387-7243
33	10	5.6	70	27	2.52	17	387-7255
47	10	7.0	60	27	2.52	15	387-7267
68	10	9.0	60	27	2.52	9	387-7279
100	10	11	60	20	7.96	8	387-7292
120	10	12	60	20	7.96	8	387-7309
150	10	17	50	20	7.96	7	387-7309
180	10	18	50	20	7.96	7	387-7310
220	10	22	45	20	7.96	6	387-7322
270	10	28	40	20	7.96	5	387-7334
330	10	34	40	20	7.96	4	387-7346

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 2220 Series 2220 Case Size</b>							
1	10	0.03	1800	10	7.96	95	870-092
1.5	10	0.032	1600	10	7.96	55	158-719
2.2	10	0.048	1300	10	7.96	42	158-720
3.3	10	0.08	1120	10	7.96	34	870-109
4.7	10	0.088	950	10	7.96	29	158-732
6.8	10	0.12	810	10	7.96	24	158-744
10	10	0.21	690	10	2.52	19	870-110
15	10	0.24	580	10	2.52	16	158-756
22	10	0.35	480	10	2.52	13	158-768
33	10	0.62	400	10	2.52	10.5	870-122
47	10	0.68	340	10	2.52	8.5	158-770
68	10	0.96	290	10	2.52	7	158-781
100	10	1.6	250	20	0.796	6	870-134
150	10	1.76	210	20	0.796	4.8	158-793
220	10	2.72	170	20	0.796	3.9	158-800
330	10	3.92	140	20	0.796	3.2	158-811
470	10	5.6	120	20	0.796	2.6	158-823
680	10	8	100	20	0.796	2.2	158-835
1000	10	12	85	30	0.252	1.8	158-847
1500	10	16	70	30	0.252	1.4	158-859
2200	10	28	55	30	0.252	1.2	158-860
4700	10	62.4	36	30	0.252	0.9	158-872
10000	10	120	25	30	0.0796	0.5	158-884

Inductance µH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor Min	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
<b>SIMID 2220H series High Current 2220 Case Size</b>							
1.0	10	0.024	2.50	10	7.96	95	387-7360
2.2	10	0.048	1.8	10	7.96	42	387-7371
4.7	10	0.088	1.35	10	7.96	29	387-7395
6.8	10	0.12	1.13	10	7.96	24	387-7401
10	10	0.168	1.0	10	2.52	19	387-7413
15	10	0.24	0.81	10	2.52	16	387-7425
22	10	0.35	0.67	10	2.52	13	387-7437
33	10	0.50	0.56	10	2.52	10.5	387-7449
100	10	1.28	350	20	0.796	6	158-896
220	10	2.72	0.24	20	0.796	3.9	387-7450
330	10	3.92	200	20	0.796	3.2	158-902
1000	10	12.0	120	30	0.252	1.8	158-914
2200	10	28	0.075	30	2.52	1.2	387-7462
3300	10	48.0	55	30	0.252	1	158-926
4700	10	62.4	0.05	30	2.52	0.9	387-7474
10000	10	120	35	30	0.0796	0.5	158-938

Order Code	10+	100+	250+	500+	+
<b>SIMID 1008 Series All Values</b>	1.93	1.32	1.23		

**SIMID Kits**

SIMID 0603, 0805, 1210, 1812T & 2220 Series



- SMD inductor kits containing the most popular values in 0603, 0805, 1210 and 2220 packages
- All values refillable from stock
- Suitable for development and research

**SIMID 0603** kit contains 20 each of 1.5, 1.8, 2.2, 3.3, 3.9, 4.7, 5.6, 6.8, 8.2, 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82 and 100nH

**SIMID 1210** kit contains 15 each of 0.015, 0.022, 0.033, 0.047, 0.068, 0.1, 0.15, 0.22, 0.33, 0.47, 0.68, 1.0, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68 and 100uH

**SIMID 1812T** kit contains 6 each of 1, 1.5, 1.8, 2.2, 3.3, 3.9, 4.7, 6.8, 8.2, 10, 15, 18, 22, 33, 39, 47, 68, 100, 150, 220, 330, 470, 680 and 1000uH

**SIMID 2220** Kit contains 6 each of 1.0, 4.7, 10, 47, 100, 330\*, 470, 1000, 1000\*, 4700 and 10000uH

(\*denotes items from SIMID 2220H Series)

204167

	Order Code	1+	3+	5+
Kit SIMID 0603	<b>960-7625</b> ●	347.96	331.48	313.17
Kit SIMID 1210	<b>387-7358</b> ●	345.00	306.00	288.00
Kit SIMID 1812T	<b>880-9100</b> ●	337.87	302.68	289.11
Kit SIMID 2220	<b>158-707</b> ●	345.00	306.00	295.54

**3613A Series**

1812 Case size, Fully encapsulated



- Ferrite cored wound chip inductors suitable for dip and reflow soldering
- Excellent Q and low dc resistance
- Encapsulated in a thermoset plastic body having copper lead terminations
- Full reels to **IEC286 PT3**.



Supplied on 8mm embossed tape, individually marked (reel=500 pcs)

Note: Inductance tolerance marking M ±20%, K ±10

Inductance	Inductance Tolerance	DC Resistance	Max dc Current	Q factor	Test. Frequency	Self Res Frequency	Order Code
μH	%	Ω	mA	Min	MHz	MHz	
0.47	20	0.13	620	50	25.2	150	<b>106-843</b> †
4.7	10	0.38	360	50	7.96	35	<b>106-848</b> †
150	10	7.6	80	50	0.796	6	<b>106-856</b> †

204069

Order Code	10+	50+	100+	250+	+
All Values	1.62	1.41	1.14	0.87	--

† Available until stocks are exhausted

**3613C Series**

1812 Case Size, Fully Encapsulated



- Ferrite cored wound chip inductor suitable for dip and reflow soldering
- Excellent Q factor
- Encapsulated in thermoset plastic body with copper lead terminations
- Full reels to **IEC 286 Pt 3**



Supplied on 8mm embossed tape, individually marked (reel = 500 pcs)

Note: 1 Inductance tolerance marking M±20% K±10%

2 The 3613C replaces the Meggit Sigma 3613A which is now obsolete

Inductance	Inductance Tolerance	DC Resistance	Max dc Current	Q factor	Test. Frequency	Self Res Frequency	Order Code
μH	%	Ω	mA	Min	MHz	MHz	
0.22	20	0.25	665	40	25.2	200	<b>117-4063</b>
0.33	20	0.28	605	40	25.2	165	<b>117-4064</b>
0.47	20	0.32	545	40	25.2	145	<b>117-4065</b>
0.68	20	0.4	500	40	25.2	135	<b>117-4066</b>
1	10	0.5	450	50	7.96	100	<b>117-4067</b>
2.2	10	0.7	380	50	7.96	55	<b>117-4068</b>
3.3	10	0.8	355	50	7.96	45	<b>117-4069</b>
4.7	10	1	315	50	7.96	35	<b>117-4070</b>
5.6	10	1.1	300	50	7.96	33	<b>117-4072</b>
10	10	1.6	250	50	2.52	20	<b>117-4073</b>
22	10	3.2	180	50	2.52	13	<b>117-4074</b>
33	10	4	160	50	2.52	11	<b>117-4075</b>

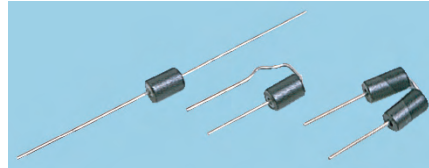
Inductance	Inductance Tolerance	DC Resistance	Max dc Current	Q factor	Test. Frequency	Self Res Frequency	Order Code
μH	%	Ω	mA	Min	MHz	MHz	
47	10	5	140	50	2.52	10	<b>117-4076</b>
100	10	8	110	40	0.796	8	<b>117-4077</b>
150	10	9	105	40	0.796	5	<b>117-4078</b>
220	10	10	100	40	0.796	4	<b>117-4080</b>
470	10	26	62	40	0.796	3	<b>117-4081</b>

227205

Order Multiple=10	Price Each			
Order Code	10+	100+	500+	1K+
All Values ●	0.78	0.63	0.59	0.41

**Ferrite Beads**

**Bead Inductors**



108-267	108-268	108-269	581-124
Body L=5.0	H=7.5, W=7.1	H=7.5, W=9.0	H=6.5, W=8.3
Body dia.=3.6	∅=3.5	∅=3.4	∅=2.3
Lead L=20	Lead pitch=5.0	Lead pitch=5.0	Lead pitch=5.0
Lead dia.=0.65	Lead dia.=0.65	Lead dia.=0.65	Lead dia.=0.6

- Ferrite bead inductors available in axial or radial styles, the radial version being available with single or double bead to provide even more effective suppression.
- Typical applications include high frequency suppression in low impedance circuits, e.g. power supplies, high speed amplifier circuits, high speed digital circuits, clocks.

Mftrs. List No.	range (Z=50Ω min.)	Current rating	Mftrs. List No.	range (Z=50Ω min.)	Current rating
BL01RN1A1D2B.	20MHz to 1000MHz	7A	BL02RN2R1M2B.	4MHz to 1000MHz	7A
BL02RN1R2M2B.	20MHz to 1000MHz	7A	BL03RN2R1M1B	12MHz to 1000MHz	6A

204239

	Order Code	10+	50+	100+	1K+	+
Axial	<b>108-267</b> †	0.23	0.21	0.20	0.13	--
Axial	<b>952-6820</b> ●	0.23	0.21	0.20	0.13	--
Radial (single)	<b>108-268</b> †	0.29	0.24	0.24	0.20	--
Radial (single)	<b>952-6838</b> ●	0.29	0.24	0.24	0.20	--
Radial (double)	<b>108-269</b> †	0.38	0.35	0.32	0.20	--
Radial (double)	<b>952-6846</b> ●	0.38	0.35	0.32	0.20	--
Radial (double)	<b>581-124</b> †	0.37	0.35	0.34	0.21	--

**Wound EMI beads**



- 6 hole wound ferrite beads
- Wire is oxygen free high conductivity copper
- Winding is 0.53mm (24AWG) dia. and tin plated



Diag. No. 1 - 1	Diag. No. 1 - 3	Diag. No. 1 - 5					
Length mm (body)	Diameter mm (A)	Weight g	Impedance Ω @ 25 MHz	Impedance Ω @ 100 MHz	Diag. No.	Mftrs. List No.	Order Code
10	6	1.4	850	550	1-5	2944666631	119-1415
10	6	1.3	310	375	1-1	2944666661	120-9495
10	6	1.4	700	580	1.3	2944666671	119-1416
10	6	1.4	650	625	1-5	2961666631	119-1312
10	6	1.3	250	425	1-1	2961666661	119-1313
10	6	1.4	600	675	1-3	2961666671	119-1314
10	W & H = 5	13	200	300		2744555576	120-9496

233506

**Axial Ferrite Bead**



Body = 13, Dia. 6.2, Lead Length 45, Wire Gauge 0.5mm

- 6 aperture ferrite bead with wire passed through to form an RF inductor. Approved to **VDE0565-2**.
- Suitable for interference suppression in the HF and VHF range.



Max Current (A)	Impedance at Resonance (Ω)	Self Res. Frequency MHz	Mftrs List No	Order Code
1	900	60	B82114RA4	975-3397
1	800	100	B82114RA1	975-2226

Order Code	Price Each			
	1+	25+	100+	+
975-3397	2.15	1.89	1.64	--
975-2226	2.15	1.89	1.64	--

**Cores, Tubes and Beads**



● Small ferrite tubes and beads for placing on insulated cables or formed wire leads to obtain a desired value of inductance.

204240

Order Multiple=10		Price Each				
Material	Dimensions	Order Code	10+	100+	1K+	3K+
<b>Double Aperture Cores (2 x 1.8mm)</b>						
	10.8 x 10.9 x 5.4	120-6471	2.08	1.26	0.96	0.78
<b>Double Aperture Cores (3mm Round)</b>						
	13 x 6 x 8	242-512	2.02	1.23	0.93	0.72
	13 x 6 x 8	242-494	2.78	1.71	1.26	0.96

Order Multiple=10		Price Each				
Material	Dimensions	Order Code	10+	300+	3K+	10K+
<b>Tubes</b>						
<b>Single Hole</b>						
2.0mm dia.	4.15 x 5.0	273-156	0.24	0.13	0.08	0.08
1.5mm dia.	4.05 x 5.5	242-482	0.24	0.13	0.08	--
<b>Beads</b>						
<b>Single Hole</b>						
2.0mm dia.	5.0 x 4.0	242-524	0.41	0.23	0.16	0.12
1.0mm dia.	3.0 x 4.0	242-500	0.72	0.41	0.27	0.22
<b>Six Hole</b>						
0.6mm dia.	6.3 x 10.5	219-850	1.20	0.63	0.42	0.33

**Axial Inductors**

**C30 Series – 0.25 Watt**



Body L=7.0 max., Dia.=2.8 max.  
Lead length=25.0 min, Lead dia.=0.6

- Popular range of miniature RF inductors encapsulated in a flame retardant resin sleeve providing protection against extremes of temperature, mechanical vibration and abrasion
- Tolerance ±10%

Body Colour: Yellow

Inductance μH	Max. dc Res Ω 20°C	Max dc Current(mA) 70°C	Q factor Min	Test. Frequency MHz	Self Res Frequency MHz	Order Code
0.1	0.08	1240	35	25	625	117-3894
0.12	0.09	1240	35	25	625	117-4250
0.15	0.1	1240	35	25	625	117-4251
0.18	0.12	1240	35	25	625	117-4252
0.22	0.14	940	33	25	470	117-3895
0.27	0.16	940	33	25	430	117-4254
0.33	0.22	750	30	25	380	117-3896
0.39	0.3	750	30	25	365	117-4255
0.47	0.35	590	30	25	310	117-3897
0.56	0.5	590	30	25	800	117-4256
0.68	0.6	540	28	25	275	117-4257
0.82	0.85	380	28	25	230	117-3898
1	1	350	25	25	210	117-3860
1.5	0.22	895	28	7.9	140	117-4258
2.2	0.4	550	30	7.9	105	117-3861
2.7	0.55	470	37	7.9	92	117-3899
3.3	0.85	380	45	7.9	83	117-3862
3.9	1	380	45	7.8	80	117-4259
4.7	1.2	320	45	7.9	69	117-3863
5.6	1.8	260	50	7.9	60	117-3901
6.8	2	260	50	7.9	60	117-4260
8.2	2.7	215	55	7.9	50	117-3902
10	3.7	180	55	7.9	46	117-3864
15	2.8	210	45	2.5	32	117-3903
22	3.3	195	50	2.5	23	117-3865
33	3.4	190	45	2.5	20	117-3866
39	3.6	190	45	2.5	20	117-4261
47	4.5	165	45	2.5	17	117-3867
56	5.2	148	45	2.5	15	117-3869
68	6.7	148	50	2.5	15	117-4262
100	8	124	50	2.5	11	117-3871
150	15	91	30	0.79	9	117-3872
220	21	77	30	0.79	7.5	117-3873

Inductance μH	Max. dc Res Ω 20°C	Max dc Current(mA) 70°C	Q factor	Test. Frequency MHz	Self Res Frequency MHz	Order Code
330	28	66	30	0.79	6	117-3875
470	42	54	30	0.79	5.1	117-3876
560	46	52	30	0.79	4.2	117-3904
820	65	43	30	0.79	3.2	117-3905
1000	72	41	30	0.79	2.9	117-3878

204269

Order Multiple=5		Price Each				
Inductance μH	Order Code	5+	50+	100+	250+	+
0.1μH to 100μH	All Values	2.40	1.77	1.26	0.98	--
150μH to 1000μH	All Values	3.81	2.85	2.04	1.53	--

**B78108T Series – RF Inductors**



- Mini cylinder core chokes
- Ceramic core up to 0.82 μH, ferrite above

Body L=9.8 max, dia.=3.3 Lead dia.=0.5

Tolerance IEC Climatic category	±10%/55/125/56		55/125/56/10															
$I_N$ (mA)	$L_N$ (μH)	Tol (%)	$f_L$ (MHz)	$Q_{min}$	$f_Q$ (MHz)	$R_{max}$ (Ω)	$f_{res}$ (MHz)	Mftrs List No.	Order Code									
1000	0.18	±10	1	35	25.2	0.17	460	B78108T3181K	512-345									
990	0.22	±10	1	35	25.2	0.195	420	B78108T3221K	512-370									
910	0.27	±10	1	35	25.2	0.215	380	B78108T3271K	512-382									
830	0.33	±10	1	35	25.2	0.24	330	B78108T3331K	512-400									
750	0.47	±10	1	35	25.2	0.315	280	B78108T3471K	512-436									
700	0.56	±10	1	35	25.2	0.34	260	B78108T3561K	512-448									
530	0.68	±10	1	35	25.2	0.48	240	B78108T3681K	512-450									
500	0.82	±10	1	35	25.2	0.55	230	B78108T3821K	512-473									
630	1	±10	1	35	25.2	0.25	180	B78108T1102K	513-350									
570	1.5	±10	1	40	7.96	0.3	150	B78108T1152K	513-362									
540	1.8	±10	1	40	7.96	0.3	130	B78108T1182K	513-374									
520	2.2	±10	1	40	7.96	0.35	120	B78108T1222K	513-386									
480	2.7	±10	1	40	7.96	0.4	100	B78108T1272K	513-398									
420	3.3	±10	1	40	7.96	0.5	110	B78108T1332K	513-404									
380	4.7	±10	1	40	7.96	0.65	90	B78108T1472K	513-416									
260	5.6	±10	1	45	7.96	1.3	75	B78108T1562K	513-428									
250	6.8	±10	1	45	7.96	1.45	70	B78108T1682K	513-430									
240	8.2	±10	1	50	7.96	1.6	65	B78108T1822K	513-441									
230	10	±10	1	50	7.96	1.7	60	B78108T1103K	513-453									
185	15	±10	0.1	55	2.52	2.7	45	B78108T1153K	513-465									
170	22	±10	0.1	60	2.52	3.2	30	B78108T1223K	513-477									
160	27	±10	0.1	60	2.52	3.6	27	B78108T1273K	513-489									
150	33	±10	0.1	60	2.52	4.1	24	B78108T1333K	513-490									
100	47	±10	0.1	60	2.52	8.5	20	B78108T1473K	513-507									
100	56	±10	0.1	60	2.52	8.8	18	B78108T1563K	524-141									
95	68	±10	0.1	60	2.52	10	15	B78108T1683K	513-519									
85	100	±10	0.1	60	2.52	12.5	11	B78108T1104K	513-520									

204142

Order Multiple=5		Price Each				
Order Code	5+	50+	100+	500+	+	+
All Values	0.49	0.46	0.42	0.36	--	--

**B78108S Series – RF Inductors**



L=9.2, Dia=4.0 max Lead Length=25, Dia =0.63

- Ferrite drum cored inductors with flame retardant encapsulation

$I_N$ (mA)	$L_N$ (μH)	Tol (%)	$f_L$ (MHz)	$Q_{min}$	$f_Q$ (MHz)	$R_{max}$ (Ω)	$f_{res}$ (MHz)	Mftrs List No.	Order Code
1200	1	±10	1	55	0.0796	0.16	205	B78108S1102K	608-427
1150	1.2	±10	1	55	7.96	0.18	185	B78108S1122K	508-561
1100	1.5	±10	1	55	7.96	0.2	165	B78108S1152K	608-439
1030	1.8	±10	1	55	7.96	0.22	155	B78108S1182K	508-573
1000	2.2	±10	1	55	7.96	0.25	140	B78108S1222K	608-440
900	3.3	±10	1	60	7.96	0.29	115	B78108S1332K	608-452
820	4.7	±10	1	60	7.96	0.34	95	B78108S1472K	608-464
780	5.6	±10	1	60	7.96	0.38	85	B78108S1562K	509-929
670	6.8	±10	1	65	7.96	0.51	75	B78108S1682K	608-476
690	8.2	±10	1	65	7.96	0.48	50	B78108S1822K	510-774
680	10	±10	0.1	70	2.52	0.49	35	B78108S1103K	608-488
610	15	±10	0.1	60	2.52	0.6	20	B78108S1153K	608-506
580	18	±10	0.1	60	2.52	0.67	17	B78108S1183K	511-511
560	22	±10	0.1	55	2.52	0.74	13	B78108S1223K	608-514
500	33	±10	0.1	55	2.52	0.92	9	B78108S1333K	608-518
470	39	±10	0.1	50	2.52	1.02	8	B78108S1393K	511-626
450	47	±5	0.1	45	2.52	1.1	7.5	B78108S1473J	608-520
410	68	±5	0.1	40	2.52	1.35	6.5	B78108S1683J	608-531
390	82	±5	0.1	35	2.52	1.54	6	B78108S1823J	511-638
370	100	±5	0.1	70	0.796	1.7	5	B78108S1104J	608-543
300	120	±5	0.1	70	0.796	2.4	4.5	B78108S1124J	608-555
280	150	±5	0.1	70	0.796	2.8	4.2	B78108S1154J	608-567
270	180	±5	0.1	70	0.796	3	3.9	B78108S1184J	511-640
250	220	±5	0.1	70	0.796	3.3	3.7	B78108S1224J	511-651
190	330	±5	0.1	70	0.796	6.4	2.7	B78108S1334J	608-579
180	390	±5	0.1	70	0.796	7	2.4	B78108S1394J	511-663
170	470	±5	0.1	70	0.796	7.9	2.2	B78108S1474J	608-580
160	560	±5	0.1	60	0.796	8.8	2	B78108S1564J	511-675
150	680	±5	0.1	55	0.796	10	1.9	B78108S1684J	608-592
130	1000	±5	0.1	55	0.252	14	1.6	B78108S1105J	608-609
100	1500	±5	0.1	50	0.252	23	1.25	B78108S1155J	608-610
80	2200	±5	0.1	40	0.252	34.7	1.1	B78108S1225J	608-622
62	3300	±5	0.1	40	0.252	59.5	0.9	B78108S1335J	608-634
55	4700								

Inductance $\mu\text{H}$	Order Code	Price Each				
		5+	100+	500+	1K+	+
1.0 $\mu\text{H}$ to 39 $\mu\text{H}$	All Values	0.52	0.49	0.42	0.27	--
47 $\mu\text{H}$ to 820 $\mu\text{H}$	All Values	0.55	0.52	0.46	0.27	--
1000 $\mu\text{H}$ to 4700 $\mu\text{H}$	All Values	0.60	0.55	0.49	0.30	--

**B82144 Series – RF Inductors**



Body L=14.8 max dia.=5.2 max Lead dia.=0.63



- Ferrite drum core RF inductors with flame retardant lacquer coating

IEC climatic category		55/125/56										Order Code
$I_N$ (mA)	$L_N$ ( $\mu\text{H}$ )	Tol (%)	$f_L$ (MHz)	$Q_{min}$	$f_0$ (MHz)	$R_{max}$ $\Omega$	$f_{res}$ (MHz)	Mftrs List No.				
2200	1	$\pm 10$	1	40	7.96	0.08	200	B82144A2102K	513-532			
1600	4.7	$\pm 10$	1	40	7.96	0.16	120	B82144A2472K	515-036			
1400	10	$\pm 10$	0.1	60	2.52	0.22	60	B82144A2103K	515-565			
1100	22	$\pm 10$	0.1	50	2.52	0.35	12	B82144A2223K	516-533			
800	47	$\pm 5$	0.1	40	2.52	0.5	5	B82144A2473J	516-545			
600	100	$\pm 5$	0.1	50	0.796	0.7	3.5	B82144A2104J	516-570			
400	220	$\pm 5$	0.1	50	0.796	1.6	2.4	B82144A2224J	516-995			
280	470	$\pm 5$	0.1	40	0.796	2.5	1.5	B82144A2474J	517-070			
200	1000	$\pm 5$	0.1	60	0.252	3.8	1.2	B82144A2105J	517-896			
120	2200	$\pm 5$	0.1	60	0.252	9	0.8	B82144A2225J	517-902			
90	4700	$\pm 5$	0.1	60	0.252	20	0.5	B82144A2475J	517-914			
50	10000	$\pm 5$	0.01	50	0.0796	42	0.35	B82144A2106J	517-926			
40	22000	$\pm 5$	0.01	50	0.0796	120	0.26	B82144A2226J	517-938			
20	100000	$\pm 5$	1	40	0.0796	360	0.12	B82144A2107J	518-300			

Inductance $\mu\text{H}$	Order Code	Price Each				
		5+	50+	100+	500+	+
1	513-532	0.87	0.81	0.72	0.42	--
4.7	515-036	0.87	0.81	0.72	0.42	--
10	515-565	0.87	0.81	0.72	0.42	--
22	516-533	0.87	0.81	0.72	0.42	--
47	516-545	0.87	0.81	0.72	0.42	--
100	516-570	0.87	0.81	0.72	0.42	--
220	516-995	0.87	0.81	0.72	0.42	--
470	517-070	0.87	0.81	0.72	0.42	--
1000	517-896	0.93	0.87	0.78	0.46	--
2200	517-902	0.93	0.87	0.78	0.46	--
4700	517-914	0.93	0.87	0.78	0.46	--
10000	517-926	0.93	0.87	0.78	0.46	--
22000	517-938	0.99	0.90	0.84	0.52	--
100000	518-300	1.17	1.08	0.99	0.60	--

**B82130 Series – RF Inductors**



- Single layer winding on a carbonyl iron core with insulating sleeve
- Approved to VDE 565-2

Voltage rating		500Vac/dc		Tolerance		$\pm 20\%$	
IEC Climatic category		55/125/56					
$L_N$ ( $\mu\text{H}$ )	Tol (%)	$f_L$ (MHz)	$Q_{min}$	$F_{res}$ (MHz)	Dimensions Dia. x L	Mftrs List No.	Order Code
80	0.15	0.1	11	22	5 x 14	B82131A5151M	506-930
27	0.4	0.1	2	40	5 x 14	B82131A5401M	508-287
50	0.4	0.1	3	37	5.5 x 19	B82132A5401M	508-226
150	0.4	0.1	3.5	18	7.5 x 29	B82134A5401M	508-329
14	0.7	0.1	0.76	53	5 x 14	B82131A5701M	506-552
23	0.7	0.1	0.73	55	5.5 x 19	B82132A5701M	508-251
55	0.7	0.1	1.2	26	7.5 x 24	B82133A5701M	506-874
60	0.7	0.1	0.77	34	7.5 x 29	B82134A5701M	506-904
6	1.5	1	0.19	84	5 x 14	B82131A5152M	506-448
8	1.5	1	0.16	90	5.5 x 19	B82132A5152M	506-710
25	1.5	0.1	0.32	40	7.5 x 24	B82133A5152M	506-916
30	1.5	0.1	0.3	44	7.5 x 24	B82134A5152M	508-305
3	2	1	0.9	113	5 x 14	B82131A5202M	506-564
6	2	1	0.11	108	5.5 x 19	B82132A5202M	506-886
14	2	0.1	0.13	57	7.5 x 24	B82133A5202M	524-128
20	2	0.1	0.15	59	7.5 x 29	B82134A5202M	506-862
2	3	1	0.038	147	5 x 14	B82131A5302M	524-130
3	3	1	0.035	151	5.5 x 19	B82132A5302M	506-898
10	3	1	0.077	69	7.5 x 24	B82133A5302M	506-540
12	3	0.1	0.09	75	7.5 x 24	B82134A5302M	508-317
1	4	1	0.015	199	5 x 14	B82131A5402M	508-240
2	4	1	0.02	186	5.5 x 19	B82132A5402M	508-275
5	4	1	0.034	87	7.5 x 24	B82133A5402M	508-202
1	6	1	0.01	243	5.5 x 19	B82132A5602M	508-214
3	6	1	0.019	108	7.5 x 24	B82133A5602M	506-539

Inductance $\mu\text{H}$	Order Code	Price Each				
		1+	25+	100+	250+	+
80	506-930	2.45	2.19	2.10	1.92	--
40	508-238	2.45	2.19	2.10	1.92	--
70	508-299	2.45	2.19	2.10	1.92	--
27	508-287	2.45	2.19	2.10	1.92	--
50	508-226	2.45	2.19	2.10	1.92	--
150	508-329	2.33	2.10	1.95	1.83	--
14	506-552	2.45	2.19	2.10	1.92	--
23	508-251	2.45	2.19	2.10	1.92	--
55	506-874	2.33	2.10	1.95	1.83	--
60	506-904	2.33	2.10	1.95	1.83	--
6	506-448	2.45	2.19	2.10	1.92	--
8	506-710	2.45	2.19	2.10	1.92	--
25	506-916	2.33	2.10	1.95	1.83	--
30	508-305	2.31	2.10	1.95	1.83	--
3	506-564	2.45	2.19	2.10	1.92	--
6	506-886	2.45	2.19	2.10	1.92	--
14	524-128	2.23	2.01	1.89	1.77	--
20	506-862	2.33	2.10	1.95	1.83	--
2	524-130	2.45	2.19	2.10	1.92	--
3	506-898	2.45	2.19	2.10	1.92	--
10	506-540	2.33	2.10	1.95	1.83	--
12	508-317	2.33	2.10	1.95	1.83	--
1	508-240	2.43	2.19	2.10	1.92	--
2	508-275	2.45	2.19	2.10	1.92	--
5	508-202	2.33	2.10	1.95	1.83	--
1	508-214	2.45	2.19	2.10	1.92	--
3	506-539	2.33	2.10	1.95	1.83	--

**1582 Series**



L=11.4 Dia.=5.2 Lead length=35.0 min, Lead dia.=0.73

- A range of RF inductors having a ferrite core encapsulated in a moulded polypropylene coating suitable for use in telecomms, medical, automotive circuits and in most other applications where RF suppression is required
- Lead terminations are tinned copper
- Temperature range -55°C to +85°C. Tolerance  $\pm 10\%$ .

Inductance ( $\mu\text{H}$ )	Resistance dc ( $\Omega$ )	Max. dc Current (A)	Q Factor Nom @ MHz	Self Res. Frequency MHz	Order Code
1	0.04	2.2	45 @ 15	190	118-6786
2.2	0.06	1.8	60 @ 8	130	118-6787
4.7	0.12	1.3	50 @ 8	95	118-6788
10	0.35	0.75	50 @ 8	65	118-6789
22	1.1	0.43	65 @ 2.5	45	118-6790
47	2.5	0.27	70 @ 2.5	20	118-6791
100	4	0.22	65 @ 1.5	14	118-6792
220	7.3	0.2	80 @ 0.8	8	118-6793
470	20	0.12	80 @ 0.8	6.5	118-6794
1000	30	0.1	85 @ 0.8	3	118-6795

Order Code	Price Each				
	5+	50+	100+	250+	+
118-6786 to 118-6787	3.69	3.35	3.18	2.71	--
118-6788 to 118-6790	3.88	3.54	3.36	2.93	--
118-6791 to 118-6792	4.55	4.09	3.94	3.39	--
118-6793 to 118-6795	8.10	7.28	6.94	6.03	--

**1585 Series**



Lead length=18 min, Lead dia=0.7 max

- A range of inductors wound on ferrite cores and insulated by a PVC sleeve, suitable for use in automotive circuits and other general applications where noise suppression is required
- Inductance value and current rating are clearly marked on each inductor. Temperature range -55°C to +85°C
- Tolerance  $\pm 20\%$

Inductance ( $\mu\text{H}$ )	Resistance dc ( $\Omega$ )	Max. dc Current (A)	Self Res. Frequency MHz	Inductor Body Dia. Length	Order Code
4	0.013	3	110	4.5 25	118-6797
10	0.025	3	70	7.5 25	118-6798
25	0.045	3	40	8.5 35	118-6799
50	0.06	3	3	11.5 27	118-6800
100	0.09	3	2.5	11.5 27	118-6801
500	0.2	3	1	15 45	118-6803

204270

204140

Compliant Non-compliant Limited stock - RoHS replacement available

RoHS



17

EMC, Filters & Suppression

204011

Order Code	5+	50+	100+	250+	+
118-6797	4.15	3.27	3.06	2.17	--
118-6798	4.15	3.27	3.06	2.17	--
118-6799	4.58	3.60	3.37	2.39	--
118-6800	6.14	4.94	4.46	3.61	--
118-6801	6.81	5.53	4.86	3.98	--
118-6803	7.27	6.51	5.65	4.83	--

**B82500 Series – Low Current**



- Ferrite cored multilayer wound Inductors
- Voltage rating 250V ac/dc
- IEC climatic category 55/125/126.

$L_N$ (μH)	$I_N$ (A)	$f_{res}$ (MHz)	$R_{TYP}$ (Ω)	Body Dimensions Dia.	L	Mfrs. List No.	Order Code
3900	0.2	1.8	20	10	32	B82500CA2	504-749
820	0.5	3	2.5	10	32	B82500CA5	976-441
330	1	4.2	0.6	10	32	B82500CA8	976-453
120	2	5.8	0.15	10	32	B82500CA10	976-465

204150

Order Code	1+	10+	50+	100+	+
All Values	9.58	8.31	7.38	5.55	--

**B82111E Series – Medium Current**



- Single layer winding on ferrite core with insulation sleeving
- Approved to VDE 565-2
- Tolerance ±20%

Voltage rating		500 V ac/dc		IEC climatic category		55/125/56	
$L_N$ (μH)	$I_N$ (A)	$f_{res}$ (MHz)	$R_{TYP}$ (Ω)	Body Dimensions Dia.	L	Mfrs. List No.	Order Code
470	0.3	25	6.5	6	26	B82111EC27	975-4121
220	0.5	32	2.6	6.5	26	B82111EC26	975-4130
100	1	55	0.65	6.5	26	B82111EC25	975-2102
56	1.5	70	0.3	6.5	26	B82111EC24	975-3346
40	2	90	0.18	7	26	B82111EC23	975-3354
22	3	110	0.07	7	26	B82111EC22	975-3362
12	4	140	0.04	7	26	B82111EC21	975-3370
7	6	180	0.02	7.5	26	B82111EC20	975-3389

204081

Order Code	1+	25+	100+	250+	+
All Values	2.08	1.87	1.62	1.38	--

**B82111B Series – up to 10A**



- Wound inductor on a ferrite core
- Approved to VDE 565-2

Voltage Rating		500V ac/dc		IEC climatic category		55/125/56		
Tolerance	$L_N$ (μH)	$I_N$ (A)	$f_{res}$ (MHz)	$R_{TYP}$ (Ω)	Body Dimensions Dia.	L	Mfrs. List No.	Order Code
	2	100	0.063	7	24	B82111BC14	975-2196	
	3	145	0.025	7	24	B82111BC13	975-2218	
	3	170	0.024	6.5	29	B82111BC19	975-2145	
	3	125	0.054	6	29	B82111BC20	975-2153	
	3	85	0.046	8.5	34	B82111BC24	975-2110	
	4	150	0.02	6.5	29	B82111BC18	975-2188	
	4	120	0.024	8.5	34	B82111BC23	975-2137	
	6	205	0.014	7.5	24	B82111BC11	975-2200	
	6	200	0.01	7	29	B82111BC17	975-2170	
	6	150	0.012	9	34	B82111BC22	975-2161	
	9	220	0.006	7.5	29	B82111BC16	975-4113	
	10	175	0.005	9.5	34	B82111BC21	975-2129	

204151

Inductance μH	Order Code	1+	25+	100+	250+	+
17	975-2196	3.20	2.82	2.43	2.08	--
8	975-2218	3.20	2.82	2.43	2.08	--
13	975-2145	3.56	3.14	2.71	2.32	--
20	975-2153	3.56	3.14	2.71	2.32	--
25	975-2110	3.93	3.45	2.98	2.55	--
11	975-2188	3.56	3.14	2.71	2.32	--
15	975-2137	2.79	2.45	2.12	1.81	--

Inductance μH	Order Code	1+	25+	100+	250+	+
4	975-2200	3.20	2.82	2.43	2.08	--
6	975-2170	3.56	3.14	2.71	2.32	--
9	975-2161	3.93	3.45	2.98	2.55	--
3	975-4113	3.56	3.14	2.71	2.32	--
5	975-2129	3.93	3.45	2.98	2.55	--

**Power Inductors**

**Helically wound power inductor**

**HPI B82559 Series**



- Very high rated current
- Extremely low DC resistance
- Suitable for pick and place processes
- Applications includes energy storage chokes for DC/DC & POL converter

**NEW**

Inductance (μH)	$R_{max}$ (Ω)	Mfrs. List No.	Order Code
0.50	1.1	B82559A0501A013	111-2809
0.95	1.4	B82559A0951A013	111-2810
1.1	2.2	B82559A0112A013	111-2811
1.4	1.8	B82559A0142A013	111-2812
2.2	4.2	B82559A0222A013	111-2813
2.4	3.2	B82559A0242A013	111-2814
3	5.1	B82559A0302A013	111-2815
3.9	6	B82559A0392A013	111-2816

423468

Order Code	5+	25+	100+	250+	+
All Values	4.04	3.35	2.86	2.25	--

**Power Inductor Kit**

**B82559A Series**



- Suitable for development and research (R&D)
- Values refillable from stock

**NEW**

Kit contains 0.5, 0.95, 1.1, 1.4, 2.2, 2.4, 3.0 and 3.9μH

423485

Order Code	1+	3+
111-2817	111.45	100.87

**Power Inductors 6x6mm**

**B82462 Series**



**SMD**

- Size: 6x6mm
- Choice of shielded or unshielded
- Shielded is better for high density population as can be placed closer to other components
- Winding: enamel copper wire, welded to terminals
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Rated Inductance  $L_R$  Measured with HP4294A, measuring voltage 100mV  
 Rated Current  $I_R$  Max permissible DC with temperature increase of ≤ 40k @ 85°C  
 Saturation Current  $I_{sat}$  Max permissible DC with inductance decrease  $\Delta L/L_0 = 10\%$   
 Self-resonance frequency  $f_{res}$  Measured with network analyser HP8753  
 Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)  
 Solderability 5d, 235°C, wetting >90%  
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile  
 DC resistance  $R_{max}$  Measured at 20 ambient temperature  
 Weight Unshielded: 0.75g, shielded: 1.5g

Inductance (μH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	$I_{sat}$ (A)	$I_R$ (A)	$R_{max}$ (Ω)	$f_{res}$ (MHz)	Mfrs. List No.	Order Code
<b>Shielded</b>								
1	0.1	20	4.40	3.4	0.016	180	B82462G4102M	742-9967
1.5	0.1	20	3.60	3.1	0.02	100	B82462G4152M	742-9975
2.2	0.1	20	2.60	2.55	0.025	75	B82462G4222M	742-9983
3.3	0.1	20	2.15	2.3	0.031	60	B82462G4332M	742-9991
4.7	0.1	20	1.80	2	0.04	55	B82462G4472M	743-0000
6.8	0.1	20	1.50	1.65	0.05	40	B82462G4682M	743-0019
10	0.1	20	1.30	1.5	0.062	31	B82462G4103M	743-0027
15	0.1	20	1.05	1.25	0.097	23	B82462G4153M	743-0035
22	0.1	20	0.85	1.05	0.15	20	B82462G4223M	743-0043
33	0.1	20	0.72	0.85	0.23	16	B82462G4333M	743-0051



Inductance (μH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>Sat</sub> (A)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	f <sub>res</sub> (MHz)	Mftrs. List No.	Order Code
<b>Shielded</b>								
47	0.1	20	0.60	0.75	0.34	13	B82462G4473M	743-0060
68	0.1	20	0.50	0.65	0.42	10	B82462G4683M	743-0078
100	0.1	20	0.42	0.53	0.58	8.5	B82462G4104M	743-0086
150	0.1	20	0.33	0.38	0.96	6.5	B82462G4154M	743-0094
220	0.1	20	0.28	0.35	1.35	5.5	B82462G4224M	743-0108
330	0.1	20	0.24	0.27	2.3	4.5	B82462G4334M	743-0116
<b>Unshielded</b>								
1	0.1	20	5.8	3	0.024	130	B82462A4102M	742-9770
1.5	0.1	20	4.6	2.6	0.03	90	B82462A4152M	742-9789
2.2	0.1	20	3.8	2.3	0.042	76	B82462A4222M	742-9797
3.3	0.1	20	3.2	2	0.06	60	B82462A4332M	742-9800
4.7	0.1	20	2.8	1.65	0.08	50	B82462A4472M	742-9819
6.8	0.1	20	2.3	1.4	0.1	40	B82462A4682M	742-9827
10	0.1	20	1.8	1.15	0.14	32	B82462A4103M	742-9835
15	0.1	10	1.5	0.9	0.21	25	B82462A4153K	742-9843
22	0.1	10	1.28	0.8	0.26	21	B82462A4223K	742-9851
33	0.1	10	1.04	0.63	0.42	15	B82462A4333K	742-9860
47	0.1	10	0.82	0.54	0.64	12	B82462A4473K	742-9878
68	0.1	10	0.69	0.43	0.86	10	B82462A4683K	742-9886
100	0.1	10	0.57	0.35	1.28	9	B82462A4104K	742-9894
150	0.1	10	0.49	0.29	1.76	7.5	B82462A4154K	742-9908
220	0.1	10	0.40	0.24	2.72	6	B82462A4224K	742-9916
330	0.1	10	0.34	0.2	3.9	5	B82462A4334K	742-9924
470	0.1	10	0.28	0.17	5.6	4	B82462A4474K	742-9932
680	0.1	10	0.23	0.14	8	3.2	B82462A4684K	742-9940
1000	0.1	10	0.18	0.11	13	2.8	B82462A4105K	742-9959

Inductance (μH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	Mftrs. List No.	Order Code
15	100	20	1.1	0.12	B82472G4153M	743-0191
22	100	20	0.9	0.2	B82472G4223M	743-0205
33	100	20	0.72	0.25	B82472G4333M	743-0213
47	100	20	0.65	0.3	B82472G4473M	743-0221
56	100	20	0.63	0.31	B82472G4563M	743-0230
68	100	20	0.6	0.46	B82472G4683M	743-0248
180	100	20	0.32	0.95	B82472G4184M	743-0272
220	100	20	0.3	1.1	B82472G4224M	743-0280

350029

Order Multiple=5	Order Code	5+	10+	50+	250+	2K5+
<b>Shielded</b>						
All Values	●	3.24	3.00	2.88	2.43	1.95
<b>Unshielded</b>						
All Values	●	2.82	2.58	2.46	2.01	1.50

349820

**Power Inductor Kit**  
B82462 Series



**NEW**

- Suitable for development and research (R&D)
  - Values refillable from stock
- Kit contains 1, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68, 100, 150, 220 and 330μH

423493

Order Code	1+	3+
111-2822 ●	156.04	141.23

**Power Inductors 7x7mm**  
B82472 Series



- Size: 7x7mm
- Magnetically shielded - better for high density population as can be placed closer to other components
- Winding: enamel copper wire, welded to terminals

**SMD**

- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Rated Inductance L<sub>R</sub> Measured with HP4284A, measuring voltage 100mV  
 Rated Current I<sub>R</sub> Max permissible DC with temperature increase of ≤ 40K @ 85°C  
 Saturation Current I<sub>Sat</sub> Max permissible DC with inductance decrease ΔL/L<sub>0</sub> = 10%  
 Self-resonance frequency f<sub>res</sub> Measured with network analyser HP8753  
 Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)

Solderability 5d, 235°C, wetting >90%  
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile  
 DC resistance R<sub>max</sub> Measured at 20 ambient temperature  
 Weight Unshielded: 1.5g, shielded: 2g

Inductance (μH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	Mftrs. List No.	Order Code
1	100	20	2.9	0.018	B82472G4102M	743-0124
1.5	100	20	2.6	0.02	B82472G4152M	743-0132
2.2	100	20	2.2	0.025	B82472G4222M	743-0140
3.3	100	20	1.9	0.035	B82472G4332M	743-0159
4.7	100	20	1.7	0.043	B82472G4472M	743-0167
6.8	100	20	1.4	0.055	B82472G4682M	743-0175
10	100	20	1.34	0.08	B82472G4103M	743-0183

**Power Inductor Kit**  
B82464 Series



- B82464 shielded
- Shielded is better for high density population as can be placed closer to other components
- Inductance range: 1-1000μH
- 3 pieces for each value

**SMD**

Kit contains 3 each of 10x10mm 1, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68, 100, 150, 220, 330, 470, 680 and 1000μH in both shielded and unshielded.

349482

Order Code	1+	3+	5+
742-9371 ●	410.70	399.63	390.12

**Power Inductors 10x10mm**  
B82464 Series



**SMD**

- Size: 10x10mm
- Choice of shielded or unshielded
- Shielded is better for high density population as can be placed closer to other components
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Rated Inductance L<sub>R</sub> Measured with HP4294A, measuring voltage 100mV  
 Rated Current I<sub>R</sub> Max permissible DC with temperature increase of ≤ 40K @ 85°C  
 Saturation Current I<sub>Sat</sub> Max permissible DC with inductance decrease ΔL/L<sub>0</sub> = 10%  
 Self-resonance frequency f<sub>res</sub> Typical self-resonance frequency measured with network analyser HP8753  
 Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)

Solderability 5d, 235°C, wetting >90%  
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile  
 DC resistance R<sub>max</sub> Measured at 20 ambient temperature  
 Weight Unshielded: 1.5g, shielded: 2g

Inductance (μH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>Sat</sub> (A)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	f <sub>res</sub> (MHz)	Mftrs. List No.	Order Code
<b>Shielded</b>								
1.0	0.1	20	10	7.5	0.007	135	B82464G4102M	742-9380
1.5	0.1	20	8.50	7	0.009	110	B82464G4152M	742-9398
2.2	0.1	20	7.00	6.5	0.01	72	B82464G4222M	742-9401
3.3	0.1	20	5.90	5.5	0.012	50	B82464G4332M	742-9410
4.7	0.1	20	5.20	4.9	0.015	37	B82464G4472M	742-9428
6.8	0.1	20	4.60	4.3	0.02	28	B82464G4682M	742-9436
10	0.1	20	3.50	3.4	0.03	22	B82464G4103M	742-9444
15	0.1	20	3.10	2.75	0.04	15	B82464G4153M	742-9452
22	0.1	20	2.50	2.25	0.052	13	B82464G4223M	742-9460
33	0.1	20	2.10	1.85	0.075	10	B82464G4333M	742-9479
47	0.1	20	1.80	1.55	0.095	9	B82464G4473M	742-9487
68	0.1	20	1.45	1.3	0.13	8	B82464G4683M	742-9495
100	0.1	20	1.15	1.05	0.22	6.5	B82464G4104M	742-9509
150	0.1	20	0.90	0.85	0.32	4.5	B82464G4154M	742-9517
220	0.1	20	0.75	0.7	0.44	4	B82464G4224M	742-9525
330	0.1	20	0.65	0.59	0.65	3.2	B82464G4334M	742-9533
470	0.1	20	0.55	0.5	0.93	2.6	B82464G4474M	742-9541
680	0.1	20	0.46	0.42	1.3	2	B82464G4684M	742-9550
1000	0.1	20	0.35	0.34	2.2	1.8	B82464G4105M	742-9568
<b>Unshielded</b>								
1	0.1	20	11	7	0.009	120	B82464A4102M	742-9576
1.5	0.1	20	9.8	6.5	0.01	80	B82464A4152M	742-9584
2.2	0.1	20	8.4	5.7	0.012	60	B82464A4222M	742-9592
3.3	0.1	20	6.6	4.9	0.015	50	B82464A4332M	742-9606
4.7	0.1	20	5.6	4.3	0.018	42	B82464A4472M	742-9614
6.8	0.1	20	4.7	3.5	0.027	30	B82464A4682M	742-9622
10	0.1	20	3.9	2.9	0.038	24	B82464A4103M	742-9630
15	0.1	10	3.2	2.5	0.046	18	B82464A4153K	742-9649
22	0.1	10	2.6	2.1	0.085	15	B82464A4223K	742-9657
33	0.1	10	2.2	1.8	0.1	13	B82464A4333K	742-9665

17

EMC, Filters & Suppression

Compliant  
 Non-compliant  
 Limited stock - RoHS replacement available  
**RoHS**

Inductance (µH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>Sat</sub> (A)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	f <sub>res</sub> (MHz)	Mfrs. List No.	Order Code
<b>Unshielded</b>								
47	0.1	10	1.8	1.5	0.14	11	B82464A4473K	742-9673
68	0.1	10	1.5	1.25	0.2	9.0	B82464A4683K	742-9681
100	0.1	10	1.2	1.03	0.28	8.0	B82464A4104K	742-9690
150	0.1	10	1.0	0.86	0.4	6.0	B82464A4154K	742-9703
220	0.1	10	0.85	0.69	0.61	5.0	B82464A4224K	742-9711
330	0.1	10	0.70	0.58	1.0	4.0	B82464A4334K	742-9720
470	0.1	10	0.55	0.5	1.27	3.2	B82464A4474K	742-9738
680	0.1	10	0.45	0.4	2.0	2.5	B82464A4684K	742-9746
1000	0.1	10	0.38	0.33	3.0	2.0	B82464A4105K	742-9762

349533

Order Code	Price Each				
	1+	10+	50+	250+	750+
<b>Shielded</b>					
All Values ●	6.93	6.54	6.12	5.19	3.93
<b>Unshielded</b>					
All Values ●	5.97	5.49	5.25	4.32	3.21

**Power Inductors 12x12mm**

**B82477 Series**



- Size: 12x12mm
- Magnetically shielded - better for high density population as can be placed closer to other components
- Winding: enamel copper wire, welded to terminals
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering



Rated Inductance L<sub>R</sub> Measured with HP4284A, measuring voltage 100mV  
 Rated Current I<sub>R</sub> Max permissible DC with temperature increase of ≤ 40k @ 85°C  
 Saturation Current I<sub>sat</sub> Max permissible DC with inductance decrease ΔL/L<sub>0</sub> ≈ 10%  
 Self-resonance frequency f<sub>res</sub> Measured with network analyser HP8753  
 Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)  
 Solderability 5d, 235°C, wetting >90%  
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile  
 DC resistance R<sub>max</sub> Measured at 20 ambient temperature  
 Weight 4g

Inductance (µH)	Freq <sub>L</sub> (MHz)	Tolerance (%)	I <sub>R</sub> (A)	R <sub>max</sub> (Ω)	Mfrs. List No.	Order Code
1	100	20	9.8	0.007	B82477G4102M	743-0299
2.2	100	20	8	0.01	B82477G4222M	743-0302
3.9	100	20	7.5	0.0125	B82477G4392M	743-0310
4.7	100	20	6.8	0.014	B82477G4472M	743-0329
5.6	100	20	6.7	0.0142	B82477G4562M	743-0337
6.8	100	20	6.5	0.0185	B82477G4682M	743-0345
10	100	20	5.4	0.022	B82477G4103M	743-0353
15	100	20	4.5	0.027	B82477G4153M	743-0370
22	100	20	3.6	0.038	B82477G4223M	743-0388
33	100	20	3	0.053	B82477G4333M	743-0396
47	100	20	2.5	0.082	B82477G4473M	743-0400
82	100	20	1.9	0.145	B82477G4823M	743-0426
100	100	20	1.7	0.165	B82477G4104M	743-0434
150	100	20	1.42	0.225	B82477G4154M	743-0442
220	100	20	1.16	0.38	B82477G4224M	743-0450
330	100	20	0.95	0.6	B82477G4334M	743-0469
470	100	20	0.8	0.79	B82477G4474M	743-0477
680	100	20	0.68	1.24	B82477G4684M	743-0485
1000	100	20	0.55	1.68	B82477G4105M	743-0493

350160

Order Code	Price Each				
	1+	10+	50+	200+	400+
All Values ●	8.13	7.83	7.68	7.11	6.00

**HM76 Series**

**Drum Core – Surface Mount Inductors**



- High performance, high current capacities
- Compatible with vapor phase and infrared reflow soldering – No special handling necessary



- Low core loss, excellent for high frequency applications – Designed for the latest clock speeds
- Low profile, designed for machine placement – Easily incorporated into volume production
- Wide range of standard values

Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)  
 Solderability 5d, 235°C, wetting >90%  
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile  
 DC resistance R<sub>max</sub> Measured at 20 ambient temperature  
 Weight Unshielded: 0.75g, shielded: 1.5g

Case size	Length	Width	Depth
10	7.3mm	4.78mm	3.23mm
20	13.46mm	9.43mm	3.5mm
30	13.46mm	9.4mm	5.9mm
40	7.3mm	4.78mm	3.23mm
50	18.95mm	15.24mm	7.21mm

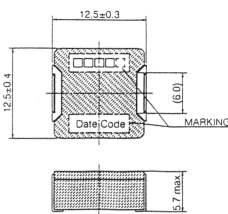
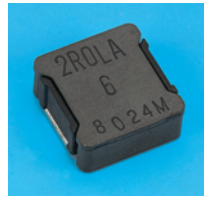
Inductance (µH)	Resistance (Ω)	Rated Current (A)	Case size	Mfrs. List No.	Order Code
0.78	0.003	15	50	HM7650R78LFJTR	943-1500
1	0.03	2.9	10	HM76101ROLFJTR	943-0814
1	0.01	8.5	30	HM76301ROLFJTR	943-1101
1.3	0.0043	13.7	50	HM76501R3LFJTR	943-1519
1.5	0.05	2.8	10	HM76101R5LFJTR	943-0822
1.5	0.01	7.9	30	HM76301R5LFJTR	943-1110
2.2	0.06	2.4	10	HM76102R2LFJTR	943-0830
2.2	0.02	7.4	30	HM76302R2LFJTR	943-1128
2.2	0.006	12	50	HM76502R2LFJTR	943-1527
3.3	0.9	2	10	HM76103R3LFJTR	943-0849
3.3	0.02	6.6	30	HM76303R3LFJTR	943-1136
3.3	0.01	9.8	40	HM76403R3LFJTR	943-1314
3.3	0.008	9.8	50	HM76503R3LFJTR	943-1535
4.7	0.9	1.5	10	HM76104R7LFJTR	943-0857
4.7	0.02	6	30	HM76304R7LFJTR	943-1144
4.7	0.01	9.3	40	HM76404R7LFJTR	943-1322
5.6	0.01	7.5	50	HM76505R6LFJTR	943-1543
6.8	0.17	1.3	10	HM76106R8LFJTR	943-0865
6.8	0.03	5.2	30	HM76306R8LFJTR	943-1152
6.8	0.02	7.7	40	HM76406R8LFJTR	943-1330
8.2	0.03	5	30	HM76308R2LFJTR	943-1160
8.2	0.02	7	40	HM76408R2LFJTR	943-1349
10	0.16	1.1	10	HM7610100LFJTR	943-0873
10	0.7	2	20	HM7620100LFJTR	943-0970
10	0.04	4.6	30	HM7630100LFJTR	943-1179
10	0.02	6.5	40	HM7640100LFJTR	943-1357
10	0.023	6	50	HM7650100LFJTR	943-1551
15	0.3	0.8	10	HM7610150LFJTR	943-0881
15	0.9	1.5	20	HM7620150LFJTR	943-0989
15	0.05	3.7	30	HM7630150LFJTR	943-1187
15	0.03	5.3	40	HM7640150LFJTR	943-1365
15	0.035	4.5	50	HM7650150LFJTR	943-1560
22	0.43	0.7	10	HM7610220LFJTR	943-0890
22	0.15	1.3	20	HM7620220LFJTR	943-0997
22	0.07	3.1	30	HM7630220LFJTR	943-1195
22	0.04	4.4	40	HM7640220LFJTR	943-1373
22	0.045	4	50	HM7650220LFJTR	943-1578
33	0.69	0.57	10	HM7610330LFJTR	943-0903
33	0.21	1.1	20	HM7620330LFJTR	943-1004
33	0.11	2.5	30	HM7630330LFJTR	943-1209
33	0.06	3.5	40	HM7640330LFJTR	943-1381
33	0.075	3	50	HM7650330LFJTR	943-1586
47	0.92	0.46	10	HM7610470LFJTR	943-0911
47	0.31	0.8	20	HM7620470LFJTR	943-1012
47	0.16	2	30	HM7630470LFJTR	943-1217
47	0.07	3	40	HM7640470LFJTR	943-1390
47	0.096	2.6	50	HM7650470LFJTR	943-1594
68	0.42	0.7	20	HM7620680LFJTR	943-1020
68	0.2	1.8	30	HM7630680LFJTR	943-1225
68	0.11	2.5	40	HM7640680LFJTR	943-1403
68	0.14	2.3	50	HM7650680LFJTR	943-1608
82	0.24	1.58	30	HM7630820LFJTR	943-1233
82	0.12	2.2	40	HM7640820LFJTR	943-1411
100	1.98	0.28	10	HM7610101LFJTR	943-0920
100	0.58	0.6	20	HM7620101LFJTR	943-1039
100	0.3	1.5	30	HM7630101LFJTR	943-1241
100	0.15	2	40	HM7640101LFJTR	943-1420
100	0.19	1.7	50	HM7650101LFJTR	943-1616
150	3.08	0.22	10	HM7610151LFJTR	943-0938
150	0.89	0.5	20	HM7620151LFJTR	943-1047
150	0.44	1.2	30	HM7630151LFJTR	943-1250
150	0.22	1.7	40	HM7640151LFJTR	943-1438
150	0.29	1.5	50	HM7650151LFJTR	943-1624
220	4.47	0.18	10	HM7610221LFJTR	943-0946
220	1.3	0.4	20	HM7620221LFJTR	943-1055
220	0.64	1	30	HM7630221LFJTR	943-1268
220	0.33	1.3	40	HM7640221LFJTR	943-1446
220	0.41	1.2	50	HM7650221LFJTR	943-1632
330	6.9	0.15	10	HM7610331LFJTR	943-0954
330	2	0.3	20	HM7620331LFJTR	943-1063
330	1	0.8	30	HM7630331LFJTR	943-1276
330	0.45	1.1	40	HM7640331LFJTR	943-1454
330	0.54	1	50	HM7650331LFJTR	943-1640
470	11.55	0.12	10	HM7610471LFJTR	943-0962
470	2.5	0.2	20	HM7620471LFJTR	943-1071
470	1.5	0.5	30	HM7630471LFJTR	943-1284
470	0.7	0.93	40	HM7640471LFJTR	943-1462
470	0.8	0.83	50	HM7650471LFJTR	943-1659
680	3.5	0.1	20	HM7620681LFJTR	943-1080
680	2.2	0.4	30	HM7630681LFJTR	943-1292
680	1	0.78	40	HM7640681LFJTR	943-1470
680	1.15	0.72	50	HM7650681LFJTR	943-1667
1000	6	0.05	20	HM7620102LFJTR	943-1098
1000	3.15	0.3	30	HM7630102LFJTR	943-1306
1000	1.45	0.65	40	HM7640102LFJTR	943-1489
1000	1.8	0.56	50	HM7650102LFJTR	943-1675

411293

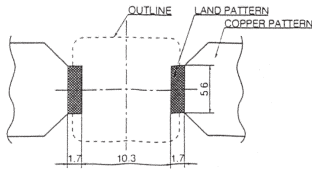
Order Multiple=5	Price Each					
	Order Code	1+	25+	50+	100+	+
Case size 10 ●	5.57	5.24	4.78	4.36	--	--
Case size 20 ●	6.31	6.05	5.70	4.95	--	--
Case size 30 ●	7.78	7.29	6.77	6.15	--	--
Case size 40 & 50 ●	9.15	8.76	8.01	7.26	--	--



Power Choke Coils - ETQP



Supplied on 24mm embossed tape (reel=500pcs)



PCB layout

- Surface mount high power choke coils
- Moulded resin construction
- Single case size for all values

Inductance @ 25°C (µH)	Tolerance %	Saturation current @ 25°C (A)	Max.DC resistance @ 20°C (mΩ)	Mfrs. List No.	Order Code
1.2	±30	14.3	2.24	ETQP6F1R2HFA	969-4145
2	±30	10.7	3.3	ETQP6F2R0HFA	969-4153
2.5	±30	11.3	4.92	ETQP6F2R5SFA	969-4161
3.2	±25	8.6	4.92	ETQP6F3R2HFA	969-4170
4.6	±25	7.3	6.48	ETQP6F4R6HFA	969-4188
6.4	±25	6.2	8.64	ETQP6F6R4HFA	969-4196
10.2	±25	4.7	13.3	ETQP6F102HFA	969-4200

204187

Order Code	Price Each				
	1+	10+	25+	50+	+
All Values	10.23	9.21	8.08	6.96	--

Power Inductors - B82476/8/9 Series



- High current rating
- Low dc resistance
- Suitable for reflow soldering (IR and vapour phase)



A range of surface mount power inductors designed for filtering supply voltages, coupling/decoupling, dc/dc converters, telecommunications and automotive electronics

B82476 - L = 9.4mm, W = 12.9mm, H = 5.08mm  
 B82478 - L = 11.6mm, W = 12.6mm, H = 8.5mm  
 B82479 - L = 15.24mm, W = 18.54mm, H = 7.11mm

Inductance µH	Inductance Tolerance %	DC Resistance Max. (Ω)	Max dc Current mA	Test Frequency MHz	Self Res. Frequency MHz	Order Code
<b>B82476</b>						
10	20	0.025	3800	100	20	387-7486
22	20	0.05	2600	100	20	387-7498
47	20	0.12	1600	100	20	387-7504
100	20	0.23	1200	100	20	387-7516
220	20	0.53	800	100	20	387-7528
330	20	0.81	600	100	20	387-7530
470	20	1.10	500	100	20	387-7541
1000	20	2.15	300	100	20	387-7553
<b>B82478</b>						
10	20	0.06	3500	10	20	387-7565
22	20	0.10	2600	10	20	387-7577
33	20	0.12	2300	10	20	387-7589
47	20	0.17	1950	10	20	387-7590
100	20	0.06	1400	10	20	387-7607
220	20	0.73	950	10	20	387-7619
330	20	1.15	800	10	20	387-7620
470	20	1.48	650	10	20	387-7632
1000	20	3.0	460	10	20	387-7644
<b>B82479</b>						
10	20	0.032	4300	100	20	387-7656
22	20	0.047	3500	100	20	387-7668
33	20	0.066	3000	100	20	387-7670
47	20	0.087	2600	100	20	387-7681
100	20	0.19	1800	100	20	387-7693
220	20	0.38	1200	100	20	387-7700
330	20	0.56	1000	100	20	387-7711
470	20	0.85	820	100	20	387-7723
1000	20	1.8	560	100	20	387-7735

234192

Type	Order Code	Price Each				
		5+	50+	100+	500+	+
B82476	All Values	6.12	5.73	5.34	4.11	--
B82478	All Values	7.83	6.30	5.82	4.62	--
B82479	All Values	8.81	8.25	7.50	5.76	--

High Power Series - ELC09



- High power fixed inductors for line noise filtering
- Compact size due to high permeability and high flux density ferrite cores
- Wide inductance range
- Applications include TV, VCR, PCs, Audio, Fax machines etc.

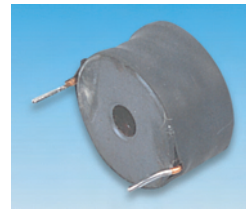
Height above PCB=13, Dia.=10  
 Lead length=4.0, Lead dia.=1.0, Fixing pitch=5.0

Inductance (µH)	Tolerance %	Max. DC Current @ 20°C (A)	DC resistance @ 20°C(Ω)	Mfrs. List No.	Order Code
2.2	±20	3.5	0.012	ELC09D2R2F	809-4810
3.3	±20	3.2	0.015	ELC09D3R3F	809-4861
3.9	±20	3.1	0.016	ELC09D3R9F	809-4870
4.7	±20	3	0.018	ELC09D4R7F	809-4942
6.8	±20	2.8	0.021	ELC09D6R8F	809-4985
8.2	±20	2.6	0.024	ELC09D8R2F	809-5035
10	±20	2.5	0.027	ELC09D100F	809-4756
15	±20	2.1	0.035	ELC09D150F	809-4799
22	±10	1.8	0.051	ELC09D220F	809-4829
27	±10	1.6	0.058	ELC09D270F	809-4853
33	±10	1.4	0.081	ELC09D330F	809-4888
39	±10	1.3	0.087	ELC09D390F	809-4918
47	±10	1.2	0.11	ELC09D470F	809-4950
56	±10	1.1	0.13	ELC09D560F	809-4977
68	±10	1	0.14	ELC09D680F	809-4993
100	±10	0.82	0.2	ELC09D101F	809-4764
150	±10	0.74	0.32	ELC09D151F	809-4802
220	±10	0.58	0.41	ELC09D221F	809-4837
330	±10	0.49	0.65	ELC09D331F	809-4896
390	±10	0.46	0.86	ELC09D391F	809-4926
470	±10	0.39	0.98	ELC09D471F	809-4969
680	±10	0.34	1.4	ELC09D681F	809-5000
1000	±10	0.28	2.1	ELC09D102F	809-4772
2200	±10	0.17	4.4	ELC09D222F	809-4845
3300	±10	0.14	7	ELC09D332F	809-4900
3900	±10	0.13	8	ELC09D392F	809-4934
10000	±10	0.08	18.8	ELC09D103F	809-4780

204189

Order Code	Price Each				
	1+	25+	50+	100+	+
All Values	1.28	1.14	1.05	0.84	--

High Current - 1400 Series



- A range of high current bobbin core inductors for switching regulators, filter and power line applications
- The core is manufactured from a high saturation flux density material, the winding is insulated by a heatshrunk sleeve
- The inductors may be PCB mounted or alternatively chassis mounted using the bobbin centre fixing hole
- Tolerance ±10%.

Fixing hole dia.=4.5  
 Lead length=10

Inductance (µH)	Current (cont.)* A	Resistance Ω	Dimensions H	Dia. (overall)	Lead Dia.
22	11	0.012	14.5	24	1.3
47	8.5	0.023	14.5	24	1.3
68	6.2	0.035	14.5	24	1.1
100	5.4	0.046	14.5	24	1.1
100	7.8	0.033	20.5	30	1.3
150	4	0.076	14.5	24	1.1
220	3.5	0.106	14.5	24	1.1
220	5.5	0.063	20.5	30	1.3
300	3	0.14	14.5	24	1.1
330	2.8	0.165	14.5	24	0.8
330	4.5	0.1	20.5	30	1.1
470	2.3	0.244	14.5	24	0.8
470	4	0.129	20.5	30	1.1
680	2	0.304	14.5	24	0.8
1000	1.6	0.461	14.5	24	0.8
2200	0.9	1.01	14.5	24	0.5

\* For a temperature rise of <30°C from ambient

204074

Value (µH)	Current (A)	Order Code	Price Each			
			1+	10+	25+	50+
22	11	107-7056	7.33	7.11	6.87	6.12
47	8.5	107-7058	7.33	7.11	6.87	6.12
68	6.2	107-7059	7.33	7.11	6.87	6.12
100	5.4	107-7015	6.83	6.45	6.15	5.79
100	7.8	107-7020	11.08	10.50	9.96	9.36
150	4	107-7024	7.33	7.11	6.87	6.12
220	3.5	107-7017	6.83	6.45	6.15	5.79
220	5.5	107-7021	11.08	10.50	9.96	9.36
300	3	107-7025	7.33	7.11	6.87	6.12
330	2.8	107-7018	6.83	6.45	6.15	5.79
330	4.5	107-7022	11.08	10.50	9.96	9.36

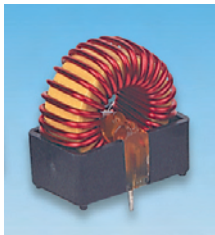
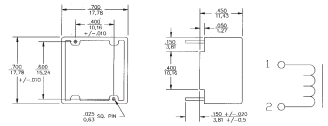
Value (μH)	Current (A)	Order Code	1+	10+	25+	50+	+
470	2.3	107-7019	6.83	6.45	6.15	5.79	--
470	4	107-7023	11.08	10.50	9.96	9.36	--
680	2	107-7026	7.33	7.11	6.87	6.12	--
1000	1.6	107-7027	7.39	6.99	6.51	5.79	--
2200	0.9	107-7060	7.33	7.11	6.87	6.12	--

Designed for National Semiconductor Simple Switcher™

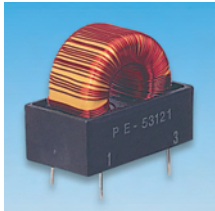
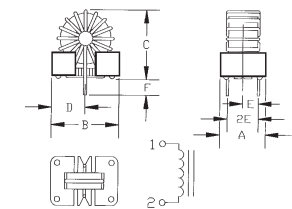
PULSE ENGINEERING



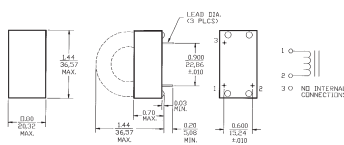
Case Style A



Case Style B-E



Case Style F



- Fixed inductors specifically designed to be used in National Semiconductor, Simple Switcher™ voltage regulator applications
- Pulse part numbers are listed in the National Semiconductor datasheet
- Base materials meet the flammability requirements of UL94V-0.

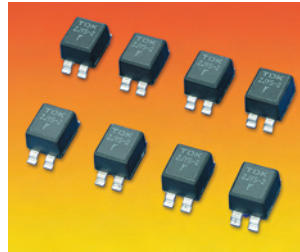
Typical Inductance (μH)	DA Current (A)	Pin Diameter	Case Style	Inductor Code	Pulse Part No.	Order Code
47	3	0.64	B	L47	PE53112NL	120-9544
68	3	1.02	D	L68	PE92114KNL	120-9545
100	3	0.81	D	L100	PE92108KNL	120-9546
150	2	0.64 SQ	D	L150	PE53113NL	120-9547
220	1.4	0.64	A	L220	PE52626NL	120-9548
220	1.4	0.51	C	L220	PE53145NL	120-9549
330	0.9	0.64 SQ	A	L330	PE52627NL	120-9550
330	0.9	0.64	C	L330	PE53146NL	120-9551
470	0.64	0.64	D	L470	PE53114NL	120-9552
680	0.42	0.64 SQ	A	L680	PE52629NL	120-9554
150	3	0.64	D	H150	PE53115NL	120-9555
220	3	0.81	E	H220	PE53116NL	120-9557
330	3	0.64	E	H330	PE53117NL	120-9558
470	2	0.64	E	H470	PE53118NL	120-9559
680	1.3	0.64	E	H680	PE53119NL	120-9560
1000	0.95	0.64	E	H1000	PE53120NL	120-9561
2200	0.42	0.81	F	H2200	PE53122NL	120-9562

204077

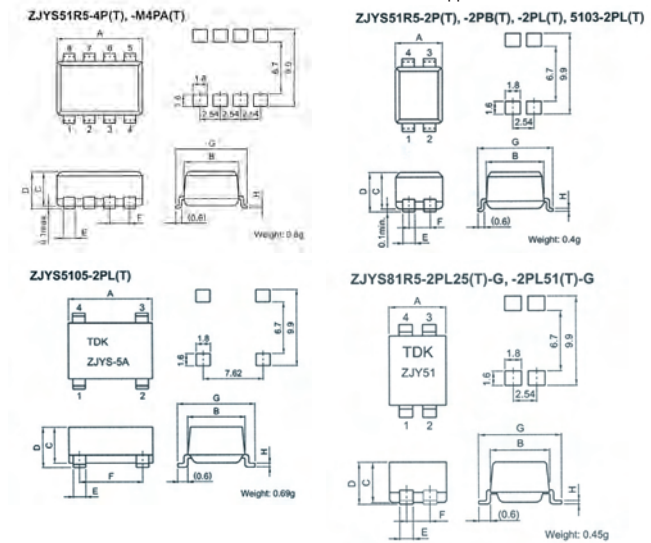
Typical Inductance μH	Order Code	1+	10+	50+	100+
47	120-9544	13.02	11.26	10.06	7.65
68	120-9545	9.67	8.43	7.45	5.66
100	120-9546	7.65	6.67	5.89	4.49
150	120-9547	14.16	12.34	10.90	8.33
220	120-9548	12.86	11.20	9.99	7.58
220	120-9549	10.84	9.47	8.37	6.41
330	120-9550	12.08	10.48	9.28	7.10
330	120-9551	13.77	12.01	10.64	8.10
470	120-9552	14.48	12.66	11.13	8.53
680	120-9554	12.56	10.94	9.73	7.39
150	120-9555	14.81	12.89	11.46	8.72
220	120-9557	15.49	13.51	11.95	9.11
330	120-9558	12.37	10.77	9.57	7.26
470	120-9559	12.37	10.77	9.57	7.26
680	120-9560	12.79	11.13	9.86	7.52
1000	120-9561	13.25	11.59	10.25	7.84

Suppression Chokes

ZJYS Series - Common Mode Choke Coils for Signal Lines



- Common-mode filters for distortion free noise removal from transmitted signals
- Optimised for the transmission of high quality signals
- Ideal for countering common mode noise resulting from data signal processing
- Surface mount packages for miniaturisation in portable applications
- High current handling of up to 5A allows use in power line noise reduction
- Key applications include, PC's, Telephones, LAN's, ISDN, Digital PBX, electronics games and portable electronic equipment
- ZJYS81R5 is a high inductance version for CANBus applications



max	A	B	C	D	E	F	G	H	Style
5.5	6.86	4.57	5.08	1.3	2.54	9	0.25	ZJYS51R5-2P/5103	
10.5	6.86	4.57	5.08	1.3	7.62	9	0.25	ZJYS51R5-4P	
6	7.1	4.5	5	1.3	2.54	9	0.25	ZJYS5105	

Voltage (V) dc	Current (A)	Test	Insulation Res. (MΩ)	DC Res. (Ω)	Impedance (Ω)	Oper. Temp. (°C)	Mfrs. List No.	Order Code
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2P(T)	423-0401
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PT-01	962-1261
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PB(T)*1	423-0413
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PBT-01*1	962-1270
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PL(T)*2	423-0425
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PLT-01*2	962-1288
50	3	125	100	0.03	100	-25 to +85	ZJYS5103-2PLT-01	962-1296
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-4P(T)	423-0462
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-4PT-01	962-1326
50	0.5	125	100	0.2	200	-25 to +85	ZJYS51R5-M4PAT-01	962-1334
50	5	125	100	0.01	100	-25 to +85	ZJYS5105-2PL(T)	423-0486
80	0.5	200	100	0.25	600	-40 to +125	ZJYS81R5-2PL25(T)-G	423-0449
80	0.5	200	100	0.25	600	-40 to +125	ZJYS81R5-2PL25T-G01	962-1300
80	0.5	200	100	0.3	1000	-40 to +125	ZJYS81R5-2PL51(T)-G	423-0450
80	0.5	200	100	0.3	1000	-40 to +125	ZJYS81R5-2PL51T-G01	962-1318

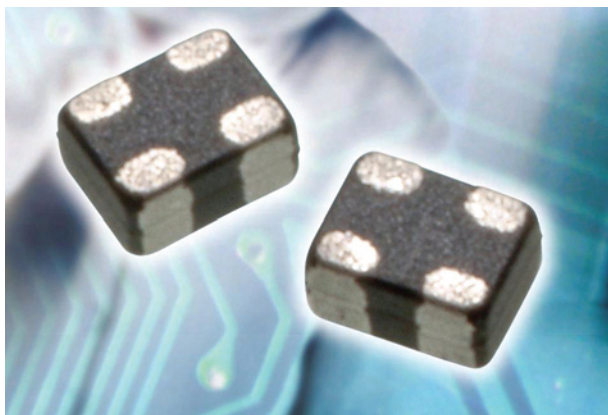
\*1 Enhanced low frequency impedance characteristics  
\*2 Separate windings for communications

243229

Mfrs. List No.	Order Code	1+	50+	100+	250+	+
ZJYS51R5-2P(T)	SMD 423-0401‡	6.33	5.43	4.74	3.81	--
ZJYS51R5-2PT-01	SMD 962-1261	6.33	5.43	4.74	3.81	--
ZJYS51R5-2PB(T)	SMD 423-0413‡	11.22	9.63	8.43	6.75	--
ZJYS51R5-2PBT-01	SMD 962-1270	11.22	9.63	8.43	6.75	--
ZJYS51R5-2PL(T)	SMD 423-0425‡	6.87	5.91	5.16	4.11	--
ZJYS51R5-2PLT-01	SMD 962-1288	6.87	5.91	5.16	4.11	--
ZJYS5103-2PL(T)	SMD 423-0437‡	10.62	9.09	7.95	6.36	--
ZJYS5103-2PLT-01	SMD 962-1296	10.62	9.09	7.95	6.36	--
ZJYS51R5-4P(T)	SMD 423-0462‡	9.99	8.55	7.50	6.00	--
ZJYS51R5-4PT-01	SMD 962-1326	9.99	8.55	7.50	6.00	--
ZJYS51R5-M4PAT-01	SMD 962-1334	12.63	10.83	9.48	7.59	--
ZJYS5105-2PL(T)	SMD 423-0486‡	6.33	5.43	4.74	3.81	--

Mfrs. List No.	Order Code	1+	50+	100+	250+	+
ZJYS5105-2PLT-01	<b>SMD 962-1342</b> ●	6.33	5.43	4.74	3.81	--
ZJYS81R5-2PL25(T)-G	<b>SMD 423-0449</b> ‡	6.27	5.37	4.68	3.75	--
ZJYS81R5-2PL25T-G01	<b>SMD 962-1300</b> ●	6.27	5.37	4.68	3.75	--
ZJYS81R5-2PL51(T)-G	<b>SMD 423-0450</b> ‡	6.27	5.37	4.68	3.75	--
ZJYS81R5-2PL51T-G01	<b>SMD 962-1318</b> ●	6.27	5.37	4.68	3.75	--

DLPONS Series



DLPONS series enables noise suppression for differential signal line without distortion in high-speed signal transmission due to its line impedance matching.

Applications:

- Note PCs
- Mobile phones
- Digital Still Cameras, Digital Video Cameras

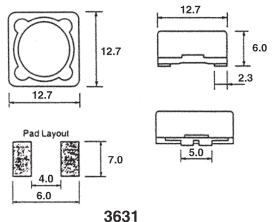


Impedance	Tolerance	Resistance	Current	Order Code
67	25	100	110	<b>111-4998</b>
90	25	100	100	<b>111-4999</b>
120	25	100	90	<b>111-5000</b>

423262

Order Code	5+	50+	100+	250+	+
All Values ●	0.78	0.65	0.49	0.49	--

3631/3632 Series - Shielded Signal Line Chokes



- High power, ferrite cored surface mount inductors
- Fully shielded moulded construction
- Suitable for switching regulators, filter and power line applications and power decoupling

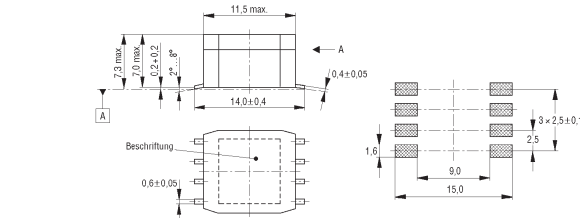
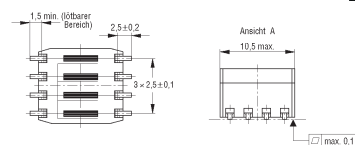
Operating temperature -20°C to +80°C

Inductance (μH)	Tolerance %	L Test Frequency	DC resistance Max. (Ω)	DC Current Max. (A)	Mfrs. List No.	Order Code
2.5	20	1kHz	0.016	6.2	3631B2R5ML	117-4023
10	20	1kHz	0.035	3.3	3631B100ML	117-4025
22	20	1kHz	0.062	2.3	3631B220ML	117-4026
33	15	1kHz	0.09	1.9	3631B330LL	117-4027
47	15	1kHz	0.13	1.6	3631B470LL	117-4028
100	15	1kHz	0.22	1.1	3631B101LL	117-4029
220	15	1kHz	0.46	0.7	3631B221K	117-4030
330	15	1kHz	0.66	0.6	3631B331K	117-4031
470	15	1kHz	0.97	0.5	3631B471K	117-4032
820	15	1kHz	1.7	0.35	3631B821K	117-4035
1000	15	0.252MHz	2.5	0.3	3632B102LL	117-4036
2200	15	0.252MHz	5	0.2	3632B222LL	117-4037
10000	15	79.6MHz	26	0.095	3632B103LL	117-4038

204188

Order Code	1+	25+	100+	500+
3631 Series All Values ●	4.65	3.81	3.33	2.55
3632 Series All Values ●	5.55	4.74	3.96	3.18

Data and Signal Line Chokes



- Ring core double and Quad chokes in a UL94V-0 flame retardant case
- Applications include CAN-BUS and telecom systems



17

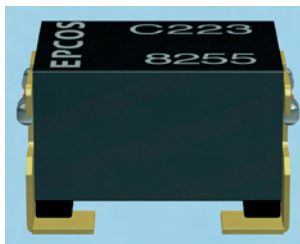
Voltage rating	80Vdc/42Vac				
IEC climatic category	40/125/56				
L <sub>N</sub> (mH)	I <sub>N</sub> (A)	L <sub>S</sub> (μH)	Application	Mfrs. List No.	Order Code
<b>Double Chokes</b>					
0.011	0.5	0.05	4 CAN-Bus	B82790C113N201	975-2234
0.025	0.5	1.5	4 CAN-Bus	B82790S253N201	975-2242
0.051	0.5	1.5	4 CAN-Bus	B82790S513N201	975-2250
0.47	0.5	0.2	4 Telecom	B82790C474N215	975-2269
1	0.5	0.2	4 Telecom	B82790C105N240	975-2277
4.7	0.5	0.25	4 Telecom	B82790C475N265	975-2285
4.7	0.2	0.25	8 Telecom	B82792C475N365	524-657
6.8	0.5	0.3	8 Telecom	B82792C685N365	524-839
10	0.2	0.4	8 Telecom	B82792C106N365	524-840
<b>Quad Chokes</b>					
0.47	0.5	0.15	8 ISDN	B82792C2474N315	524-852
1	0.5	0.2	8 ISDN	B82792C2105N365	524-876
4.7	0.2	0.3	8 ISDN	B82792C2475N365	524-943

204146

Order Multiple=5	Price Each					
Mfrs. List No.	1+	25+	50+	100+	+	
<b>Double chokes</b>						
B82790C113N201	<b>SMD 975-2234</b> ●	4.62	4.23	3.66	3.13	--
B82790S253N201	<b>SMD 975-2242</b> ●	4.99	4.58	3.96	3.38	--
B82790S513N201	<b>SMD 975-2250</b> ●	4.38	3.85	3.33	2.85	--
B82790C474N215	<b>SMD 975-2269</b> ●	5.20	4.76	4.11	3.51	--
B82790C105N240	<b>SMD 975-2277</b> ●	5.42	4.99	4.31	3.68	--
B82790C475N265	<b>SMD 975-2285</b> ●	6.55	5.97	5.16	4.41	--
B82792C475N365	<b>SMD 524-657</b> ●	6.03	5.70	5.55	4.65	--
B82792C685N365	<b>SMD 524-839</b> ●	6.64	6.39	6.12	5.04	--
B82792C106N365	<b>SMD 524-840</b> ●	7.16	6.75	6.45	5.37	--
<b>Quad chokes</b>						
B82792C2474N315	<b>SMD 524-852</b> ●	8.69	8.46	8.46	6.66	--
B82792C2105N365	<b>SMD 524-876</b> ●	9.18	8.94	8.91	7.05	--
B82792C2475N365	<b>SMD 524-943</b> ●	11.84	11.58	11.55	9.15	--

Data Line Choke

B82789 Series



- Current compensated double choke with ferrite core
- Suitable for automatic placement
- Suitable for reflow soldering
- Suppression of asymmetrical interface coupled in on lines, whereas data signals up to several MHz can pass unaffected
- Tinned terminals



Rated Voltage	42V (50/60 Hz), 80V DC
Rated Current	Referred to 50Hz and 85°C ambient temperature
Rated Inductance	Measured with HP4275A at 100kHz, 0.1A
Inductance Tolerance	-30%/+50%
Stray Inductance	typical value measured with HP4275A at 100kHz, 5mA
DC resistance	typical value measured at 20°C ambient temperature
Operating Temperature	-40°C to +125°C
Test Voltage	250V-, 2s

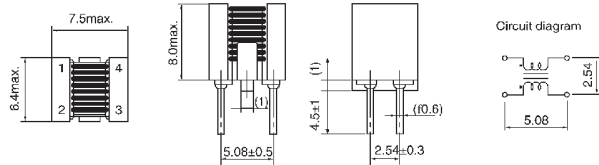
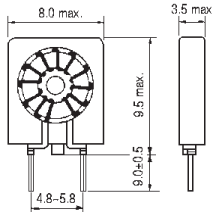
Inductance (μH)	Leakage Inductance (nH)	Current (mA)	RMS Test Voltage (V-, 2s)	Resistance max (mΩ)	Mfrs. List No.	Order Code
11	60	300	250	200	B82789C113N2	743-0507
22	100	250	250	500	B82789C223N2	743-0515
22	3000	250	250	550	B82789C223N2	743-0523
51	100	250	250	450	B82789C513N2	743-0531
100	250	150	250	1000	B82789C104N2	743-0540



Compliant  
● Non-compliant  
▲ Limited stock - RoHS replacement available  
**RoHS**

Order Multiple=5	Price Each				
Order Code	5+	10+	50+	250+	2K5+
All Values	3.24	3.00	2.88	2.43	1.95

PCB Mounting



Circuit diagram

- A range of compact data line filters employing a high performance toroidal core
- These common mode and differential mode chokes have a plastic carrier for ease of PCB mounting.

Voltage rating 50V  
Operating temperature  
Current rating  
Differential mode chokes  
Common mode chokes  
500mA  
25°C to +85°C  
25°C to +70°C

Inductance @ 1kHzµH	Inductance Tolerance %	Resistance mΩ	Order Code
<b>Differential Mode</b>			
5.6	± 50	<25	312-8714
5.6	± 50	<25	925-3556
20	± 35	<35	312-8726
20	± 35	<35	925-3564
56	± 35	<35	312-4873
56	± 35	<35	925-3548
<b>Common Mode</b>			
40	± 35	40	535-928
40	± 35	40	926-5783
80	± 35	55	535-941
80	± 35	55	926-5791

Order Multiple=5	Price Each					
Inductance µH	Order Code	5+	25+	50+	100+	+
<b>Differential Mode</b>						
5.6	312-8714	1.45	1.14	0.96	0.72	--
5.6	925-3556	0.81	0.71	0.61	0.52	--
20	312-8726	1.45	1.14	0.96	0.72	--
20	925-3564	0.80	0.71	0.61	0.52	--
56	312-4873	1.45	1.14	0.96	0.72	--
56	925-3548	0.57	0.50	0.43	0.37	--
<b>Common Mode</b>						
40	535-928	2.81	2.13	1.80	1.38	--
40	926-5783	2.81	2.13	1.80	1.38	--
80	535-941	3.06	2.31	1.92	1.47	--
80	926-5791	3.06	2.31	1.92	1.47	--

Miniature, Low Current – 2200R Series



H=11, Dia.=7.2, Fixing pitch=3.5p  
Lead length=10, Lead dia.=0.6

- Low cost, small outline inductors suitable for general use, such as power decoupling, low power switching regulators and LF tuned circuits
- Open wound ferrite bobbin construction, insulated with flame retardant sleeving.

L (mH)	Rdc Ω	I <sub>max</sub> mA	Mftrs. List No.	Order Code	L (mH)	Rdc Ω	I <sub>max</sub> mA	Mftrs. List No.	Order Code
10	0.05	1.62	22R103C	107-7049	1	3.63	170	22R105C	107-7036
15	0.07	1.35	22R153C	107-7050	1.5	6.49	130	22R155C	107-7037
22	0.09	1.08	22R223C	107-7051	2.2	8.58	110	22R225C	107-7038
33	0.14	900	22R333C	107-7052	3.3	10	100	22R335C	107-7039
47	0.22	770	22R473C	107-7054	4.7	13.2	81	22R475C	107-7042
68	0.28	770	22R683C	107-7055	10	37.4	63	22R106C	107-7043
100	0.39	670	22R104C	107-7029	15	49.5	54	22R156C	107-7044
150	0.54	520	22R154C	107-7031	22	82.5	45	22R226C	107-7045
220	0.83	430	22R224C	107-7032	33	110	36	22R336C	107-7046
330	1.21	380	22R334C	107-7033	47	154	27	22R476C	107-7047
470	1.65	310	22R474C	107-7034	68	242	18	22R686C	107-7048
680	2.64	250	22R684C	107-7035					

Order Multiple=10	Price Each					
Inductance	Order Code	10+	100+	500+	500+	1K+
10µH to 68mH	All Values	1.40	1.35	1.26	1.26	1.08

Low Current – 8RBS/8RB Series



- A range of fixed inductors suitable for power decoupling in logic circuits and a wide variety of LF tuned circuit applications
- Construction employs an open wound ferrite bobbin insulated by a heatshrunk sleeve
- Tolerance is ±10%.

Dia=8, H=6.2 (0.1mH to 12mH), 11.2 (22mH to 36mH),  
Lead L=2.4, Dia.=0.7, Fixing pitch=5

Q>60(@ 796kHz)			Q>80(@ 252kHz)			Q>100(22-36mH) @ 79.6kHz		
Inductance (mH)	Resistance (Ω)	I <sub>max</sub> (mA)	Inductance (mH)	Resistance (Ω)	I <sub>max</sub> (mA)	Inductance (mH)	Resistance (Ω)	I <sub>max</sub> (mA)
0.1	2	200	1	9	50	10	55	20
0.22	3	150	2.2	14	50	12	65	20
0.47	5	100	4.7	32	40	22	80	30
			5.6	36	30	27	80	30
						36	80	30

Inductance mH	Order Code	1+	25+	100+	250+	+
0.1	119-3611	2.40	2.16	1.92	1.53	--
0.22	119-3613	2.40	2.16	1.92	1.53	--
0.47	119-3614	2.40	2.16	1.92	1.53	--
1	119-3615	2.40	2.16	1.92	1.53	--
2.2	119-3616	2.40	2.16	1.92	1.53	--
4.7	119-3617	2.40	2.16	1.92	1.53	--
5.6	119-3618	2.59	2.37	2.19	1.62	--
10	119-3619	2.40	2.16	1.92	1.53	--
12	119-3620	2.59	2.37	2.19	1.62	--
22	119-3621	2.40	2.16	1.92	1.53	--
27	119-3622	2.59	2.37	2.19	1.62	--
36	119-3623	2.59	2.37	2.19	1.62	--

8RHB Series



- Fixed inductor for noise filtering applications in power supplies used in computers, TV etc
- Low profile and high saturation flux density ferrite core insulated with a heatshrunk sleeve.

Tolerance ±10%

Dia=8.5, H=11  
Lead L=5, Dia=0.62, Fixing pitch=5

Inductance µH	Resistance Ω	I <sub>max</sub> (A)	Q min	Q Test freq (MHz)	Order Code
47	0.16	1.4	30	2.52	119-3632
100	0.28	0.91	20	0.796	119-3633
220	0.68	0.64	20	0.796	119-3634
470	1.1	0.46	20	0.796	119-3635
1000	2.9	0.29	50	0.796	119-3637

Inductance µH	Order Code	1+	25+	100+	250+	+
47	119-3632	2.40	2.22	2.10	1.65	--
100	119-3633	2.40	2.22	2.10	1.65	--
220	119-3634	2.40	2.22	2.10	1.65	--
470	119-3635	2.40	2.22	2.10	1.65	--
1000	119-3637	2.40	2.22	2.10	1.65	--

Open Toroidal



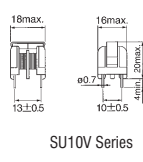
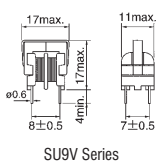
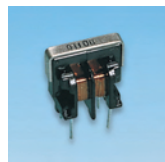
- Toroidal Suppression chokes designed for triac control circuits used in speed control, lighting dimmer and similar applications.

Voltage rating 240V  
Lead length 40mm

Power Handling @ 240V	Inductance (mH)±20%	Resistance DCΩ	Inner Dia.	Outer Dia.	Height	Order Code
100W	4	1.8	7.5	20	8	118-7722
250W	4	0.9	7.5	25	10	118-7723
400W	2.9	0.5	10	30	12.5	118-7724
500W	2.4	0.4	10	32	12.5	118-7725

Value (mH)	Order Code	1+	10+	25+	50+	+
4	118-7722	4.93	4.44	3.99	3.36	--
4	118-7723	5.21	4.86	4.38	3.69	--
2.9	118-7724	6.55	5.91	5.31	4.47	--
2.4	118-7725	7.21	6.45	5.82	4.89	--

Common Mode - Low Current



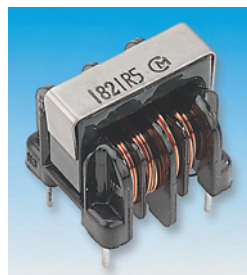
TOKIN

- A range of compact high inductance common mode chokes to provide excellent attenuation of RFI.
  - Suitable for filtering of power supply rails and use in audio/communication equipment
- Voltage rating 250V ac/dc Operating temperature -25°C to +80°C (SU10V = +65°C)  
 Frequency range 0.1 to 10MHz Inductance measured at 1kHz @20°C  
 Insulation resistance 100MΩ at 500

Current Rating (A)	Inductance (mH) min.	DC resistance (Ω/line)	Mfrs. List No.	Order Code
0.1A	10	8	SU9V-01100.	752-769
0.1A	10	8	SU9V-01100	926-5813
0.5A	2	1	SU9V-05020.	752-770
0.5A	2	1	SU9V-05020	926-5821
0.7A	1	0.6	SU9V-07010.	752-782
0.7A	1	0.6	SU9V-07010	926-5830
1A	0.5	0.3	SU9V-10005.	752-794
1A	0.5	0.3	SU9V-10005	926-5848
0.5A	5	1.5	SU10V-05050.	752-800
0.5A	5	1.5	SU10V-05050	926-5856
1.5A	1	0.2	SU10V-15010.	752-812
1.5A	1	0.2	SU10V-15010	926-5864
2A	0.6	0.15	SU10V-20006.	752-824
2A	0.6	0.15	SU10V-20006	926-5872

Current Rating	Order Code	Price Each			
		1+	10+	50+	100+
<b>SU9V Series</b>					
0.1A	752-769‡	4.13	3.87	3.75	3.18
0.1A	926-5813●	4.13	3.87	3.75	3.18
0.5A	752-770‡	4.18	3.87	3.75	3.18
0.5A	926-5821●	4.18	3.87	3.75	3.18
0.7A	752-782‡	4.18	3.87	3.75	3.18
0.7A	926-5830●	4.18	3.87	3.75	3.18
1A	752-794‡	4.18	3.87	3.75	3.18
1A	926-5848●	4.18	3.87	3.75	3.18
<b>SU10V Series</b>					
0.5A	752-800‡	3.68	3.29	3.09	2.67
0.5A	926-5856●	4.52	3.99	3.75	3.18
1.5A	752-812‡	4.52	3.99	3.75	3.18
1.5A	926-5864●	4.52	3.99	3.75	3.18
2A	752-824‡	3.68	3.29	3.19	2.73
2A	926-5872●	4.52	3.99	3.90	3.27

Common Mode PLA10 Series



- Compact, high performance common mode choke coils
- Standard or sectional winding options
- Sectional winding type for improved higher frequency operation
- Compact size, with profile 17.5mm max above PCB
- Ideal for switching power supplies, electric ballasts (AC-AC Converter) and TV use

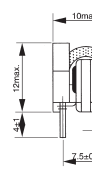
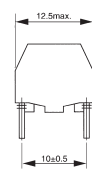
Voltage rating 300V ac/dc  
 Insulation resistance 100MΩ at 500-25°C/120°C  
 Operating temperature -25°C to +120°C/100

H=17.5, W=18, D=16  
 Drilling=13 x 10, Dia.=1.2

Inductance mH min.	Current A rms	DC Resistance Ω max.	Mfrs List No.	Order Code
<b>Standard Winding Type</b>				
43	0.3	4	PLA10AN4330R3R2B	952-8512
30	0.4	2.7	PLA10AN3030R4R2B	952-8482
20	0.5	1.8	PLA10AN2030R5R2B	952-8440
10	0.7	0.86	PLA10AN1030R7R2B	952-8415
7.4	0.8	0.64	PLA10AN7420R8R2B	952-8539
5.5	1	0.46	PLA10AN5521R0R2B	952-8520
3.6	1	0.44	PLA10AN3621R0D2B	121-9009
3.5	1.2	0.32	PLA10AN3521R2R2B	952-8490
3	1.3	0.26	PLA10AN3021R3R2B	952-8474
2.2	1.5	0.22	PLA10AN2221R5R2B	952-8458
1.8	1.7	0.18	PLA10AN1821R7R2B	121-9008
1.5	2	0.15	PLA10AN1522R0R2B	952-8423
<b>Sectional Winding Type</b>				
36	0.3	4.5	PLA10AN3630R3D2B	952-8504
22	0.4	2.7	PLA10AN2230R4D2B	952-8466
7.7	0.7	1.6	PLA10AN7720R7D2B	952-8547
1.8	1.5	0.21	PLA10AN1821R5D2B	952-8431
0.9	2	0.12	PLA10AN9012R0D2B	952-8555

Order Code	Price Each			
	1+	10+	50+	100+
All Values ●	3.00	2.70	2.52	2.04

PCB Mounting - 3A



TOKIN

- Common mode chokes wound on a high performance ferrite core suitable for the attenuation of common mode noise in switch mode power supplies, AC adaptors, microprocessor systems etc
- Operating temperature -25°C to +80°C Voltage Rating 150V dc  
 Insulation resistance <10MΩ Test Voltage 600Vdc (2 seconds between lines)

Order Code	Price Each			
	1+	50+	100+	500+
556-920‡	4.02	3.48	3.15	2.37

Common Mode - up to 3.3A



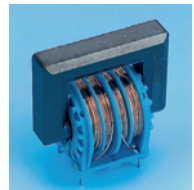
- High performance common mode chokes
- Vertically mounted ferrite core saves PCB space
- Suitable for RFI filter applications

H=20, W=18, D=16  
 Drilling=13 x 10, Dia=1.0

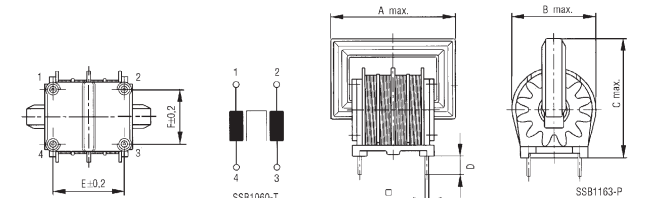
Inductance min	Current A rms	R DC Max	Mfrs. List No.	Order Code
150μH	1.5	0.1	PLH11A1511R5P01M75-009	869-790
60μH	3.3	0.05	PLH11A6003R3P01M75-009	869-806
30mH	0.3	4	PLAA3030R3D01M70-024	869-818
7mH	0.7	0.8	PLAA7020R7D01M70-024	869-820

Inductance	Order Code	Price Each			
		1+	10+	25+	100+
150μH	869-790▲	3.90	3.57	3.21	2.76
60μH	869-806▲	3.90	3.57	3.21	2.76
30mH	869-818▲	3.55	3.18	2.88	2.46
7mH	869-820▲	3.48	3.15	2.88	2.46

Common Mode - D Core - Vertical



- Common mode chokes with vertical core for reduced PCB footprint
- 4 section polycarbonate coil former flame retardant to UL94V-0
- Suitable for attenuation of RFI in switch mode power supplies in audio and computer equipment



Voltage Rating	250V ac/dc	IEC climatic category	40/125/56
$L_N$ (mH)	$I_N$ (A)	$R_{typ}$ (mΩ)	Dimensions H W D
47	0.4	2400	20 20.5 15
10	0.9	510	20 20.5 15
3.3	1.5	200	20 20.5 15
47	0.6	1400	23 24 16
15	1.1	440	23 24 16
6.8	1.7	190	23 24 16
3.3	2.2	110	23 24 16
47	1.3	560	31 32.5 21
27	1.7	320	31 32.5 21
15	2.3	185	31 32.5 21
10	2.6	130	31 32.5 21
6.8	3.2	85	31 32.5 21
3.3	4.6	46	31 32.5 21

Inductance mH	Order Code	Price Each		
		1+	25+	50+
47	121-9118●	6.58	6.18	5.64
10	525-339●	7.13	6.66	6.24
3.3	121-9134●	6.58	6.18	5.64
47	121-9124●	7.48	6.81	6.21
15	121-9120●	7.34	6.81	6.21
6.8	121-9122●	7.34	6.81	6.21

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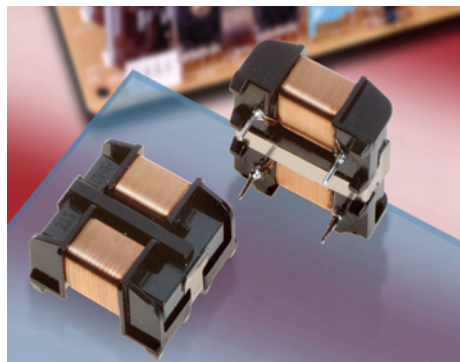
EMC, Filters & Suppression

Compliant Non-compliant + Limited stock - RoHS replacement available  
**RoHS**



Inductance mH	Order Code	Price Each		
		1+	25+	50+
3.3	121-9123	7.11	6.47	5.90
47	121-9125	9.06	8.38	7.64
27	121-9126	9.06	8.38	7.64
15	121-9127	9.06	8.38	7.64
10	121-9128	9.06	8.38	7.64
6.8	121-9129	9.06	8.38	7.64
3.3	121-9130	9.21	8.38	7.64

PLY17 Series



Dimensions (HxWxD): 24.5 x 22.5 x 12.5mm Pin out: 15 x 12.5

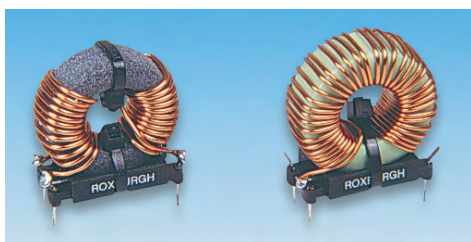
- Integration of choke coil function to suppress differential mode/Low and High Frequency common mode noise
- Low Profile (H=<13mm)
- Applications include:
  - For AC power supply, AC adapter
  - Low profile equipment such as lighting equipment, FPD, Digital Amplifier

Resistance Ω	Current A	Volts V (ac)	Volts V (ac)	Order Code
61	3	300	PLY17BN1023R0B2	111-5047
66	2.4	300	PLY17BN4912R4B2	111-5046
91	2	300	PLY17BN9612R0B2	111-5045
120	1.8	300	PLY17BN1221R8B2	111-5044
170	1.5	300	PLY17BN1821R5B2	111-5043
260	1.2	300	PLY17BN2921R2B2	111-5041
360	1	300	PLY17BN3721R0B2	111-5040
530	0.8	300	PLY17BN5520R8B2	111-5039
730	0.7	300	PLY17BN7620R7B2	111-5038
970	0.6	300	PLY17BN9320R6B2	111-5037

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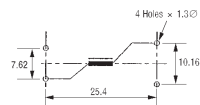
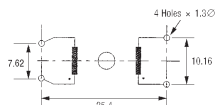
Order Code	Price Each			
	1+	25+	50+	100+ +
All Values	6.77	5.63	4.36	4.23 --

Open Former



CMV Series Common mode  
H=32, W=32, D=12

SMV Series Differential mode  
H=35, W=32, D=13



- Open former common mode and differential mode suppression chokes constructed using a wound ferrite ring mounted vertically onto a flame retardant PCB mounting plastic carrier.

Voltage Rating 250V ac      Operating temperature -25°C to +100°C  
Line Frequency DC to 440Hz

Current Rating	Inductance* (mH)	Resistance* (mΩ)	Mfrs. List No.	Order Code
<b>Common Mode - CMV Series</b>				
1A	18	640	CMV10	118-7664
2A	7.5	160	CMV20	118-7665
3A	3.2	71	CMV30	118-7717
4A	2.4	40	CMV40	118-7666
6A	1.4	19	CMV60	118-7667
8A	0.74	9.6	CMV80	118-7668
<b>Differential mode - SMV Series</b>				
1A	1.17	1470	SMV10	118-7669
2A	0.5	370	SMV20	118-7670

Current Rating	Inductance* (mH)	Resistance* (mΩ)	Mfrs. List No.	Order Code
<b>Differential mode - SMV Series</b>				
3A	0.26	140	SMV30	118-7718
4A	0.21	100	SMV40	118-7671
6A	0.12	40	SMV60	118-7672
8A	0.085	25	SMV80	118-7674

\* Per phase

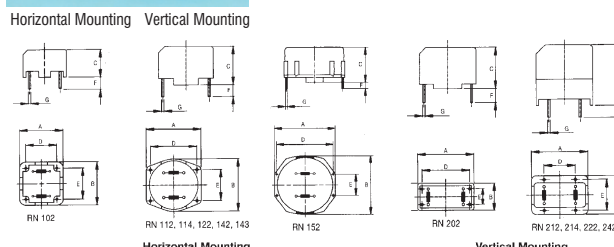
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Current Rating	Order Code	Price Each				
		1+	10+	25+	50+	+
<b>Common Mode - CMV Series</b>						
1A	118-7664	7.27	6.54	5.79	4.35	--
2A	118-7665	7.27	6.54	5.79	4.35	--
3A	118-7717	7.27	6.54	5.79	4.35	--
4A	118-7666	7.21	6.30	5.61	4.83	--
6A	118-7667	7.21	6.30	5.61	4.83	--
8A	118-7668	7.21	6.30	5.61	4.83	--
<b>Differential Mode - SMV Series</b>						
1A	118-7669	7.86	7.05	6.27	4.71	--
2A	118-7670	7.86	7.05	6.27	4.71	--
3A	118-7718	7.86	7.05	6.27	4.71	--
4A	118-7671	7.86	7.05	6.27	4.71	--
6A	118-7672	7.86	7.05	6.27	4.71	--
8A	118-7674	7.86	7.05	6.27	4.71	--

Common/Asymmetrical Mode RN Series



- Compact PCB mounting current compensating suppression chokes in a UL94V-0 flame retardant housing for general purpose common/asymmetrical mode applications
- Approved to VDE and UL recognised



Package style	Dimensions						
	A	B	C	D	E	F	G (Dia)
<b>Horizontal Mounting</b>							
RN112	17.1	17.1	12.6	15	10	4	0.8
RN114	21.5	22.5	13.2	20.1	12.5	4	0.8
RN122	27	28	16.5	25	15	4	0.8
RN142/3	33.1	32.5	19.7	30	20	4.3	0.8
RN152	43	41.8	25	40	15	4.5	1.2
<b>Vertical Mounting</b>							
RN202	18.2	8.8	13.5	15.21	5.08	4.5	0.8
RN212	12.5	18	20	15	10	4	0.8
RN214	15.5	23	25	10	12.5	4	0.8
RN222	18	31	29.3	12.5	15	4.7	0.8
RN242	31	18	34.3	12.5	15	4.2	0.8

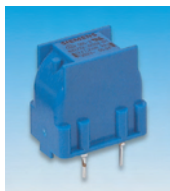
Voltage rating 250V ac      Operating temperature -40°C to +125°C  
Test voltage (winding to winding) 1500V ac (2 seconds)  
Common mode resonance frequencies 100kHz to 3MHz

Current Rating (A) @ 45°C	Typical Inductance (mH)	Resistance per Winding (Ω)	Mfrs. List No.	Order Code
<b>Horizontal Mounting</b>				
0.3	12	1.275	RN102-0.3/02	119-1459
0.6	4.4	0.385	RN102-0.6/02	119-1461
1	3	0.205	RN102-1.0/0.2	119-1462
1.5	1.1	0.1	RN102-1.5/02	119-1463
2	1.1	0.07	RN102-2/02	119-1464
0.4	39	2	RN112-0.4/02	119-1465
0.5	27	1.25	RN112-0.5/02	119-1466
0.6	15	0.83	RN112-0.6/02	119-1467
0.8	10	0.37	RN112-0.8/02	119-1468
1.2	6.8	0.245	RN112-1.2/02	119-1471
1.5	3.3	0.17	RN112-1.5/02	119-1472
2	1.8	0.075	RN112-2/02	119-1473
4	0.7	0.035	RN112-4/02	119-1474
0.3	47	1.75	RN114-0.3/02	119-1475
0.8	27	0.5	RN114-0.8/02	119-1476
1	15	0.375	RN114-1/02	119-1479
1.2	10	0.2	RN114-1.2/02	119-1477
1.5	6.8	0.13	RN114-1.5/02	119-1478
2	4.2	0.14	RN114-2/02	119-1481
2.5	3.3	0.072	RN114-2.5/02	119-1480
3	2	0.055	RN114-3.0/02	119-1483
4	1.5	0.035	RN114-4/02	119-1484
0.6	47	1.18	RN122-0.6/02	119-1485
0.8	39	1	RN122-0.8/02	119-1486
1.5	10	0.22	RN122-1.5/02	119-1487
2	6.8	0.13	RN122-2/02	119-1489
2.5	5.6	0.105	RN122-2.5/02	119-1488

Prices are in Singapore Dollars and exclusive of GST. Due to the volatile nature of certain products, prices are subject to change without notice.

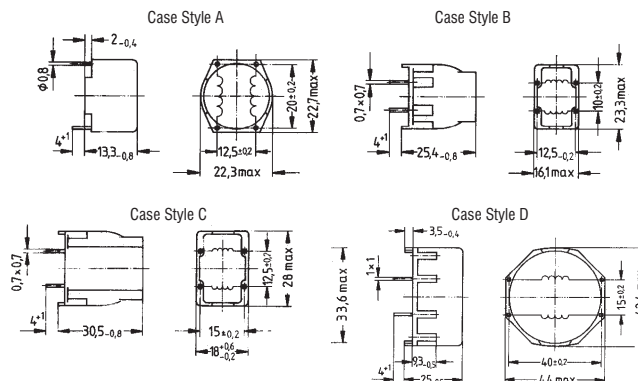
Current Rating (A) @ 45°C	Typical Inductance (mH)	Resistance per Winding (Ω)	Mftrs. List No.	Order Code
<b>Horizontal Mounting</b>				
3	4.5	0.08	RN122-3/02	119-1490
4	3.3	0.04	RN122-4/02	119-1491
6	1.8	0.02	RN142-6/02	119-1492
2	10	0.23	RN143-2/02	119-1493
<b>Vertical Mounting</b>				
0.3	12	1.275	RN202-0.3/02	119-1499
0.6	4.4	0.385	RN202-0.6/02	119-1501
1	3	0.205	RN202-1/02	119-1503
1.5	1.6	0.1	RN202-1.5/02	119-1502
2	1.1	0.07	RN202-2/02	119-1504
0.4	39	1.5	RN212-0.4/02	119-1505
0.5	27	1.25	RN212-0.5/02	119-1506
0.6	15	0.8	RN212-0.6/02	119-1507
0.8	10	0.37	RN212-0.8/02	119-1508
1.2	6.8	0.245	RN212-1.2/02	119-1509
1.5	3.3	0.15	RN212-1.5/02	119-1510
2	1.8	0.075	RN212-2/02	119-1511
4	0.7	0.03	RN212-4/02	119-1513
0.8	27	0.5	RN214-0.8/02	119-1514
2.5	3.3	0.072	RN214-2.5/02	119-1515
3	2	0.055	RN214-3/02	119-1517
4	1.5	0.035	RN214-4/02	119-1518
1	18	0.61	RN222-1.0/02	119-1519
2	6.8	0.147	RN222-2/02	119-1521
2.5	5.6	0.12	RN222-2.5/02	119-1520
3	4.5	0.08	RN222-3.0/02	119-1522
4	3.3	0.06	RN222-4/02	119-1523
4	3.3	0.066	RN242-4/02	119-1526
6	1.8	0.02	RN242-6/02	119-1527

**Current Compensated Twin Coil**



- Current compensated, ferrite ring core chokes
- Case flame retardant to **UL94V-0**
- Approved to **VDE 565-2**

Voltage rating 250V ac  
IEC climatic category 40/125/56



Package Style	Current Rating	Order Code	1+	10+	50+	100+	+
<b>Horizontal</b>							
RN102	0.3A	119-1459	7.05	5.76	4.38	3.45	--
RN102	0.6A	119-1461	7.05	5.76	4.38	3.44	--
RN102	1A	119-1462	7.05	5.76	4.38	3.44	--
RN102	1.5A	119-1463	7.05	5.76	4.38	3.44	--
RN102	2A	119-1464	7.05	5.76	4.38	3.44	--
RN112	0.4A	119-1465	7.05	5.76	4.38	3.44	--
RN112	0.5A	119-1466	6.93	6.33	4.92	3.44	--
RN112	0.6A	119-1467	7.05	5.76	4.38	3.44	--
RN112	0.8A	119-1468	7.05	5.76	4.38	3.44	--
RN112	1.2A	119-1471	7.05	5.76	4.38	3.44	--
RN112	1.5A	119-1472	7.05	5.76	4.38	3.44	--
RN112	2A	119-1473	6.93	6.33	4.92	3.44	--
RN112	4A	119-1474	7.05	5.76	4.38	3.44	--
RN114	0.3A	119-1475	7.39	6.15	4.71	3.78	--
RN114	0.8A	119-1476	7.39	6.15	4.71	3.78	--
RN114	1A	119-1479	7.58	7.02	5.61	4.05	--
RN114	1.2A	119-1477	7.39	6.15	4.71	3.78	--
RN114	1.5A	119-1478	7.58	7.02	5.61	4.05	--
RN114	2A	119-1481	7.39	6.15	4.71	3.78	--
RN114	2.5A	119-1480	7.58	7.02	5.61	4.05	--
RN114	3A	119-1483	7.39	6.15	4.71	3.78	--
RN114	4A	119-1484	7.58	7.02	5.61	4.05	--
RN122	0.6A	119-1485	8.02	7.59	5.34	4.19	--
RN122	0.8A	119-1486	8.46	7.89	6.54	4.95	--
RN122	1.5A	119-1487	8.02	7.59	5.34	4.19	--
RN122	2A	119-1489	8.02	7.59	5.34	4.19	--
RN122	2.5A	119-1488	8.46	7.89	6.54	4.95	--
RN122	3A	119-1490	8.02	7.59	5.34	4.19	--
RN122	4A	119-1491	8.02	7.59	5.34	4.18	--
RN142	6A	119-1492	7.61	7.05	5.64	4.08	--
RN143	2A	119-1493	7.61	7.05	5.64	4.08	--
<b>Vertical</b>							
RN202	0.3A	119-1499	6.90	6.30	4.89	3.35	--
RN202	0.6A	119-1501	6.90	6.30	4.89	3.35	--
RN202	1A	119-1503	6.90	6.30	4.89	3.35	--
RN202	1.5A	119-1502	6.90	6.30	4.89	3.35	--
RN202	2A	119-1504	6.90	6.30	4.89	3.35	--
RN212	0.4A	119-1505	7.39	5.49	4.86	3.48	--
RN212	0.5A	119-1506	7.39	5.49	4.86	3.48	--
RN212	0.6A	119-1507	7.39	5.49	4.86	3.48	--
RN212	0.8A	119-1508	7.39	5.49	4.86	3.48	--
RN212	1.2A	119-1509	7.39	5.49	4.86	3.50	--
RN212	1.5A	119-1510	7.39	5.49	4.86	3.48	--
RN212	2A	119-1511	7.39	5.49	4.86	3.48	--
RN212	4A	119-1513	7.39	5.49	4.86	3.48	--
RN214	2A	119-1516	7.33	5.82	5.52	3.77	--
RN214	2.5A	119-1515	7.58	7.02	5.61	3.77	--
RN214	3A	119-1517	7.58	7.02	5.61	3.77	--
RN214	4A	119-1518	7.58	7.02	5.61	3.77	--
RN222	1A	119-1519	8.14	6.48	5.97	4.35	--
RN222	2A	119-1521	6.93	6.33	4.92	4.05	--
RN222	2.5A	119-1520	8.14	6.48	5.97	4.35	--
RN222	3A	119-1522	8.14	6.48	5.97	4.35	--
RN222	4A	119-1523	8.14	6.48	5.97	4.35	--
RN242	4A	119-1526	8.24	7.68	6.30	4.74	--
RN242	6A	119-1527	8.24	7.68	6.30	4.74	--

LH (mH)	IN (A)	R typ (mΩ)	Dimensions			Pin Spacing	Mftrs List No.	Order Code
			H	W	D	x	y	
<b>Vertical</b>								
39	0.4	2000	20.3	13.2	18.2	10	15	B82721K2401N20 121-9099
10	0.7	600	20.3	13.2	18.2	10	15	B82721K2701N20 121-9100
6.8	1.2	280	20.3	13.2	18.2	10	15	B82721K2122N20 121-9097
1	2	90	20.3	13.2	18.2	10	15	B82721K2202N1 121-9137
0.4	3.6	35	20.3	13.2	18.2	10	15	B82721K2362N1 121-9098
<b>Vertical</b>								
27	0.5	1200	25.4	16.1	23.3	12.5	10	B82722J2501N1 121-9138
10	1	480	25.4	16.1	23.3	12.5	10	B82722J2102N1 121-9101
2.2	2	130	25.4	16.1	23.3	12.5	10	B82722J2202N1 121-9102
1.2	3	56	25.4	16.1	23.3	12.5	10	B82722J2302N1 121-9103
<b>Vertical</b>								
27	1	750	30.5	18.6	28	15	12.5	B82723J2102N1 121-9104
5.6	2	160	30.5	18.6	28	15	12.5	B82723J2202N1 121-9105
2.7	4	60	30.5	18.6	28	15	12.5	B82723J2402N1 121-9106
<b>Vertical</b>								
33	1	810	33.2	18.5	31.3	15	12.5	B82724J2102N1 121-9111
27	1.4	500	33.2	18.5	31.3	15	12.5	B82724J2142N1 121-9112
6.8	2	190	33.2	18.5	31.3	15	12.5	B82724J2202N1 121-9113
3.3	4	66	33.2	18.5	31.3	15	12.5	B82724J2402N1 121-9114
<b>Horizontal</b>								
10	2	230	25.0	33.1	32.6	20	30	B82724B2202N1 121-9107
1.8	6	23	25.0	33.1	32.6	20	30	B82724B2602N1 121-9109
68	1	1300	25.0	44.0	42.4	20	30	B82725A2102N1 121-9131
18	2	350	25.0	44.0	42.4	20	30	B82725A2202N1 121-9116
3.9	6	41	25.0	25.0	42.4	20	30	B82725A2602N1 121-9132
2.7	8	22	25.0	44.0	42.4	20	30	B82725A2802N1 121-9117
1.8	10	14	25.0	44.0	42.4	20	30	B82725A2103N1 121-9115

Inductance mH	Order Code	1+	25+	50+	100+	+	+
<b>Vertical</b>							
39	121-9099	8.32	6.45	4.83	3.58	--	--
10	121-9100	7.12	5.52	4.13	3.06	--	--
6.8	121-9097	6.89	5.49	4.11	3.05	--	--
1	121-9137	7.42	6.44	5.83	5.01	--	--
0.4	121-9098	6.89	5.49	4.11	3.05	--	--
<b>Vertical</b>							
27	121-9138	7.84	6.77	6.05	5.34	--	--
10	121-9101	7.28	5.67	4.25	3.15	--	--
2.2	121-9102	7.28	5.67	4.25	3.15	--	--
1.2	121-9103	7.28	5.67	4.25	3.15	--	--
<b>Vertical</b>							
27	121-9104	9.07	7.03	5.26	3.90	--	--
5.6	121-9105	9.07	7.03	5.26	3.90	--	--
2.7	121-9106	9.07	7.03	5.26	3.90	--	--
<b>Vertical</b>							
33	121-9111	8.94	7.03	5.26	3.90	--	--
27	121-9112	9.03	7.03	5.26	3.90	--	--
6.8	121-9113	8.72	7.03	5.26	3.90	--	--
3.3	121-9114	8.73	6.77	5.07	3.76	--	--
<b>Horizontal</b>							
10	121-9107	10.94	9.83	9.15	7.75	--	--
1.8	121-9109	11.95	10.81	10.22	8.82	--	--
68	121-9131	11.95	10.81	10.81	8.82	--	--
18	121-9116	11.95	10.81	10.22	8.82	--	--
3.9	121-9132	16.33	12.65	9.47	7.02	--	--
2.7	121-9117	21.17	16.40	12.28	9.10	--	--
1.8	121-9115	20.93	16.22	12.14	9.00	--	--



High Current



- High current RFI suppression chokes for use in custom designed suppression circuits
- Typical applications include the suppression of RFI generated by motors, switched mode power supplies etc.
- All chokes are fully encapsulated and feature single M4 threaded insert fixing.
- Designed to meet IEC 950 and UL, CSA and VDE requirements.

Voltage rating 500V rms max.  
 Max. operation temp. 45°C (60°C on 25A)  
 Insulation proof voltage 1.5kV conductor/conductor (1 min.)  
 2.5kV conductor/mounting insert (1 min.)  
 Nominal inductance 1 mH (2mH on 10A)2mH

204050

Rating	Mftrs. List No.	Order Code	1+	5+	10+
10A	C210	118-7712	27.89	26.11	25.61
15A	C215	118-7713	31.74	29.20	28.42
25A	C225	118-7714	39.41	36.33	34.95

Dimensions			Type Impedance (Ω)		Mftrs. List No.	Code
O/D	I/D	H	25MHz	100MHz		
<b>4S2 Material</b>						
16.25	7.9	14.3	70	113	CST16/7.9/14-4S2	898-478
16.25	7.9	28.6	130	213	CST16/7.9/29-4S2	898-480
17.45	9.5	12.7	55	88	CST17/9.5/13-4S2	898-491
17.45	9.5	28.6	125	200	CST17/9.5/29-4S2	898-508
19	10.15	28.6	128	196	CST19/10.15/29-4S2	898-510
25.9	12.8	28.6	145	225	CST26/13/29-4S2	898-521
29	19	7.5	28	47	CST29/19/7.5-4S2	898-533

204115

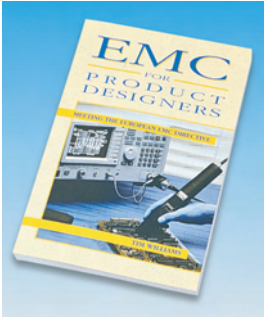
Order Multiple=5 ID x H	Order Code	Price Each				
		5+	50+	100+	250+	+
<b>3S4 Material</b>						
5.3 x 10	898-340	0.42	0.35	0.31	0.23	--
3.5 x 10	898-351	0.49	0.39	0.35	0.27	--
5.1 x 14	898-363	1.38	1.14	1.02	0.75	--
11 x 60	898-375	9.76	8.04	7.17	5.40	--
9.53 x 12.7	898-387	1.80	1.47	1.32	0.99	--
9.53 x 28.55	898-399	4.19	3.45	3.09	2.34	--
10.6 x 11.5	898-405	2.31	1.83	1.65	1.23	--
<b>4S2 Material</b>						
4.75 x 6.3	898-417	0.52	0.42	0.39	0.27	--
4.75 x 10.4	898-429	0.66	0.55	0.49	0.37	--
4.75 x 19.05	898-430	1.17	0.96	0.87	0.66	--
5.0 x 5.05	898-442	0.42	0.35	0.31	0.23	--
6.35 x 28.6	898-454	3.30	2.73	2.43	1.83	--
7.25 x 28.6	898-466	3.36	2.70	2.31	1.74	--
7.9 x 14.3	898-478	2.16	1.77	1.59	1.20	--
7.9 x 28.6	898-480	4.02	3.33	2.94	2.22	--
9.5 x 12.7	898-491	2.16	1.77	1.59	1.20	--
9.5 x 28.6	898-508	4.41	3.63	3.24	2.40	--
10.15 x 28.6	898-510	4.56	3.75	3.36	2.52	--
12.8 x 28.6	898-521	10.10	8.22	7.29	5.52	--
19 x 7.5	898-533	2.87	2.31	2.07	1.56	--

17

EMC, Filters & Suppression

Technical Books

EMC for Product Designers



- All electrical or electronic equipment made or sold anywhere within the EU will need to be constructed in such a way that they comply with the EU Directive on EMC
- This book discusses the subject of EMC, its implications and explains to the design engineer how to meet the Directive.

203995

Order Code	Price Each
291-274	84.30

EMC Shielding Products

- The following products can be used to help electrical and electronic apparatus in meeting the requirements of the EMC (electromagnetic compatibility) directive
- The directive covers all apparatus liable to cause electromagnetic disturbance, or the performance of which is liable to be affected by such disturbance.

204244

Ferroxcube Magnetic Materials



- Ferroxcube have developed a new ferrite material for their new range of cable shielding products. 3S4 is a new high resistivity manganese zinc ferrite which offers excellent interference suppression into the high MHz regions. 3S4 is Nickel Free to protect the environment.
- Available in 2 materials, 3S4 and 4S2

213823

Tubular Cable Shields



- Tubular ferrite cable shields
- Available in 2 material grades, 3S2 and 4S2
- Provide attenuation of RFI over a wide frequency range
- Cost effective as they reduce the need for more complex shielding measures or costly PCB re-designs

Dimensions			Type Impedance (Ω)		Mftrs. List No.	Code
O/D	I/D	H	25MHz	100MHz		
<b>3S4 Material</b>						
8	5.3	10	32	50	CST7.8/5.3/9.8-3S4	898-340
8.3	3.5	10	70	96	CST8.3/3.5/10-3S4	898-351
9.5	5.1	14	66	110	CST9.5/5.1/15-3S4	898-363
17.2	11	60	200	320	CST17/11/60-3S4	898-375
17.45	9.53	12.7	55	88	CST17/9.5/13-3S4	898-387
17.45	9.53	28.55	125	200	CST17/9.5/29-3S4	898-399
19	10.6	11.5	50	75	CST19/11/12-3S4	898-405
<b>4S2 Material</b>						
9.5	4.75	6.3	23	50	CST9.5/4.8/6.4-4S2	898-417
9.5	4.75	10.4	53	80	CST9.5/4.8/10-4S2	898-429
9.5	4.75	19.05	100	145	CST9.5/4.8/19-4S2	898-430
9.65	5.0	5.05	26	43	CST9.7/5/5.1-4S2	898-442
14.3	6.35	28.6	170	250	CST14/6.4/29-4S2	898-454
14.3	7.25	28.6	143	215	CST14/7.3/29-4S2	898-466

EMI Cores



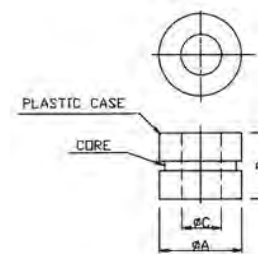
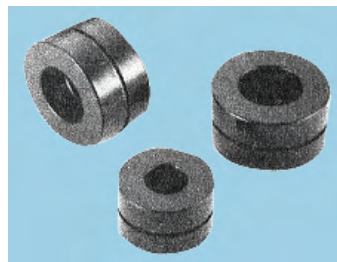
- Toroidal ferrite cores which attenuate electrical noise in signal and data cables
- Applications include digital audio systems, computers and peripherals and any sensitive electronic equipment

Dimensions			Typical Impedance (Ω)		Code
OD	ID	H	25MHz	100MHz	
16	10	14	40	125	323-4927
16	10	14	40	125	964-0380
20	10	10	45	120	323-4939
20	10	10	45	120	964-0398
25	15	12	40	120	323-4940
25	15	12	40	120	964-0401
28	16	13	50	120	323-4952
28	16	13	50	120	964-0410
28	16	20	70	130	323-4964
28	16	20	70	130	964-0428
31.5	19	16	55	115	323-4976
31.5	19	16	55	115	964-0436

204208

Order Multiple=5 Order Code	Price Each				
	5+	25+	100+	250+	+
323-4927‡	2.74	2.49	2.31	1.62	--
964-0380	2.74	2.49	2.31	1.62	--
323-4939‡	2.93	2.70	2.49	1.77	--
964-0398	2.93	2.70	2.49	1.77	--
323-4940‡	2.94	2.76	2.52	1.83	--
964-0401	2.94	2.76	2.52	1.83	--
323-4952‡	3.90	3.63	3.39	2.40	--
964-0410	3.90	3.63	3.39	2.40	--
323-4964‡	4.93	4.65	4.38	3.18	--
964-0428	4.93	4.65	4.38	3.18	--
323-4976‡	4.93	4.65	4.38	3.18	--
964-0436	4.93	4.65	4.38	3.18	--

Ferrite Core



A high performance range of ferrite cores protected by a plastic case. Making them ideal for external use and industrial machinery.

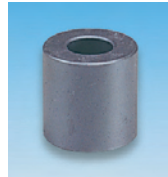




Dimensions		Dimensions	Min. Impedance (Ω)		Mfrs List No.	Code
Depth	Height	Internal Dia.	25MHz	100MHz		
23	23	8.2	51	94	TRCA-08	941-5904
29.3	20	13.8	49	96	TRCA-13	941-5912
23	23	8.2	51	94	TRCS-08	941-5920
29.3	20	13.8	49	96	TRCS-13	941-5939

Mfrs List No.	Order Code	1+	10+	50+	100+	+
TRCA-08	941-5904	5.63	4.52	3.97	3.45	--
TRCA-13	941-5912	6.93	5.11	4.36	3.78	--
TRCS-08	941-5920	9.24	8.20	7.62	7.10	--
TRCS-13	941-5939	9.57	8.53	7.94	7.42	--

EMI Sleeves



- Ferrite sleeves which will provide attenuation of EMI on power and data cables, without affecting data transmitted through the cable
- Suitable for use on computers, peripherals, digital audio systems etc.

Note: To enable the cable to pass smoothly through the sleeve an allowance should be made for tolerances in the OD of the cable and the ID of the sleeve.

Dimensions			Min. Impedance (Ω)		Code
OD	ID	H	25MHz	100MHz	
14.2	6.35	28.5	130	185	559-519
14.2	6.35	28.5	130	185	964-0495
14.2	7.0	28.5	130	210	559-520
14.2	7.0	28.5	130	210	964-0509
16.0	9.0	17.0	60	140	559-532
16.0	9.0	17.0	60	140	964-0517
14.2	8.0	28.5	110	210	559-544
14.2	8.0	28.5	110	210	964-0525
17.5	9.5	28.5	90	150	559-556
17.5	9.5	28.5	90	150	964-0533
17.5	10.7	28.5	90	160	559-568
17.5	10.7	28.5	90	160	964-0541
26.0	13	28.5	130	200	559-570
26.0	13	28.5	130	200	964-0550

ID x H	Order Code	5+	25+	100+	250+	+
6.35 x 28.5	559-519	2.84	2.49	2.22	1.71	--
6.35 x 28.5	964-0495	2.84	2.49	2.22	1.71	--
7.0 x 28.5	559-520	3.30	3.03	2.73	2.04	--
7.0 x 28.5	964-0509	3.30	3.03	2.73	2.04	--
9.0 x 17.0	559-532	2.94	2.67	2.34	1.86	--
9.0 x 17.0	964-0517	2.94	2.67	2.34	1.86	--
8.0 x 28.5	559-544	3.09	2.76	2.46	1.92	--
8.0 x 28.5	964-0525	3.09	2.76	2.46	1.92	--
9.5 x 28.5	559-556	3.48	3.18	2.79	2.10	--
9.5 x 28.5	964-0533	3.48	3.18	2.79	2.10	--
10.7 x 28.5	559-568	3.48	3.18	2.79	2.10	--
10.7 x 28.5	964-0541	3.48	3.18	2.79	2.10	--
13 x 28.5	559-570	6.43	5.76	5.04	4.05	--
13 x 28.5	964-0550	6.43	5.76	5.04	4.05	--

Hinged Clamp Cores



- A range of easy to fit data line filters providing a simple solution to the problems of radiated noise emissions generated by electronic equipment
- The filter simply clips around the cable to be shielded and locks closed with no need to disconnect the cable or remove connectors
- No grounding is required unlike cable shields.

Frequency range 10MHz to 300MHz Case material Black Nylon 66 to UL94V-0  
Insulation resistance 10MΩ (min) between case and cores

Cable Diameter	Dimensions		Code
	25MHz	100MHz	
6.5	135	220	964-0444
10	90	190	964-0452
13	105	190	964-0460

Oval	Dimensions		Code
	L	Dia	
3.5	4.5	115	964-0479
5.0	45	115	964-0487

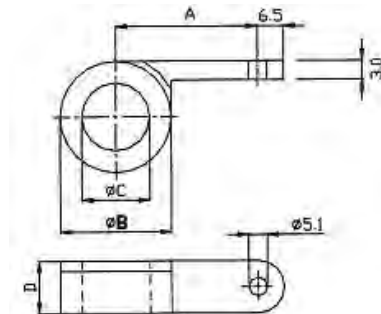
Cable Diameter	Order Code	Price Each				
		1+	10+	50+	100+	+
LF-65B	964-0444	8.51	7.23	6.15	4.77	--
LF-100B	964-0452	11.72	10.23	8.91	7.05	--
LF-130B	964-0460	15.12	13.02	11.16	8.91	--
LF35B	964-0479	6.24	5.19	4.98	3.66	--
LF50B	964-0487	6.79	6.06	5.37	4.29	--

P Cores



KEKITAGAWA

NEW



A high performance range of ferrite cores protected by a plastic case. Making them ideal for external use and industrial machinery.

Dimensions (mm)	Dia. External	Dia. Internal	H	Mfrs List No.	Order Code
19.4	8.2	30.2	30.2	TRCN-16-8-13	941-5777
19.4	8.2	30.2	30.2	TRCN-16-8-16	941-5785
25.7	10.4	38.2	38.2	TRCN-20-10-10	941-5793
26.8	11.4	39.4	39.4	TRCN-23-11-14	941-5807
32.8	16.4	45	45	TRCN-28-16-13	941-5815
32.8	16.4	45	45	TRCN-28-16-20	941-5823
44.6	27.4	57.3	57.3	TRCN-40-27-15	941-5831

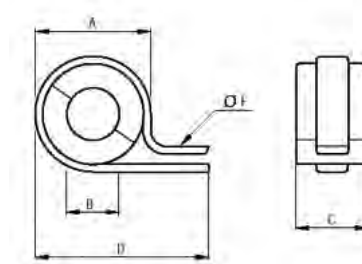
Mfrs List No.	Order Code	1+	10+	50+	100+	+
TRCN-16-8-13	941-5777	11.20	10.22	9.24	8.27	--
TRCN-16-8-16	941-5785	12.04	10.71	10.03	8.76	--
TRCN-20-10-10	941-5793	12.21	10.87	9.90	8.92	--
TRCN-23-11-14	941-5807	13.35	12.04	11.03	10.06	--
TRCN-28-16-13	941-5815	16.14	14.84	13.83	12.86	--
TRCN-28-16-20	941-5823	16.99	15.66	14.68	13.67	--
TRCN-40-27-15	941-5831	17.64	15.98	15.01	14.00	--

Hinged Core



KEKITAGAWA

NEW



- Employs high-performance Nickel-Zinc ferrites
- Nylon 6/6 cases are UL94V-0 (except TRCN series UL94V-2)
- SFC/RFC and USB series employ patented designs to ensure tight grip of the cable and secure closure
- USB series has been designed to provide high impedance over a wide frequency range
- Available in both natural and black colours

Dimensions (mm)			Min. Impedance (Ω)		Mftrs List No.	Order Code
Width	Depth	H	25MHz	100MHz		
13.4	13.2	18.9	45	80	SFC-3	941-5688
13.9	13.6	27	122	168	USB-4	941-5700
16.3	15	29.5	96	138	SFC-4	941-5718
21	17.5	32	177	242	SFC-5	941-5726
23.5	20	32	139	207	SFC-6	941-5734
23.5	20	32	137	204	SFC-8	941-5742
32.6	29	32	149	266	SFC-10	941-5750
31.7	29.4	41	200	270	RFC-H13	941-5769

411299

Mftrs List No.	Order Code	1+	10+	50+	100+	+
SFC-3	941-5688	6.12	4.88	4.04	3.45	--
USB-4	941-5700	7.75	5.83	4.82	4.10	--
SFC-4	941-5718	9.86	7.26	5.99	5.05	--
SFC-5	941-5726	10.22	7.62	6.35	5.44	--
SFC-6	941-5734	11.03	8.85	7.36	6.28	--
SFC-8	941-5742	12.53	9.86	8.66	7.71	--
SFC-10	941-5750	18.42	14.45	12.27	10.61	--
RFC-H13	941-5769	19.30	15.75	13.38	11.62	--

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EMC, Filters & Suppression

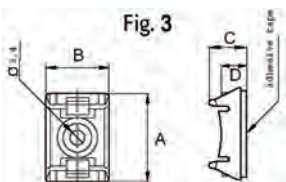
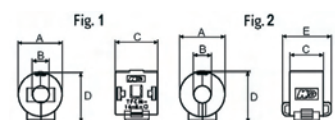
Hinged P'Cores



KEKITAGAWA

A high quality range of easy fit hinged ferrite clamps with the unique feature of being able to panel mount the units using a 3mm screw and/or adhesive tape. The units employ high performance Nickel-Zinc ferrites giving them high performance against high frequency noise. Suitable for single or multiple cables.

NEW



Dimensions (mm)			Min. Impedance (Ω)		Mftrs List No.	Order Code
Dia. External	Dia. Internal	H	25MHz	100MHz		
19.8	7.6	26.1	73	139	TFCM-16-8-16	941-5840
24.2	8.8	30.7	47	92	TFC-20-10-10	941-5858
27.4	10.8	33.9	72	132	TFC-23-11-14	941-5866
28.6	13.6	35.2	41	88	TFC-25-15-12	941-5874
20	13.5	4.8	-	-	TFP2014-T	941-5882
20	13.5	4.8	-	-	TFP2014-V	941-5890

411300

Mftrs List No.	Order Code	1+	10+	50+	100+	+
TFCM-16-8-16	941-5840	12.47	9.08	7.91	7.13	--
TFC-20-10-10	941-5858	12.79	9.41	8.27	7.45	--
TFC-23-11-14	941-5866	14.68	12.21	10.42	9.21	--
TFC-25-15-12	941-5874	15.33	12.86	10.94	9.67	--
TFP2014-T	941-5882	1.14	1.04	0.98	0.91	--
TFP2014-V	941-5890	0.98	0.88	0.81	0.75	--

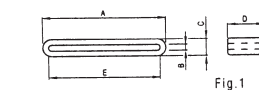
Note: The plastic case has UL94V-0 approval.

One Piece Flat Cable Cores

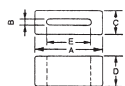


KEKITAGAWA

- High performance nickel zinc ferrite material
- Suitable for flat printed circuit cables and ribbon cables
- Offer good attenuation over wide frequency range
- PVC mounting brackets parts with adhesive backing for stabilising on flat cable



Style 1



Style 2

Style	Dimensions				Impedance (Ω)		Mftrs. List No.	Order Code	
	A	B	C	D	25MHz	100MHz			
1	16	0.5	5	12	11.5	42	79	FPC-16-12K	353-8345
1	24.5	0.5	5	12	20	30	65	FPC-25-12K	353-8357
1	31	0.5	5	12	27	26	66	FPC-31-12K	353-8369
1	55.9	0.5	5	12	52	23	66	FPC-56-12	353-8370
2	21	1.3	6.8	15	15	60	75	SSC-21-6.8-8B	353-8382
1	33.5	1.3	6.5	20	27	50	90	SSC-33.5-20M	353-8394
1	40	1.3	6.5	10	35	23	54	SSC-40-10M	353-8400
1	40	1.3	6.5	12	35	27	60	SSC-40-12M	353-8412
1	45.2	1.3	6.5	12	40	26	61	SSC-45-12M	353-8424
1	45.2	1.3	6.5	8	40	19	46	SSC-45-8M	353-8436
1	49.6	1.3	6.5	12	44	25	64	SSC-50-12M	353-8448
1	57.6	1.3	6.5	12	52	25	63	SSC-58-12M	353-8450

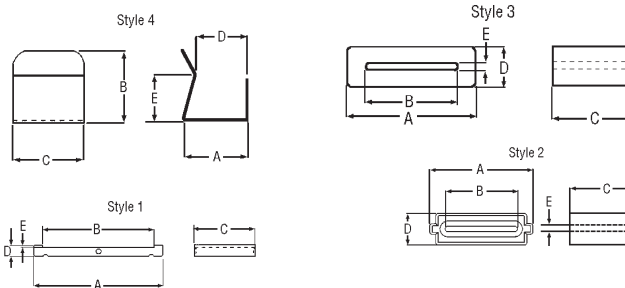
Adhesive PVC Mounts

No. of stops	Application Cores	Mftrs. List No.	Order Code
2	FPC-16-12, FPC-25-12	FPC-12A	353-8722
4	FPC-31-12, FPC-56-12	FPC-12B	353-8734

227234

Style	'D' Dimension	Order Code	Price Each			
			1+	10+	100+	500+
1	12	353-8345	3.21	2.58	1.95	1.26
1	12	353-8357	3.93	3.18	2.40	1.53
1	12	353-8369	5.97	4.83	3.66	2.31
1	12	353-8370	12.36	9.99	7.59	4.80
2	15	353-8382	1.89	1.53	1.17	0.72
1	20	353-8394	4.89	3.93	3.00	1.89
1	10	353-8400	3.45	2.76	2.13	1.32
1	12	353-8412	3.93	3.18	2.40	1.53
1	12	353-8424	4.77	3.84	2.91	1.86
1	8	353-8436	3.33	2.67	2.07	1.29
1	12	353-8448	4.50	3.63	2.76	1.74
1	12	353-8450	6.75	5.46	4.14	2.61
2 stop PVC Mount		353-8722	1.29	1.07	0.79	0.50
4 stop PVC mount		353-8734	1.61	1.29	0.98	0.63

Ribbon Cable Cores



- Cable Shields for ribbon cable applications
- 1 piece shields suitable for fitting in production runs
- 2 piece shields for retro fitting in test houses and laboratories
- Excellent attenuation over a wide frequency range
- Manufactured from nickel free 3S4 material

Style	Dimensions					Impedance (Ω)		Mfrs. List No.	Code
	A	B	C	D	E	25MHz	100MHz		
1	76.2	65.3	12.7	6.35	0.85	36	110	CSU76/6.4/13-3S4	898-545
1	76.2	65.3	15	6.35	0.85	50	159	CSU76/6.4/15-3S4	898-557
1	76.2	65.3	28.6	6.35	0.85	70	235	CSU76/6.4/29-3S4	898-569
4	38.5	11	12.7	11.4	8	-	-	CL-CSU6.4	898-570
2	38.5	26.7	25.4	12.1	1.9	110	215	CSF38/12/25-3S4-S	898-582
3	38.1	26.7	25.4	12.1	1.9	98	196	CSF38/12/25-3S4	898-594

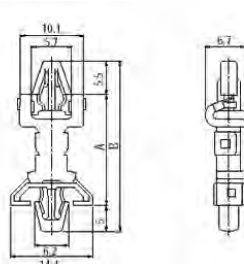
Order Multiple=2		Order Code		Price Per 1/2 Core				
Style	C' Dimension	Code	2+	20+	100+	500+	+	
1	12.7	898-545	6.36	5.22	4.65	3.51	--	
1	15	898-557	7.11	5.82	5.19	3.93	--	
1	28.6	898-569	11.61	9.54	8.52	6.42	--	
Clip		Order Code		Price Per Clip				
Style	C' Dimension	Code	2+	20+	100+	500+	+	
4	-	898-570	2.06	1.70	1.48	1.13	--	
		Order Code		Price Each				
Style	C' Dimension	Code	1+	10+	50+	100+	+	
2	25.4	898-582	7.20	5.88	5.55	4.38	--	
3	25.4	898-594	9.36	7.71	6.87	5.19	--	

PCB Grounding Spacer



KEKITAGAWA

**NEW**



Resin made spacer combined with tin plated phosphor bronze (PATENTED) is used for suppression of EMI and ESD on the PCB. Pressure developed by the plastic and metal fingers provides contact on PCB for excellent electrical current passage.

Features include:

- Ensures a stable contact resistance
- Contact resistance does not vary in heat cycle test
- UL94V-0 flammability rating (resin part)
- Provides easy assembly and disassembly of the PCB

Dimensions (mm)		Mfrs List No.		Order Code	
Length	Length stem	H			
20.3	9.8	20.3	FGS-3S	941-5947	
24.9	14.4	24.9	FGS-6S	941-5955	
28.2	17.7	28.2	FGS-8S	941-5963	
30.5	20	30.5	FGS-9S	941-5971	

Mfrs List No.	Order Code	1+	25+	50+	100+	+
FGS-3S	941-5947	1.92	1.53	1.27	1.11	--
FGS-6S	941-5955	2.25	1.86	1.63	1.43	--
FGS-8S	941-5963	2.31	1.92	1.69	1.53	--
FGS-9S	941-5971	2.47	2.08	1.86	1.69	--

Cable Earthing Clamp



KEKITAGAWA

- Flexible moulded earthing clamps
- Simultaneously fastens and earths
- Resin clamp provides excellent elasticity resulting in no damage to the cable
- For use with outer or inner\* earth shielding braid
- M3 screw mounting

\*cut away cable insulation material to expose inner shielding braid

Nominal cable dia.		Mfrs. List No.	Order Code	5+	25+	100+	500+	+
3 to 3.5	FGC-3 M3	353-8266	●	2.51	2.20	1.95	1.35	--
5 to 5.5	FGC-5 M3	353-8278	●	2.86	2.49	2.20	1.61	--
8 to 8.5	FGC-8 M3	353-8280	●	2.99	2.58	2.30	1.67	--

Earthing Straps



Hole Dia=4.75

- Earthing straps designed to provide low impedance paths for EMI generated currents
- The strap overcomes the problems associated with conventional round earth wires, of an increased inductive resistance at high frequencies, due to the "Skin effect"
- Manufactured from tin plated copper with Green/Yellow insulation.

Copper thickness  
Insulation material  
Insulation colour  
Tin plate thickness  
Dielectric strength  
Operating temperature



KV DC  
to +

386536

Dimensions		Order code		Price Each		
Length (mm)	Width (mm)	1+	5+	10+	25+	
76.2		121-9162	5.11	4.78	4.43	3.39
152.4		121-9163	6.80	6.41	5.92	4.52
228.6		121-9161	5.76	5.37	5.11	4.75
304.8		121-9164	9.28	8.76	8.04	6.22

Conductive Foil Tape



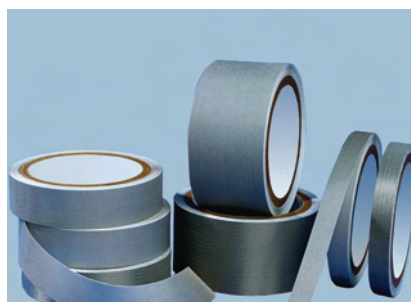
- Exceptional conformability which combines excellent shielding with a smooth appearance, even on irregular surfaces
- Metalized cloth tape provides an extremely durable material which will not crack after repeated flexings or tear during installation
- Lightweight design makes them easy to handle and ideal where weight reduction is critical

**NEW**

386533

Dimensions (HxWxD)		Order Code		Price Each		
100 x 110 x 19 (mm)	100 x 110 x 25 (mm)	1+	5+	10+	25+	
		883-3648	124.76	117.25	96.87	87.92
		883-3656	166.88	144.68	113.47	106.89

Shielding Foil Tape



- Shielding tapes are available in tinned copper, Aluminum, Adhesive copper and nickel fabric version
- Shielding tapes offers strong conductivity, strong adhesive and durability in a thin lightweight and flexible shielding design and application
- Also offers superior abrasion and corrosion resistance
- Tinned copper version allows direct soldering to the tape
- Copper tape meets the requirements of MIL-T-47012 and the tinned copper foil tape meets MIL-T-10727 for corrosion resistance

**NEW**

386546

Note: Reel length tolerance ±10%

Dimension (W x L)	Order Code	1+	5+	10+	25+
<b>Tin-plated Copper</b>					
12.7mm x 15m	886-8506	89.02	80.92	74.93	62.95
25.4mm x 15m	886-8514	169.13	153.73	142.37	119.59
50.8mm x 15m	886-8522	340.25	309.29	286.34	240.51
101.6mm x 15m	886-8530	676.55	614.93	569.40	478.29
<b>Aluminium</b>					
12.7mm x 15m	886-8549	36.10	32.84	30.40	25.52
25.4mm x 15m	886-8557	62.82	57.09	52.89	44.43
50.8mm x 15m	886-8565	132.06	120.04	111.16	93.35
101.6mm x 15m	886-8573	282.40	256.69	237.68	199.66
<b>Copper</b>					
12.7mm x 15m	886-8581	67.25	61.13	56.60	47.56
25.4mm x 15m	886-8590	123.66	112.40	104.06	87.43
50.8mm x 15m	886-8603	142.44	129.48	119.88	100.68

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EMC, Filters & Suppression

Compliant  
Non-compliant  
RoHS

Limited stock - RoHS replacement available

Dimension (W x L)	Order Code	Price Each			
		1+	5+	10+	25+
<b>Copper, Non-conductive Adhesive</b>					
12.7mm x 15m	886-8611	86.36	78.48	72.72	61.03
25.4mm x 15m	886-8620	164.12	149.14	138.11	116.01
50.8mm x 15m	886-8638	333.44	303.07	280.65	235.73
<b>Copper, Conductive Adhesive 2 Sides</b>					
25.4mm x 15m	886-8646	133.55	121.38	112.40	94.40
50.8mm x 15m	886-8654	226.03	205.42	190.22	159.79
<b>Nickel-plated Fabric</b>					
25.4mm x 15m	886-8662	493.59	448.60	415.40	348.94
50.8mm x 15m	886-8670	881.29	801.02	741.72	623.01

Shielding Foil Tape – 'CHO-FOIL'®



- Economical EMI shielding solution for variety of commercial uses
- Pressure-sensitive adhesive (PSA). Adhesive contains a uniform dispersion of unique oxidation resistant conductive particles that produce a very low resistance through the tape
- Copper tape meets the requirements of MIL-T-47012 and the tinned copper foil tape meets MIL-T-10727 for corrosion resistance
- Tinned copper version allows direct soldering to the tape

Note: Reel length tolerance ±10%

204250

Dimension (W x L)	Order Code	Price Each			
		1+	5+	10+	25+
<b>Tin-plated Copper</b>					
12.7mm x 15m	121-8470	78.18	66.45	53.16	48.33
25.4mm x 15m	121-8466	148.17	127.17	104.82	90.07
50.8mm x 15m	121-8471	297.36	252.75	202.20	183.81
101.6mm x 15m	121-8472	594.72	505.50	404.40	367.65
<b>Aluminium</b>					
12.7mm x 15m	121-8473	30.69	26.76	22.20	19.71
25.4mm x 15m	121-8474	53.79	46.89	38.91	34.53
50.8mm x 15m	121-8476	108.45	92.19	73.74	67.05
101.6mm x 15m	121-8477	216.87	184.35	147.48	134.07
<b>Copper</b>					
12.7mm x 15m	121-8478	43.83	38.19	31.71	28.14
25.4mm x 15m	121-8465	109.20	97.89	89.91	73.89
50.8mm x 15m	121-8479	161.55	137.34	109.86	99.87
<b>Copper, Non-conductive Adhesive</b>					
12.7mm x 15m	121-8480	42.75	37.29	30.93	27.45
25.4mm x 15m	121-8481	78.63	66.84	53.46	48.60
50.8mm x 15m	121-8482	157.23	133.65	106.92	97.20
<b>Copper, Conductive Adhesive 2 Sides</b>					
25.4mm x 15m	121-8483	128.73	109.44	87.54	79.59
50.8mm x 15m	121-8484	257.46	218.85	175.08	159.15
<b>Aluminium, Conductive Adhesive 2 Sides</b>					
25.4mm x 30m	121-8485	138.54	117.75	94.20	85.65

Shielding Foils



- 3M Scotch® Foil Shielding Tapes are designed for applications requiring reliable point-to-point electrical contact, particularly EMI shielding, grounding and static charge draining
- The tapes have multitude of uses in electronic design and test laboratories for prototyping, design and troubleshooting.
- Also available as an engineering kit, which offers easy access to all 9 foil tapes in the 3M range
- Dispenser box serves as a source of reference for tapes, as basic technical information about each tape appears on the box

All rolls are 19mm wide and 3.66m long

Mftrs. List No.	Order Code	Description
1170	120-8990	Plain aluminium foil, conductive adhesive solderable. Total thickness 0.08mm
1181	120-8991	Plain Copper foil, conductive adhesive, solderable. Total thickness 0.07mm
1182	120-8993	Plain Copper foil, conductive adhesive on both sides of foil, solderable. Total thickness 0.09mm.
1183	120-8994	Tin Plated Copper foil, oxidation resistant for long term EMI Shielding. Conductive adhesive. Total thickness 0.07mm.
1194	120-8995	Plain Copper foil, electrically non-conductive adhesive. Total thickness 0.08mm.
1245	120-8996	Embossed Copper foil, conductive adhesive. Solderable. Total thickness 0.1mm.
1345	120-8999	Embossed Tin Plated Copper foil. Conductive adhesive. Oxidation resistant for long term EMI shielding. Total thickness 0.1mm.
Foil Engineering Kit	120-8988	1 roll of each of the above foils.

204090

Mftrs. List No.	Order Code	Price Each			
		1+	12+	24+	36+
1170	120-8990	34.18	27.93	24.84	21.91
1181	120-8991	32.42	26.50	23.53	20.77
1182	120-8993	33.69	27.47	24.45	21.58
1183	120-8994	35.94	29.13	25.91	22.85
1194	120-8995	13.22	10.81	9.63	8.46
1245	120-8996	29.03	23.70	21.06	18.59
1345	120-8999	36.10	29.49	26.20	23.11
Foil Engineering Kit	120-8988	273.22	261.31	236.28	213.14

Knitted Wire Mesh Tape



- Monel mesh tape providing excellent RFI/EMI shielding for electronic cables and harness assemblies.
- When wrapped firmly around cables with a 50% overlap and earthed at both ends, provides an effective shield in compliance with BS6527, VDE and FCC radiation limits.

204249

10m Reel		Order Code	Price Per Reel		
Reel Width			1+	5+	10+
25mm		121-9141	38.49	34.65	31.47
50mm		121-9142	57.51	51.96	47.13

Raybraid-101 – Shielding Braid tyco / Electronics / Raychem



- Tinned copper shielding braid for harness systems
- Supplied on easily removed plastic tube former
- Minimum 93% optical coverage
- Super flexible with high expansion ratio

Note: Tube former must be removed from braid before use.

Bundle Diameter Max.	Min.	Former Diameter	Braid Size mm AWG	Mftrs. List No.	Order Code
5.0	2.5	3mm ± 0.13mm	0.1 38	RAY-101-3.0	121-8642
7.5	3.5	4mm ± 0.25mm	0.13 36	RAY-101-4.0	121-8643
9.5	4.5	6mm ± 0.25mm	0.13 36	RAY-101-6.0	121-8644
14	7	7.5mm ± 0.25mm	0.13 36	RAY-101-7.5	121-8646
22	8	10mm ± 0.25mm	0.13 36	RAY-101-10.0	121-8647
24	11	12.5mm ± 0.25mm	0.13 36	RAY-101-12.5	121-8648
38	16	20mm ± 0.38mm	0.13 36	RAY-101-20.0	121-8649

204176

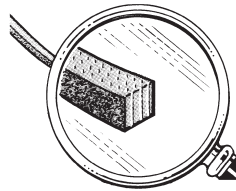
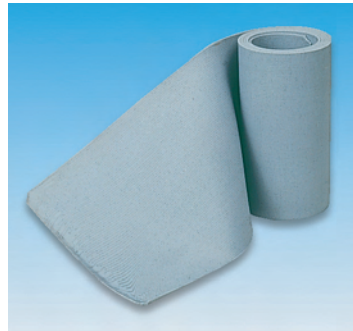
10m Coils	Order Code	Price Each				
		1+	10+	25+	50+	+
	121-8642	55.07	50.34	49.39	43.53	--
	121-8643	92.38	82.31	77.80	68.61	--
	121-8644	131.76	117.43	111.01	97.87	--
	121-8646	132.92	118.44	111.98	106.93	--
	121-8647	160.68	143.20	133.28	119.42	--
	121-8648	179.19	159.71	150.98	133.15	--
	121-8649	245.45	234.52	215.46	204.60	--

- FREE to all account holders
- Notification of obsolete, end of line and end of stock items
- Replacement or upgrade recommendations

Advanced warning of obsolete components

Prices are in Singapore Dollars and exclusive of GST. Due to the volatile nature of certain products, prices are subject to change without notice.

'WS' Monel/Silicone Shielding Material



Sheet size  
H=900, W=100, Th=1.5

- This shielding material is a composite of monel wires embedded in a solid silicone, and orientated to a matrix of 100 per square centimetre
- Provides excellent RF attenuation through wire point contact on both sides of the gasket and will also provide environmental sealing to IP65 or IP66 depending on seal compression.
- Small gaskets can be made simply by cutting the sheet using a blade
- Larger gaskets can be formed by cutting the material into strips, and gluing using a good cyanoacrylate (super glue), into a 'picture frame style'.
- Holes can be cut or punched as required.

Monel wires 0.11mm dia. Operating temperature -55°C to +125°C

204251

Order Code	Price Each		
	1+	5+	10+
121-9144 ●	84.34	66.82	60.13

PTFE Shielding Strip – GORE-Shield

GORE



- Lightweight PTFE based shielding strip offering an excellent combination of EMI shielding and environmental sealing
- Supplied with a conductive pressure-sensitive adhesive backing it is soft and easy to compress allowing use with rough surfaces, providing environmental sealing to IP65 or IP66 depending on seal compression.
- Joint can be butted together or overlapped while still obtaining a complete EMI and environmental seal

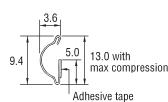
- Gasket thickness can be increased by laying additional thickness on top of one another
- Flame retardant to UL94V-0

Typical shielding performance 1MHz to 1GHz >45db  
Volumetric resistivity @ 3MPa 1Ω-cm  
Compressibility @ 1.4MPa 40%  
Operating temperature 200°C to +200°C

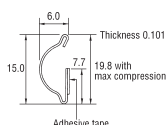
204253

3m Reel Strip Size	Order Code	Price Each		
		1+	5+	10+
0.5mm x 6.35mm	230-327	80.88	72.75	62.43
0.5mm x 12.7mm	230-339	161.70	145.44	124.80
1.0mm x 3.2mm	230-340	97.23	87.39	75.03

'CB' Copper Beryllium Finger Strips



End view 152-618  
Finger width=5.7  
Gap between fingers=0.7



End view 152-619  
Finger width=8.5  
Gap between fingers=1.0

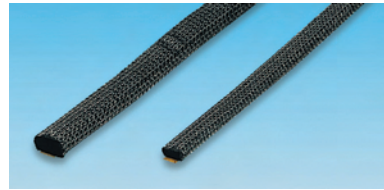
- Beryllium copper finger strips combine a mechanical spring like action similar to steel, and electrical conductivity of copper. Provides an excellent RFI/EMI shield or earthing contact when used on closure doors, cabinets and boxes particularly where a frequent opening and closing operation is required.
- It does not provide an environmental seal
- Strips are supplied with bright tin finish and fitted with a high tack adhesive for simplicity of fixing.
- Compression should be approximately 25% of original height
- Extra soft version provides maximum shielding performance in applications where only a light force is applied.

Adhesive strip 3M 9469 high tack acrylic Operating temperature -55°C to +230°C

204248

0.5m Lengths Finger Width	Order Code	Price Each			
		1+	10+	20+	50+
5.7	121-9146 ●	31.72	20.54	15.89	14.30
8.5	121-9147 ●	41.18	26.10	22.95	19.83

Gasket Strip-Extra Soft



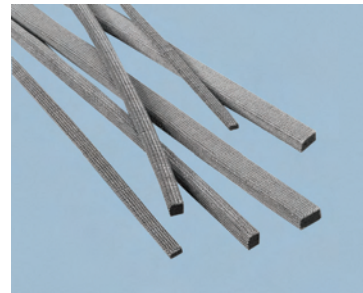
- Extra Soft Shielding Strip for commercial enclosures, cabinets and panels requiring minimum closure force or where wide tolerance gaps exist.
- Constructed from a single layer of fine monel wire, knitted over a closed cell neoprene sponge
- Excellent shielding performance when compressed by 25%, compression up to 50% can be applied to improve environmental sealing
- Pressure-sensitive adhesive backing ensures easy application

Monel wire thickness 80µm Operating temperature -40°C to +80°C

213822

Size A x B	Order Code	Price Per Reel			
		1+	10+	25+	50+
<b>5m Reels</b>					
6 x 4	121-9154 ●	79.83	71.47	64.42	50.08
9 x 6	121-9155 ●	89.51	78.29	67.96	52.94
<b>10m Reels</b>					
6 x 4	121-9156 ●	153.42	137.83	122.30	93.73
9 x 6	121-9158 ●	170.45	153.24	135.98	102.57

Knitted Gasket



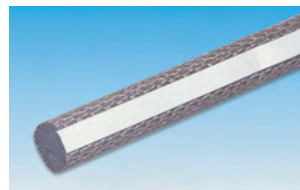
NEW

- Designed to provide an economic EMI seal for commercial electronic enclosures
- **Shielding Performance:** >70dB attenuation from 20MHz to 10GHz
- **Closure Force:** Requires <0.175 N/mm (1lb./inch) closure force
- Self terminating - simply cut to length
- Pressure-sensitive adhesive (PSA) for ease-of-use and quick mounting
- Supplied in packs of 1m lengths

386622

Dimensions W x H	Pack Qty	Order Code	Per Pack			
			1+	5+	10+	25+
<b>Square Shape</b>						
6.4mm x 6.4mm	3	883-3834 ●	81.19	74.83	69.47	61.44
6.4mm x 6.4mm	5	883-3842 ●	107.20	98.80	91.74	81.12
<b>D Shape</b>						
3.6mm x 2.5mm	5	883-3850 ●	120.73	111.25	103.29	91.37
9.5mm x 6.4mm	5	883-3869 ●	117.62	108.34	100.64	89.02
12.7mm x 9.5mm	5	883-3877 ●	159.26	146.74	136.26	120.49
<b>Rectangular Shape</b>						
6.4mm x 3.3mm	5	883-3885 ●	77.57	71.45	66.36	58.69
12.7mm x 6.4mm	5	883-3893 ●	176.94	163.01	151.36	133.92
12.7mm x 6.4mm	10	883-3907 ●	290.41	267.54	248.46	219.76

Knitted Yarn Gasket – 'Soft-Shield 2000'



- Designed to provide an economic EMI seal for commercial electronic enclosures.
- **Shielding Performance:** >70dB attenuation from 20MHz to 10GHz
- **Closure Force:** Requires <0.175 N/mm (1lb./inch) closure force
- Self terminating - simply cut to length
- Pressure-sensitive adhesive (PSA) for ease-of-use and quick mounting

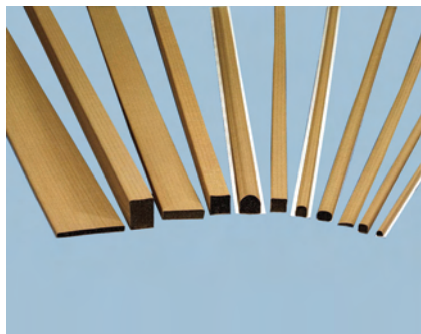
204272

Dimensions W x H	Reel Length	Gasket Profile	Order Code	Price Each			
				1+	5+	10+	25+
<b>Square Shape</b>							
9.5mm x 6.4mm	5m	6792	121-8488 ●	112.74	98.64	78.91	71.73
<b>D Shape</b>							
3.6mm x 2.5mm	5m	6903	121-8486 ●	119.50	104.59	83.66	76.05
9.5mm x 6.4mm	5m	6792	121-8488 ●	112.74	98.64	78.91	71.73
9.5mm x 6.4mm	5m	6792	121-8488 ●	112.74	98.64	78.91	71.73
<b>Rectangular Shape</b>							
9.5mm x 6.4mm	5m	6792	121-8488 ●	112.74	98.64	78.91	71.73

**EMC Foam Gasket**



**NEW**



- UL 94VO and HB flame retardant
- Ideal for applications requiring low pressure force
- High conductivity and shielding attenuation
- High abrasion and shear resistance
- Self-terminating cut-to-lengths of 1m

386520

1m Lengths		Order Code	Price Each			
Dimensions (mm)	1+		5+	10+	25+	
W	x H					
<b>Square Shape</b>						
5	x 5	883-3508	28.83	26.28	21.03	19.28
6	x 6	883-3516	29.16	26.62	21.29	19.52
9.5	x 9.5	883-3524	33.85	30.94	24.71	22.67
<b>Rectangular Shape</b>						
3.3	x 4.8	883-3532	25.41	23.24	18.58	17.04
6.4	x 9.5	883-3540	32.64	29.80	23.84	21.86
9.5	x 12.7	883-3559	45.77	41.82	33.48	30.67
<b>D Shape</b>						
2.3	x 2.3	883-3567	25.75	23.54	18.85	17.28
6.4	x 3.6	883-3575	25.75	23.54	18.85	17.28
9.5	x 6.4	883-3583	34.18	31.24	25.01	22.90
<b>C - Fold Shape</b>						
10.7	x 9.8	883-3591	45.00	40.98	32.88	30.17
15	x 17.1	883-3605	62.74	57.32	45.87	42.08

**Shielding**



- NSC – Nickel Screening Compound**
- 100% Ozone Friendly
  - Excellent surface resistivity
  - Excellent adhesion
  - Fast drying
  - Excellent attenuation levels
- SCP – Silver Conductive Paint**
- Highly conductive silver loaded resin
  - Fast drying
  - Ideal for track repair
  - Ideal for pinpoint shielding

**Warning:** Both of the above products contain flammable contents, do not use on live equipment or near any source of ignition, use in a well ventilated area.

227250

Mftrs. List No.	Order Code	Price Each				
		1+	6+	12+	+	
400ml Aerosol	NSC400H	521-450	57.52	54.67	53.40	--
3g Bottle	SCP03B	725-614	19.14	18.20	17.42	--

**Fabric Wrapped Foam Gasket**



Soft-Shield® 5000



- **Shielding performance** >90dB attenuation from 20MHz to 10GHz
- **Closure force** <0.175N/mm (1lb/inch), 5 times lower than standard gaskets
- Asymmetrical profiles as well as C and D shapes
- Self terminating nickel-plated silver woven nylon rip-stop fabric jacket
- Pressure sensitive adhesive (PSA) for ease-of-use and quick mounting
- Standard 1 metre length

Mftrs List No. 82-121 + gasket profile

- **Shielding performance** >90dB attenuation from 20MHz to 10GHz
- **Closure force** <0.175N/mm (1lb/inch), 5 times lower than standard gaskets
- Asymmetrical profiles as well as C, V and D shapes
- Self terminating nickel-plated silver woven nylon rip-stop fabric jacket
- Pressure sensitive adhesive (PSA) for ease-of-use and quick mounting
- Standard 1 metre length

204056

1m Lengths		Chomerics Gasket Profile	Order Code	Price Each			
Dimensions	1+			5+	10+	25+	
W	x H						
<b>Square Shape</b>							
5.1	x 5.1	74017	121-8450	27.69	24.44	19.89	15.99
6	x 6	74022	121-8452	28.70	24.80	20.18	16.22
9.5	x 9.5	74024	121-8453	32.79	28.83	23.50	18.92
<b>Rectangular Shape</b>							
4.8	x 3.3	74015	121-8454	24.34	21.42	17.45	14.04
9.5	x 6.4	74016	121-8455	31.46	27.76	22.62	18.20
12.7	x 9.5	74021	121-8456	37.21	32.76	26.65	21.48
<b>D Shape</b>							
2.3	x 2.3	74019	121-8457	24.67	21.71	17.71	14.20
6.4	x 3.6	74006	121-8458	24.67	21.71	17.71	14.20
9.5	x 6.4	74011	121-8459	33.74	29.15	23.73	19.11
<b>V Shape</b>							
10.7	x 9.8	74008	121-8460	44.48	38.42	31.30	25.19
14.7	x 17.1	74010	121-8461	61.72	54.34	44.30	35.62



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