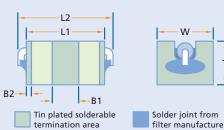
# Urface Mount EMI Filters Surface Mount C and Pi Filters

The SBSG range has a 5A current rating for the Pi type, and 10A rating for the C type. Suitable for pick-and-place, these miniature surface mount filters offer assembly savings compared with conventional panel mounted filters. The combination of high current, high capacitance and high voltage makes them suitable for a wide range of applications including telecoms, mil/aerospace and industrial.



## **Specifications**

	mm	(inches)
L1	4.55 ± 0.25	$(0.179 \pm 0.010)$
L2	$5.25 \pm 0.4$	$(0.207 \pm 0.015)$
W	$3.20 \pm 0.2$	$(0.126 \pm 0.008)$
T	2.50 ± 0.15	$(0.098 \pm 0.006)$
B1	$1.50 \pm 0.4$	$(0.059 \pm 0.015)$
B2	$0.30 \pm 0.25$	$(0.012 \pm 0.010)$

**Electrical Configuration Capacitance Measurement Current Rating** 

**Temperature Rating DC** Resistance Ferrite Inductance, typical Weight

C & Pi Filters At 1000hr point Pi Section 5 amps dc C Section 10 amps dc -55°C to 125°C 0.005 Ohms Max. 0.5μH (Pi Section only) 0.2g typical (0.007oz)



Type No.	Capacitance	Dielectric	Rated	DWV	Typical Insertion Loss (dB) 50 ohm System No Load									
( * = Preferred Value)	(M = +/-20%)	Code	Voltage	(Vd.c.)		C Section Pi Section							n	
			(Vd.c.)		0.1MHz	1MHz	10MHz	100MHz	1GHz	0.1MHz	1MHz	10MHz	100MHz	z 1GHz
* SBSG#1 5000102MX#2	1.0nF	X7R	500	750	0	0	4	23	41	0	0	5	33	60+
SBSG#1 5000152MX#2	1.5nF	X7R	500	750	0	0	7	26	45	0	0	9	40	60+
* SBSG#1 5000222MX#2	2.2nF	X7R	500	750	0	0	10	30	50	0	0	11	47	60+
SBSG#1 5000332MX#2	3.3nF	X7R	500	750	0	0	13	33	52	0	0	14	54	60+
* SBSG#1 5000472MX#2	4.7nF	X7R	500	750	0	1	16	36	55	0	1	19	57	60+
SBSG#1 5000682MX#2	6.8nF	X7R	500	750	0	2	19	39	57	0	2	24	60+	60+
* SBSG#1 5000103MX#2	10nF	X7R	500	750	0	4	22	41	60+	0	5	29	60+	60+
* SBSG#1 5000153MX#2	15nF	X7R	500	750	0	7	25	44	60+	0	7	36	60+	60+
*SBSG#1 5000223MX#2	22nF	X7R	500	750	0	10	29	46	60+	0	11	42	60+	60+
SBSG#1 5000333MX#2	33nF	X7R	500	750	0	13	33	48	60+	0	14	51	60+	60+
*SBSG#1 5000473MX#2	47nF	X7R	500	750	1	16	35	50	60+	1	16	57	60+	60+
SBSG#1 2000683MX#2	68nF	X7R	200	500	2	19	39	54	60+	3	19	60+	60+	60+
* SBSG#1 1000104MX#2	100nF	X7R	100	250	4	22	41	57	60+	5	21	60+	60+	60+
* SBSG#1 1000154MX#2	150nF	X7R	100	250	7	25	45	60+	60+	8	23	60+	60+	60+
* SBSG#1 0500224MX#2	220nF	X7R	50	125	10	29	49	60+	60+	11	27	60+	60+	60+

Note #1 For C Filter insert "C", for Pi Filter insert "P". Note #2 For taping on 7" reel insert "T", on 13" reel insert "R", if supplied in bulk insert "B". Insertion loss figures quoted are for filters mounted within a partition. It should be noted that some degradation will occur at higher frequencies for filters which are not fully shielded.

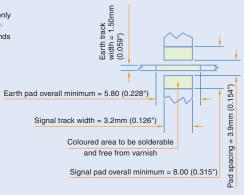
Side bands provide earth contact points.

### **SBSG**

SM Pi or C filter mounted to board

#### and soldered in identical manner to Bands are formed on the sides of the chip only chip capacitor. and are not continuous underneath the chip. Solder connections made to each Solder joints must be made to both side bands end (signal lines) and each side to ensure effective filtering. band (earth track) Signal track Signal track Signal track width 3.2 (0.126") Mount on board with Ferrite Bead / slot upwards Signal track Chip soldered Earth track to Signal track Chip soldered to Earth at both ends track at (both sides) Chip Filter Signal track

# **PAD DIMENSIONS - C & Pi Filter**



### Notes on pad design

- 1. Pad / track design assumes 2oz copper track material.
- 2. Track width quoted allows for operation at max. rated current at 125°C.
- 3. Different operating conditions may allow alternative track designs to be used. Although any pad must be able to support continuous opertating current at max. operating temperature.



FILTSMSBSG.ver2