



**THE DATASHEET OF  
SBSMP5000102MXT**



**Dimensions**

L1	5.7±0.4 (0.224"±0.015")
L2	6.6±0.4 (0.260"±0.015")
W	5.0±0.4 (0.197"±0.015")
T	3.18±0.2 (0.125"±0.008")
B1	2.25±0.4 (0.088"±0.015")
B2	0.30±0.25 (0.012"±0.010")



**Suggested mounting pad details**

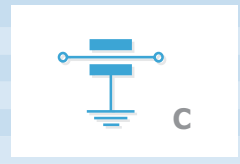


A	10.00 (0.394")
B	2.35 (0.093")
C	1.35 (0.053")
D	2.00 (0.079")
E	3.95 (0.156")
F	7.80 (0.307")

It is recommended that designers independently confirm pad dimensions are acceptable, particularly with respect to higher working voltages.

**Electrical Details**

Electrical Configuration	C Filter
Capacitance Measurement	@ 1000hr Point
Current Rating	20A
Insulation Resistance (IR)	10GΩ or 1000ΩF
Temperature Rating	-55°C to +125°C
Ferrite Inductance (Typical)	N/A (C' Section)



**Mechanical Details**

Terminals & Finish - End	SnCu solder over Sn Plate
Terminals & Finish - Side	Sn Plated
Reflow Temperature	220°C max.
Construction	Ceramic Multi Layer Chip Capacitor Copper Alloy Through Conductor Soldered End Connections
Weight (Typical)	0.65g (0.023oz)

**Reeled quantities**

	<b>SBSMC</b>
178mm (7") reel	500

Product Code	Capacitance (±20%)	Dielectric	Rated Voltage (dc)	DWV (dc)	Approximate Resonant Frequency (MHz)	Typical No-Load Insertion Loss (dB)*				
						0.1MHz	1MHz	10MHz	100MHz	1GHz
SBSMC5000152MX	1.5nF	X7R	500	750	265	0	0	7	25	21
SBSMC5000222MX	2.2nF		500	750	235	0	0	11	31	21
SBSMC5000332MX	3.3nF		500	750	185	0	1	15	35	21
SBSMC5000472MX	4.7nF		500	750	154	0	2	17	40	21
SBSMC5000682MX	6.8nF		500	750	125	0	4	21	44	21
SBSMC5000103MX	10nF		500	750	100	0	5	24	50	21
SBSMC5000153MX	15nF		500	750	80	0	7	27	43	21
SBSMC5000223MX	22nF		500	750	65	0	11	31	43	21
SBSMC5000333MX	33nF		500	750	54	1	15	34	43	21
SBSMC5000473MX	47nF		500	750	46	2	17	37	43	21
SBSMC5000683MX	68nF		500	750	39	3	21	41	43	21
SBSMC2000104MX	100nF		200	500	33	5	24	44	43	21
SBSMC2000154MX	150nF		200	500	26	7	26	47	43	21
SBSMC1000224MX	220nF		100	250	21	11	31	52	43	21
SBSMC1000334MX	330nF		100	250	20	14	33	54	43	21
SBSMC0500474MX	470nF		50	125	19	17	36	54	43	21

\* Insertion Loss performance quoted is measured on an open FR4 board mounted on a brass backplane in a 50Ω system. Performance curves can be supplied on request. Performance in circuit is liable to be different and is affected by board material, track layout, grounding efficiency and circuit impedances. Shielding can be used to improve high frequency performance.

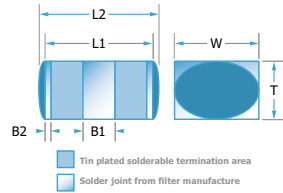
**Ordering Information - SBSMC range**

SB	S	M	C	100	0334	M	X	B
Type	Case style	Size	Electrical configuration	Voltage (dc)	Capacitance in picofarads (pF)	Tolerance	Dielectric	Packaging
Syfer Board Filter	Surface Mount	Size Code <b>M</b> (nominally 2220)	<b>C</b> = C Filter	<b>050</b> = 50V <b>100</b> = 100V <b>200</b> = 200V <b>500</b> = 500V	First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is number of zeros following Example: <b>0472</b> = 4700pF <b>0683</b> = 68000pF	<b>M</b> = ±20%	<b>X</b> = X7R	<b>T</b> = 178mm (7") reel <b>R</b> = 330mm (13") reel <b>B</b> = Bulk

Note: The addition of a 4-digit numerical suffix code can be used to denote changes to the standard part. Options include for example: change of finish / alternative voltage rating / non-standard intermediate capacitance values / test requirements. Please refer specific requests to the factory.

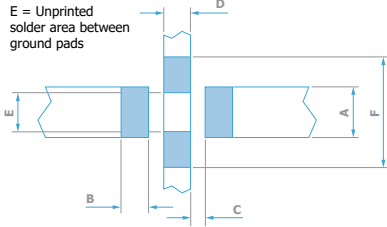
**Dimensions**

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B1	2.25±0.4 (0.088"±0.015")
B2	0.30±0.25 (0.012"±0.010")



**Suggested mounting pad details**

E = Unprinted solder area between ground pads



A	5.00 (0.197")
B	2.35 (0.093")
C	1.35 (0.053")
D	2.00 (0.079")
E	3.95 (0.156")
F	7.80 (0.307")

It is recommended that designers independently confirm pad dimensions are acceptable, particularly with respect to higher working voltages.

**Electrical Details**

Electrical Configuration	Pi Filter
Capacitance Measurement	@ 1000hr Point
Current Rating	10A
Insulation Resistance (IR)	10GΩ or 1000ΩF
Temperature Rating	-55°C to +125°C
Ferrite Inductance (Typical)	0.22μH (@ 100kHz)



**Mechanical Details**

Terminals & Finish - End	SnCu solder over Sn Plate
Terminals & Finish - Side	Sn Plated
Reflow Temperature	220°C max.
Construction	Ceramic Multi Layer Chip Capacitor Copper Alloy Through Conductor Ferrite Bead Inductor Soldered End Connections
Weight (Typical)	0.6g (0.021oz)

**Reeled quantities**

	<b>SBSMP</b>
178mm (7") reel	500

Product Code	Capacitance (±20%)	Dielectric	Rated Voltage (dc)	DWV (dc)	Approximate Resonant Frequency (MHz)	Typical No-Load Insertion Loss (dB)*				
						0.1MHz	1MHz	10MHz	100MHz	1GHz
SBSMP5000152MX	1.5nF	X7R	500	750	130	0	0	7	39	21
SBSMP5000222MX	2.2nF		500	750	100	0	0	11	38	21
SBSMP5000332MX	3.3nF		500	750	80	0	1	12	44	21
SBSMP5000472MX	4.7nF		500	750	63	0	2	15	44	21
SBSMP5000682MX	6.8nF		500	750	55	0	3	18	44	21
SBSMP5000103MX	10nF		500	750	43	0	5	24	44	21
SBSMP5000153MX	15nF		500	750	35	0	8	28	44	21
SBSMP5000223MX	22nF		500	750	30	0	10	35	44	21
SBSMP5000333MX	33nF		500	750	23	1	12	48	44	21
SBSMP5000473MX	47nF		500	750	19	2	16	50	44	21
SBSMC5000683MX	68nF		500	750	15	3	19	55	44	21
SBSMP2000104MX	100nF		200	500	12	5	21	58	44	21
SBSMP2000154MX	150nF		200	500	10	8	23	62	44	21
SBSMP1000224MX	220nF		100	250	8	11	25	63	44	21
SBSMP1000334MX	330nF		100	250	6	14	22	62	44	21
SBSMP0500474MX	470nF		50	125	5	16	20	64	44	21

\* Insertion Loss performance quoted is measured on an open FR4 board mounted on a brass backplane in a 50Ω system. Performance curves can be supplied on request. Performance in circuit is liable to be different and is affected by board material, track layout, grounding efficiency and circuit impedances. Shielding can be used to improve high frequency performance.

**Ordering Information - SBSMP range**

SB	S	M	P	500	0473	M	X	B
Type	Case style	Size	Electrical configuration	Voltage (dc)	Capacitance in picofarads (pF)	Tolerance	Dielectric	Packaging
Syfer Board Filter	Surface Mount	Size Code <b>M</b> (nominally 2220)	<b>P</b> = Pi Filter	<b>050</b> = 50V <b>100</b> = 100V <b>200</b> = 200V <b>500</b> = 500V	First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is number of zeros following  Example: <b>0472</b> = 4700pF <b>0683</b> = 68000pF	<b>M</b> = ±20%	<b>X</b> = X7R	<b>T</b> = 178mm (7") reel <b>R</b> = 330mm (13") reel <b>B</b> = Bulk

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