



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### 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")

■ Tin plated solderable termination area  
■ Solder joint from filter manufacture

### Suggested mounting pad details

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")

E = Unprinted solder area between ground pads

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	SBSMP
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

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.