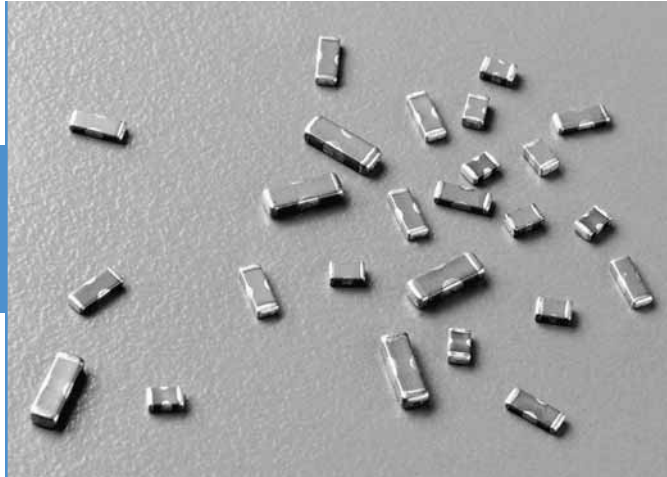


Surface Mount EMI Filters Three Terminal Chips



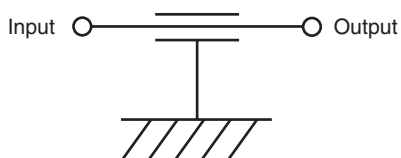
Features

- Excellent performance in high current applications
- Non-polar, surface mountable
- Superior filtering characteristics
- Superb ability to withstand transient voltages and surge
- Offers exceptional solderability and resistance to solder heat
- Available in 0805, 1205 and 1806 body size
- Two amp current rating available

Applications

- Cellular telephones and base stations
- Telecommunication equipment
- Industrial electronic interface or programmable controllers
- Electronic automotive equipment
- Computer and peripheral equipment

Circuit Schematic



Typical Electrical Characteristics

<i>Capacitance</i>		
<i>Range</i>	COG (NPO)	22 pF to 470 pF
	X7R	470 pF to 47,000 pF
<i>Capacitance</i>		
<i>Tolerance</i>	COG (NPO)	+50/-20%
	X7R	+50/-20%
<i>Temperature</i>		
<i>Coefficient</i>	COG (NPO)	0 ±30 ppm/°C, -55 to +125°C
	X7R	+/-15%, -55 to +125°C
<i>Insulation</i>		
<i>Resistance</i>	up to 22,000 pF	10000 Megohms
	47,000 pF	5000 Megohms
<i>DC</i>		
<i>Resistance</i>	0.4 Amp or less	0.3 ohm max.
	1 Amp	0.08 ohm max.
	2 Amp	0.04 ohm max.

Surface Mount EMI Filters Three Terminal Chips

Selection Guide

Part Number	Body Size	Capacitance (in picofarad)	Capacitance Tolerance	Temp. Charact.	Rated Voltage (Volts DC)	Rated Current (Amps DC)	IR (Megohms Min.)	DC Resistance (ohm Max.)	Operating Temp.
SF0805C220SBNC-*	0805	22	+50/-20%	COG	50	0.4	10,000	0.3	-55/+125°C
SF0805C470SBNC-*	0805	47	+50/-20%	COG	50	0.4	10,000	0.3	-55/+125°C
SF0805C101SBNC-*	0805	100	+50/-20%	COG	50	0.4	10,000	0.3	-55/+125°C
SF0805C221SBNC-*	0805	220	+50/-20%	COG	50	0.4	10,000	0.3	-55/+125°C
SF0805X471SBNC-*	0805	470	+50/-20%	X7R	50	0.4	10,000	0.3	-55/+125°C
SF0805X102SBNC-*	0805	1,000	+50/-20%	X7R	50	0.4	10,000	0.3	-55/+125°C
SF0805X222SBNC-*	0805	2,200	+50/-20%	X7R	50	0.4	10,000	0.3	-55/+125°C
SF0805X223SBND-*	0805	22,000	+50/-20%	X7R	50	1.0	10,000	0.08	-55/+125°C
SF1205C220SBNB-*	1205	22	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF1205C470SBNB-*	1205	47	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF1205C101SBNB-*	1205	100	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF1205C221SBNB-*	1205	220	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF1205X471SBNB-*	1205	470	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF1205X102SBNB-*	1205	1,000	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF1205X222SBNB-*	1205	2,200	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF1205X223SBNB-*	1205	22,000	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF1205X473SBND-*	1205	47,000	+50/-20%	X7R	50	1.0	5,000	0.08	-55/+125°C
SF1806C220SDNB-*	1806	22	+50/-20%	COG	100	0.3	10,000	0.3	-55/+125°C
SF1806C470SDNB-*	1806	47	+50/-20%	COG	100	0.3	10,000	0.3	-55/+125°C
SF1806C101SDNB-*	1806	100	+50/-20%	COG	100	0.3	10,000	0.3	-55/+125°C
SF1806C221SDNB-*	1806	220	+50/-20%	COG	100	0.3	10,000	0.3	-55/+125°C
SF1806C471SDNB-*	1806	470	+50/-20%	COG	100	0.3	10,000	0.3	-55/+125°C
SF1806X102SDNB-*	1806	1,000	+50/-20%	X7R	100	0.3	10,000	0.3	-55/+125°C
SF1806X222SDNB-*	1806	2,200	+50/-20%	X7R	100	0.3	10,000	0.3	-55/+125°C
SF1806X103SDNB-*	1806	10,000	+50/-20%	X7R	100	0.3	10,000	0.3	-55/+125°C
SF1806X223SDNB-*	1806	22,000	+50/-20%	X7R	100	0.3	10,000	0.3	-55/+125°C
2 AMP FILTER SF1806Y224ZBNE-*	1806	220,000	+80/-20%	Y5V †	50	2.0	1,000	0.04	-25/+85°C

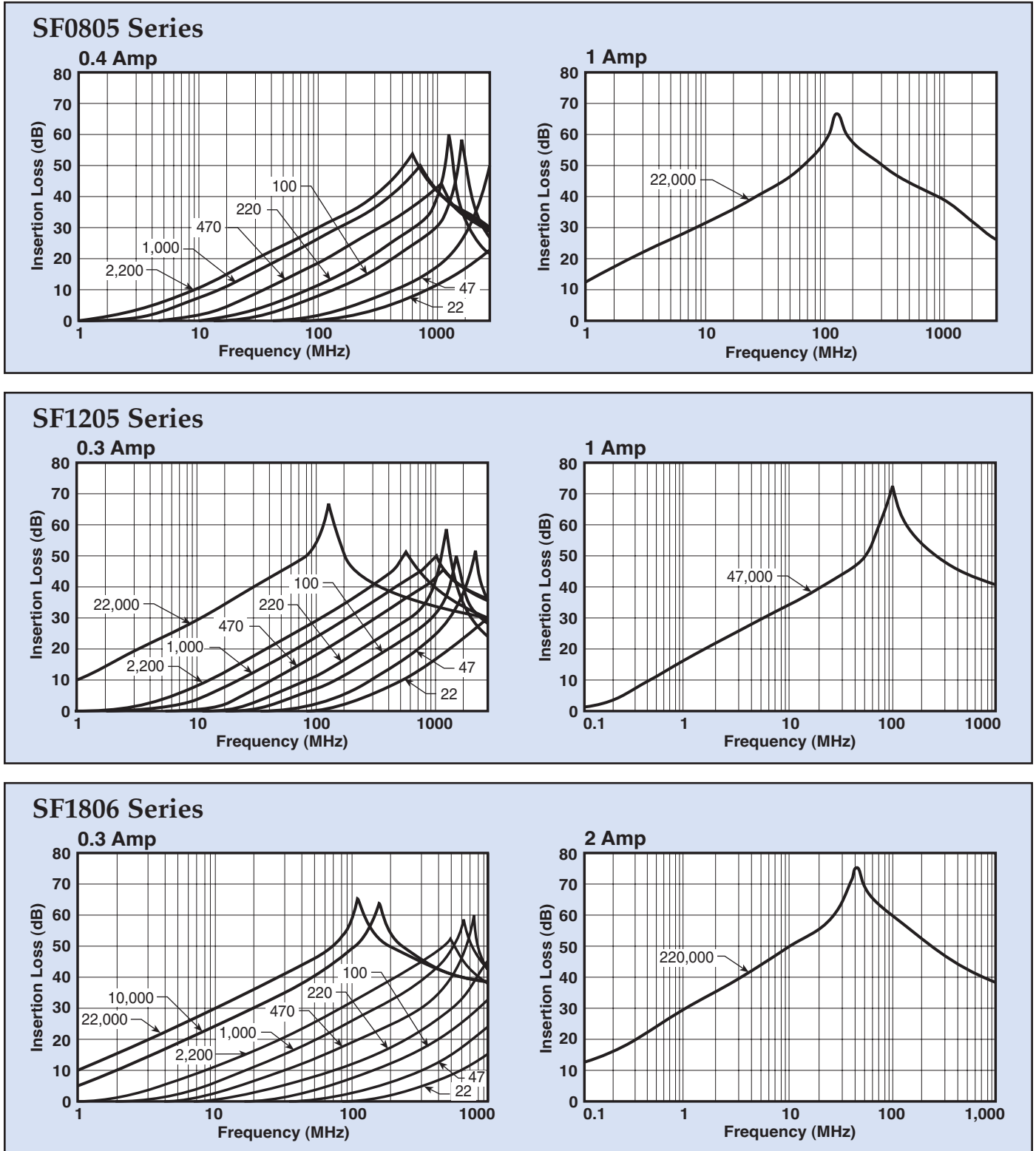
Bold Letter = High Current Applications

-* = Denotes Packaging Style. Replace with T for Tape and Reel or B for Bulk

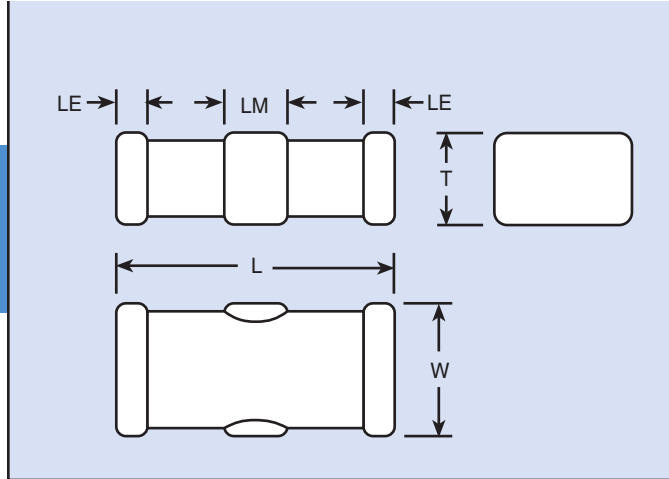
† = Temperature Characteristic is +30/-80%

Surface Mount EMI Filters Three Terminal Chips

Insertion Loss (Per MIL-STD-220)



Surface Mount EMI Filters Three Terminal Chips



Mechanical Dimensions

Dimensions in inches (mm)

Body Style/Size	Body Length (L)	Body Width (W)	Body Thickness (T)	End Terminal Length (LE)	Middle Terminal Length (LM)
SF0805	0.079 +/-0.008 (2.0 +/-0.2)	0.049 +/-0.008 (1.25 +/-0.2)	0.032 +/-0.008 (0.8 +/-0.2)	0.012 +/-0.008 (0.3 +/-0.2)	0.024 +/-0.008 (0.6 +/-0.2)
SF1205	0.126 +/-0.008 (3.2 +/-0.2)	0.049 +/-0.008 (1.25 +/-0.2)	0.028 +/-0.008 (0.7 +/-0.2)	0.016 +/-0.012 (0.4 +/-0.3)	0.043 +/-0.012 (1.1 +/-0.3)
SF1806	0.177 +/-0.012 (4.5 +/-0.3)	0.063 +/-0.012 (1.6 +/-0.3)	0.039 +/-0.012 (1.0 +/-0.3)	0.020 +/-0.012 (0.5 +/-0.3)	0.055 +/-0.012 (1.4 +/-0.3)

Ordering Information

Example: SF0805C221SBNCT

This part number represents a three terminal chip with a body size of 0805 with a COG (NPO) dielectric. The capacitance is 220 pF with a capacitance tolerance of +50%/-20%. Voltage rating is 50 Volts DC. It has nickel barrier, solder plated terminations and a current rating of 0.4 Amp, (400 milliamps). The parts are taped and reeled.

SF	0805	C	221	S	B	N	C	T
Style	Size	Ceramic	Capacitance Code	Capacitance Tolerance	Rated Voltage (Vdc)	Termination	Current Rating	Packaging
SF	0805 1205 1806	C - COG X - X7R Y - Y5V	First Two Numbers are Significant, the Third Number Refers to Number of Zeroes	S - +50%/-20% Z - +80%/-20%	B - 50 D - 100	N - Ni Barrier, Solder Plated	B - 0.3 A C - 0.4 A D - 1 A E - 2 A	T - Tape and Reel B - Bulk