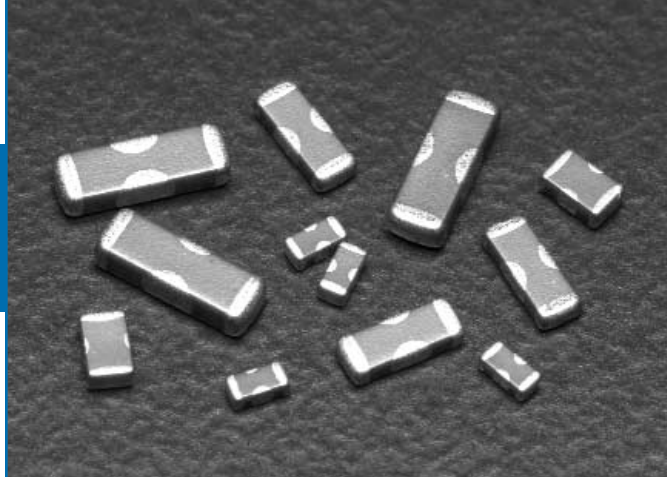


Surface Mount EMI Filters Three Terminal Chips



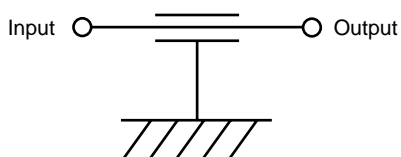
Features

- 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 0603, 0805, 1205 and 1806 body size
- Two amp current rating available
- Available lead free/RoHS Compliant

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

Capacitance Range COG (NPO) 22 pF to 470 pF
 X7R 470 pF to 47,000 pF
 YV5 100,000 pF and 220,000 pF

Capacitance Tolerance COG (NPO) +50/-20%
 X7R +50/-20%
 Y5V +80/-20%

Temperature Coefficient COG (NPO) 0 ±30 ppm/°C,
 -55 to +125°C
 X7R +/-15%,
 -55 to +125°C
 Y5V -25 to +85°C

Insulation Resistance up to 22,000 pF 10000 MΩ
 47,000 pF 5000 MΩ

DC Resistance 0.4 Amp or less 0.3 Ohm max.
 1 Amp 0.08 Ohm max.
 2 Amp 0.04 Ohm max.

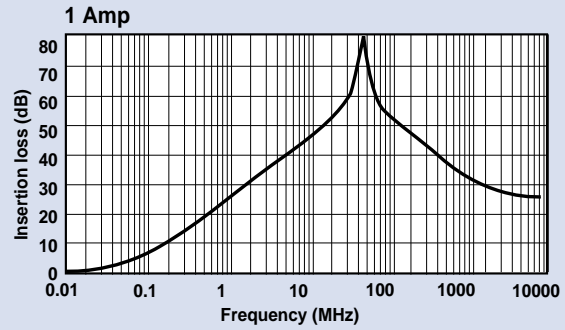
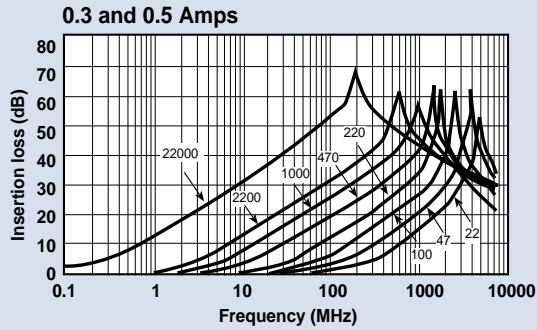
Rated Voltage up to 100 VDC

Rated Current up to 2 Amps

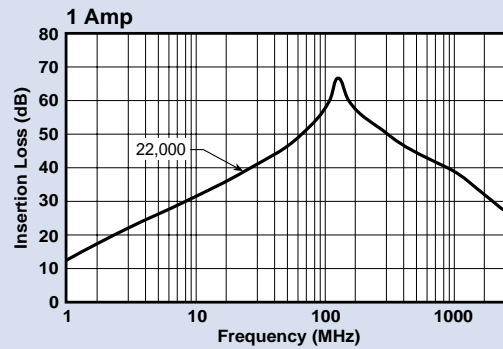
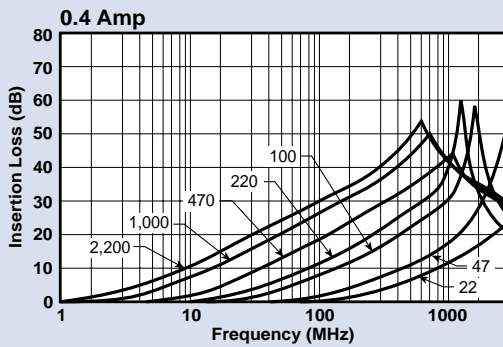
Surface Mount EMI Filters Three Terminal Chips

Insertion Loss (Per MIL-STD-220)

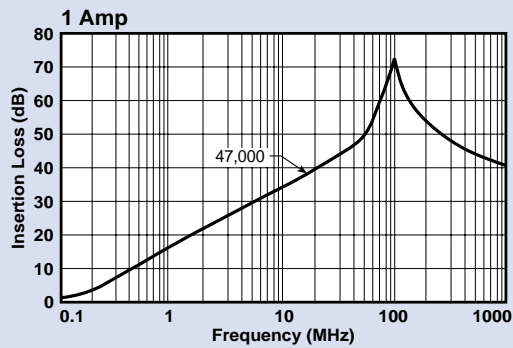
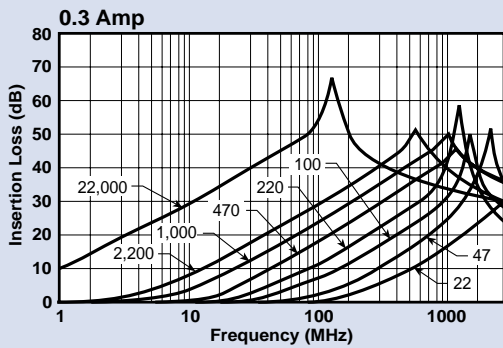
SF0603 Series



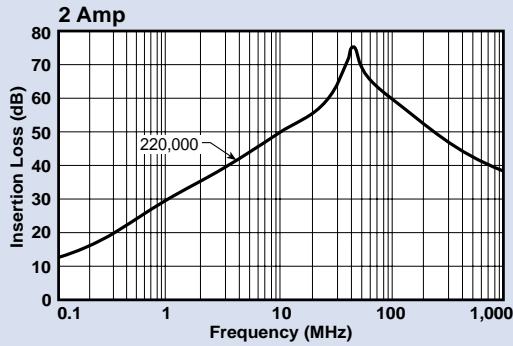
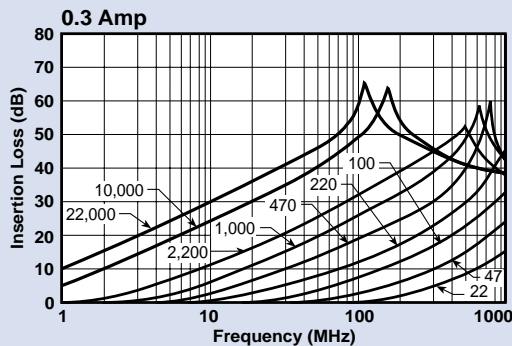
SF0805 Series



SF1205 Series



SF1806 Series



Surface Mount EMI Filters

Three Terminal Chips

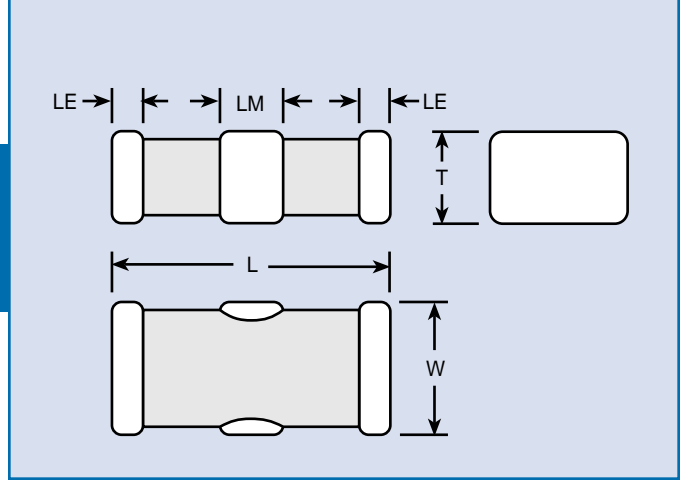
Selection Guide

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.
SF0603C220SBNB-*	0603	22	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF0603C470SBNB-*	0603	47	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF0603C101SBNB-*	0603	100	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF0603C221SBNB-*	0603	220	+50/-20%	COG	50	0.3	10,000	0.3	-55/+125°C
SF0603X471SBNB-*	0603	470	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF0603X102SBNB-*	0603	1,000	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF0603X222SBNB-*	0603	2,200	+50/-20%	X7R	50	0.3	10,000	0.3	-55/+125°C
SF0603X223SANC-*	0603	22,000	+50/-20%	X7R	25	0.5	10,000	0.15	-55/+125°C
SF0603Y104SAND-*	0603	100,000	+80/-20%	Y5V†	25	1	1,000	0.08	-25/+85°C
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
 † = Temperature Characteristic is +30/-80%

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

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)
SF0603	0.063 +/-0.006 (1.60 +/-0.15)	0.031 +/-0.006 (0.80+/-0.15)	0.023 +/-0.006 (0.6+/-0.15)	0.008 +/-0.006 (0.2 +/-0.15)	0.020 +/-0.006 (0.5 +/-0.15)
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**

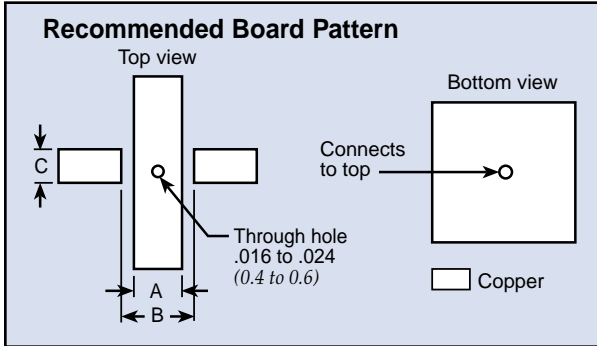
This part number represents a three terminal chip with a body size of 0805 with a COG (NPO) dielectric. The capacitance is 220 pF with a capacitance tolerance of +50%/-20%. Voltage rating is 50 Volts DC. It has nickel barrier, solder plated terminations and a current rating of 0.4 Amp, (400 milliamps). 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	0603 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%	A - 25 B - 50 D - 100	N - Ni Barrier, Solder Plated	B - 0.3 A C - 0.4 A D - 1 A E - 2 A F - 3 A G - 4 A H - 5 A I - 6 A	T - Tape and Reel B - Bulk

Three Terminal Chips Soldering Specifications

Soldering Instructions

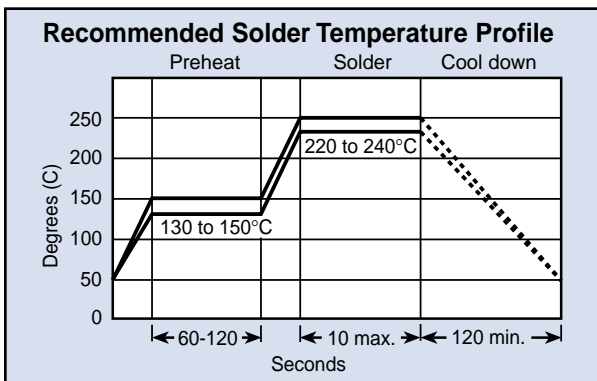
Reflow Soldering



Board Pattern Dimensions in inches (mm)

Body Style/Size	Dimension		
	A	B	C
SF0603	0.020 (0.5)	0.047 (1.2)	0.031 (0.8)
SF0805	0.024 (0.6)	0.059 (1.5)	0.039 (1.0)
SF1205	0.051 (1.3)	0.091 (2.3)	0.047 (1.2)
SF1806	0.079 (2.0)	0.138 (3.5)	0.051 (1.3)

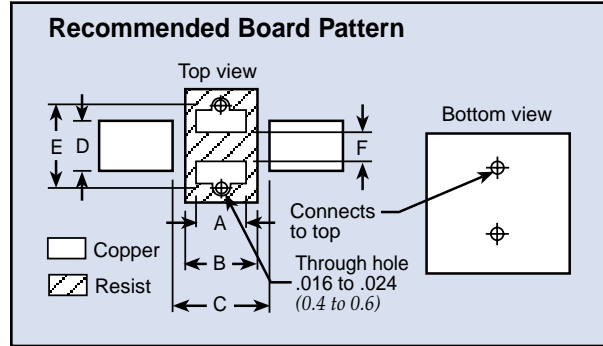
Reflow Soldering



General Soldering Notes

1. High soldering temperatures and long soldering times can cause leaching of the termination and adversely affect adhesion. These conditions can also decrease capacitance value. Use the above recommended solder temperature cycle.
2. Due to the mechanical characteristic of ceramic composition, aggressive thermal shock will degrade performance. Preheat the assembly before soldering using the above solder temperature profile as a guide.

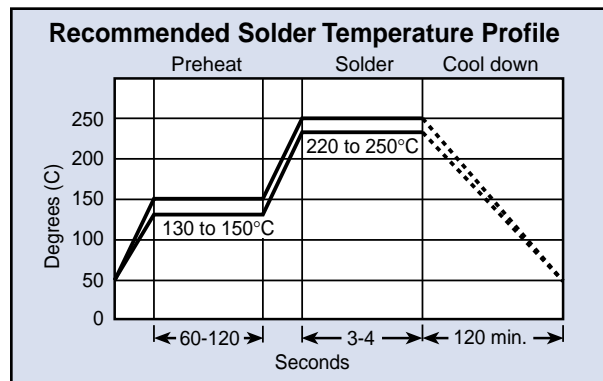
Flow Soldering



Board Pattern Dimensions in inches (mm)

Body Style/Size	Dimension					
	A	B	C	D	E	F
SF0603	0.020 (0.5)	0.031 (0.8)	0.047 (1.2)	0.031 (0.8)	0.071 (1.8)	0.016 (0.4)
SF0805	0.024 (0.6)	0.031 (0.8)	0.059 (1.5)	0.039 (1.0)	0.087 (2.2)	0.024 (0.6)
SF1205	0.051 (1.3)	0.059 (1.5)	0.091 (2.3)	0.047 (1.2)	0.118 (3.0)	0.024 (0.6)
SF1806	0.059 (1.5)	0.079 (1.5)	0.138 (3.5)	0.051 (1.3)	0.118 (3.0)	0.024 (0.6)

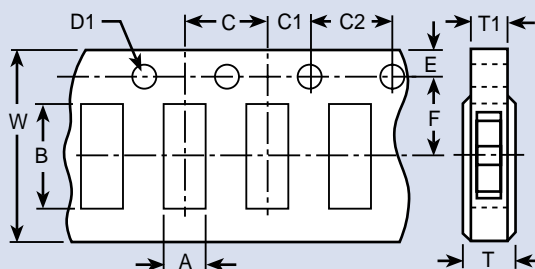
Flow Soldering



3. Use mild flux (less than 0.2% by weight of Chlorine), preferable rosin based. If water soluble, wash thoroughly to assure all residue is removed from the underside of components.
4. Ultrasonic Cleaning
When using an ultrasonic cleaning method, the following range is recommended:
Frequency: Not to exceed 28KHz
Output Power: Not to exceed 20W/liter
Cleaning Time: 5 minutes max

Three Terminal Chips Packaging Specifications

Package Information Paper Tape Dimensions SF0805 and SF1205 Bodies



Package Quantities

Body Style/Size	Tape and Reel
SF0603	4,000 units/reel
SF0805	4,000 units/reel
SF1205	4,000 units/reel
SF1806	2,000 units/reel

Dimensions in inches (mm)

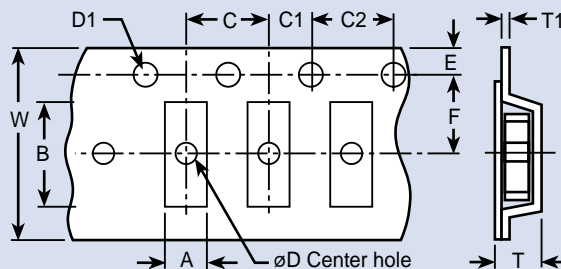
Body Style/Size	Chip Cavity		Tape			Holes			Hole Diameter		Thickness	
	Length A	Width B	Width W	Center to End F	Indexing to End E	Center to Center C	Indexing to Center C1	Indexing to Indexing C2	Center	Indexing	Overall T (Max.)	Carrier Tape T1 (Max.)
SF0603	0.039 +/-0.00? (1.0 +/-0.?)	0.075 +/-0.00? (1.9 +/-0.?)	0.315 +/-0.012 (8.0 +/-0.3)	0.138 +/-0.002 (3.5 +/-0.05)	0.069 +/-0.004 (1.75 +/-0.1)	0.157 +/-0.004 (4.0 +/-0.1)	0.079 +/-0.004 (2.0 +/-0.1)	0.157 +/-0.008 (4.0 +/-0.1)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.043 (1.1)	0.039 (1.0)
SF0805	0.064 +/-0.008 (1.62 +/-0.2)	0.091 +/-0.008 (2.3 +/-0.2)	0.315 +/-0.012 (8.0 +/-0.3)	0.138 +/-0.002 (3.5 +/-0.05)	0.069 +/-0.004 (1.75 +/-0.1)	0.157 +/-0.004 (4.0 +/-0.1)	0.079 +/-0.004 (2.0 +/-0.1)	0.157 +/-0.008 (4.0 +/-0.1)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.043 (1.1)	0.039 (1.0)
SF1205	0.067 +/-0.008 (1.70 +/-0.2)	0.138 +/-0.008 (3.5 +/-0.2)	0.315 +/-0.012 (8.0 +/-0.3)	0.138 +/-0.002 (3.5 +/-0.05)	0.069 +/-0.004 (1.75 +/-0.1)	0.157 +/-0.004 (4.0 +/-0.1)	0.079 +/-0.004 (2.0 +/-0.1)	0.157 +/-0.008 (4.0 +/-0.1)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.043 (1.1)	0.039 (1.0)

Plastic Reel Dimensions

Dimensions in inches (mm)

Body Style/Size	Diameter (Max.)	Width (Max.)
SF0603	7.00 (180)	0.46 (11.5)
SF0805	7.00 (180)	0.46 (11.5)
SF1205	7.00 (180)	0.46 (11.5)
SF1806	7.00 (180)	0.61 (11.5)

Package Information Tape and Reel Specification Plastic Carrier Tape Dimensions SF1806 Body



Dimensions in inches (mm)

Body Style/Size	Chip Cavity		Tape			Holes			Hole Diameter		Thickness	
	Length A	Width B	Width W	Center to End F	Indexing to End E	Center to Center C	Indexing to Center C1	Indexing to Indexing C2	Center D (Min.)	Indexing D1	Overall T (Max.)	Tape T1 (Max.)
SF1806	0.071 +/-0.008 (1.80 +/-0.2)	0.185 +/-0.008 (4.70 +/-0.2)	0.472 +/-0.008 (12.0 +/-0.2)	0.217 +/-0.002 (5.5 +/-0.05)	0.069 +/-0.004 (1.75 +/-0.1)	0.157 +/-0.004 (4.0 +/-0.1)	0.079 +/-0.004 (2.0 +/-0.1)	0.157 +/-0.008 (4.0 +/-0.1)	0.059 (1.5)	0.059 +0.004/-0 (1.5 +/-0.1/-0)	0.098 (2.5)	0.024 (0.6)

Surface Mount EMI Filters LC & LZ Type Chips

LC Features

- High efficiency EMI surface mount filter
- Ideally suited for high frequency signal lines
- Steep insertion loss (IL) characteristics
- Available in 0603, 0805 and 1206 body sizes

LC Typical Electrical Characteristics

Cut-off

Frequency Ranges 10 MHz to 220 MHz \pm 20%

Rated Voltage 25 Volt

Rated Current 100 mA

IR 10 M Ω min.

Operating

Temperature Range -40°C to +85°C

LZ Features

- Monolithic construction of dielectric and ferrite materials
- Band stop filter with a choice of rejected frequency band
- Little delay and distortion from original signal wave
- Available in the 0402 and 0603 body sizes

LZ Typical Electrical Characteristics

Center

Frequency Ranges 10 MHz to 2,000 MHz \pm 20%

Rated Current 50 mA and 100 mA

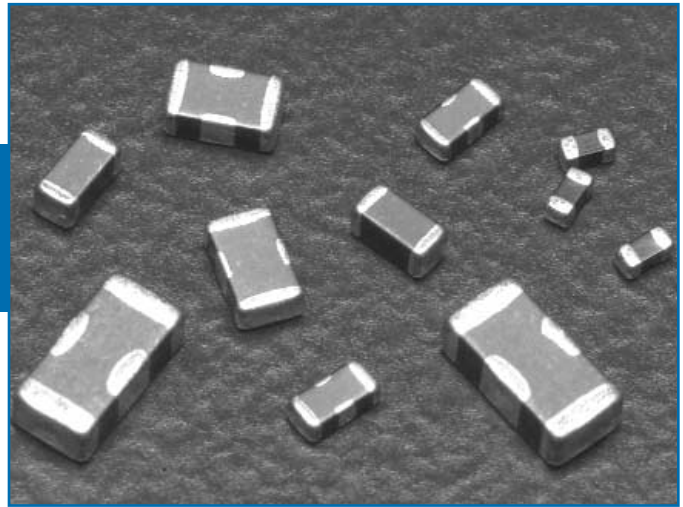
Rejected Bandwidth 0.5 dec. to 1.5 dec.

Operating

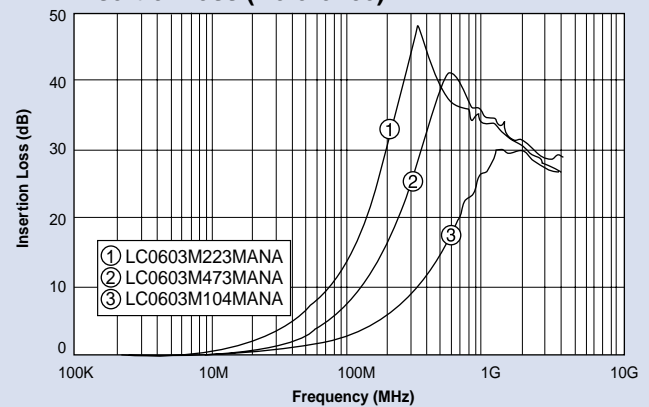
Temperature Range -25°C to +85°C

LC/LZ Applications

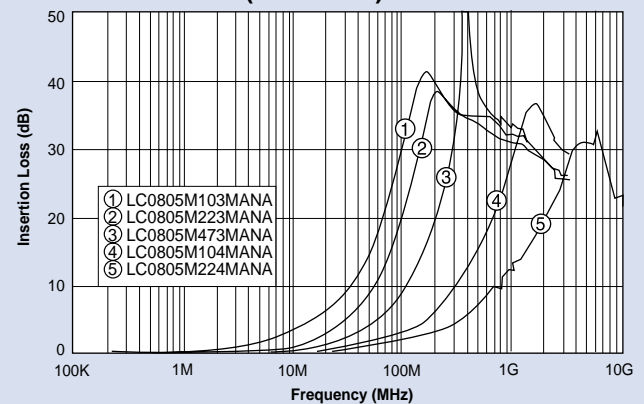
- Telecommunication equipment, fax, modem, and ADSL
- Computer and peripheral equipment
- Digital AV equipment, such as TV, VCR and DVD
- Digital circuit equipment noise countermeasure



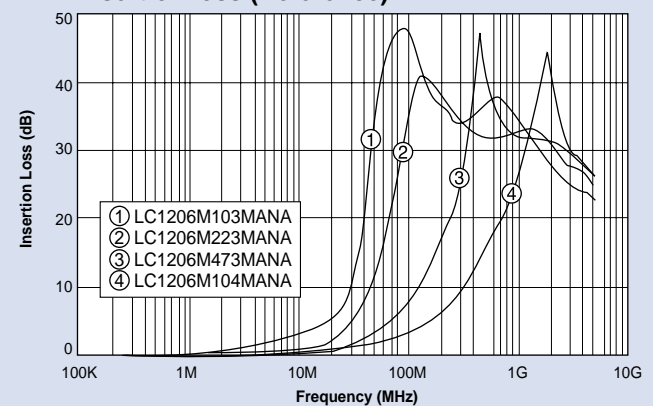
LC0603 Style Insertion Loss (Reference)



LC0805 Style Insertion Loss (Reference)



LC1206 Style Insertion Loss (Reference)



Surface Mount EMI Filters LC & LZ Type Chips

Specifications

Part Number	Body Size	Cut-off Frequency (MHz)	Cut-off Frequency Tolerance	Rated Voltage	Rated Current	I.R. (Min.)	Temperature Range
LC0603M223MANA-*	0603	22	± 20%	25 V	100 mA	10 MΩ	-40°C – +85°C
LC0603M473MANA-*		47					
LC0603M104MANA-*		100					
LC0805M103MANA-*	0805	10					
LC0805M223MANA-*		22					
LC0805M473MANA-*		47					
LC0805M104MANA-*		100					
LC0805M224MANA-*		220					
LC1206M103MANA-*	1206	10					
LC1206M223MANA-*		22					
LC1206M473MANA-*		47					
LC1206M104MANA-*		100					

* Denotes packaging style, replace with T for tape and reel or B for bulk

Ordering Information

Example: **LC1206M223MANAT**

This part number represents an LC EMI filter chip with a body size of 1206. The cut-off frequency is 22 MHz with a tolerance of ± 20%, voltage rating is 25 Volts DC. It has nickel barrier, solder plated termination and a current rating of 0.1 Amp (100 milliamps). The parts are taped and reeled.

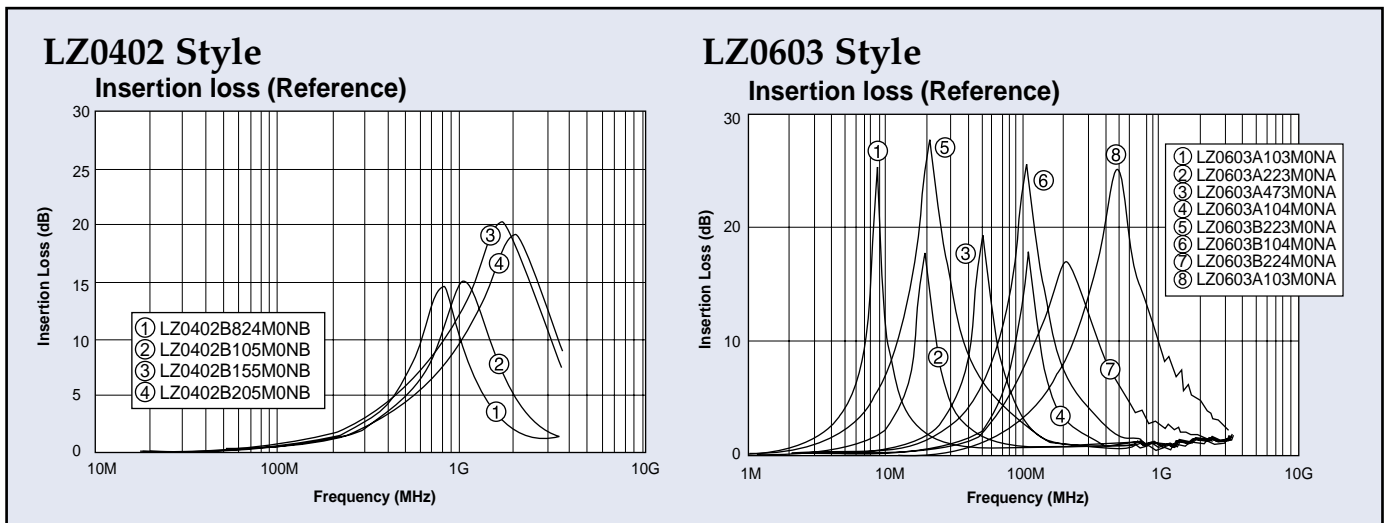
LC	1206	M223	M	A	N	A	T
Style	Size	Cut-off Frequency	Cut-off Tolerance	Rated Voltage	Termination	Rated Current	Packaging
LC	0603 0805 1206	M223 = 22 MHz	M = ± 20%	A = 25 VDC	N = Ni Barrier, Solder Plated	A = 0.1 A (100 mA)	T = Tape and Reel B = Bulk

Surface Mount EMI Filters LC & LZ Type Chips

Specifications

Part Number	Body Size	Cut-off Frequency (MHz)	Cut-off Frequency Tolerance	Rejected Bandwidth (dec.)	Max. Insertion Loss	Rated Current	Operating Temperature Range		
LZ0402Z824MBNB-*	0402	820	± 20%	0.75	≥ 10 dB	50 mA	-25°C – +85°C		
LZ0402B105MBNB-*		1,000		1.0					
LZ0402Y155MBNB-*		1,500		1.25					
LZ0402Y205MBNB-*		2,000		1.25					
LZ0603A103MCNA-*	0603	10		± 20%	0.5	≥ 15 dB		100 mA	-25°C – +85°C
LZ0603A223MCNA-*		22			0.5				
LZ0603A473MCNA-*		47			0.5				
LZ0603A104MCNA-*		100			0.5				
LZ0603B223MCNA-*		22			1.0				
LZ0603B104MCNA-*		100			1.0				
LZ0603B224MCNA-*		220			1.0				
LZ0603C474MDNA-*		470			1.5				

* Denotes packaging style, replace with T for tape and reel or B for bulk



Ordering Information

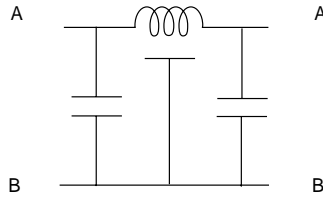
Example: **LZ0402B824MBNBT**

LZ	0402	B	824	M	B	N	A	T
Style	Size	Rejected Bandwidth	Center Frequency Tolerance	Center Frequency Loss	Max. Insertion	Termination	Rated Current	Packaging
LZ	0402 0603	A = 0.5 dec. Z = 0.75 dec. B = 1.0 dec. Y = 1.25 dec. C = 1.5 dec.	820 MHz	M = ±20%	B = ≥10 dB C = ≥15 dB D = ≥20 dB	N = Ni Barrier, Solder Plated	A=0.1A (100mA) B = 0.5A (50mA)	T = Tape and Reel B = Bulk

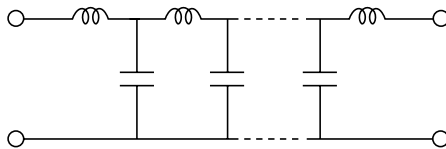
Surface Mount EMI Filters LC & LZ Type Chips

Circuit Schematic

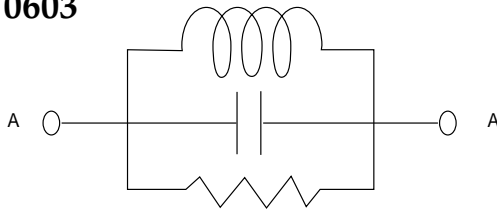
LC 0603



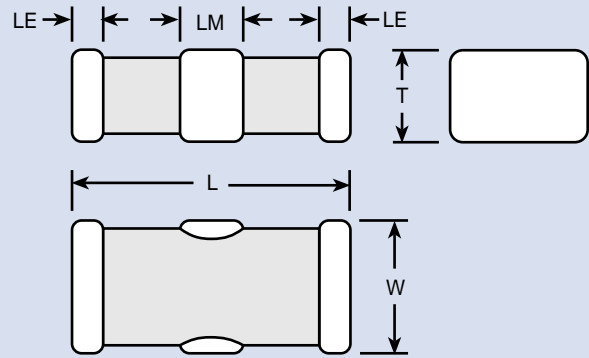
LC 0805 & 1206



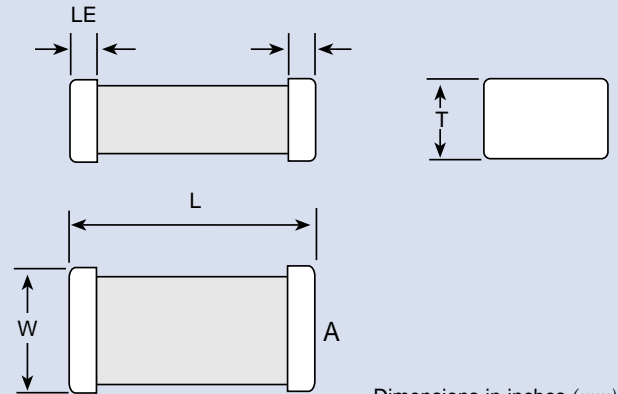
LZ 0402 & 0603



LC 0603, 0805 & 1206



LZ 0402 & 0603



Dimensions in inches (mm)

Mechanical Dimensions

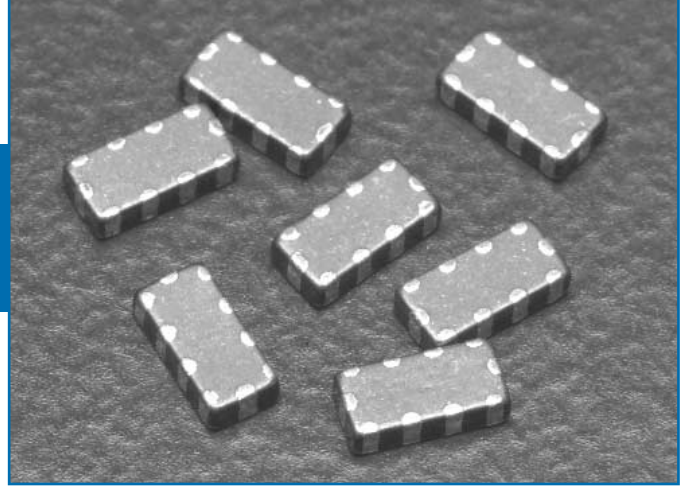
Body Style/Size	Body Length (L)	Body Width (W)	Body Thickness (T)	End Terminal Length (LE)	Middle Terminal Length (LM)
LZ0402	0.039±0.002 (1.0±0.05)	0.020±0.002 (0.5±0.05)	0.020±0.002 (0.5±0.05)	0.010±0.004 (0.25±0.10)	
LZ0603	0.063±0.008 (1.60±0.20)	0.031±0.008 (0.80±0.20)	0.031±0.008 (0.80±0.20)	0.012±0.008 (0.30±0.20)	
LC0603	0.063±0.004 (1.60±0.10)	0.031±0.004 (0.80±0.10)	0.024±0.004 (0.60±0.10)	0.010±0.008 (0.25±0.20)	0.016±0.008 (0.40±0.20)
LC0805	0.079±0.007 (2.0±0.18)	0.049±0.004 (1.25±0.10)	0.031±0.008 (0.80±0.20)	0.012±0.010 (0.30±0.25)	0.024±0.012 (0.60±0.30)
LC1206	0.126±0.008 (3.20±0.20)	0.063±0.008 (1.60±0.20)	0.039±0.008 (1.0±0.20)	0.016±0.012 (0.40±0.30)	0.043±0.012 (1.10±0.30)

Dimensions in inches (mm)

Package Quantities

Body Style/Size	Tape and Reel
LZ0402	10,000 units/reel
LZ0603	4,000 units/reel
LC0603	4,000 units/reel
LC0805	4,000 units/reel
LC1206	2,000 units/reel

Surface Mount Filter Arrays SA Series



Features

- The filter's structure minimizes residual inductance with a high self resonant frequency, ensuring large insertion loss in a wide band.
- The common ground electrode built into the chip ensures complete grounding of all lines at the ground on both ends. The filter is designed to control cross talk.
- An optimum constant can be selected from the capacity range of 22-22,000 pF to best suit the frequency.
- Solder plated nickel barrier terminations offer good solderability and resistance to soldering heat.
- Available lead free/RoHs Compliant

Applications

- Noise reduction for DC lines on computers
- Computer peripheral equipment
- Digital TV & VTR
- Cellular telephones
- Automotive electronics

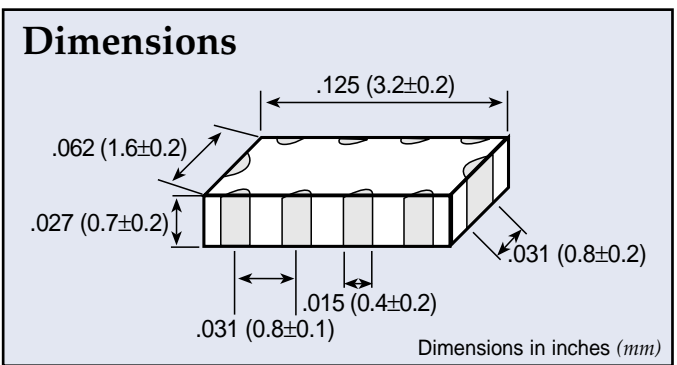
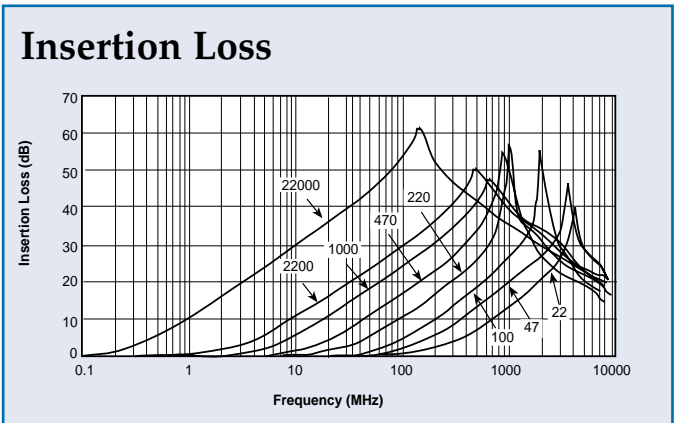
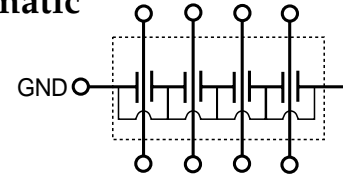
Typical Electrical Characteristics

Rated Voltage 25 VDC to 50 VDC
 Rated Current 0.3 Amps
 IR 10,000 MΩ Min.
 DC Resistance 0.3 Ω Max.
 Temperature Range -55°C to +125°C
 Capacitance Range 22 pF to 22,000 pF
 Capacitance Tolerance ±20%

Specifications

Part Number	Rated Voltage (@ 50/60Hz)	Rated Current	Temperature Characteristic	IR	DC Resistance	Operating Temp	Capacitance (pF)
SA1206C220	50 VDC	0.3A DC	C	10,000 MΩ min.	0.3Ω max.	-55/+125°C	22
SA1206C470			C				47
SA1206C101			C				100
SA1206C221			C				220
SA1206U471			U				470
SA1206R102			R				1,000
SA1206R222			R				2,200
SA1206R223	25 VDC		R				22,000

Circuit Schematic



SA Series Filter Arrays

Surface Mount Filter Arrays SA Series

Ordering Information

SA	1206	C	220	M	B	N	B									
Style	Size	Temperature Characteristics	Capacitance	Capacitance tolerance	Rated Voltage (Vdc)	Termination	Packaging									
SA Series	1206	C +/- 30 ppm/°C R +/- 15% U -750 +/- 120 ppm/°C	<table border="1"> <thead> <tr> <th>Capacitance</th> </tr> </thead> <tbody> <tr><td>22 pF</td></tr> <tr><td>47 pF</td></tr> <tr><td>100 pF</td></tr> <tr><td>220 pF</td></tr> <tr><td>470 pF</td></tr> <tr><td>1,000 pF</td></tr> <tr><td>2,200 pF</td></tr> <tr><td>22,000 pF</td></tr> </tbody> </table>	Capacitance	22 pF	47 pF	100 pF	220 pF	470 pF	1,000 pF	2,200 pF	22,000 pF	M = ± 20%	A = 25 B = 50	N = Ni Barrier Solder Plated	T - Tape and reel 4,000 pc/reel B - Bulk pack 1,000 pcs/bag
Capacitance																
22 pF																
47 pF																
100 pF																
220 pF																
470 pF																
1,000 pF																
2,200 pF																
22,000 pF																

