

Preliminary



SF2151B

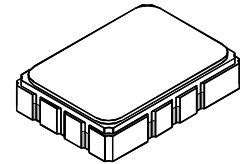
211.2 MHz SAW Filter

- IF SAW Filter, 211.2 MHz, 20 MHz BW
- Low-loss Filter for WCDMA applications
- 5.0 X 7.0 x 1.7 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)



Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Maximum Soldering Temperature	265°C for 10 s	



SMP-03-S

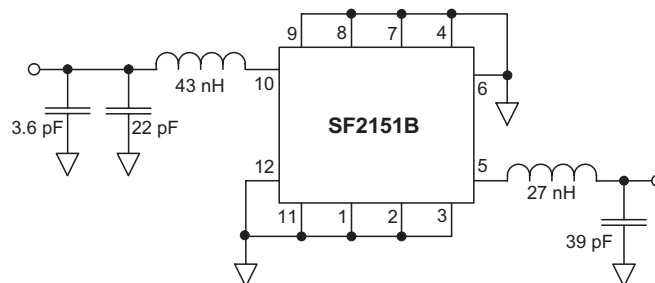
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1	211.2			MHz
Insertion Attenuation	α_{min}	1		13.5	16.0	dB
Amplitude Ripple (p-p)	$f_C \pm 9.42$ MHz $f_C \pm 10.00$ MHz	$\Delta\alpha$		0.35 0.45	1.5 2.0	
Group Delay Ripple (p-p)	$f_C \pm 10.00$ MHz	$\Delta\tau$		20	100	ns
Group Delay	at f_C	τ		700	800	
VSWR	$f_C \pm 10.00$ MHz			1.2:1	2:1	
Relative Attenuation (relative to α_{min})	10 ~ 100 MHz		50			dB
	100 ~ 168 MHz		53			dB
	168 ~ 196.5 MHz		20			dB
	260 ~ 270 MHz		48			dB
	270 ~ 360 MHz		45			dB
Operating Temperature Range	T_A	1	-40		+85	°C
Case Style		5	SMP-03-S 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift) See note 4			RFM SF2151 YYWWS			

Electrical Connections

Connection	Terminals
Input	10
Output	5
Ground	All Others

Measurement Circuit

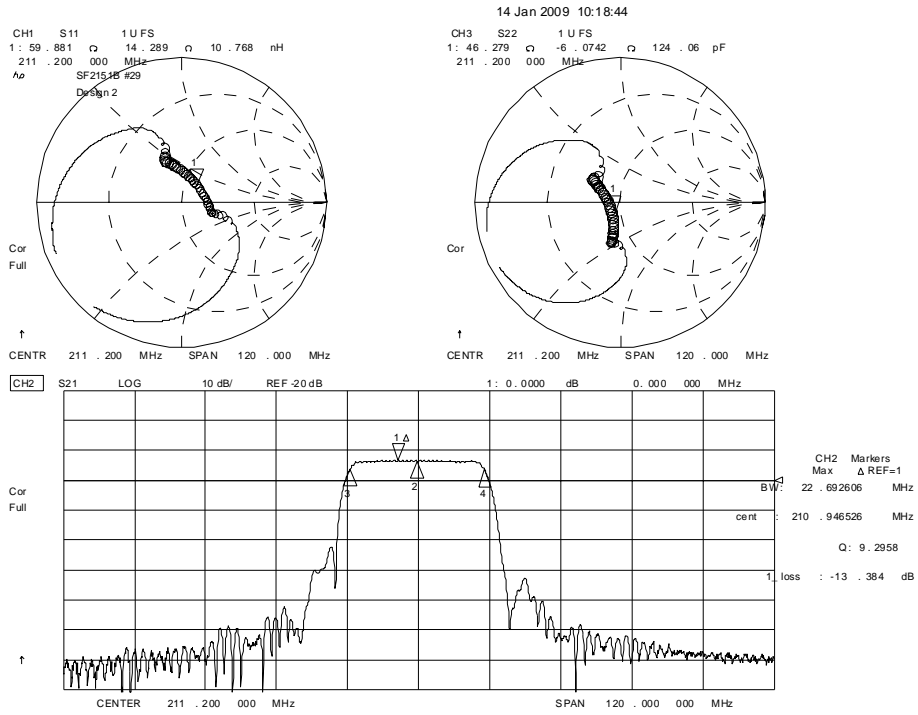


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

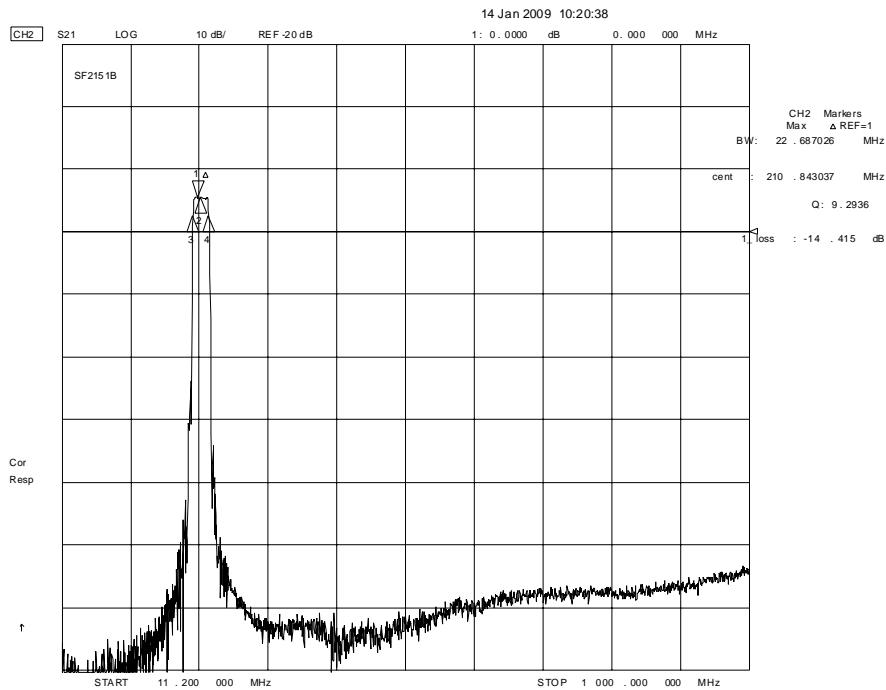
Notes:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_C .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. Tape and Reel Standard Per ANSI / EIA 481.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

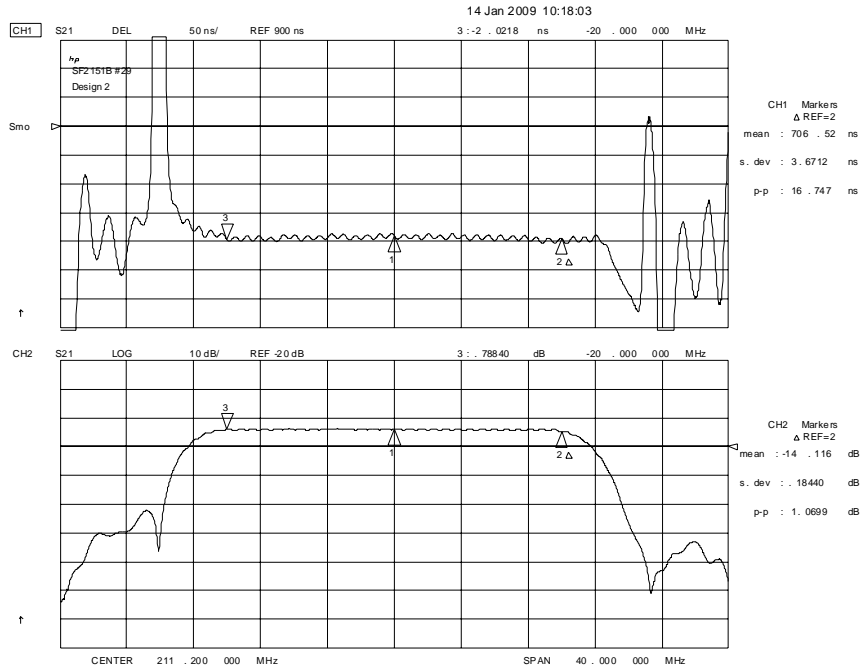
Filter Response and Impedance Plots



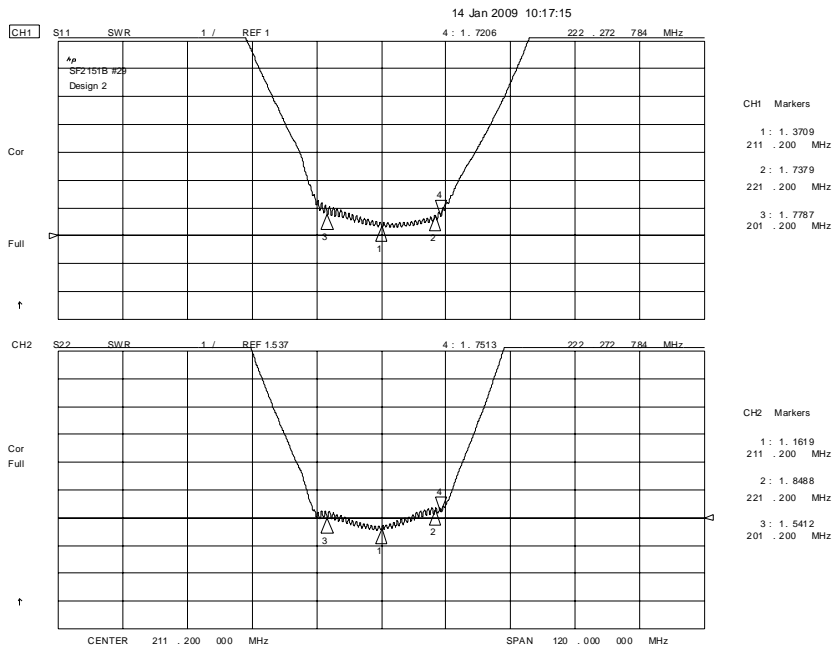
Filter Ultimate Rejection Plot



Filter Passband Group Delay and Amplitude Plots



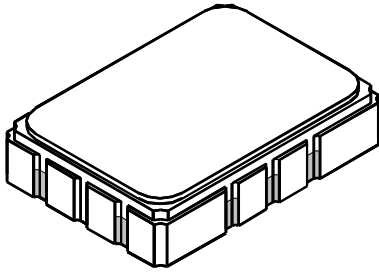
Filter Input and Output VSWR Plots (matched)



SMP-03-S Case

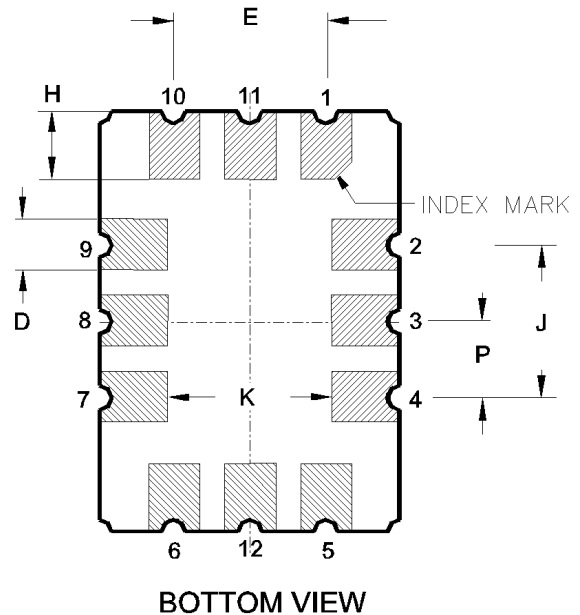
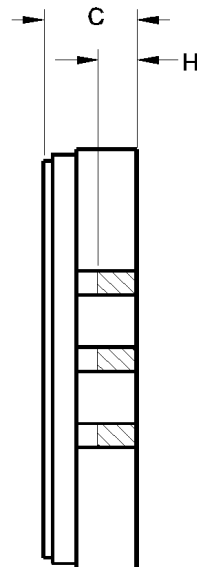
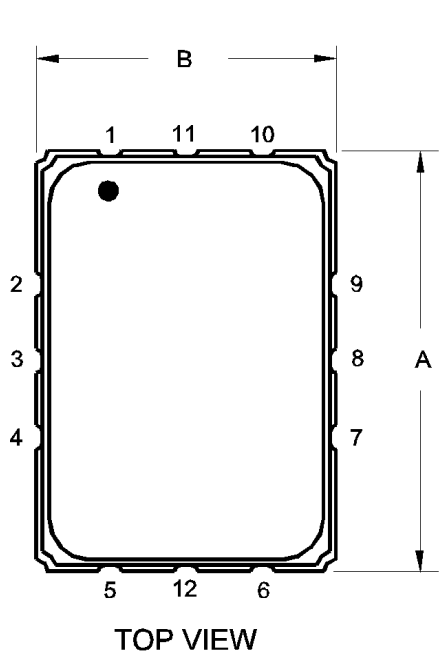
12-Terminal Ceramic Surface-Mount Case

5 x 7 mm Nominal Footprint

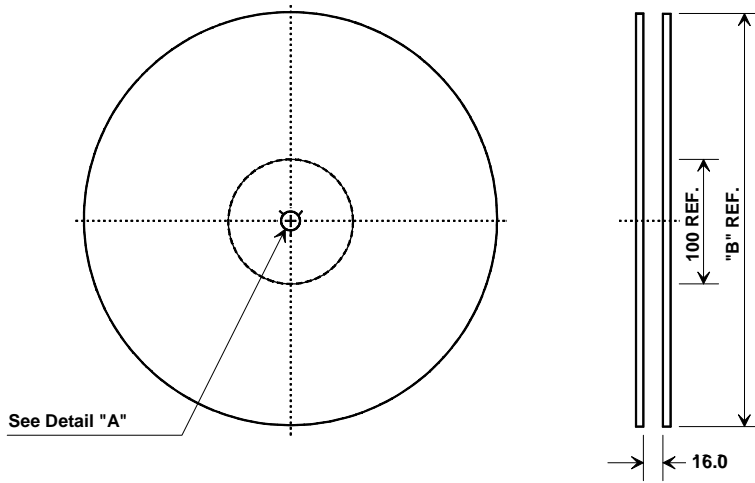


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.80				
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.1	1.13	0.034	0.039	0.044
J		2.54				
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

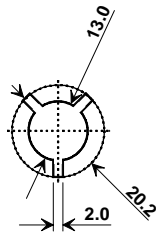
Materials	
Solder Pad Termination	Au plating 30 - 60 pinches (76.2-152 μm) over 80-200 pinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 pinches Thick
Body	Al_2O_3 Ceramic
Pb Free	



Tape and Reel Specifications



"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.5 mm
Bo	7.5 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm

