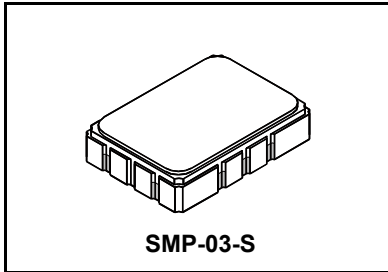


**SF2151B**

**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 in Tape and Reel	-40 to +85	°C
Maximum Soldering Temperature	265 °C for 10 s	

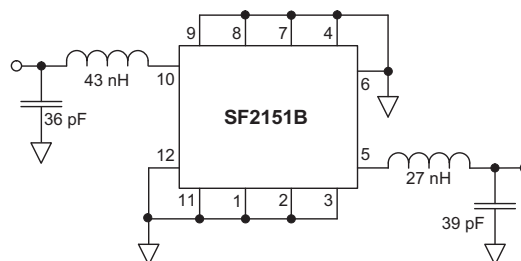
**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_C$	1	211.2			MHz
Insertion Attenuation	$\alpha_{min}$			13.5	16.0	dB
Amplitude Ripple (p-p)	$f_C \pm 9.42$ MHz	$\Delta\alpha$	1	0.35	1.5	
	$f_C \pm 10.00$ MHz			0.45	2.0	
Group Delay Ripple (p-p)	$f_C \pm 10.00$ MHz	$\Delta\tau$	1	20	100	ns
Group Delay	at $f_C$	$\tau$		700	800	
VSWR	$f_C \pm 10.00$ MHz			1.2:1	2:1	
Relative Attenuation (relative to $\alpha_{min}$ )	10 to 100 MHz		50			dB
	100 to 168 MHz		53			dB
	168 to 196.5 MHz		20			dB
	260 to 270 MHz		48			dB
	270 to 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 YYWW			

**Electrical Connections**

Connection	Terminals
Input	10
Output	5
Ground	All Others

**Measurement Circuit**

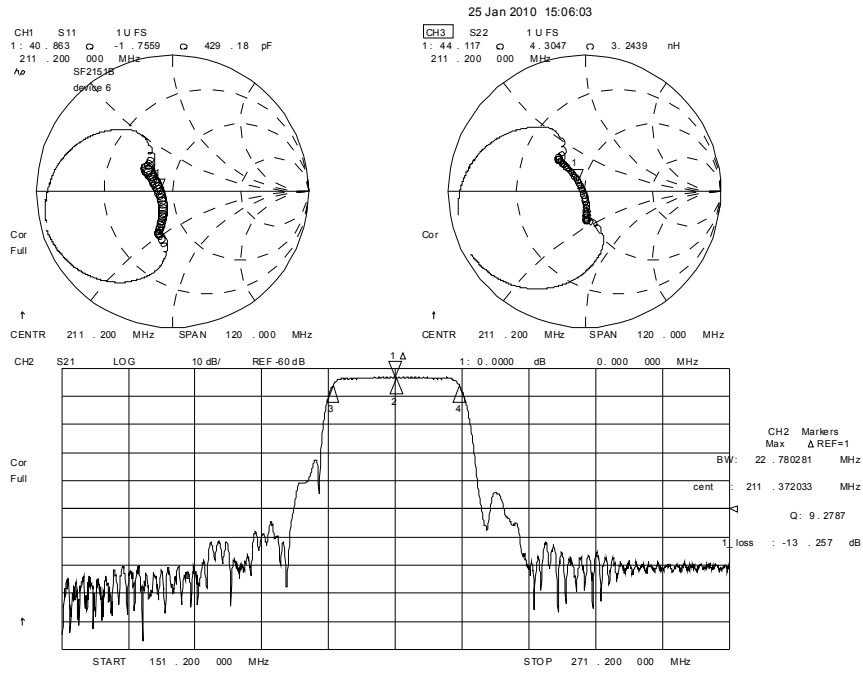


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

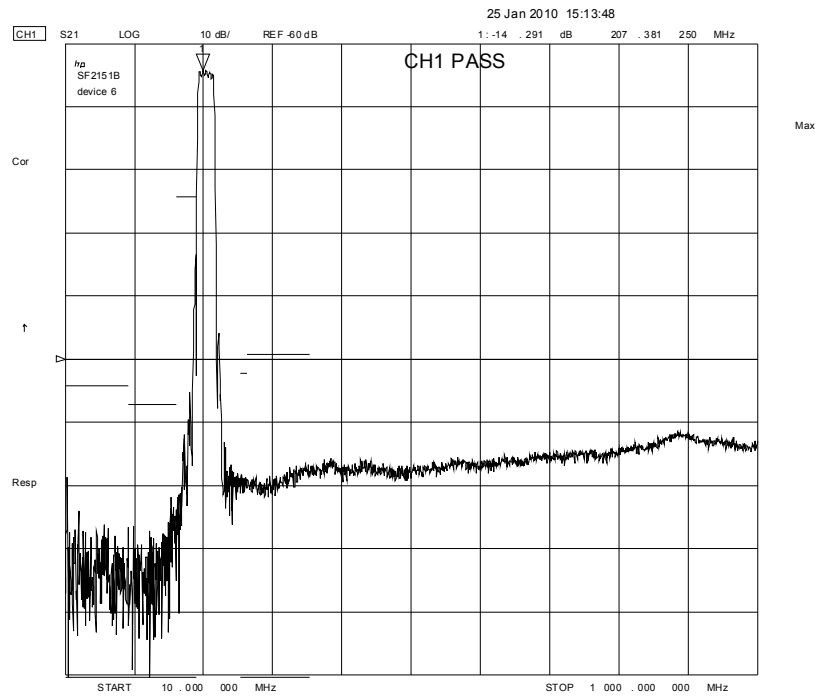
**NOTES:**

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  $\Omega$  and measured with 50  $\Omega$  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. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

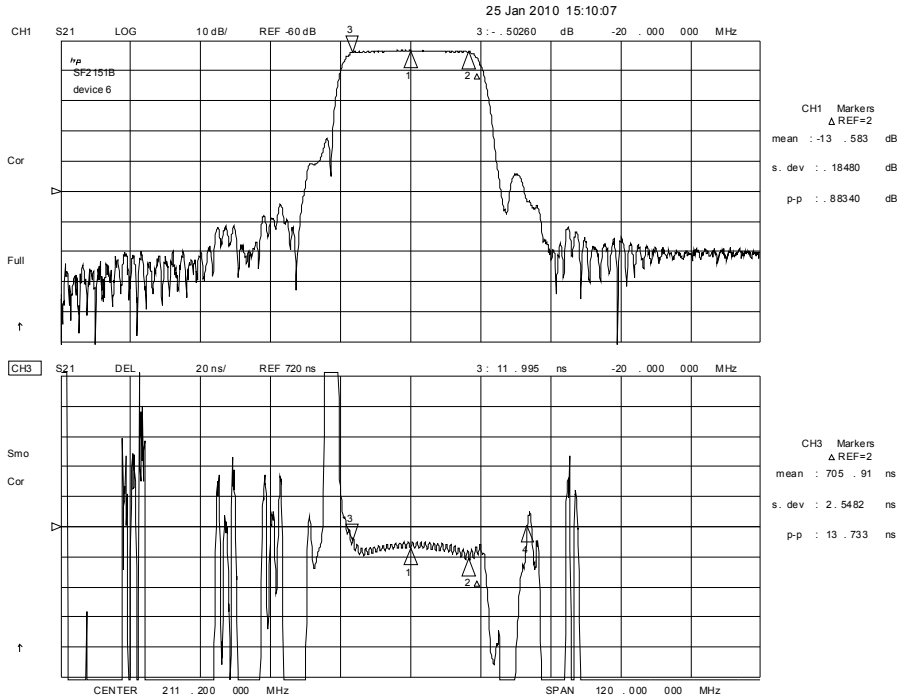
# Filter Response and Impedance Plots



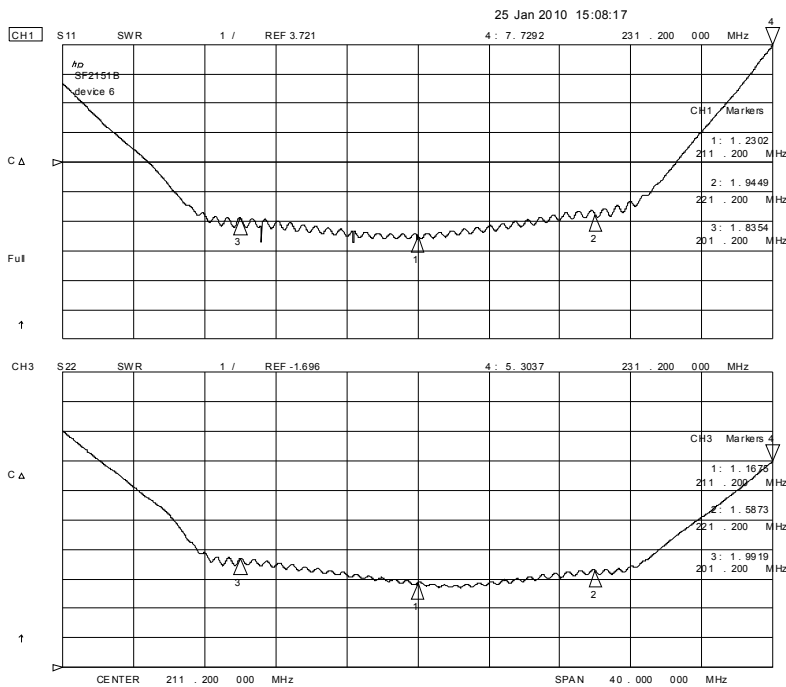
# Filter Ultimate Rejection Plot



# Filter Passband Group Delay and Amplitude Plots



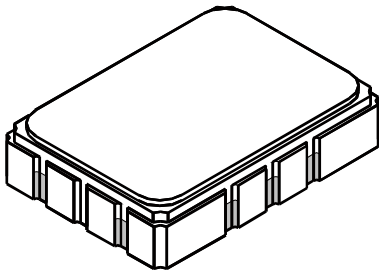
# Filter Input and Output VSWR Plots (matched)



# SMP-03-S Case

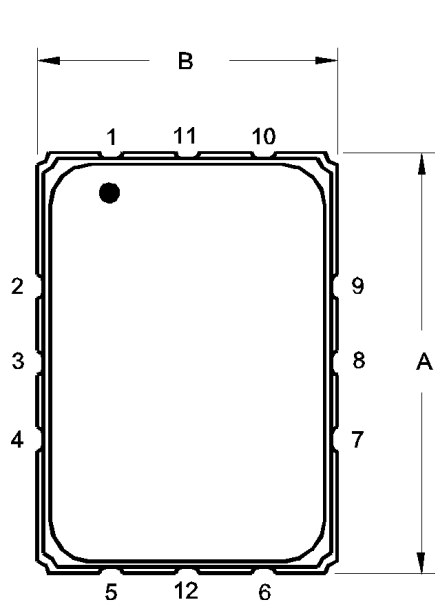
## 12-Terminal Ceramic Surface-Mount Case

### 5 x 7 mm Nominal Footprint

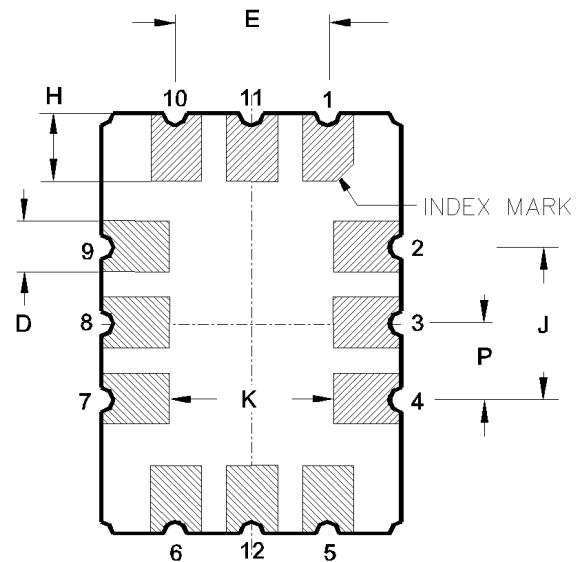
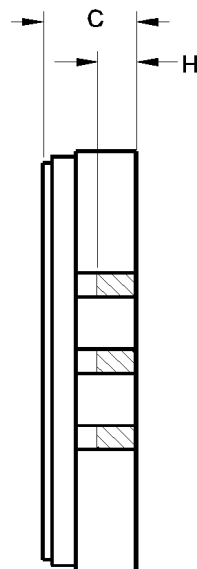


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.80				
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.1	1.13	0.034	0.039	0.044
J		2.54				
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14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

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic
Pb Free	

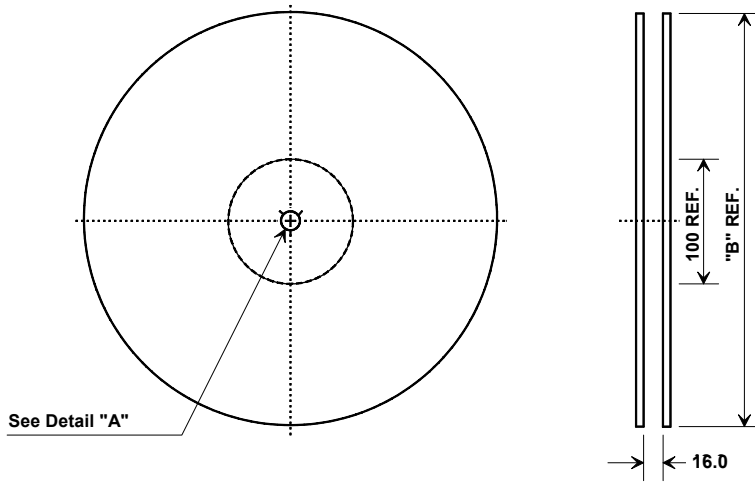


TOP VIEW

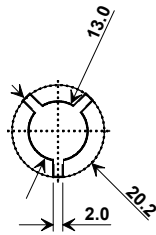


BOTTOM VIEW

## Tape and Reel Specifications



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



## COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
<b>Ao</b>	5.5 mm
<b>Bo</b>	7.5 mm
<b>Ko</b>	2.0 mm
<b>Pitch</b>	8.0 mm
<b>W</b>	16.0 mm

