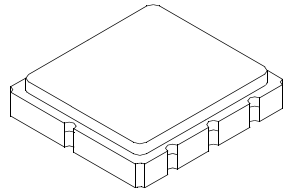
Preliminary

SF2172C

280 MHz SAW Filter

- ***Low Insertion Loss***
- ***5.0 X 5.0 mm Surface-Mount Case***
- ***Single Ended Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM5050-8

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Maximum DC Voltage Between any Two Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Temperature	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1		280		MHz
Insertion Loss	IL_{MIN}	1		8.8	11	dB
Passband Ripple, f_C ± 7.5 MHz		1		0.4	1.0	dB_{P-P}
Passband Rippl2, f_C ± (7.5 to 8.5) MHz				0.7	2.0	dB_{P-P}
1 dB Bandwidth	BW_1	1	15	19.8		MHz
Group Delay Deviation, f_C ± 7.5 MHz		1		24	50	ns
40 dB Bandwidth				29.5	31.0	MHz
Attenuation Referenced to IL_{MIN}						
Fc ±(15 to 17) MHz			10	40		dB
Fc ±(17 to 100) MHz			40	45		dB
Operating Temperature Range			-40		85	°C
Case Style		SM5050-8 5 x 5 mm Nominal Footprint				
Lid Symbolization (Y=year, WW=week, S=shift)		RFM 852 YWWS				

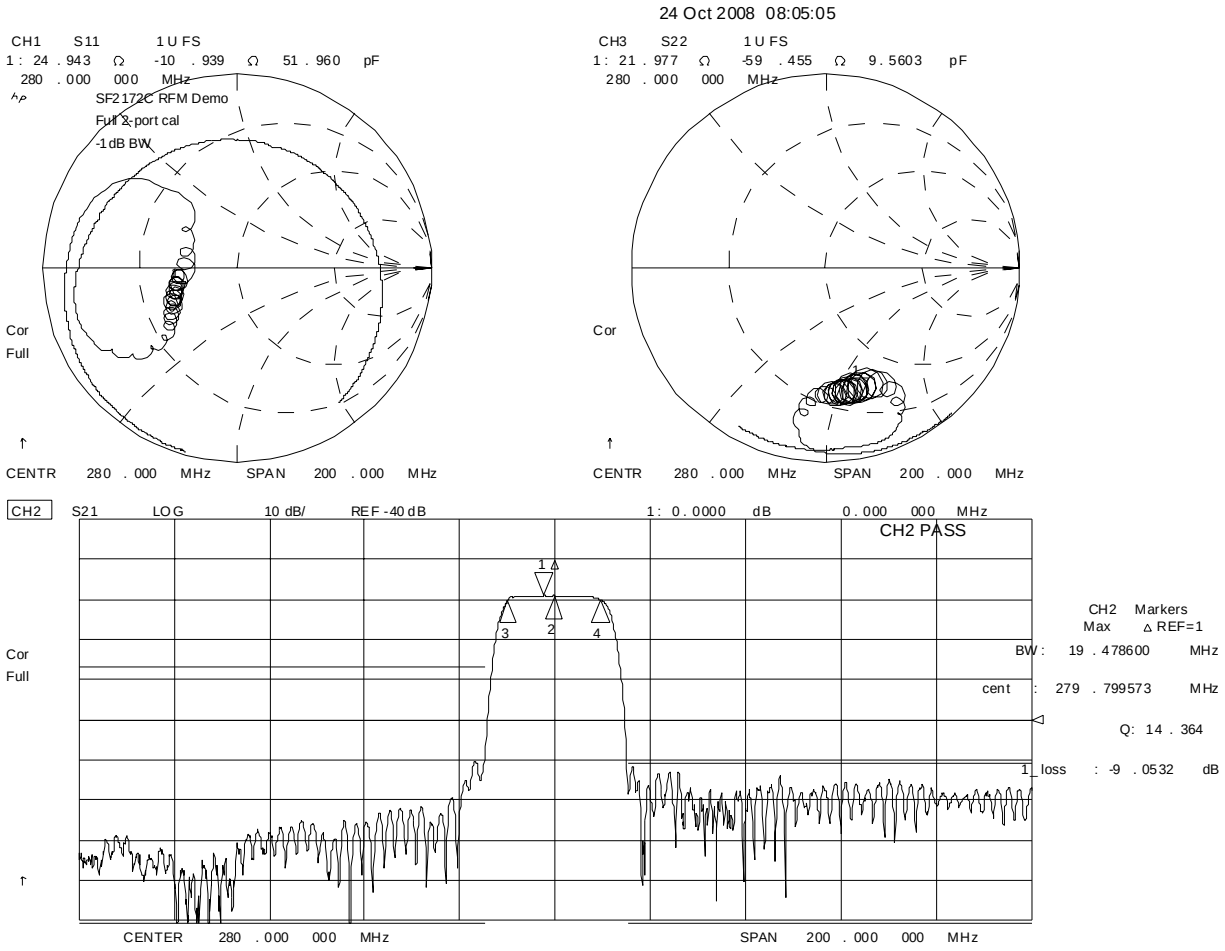
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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. 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.
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. Tape and Reel Standard ANSI / EIA 481.
5. 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.
6. US and international patents may apply.
7. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

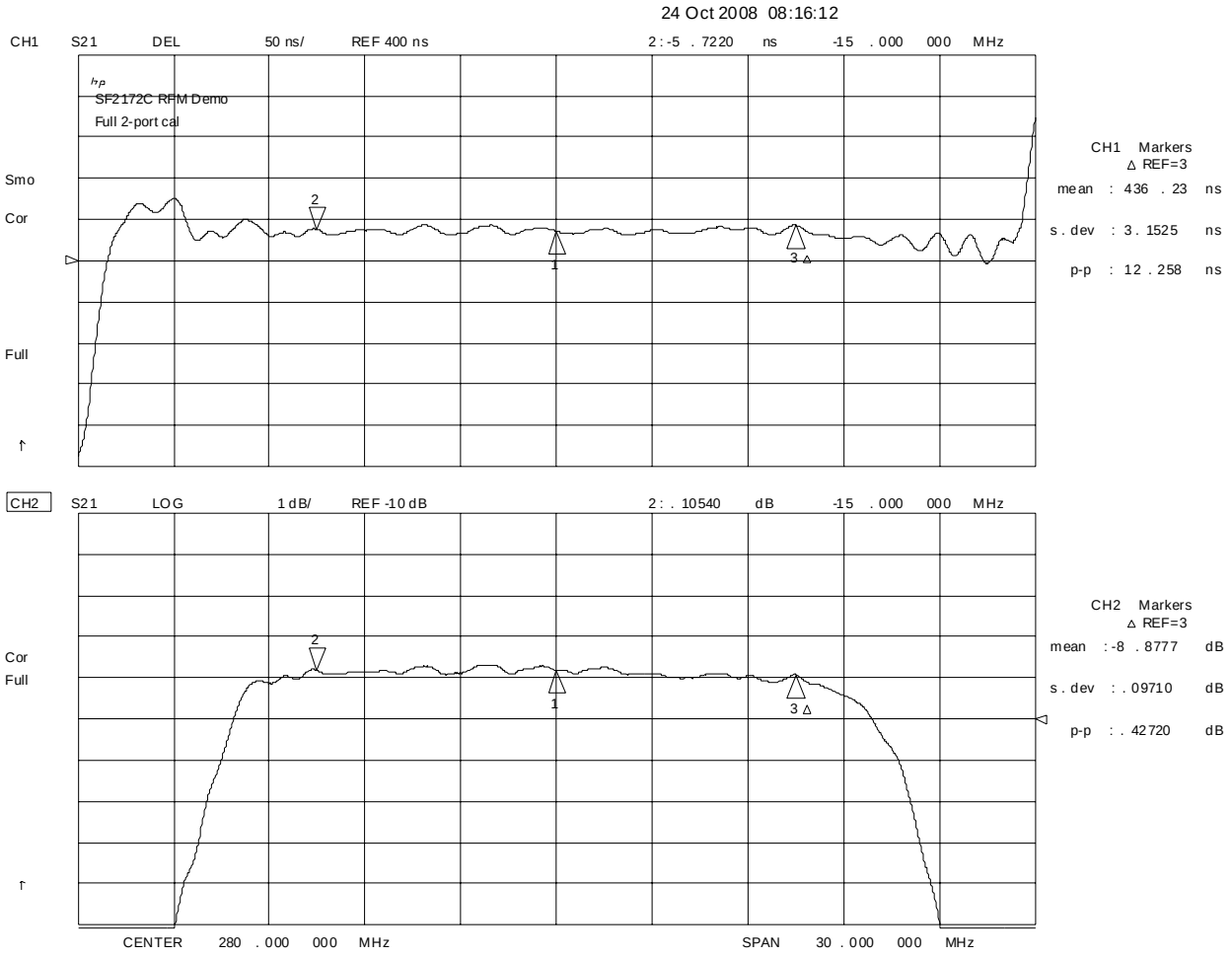
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Frequency Response and Smith Charts



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Passband Response

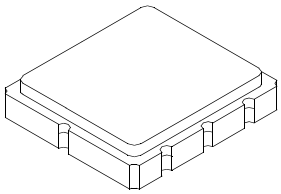


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SM5050-8 Case and Test Circuit

8-Terminal Ceramic Surface-Mount Case

5.0 X 5.0 mm Nominal Footprint



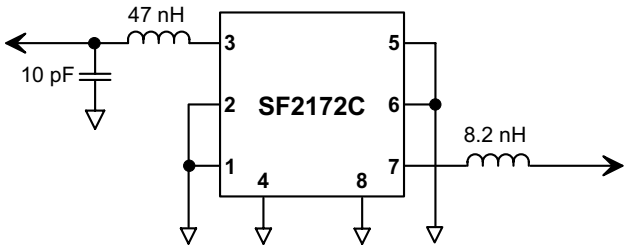
Case Dimension

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.8	5.0	5.2		0.1968	
B	4.8	5.0	5.2		0.1968	
C			1.7			0.0669
D		2.08			0.0818	
E		1.17			0.046	
F		0.64			0.0252	
G	2.39	2.54	2.69		0.100	

Electrical Connection

Connection		Terminals
Port 1	Input	3
Port 2	Output	7
	Ground	All others
Dot indicates Pin 1		

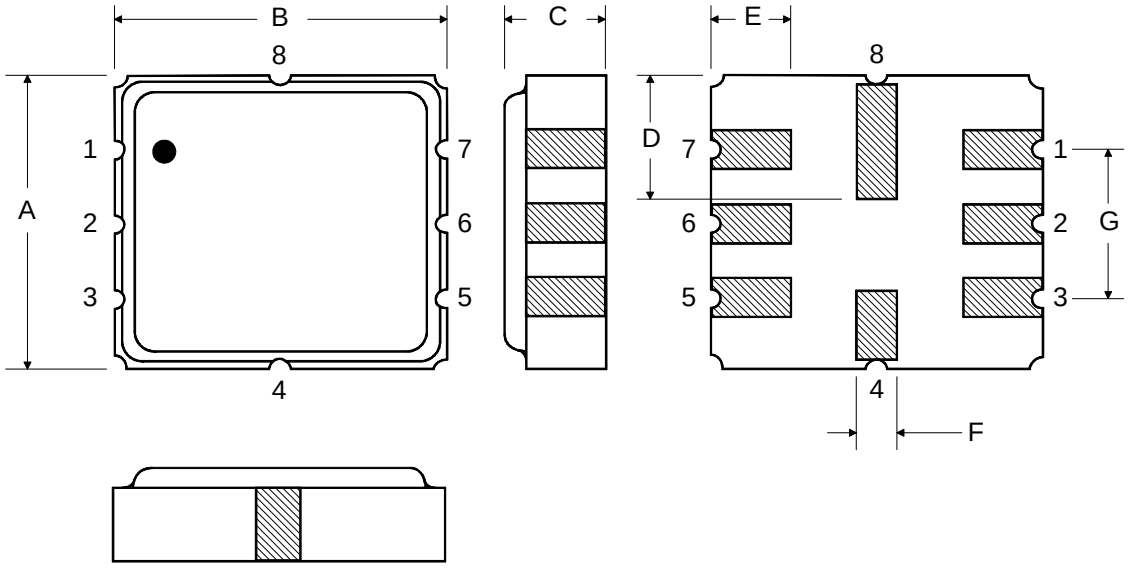
SF2172C Test Circuit



Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

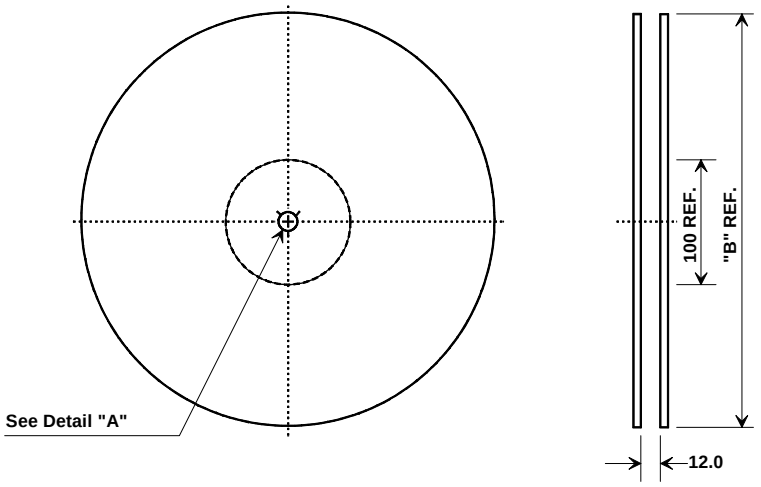
TOP VIEW

BOTTOM VIEW

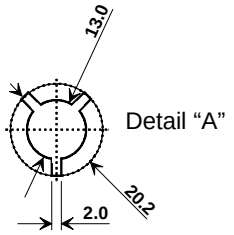


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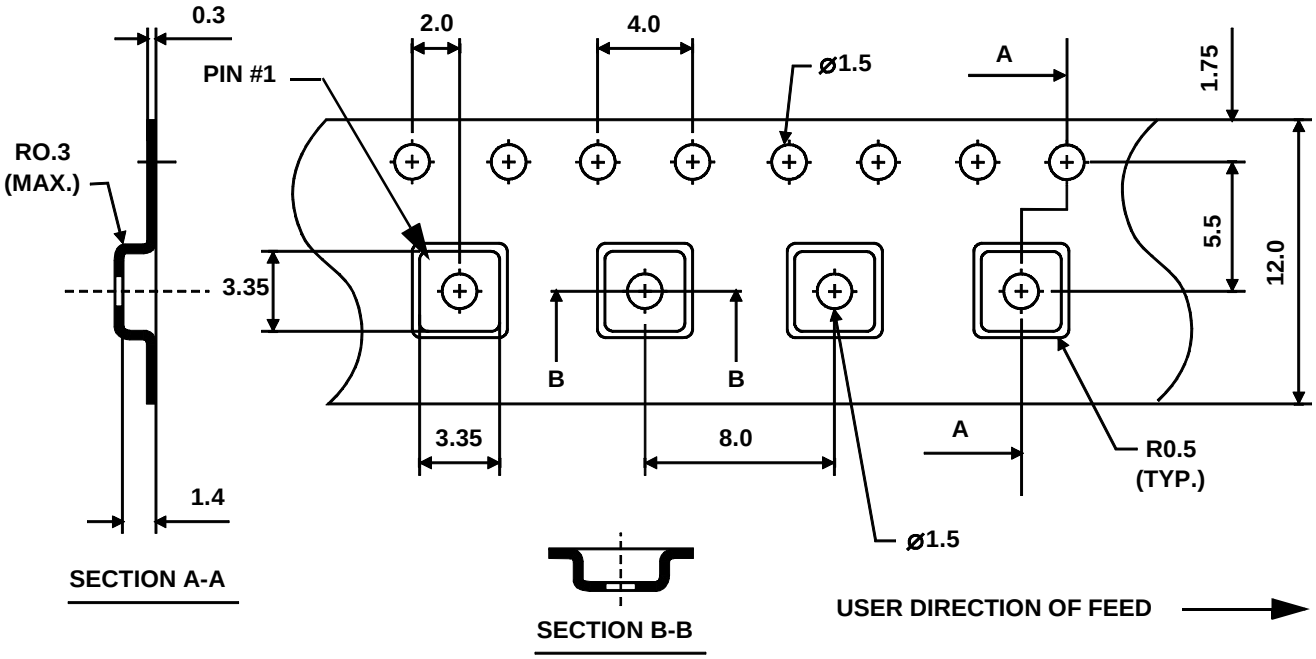
Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
Inches	Millimeters	
7	178	500 pcs
13	330	3,000 pcs



COMPONENT ORIENTATION



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