

Preliminary

RFM products are now Murata products.

SF2244A

225 MHz

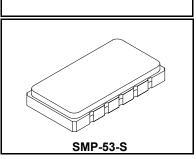
SAW Filter

Low Insertion Loss

- Excellent Size-to-performance Ratio
- Hermetic 13.3 x 6.5 mm Surface-mount Case
- Single-ended Input and Output
- Complies with Directive 2002/95/EC (RoHS)

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+18	dBm
Maximum DC Voltage on any Non-ground Terminal	10	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C	for 30 s



Electrical Specifications

Characteristic	Sym	Notes	Min	Тур	Max	Units
Center Frequency	f _C			225.0		MHz
Maximum Insertion Loss	IL _{MAX}	1		10.0	12.0	dB
Passband Ripple, 223.0 to 227.0 MHz				0.6	1.0	dB _{P-P}
1 dB Bandwidth	BW ₁		4.0	5.1	-	MHz
3 dB Bandwidth	BW ₃	1, 2	-	5.7	-	MHz
45 dB Bandwidth	BW ₄₅		-	9.4	10.0	MHz
Rejection Referenced to IL _{MIN} :		1, 2, 3				
1 to 210 MHz			45	53		dB
238 to 400 MHz			45	51		
Operating Temperature Range	T _A	1	-20		+70	°C
Frequency Temperature Coefficient				-23		ppm/°C
Wafer Material				LiTaO ₃	•	•

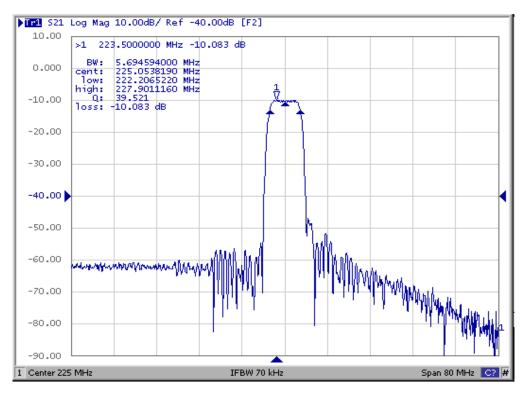
Impedance Matching to 50 Ω Single-ended Source and Load	External L-C
Case Style	SMP-53-S 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM/SF2244A/YYWW

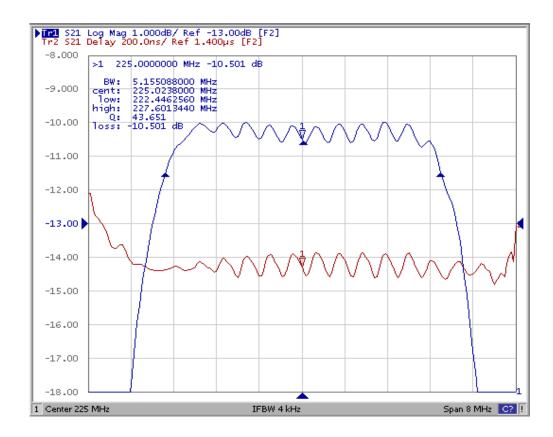


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. NOTES:

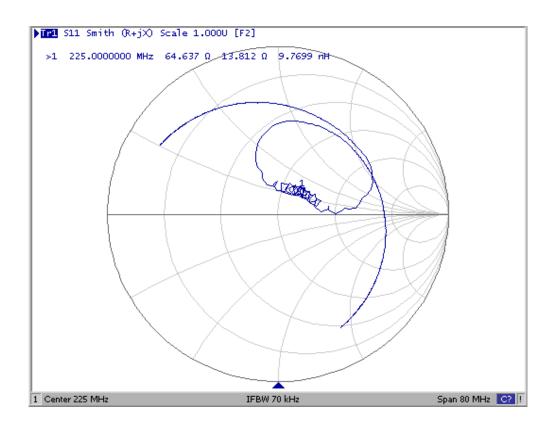
- 1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
- 2 Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
- 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. The turnover temperature, T_O, is the temperature of maximum (or turnover) frequency, f_o. The nominal frequency at any case temperature, T_C, may 3.
- 4. be calculated from: $f=f_0[1-FTC(T_0-T_c)^2]$.
- The design, manufacturing process, and specifications of this filter are subject to change. 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.
- 7. US and international patents may apply.

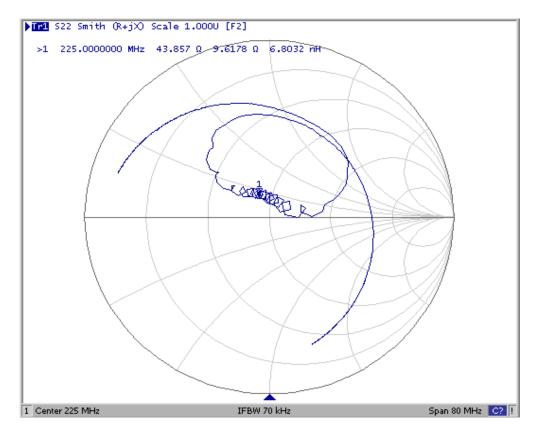
Frequency Respose Plots



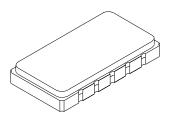


Input/Output Impedance Plots





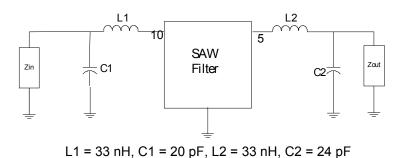
SMP-53-S Ceramic Surface-mount 10-terminal Case 13.3 x 6.5 mm Nominal Footprint



Electrical Connections

Connection	Terminals
Input	10
Output	5
Case Ground	All others

Typical Matching Network



Case Outline Drawing

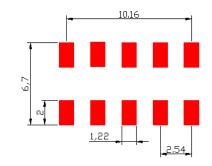
С D В G 1 10 10 2 9 9 3 8 8 А 4 7 7 5 6 6 TOP VIEW

Case Dimensions

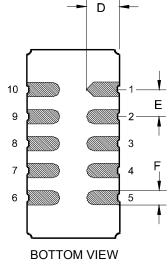
Dimension		mm			Inches	
Dimension	Min	Nom	Max	Min	Nom	Max
A		13.3			.524	
В		6.5			.256	
С			2.00			.078
D		2.3			.091	
E		1.91			.075	
F		1.02			.040	
G		1.0			0.039	

Case Material

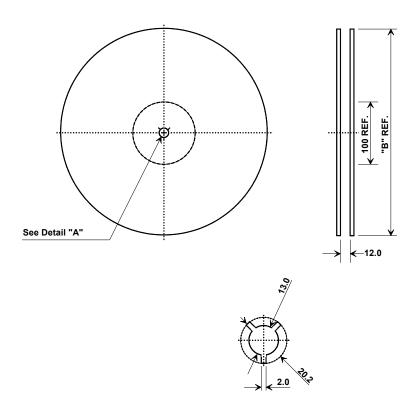
Materials				
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel			
Lid Plating	2.0 to 3.0 µm Nickel			
Body	Al ₂ O ₃ Ceramic			
Pb Free				



PCB Footprint (mm)



Reel Dimensions



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

Tape Dimensions

