RFMi
A BRAND OF AKOUSTIS

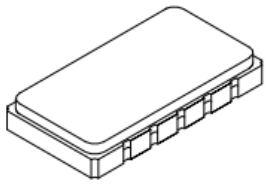
Preliminary

RoHS compliant

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)***
- ***Moisture Sensitivity Level: 1***



SMP-53-S

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	Typ	Max	Units
Center Frequency	f_C			225.0		MHz
Maximum Insertion Loss	IL_{MAX}			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		-	5.7	-	MHz
45 dB Bandwidth	BW_{45}		-	9.4	10.0	MHz
Rejection Referenced to IL_{MIN}:						dB
1 to 210 MHz			45	53		
238 to 400 MHz			45	51		
Operating Temperature Range	T_A		-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, S = shift, ## = Sequence Code)	RFM, SF2244A, YYWWS##

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

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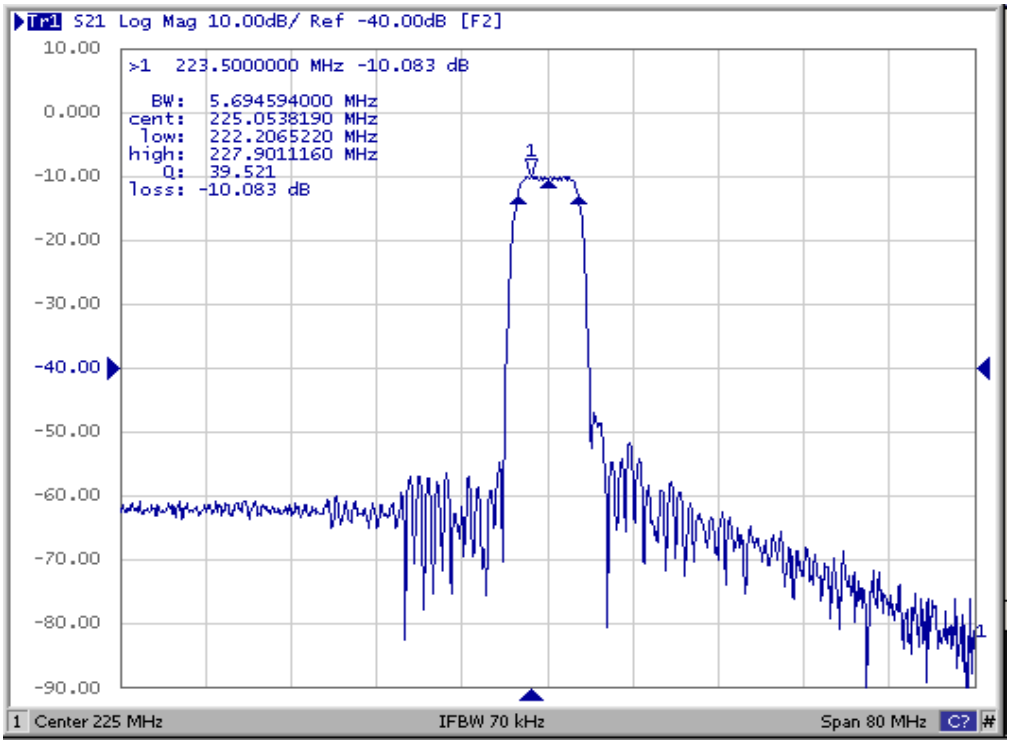
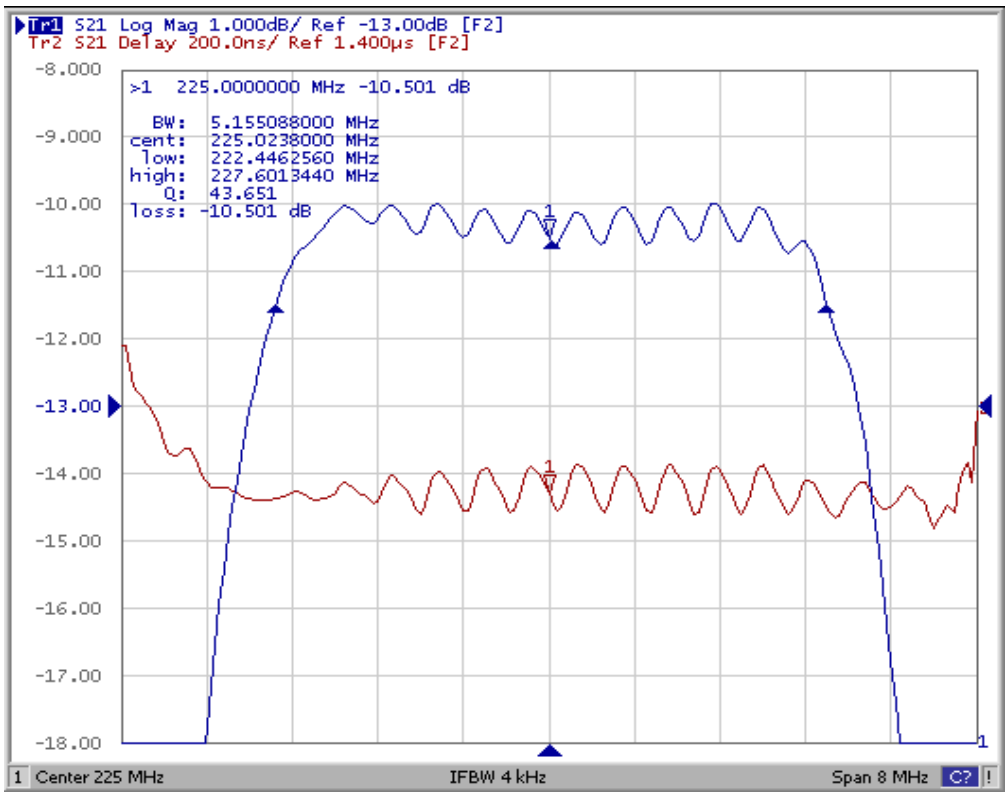
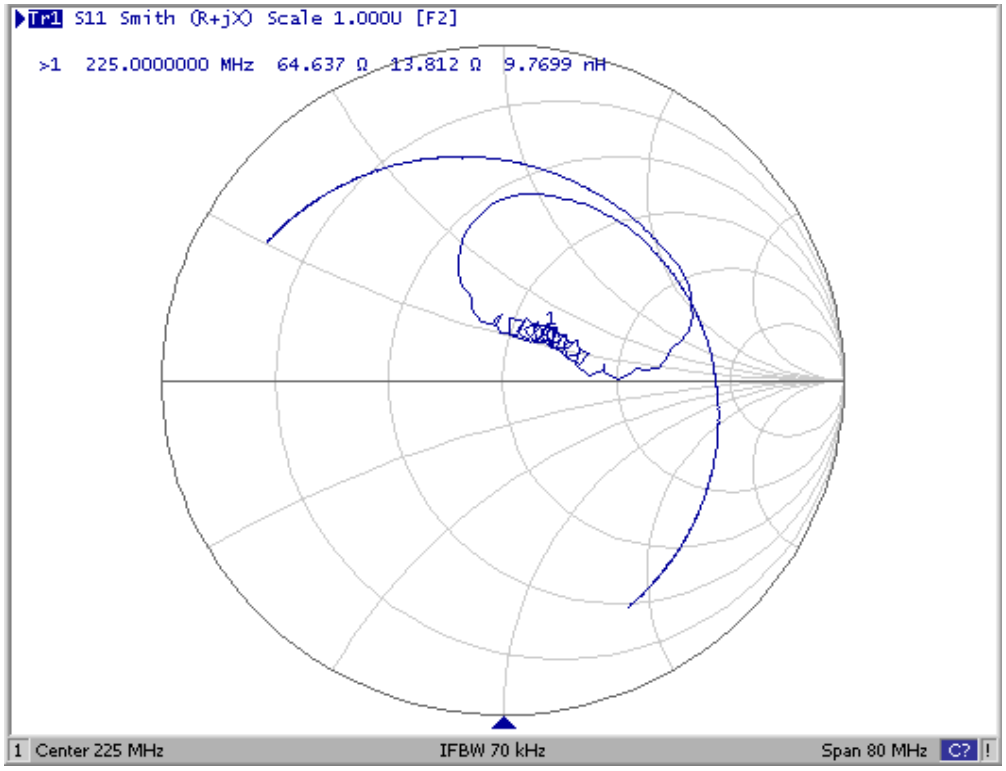
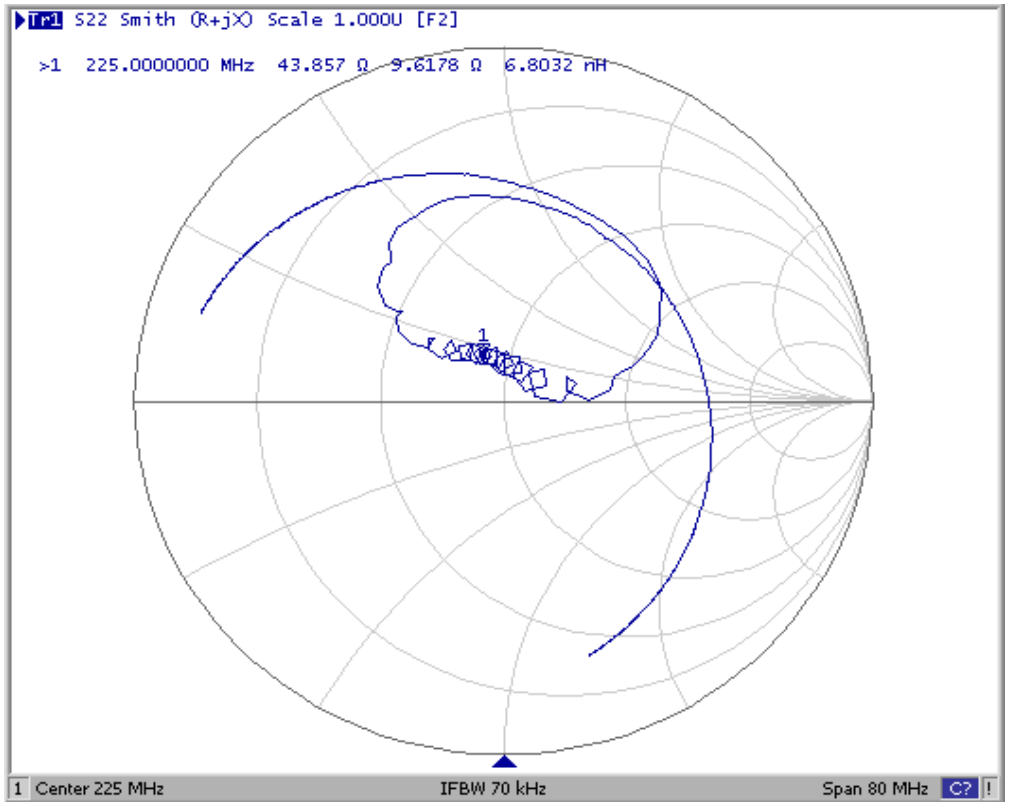
Frequency Respose Plots





Input/Output Impedance Plots





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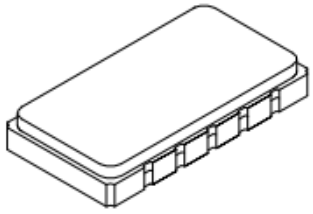
SMP-53-S Ceramic Surface-mount 10-terminal Case
13.3 x 6.5 mm Nominal Footprint



Case Dimensions

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

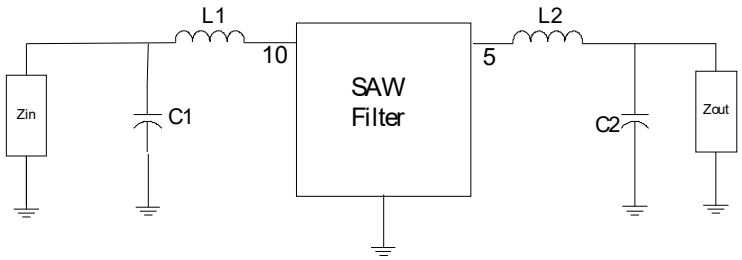
Electrical Connections

Connection	Terminals
Input	10
Output	5
Case Ground	All others

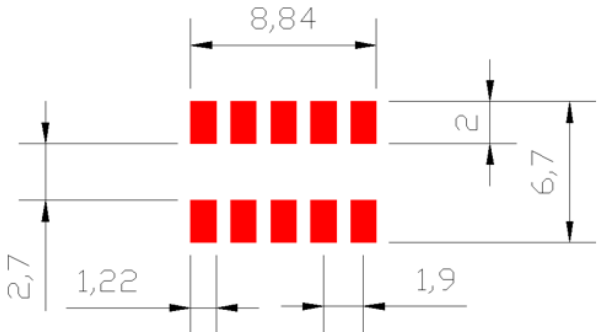
Case Material

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_2O_3 Ceramic
Pb Free	

Typical Matching Network

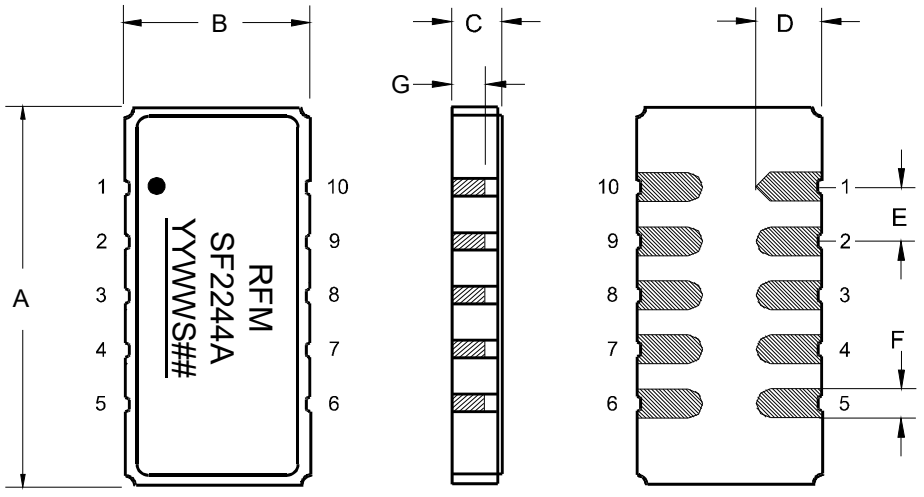


L1 = 33 nH, C1 = 20 pF, L2 = 33 nH, C2 = 24 pF



PCB Footprint (mm)

Case Outline Drawing



TOP VIEW BOTTOM VIEW

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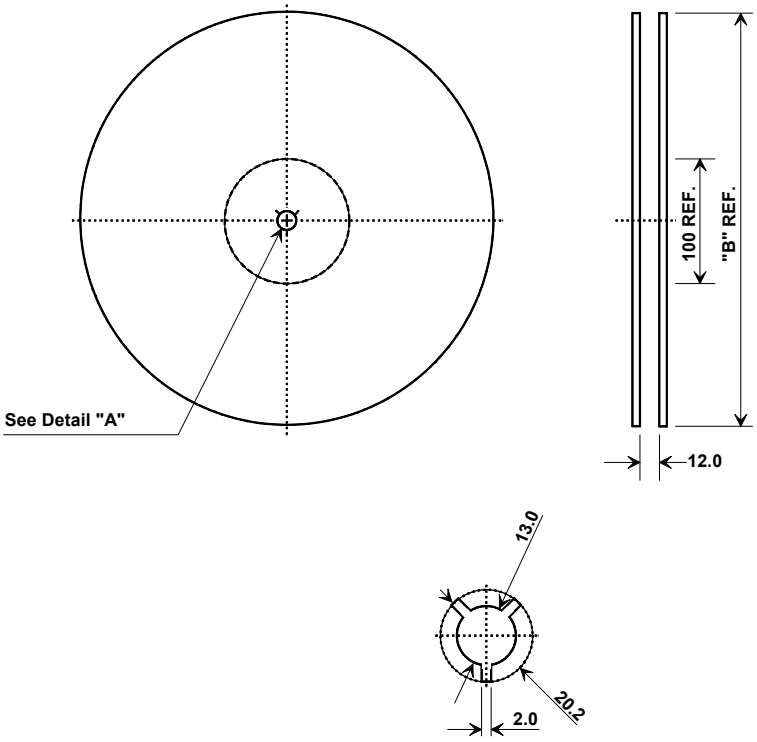
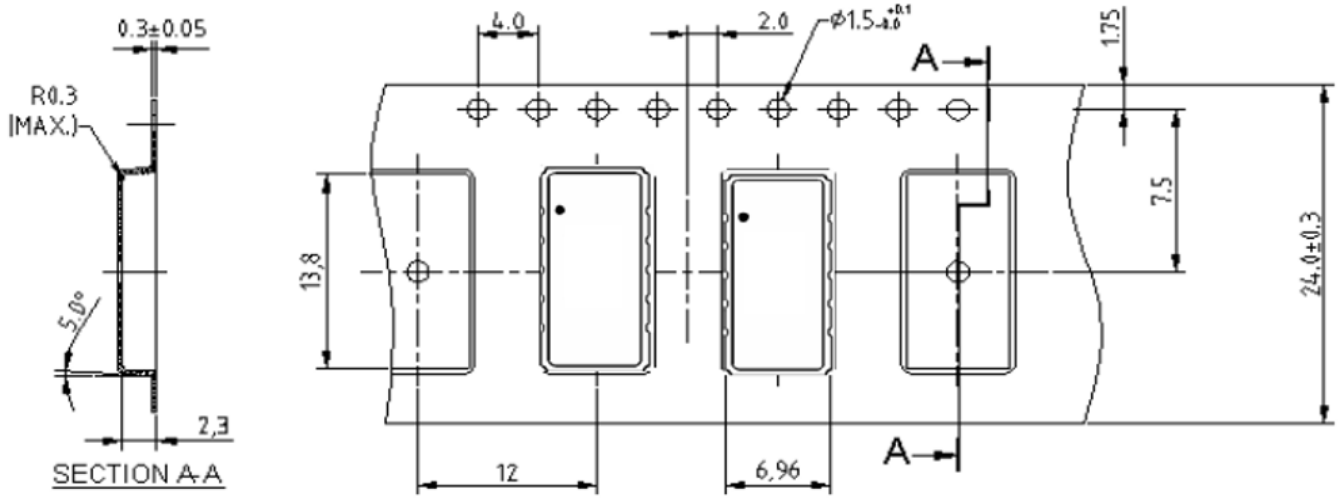
Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481



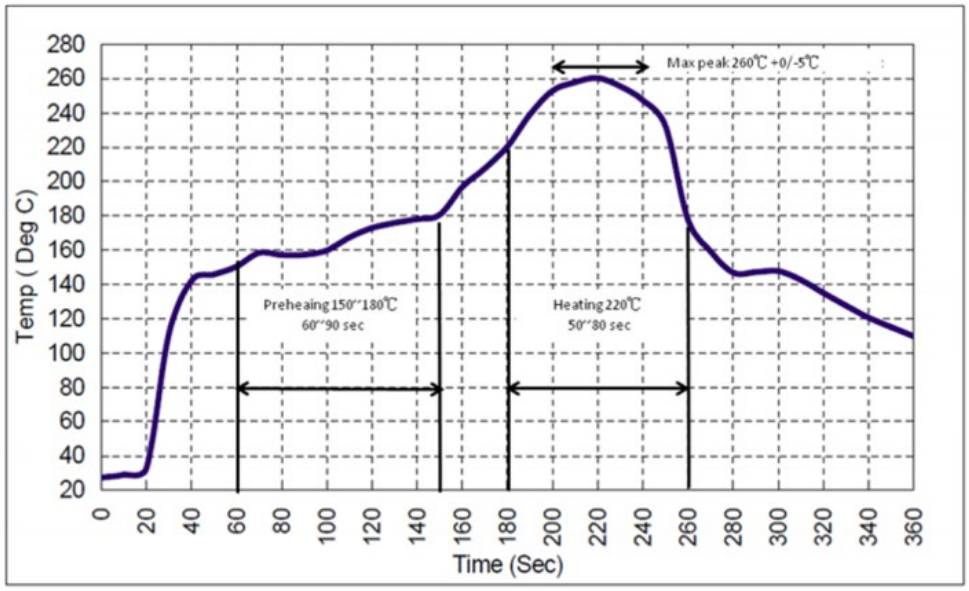
"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

Tape Dimensions



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180ºC for 60~90 seconds.
2. Ascending time to preheating temperature 150ºC shall be 30 seconds min.
3. Heating shall be fixed at 220ºC for 50~80 seconds and at 260ºC +0/-5ºC peak (10 seconds).
4. Time: 5 times maximum.



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