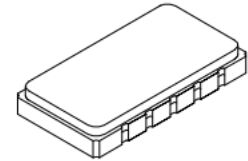


SF2243A

**233 MHz
SAW Filter**



SMP-53-S

- **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**

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			233.0		MHz
Maximum Insertion Loss	IL_{MAX}			11.0	12.0	dB
Passband Ripple, 231.0 to 235.0 MHz				0.6	1.0	dB _{P-P}
1 dB Bandwidth	BW_1		4.0	5.3	-	MHz
3 dB Bandwidth	BW_3		-	6.0	-	MHz
45 dB Bandwidth	BW_{45}		-	8.3	10.0	MHz
Rejection Referenced to IL_{MIN} :						dB
1 to 210 MHz			45	50		
246 to 400 MHz			45	50		
Operating Temperature Range	T_A		-20		+70	°C
Frequency Temperature Coefficient				-23		ppm/°C
Wafer Material				LiTaO ₃		

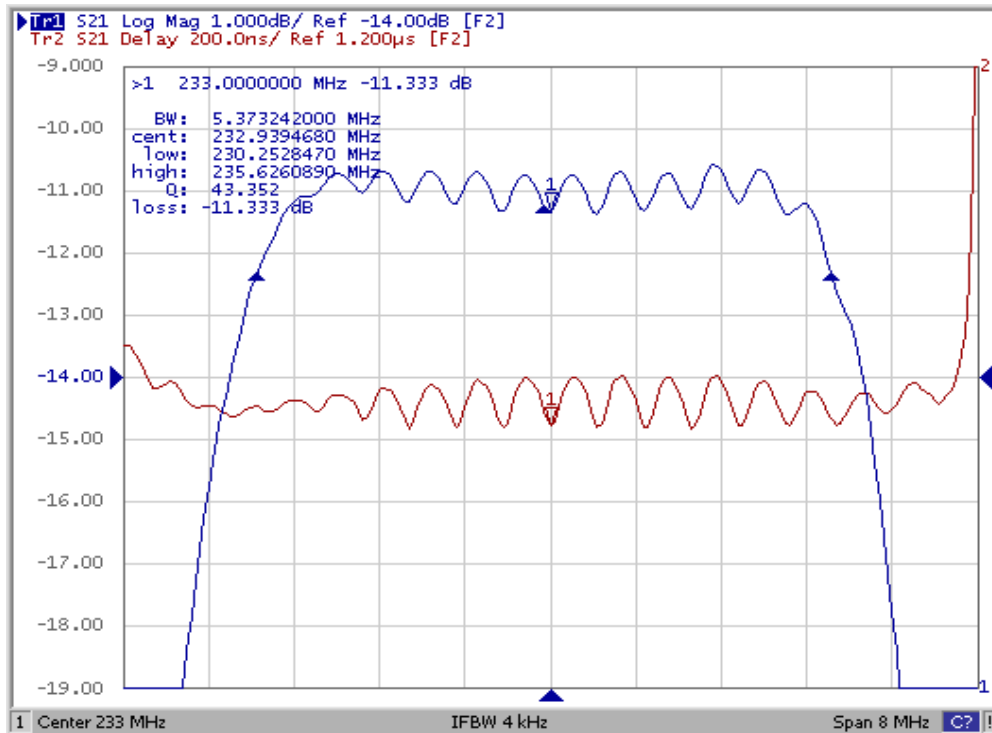
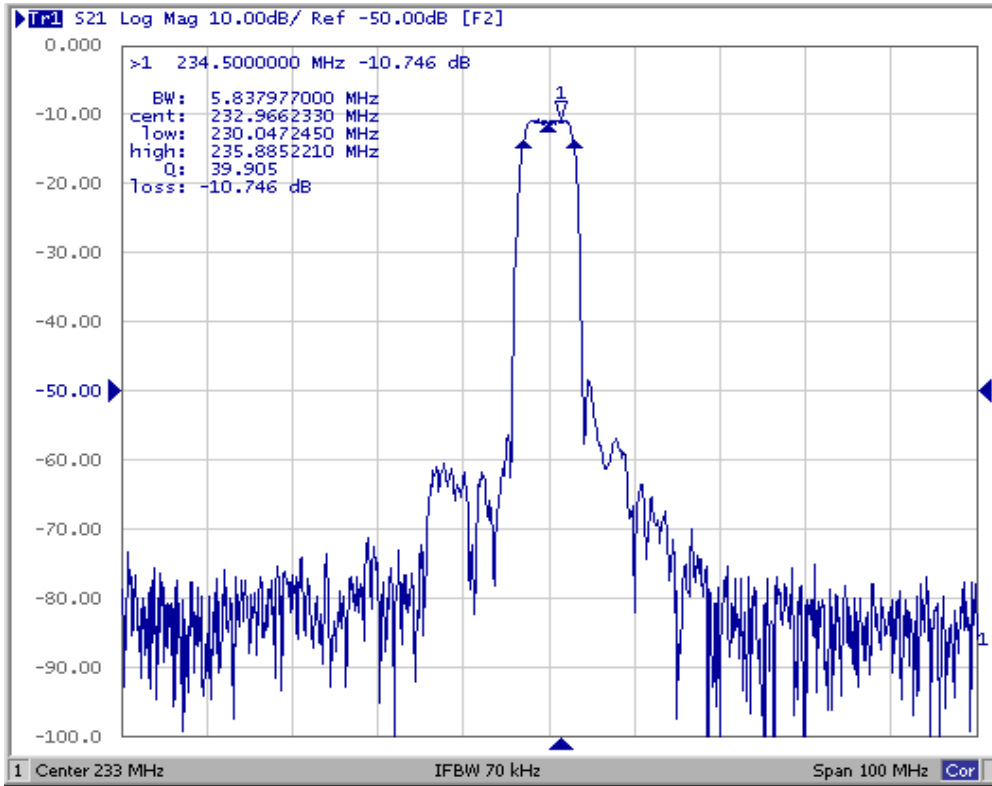
Impedance Matching to 50 Ω Single-ended Source and Load	External L-C
Case Style	SMP-53-S 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week, S = shift, ## = Sequence Code)	RFM, SF2243A, <u>YYWWS##</u>

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

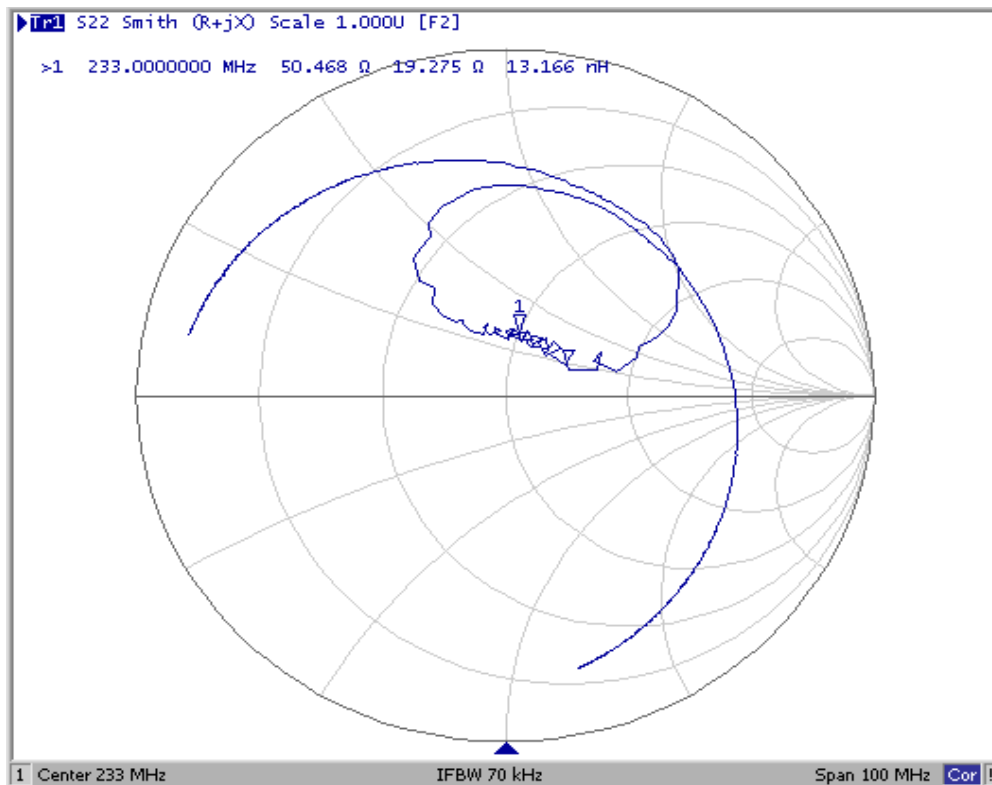
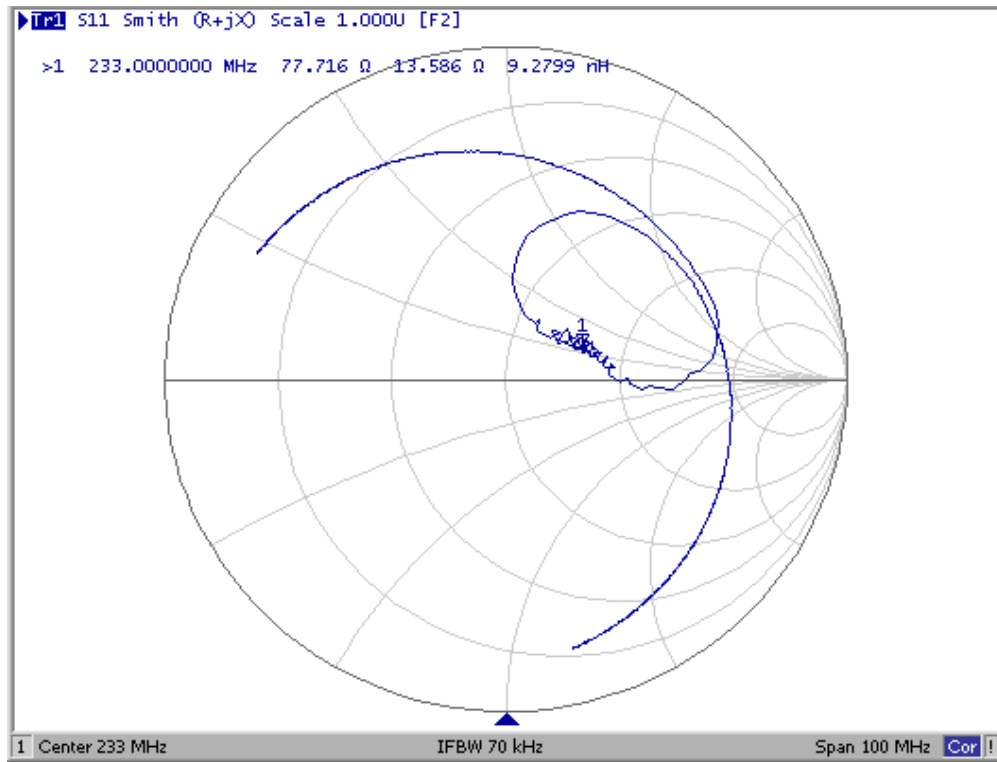
NOTES:

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.

Frequency Response Plots

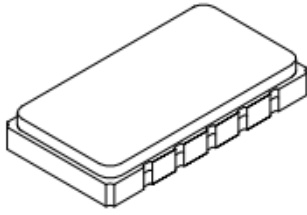


Input/Output Impedance Plots



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	

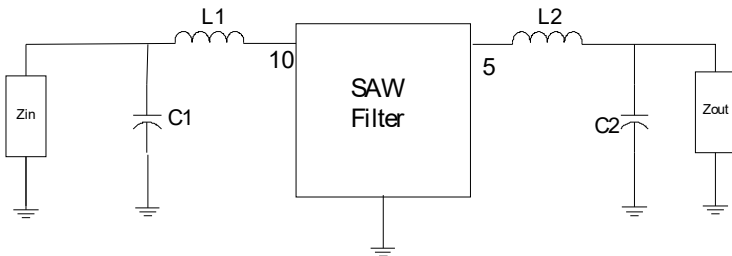
Electrical Connections

Connection	Terminals
Input	10
Output	5
Case Ground	All others

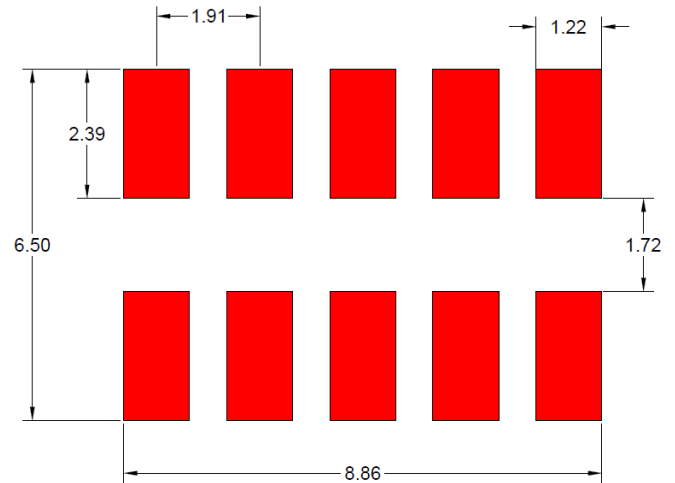
Case Material

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

Typical Matching Network

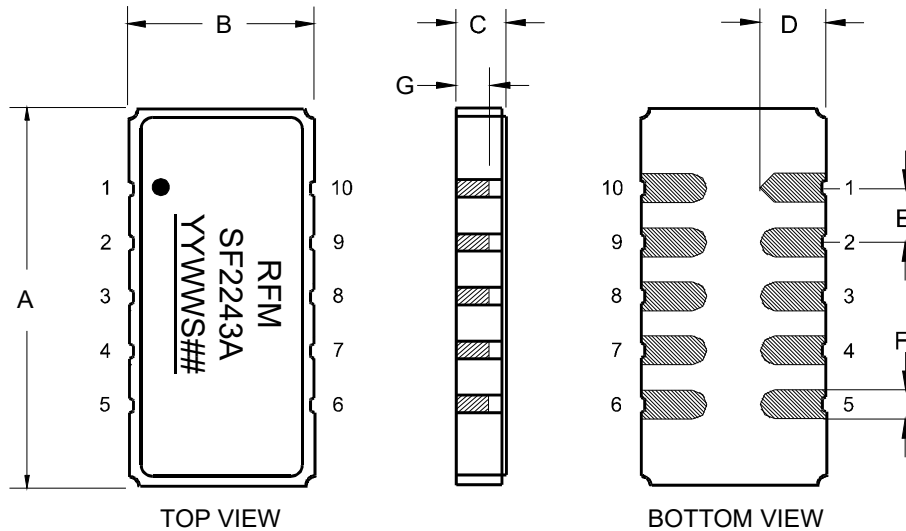


$L1 = 27 \text{ nH}$, $C1 = 18 \text{ pF}$, $L2 = 33 \text{ nH}$, $C2 = 20 \text{ pF}$



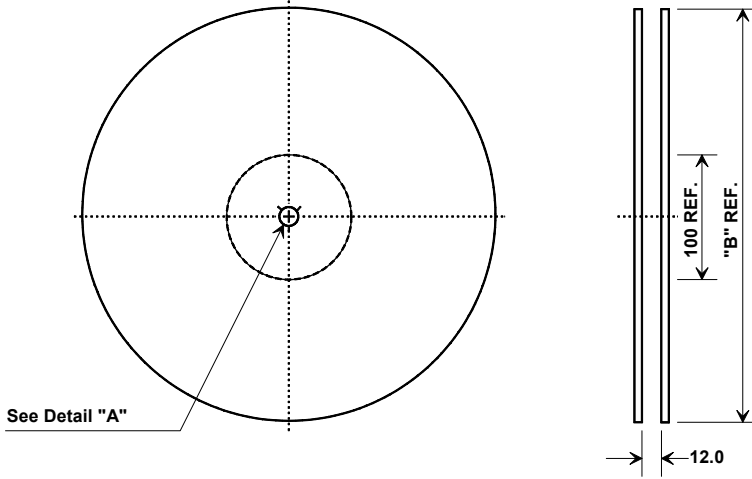
PCB Footprint (mm)

Case Outline Drawing

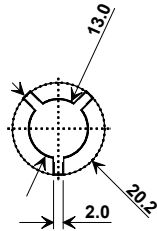


Tape and Reel Specifications

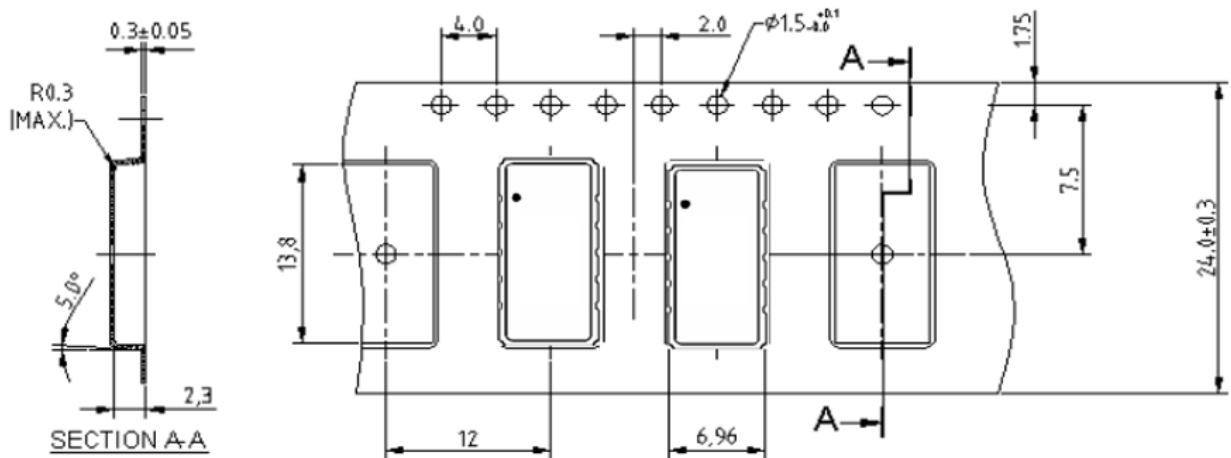
Tape and Reel Standard per ANSI/EIA-481



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



Tape Dimensions



Recommended Reflow Profile

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

