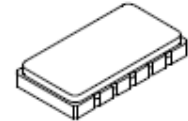


SF2503A

37.8 MHz SAW Filter



SMP-53-S

- **Low Insertion Loss**
- **Hermetic 13.3 x 6.5 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	10	VDC
Storage Temperature Range	-40 to +85	°C
Specification Temperature Range	-40 to +85	°C

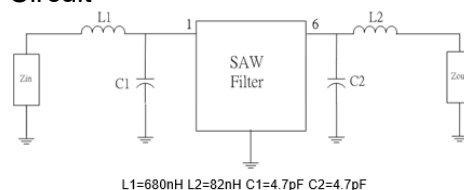
Electrical Characteristics

Item	Unit	Min.	Type.	Max.	
Center frequency, F_c	MHz	-	37.8	-	
Insertion Loss, IL	dB	-	18.5	20.2	
1dB Band Width	MHz	-	5.8	-	
40dB Band Width	MHz	-	9.3	10.5	
Amplitude Ripple F _c ±2.4MHz	dB	-	0.6	1.2	
Attenuation (Reference level from typical Insertion loss)					
F _c ±10.5MHz ~ F _c ±14MHz	dB	40	45		
F _c ±14MHz ~ F _c ±20MHz	dB	45	50		
Temperature Coefficient	ppm/°C	-	-94	-	
Source Impedance	Ohm	-	50	-	
Load Impedance	Ohm	-	50	-	
Case Style	SMP-53-S 13.3 X 6.5 mm Nominal Footprint				
Lid Symbolization (YY=year, WW = week, S = shift, ## = lot code)				RFM SF2503A YYWWS##	

Electrical Connections

Connection	Terminals
Port 1 input	1
Port 2 Output	6
Case Ground	2,3,4,5,7,8,9,10

Matching Circuit



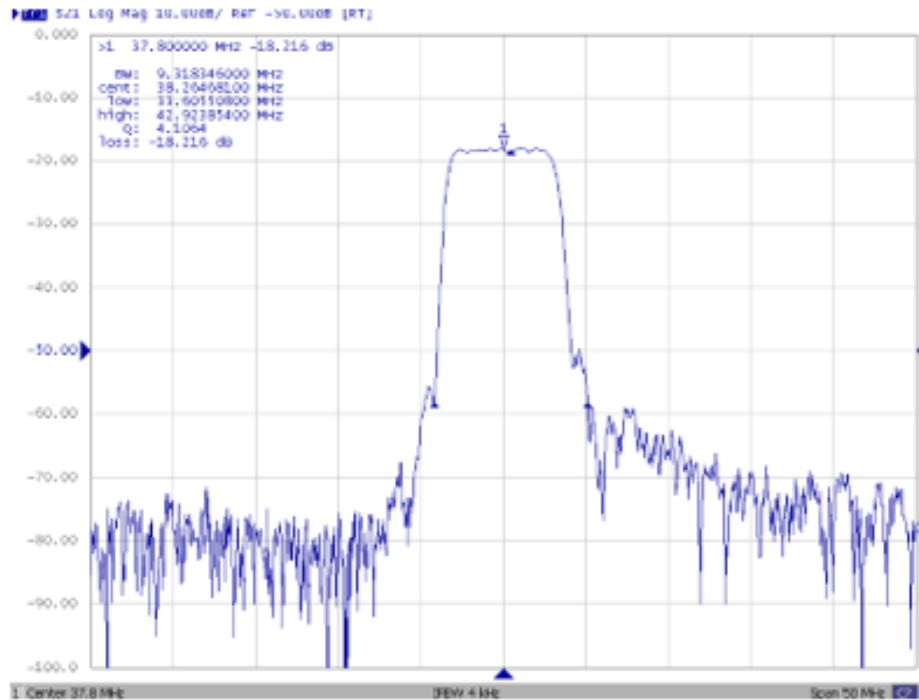
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

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

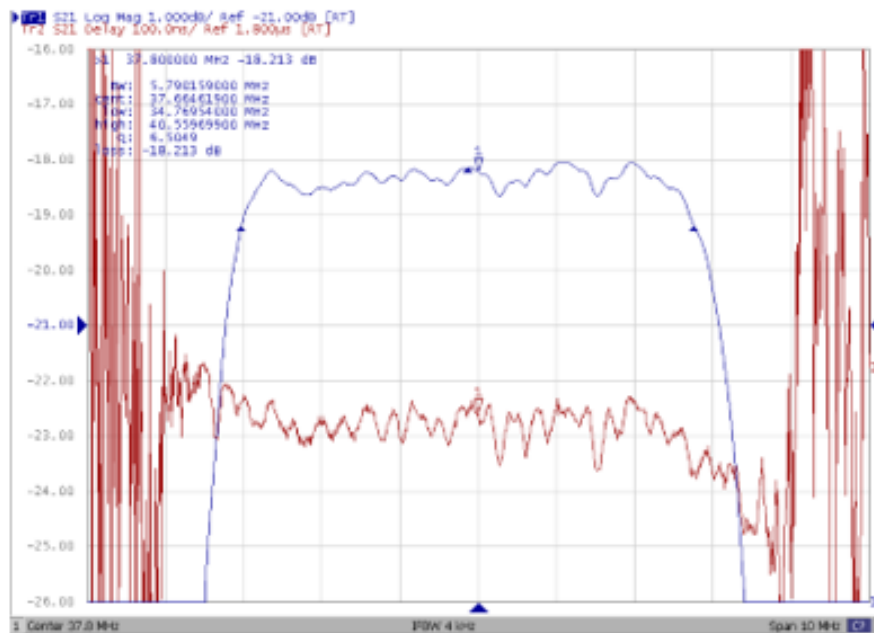
Frequency Characteristics

(1) Wide band Response:(span 60MHz)



Horizontal: 5MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Time Delay response:

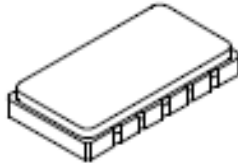


Horizontal: 1.0MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

SMP-53-S Case

10-Terminal Ceramic Surface-Mount Case

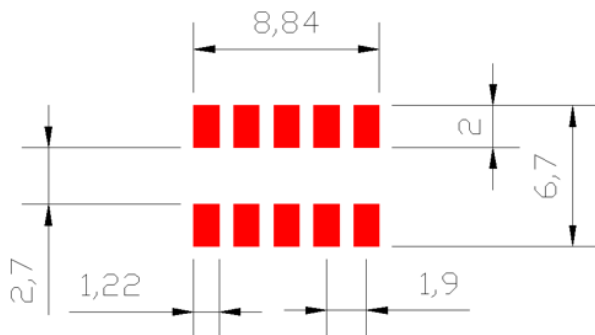
13.3 x 6.5 mm Nominal Footprint



Case Dimensions

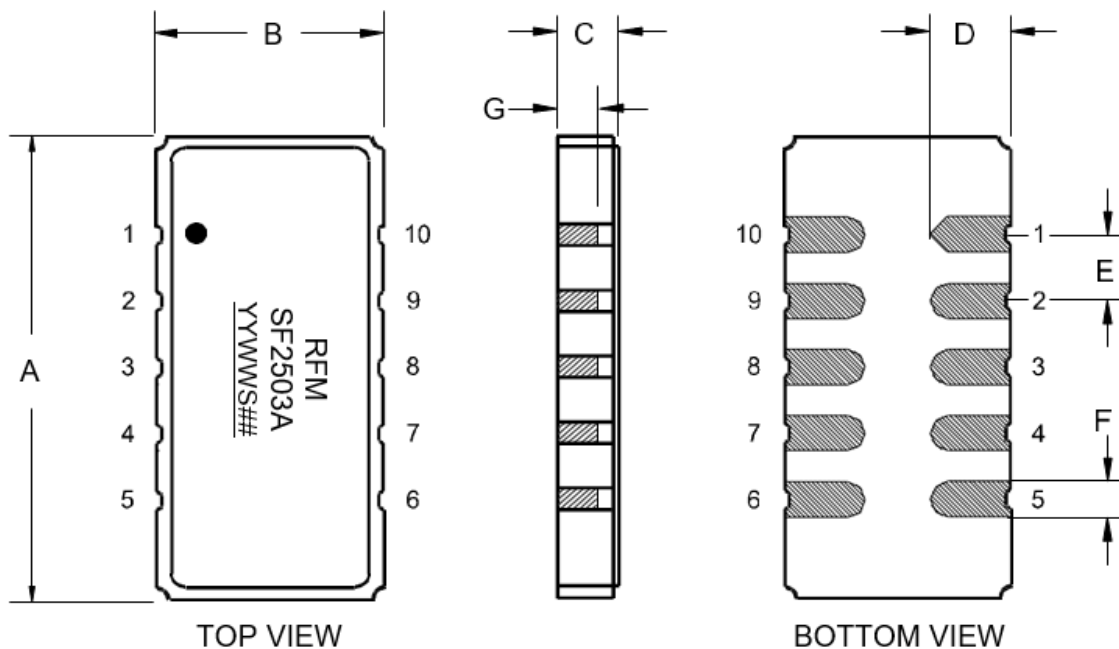
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		13.3			.524	
B		6.5			.256	
C			1.8			.071
D		1.8			.071	
E		1.91			.075	
F		1.02			.040	
G		1.0			0.039	

Typical PCB Land Pattern



Electrical Connections

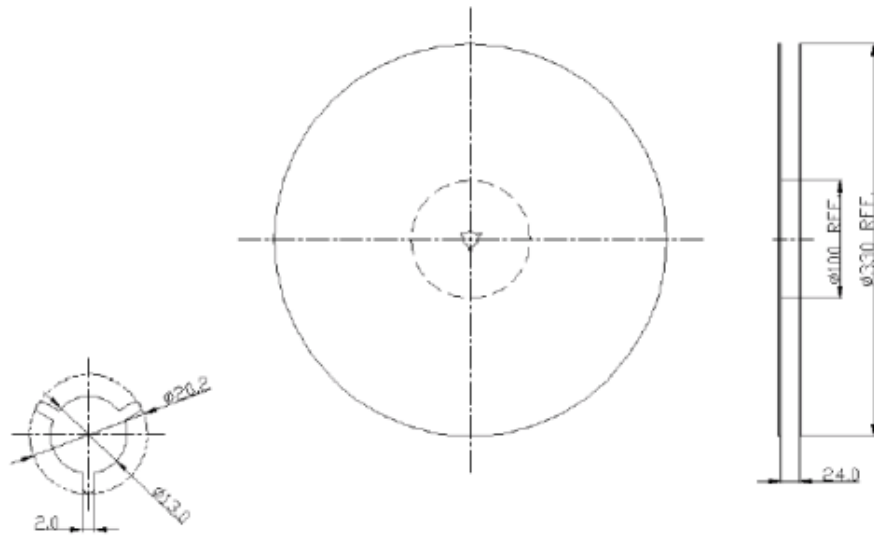
Connection	Terminals
Port 1 Hot or Return/Gnd	1
Port 1 Return/Gnd or Hot	10
Port 2 Hot or Return/Gnd	6
Port 2 Return/Gnd or Hot	5
Case Ground	All others



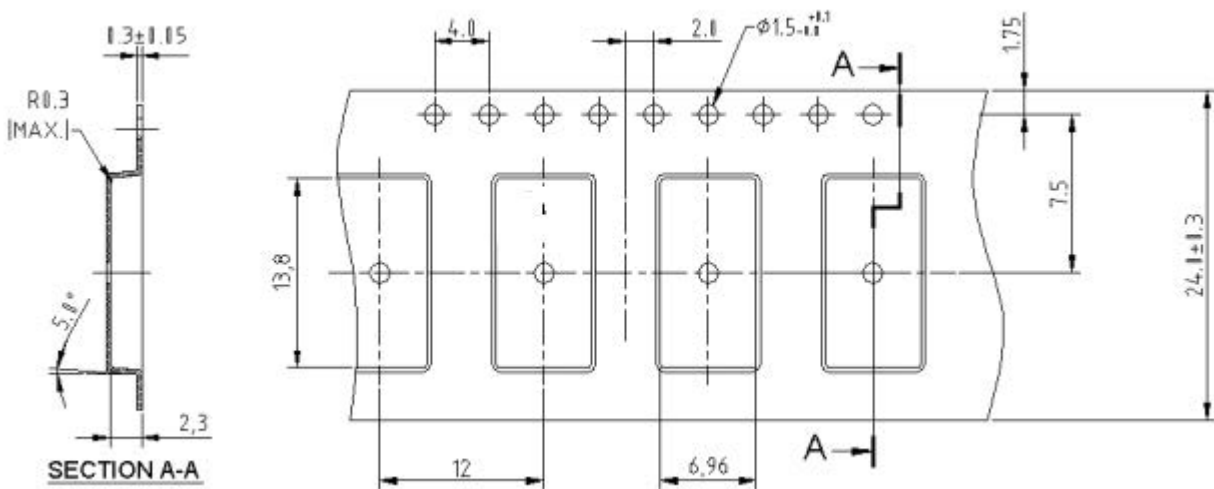
Packing:

Reel Dimensions

Tape and Reel Standard per ANSI/EIA-481



Tape Dimension



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.

