

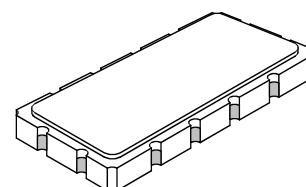
- Precision IF SAW Filter
- Hermetic 13.3 x 6.5 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitive Level: 1

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+20	dBm
Operating Temperature	-30 to +80	°C
Storage Temperature	-40 to +85	°C
Moisture Sensitivity Level: 1		
Case Style: SM13365-12	13.3 x 6.5 mm Nominal Footprint	
Lid Symbolization (YY = year, WW = week, s=Shift: ## = Sequence Code) RFM, SF2227A, <u>YYWWS##</u>		

SF2227A

**70 MHz
SAW Filter**



SM13365-12

Electrical Characteristics

RFM, SF2227A,
YYWWS##

Parameters	Unit	Min.	Typical	Max.
Center frequency, F_c	MHz	69.8	70	70.2
Insertion Loss, IL	dB	-	9.1	11.0
1 dB Bandwidth	MHz	5.2	5.8	-
3 dB Bandwidth	MHz	6.0	6.8	-
40 dB Bandwidth	MHz	-	9.6	10.0
Relative Attenuation:				
10 to 64.5 MHz	dB	40	45	-
75.5 to 140 MHz	dB	37	41	-
Amplitude ripple within $F_c \pm 2.1$ MHz	dB	-	0.8	1.0
Group Delay ripple within $F_c \pm 2.1$ MHz	nsec	-	100	170
Substrate Material	-	-	YZ-LN	-
Temperature Coefficient of frequency	ppm/ °C	-	-94	-



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 Characteristics

(1) Frequency Response

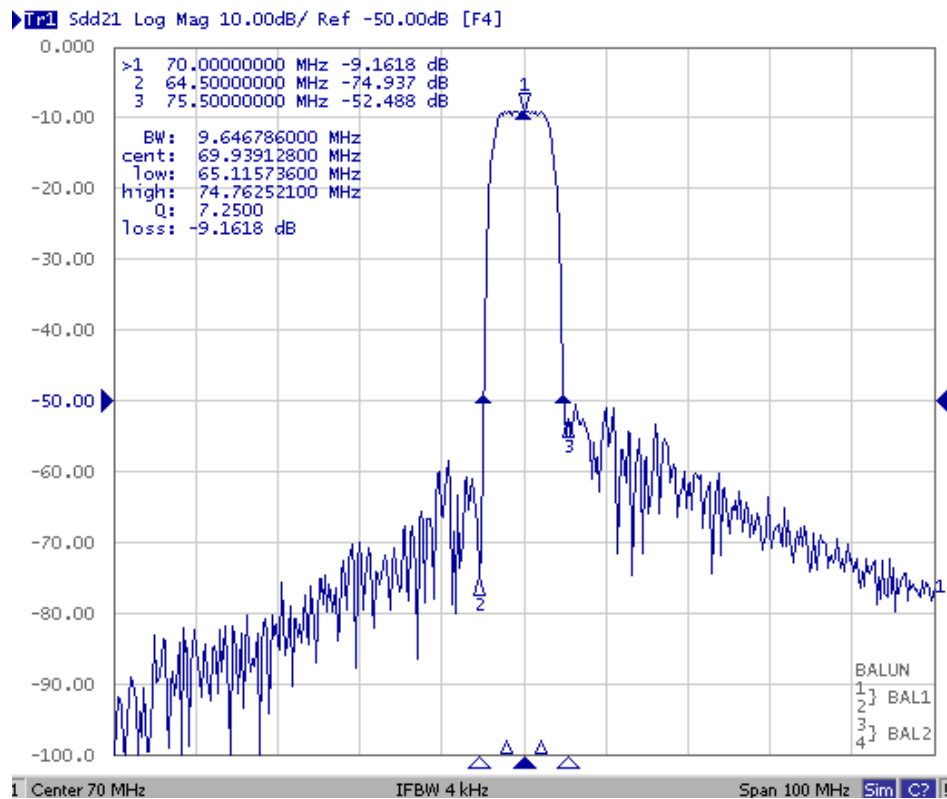


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

(2) Passband response and Group Delay Variation

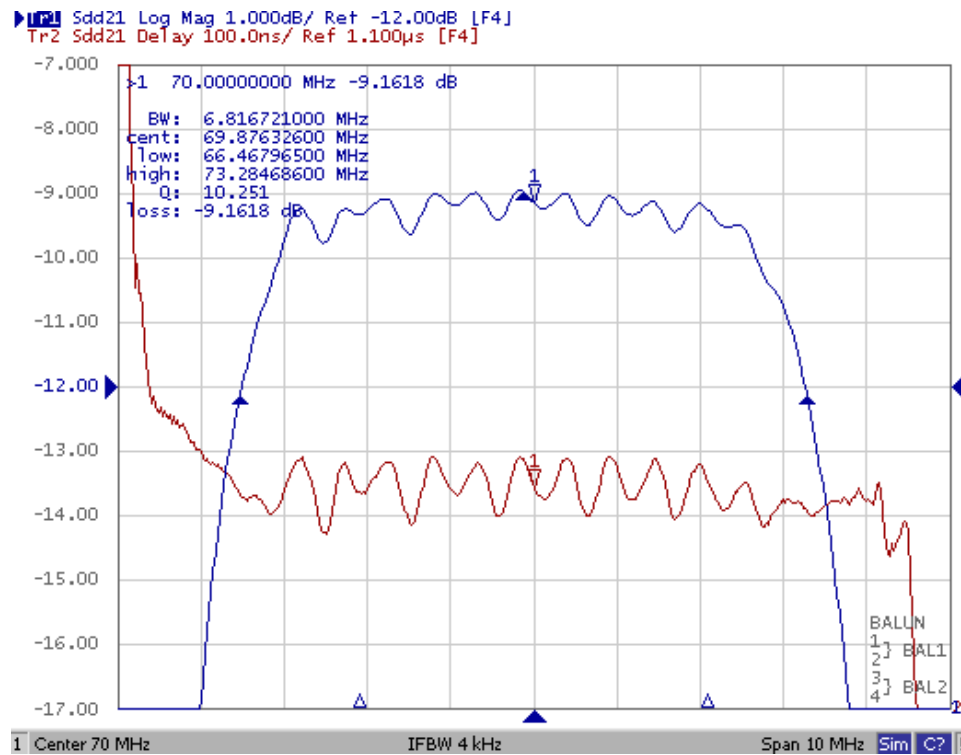
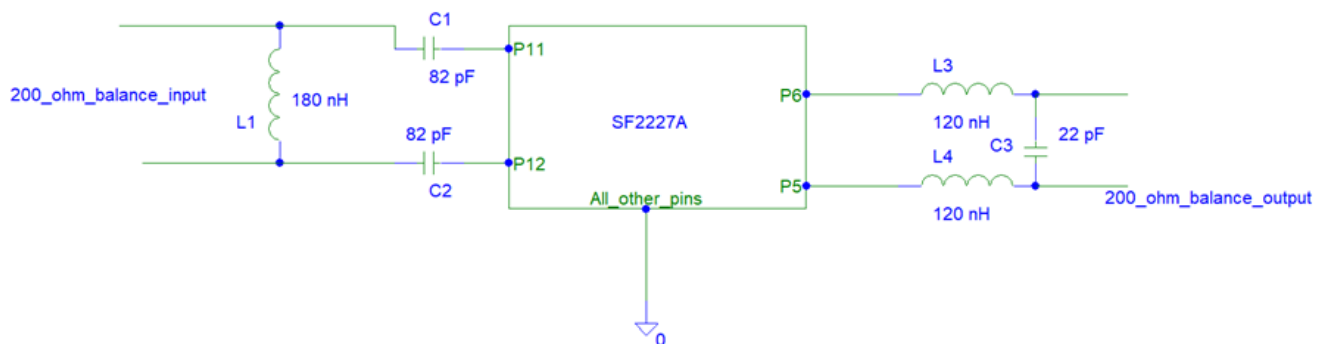


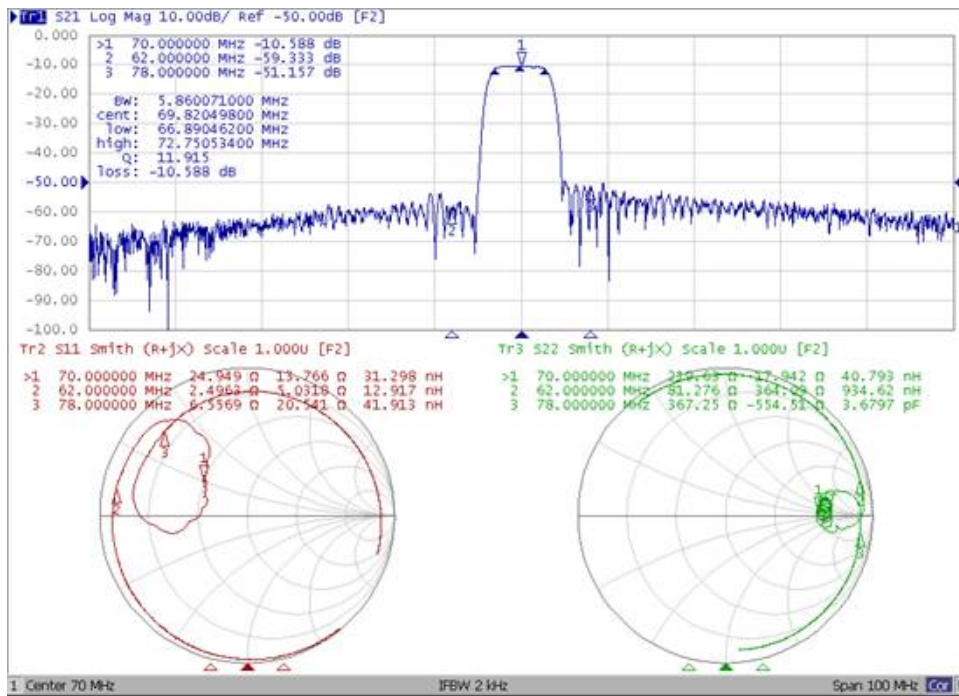
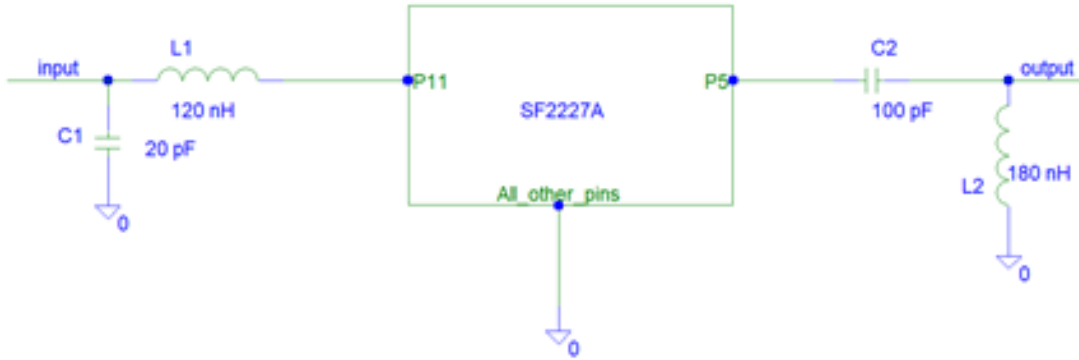
Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div

Vertical: 100ns/Div

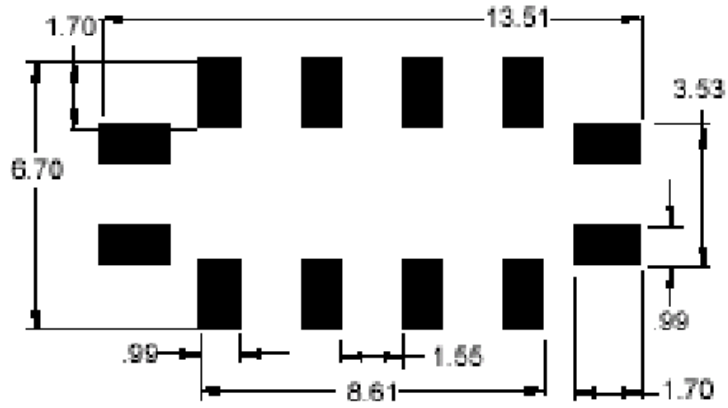
Balanced input and output test Circuit



Single end matching



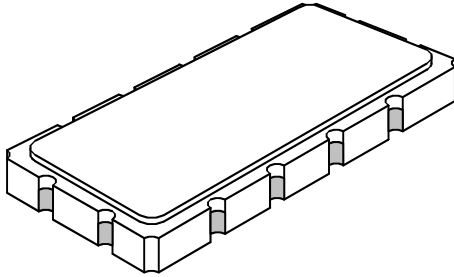
PCB Footprint



Unit: mm

SM13365-12 Ceramic Surface-mount 12-Terminal Case

13.3 x 6.5 mm Nominal Footprint



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.10	13.30	13.50	0.516	0.524	0.531
B	6.30	6.50	6.70	0.248	0.256	0.264
C			1.80			0.071
D		1.50			0.059	
E		0.80			0.031	
H		0.80			0.031	
P		2.54			0.100	

Electrical Connections (50 ohm single ended)

Connection	Terminals
Input	11
Output	5
Case Ground	All others

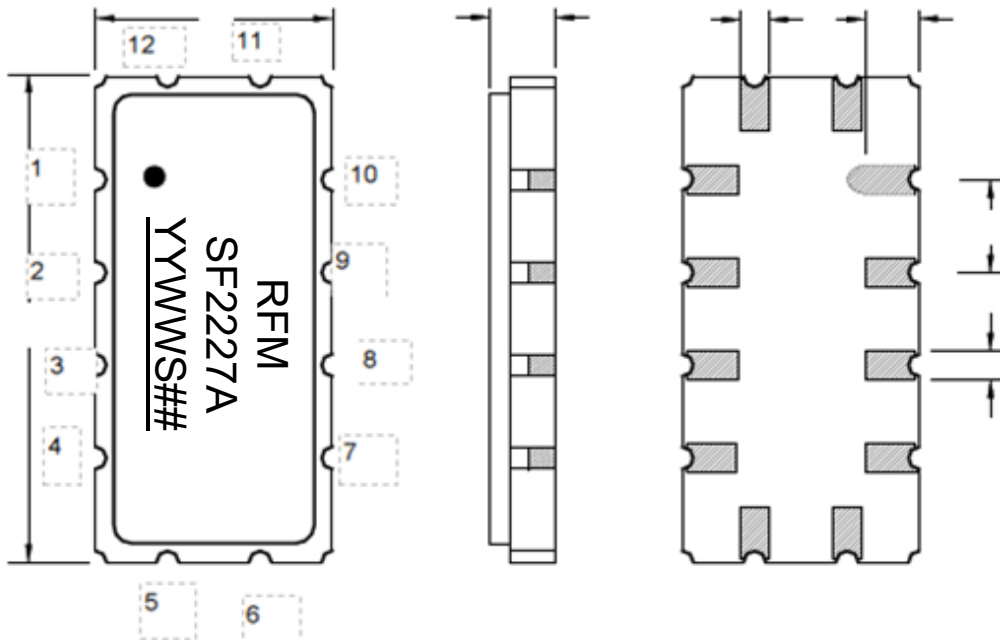
Electrical Connections (200 ohm balance)

Connection	Terminals
Input	11,12
Output	5,6
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

Case Outline Drawing



Packing

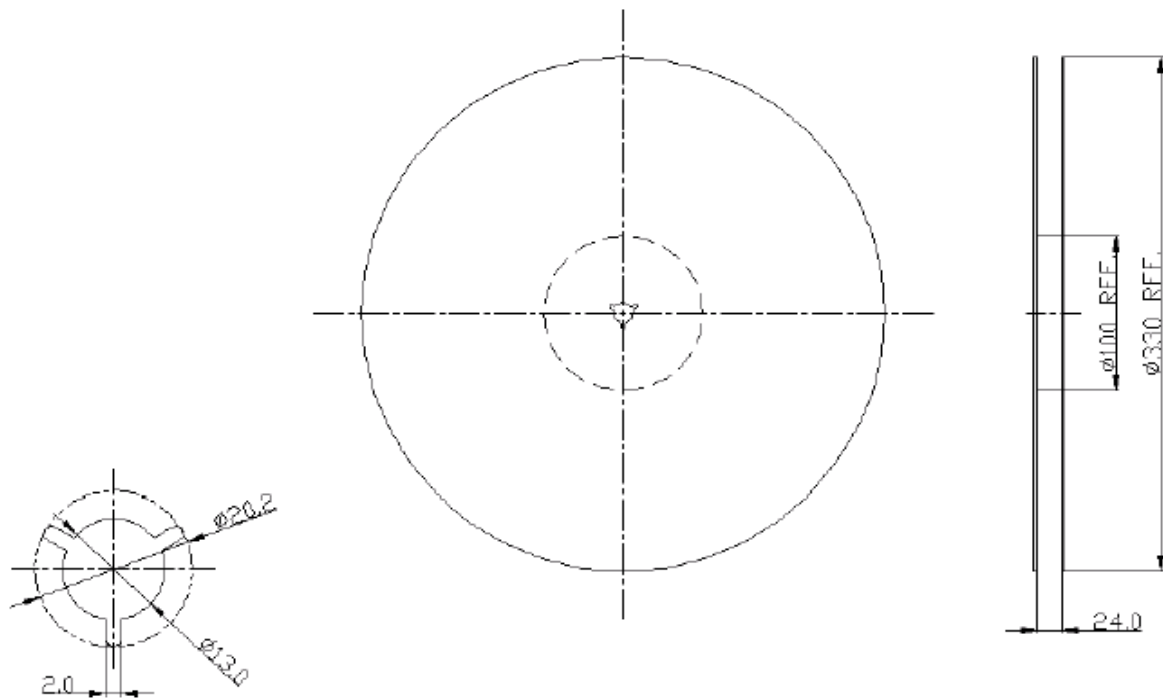
Reel Dimension

Tape and Reel Standard per ANSI/EIA-481

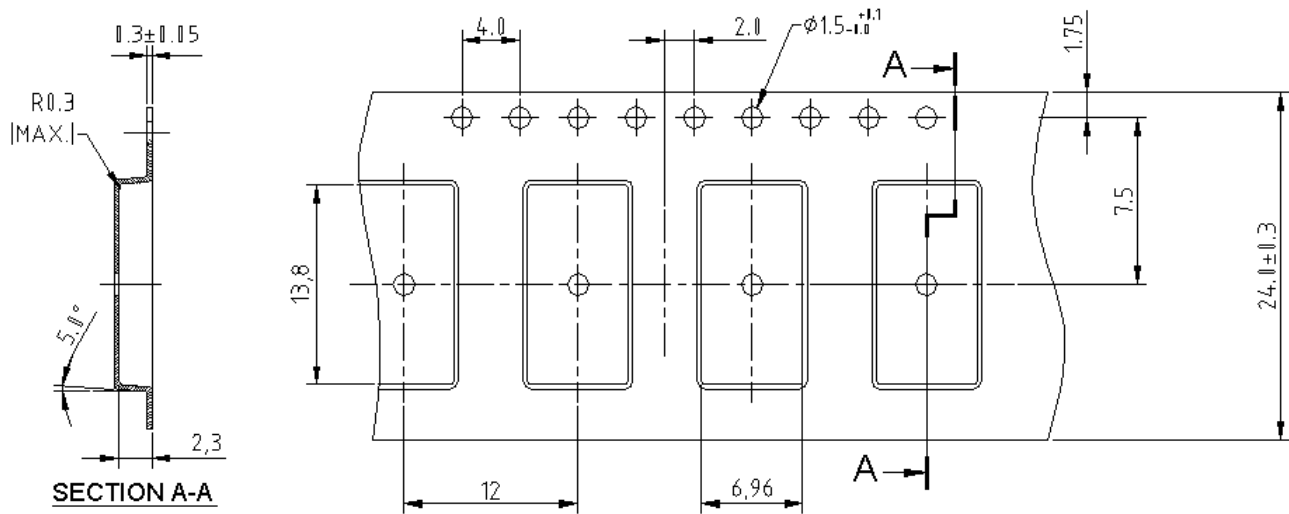
Reel Count:

7" = 250

13" = 2000



13.3X6.5



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.

