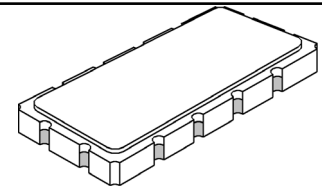


**SF2267A**

**70 MHz  
SAW Filter**



SM13365-12

- **Precision SAW IF Filter**
- **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
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 Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$		69.9	70.0	70.1	MHz
Insertion Loss	IL			9.8	12.0	dB
1 dB Bandwidth	$BW_1$			1.00		MHz
3 dB Bandwidth	$BW_3$		1.26	1.32		
40 dB Bandwidth	$BW_{40}$			2.84	2.90	
Amplitude Ripple, $f_C \pm 0.35$ MHz				0.3	1.0	dB <sub>p-p</sub>
Group Delay Ripple, $f_C \pm 0.35$ MHz				160	280	ns <sub>p-p</sub>
Relative Attenuation:						dB
DC to 65 MHz			45	55		
75 to 200 MHz			45	55		
Operating Temperature Range			-40		+80	°C

Impedance Matching to 50 $\Omega$ Unbalanced Source/Load	External L-C
Case Style	13.3 x 6.5 mm Nominal Footprint

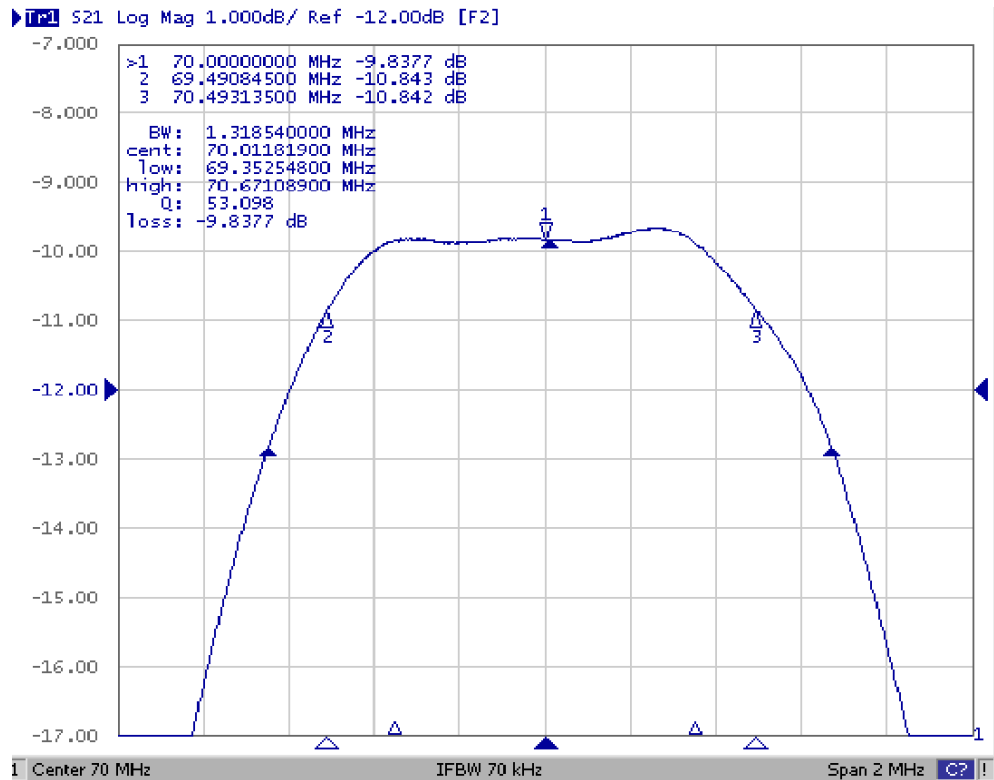
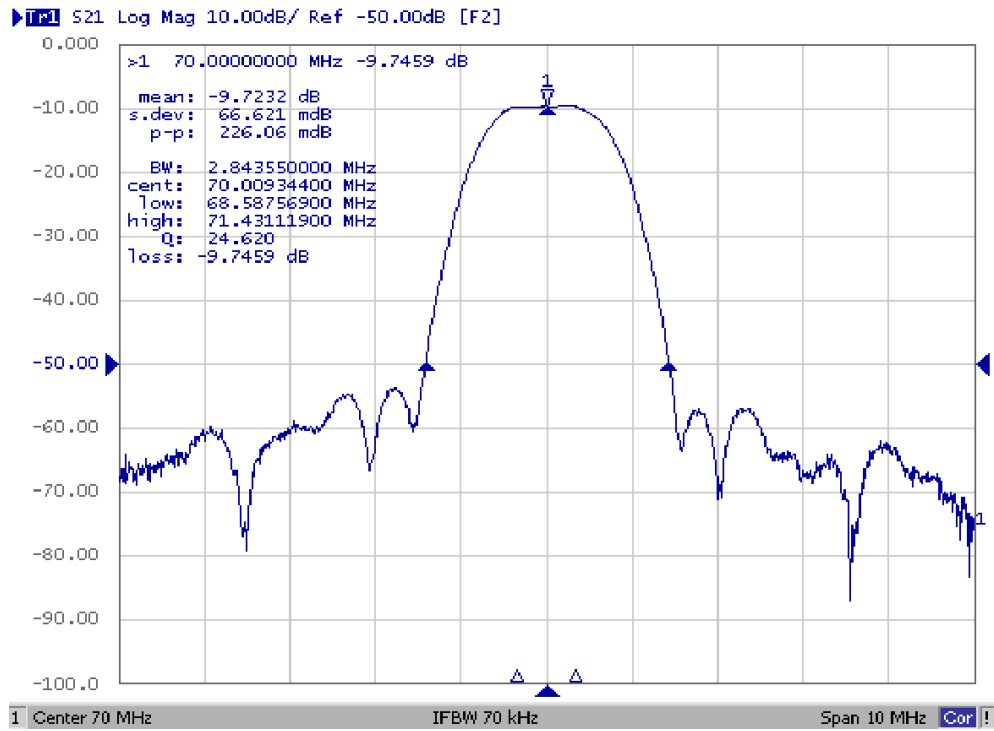


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

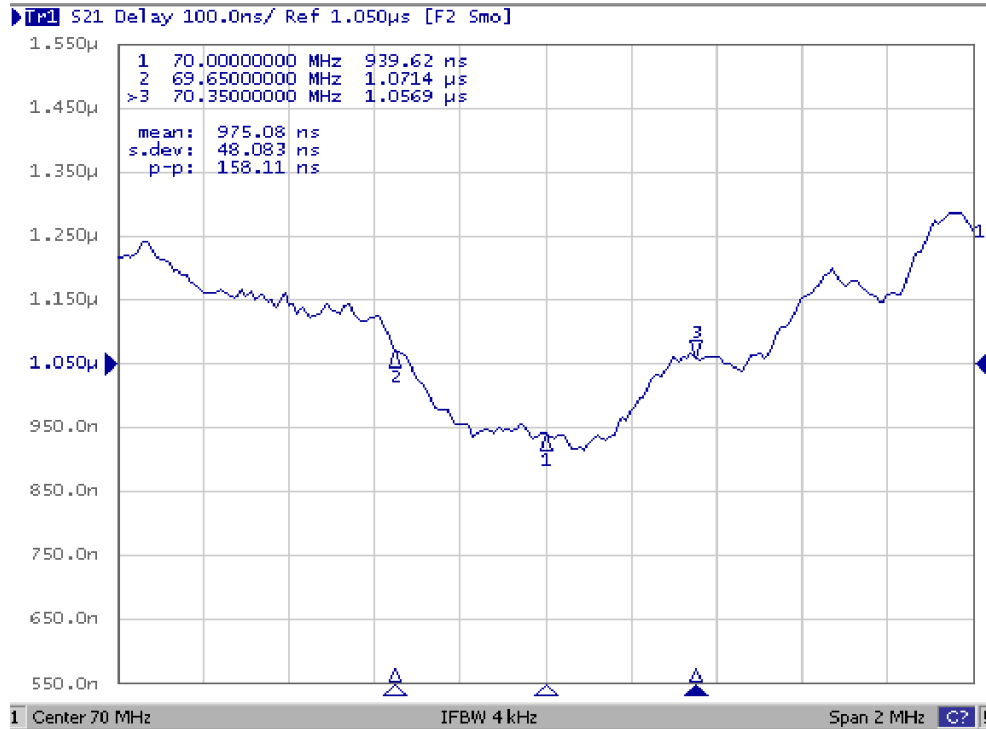
**NOTES:**

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.

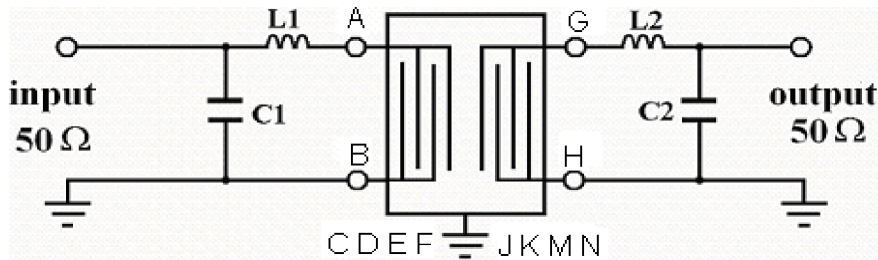
# Filter Amplitude Response Plots



## Filter Group Delay Plot

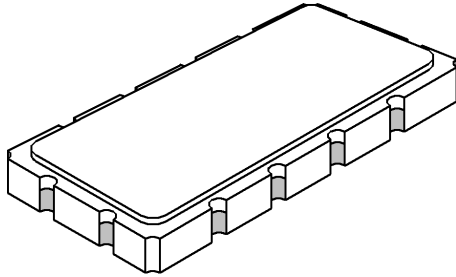


## Tuning Component Values



$L1 = 470 + 47 \text{ nH}$ ,  $C1 = 100 \text{ pF}$ ,  $L2 = 560 \text{ nH}$ ,  $C2 = 100 \text{ pF}$

## Ceramic Surface-mount 12-Terminal Case 13.3 x 6.5 mm Nominal Footprint



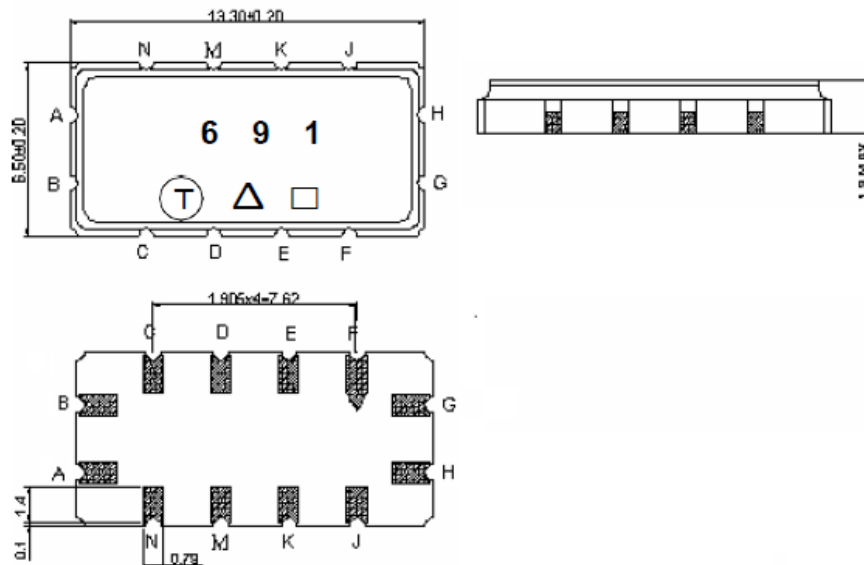
### Case Material

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

### Electrical Connections

Connection	Terminals
Input	A
Output	G
Case Ground	All others

### Case Outline Drawing



Pin A –RF input

Pin B –RF input ground

Pin G –RF output

Pin H –RF output ground

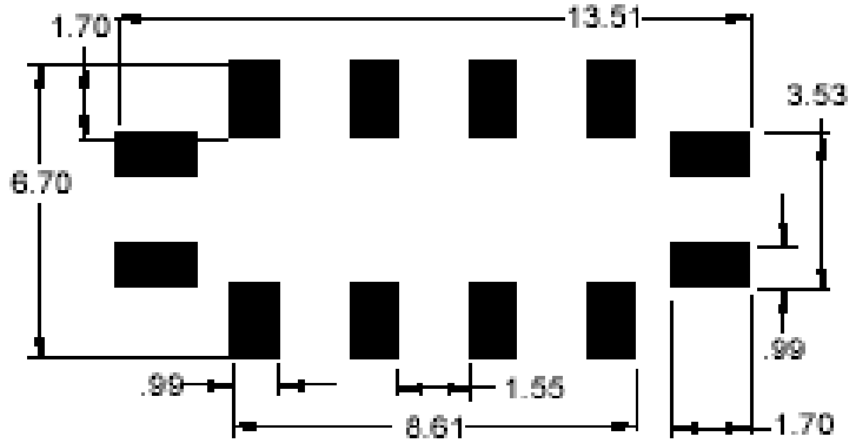
Pin C, D, E, F, J, K, M, N - Ground

□ : Week Code (Follow the table from planner each year)

Unit : mm

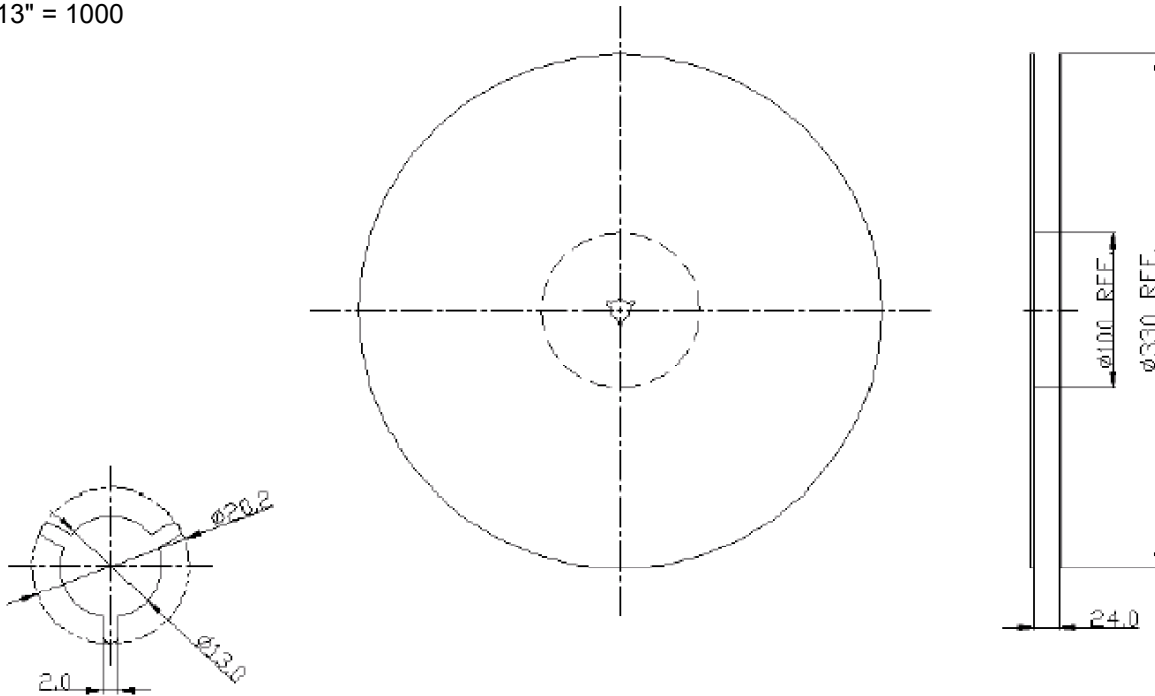
△ : Product / Year Code

# PCB Pad Layout

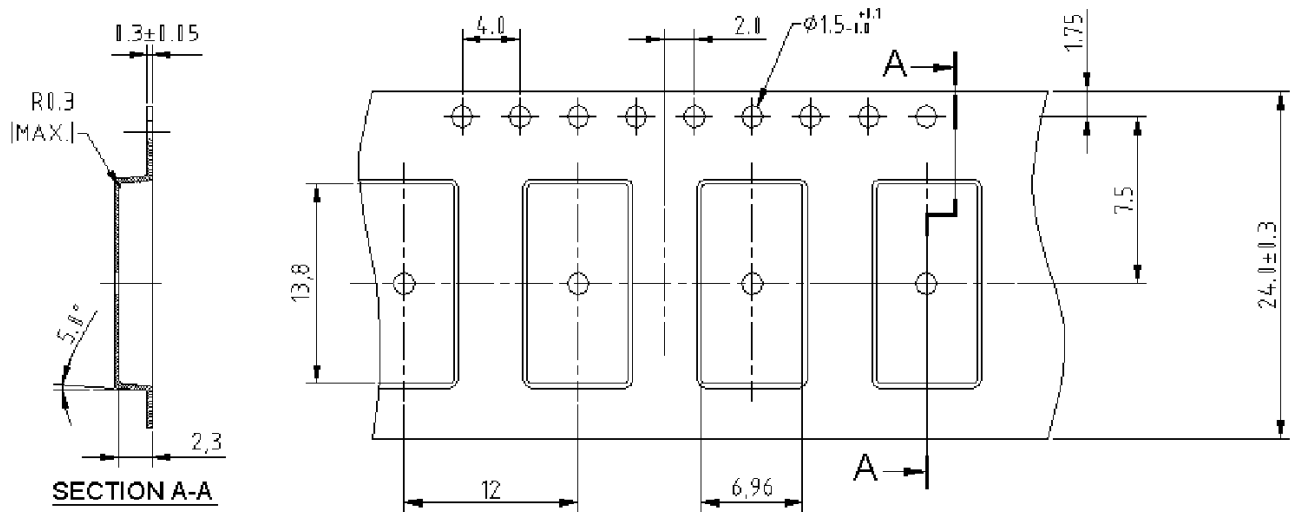


## Tape and Reel Specifications

Reel Count:  
7" = 500  
13" = 1000



# 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.

