

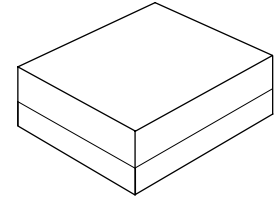
- **Designed for RF Front-end Applications**
- **Excellent Rejection**
- **1.45 x 1.15 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level - 2A**

**Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage On any Non-ground Terminal	3	VDC
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Soldering Temperature Profile, 5 cycles/10 seconds maximum	265	°C

**SF2217K**

**1591.5 MHz  
SAW Filter**



**SM1411-5 Case**

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1591.5		MHz
Insertion Loss, 1574 to 1609 MHz	$IL_{MAX}$			2.4	3.7	dB
Amplitude Ripple, 1574 to 1609 MHz				1.3	2.6	dB <sub>P-P</sub>
Group Delay Ripple, 1574 to 1609 MHz				17	50	ns <sub>P-P</sub>
Rejection Referenced to 0 dB:						dB
10 to 1200 MHz			28	34		
1200 to 1450 MHz			28	34		
1450 to 1540 MHz			20	37		
1626 to 1710 MHz			9	31		
1710 to 2000 MHz			30	37		
2000 to 2500 MHz			30	37		
VSWR, 1574 to 1609 MHz				2.0:1	2.4:1	
Terminating Source impedance	$Z_S$			50		$\Omega$
Terminating Load impedance	$Z_L$			50		$\Omega$
Case Style				SM1411-5		
Lid Symbolization □= year/month manufacturing code				B□		

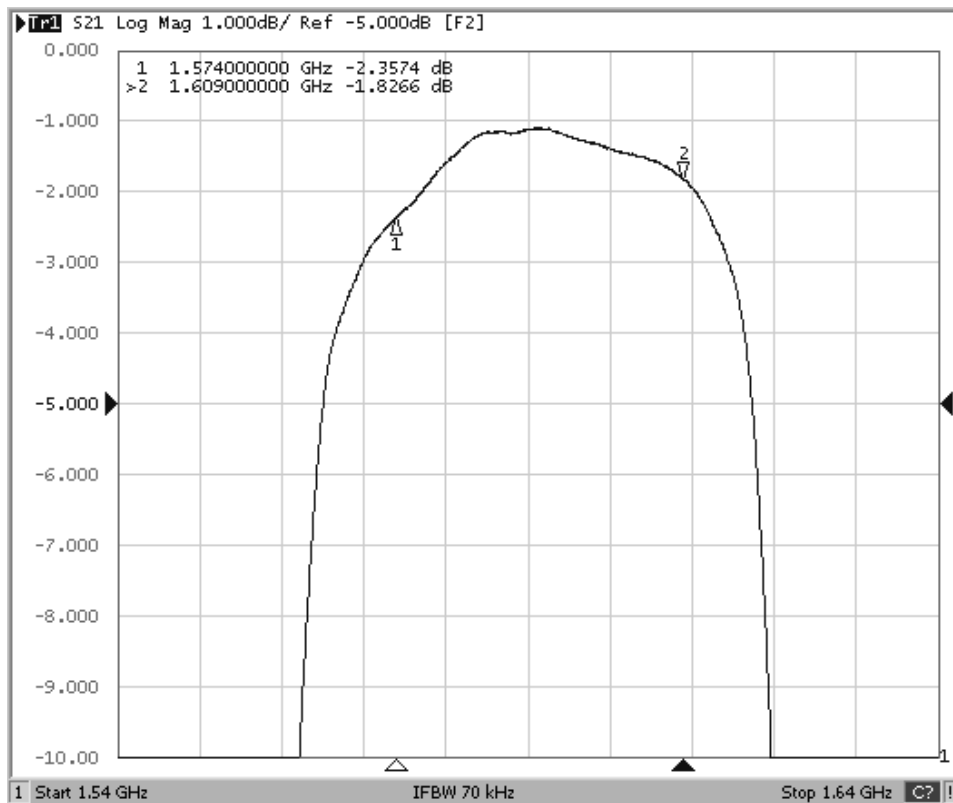
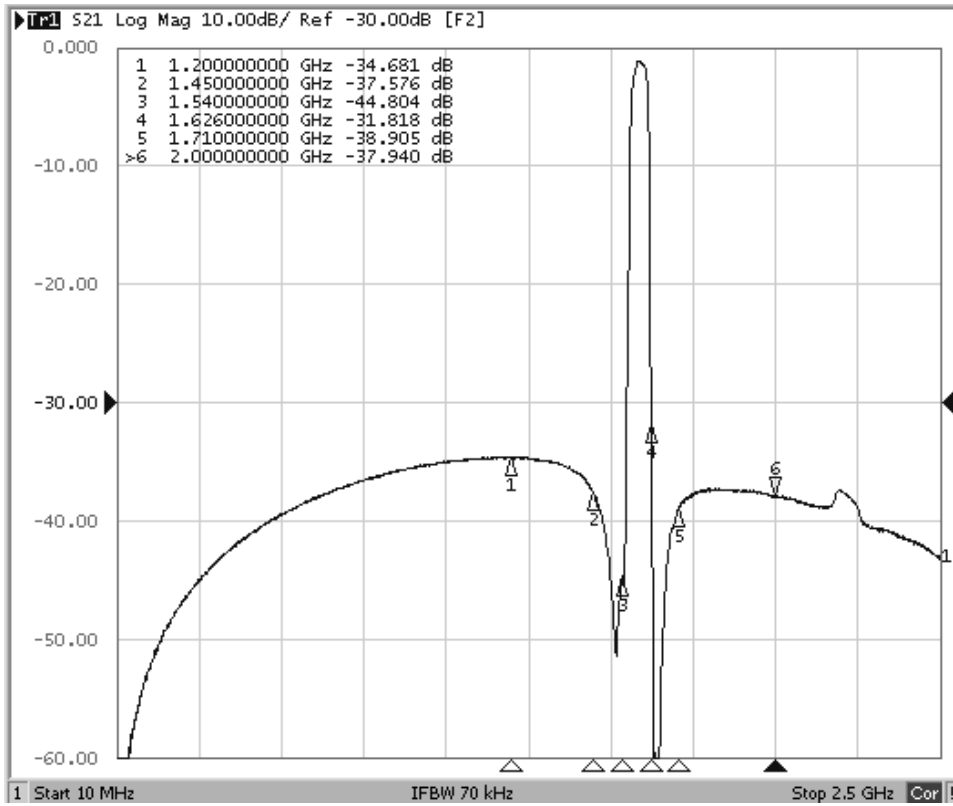


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

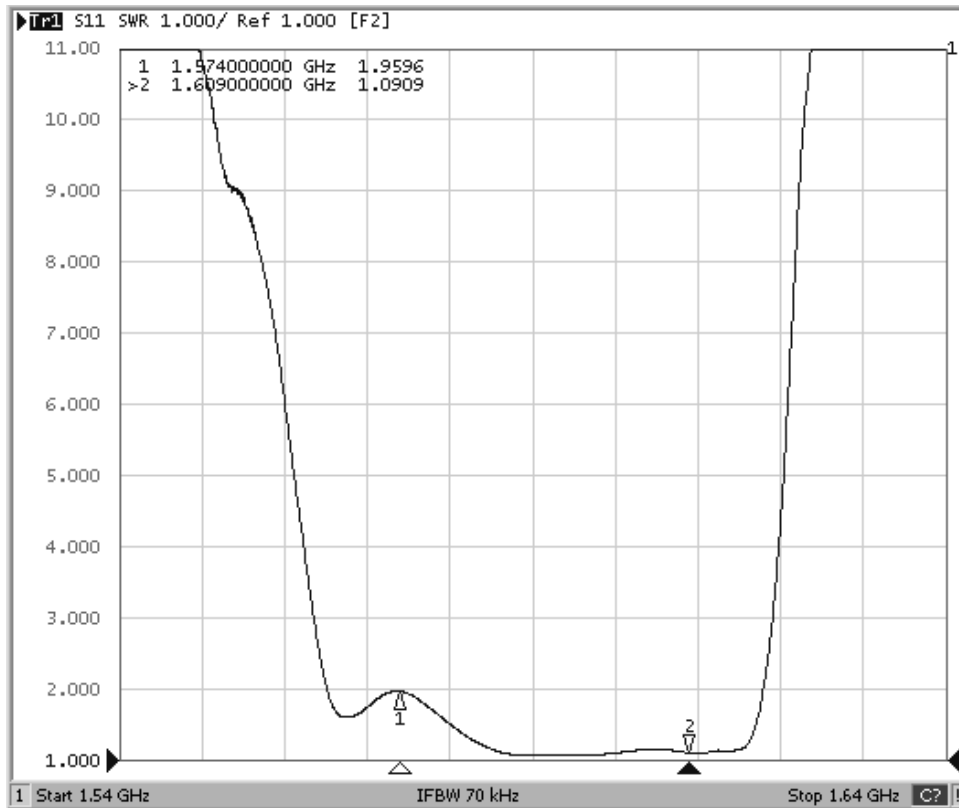
**NOTES:**

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.

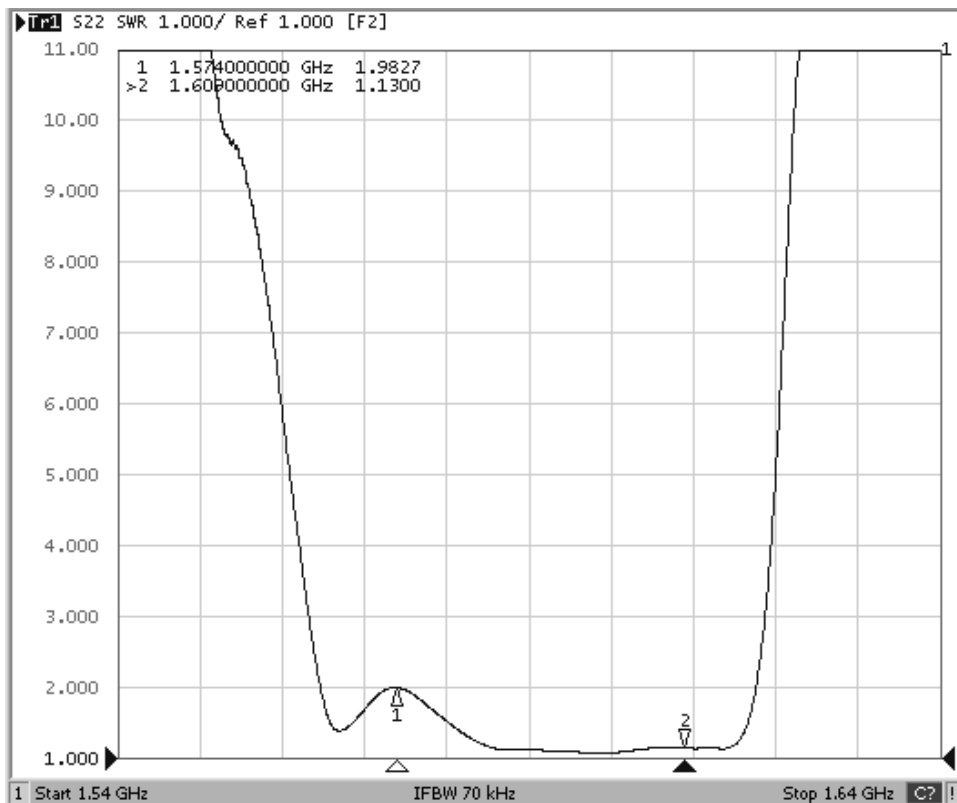
# Frequency Response Plots



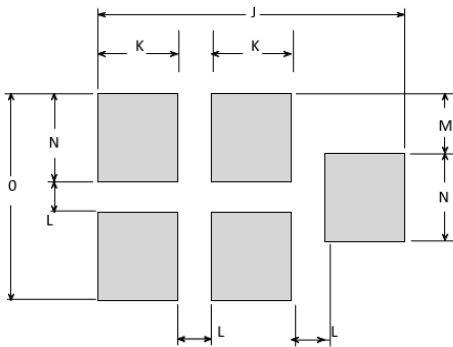
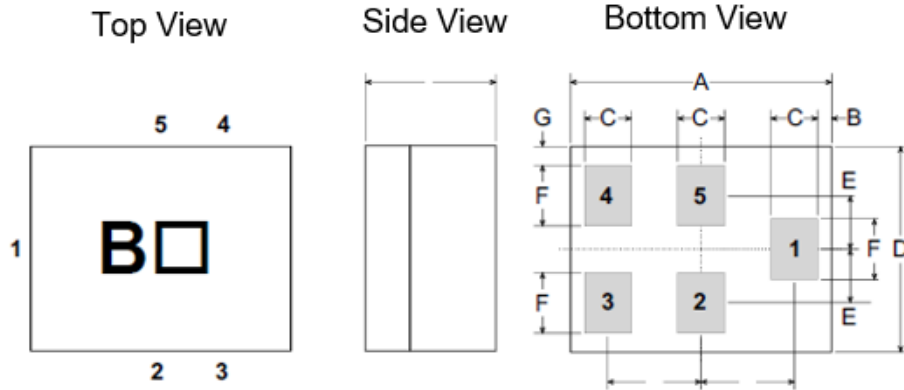
## Input VSWR Plot



## Output VSWR Plot



# SM1411-5 1.4 X 1.1 mm 5-Terminal Surface-mount Case Drawing

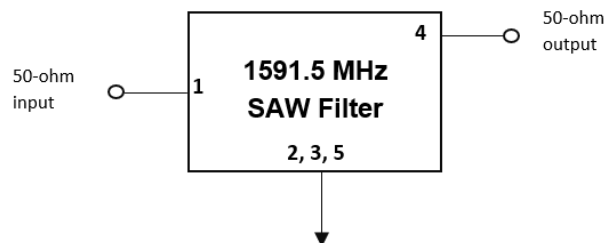


**PCB Footprint**

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.3500	1.4000	1.4500	0.0531	0.0551	0.0571
B	-	0.0750	-	-	0.0030	-
C	0.1700	0.250	0.3300	0.0067	0.0098	0.0130
D	1.0500	1.1000	1.1500	0.0413	0.0433	0.0453
E	-	0.2875	-	-	0.0113	-
F	0.2450	0.3250	0.4050	0.0096	0.0128	0.0159
G	-	0.100	-	-	0.0039	-
H	-	0.5000	-	-	0.0197	-
I	0.6000	0.6500	0.700	0.0236	0.0256	0.0276
J	-	1.3500	-	-	0.0531	-
K	-	0.3500	-	-	0.0138	-
L	-	0.1500	-	-	0.0059	-
M	-	0.2875	-	-	0.0113	-
N	-	0.4250	-	-	0.0167	-
O	-	1.0000	-	-	0.0394	-

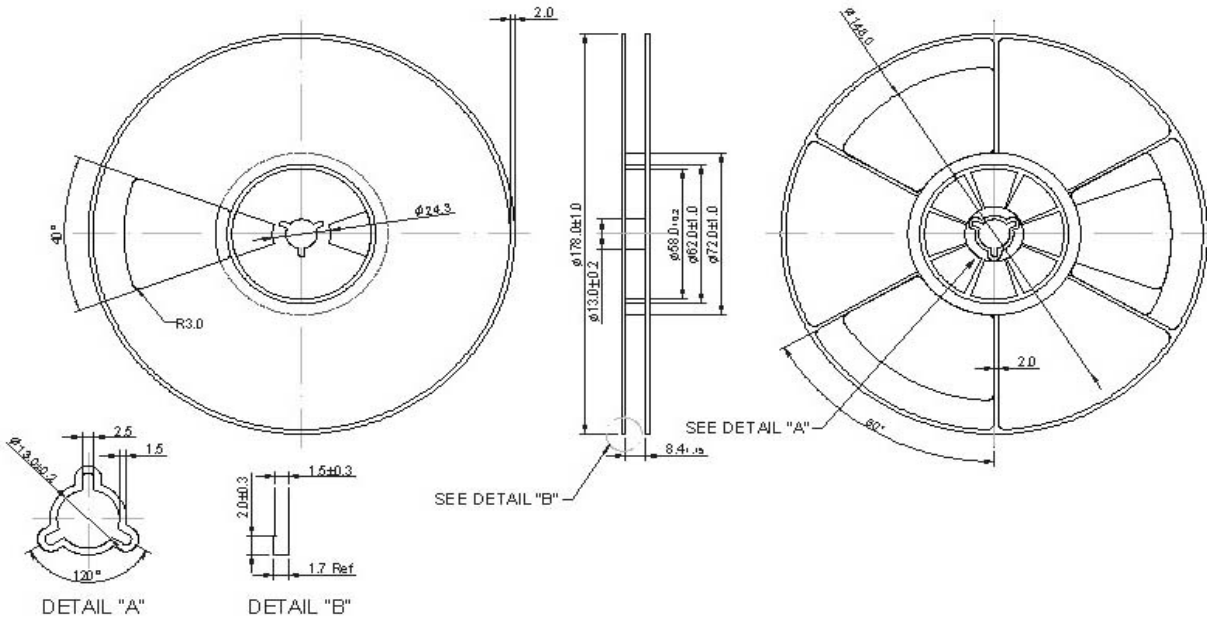
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

## Test Circuit

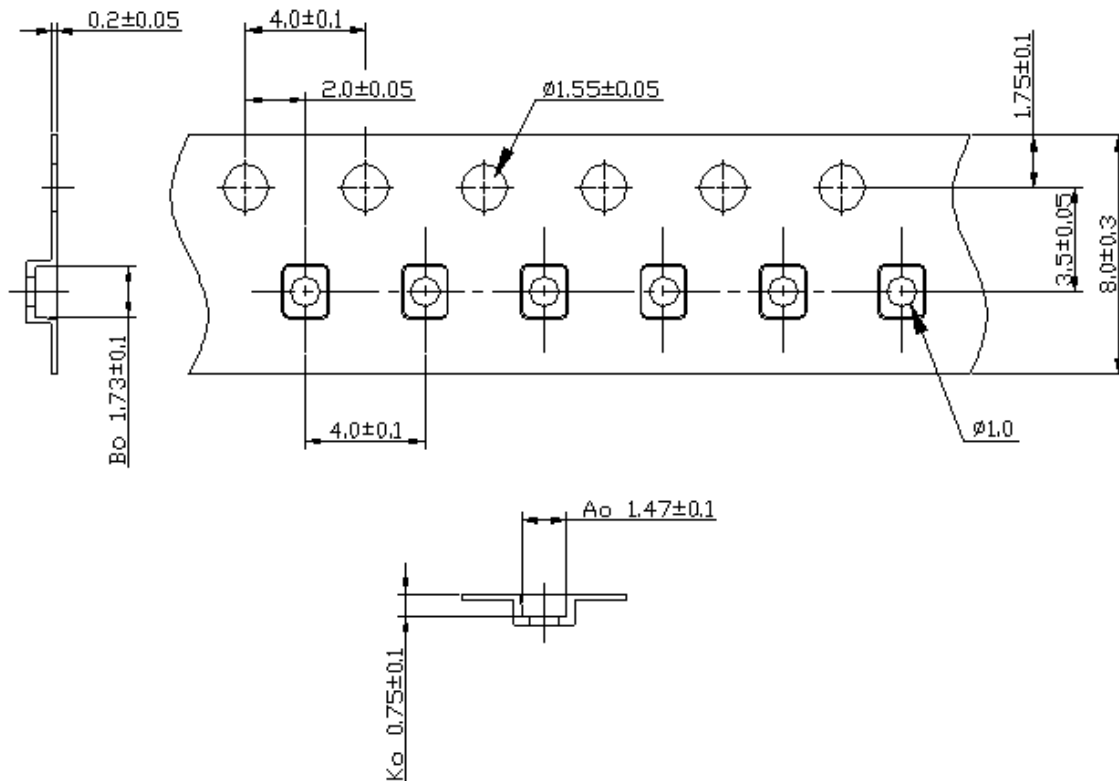


# Reel Dimensions - 7 inch Reel, 3000 Filters

Tape and Reel Standard per ANSI/EIA-481



## 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.

