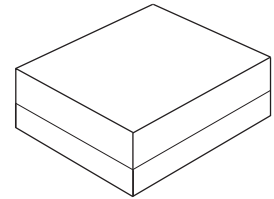


- **Miniature High Performance SAW Filter**
- **Low Passband Loss**
- **Hermetic 1.4 x 1.1 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 3**
- **AEC-Q200 Qualified**

**SF2506K**

**2450 MHz  
SAW Filter**



**SM1411-5**

**Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+28	dBm
Maximum DC Voltage On any Non-ground Terminal	3	VDC
Component Operating Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Temperature Profile (5 cycles maximum)	265 °C for 10 s	

**Electrical Characteristics**

Terminating source impedance:  $Z_s = 50 // 3nH \Omega$

Terminating load impedance:  $Z_L = 50 // 2.7nH \Omega$

Characteristic	Sym	Unit	Min.	Typ.	Max.
Center Frequency	Fc	MHz	-	2450	-
Insertion Loss (2400~2500 MHz)	IL	dB	-	1.6	2.7
Amplitude Ripple (2400~2500 MHz)		dB	-	0.4	1.6
VSWR within (2400~2500 MHz)		dB	-	1.4	2.4
Attenuation (Reference level from 0 dB)					
DC~960 MHz		dB	35	55	-
960~1570 MHz		dB	35	42	-
1570~1580 MHz		dB	35	41	-
1580~1710 MHz		dB	35	40	-
1710~1910 MHz		dB	30	35	-
1910~1980 MHz		dB	30	36	-
2110~2170 MHz		dB	30	35	-
2640~3000 MHz		dB	21	31	-
3000~4800 MHz		dB	23	32	-
4800~5000 MHz		dB	20	35	-
5000~6000 MHz		dB	20	32	-

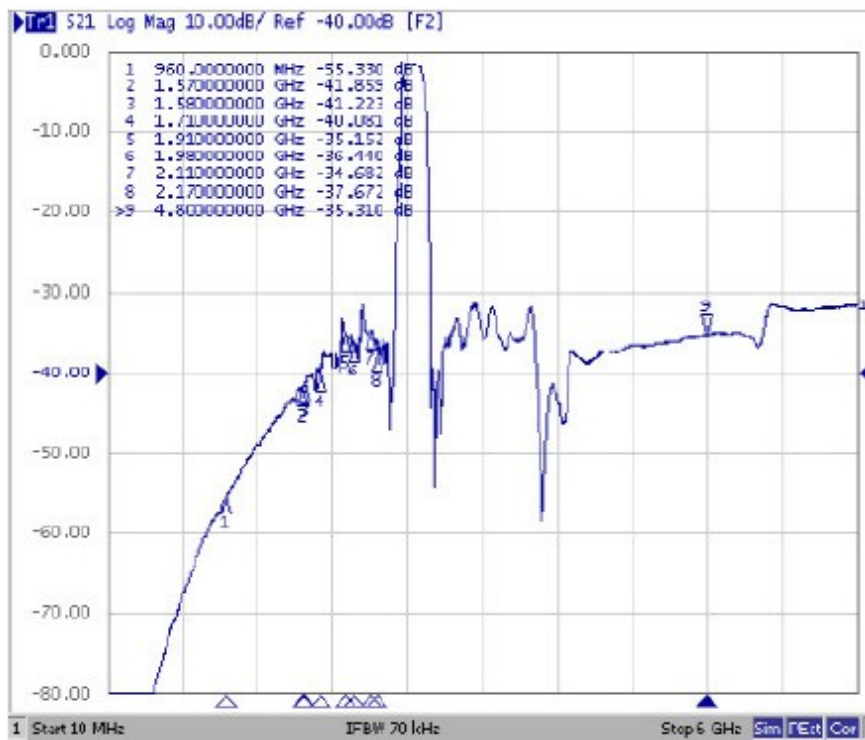
Case Style	SM1411-5
Lid Symbolization	$\bar{s}$

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

**NOTES:**

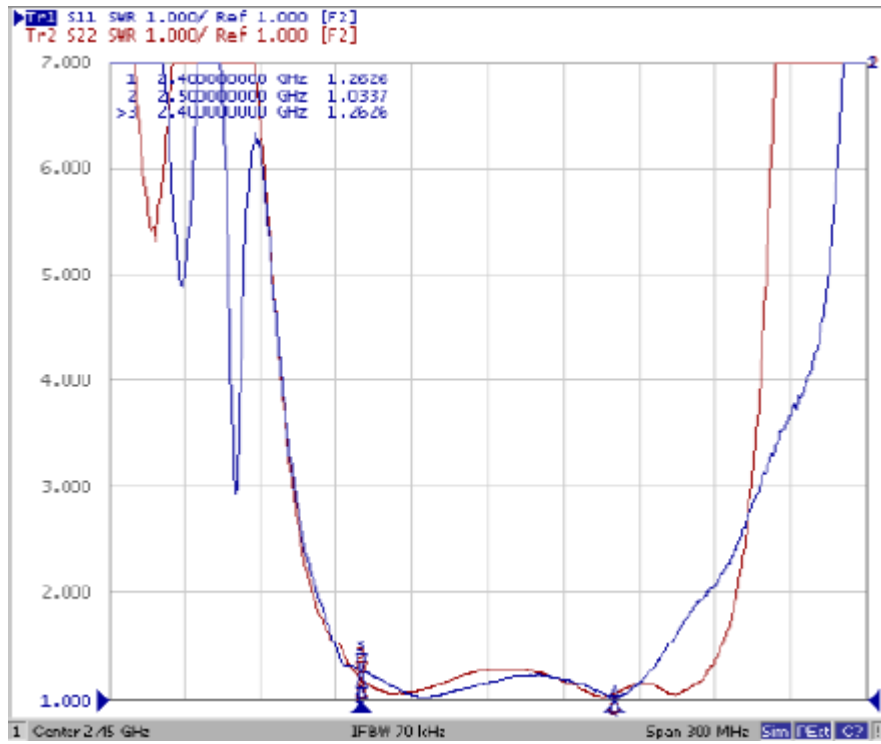
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

## Frequency Characteristics

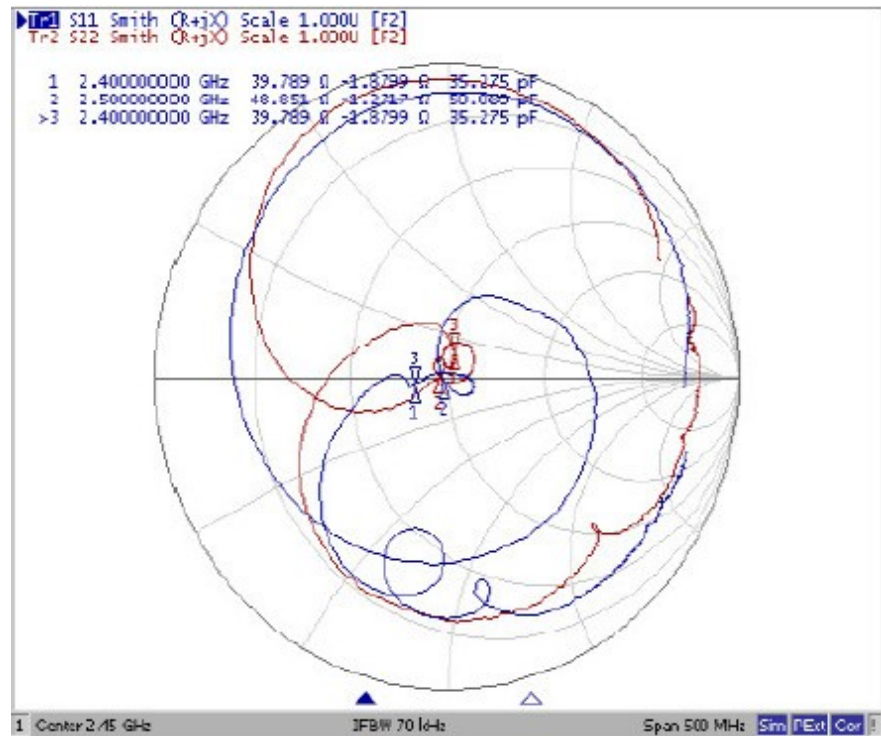


# Reflection Functions

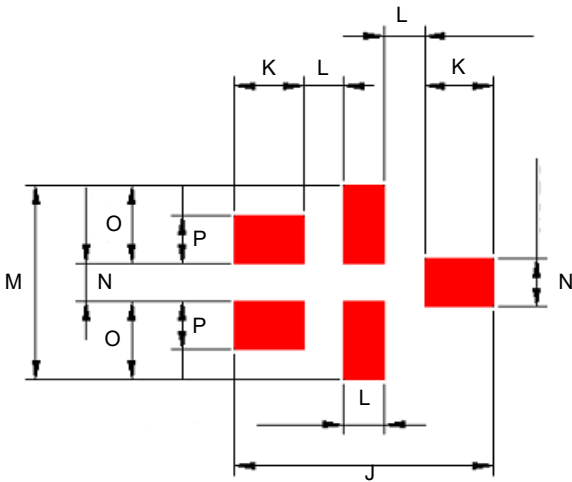
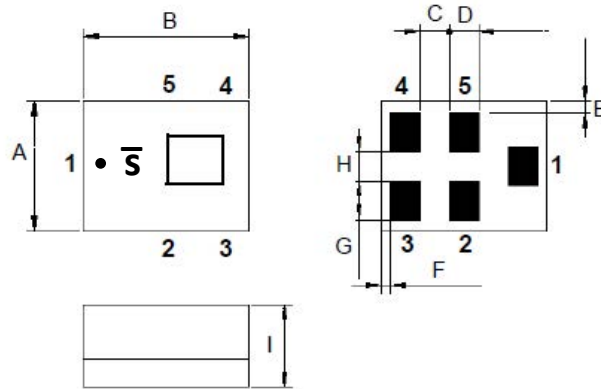
## VSWR



## Smith Chart



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



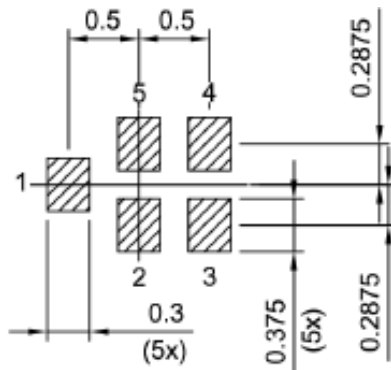
**PCB Footprint**

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	1.10	-	-	0.043	-
B	-	1.40	-	-	0.055	-
C	-	0.25	-	-	0.009	-
D	-	0.25	-	-	0.009	-
E	-	0.10	-	-	0.003	-
F	-	0.075	-	-	0.002	-
G	-	0.325	-	-	0.012	-
H	-	0.25	-	-	0.009	-
I	-	-	0.700	-	-	0.027
J	-	1.60	-	-	0.062	-
K	-	0.425	-	-	0.016	-
L	-	0.25	-	-	0.009	-
M	-	1.30	-	-	0.051	-
N	-	0.325	-	-	0.012	-
O	-	0.525	-	-	0.020	-
P	-	0.325	-	-	0.012	-

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Body	Epoxy Resin

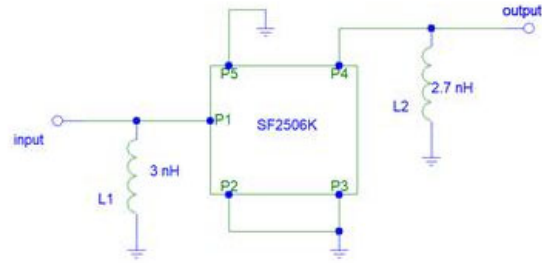
**Alternate PCB Footprint**

Land pattern  
THRU VIEW



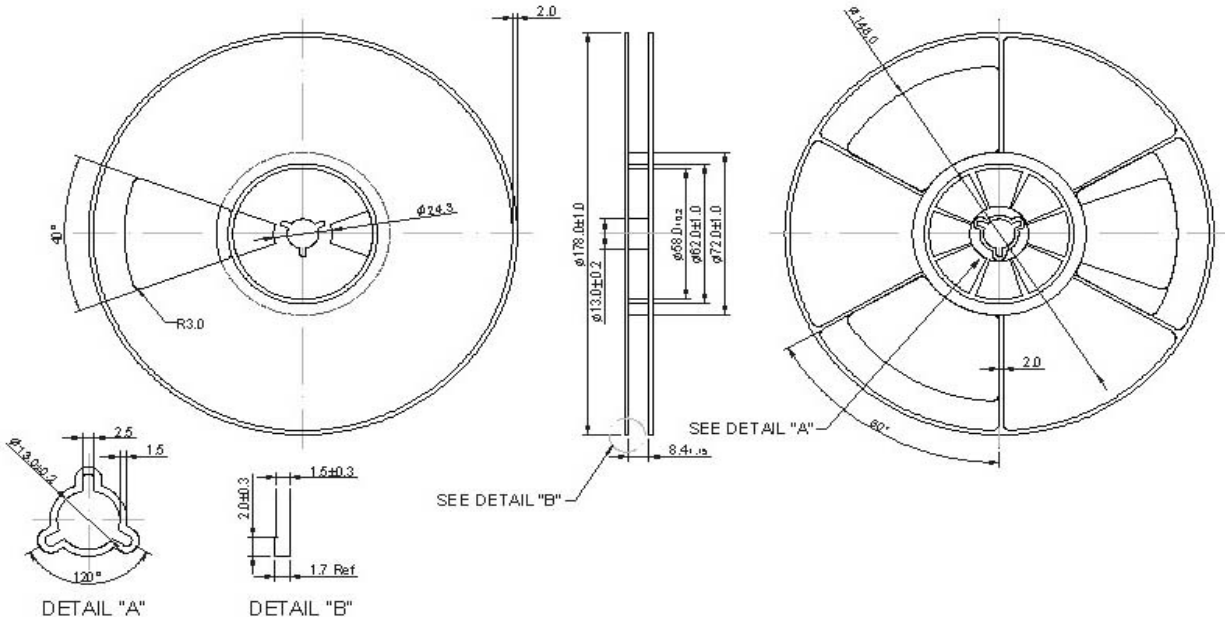
Landing pad tolerance -0.02

## Test Circuit

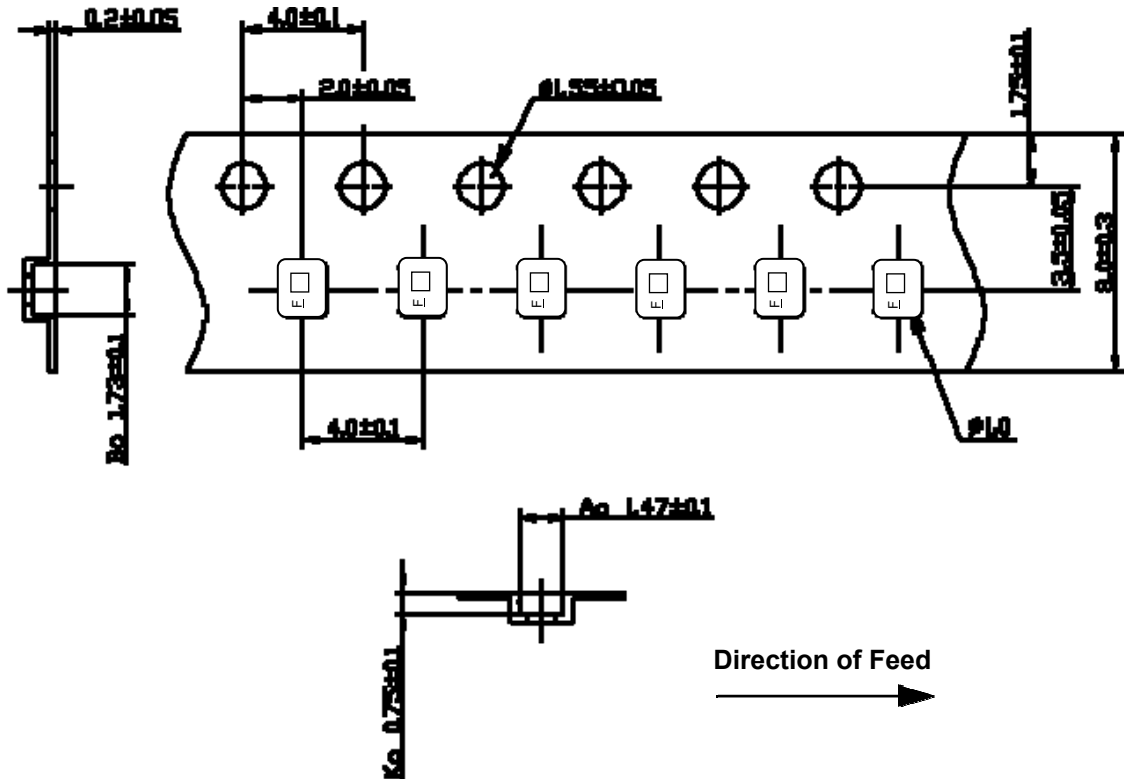


# Reel Dimensions - 7 inch Reel, 3000 Filters

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.

