

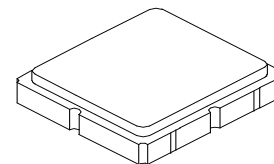
- Surface Mount 3.0 x 3.0 x 1.3 mm Package
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +95	°C
Storage Temperature Range	-40 to +95	°C
Solder Reflow Temperature, 10 seconds, 5 cycles maximum	260	°C

**SF2202E-1**

**2017.5 MHz  
SAW Filter**



**SM3030-6**

**Electrical Characteristics**

Characteristic	Sym	Min(-40~95°C)	Typ	Max(-40~85°C)	(-40~95°C)	Units
Center Frequency	$F_C$		2017.5			MHz
Insertion Loss, 2010 to 2025 MHz	IL		3.1	4.2	4.5	dB
Amplitude Ripple, 2010 to 2025 MHz			0.4	1.4	1.8	dB <sub>p-p</sub>
VSWR, 2010 to 2025			1.3:1		2.5:1	
Group Delay Ripple, 2010 to 2025 MHz			9	30	30	ns <sub>p-p</sub>
Attenuation, Referenced to 0 dB						dB
1700 to 1785 MHz		40	50			
1800 to 1860 MHz		45	51			
1920 to 1980 MHz		30	37			
2045 to 2070 MHz		6	33			
2070 to 2085 MHz		15	54			
2170 to 4000 MHz		30	33			
Source Impedance	$Z_S$		50			$\Omega$
Load Impedance	$Z_L$		50			
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	947, <u>YWWS</u>					

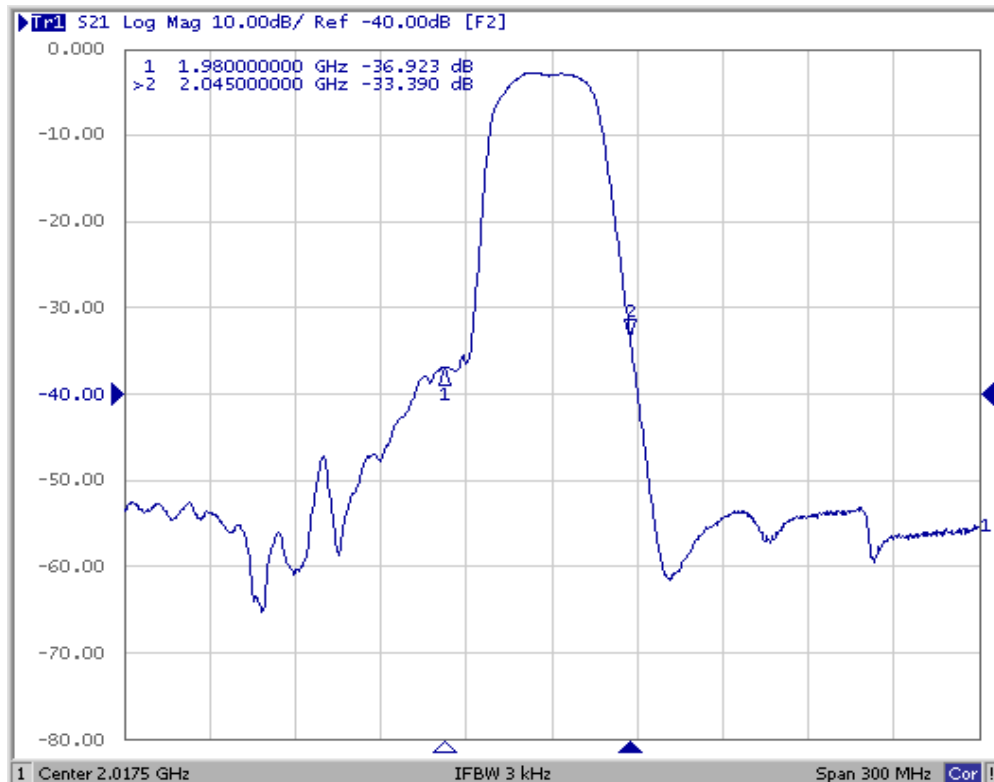
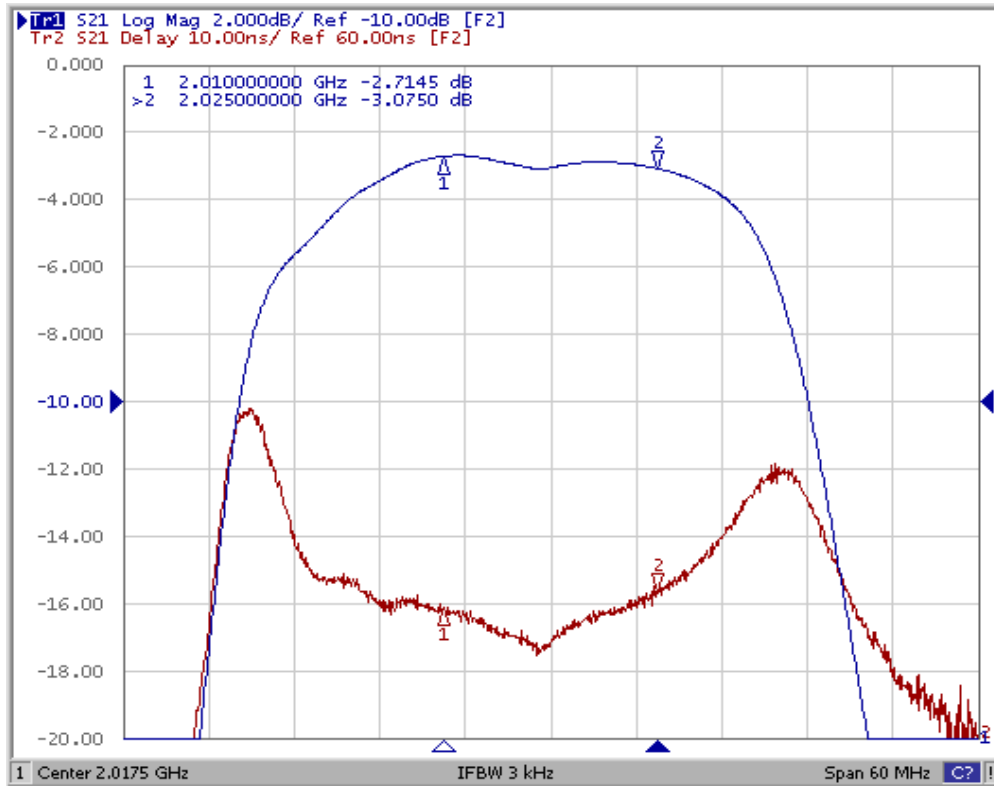


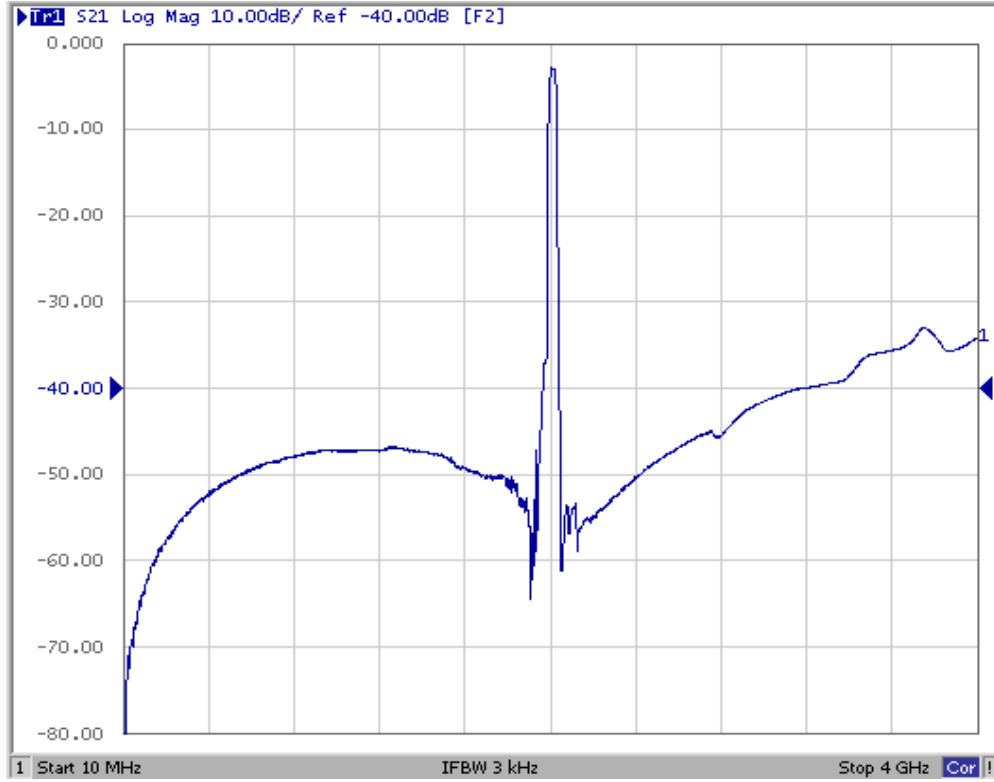
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

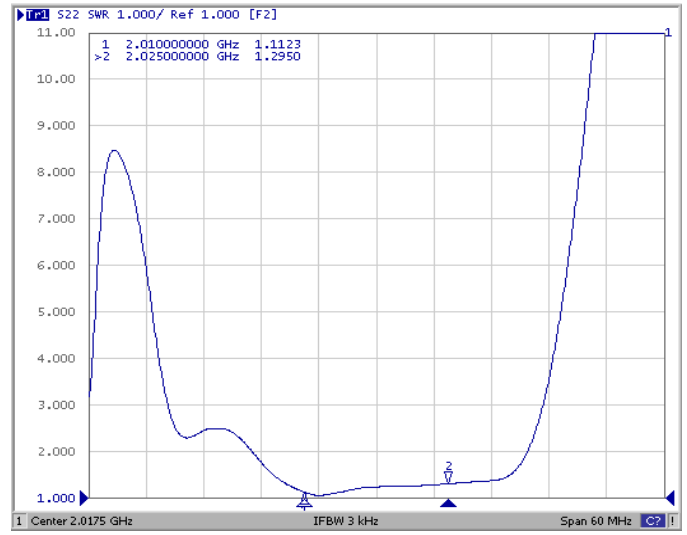
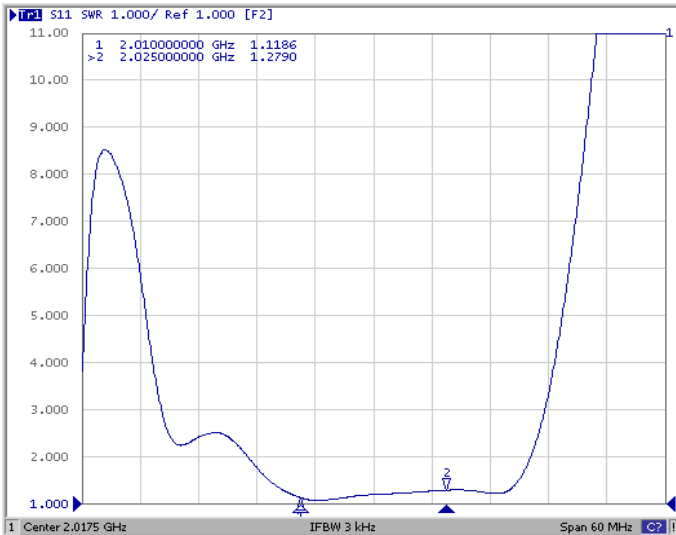
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Filter Response Plots



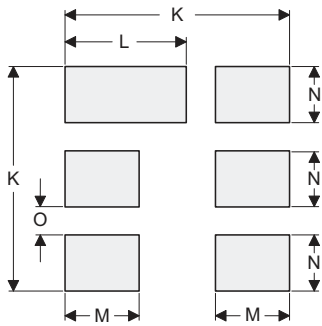
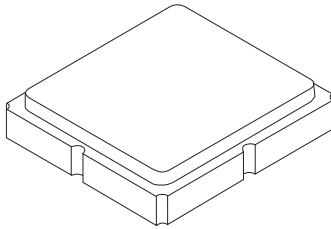


## Filter VSWR Plots



# SM3030-6 Case

## 6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

### Case and PCB Footprint Dimensions

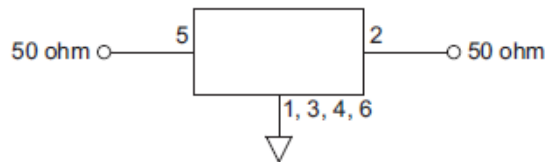
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

### Case Materials

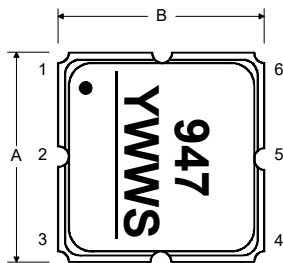
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

### Electrical Connections

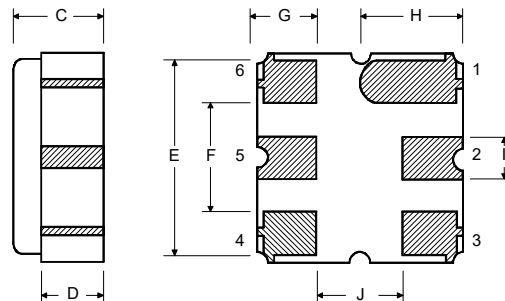
Connection	Terminals
Input	5
Output	2
Ground	All Others



### TOP VIEW



### BOTTOM VIEW





## 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.

