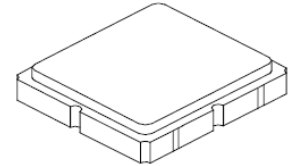


**SF2214E**

**815.00 MHz  
SAW Filter**



**SM3030-6**

- **Low-loss 815 MHz Filter**
- **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	5	V
Operating Temperature Range	-30 to +80	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/10 seconds maximum	265	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			815.00		MHz
Insertion Loss, 805 to 825 MHz	IL			2.8	3.5	dB
Peak-to-Peak Amplitude Ripple, 805 to 825 MHz				1.0	2.0	dB
Input/Output VSWR, 805 to 825 MHz	SWR			1.9:1	2.5:1	
Attenuation, Referenced to 0 dB:						dB
10 to 780 MHz			40	63		
851 to 856 MHz			28	50		
856 to 869 MHz			40	47		
869 to 896 MHz			45	52		
896 to 941MHz			40	62		
960 to 2200 MHz			40	46		
2200 to 2600 MHz			30	35		
Source Impedance	$Z_S$			50		$\Omega$
Load Impedance	$Z_L$			50		$\Omega$
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	950, YWWS					
Standard Reel Quantity	Reel Size 7 inch					500 Pieces/Reel
	Reel Size 13 inch					3000 Pieces/Reel

**Electrical Connections**

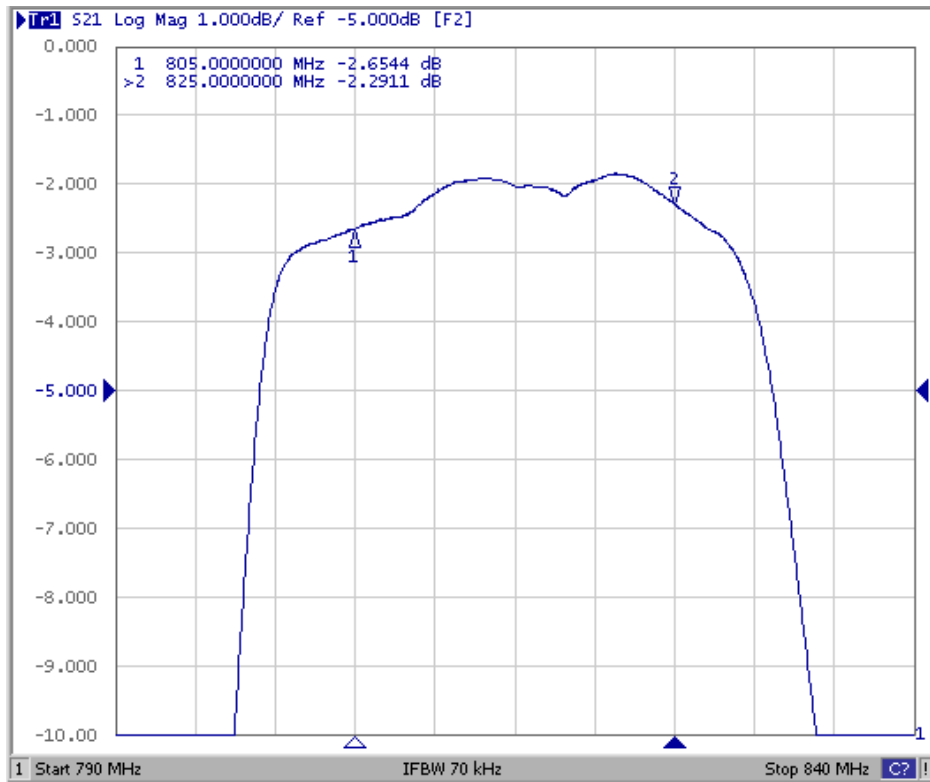
Connection	Terminals
Input	2
Output	5
Case Ground	All others

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

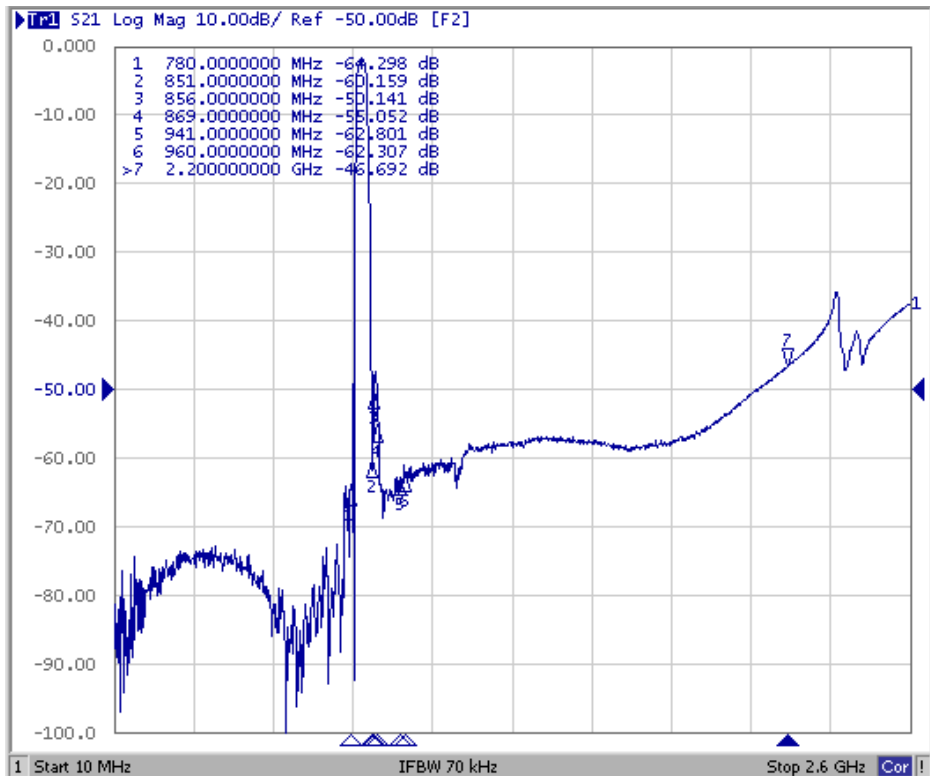
**NOTES:**

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.

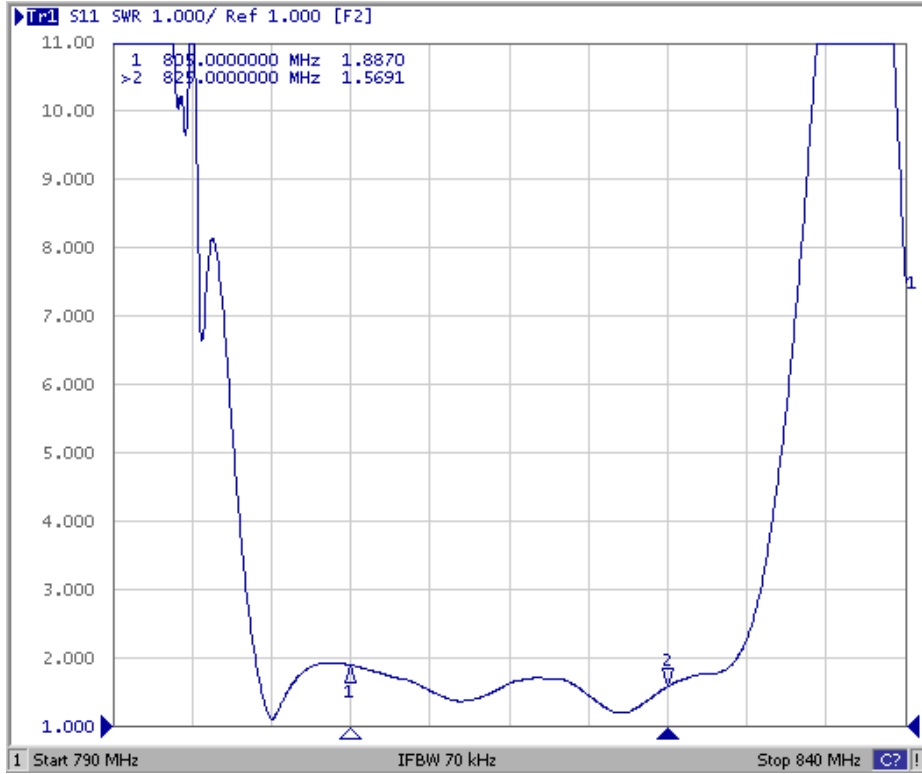
## Filter Passband Response



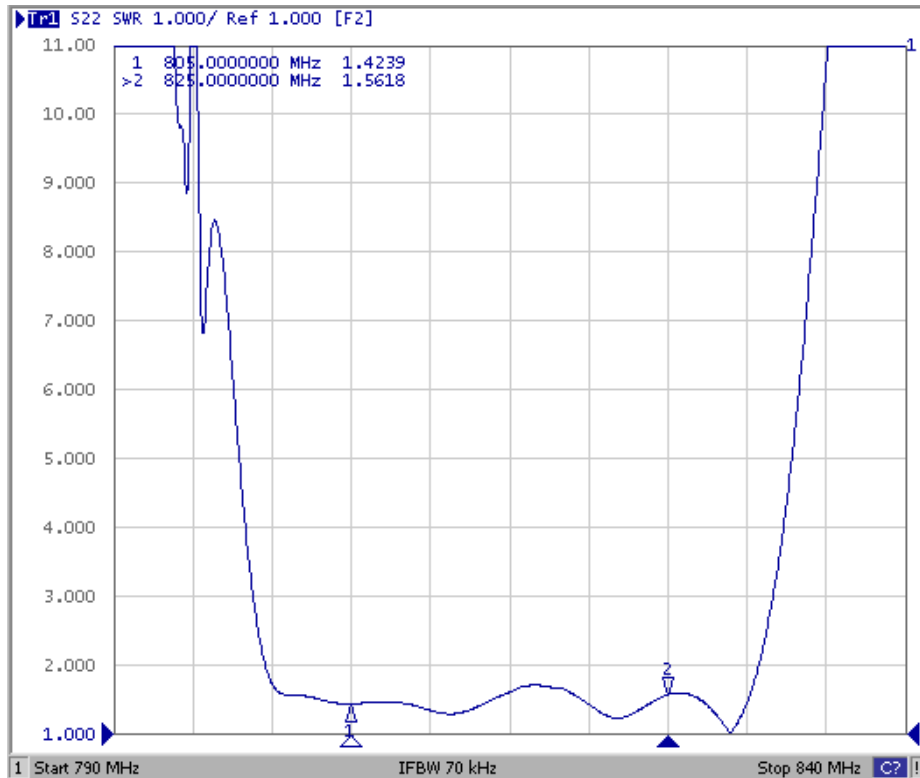
## Filter Broadband Response



## Filter Input VSWR Plot



## Filter Output VSWR Plot



# SM3030-6 Case

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



PCB Footprint Top View

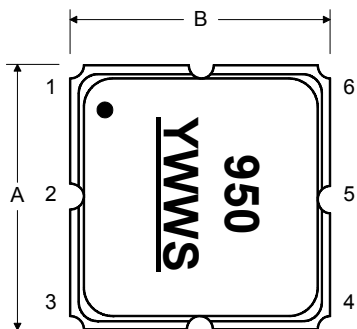
### Case and PCB Footprint Dimensions

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	

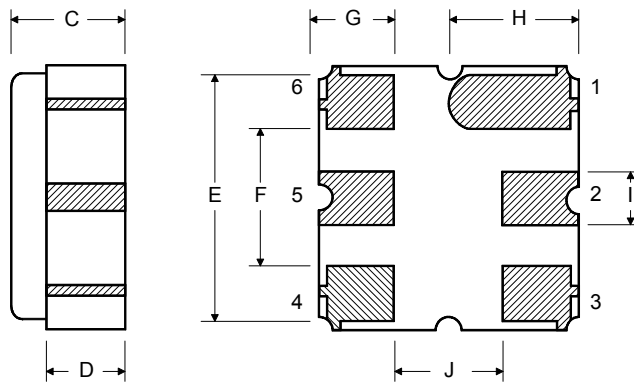
### Case Materials

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

### 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.

