



# THE DATASHEET OF SF2160E



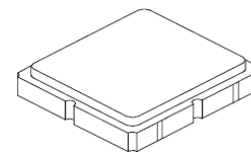
- RF SAW Filter, 2330 MHz, 60 MHz BW
- 3.0 x 3.0 x 1.4 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

#### Absolute Maximum Ratings

Rating	Value	Units
Input Power	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Component Storage Temperature Range	-50 to +95	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 Cycles/10 seconds Maximum	265	°C
HBM level = 250V/MM level = 200V/CDM level = 1000V		

**SF2160E**

**2330 MHz  
SAW Filter**



**SM3030-6**

#### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			2330		MHz
Insertion Loss 2300 to 2360 MHz	IL			2.4	3.2	dB
Amplitude Ripple:						
2300 to 2360 MHz				1.1	2	dB
2300 to 2320 MHz				0.3	1	
2320 to 2340 MHz				0.6	1	
2340 to 2360 MHz				0.5	1	
Return Loss 2300 to 2360 MHz			9	9.5		dB
Attenuation Referenced to 0 dB:						
DC to 2085 MHz			25	30		dB
2097 to 2235 MHz			25	36		
2235 to 2256 MHz			15	29		
Case Style			SM3030-6 3 x 3 x 1.4 mm Surface-Mount			
Lid Symbolization, Y=year, WW=week, S=shift)			826, YWWS			

#### Electrical Connections

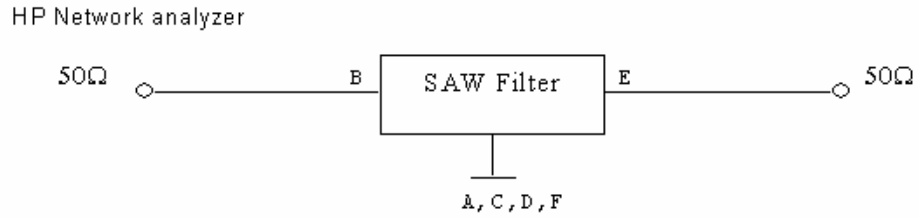
Connection	Terminals
Input	2
Output	5
Ground	All others

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

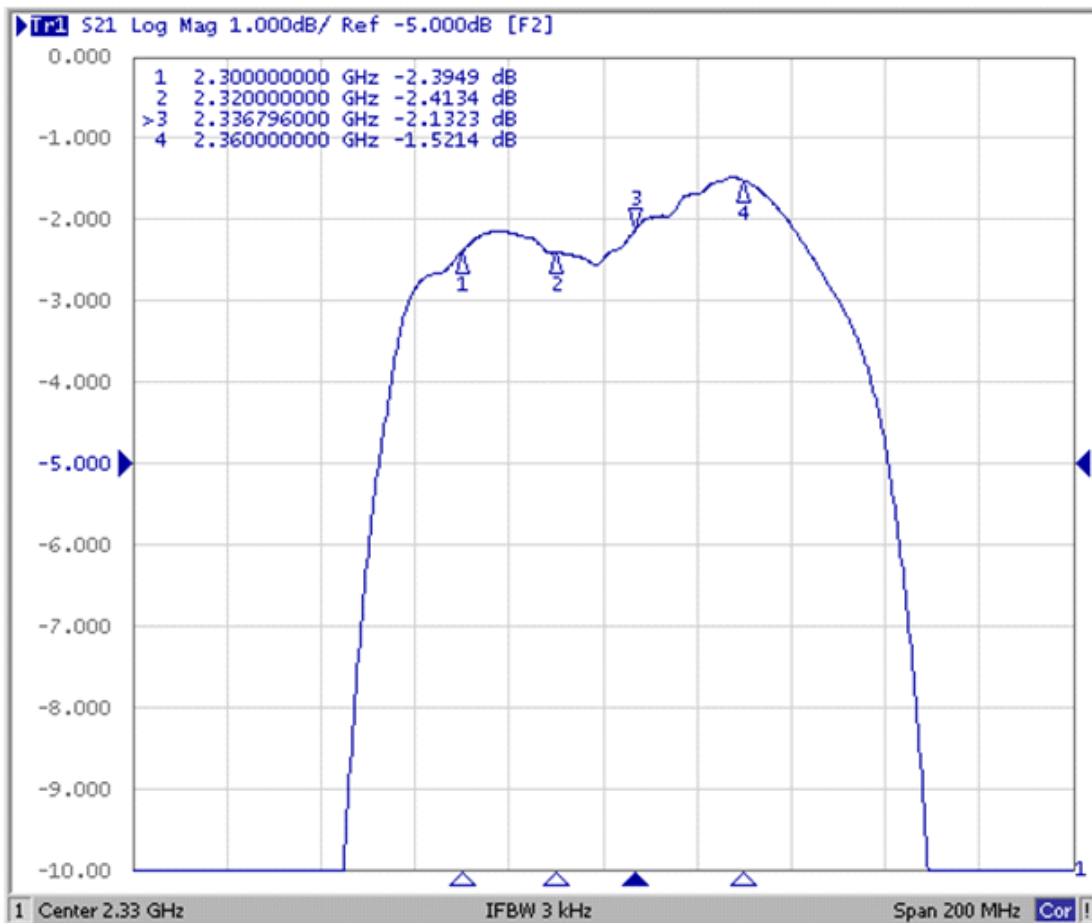
#### NOTES:

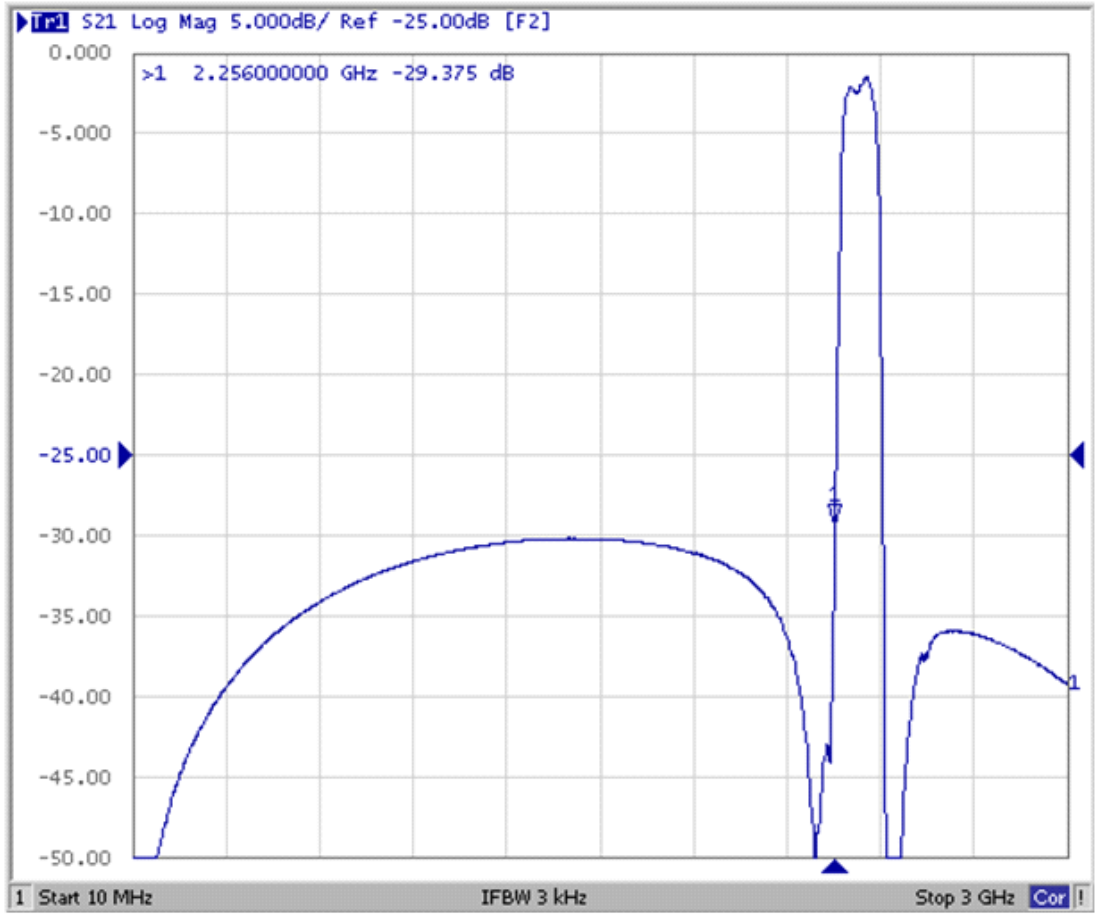
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

## Testing Environment

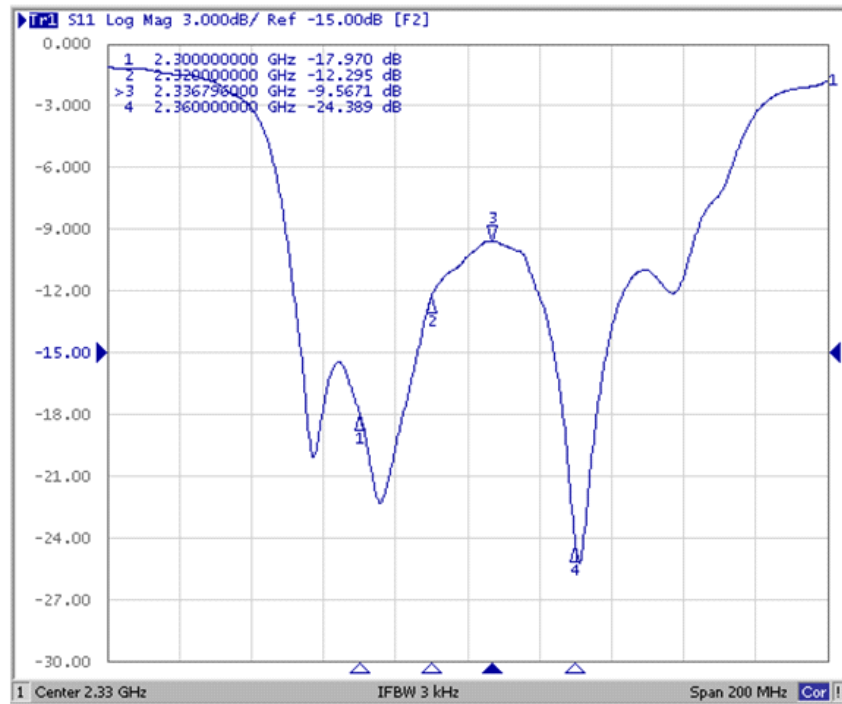


## Frequency Response

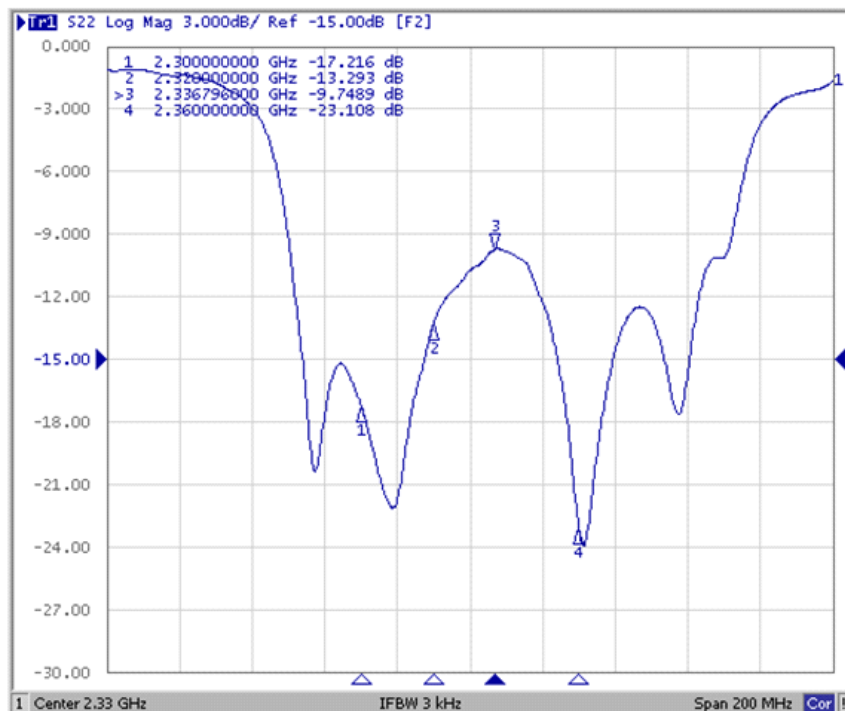




## S11

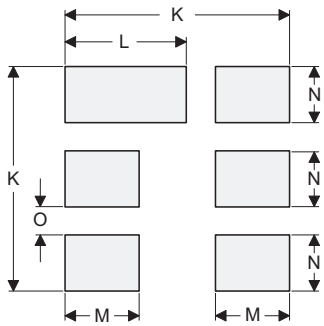
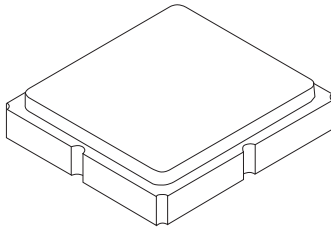


## S22



# SM3030-6 Case

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



PCB Footprint Top View

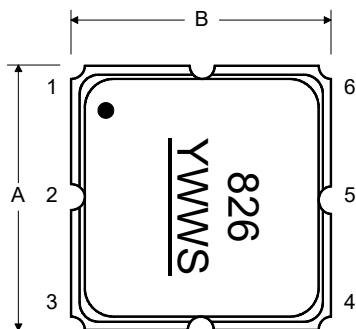
### Case and PCB Footprint Dimensions

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	

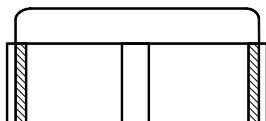
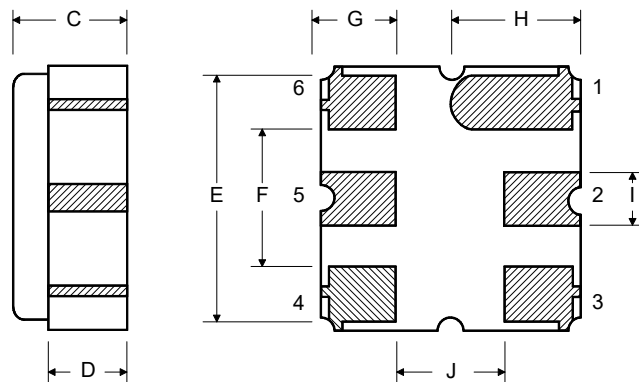
### Case Materials

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



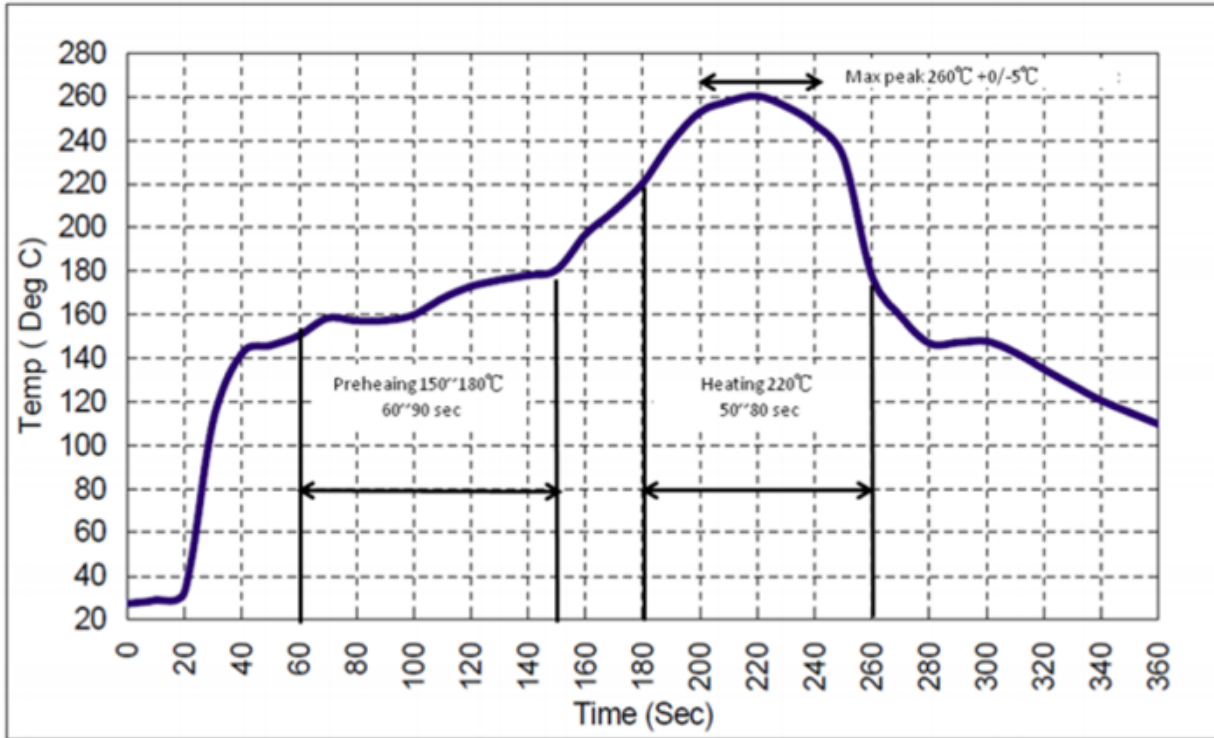
### BOTTOM VIEW







## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180° for 60~90 seconds.
2. Ascending time to preheating temperature 150° shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C peak (10 seconds.)
4. Time: 5 times maximum



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-  [RF Monolithics, Inc Information](#)

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