

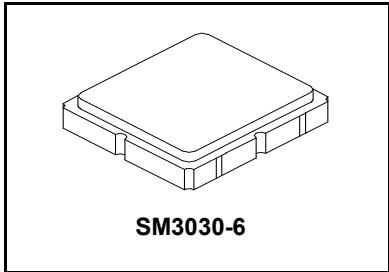


- Surface Mount 3.0 x 3.0 mm Package
- Complies with Directive 2002/95/EC (RoHS)
- AEC-Q200 Qualified

RoHS  
Compliant

SF2393E

1570 MHz  
SAW Filter



**Absolute Maximum Ratings**

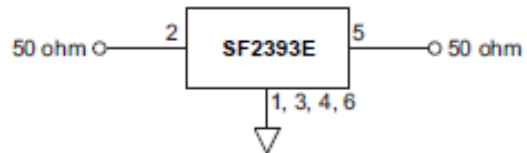
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			1570		MHz
Insertion Loss, (1530 to 1610 MHz)	IL			3.6	4.2	dB
Pass Band Ripple, (1530 to 1610 MHz)				1.3	2.2	
Group Delay Variation (1530 to 1610 MHz)				4	30	ns
Return Loss (1530 to 1610 MHz)			6	7.5		dB
Attenuation, Referenced from 0 dB:						
50 to 1370 MHz			20	28		dB
1700 to 2000 MHz			10	24		
Temperature coefficient of frequency				-80		Ppm/°C
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	6Z, YWWS					

**Electrical Connections**

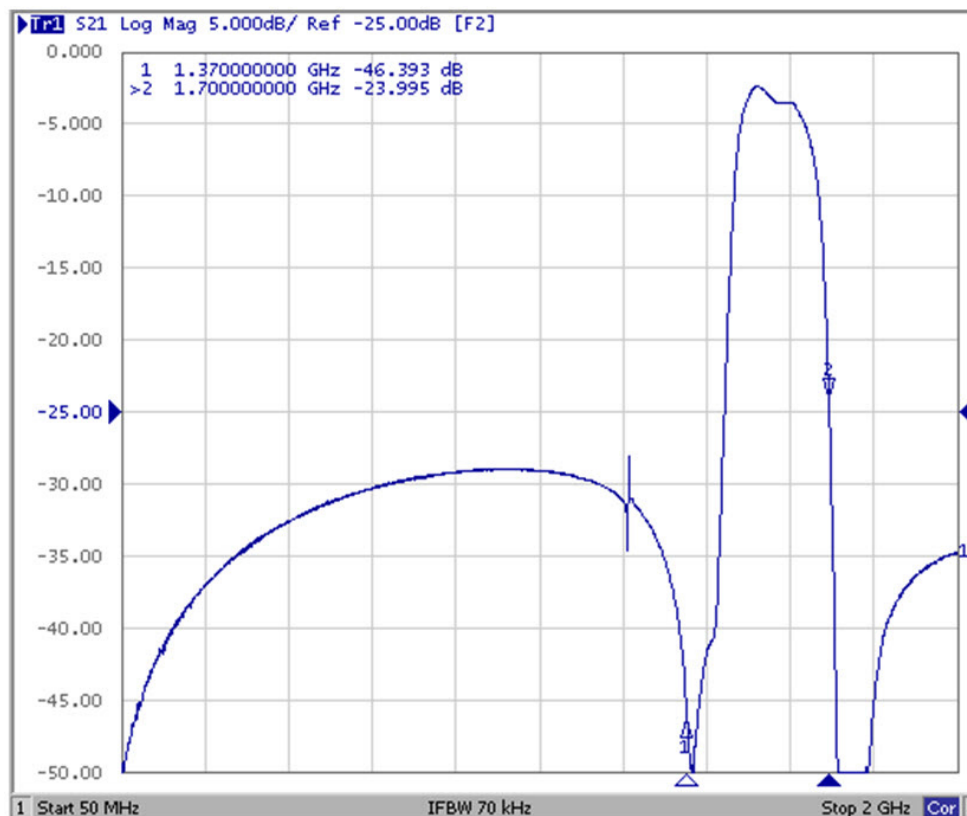
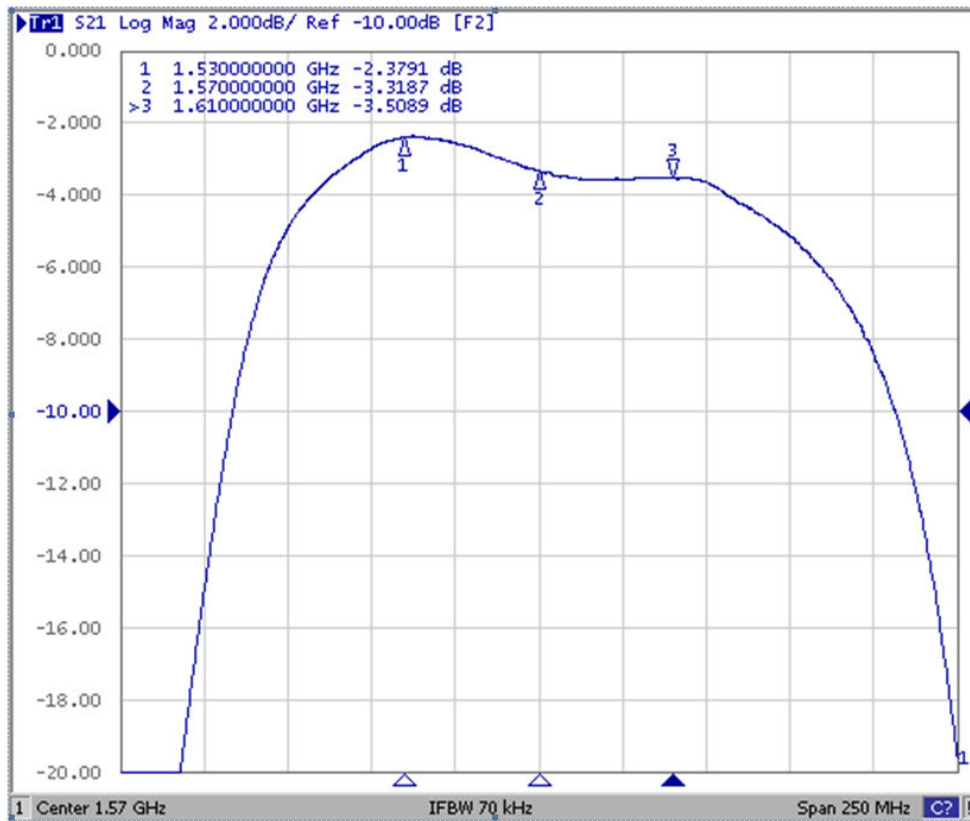
Connection	Terminals
Input	2
Output	5
Case Ground	All others



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

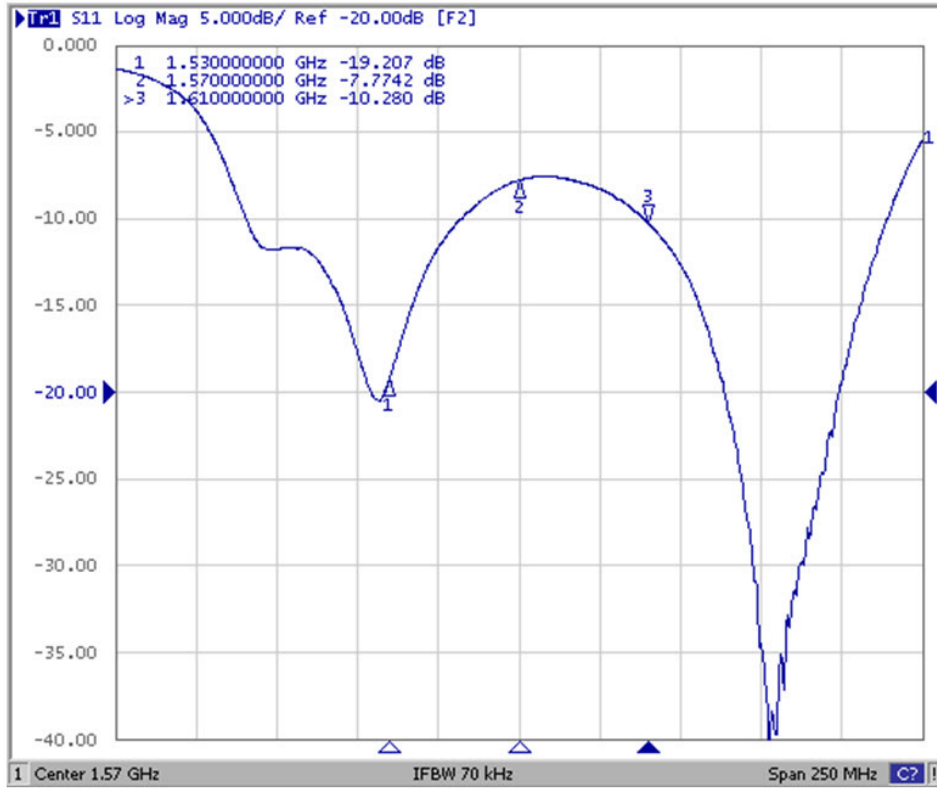
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Frequency Characteristics

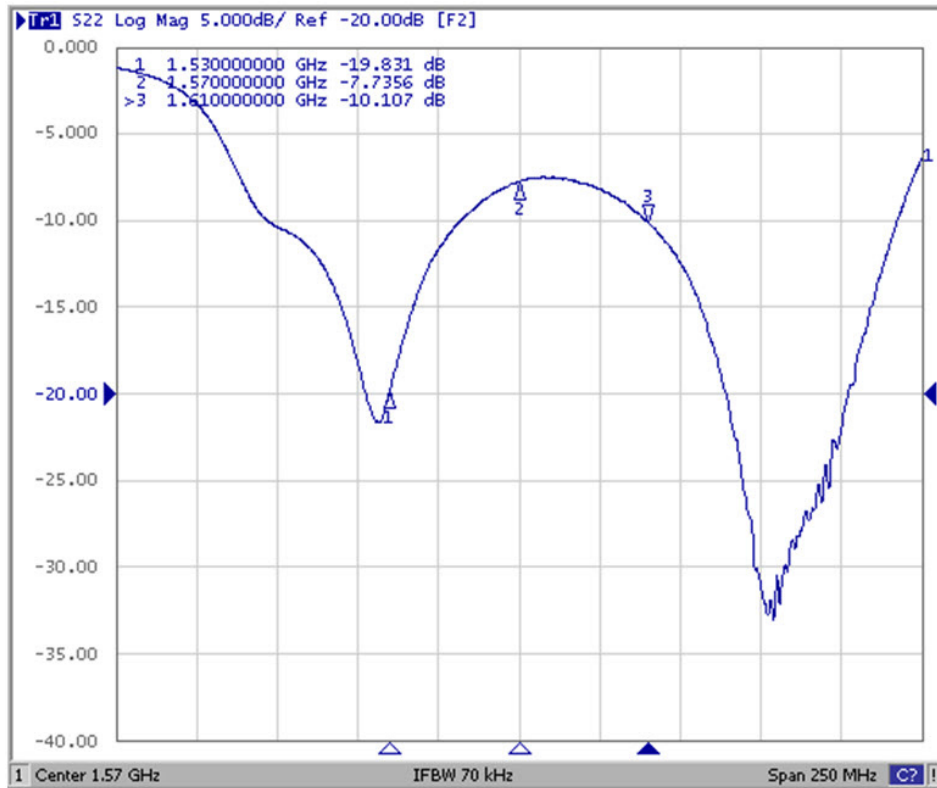


# Reflection Functions

S11

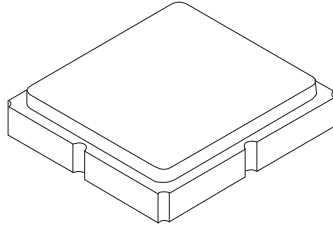


S22



# SM3030-6 Case

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



PCB Footprint Top View

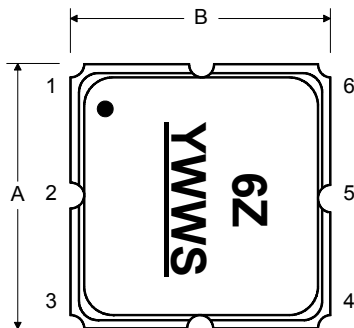
### Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.90	3.00	3.10	0.114	0.118	0.122
B	2.90	3.00	3.10	0.114	0.118	0.122
C	-	-	1.40	-	-	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.39	2.54	2.69	0.094	0.110	0.105
F	1.45	1.60	1.75	0.057	0.063	0.068
G	0.70	0.85	1.00	0.027	0.033	0.039
H	1.35	1.50	1.65	0.053	0.059	0.064
I	0.45	0.60	0.75	0.017	0.024	0.029
J	1.15	1.30	1.45	0.045	0.051	0.057
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	-

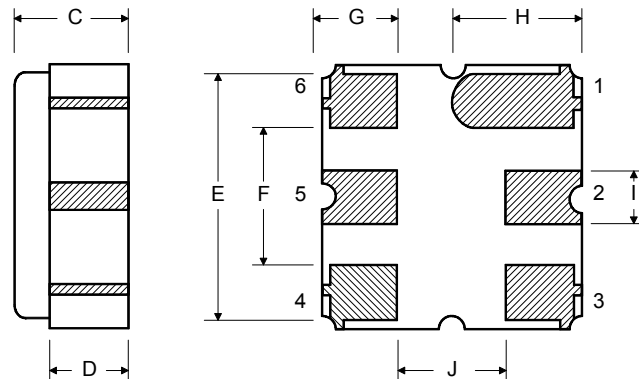
### Case Materials

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
Pb Free	

### TOP VIEW

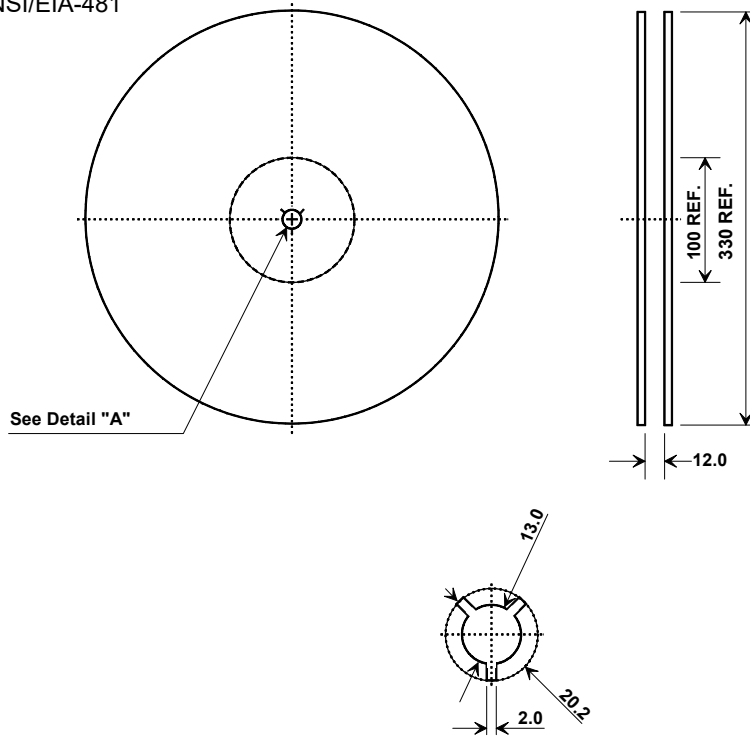


### BOTTOM VIEW



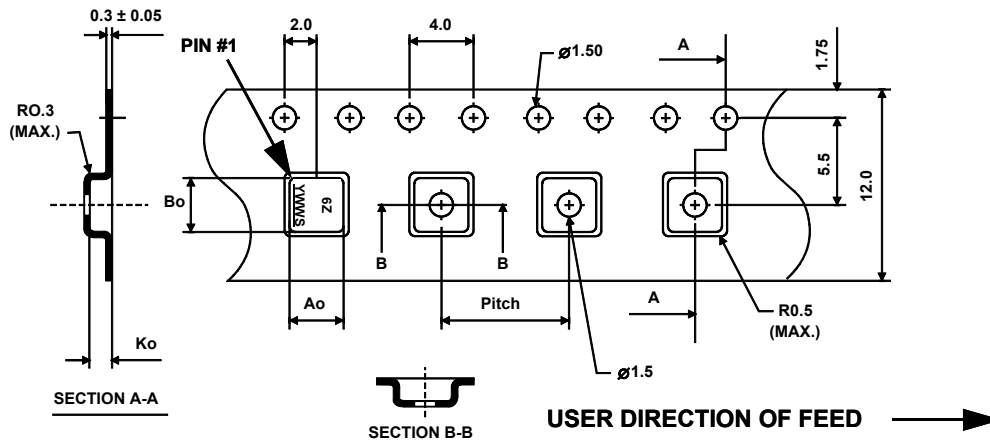
# Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481



## COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



## 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.

