

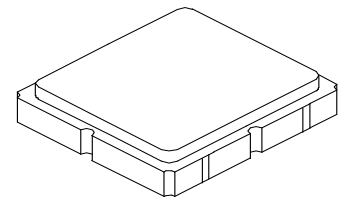
- **Designed for RF Front-end Applications**
- **Low Insertion Loss**
- **3.0 x 3.0 x 1.3 mm Surface-mount Case**
- **No Matching Circuit Required**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+20	dBm
DC Voltage on any Non-ground Terminal	3	Volts
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Solder Reflow Temperature - 5 Cycles Maximum	260°C for 10 seconds	

SF1186E-3

**1575.45MHz
SAW Filter**



SM3030-6

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1575.45		MHz
Insertion Loss, 1565.45 to 1585.45 MHz	IL				2.8	dB
Amplitude Ripple, 1565.45 to 1585.45 MHz					2.0	dB _{p-p}
VSWR, 1565.45 to 1585.45 MHz					2.0	
Attenuation, referenced to 0 dB						dB
D.C. to 600 MHz			30			
600 to 1500 MHz			27			
1500 to 1525 MHz			20			
1625 to 1675 MHz			20			
1675 to 3000 MHz			30			
Single-Ended Input / Output Impedance Match	No matching network required for operation at 50 ohms					
Case Style	SM3030-6, 3 x 3 mm Nominal Footprint					
Lid Symbolization, Y=year, WW=week, S=shift	E5, YWWS					

Electrical Connections

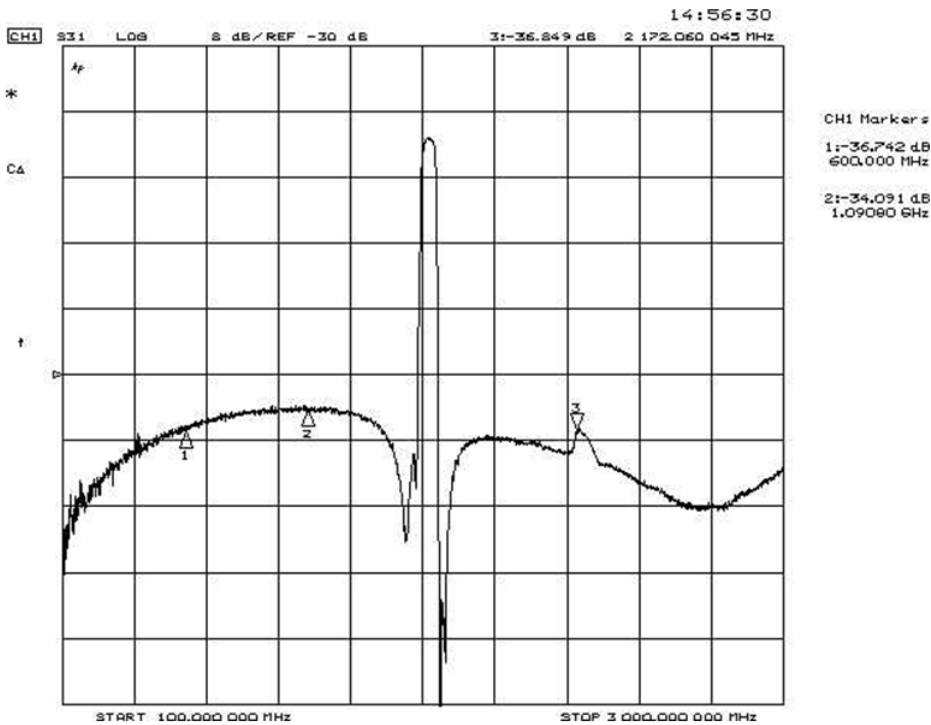
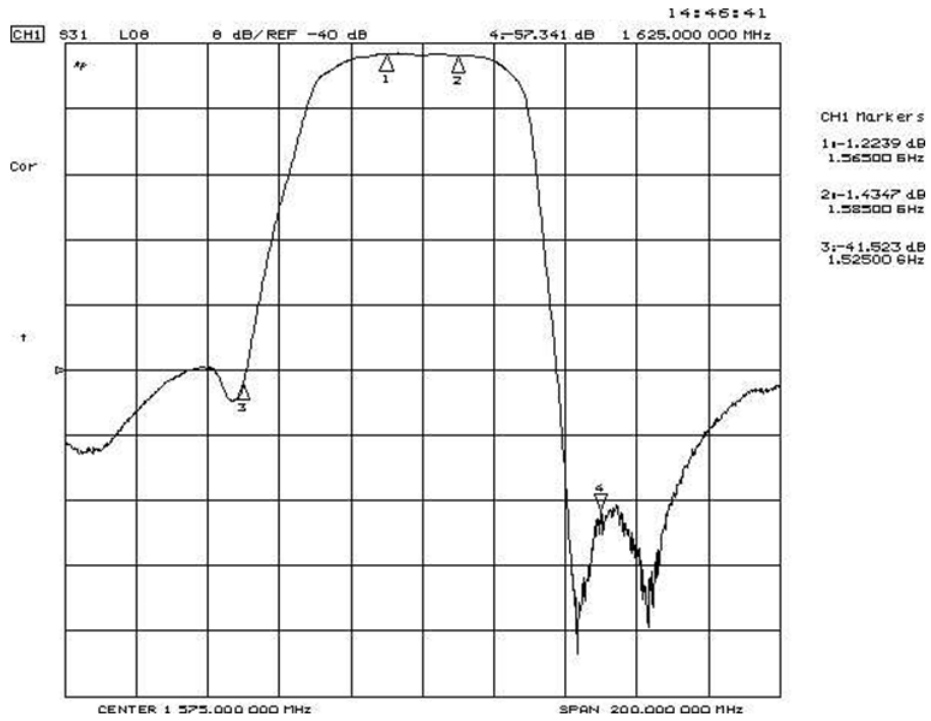
Pin #	Description	Pin #	Description
1	Ground	4	Ground
2	Input	5	Output
3	Ground	6	Ground

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

NOTES:

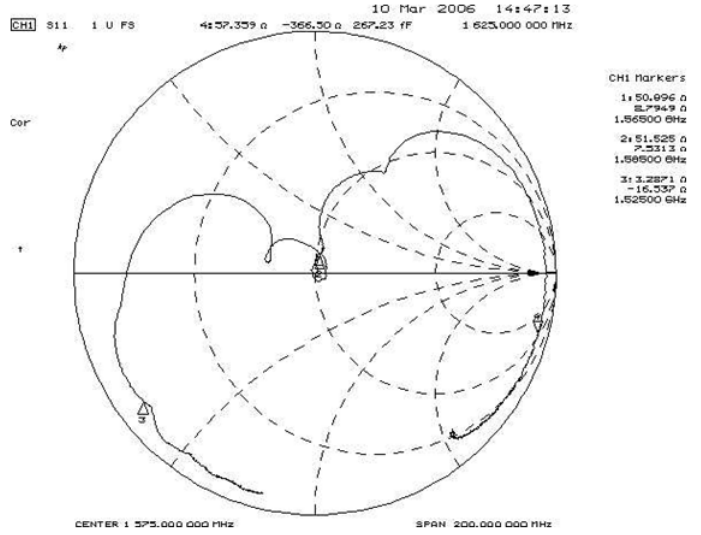
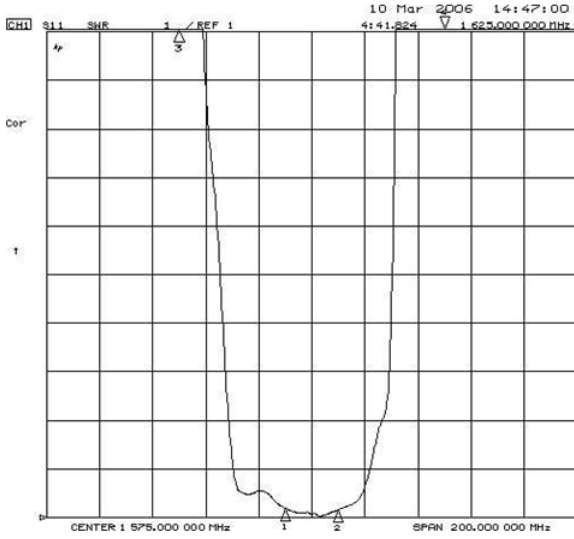
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics

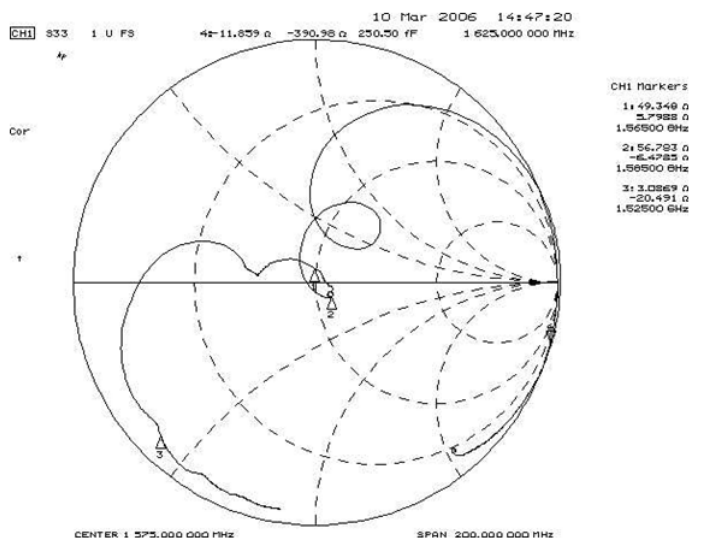
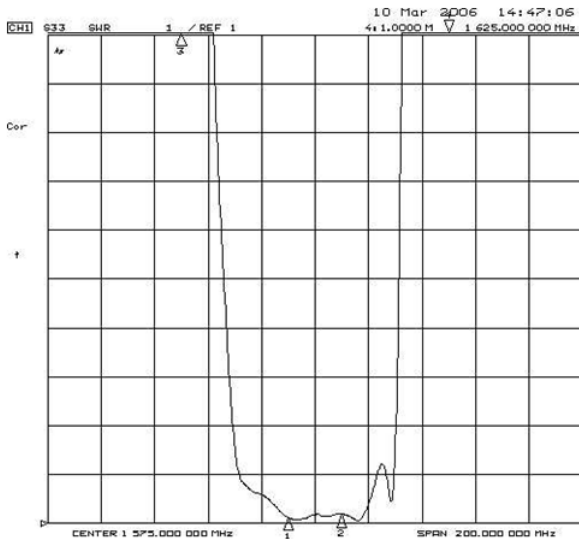


Reflection Functions:

S11 VSWR

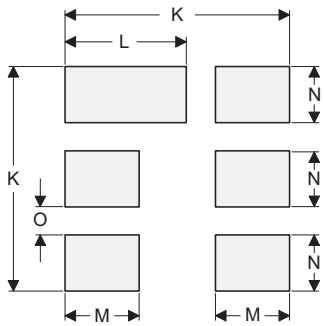
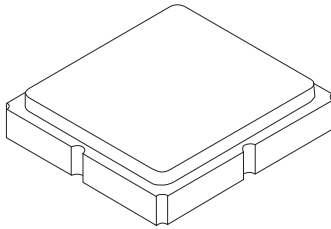


S22 VSWR



SM3030-6 Case

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



PCB Footprint Top View

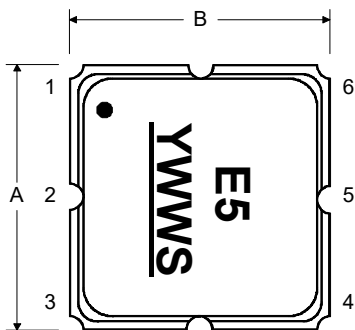
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.99	3.00	3.01	0.117	0.118	0.118
B	2.99	3.00	3.01	0.117	0.118	0.118
C	-	-	1.40	-	-	0.055
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.35	2.50	2.65	0.092	0.110	0.104
F	1.45	1.60	1.57	0.058	0.063	0.061
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	0.017
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	

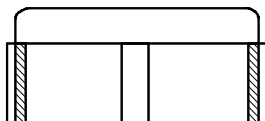
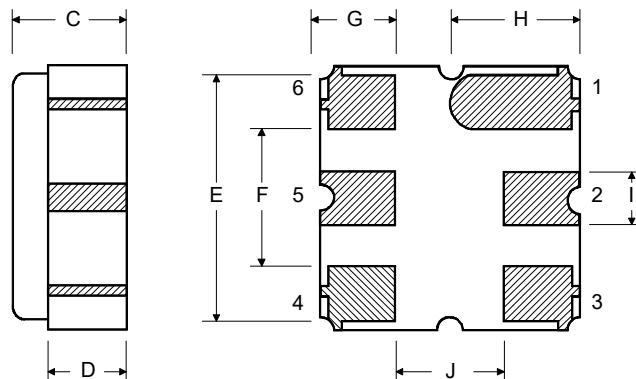
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

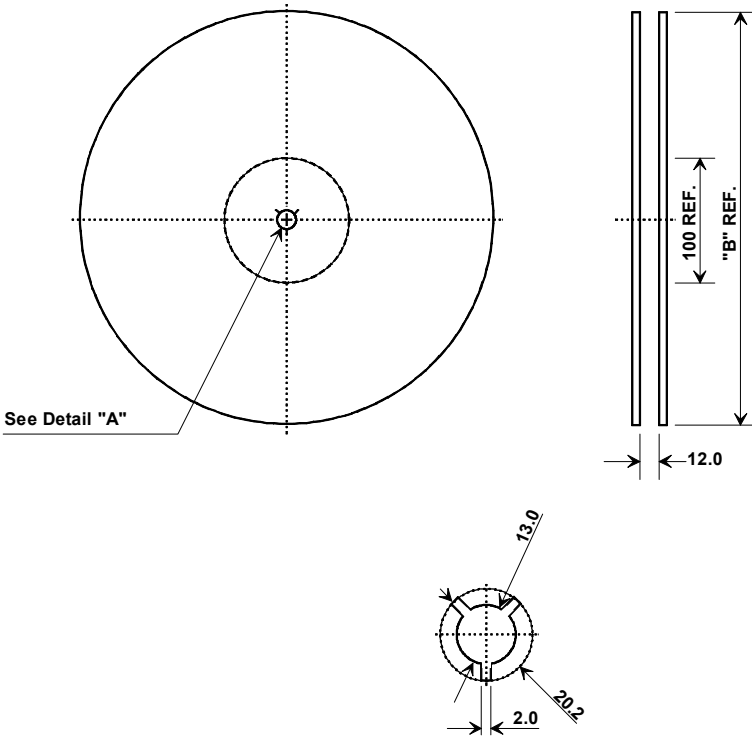
TOP VIEW



BOTTOM VIEW



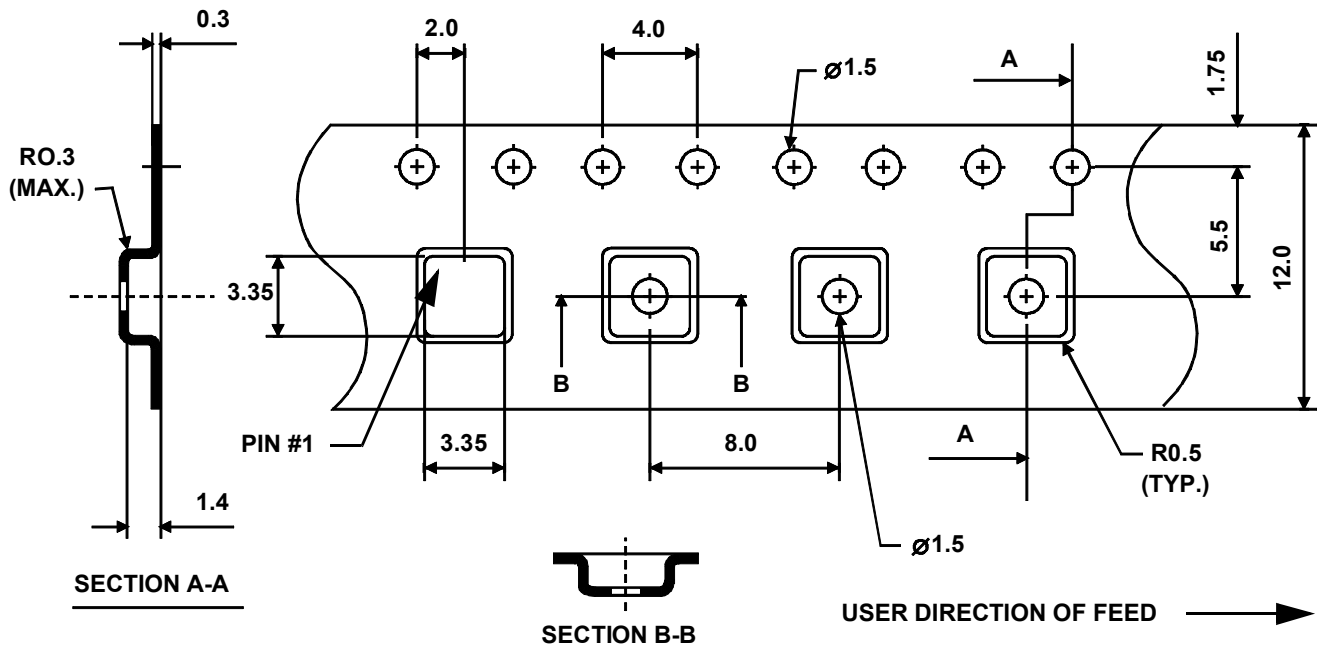
Tape and Reel Specifications



Tape and Reel Standard per ANSI/EIA-481

"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

COMPONENT ORIENTATION



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.

