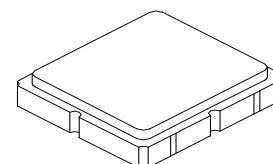


SF2208E

**1227 MHz
SAW Filter**



SM3030-6

- **No Matching Network Required for 50 Ω Operation**
- **Surface-mount 3.0 x 3.0 mm Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

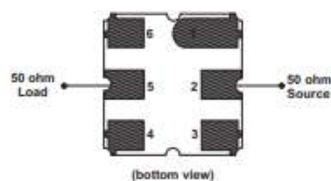
Rating	Value	Units
Input Power Level	20	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-20 to +70	°C
Storage Temperature Range in Tape and Reel	-30 to +85	°C
Solder Reflow Temperature, 10 seconds, 5 cycles maximum	260	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			1227		MHz
Insertion Loss, 1227 MHz	IL			0.95	1.30	dB
Amplitude Ripple, 1217 to 1237 MHz				0.1	0.8	
Input/Output VSWR, 1217 to 1237 MHz				1.3:1	2.0:1	
Attenuation, 0 dB Reference:						dB
DC to 600 MHz			10	26.4		
600 to 1177 MHz			10	21.6		
1277 to 1290 MHz			20	36.0		
1290 to 3000 MHz			10	25.2		
Source Impedance	Z_s			50		Ω
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	943, <u>YWWS</u>					
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

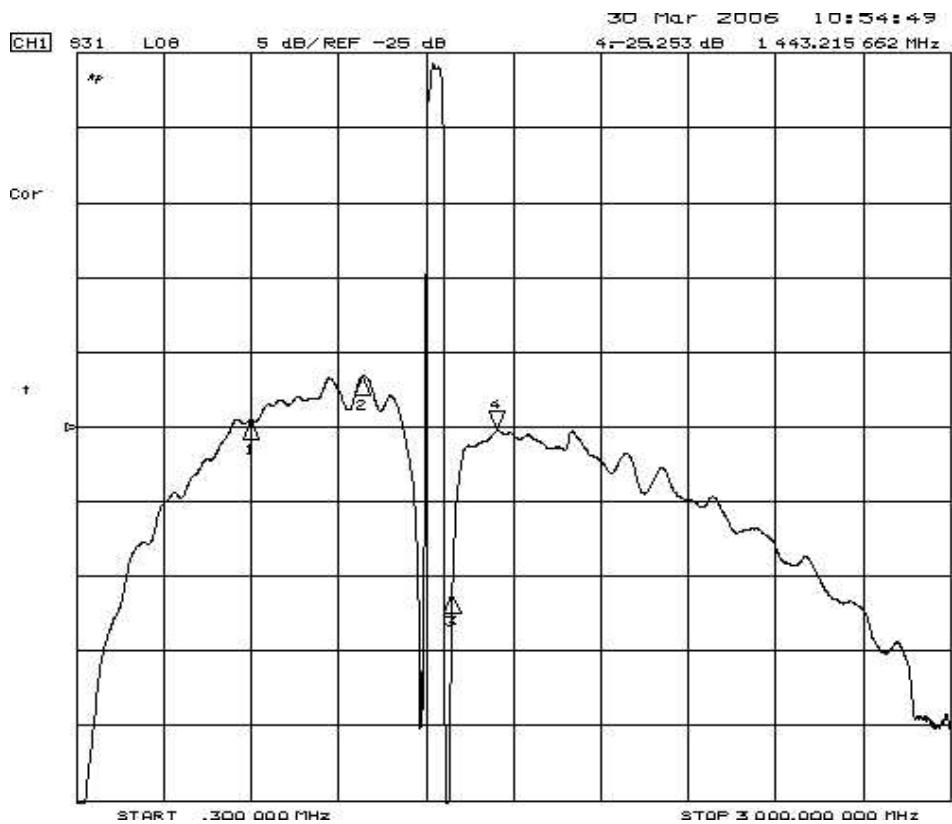
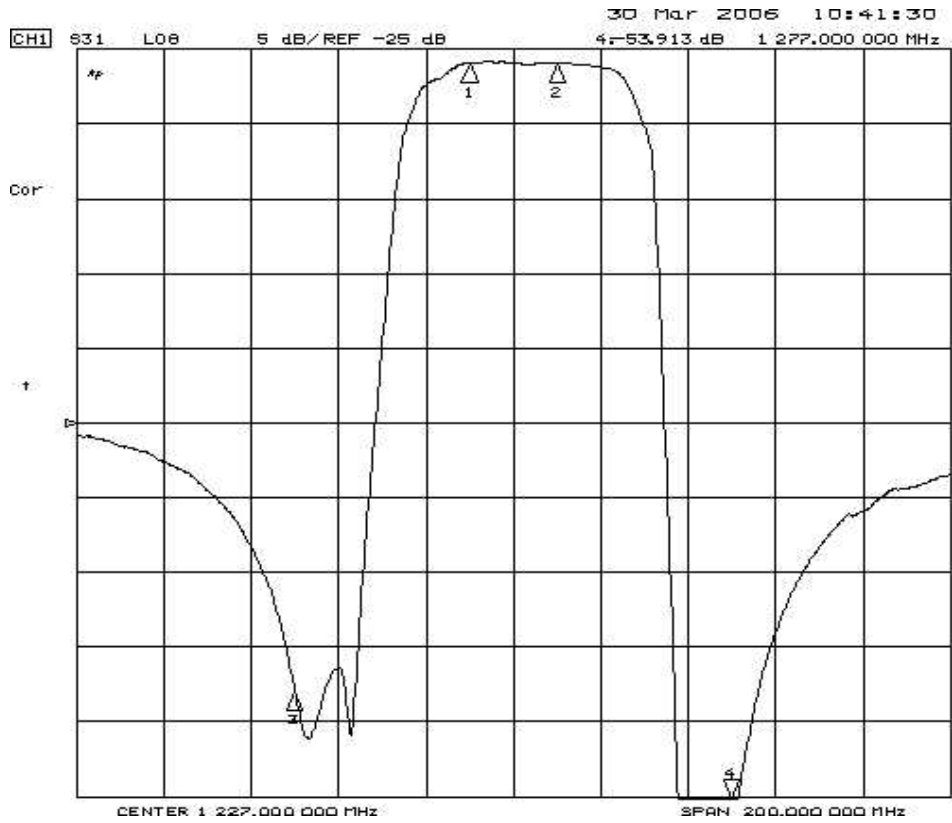


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

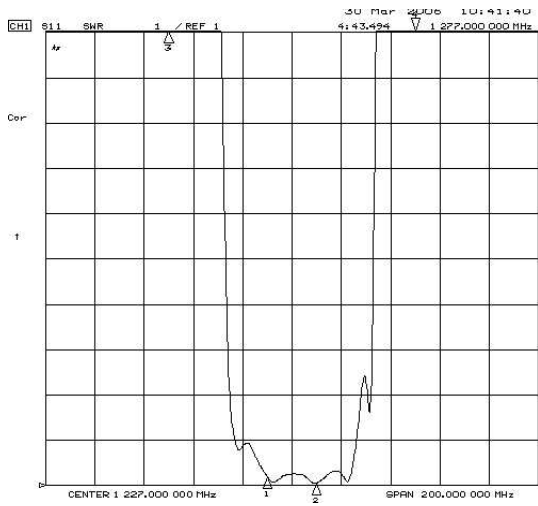
NOTES:

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.

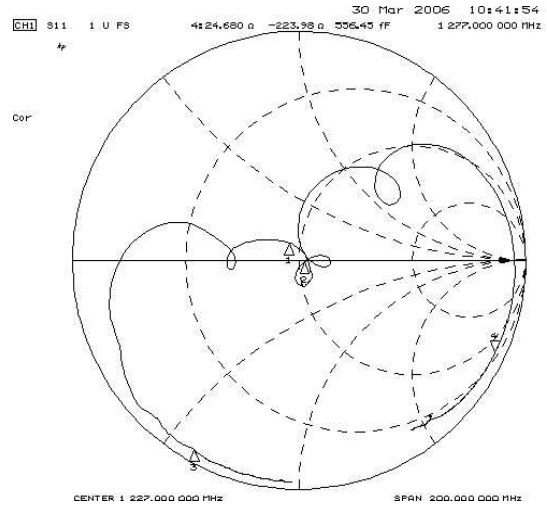
Filter Frequency Response



Filter Input Impedance

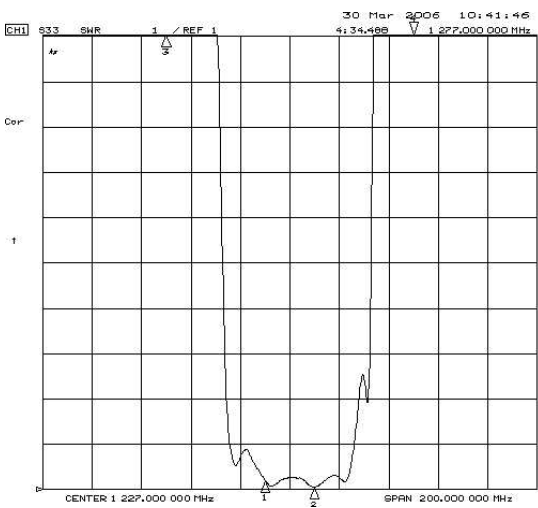


CHI Markers
 1: 1.1974
 1.21700 GHz
 2: 1.0527
 1.23700 GHz
 3: 37.229
 1.17700 GHz

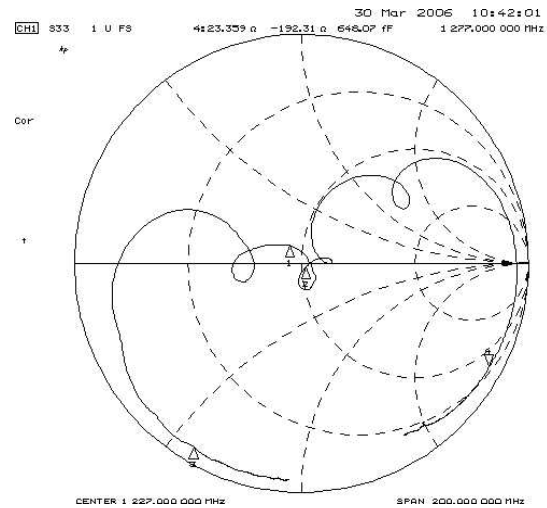


CHI Markers
 1: 45.289 a
 7.0352 a
 1.21700 GHz
 2: 52.523 a
 -744.14 na
 1.23700 GHz
 3: 1.7930 a
 -23.343 a
 1.17700 GHz

Filter Output Impedance



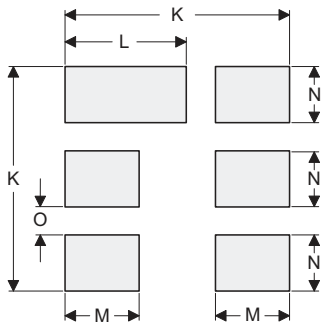
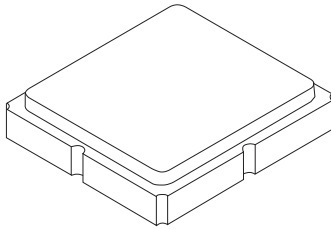
CHI Markers
 1: 1.2039
 1.21700 GHz
 2: 1.0520
 1.23700 GHz
 3: 29.312
 1.17700 GHz



CHI Markers
 1: 44.656 a
 8.9727 a
 1.21700 GHz
 2: 52.111 a
 -14.980 a
 1.23700 GHz
 3: 2.3330 a
 -26.442 a
 1.17700 GHz

SM3030-6 Case

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



PCB Footprint Top View

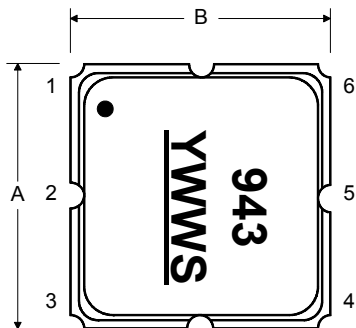
Case and PCB Footprint Dimensions

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	

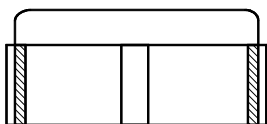
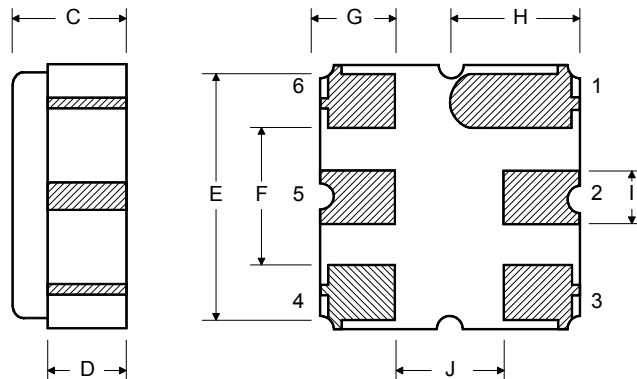
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 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

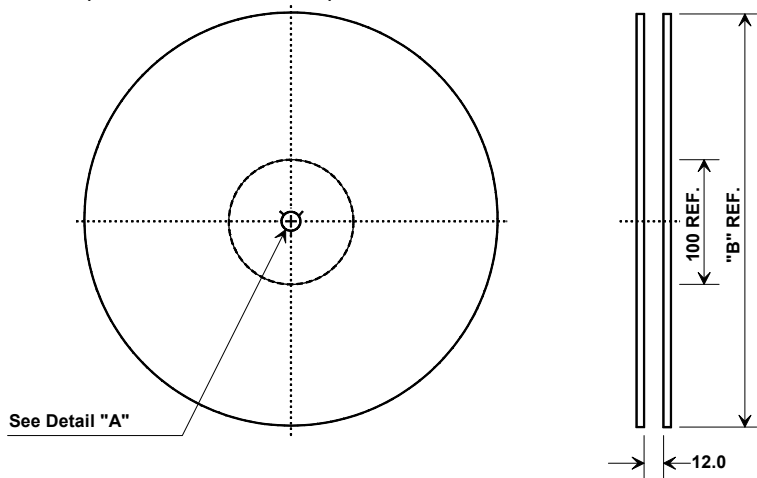


BOTTOM VIEW

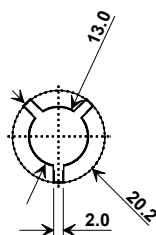


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

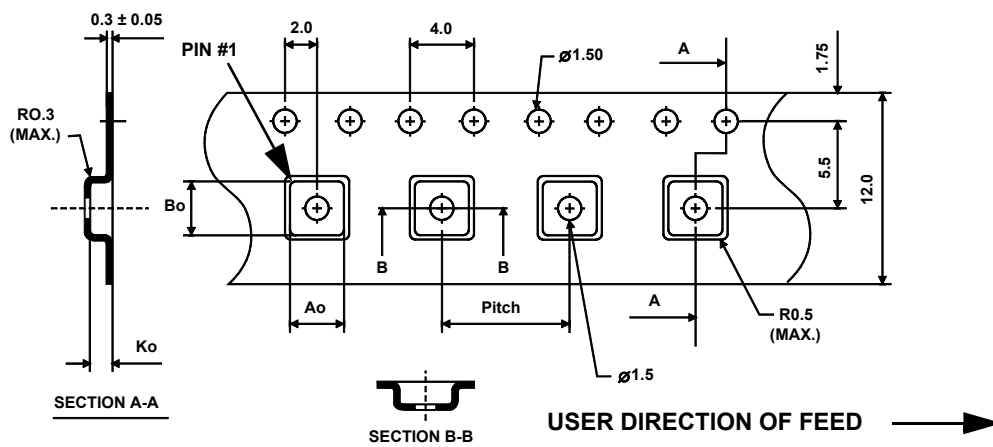


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



COMPONENT ORIENTATION 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.

