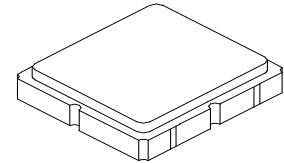


- No Matching Network Required for 50 Ω Operation
- Surface-mount 3.0 x 3.0 mm Package
- Complies with Directive 2002/95/EC (RoHS)



SF2208E

**1227 MHz
SAW Filter**



SM3030-6

Absolute Maximum Ratings

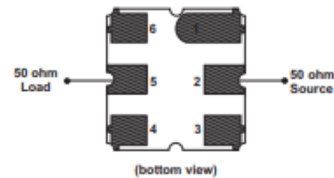
Rating	Value	Units
Input Power Level	20	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	$^{\circ}$ C
Specification Temperature Range	-20 to +70	$^{\circ}$ C
Storage Temperature Range in Tape and Reel	-30 to +85	$^{\circ}$ C
Solder Reflow Temperature, 10 seconds, 5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

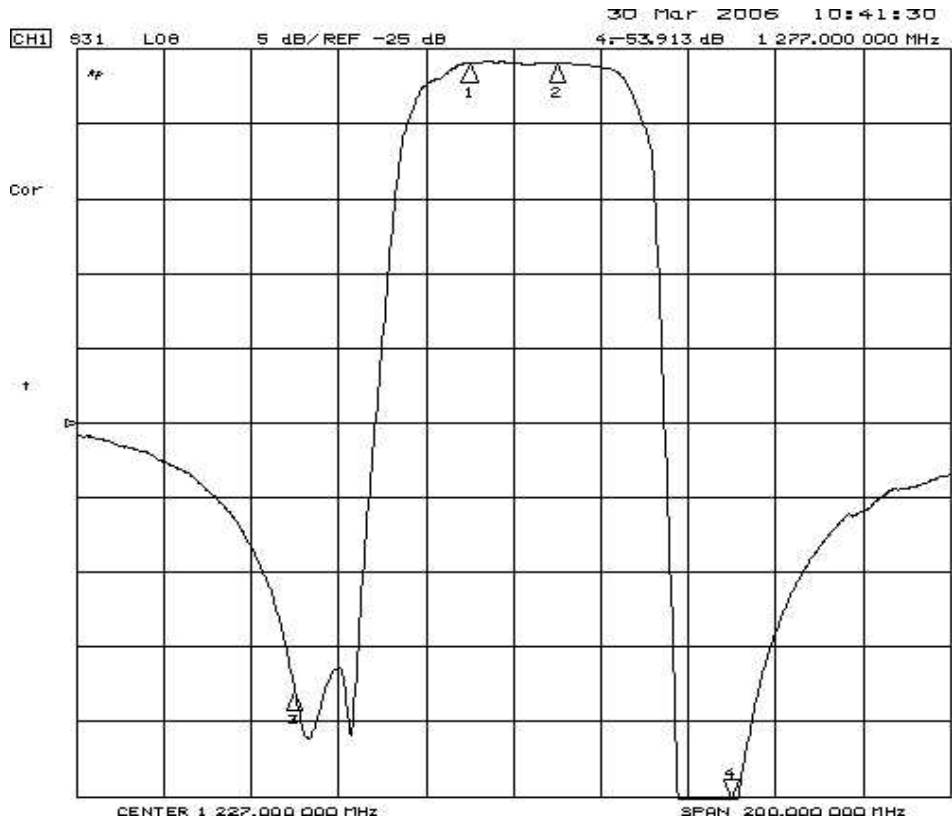


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

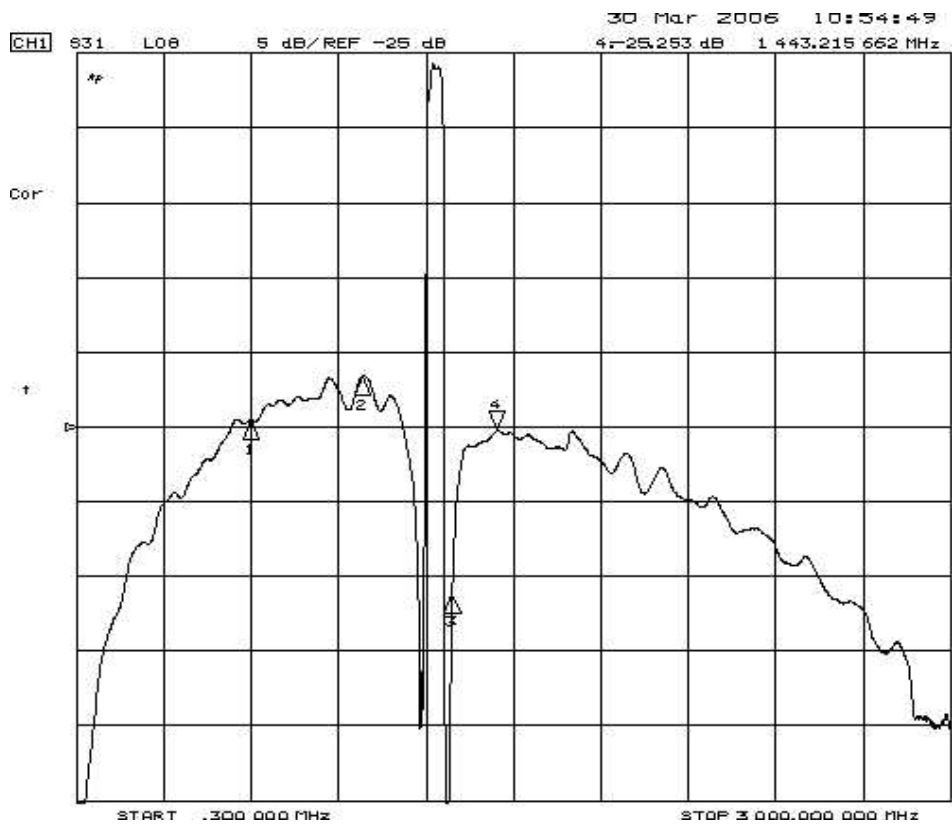
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

Filter Frequency Response



CH1 Markers

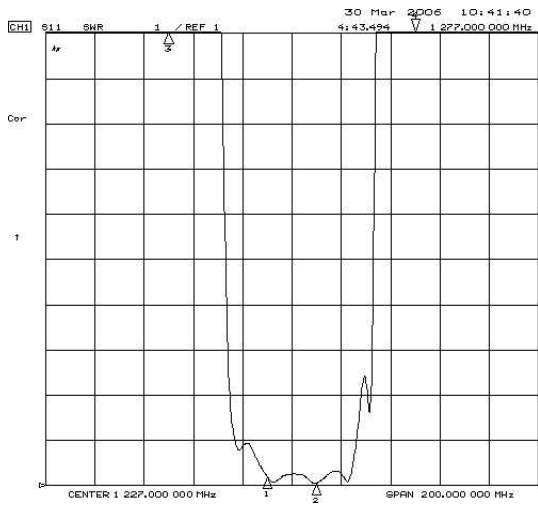
1	-93970 dB	1.21700 GHz
2	-94150 dB	1.23700 GHz
3	-42.922 dB	1.17700 GHz



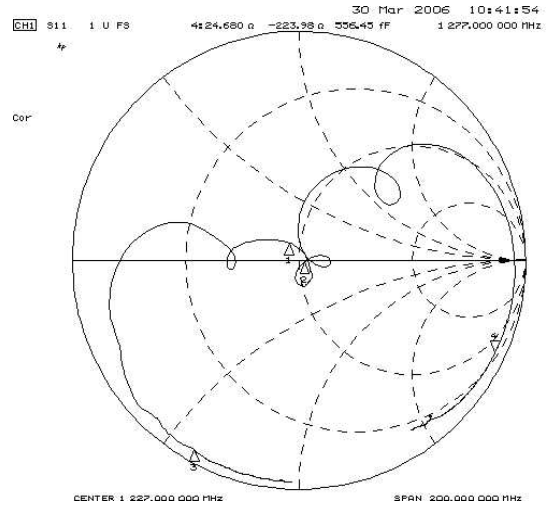
CH1 Markers

1	-24.561 dB	1.60000 GHz
2	-21.580 dB	1.58394 GHz
3	-36.104 dB	1.29000 GHz

Filter Input Impedance

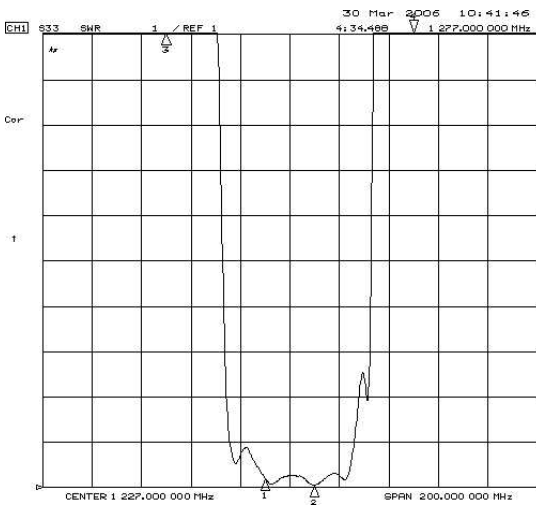


CHI Markers
 1: 1.1934
 1.21700 GHz
 2: 1.0527
 1.23700 GHz
 3: 37.229
 1.17700 GHz

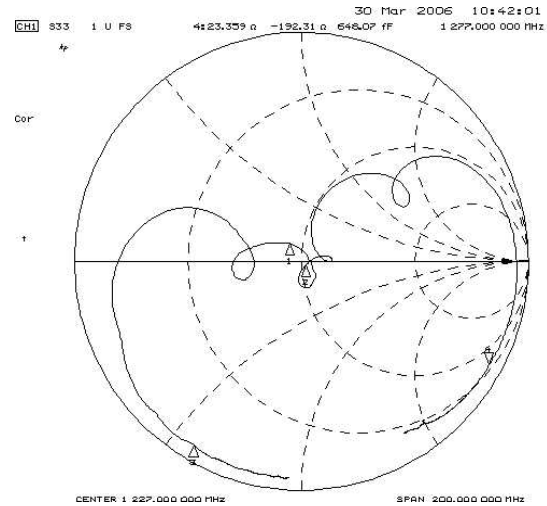


CHI Markers
 1: 45.289 a
 7.0352 a
 1.21700 GHz
 2: 52.523 a
 -744.14 no
 1.23700 GHz
 3: 1.7930 a
 -23.343 a
 1.17700 GHz

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

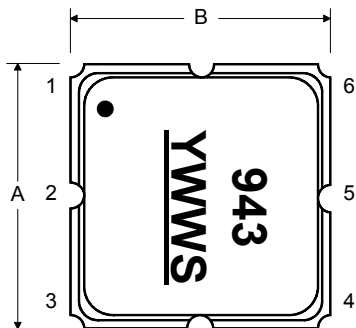
Case and PCB Footprint Dimensions

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	

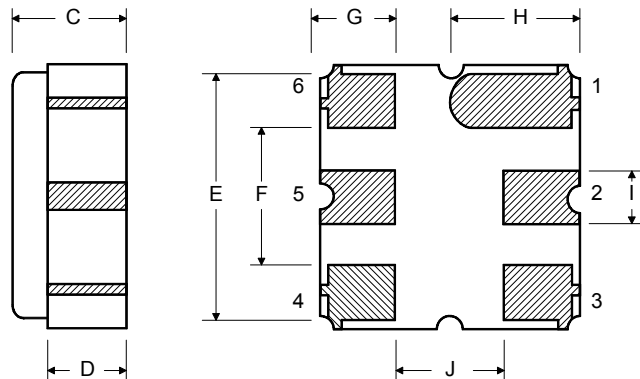
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

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.

