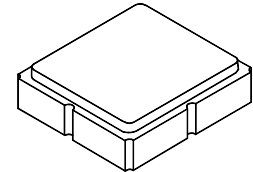


SF2389E

**868.3 MHz
SAW Filter**



SM3030-8

- **Low-loss SAW Filter**
- **Single-ended Input, Output**
- **3.0 x 3.0 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**

Maximum Rating

Rating	Value	Units
Input Power Level	+18	dBm
DC Voltage on any Non-ground Terminal	6	V
Operating Temperature Range	-45 to +90	°C
Component Storage Temperature Range	-45 to +90	°C
Solder Reflow Temperature, 10 seconds/5 cycles maximum	260	°C

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			868.30		MHz
Minimum Insertion Loss	IL_{MIN}			3.0	4.2	dB
Passband (relative to IL_{MIN})						
868.0 to 868.78 MHz				0.9	3.0	dB
867.9 to 868.88 MHz				1.7	4.5	dB
Pass Bandwidth (relative to IL_{MIN})				1500		KHz
Attenuation, (relative to IL_{MIN})						
10 to 700 MHz			50	53		dB
700 to 830 MHz			40	45		
830 to 850 MHz			35	40		
850 to 865.02 MHz			25	27		
871 to 874.5 MHz			15	23		
874.5 to 883 MHz			19	27		
883 to 900 MHz			30	35		
900 to 1000 MHz			40	47		
Impedance at F_c Input $Z_{IN}=R_{IN}/C_{IN}$ Output $Z_{OUT}=R_{OUT}/C_{OUT}$			145Ω // 2.6 pF			

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator	6W, <u>YWW</u> S
Standard Reel Quantity	500 Pieces/Reel
Reel Size 7 inch	
Reel Size 13 inch	3000 Pieces/Reel



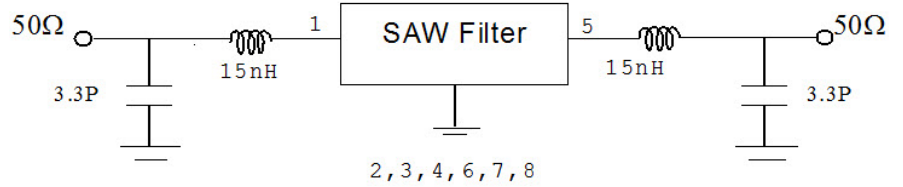
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

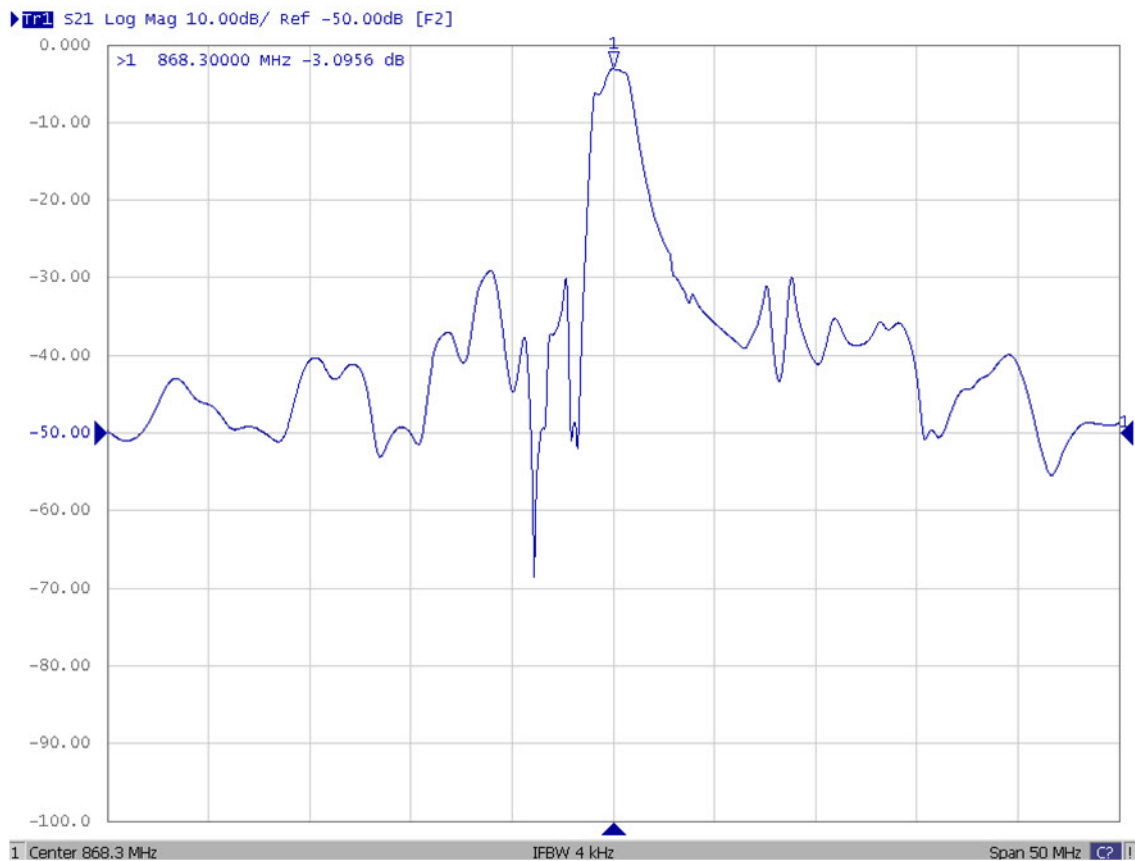
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Test Circuit

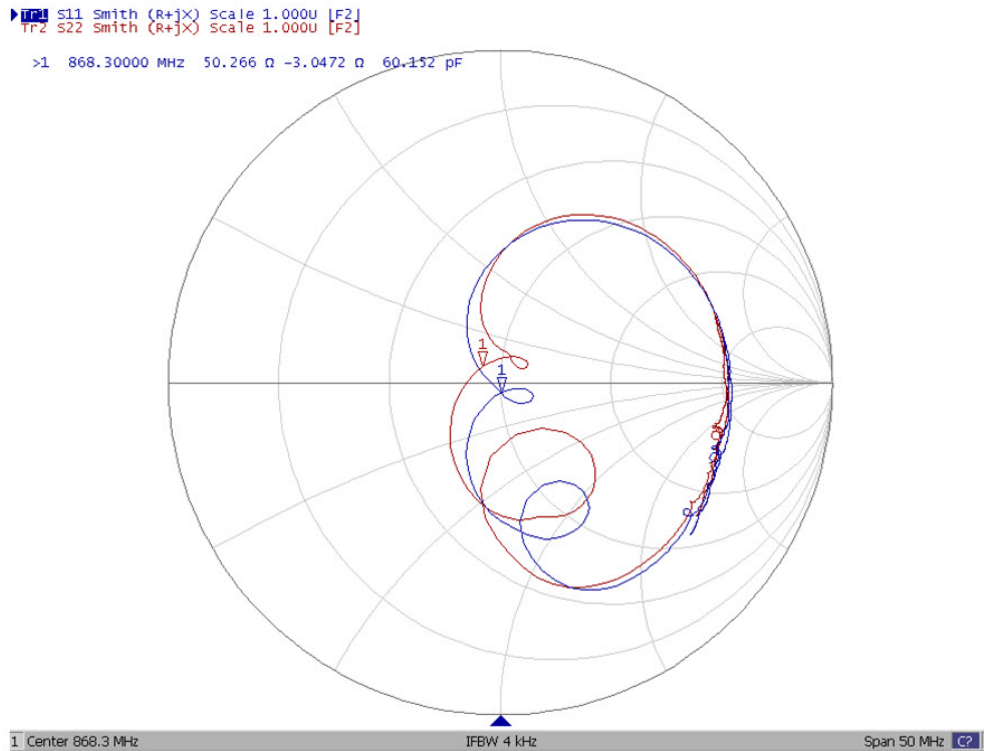
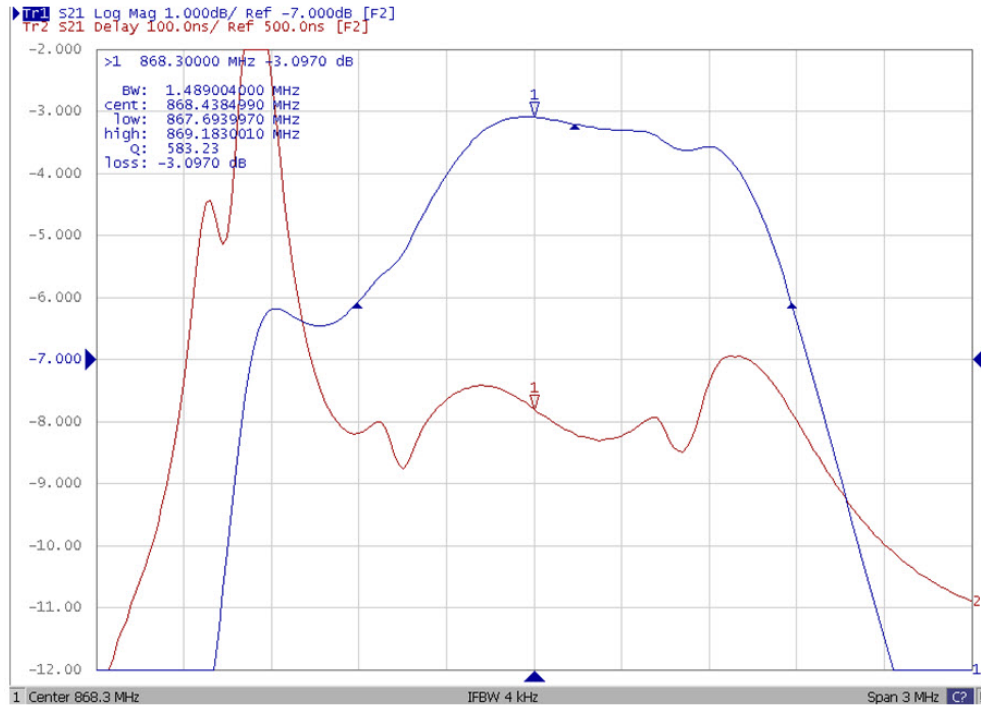
Connection	Terminals
1	Input or Input Ground
2	Input Ground or Input
5	Output or Output Ground
6	Output Ground or Output
3, 4, 7, 8	Ground



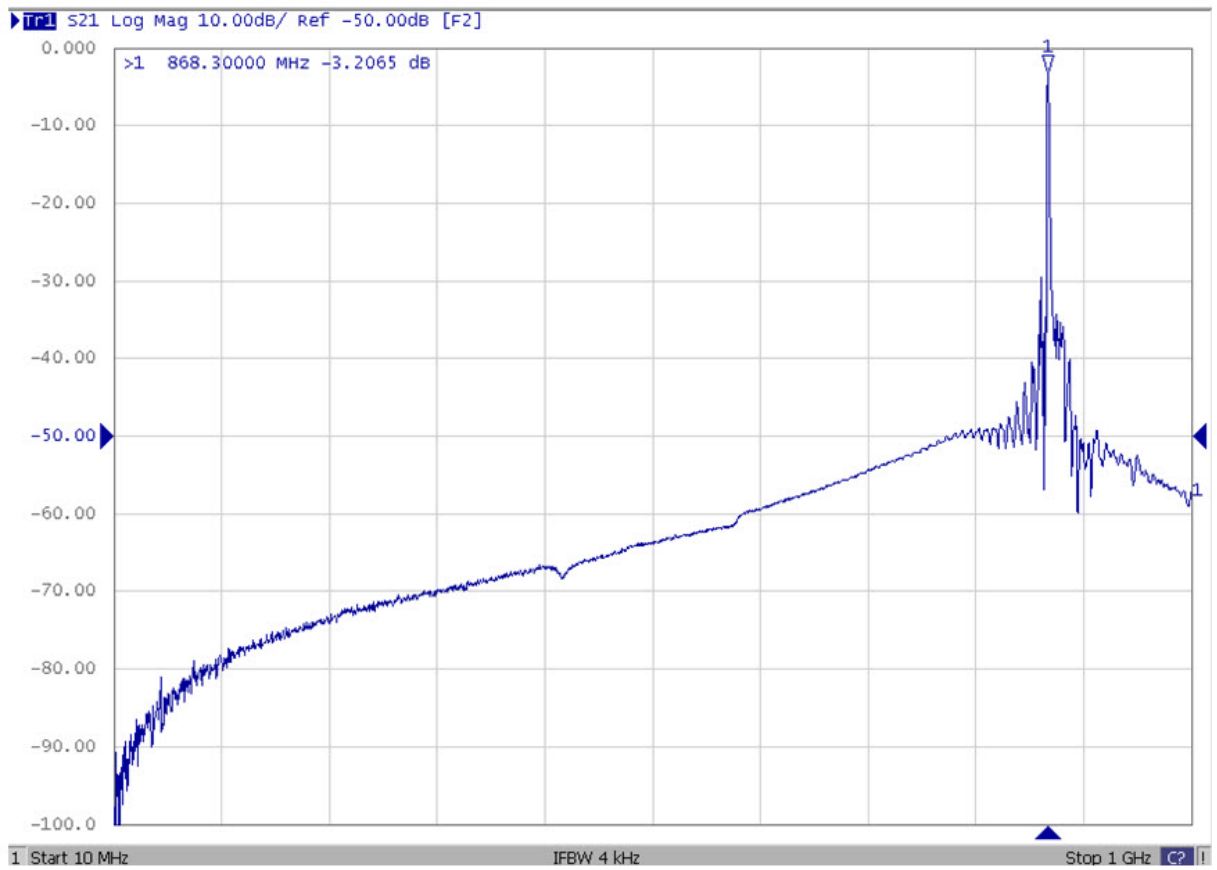
Frequency Characteristics



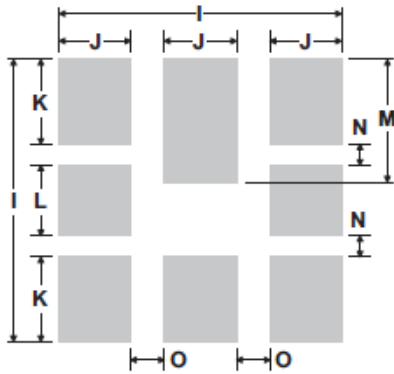
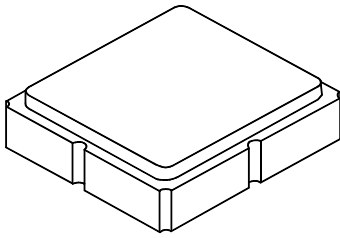
Frequency Characteristics



Frequency Characteristics



8-Terminal Ceramic Surface-Mount Case 3.0 x 3.0 mm Nominal Footprint



PCB Footprint Top View

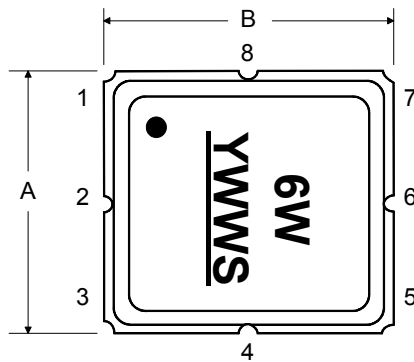
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	3.00	-	-	0.118	-
B	-	3.00	-	-	0.118	-
C	-	-	1.4	-	-	0.055
D	-	0.92	-	-	0.036	-
E	-	0.75	-	-	0.029	-
F	-	0.60	-	-	0.024	-
G	-	0.60	-	-	0.024	-
H	-	1.20	-	-	0.047	-
I	-	3.19	-	-	0.126	-
J	-	0.81	-	-	0.032	-
K	-	0.96	-	-	0.038	-
L	-	0.81	-	-	0.032	-
M	-	1.39	-	-	0.055	-
N	-	0.23	-	-	0.009	-
O	-	0.38	-	-	0.015	-

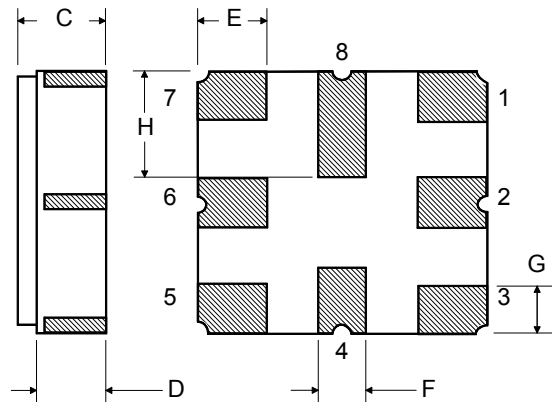
Case Materials

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

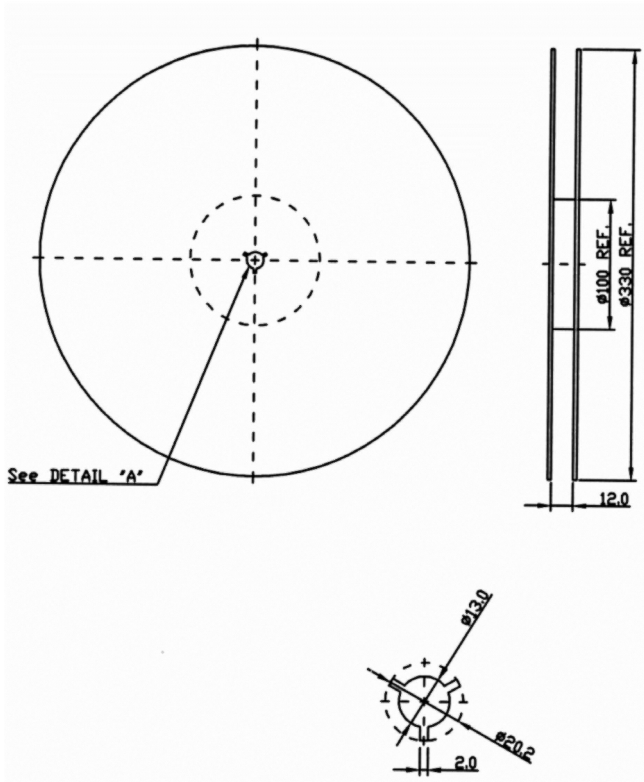


BOTTOM VIEW



Tape and Reel Specifications

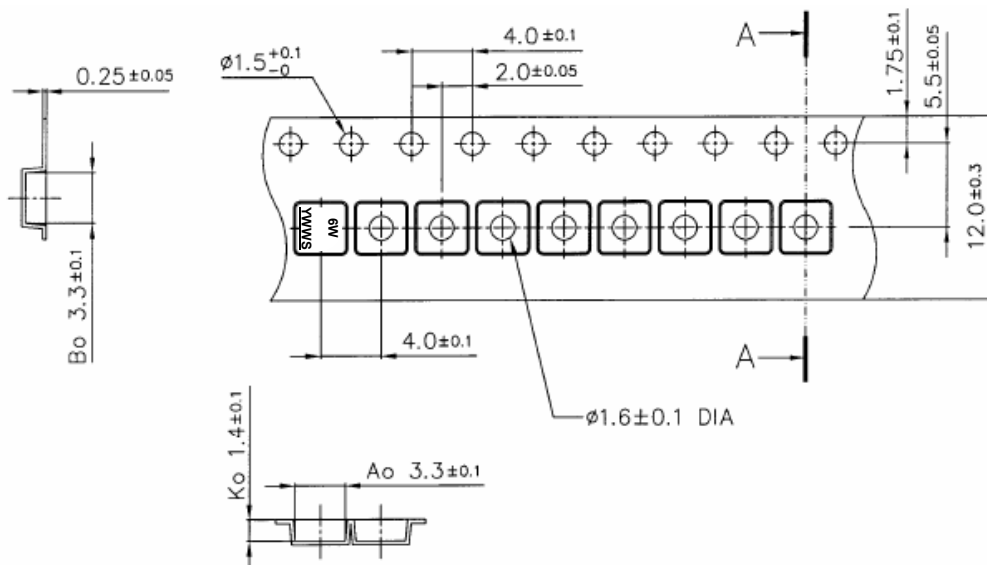
Tape and Reel Standard per ANSI/EIA-481



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

Carrier Tape Dimensions	
Ao	3.3 mm ± 0.1
Bo	3.3 mm ± 0.1
Ko	1.4 ± 0.1 mm
Pitch	4.0 ± 0.1 mm
W	12.0 mm ± 0.3

COMPONENT ORIENTATION and DIMENSIONS



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.

