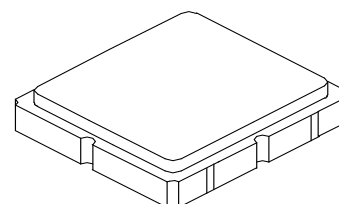


SF2445E

846 MHz
SAW Filter



SM3030-8

- **RF Filter for Mobile Communication Applications**
- **Low Insertion Loss**
- **3.0 x 3.0 x 1.3 mm Surface-Mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+15	dBm
Maximum DC Voltage Between any 2 Terminals	3	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-30 to +85	°C
Storage Temperature Range	-40 to +85	°C
Terminating Source Impedance (single) Z_S	50	Ω
Terminating Load Impedance (single) Z_L	50	Ω
Maximum Soldering Profile	260 °C for 10 s	

Characteristic	Sym	Notes	Min	Typ	Max	Units		
Center Frequency	f_c		846			MHz		
3dB Bandwidth			1.23	1.7		MHz		
Total Amplitude Variation, 845.385 to 846.615 MHz				2.5	4.7	dB		
Minimum Insertion Loss				8.0	10.5			
Input VSWR, 845.385 to 846.615 MHz				4.7	6.3			
Output VSWR, 845.385 to 846.615 MHz				2.1	3.8			
Phase Deviation (845.385 to 846.615 MHz RMS))				2	5	deg.		
Attenuation Referenced to IL min:	IL					dB		
0.1 to 841 MHz							40	45
841 to 844.28 MHz							19	25
849 to 1000 MHz							35	38
Case Style	SM3030-8 3 x 3 mm Nominal Footprint							
Lid Symbolization (Y=year, WW=week, S=shift)	9B, <u>YWWS</u>							



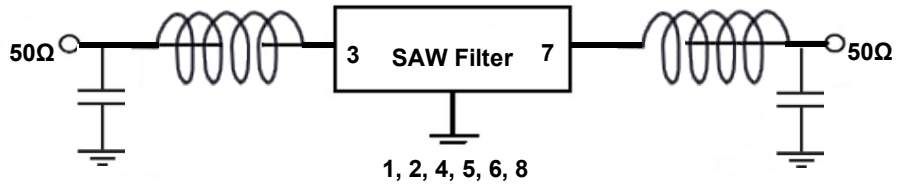
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

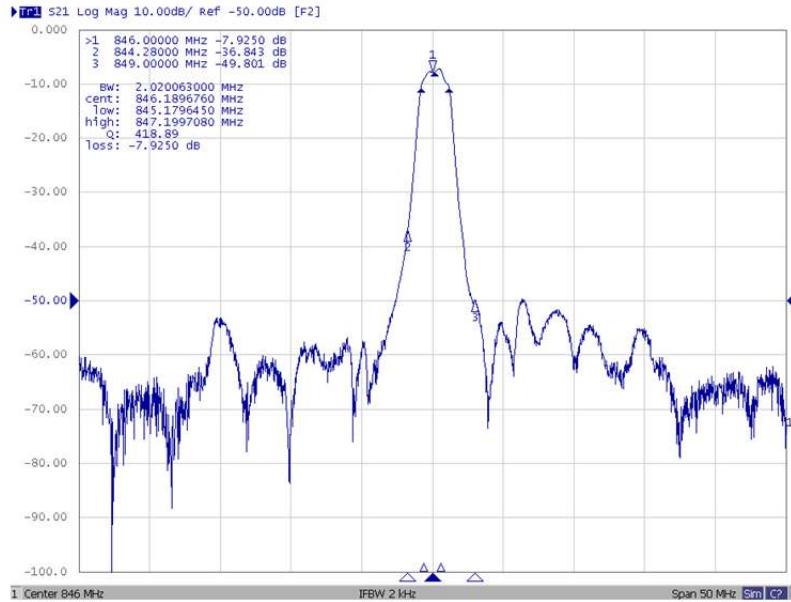
Electrical Connections

Connection	Terminals
Input	3
Output	7
Ground	All others

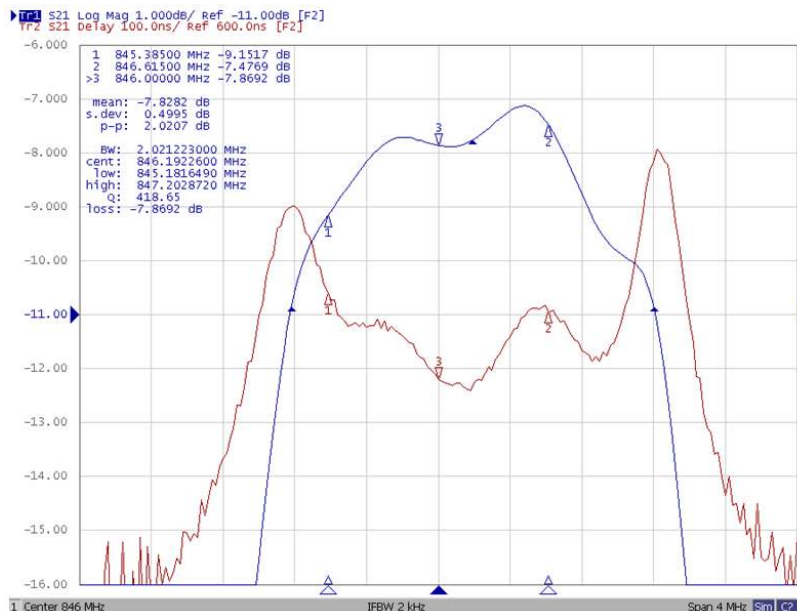


Frequency Characteristics

Narrow Band Response

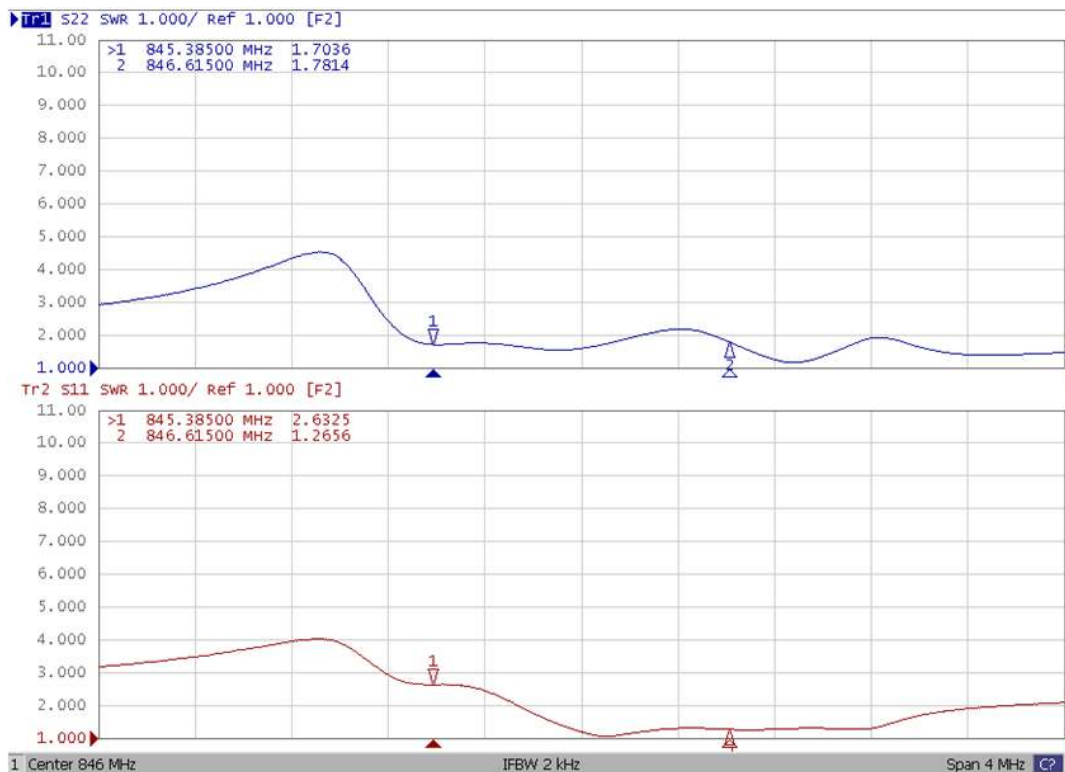


Pass Band and Group Time Delay Response

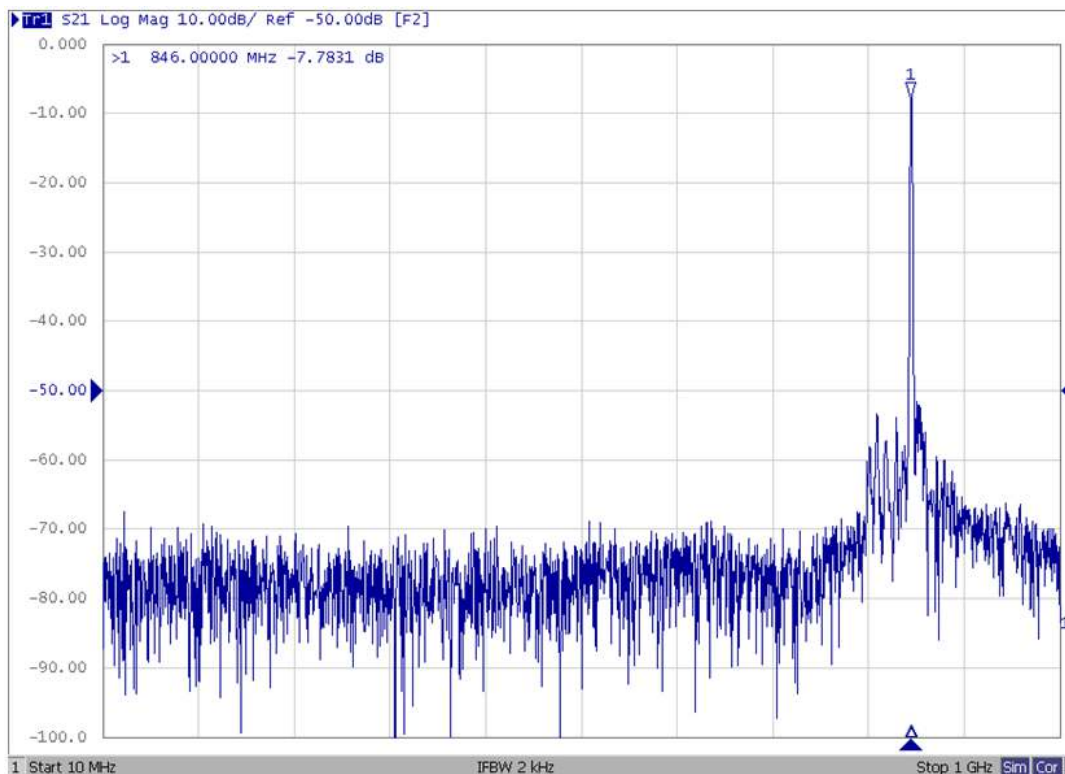


Frequency Characteristics (cont.)

VSWR

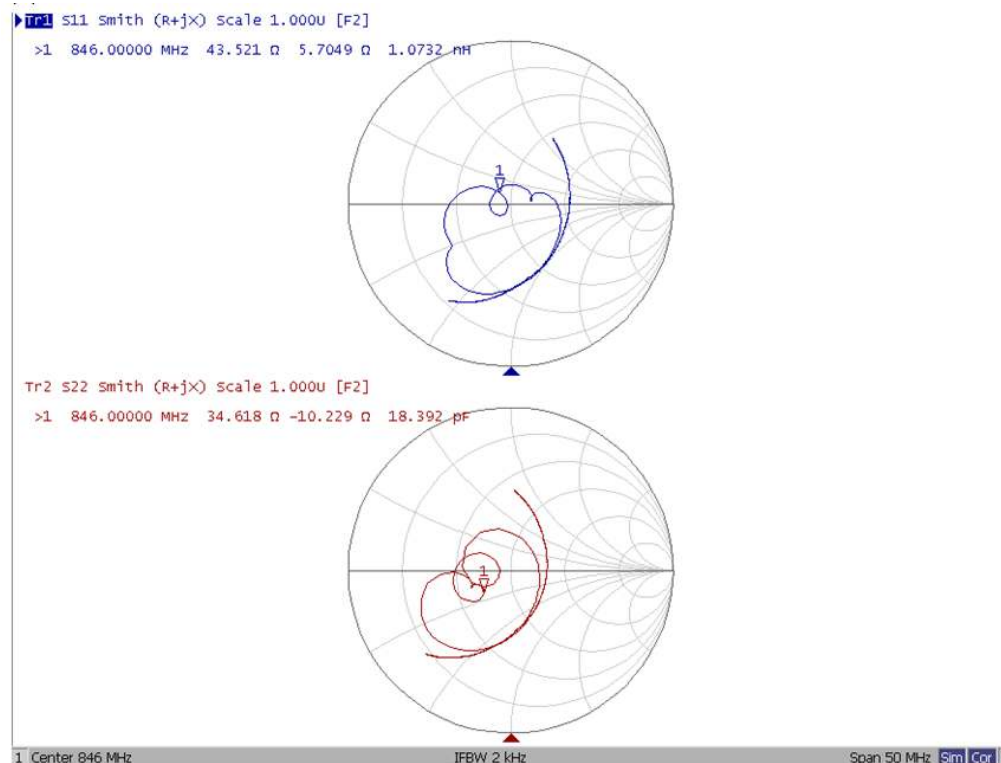


Wide Band Response



Frequency Characteristics (cont.)

Smith Chart

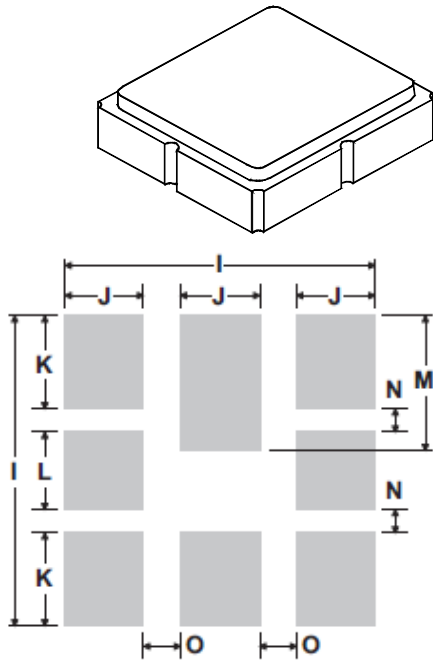


Phase



SM3030-8 Case

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



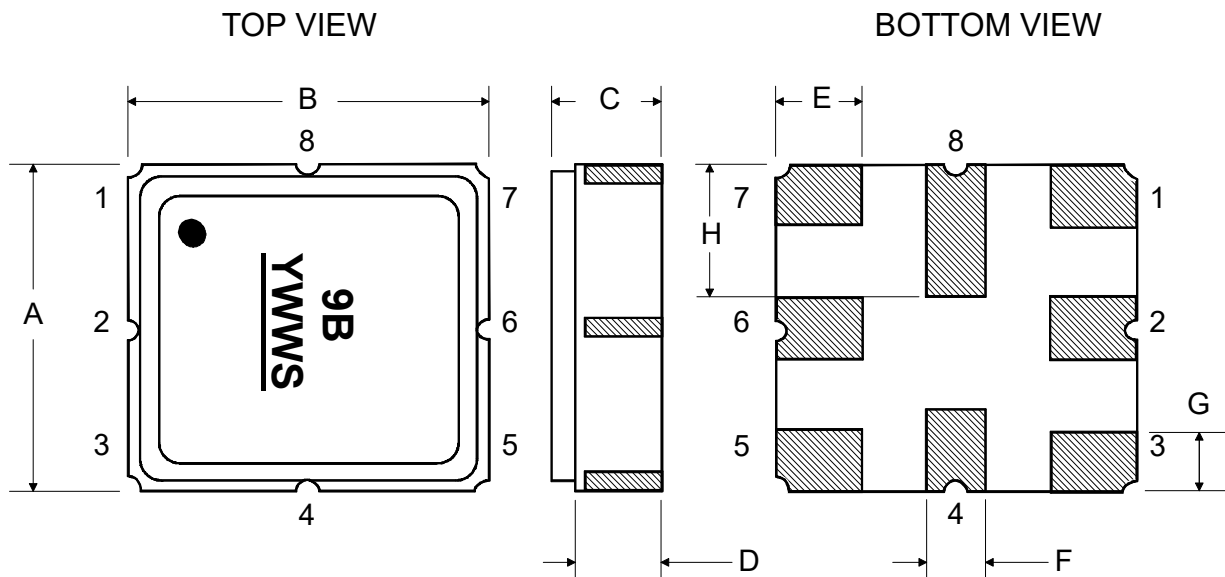
PCB Footprint, Top View

Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.14	1.27	1.40	0.045	0.050	0.055
D	0.79	0.92	1.05	0.031	0.036	0.041
E	0.62	0.75	0.88	0.024	0.029	0.034
F	0.47	0.60	0.73	0.018	0.024	0.029
G	0.47	0.60	0.73	0.018	0.024	0.029
H	1.07	1.20	1.33	0.042	0.047	0.052
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	

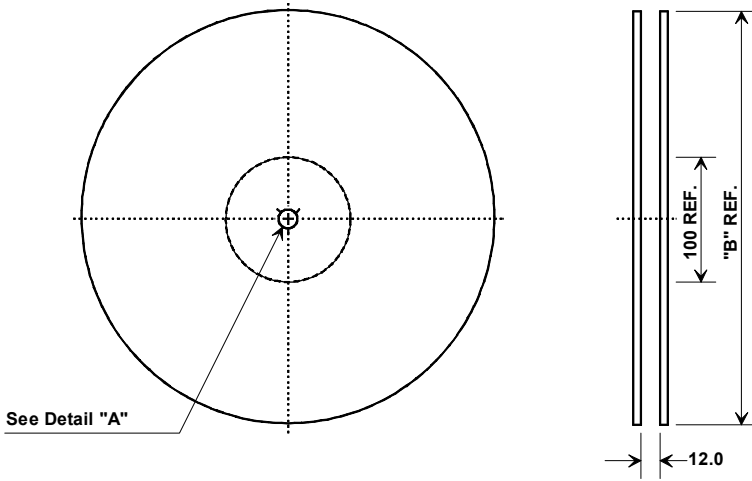
Case Materials

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

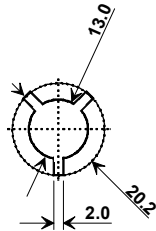


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

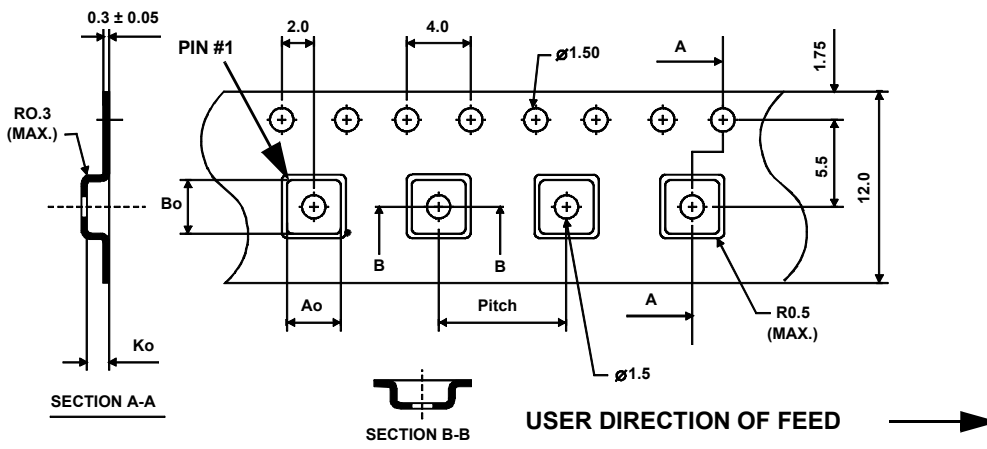


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.3 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.

