

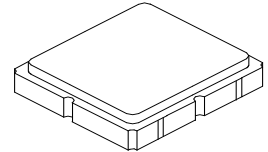
- **RF Filter for Mobile Communication Applications**
- **Low Insertion Loss**
- **3.0 x 3.0 x 1.3 mm Surface-Mount Case**
- **No Matching Circuit Required**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any 2 Terminals	3	VDC
Operable Temperature Range	-45 to +125	°C
Operating Temperature Range	-30 to +85	°C
Storage Temperature Range	-40 to +85	°C
Maximum Soldering Profile	265 °C for 10 s	

SF2369E

**876.5 MHz
SAW Filter**



SM3030-6

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C		876.5			MHz
Insertion Loss, 859-894 MHz	IL			2.5	4.0	dB
Amplitude Ripple, p-p, 859-894 MHz				0.8	2.0	
Attenuation Referenced to 0 dB:						dB
10 to 840 MHz		1, 2, 3	40	44		
920 to 1000 MHz			30	36		
1000 to 2600 MHz			25	34		
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)	5T <u>YWWWS</u>					



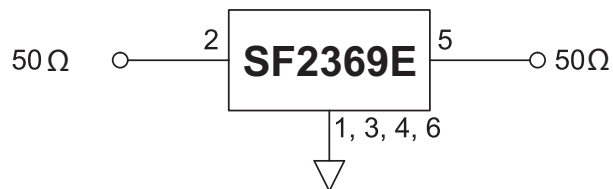
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

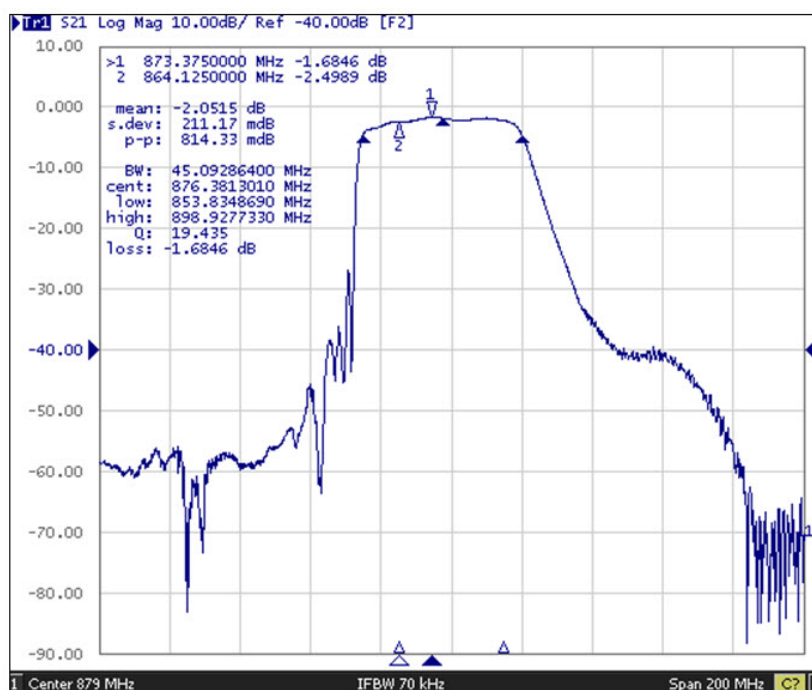
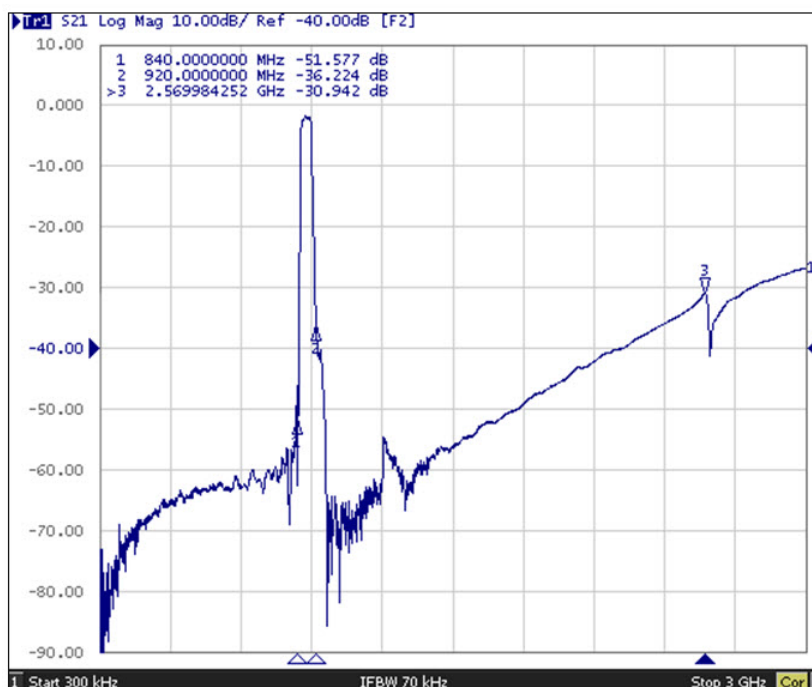
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_C .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.
9. Electrostatic Sensitive Device. Observe precautions for handling.

Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All others



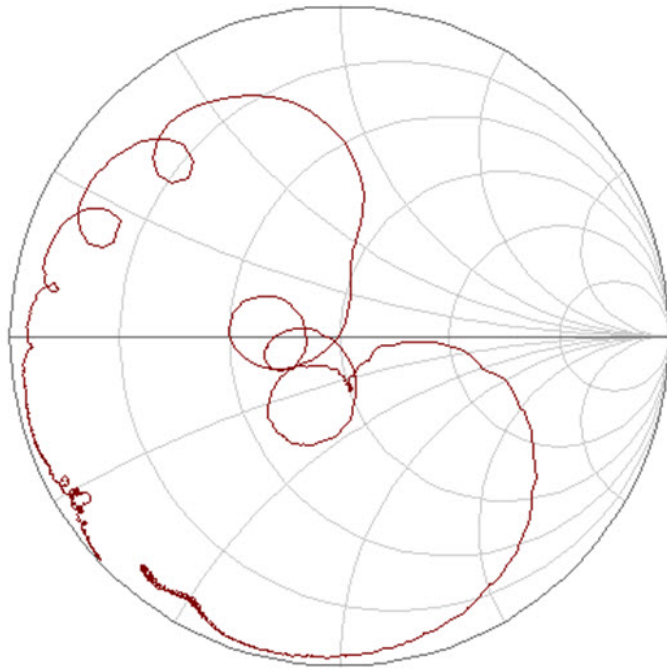
Frequency Characteristics



Frequency Characteristics

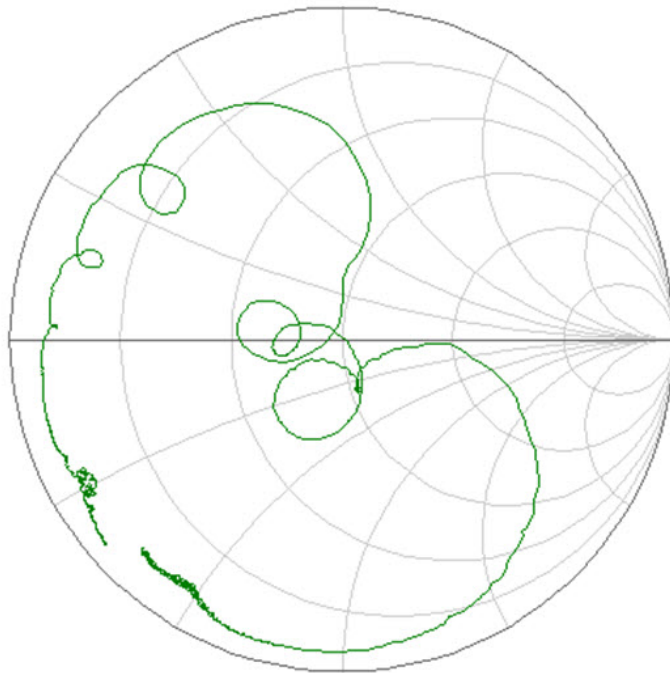
S11 Smith Chart

▶ **Tr2** S11 Smith (R+jX) Scale 1.000U [F2]



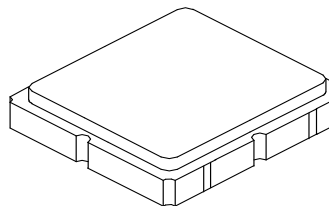
S22 Smith Chart

▶ **Tr8** S22 Smith (R+jX) Scale 1.000U [F2]

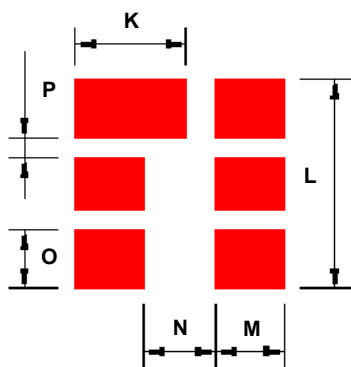


SM3030-6 Case

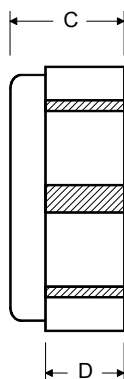
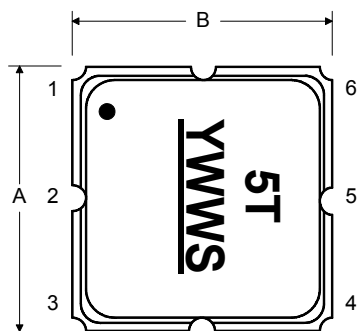
6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



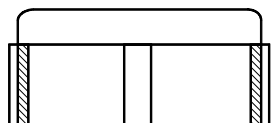
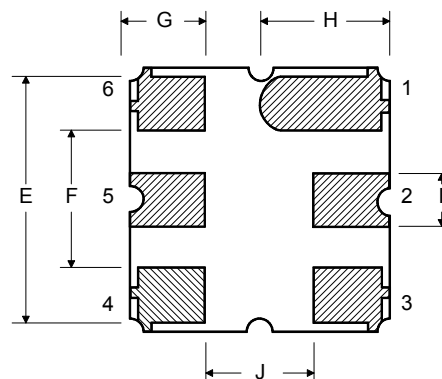
PCB Footprint, Top View



TOP VIEW



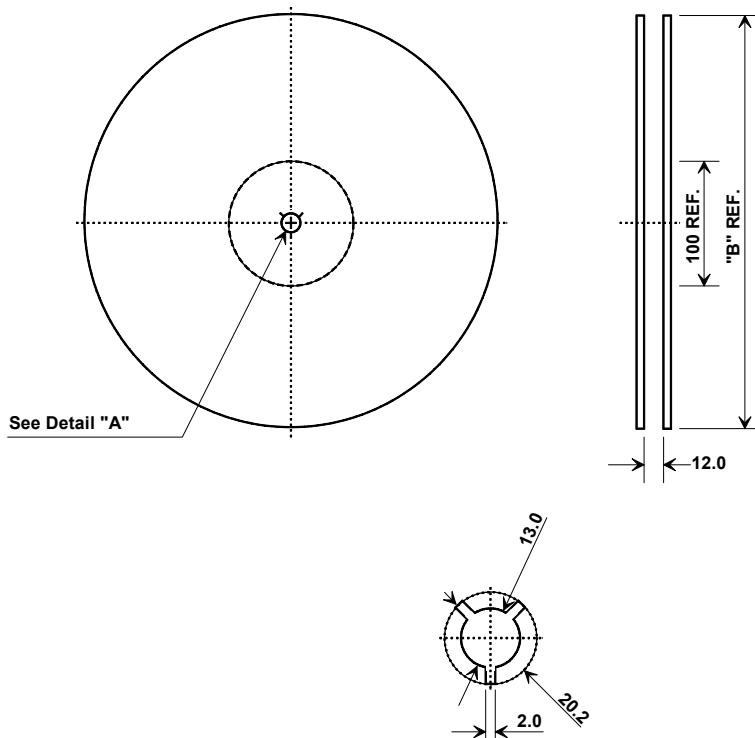
BOTTOM VIEW



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		3.0			0.118	
B		3.0			0.118	
C			1.4			0.055
D			1.0			0.039
E		2.80			0.110	
F		1.6			0.063	
G		0.85			0.033	
H		1.5			0.059	
I		0.6			0.024	
J		1.3			0.051	
K		1.70			0.066	
L		3.20			0.125	
M		1.05			0.041	
N		1.10			0.043	
O		0.90			0.035	
P		0.30			0.011	

Tape and Reel Specifications



“B” Nominal Size		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	1.4 mm
Pitch	8.0 mm
W	12.0 mm

