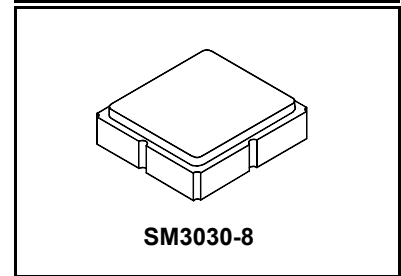


**SF2249E**

**1602 MHz  
SAW Filter**



- **Low-loss UHF SAW Filter**
- **3.0 x 3.0 Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**



**Maximum Rating**

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Solder Reflow Temperature, 10 seconds/5 cycles maximum	260	°C

Characteristic	Sym	Not	Min	Typ	Max	Units
Center Frequency	$f_c$			1602		MHz
3 dB Bandwidth	$BW_3$			61		
Insertion Loss, 1596 to 1607 MHz	IL			3.0	4.0	dB
Amplitude Ripple, 1596 to 1607 MHz				0.6	2.0	
Group Delay Ripple, 1596 to 1607 MHz				6	15	ns
Input/Output Return Loss, 1596 to 1607 MHz			8	9		dB
Attenuation, 0 dB Reference:						
10 to 1500 MHz			45	48		dB
1700 to 2400 MHz			43	50		
200 ohm Balanced Source Impedance				200 $\Omega$    18 nH		
200 ohm Balanced Load Impedance				200 $\Omega$    18 nH		

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint	
Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator	990, YWWS	
Standard Reel Quantity	Reel Size 7 inch	500 Pieces/Reel
	Reel Size 13 inch	3000 Pieces/Reel

**Electrical Connections**

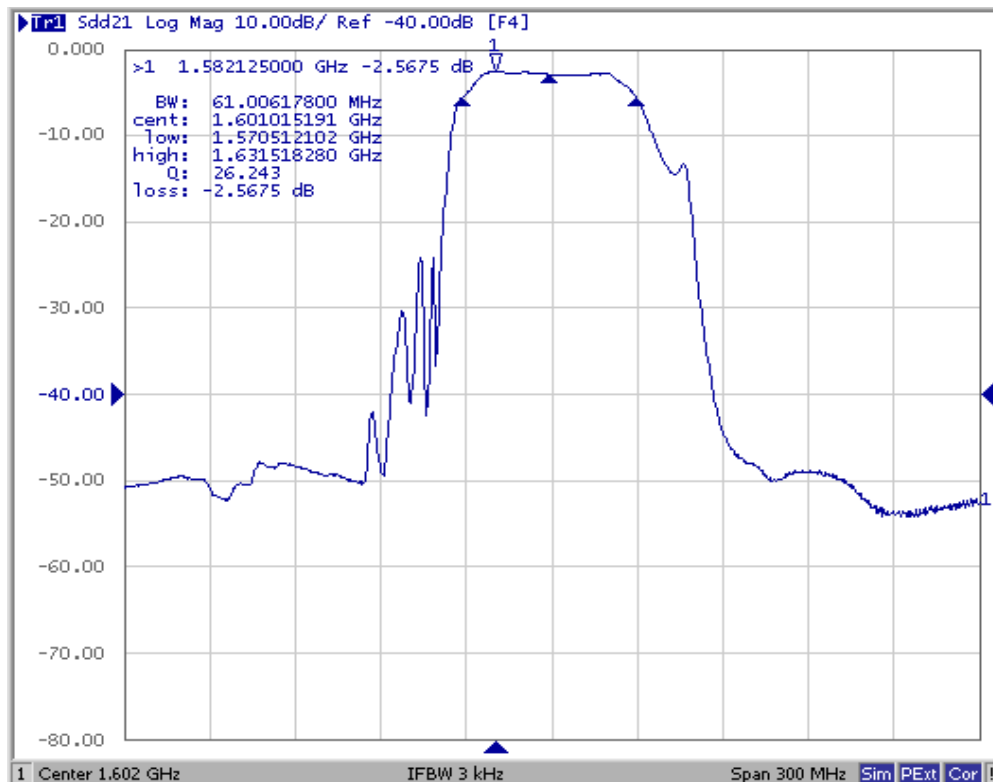
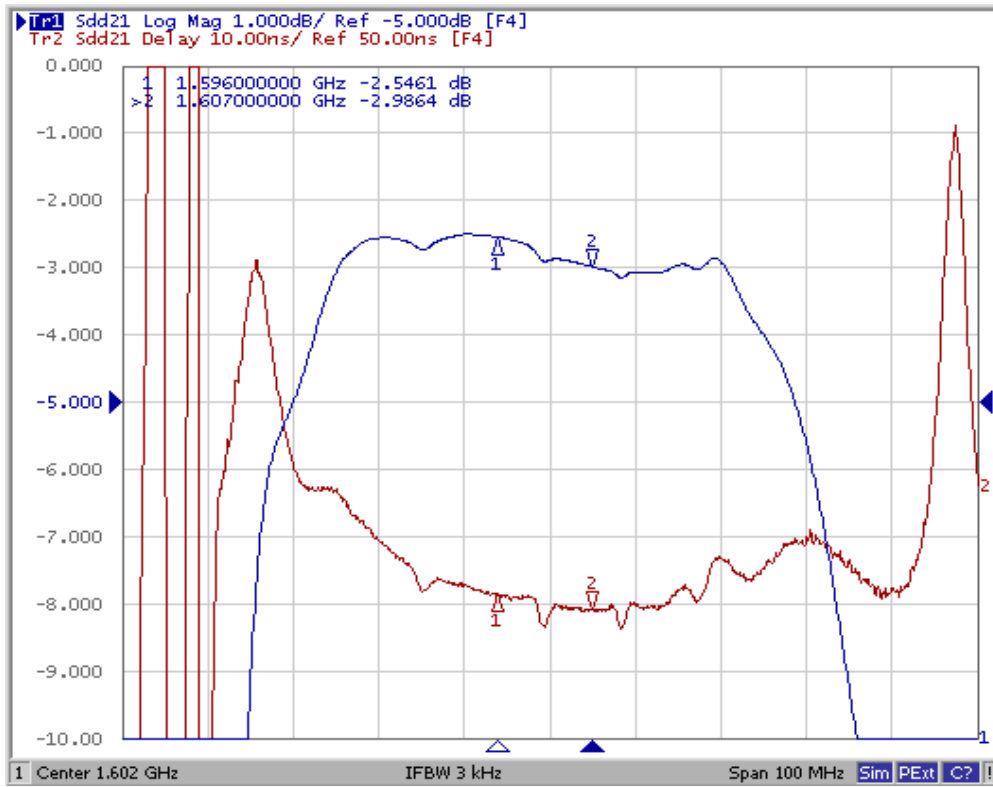
Connection	Terminals
Input	1, 2
Balanced Output	5, 6
Case Ground	All others

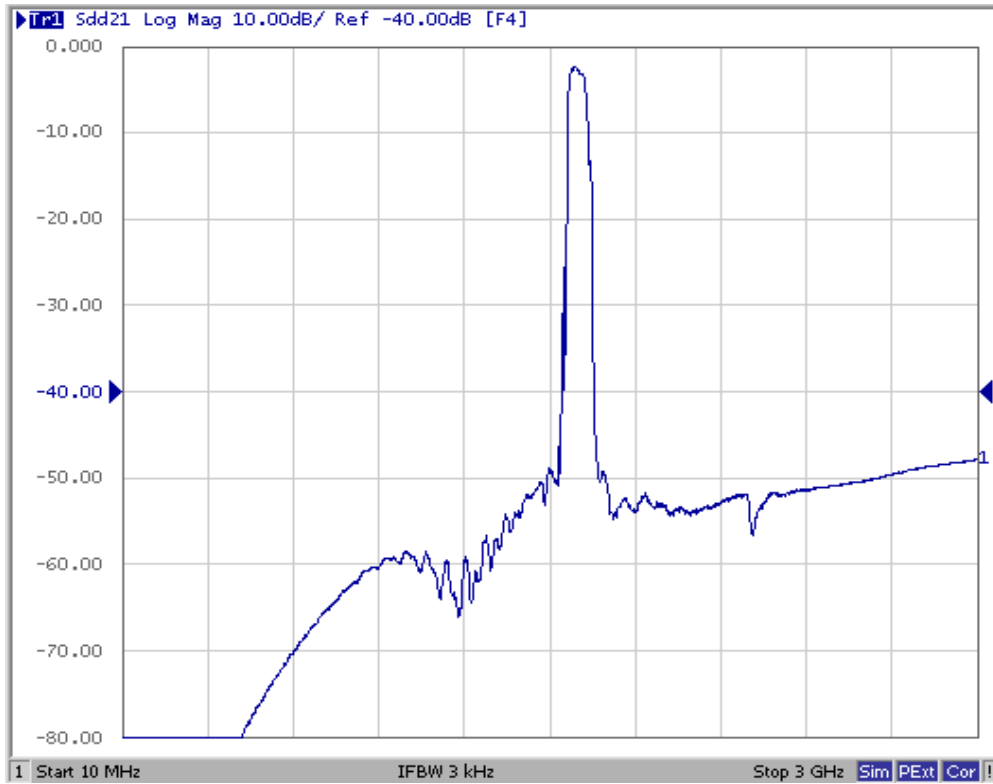


**NOTES:**

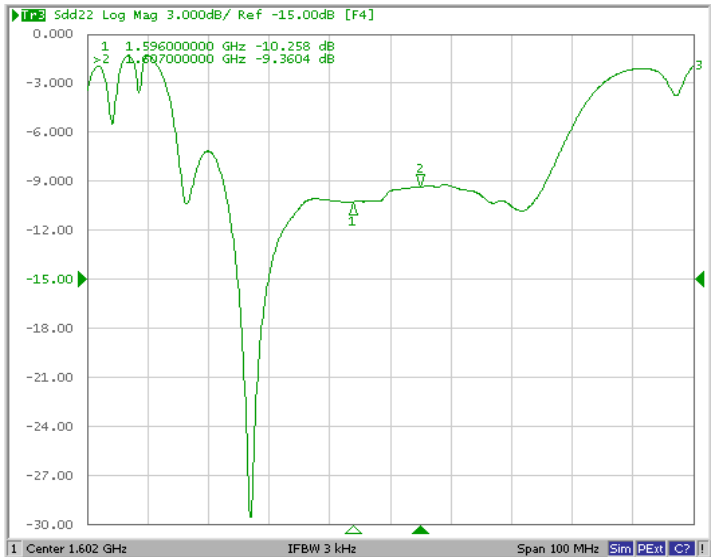
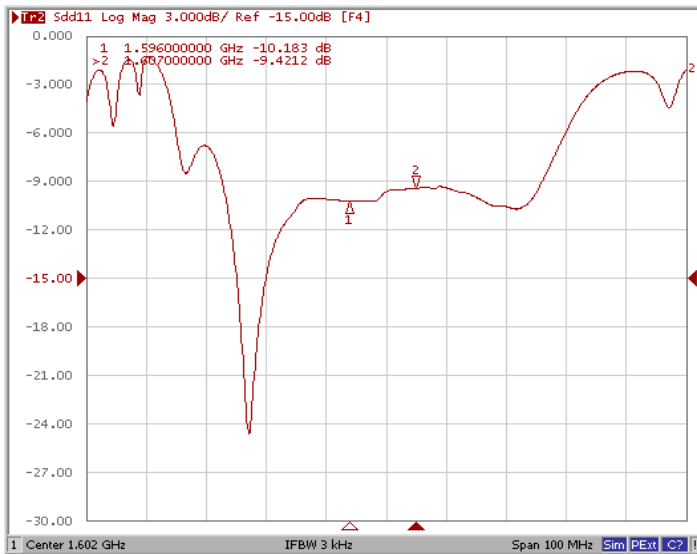
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.
3. Electrostatic Sensitive Device. Observe precautions for handling.

# Filter Response Plots

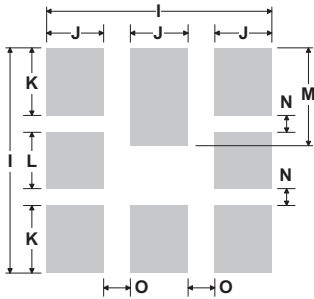
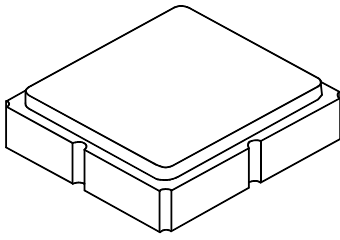




## Input/Output Return Loss Plots



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



**PCB Footprint Top View**

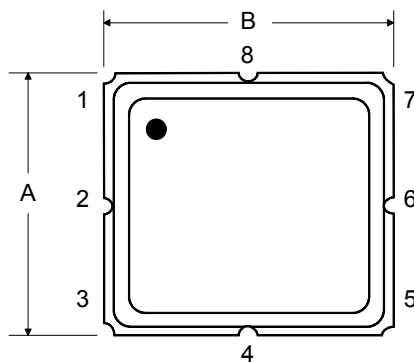
### Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
<b>A</b>	2.87	3.00	3.13	0.113	0.118	0.123
<b>B</b>	2.87	3.00	3.13	0.113	0.118	0.123
<b>C</b>	-	-	1.10	-	-	0.043
<b>D</b>	0.79	0.92	1.05	0.031	0.036	0.041
<b>E</b>	0.62	0.75	0.88	0.024	0.029	0.034
<b>F</b>	0.47	0.60	0.73	0.018	0.024	0.029
<b>G</b>	0.47	0.60	0.73	0.018	0.024	0.029
<b>H</b>	1.07	1.20	1.33	0.042	0.047	0.052
<b>I</b>		3.19			0.126	
<b>J</b>		0.81			0.032	
<b>K</b>		0.96			0.038	
<b>L</b>		0.81			0.032	
<b>M</b>		1.39			0.055	
<b>N</b>		0.23			0.009	
<b>O</b>		0.38			0.015	

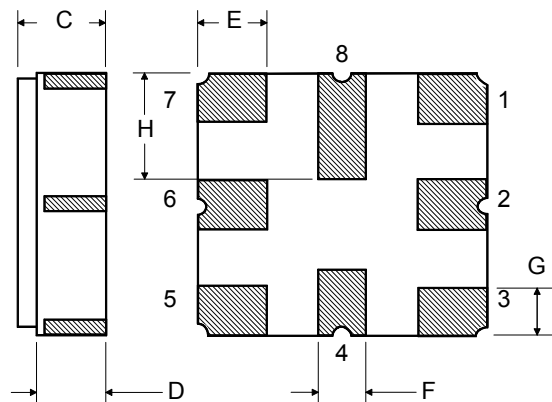
### Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic
	Pb Free

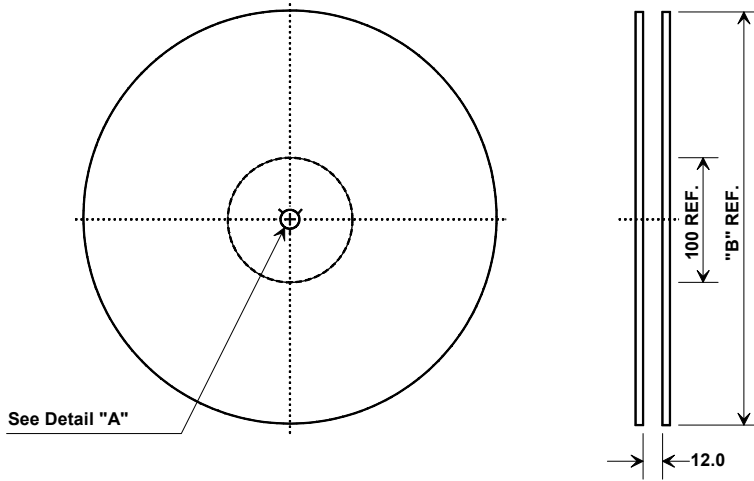
**TOP VIEW**



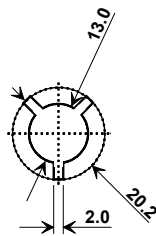
**BOTTOM VIEW**



# Tape and Reel Specifications



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



Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.4 mm
Pitch	8.0 mm
W	12.0 mm

## COMPONENT ORIENTATION and DIMENSIONS

