

- **Low-loss SAW Filter**
- **Complies with Directive 2002/95/EC (RoHS)**



**Characteristics:**

Single-ended to Balanced operation

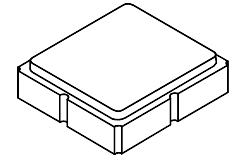
Terminating source/load impedance: 50/150  $\Omega$

**Maximum Rating**

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +105	°C
Storage Temperature Range	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/ 10 seconds maximum	265	°C

**SF2235E**

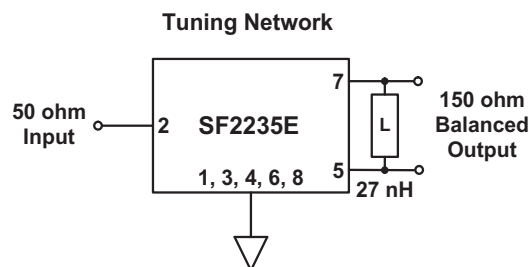
**1542.5 MHz  
SAW Filter**



**SM3030-8**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			1542.5		MHz
Insertion Loss, 1525 to 1560 MHz	IL			3.2	4.5	dB
Amplitude Ripple, 1525 to 1560 MHz				0.5	2.2	dB
Attenuation, 0 dB Reference:						
DC to 1480 MHz			21	45		dB
1630 to 1660 MHz			26	38		
1660 to 2050 MHz			30	39		
2050 to 3500 MHz			25	48		
Source Impedance, Single Ended				50		$\Omega$
Load Impedance, Balanced			150 $\Omega$    27 nH			
Temperature Coefficient of Frequency			-36			ppm/°C

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A06, <u>YWWS</u>	
Standard Reel Quantity	Reel Size 7 inch	500 Pieces/Reel
	Reel Size 13 inch	3000 Pieces/Reel



**NOTES:**

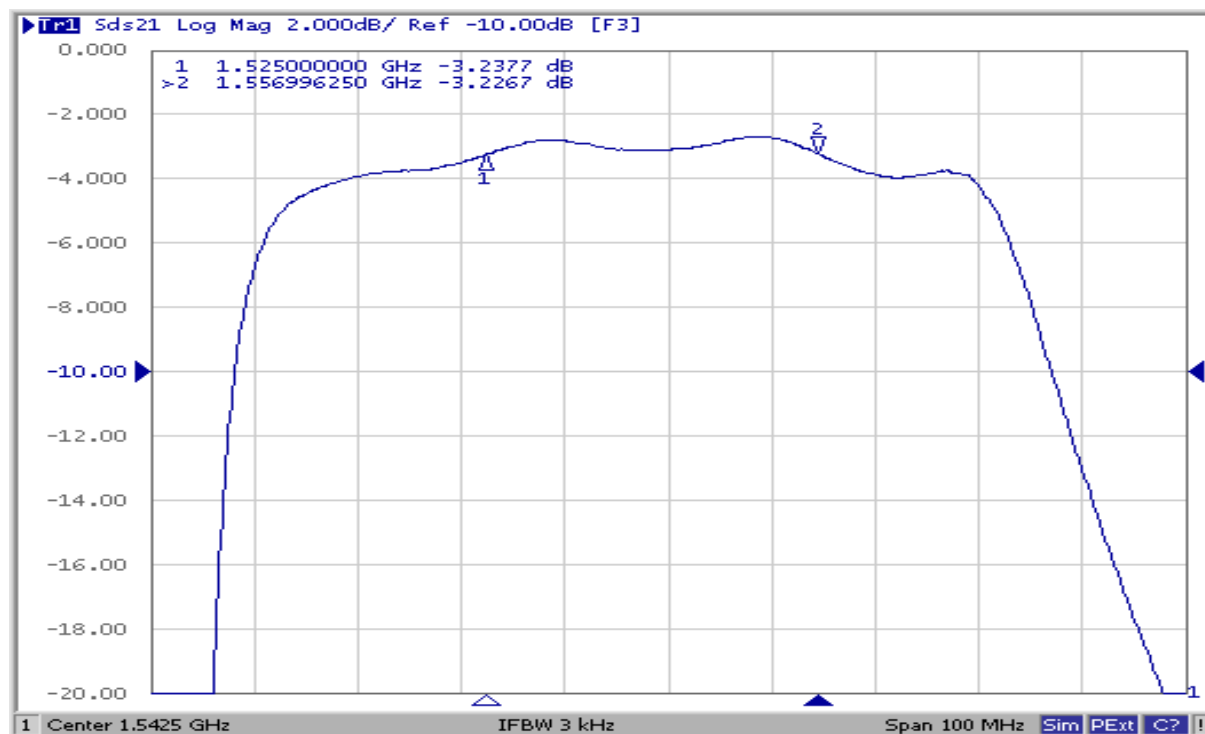
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

## Maximum Rating

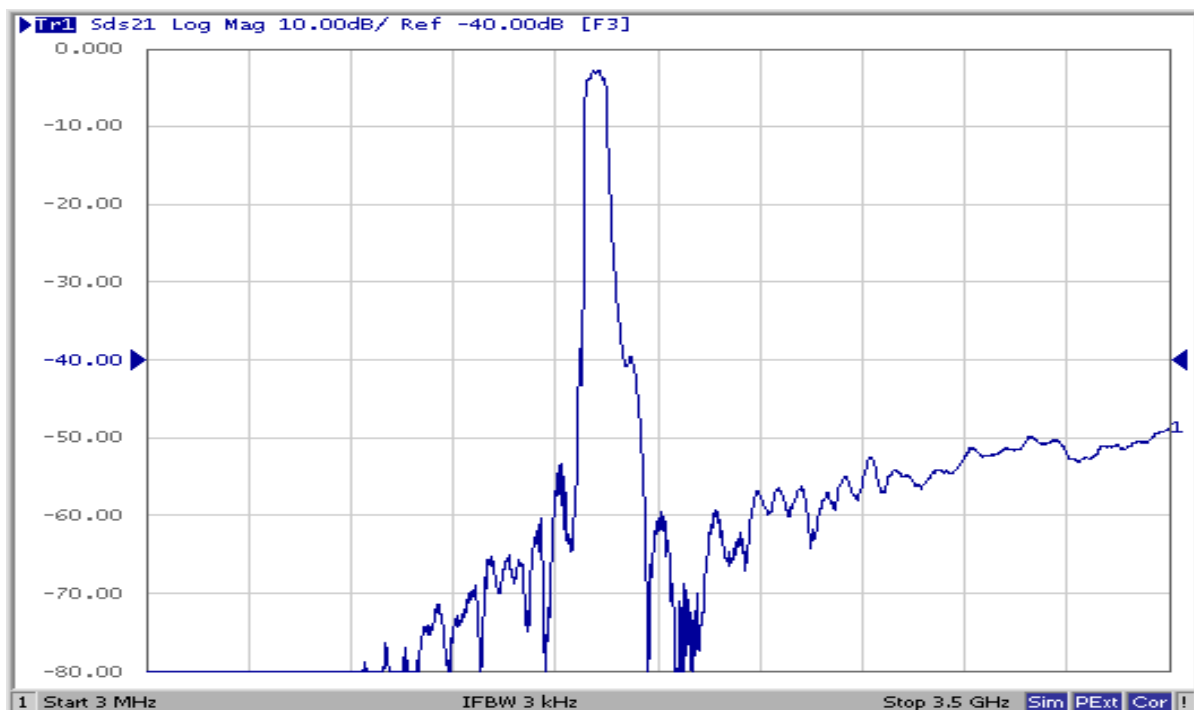
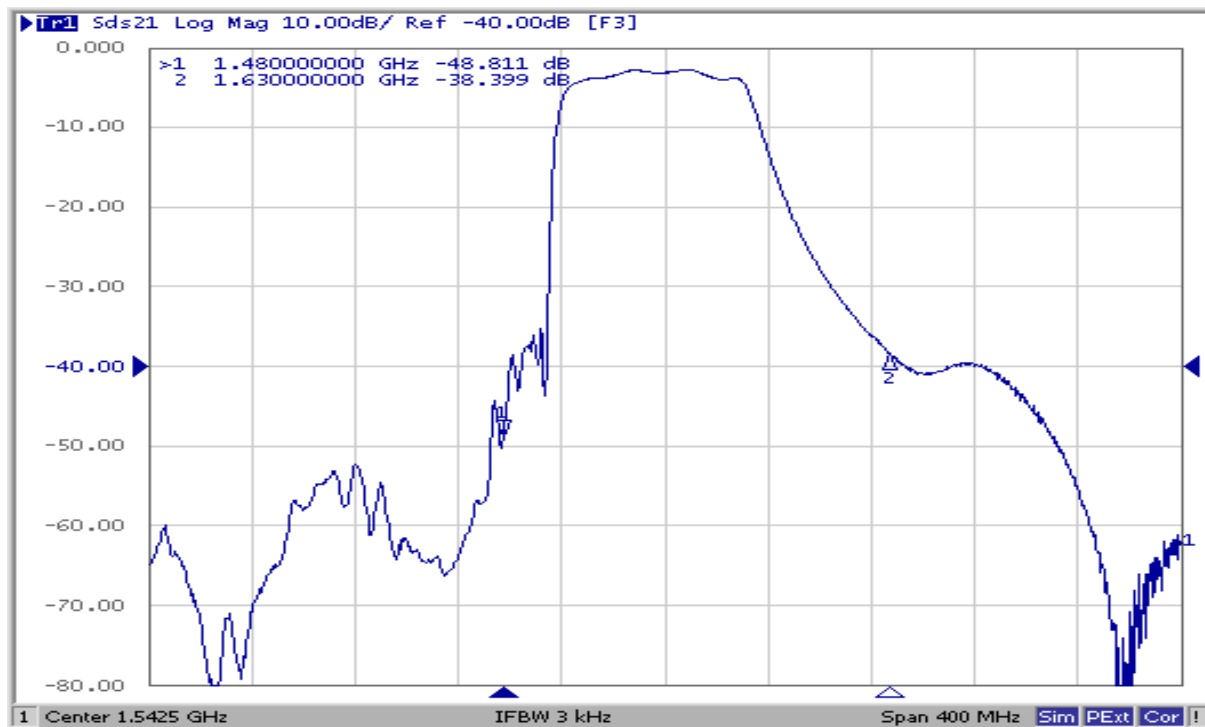
Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-20 to +75	°C
Storage Temperature Range	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/ 10 seconds maximum	265	°C

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1542.5		MHz
Insertion Loss, 1525 to 1560 MHz	IL			3.2	4.2	dB
Amplitude Ripple, 1525 to 1560 MHz				0.5	2.0	dB
Attenuation, 0 dB Reference:						
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Source Impedance, Single Ended				50		$\Omega$
Load Impedance, Balanced			150 $\Omega$    27 nH			
Temperature Coefficient of Frequency				-36		ppm/°C

## Filter Response Plots

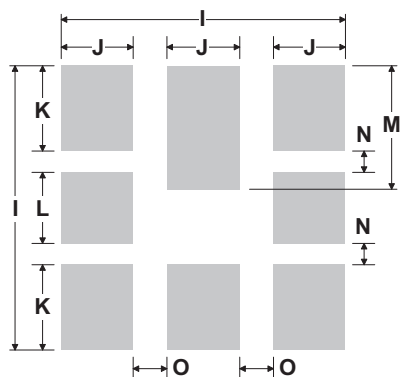
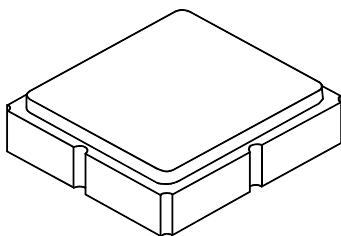


## Filter Response Plots (cont.)



## 8-Terminal Ceramic Surface-Mount Case

### 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

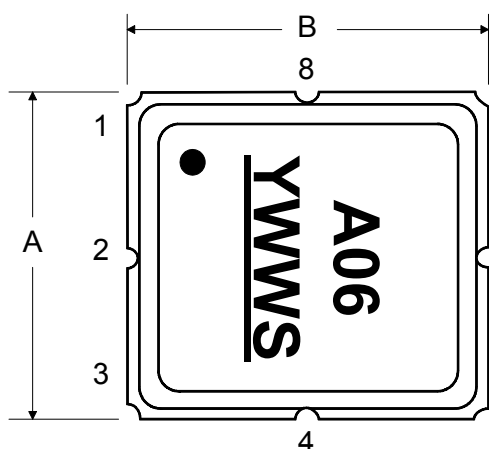
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	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	

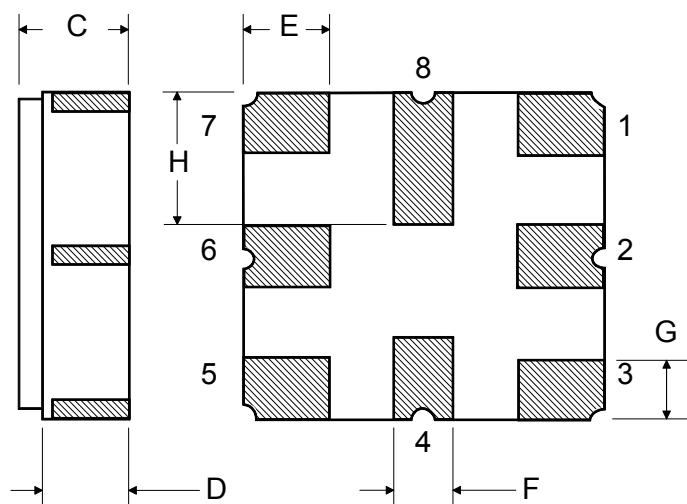
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ 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



Technical drawing of a circular component, likely a flange or end plate, showing three views: a top view, a side view, and a detail view.

**Top View:** A large circle with a smaller concentric circle in the center. A crosshair indicates the center. A leader line points from the text "See Detail 'A'" to the central hole.

**Side View:** A vertical cross-section showing the thickness of the component. The total thickness is dimensioned as 12.0. The central hole is dimensioned with a diameter of 100 REF. and a depth of "B" REF.

**Detail View (Detail A):** A cross-section of the central hole, showing a circular profile with a central hole. The outer diameter is dimensioned as 13.0. The inner diameter is dimensioned as 20.2. The thickness of the flange is dimensioned as 2.0.

“B”		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm

