

- **Low-loss RF SAW Filter**
- **Miniature 3 x 3 mm SMD Package**
- **Complies with Directive 2002/95/EC (RoHS)**

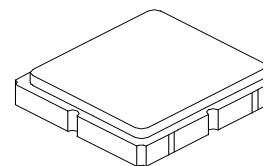


### Absolute Maximum Ratings

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

**SF2236E**

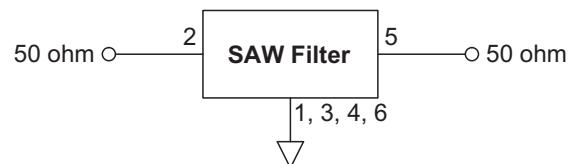
**1642.5 MHz  
SAW Filter**



**SM3030-6**

### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1642.5		MHz
Insertion Loss, 1625 to 1660 MHz	IL			1.8	3.5	dB
Amplitude Ripple, 1625 to 1660 MHz				0.7	2.0	dB <sub>P-P</sub>
VSWR, 1625 to 1660 MHz				1.7:1	2.3:1	
Attenuation, Referenced to 0 dB:						
DC to 1500 MHz			21	29		dB
1525 to 1559 MHz			30	36		
1700 to 2050 MHz			30	32		
2050 to 3500 MHz			25	32		
Source Impedance	$Z_S$			50		Ω
Load Impedance	$Z_L$			50		Ω
Case Style			SM3030-6 3.0 x 3.0 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator						
Standard Reel Quantity	Reel Size 7 inch					
	Reel Size 13 inch					



### Electrical Connections

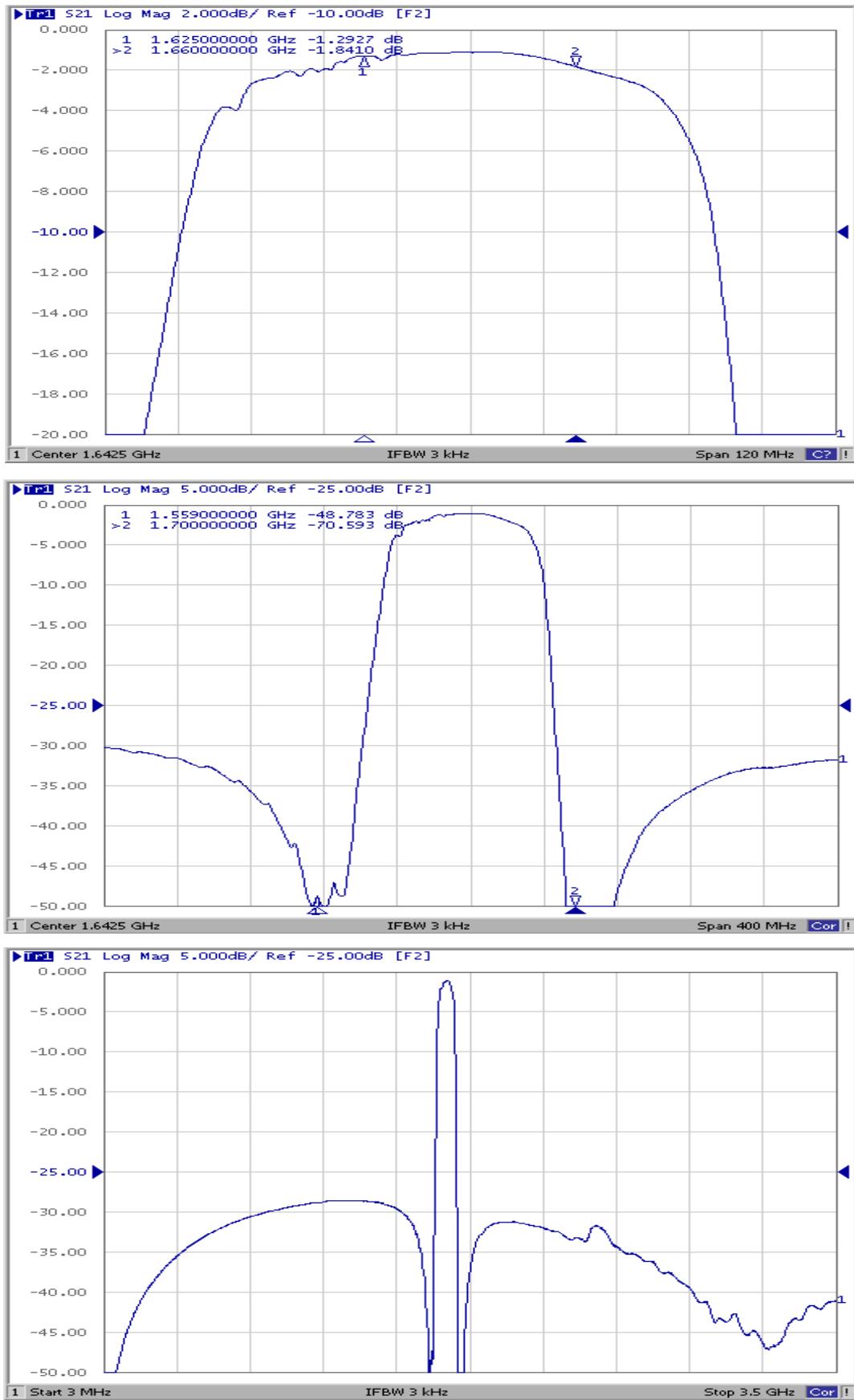
Connection	Terminals
Input	2
Output	5
Case Ground	All others

**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

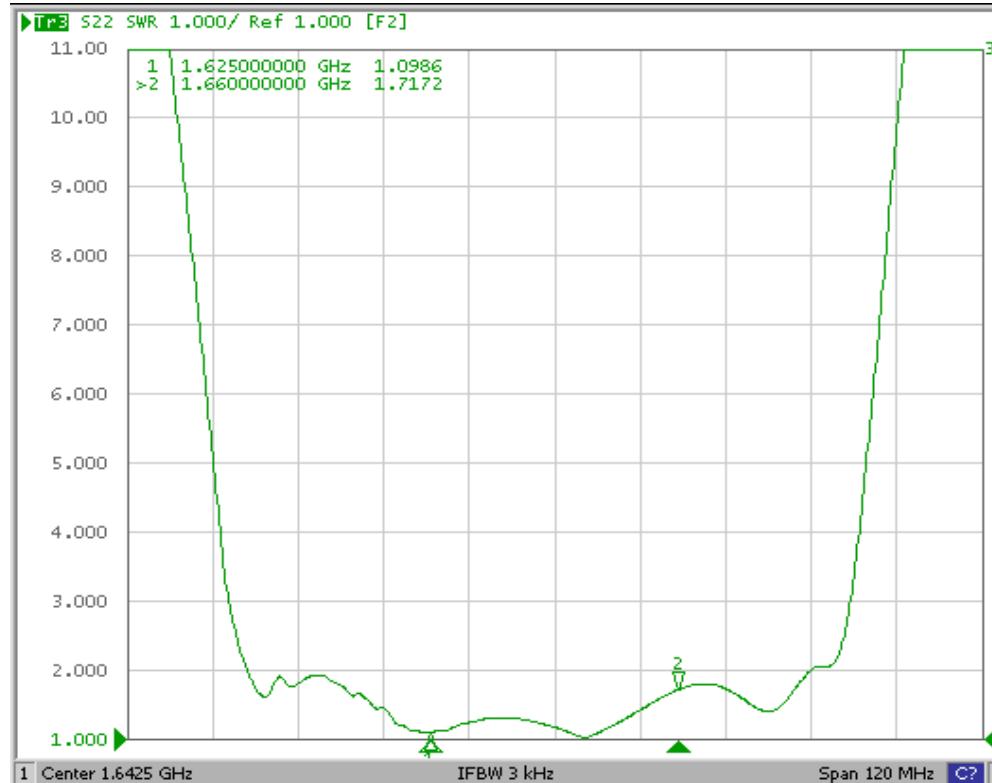
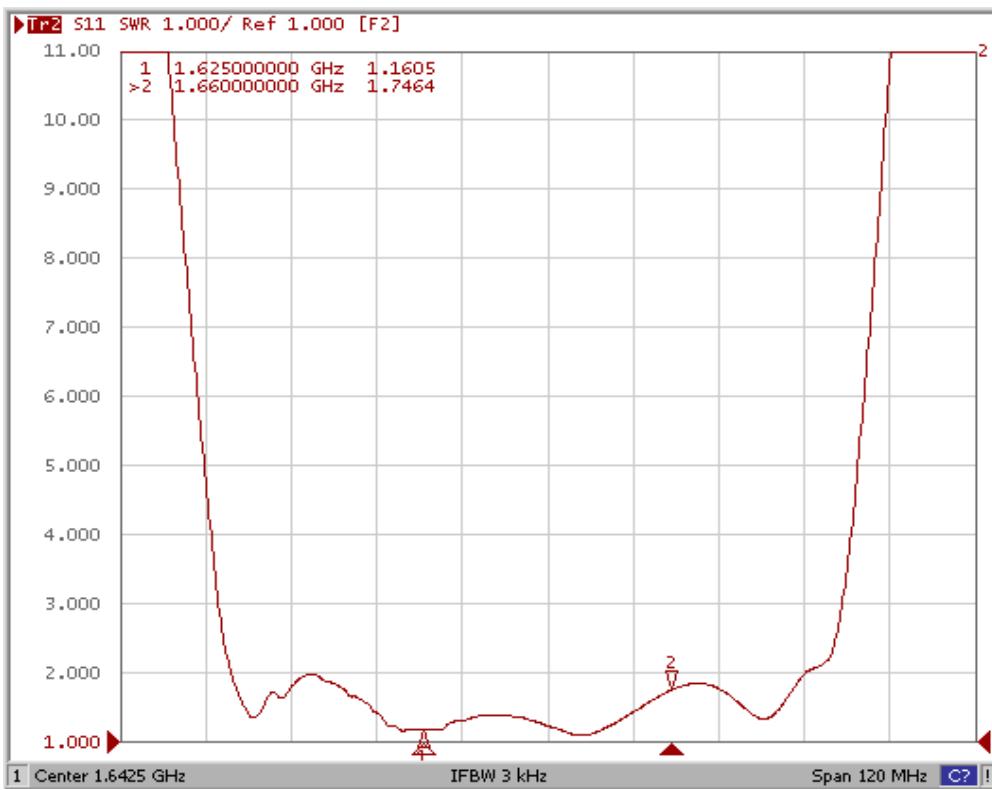
#### NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to  $50\ \Omega$  and measured with  $50\ \Omega$  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. The design, manufacturing process, and specifications of this filter are subject to change.
5. 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.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

## Filter Response Plots

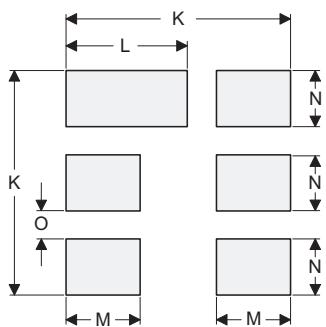
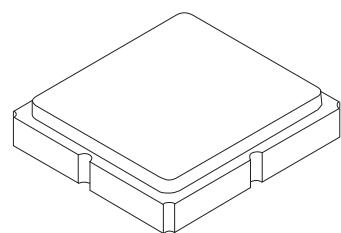


## Filter VSWR Plots



# SM3030-6 Case

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



PCB Footprint Top View

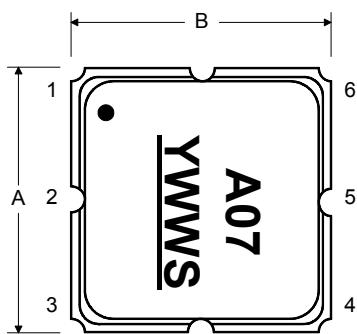
### Case and PCB Footprint Dimensions

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>	1.12	1.25	1.38	0.044	0.049	0.054
<b>D</b>	0.77	0.90	1.03	0.030	0.035	0.040
<b>E</b>	2.67	2.80	2.93	0.105	0.110	0.115
<b>F</b>	1.47	1.60	1.73	0.058	0.063	0.068
<b>G</b>	0.72	0.85	0.98	0.028	0.033	0.038
<b>H</b>	1.37	1.50	1.63	0.054	0.059	0.064
<b>I</b>	0.47	0.60	0.73	0.019	0.024	0.029
<b>J</b>	1.17	1.30	1.43	0.046	0.051	0.056
<b>K</b>		3.20			0.126	
<b>L</b>		1.70			0.067	
<b>M</b>		1.05			0.041	
<b>N</b>		0.81			0.032	
<b>O</b>		0.38			0.015	

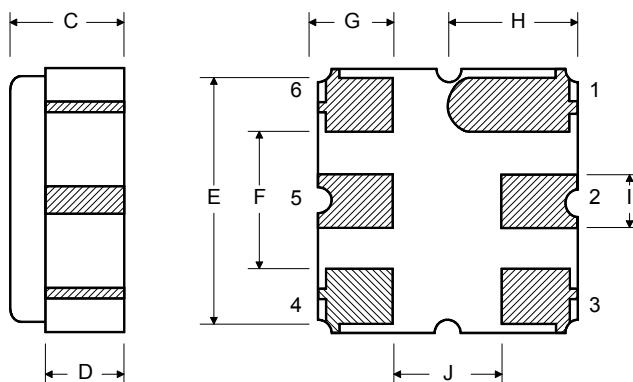
### Case Materials

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

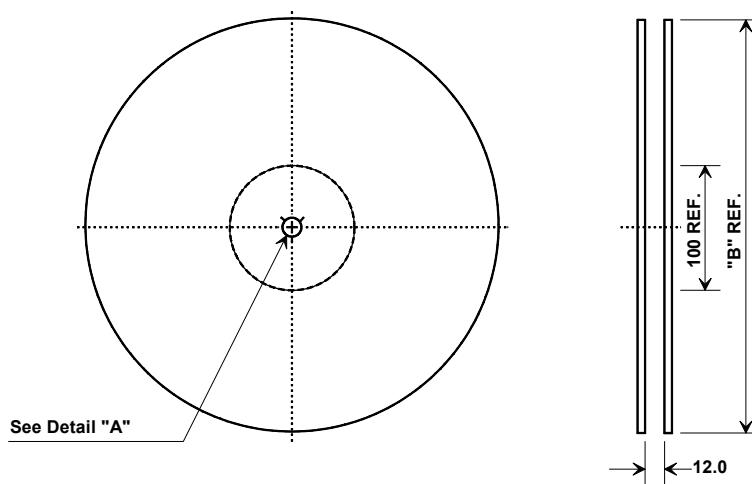
### TOP VIEW



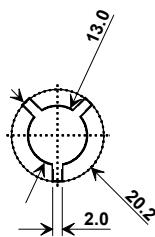
### BOTTOM VIEW



## Tape and Reel Specifications

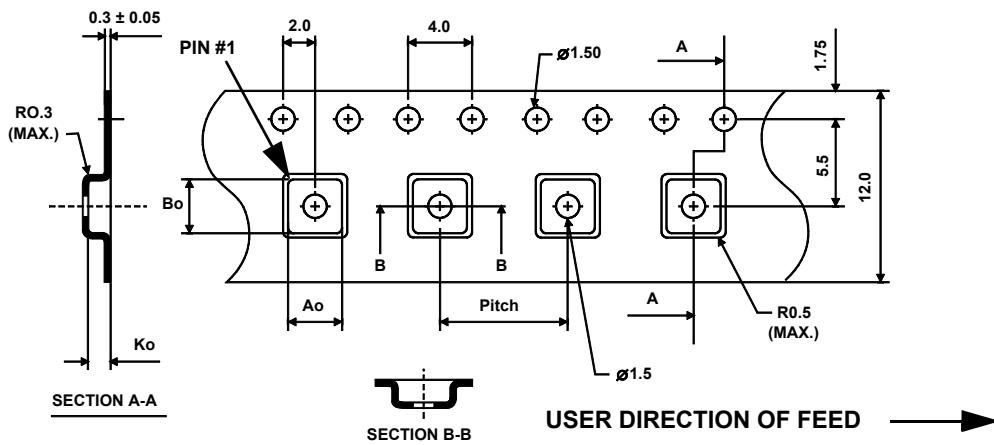


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



### COMPONENT ORIENTATION and DIMENSIONS

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



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