

- Low-loss RF SAW Filter
- Surface Mount 3.0 x 3.0 x 1.3 mm Package
- Complies with Directive 2002/95/EC (RoHS)

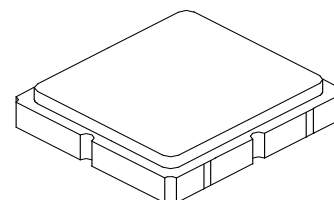


#### Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	15	dBm
DC Voltage on any Non-ground Terminal	12	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	220	°C

**SF2253E**

**2655 MHz  
SAW Filter**



**SM3030-6**

#### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	F <sub>C</sub>			2655		MHz
Insertion Loss, 2620 to 2690 MHz	IL			2.2	3.6	dB
Amplitude Ripple, 2620 to 2690 MHz				0.7	2.2	dB <sub>P-P</sub>
Group Delay Ripple, 2620 to 2690 MHz				7	35	ns
VSWR, 2620 to 2690 MHz				1.9	2.5	
Attenuation Referenced to 0 dB:						
300 to 500 MHz			20	36		dB
500 to 2450 MHz			22	30		
2450 to 2550 MHz			25	36		
2745 to 3000 MHz			15	37		
Source Impedance	Z <sub>S</sub>			50		Ω
Load Impedance	Z <sub>L</sub>			50		
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	995, YWWS					
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel				
	Reel Size 13 Inch	3000 Pieces/Reel				

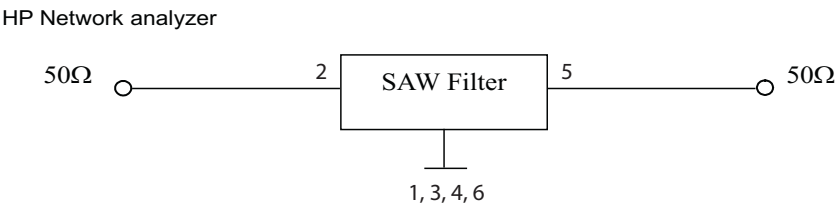


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

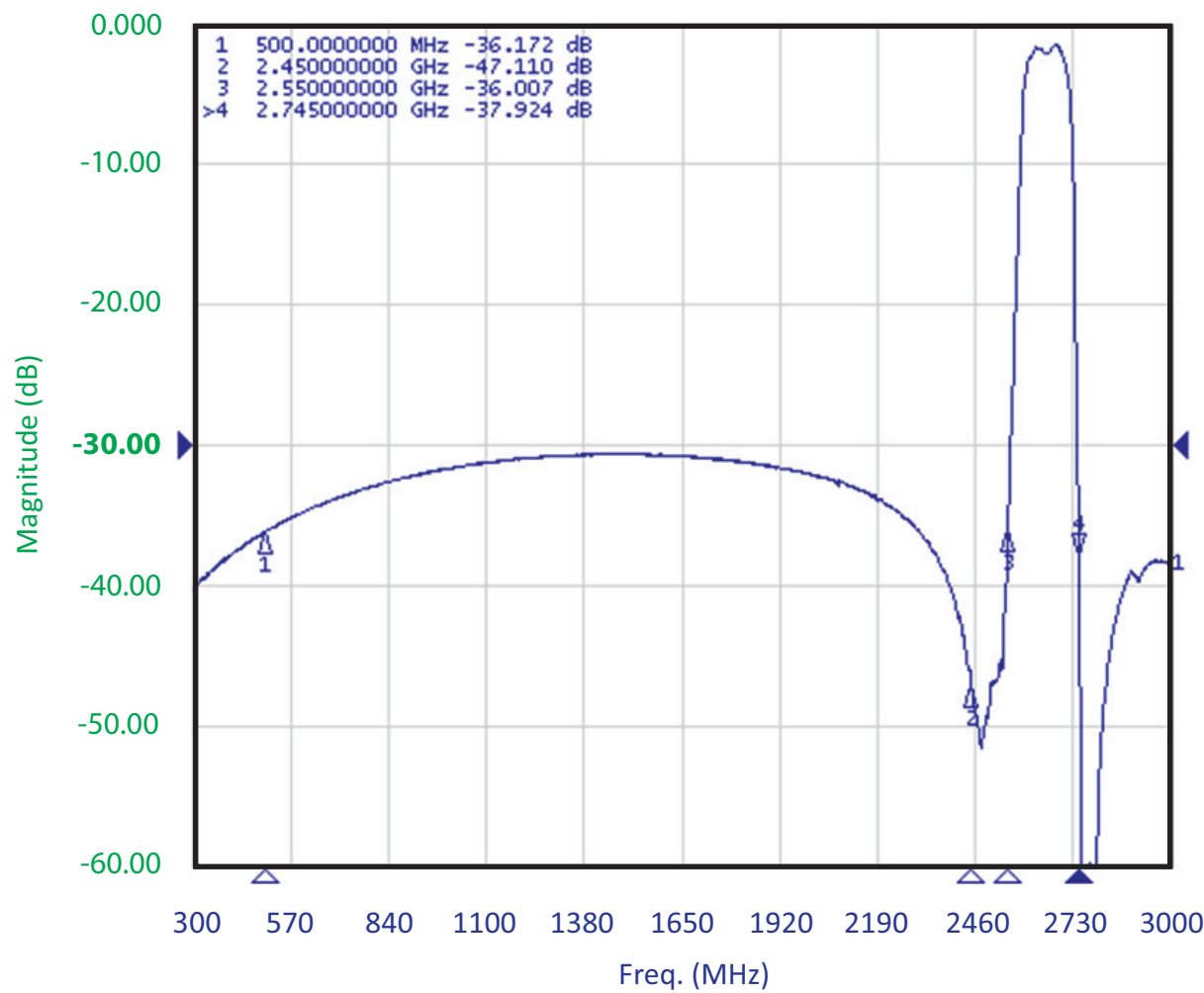
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
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 Test Circuit

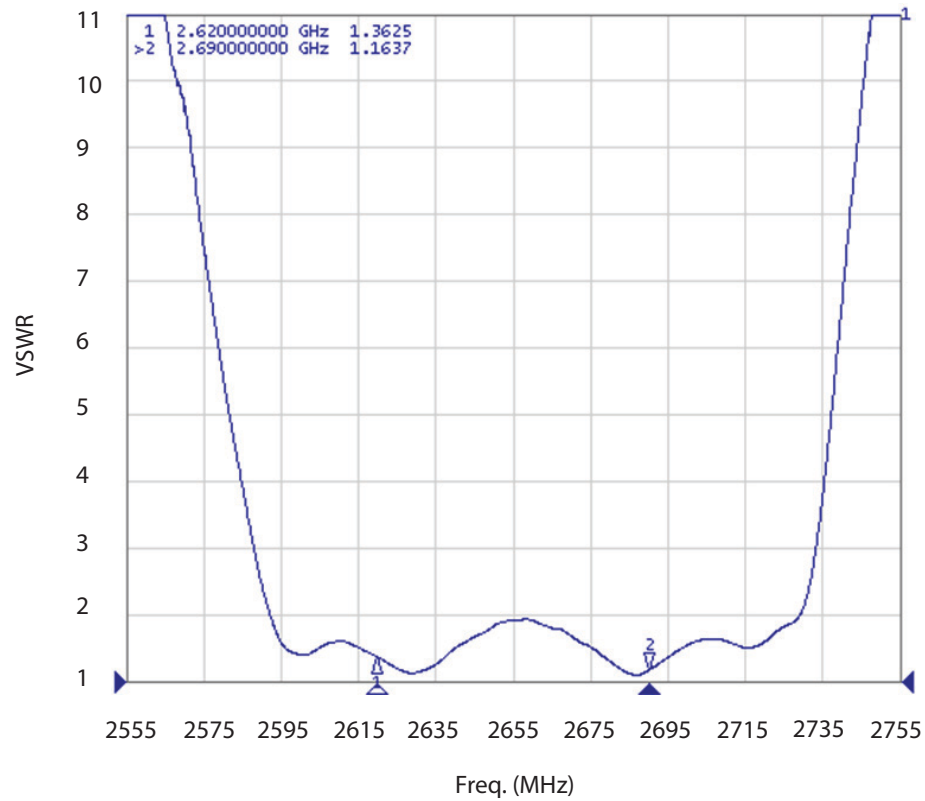


Connection	Terminals
Input	2
Output	5
Ground	1, 3, 4, 6

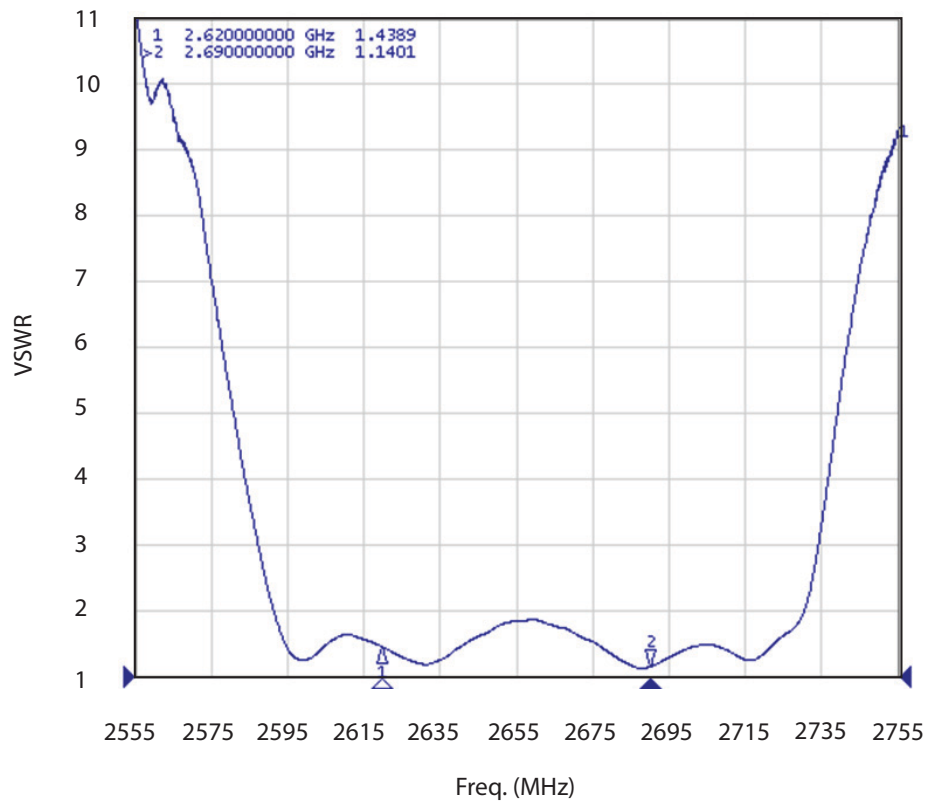
## Frequency Response:



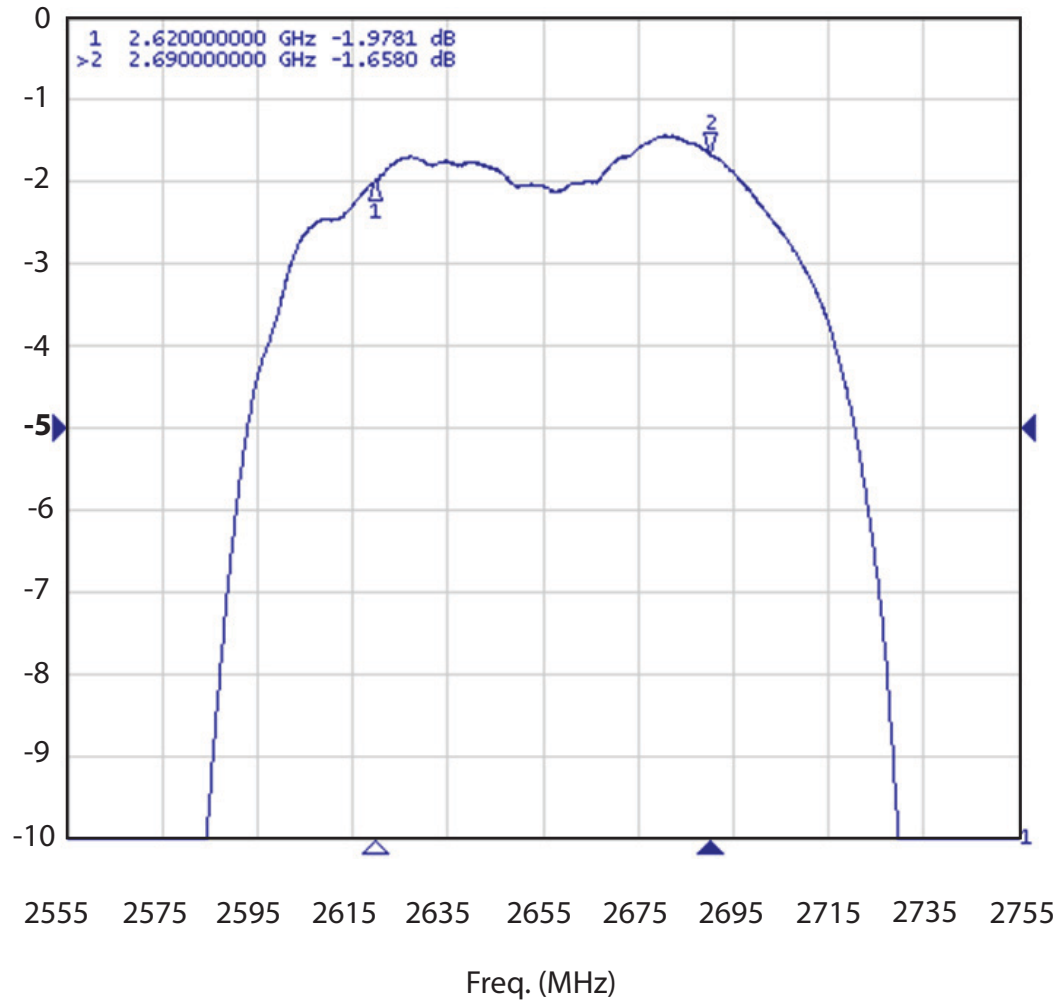
## S11



## S22

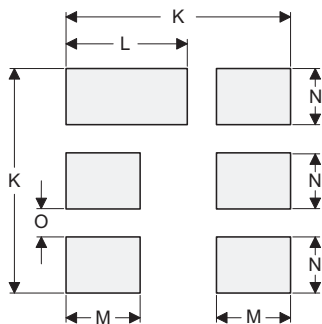
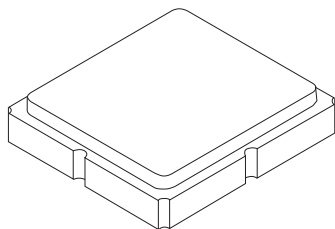


## Pass Band Response



# SM3030-6 Case

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



PCB Footprint Top View

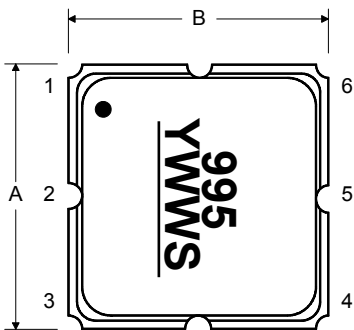
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.4	0.044	0.049	0.050
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.50	2.93	0.105	0.090	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

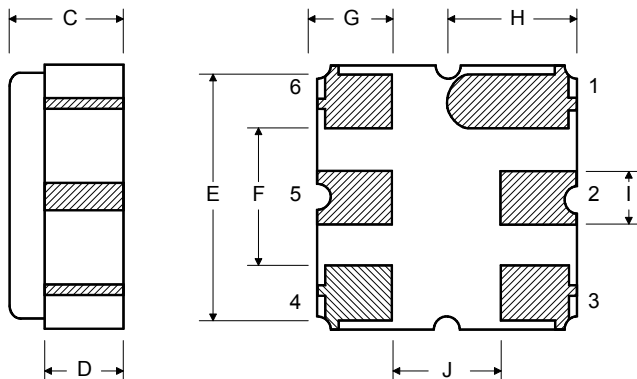
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Lid Plating	2.0 to 3.0 $\mu$ m Nickel
Body	Al <sub>2</sub> O <sub>3</sub> 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 of the central hole.

**Top View:** A large circle with a smaller concentric circle in the center. A horizontal centerline and a vertical centerline intersect at the center. A leader line points from the text "See Detail 'A'" to the center of the inner circle.

**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. It shows a circular hole with a diameter of 20.2. The hole is surrounded by a flange with a thickness of 2.0. The distance from the center of the hole to the outer edge of the flange is dimensioned as 13.0.

“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

