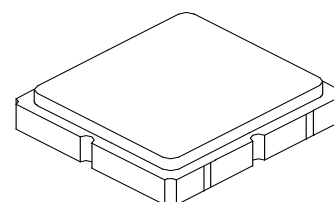


**SF2253E**

**2655 MHz  
SAW Filter**



**SM3030-6**

- **Low-loss RF SAW Filter**
- **Surface Mount 3.0 x 3.0 x 1.3 mm Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

**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

**Electrical Characteristics**

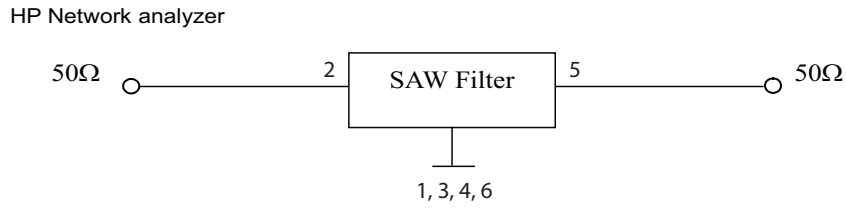
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$F_C$			2655		MHz
Insertion Loss, 2620 to 2690 MHz	IL			2.2	3.6	dB
Amplitude Ripple, 2620 to 2690 MHz				0.7	2.2	dB <sub>p-p</sub>
Group Delay Ripple, 2620 to 2690 MHz				7	35	ns
VSWR, 2620 to 2690 MHz				1.9	2.5	
Attenuation Referenced to 0 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	$Z_S$			50		$\Omega$
Load Impedance	$Z_L$			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, <u>YWWS</u>					
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:**

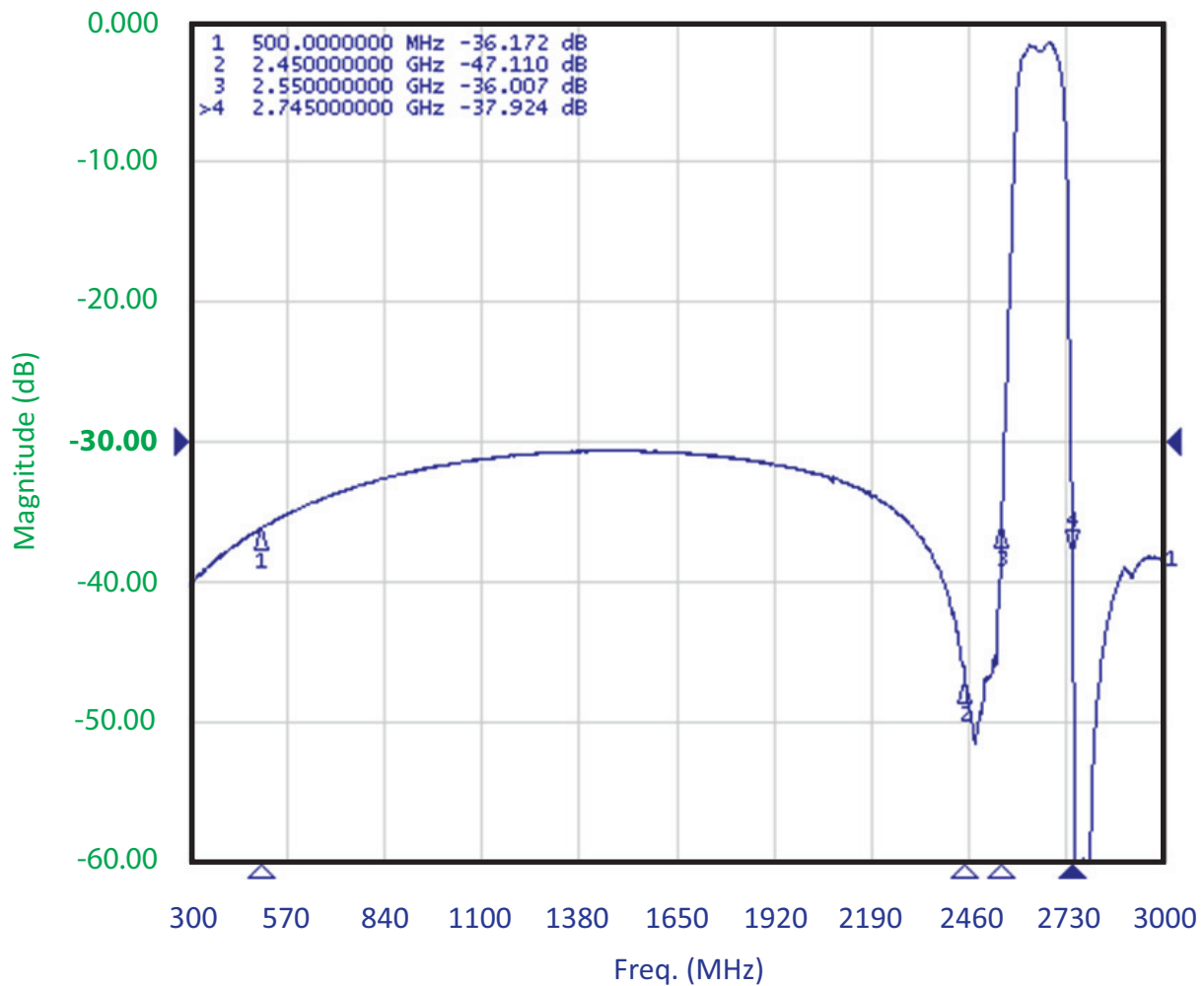
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Filter Test Circuit

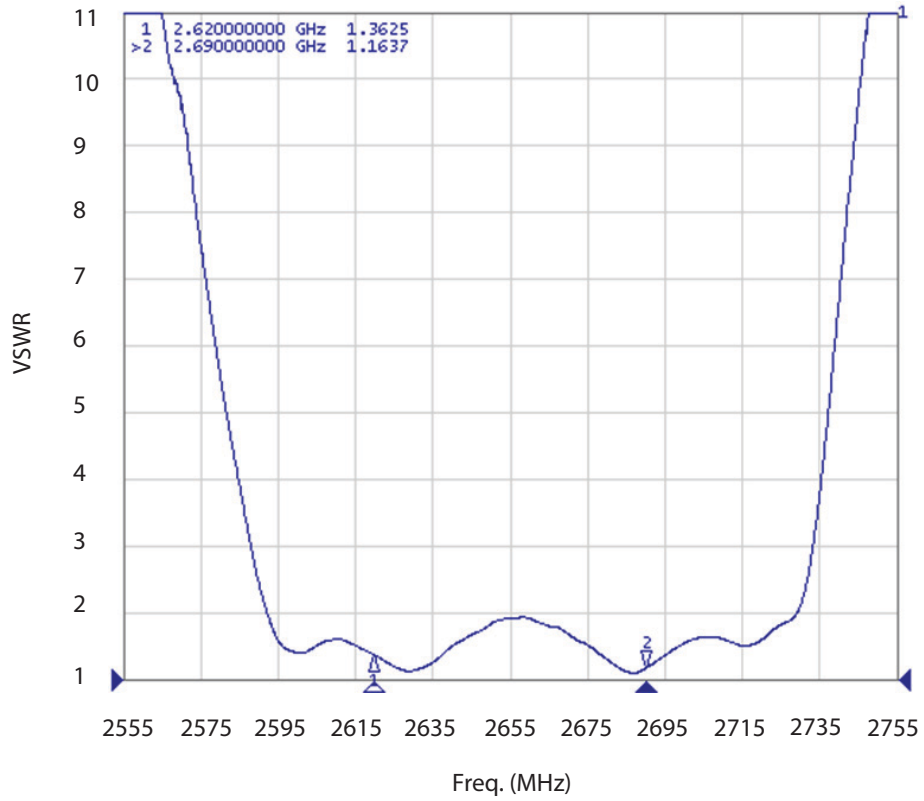


Connection	Terminals
Input	2
Output	5
Ground	1, 3, 4, 6

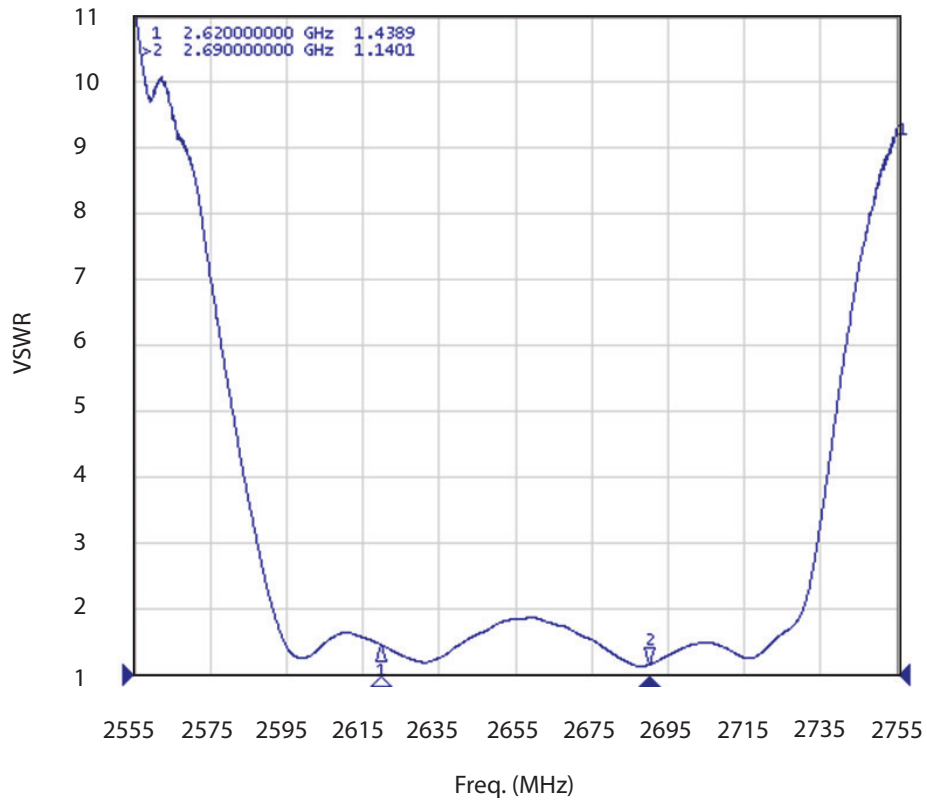
## Frequency Response:



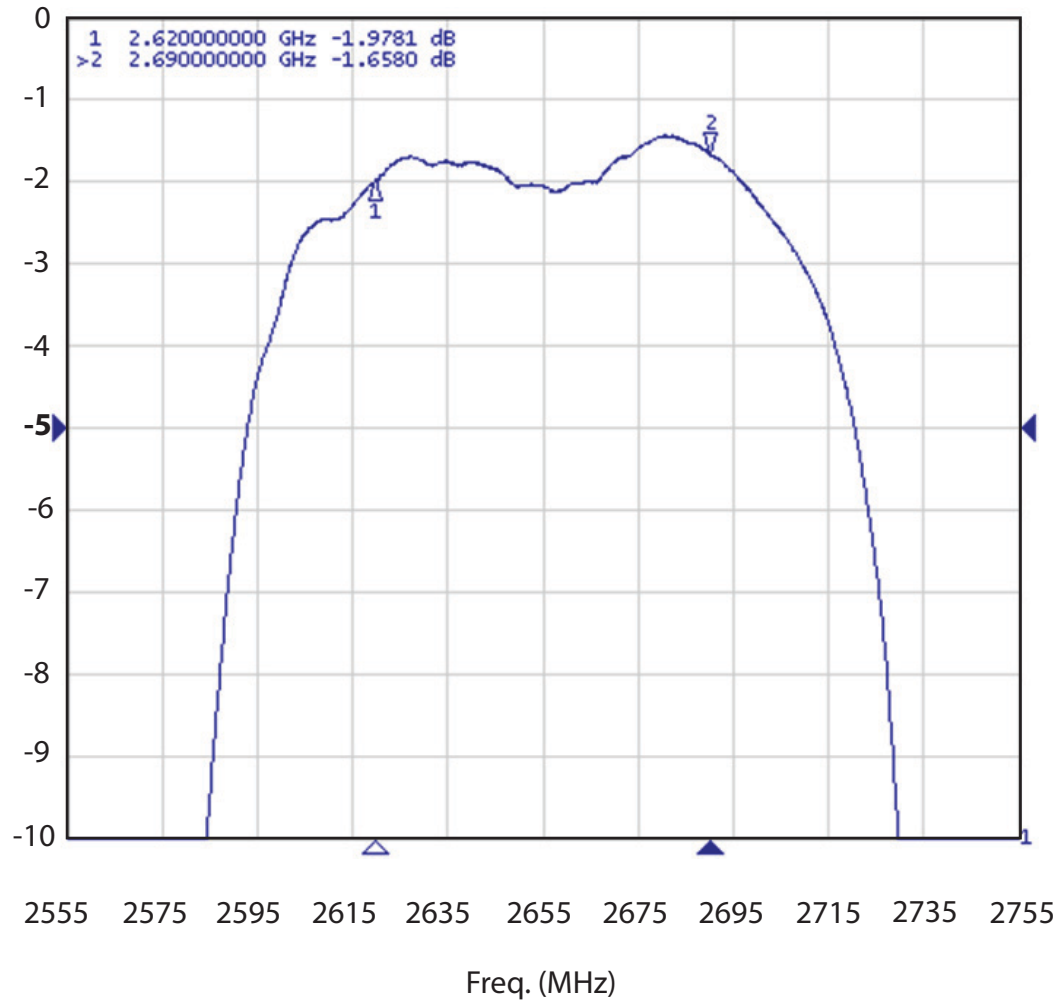
# S11



# S22

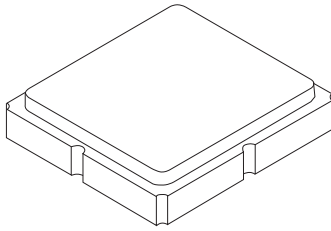


## Pass Band Response



# SM3030-6 Case

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



PCB Footprint Top View

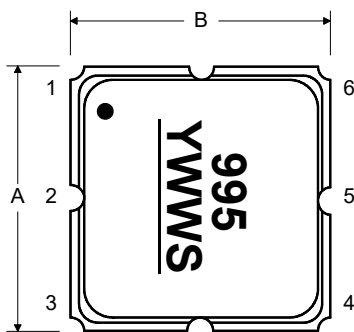
### Case and PCB Footprint Dimensions

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	

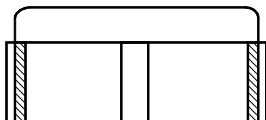
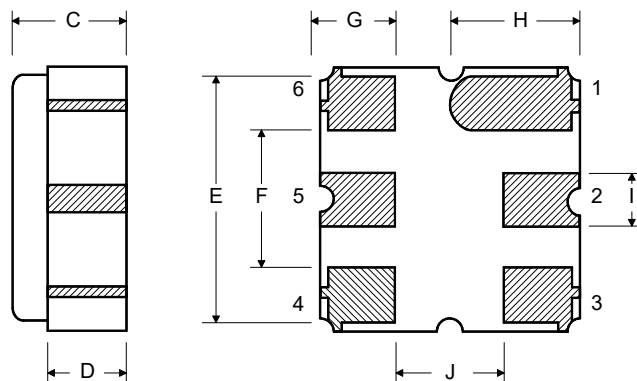
### Case Materials

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

### TOP VIEW

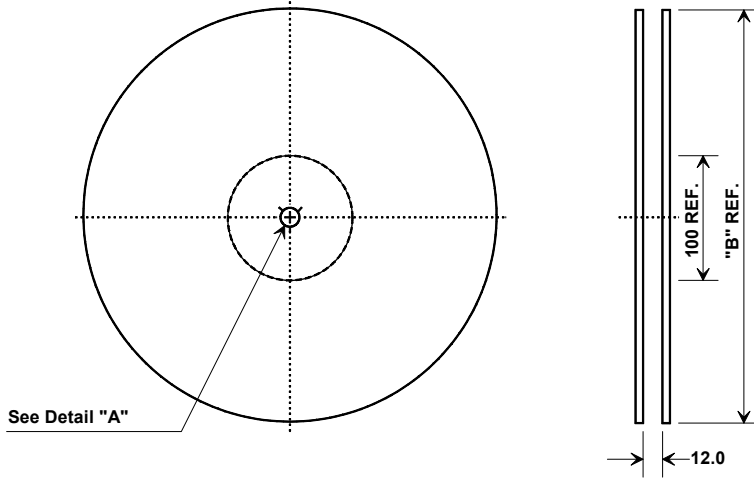


### BOTTOM VIEW

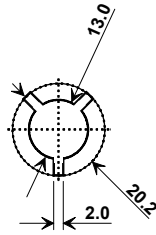


## Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA481

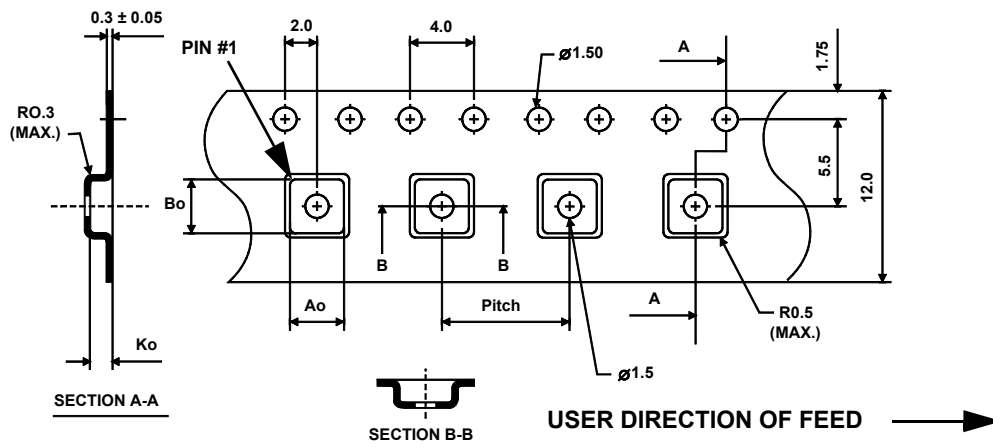


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



### 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



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180° for 60~90 seconds.
2. Ascending time to preheating temperature 150° shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C peak (10 seconds.)
4. Time: 5 times maximum

