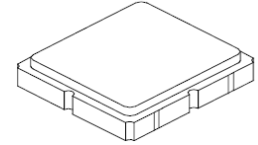


**SF2464E**

**400 MHz  
SAW Filter**



**SM 3030-6**

- **Low-loss SAW Filter**
- **3.0 x 3.0 x 1.25 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**

Absolute Maximum Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	6	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-45 to +85	°C
Moisture Sensitivity Level	1	MSL
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 20 - 40 s	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			400		MHz
3dB BW				680		kHz
Insertion Loss	ILmin			2.8	3.5	dB
Insertion Loss (excluding loss in matching elements)	ILmin			2.3	3.0	
Passband (relative to ILmin) 399.875 to 400.125 MHz				0.5	3.0	
Attenuation relative to ILmin:						dB
10 to 370 MHz			50	53		
370 to 390 MHz			45	50		
390 to 399 MHz			22	32		
399 to 399.3 MHz			15	21		
400.7 to 401 MHz			15	21		
401 to 408 MHz			12	29		
404 to 414 MHz			35	43		
414 to 468 MHz			45	46		
468 to 800 MHz			50	50		
800 to 1500 MHz			60	70		
1500 to 2500 MHz			50	68		
Impedance at $F_C$ , Input	$Z_{in} = R_{in}/C_{in} Z_S$		328Ω//2.85pF			
Impedance at $F_C$ , Output	$Z_{out} = R_{out}/C_{out} Z_L$		328Ω//2.85pF			

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint		
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A9, <u>YWWS</u>		
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel	
	Reel Size 13 Inch	3000 Pieces/Reel	

**Electrical Connections**

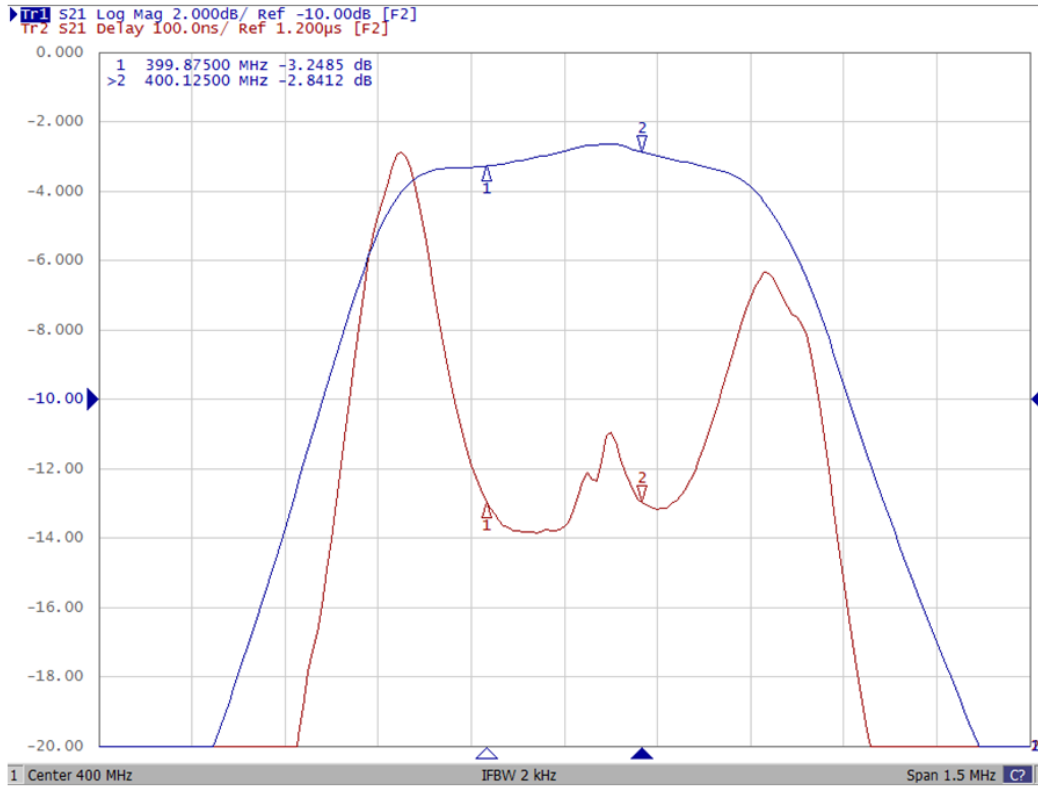
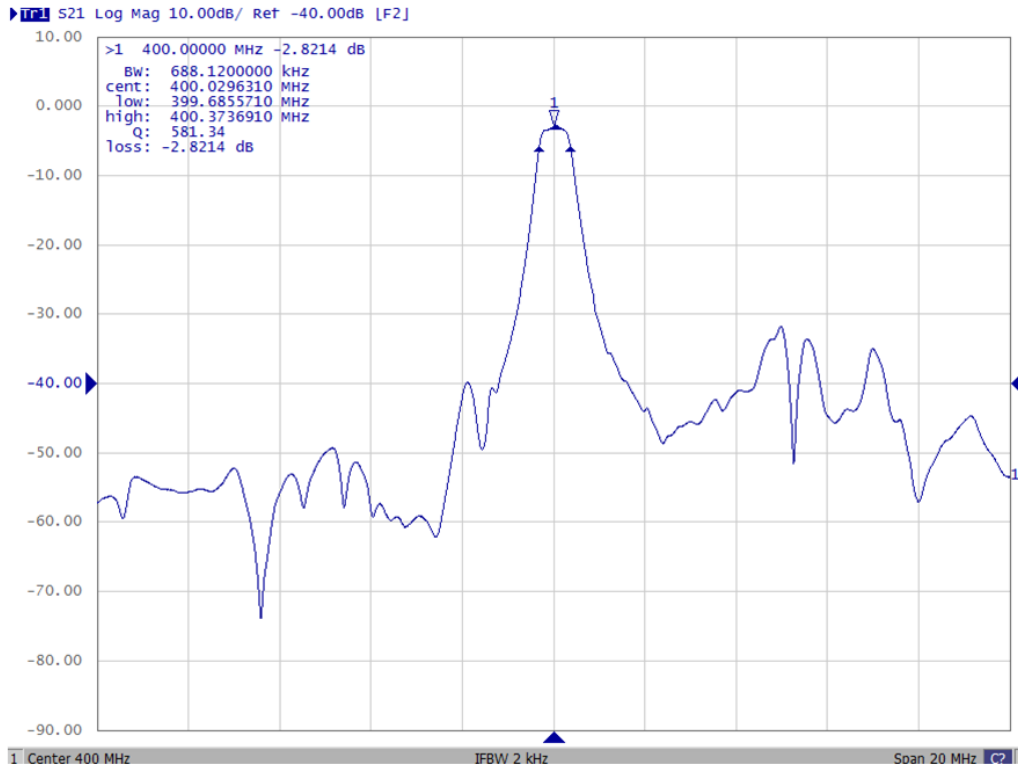
Connection	Terminals
Input (recommended)/Input Ground	1
Input Ground/Input	2
Output (recommended)/Output Ground	4
Output Ground/Output	5
Ground	All others



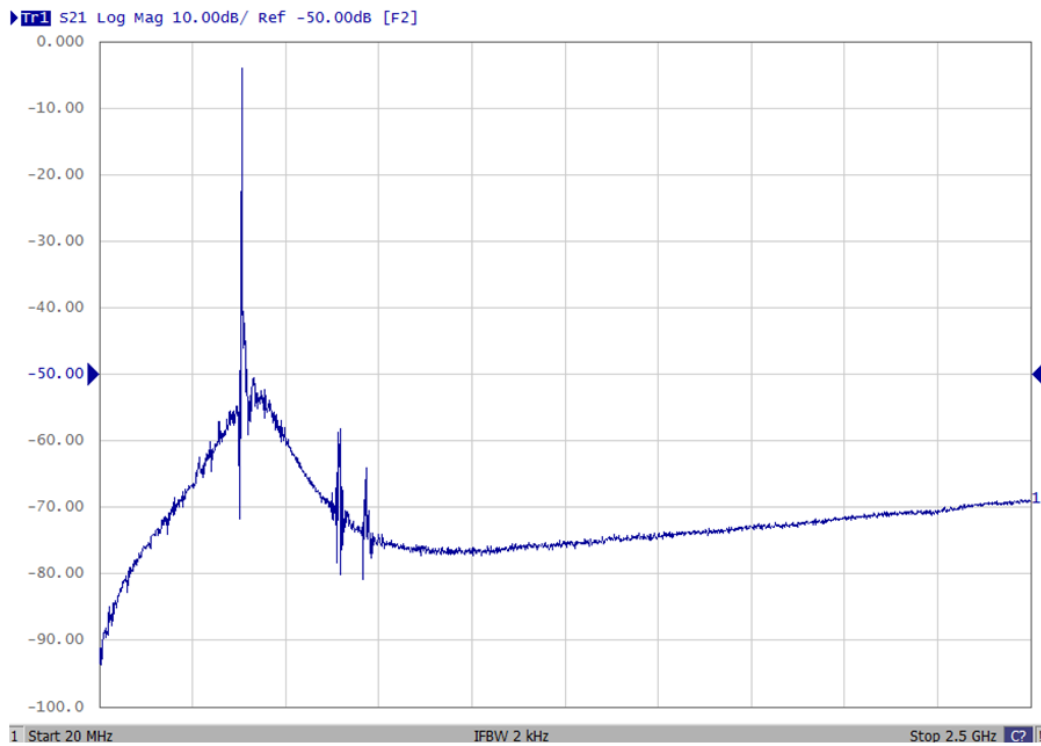
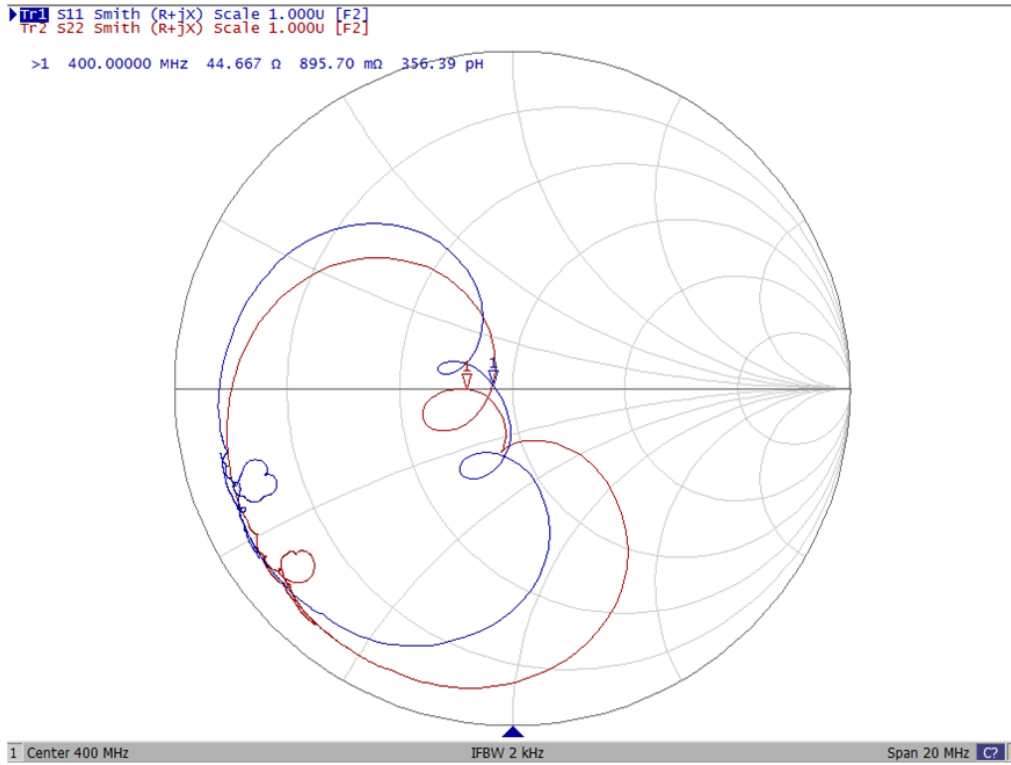
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**  
**NOTES:**

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.

# Frequency Characteristics



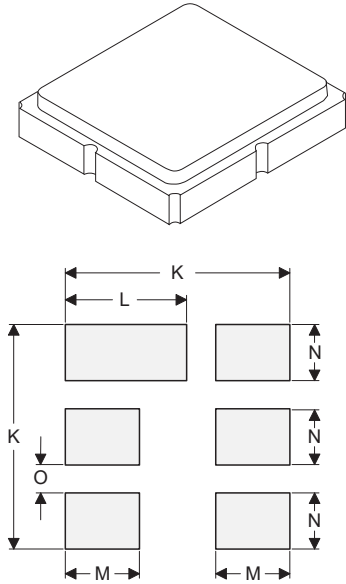
# Frequency Characteristics



# SM3030-6 Ceramic 6-Terminal Surface-mount Case

## 3.0 X 3.0 mm Nominal Footprint

### Case and PCB Footprint Dimensions



Typical PCB Land Footprint

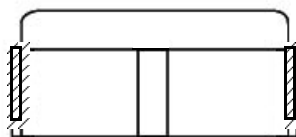
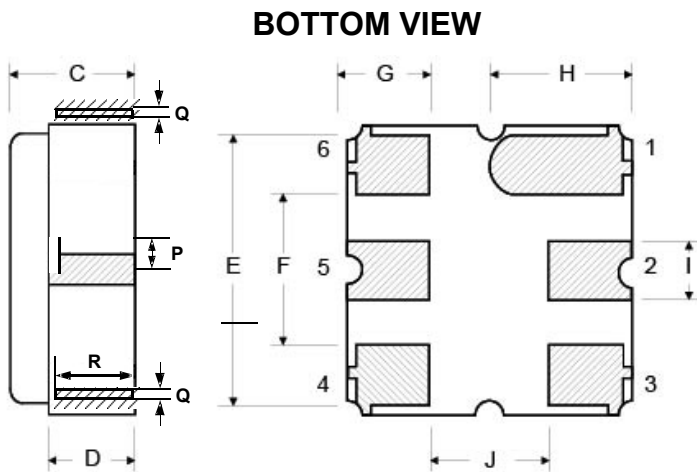
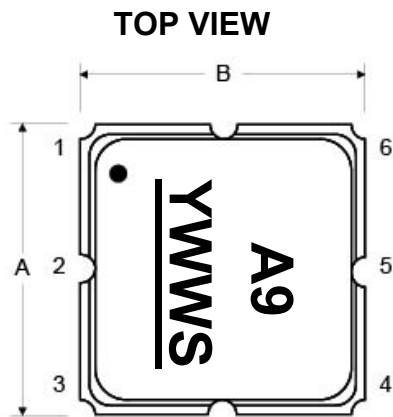
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	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	
P	0.15	0.30	0.45	0.005	0.011	0.017
Q	0.07	0.20	0.36	0.002	0.007	0.014
R	0.62	0.7	0.78	0.024	0.027	0.030

### Case Materials

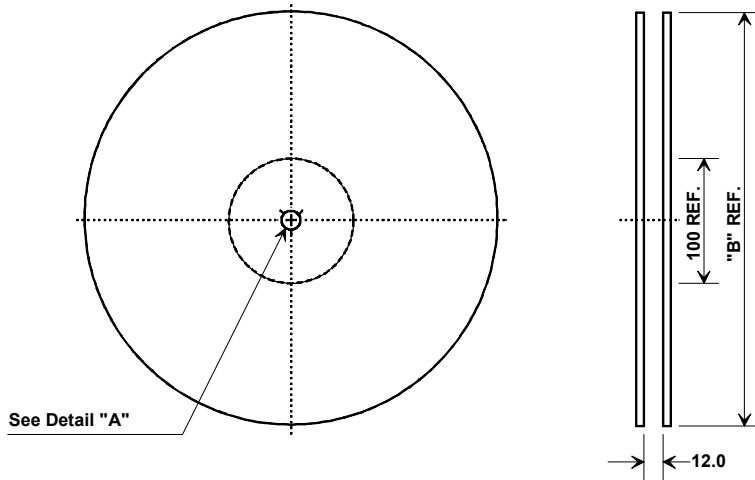
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

### Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

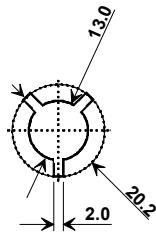


## Tape and Reel Specifications



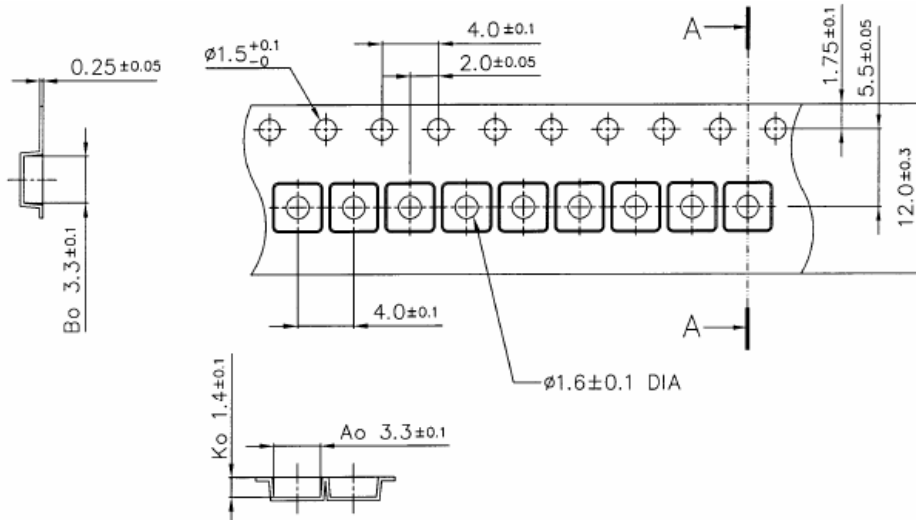
Tape and Reel Standard per ANSI/EIA-481

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



### COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.30 mm
Bo	3.30 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

