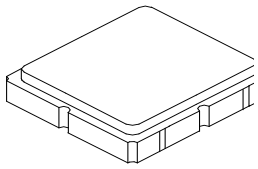
muRata
INNOVATOR IN ELECTRONICS

SF2381E

2492 MHz SAW Filter

- ***Low-loss RF SAW Filter***
- ***Miniature 3 x 3 mm SMD Package***
- ***Complies with Directive 2011/65/EU (RoHS)***



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-grounded Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range	-40 to +85	°C
Maximum Soldering Profile, 2 cycles/10 seconds minimum	260	°C

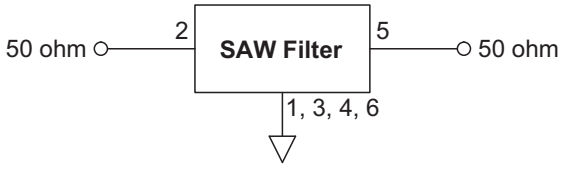
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			2492		MHz
Insertion Loss, 2489.5 to 2494.5 MHz	IL			1.55	2.0	dB
Amplitude Ripple, 2489.5 to 2494.5 MHz				0.2	1.0	dB
VSWR, 2489.5 to 2494.5 MHz				1.2	1.8	
Attenuation, Referenced to 0 dB:						dB
DC to 2390 MHz			33	40		
2575 to 3000 MHz			43	50		
Source Impedance	Z_S			50		Ω
Load Impedance	Z_L			50		Ω
Temperature Coefficient of Frequency				-36		ppm/°C

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

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

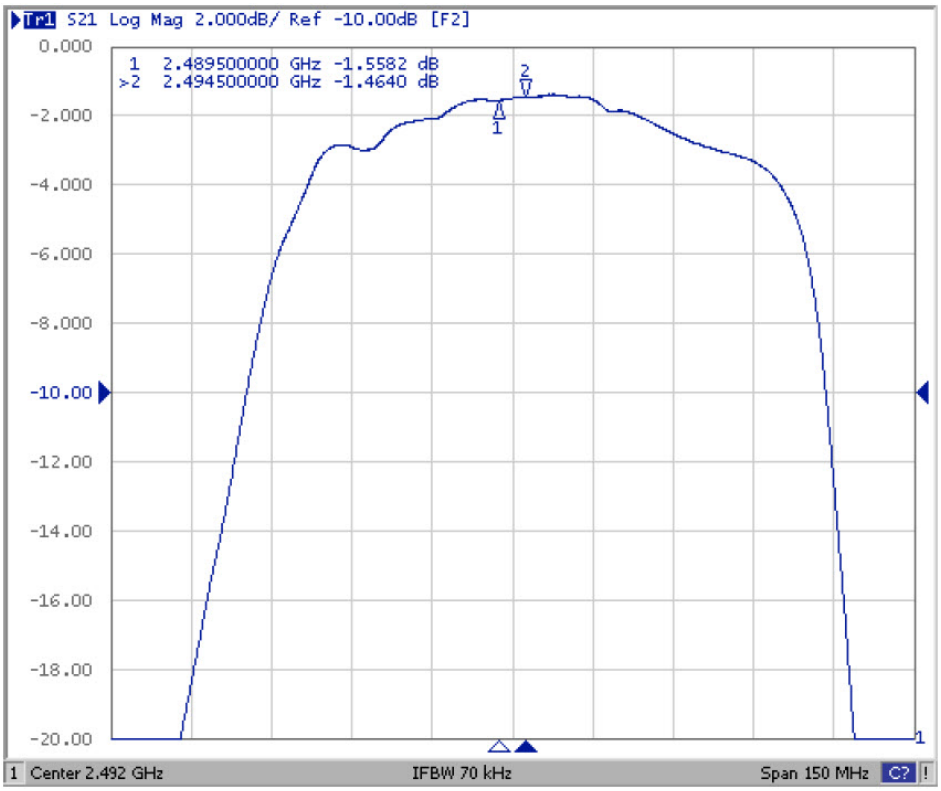


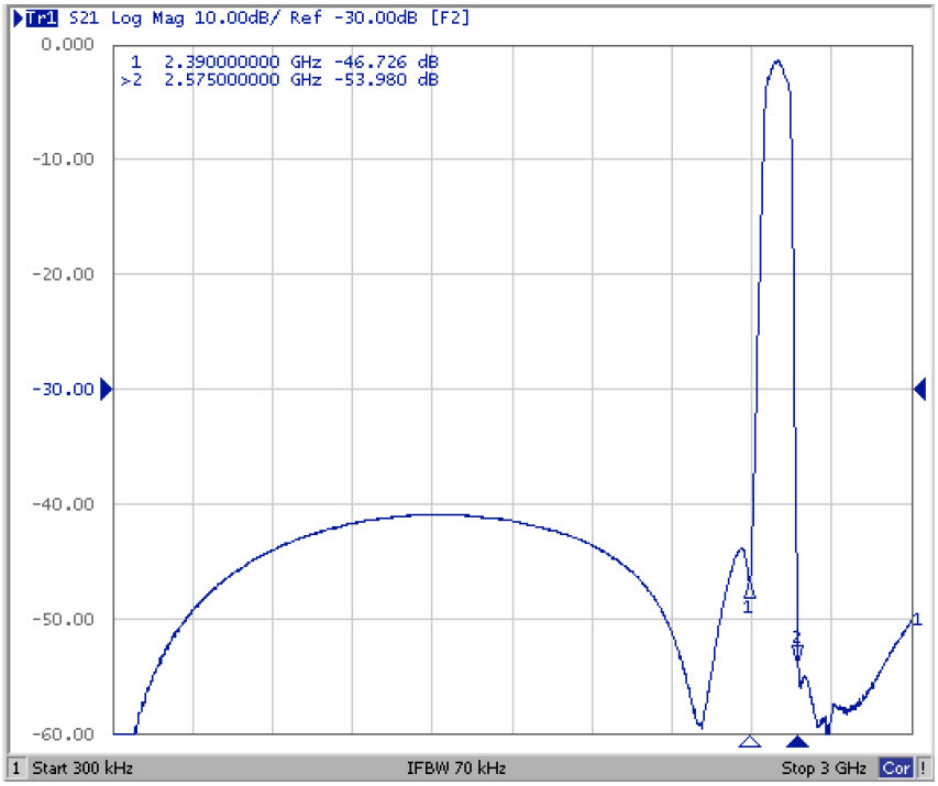
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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 Ω and measured with 50 Ω 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.

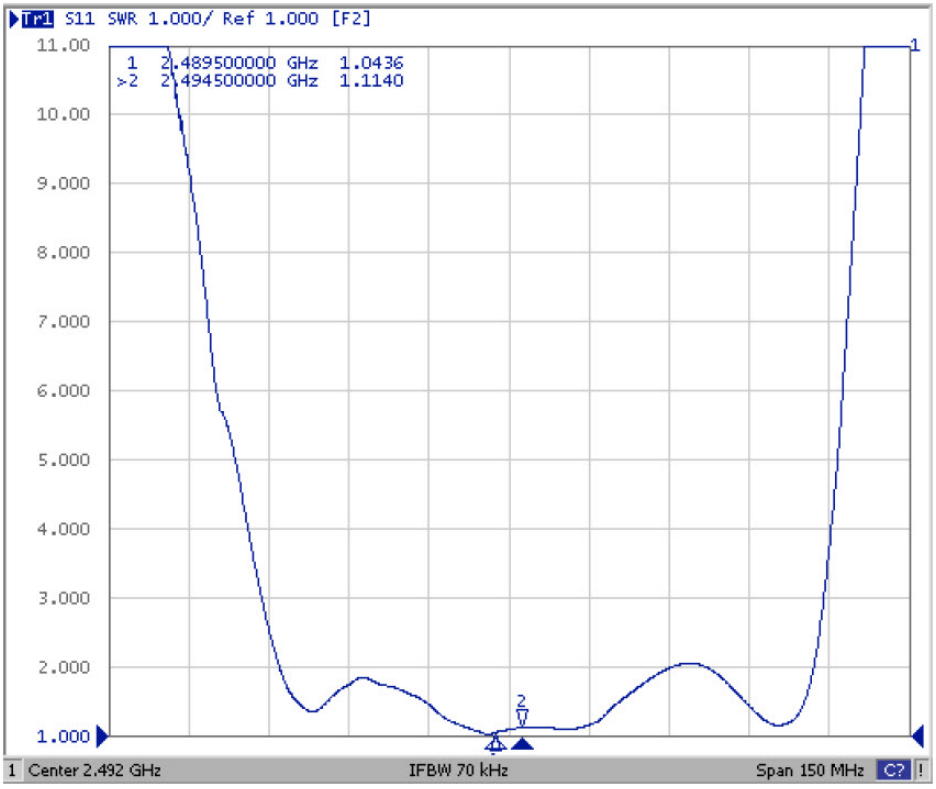
Frequency Characteristics



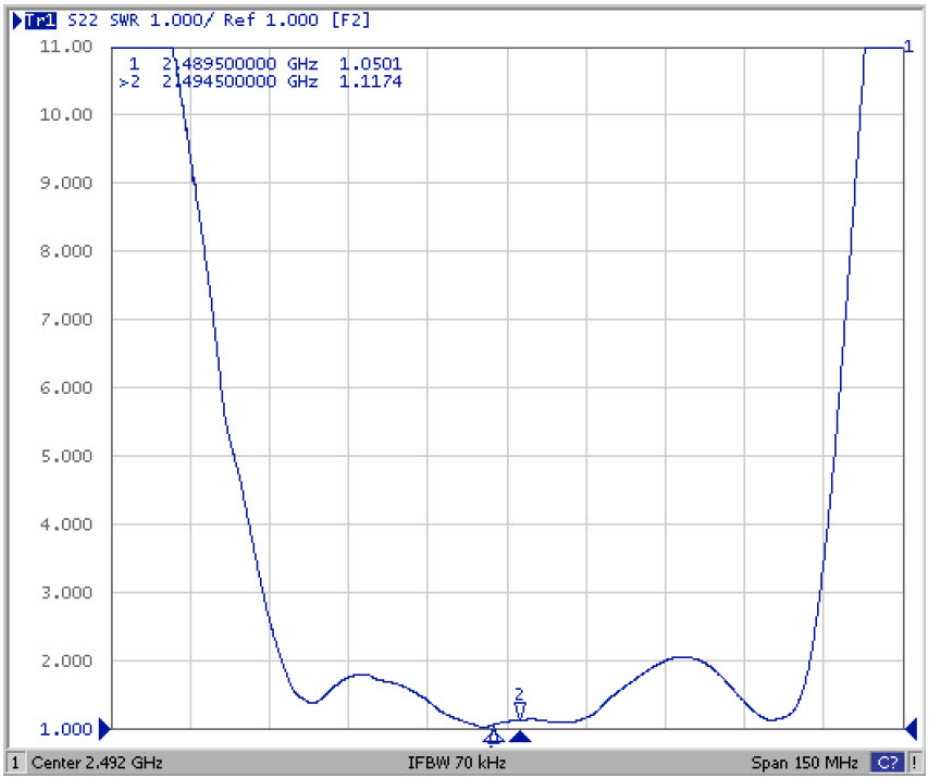


Reflection Functions

S11

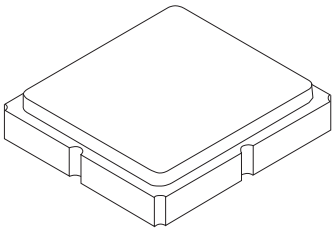


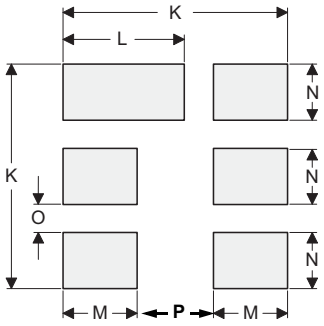
S22



SM3030-6 Case

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





PCB Footprint Top View

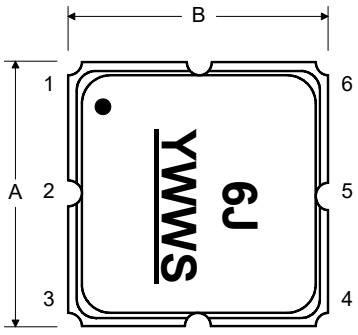
Case and PCB Footprint Dimensions

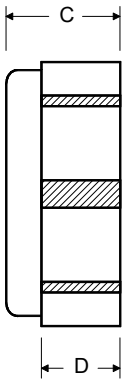
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	-	-	1.40	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	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	-	1.09	-	-	0.039	-

Case Materials

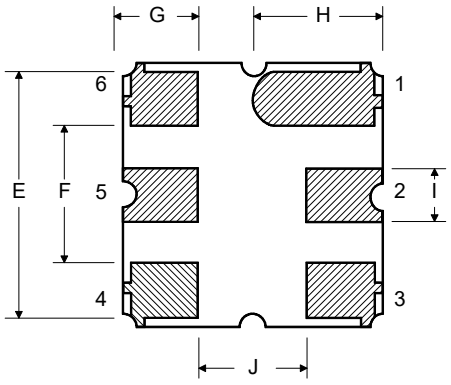
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

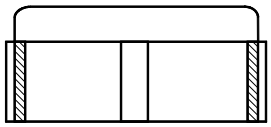
TOP VIEW



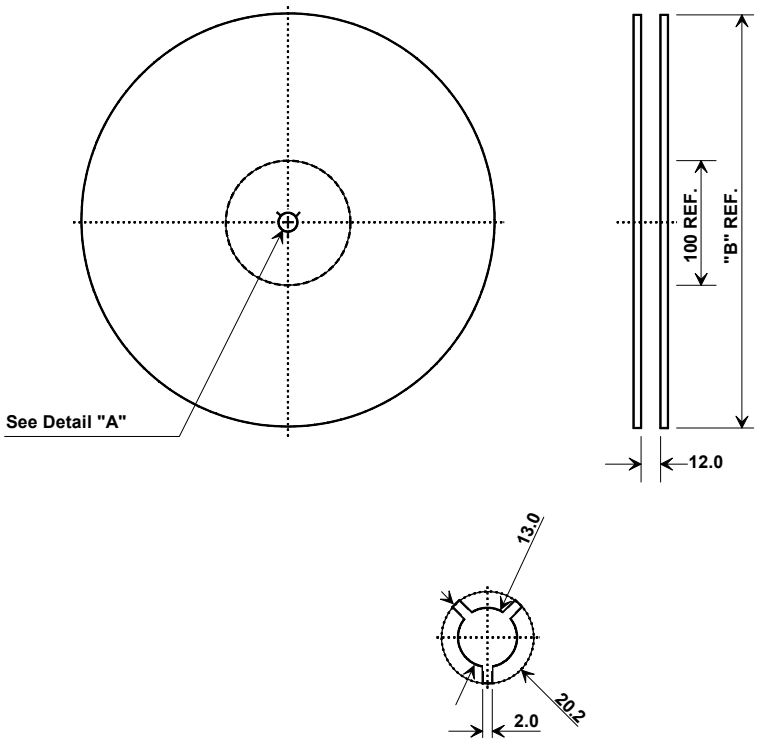


BOTTOM VIEW





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 ±0.1 mm
Bo	3.35 ±0.1 mm
Ko	1.40 ±0.1 mm
Pitch	8.0 ±0.05 mm
W	12.0 ±0.3 mm