muRata
INNOVATOR IN ELECTRONICS

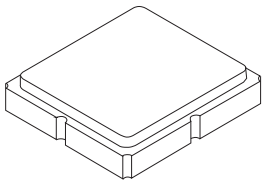
PRELIMINARY

RoHS Compliance
This component is compliant with RoHS directive.
This component was always RoHS compliant from the first date of manufacture.

SF2464E

400 MHz SAW Filter

- ***Low-loss SAW Filter***
- ***No Matching Required for 50 ohm Source/Load***
- ***3.0 x 3.0 x 1.25 mm Surface-mount Package***



SM 3030-6

Absolute Maximum Ratings

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	

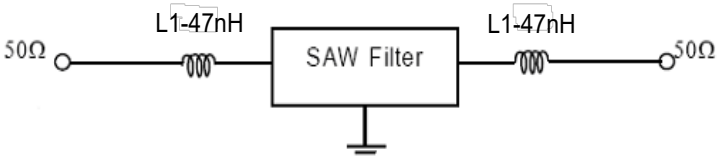
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1		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 Referenced to 0 dB:		1, 2, 3				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			20	29		
404 to 414 MHz			35	43		
414 to 468 MHz			40	46		
468 to 800 MHz			45	50		
800 to 1500 MHz			60	70		
1500 to 2500 MHz			50	68		
Impedance at F_C, Input	Zin = Rin//Cin Z_S		245Ω//3.5pF			
Impedance at F_C, Output	Zin = Rout//Cout Z_L		245Ω//3.5pF			

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, YWWS
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

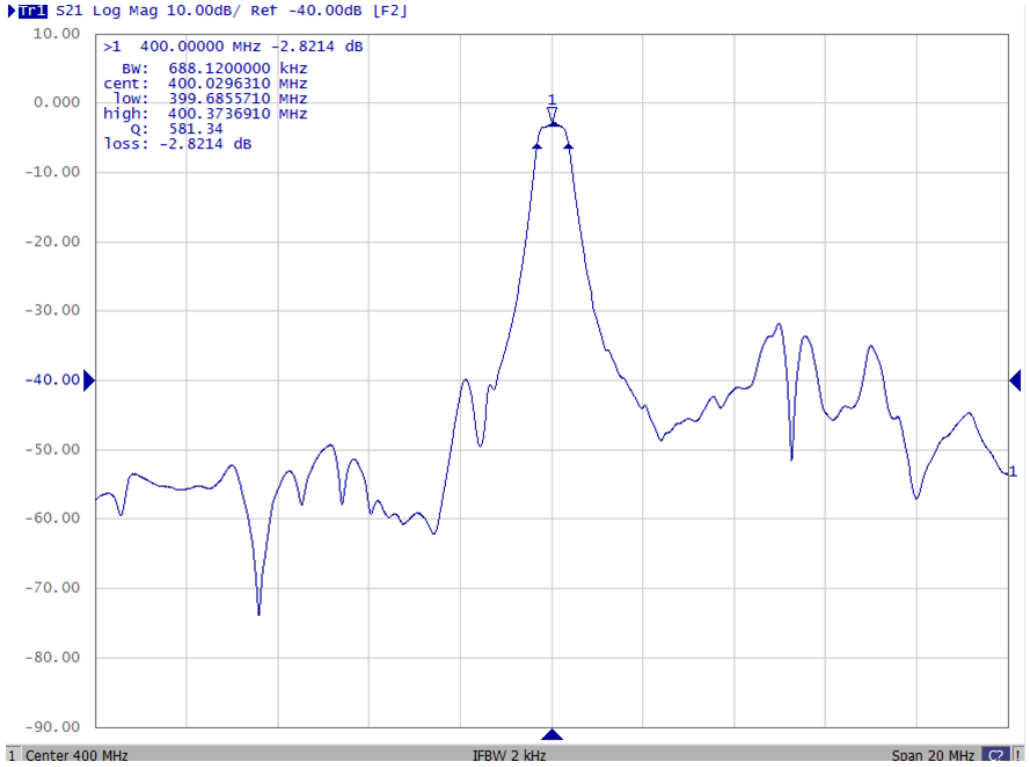


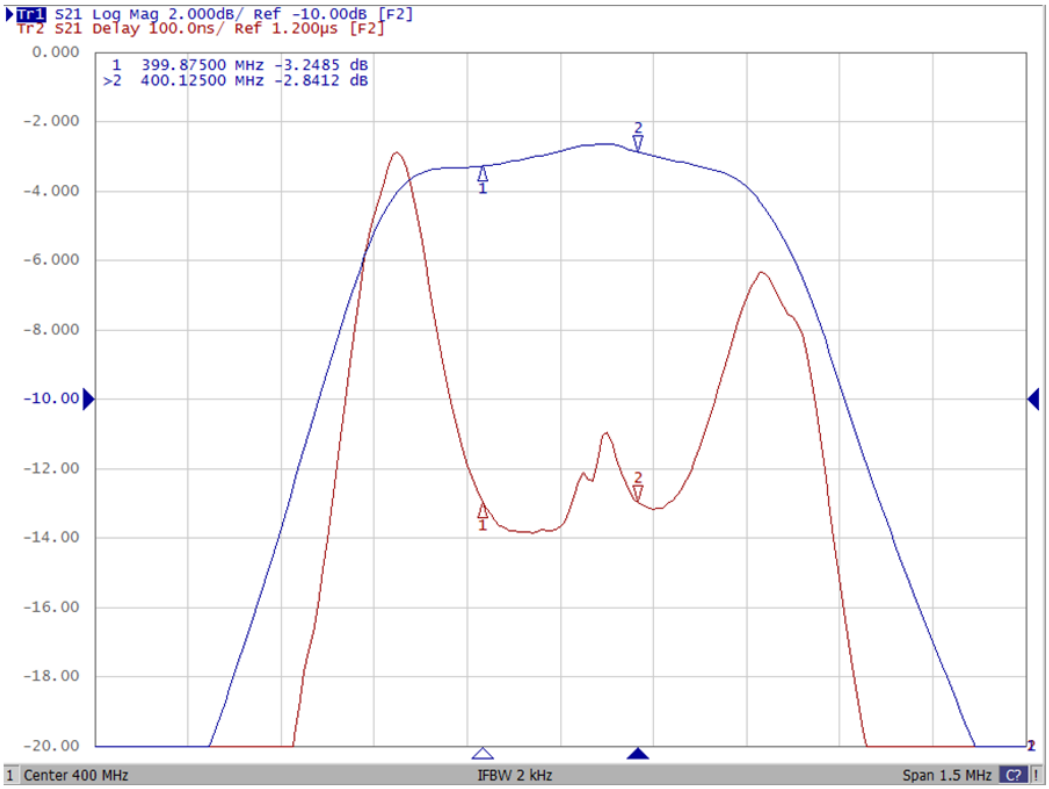
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

Notes:

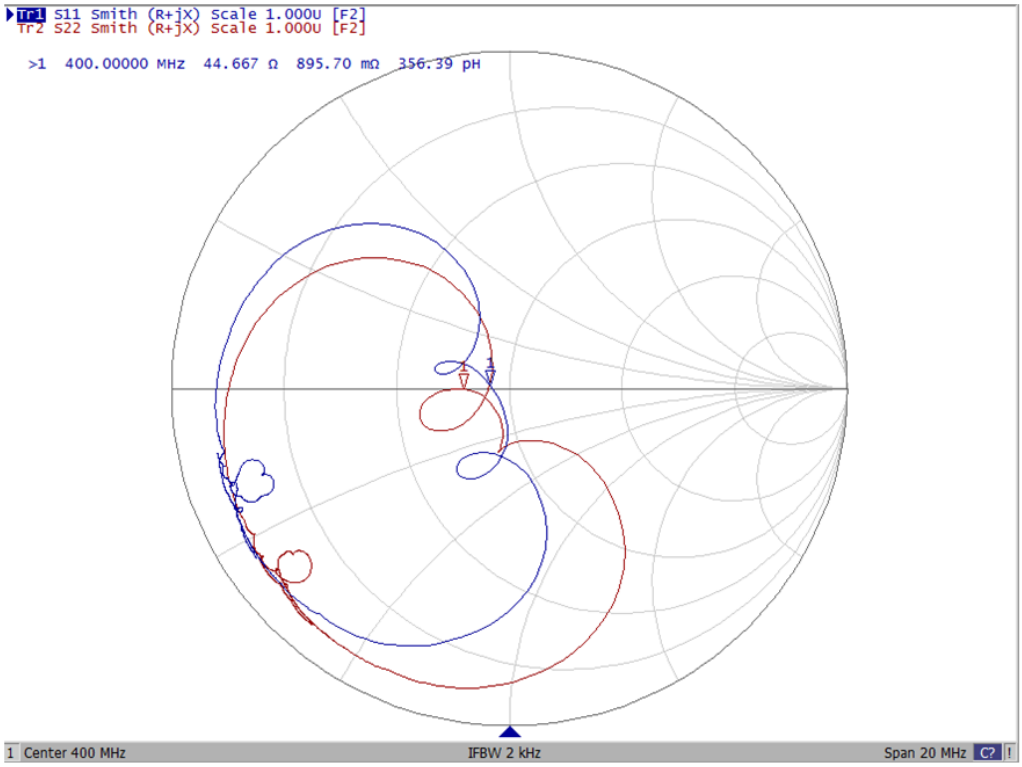
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal 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. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. 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.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

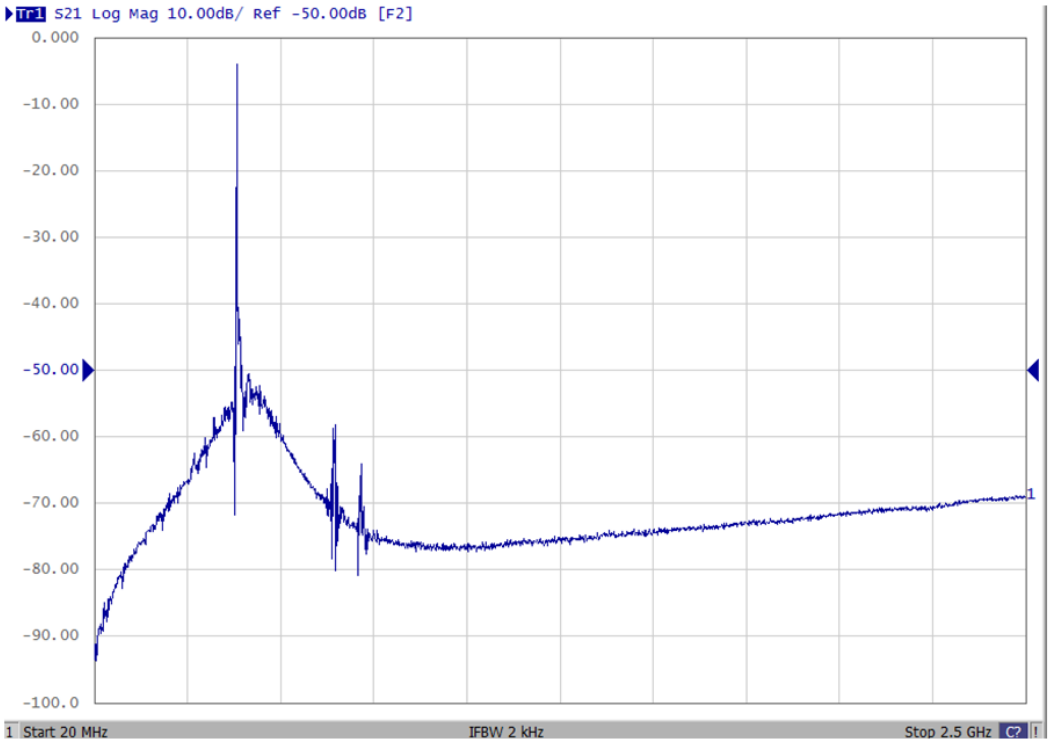
Frequency Characteristics





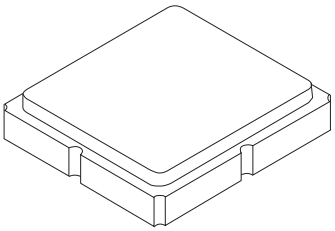
Frequency Characteristics

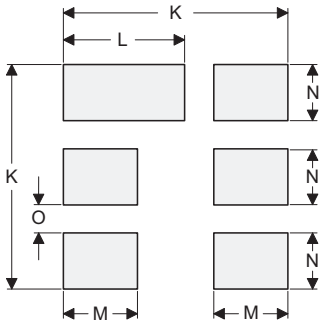




SM3030-6 Ceramic 6-Terminal Surface-mount Case

3.0 X 3.0 mm Nominal Footprint





Typical PCB Land Footprint

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	1.38	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

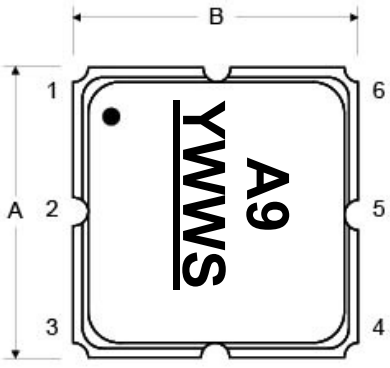
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 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	

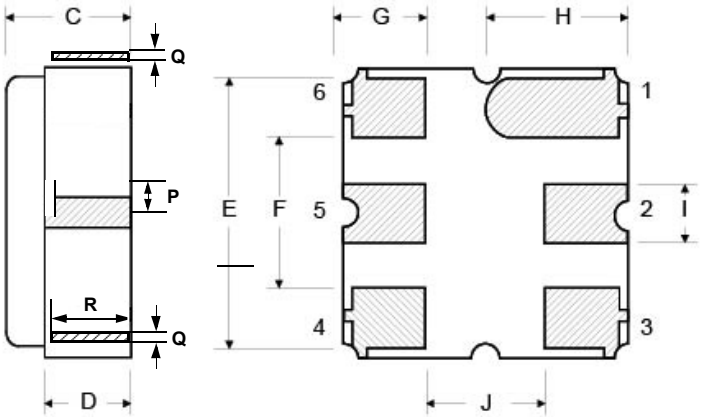
Electrical Connections

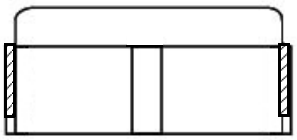
Connection	Terminals
Input	2
Output	5
Case Ground	All others

TOP VIEW

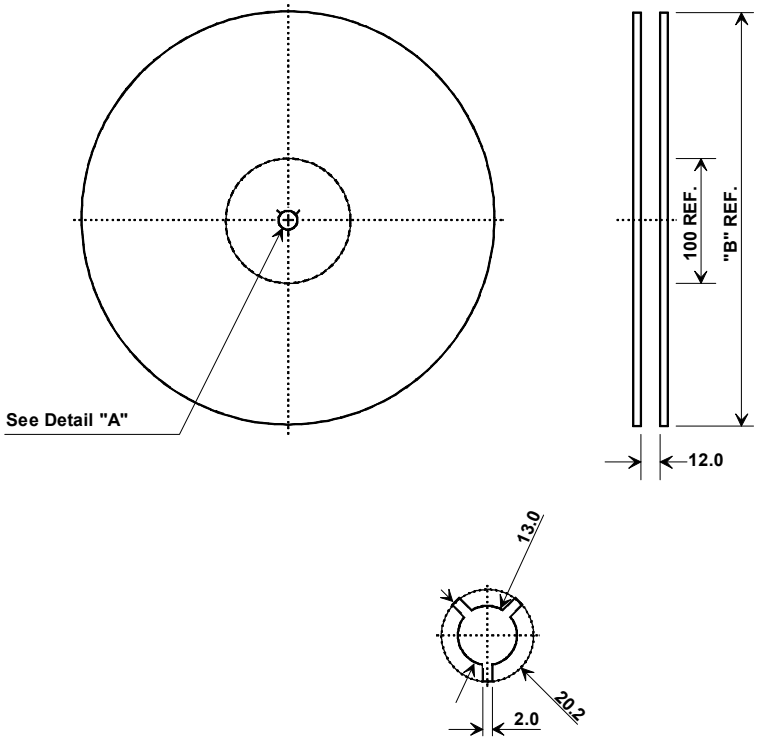


BOTTOM VIEW





Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
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