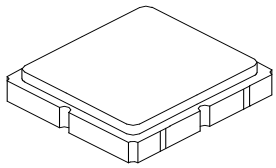
muRata
INNOVATOR IN ELECTRONICS

SF2413E

866.5 MHz SAW Filter

- ***Surface Mount 3.0 x 3.0 mm Package***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	15	dBm
DC Voltage on any Non-ground Terminal	6	V
Operable Temperature	-40 to +125	°C
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

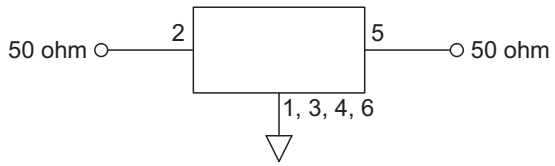
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1		866.5		MHz
Insertion Loss, (863 to 870 MHz)	IL			3.0	3.8	dB
Amplitude Ripple, (863 to 870 MHz)				1.5	2.0	
VSWR (863 to 870 MHz)				1.8	2.2	
Attenuation, Referenced from 0 dB:						
10 to 830 MHz			36	41		dB
830 to 845 MHz			32	37		
880 to 884 MHz			20	25		
884 to 887 MHz			36	41		
887 to 965 MHz			45	50		
965 to 2000 MHz			40	45		
Temperature Coefficient of Frequency				-36		ppm/k

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	7W, YWWS

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

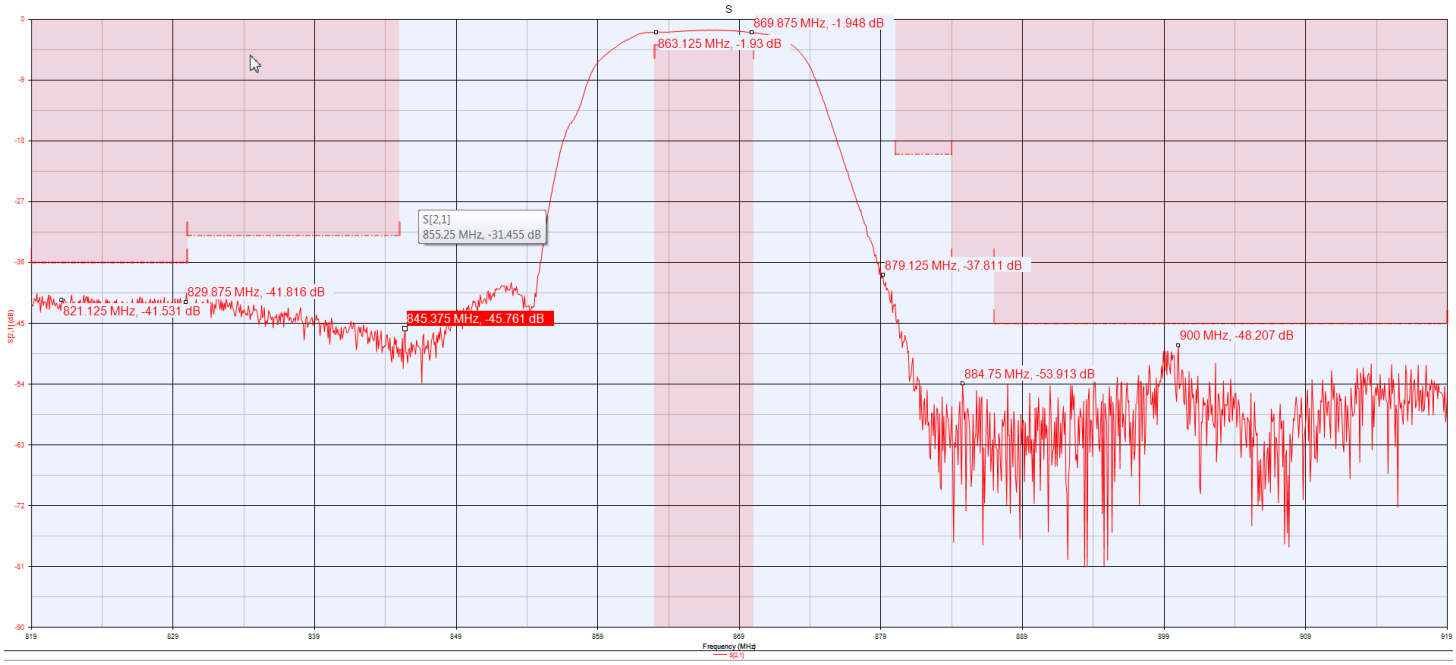


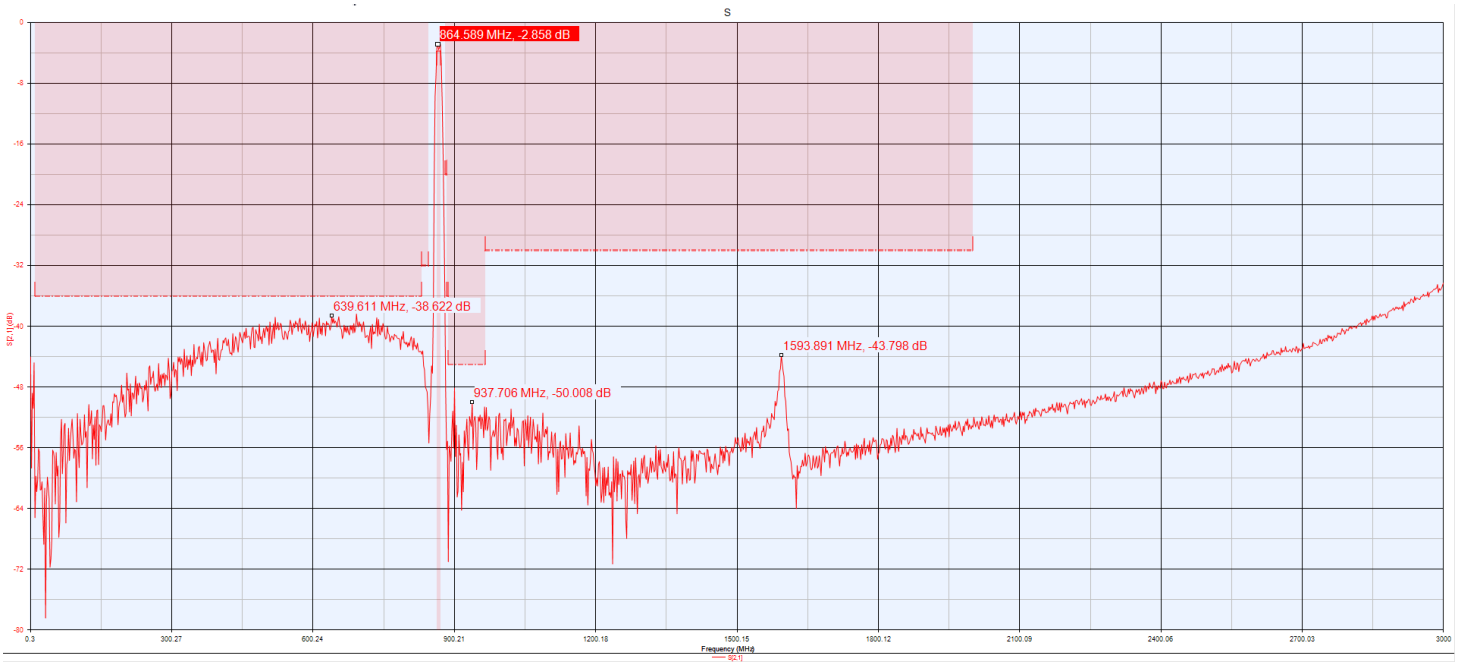
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. No matching network required for operation at 50Ω .
2. 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.
3. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
4. 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.
5. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. 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.
8. US and international patents may apply.
9. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

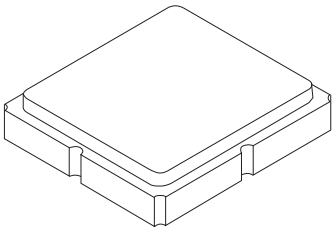
Frequency Characteristics

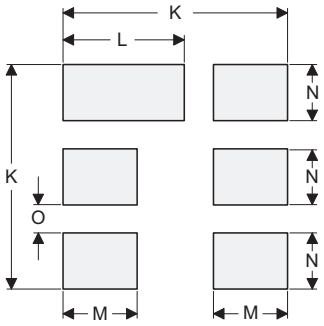




SM3030-6 Case

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





PCB Footprint Top View

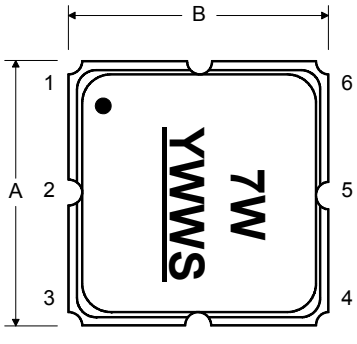
Case and PCB Footprint Dimensions

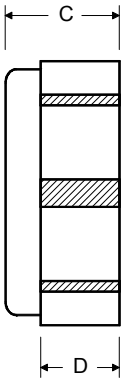
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	3.00	-	-	0.118	-
B	-	3.00	-	-	0.118	-
C	-	-	1.30	-	-	0.051
D	-	-	0.90	-	-	0.035
E	-	2.80	-	-	0.110	-
F	-	1.60	-	-	0.063	-
G	-	0.85	-	-	0.033	-
H	-	1.50	-	-	0.059	-
I	-	0.60	-	-	0.024	-
J	-	1.30	-	-	0.051	-
K	-	3.20	-	-	0.126	-
L	-	1.70	-	-	0.067	-
M	-	1.05	-	-	0.041	-
N	-	0.81	-	-	0.032	-
O	-	0.38	-	-	0.015	-

Case Materials

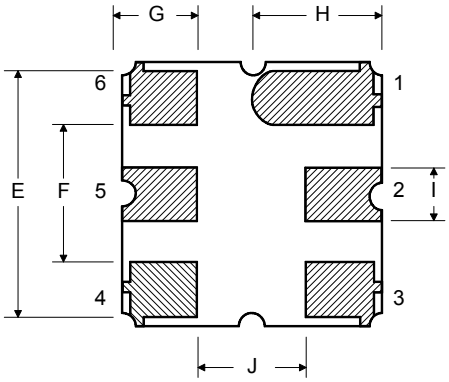
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

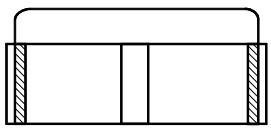
TOP VIEW



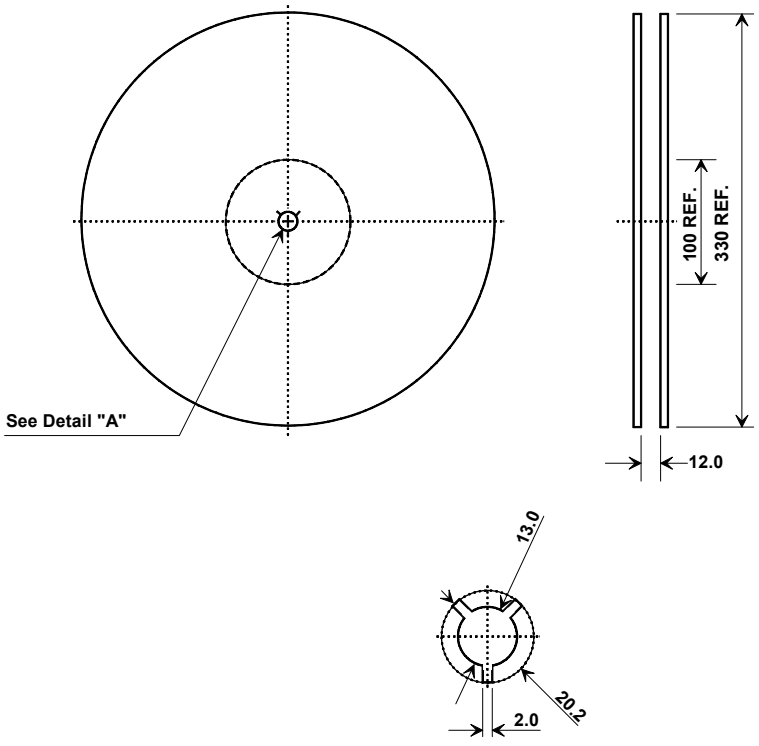


BOTTOM VIEW





Tape and Reel Specifications



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