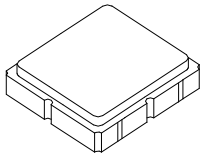
Preliminary

RFM products are now Murata products.

SF2371E

869.225 MHz SAW Filter

- ***RF Filter for Mobile Communication Applications***
- ***Low Insertion Loss***
- ***3.0 x 3.0 x 1.3 mm Surface-Mount Case***



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Maximum DC Voltage Between any 2 Terminals	0	VDC
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range	-40 to +85	°C
Terminating Source Impedance (single) Z_S	50	Ω
Terminating Load Impedance (single) Z_L	50	Ω
Maximum Soldering Profile	265 °C for 10 s	

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			869.225		MHz
Minimum Insertion Loss,	α min					dB
Incl. Loss in matching elements (868.3 to 870.15 MHz) MHz				2.7	3.4	
Excl. Loss in matching elements (868.3 to 870.15 MHz)				1.9	2.6	
Pass Band Relative to α min (868.3 to 870.15 MHz)				1.1	2.5	
Attenuation Relative to α min:						dB
10 to 350 MHz			50	55		
350 to 600 MHz			35	40		
600 to 846 MHz			35	40		
846 to 862 MHz			15	20		
880 to 889 MHz			30	35		
889 to 1000 MHz			35	40		
1000 to 1700 MHz			52	57		
1700 to 2500 MHz			42	47		
Impedance for Pass Band Matching Input: ZIN = Ls1/Cp1				82/8.2		nH
Output: ZOUT= Ls2/Cp2				68/1		nH

Case Style	SM3030-6 3 x 3 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift)	5W YWWS

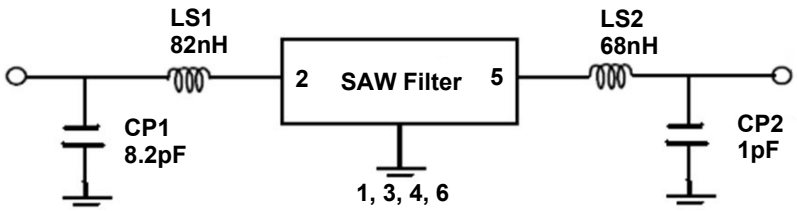
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.
9. Electrostatic Sensitive Device. Observe precautions for handling.

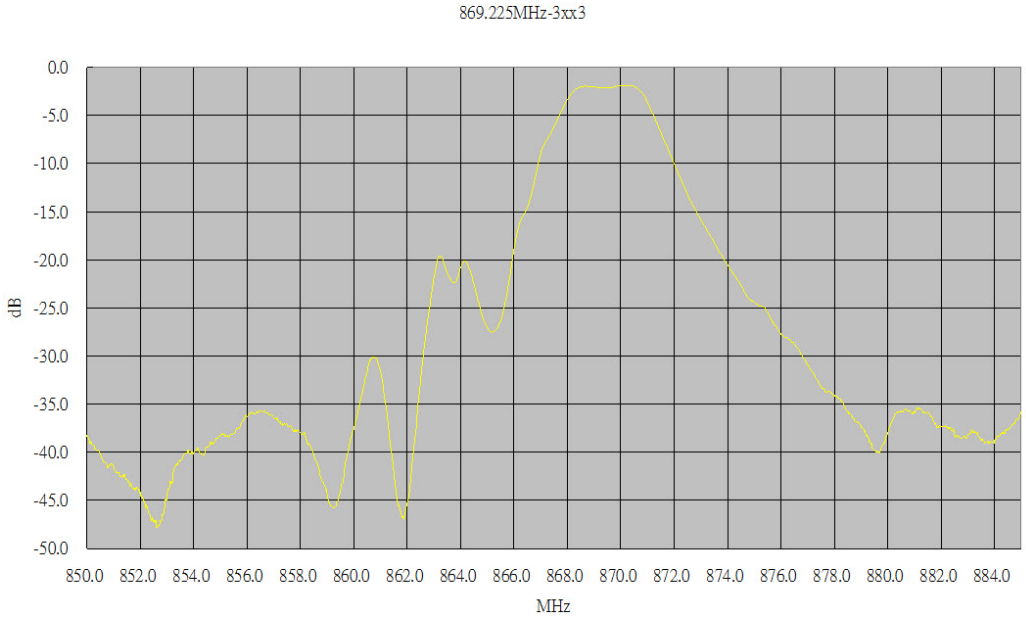
Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All others

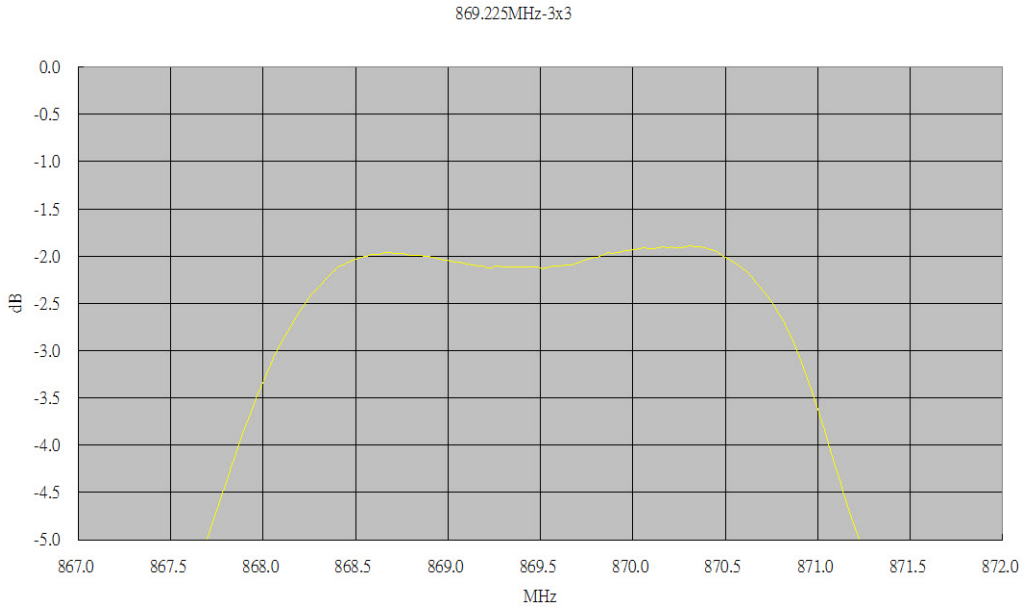


Frequency Characteristics

S21 Response: Span 35 MHz

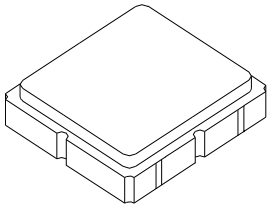


S21 Response: Span 5 MHz

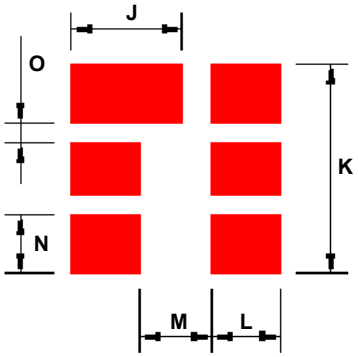


SM3030-6 Case

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



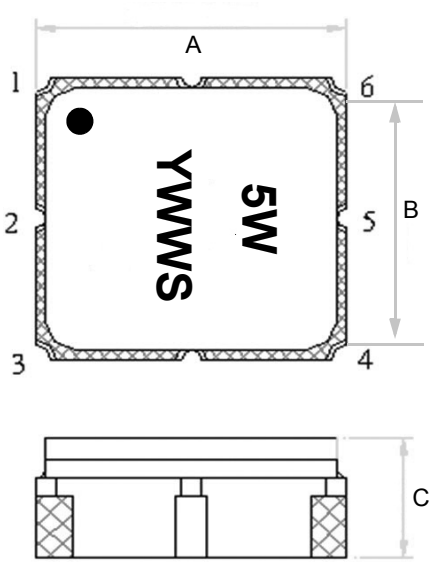
PCB Footprint, Top View



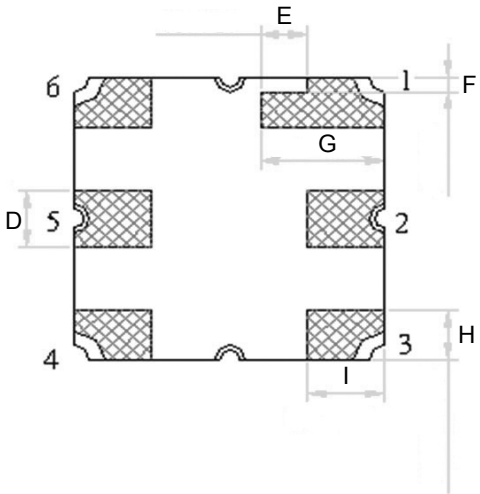
Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	3.0	-	-	0.118	-
B	-	3.0	-	-	0.118	-
C	-		1.4	-	-	0.055
D	0.55	0.60	0.65	0.021	0.023	0.025
E	-	0.45	-	-	0.110	-
F	-	0.15	-	-	0.063	-
G	1.05	1.20	1.35	0.041	0.047	0.053
H	0.38	0.53	0.68	0.014	0.020	0.026
I	0.60	0.75	0.90	0.023	0.029	0.035
J	-	1.70	-	-	0.066	-
K	-	3.20	-	-	0.125	-
L	-	1.05	-	-	0.041	-
M	-	1.10	-	-	0.043	-
N	-	0.90	-	-	0.035	-
O	-	0.30	-	-	0.011	-

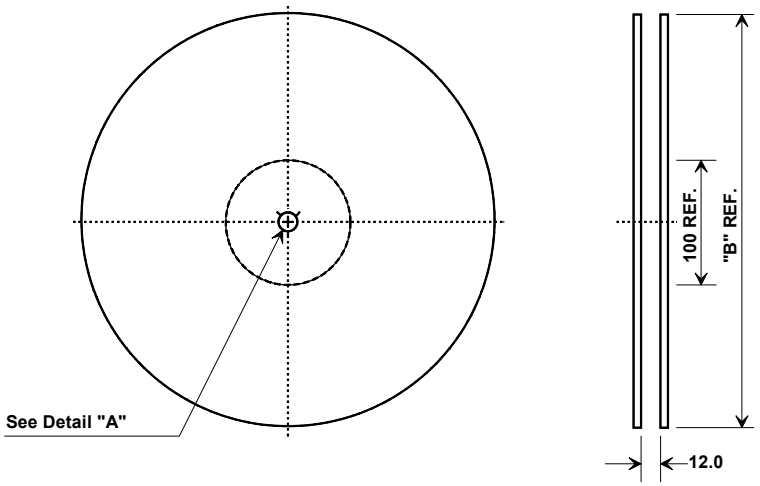
TOP VIEW



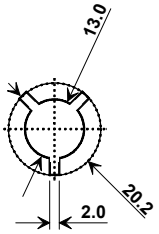
BOTTOM VIEW



Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	1000
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.3 mm
Pitch	8.0 mm
W	12.0 mm