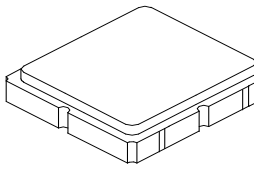
Preliminary

RFM products are now Murata products.

RF3708E

902.875 MHz SAW Filter

- ***Low-loss RF SAW Filter***
- ***3 x 3 mm Surface-mount Package***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	±6	V
Operating Temperature Range	-40 to +105	°C
Component Storage Temperature Range	-40 to +105	°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			902.875		MHz
3 dB Bandwidth	BW_3			2.0		MHz
Minimum Insertion Loss	IL_{MIN}			2.4	3.2	dB
Exclude loss in matching elements		4		2.4	3.6	
Include loss of matching elements (Q=89)		5		3.4	4.6	
902.20 to 903.55 MHz Passband Relative to IL_{MIN}		4		1.5	3.0	
902.10 to 903.65 MHz Passband Relative to IL_{MIN}				2.0	5.0	
Rejection Relative to IL_{MIN}:		4				
10 to 820 MHz			47	53		
820.0 to 884.0 MHz			42	48		
884.0 to 892.0 MHz			37	43		
892.0 to 900.5 MHz			15	21		
906.0 to 910.5 MHz			15	21		
910.5 to 929.0 MHz			22	28		
929 to 945 MHz			38	44		
945.0 to 1000.0 MHz			41	47		
1000 to 2000 MHz			37	43		
2000 to 3500 MHz			55	66		
Impedance at Fc, Input Zin = Rin//Cin	Z_S	4	579Ω//1.0pF			Ω
Impedance at Fc, Output Zout = Rout//Cout	Z_L	4				

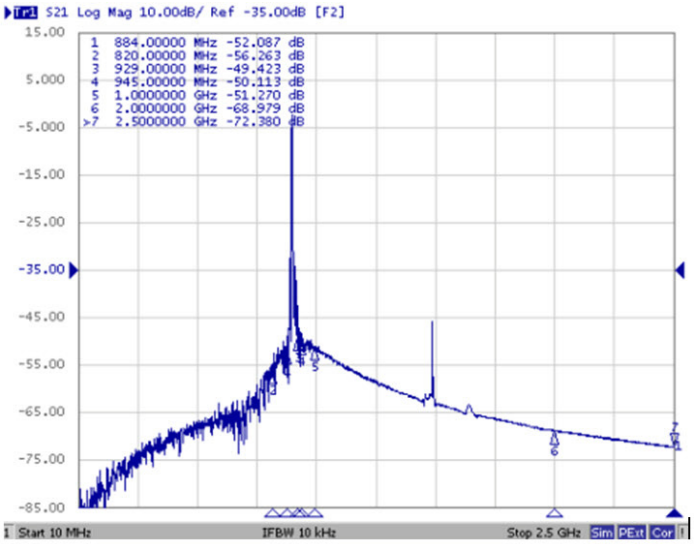
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	B21, YWWS
Standard Reel Quantity Reel Size 7 Inch	500 Pieces/Reel
Reel Size 13 Inch	3000 Pieces/Reel

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

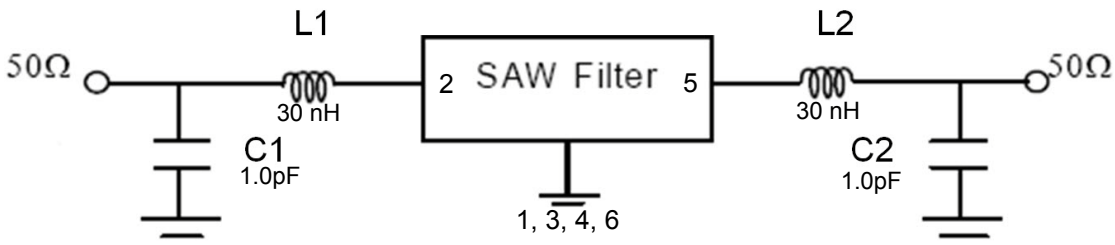
NOTES:

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 matching circuit is ideal by simulation.
5. The matching circuit is real by actual passive components.
   0805 Coilcraft CS series chip conductor is used for inductor.
   0402 muRata GRM series is used for capacitor.
6. The design, manufacturing process, and specifications of this filter are subject to change.
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.

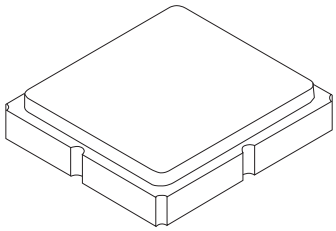
RF3708E Frequency Characteristics

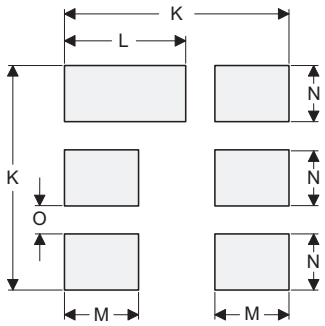


RF3708E Matching Circuit



6-Terminal SM3030-6 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	2.90	3.00	3.10	0.114	0.118	0.122
B	2.90	3.00	3.10	0.114	0.118	0.122
C	1.03	1.15	1.27	0.040	0.045	0.050
E		2.54			0.100	
F		1.60			0.063	
G		0.85			0.033	
H		1.50			0.059	
I		0.60			0.023	
J		1.30			0.051	
K		3.20			0.126	
L		1.70			0.069	
M		1.05			0.041	
N		0.81			0.031	
O		0.38			0.015	

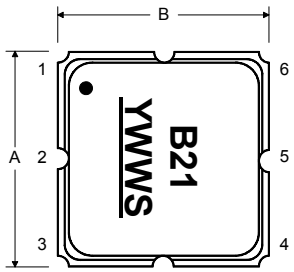
Case Materials

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	

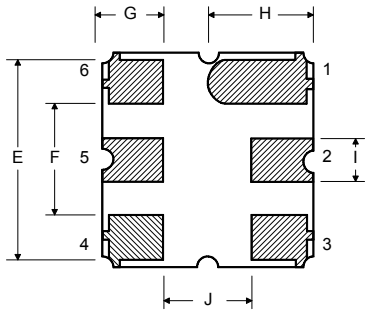
Electrical Connections

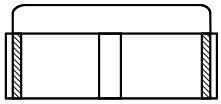
Connection	Terminals
Input Port	2
Output Port	5
Case Ground	1, 3, 4, 6

Top

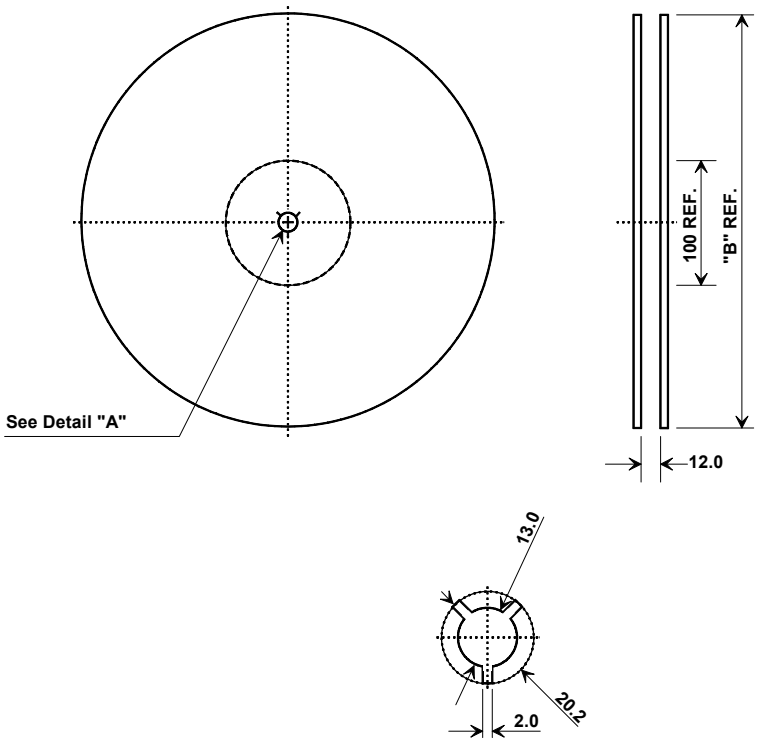


Bottom





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 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm