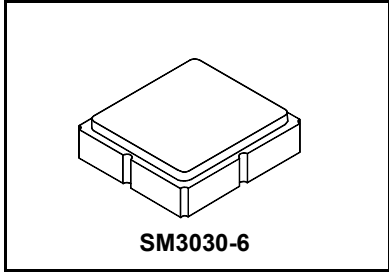


RF3708E

**902.875 MHz
SAW Filter**



- **Low-loss RF SAW Filter**
- **3 x 3 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

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

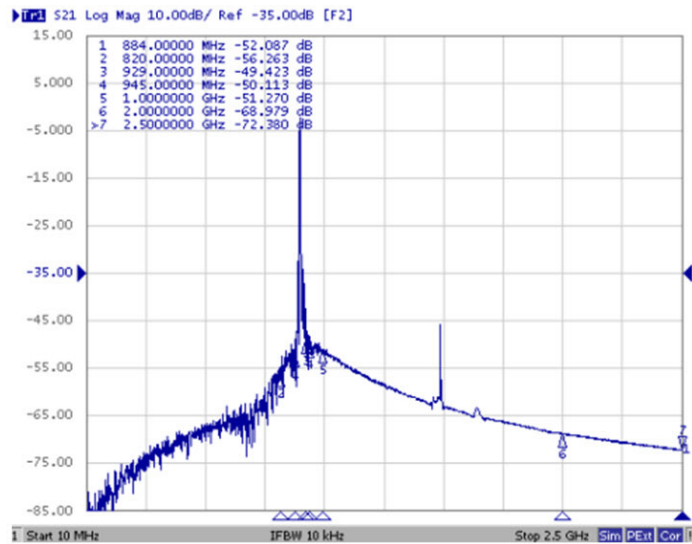
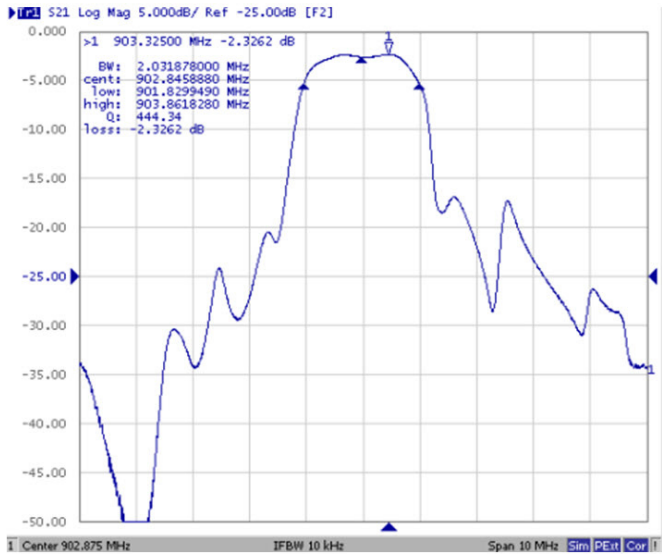
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			902.875		MHz
3 dB Bandwidth	BW_3			2.0		MHz
Minimum Insertion Loss	IL_{MIN}			2.4	3.2	dB
Exclude loss in matching elements				2.4	3.6	
Include loss of matching elements (Q=89)				3.4	4.6	
902.20 to 903.55 MHz Passband Relative to IL_{MIN}				1.5	3.0	
902.10 to 903.65 MHz Passband Relative to IL_{MIN}				2.0	5.0	
Rejection Relative to IL_{MIN} :						
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 f_c , Input $Z_{in} = R_{in}/C_{in}$	Z_S	4	579Ω/1.0pF			Ω
Impedance at f_c , Output $Z_{out} = R_{out}/C_{out}$	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, <u>YWWS</u>	
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

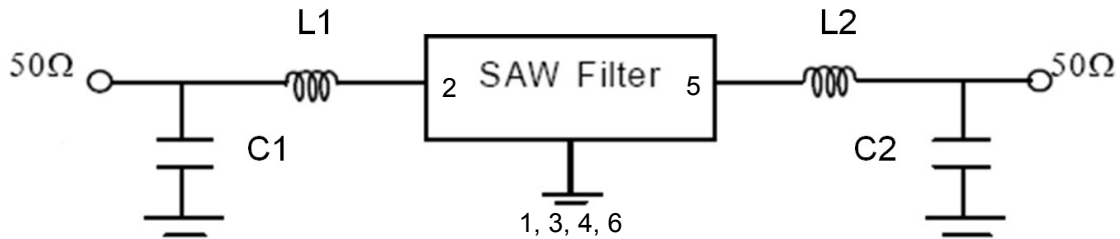
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.
NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

RF3708E Frequency Characteristics



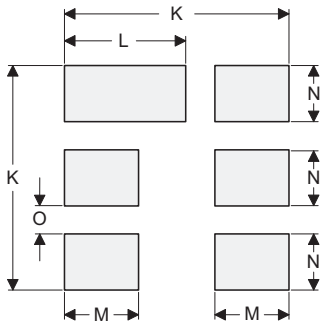
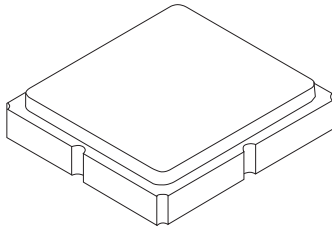
RF3708E Matching Circuit



Component values:

L1 = L2	18 nH
C1 = C2	5.6 pF

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

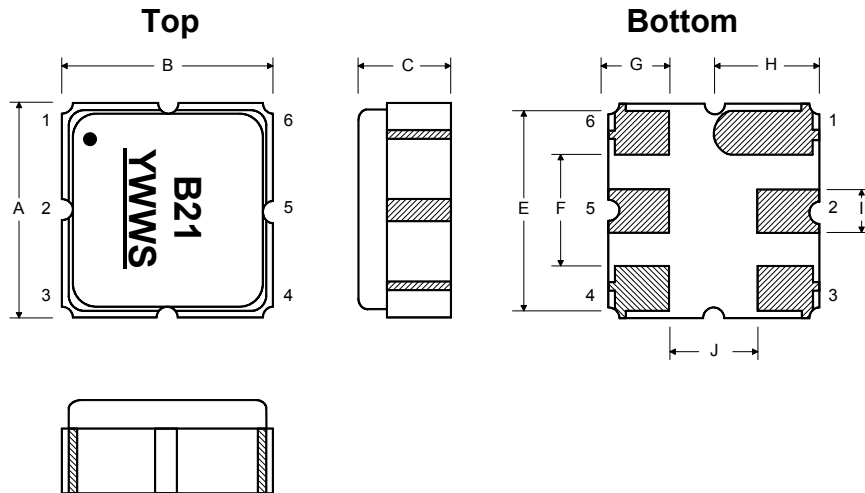
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.90	3.00	3.10	0.114	0.118	0.122
B	2.90	3.00	3.10	0.114	0.118	0.122
C	1.03	1.15	1.27	0.040	0.045	0.050
E		2.54			0.100	
F		1.60			0.063	
G		0.85			0.033	
H		1.50			0.059	
I		0.60			0.023	
J		1.30			0.051	
K		3.20			0.126	
L		1.70			0.069	
M		1.05			0.041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

Case Materials

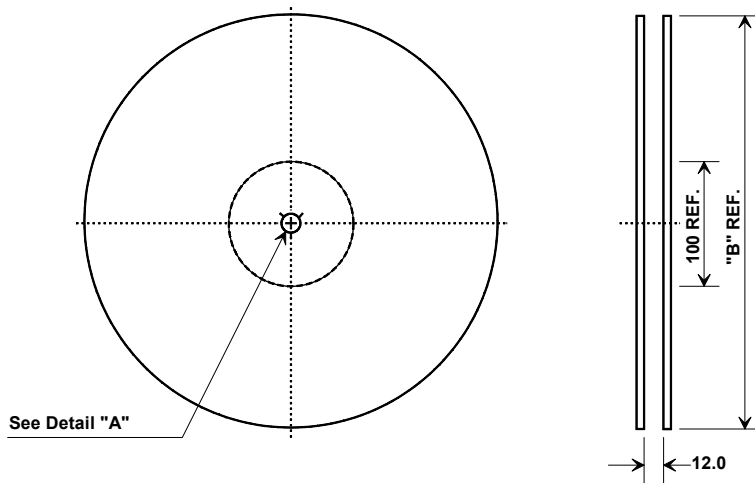
Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

Electrical Connections

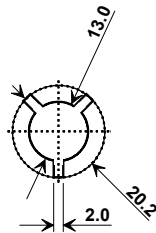
Connection	Terminals
Input Port	2
Output Port	5
Case Ground	1, 3, 4, 6



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

