

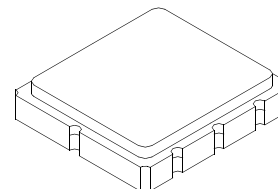
- **High Performance SAW Filter**
- **3.8 x 3.8 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Active Terminals	3	VDC
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range	-40 to +95	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 10 sec	

SF2438D

**509 MHz
SAW Filter**



SM3838-8

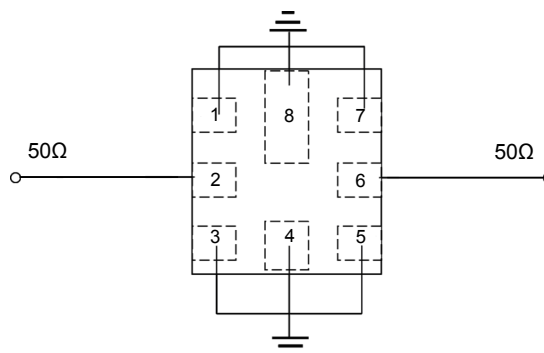
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			509		MHz
Insertion Loss (500 to 518 MHz)	ILmin			2.3	3.0	dB
Amplitude Ripple (500 to 518 MHz)				1.0	2.0	
Attenuation (Reference level from 0dB)						dB
0 to 450 MHz			50	60		
470 to 490 MHz			39	45		
540 to 560 MHz			30	41		
560 - 600 MHz			50	61		

Case Style	3.8 x 3.8 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	B48, YWWS

Electrical Connections

Connection	Terminals
Input	2
Output	6
Case Ground	All others

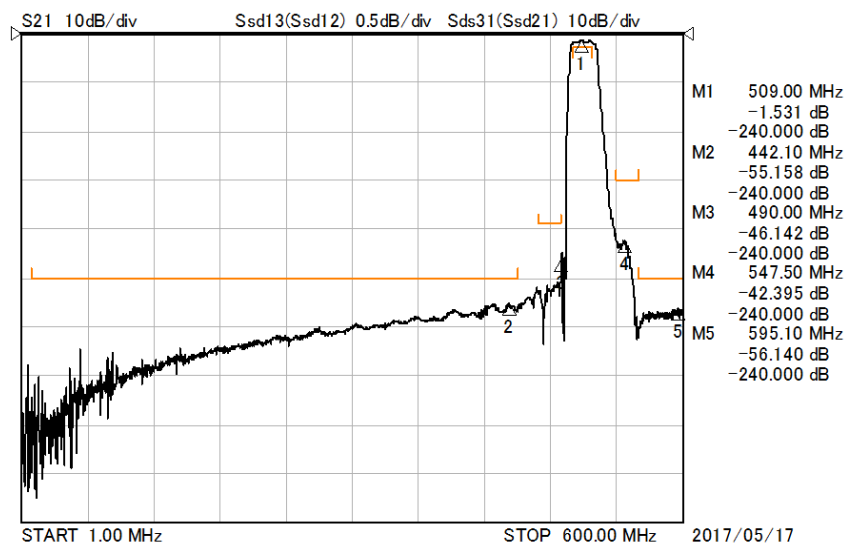
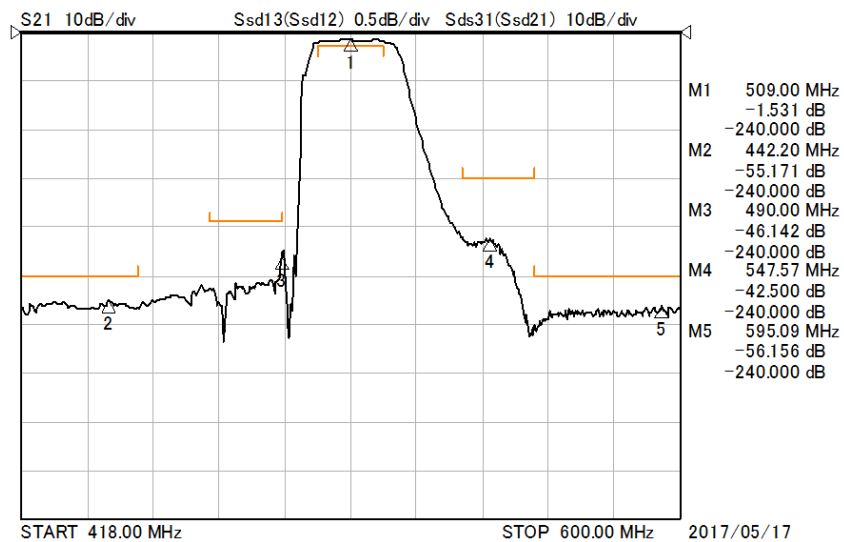
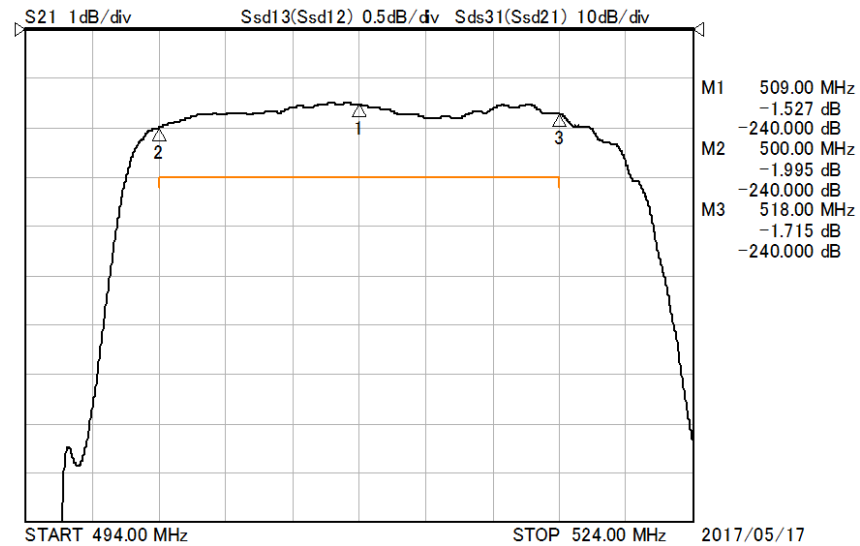


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

- 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.
- Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
- 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.
- "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
- The design, manufacturing process, and specifications of this filter are subject to change.
- 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.
- US and international patents may apply.
- Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

Frequency Characteristics

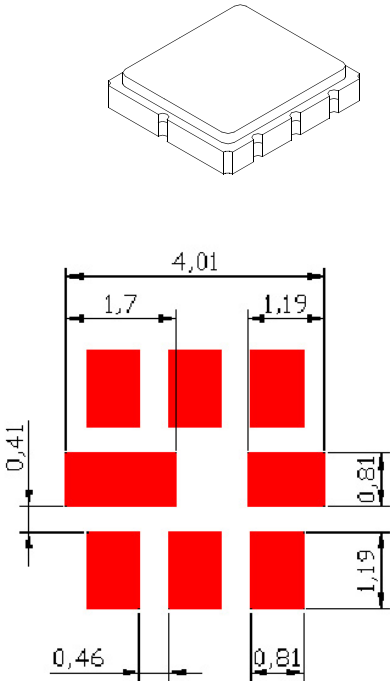


SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8mm Nominal Footprint

Case Dimensions

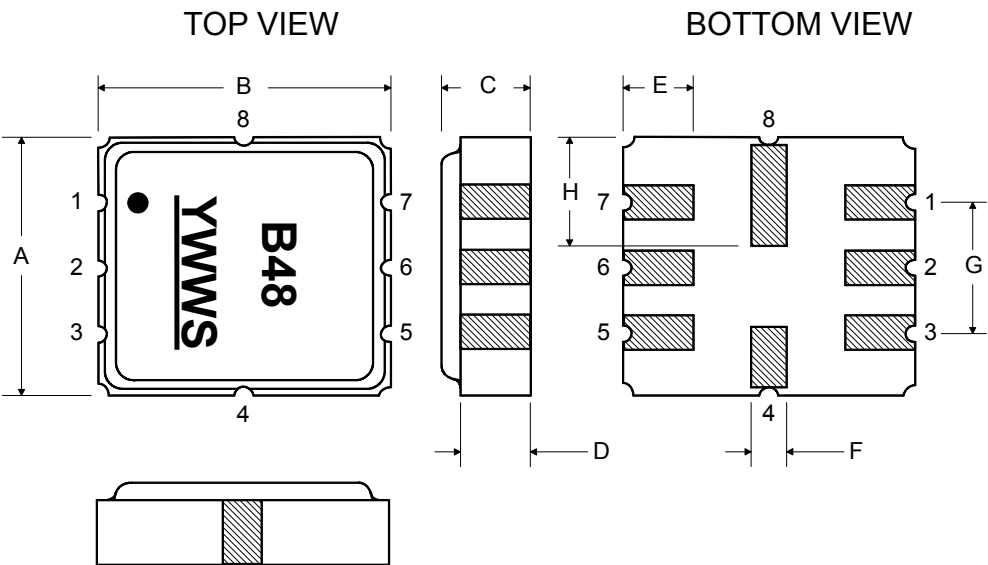
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.65	3.8	3.95	0.14	0.15	0.155
B	3.65	3.8	3.95	0.14	0.15	0.155
C	-	-	1.40	-	-	0.055
D	-	1.10	-	-	0.043	-
E	-	1.0	-	-	0.04	-
F	-	0.6	-	-	0.024	-
G	-	2.54	-	-	0.100	-
H	-	1.50	-	-	0.059	-



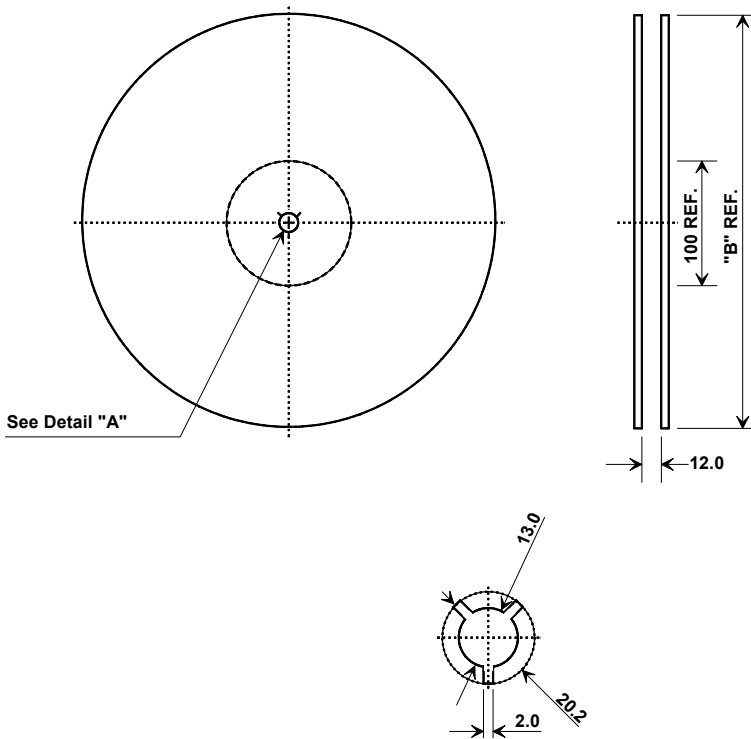
PCB Footprint

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



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	4.25 mm
Bo	4.25 mm
Ko	1.3 mm
Pitch	8.0 mm
W	12.0 mm

