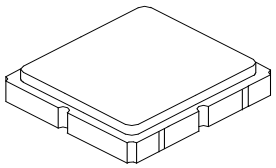
muRata
INNOVATOR IN ELECTRONICS

Discontinued

SF2344D

241 MHz SAW Filter

- ***Narrow-band SAW Filter***
- ***Balanced/Single-ended Operation***
- ***3.8 x 3.8 x 1.4 mm Surface-mount Package***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3838-8

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband, Continuous	+15	dBm
Maximum DC Voltage on any Non-ground Terminals	3	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1		241		MHz
Minimum Insertion Loss	IL_{MIN}			2.2	3.3	dB
3 dB Bandwidth	BW_3			5		MHz
Amplitude Ripple 240.9 to 241.1 MHz		1			0.2	dB_{P-P}
Group Delay Ripple 240.9 to 241.1 MHz		1			0.2	μs_{P-P}
Rejection Referenced to IL_{MIN}:		1, 2, 3				dB
10 to 232.5 MHz			50	60		
274 to 886.5 MHz			50	60		
Operating Temperature Range			-10		+85	°C

Case Style		SM3838-8 3.8 x 3.8 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator		B09, YWWS
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

Electrical Connections

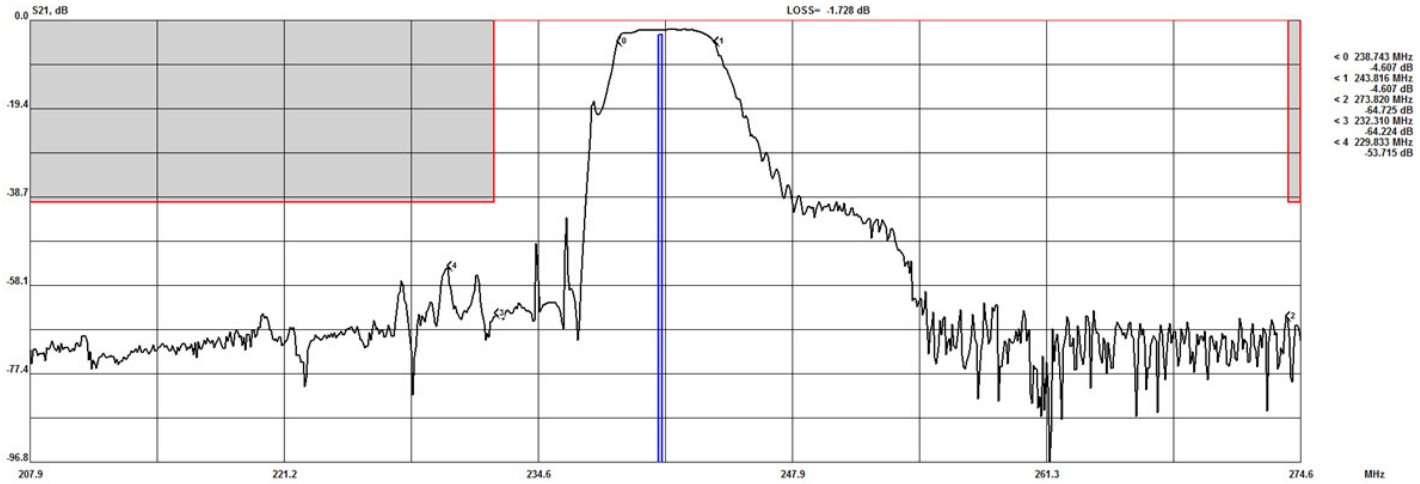
Connection	Terminals
50 Ω Input Port	2
200 Ω Balanced Output Port	6, 7
Ground	All others

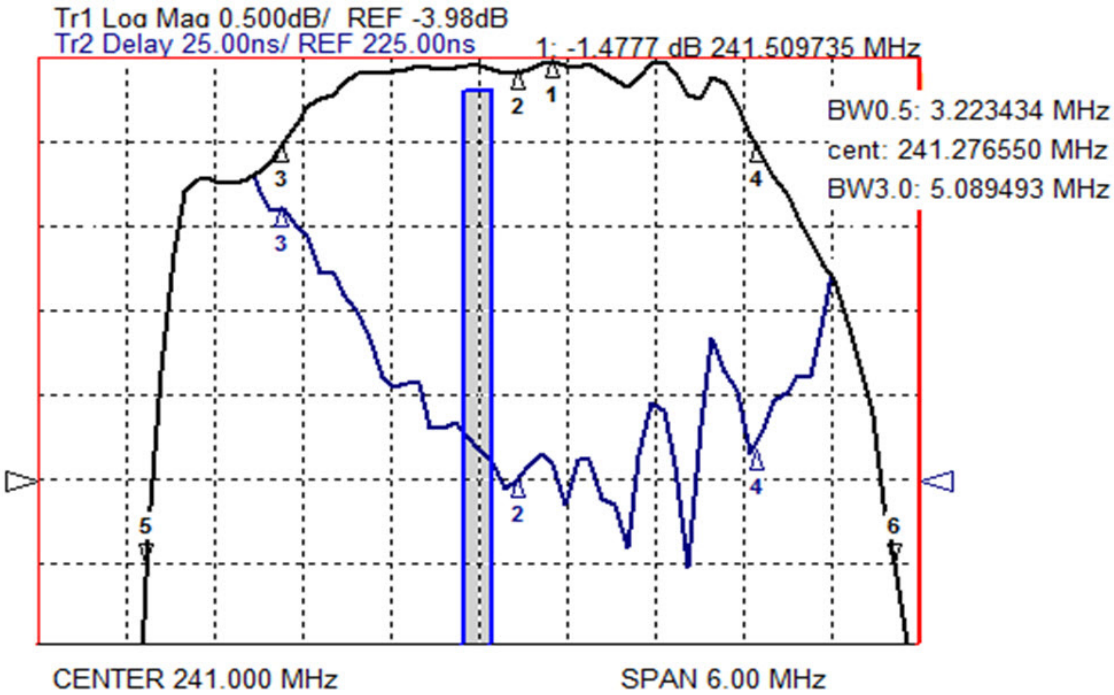
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

Filter Response Plots

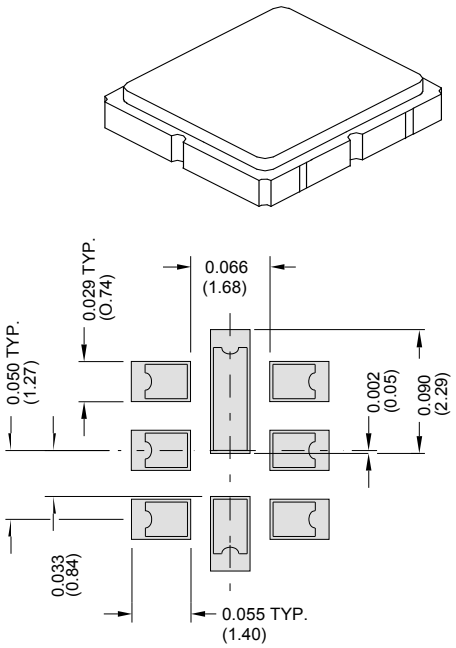




SM3838-8 Case

8-Terminal Ceramic Surface-mount Case

3.8 X 3.8 mm Nominal Footprint



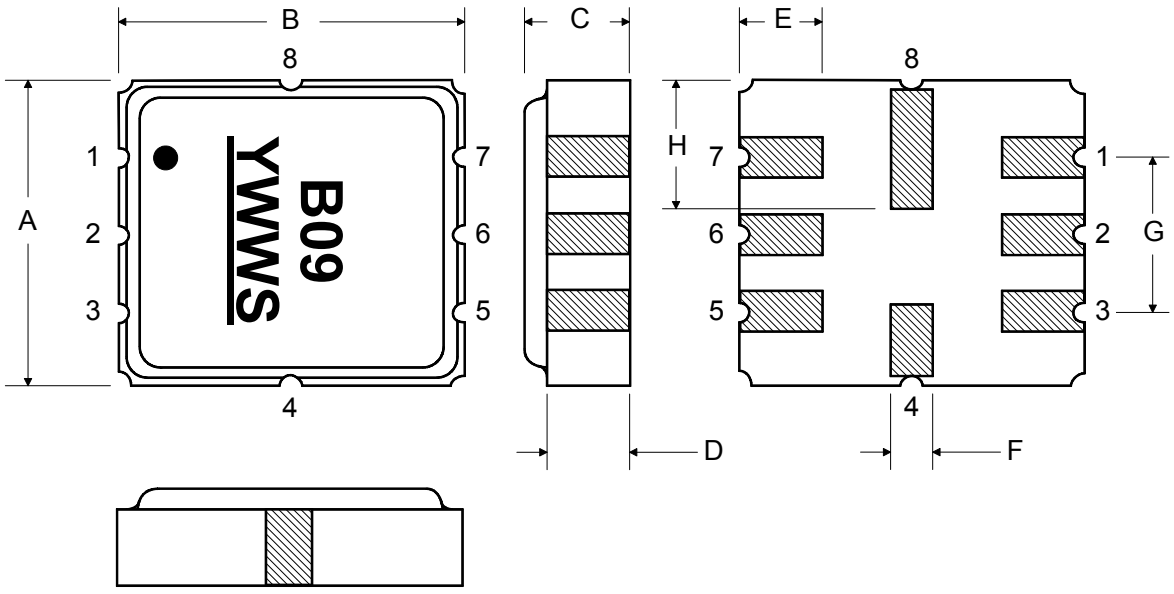
Typical PCB Land Footprint

Case Dimensions

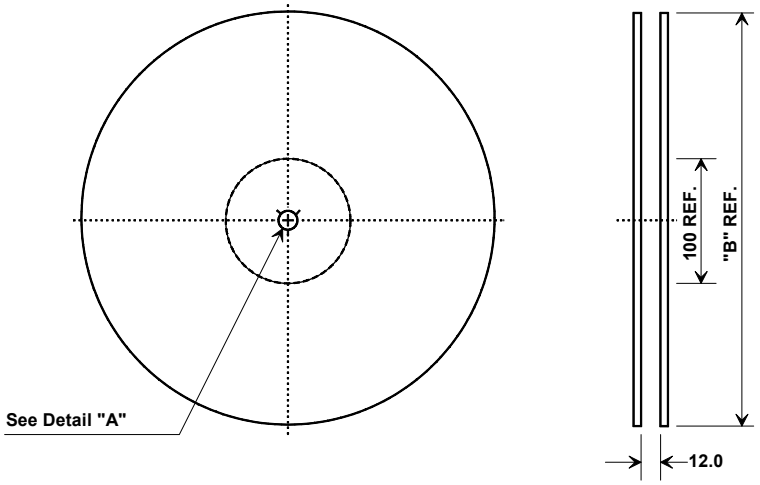
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	1.05	1.20	1.40	0.041	0.047	0.055
D	0.95	1.10	1.25	0.037	0.043	0.049
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080

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	

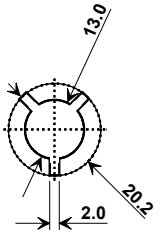
TOP VIEW **BOTTOM VIEW**



Tape and Reel Specifications



"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	1.30 mm
Pitch	8.0 mm
W	12.0 mm