

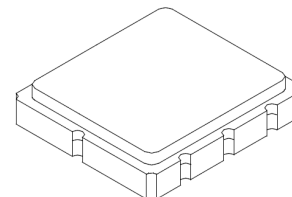
- **High Performance SAW Filter**
- **3.8 x 3.8 mm Surface-mount Package**

#### Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Active Terminals	3	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 20 - 40 sec	

**SF2433D**

**500 MHz  
SAW Filter**



**SM3838-8**

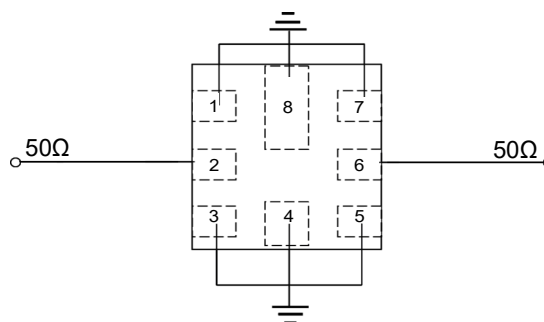
#### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			500		MHz
Insertion Loss	IL <sub>min</sub>			2.2	2.8	dB
2 dB Bandwidth	BW <sub>-2dB</sub>		20	24		MHz
Rejection referenced to IL at Peak:						
400 to 455 MHz			40	55		dB
514 to 535 MHz (-25 to +55°C)			5	10		
545 to 555 MHz			30	55		
555 to 600 MHz			40	55		
Temperature Coefficient of Frequency				-36		ppm/°C

Case Style	3.8 x 3.8 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	B43, <u>YWWWS</u>

#### Electrical Connections

Connection	Terminals
Input	2
Output	6
Case Ground	All others



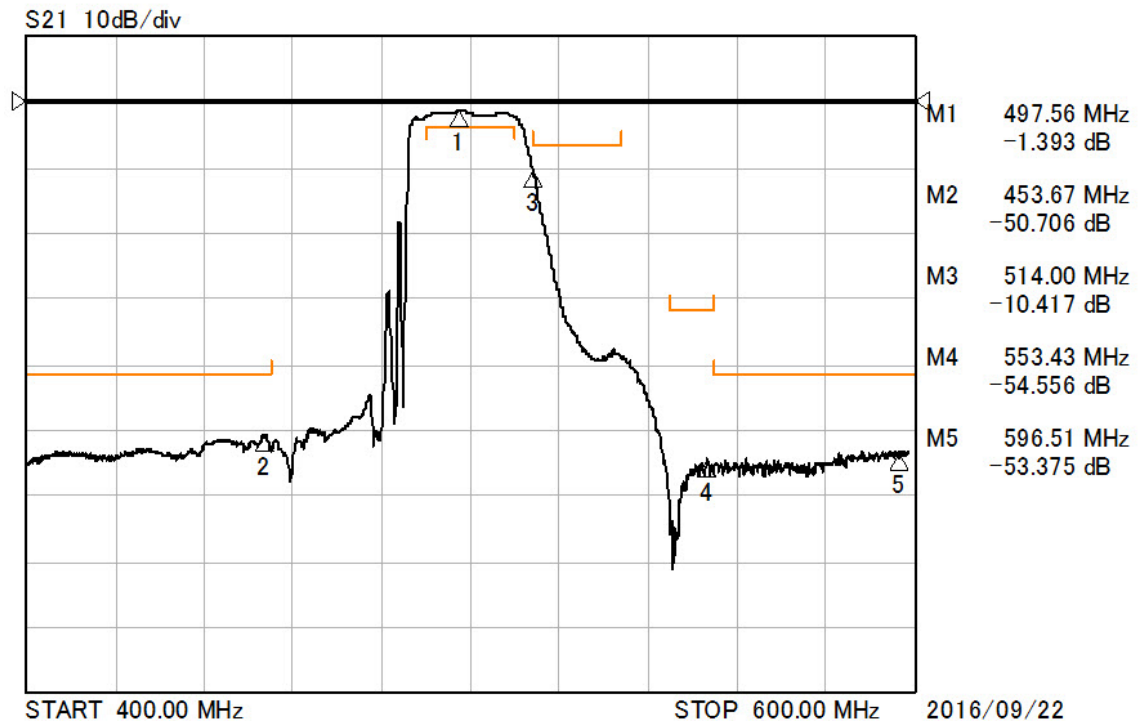
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

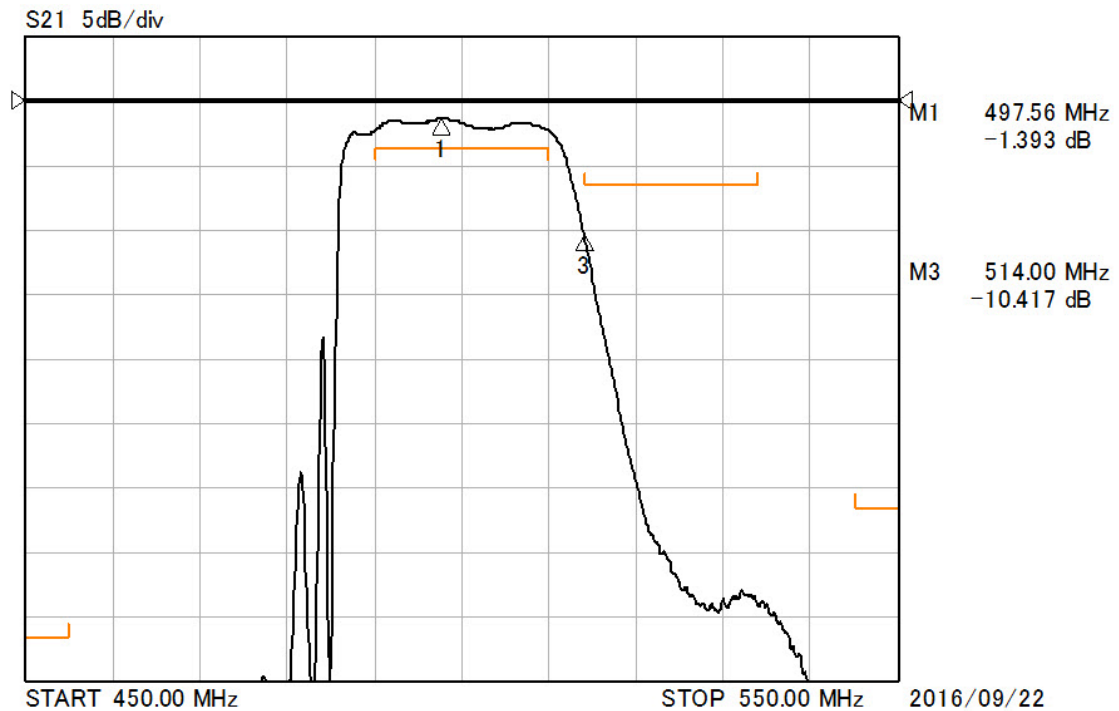
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency,  $f_C$ .
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.

## Frequency Characteristics

Span: 200 MHz

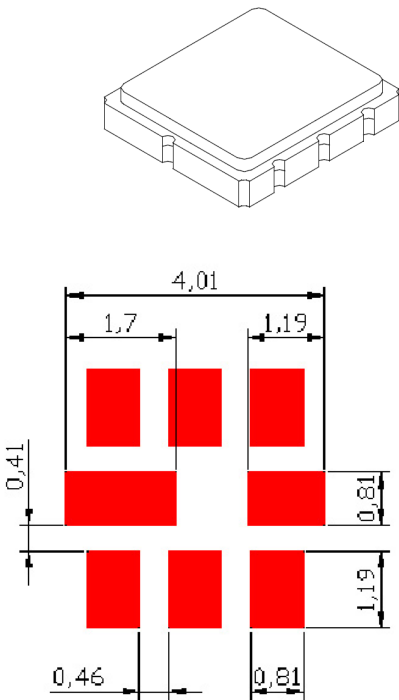


Span: 100 MHz



# SM3838-8 Case

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



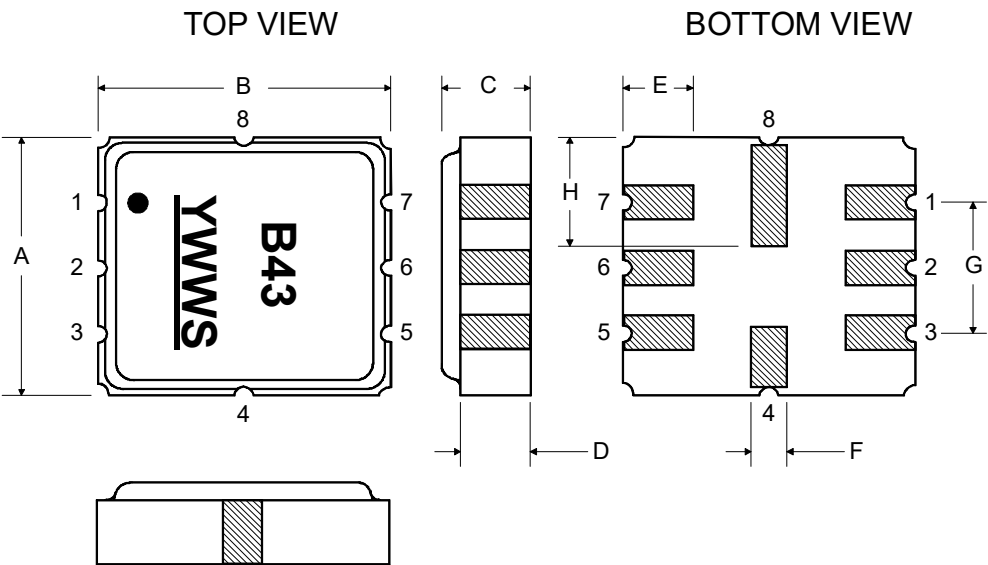
PCB Footprint

Case Dimensions

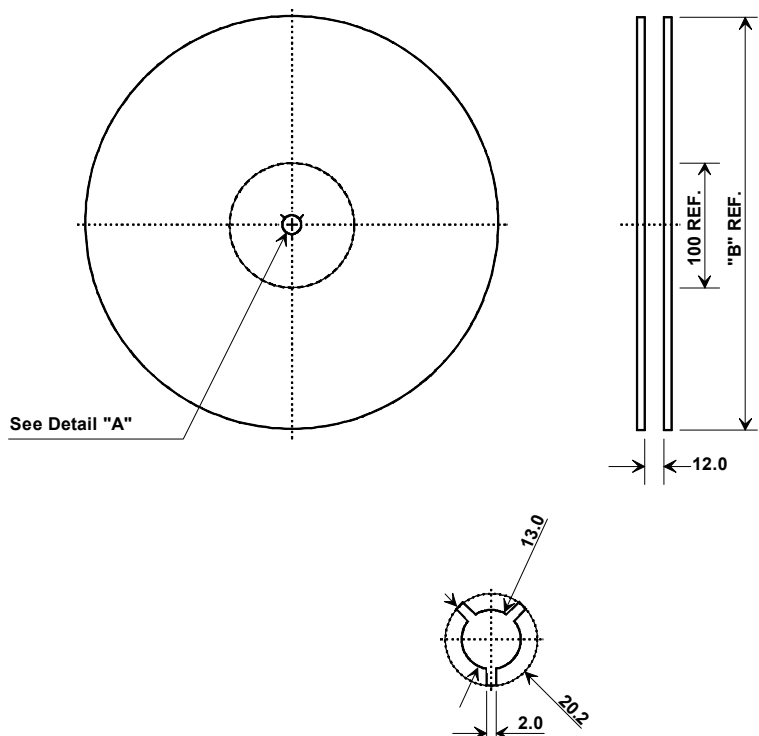
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.65	3.8	3.95	0.14	0.15	0.155
B	3.65	3.8	3.95	0.14	0.15	0.155
C	-	-	1.40	-	-	0.055
D	-	1.10	-	-	0.043	-
E	-	1.0	-	-	0.04	-
F	-	0.6	-	-	0.024	-
G	-	2.54	-	-	0.100	-
H	-	1.50	-	-	0.059	-

Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Lid Plating	2.0 to 3.0 $\mu$ m Nickel
Body	Al <sub>2</sub> O <sub>3</sub> 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

COVER TAPE SIZE

