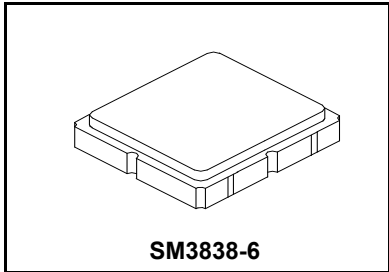


**SF2307D**

**353.5 MHz  
SAW Filter**



- **Low-loss SAW Filter**
- **3.8 x 3.8 x 1.4 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**



**Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	15	dBm
Maximum DC Voltage on any Non-ground Terminal	3	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Operating Temperature Range	-30 to +80	°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		353.5		MHz
Insertion Loss	IL			1.5	3.5	dB
Bandwidth	BW				7	MHz
Amplitude Ripple, $f_C \pm 3.5$ MHz					3.0	dB <sub>p-p</sub>
Rejection Referenced to IL:		1, 2, 3				dB
0.3 to 345.0 MHz			30	50		
360 to 362 MHz			6	23		
362 to 367 MHz			20	30		
367 to 2000 MHz			25	45		
VSWR, $f_C \pm 3.5$ MHz				1.5:1	2.0:1	

Case Style	SM3838-6 3.8 x 3.8 mm Nominal Footprint		
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A57, YWWS		
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel	
	Reel Size 13 Inch	3000 Pieces/Reel	

**Electrical Connections**

Connection	Terminals
Input Port	2
Output Port	5
Ground	All others

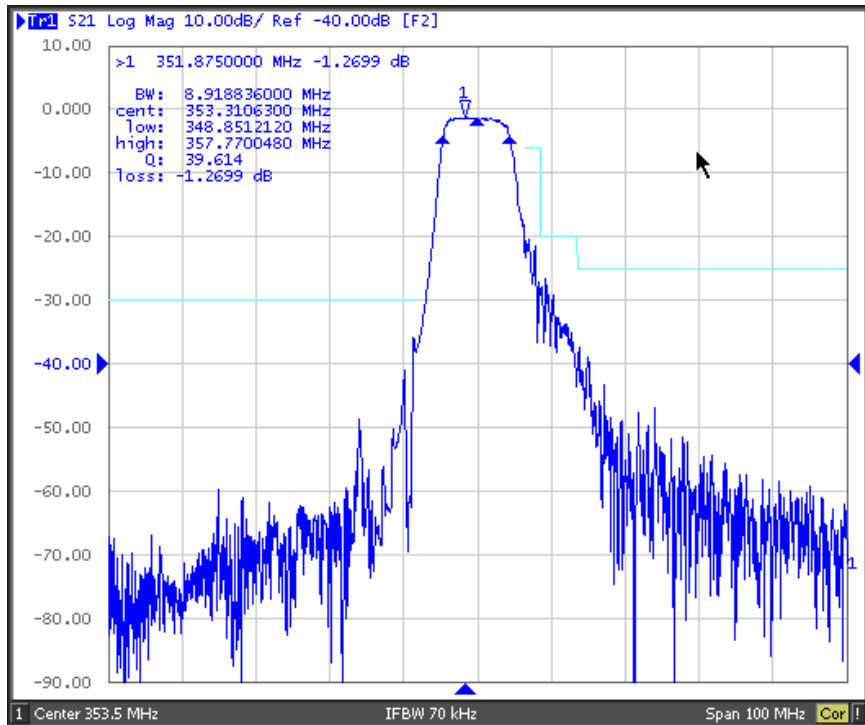
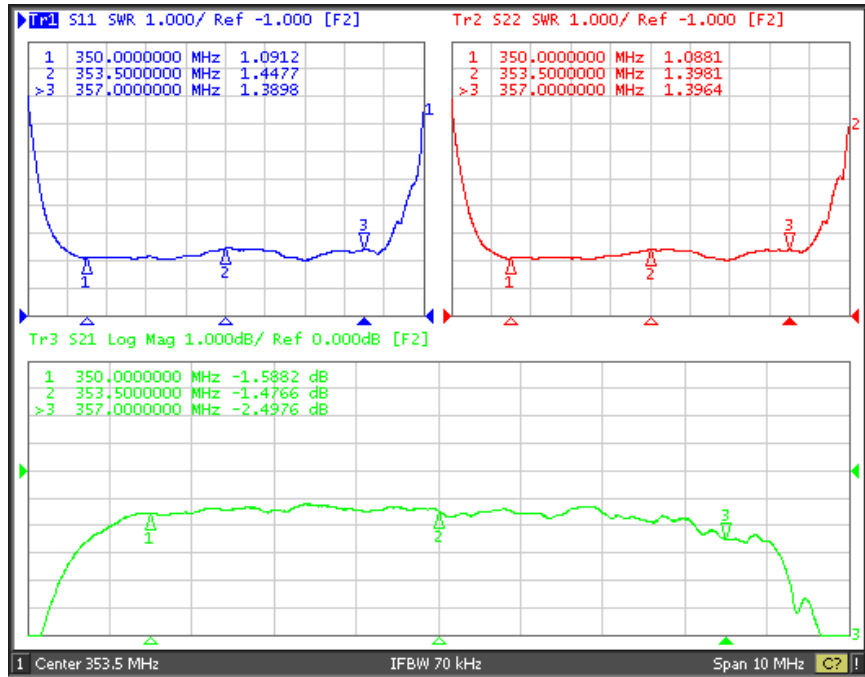


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

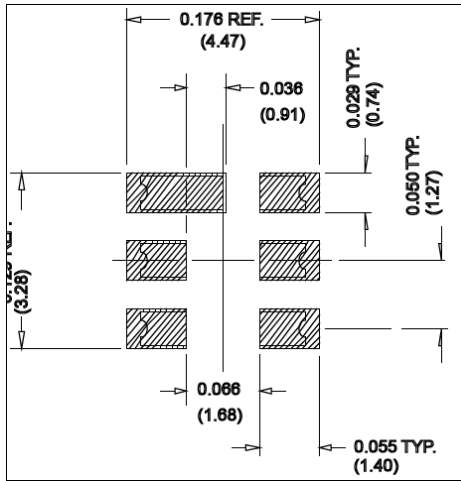
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal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

# Filter Response Plots



# SM3838-6 Case

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



PCB Footprint

### Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.60	3.80	4.0	0.14	0.15	0.16
B	3.60	3.80	4.0	0.14	0.15	0.16
C	1.07	1.25	1.43	0.05	0.06	0.067
D	0.95	1.10	1.25	0.037	0.043	0.05
E	2.39	2.54	2.69	0.090	0.10	0.110
G	0.90	1.0	1.10	0.035	0.04	0.043
H	1.90	2.0	2.10	0.75	0.08	0.83
I	0.50	0.6	0.70	0.020	0.024	0.028
J	1.70	1.8	1.90	0.067	0.07	0.075

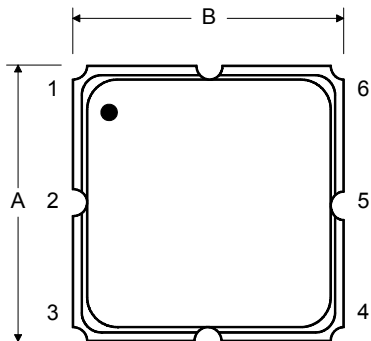
### Electrical Connections

Connection		Terminals
Port 1	Single-ended Input	2
Port 2	Single-ended Output	5
	Ground	All others
Single-ended Operation Only		
Dot indicates Pin 1		

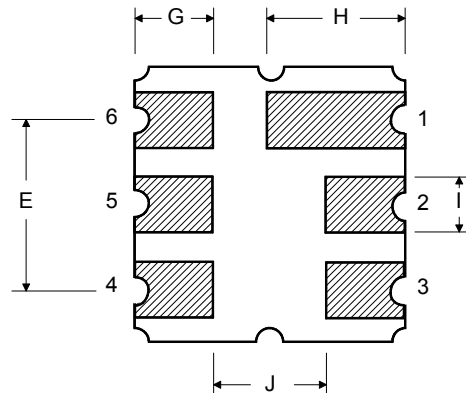
### Materials

Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic
Pb Free	

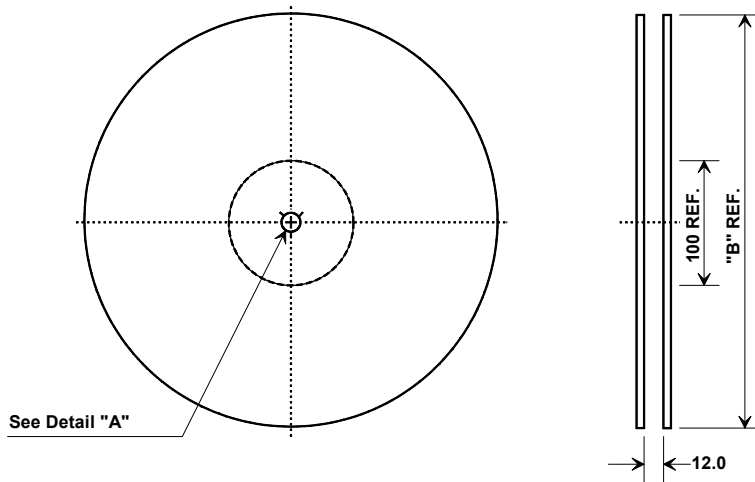
### TOP VIEW



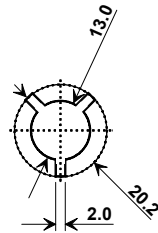
### BOTTOM VIEW



## Tape and Reel Specifications



"B"		Quantity Per Reel
Nominal Size		
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

