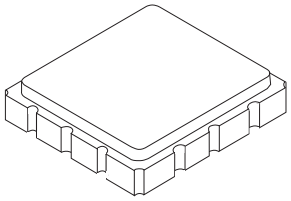
Preliminary

RFM products are now Murata products.

SF2338D

1732.5/2132.5 MHz SAW Duplexer Filter

- ***Band 4***
- ***Low Insertion Loss Duplexer SAW Filter***
- ***3.8 x 3.8 mm Surface-mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3838-12

Absolute Maximum Ratings

Rating	Value	Units
Average Input Power	+28	dBm
Maximum DC Voltage Between any Two Terminals	0	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	
Peak Input Power	+30	dBm

Electrical Characteristics

Characteristic	Sym	Note	Min	Typ	Max	Units
Ant to Rx (1732.5 MHz)						
Insertion Loss, 1710.0 to 1755.0 MHz				1.9	3.0	dB
Amplitude Ripple, 1710.0 to 1755.0 MHz				0.6	1.5	dB
VSWR, 1710.0 to 1755.0 MHz				1.7	2.2	
Absolute Attenuation: 2110.0 to 2155.0 MHz			30	37		dB
Tx to Ant (2132.5 MHz)						
Insertion Loss, 2110.0 to 2155.0 MHz				2.5	3.2	dB
Amplitude Ripple, 2110.0 to 2155.0 MHz				0.6	1.5	
VSWR 2110.0 to 2155.0 MHz				1.7	2.2	
Absolute Attenuation (1710.0 to 1755.0 MHz)			35	43		dB
Tx to Rx						
Isolation in Tx Band 1710.0 to 1755.0 MHz			35	45		dB
Isolation in Rx Band 2110.0 to 2155.0 MHz			30	38		

Case Style		SM3838-12, 3.8 x 3.8 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator		B04, YWWS
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

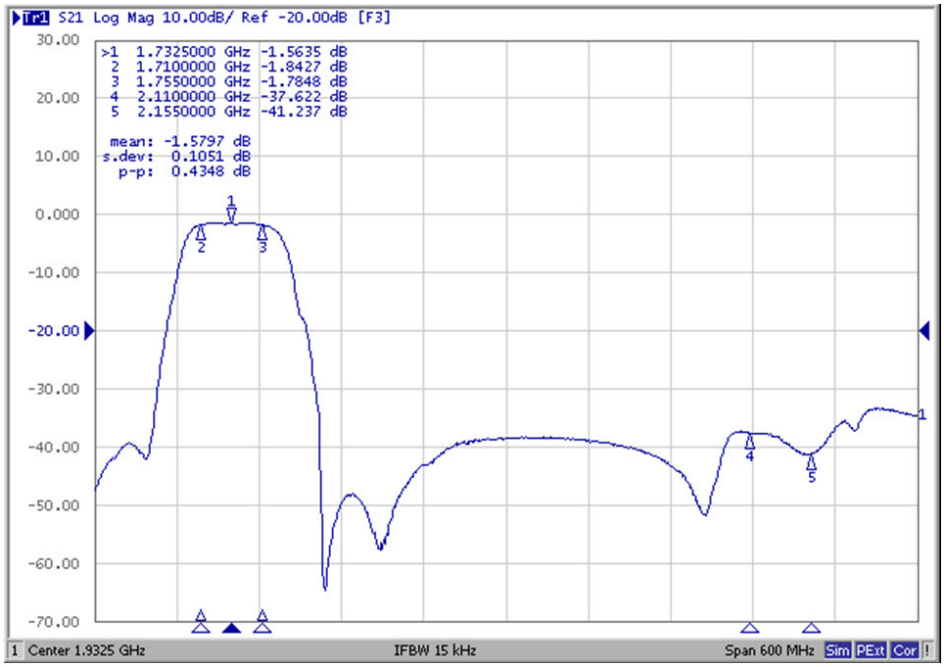
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

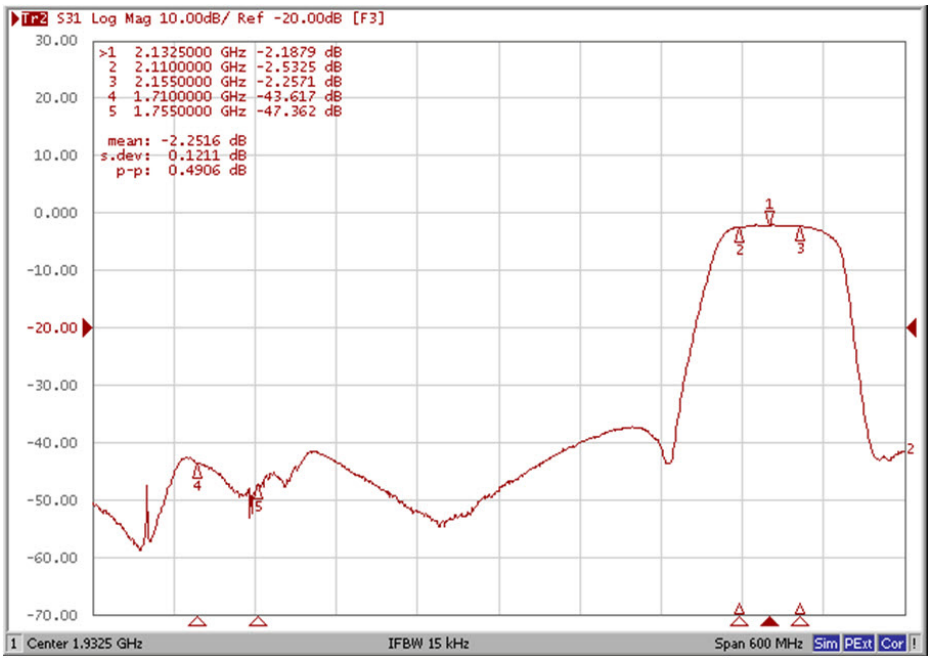
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal 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. The design, manufacturing process, and specifications of this filter are subject to change.
5. 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.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

Frequency Characteristics

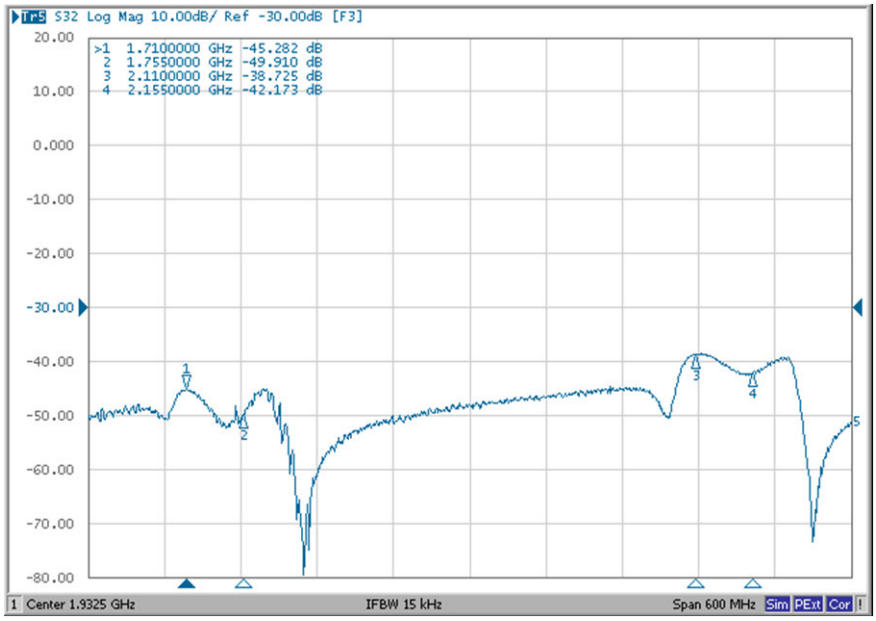
Rx



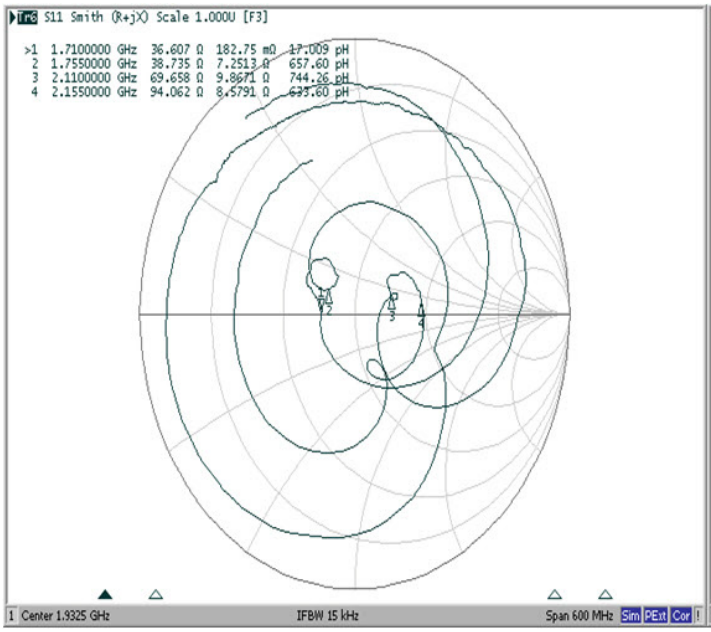
Tx

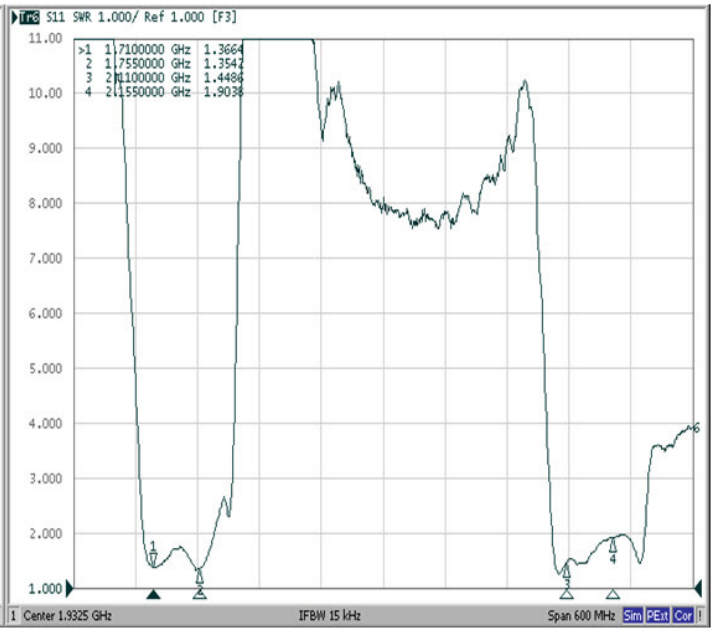


Isolation

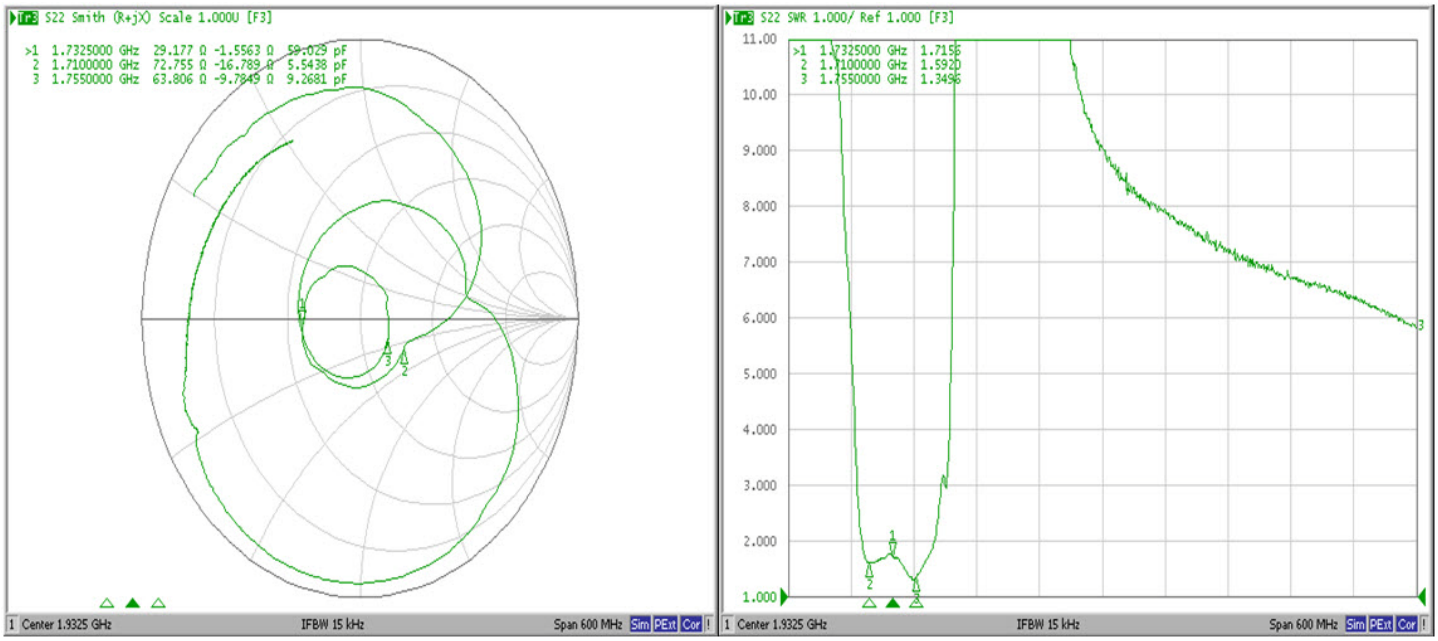


ANT - Smith Chart and VSWR

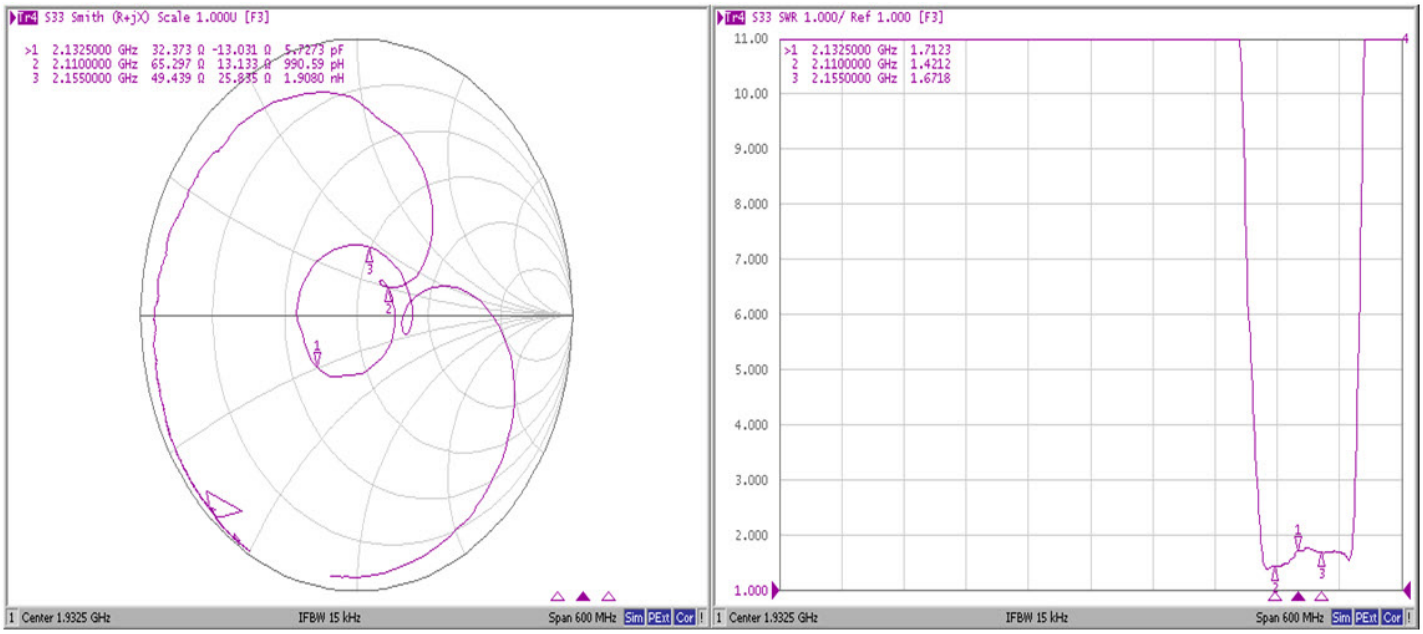




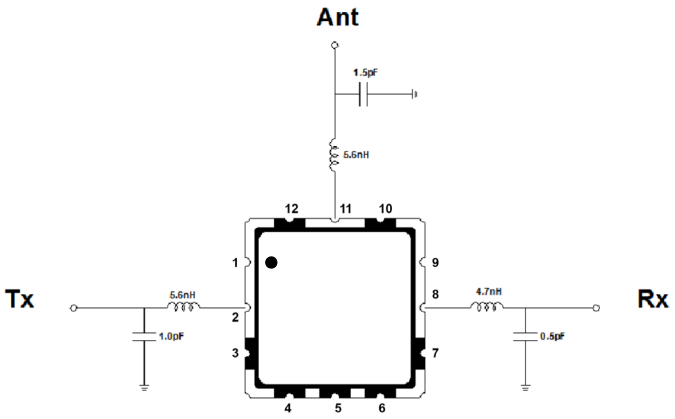
Rx - Smith Chart and VSWR



Rx - Smith Chart and VSWR



Measurement Circuit

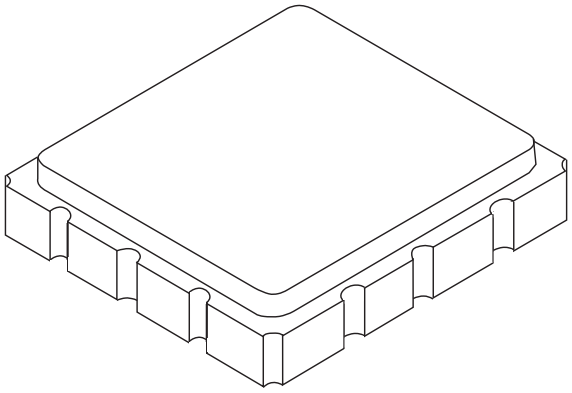


Electrical Connections

Pin	Connection
1, 3, 4, 5, 6, 7, 9, 10, 12	Ground
11	Ant
2	Tx
8	Rx
Dot Indicates Pin 1	

SM3838-12 Case

12-Terminal Ceramic Surface-mount Case
3.8 X 3.8 mm Nominal Footprint

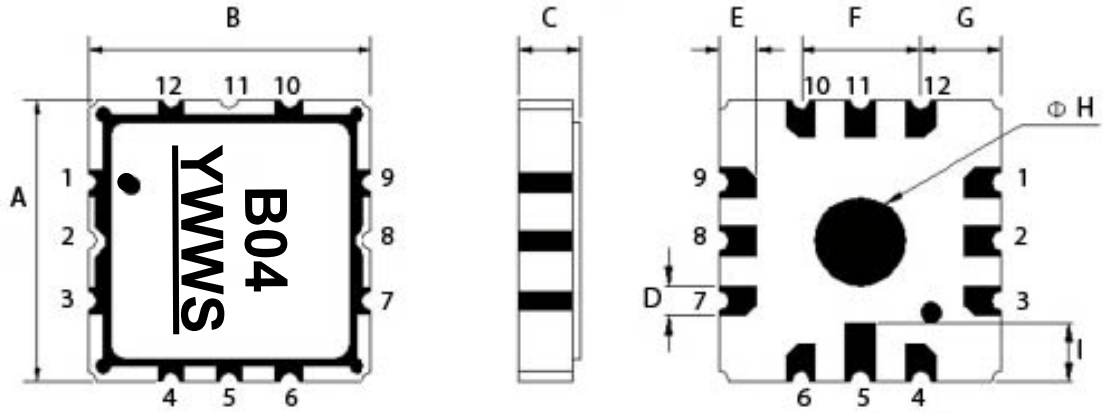


Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		3.8			0.14	
B		3.8			0.14	
C			1.45		0.057	
D		0.45			0.017	
E		0.60			0.023	
F		1.60			0.062	
G		1.10			0.043	
H		1.20			0.047	
I		0.80			0.031	

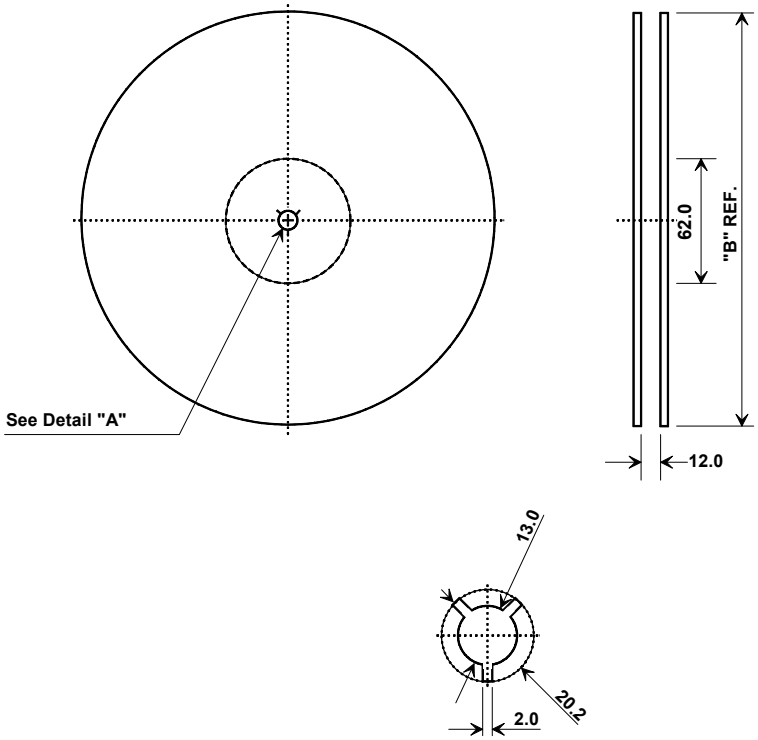
Solder Pad Plating	0.3 to
Lid Plating	2.0 to
Body	Al_2O_3
Pb Free	

TOP VIEW



BOTTOM

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	3.4 mm
Bo	3.4 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm