

Preliminary



SF2102D

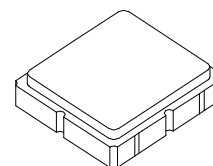
- **Low Insertion Loss**
- **3.8 X 3.8 X 1.0 mm Surface Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**



465.0 MHz SAW Filter

Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power in Passband	+23.7	dBm
Minimum life time at room temperature superior to 50,000 hours under the input power of 23.7dBm in passband.		
Max. DC voltage between any 2 Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max. Soldering Profile	260°C for 30 s	



SM3838-6

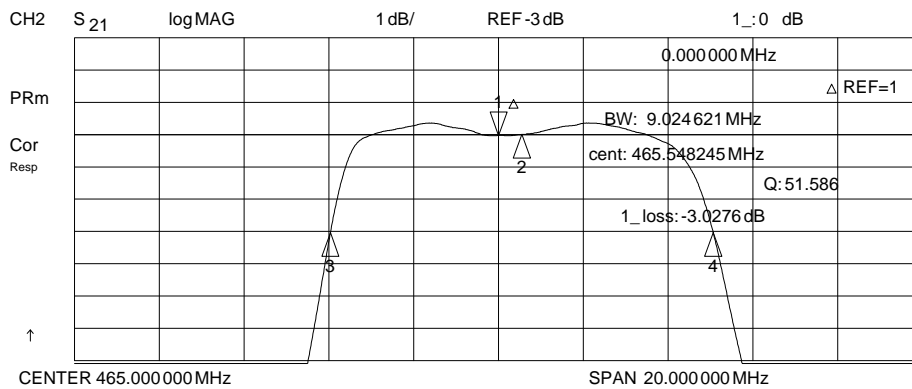
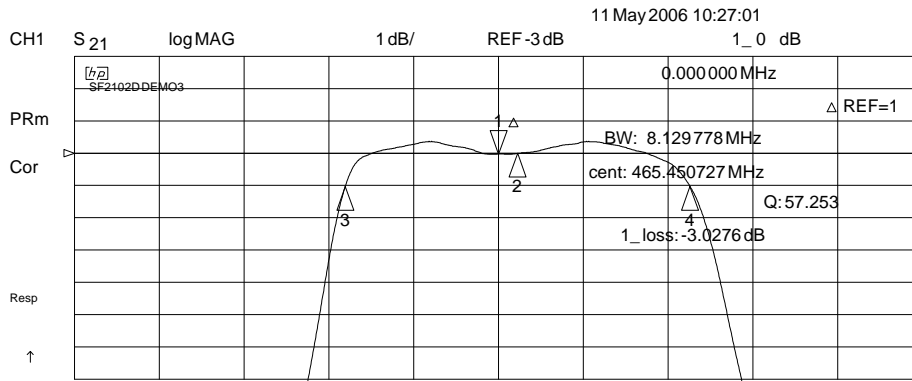
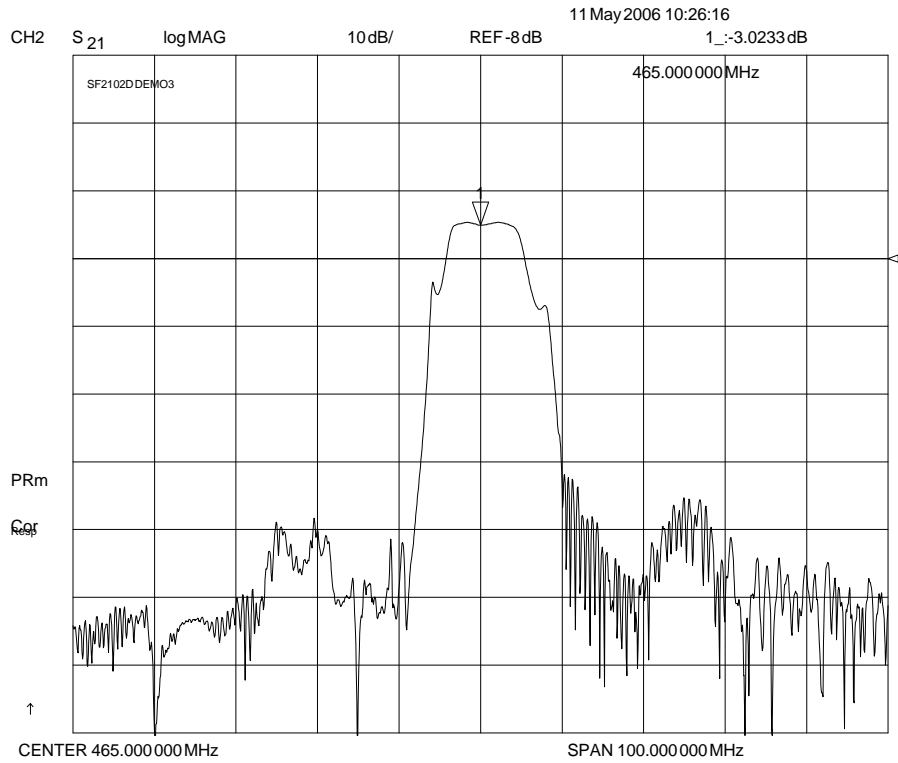
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_o	1		465.0		MHz
Source Impedance (single ended)				50		Ω
Load Impedance (single ended)				50		Ω
Absolute Attenuation (WRT 0dB)	300 kHz to 452.5 MHz		40	42		dB
	452.5 MHz to 457.5 MHz		10	12		
	452.5 MHz to 457.5 MHz	10	20	22		
	485 MHz to 507.5 MHz		38	41		
	507.5 MHz to 1200 MHz		30	33		
	1200 MHz to 1700 MHz		30	33		
1700 MHz to 2000 MHz			10	15		
Minimum Insertion Loss in 462.5 MHz -467.5 MHz				2.5	3.8	dB
Input VSWR in 462.5 MHz - 467.5 MHz at 25°C				2.0:1	2.2:1	
Output VSWR in 462.5 MHz - 467.5 MHz at 25°C				2.0:1	2.2:1	
Input Power in 462.5 MHz -467.5 MHz					23.7	dBm
Operating Temperature			-10		+85	°C

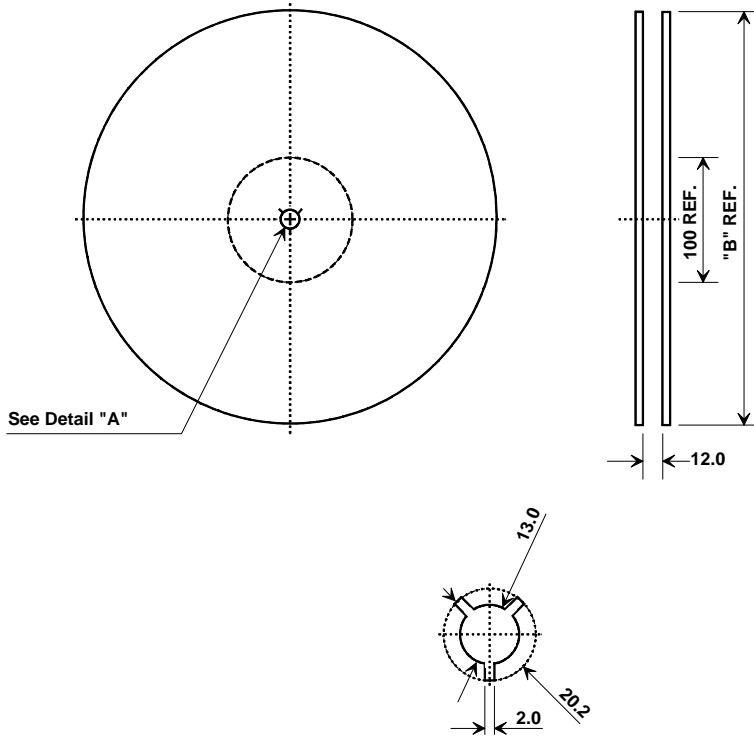
Case Style	SM3838-6 3.8 x 3.8 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	602, <u>YYWW</u>	
Standard Reel Quantity	Reel Size 7 Inch	1000 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

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. 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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
8. ©Copyright 1999, RF Monolithics Inc.
9. Electrostatic Sensitive Device. Observe precautions for handling
10. Temperature Range: +15°C to +40°C only



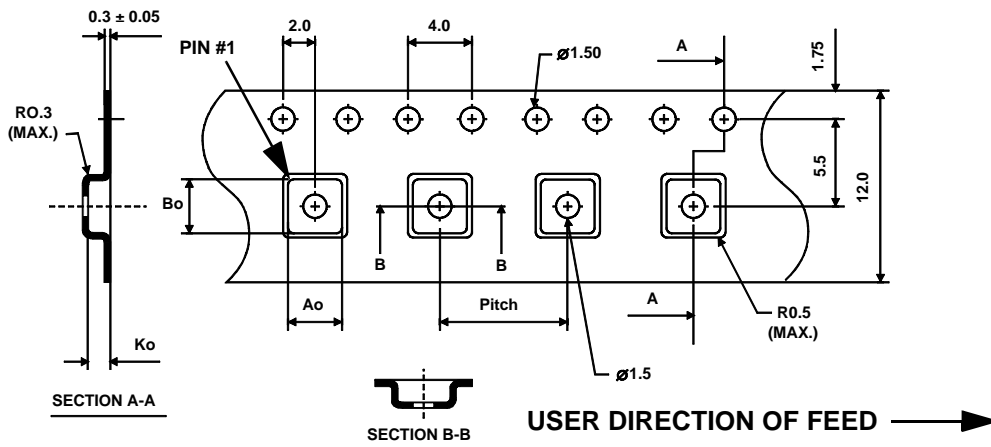
Tape and Reel Specifications



"B"		Quantity Per Reel
Inches	millimeters	
7	178	1000
13	330	3000

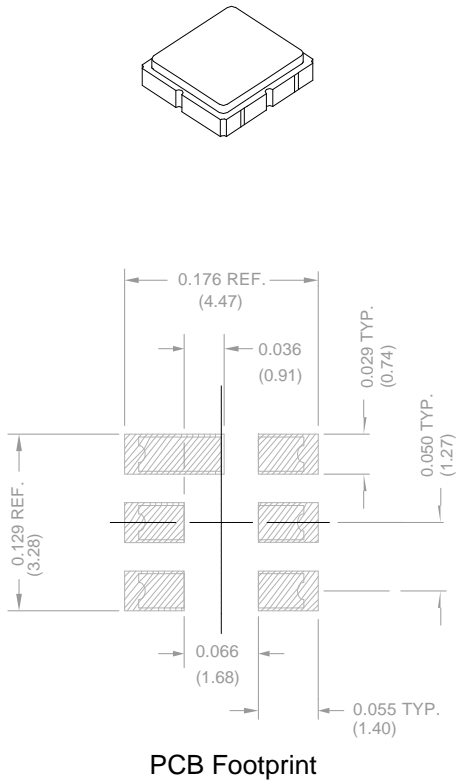
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.60 mm
Pitch	8.0 mm
W	12.0 mm



SM3838-6 Case

6-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	3.60	3.80	4.0	0.14	0.15	0.16
B	3.60	3.80	4.0	0.14	0.15	0.16
C	1.30	1.50	1.70	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 Termination	Au plating 30 - 60 μinches (76.2-152 μm) over 80-200 μinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 μinches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

