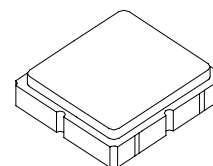




- Low Insertion Loss
- 3.8 X 3.8 X 1.2 mm Surface-Mount Case
- Differential 750 Ohm IN and 900 Ohm OUT
- Complies with Directive 2002/95/EC (RoHS)

**SF2109D****305.00 MHz
SAW Filter****Absolute Maximum Ratings**

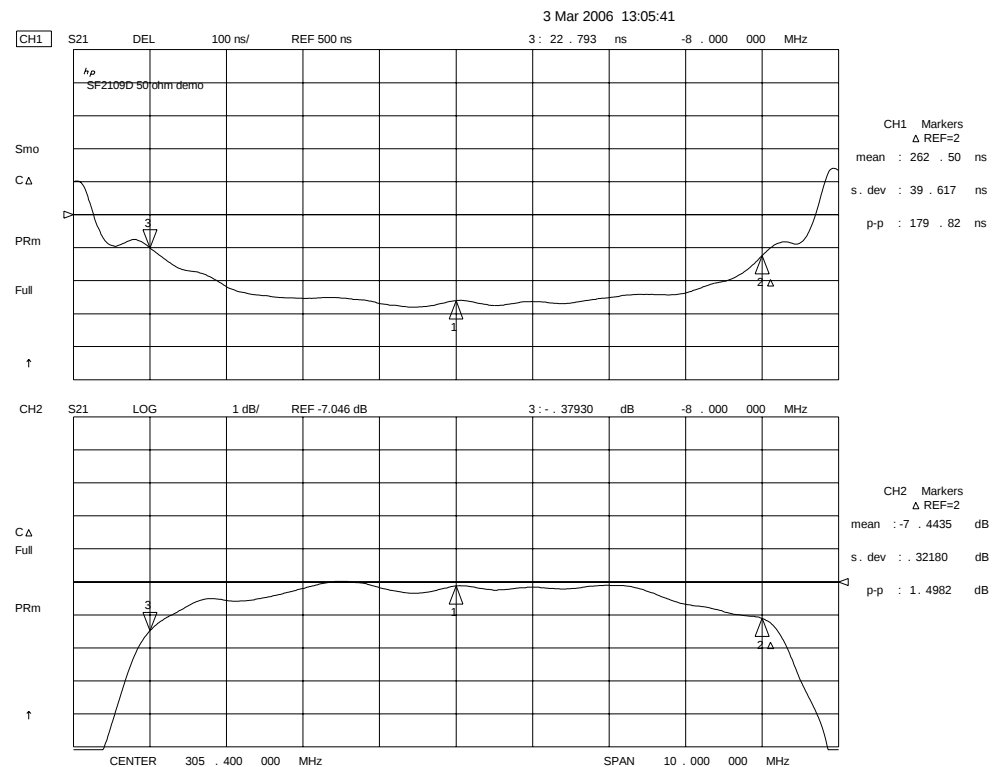
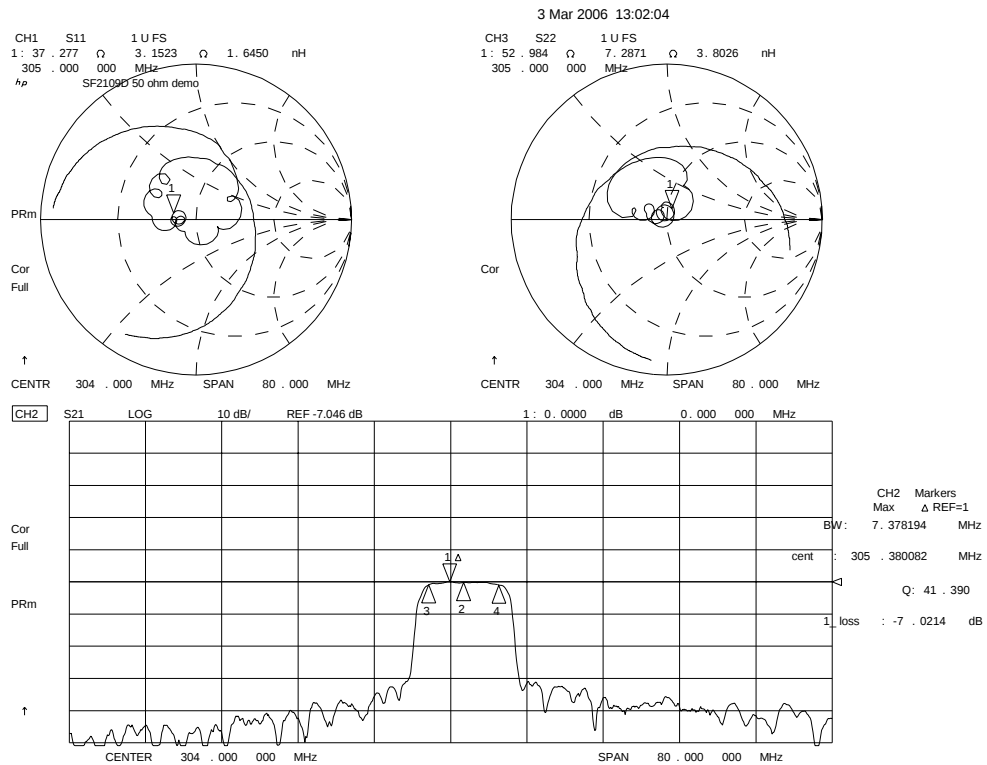
Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Operating Temperature	-15 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

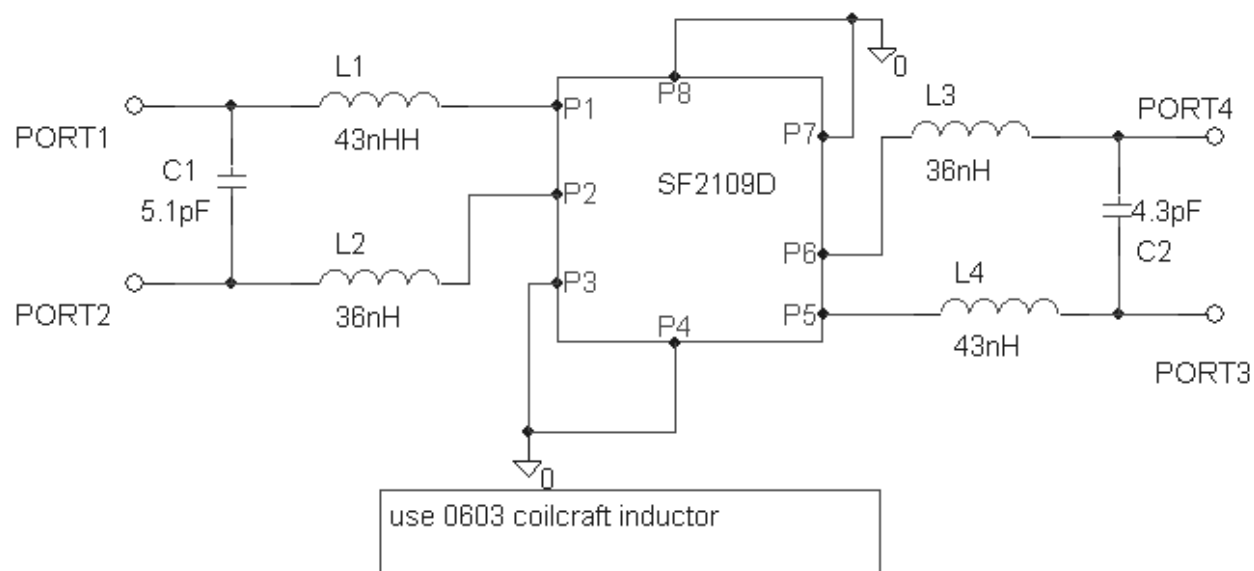
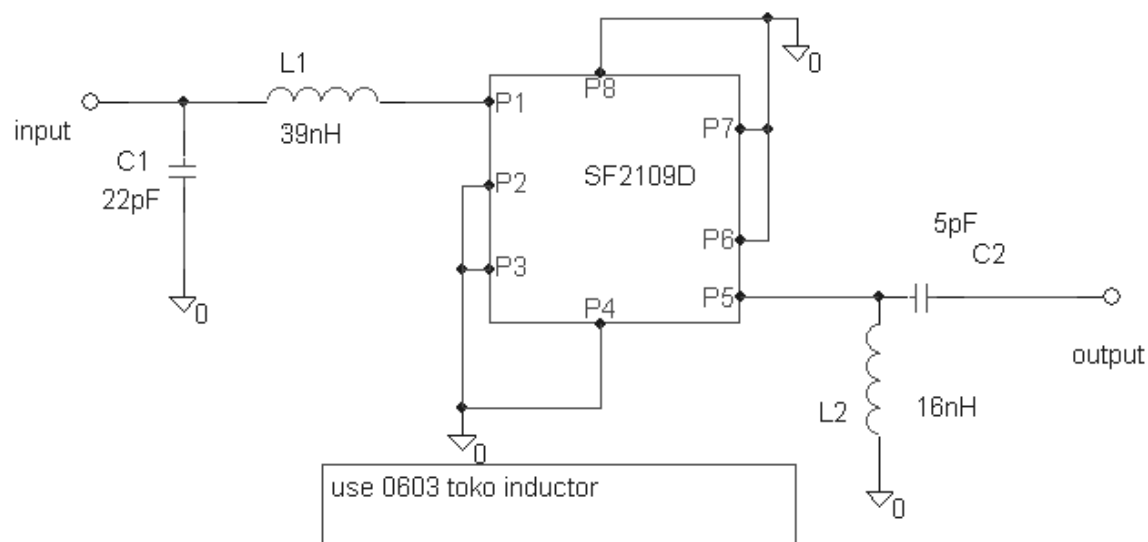
**SM3838-8****Electrical Characteristics**

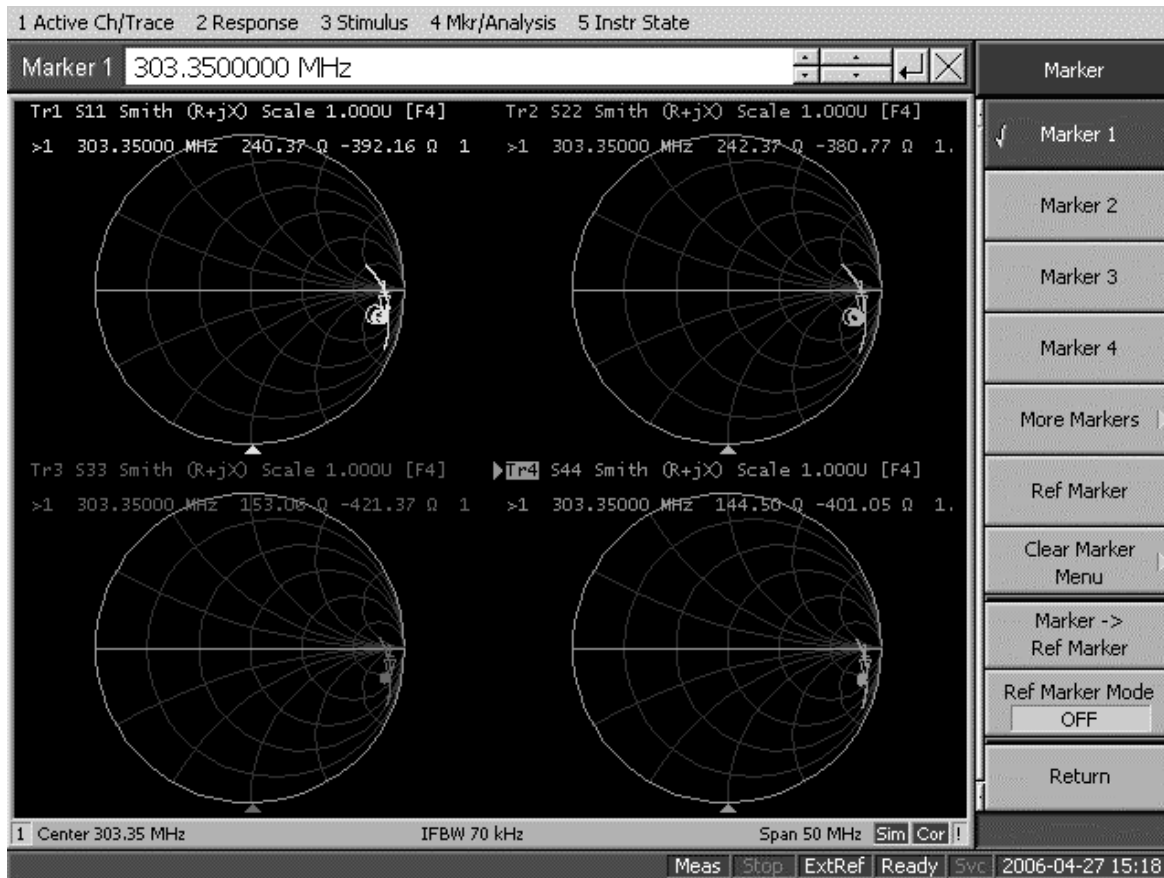
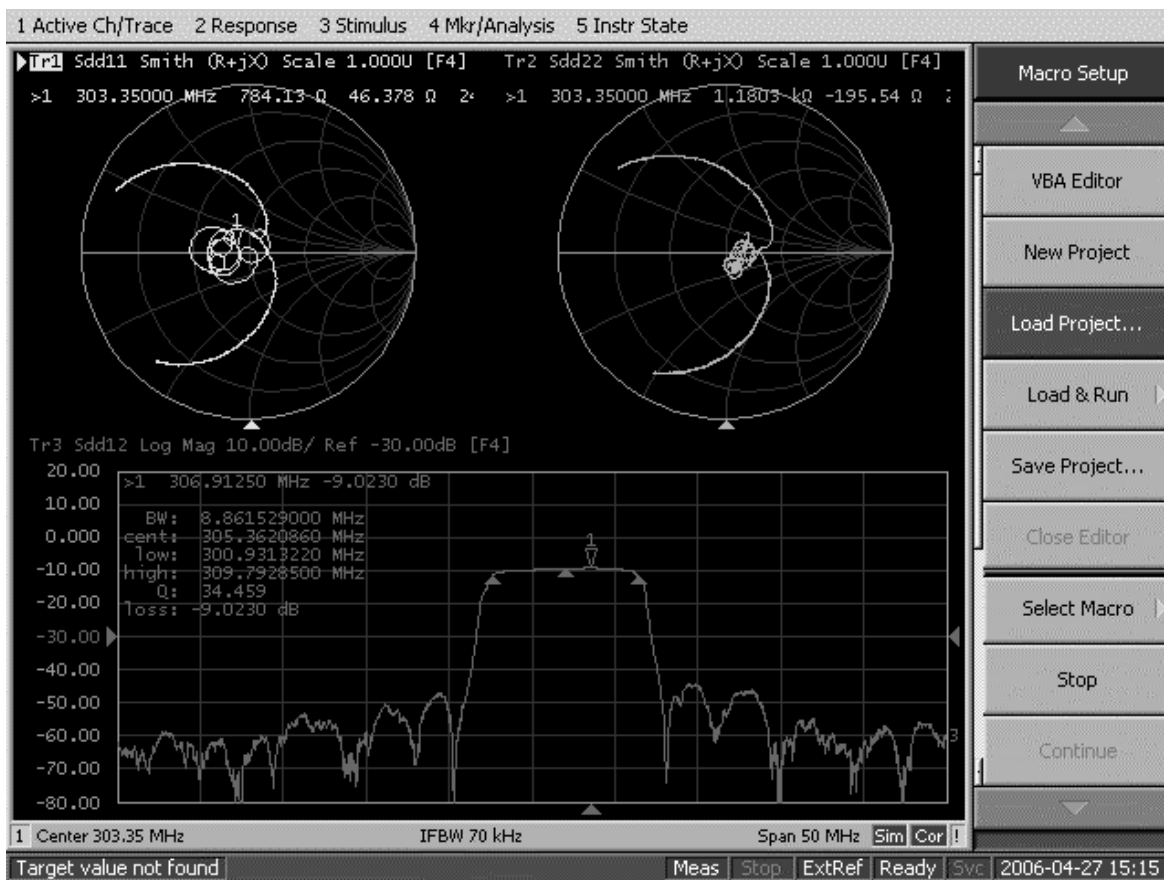
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C	1		305		MHz
Insertion Loss	IL			7	10	dB
Amplitude Ripple (p-p)	fc-4.0 to fc+4.0 MHz	1, 2		1.2	2.0	dB
Low Side Attenuation (fc-9.28 MHz)			30	35		dB
Low Side Attenuation (fc-5.78 MHz)			25	35		
High Side Attenuation (fc+5.78 MHz)			20	26		
High Side Attenuation (fc+9.28 MHz)			30	35		
Delay Ripple (p-p)	fc-4.0 to fc+4.0 MHz	1, 2, 3			300	ns
Group Delay in Passband					500	
Case Style		6	SM3838-8 3.8 x 3.8 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift) See note 4			607 YWWS			

**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. The design, manufacturing process, and specifications of this filter are subject to change.
5. Tape and Reel Standard Per ANSI / EIA 481.
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.



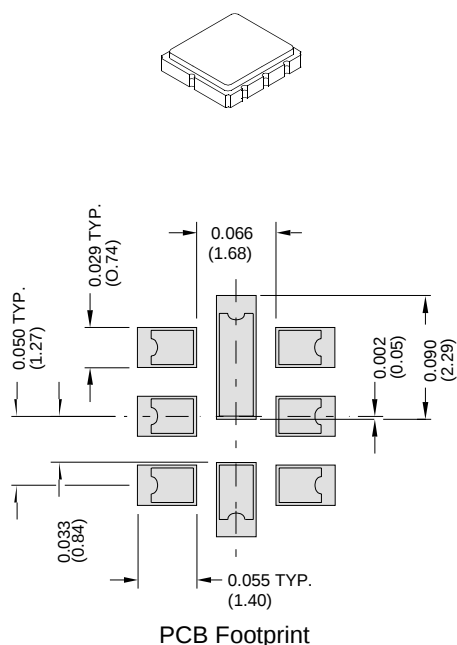




SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case

3.8 X 3.8 mm Nominal Footprint



PCB Footprint

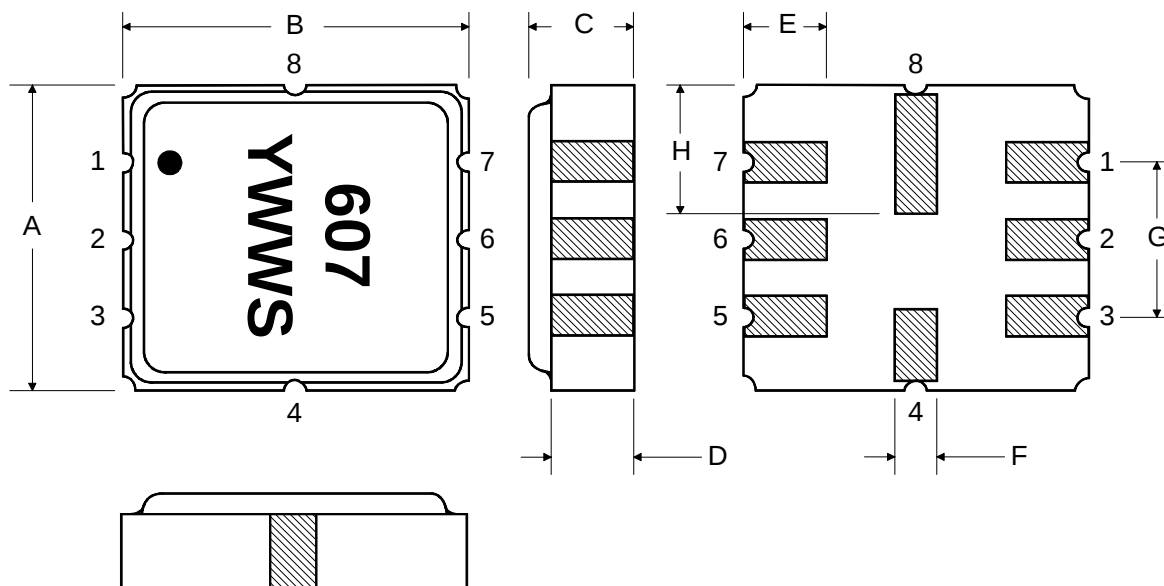
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	1.05	1.20	1.35	0.041	0.047	0.053
D	0.95	1.10	1.25	0.037	0.043	0.049
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080

Electrical Connections		
	Connection	Terminals
Port 1	Differential Input	1, 2
Port 2	Differential Output	5, 6
	Ground	All Others
Single Ended Operation		Return is Ground
Differential Operation		Return is Hot
Dot Indicates Pin 1		

Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

TOP VIEW

BOTTOM VIEW



See Detail "A"

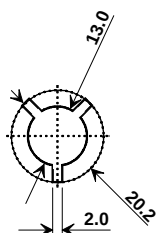
100 REF.

"B" REF.

12.0

The drawing shows a circular detail with a central hole. A vertical section view is shown to the right, indicating a thickness of 12.0. The section view shows two parallel lines representing the top and bottom surfaces. The distance from the centerline to the top surface is labeled "100 REF." and the distance from the centerline to the bottom surface is labeled "'B' REF.".

“B “		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.30 mm
Pitch	8.0 mm
W	12.0 mm

