




Preliminary

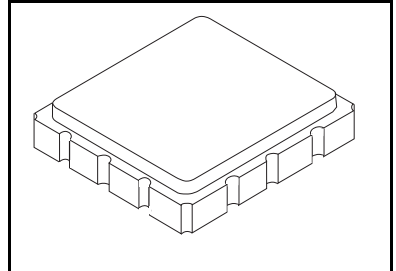
SF1207D

**836.5/881.5 MHz
SAW Duplexer**

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

Absolute Maximum Ratings

Rating	Value	Units
CW Input Power Level, 50,000 hours, +50 °C	1.2	W
DC Voltage	0	V
Operating Temperature Range	-30 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C



Electrical Characteristics, Transmitter to Antenna

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	F_C			836.5		MHz
Insertion Loss, 824 to 849 MHz	IL			1.5	2.2	dB
Amplitude Ripple, 824 to 849 MHz				0.4	1.0	dB _{P-P}
VSWR, 824 to 849 MHz				1.9:1	2.4:1	
Attenuation Referenced to 0 dB:						dB
859 MHz			4	9		
869 to 894 MHz			45	50		
Input Impedance (Antenna)	Z_S			50		Ω
Output Impedance, (TX and RX)	Z_L			50		
Case Style	SM3838-12 3.8 x 3.8 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A42, YWWS					
Standard Reel Quantity	Reel Size 7 Inch					1000 Pieces/Reel
	Reel Size 13 Inch					3000 Pieces/Reel



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

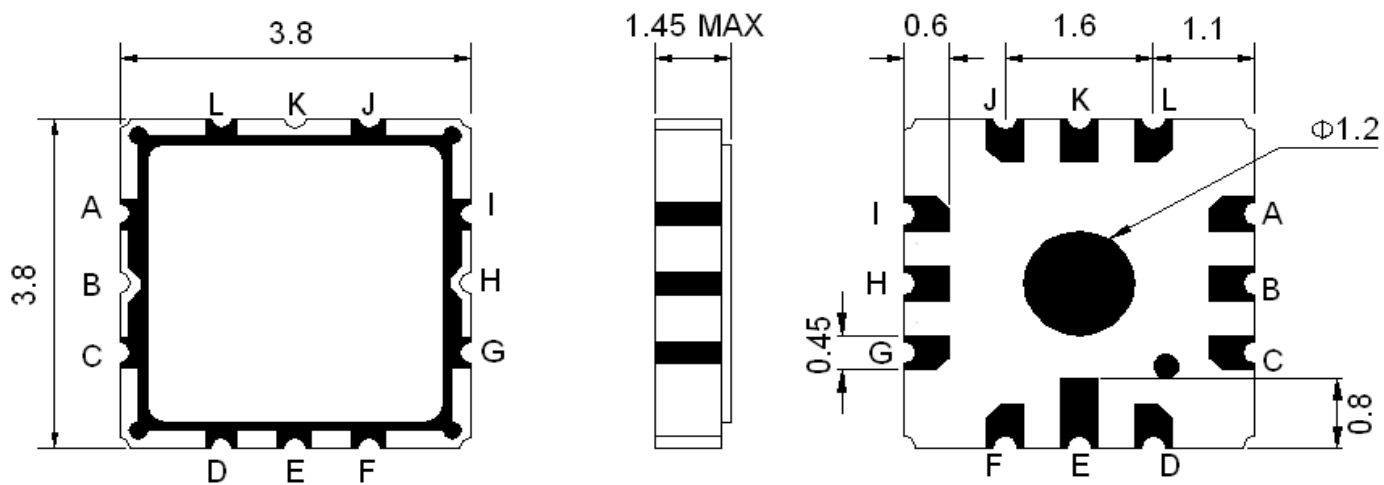
Notes:

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, 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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc

Electrical Characteristics, Receiver to Antenna, Receiver to Transmitter

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	F_C			881.5		MHz
Insertion Loss, 869 to 894 MHz	IL			2.0	3.0	dB
Amplitude Ripple, 869 to 894 MHz				0.8	1.5	dB _{P-P}
VSWR, 869 to 894 MHz				1.7:1	2.2:1	
Attenuation Referenced to 0 dB:						
824 to 849 MHz			50	58		dB
859 MHz			4	13		
Receiver-Transmitter Isolation:						
824 to 849 MHz			50	55		dB
869 to 894 MHz			48	53		

Duplexer Package

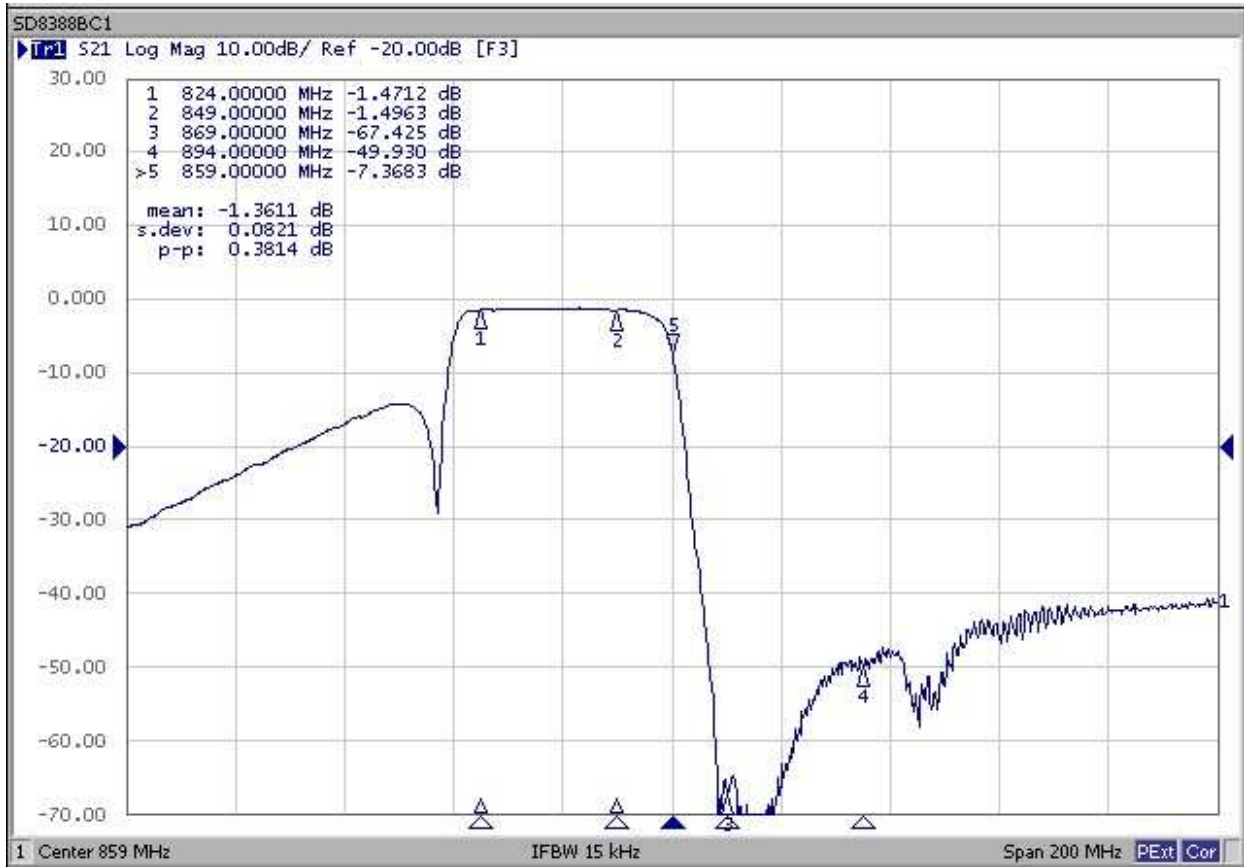


Dimensions in mm

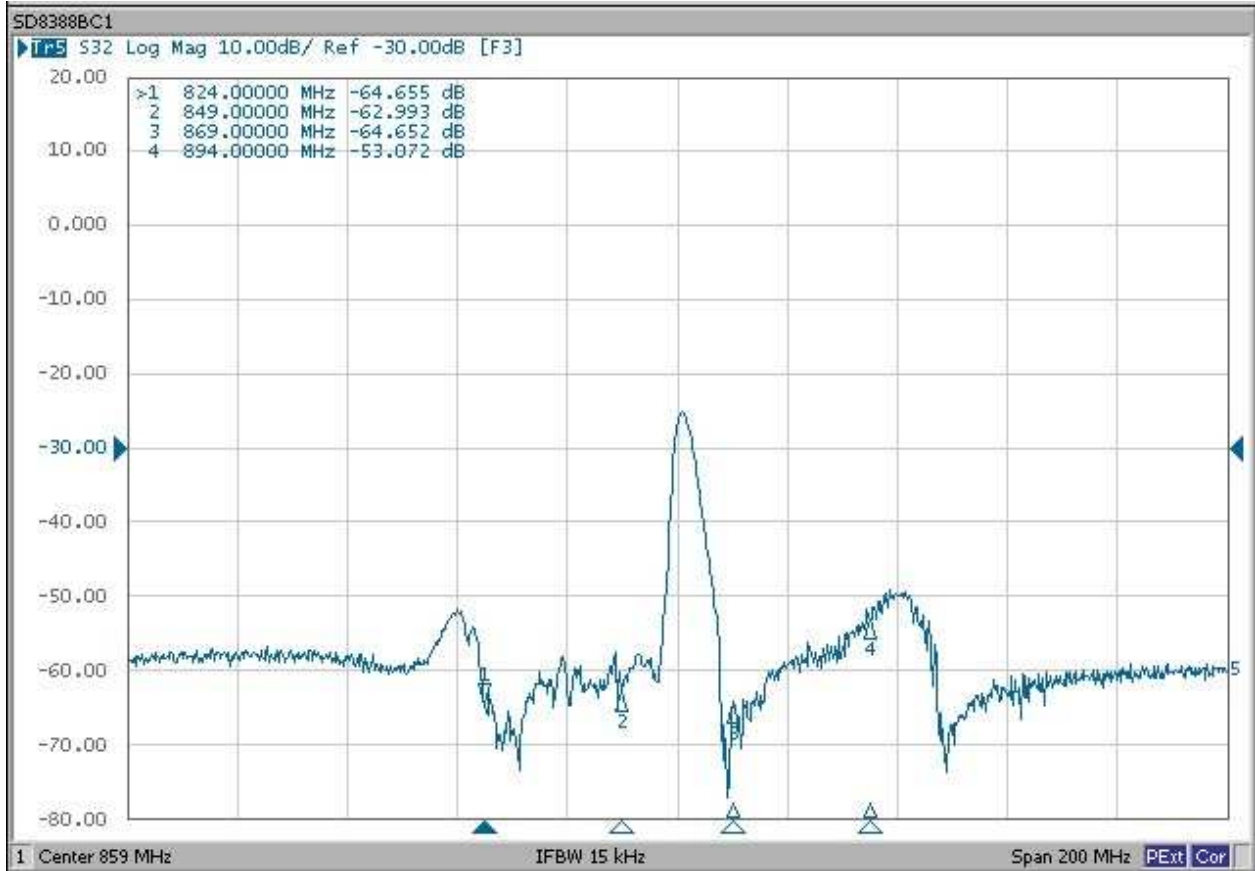
Duplexer Antenna to Receiver Passband Response



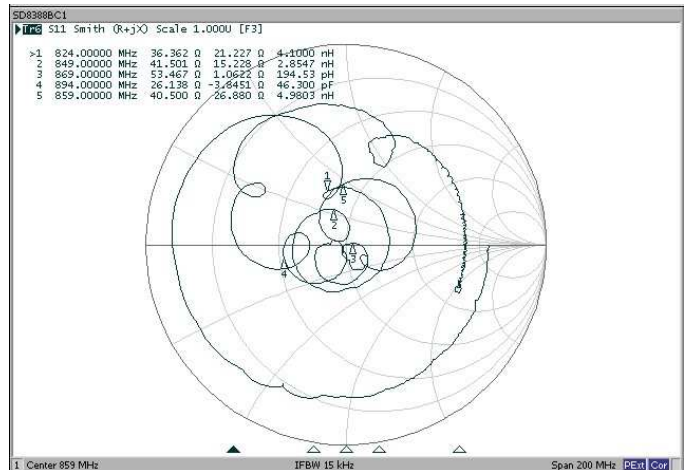
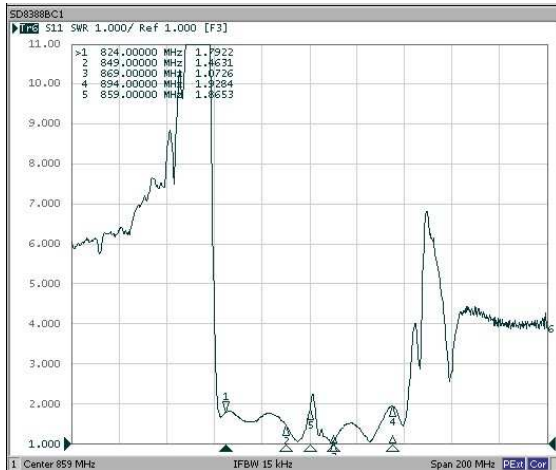
Duplexer Antenna to Transmitter Passband Response



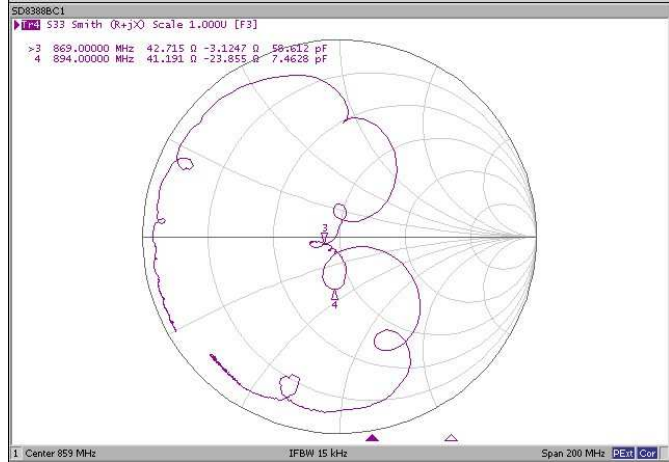
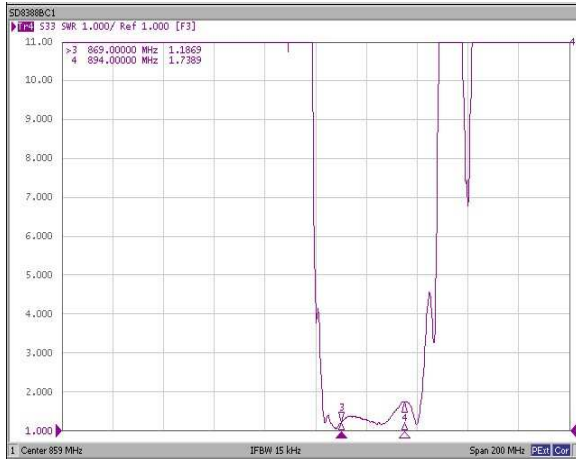
Duplexer RX-TX Isolation



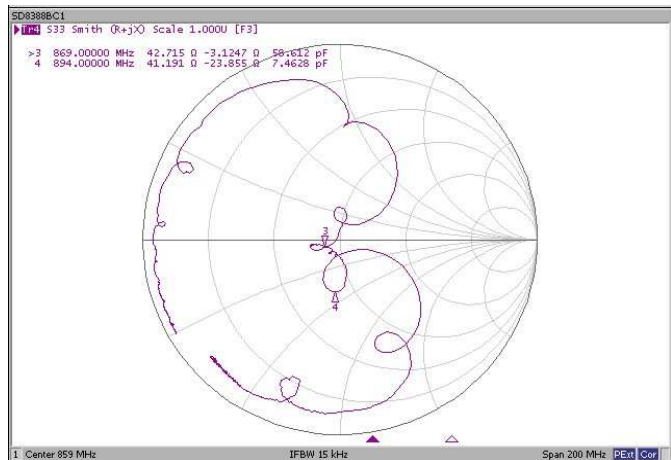
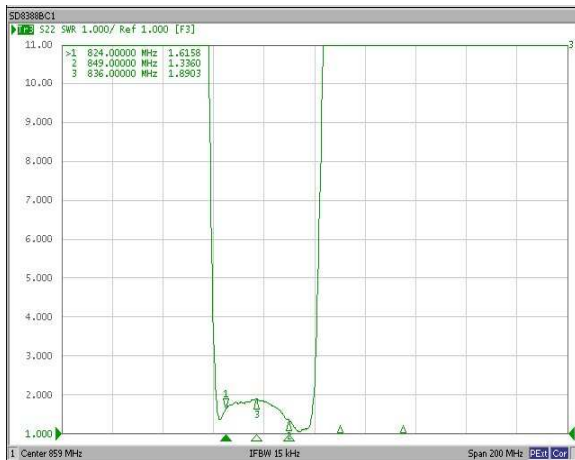
Antenna Port Impedance



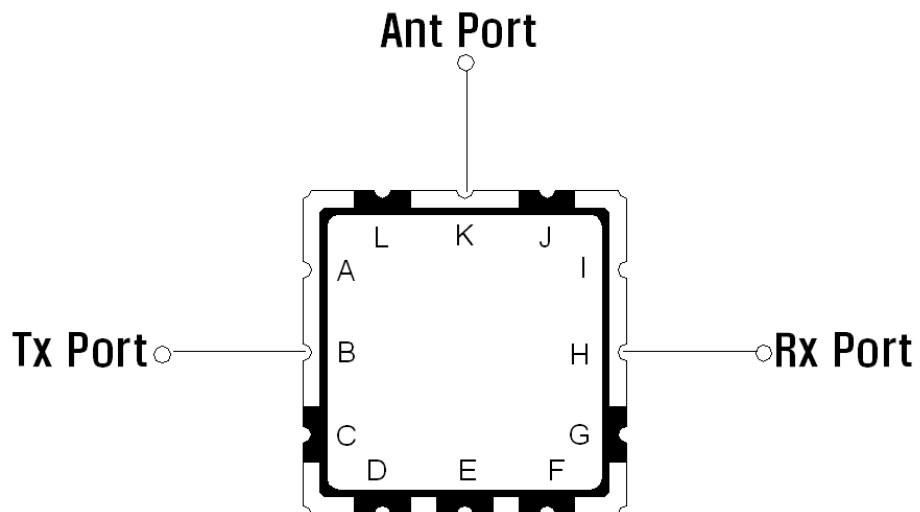
Receiver Port Impedance



Transmitter Port Impedance



Duplexer Test Circuit



K is the Antenna Port
B is the Transmitter Port
H is the Receiver Port
All other Package Pads are Ground