

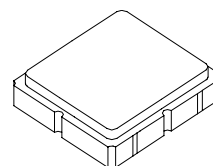


- **Steep Roll-off Filter for 869.00 MHz Unlicensed band**
- **Complies with Directive 2002/95/EC (RoHS)**
- **No Matching Required for Operation in 50 Ω Environment**



SF2137D

**869.00 MHz
SAW Filter**



SM3838-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	17	dBm
DC Voltage Between any Two Pins	3	V
Operating Temperature Range	-20 to +70	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	F _C			869.00		MHz
Insertion Loss, 868 to 870 MHz	IL			2.9	4.0	dB
Amplitude Ripple, p-p, 868 to 870 MHz				0.2	1.5	
Attenuation Relative to 0 dB:						
825 to 828 MHz			40	47		
835 to 842 MHz			30	38		
891 to 894 MHz			30	43		
910 to 913 MHz			40	48		
Source Impedance	Z _S			50		Ω
Load Impedance	Z _L			50		Ω

Case Style	SM3838-6					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A33, YWWS					
Standard Reel Quantity	Reel Size 7 Inch	1000 Pieces/Reel				
	Reel Size 13 Inch	3000 Pieces/Reel				

Electrical Connections

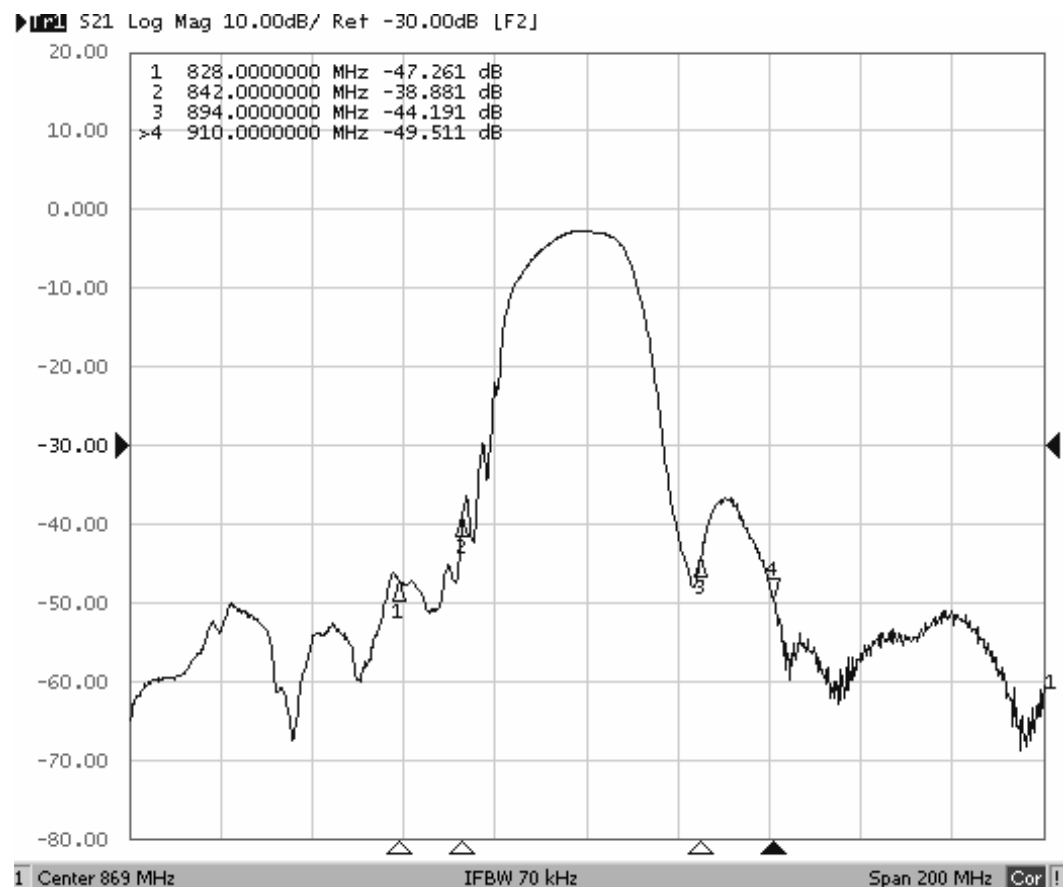
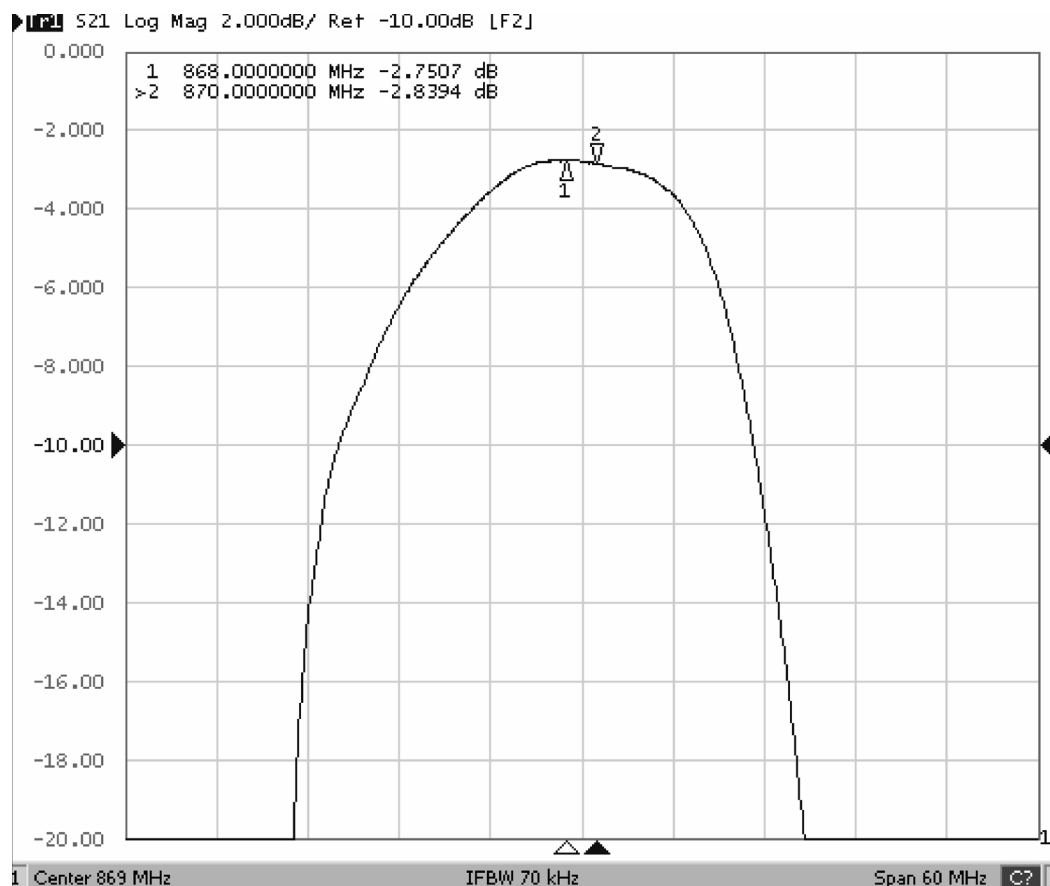
Connection	Terminals
Port 1	2
Port 2	5
Case Ground	All others



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, 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. US and international patents may apply.
6. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.



Technical drawing of a circular component, likely a flange or end plate, showing three views: a top view, a side view, and a detail view.

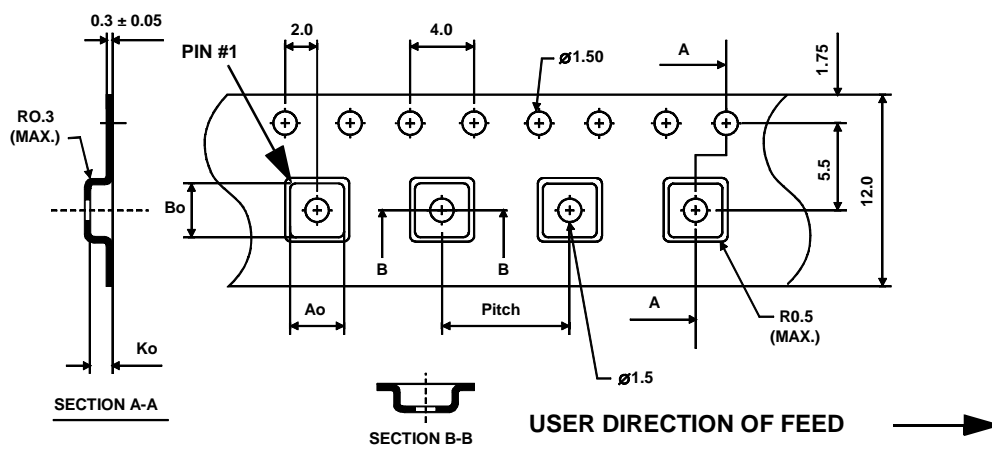
Top View: A large circle with a smaller concentric circle in the center. A horizontal dashed line and a vertical dashed line intersect at the center. A leader line points from the text "See Detail 'A'" to the center of the inner circle.

Side View: Two vertical lines representing the thickness of the component. The total thickness is dimensioned as 12.0. The distance from the centerline to the outer edge is dimensioned as 100 REF. The distance from the centerline to the inner edge is dimensioned as "B" REF.

Detail View (Detail A): A cross-sectional view of the central hole. It shows a circular hole with a diameter of 13.0. The hole is surrounded by a flange with a thickness of 2.0. The distance from the centerline to the outer edge of the flange is dimensioned as 20.2.

“B”		Quantity Per Reel
Inches	millimeters	
7	178	1000
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



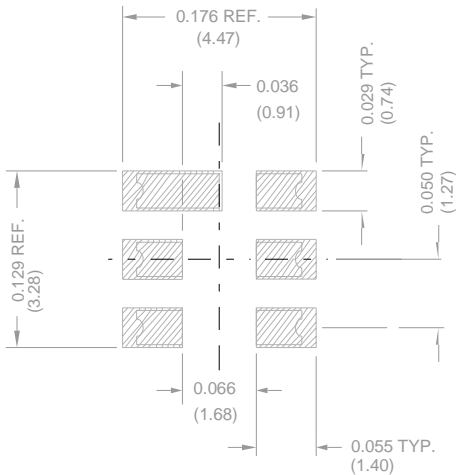
SM3838-6 Case

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	1.07	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



PCB Footprint

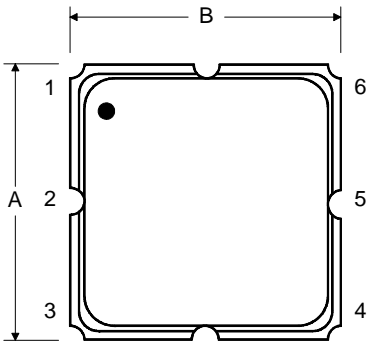
Electrical Connections

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 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

TOP VIEW



BOTTOM VIEW

