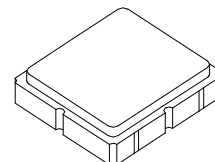


SF2137E

**869.00 MHz
SAW Filter**



SM3030-6

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



Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	17	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 Cycles/10 seconds Maximum	265	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			869.00		MHz
Bandwidth, 1 dB				11		
Bandwidth, 3 dB				17		
Insertion Loss, 868 to 870 MHz	IL			2.8	4.0	dB
Amplitude Ripple, 868 to 870 MHz				0.2	1.5	dB _{P-P}
Attenuation Referenced to 0 dB:						dB
825 to 828 MHz			40	47		
835 to 842 MHz			30	39		
891 to 894 MHz			30	42		
910 to 913 MHz			40	47		
Source Impedance	Z_s			50		Ω
Load Impedance	Z_L			50		Ω

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	711, YWWS					
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel				
	Reel Size 13 Inch	3000 Pieces/Reel				

Electrical Connections

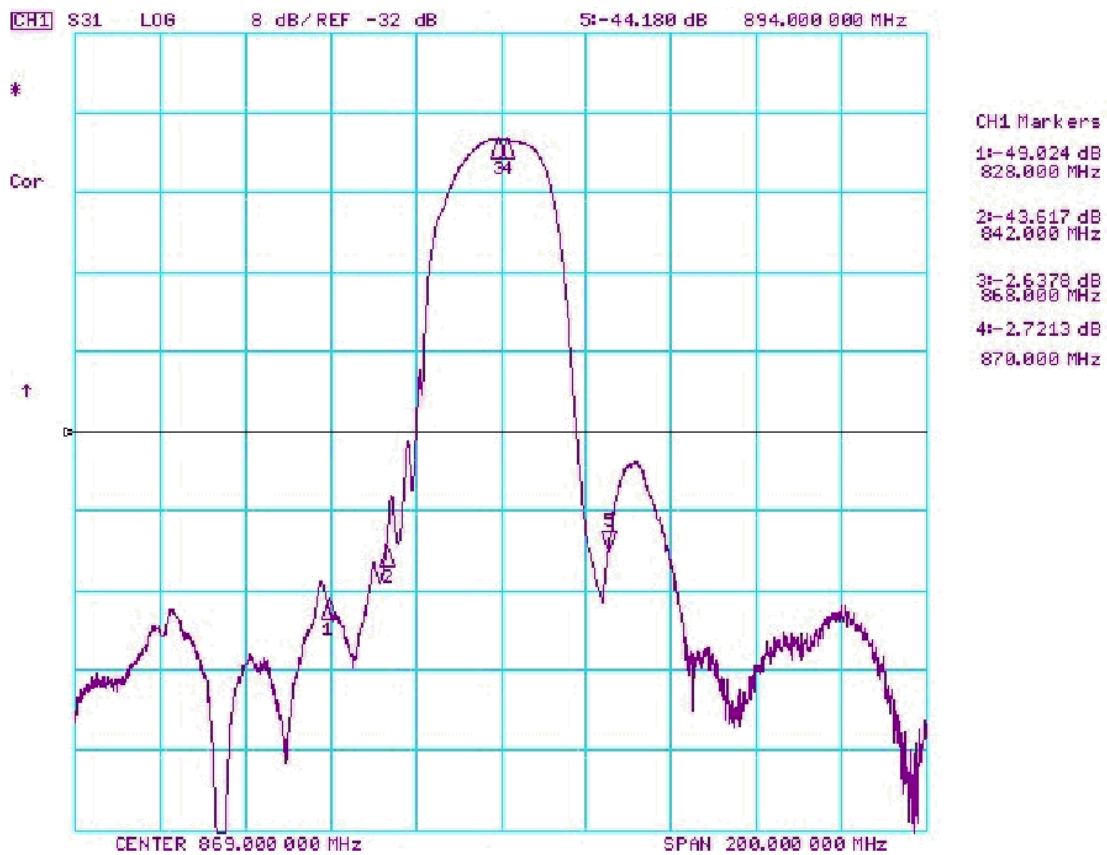
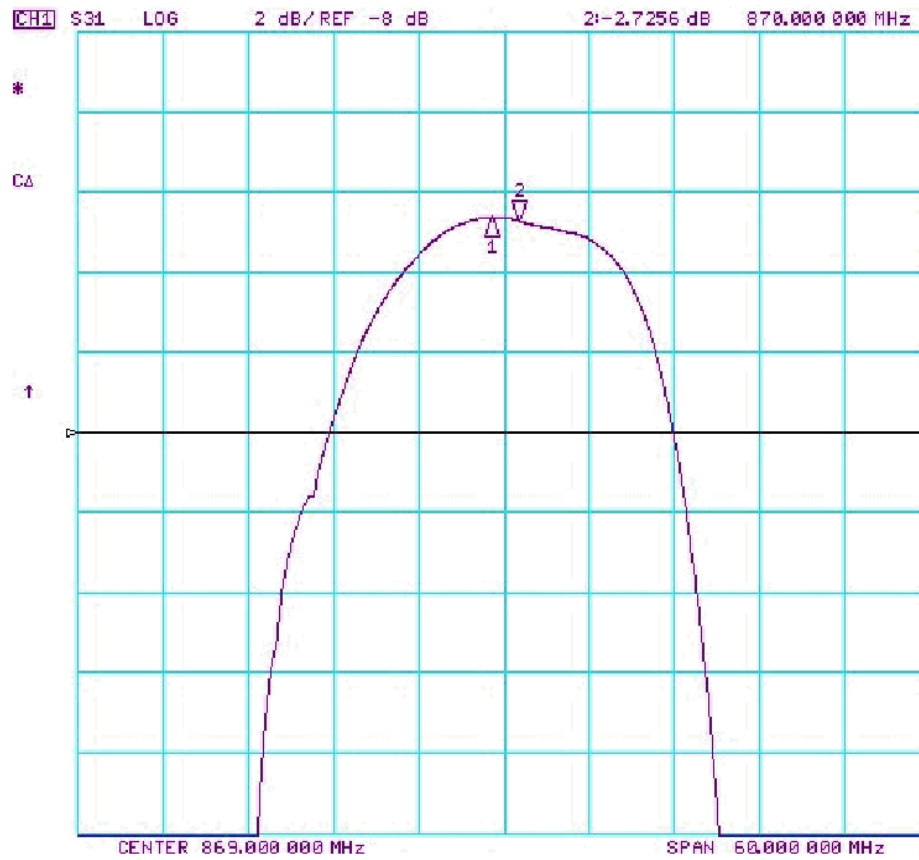
Connection	Terminals
Port 1	2
Port 2	5
Case Ground	All others

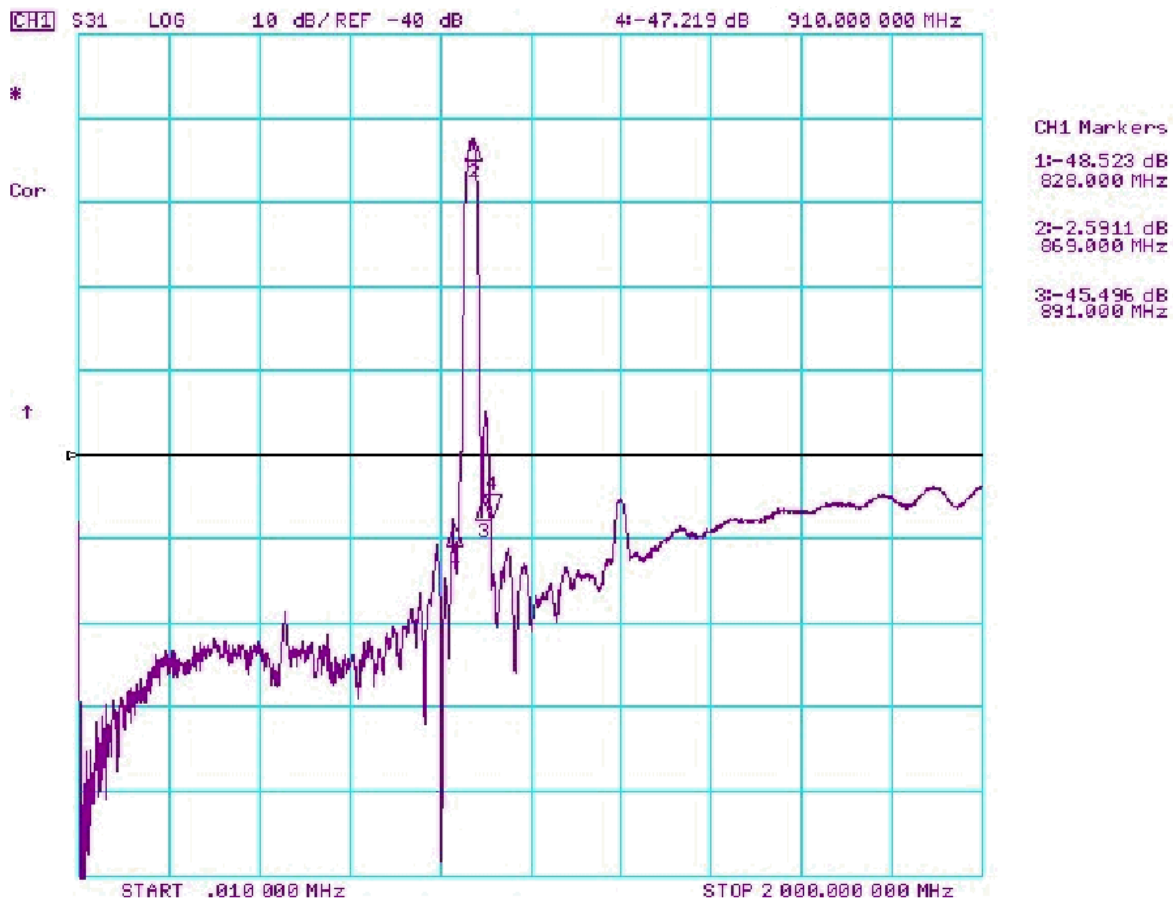


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

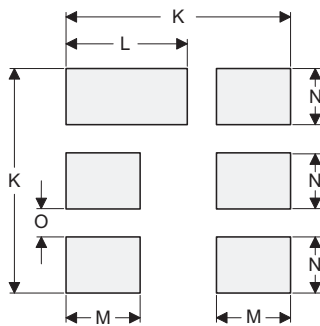
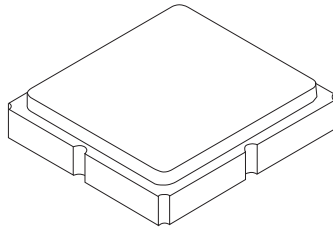
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal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





SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

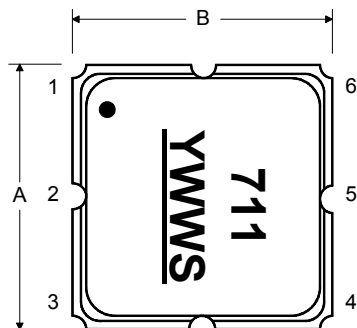
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

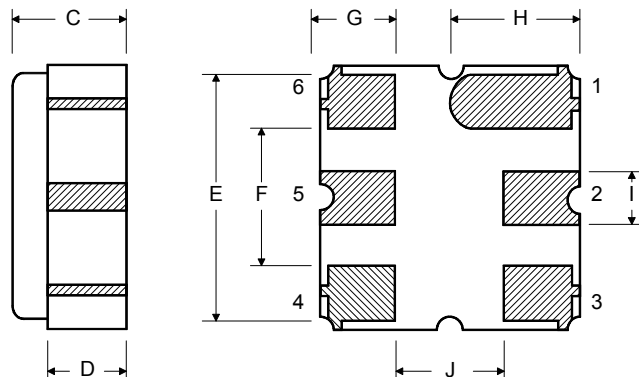
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

Top View



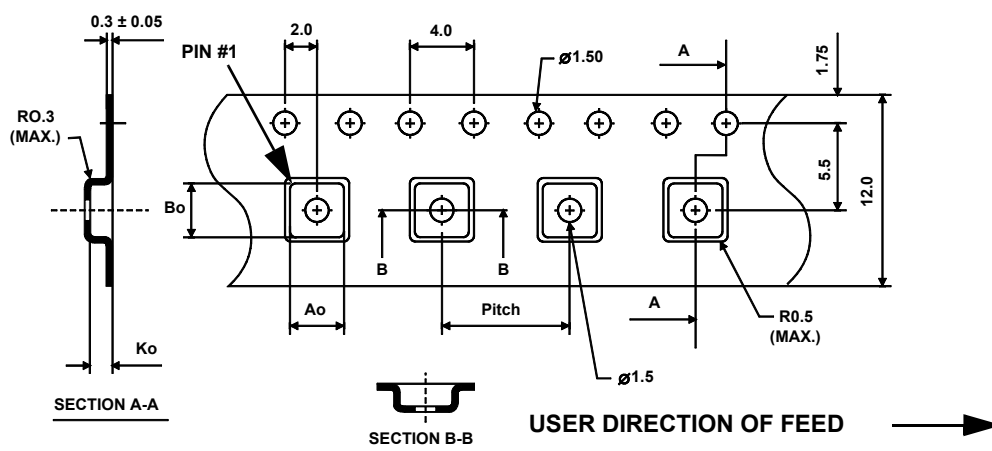
Bottom View



Technical drawing of a circular component. The top view shows a large outer circle and a smaller concentric inner circle. A central hole is indicated by a circle with a crosshair. A leader line points from the text "See Detail 'A'" to the central hole. The side view shows the component's profile, which is a thin, elongated shape. The total height is labeled "100 REF." and the width is labeled "12.0". The side view also shows a central hole with a diameter of "20.2" and a thickness of "2.0". The top view includes a vertical centerline and a horizontal centerline. The side view includes a vertical centerline and a horizontal centerline. The side view also shows a central hole with a diameter of "20.2" and a thickness of "2.0".

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

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



Typical Solder Reflow Profile

