

- Low-loss RF Filter for 315 MHz Applications
- No Matching Required for Operation in 50 Ω Environment
- Complies with Directive 2002/95/EC (RoHS)

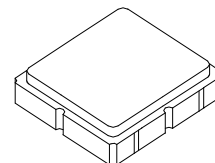


Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	10	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

SF2248E

315 MHz SAW Filter



SM3030-6

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			315		MHz
3 dB Bandwidth				5		MHz
Insertion Loss, 314.7 to 315.3 MHz	IL _{MAX}			1.52	2.50	dB
Amplitude Ripple, 314.7 to 315.3 MHz				0.4	1.2	dB _{P-P}
VSWR				1.4:1	1.6:1	
Attenuation Referenced to IL _{MAX} :						
270.0 to 286.0 MHz			55	65		dB
293.0 to 293.9 MHz			53	60		
304.0 to 304.6 MHz			48	60		
325.4 to 326.0 MHz			24	30		
336.1 to 337.0 MHz			36	52		
357.5 to 358.7 MHz			50	60		
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	986, YWWS		
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel	
	Reel Size 13 Inch	3000 Pieces/Reel	

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

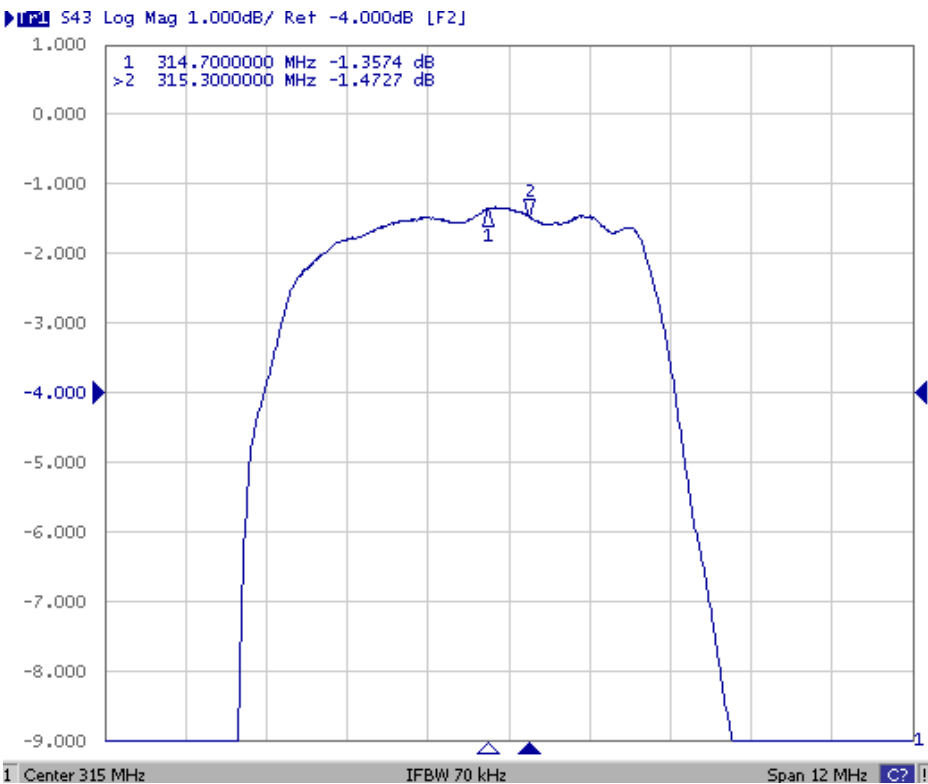
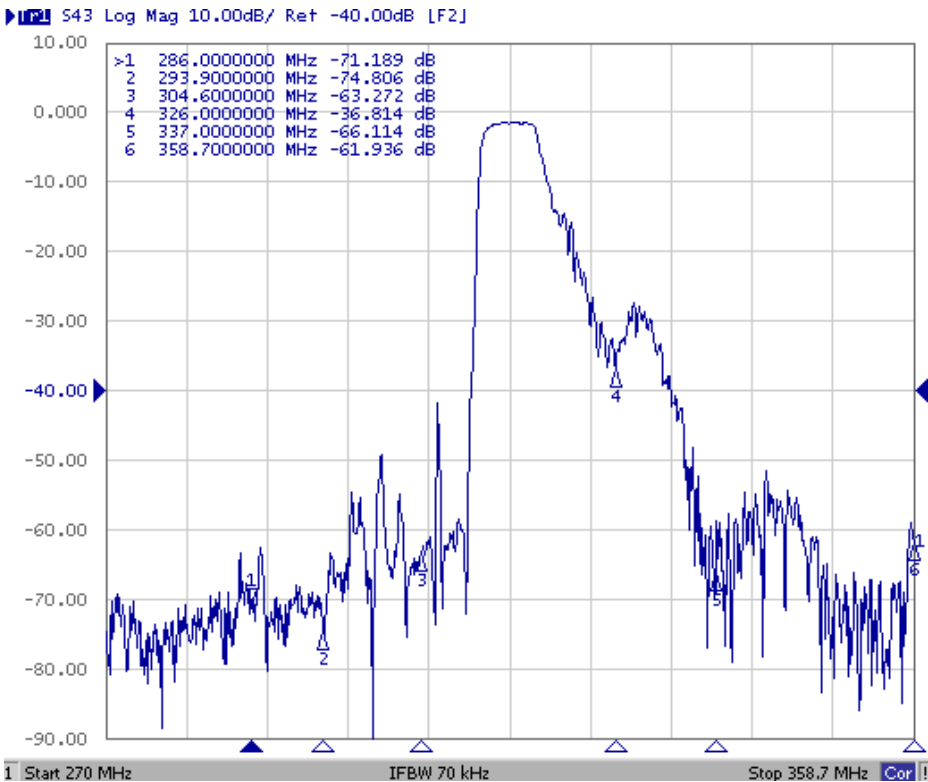


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

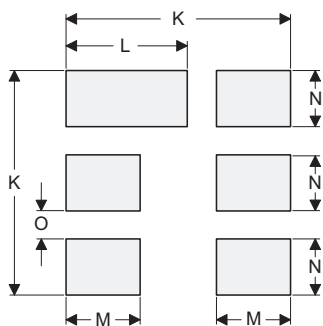
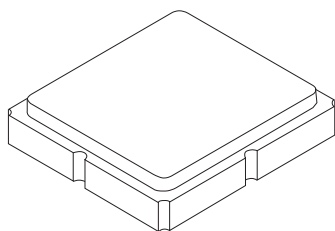
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal 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.

Amplitude Response Plots



SM3030-6 Case

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



PCB Footprint Top View

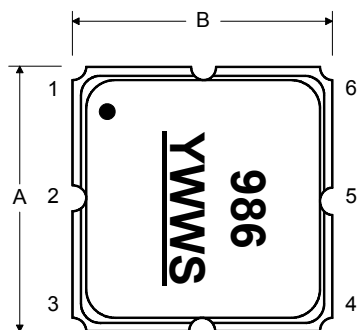
Case and PCB Footprint Dimensions

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	1.30	0.044	0.049	0.051
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	

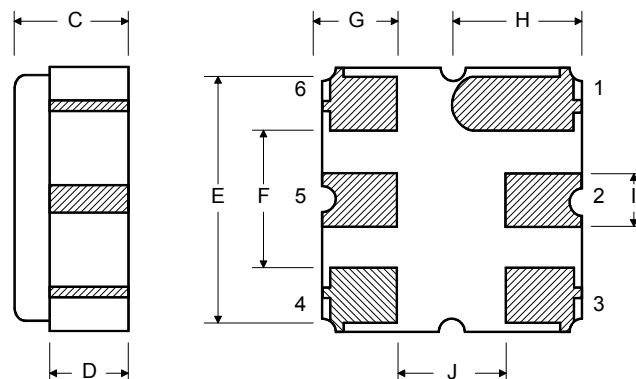
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 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	

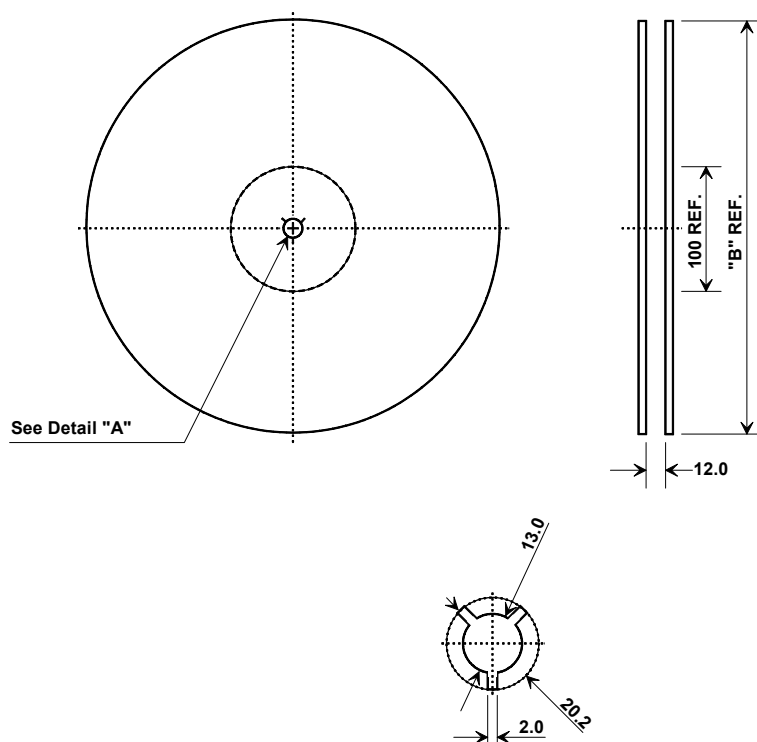
Top View



Bottom View



Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

COMPONENT ORIENTATION and DIMENSIONS

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

