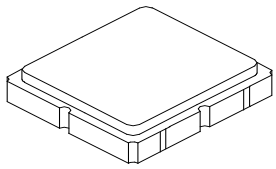
Preliminary

muRata
INNOVATOR IN ELECTRONICS

RF3702D

426.44 MHz SAW Filter

- ***Low Insertion Loss SAW Filter***
- ***Balanced 200 ohm Input, Single-ended 50 ohm Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3838-8

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+20	dBm
DC Voltage	±10	V
Operating Temperature Range	-20 to +70	°C
Storage Temperature Range in Tape and Reel	-30 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			426.44		MHz
3 dB Bandwidth	BW_3		1.0			MHz
Maximum Insertion Loss, 426.22 to 426.66 MHz	IL_{MAX}			2.0	3.0	dB
Amplitude Ripple, 426.22 to 426.66 MHz				0.6	1.0	dB_{P-P}
Rejection Referenced to 0 dB:						
404.64 to 405.44 MHz, [426.44 -(21 to 21.8) MHz]			50	54		dB
405.44 to 421.44 MHz			30	36		
436.44 to 447.84 MHz			20	40		
470.0 to 770.0 MHz			50	59		
800.0 to 2010.0 MHz			40	65		
Balanced Source Impedance	Z_S			200		Ω
Load Impedance	Z_L			50		Ω

Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	948, YWWS
Standard Reel Quantity Reel Size 7 Inch	500 Pieces/Reel
Reel Size 13 Inch	3000 Pieces/Reel

Electrical Connections

Connection	Terminals
Balanced Input	1,2
Output	5
Case Ground	3, 4, 6, 7, 8

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.
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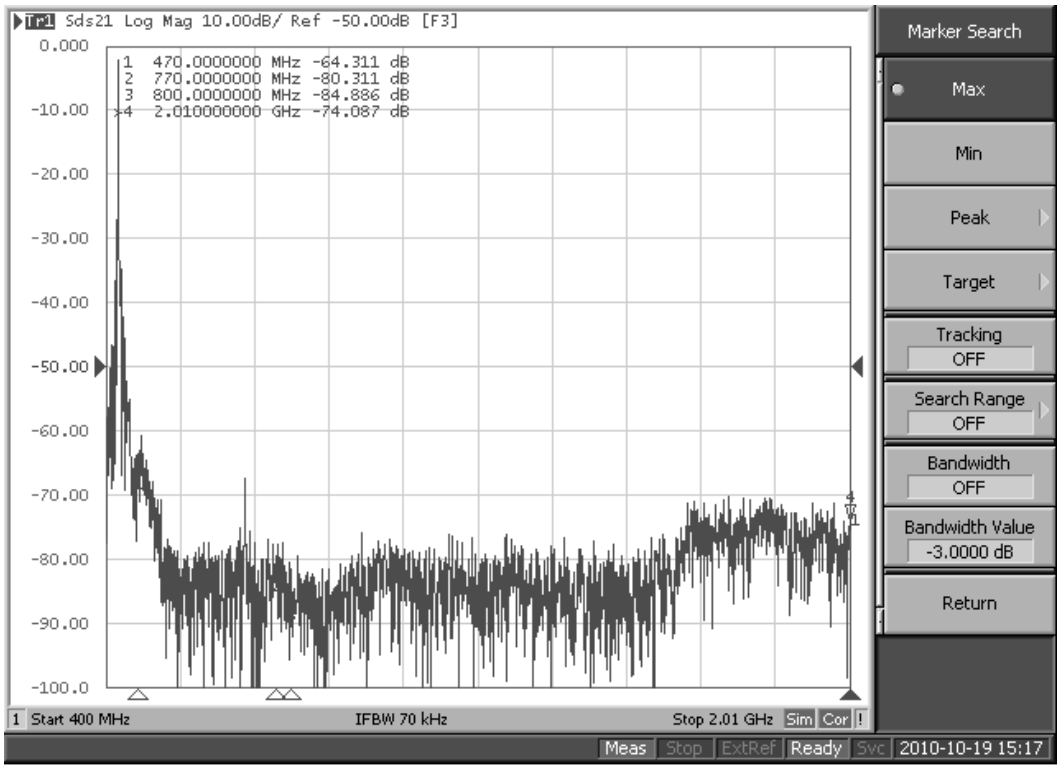
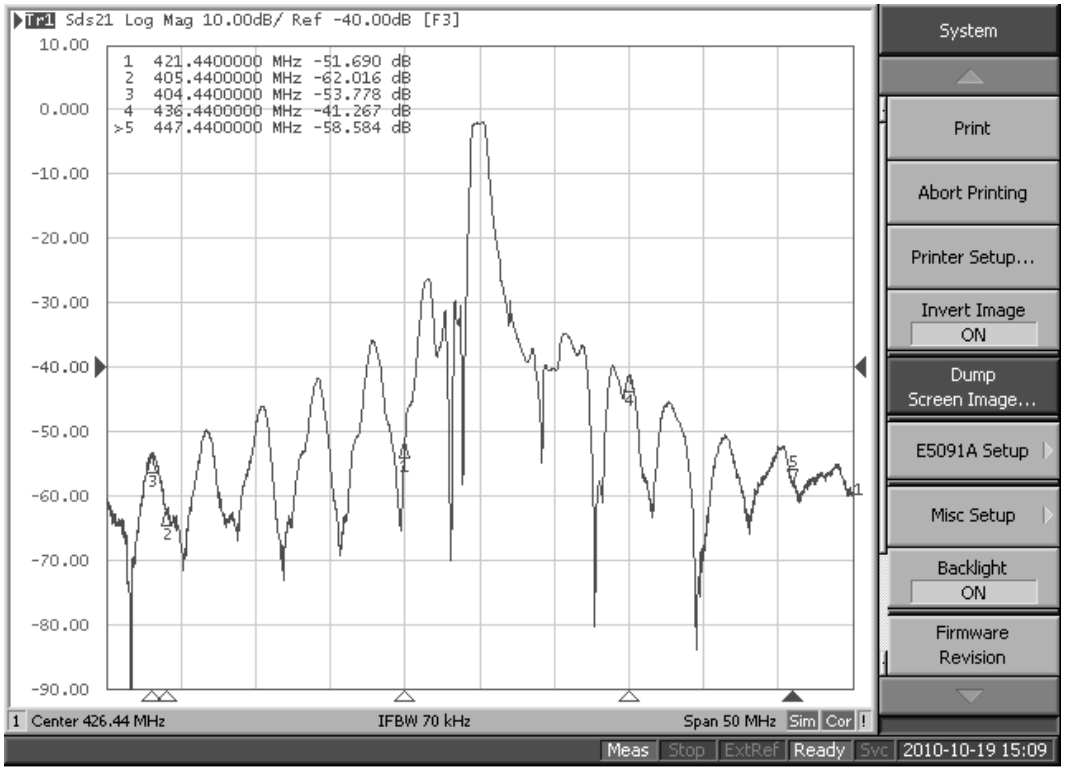
Frequency Response Plots





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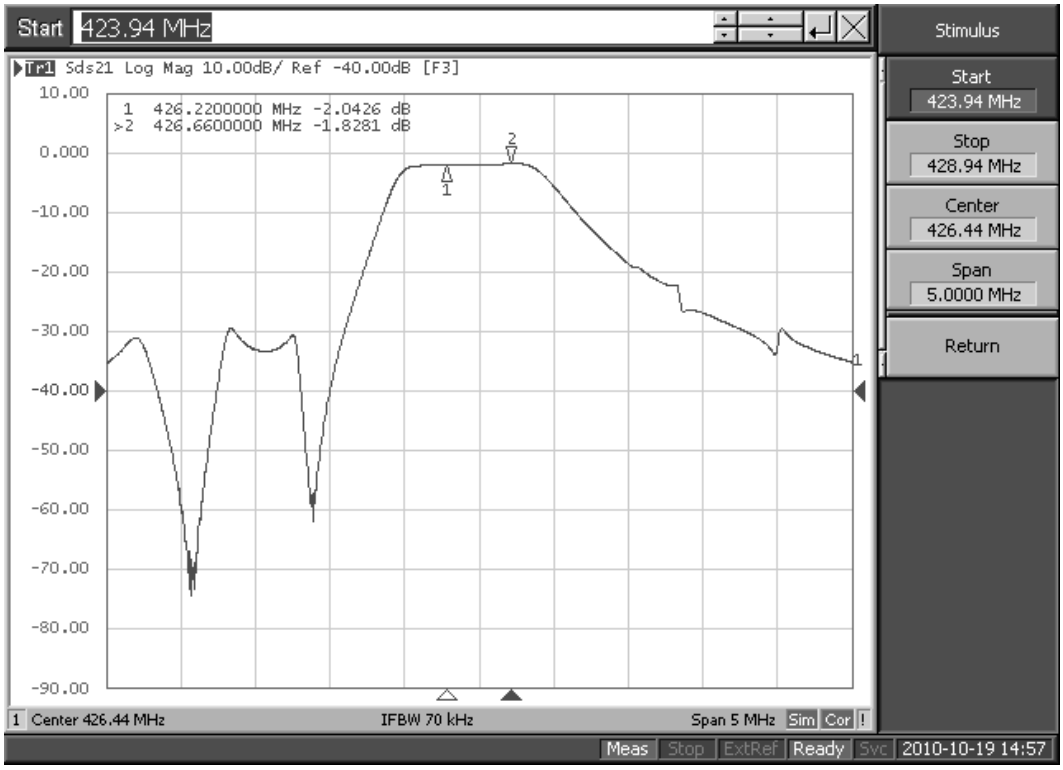

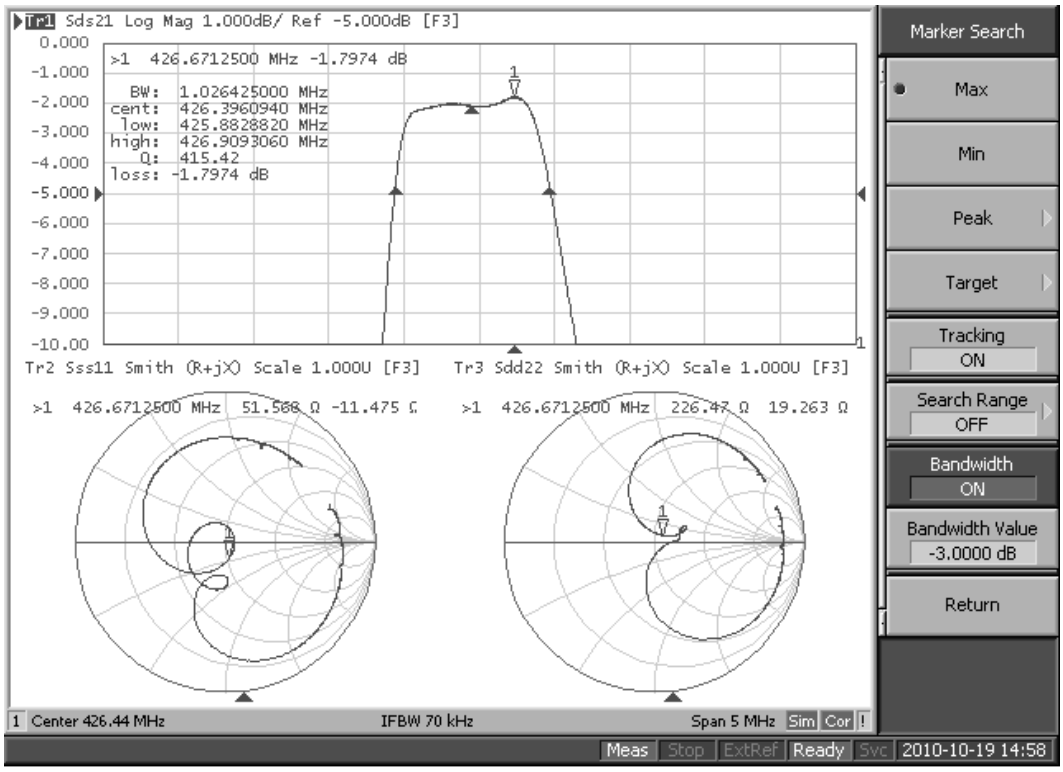

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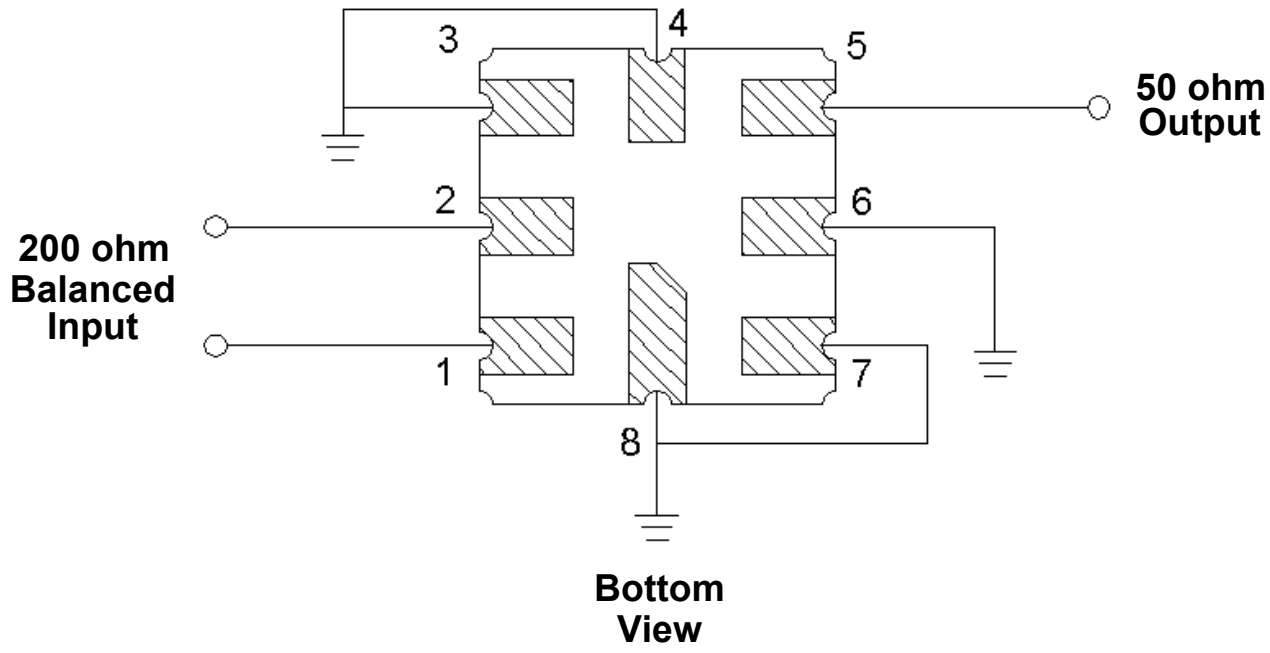
Application Circuit



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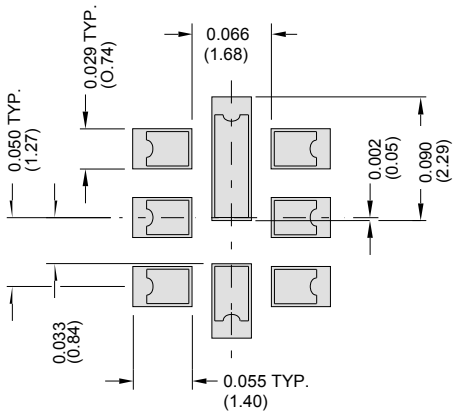
SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case
3.8 X 3.8 mm Nominal Footprint



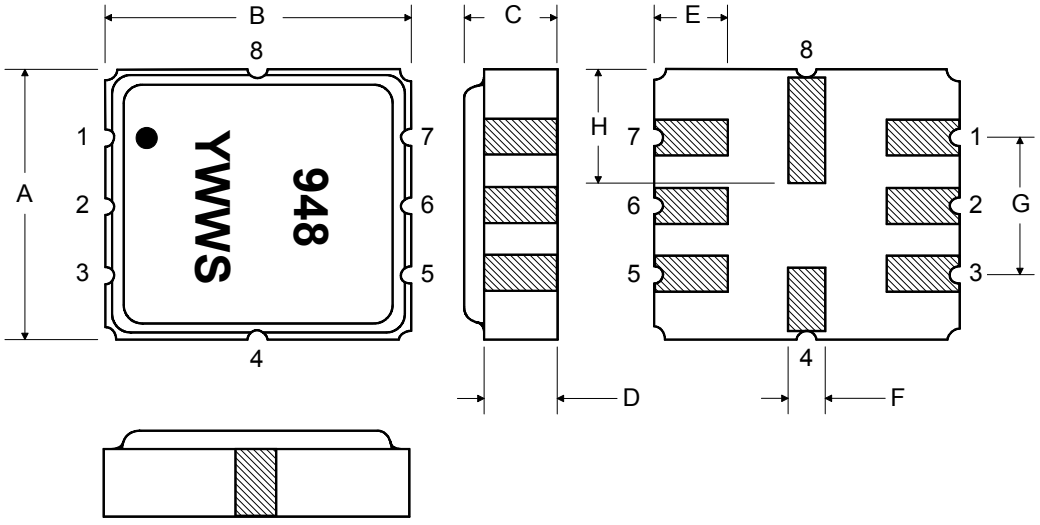
PCB Footprint

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	0.90	1.00	1.1	0.035	0.040	0.043
D	0.80	0.90	1.0	0.031	0.035	0.040
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

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_2O_3 Ceramic
Pb Free	

TOP VIEW

BOTTOM VIEW



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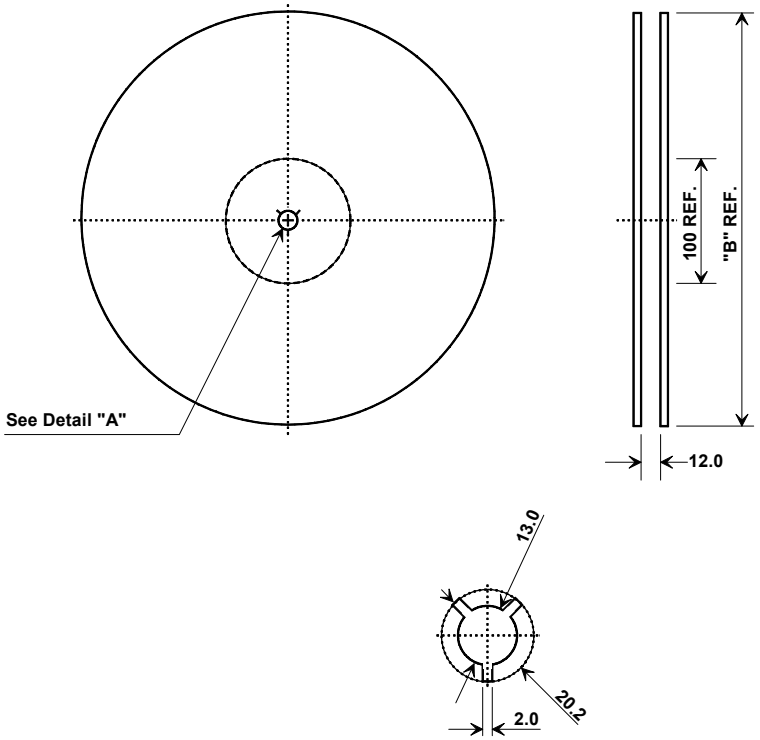
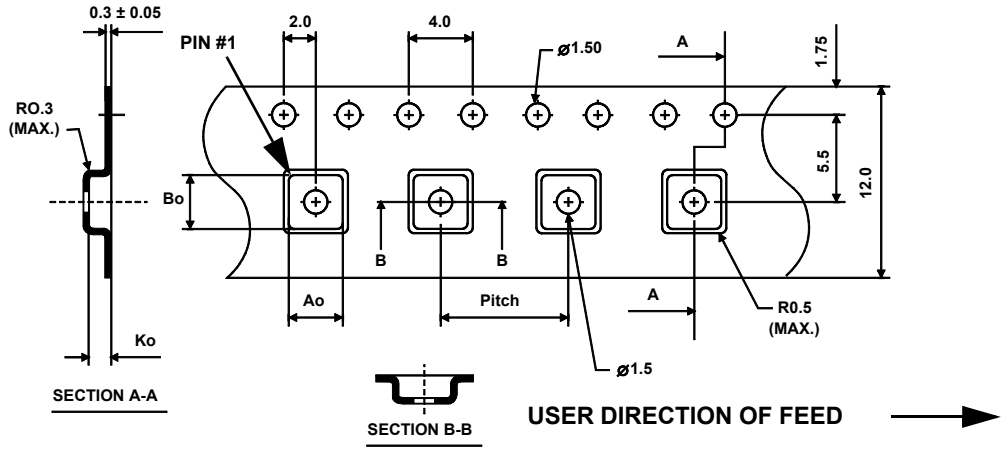
Tape and Reel Specifications



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

COMPONENT ORIENTATION and DIMENSIONS

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



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