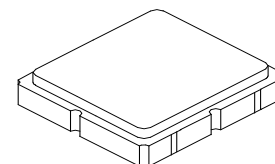


**RF3702D**

**426.44 MHz  
SAW Filter**



**SM3838-8**

- *Low Insertion Loss SAW Filter*
- *Balanced 200 ohm Input, Single-ended 50 ohm Output*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Moisture Sensitivity Level: 1*

**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 <sub>P-P</sub>
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		$\Omega$
Load Impedance	$Z_L$			50		$\Omega$

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, <u>YWWS</u>					
Standard Reel Quantity	Reel Size 7 Inch					500 Pieces/Reel
	Reel Size 13 Inch					3000 Pieces/Reel

**Electrical Connections**

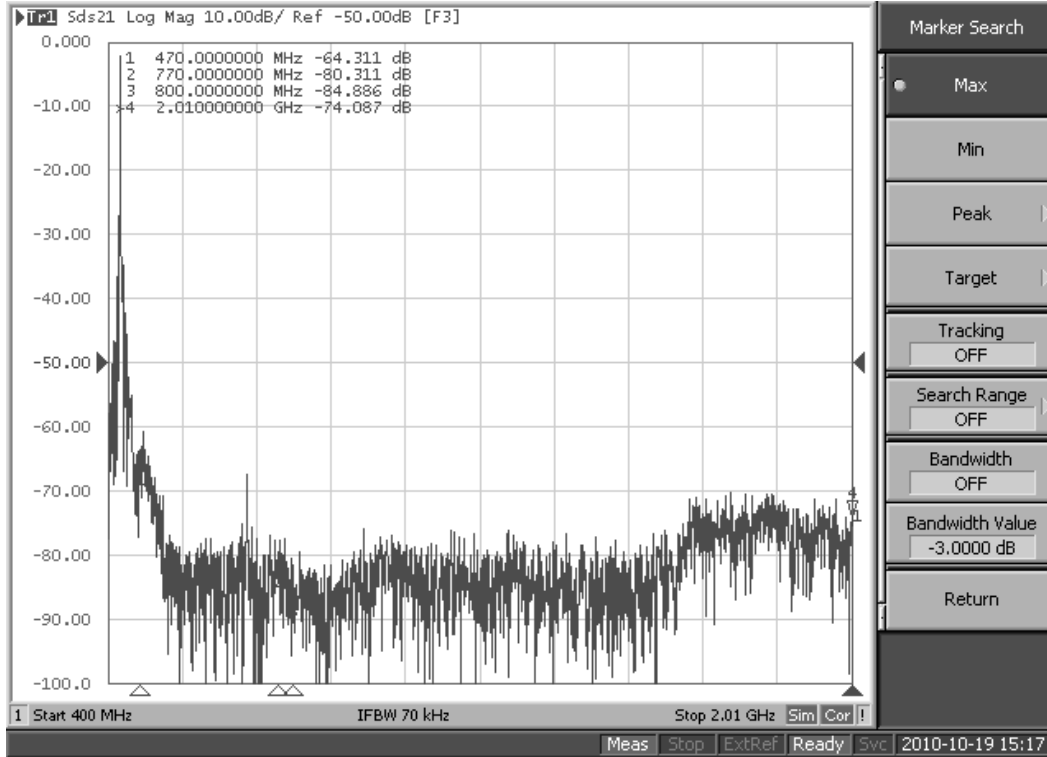
Connection	Terminals
Balanced Input	1,2
Output	5
Case Ground	3, 4, 6, 7, 8

 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

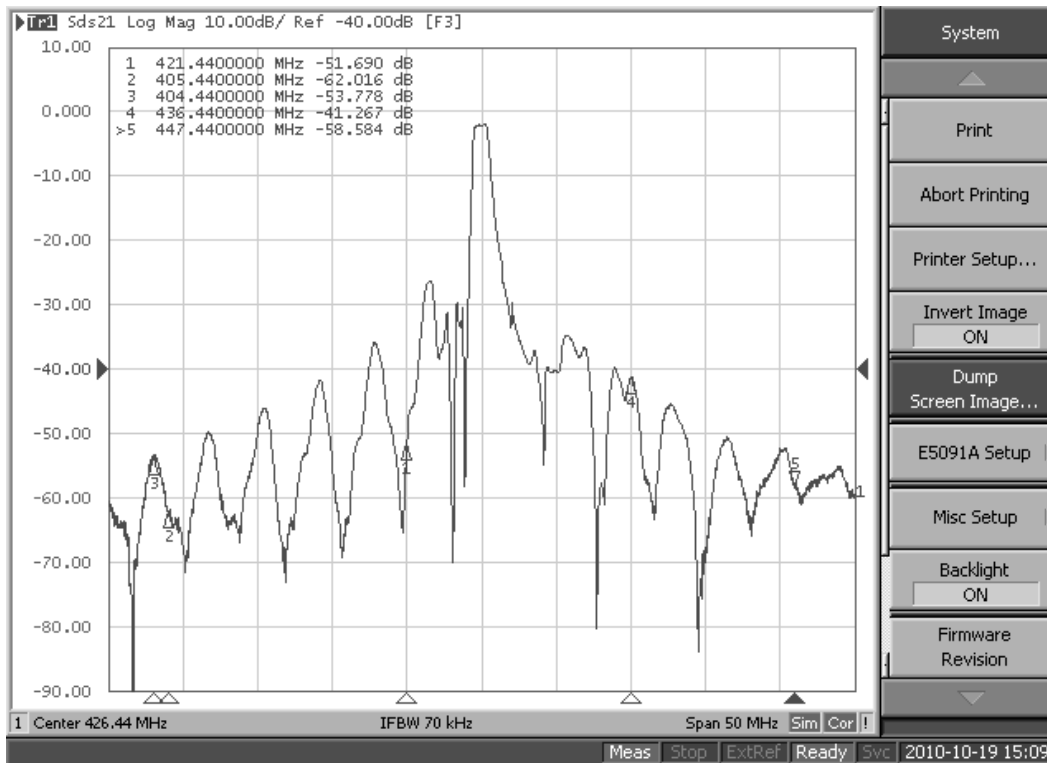
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Frequency Response Plots



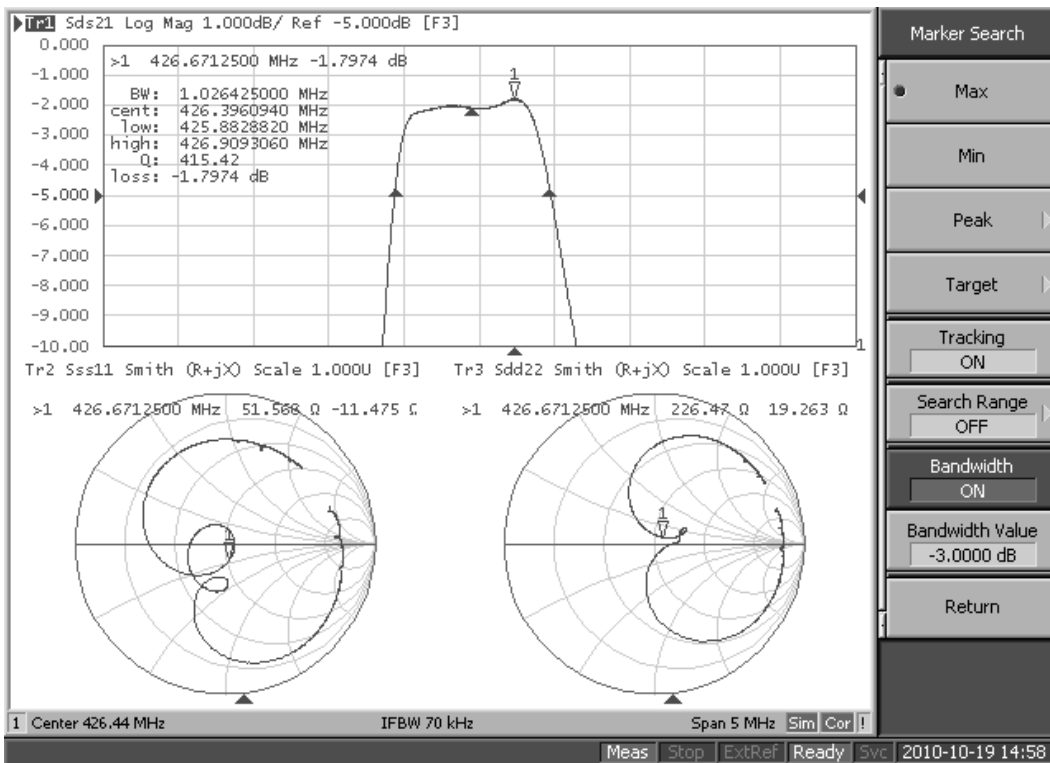
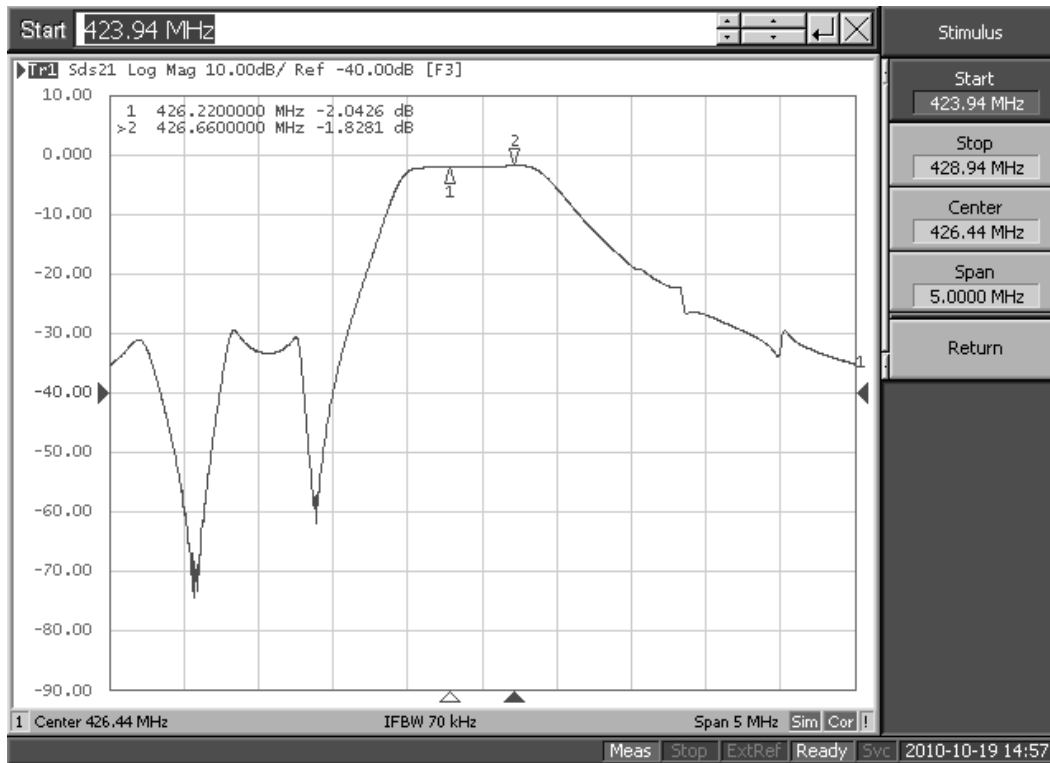
Marker Search

- Max
- Min
- Peak
- Target
- Tracking OFF
- Search Range OFF
- Bandwidth OFF
- Bandwidth Value -3.0000 dB
- Return

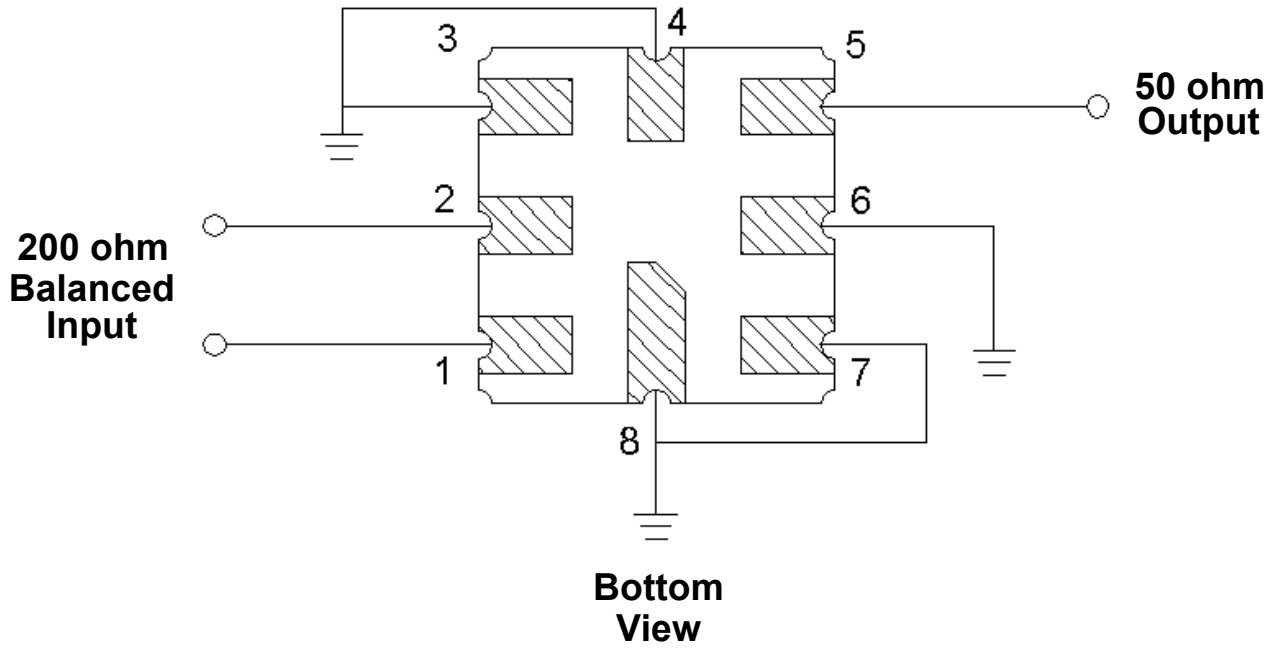


System

- Print
- Abort Printing
- Printer Setup...
- Invert Image ON
- Dump Screen Image...
- E5091A Setup
- Misc Setup
- Backlight ON
- Firmware Revision

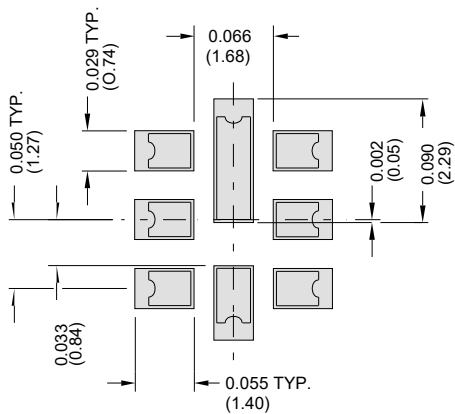


# Application Circuit



# SM3838-8 Case

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

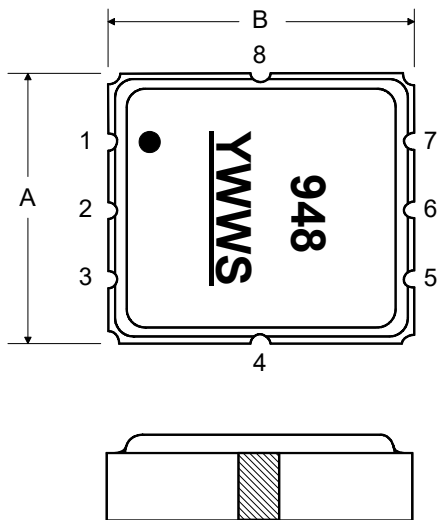


PCB Footprint

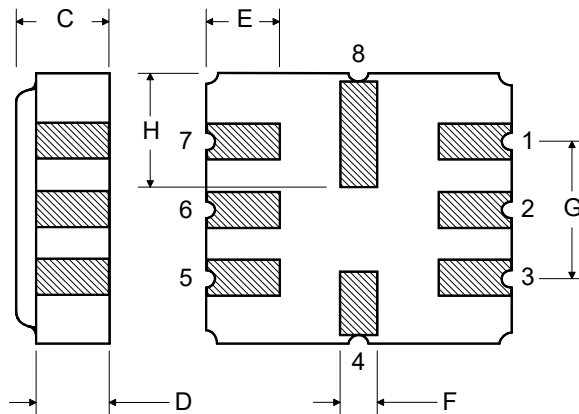
Dimension	Case Dimensions					
	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	0.90	1.00	1.1	0.035	0.040	0.043
D	0.80	0.90	1.0	0.031	0.035	0.040
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Lid Plating	2.0 to 3.0 $\mu$ m Nickel
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic

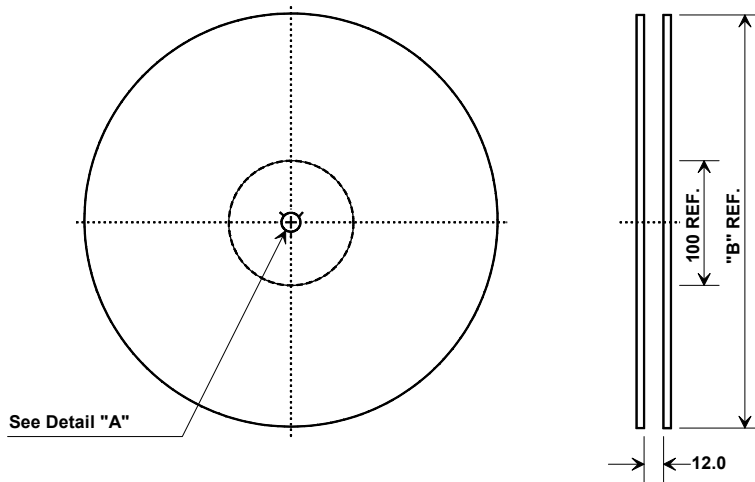
TOP VIEW



BOTTOM VIEW

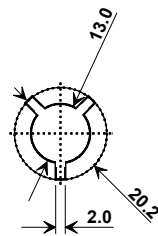


## Tape and Reel Specifications



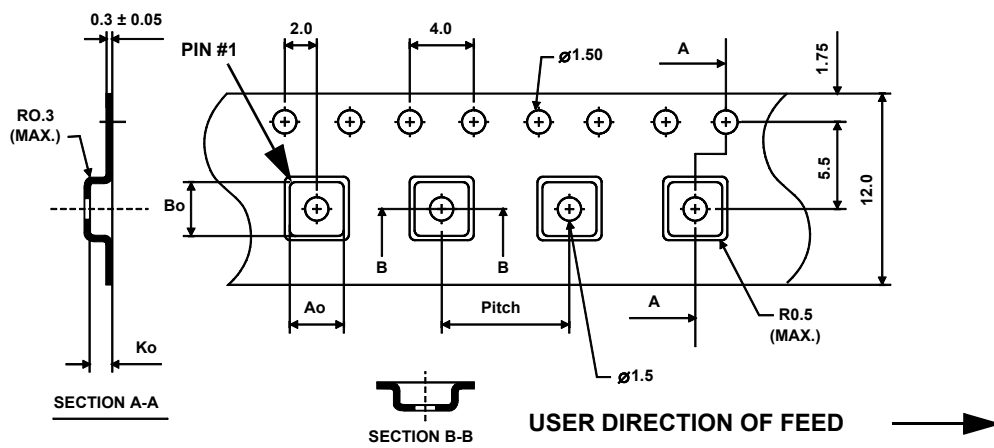
Tape and Reel Standard per ANSI/EIA-481

"B"		Quantity Per Reel
Nominal Size		
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



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

