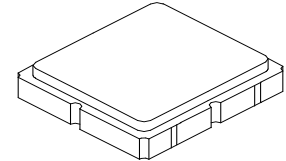


# RF3702D

## 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

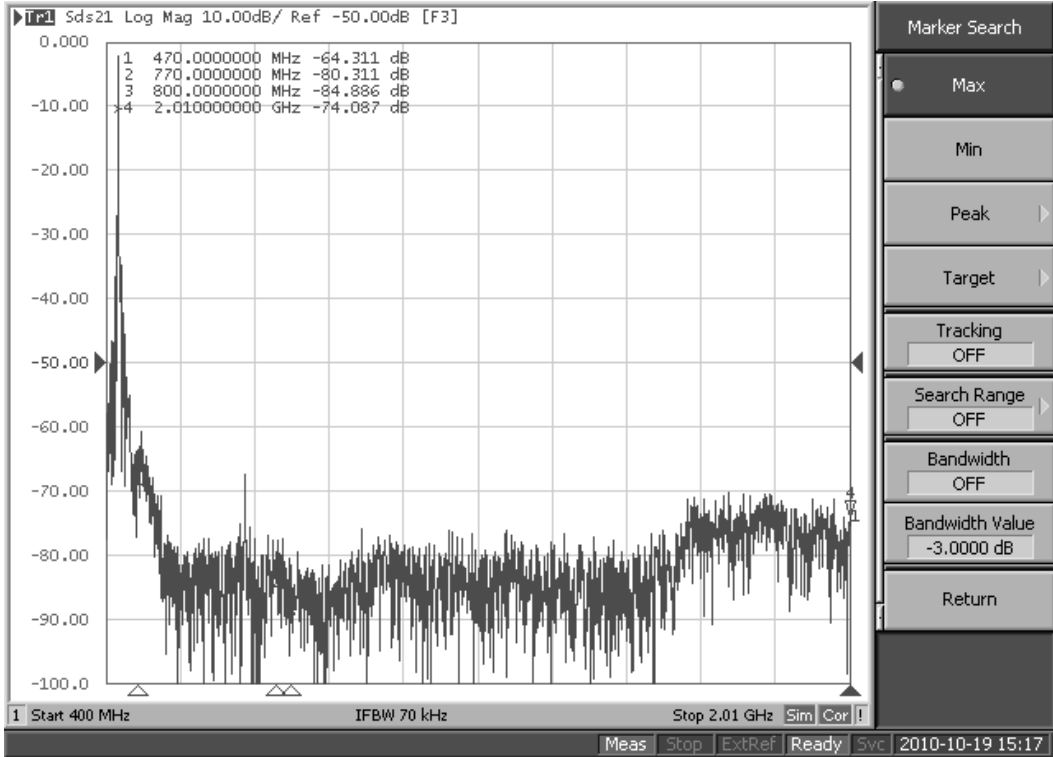
Connection	Terminals
Balanced Input	1,2
Output	5
Case Ground	3, 4, 6, 7, 8

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

#### NOTES:

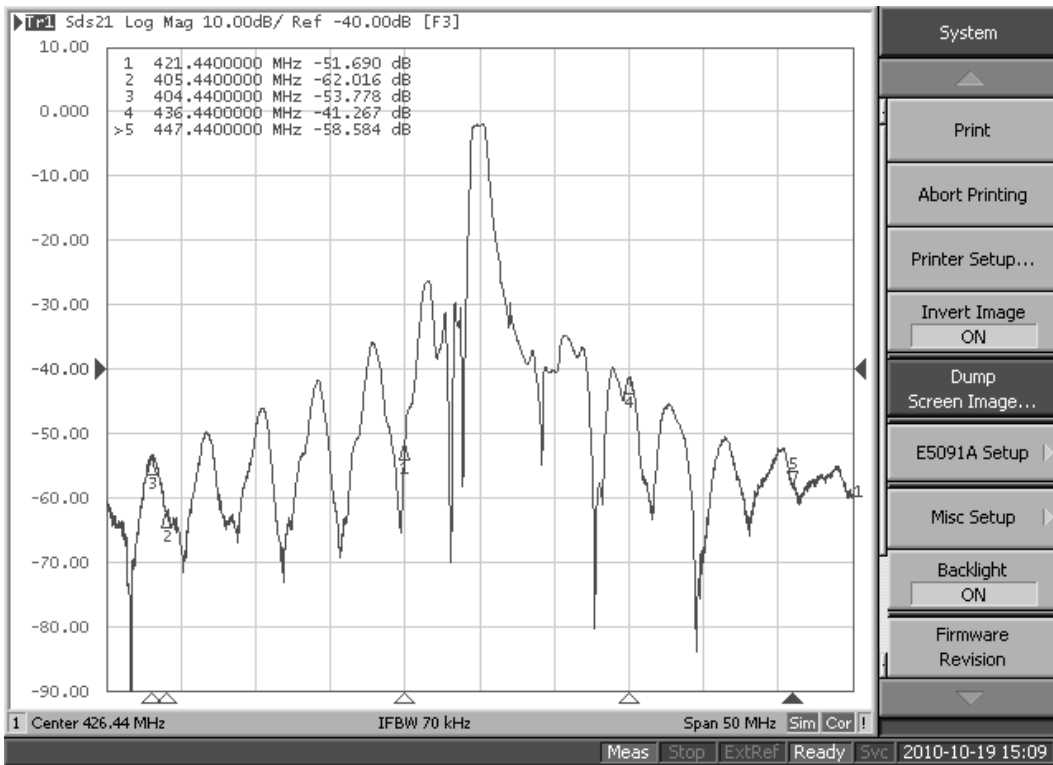
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Frequency Response Plots



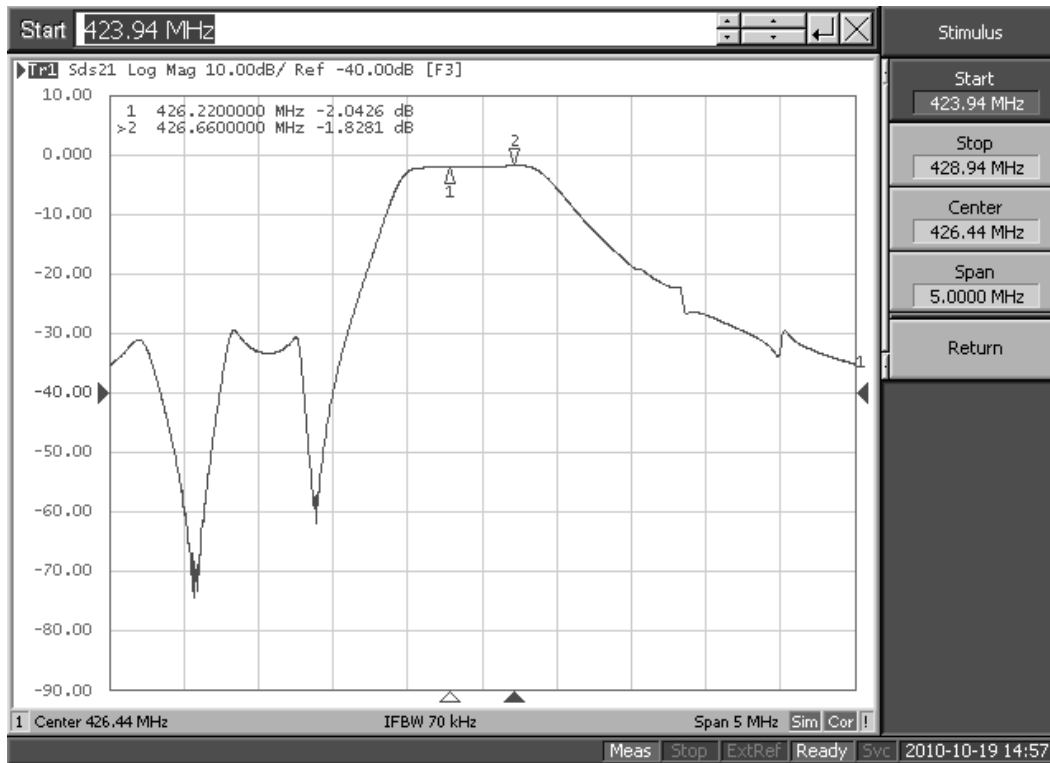
Marker Search

- 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



Stimulus

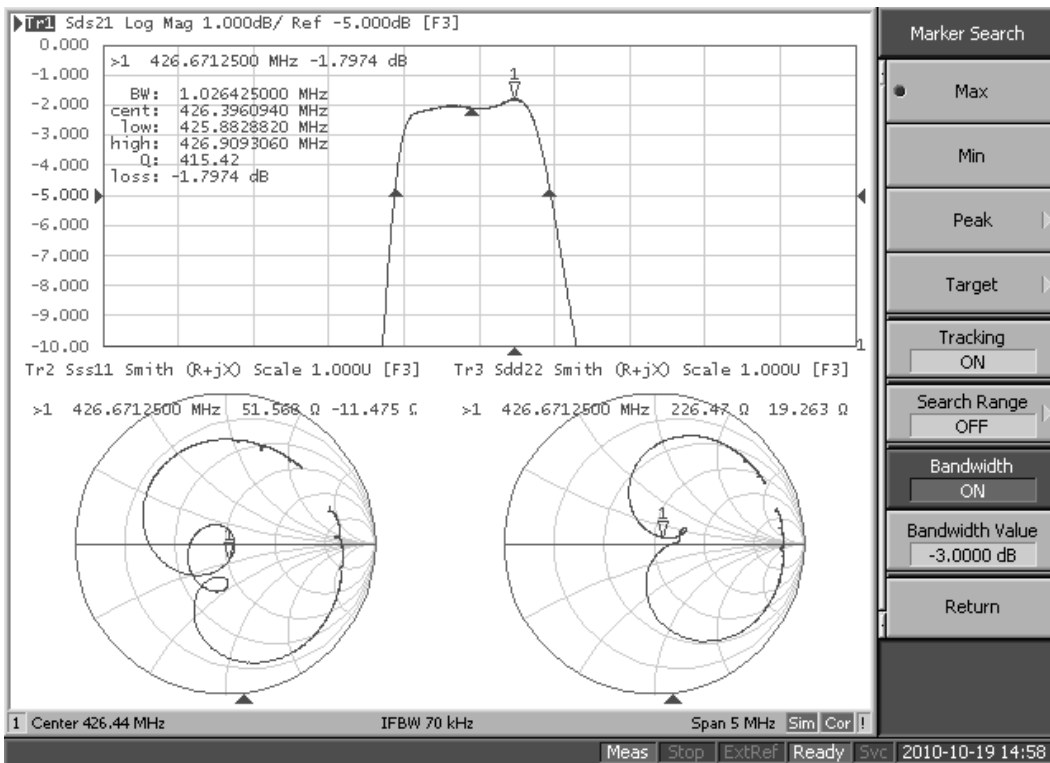
Start 423.94 MHz

Stop 428.94 MHz

Center 426.44 MHz

Span 5.0000 MHz

Return



Marker Search

Max

Min

Peak

Target

Tracking ON

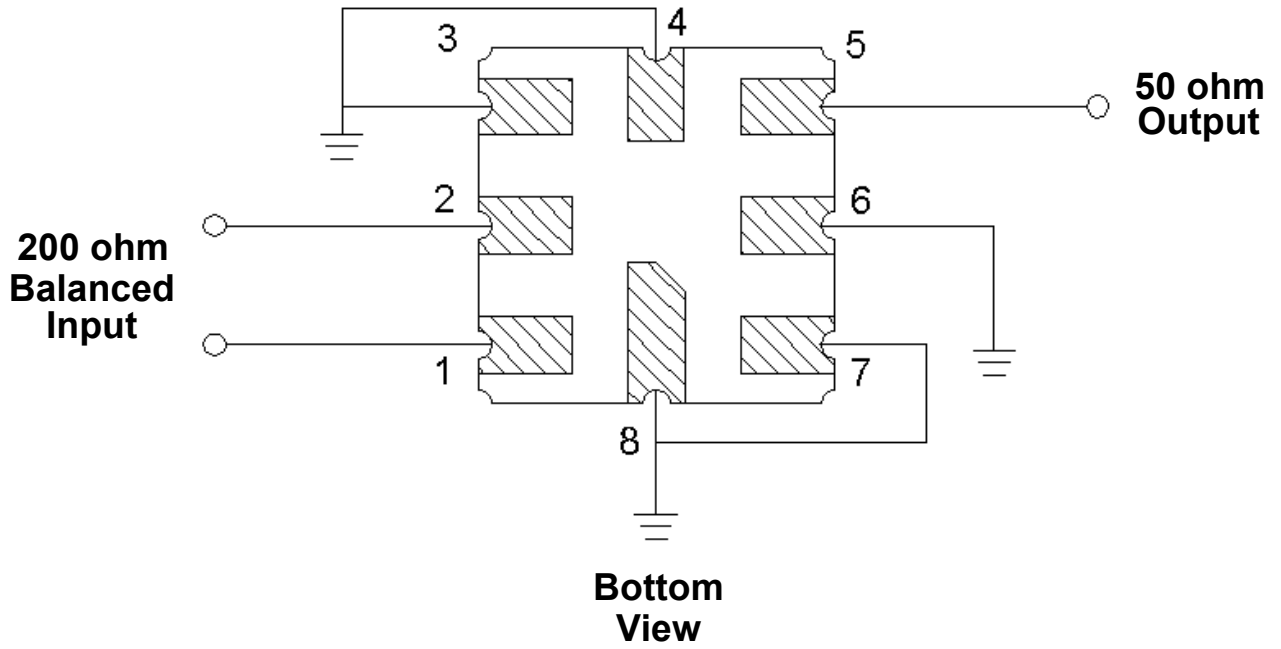
Search Range OFF

Bandwidth ON

Bandwidth Value -3.0000 dB

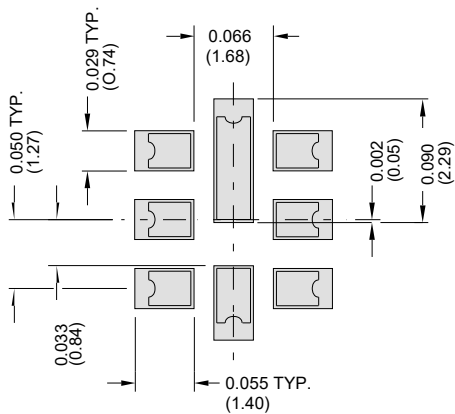
Return

# Application Circuit



# SM3838-8 Case

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

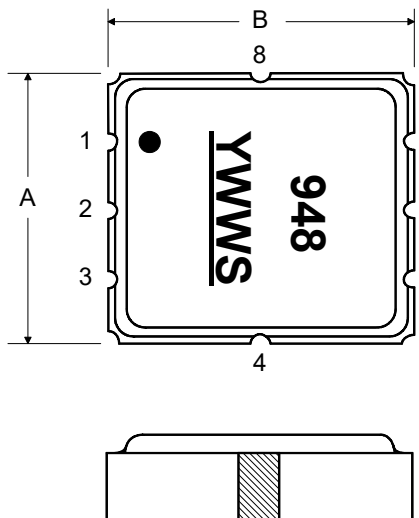


PCB Footprint

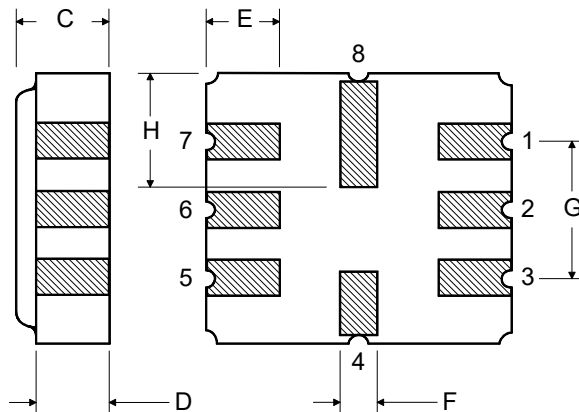
Dimension	Case Dimensions					
	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	0.90	1.00	1.1	0.035	0.040	0.043
D	0.80	0.90	1.0	0.031	0.035	0.040
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100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

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

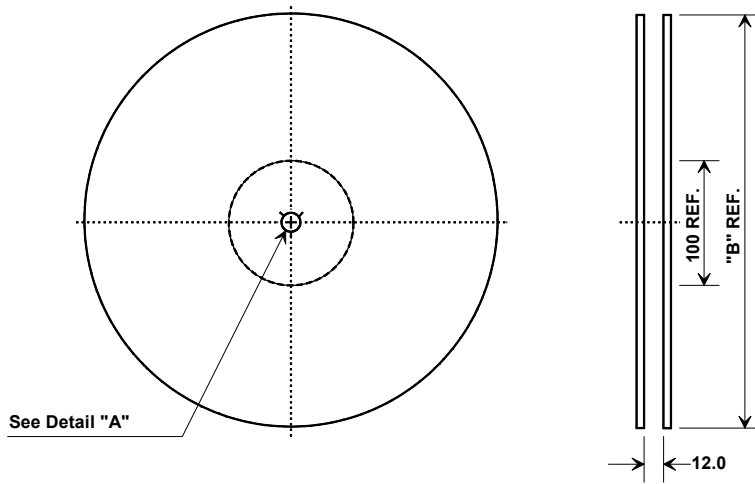
TOP VIEW



BOTTOM VIEW

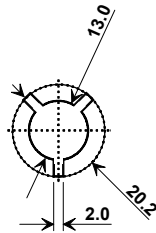


## Tape and Reel Specifications



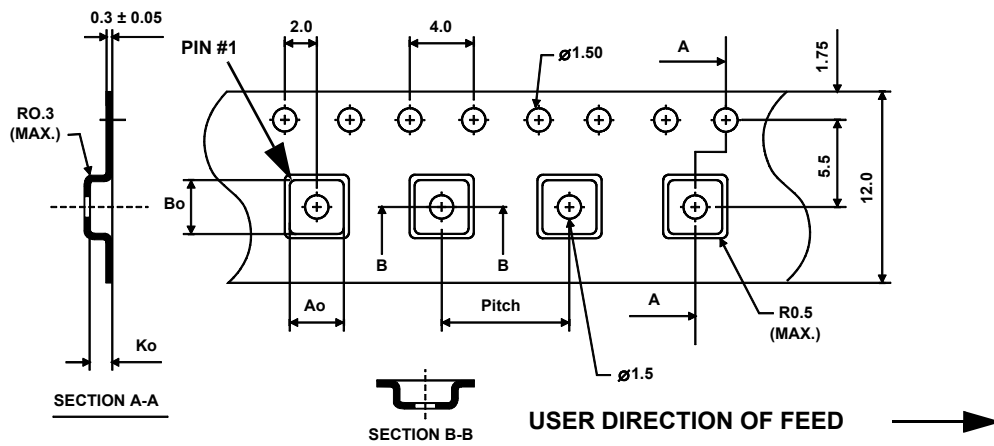
Tape and Reel Standard per ANSI/EIA-481

"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.

