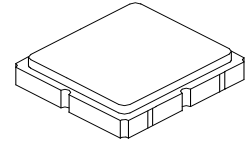


**SF2424D**

**505 MHz  
SAW Filter**



SM3838-8

- **Hermetically sealed Surface Mount package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

**Absolute Maximum Ratings**

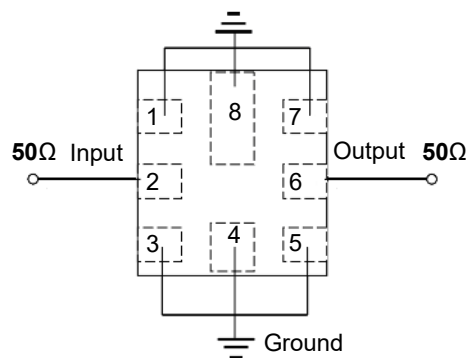
Rating	Value	Units
Maximum Input Power	10	dBm
DC Voltage	10	VDC
Operating Temperature	-40 to +85	°C
Storage Temperature	-40 to +85	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency	$f_c$			505		MHz
Insertion Loss	IL	500 - 508 MHz		2.6	4.1	dB
		500 - 510 MHz		2.8	4.1	
Amplitude Ripple		500 - 508 MHz		0.5	2.5	dB
		500 - 510 MHz		0.6	2.5	
Attenuation (Reference level from 0dB)		404 to 463.2 MHz				dB
				42	50	
				42	48	
Temperature Coefficient of Frequency				-36		ppm/k
Terminating Source Impedance (single) $Z_S$				50		$\Omega$
Terminating Load Impedance (single) $Z_L$						
Footprint Size: 3.8 X 3.8			SM3838-8			
Lid Symbolization (Y=Year, WW=week, S=shift)			B38, YWWS			

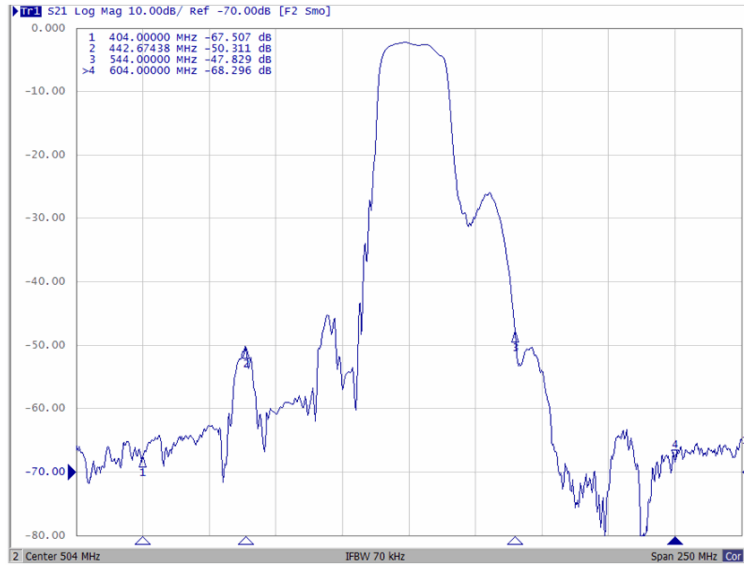
**Electrical Connections**

Connection	Terminals
Input	2
Output	6
Ground	All Others

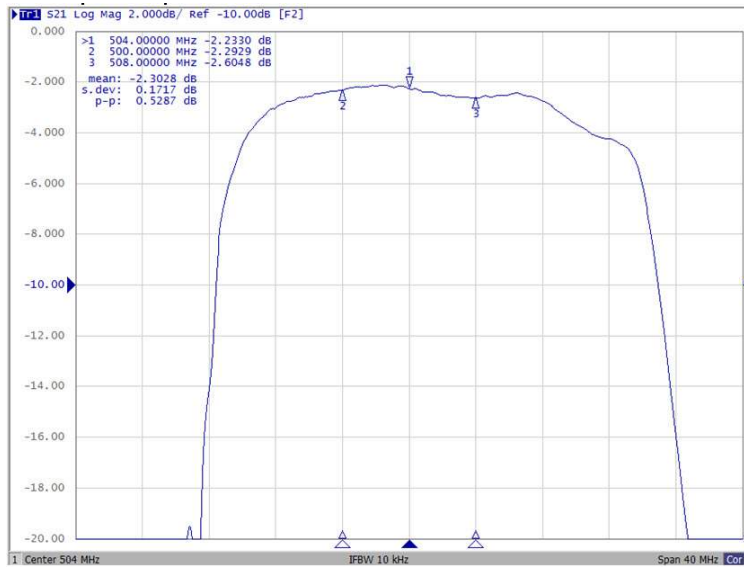


# Frequency Characteristics

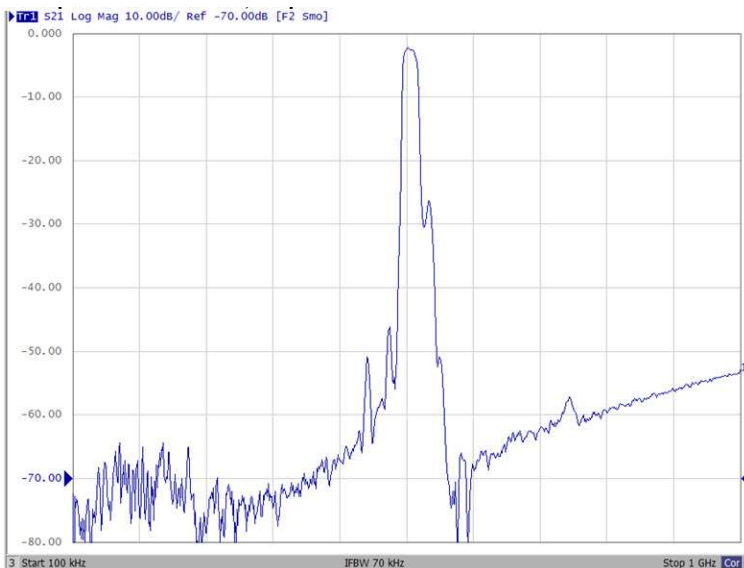
## S21 Response: Center 504 MHz, Span 250 MHz



## S21 Response: Span 40 MHz



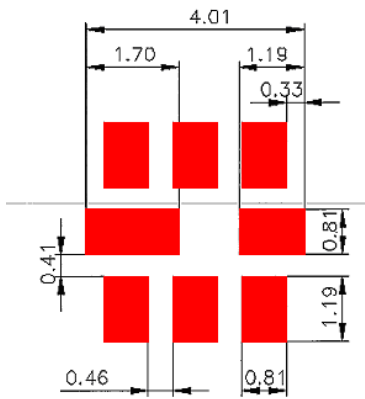
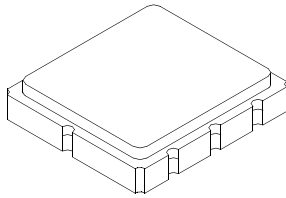
## S21 Response: 0 - 1000 MHz



# SM3838-8 Case

## 8-Terminal Ceramic Surface-Mount Case

### 3.8 X 3.8 mm Nominal Footprint



PCB Footprint

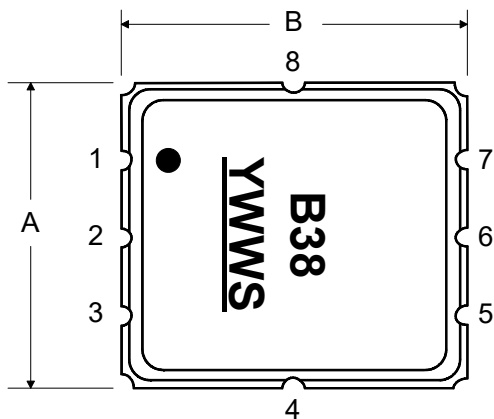
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.65	3.80	3.95	0.143	0.149	0.155
B	3.65	3.80	3.95	0.143	0.149	0.155
C	-	-	1.40	-	-	0.055
D	0.95	1.10	1.25	0.037	0.043	0.049
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080
I	0.90	1.00	1.10	0.035	0.040	0.043

Electrical Connections		
	Connection	Terminals
Port 1	Input	2
Port 2	Output	6
	Ground	All Others

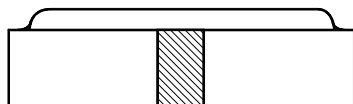
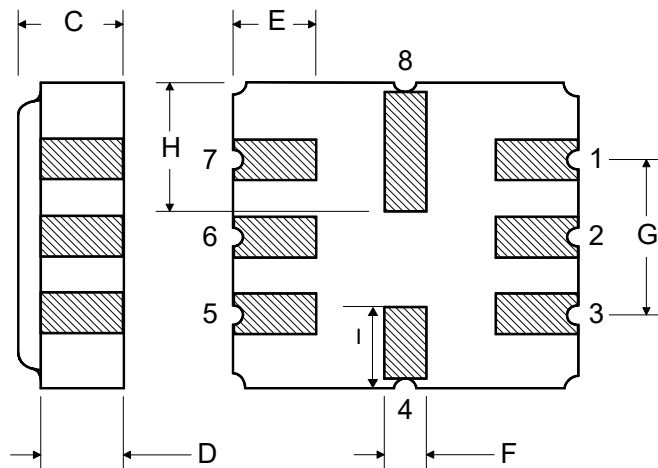
Dot Indicates Pin 1

Materials	
Solder Pad Termination	Au plating 30 - 60 $\mu$ Inches (76.2-152 $\mu$ M) over 80-200 $\mu$ Inches (203-508 $\mu$ M) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 $\mu$ Inches Thick
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic

TOP VIEW

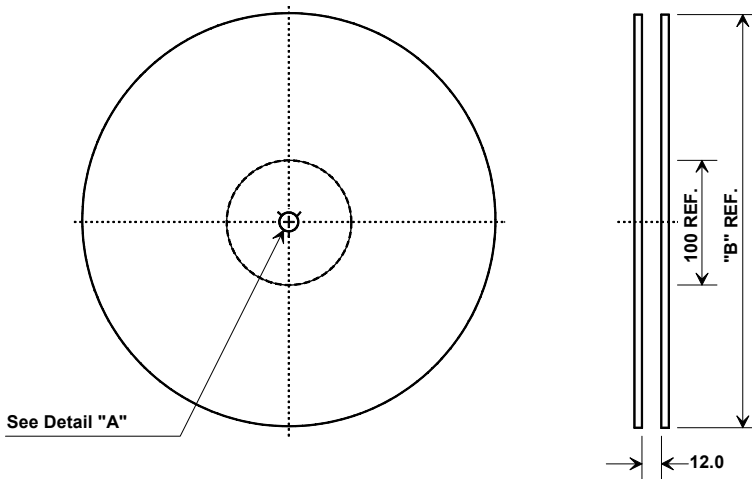


BOTTOM VIEW

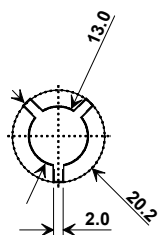


## Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

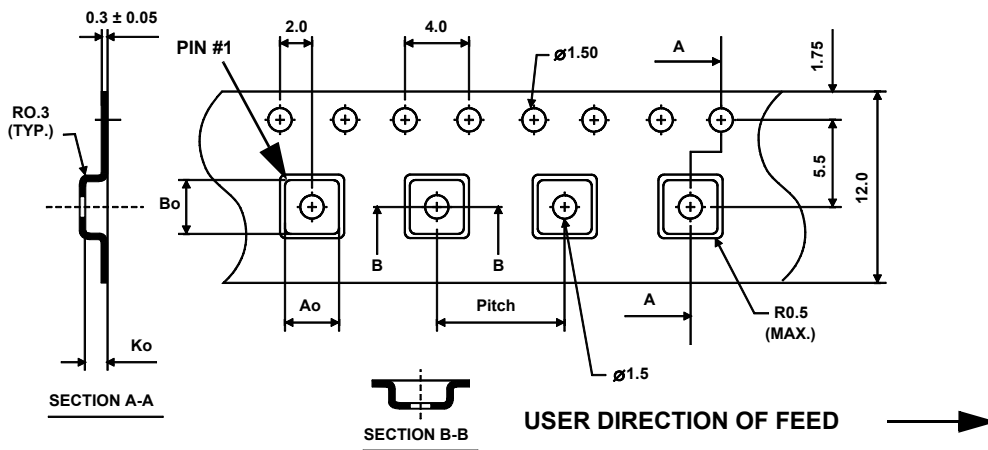


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



### 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



## 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.

