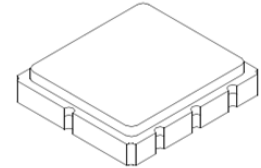


**SF2218D**

**425 MHz  
SAW Filter**



SM3838-8

- **Low Insertion Loss**
- **3.8 X 3.8 mm Surface-mount Case**
- **Single-ended Input and Differential Output**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

**Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage on any Non-ground Terminal	3	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Temperature	260°C for 30 s	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_c$			425		MHz
Insertion Loss, 425 MHz	IL				5.0	dB
3 dB Bandwidth	$BW_{3dB}$		10	19		MHz
Passband Amplitude Ripple, 420 to 430 MHz				1.0	2.1	dB <sub>p-p</sub>
Attenuation Referenced to 0 dB:						
275 to 300 MHz			45			dB
299 to 335 MHz			40			
334 to 360 MHz			45			
359 to 385 MHz			35			
386 to 400 MHz			20			
400 to 410 MHz			40			
455 to 484 MHz			20			
485 to 494 MHz			35			
495 to 575 MHz			40			
Single-ended Source Impedance				50		ohm
Balanced Load Impedance				100		ohm
Operating Temperature Range			-20		+70	°C
Case Style			SM3838-8 3.8 x 3.8 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift)			956, <u>YWWS</u>			



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

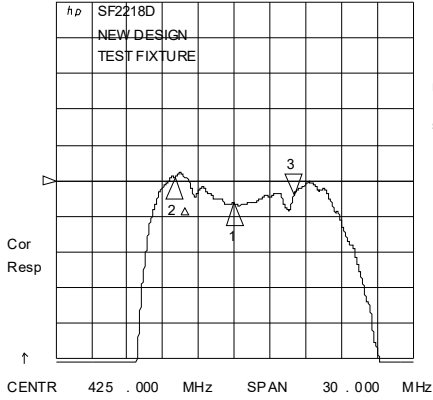
**NOTES:**

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.

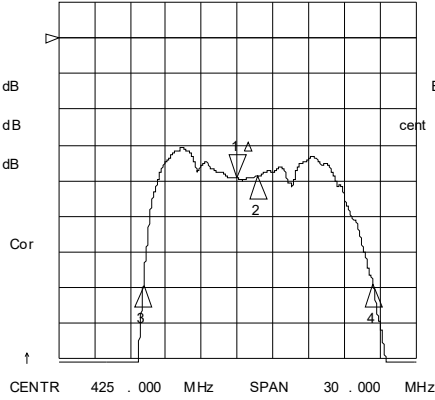
# SF2218D Frequency Response

22 Jul 2010 10:06:01

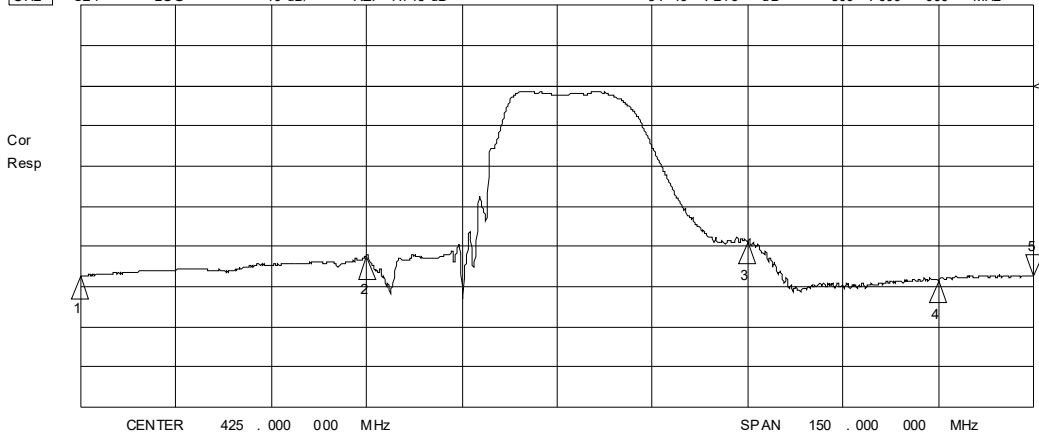
CH1 LOG 1 dB/ REF -3.283 dB  
S21 3 :- .53720 dB 10 .000 000 MHz



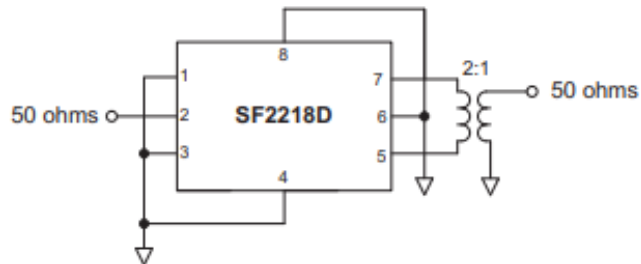
CH3 LOG 1 dB/ REF 0 dB  
S21 1 : 0.0000 dB 0.000 000 MHz



CH2 S21 LOG 10 dB/ REF -1.743 dB 5 :-49 .279 dB 500 .000 000 MHz



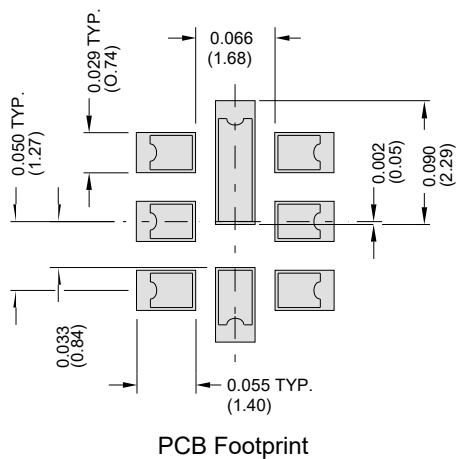
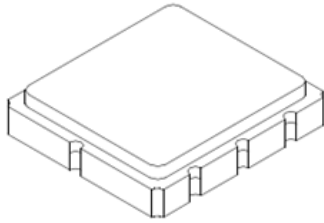
# SF2218D Measurement Circuit



# SM3838-8 Case

## 8-Terminal Ceramic Surface-Mount Case

### 3.8 X 3.8 mm Nominal 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	1.05	1.20	1.35	0.041	0.047	0.053
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

#### Electrical Connections

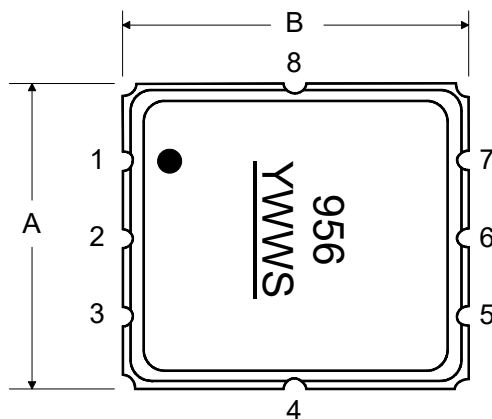
	Connection	Terminals
Port 1	Single-ended Input	2
Port 2	Balanced Output	5, 7
	Ground	All Others

Dot Indicates Pin 1

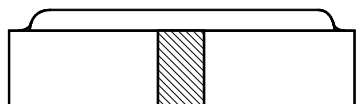
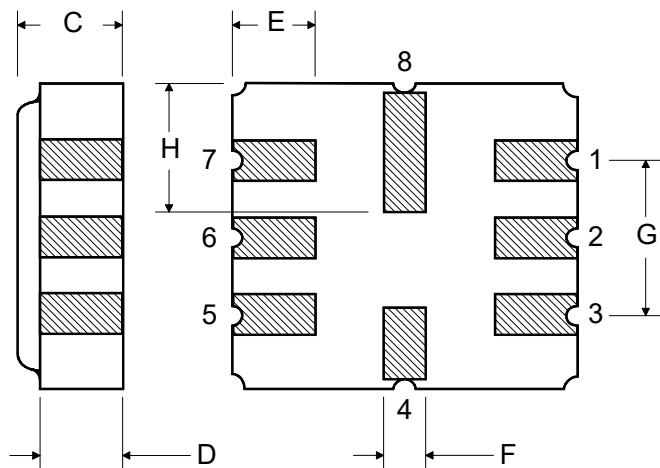
#### Materials

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

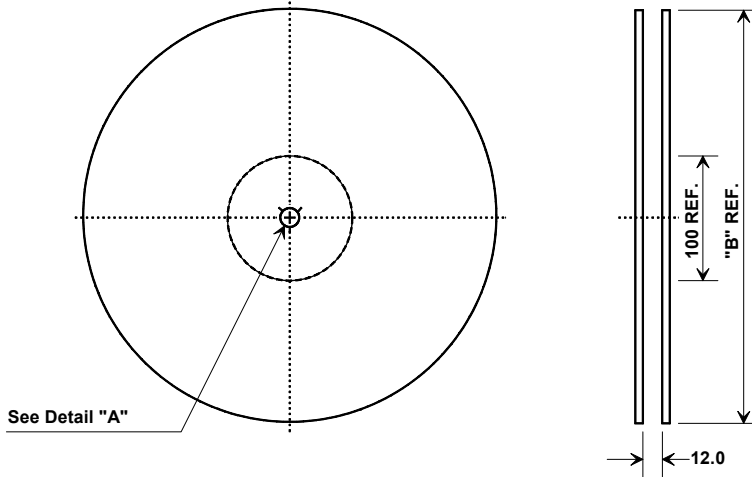


#### BOTTOM VIEW

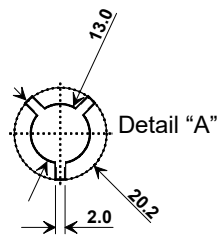


## Tape and Reel Specifications

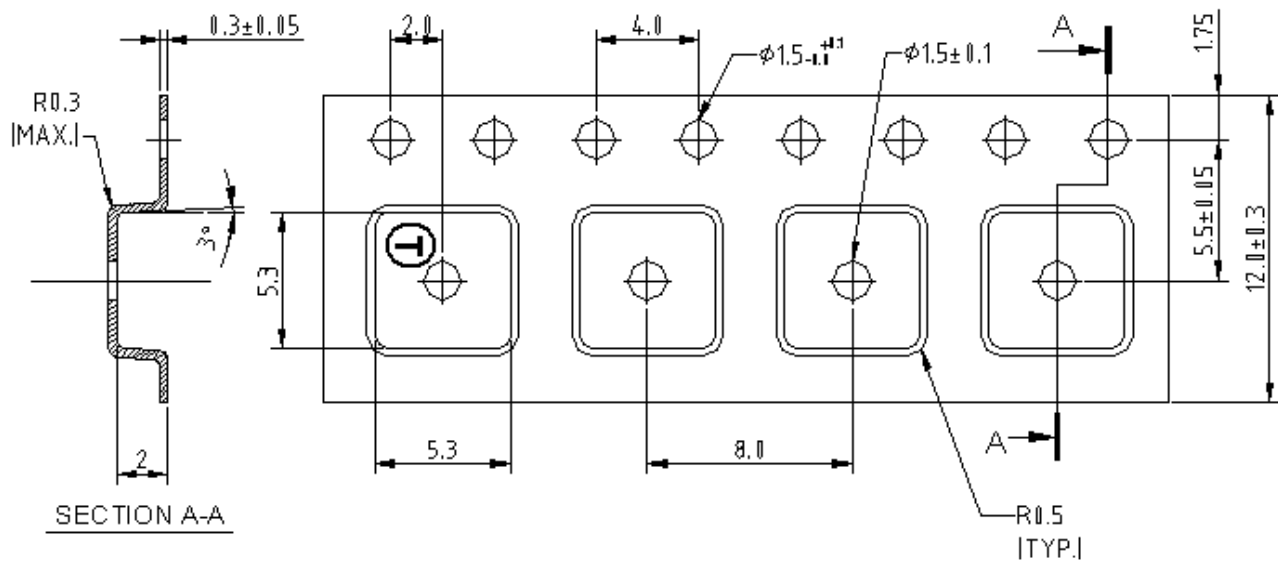
Tape and Reel Standard per ANSI/EIA-481



"B" Nominal Size		Quantity Per Reel
Inches	Millimeters	
7	178	500 pcs
13	330	3,000 pcs



### COMPONENT ORIENTATION



## 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.

