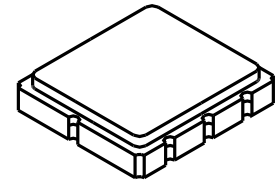


SF2280D

**869.2125 MHz
SAW Filter**



SM3838-8

- **Low-loss SAW Filter**
- **Surface-mount 3.8 x 3.8 x 1.2 mm Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

Absolute Maximum Ratings

Rating	Value	Units
Incident Power In Passband	14	dBm
Incident Power Out of Band	26	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-10 to +55	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/10 seconds maximum	265	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Frequency 1	fN1			869.2125		MHz
Passband 1						
Insertion loss within PB1 (fN1±12.5 kHz)	PB1			2.0	3.0	dB
Passband variation within PB1 (fN1±12.5 kHz)				0.1	1.0	
Nominal Frequency 2	fN2			869.2375		MHz
Passband 2						
Insertion loss within PB1 (fN1±12.5 kHz)	PB2			2.0	3.0	dB
Passband variation within PB1 (fN1±12.5 kHz)				0.1	1.0	
Attenuation (relative to 0dB)						
1 to 852 MHz			15	45		dB
852 to 862 MHz			25	34		
862 to 867.2125 MHz			15	23		
871.2125 to 880 MHz			15	20		
880 to 915 MHz			15	23		
Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	B29, <u>Y</u> WWS					
Standard Reel Quantity	Reel Size 13 Inch	3000 Pieces/Reel				



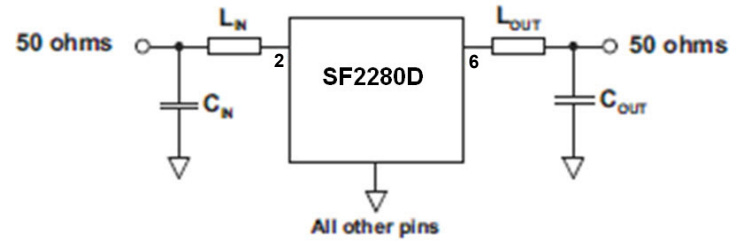
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

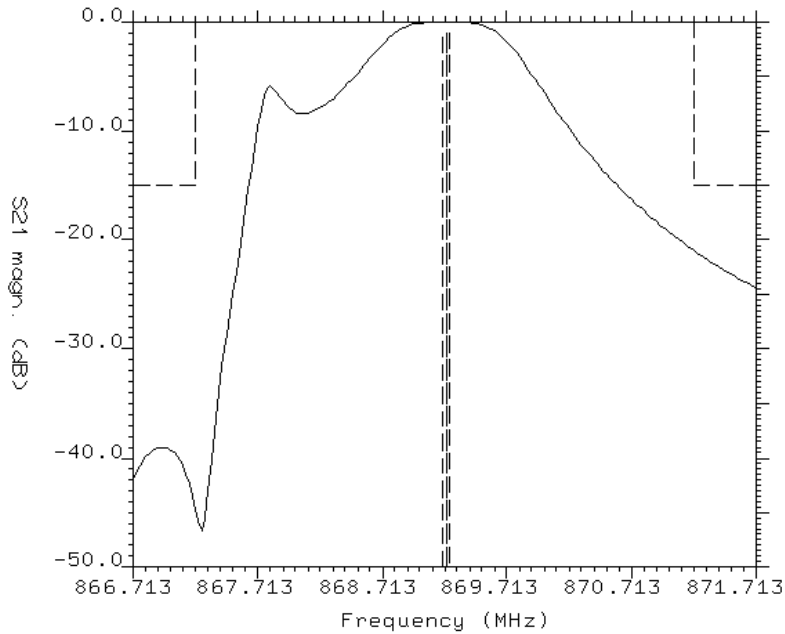
Electrical Connections

Connection	Terminals
Input	2
Output	6
Ground	All Others

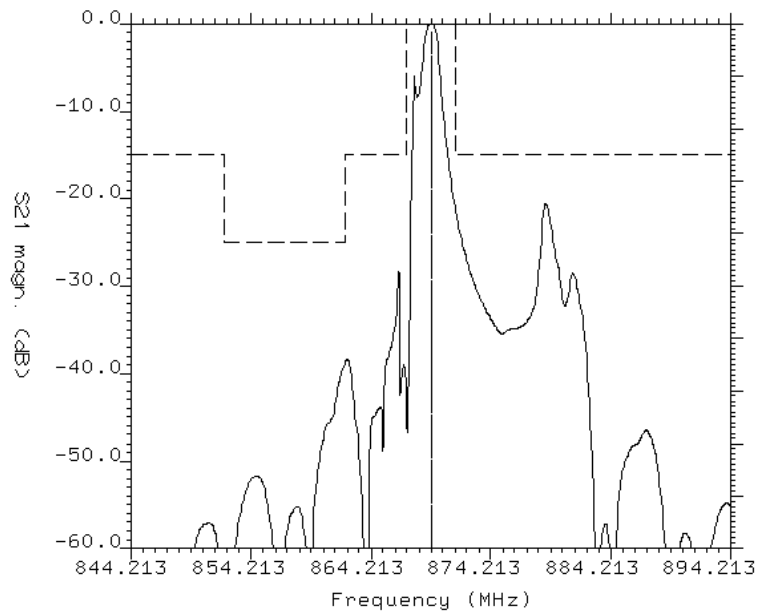


Frequency Characteristics

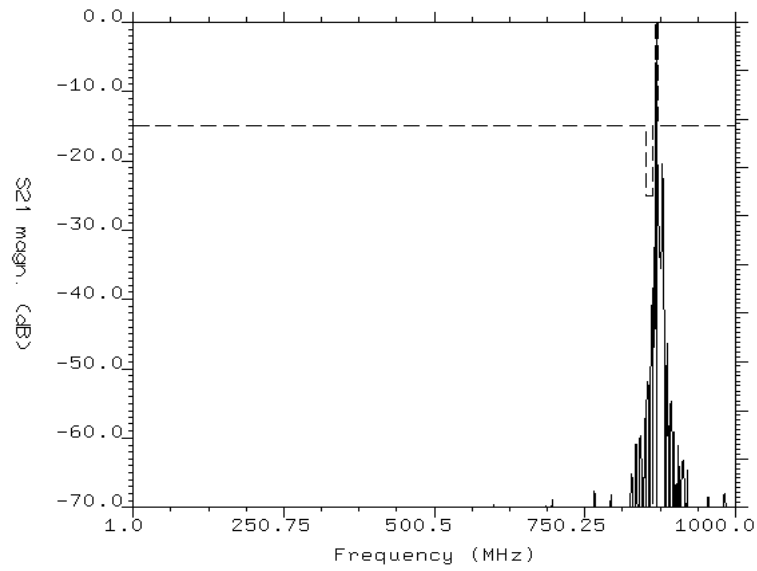
Wide Band Response (span 5 MHz)



Wide Band Response (span 50 MHz)

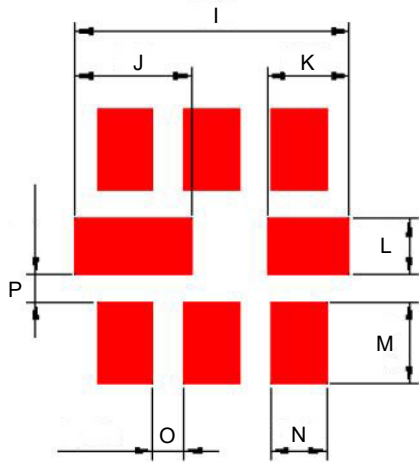
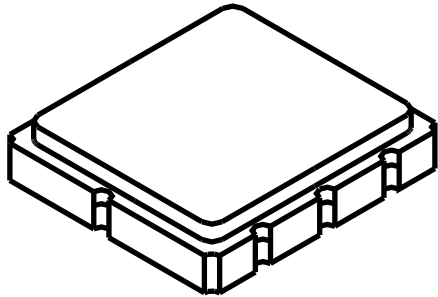


Wide Band Response: (Frequency Range 1 - 1000 MHz)

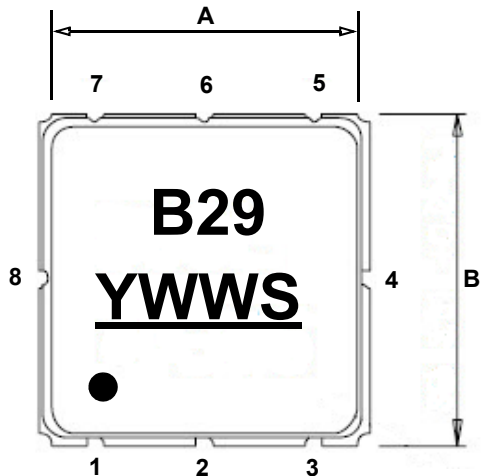


SM3838-8 Case

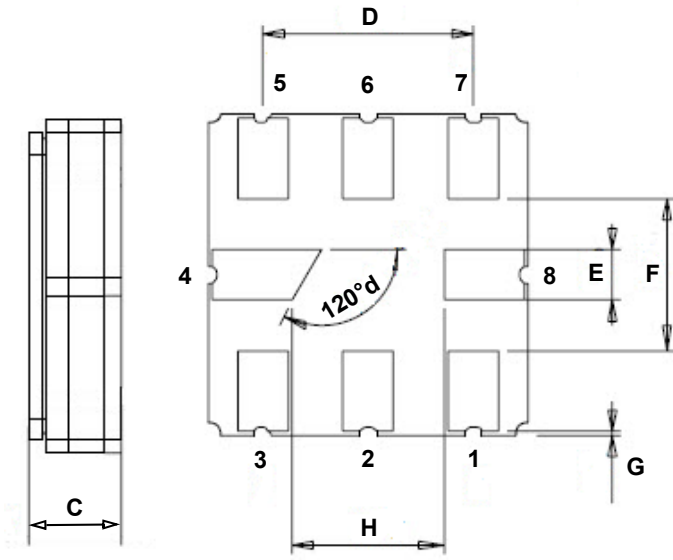
8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint



TOP VIEW



BOTTOM VIEW



Case and PCB Footprint Dimensions

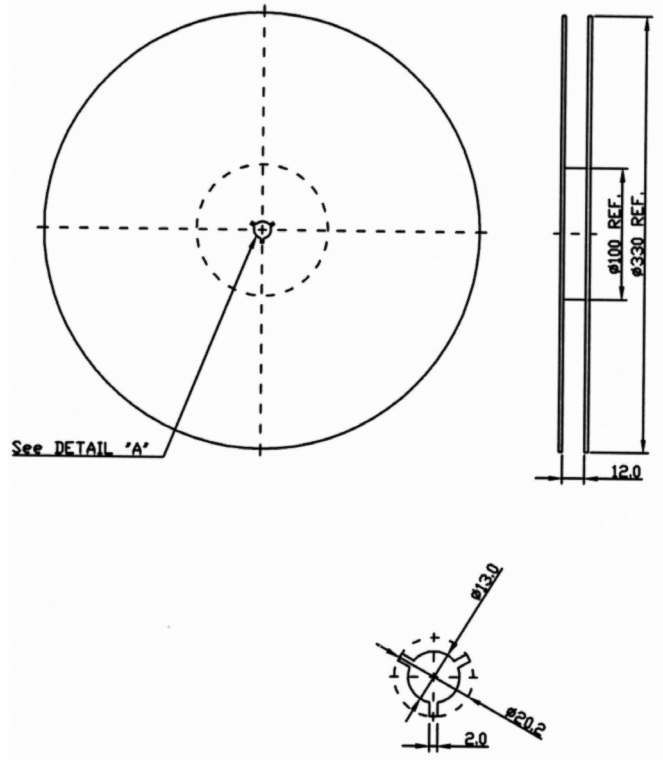
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.61	3.81	4.01	0.142	0.150	0.157
B	3.61	3.81	4.01	0.142	0.150	0.157
C	-	-	1.20	-	-	0.047
D	-	2.54	-	-	0.100	-
E	-	0.60	-	-	0.023	-
F	-	1.78	-	-	0.070	-
G	-	0.10	-	-	0.003	-
H	-	1.78	-	-	0.070	-
I	-	4.01	-	-	0.157	-
J	-	1.70	-	-	0.066	-
K	-	1.19	-	-	0.043	-
L	-	0.81	-	-	0.031	-
M	-	1.19	-	-	0.043	-
N	-	0.81	-	-	0.031	-
O	-	0.46	-	-	0.018	-
P	-	0.41	-	-	0.016	-

Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

Tape and Reel Specifications

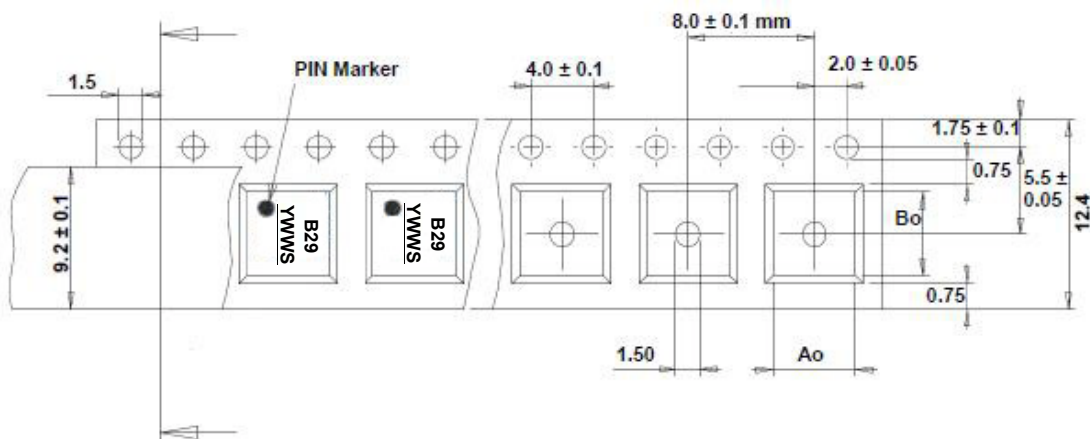
Tape and Reel Standard per ANSI/EIA-481



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

Component Orientation and Dimensions

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Pitch	8.0 ± 0.1 mm
W	12.4 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.

