PRELIMINARY

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INNOVATOR IN ELECTRONICS

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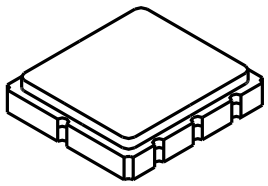
SF2280D

869.2125 MHz SAW Filter

- ***Low-loss SAW Filter***
- ***Surface-mount 3.8 x 3.8 x 1.2 mm Package***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3838-8

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	PB1					dB
Insertion loss within PB1 (fN1±12.5 kHz)				2.0	3.0	
Passband variation within PB1 (fN1±12.5 kHz)				0.1	1.0	
Nominal Frequency 2	fN2			869.2375		MHz
Passband 2	PB2					dB
Insertion loss within PB1 (fN1±12.5 kHz)				2.0	3.0	
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, YWWS
Standard Reel Quantity Reel Size 13 Inch	3000 Pieces/Reel

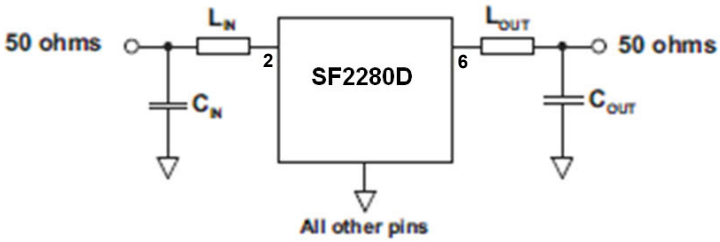
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

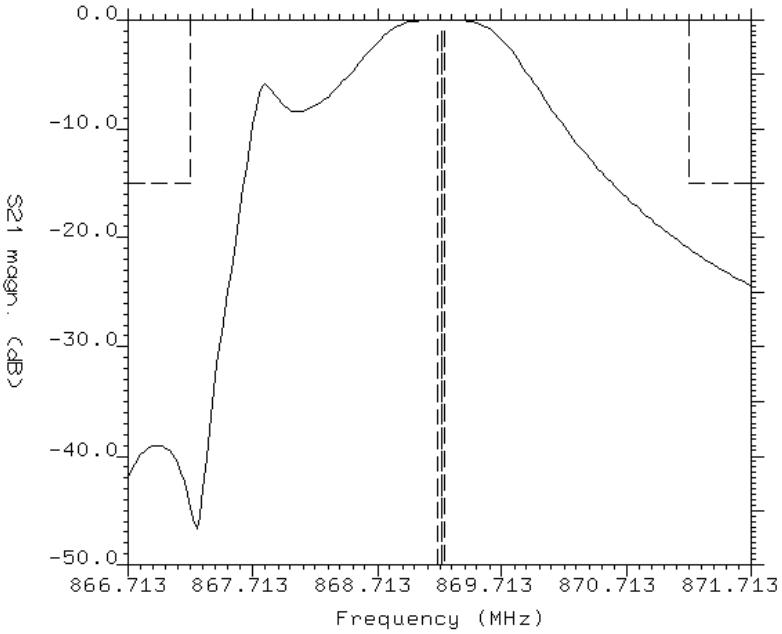
Electrical Connections

Connection	Terminals
Input	2
Output	6
Ground	All Others

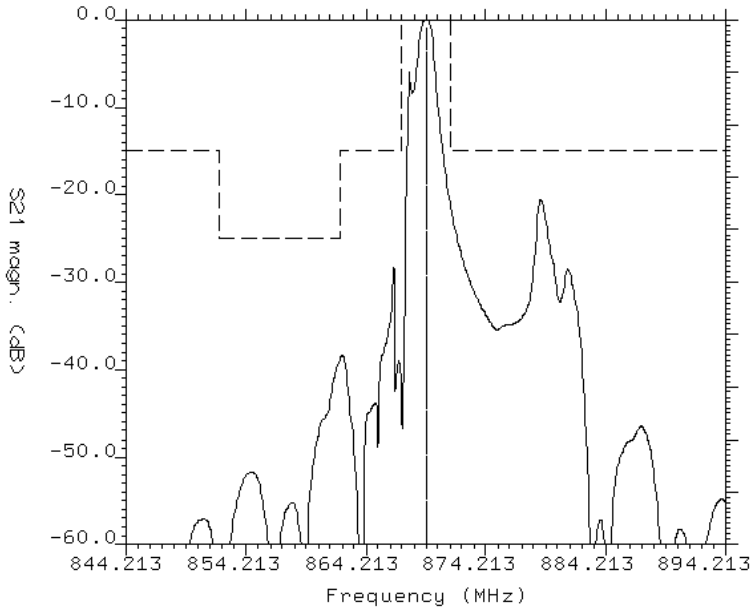


Frequency Characteristics

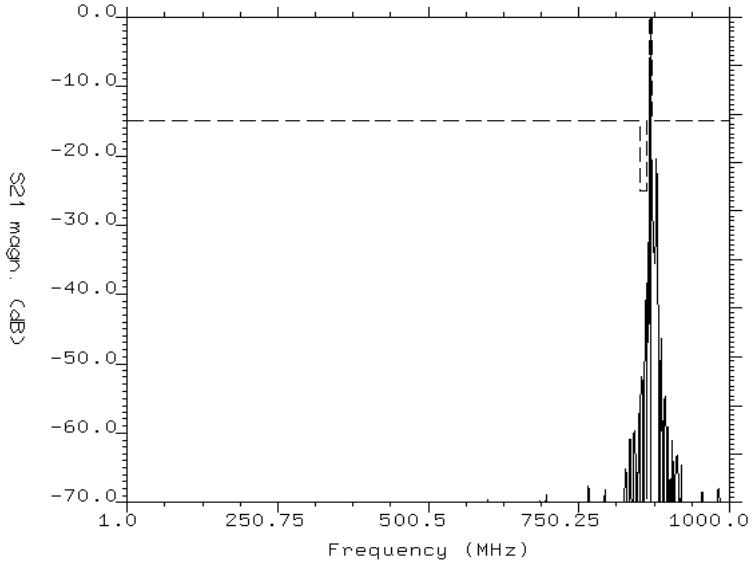
Wide Band Response (span 5 MHz)



Wide Band Response (span 50 MHz)

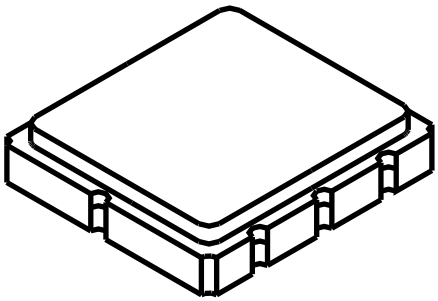


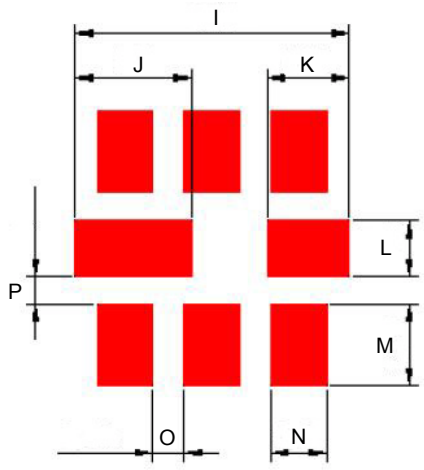
Wide Band Response: (Frequency Range 1 - 1000 MHz)



SM3838-8 Case

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





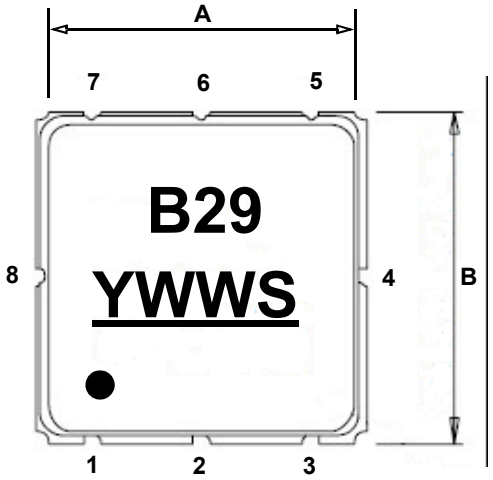
Case and PCB Footprint Dimensions

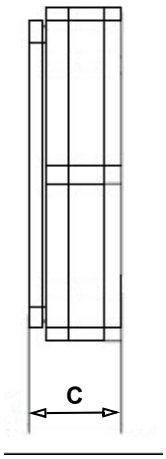
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.61	3.81	4.01	0.142	0.150	0.157
B	3.61	3.81	4.01	0.142	0.150	0.157
C	-	-	1.20	-	-	0.047
D	-	2.54	-	-	0.100	-
E	-	0.60	-	-	0.023	-
F	-	1.78	-	-	0.070	-
G	-	0.10	-	-	0.003	-
H	-	1.78	-	-	0.070	-
I	-	4.01	-	-	0.157	-
J	-	1.70	-	-	0.066	-
K	-	1.19	-	-	0.043	-
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

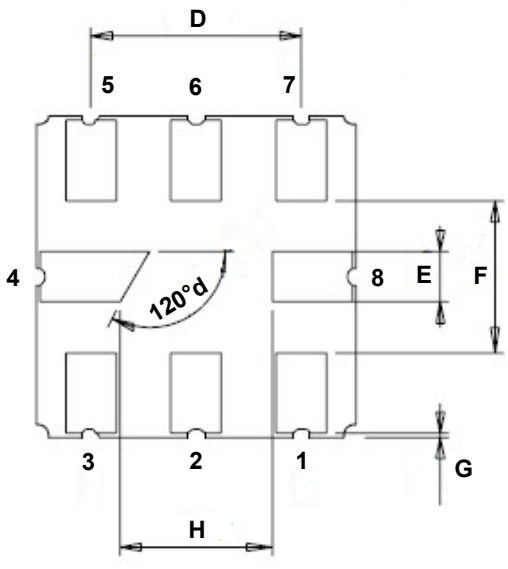
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

TOP VIEW

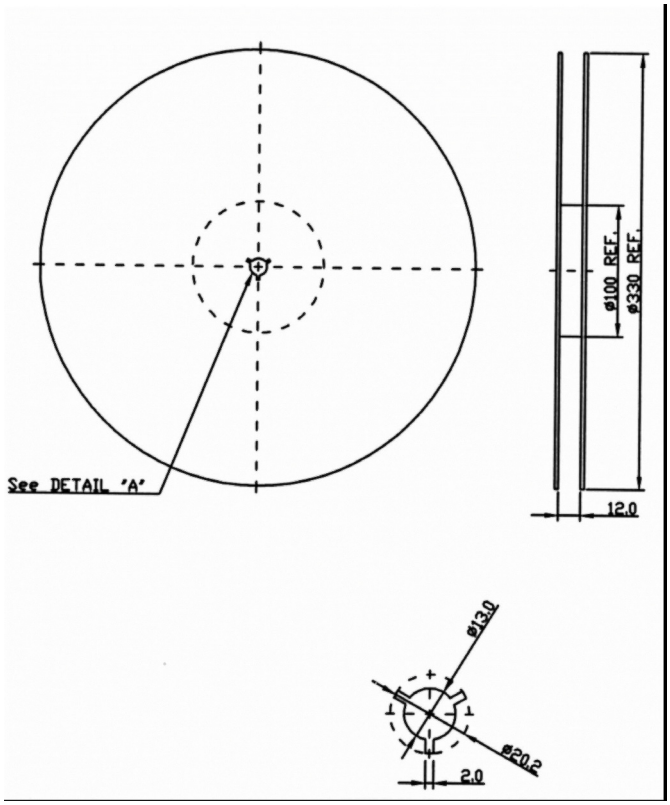




BOTTOM VIEW



Tape and Reel Specifications



"B"		Quantity Per Reel
Inches	millimeters	
13	330	3000

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