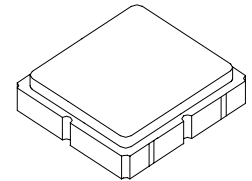


SF2180D

700 MHz SAW Filter



SM3838-8

- Low-loss SAW Filter
- 3.8 x 3.8 x 1.4 mm Surface-mount Package
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Active Terminals	30	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 30 s	

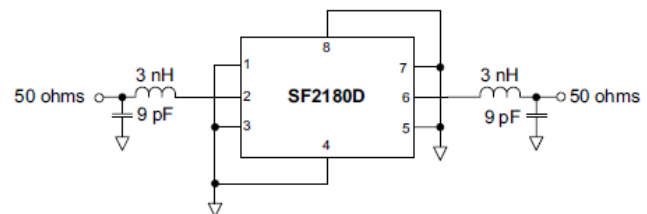
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C			700		MHz
Passband Insertion Loss	IL				6.0	dB
3 dB Bandwidth			3.8		6.0	MHz
Phase, 698.25 to 701.75 MHz				linear		deg _{P-P}
VSWR, 698.10 to 701.90 MHz					2:1	
40 dB Bandwidth					12	MHz
Operating Temperature Range	T_A		-40		+85	°C
Impedance at f_C :						
Source, Single-ended				50 ohm		
Load, Single-ended				50 ohm		

Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint		
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	899, YWWS		
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel	
	Reel Size 13 Inch	3000 Pieces/Reel	

Electrical Connections

Connection	Terminals
Input	1 or 2
Output	5 or 6
Case Ground	All but selected in/out

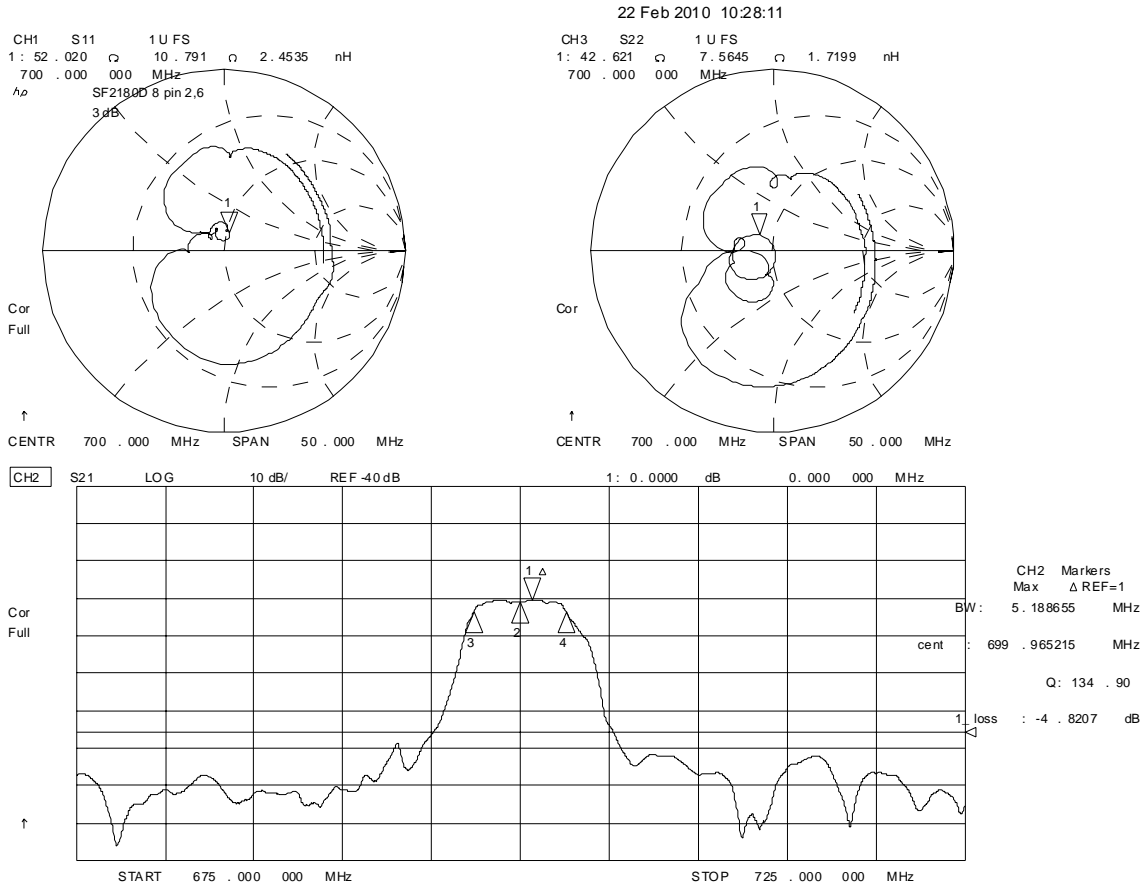


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

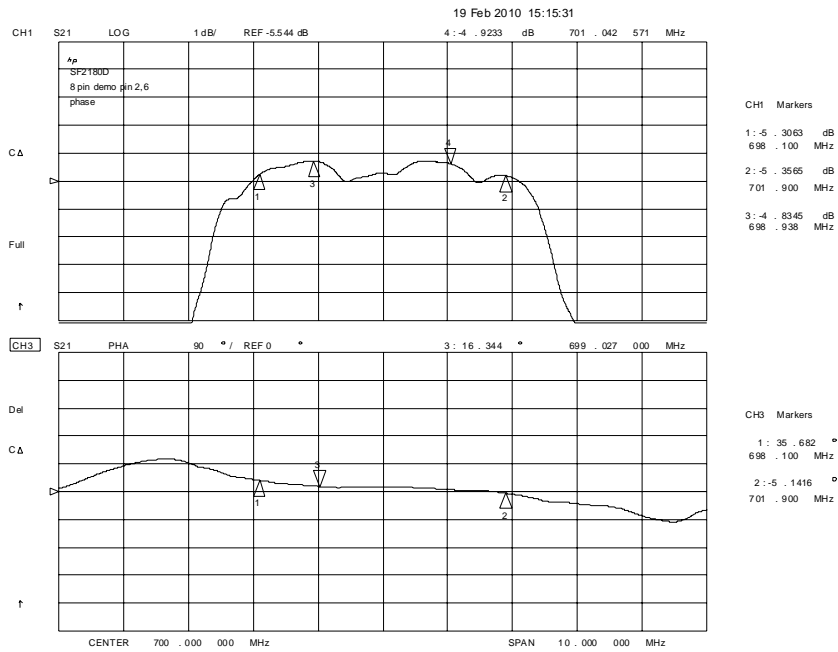
NOTES:

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.

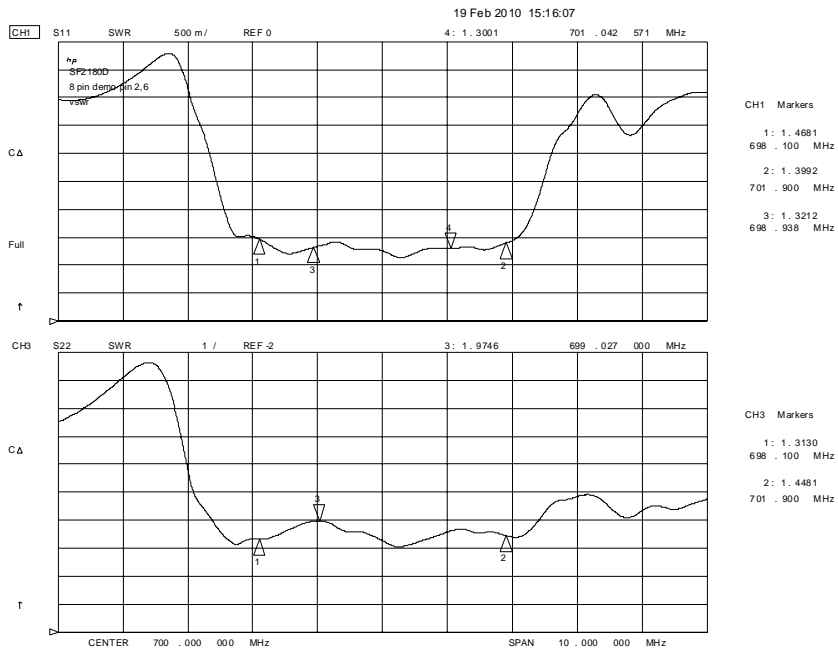
Filter Input/Output Impedance and Amplitude Plots



Filter Passband Amplitude and Phase Plots



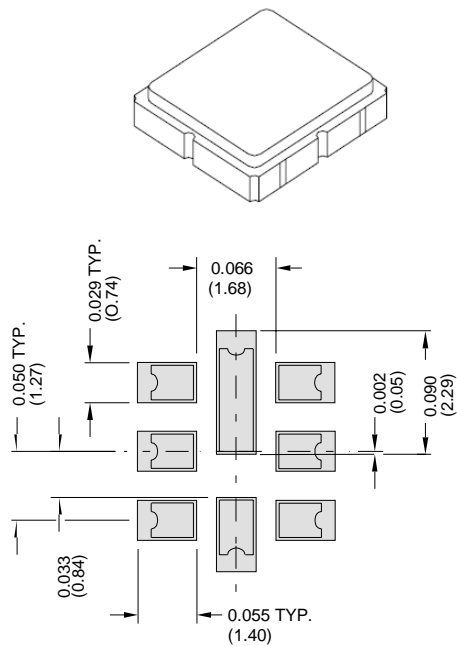
Filter Input and Output SWR Plots



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	3.6	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

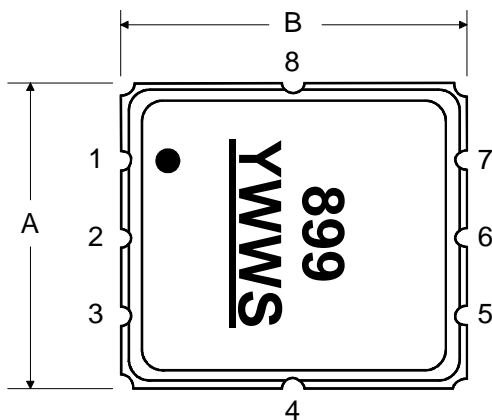
	Connection	Terminals
Port 1	Input	2
Port 2	Output	6
	Ground	All Others

Dot Indicates Pin 1

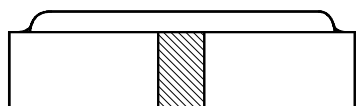
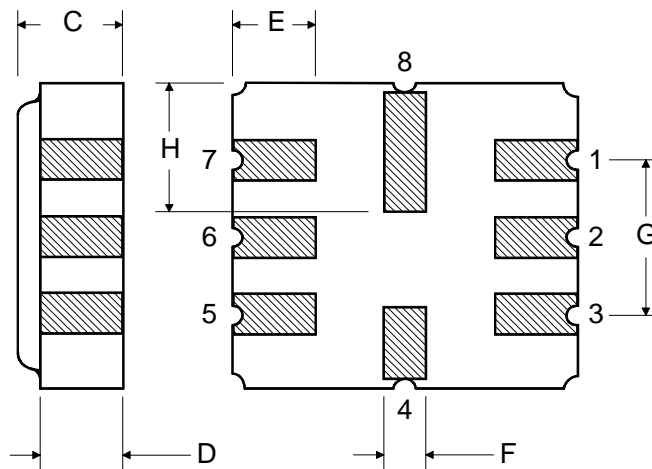
Materials

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

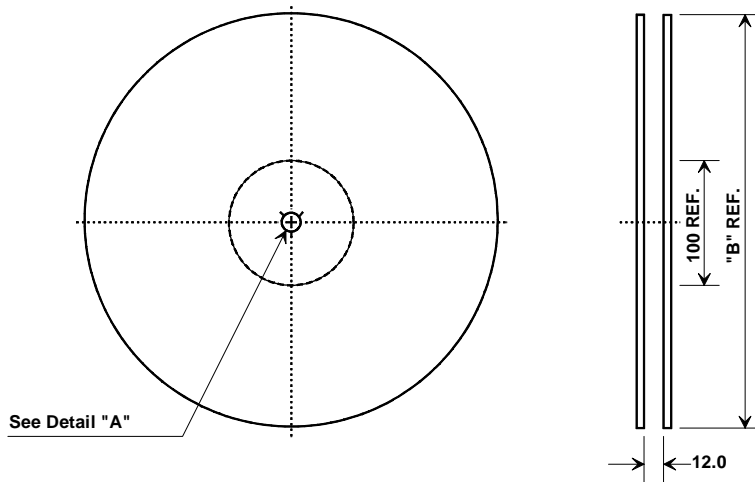
TOP VIEW



BOTTOM VIEW

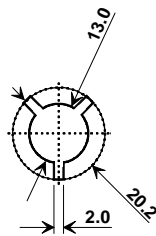


Tape and Reel Specifications



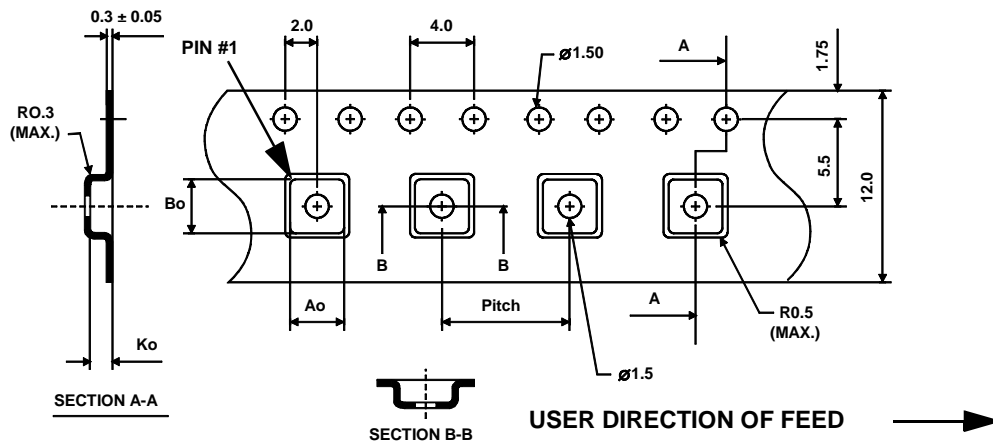
Tape and Reel Standard per ANSI/EIA-481

"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.

