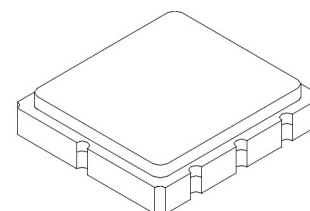


SF2478D

**416 MHz
SAW Filter**



SM3838-6

- High Performance SAW Filter
- 3.8 x 3.8 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	+18	dBm
Maximum DC Voltage Between any Two Active Terminals	5	VDC
Specification Temperature Range	-30 to +70	°C
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 20 - 40 sec	

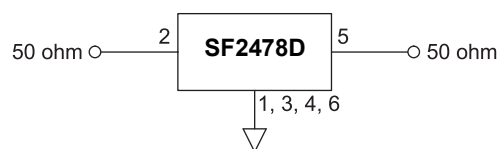
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			416		MHz
Insertion Loss 407 to 425 MHz	IL _{min}			2.0	4	dB
Amplitude Ripple 407 to 425 MHz				0.5	2.2	
VSWR 407 to 425 MHz				1.7	2.2	
Attenuation (Reference level from 0 dB)						dB
10 to 300 MHz			30	56		
300 to 380 MHz			24	42		
380 to 386 MHz			15	36		
460 to 525 MHz			12	40		
559 to 580 MHz			28	47		
669 to 690 MHz			24	48		
690 to 1000 MHz			26	40		
Temperature Coefficient of Frequency				-36		ppm/°C
Source Impedance Z_S				50		Ω
Load Impedance, Z_L				50		

Case Style	3.8 x 3.8 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	B57, YWWS

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others



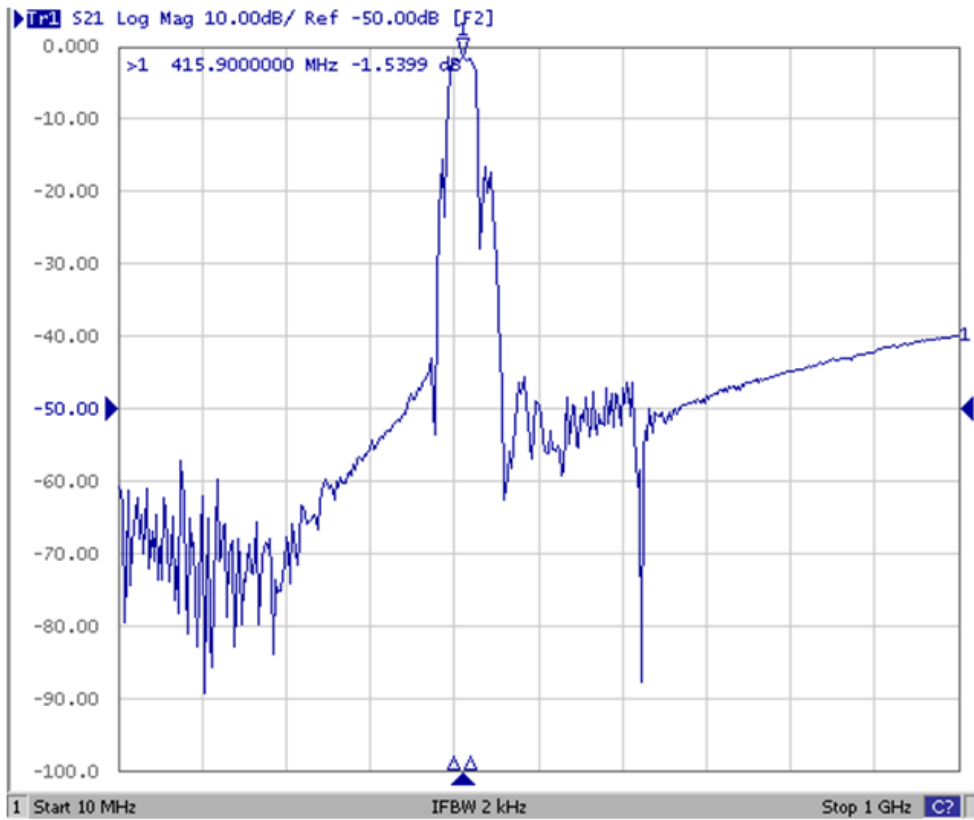
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

NOTES:

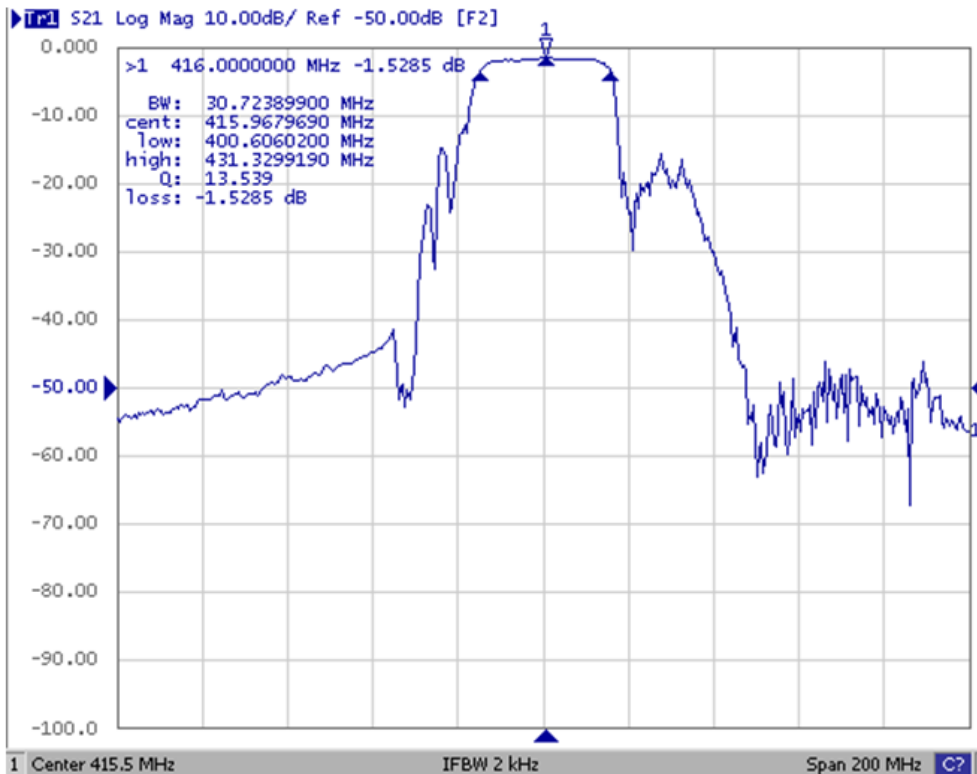
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics

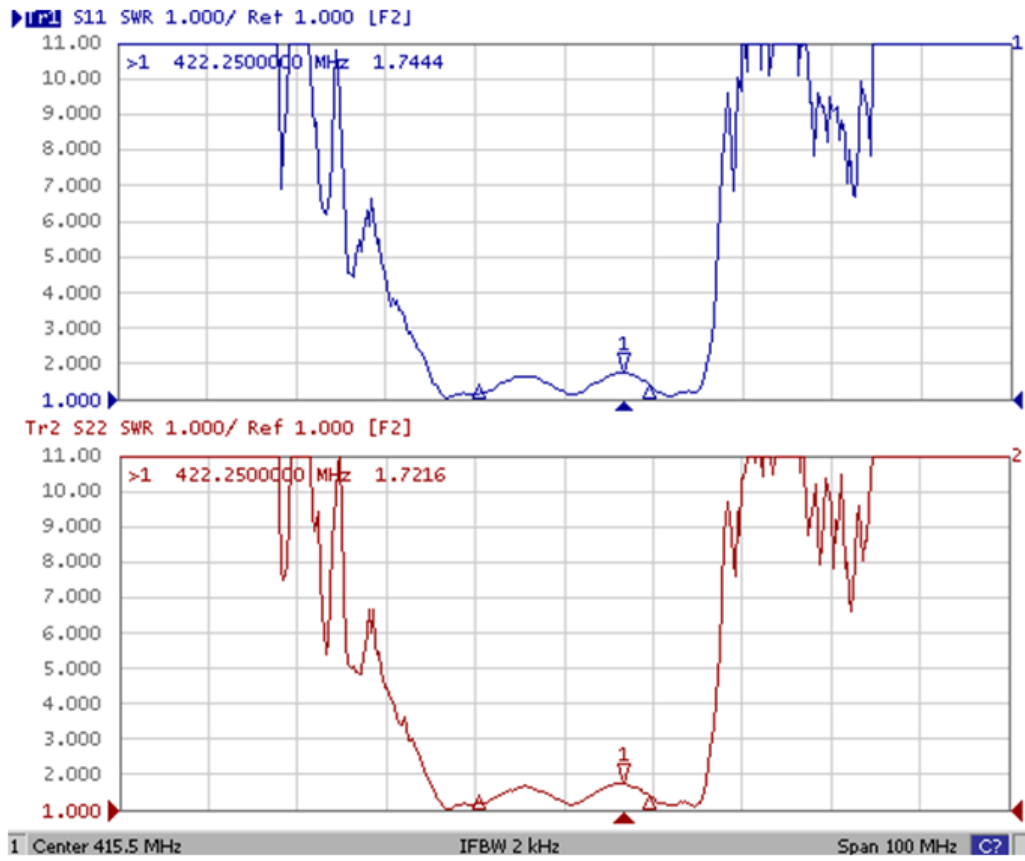
Wideband



Passband



VSWR



SM3838-6 Case

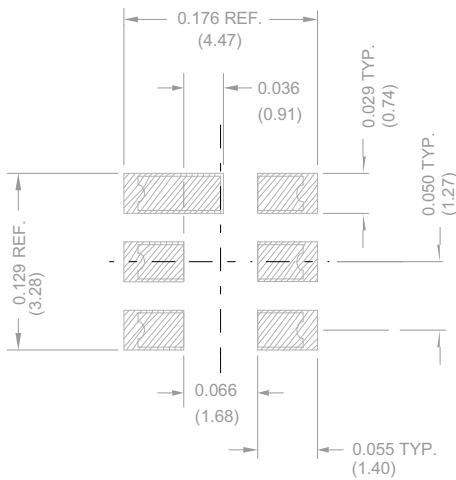
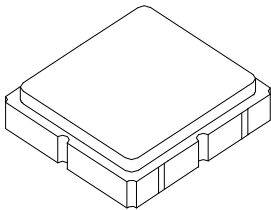
6-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint

Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.60	3.80	4.00	0.142	0.150	0.157
B	3.60	3.80	4.00	0.142	0.150	0.157
C	1.10	1.30	1.50	0.043	0.050	0.060
D	0.95	1.10	1.25	0.037	0.043	0.049
E	2.39	2.54	2.69	0.094	0.100	0.106
G	0.90	1.00	1.10	0.035	0.040	0.043
H	1.90	2.00	2.10	0.748	0.079	0.083
I	0.50	0.60	0.70	0.020	0.024	0.028
J	1.70	1.80	1.90	0.067	0.071	0.075

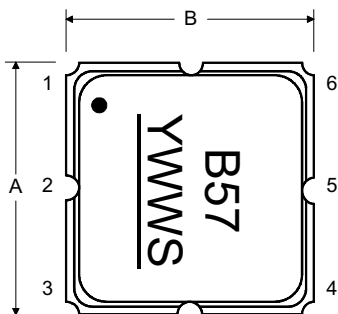
Case Material

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

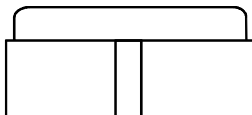
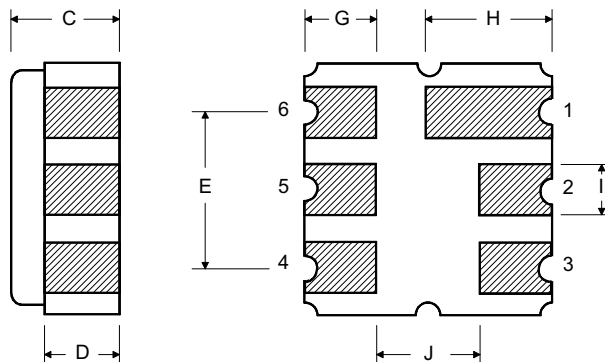


PCB Footprint

TOP VIEW

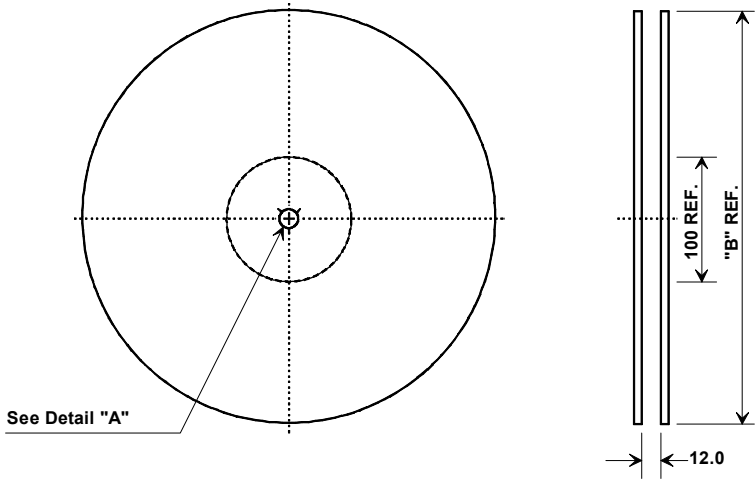


BOTTOM VIEW

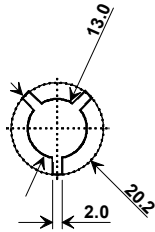


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA481

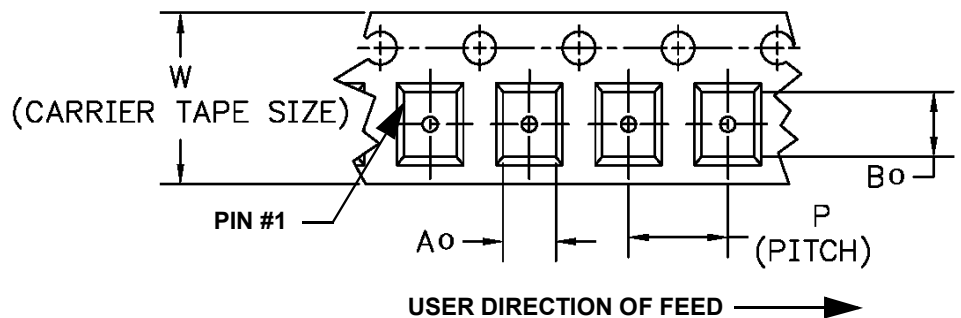
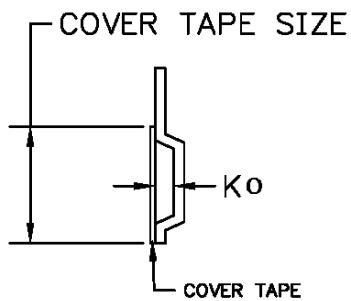


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.2 mm
Bo	4.2 mm
Ko	1.6 mm
Pitch	8.0 mm
W	12.0 mm



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180° for 60~90 seconds.
2. Ascending time to preheating temperature 150° shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C peak (10 seconds.)
4. Time: 5 times maximum

