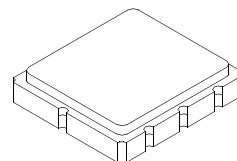


SF2222C

**228.0 MHz
SAW Filter**



SM5050-8

- **Low Insertion Loss**
- **Excellent Size-to-Performance Ratio**
- **Hermetic SM5050-8 Surface-mount Case**
- **Single-ended Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**



Absolute Maximum Ratings

Rating	Value	Units
Maximum Power Handling	1	W
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 Profile	260°C for 30 s	

Electrical Specifications

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c		228.0			MHz
Insertion Loss, 224.9 to 231.1 MHz					3.0	dB
Amplitude Ripple, 224.9 to 231.1 MHz					1.2	dB _{P-P}
Rejection:						dB
1.0 to 150.0 MHz			50			
150.0 to 195.0 MHz			40			
195.0 to 210.0 MHz			30			
250.0 to 275.0 MHz			35			
275.0 to 320.0 MHz			35			
320.0 to 1000.0 MHz			TBD			
1000.0 to 3000.0 MHz			TBD			
Source Impedance, Single-ended				50		Ω
Load Impedance, Single-ended				50		Ω
Operating Temperature Range	T_A		-40		+85	°C

Case Style	SM5050-8, 5 x 5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	958, YYWW

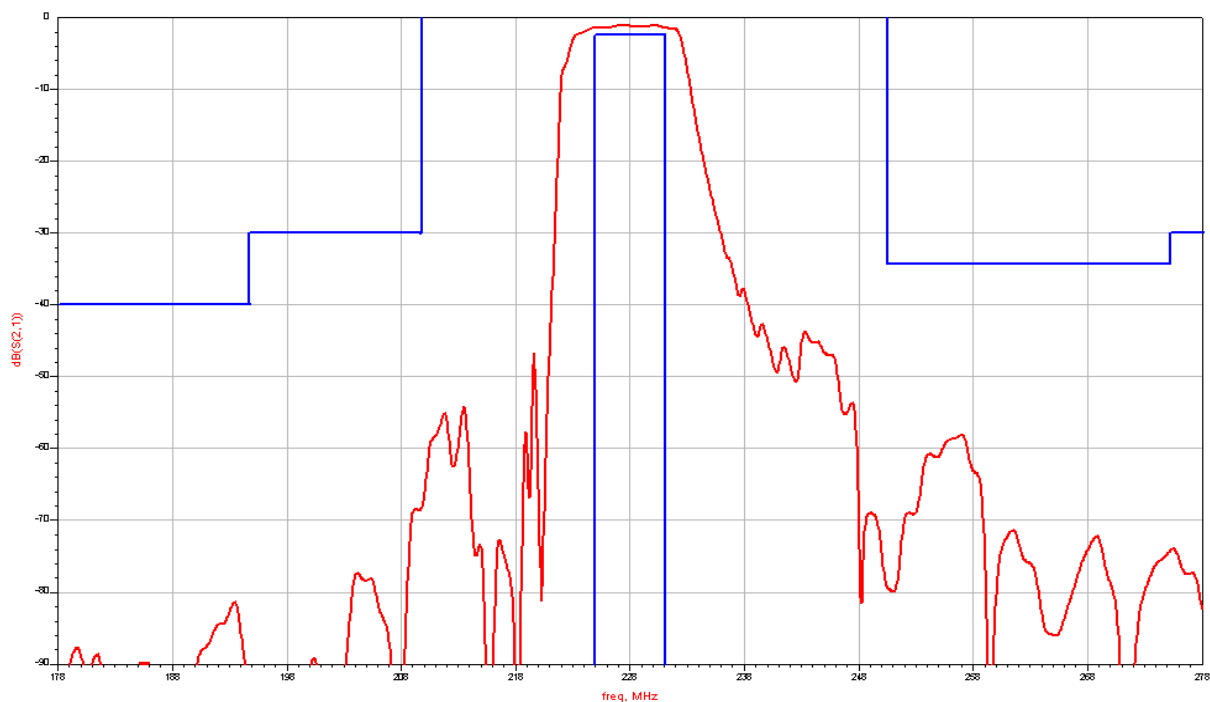


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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, f_c .
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. The turnover temperature, T_O , is the temperature of maximum (or turnover) frequency, f_O . The nominal frequency at any case temperature, T_C , may be calculated from: $f=f_O[1-FTC(T_O-T_C)^2]$.
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.

Frequency Response Plot

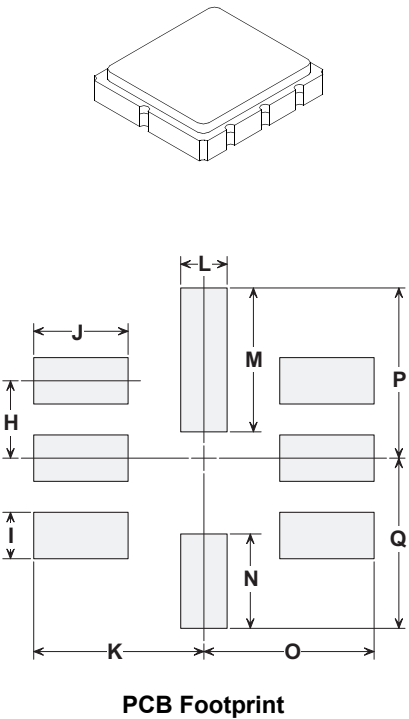


Terminal Connections

Connection		Terminals
Port 1	Input	2
Port 2	Output	6
	Ground	All others
Operation		Single-ended
Dot indicates Pin 1		

SM5050-8 Case

8-Terminal Ceramic Surface-Mount Case 5.0 X 5.0 mm Nominal Footprint

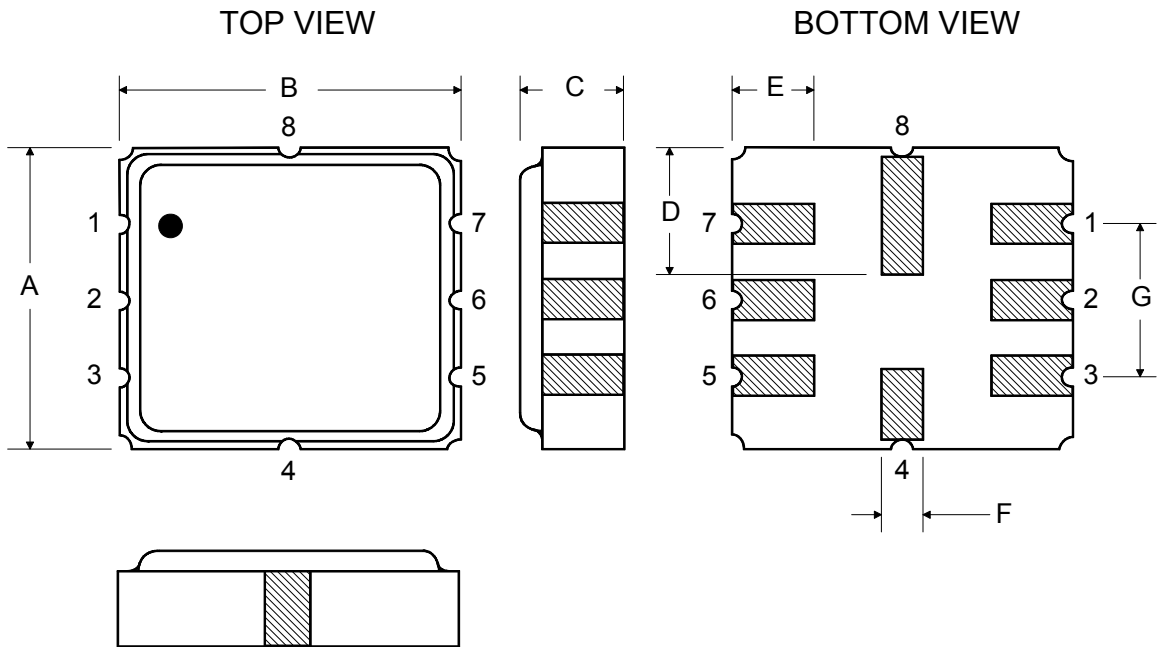


Case Dimensions

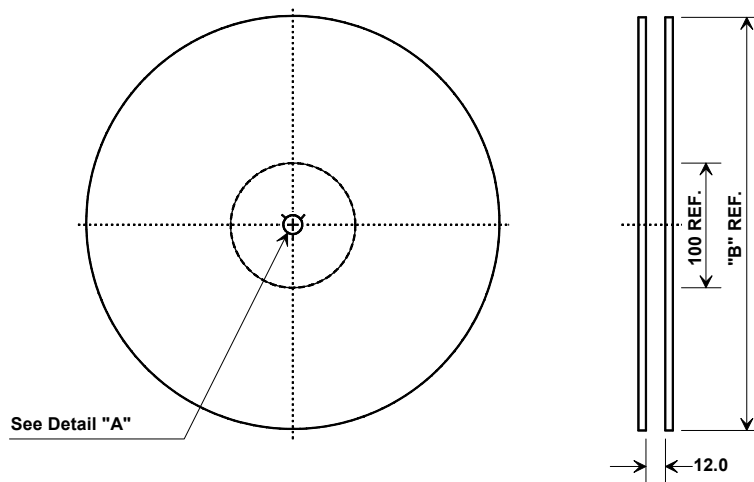
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.80	5.00	5.20	0.189	0.197	0.205
B	4.80	5.00	5.20	0.189	0.197	0.205
C	1.30	1.50	1.70	0.050	0.060	0.067
D	1.98	2.08	2.18	0.078	0.082	0.086
E	1.07	1.17	1.27	0.042	0.046	0.050
F	0.50	0.64	0.70	0.020	0.025	0.028
G	2.39	2.54	2.69	0.094	0.100	0.106
H		1.27			0.050	
I		0.76			0.030	
J		1.55			0.061	
K		2.79			0.110	
L		0.76			0.030	
M		2.36			0.093	
N		1.55			0.061	
O		2.79			0.110	
P		2.79			0.110	
Q		2.79			0.110	

Case Material

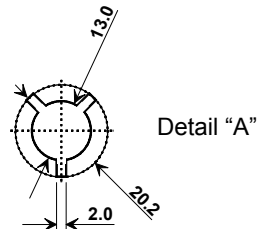
Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	



Tape and Reel Specifications



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



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.3 mm
Bo	5.3 mm
Ko	2.0 mm
Pitch	8.0 mm
W	12.0 mm

