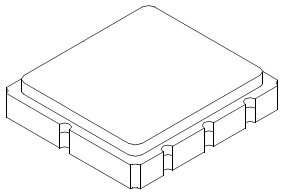
muRata
INNOVATOR IN ELECTRONICS

SF2271C

460 MHz SAW Filter

- ***Low Insertion Loss SAW Filter***
- ***5.0 x 5.0 mm Surface-mount Case***
- ***Direct 50 ohm Operation***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM5050-8

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage on any Non-ground Terminal	3	V
Operating Temperature	-40 to + 85	°C
Storage Temperature Range in Tape and Reel	-40 to + 85	°C
Maximum Soldering Profile	265 °C for 10 s	

Electrical Characteristics

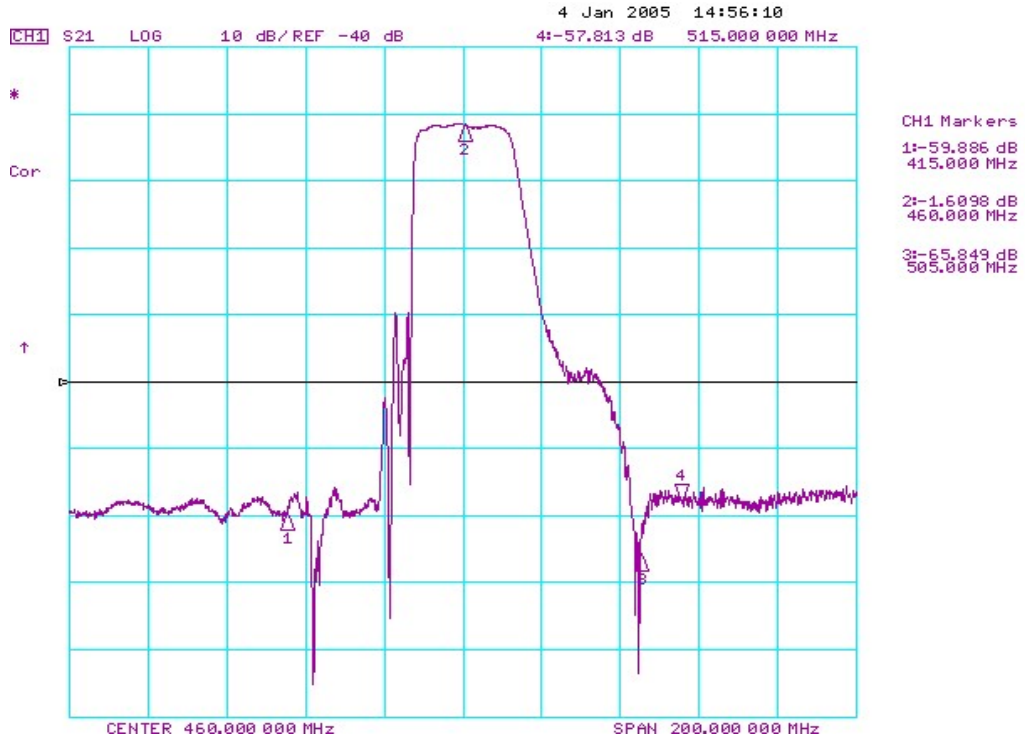
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1		460		MHz
Minimum Insertion Loss	IL_{MIN}	1		1.5	2.8	dB
2 dB Bandwidth	BW_2	1	20	23.4		MHz
Rejection Referenced to 0 dB:		1, 3				dB
f_C-45 to f_C-100 MHz			40	56		
f_C+45 to f_C+55 MHz			30	56		
f_C+55 to f_C+100 MHz			40	54		
Frequency Temperture Coefficient	FTC			-36		ppm/°C
Source Impedance				50		ohms
Load Impedance				50		ohms
Case Style		6	SM5050-8 5 x 5 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift) See note 4			A19			

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

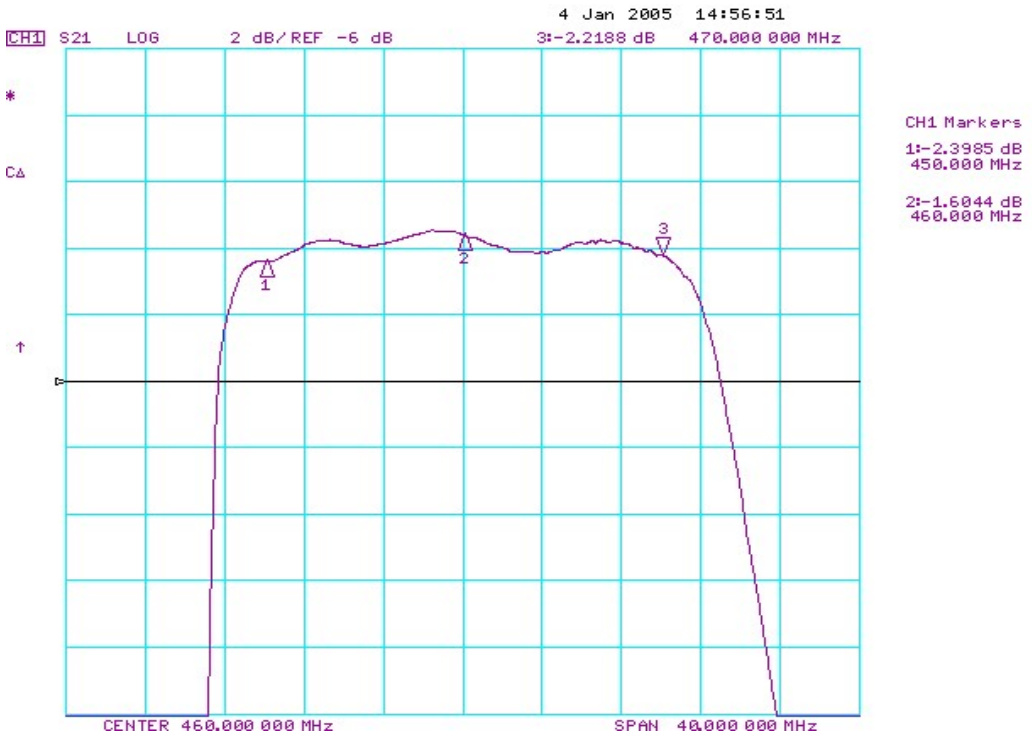
NOTES:

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. Tape and Reel Standard ANSI / EIA 481.
7. 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.
8. US and international patents may apply.
9. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

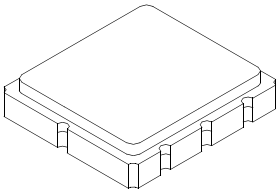
Filter Transition Bandwidth Plot

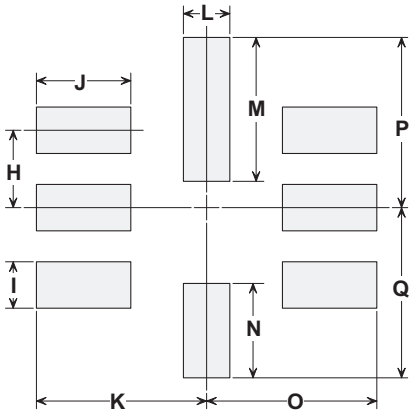


Filter Passband Plot



SM5050-8 Surface-Mount 8-Terminal Ceramic Case
5.0 X 5.0 mm Nominal Footprint





PCB 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	

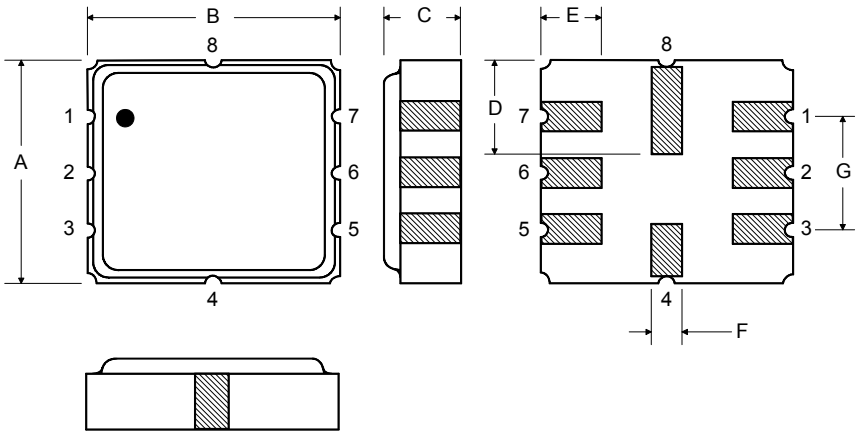
Case Materials

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	

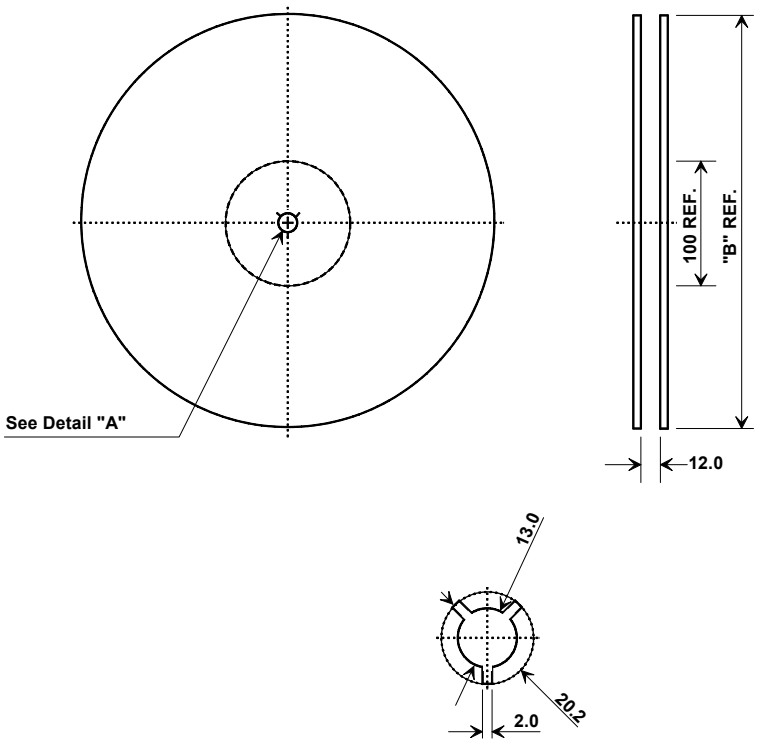
Electrical Connections

Connection		Terminals
Port 1	Input	2
Port 2	Output	6
	Ground	All others
Dot indicates Pin 1		

TOP VIEW BOTTOM VIEW



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