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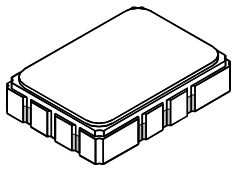
SF2042B

456.00 MHz SAW Filter

- ***Designed for 802.16 and WIMAX Receiver IF Application***
- ***Low Insertion Loss***
- ***5.0 X 7.0 mm Surface-Mount Case***
- ***Differential Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SMP-03

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency @ 25°C		CF	10		456.00		MHz
Insertion Loss @ 25°C			1		12	14	dB
Differential Impedance line-to-line			1		200		Ohms
Passband 1dB			1, 10	±6.4	±7.5		MHz
Passband 3dB			1, 10	±7.5	±8.8		
Group Delay	Absolute Group Delay Variation; CF ±6.4 MHz		1		50	150	nsec
	Return Loss		1	8	15		dB
Rejection	DC to 256 MHz		1	30	55		dB
	256 to 360 MHz		1	36	50		
	360 to 416		1	36	40		
	416 to 443 MHz		1	25	35		
	470 to 656 MHz		1	32	35		
	656 to 946 MHz		1	30	50		
Equivalent Circuit	Input 320 ohm				5.1		pF
	Output 400 ohm				4.5		pF
Center Frequency Temperature Coefficient			10		-15		kHz/°C
Maximum Peak RF Input Power						13	dBm
Temperature	Operating			-40		85	°C
	Storage			-40		85	
Case Style			SMP-03 5 x 7 mm Nominal Footprint				
Lid Symbolization (YY=year, WW=week, S=shift)			RFM SF2042B YYWWS				

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

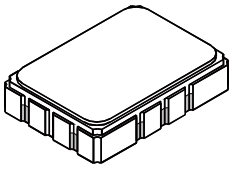
NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50Ω using 50Ω / 200Ω baluns and measured with 50 Ω network analyzer.
2. 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.
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. Tape and Reel Standard ANSI / EIA 481.
5. 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.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.
8. The center of the passbands will move with ambient temperature.

SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

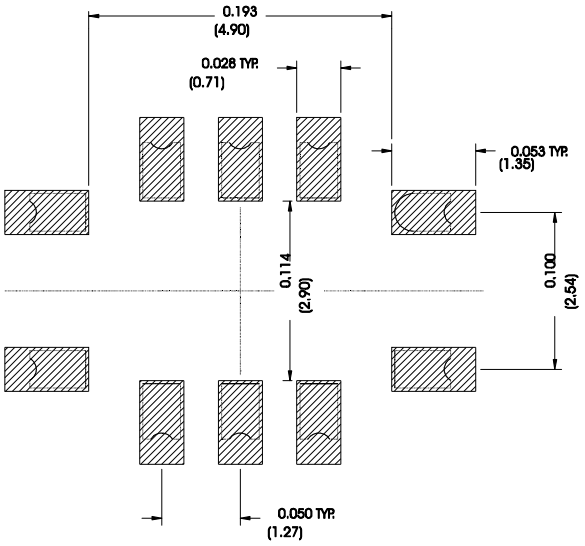
7 x 5 mm Nominal Footprint



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D	.47	0.60	.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	0.197	0.202
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

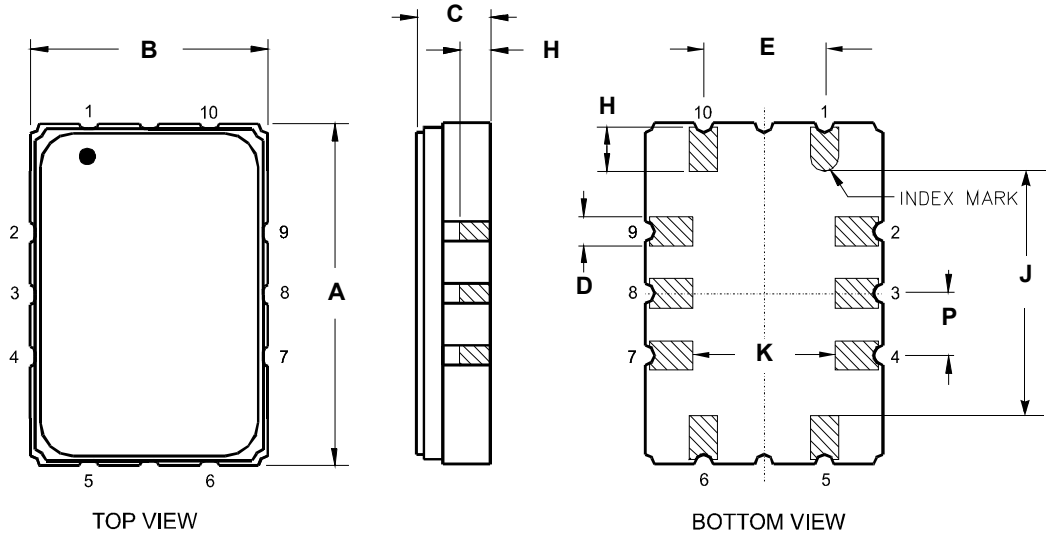
Recommended PCB Footprint



Materials	
Solder Pad Termination	Au plating 30 - 60 uInches (76.2-152 uM) over 80-200 uInches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 uInches Thick
Body	Al_2O_3 Ceramic
Pb Free	

Electrical Connections

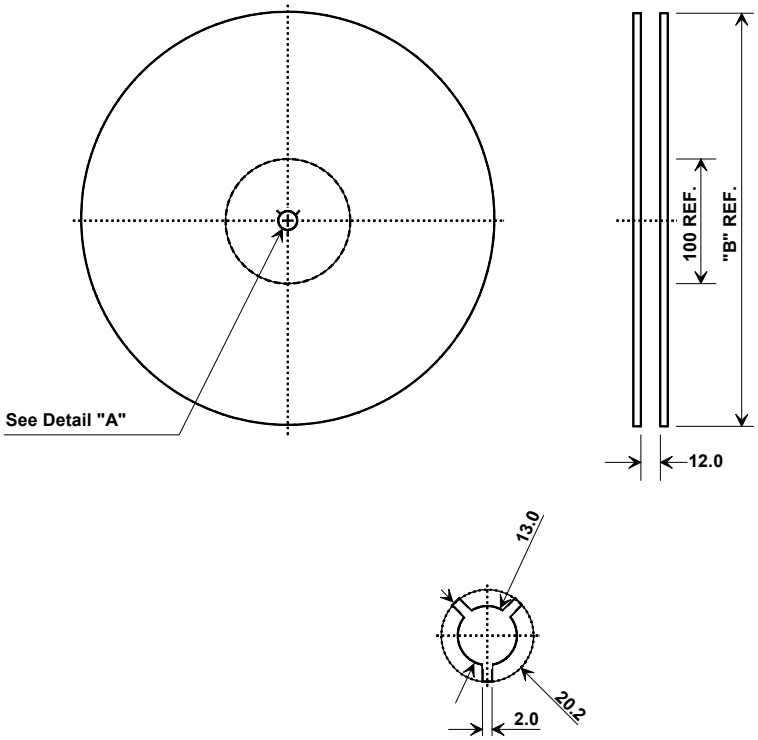
Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**



TOP VIEW

BOTTOM VIEW

Tape and Reel Specifications



"B "		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions		Tolerance
Ao	5.5 mm	± 0.1mm
Bo	7.5 mm	± 0.1mm
Ko	2.0 mm	± 0.1mm
Pitch	8.0 mm	± 0.1mm
W	16.0 mm	± 0.2mm