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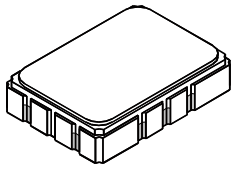
INNOVATOR IN ELECTRONICS

RoHS Compliance
This component is compliant with RoHS directive.
This component was always RoHS compliant from the first date of manufacture.

SF2024B

467.751 MHz SAW Filter

- ***Designed for SDARS Receiver IF Application***
- ***Low Insertion Loss***
- ***5.0 X 7.0 mm Surface-Mount Case***
- ***Differential Input and Output***



SMP-03

Absolute Maximum Ratings

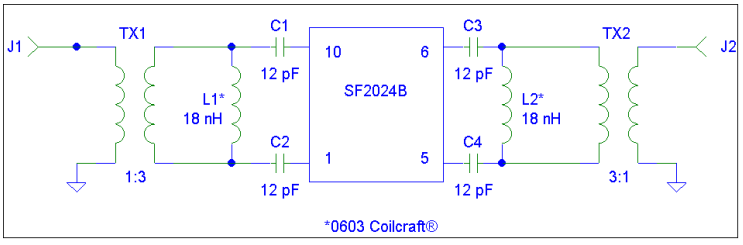
Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1		467.751		MHz
Passband Minimum Insertion Loss	IL			18	20	dB
1.5 dB Passband	$BW_{1.5}$	1, 2		14.2		MHz
3 dB Passband	BW_3			15		
Amplitude Ripple from fc-6.344 MHz to fc-4.2985 MHz (-20 to 85°C)					1	dB_{P-P}
Amplitude Ripple from fc-6.344 MHz to fc-4.2985 MHz (-40 to -20°C)					1.25	
Amplitude Ripple from fc-4.4865 MHz to fc-2.441 MHz					1	
Amplitude Ripple from fc-2.629 MHz to fc+0.069 MHz					1	
Amplitude Ripple from fc-0.069 MHz to fc+2.629 MHz					1	
Amplitude Ripple from fc+2.441 MHz to fc+4.4865 MHz					1	
Amplitude Ripple from fc+4.2985 MHz to fc+6.344 MHz (-40 to 50°C)					1	
Amplitude Ripple from fc+4.2985 MHz to fc+6.344 MHz (50 to 85°C)					1.25	
Group Delay Variation over fc-6.344 MHz to fc-2.441 MHz and from fc+6.344 MHz to fc+2.441 MHz	GDV1			60	80	ns_{P-P}
Group Delay Variation over fc±2.629 MHz	GDV2			60	120	
Rejection fc-33 to fc-12 MHz and fc+12 to fc+33 MHz		1, 2, 3	32	40		dB
fc-12 to fc-10.5 MHz			24	40		
fc+9 to fc+12 MHz			10	24		
Operating Temperature Range	T_A	1	-40		+85	°C
Differential Input and Output Impedance	150 ohms					
Case Style		6	SMP-03 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift) See note 4			RFM SF2024B YYWWS			

Electrical Connections

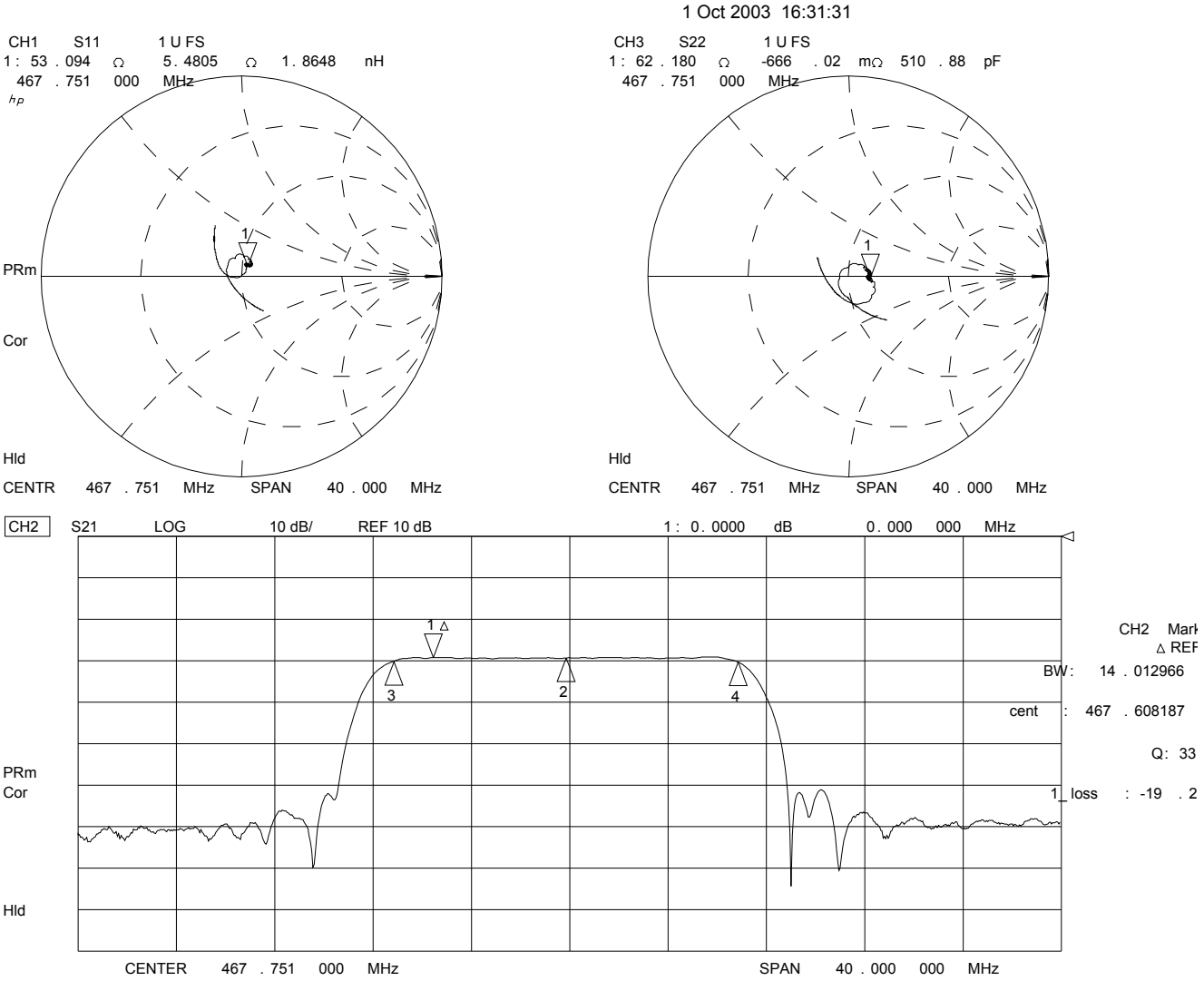
Connection	Terminals
Port 1 Hot	10
Port 1 Ground Return	1
Port 2 Hot	5
Port 2 Ground Return	6
Case Ground	All Others

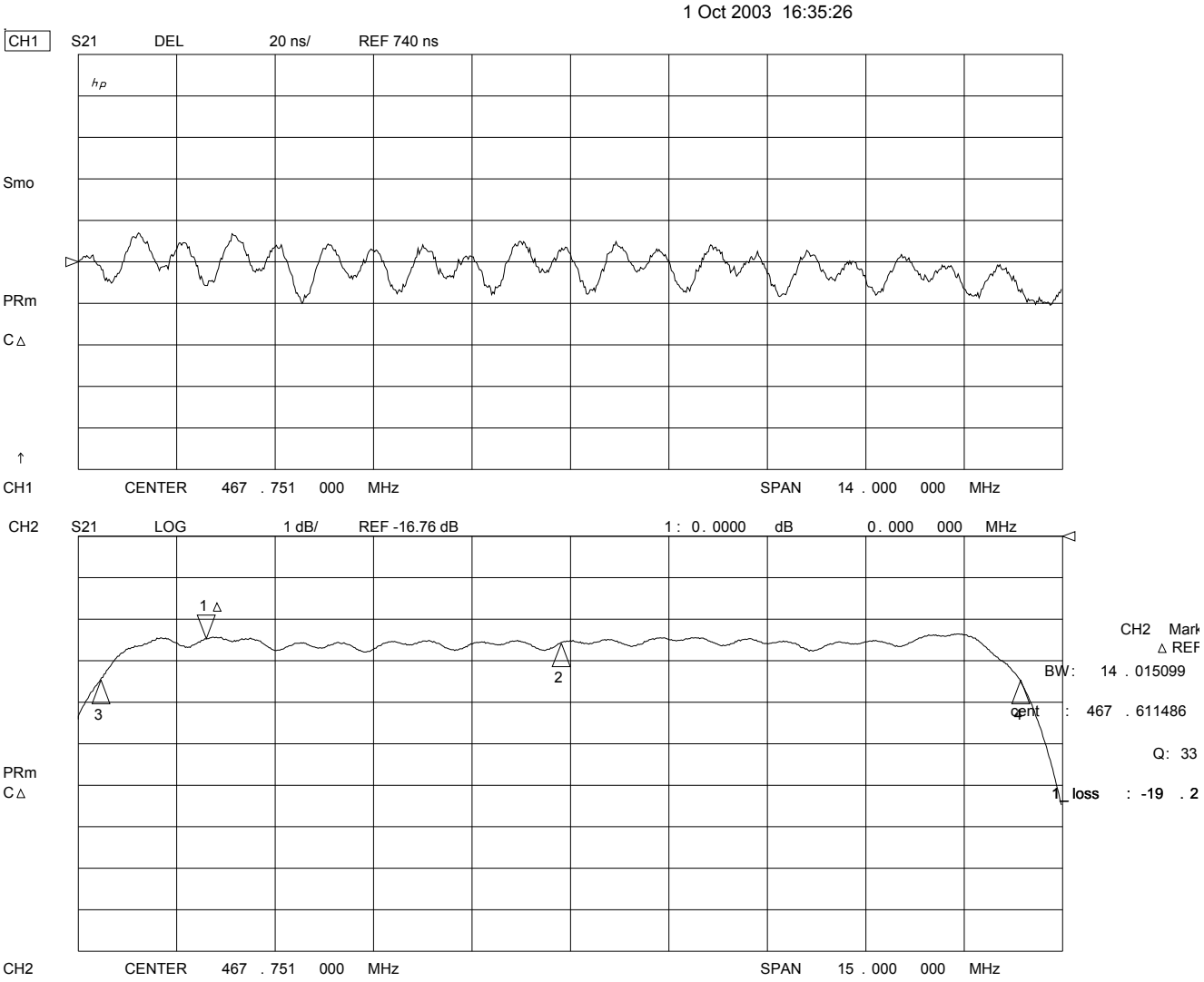


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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 Per 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.

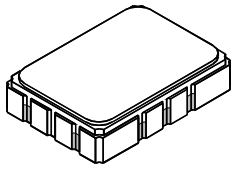




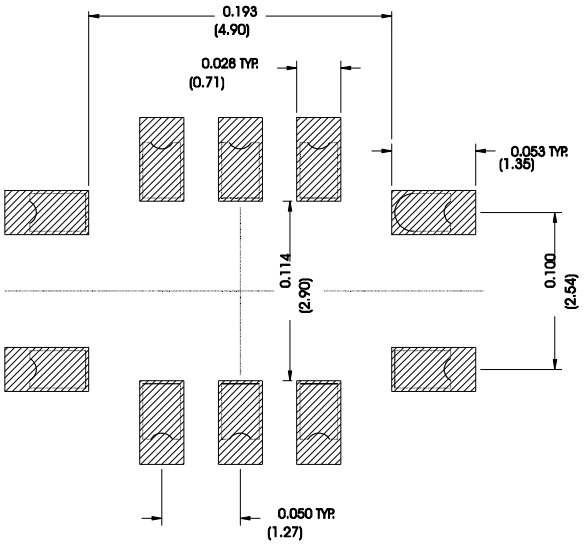
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



Recommended PCB Footprint



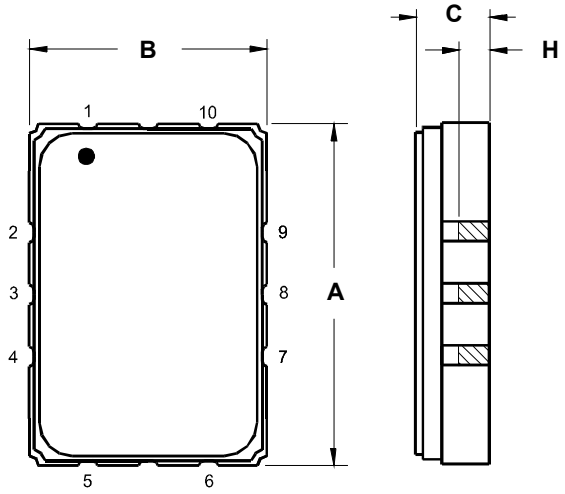
Case Dimensions

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

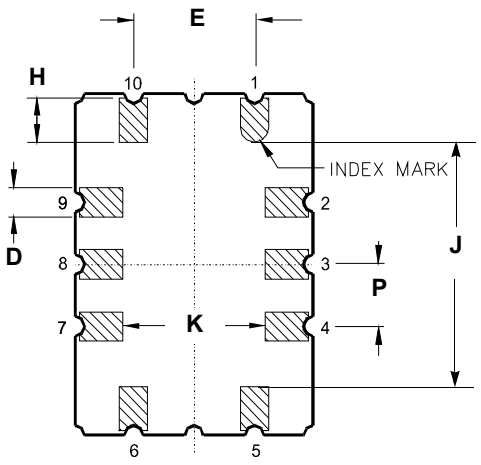
Materials	
Solder Pad Termination	Au plating 30 - 60 uInches (76.2-152 uM) over 80-200 uInches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 uInches Thick
Body	Al_2O_3 Ceramic
Pb Free	

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**

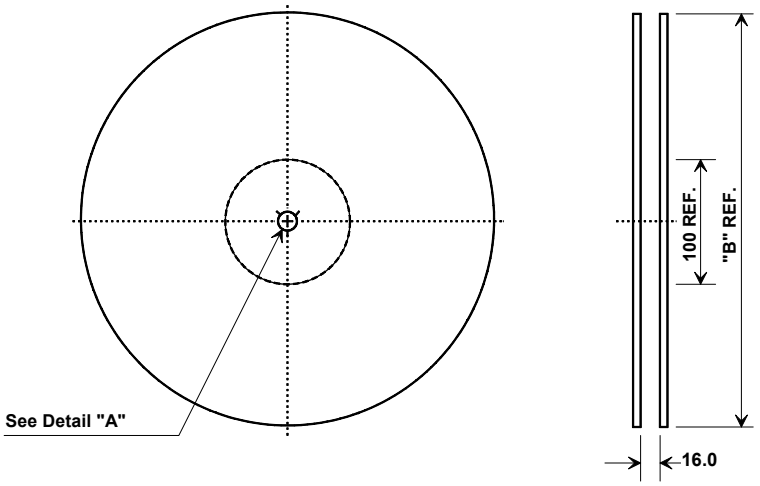


TOP VIEW



BOTTOM VIEW

Tape and Reel Specifications



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

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.5 mm
Bo	7.5 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm