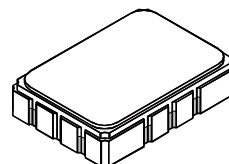




- **Designed for SDARS Receiver IF Application**
- **Low Insertion Loss**
- **5.0 X 7.0 mm Surface-Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**

**SF2024B****467.751 MHz
SAW Filter****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}			14.2		MHz
3 dB Passband	BW ₃			15		MHz
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			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			SMP-03 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift) See note 4			RFM SF2024B YYWWSS			

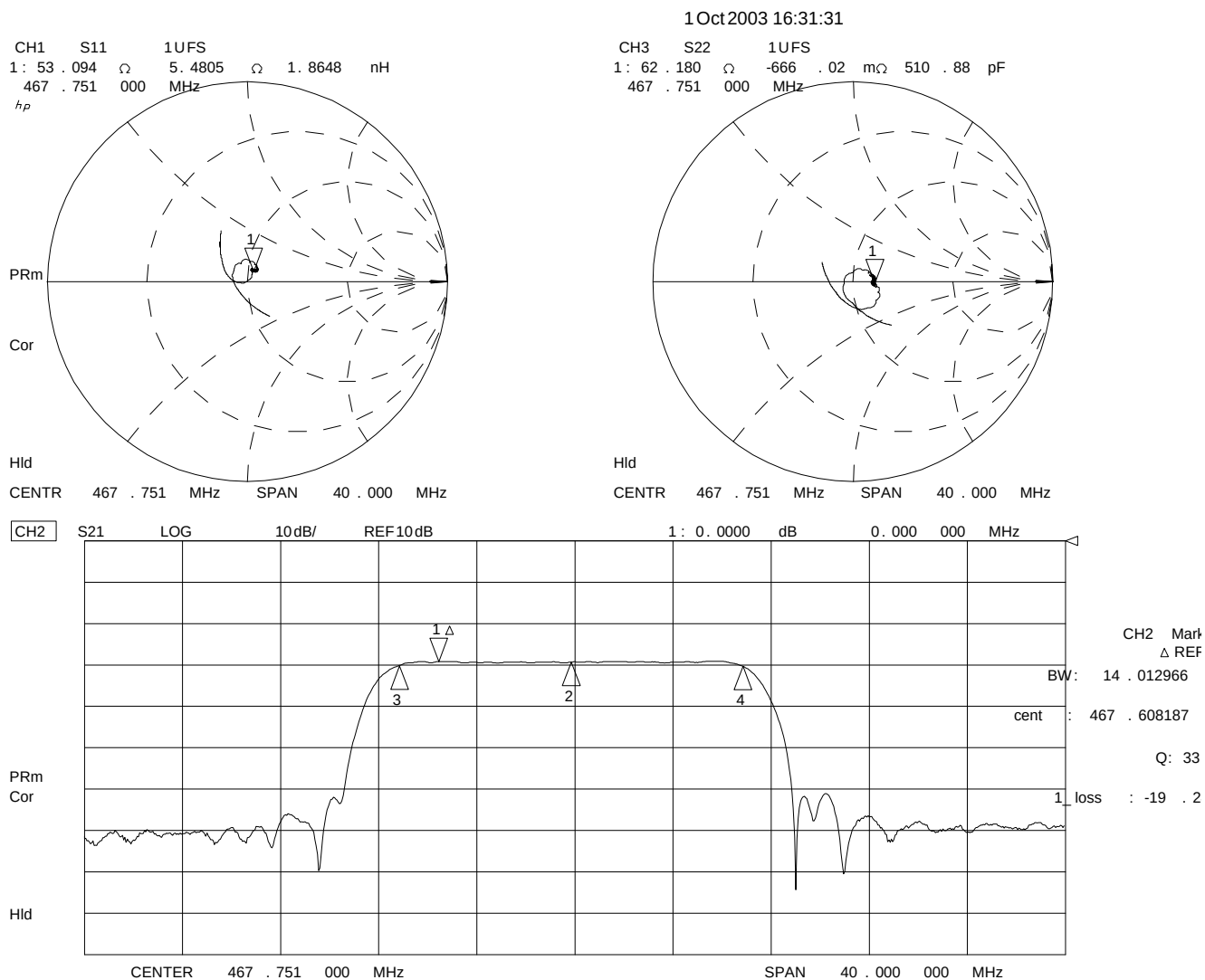
Electrical Connections

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

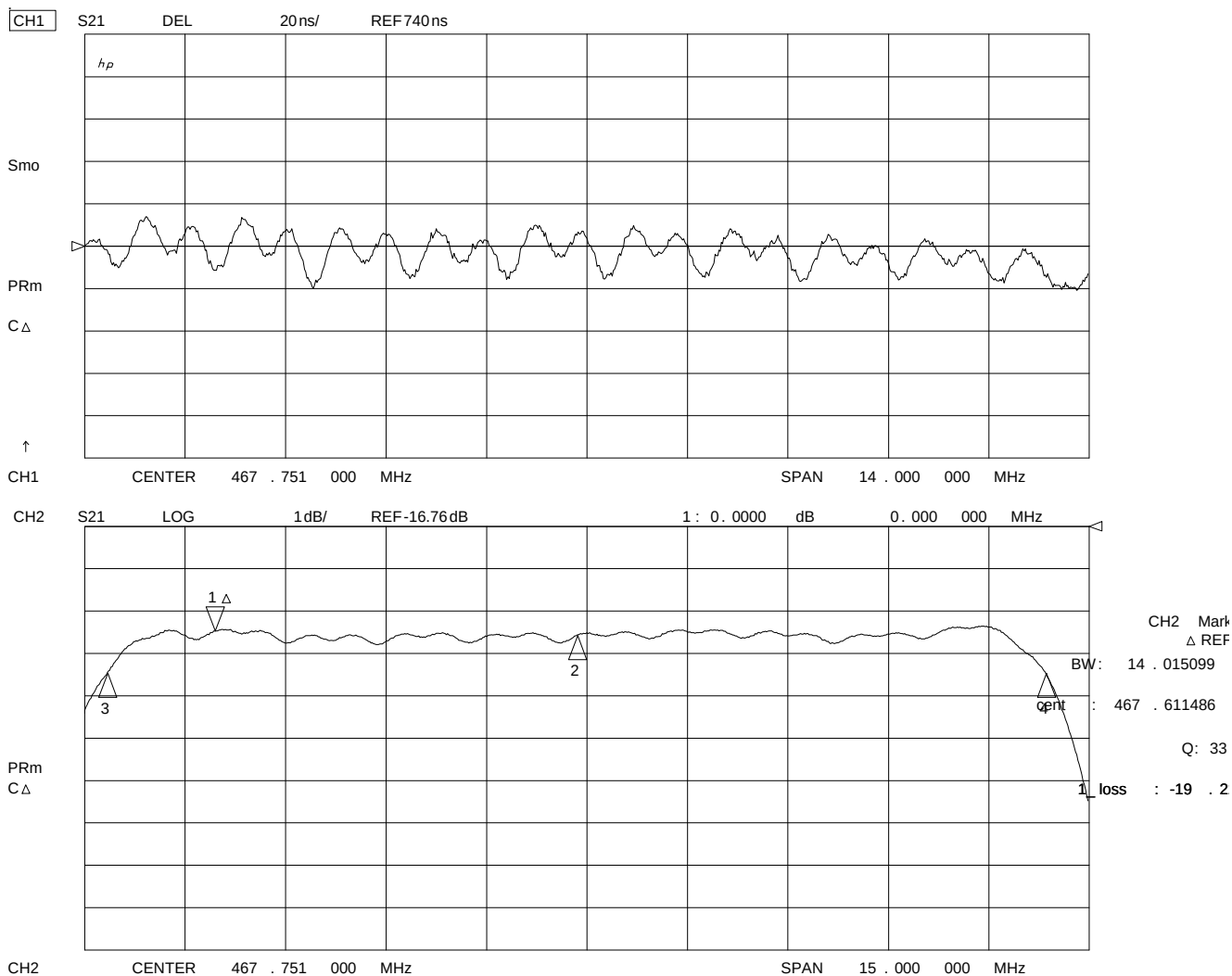
**Notes:**

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. "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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
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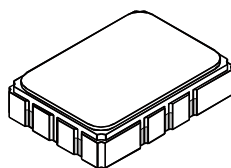




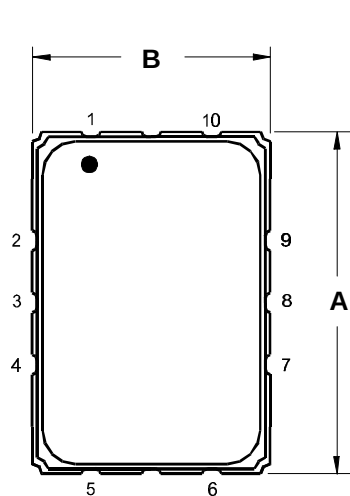
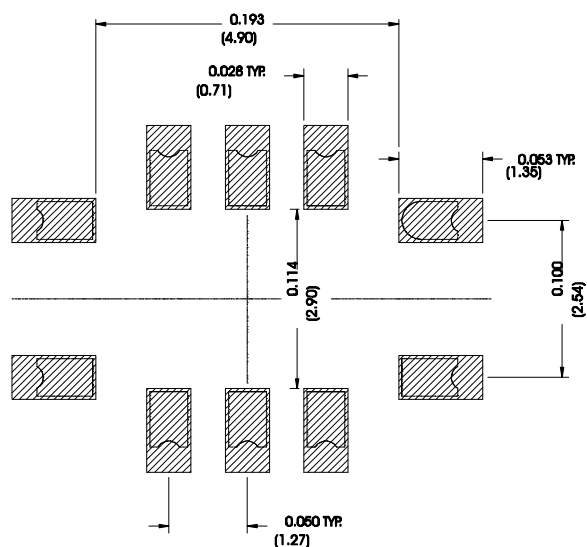
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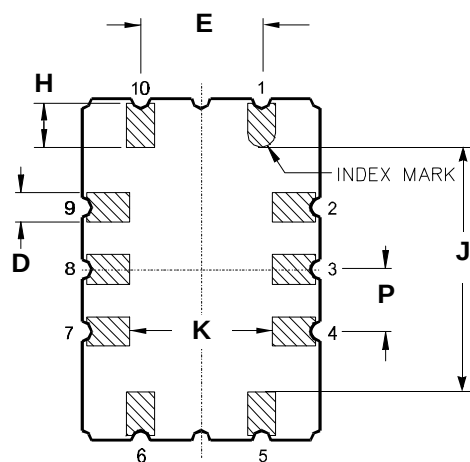
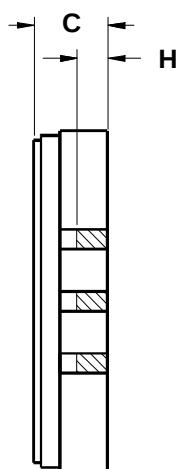
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case
7 x 5 mm Nominal Footprint

Recommended PCB Footprint



TOP VIEW



BOTTOM VIEW

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

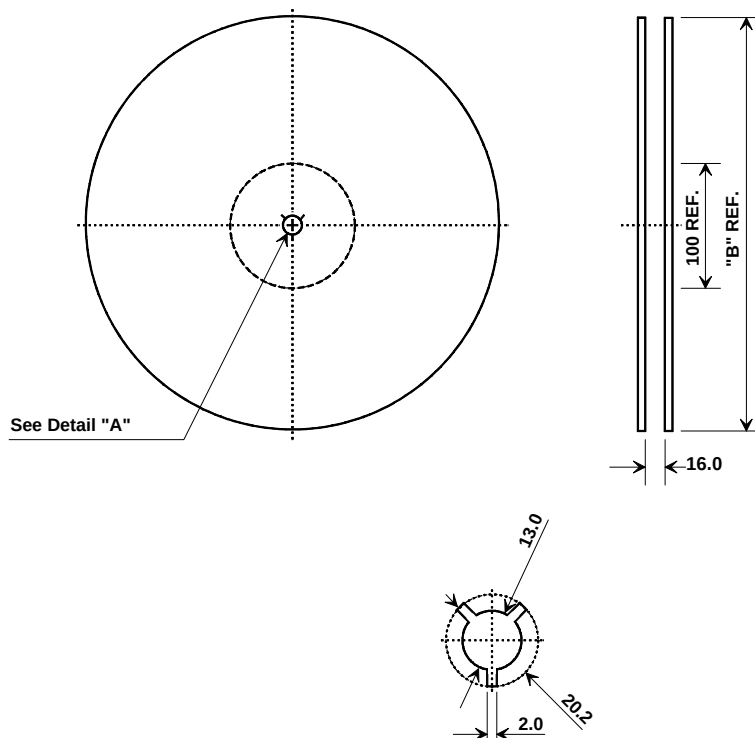
Materials

Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections

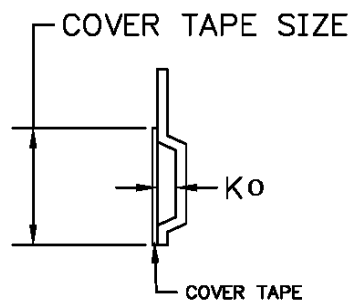
Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

Tape and Reel Specifications



"B "		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

