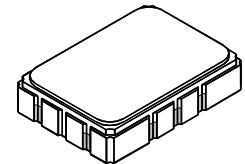


**SF2024B**

**467.751 MHz  
SAW Filter**



**SMP-03**

- **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)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

**Absolute Maximum Ratings**

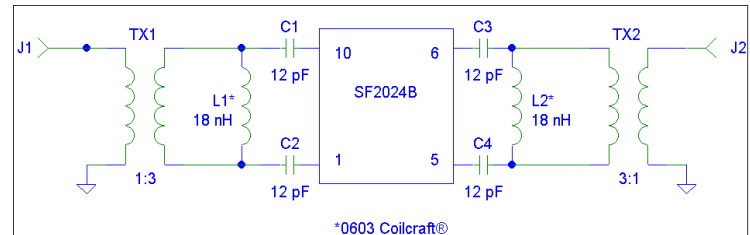
Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units	
Nominal Center Frequency	$f_C$			467.751		MHz	
Passband	Minimum Insertion Loss	1.5 dB Passband		18	20	dB	
		3 dB Passband		14.2			MHz
				15			
Amplitude Ripple from fc-6.344 MHz to fc-4.2985 MHz (-20 to 85°C)					1	dB <sub>p-p</sub>	
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 <sub>p-p</sub>	
		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	$T_A$		-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, ## = Sequence Code)			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

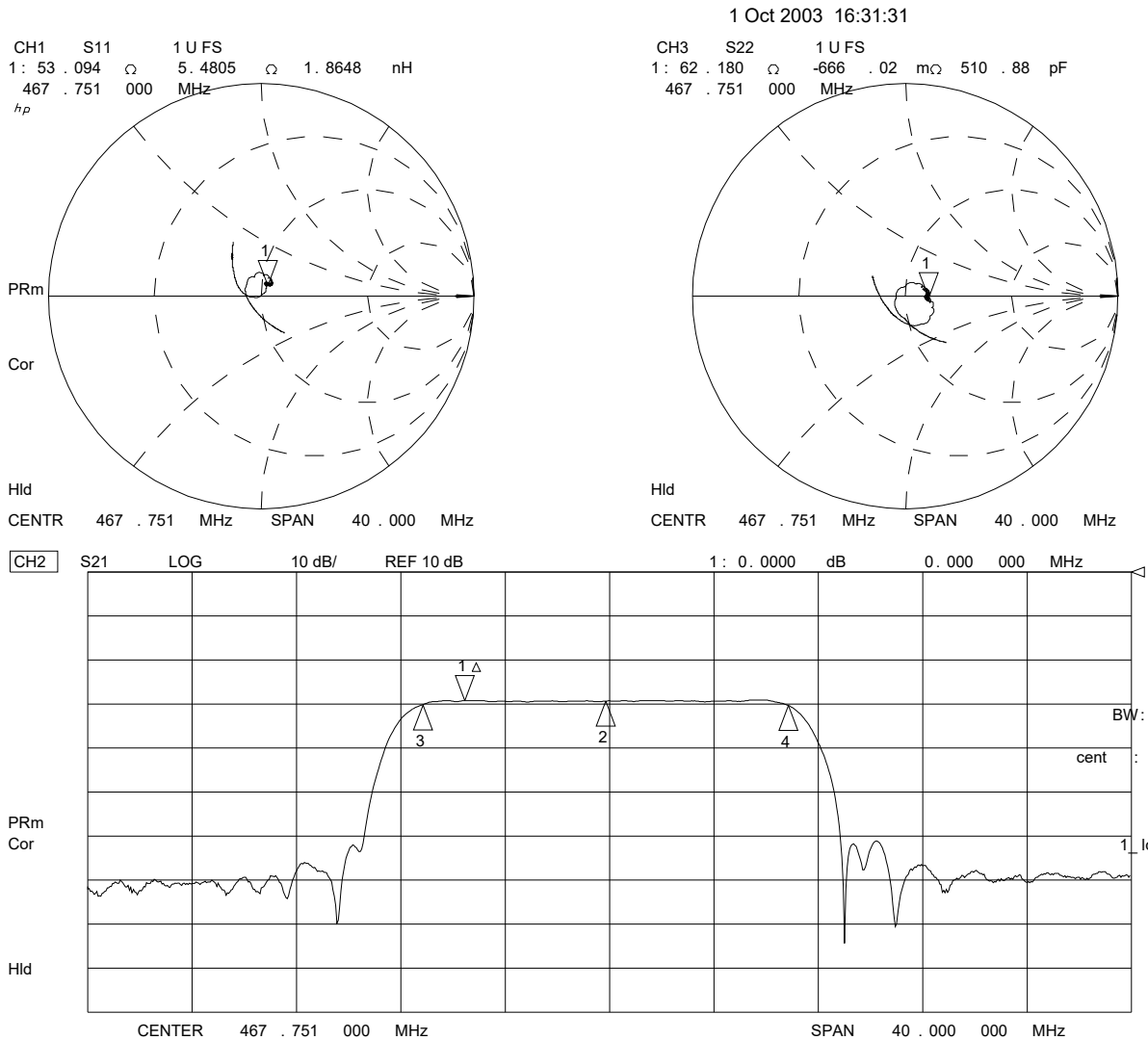




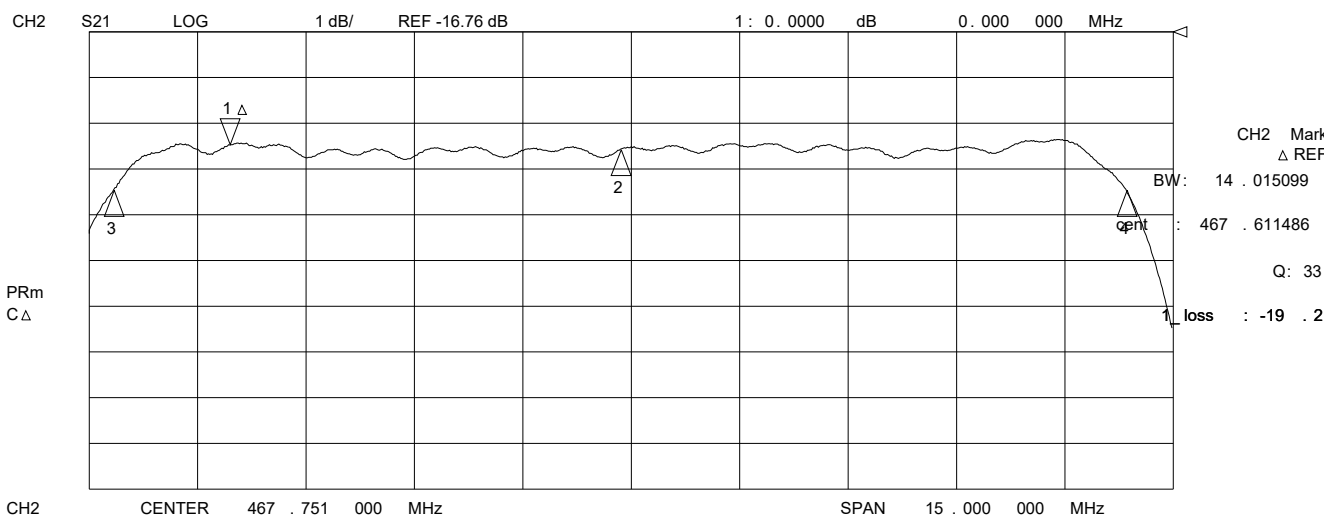
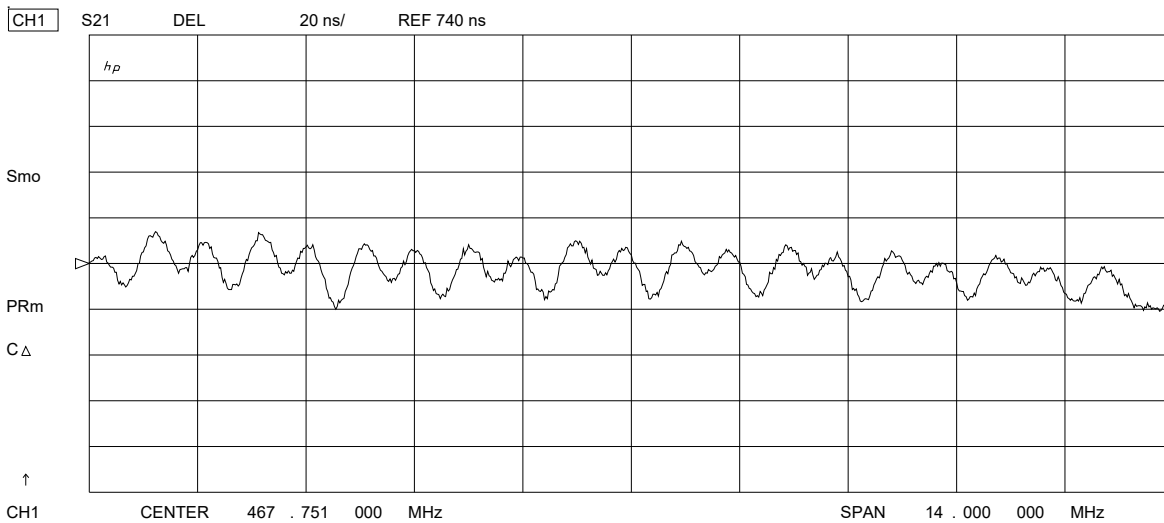
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.



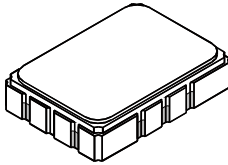
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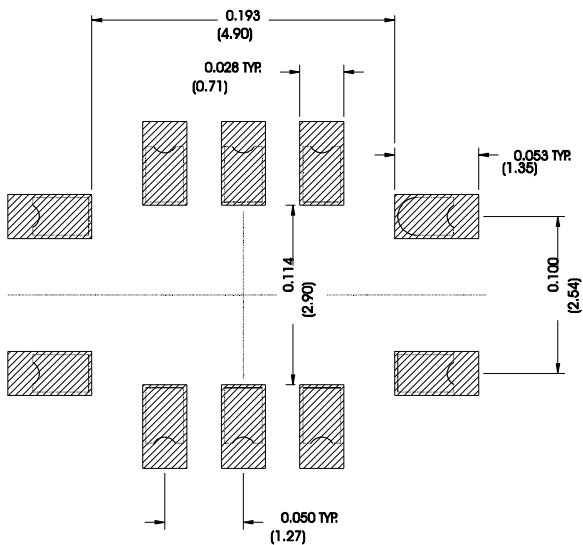
# SMP-03 Case

## 10-Terminal Ceramic Surface-Mount Case

### 7 x 5 mm Nominal Footprint



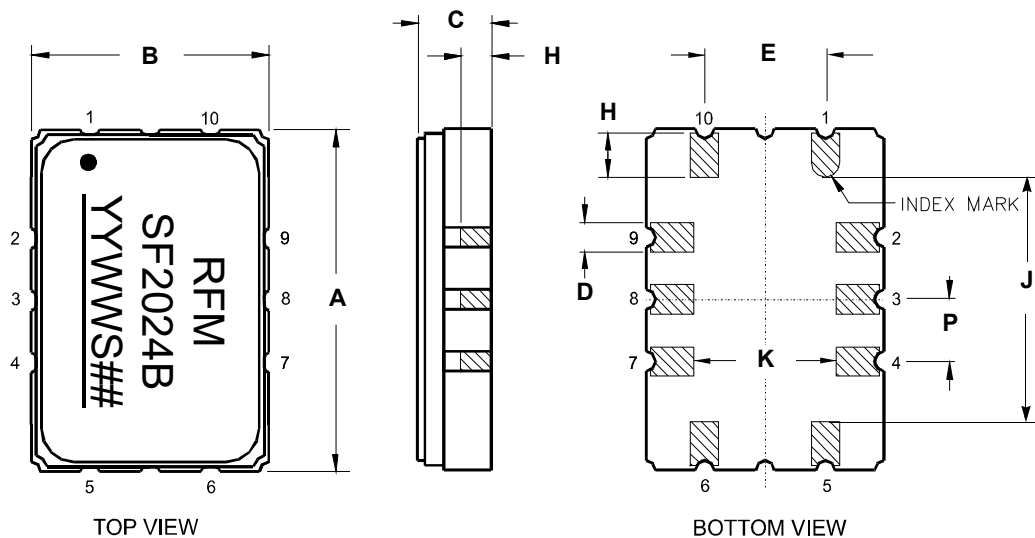
Recommended PCB Footprint



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

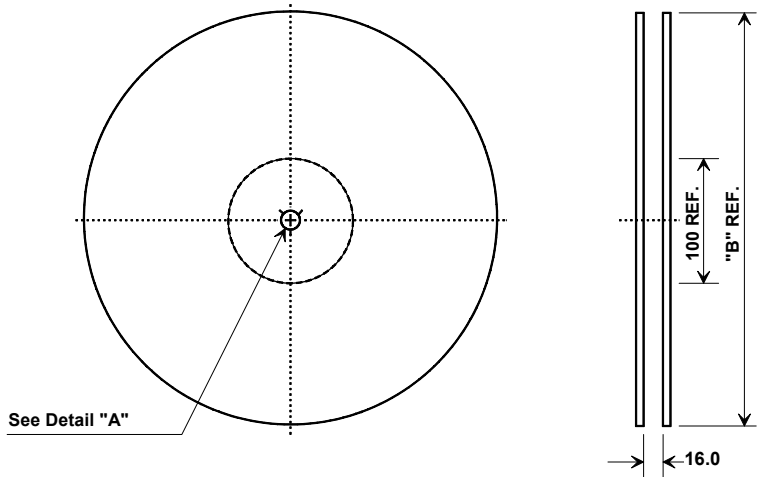
Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 $\mu\text{M}$ ) over 80-200 ulnches (203-508 $\mu\text{M}$ ) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	$\text{Al}_2\text{O}_3$ Ceramic

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	

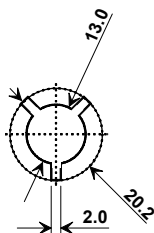


## Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

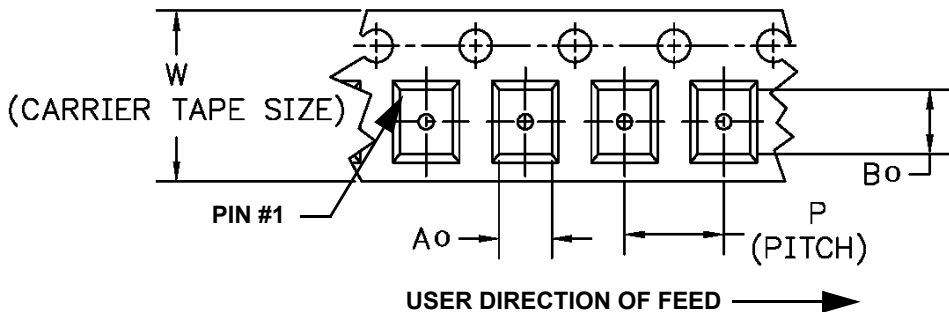
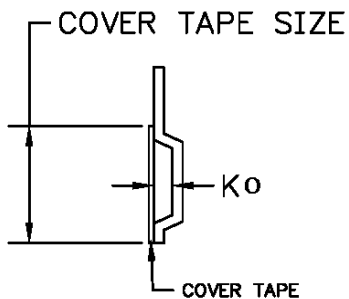


"B "		Quantity Per Reel
Nominal Size		
Inches	millimeters	
7	178	500
13	330	2000



### 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



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

