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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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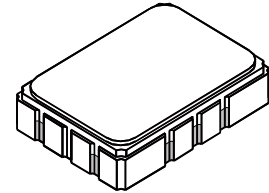


- **Designed for GPS Applications**
- **Quartz Temperature Stability**
- **Small Size**
- **Hermetic 7 x 5 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



**SF1120B**

**298.74 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	298.740			MHz	
Passband Insertion Loss at $f_C$ 1 db Passband 3 db Passband Amplitude Ripple over $f_C \pm 1.0$ MHz Group Delay Variation over $f_C \pm 1.0$ MHz	IL	1, 2			12.0	dB	
	$BW_1$		$\pm 750$			kHz	
	$BW_3$		$\pm 1100$	$\pm 1150$	$\pm 1300$		
						1.0	dB <sub>P-P</sub>
			GDV			250	ns <sub>P-P</sub>
Rejection $f_C - 25$ to $f_C - 5.0$ and $f_C + 5.0$ to $f_C + 25$ MHz		1, 2, 3				dB	
Operating Temperature Range	$T_A$	1	-20		+75	°C	

Matching to Unbalanced Impedance	External L-C to 1k $\Omega$ (Port 1) and 200 $\Omega$ (Port 2)	
Case Style	6	SMP-03 7 x 5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)		RFM SF1120B YYWW



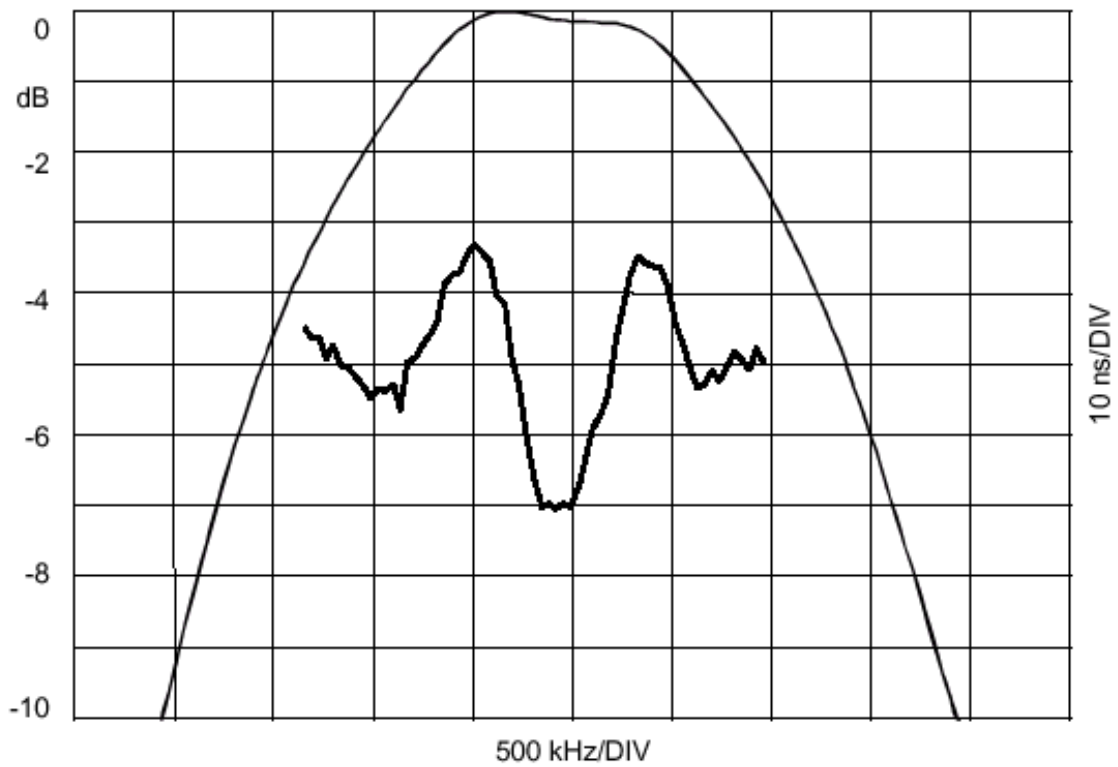
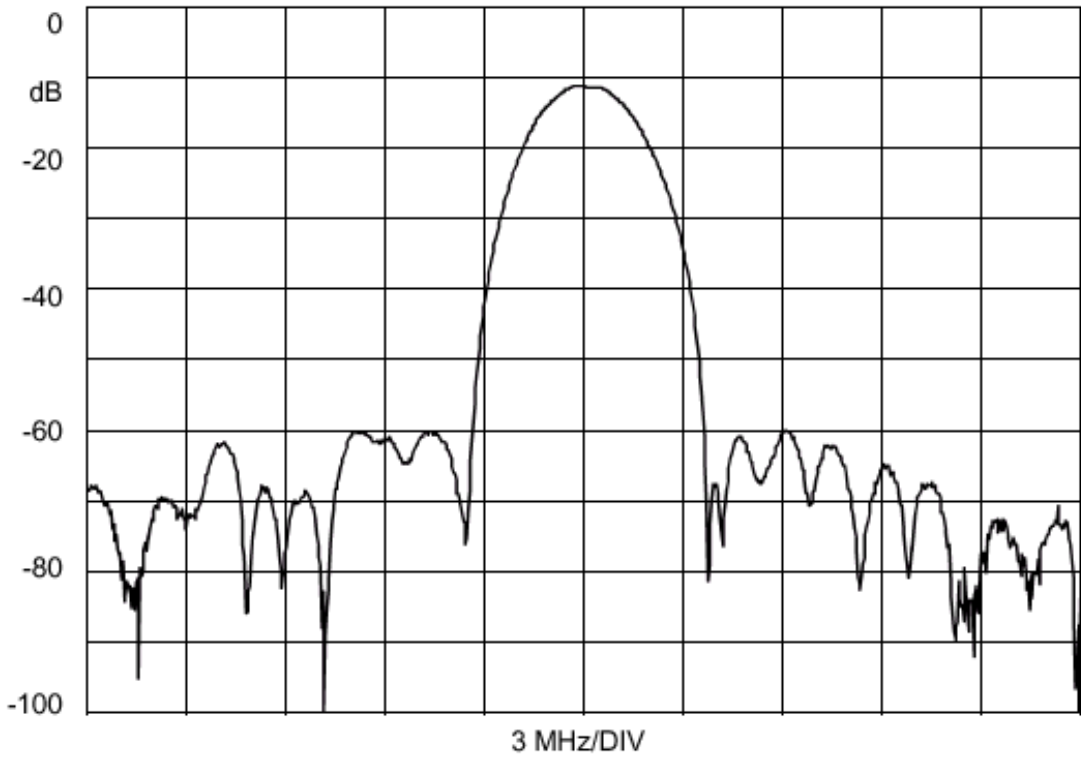
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

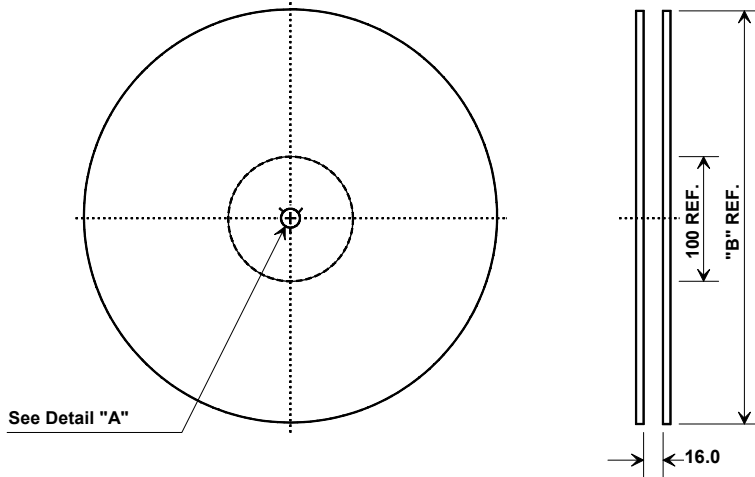
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced 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 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.

**Electrical Connections**

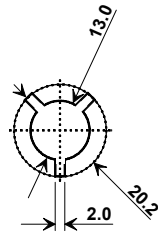
Connection	Terminals
Port 1	1, 10
Port 2	5, 6
Case Ground	All others



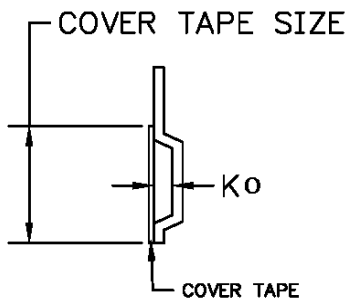
## Tape and Reel Specifications



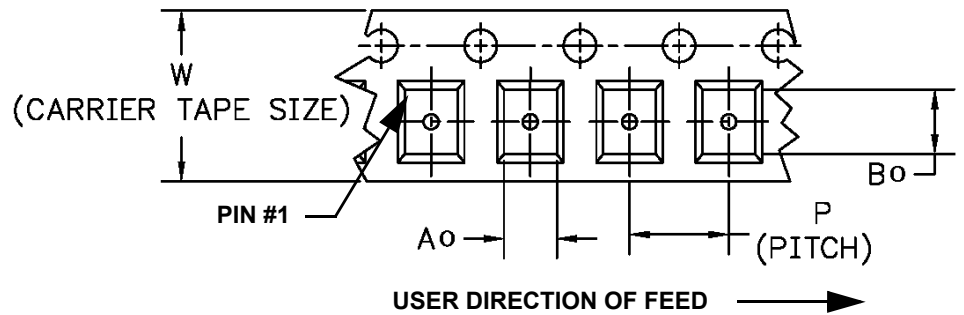
"B "		Quantity Per Reel
Nominal Size		
Inches	millimeters	
7	178	500
13	330	2000



**COMPONENT ORIENTATION and DIMENSIONS**



Carrier Tape Dimensions	
<b>Ao</b>	5.5 mm
<b>Bo</b>	7.5 mm
<b>Ko</b>	2.0 mm
<b>Pitch</b>	8.0 mm
<b>W</b>	16.0 mm

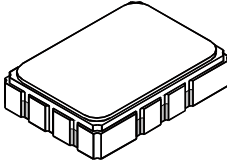




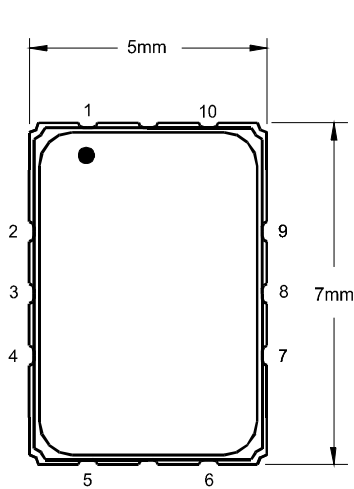
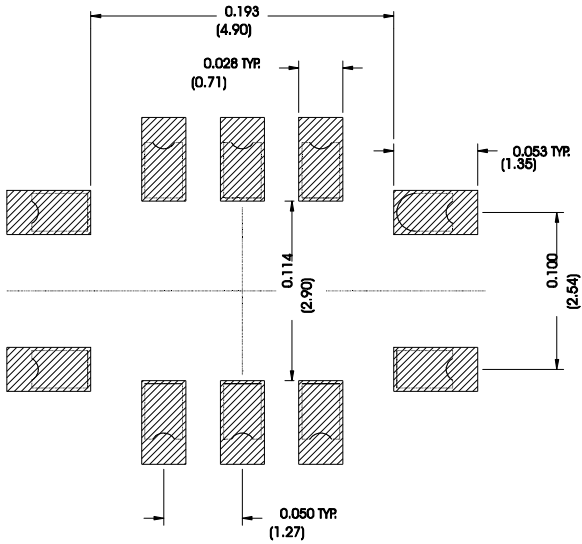
# SMP-03 Case

## 10-Terminal Ceramic Surface-Mount Case

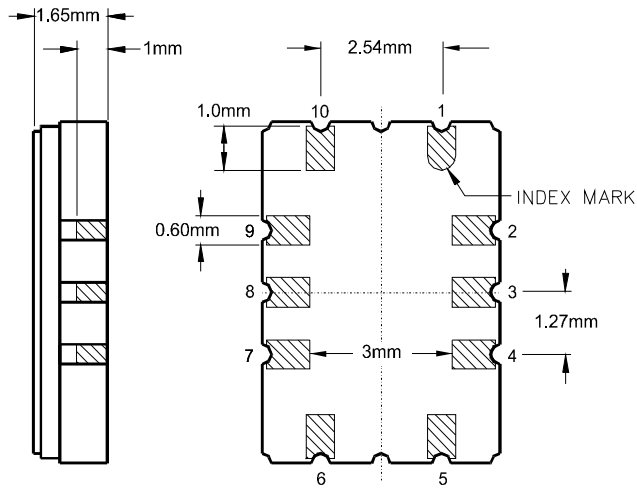
### 7 x 5 mm Nominal Footprint



#### 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		0.60			0.024	
E		2.54			0.100	
H		1.0			0.039	
J		5.00			0.197	
K		3.00			0.118	
P		1.27			0.050	

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

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 <sub>2</sub> O <sub>3</sub> Ceramic
Pb Free	