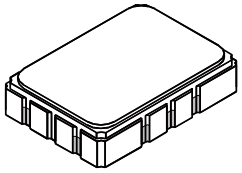
RFM products are now Murata products.

SF1179B

184.14 MHz SAW Filter

- ***IF Filter for RFMD Argo GPS Chipset***
- ***Balance Input / Output Configuration***
- ***Small Size***
- ***Hermetic 7 X 5 mm Surface Mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



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	

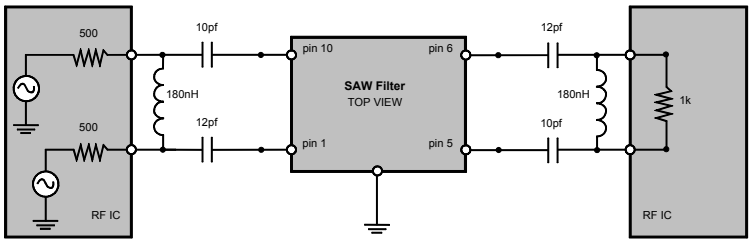
Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C	1		184.14		MHz
Passband	Insertion Loss at fc	IL			8.2	9.0	dB
	3 dB Passband	BW_3	1, 2	11	13.9		MHz
	Amplitude Ripple over fc ±5.0 MHz				0.6	1.25	dB_{P-P}
	Group Delay Variation over fc ±5.0	GDV			45	250	ns
Rejection	fc -15.0 MHz to fc -11.0 MHz		1, 2, 3	35	40		dB
	fc +11.0 MHz to fc +15.0 MHz			35	38.5		
Termination Source impedance (differential)		Z_S			1000		Ω
Termination Load impedance (differential)		Z_L			1000		Ω
Operating Temperature Range		T_A	1	-40		+85	°C

Matching to balanced 1kΩ (See Figure 1)	After External L-C
Case Style	SMP-03 7 X 5 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week) See note 4	RFM SF1179B YYWW

Electrical Connections

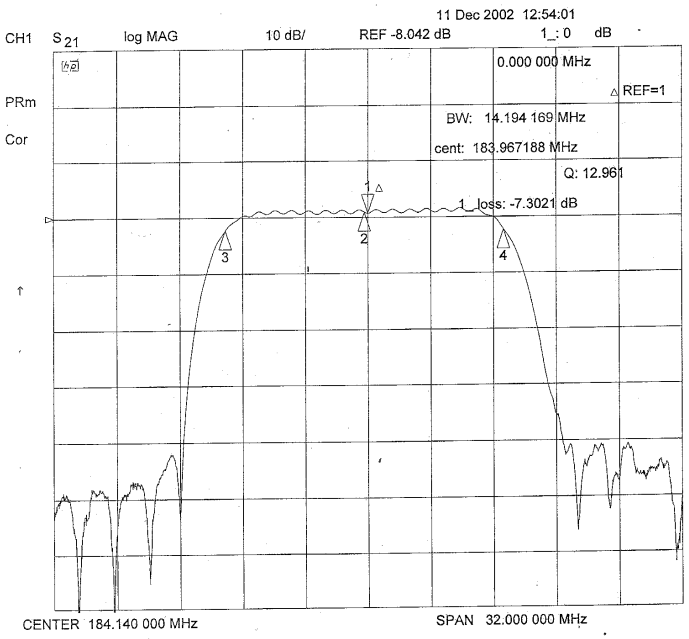
Connection	Terminals
Port 1 Hot	10
Port 1 Gnd Return	1
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others

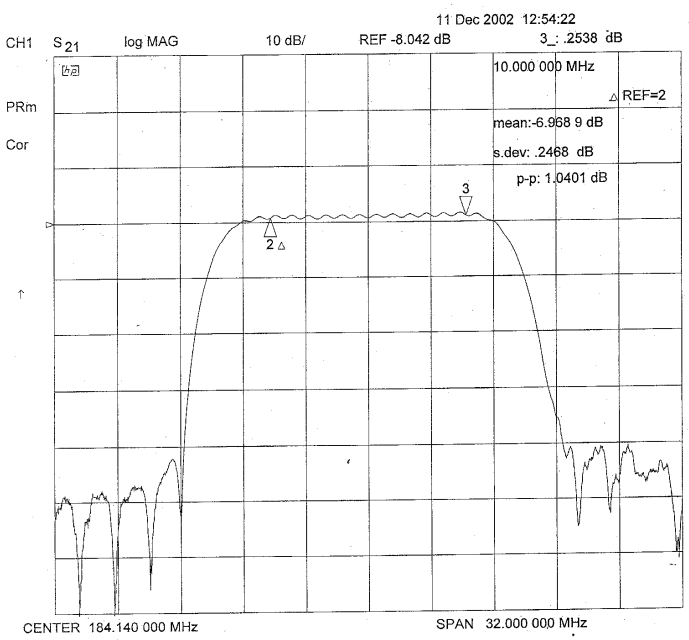


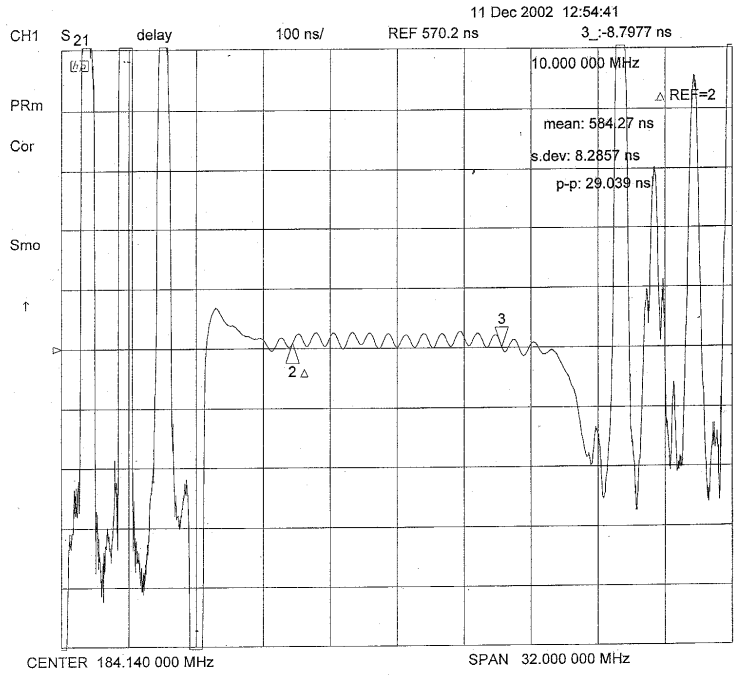
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

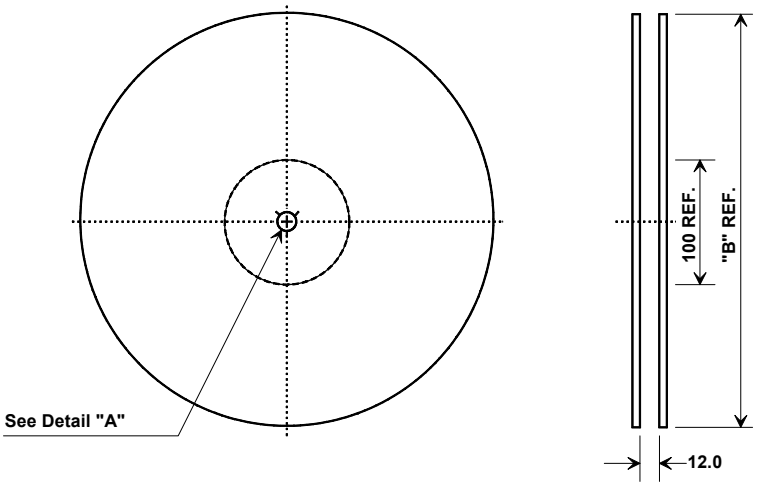
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network ana-lyzer. A dB offset exists for Murata because of the loss introduced by using transformers on the Input and Output.
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. 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.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.



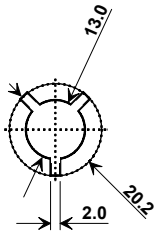




Tape and Reel Specifications

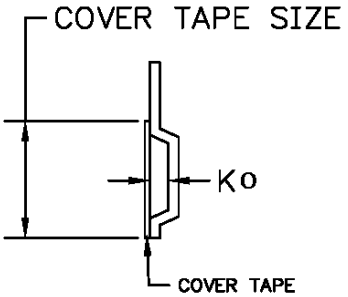


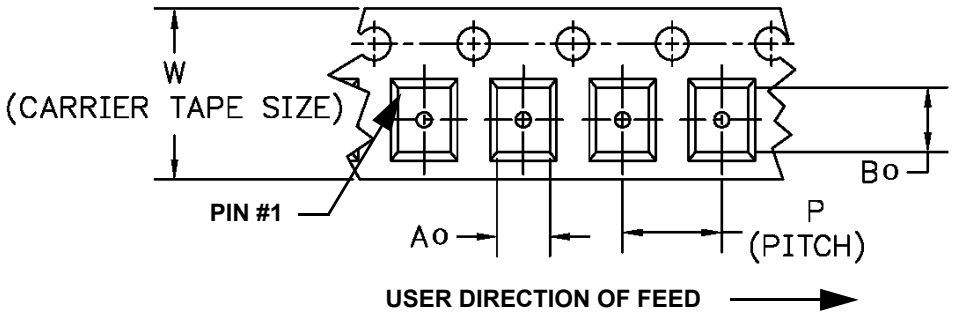
"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	9.4 mm
Bo	7.4 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm

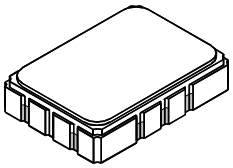




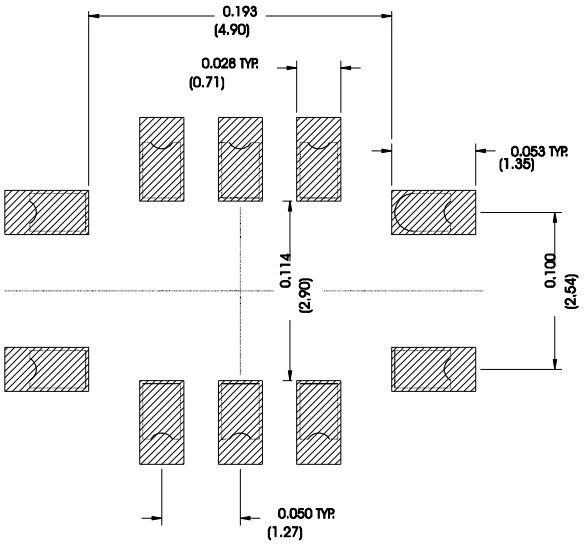
SMP-03 Case

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		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 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