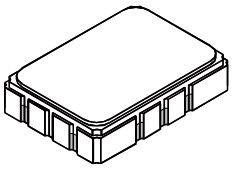
SF1143B-1

315 MHz
SAW Notch Filter

- ***Designed for SDARS IF Receiver***
- ***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
Max Soldering Profile	265°C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1		315.0		MHz
Passband Insertion Loss at fc	IL			15.1	17.0	dB
Passband 1 low frequency	BW_3	1, 2			309.40	MHz
Passband 1 high frequency			313.435			MHz
Passband 2 low frequency					317.965	MHz
Passband 2 high frequency			321.685			MHz
Notch 3dB rejection band relative to Passband 1 and Passband 2:						MHz
3dB low frequency rejection					315.030	
3dB high frequency rejection			315.865			
Maximum Notch depth at fc			-10			dB
Amplitude Ripple over Passband 1 +Passband 2					1.0	dB_{P-P}
Group Delay Variation over Passband 1 +Passband 2	GDV			23	200	ns_{P-P}
Rejection 100 MHz to fc-10.3 and fc+10.3 to fc+100 MHz		1, 2, 3	40			dB
Operating Temperature Range	T_A	1	-40		+85	°C
Differential Input and Output Impedance	250 ohms					
Case Style		6	SMP-03 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift) See note 4			RFM SF1143B-1 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

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 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.
10. ©Copyright 1999, RF Monolithics Inc.
11. Electrostatic Sensitive Device. Observe precautions for handling.

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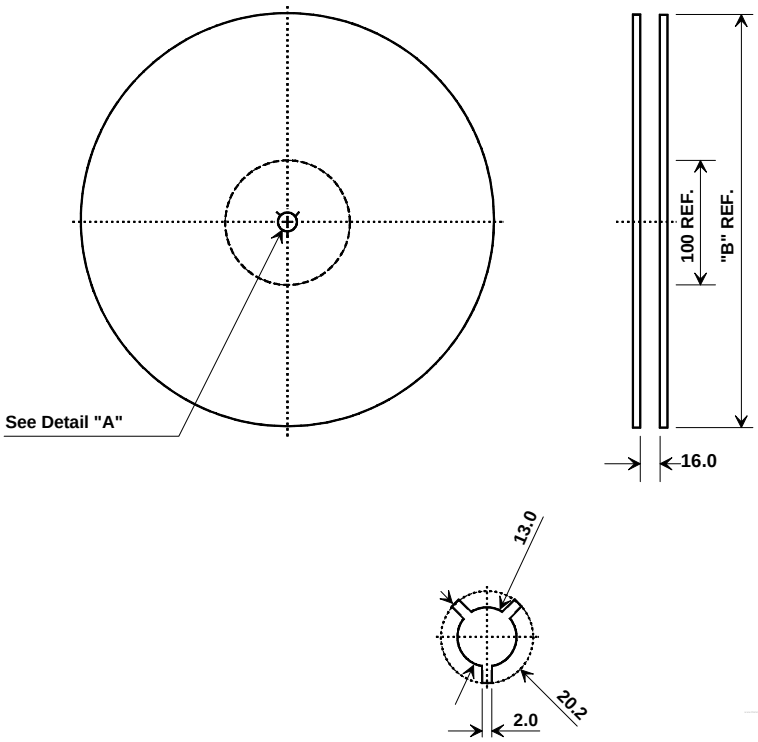
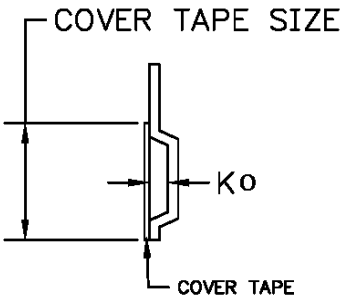
Tape and Reel Specifications

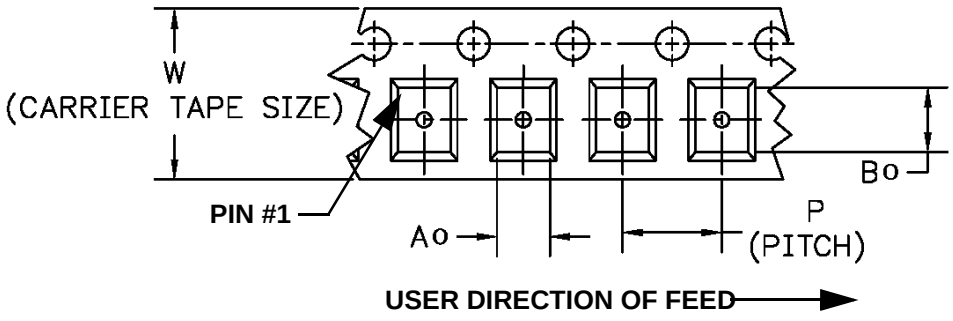


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

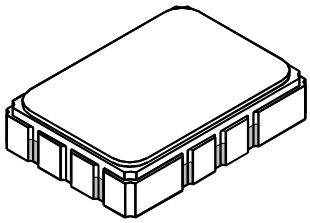
COMPONENT ORIENTATION and DIMENSIONS

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





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

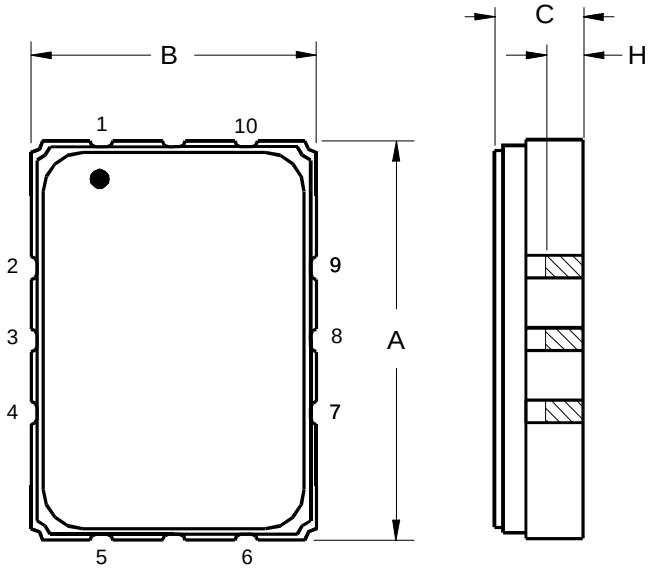


Case Dimensions

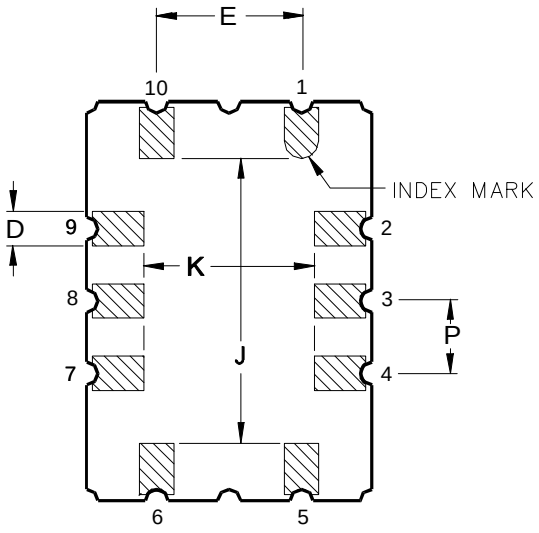
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.60			0.024	
E		2.54			0.100	
H		1.0			0.039	
J		5.00			0.197	
K		3.00			0.118	
P		1.27			0.050	

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**



TOP VIEW



BOTTOM VIEW