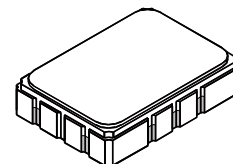


SF2131B

92.16 MHz
SAW Filter



SMP-03

- **Low Insertion Loss**
- **5.0 X 7.0 mm Surface-Mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Terminals	30	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile	265 °C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_c			92.16		MHz
1.5 dB Passband Bandwidth			20			MHz
Minimum Insertion Loss	IL_{MIN}			9	10.0	dB
Attenuation Relative to IL_{MIN}	0 to 40.72 MHz		42	50		dB
	40.72 to 66 MHz		45	49.5		
	61.44 and 122.88 MHz		52	56		
	109 to 143.6 MHz		40	45		
	143.6 to 153.6 MHz		56	60		
	218 to 1000 MHz		58	63		
Amplitude Ripple	82.16 to 102.16 MHz			0.9	1.2	dB _{P-P}
Group Delay Ripple	82.16 to 102.16 MHz			65	100	ns _{P-P}
1 dB Compression Point	82.16 to 102.16 MHz		12	15		dBm
Input IP3			35	40		dBm
Operating Temperature Range			-40		+85	°C
Terminating Source/Load Impedance				50		ohm
Case Style	SMP-03 7 x 5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week, S=shift, ## Sequence Code)	RFM, SF2131B, YYWWS##					

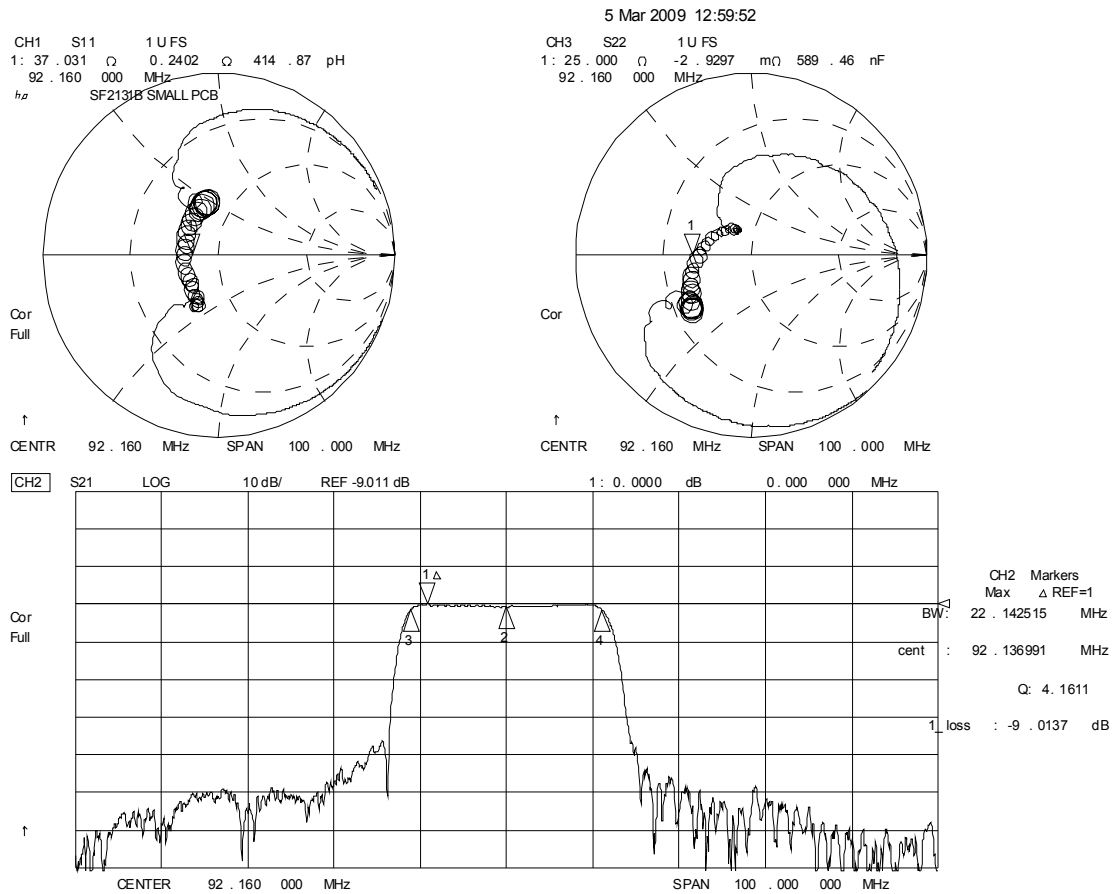


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

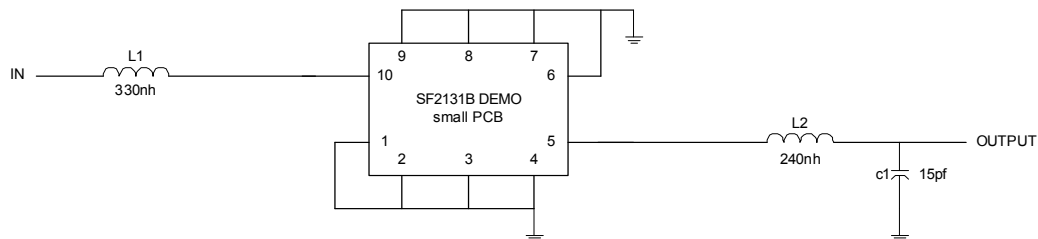
NOTES:

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.

SF2131B I/O Impedance (matched) and Amplitude Plots



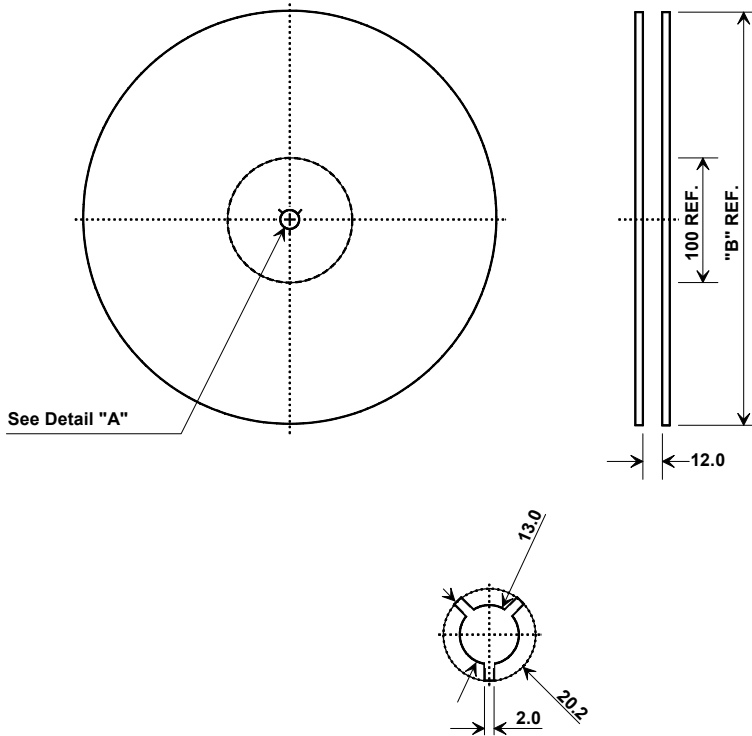
SF2131B Matching Network



PCB	400-1608-001	small PCB, 5X7	PCB
IND	501-0782-331	0805, 330 nH	L1
IND	501-0782-241	0805, 240 nH	L2
CAP	501-1275-150	0805, 15 pF	C1

Tape and Reel Specifications

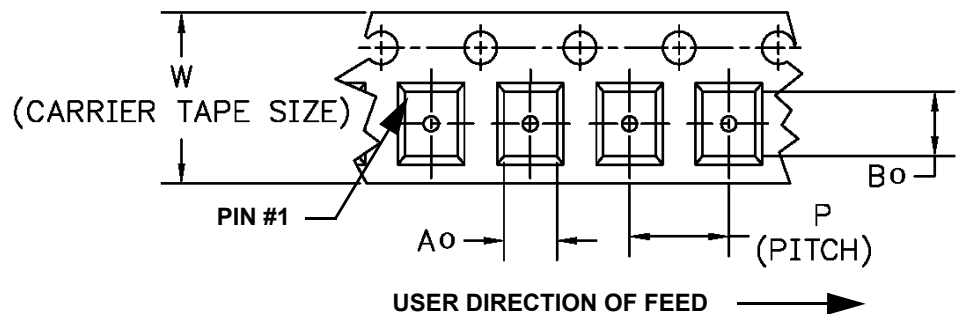
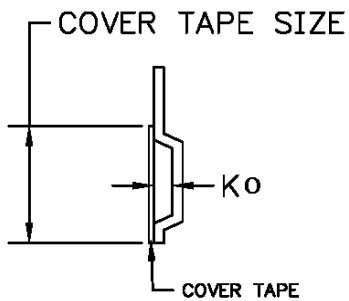
Tape and Reel Standard per ANSI/EIA-481



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

COMPONENT ORIENTATION and DIMENSIONS

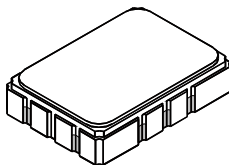
Carrier Tape Dimensions	
Ao	9.4 mm
Bo	7.4 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm



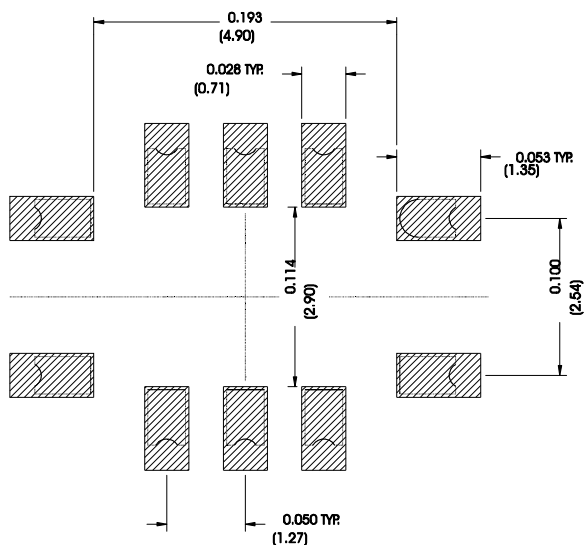
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



Recommended PCB Footprint



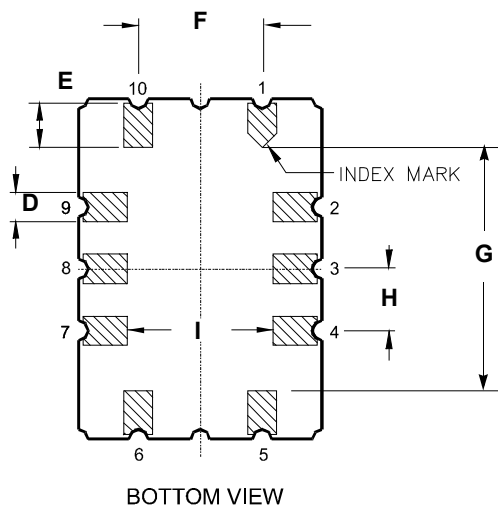
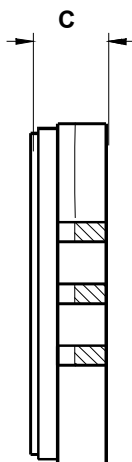
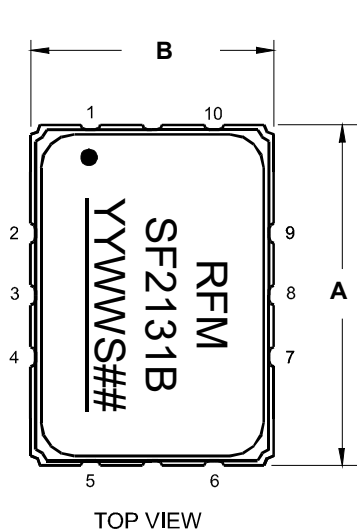
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C	-	1.65	2.00	-	0.065	0.079
D	0.47	0.60	0.73	0.019	0.024	0.029
E	0.87	1.00	1.13	0.034	0.039	0.044
F	2.41	2.54	2.67	0.094	0.100	0.105
G	4.87	5.00	5.13	0.192	0.197	0.202
H	1.14	1.27	1.40	0.044	0.050	0.055
I	2.87	3.00	3.13	0.112	0.118	0.123

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 Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic



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.

