THE DATASHEET OF

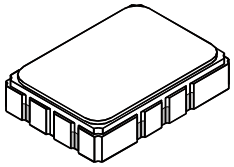
SF2145B

RFM
A BRAND OF AKOUSTIS

SF2145B

895 MHz SAW Filter

- ***SAW Filter, 895 MHz, 15 MHz BW***
- ***7.0 X 5.0 mm 10 pin Surface-Mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***



SMP-03

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+20	dBm
Maximum DC Voltage Between any Two Terminals	0	VDC
Operating Temperature Range	-20 to +70	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			895		MHz
Source Impedance, single ended				50		Ω
Load Impedance, single ended				50		Ω
1 dB Bandwidth				18		MHz
Insertion Loss, 894 to 895.5 MHz	IL			8.5	9.0	dB
Insertion Loss Variation: Any point within 894 to 895.5 MHz measured at a constant temperature with the RF input level varying from +10 to +20 dBm					0.3	ΔdB
Amplitude Ripple, 894 to 895.5 MHz				.35	.75	dB
Average Group Delay, 894 to 895.5 MHz			804	814	824	ns
Group Delay Variation, 894.0 to 895.5 MHz				10	25	ns_{P-P}
Input / Output Return Loss at f_C			10	15		dB
Temperature Coefficient				-18		ppm/K

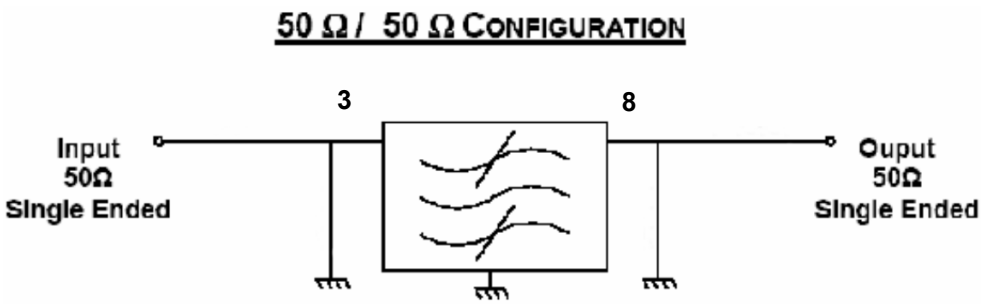
Case Style	SMP-03 7.0 x 5.0 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week, S=Shift, ## = Sequence Code)	RFM, SF2145B, YYWWS##

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

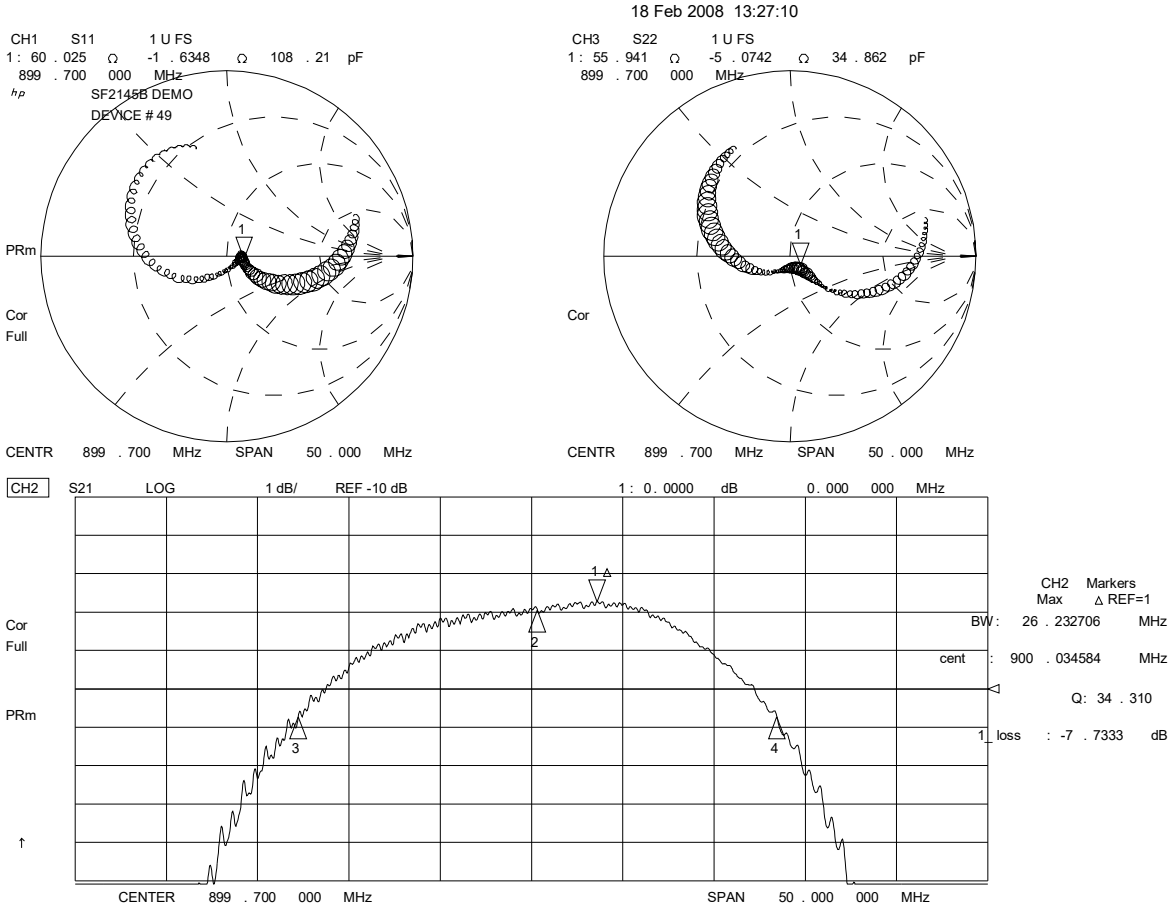
NOTES:

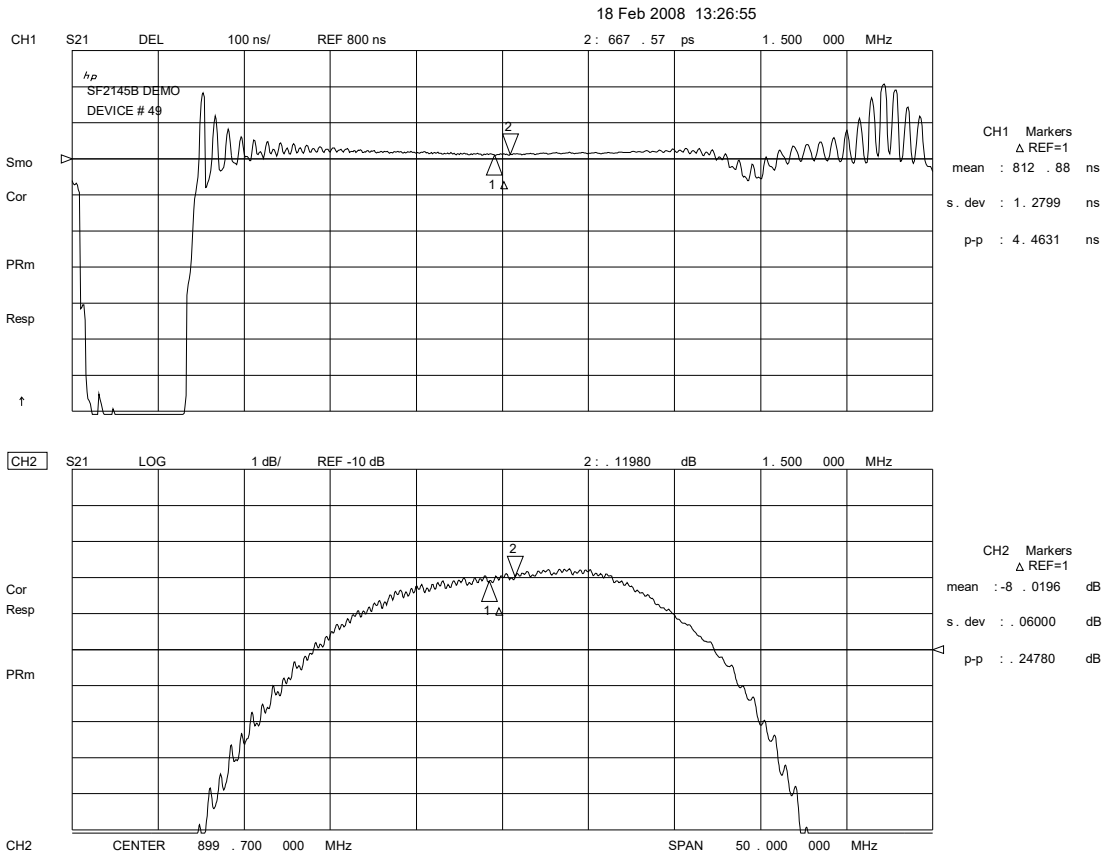
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Tesing Environment



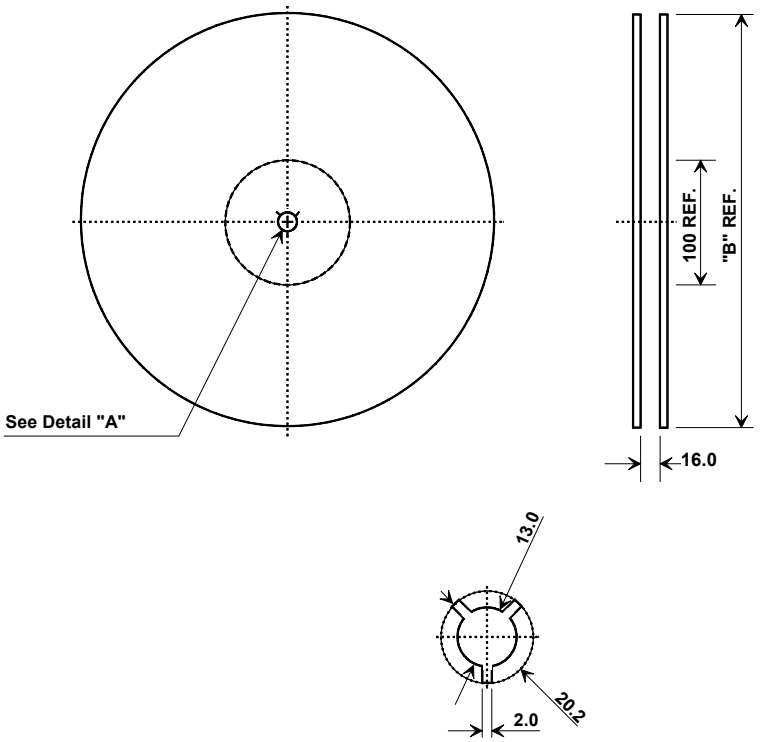
Note: Unmatched Filter to 50Ω Input / Output.




18 Feb 2008 13:26:55
CH1 S21 DEL 100 ns/ REF 800 ns 2 : 667 . 57 ps 1 . 500 000 MHz
SF2145B DEMO
DEVICE # 49
Smo
Cor
PRm
Resp
CH1 Markers
Δ REF=1
mean : 812 . 88 ns
s . dev : 1 . 2799 ns
p-p : 4 . 4631 ns
CH2 S21 LOG 1 dB/ REF -10 dB 2 : . 11980 dB 1 . 500 000 MHz
Cor
Resp
PRm
CH2 Markers
Δ REF=1
mean : -8 . 0196 dB
s . dev : . 06000 dB
p-p : . 24780 dB
CH2 CENTER 899 . 700 000 MHz SPAN 50 . 000 000 MHz

Tape and Reel Specifications

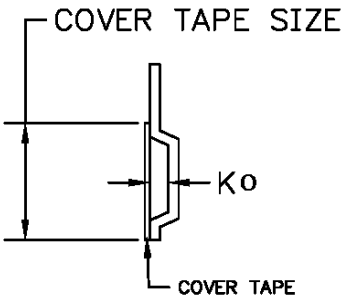
Tape and Reel Standard per ANSI/EIA-481

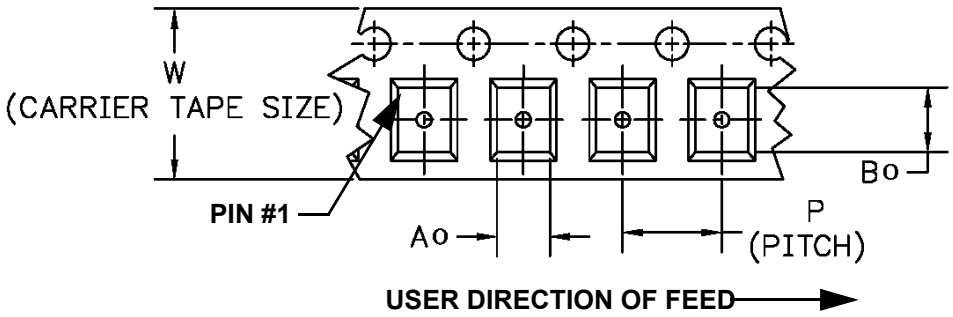


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

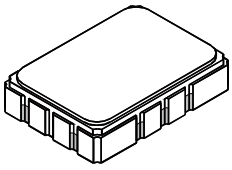
Carrier Tape Dimensions	
Ao	5.5 mm
Bo	7.5 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm



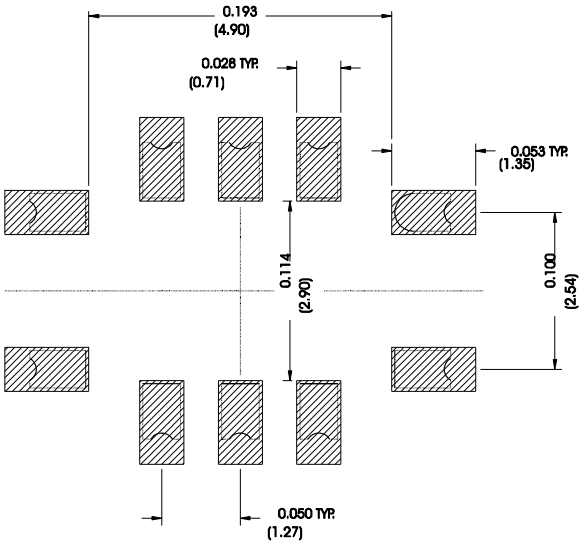


SMP-03 Case

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



Recommended PCB Footprint



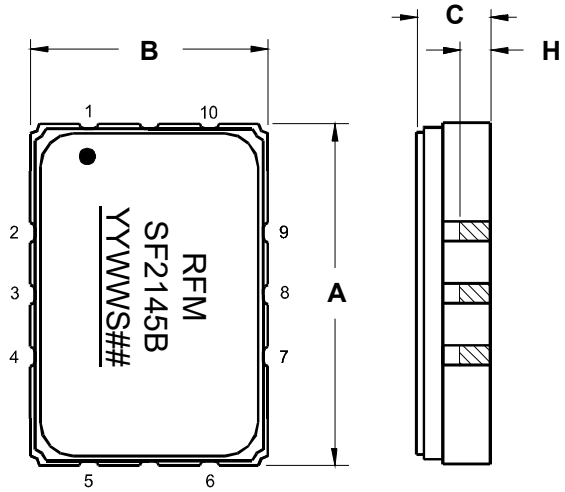
Case Dimensions

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

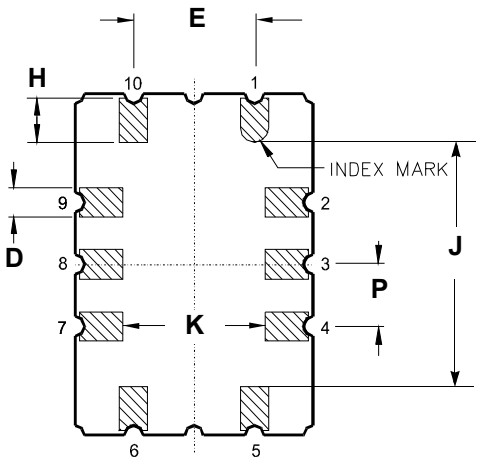
Electrical Connections

Connection	Terminals
Input (Port 1)	3
Output (Port 2)	8
Case Ground	2, 4, 7, 9
To Be Grounded	1, 2, 4, 5, 6, 7, 9, 10

Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic



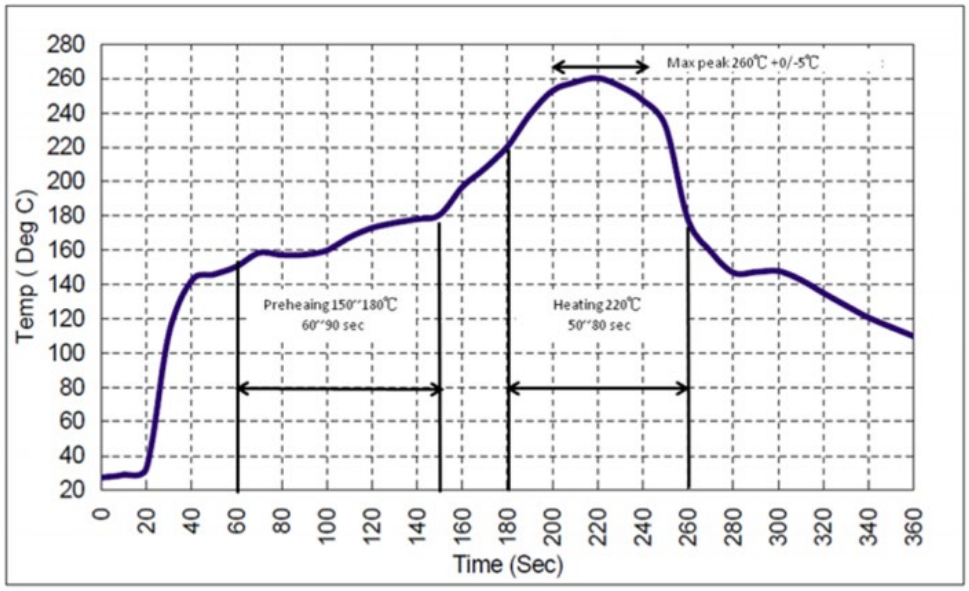
TOP VIEW



BOTTOM VIEW

Recommended Reflow Profile

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



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