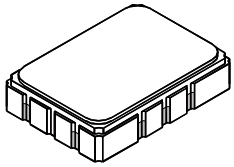
RFM
A BRAND OF AKOUSTIS

RoHS compliant

SF1140B

75.00 MHz
SAW Filter

- ***Designed for SDARS IF Receiver***
- ***Low Insertion Loss***
- ***5.0 X 7.0 mm Surface-Mount Case***
- ***Differential Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***
- ***AEC-Q200 Qualified***



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	

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C			75.000		MHz
Passband	Insertion Loss at fc	IL			11.0	13.0	dB
	1dB Passband	BW_1		±2.1	±2.7		MHz
	Fast Amplitude Ripple over fc ±2.1 MHz					1.0	dB_{P-P}
	Group Delay Variation over fc ±2.1 MHz	GDV			40	200	ns_{P-P}
Rejection	fc-15 to fc-7.15 and fc+15 to fc+65 MHz			40	43		dB
	fc+7.15 to fc+15 MHz			36			
Operating Temperature Range		T_A		-40		+85	°C
Differential Input and Output Impedance		250 ohms					
Case Style				SMP-03 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift, ##= Sequence Code)				RFM SF1140B 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

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

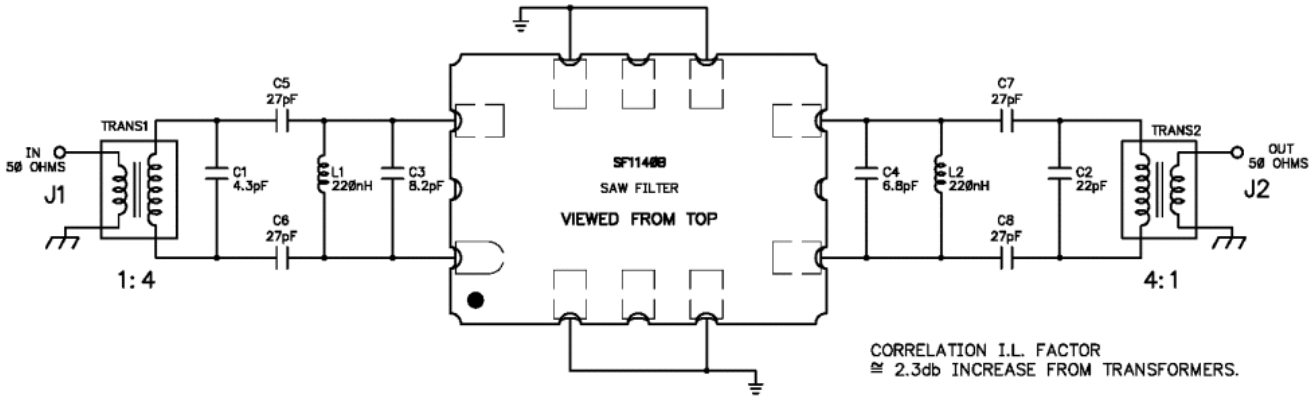
NOTES:

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.

NOTES:

1. ~~SOLDER "TAPE" 4 PLACES ONTO COMPONENT SIDE OF PCB AS SHOWN.~~
2. USE A WRIST STRAP WHEN SOLDERING TRANS 1, AND TRANS 2 TO PCB. (CUT LEADS .Ø7 IN.)
3. MOUNT AND SOLDER ALL COMPONENTS ON PCB.
4. CUT CENTER CONDUCTORS FROM J1 AND J2 TO .1Ø IN.
5. MOUNT J1 AND J2 AS SHOWN (SOLDER BACKSIDE ALSO).
6. LABEL DEMO BOARD ACCORDINGLY.
7. MOUNT "FILTER" ON TOPSIDE OF PCB AS SHOWN.
8. ~~MOUNT L1 AND L2 9Ø° TO EACH OTHER.~~
9. ~~CUT SHIELD IN TWO PIECES..."SHIELD A" AND "SHIELD B". SOLDER TO PCB AS SHOWN.~~

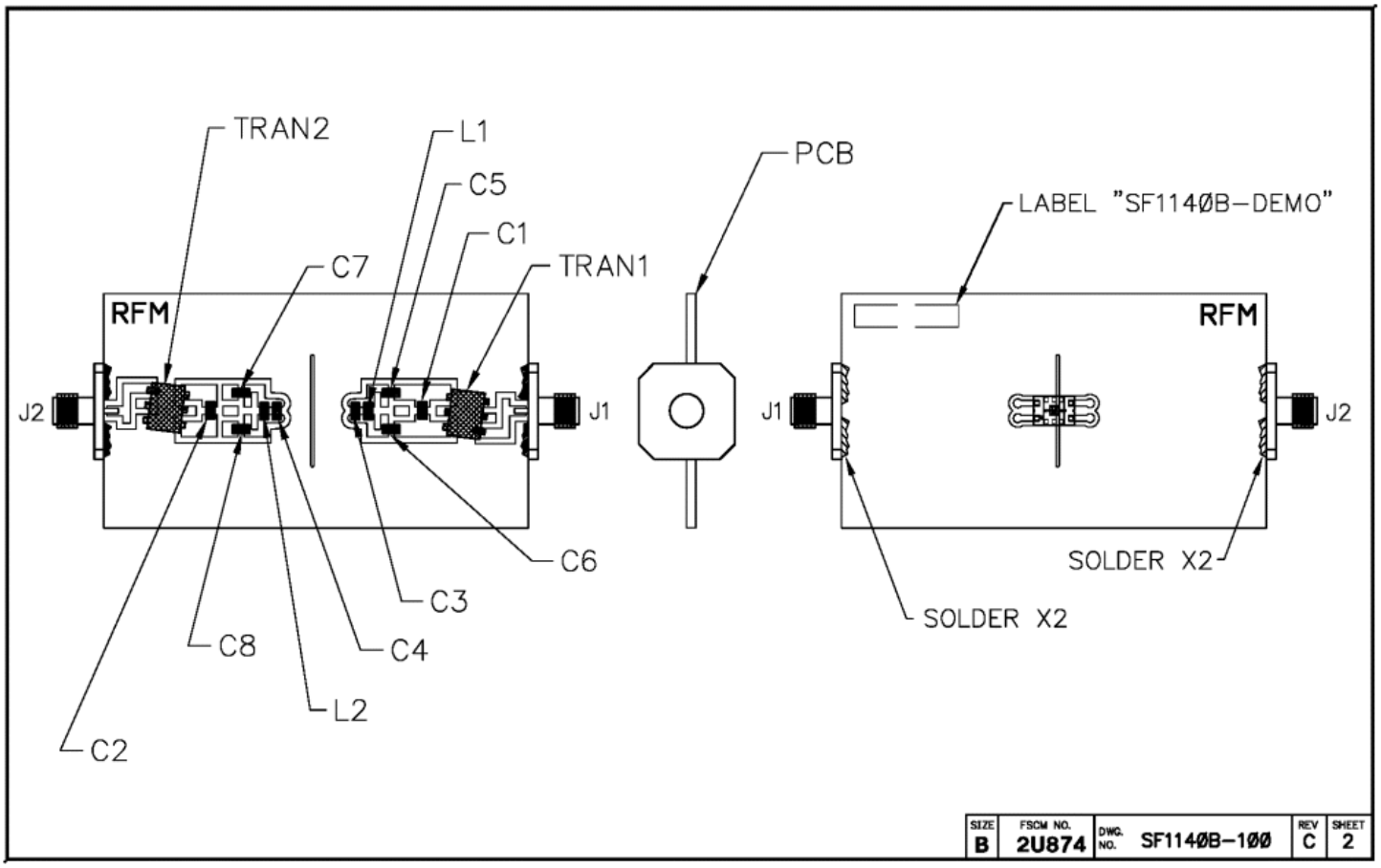
REV	ECN	DESCRIPTION	DATE
A	9214	INITIAL RELEASE	29novØØ
B	1Ø655	REVISED	3Øaprø2
C	11Ø78	REVISED	2Ønovø2

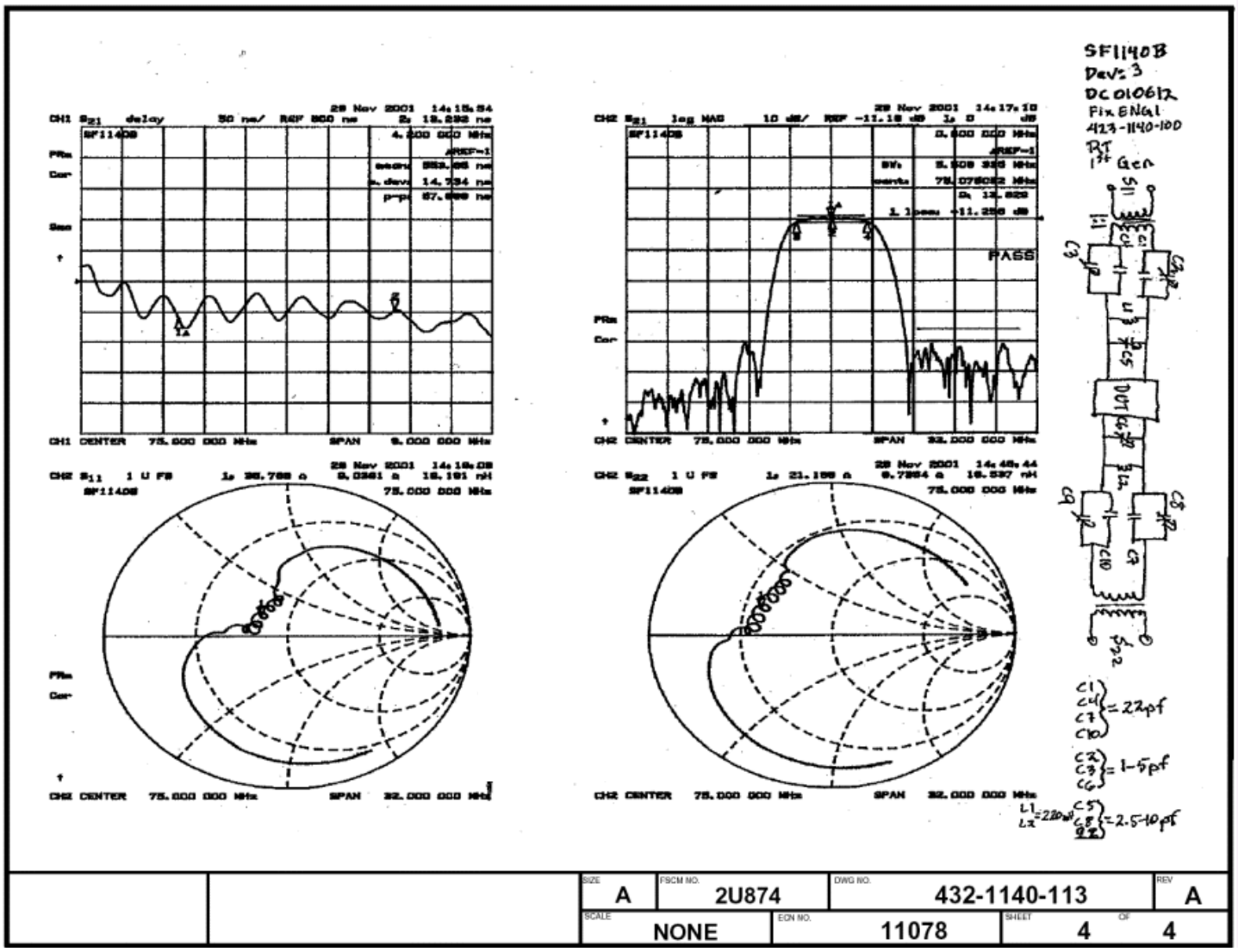


CORRELATION I.L. FACTOR
≅ 2.3db INCREASE FROM TRANSFORMERS.

TITLE: ASSY DIAGRAM, SF1140B-DEMO, S, TD

SIZE	FSCM NO.	DWG. NO.	REV	SHEET
B	2U874	SF1140B-100	C	1/2

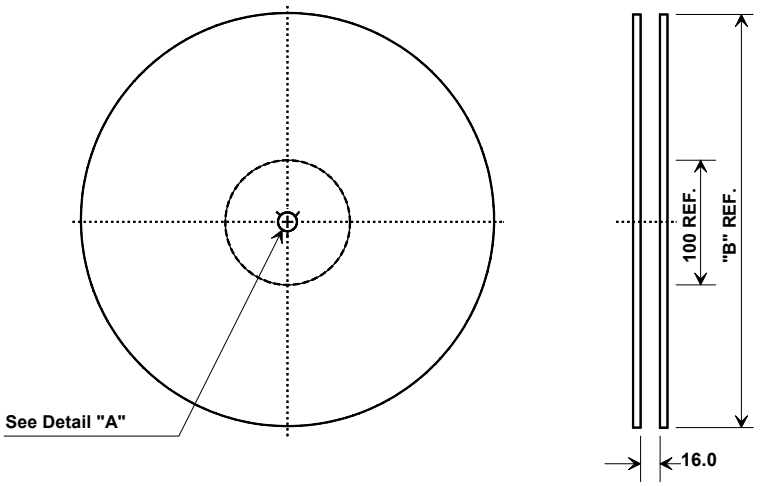

TRAN2
L1
C5
C1
C7
TRAN1
PCB
LABEL "SF1140B-DEMO"
RFM
RFM
J2
J1
J1
J2
C6
C3
C8
C4
L2
C2
SOLDER X2
SOLDER X2
SIZE B
FSCM NO. 2U874
DWG. NO. SF1140B-100
REV C
SHEET 2



		SIZE	FSCM NO.	DWG NO.	REV
		A	2U874	432-1140-113	A
		SCALE	ECN NO.	SHEET	OF
		NONE	11078	4	4

Tape and Reel Specifications

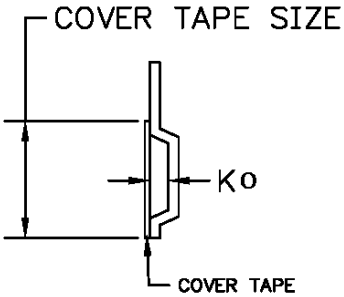
Tape and Reel Standard per ANSI/EIA481

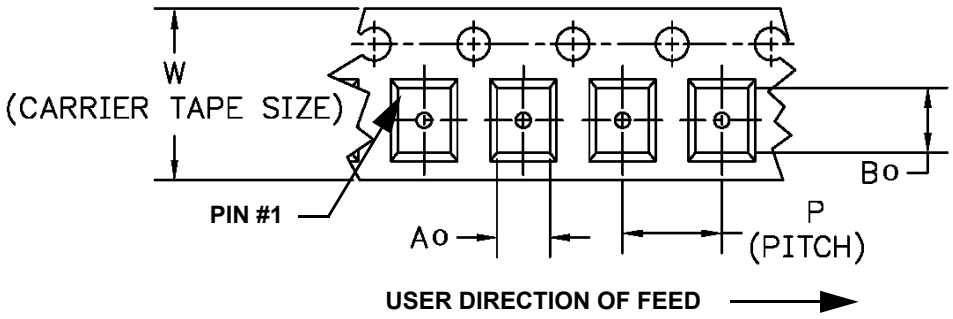


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions		Tolerance
Ao	5.5 mm	± 0.1mm
Bo	7.5 mm	± 0.1mm
Ko	2.0 mm	± 0.1mm
Pitch	8.0 mm	± 0.1mm
W	16.0 mm	± 0.2mm

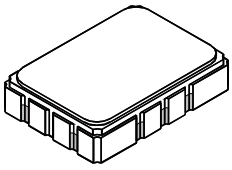




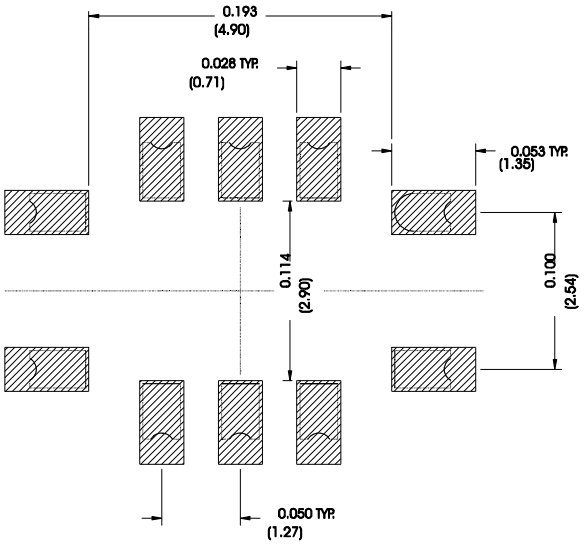
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



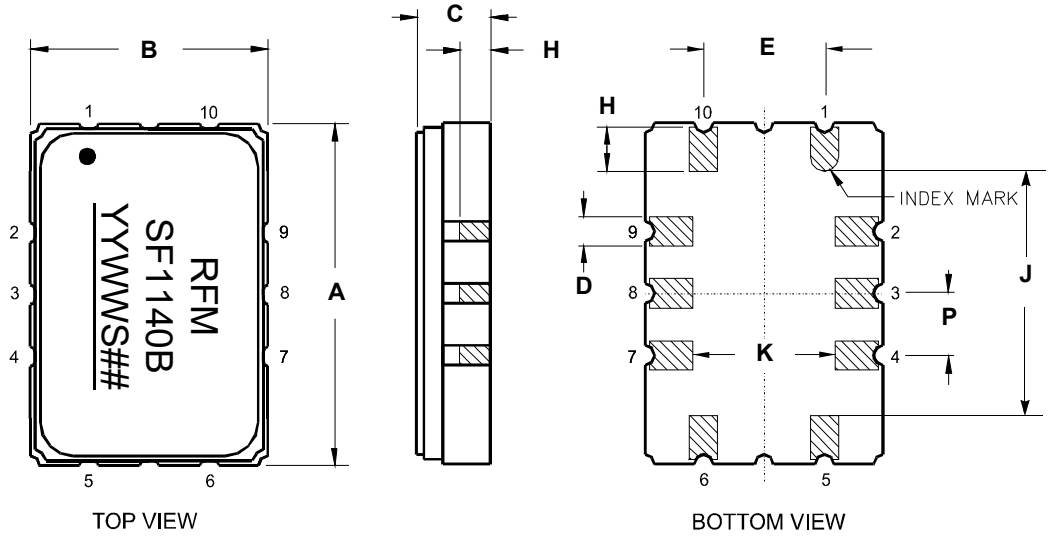
Recommended PCB Footprint



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

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

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**



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.