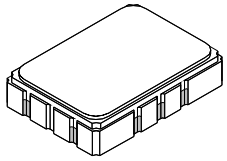
SF1140B 75 MHz SAW Filter

- *Designed for SDARS IF Receiver*
- *Low Insertion Loss*
- *5.0 x 7.0 mm Surface-Mount Case*
- *Differential Input and Output*



See Associated Plots

Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc		75.000		MHz	1
Passband Insertion Loss at fc	IL		11.0	13.0	dB	
1 dB Passband	BW_1	±2.1	±2.7		MHz	1, 2
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 MHz to fc-7.15MHz and Fc+15 to Fc+65 MHz fc+7.15MHz to fc+15 MHz		40 36	43		dB	1, 2, 3
Operating Temperature Range	T_A	-40		+85	°C	1

Differential Input and Output Impedance	250 ohms
Case Style	SMP-03 7 x 5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF1140B YYWW

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 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

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. Matching components maximum 2 inductors (Q=30), 2 capacitors and one resistor or transformer at each 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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
9.
10. Electrostatic Sensitive Device. Observe precautions for handling.

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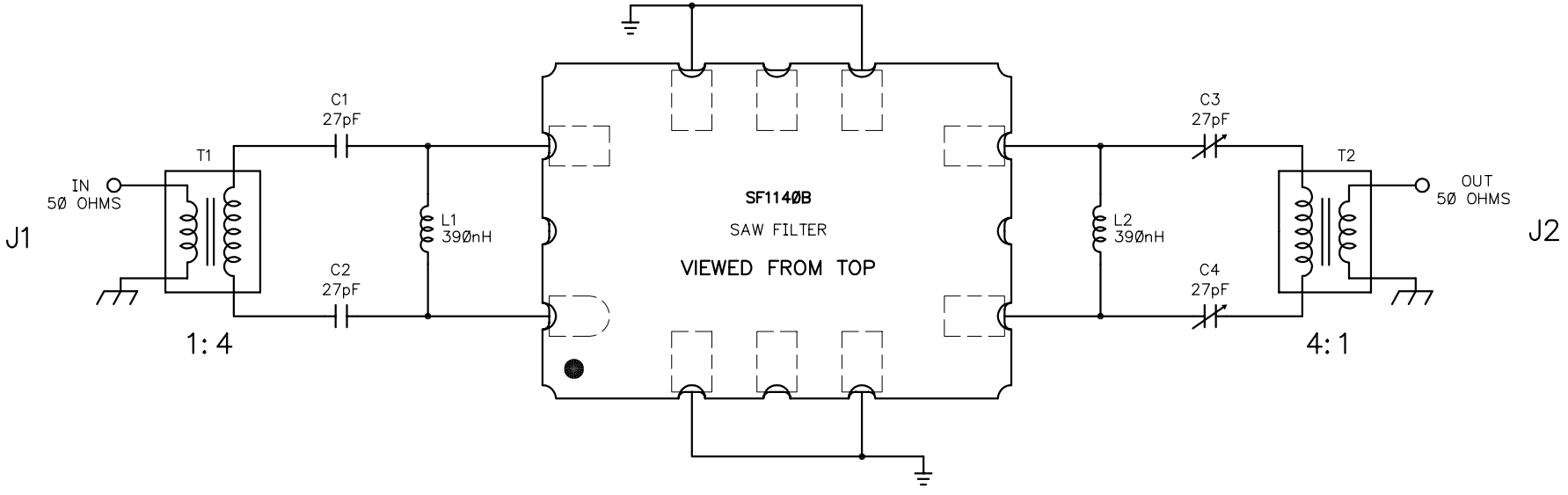
European Sales Office

NOTES:

1. SOLDER "TAPE" 4 PLACES ONTO COMPONENT SIDE OF PCB AS SHOWN.
2. USE A WRIST STRAP WHEN SOLDERIING 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.

REV	ECN	DESCRIPTION	DATE
A	9214	INITIAL RELEASE	29novØØ



MATERIAL/FINISH:

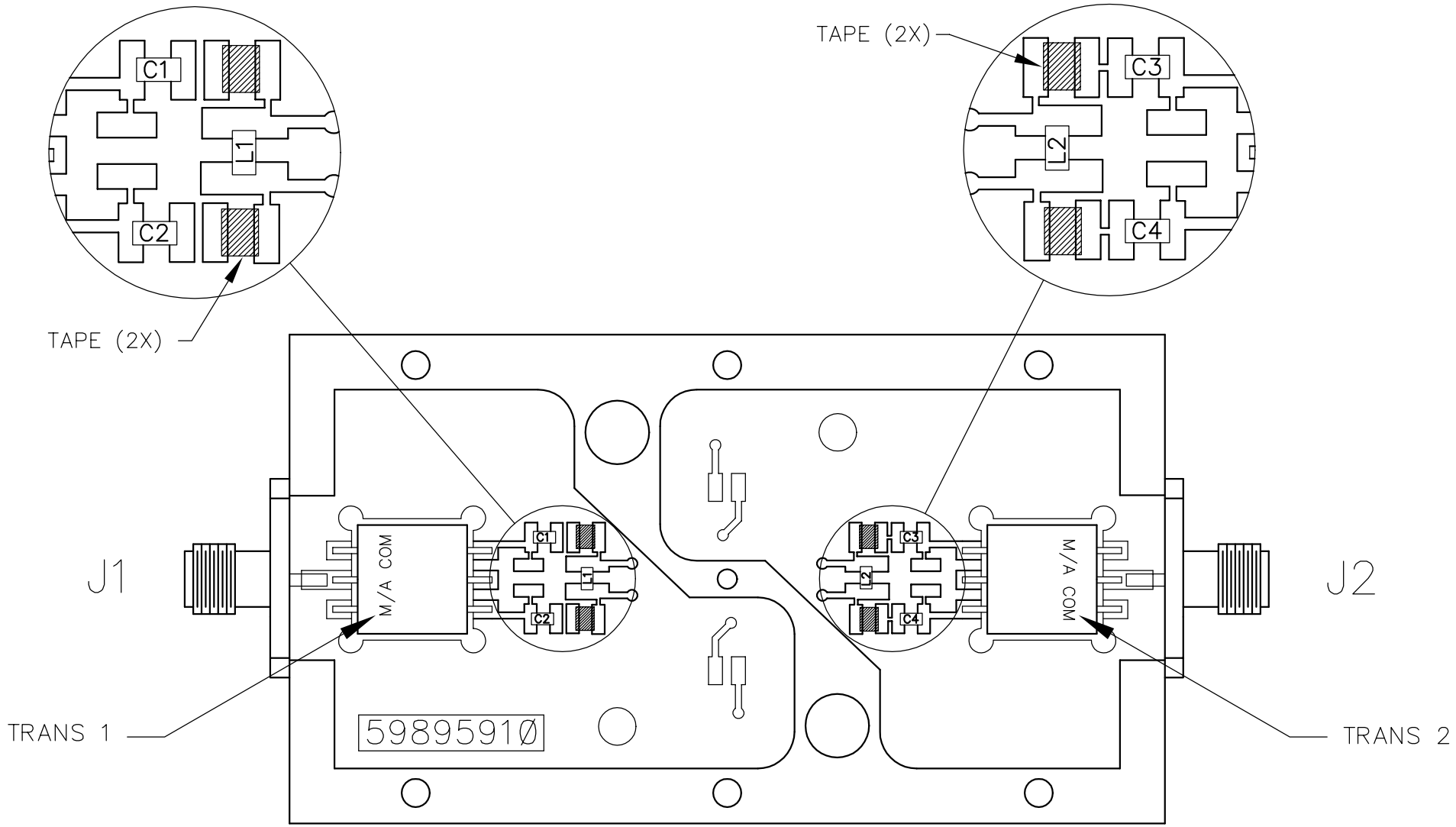
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES(mm)
DIMENSIONING AND TOLERANCING PER ANSI Y14.5-1982
DRAWING PREPARED IN ACCORDANCE WITH MIL-STD-1ØØ
LINEAR GENERAL TOLERANCING AS FOLLOWS:
.XX = ±.Ø1 .XXX = ±.ØØ5 .XXXX = ±.ØØ1Ø
ANGULAR = ±Ø°3Ø'
GENERAL MACHINED SURFACE FINISH 63

DRAWN	DATE
J.F.Christopherson	29novØØ
CHECKED/APPROVED	DATE

RFMonolithics, Inc.
DALLAS , TEXAS 75244 USA

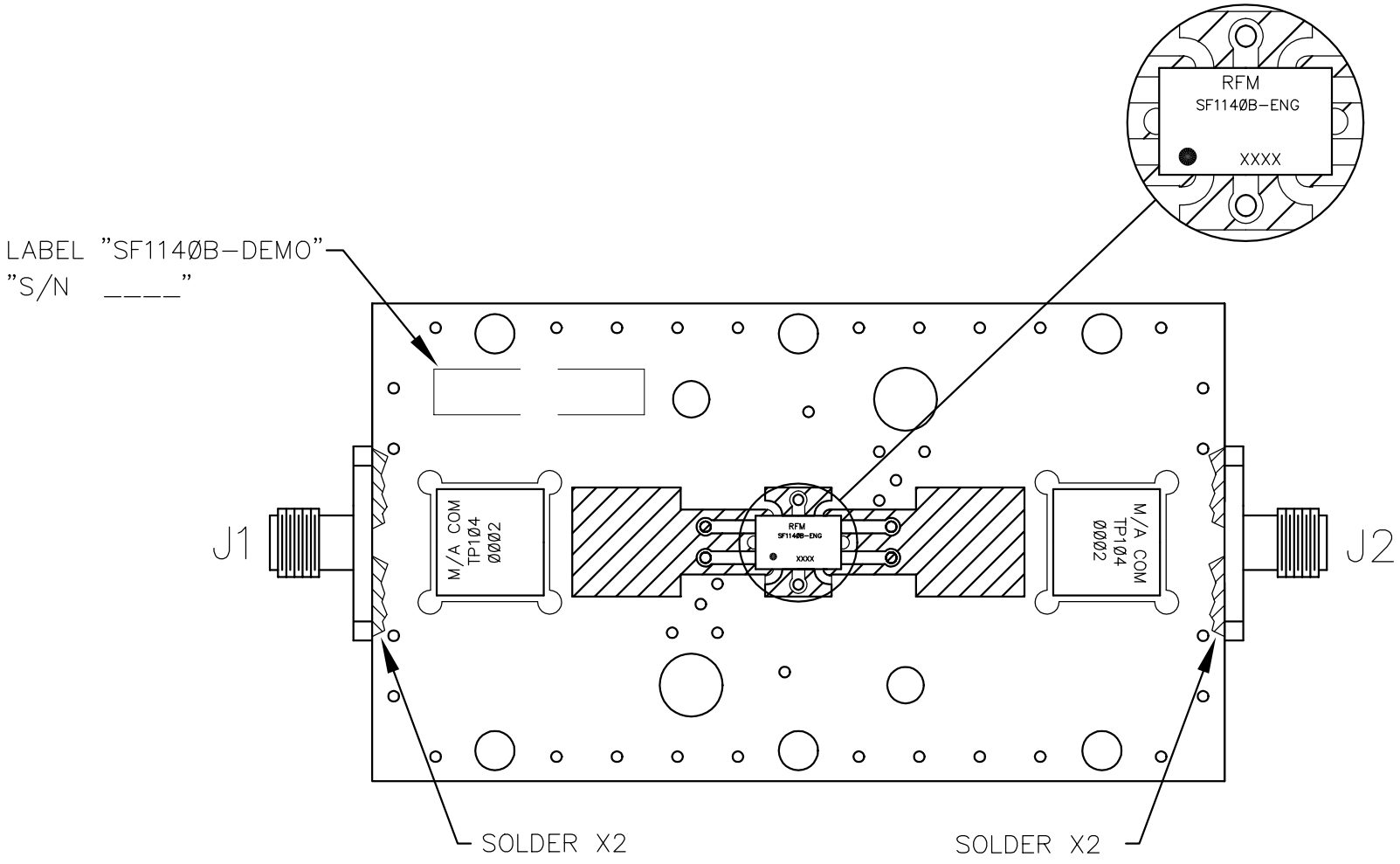
TITLE: ASSY DIAGRAM, SF114ØB DEMO

SIZE	FSCM NO.	DWG. NO.	REV	SHEET
B	2U874	SF114ØB-1ØØ	A	1/4



BOTTOM VIEW

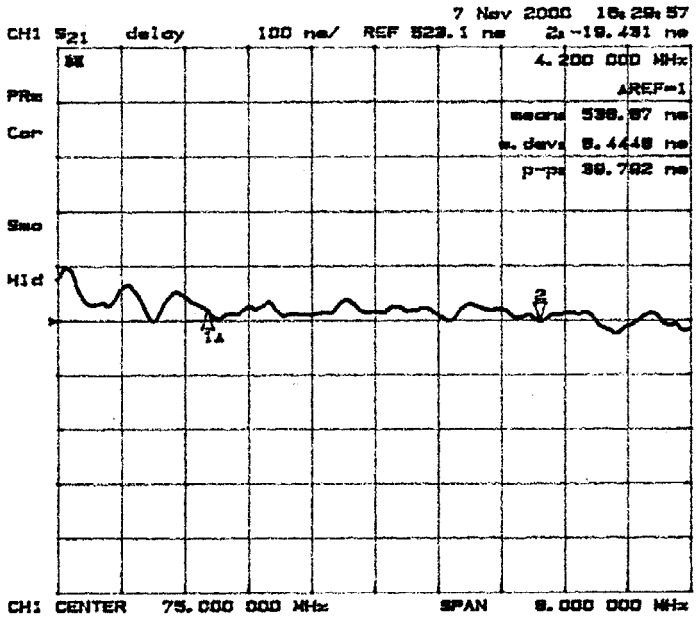
SIZE	FSCM NO.	DWG. NO.	REV	SHEET
B	2U874	SF1140B-1ØØ	A	2

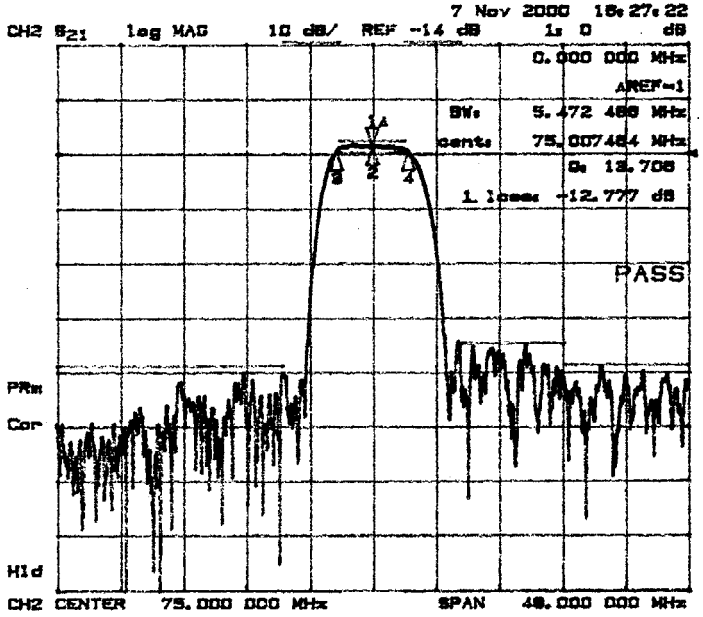


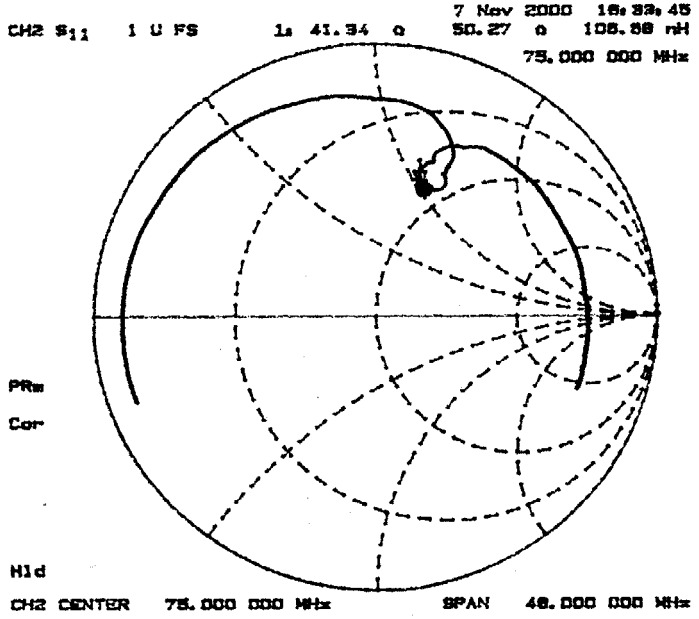
TOP VIEW

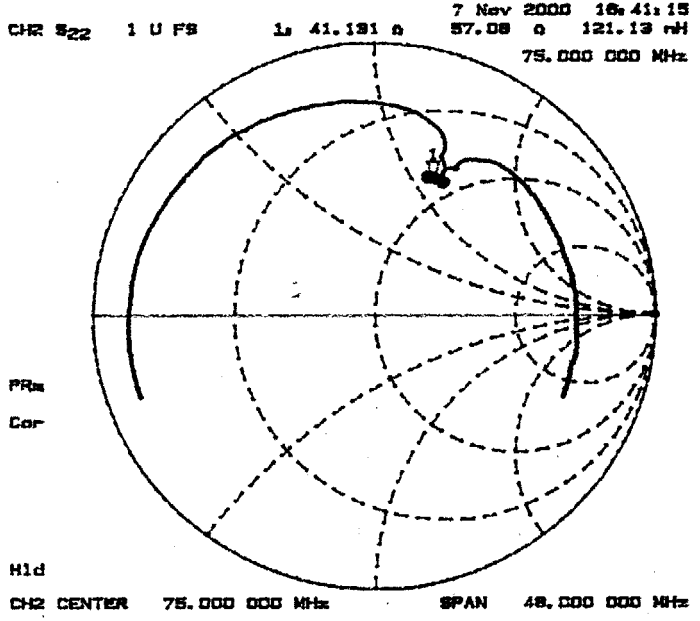
SIZE	FSCM NO.	DWG. NO.	REV	SHEET
B	2U874	SF1140B-100	A	3

SF1140B
DEMO 1
11-7-00
RT

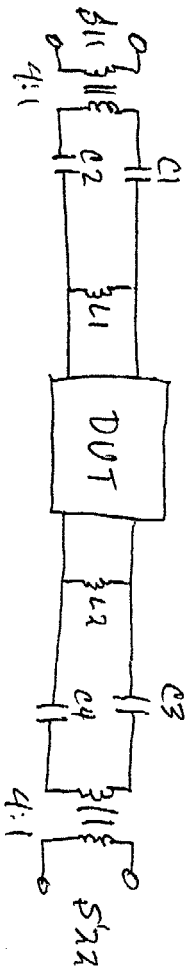




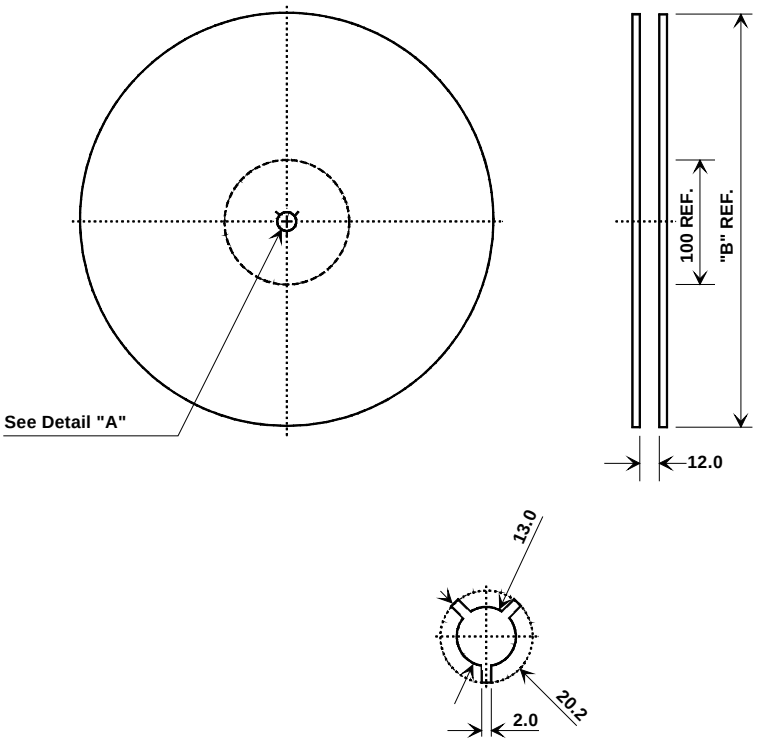




L1, L2 = 390nH
C1, C2, C3, C4 = 27 pF



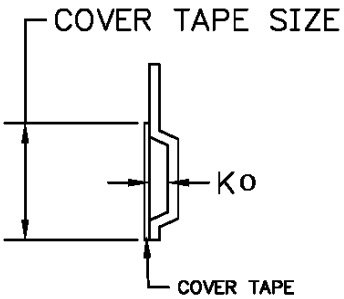
Tape and Reel Specifications

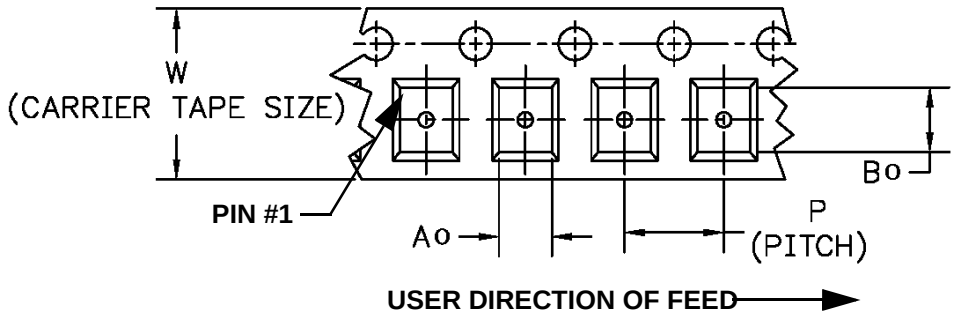


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

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





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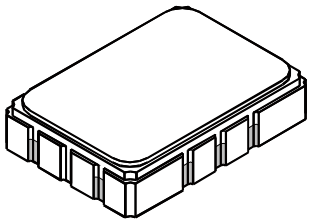
SMP-03 Case

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

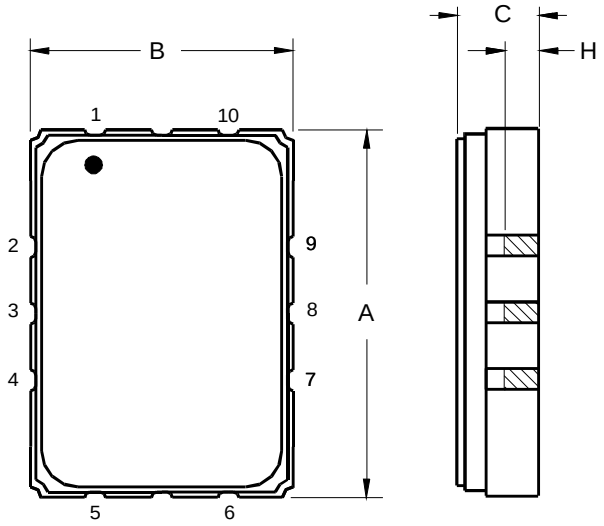


Case Dimensions

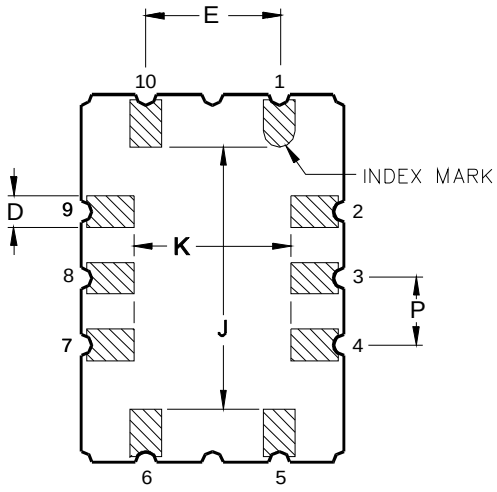
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.60			0.024	
E		2.54			0.100	
H		1.0			0.039	
J		5.00			0.197	
K		3.00			0.118	
P		1.27			0.050	

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

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