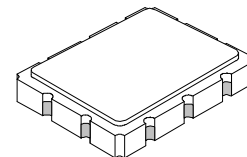


SF1082A 125 MHz SAW Filter



- Designed for GSM BTS Transmitter Applications
- Low Insertion Loss
- 9.1 X 7.1 mm Surface-Mount Case
- Unbalanced Input and Output



Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc		125.000		MHz	1
Passband	Insertion Loss at fc	IL	6	8.0	dB	1, 2
	3 dB Passband	BW ₃	±275	±440	kHz	
	Amplitude Ripple over fc ±75 kHz			0.3	dB _{P-P}	
	Group Delay Variation over fc ±75 kHz	GDV		100	ns _{P-P}	
Rejection	fc-7.5 to fc-6.0 and fc+6.0 to fc+7.5 MHz		20	40	dB	1, 2, 3
	Ultimate		>40			
Operating Temperature Range	T _A	-40		+85	°C	1

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SM9171-10 9.1 x 7.1 mm Nominal Footprint
Lid Symbolization (XX = 2-character date code)	RFM SF1082A XX

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	1
Port 1 Gnd Return	4
Port 2 Hot	6
Port 2 Gnd Return	9
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. 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. ©Copyright 1999, RF Monolithics Inc.
10. Electrostatic Sensitive Device. Observe precautions for handling.

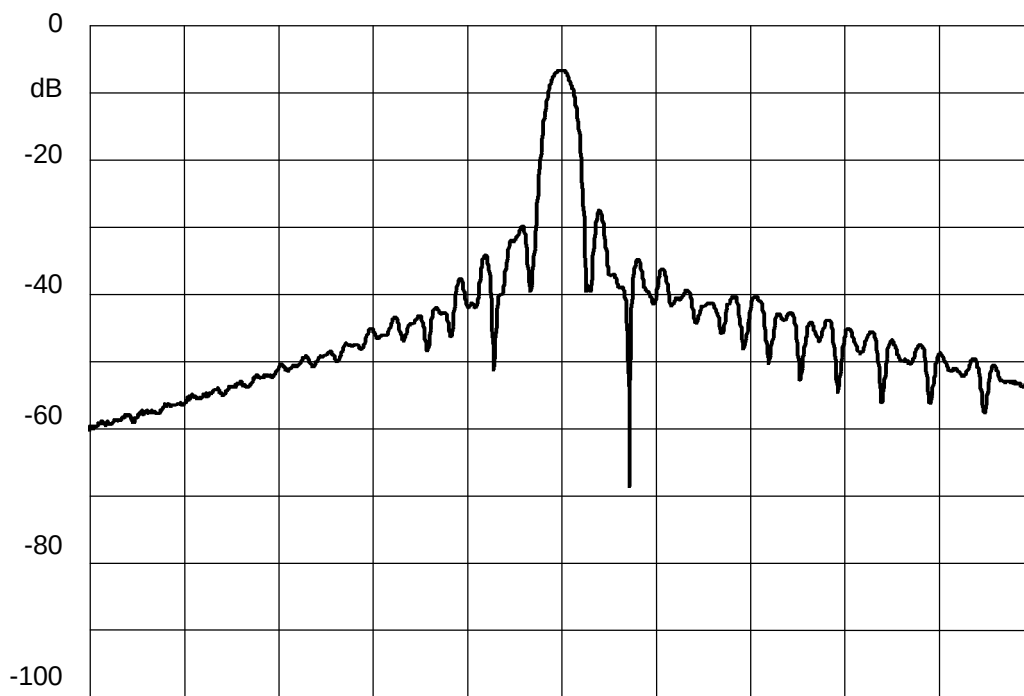


RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

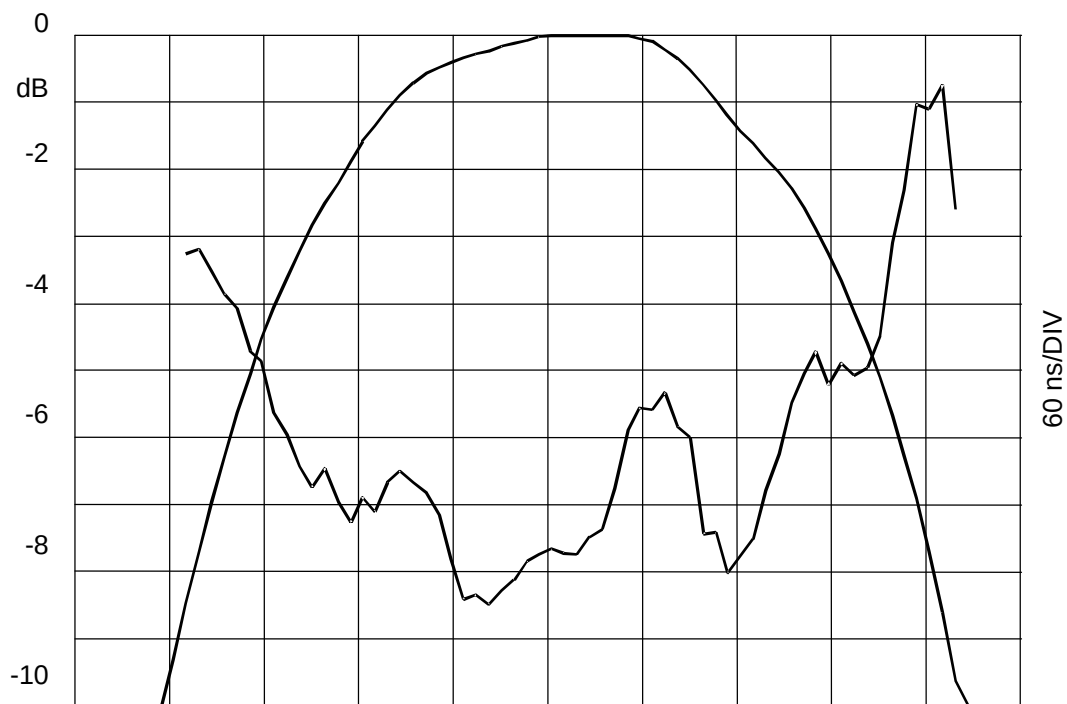
Phone: +1(972)233-2903
Fax: +1(972)387-8148
e-mail: info@rfm.com
Home page: www.rfm.com

European Sales Office
44 1963 251383
44 1963 251510

SF1082A 125 MHz SAW Filter



4 MHz/DIV



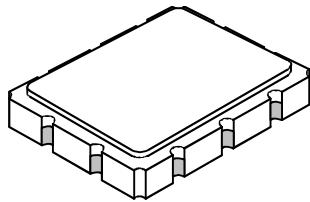
200 kHz/DIV

RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

Phone: +1(972)233-2903
Fax: +1(972)387-8148
e-mail: info@rfm.com
Home page: www.rfm.com

European Sales Office
44 1963 251383
44 1963 251510

10-Terminal Ceramic Surface-Mount Case 9.1 x 7.1 mm Nominal Footprint

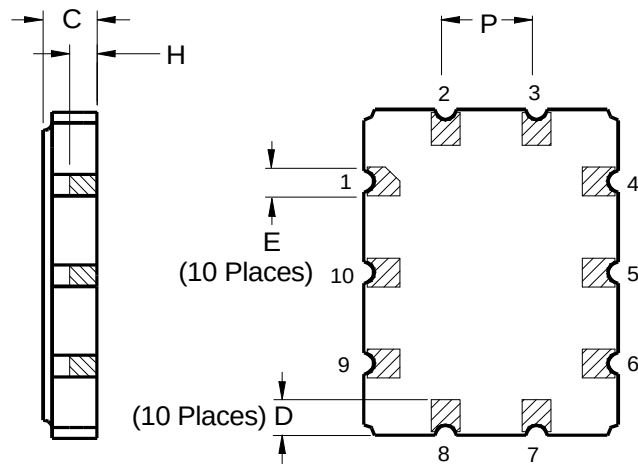
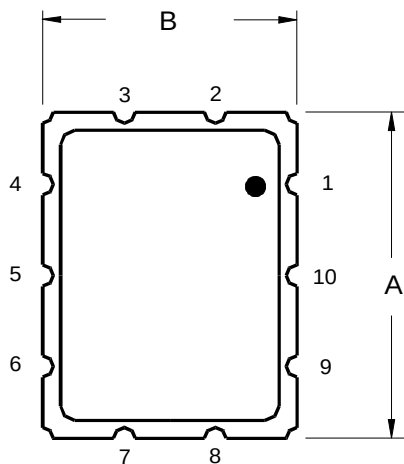


Case Dimensions

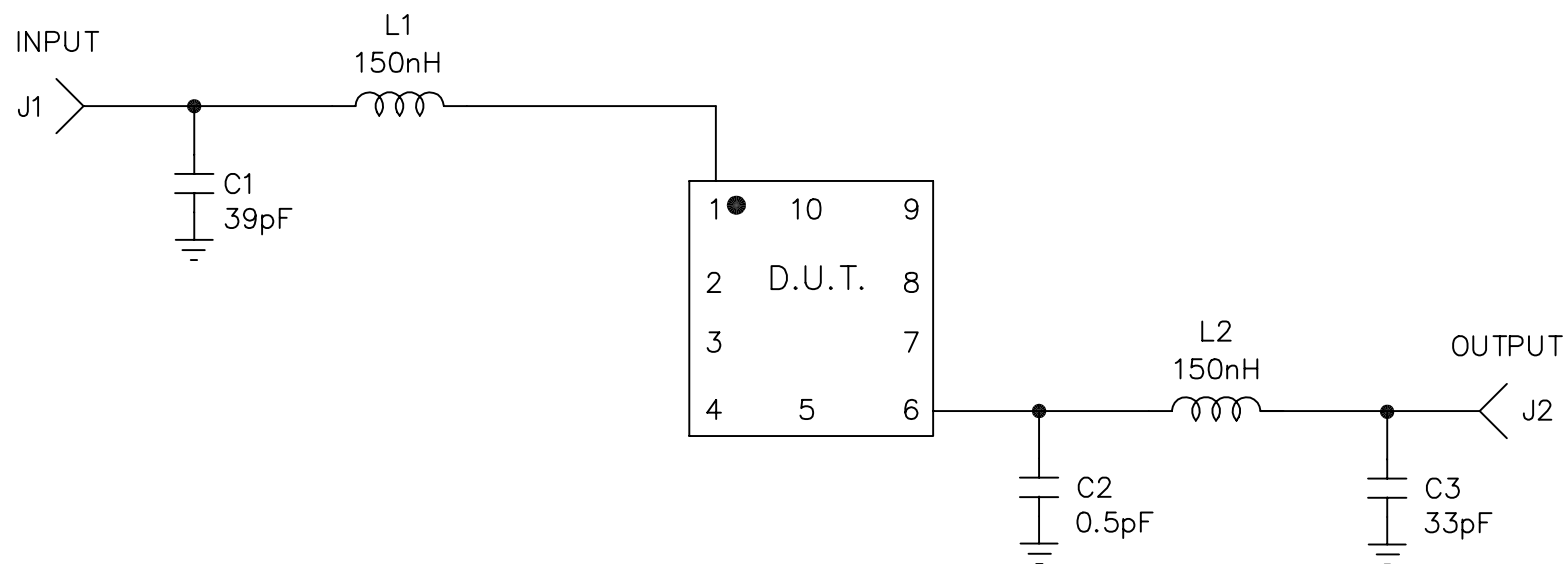
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	6
	Return or Input	5
Port 2	Output or Return	1
	Return or Output	10
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot



REV	ECN NO.	DESCRIPTION	APP/DATE
A	6254	INITIAL RELEASE	



DRAWN BY/DATE: J.J. LAYTON 01/15/98

TITLE: ASSY DIAGRAM, SF1082A-DEMO

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

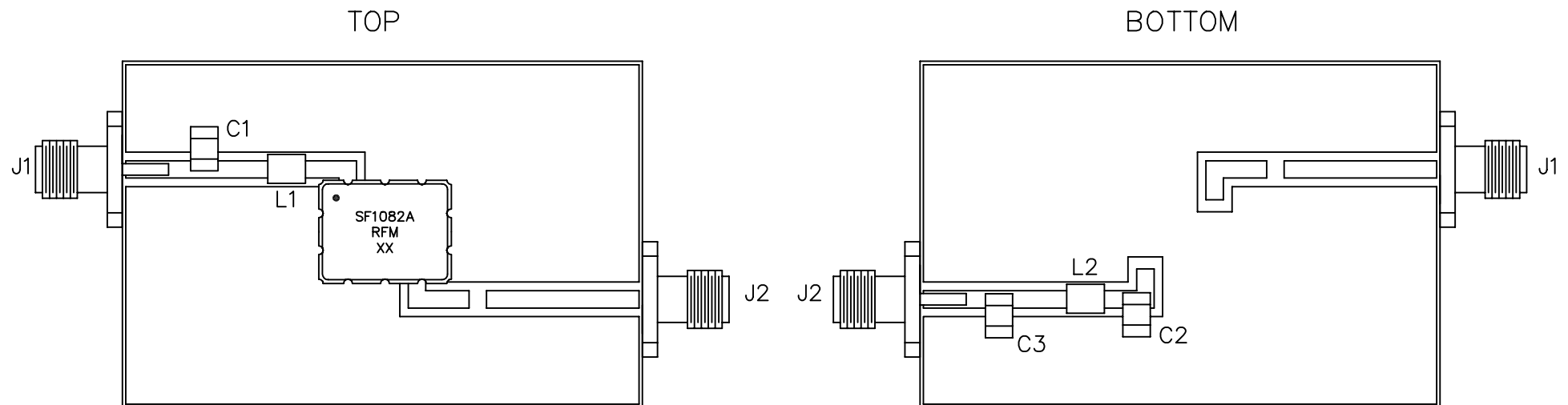
SIZE **A** CODE IDENT **2U874**

DWG. NO. SF1082A-000

REV **A** SHEET 1/3

NOTES:

1. SOLDER MOUNT COMPONENTS TO PCB.
2. NOTE PROPER ORIENTATION OF INDUCTORS IS 90° TO EACH OTHER.
3. COMPONENT VALUES MAY NEED TO BE TRADED FOR SLIGHTLY HIGHER OR LOWER VALUES DUE TO TOLERANCE LEVELS OF EACH INDIVIDUAL COMPONENT.



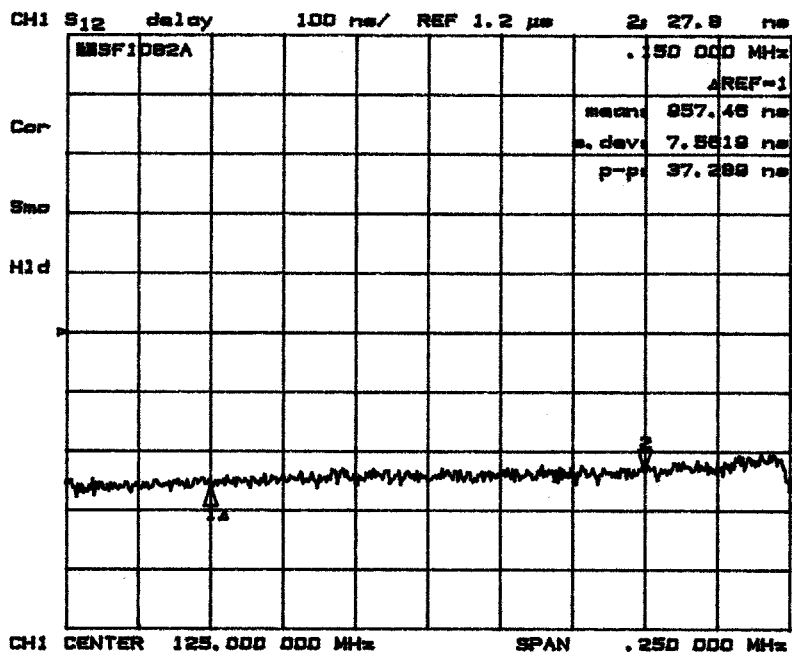
SF1082A:

DEMO

E-3230
w/ker#4

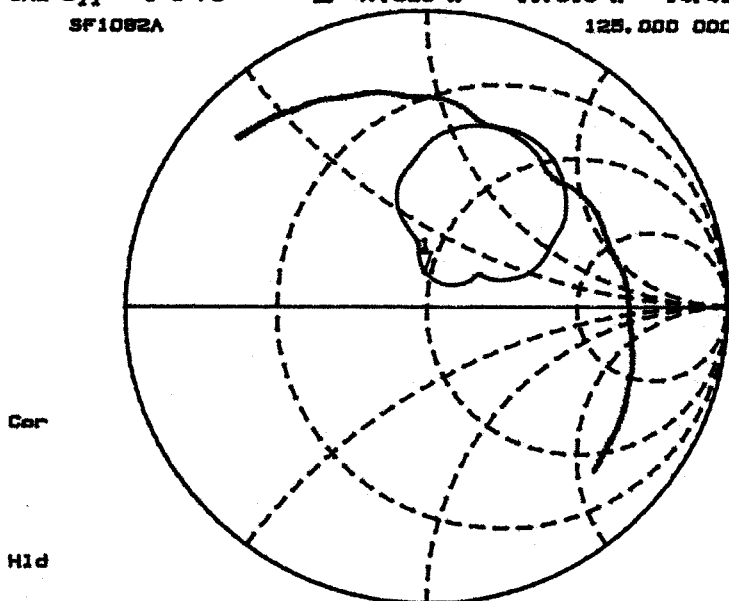
11-12-97

RCH

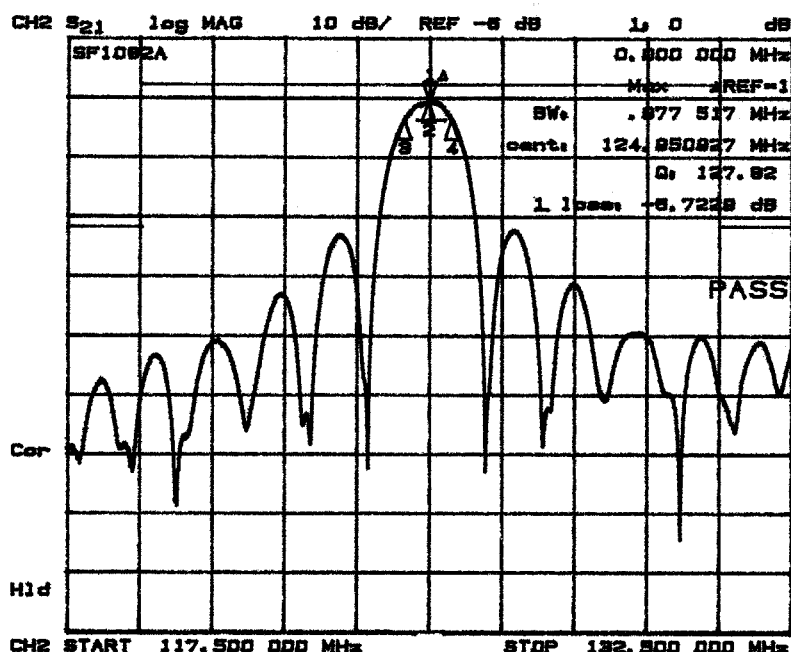


CH2 S₁₁ 1 U FS 1: 47.828 n 11.318 n 14.411 nH

SF1082A 125.000 000 MHz

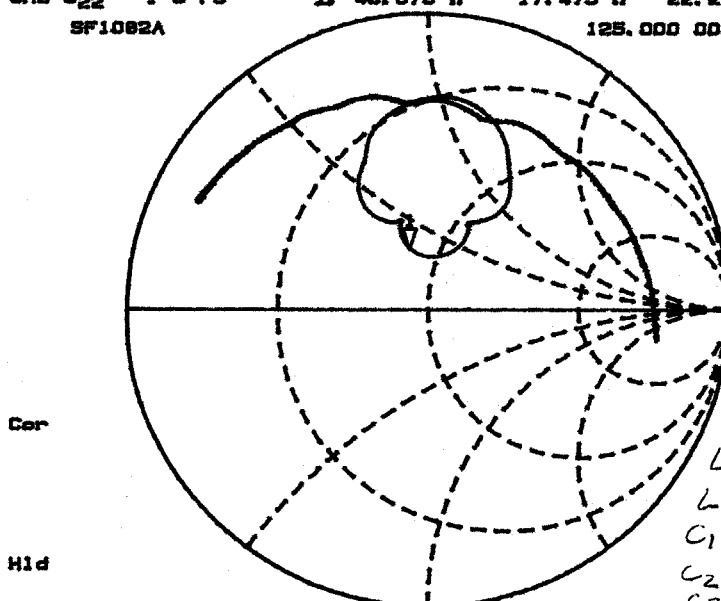


CH2 START 117.500 000 MHz STOP 132.500 000 MHz

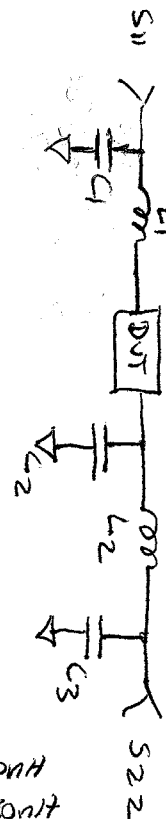


CH2 S₂₂ 1 U FS 1: 40.879 n 17.475 n 22.248 nH

SF1082A 125.000 000 MHz



CH2 START 117.500 000 MHz STOP 132.500 000 MHz



L₁ = 150nH
L₂ = 150nH
C₁ = 39 pF
C₂ = 0.5 pF
C₃ = 33 pF

SF1082-~~DEMO~~ REV: A Sht 3 of 3
SF1082A (DEMO)

BILL OF MATERIALS

<u>PART IDENTIFIER</u>	<u>DESCRIPTION 1</u>	<u>DESCRIPTION 2</u>	<u>QTY/ASSY</u>	<u>REFERENCE DESCRIPTION</u>
SF1082A-DEMO	DEMO BOARD,SF1082A			
SF1082A-000	ASSY DIAGRAM,DEMO BOARD,	SF1082A	0	
400-1389-001	PCB,DEMO BD,9 X 7		1.0000	CHAS1
500-0003-390	CAP,CHIP,NPO,39(J),STD		1.0000	C 1
500-0013-005	CAP,CHIP,NPO,0.5(E),STD	0805	1.0000	C 2
500-0003-330	CAP,CHIP,NPO,33(J),STD		1.0000	C 3
500-0583-151	IND,CHIP,0805CS,150NH		2.0000	L 1,2



SIZE

A

FSCM NO.

2U874

DWG NO.

SF1082A-DEMO

SCALE

NONE

W/O or ECN

6254

REV

A

SHEET

1

OF

2

REV HISTORY						
REV	ECN	DATE	DESCRIPTION			
A	6254	12/17/97	INITIAL RELEASE			
				SIZE A	FSCM NO. 2U874	DWG NO. SF1082A-DEMO
			SCALE NONE	W/O or ECN 6254	REV A	SHEET 2 OF 2