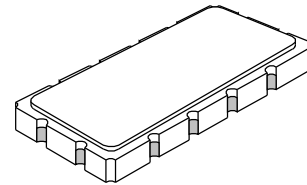


SF1072A 135.3 MHz SAW Filter



- Designed for WLAN IF Applications
- Low Insertion Loss
- Hermetic 13.3 x 6.5 mm Surface-Mount Case
- Unbalanced Input and Output



Characteristic	Sym	Min	Typ	Max	Units	Notes	
Nominal Center Frequency	fc	135.300			MHz	1	
Passband	Insertion Loss at fc	IL	8.5	10.5	dB	1, 2	
	3 dB Passband	BW ₃	±300	±400	±600		kHz
	Amplitude Ripple over fc ±100 kHz			0.5	dB _{P-P}		
	Group Delay Variation over fc ±300 kHz	GDV	200	350	ns _{P-P}		
Rejection	fc-15 to fc-1.35 and fc+1.35 to fc+15 MHz		40	45	dB	1, 2, 3	
	20 MHz to fc-15 and fc+15 MHz to 300 MHz		50	55			
Operating Temperature Range	T _A	-40		+85	°C	1	

Impedance Matching to 50 Ω unbalanced	External L-C	
Case Style	SM13365-12	13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (XX = 2 character date code)	RFM SF1072A 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	2
Port 1 Gnd Return	3
Port 2 Hot	8
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.

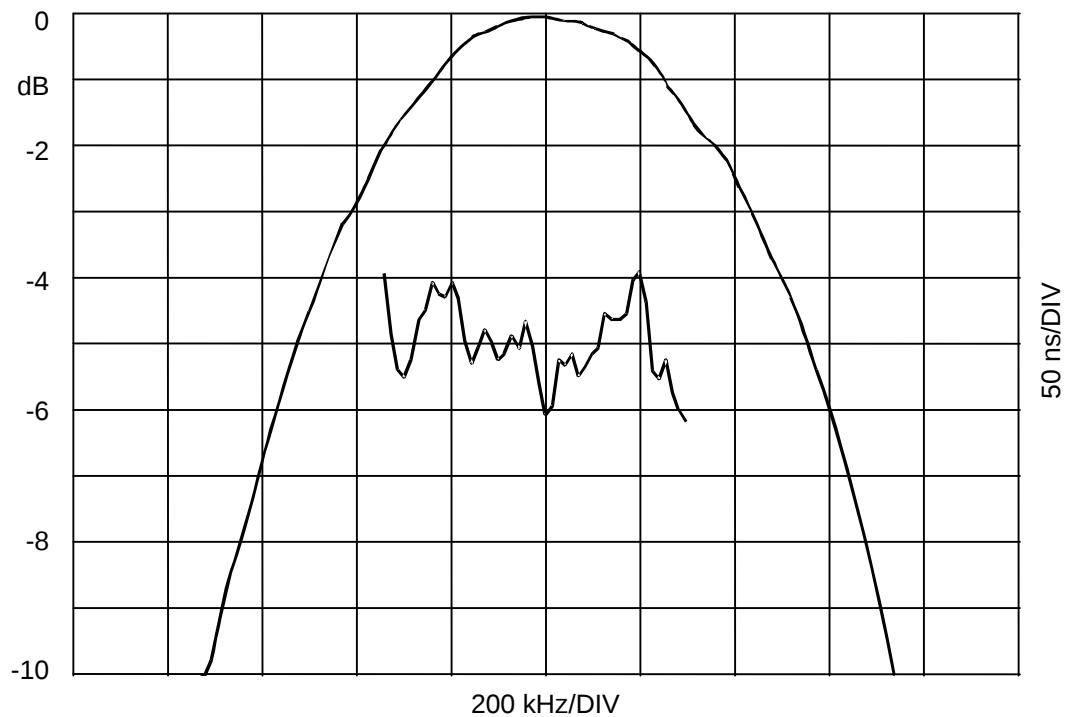
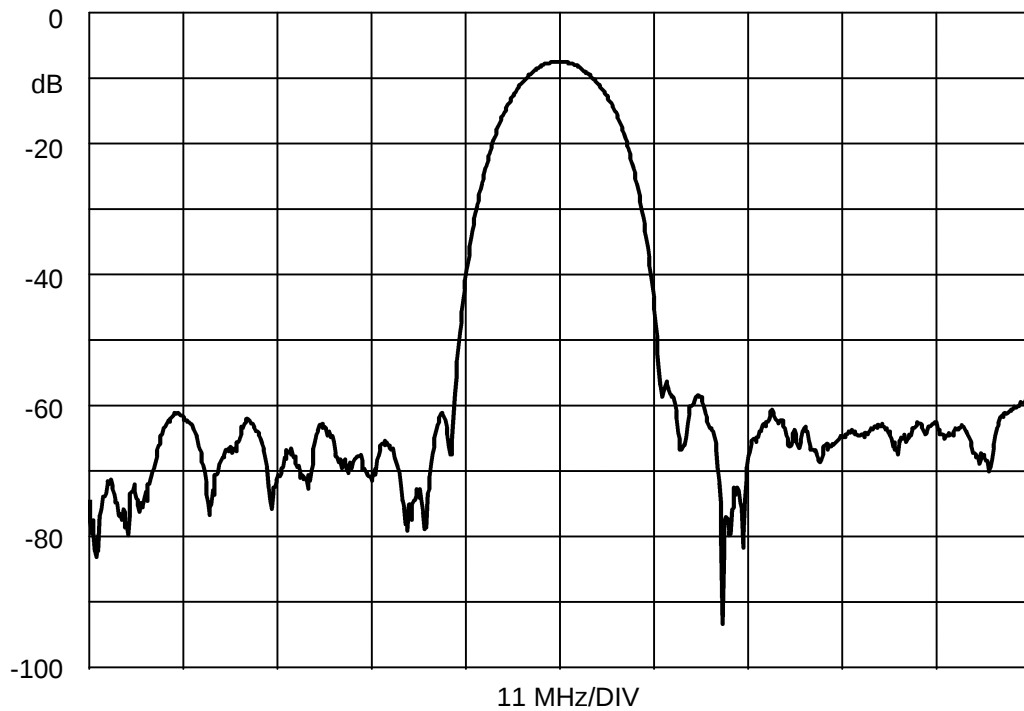


RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

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

SF1072A 135.3 MHz SAW Filter

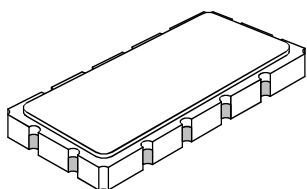


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European Sales Office
44 1963 251383
44 1963 251510

12-Terminal Ceramic Surface-Mount Case 13.3 x 6.5 mm Nominal Footprint

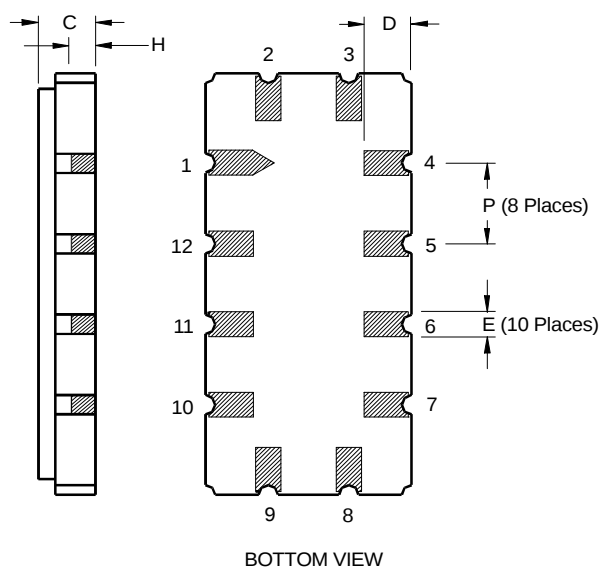
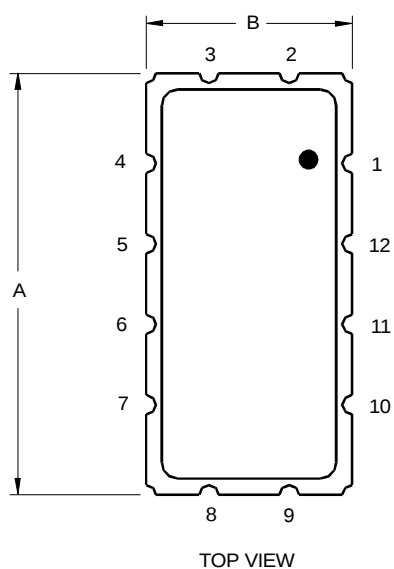


Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	2
	Return or Input	3
Port 2	Output or Return	8
	Return or Output	9
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

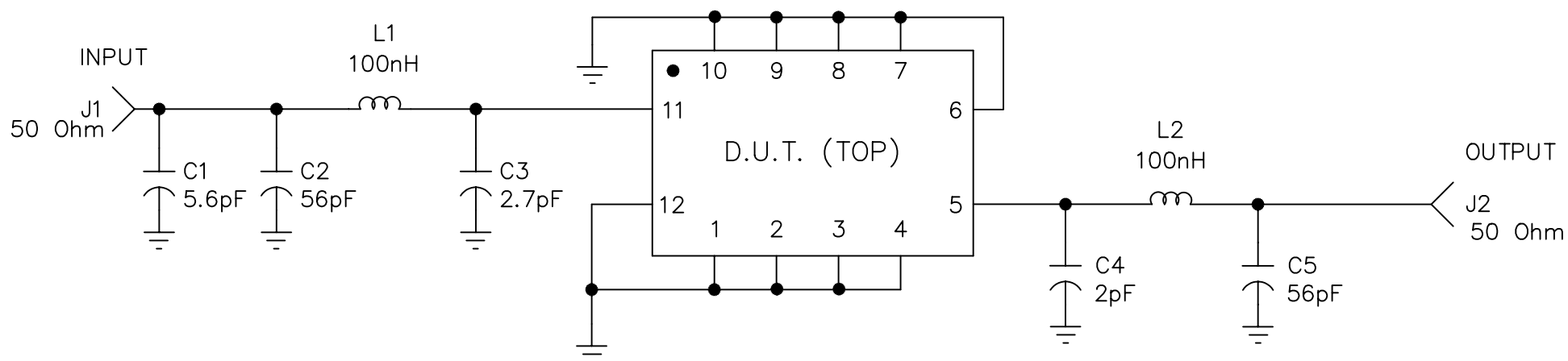


NOTES:

1. NOTE PROPER ORIENTATION OF INDUCTORS L1 AND L2. THEY ARE TO BE POSITIONED 90° TO EACH OTHER.

2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 12 PLACES AS SHOWN.

REV	ECN NO.	DESCRIPTION	APP/DATE
A	4880	NEW RELEASE	



DRAWN BY/DATE: J.J. LAYTON

08/29/96

TITLE:

SF1072A DEMO PCB

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

SIZE
A

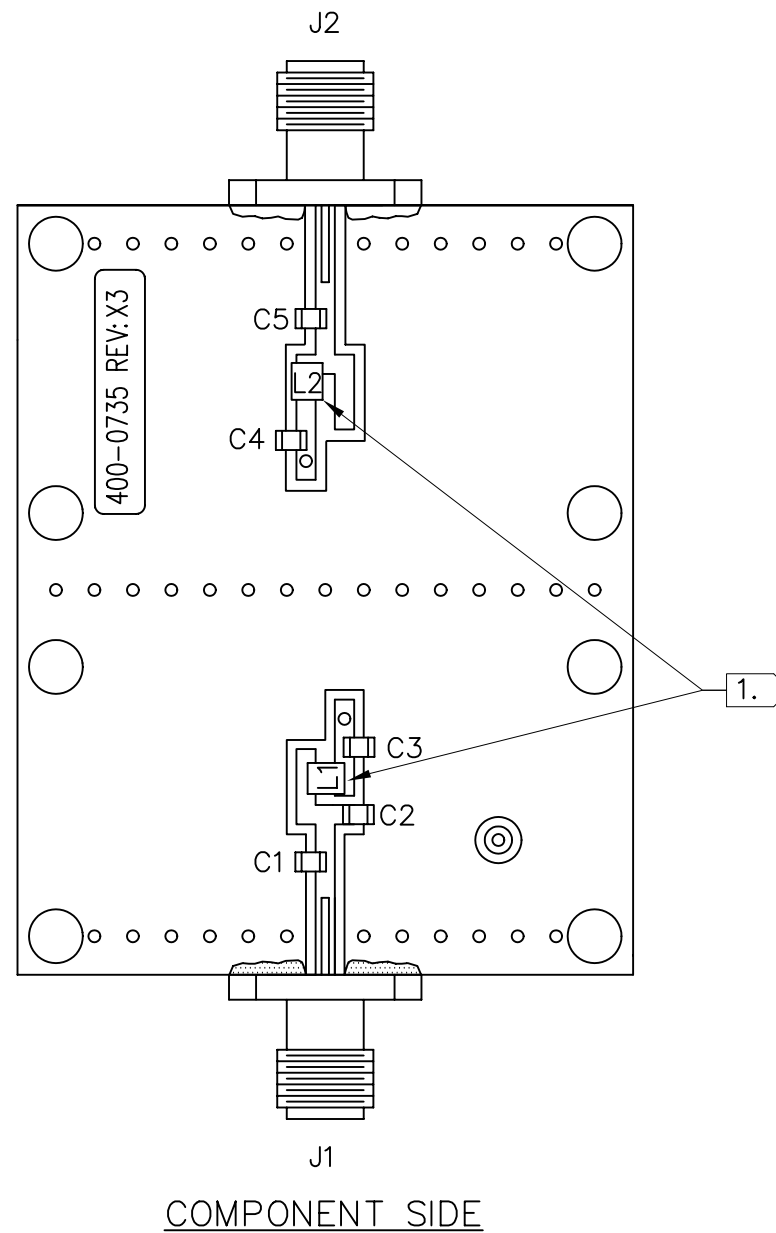
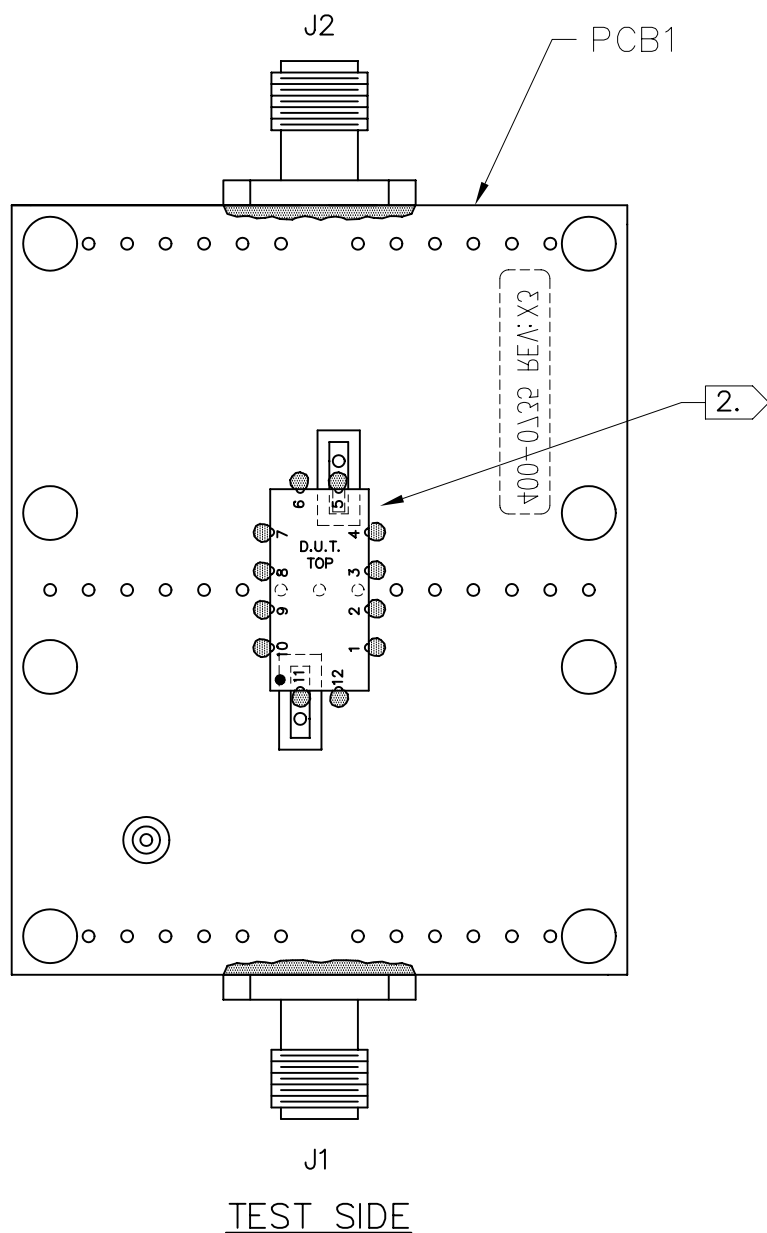
CODE IDENT
2U874

DWG.
NO.

SF1072A-000

REV
A

SHEET
1/6



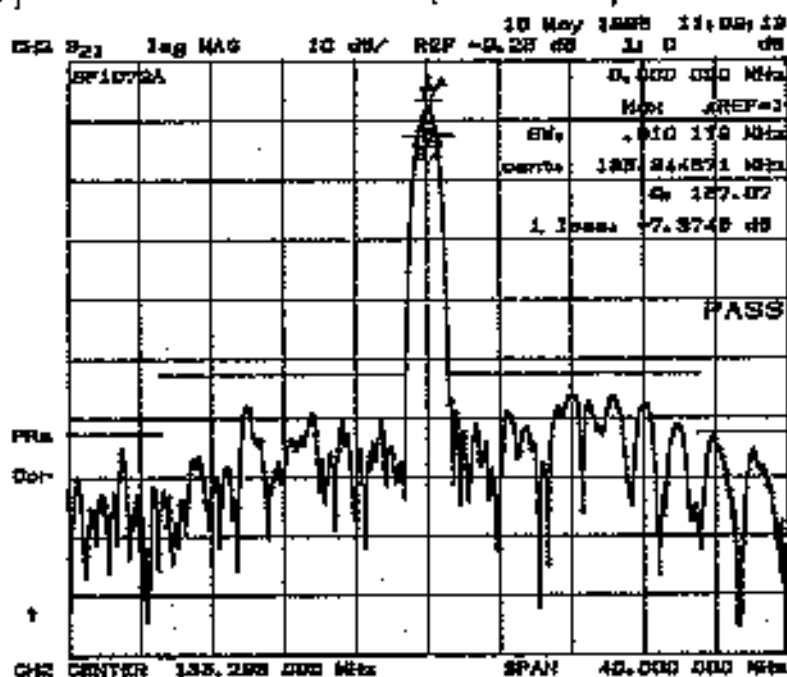
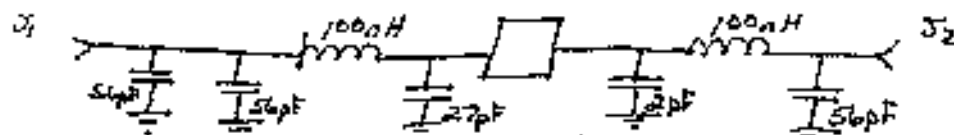
SF1072A

Demo #1

E-2845-1

5-10-96

PK



10 May 1998 11:10:03

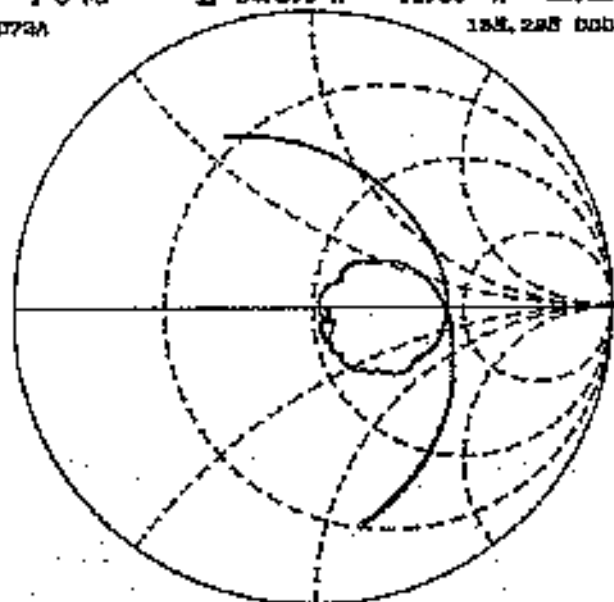
CH1 S11 1 U FB 1: 34.978 n -12.95 n 23.800 pF

SF1072A

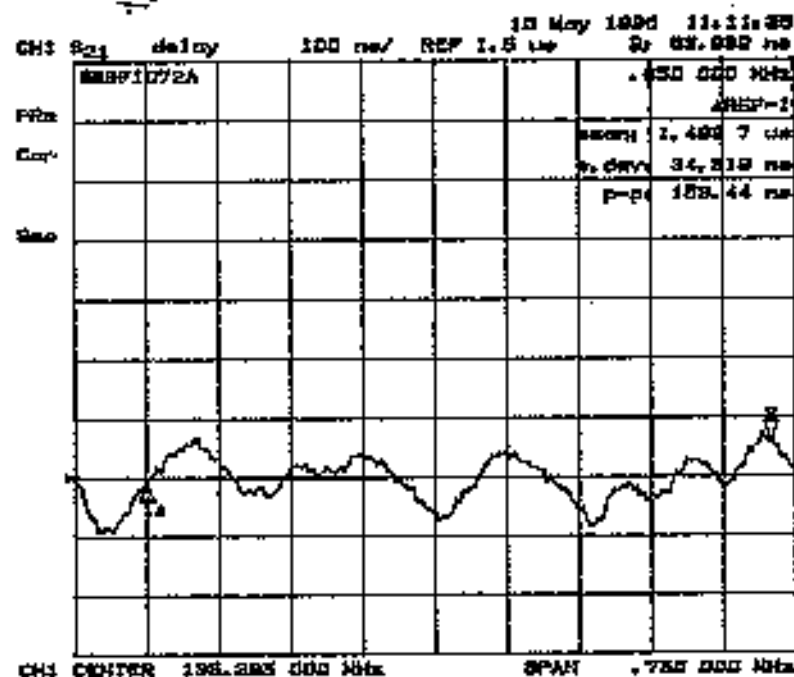
135.245 000 MHz

PRM

Cor



CENTER 135.245 000 MHz SPAN 10.000 000 MHz



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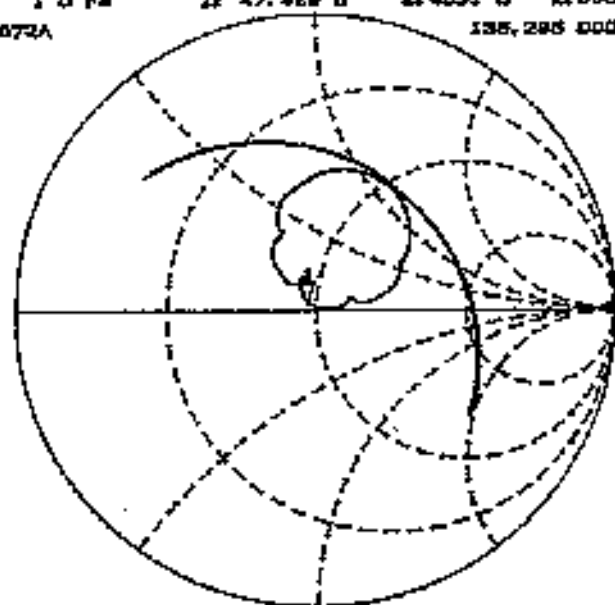
CH2 S22 1 U FB 1: 47.428 n 2.4831 n 2.9887 pF

SF1072A

135.245 000 MHz

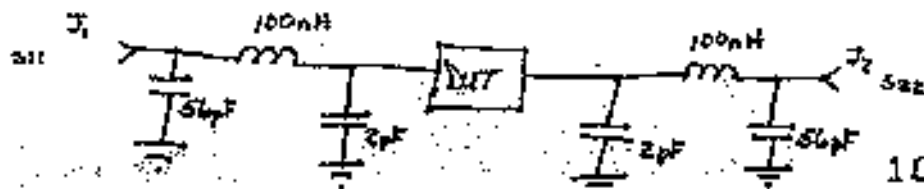
PRM

Cor



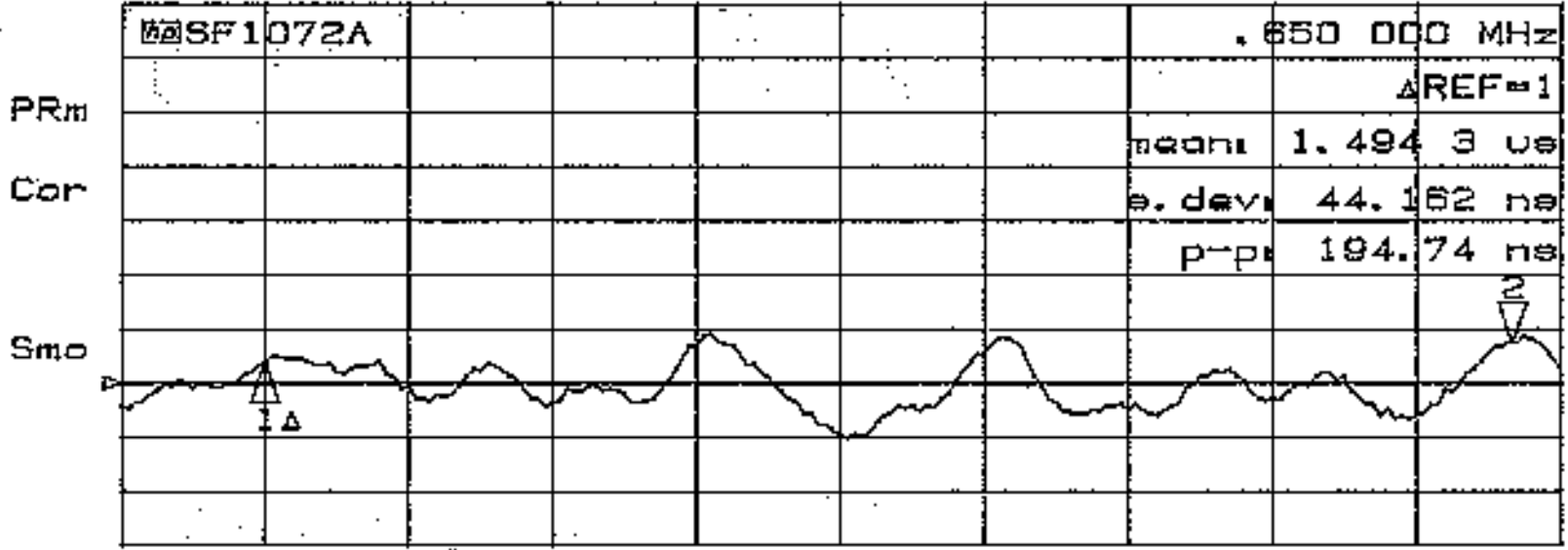
CENTER 135.245 000 MHz SPAN 10.000 000 MHz

SF1072A-000 REV:#



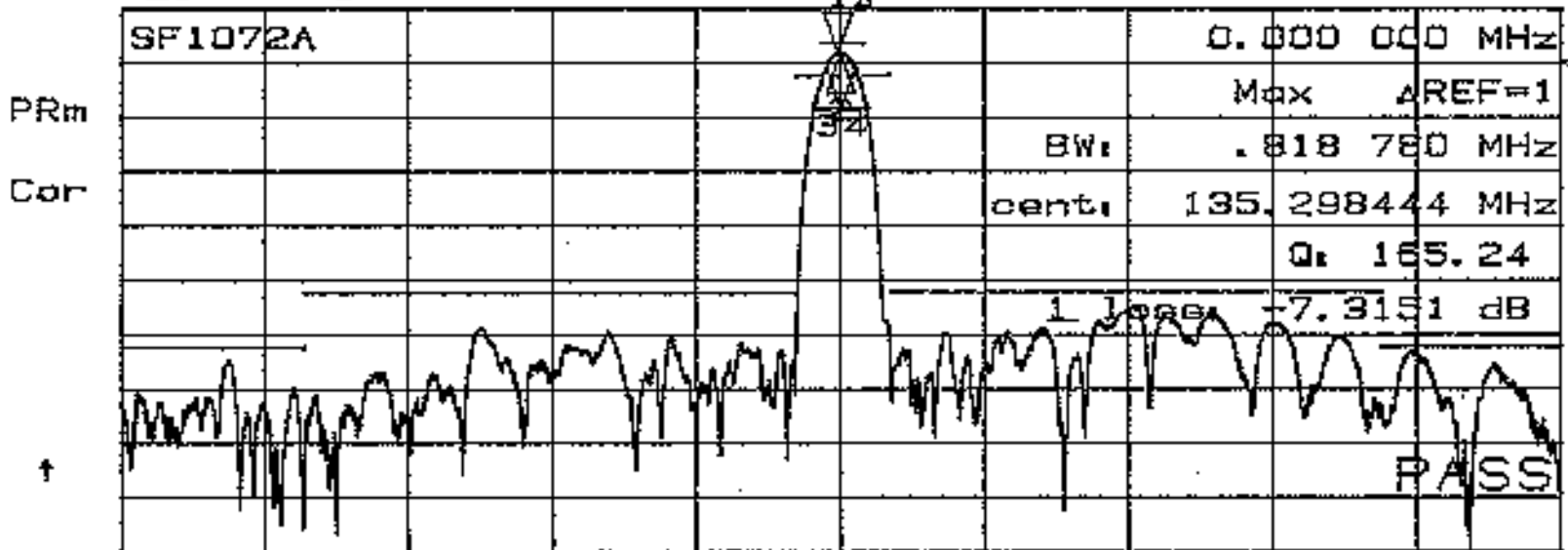
SF1072A
Demo #1

10 May 1996 10:04:44
CH1 S21 delay 100 ns/ REF 1.5 us 2 36.918 ns

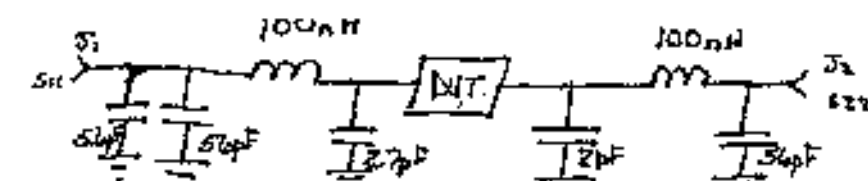


5-10-96
YES

CH1 CENTER 135.295 000 MHz SPAN .750 000 MHz
CH2 S21 log MAG 10 dB/ REF -9.25 dB 1 0 dB



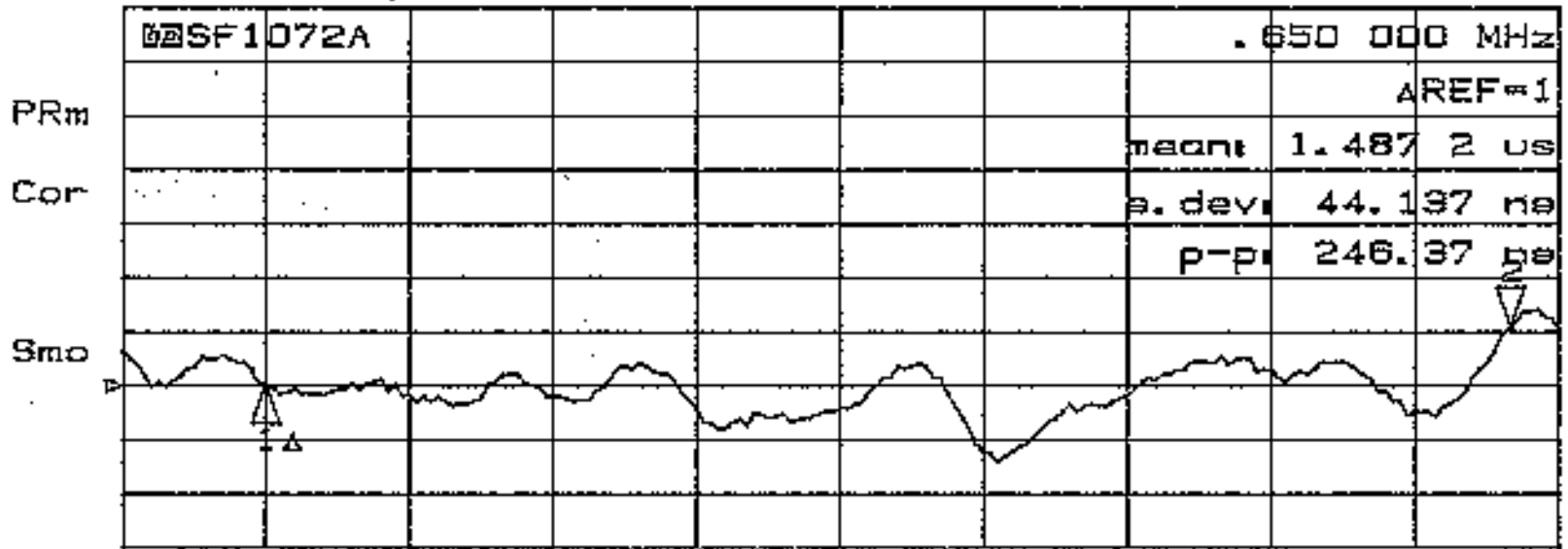
CH2 CENTER 135.295 000 MHz SPAN 40.000 000 MHz



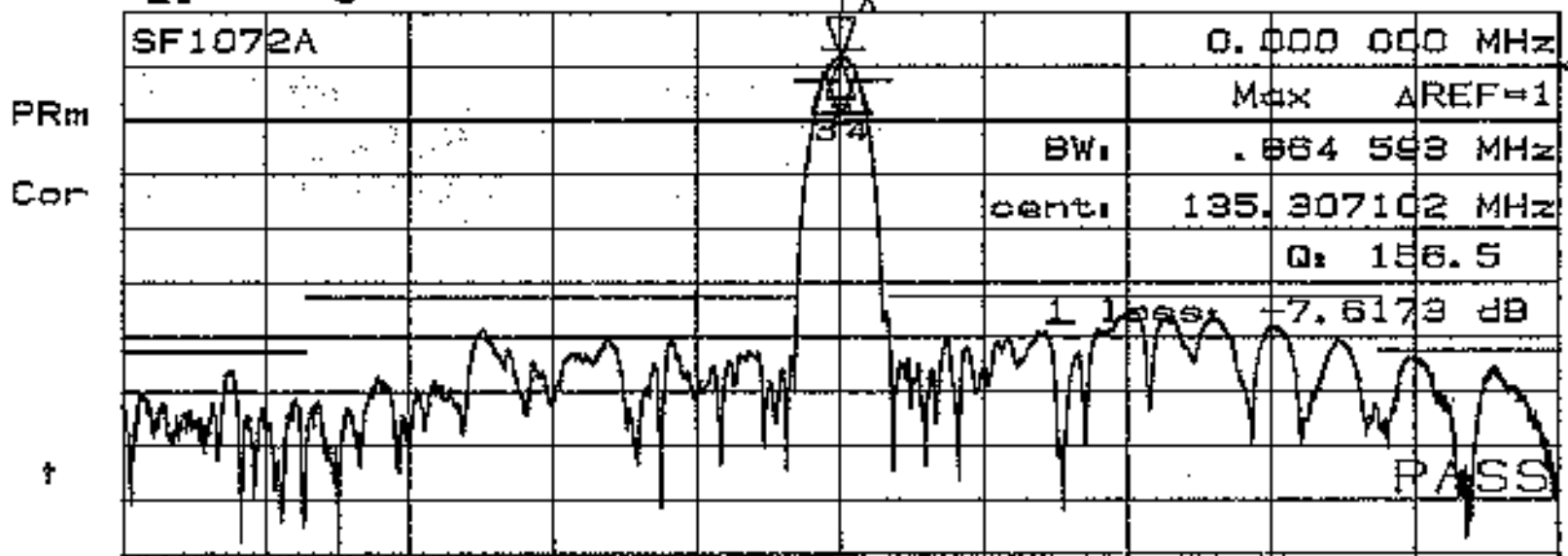
CH1 S₂₁ delay 100 ns/ REF 1.5 us 2, 106.07 ns

SF1072A
Demo #2

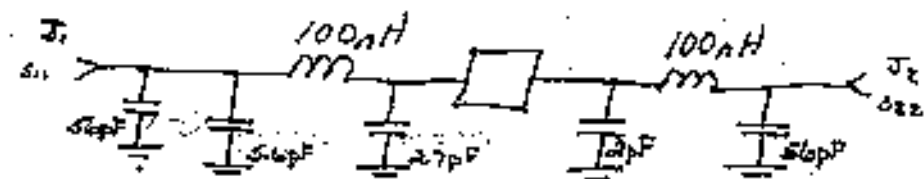
5-10-96



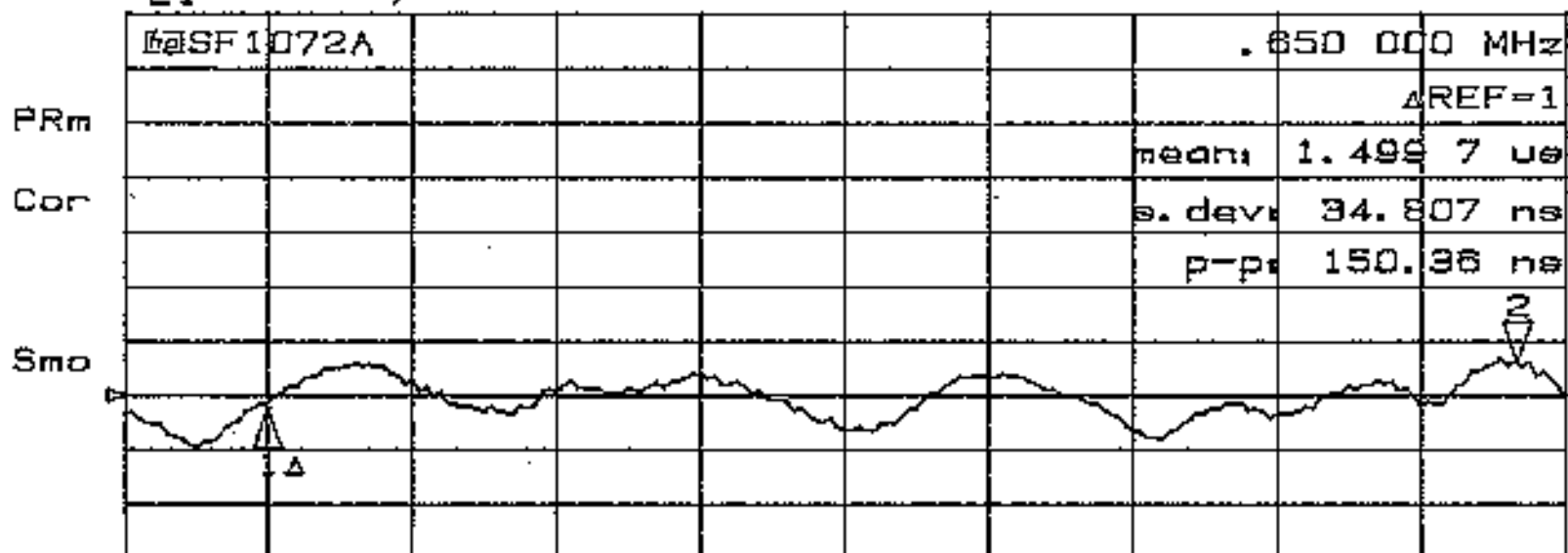
CH1 CENTER 135.295 000 MHz SPAN .750 000 MHz
CH2 S₂₁ log MAG 10 dB/ REF -9.25 dB 1 0 dB



CH2 CENTER 135.295 000 MHz SPAN 40.000 000 MHz

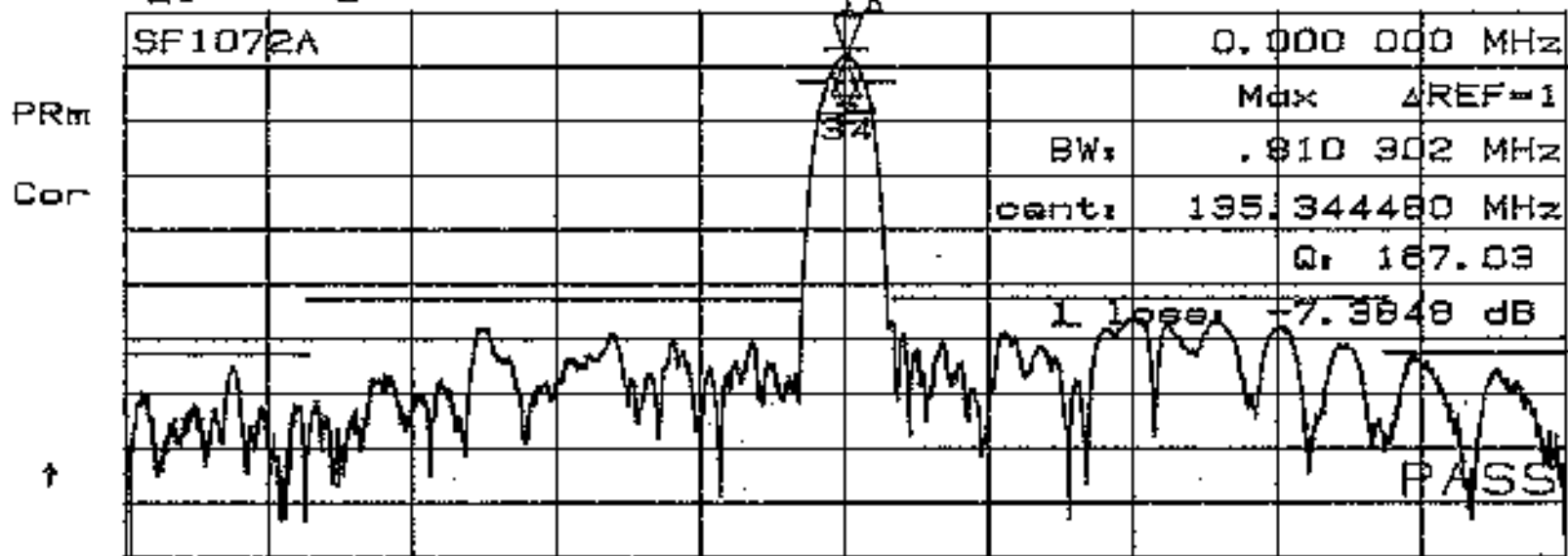


CH1 S21 delay 100 ns/ REF 1.5 us 2. 86.487 ns



CH1 CENTER 135.295 000 MHz SPAN .750 000 MHz

CH2 S21 log MAG 10 dB/ REF -9.25 dB L: 0 dB



CH2 CENTER 135.295 000 MHz SPAN 40.000 000 MHz

SF1072A
Demo #3

5-10-96
[Signature]

BILL OF MATERIALS

<u>PART IDENTIFIER</u>	<u>DESCRIPTION 1</u>	<u>DESCRIPTION 2</u>	<u>QTY/ASSY</u>	<u>REFERENCE DESCRIPTION</u>
SF1072A(DEMO)	BOM,DEMO BOARD,SF1072A			
SF1072A	FILTER,SM,135.300MHZ 3DB	PASS+/-300.00KHZ,AXONN	1.0000	
SF1072A-000	ASSY DIAGRAM,DEMO BOARD,	SF1072A	0	
500-0003-056	CAP,CHIP,NPO,5.6(C),STD		1.0000	C1
500-0003-560	CAP,CHIP,NPO,56(J),STD		2.0000	C2,C5
500-0003-027	CAP,CHIP,NPO,2.7(C),STD		1.0000	C3
500-0003-020	CAP,CHIP,NPO,2.0(C),STD		1.0000	C4
500-0248-001	CONN,COAX,FLANGE MT.JACK		2.0000	J1,2
500-0010-101	IND,CHIP,1008CS,100NH,10%		2.0000	L1,2



SIZE
A

FSCM NO.
2U874

DWG NO. **SF1072A (DEMO)**

SCALE **NONE**

W/O or ECN **4880**

REV **A**

SHEET **1** OF **2**

REV HISTORY							
REV	ECN	DATE	DESCRIPTION				
A	4880	07/24/96	INITIAL RELEASE				
				SIZE A	FSCM NO. 2U874	DWG NO. SF1072A (DEMO)	
			SCALE NONE	W/O or ECN 4880	REV A	SHEET 2 OF 2	