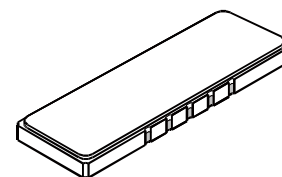


- **Designed for GSM BTS Receiver IF Applications**
- **Simple External Impedance Matching**
- **Hermetic SMP-87 Surface-Mount Case**
- **Unbalanced Input and Output**
- **Indoor-Temperature Version of SF1081A-1**
- **Complies with Directive 2002/95/EC (RoHS)**



SF1081A

**71.00 MHz
SAW Filter**



SMP-87

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
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_c	1	71.000			MHz
Passband	IL	1, 2		6	8.0	dB
Insertion Loss at f_c	BW ₃		±100	±140	±200	kHz
3 dB Passband					1.5	dB _{p-p}
Amplitude Ripple over $f_c \pm 80$ kHz	GDV			300	1000	ns _{p-p}
Group Delay Variation over $f_c \pm 50$ kHz	GD			2.8		µs
Rejection		1, 2, 3	25	26		dB
$f_c - 600$ to $f_c - 400$ and $f_c + 400$ to $f_c + 600$ MHz			35	40		
$f_c - 1.0$ to $f_c - 0.6$ and $f_c + 0.6$ to $f_c + 1.8$ MHz			40	45		
69.6 to 70.0 MHz			35	50		
31 to 69.6 and 71.8 to 111 MHz						
Operating Temperature Range	T _A	1	-5		+70	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SMP-87 22.1 X 8 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week)	RFM SF1081A YYWW

Electrical Connections

Connection	Terminals
Port 1 Hot	1
Port 1 Gnd Return	10
Port 2 Hot	6
Port 2 Gnd Return	5
Case Ground	All Others

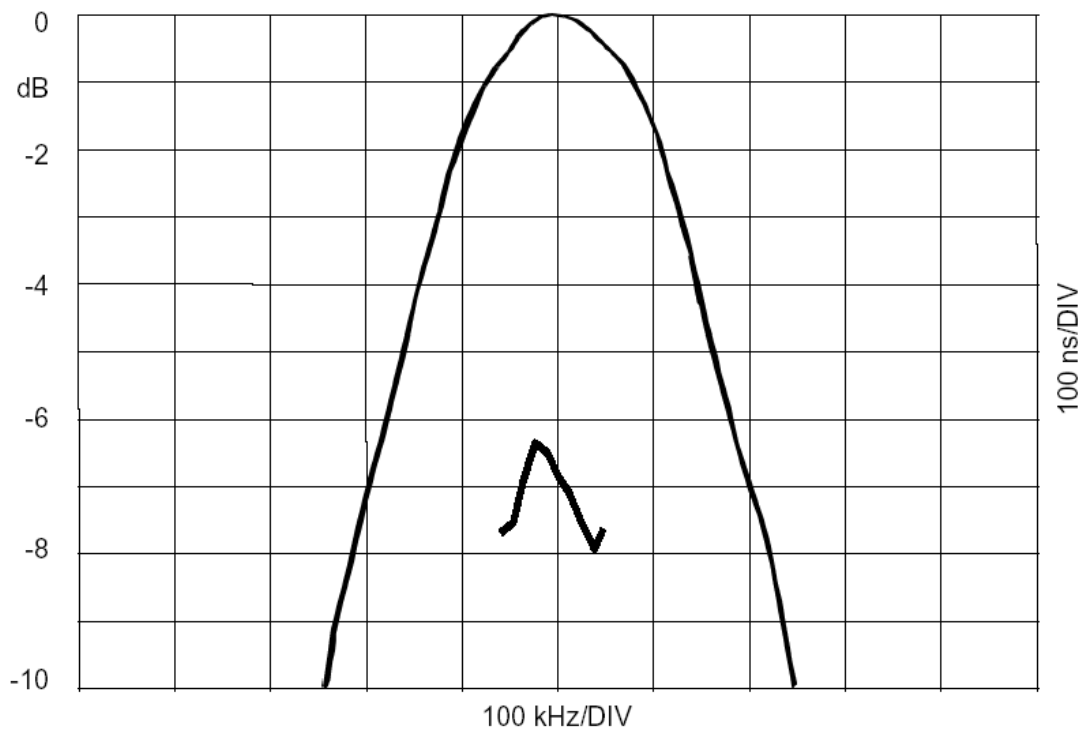
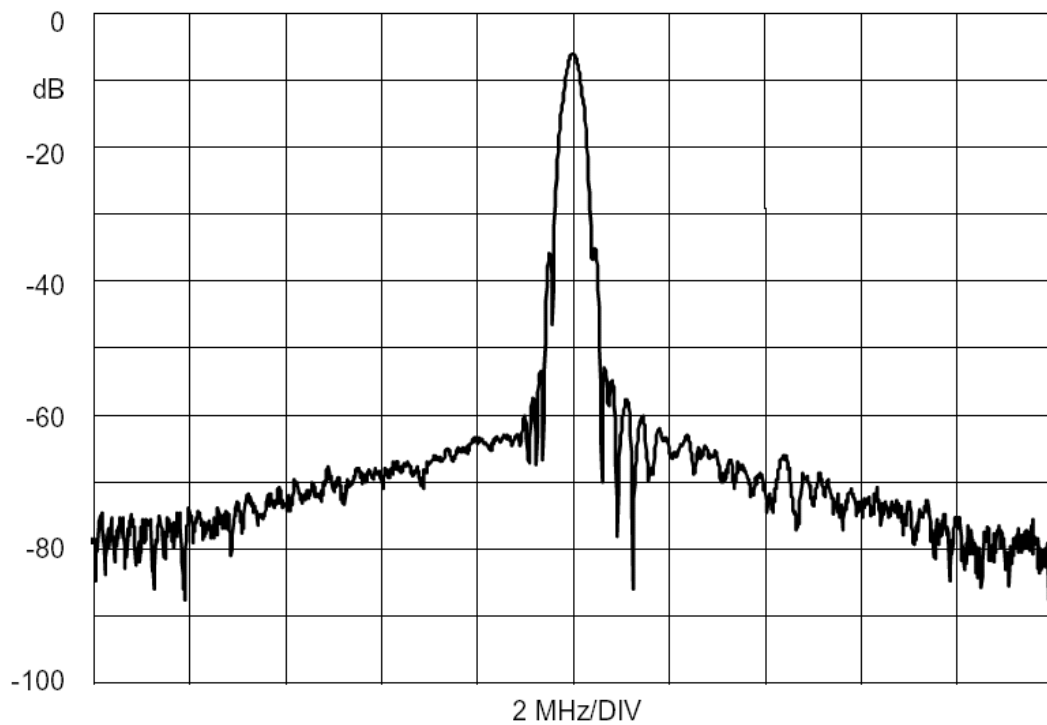
Notes:

- 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.
- Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
- 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.
- "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
- The design, manufacturing process, and specifications of this filter are subject to change.
- 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.
- US and international patents may apply.
- RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
- ©Copyright 1999, RF Monolithics Inc.
- Electrostatic Sensitive Device. Observe precautions for handling

71.000 MHz

SAW Filter

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71.000 MHz

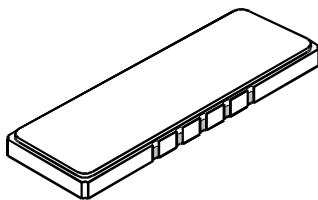
SAW Filter

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SMP-87 Case

10-Terminal Ceramic Surface-Mount Case

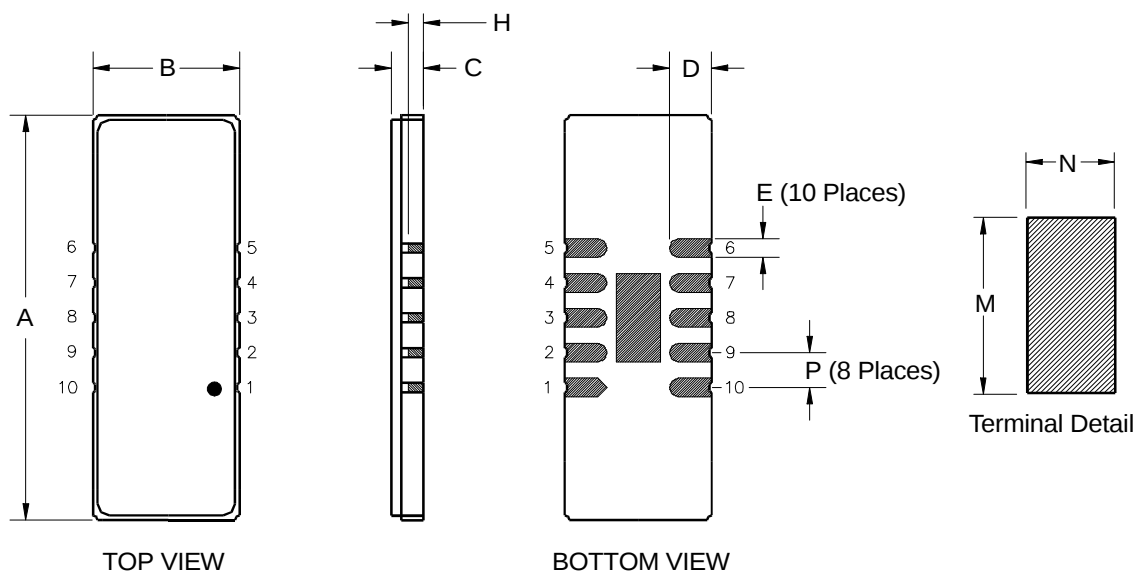
22.1 x 8 mm Nominal Footprint



Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	21.90	22.10	22.40	0.862	0.870	0.882
B	7.80	8.00	8.30	0.307	0.315	0.327
C		1.78	2.00		0.070	0.079
D		2.29			0.090	
E		1.02			0.040	
H		1.0			0.039	
M		4.83			0.190	
N		2.41			0.095	
P		1.905			0.075	

Materials	
Solder Pad Termination	Au plating 30 - 60 μinches (76.2-152 μm) over 80-200 μinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 μinches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

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

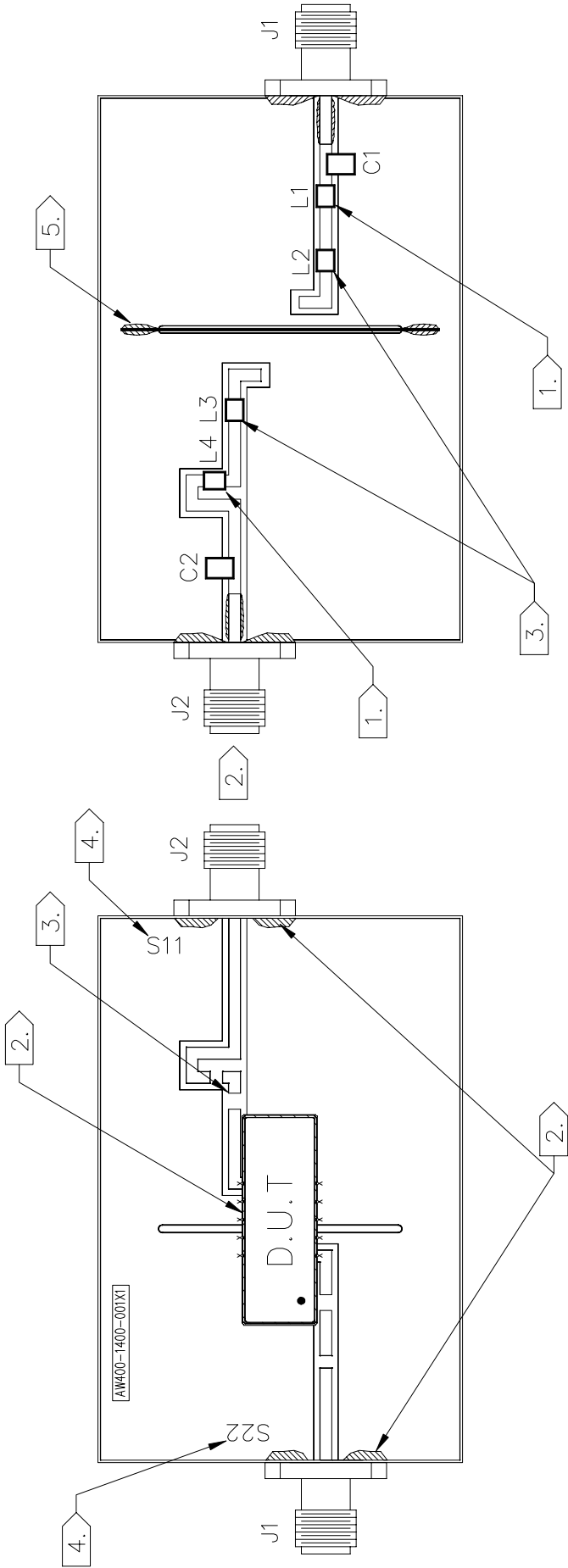


REV	ECN NO.	DESCRIPTION	DATE
A	6524	INITIAL RELEASE	4/10/98
B	6857	UPDATE	7/13/98
C	6999	SPLIT SOLDER INTO 2 PIECES	9/13/98
D	7121	CHANGE REF DESIGNATORS	11/15/98

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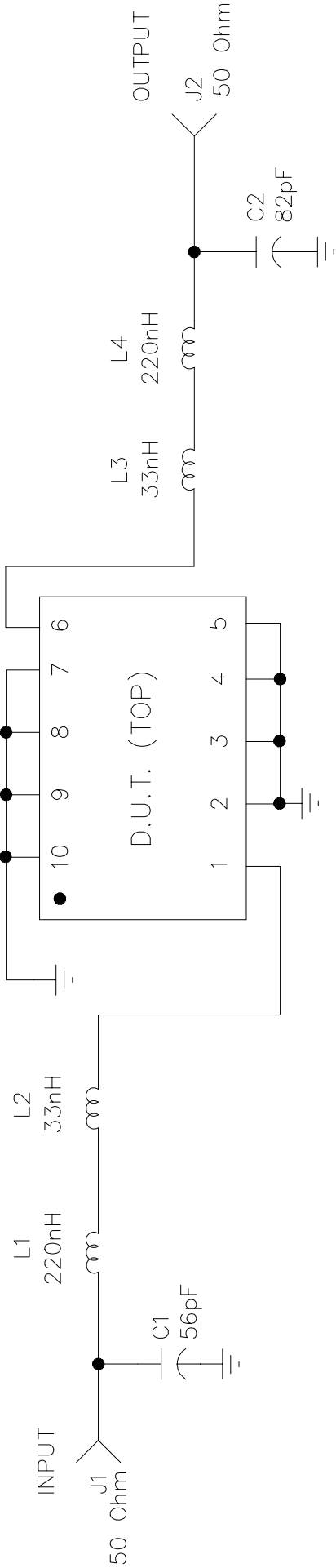
NOTES:

1. NOTE PROPER ORIENTATION OF INDUCTORS L1 & L4. THEY ARE TO BE POSITIONED 90° TO EACH OTHER.
2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 10 PLACES AND CONNECTORS AS SHOWN.
3. CUT TRACES ON BOTH SIDES OF THE PCB BETWEEN THE SAME HOLES TO PROVIDE GAP FOR L2 & L3.
4. LABEL BOARD USING ELECTRONIC METHOD.
5. CUT SHIELD TAB SO THAT IT IS EVEN WITH TEST SIDE. SOLDER AS SHOWN.



DRAWN BY/DATE: J.J. LAYTON 04/10/98		TITLE: ASSEMBLY, SF1081A(DEMO)				
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE	CODE IDENT	DWG. NO.	REV	SHEET
		A	2U874	SF1081A-000	D	1/10

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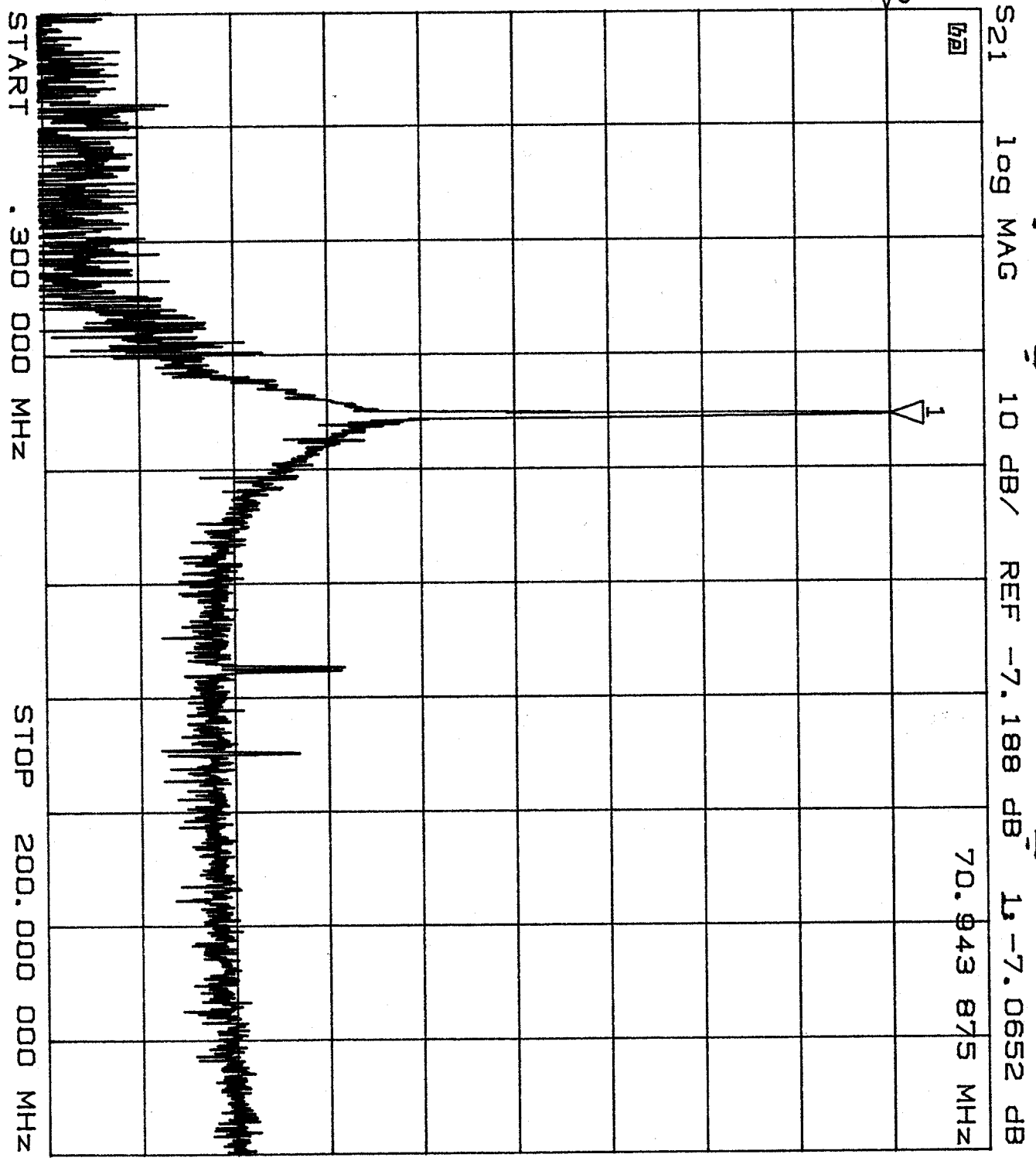
Sgt 3/10 SF 10814-000 R3U Q.D

Tuning changed to
match passband. F.H.

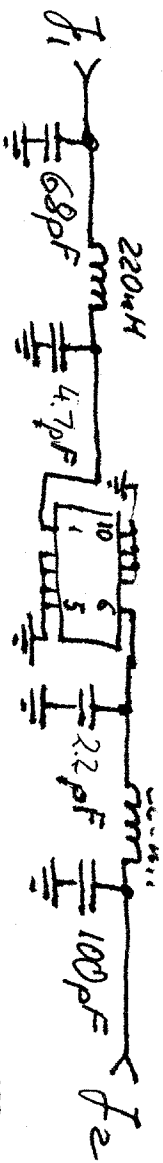
Cor
11-18-87
F.M.

H I D

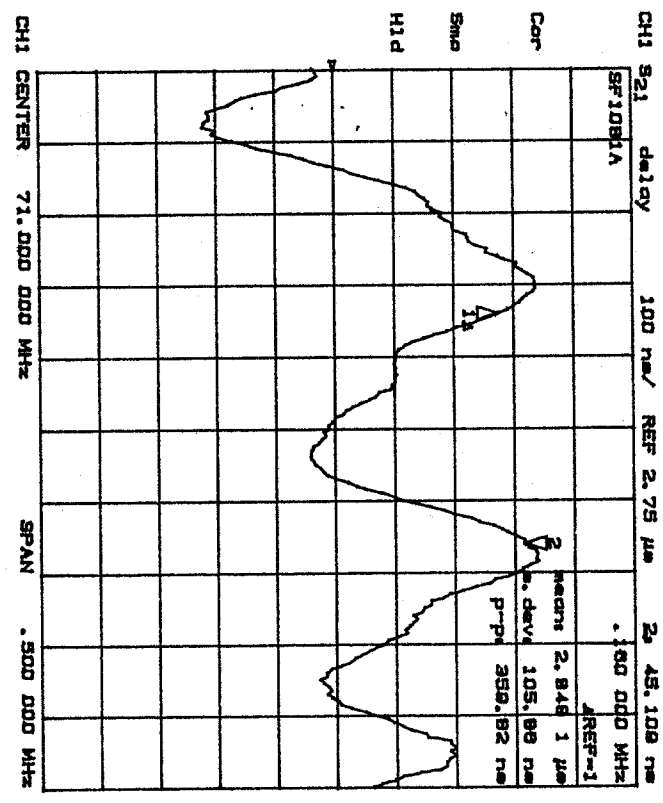
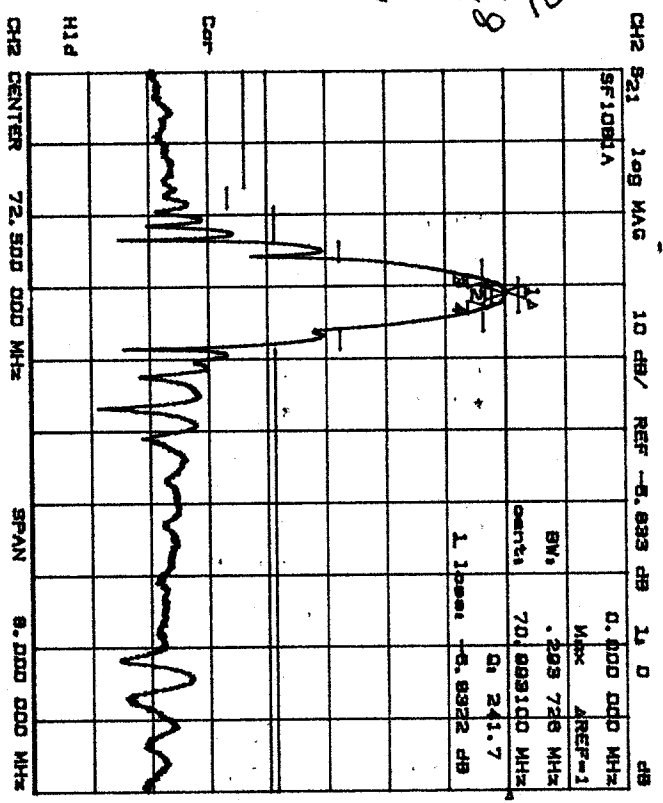
查询"SF1081A"供应商



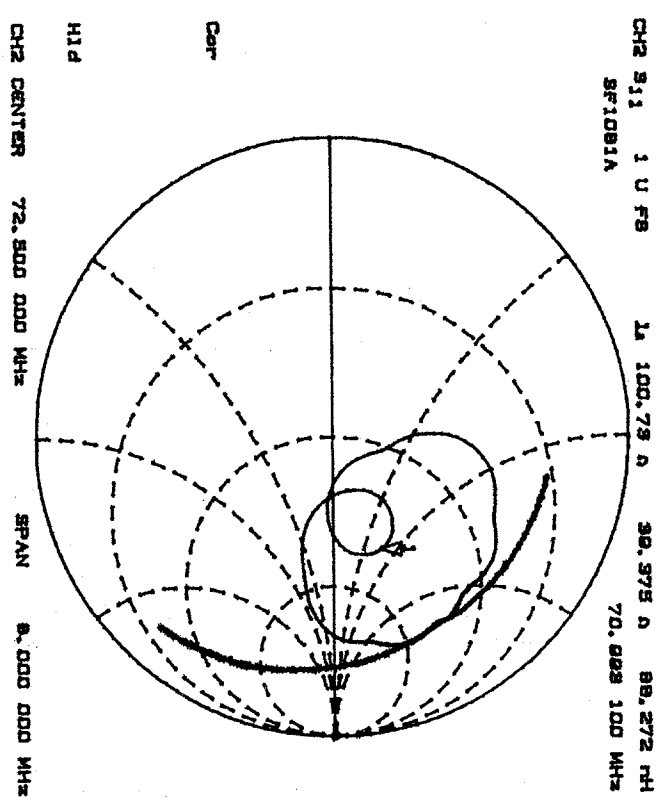
STOP 200.000 000 MHZ
Sht 40810 SF1081A-000 R23V 4D



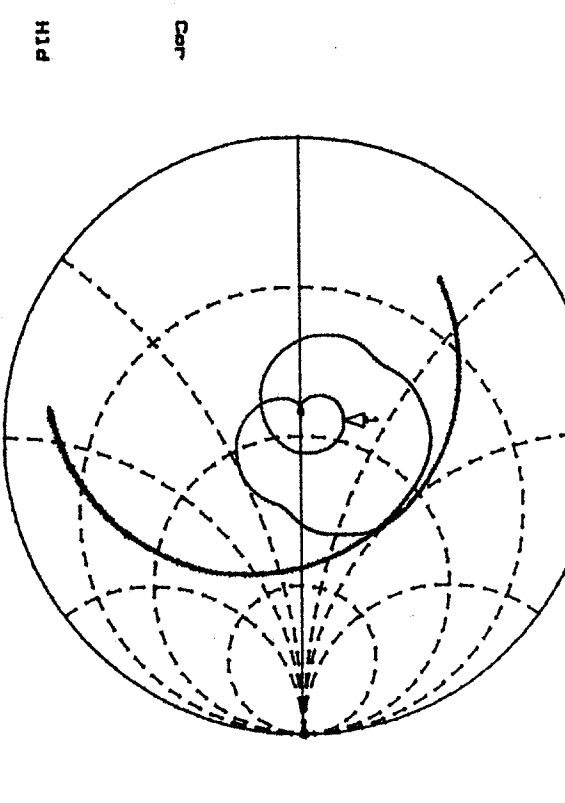
SF1081A
DEM1042
E-3224-18
BM82
11-18-97
F.H.



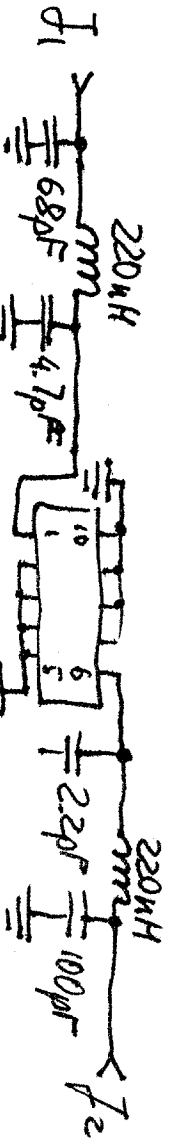
[查询"SF1081A"供应商](#)



CH2 522 1 U FB 1u 49.487 0 19.076 0 28.915 nH
SF1081A



SLT S/10 SF1081A-000 REV 4D

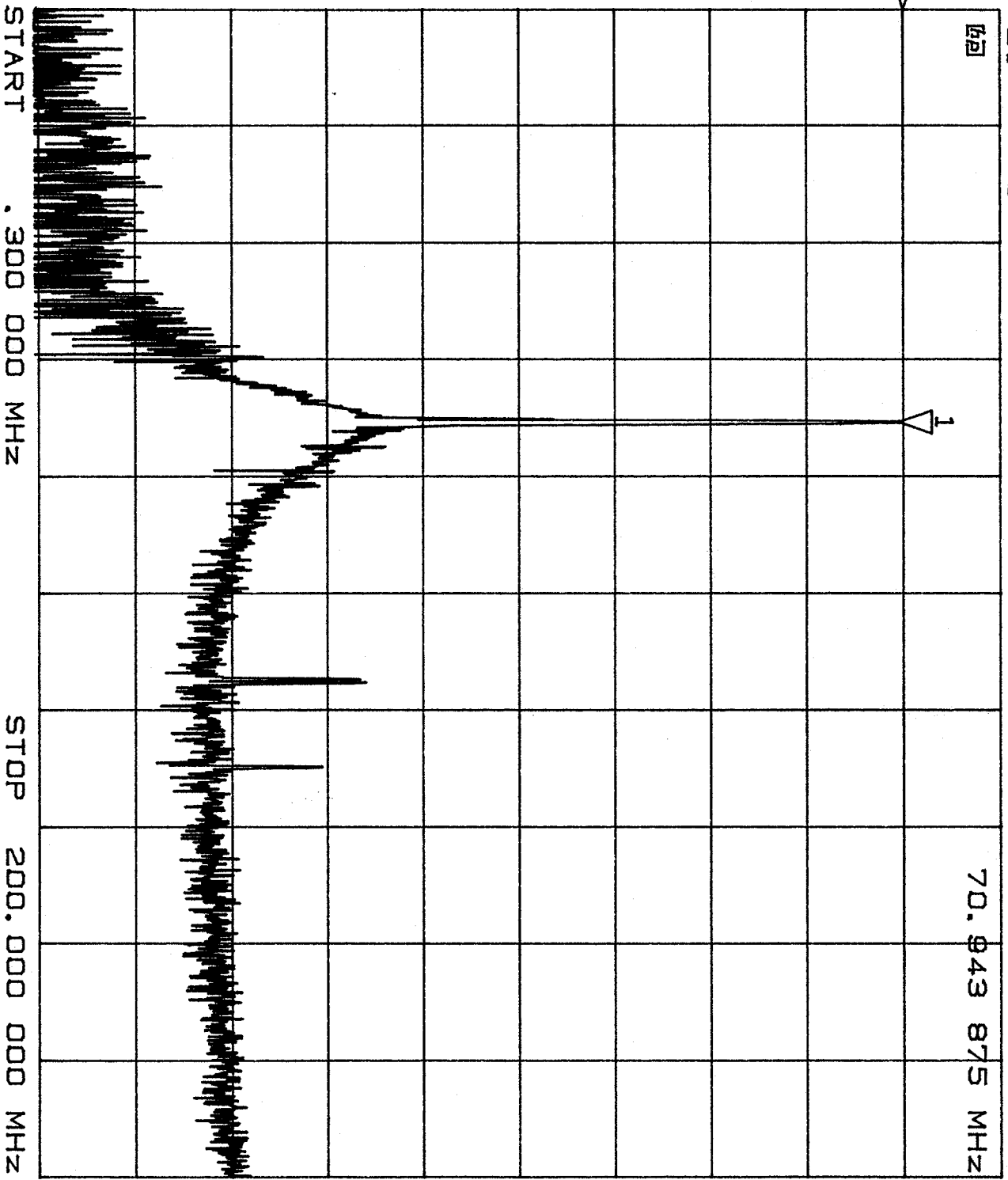


Tuning changed to match passband. F.M.

SF1081A
 DEMO#2
 ES224-1/8
 BM82 Cor
 11-18-57
 F.M.

H1D

CH1 S21 10g MAG 10 dB/ REF -7.188 dB L: -7.6309 dB



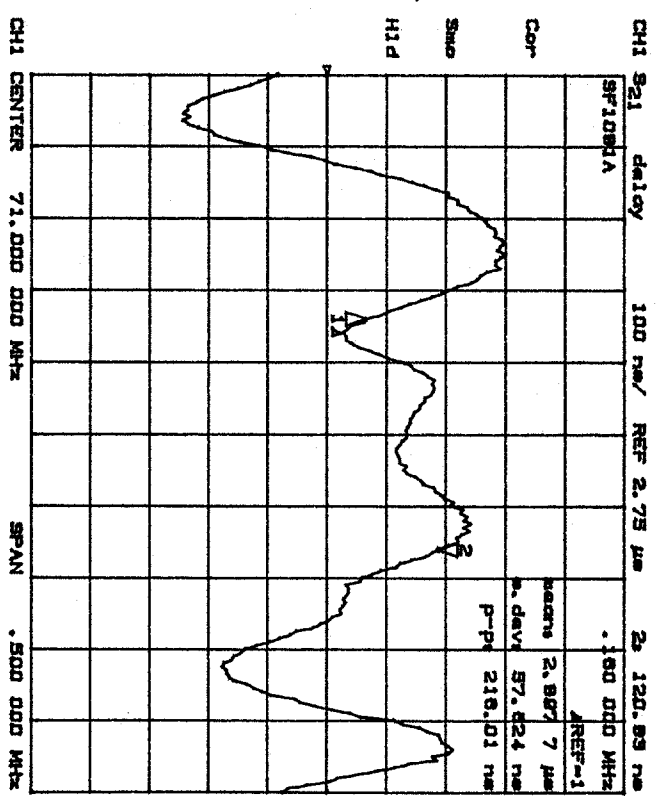
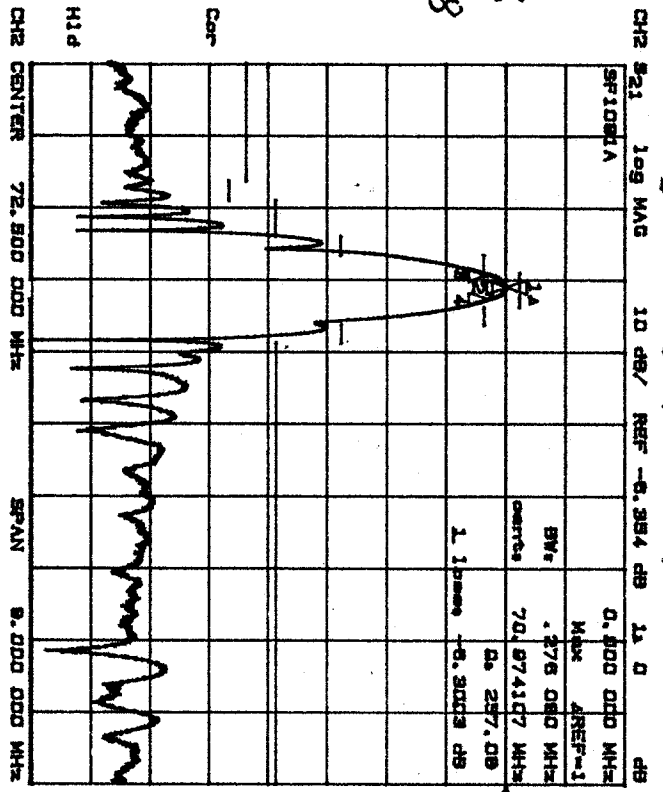
[查询"SF1081A"供应商](#)

SMT 6/16 SF1081A-000 23V 4-D

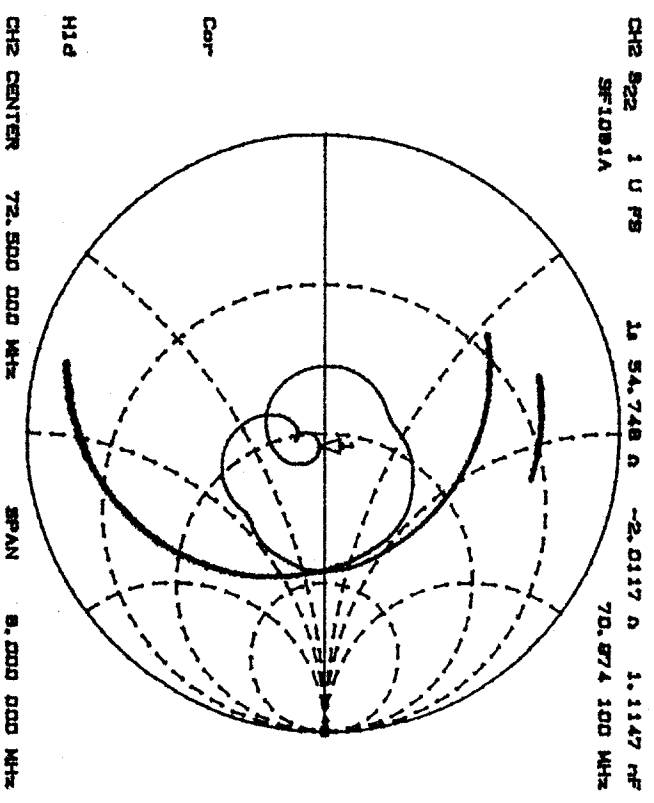
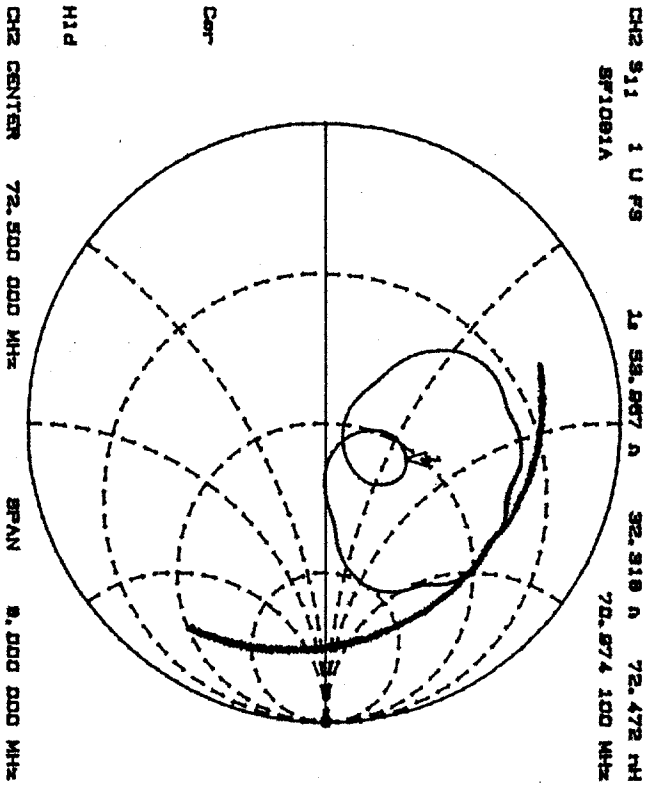


Tuning changed to match passband. F14

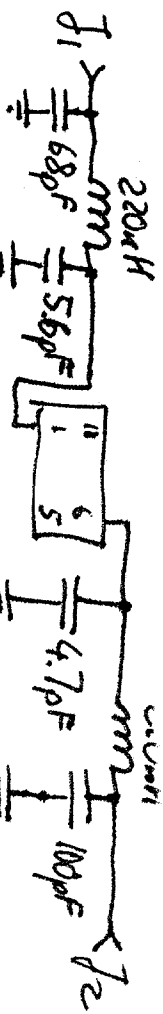
SF1081A
DEM0#3
E-3224-18
B7B2
11-18-97
F14.



[查询"SF1081A"供应商](#)



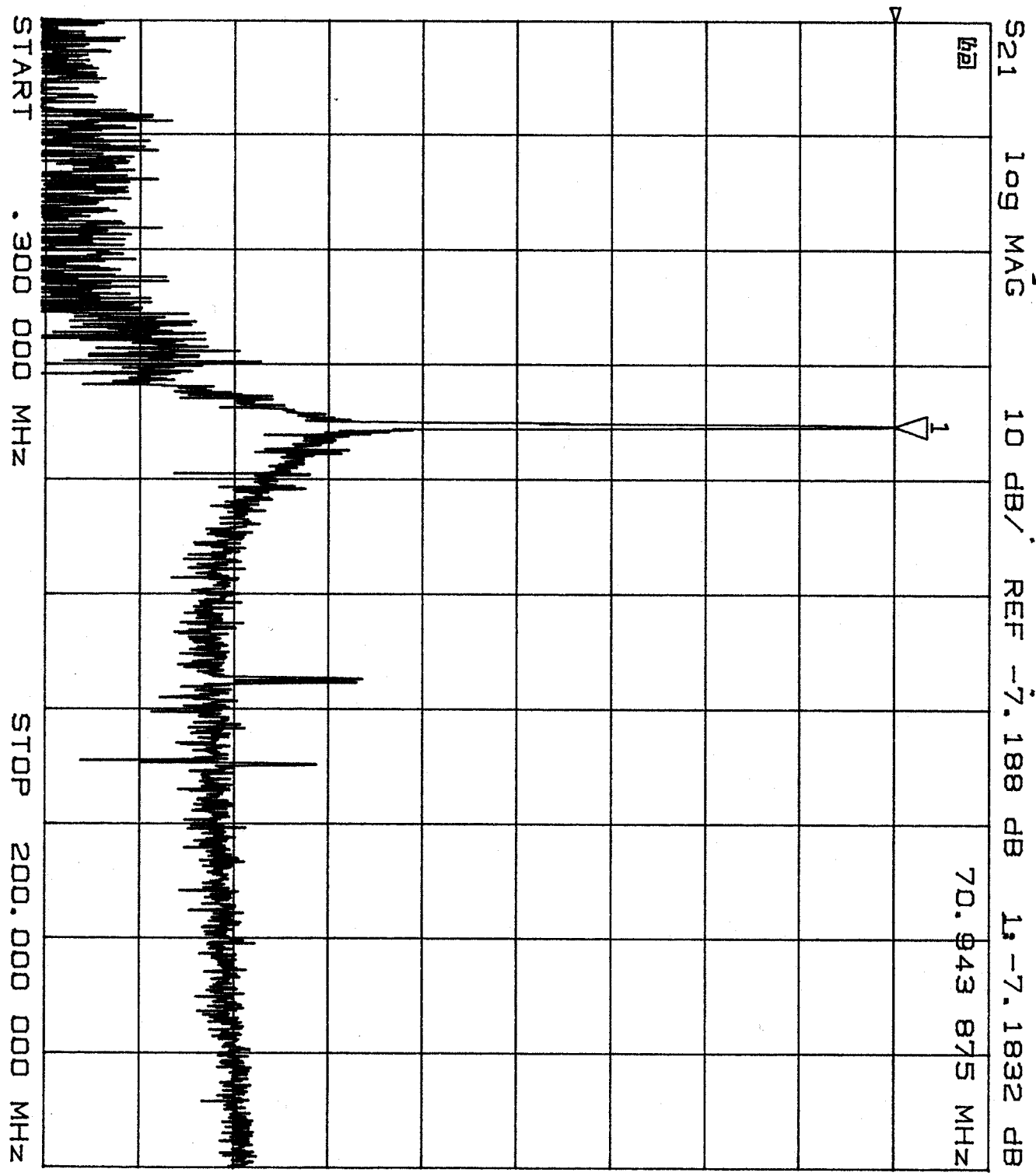
Sht 7/10
SF1081A-000 RLV QD



Tuning changed to
width passband.
F.M.

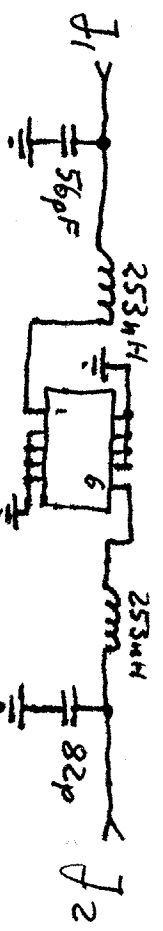
SF1081A
DEM0 #3
E-3224-18
B782 cor
11-18-97
F.M.

H1d

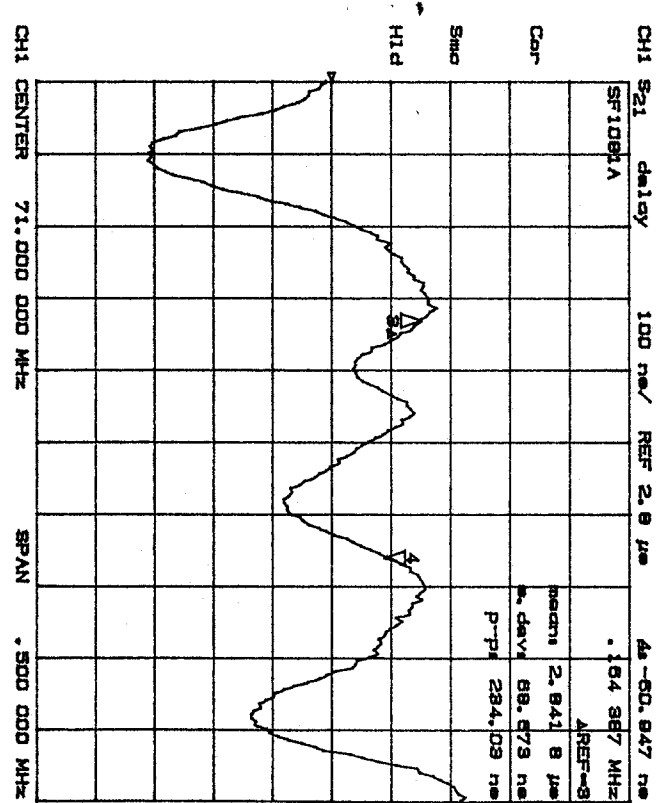
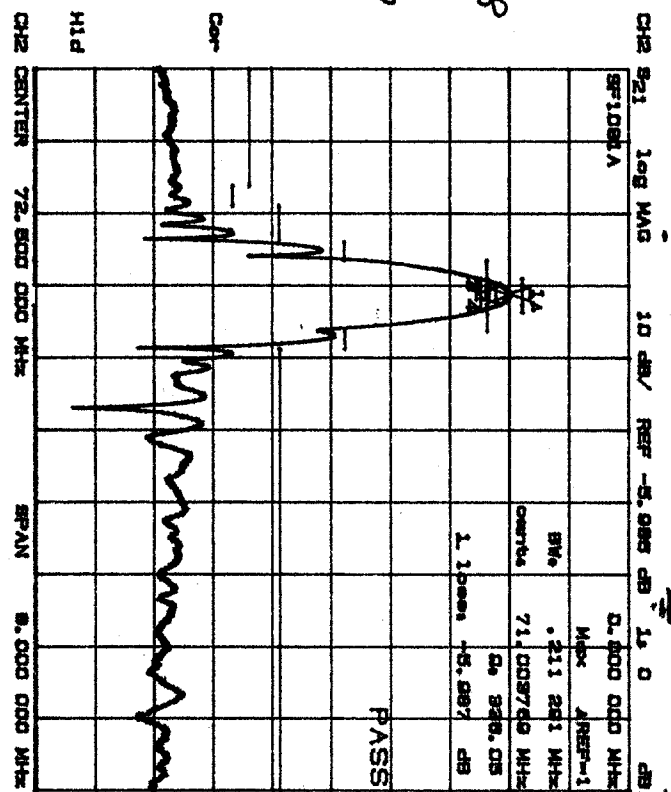


[查询"SF1081A"供应商](#)

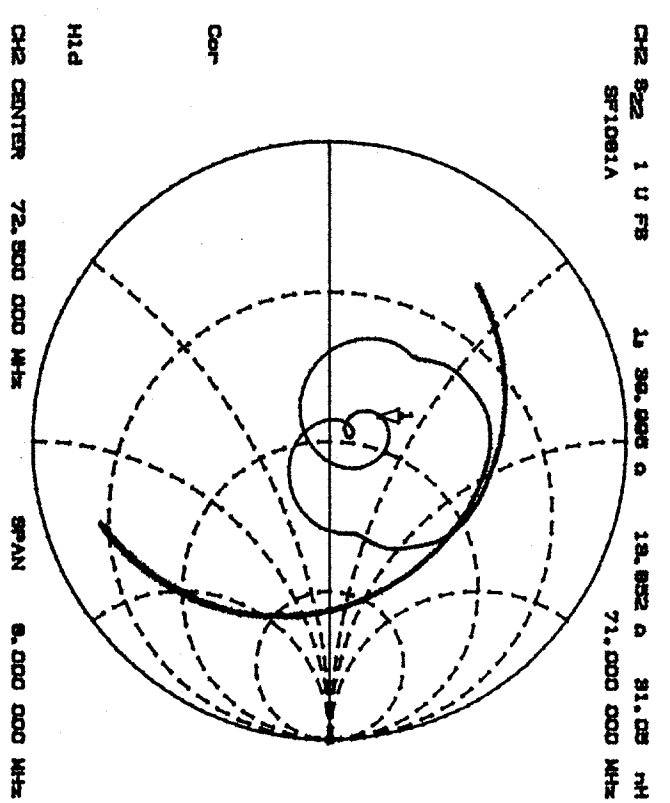
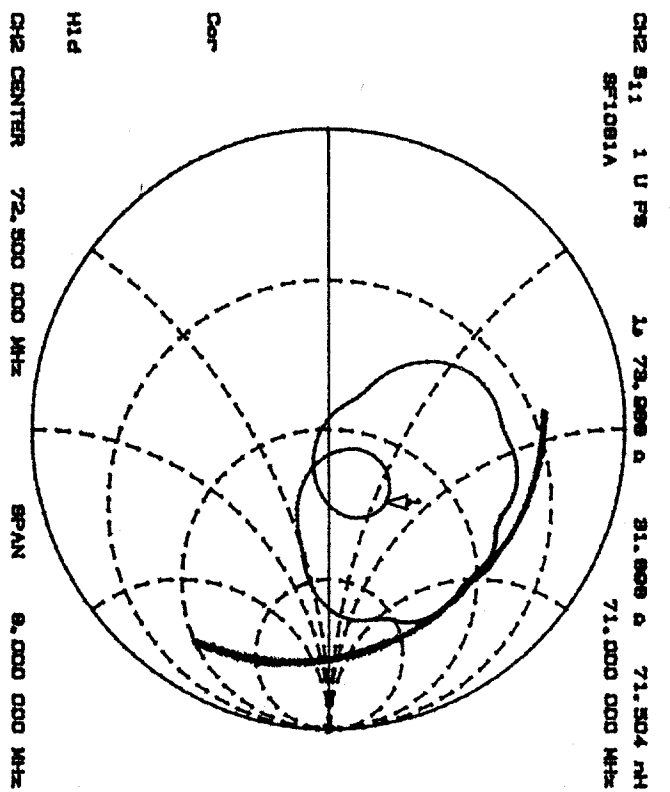
515 8/10 SF1081A-000 23V & D



SF1081A
 Demo #4
 E-3224-1,8
 BM82
 11-18-87



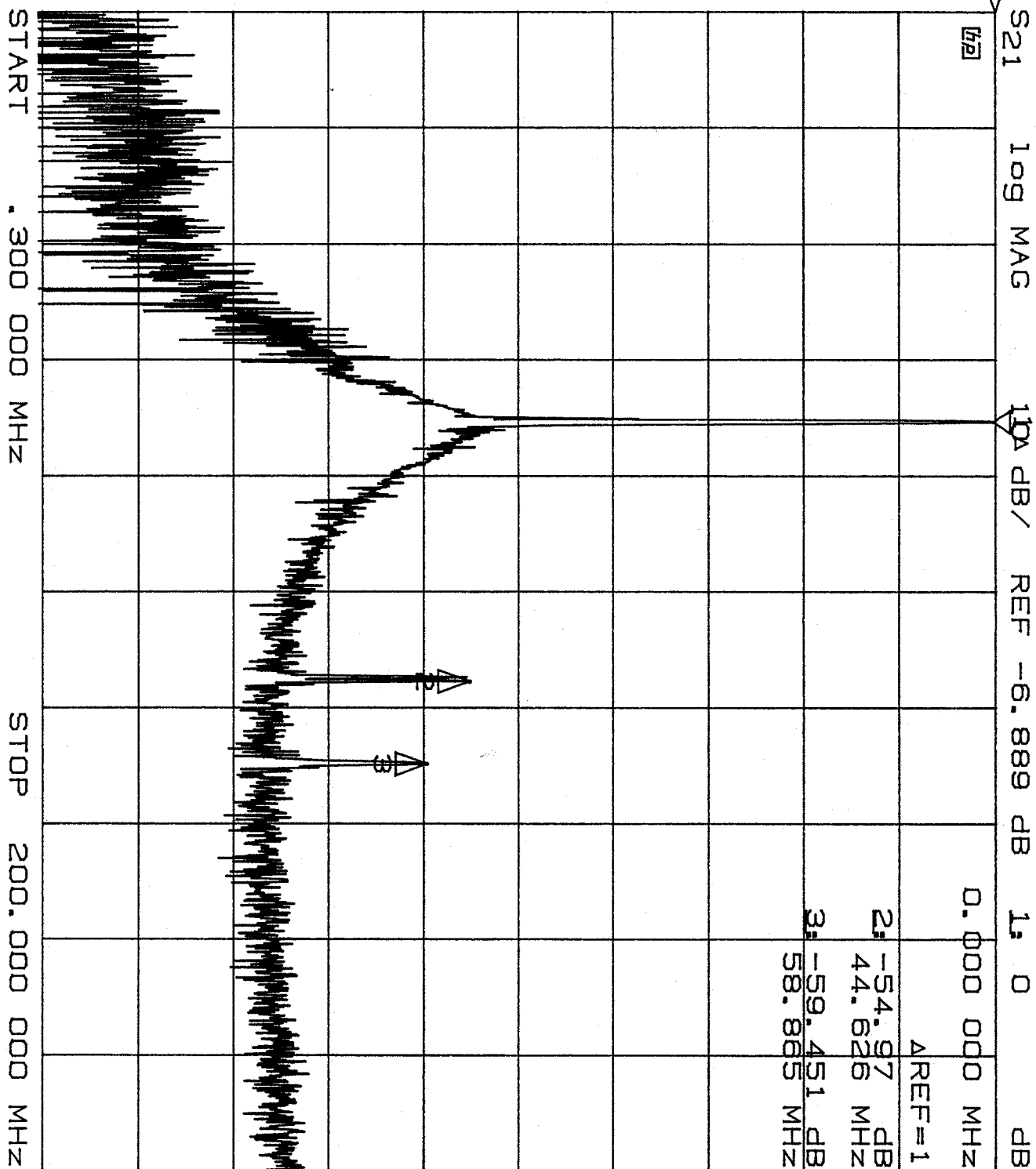
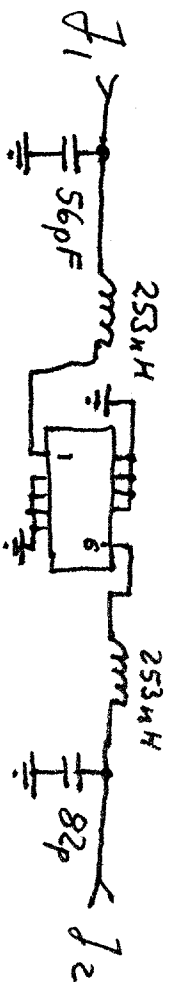
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Mat 9/1/00 SF1081A-000 REV A-D

SF1081A
 DEMO#4
 E-3224-1/8
 B1182
 11-21-97
 FM Cor

H1d



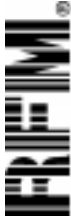
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SMT-10/10 SF1081A-000 REV D0

BILL OF MATERIALS

<u>PART IDENTIFIER</u>	<u>DESCRIPTION 1</u>	<u>DESCRIPTION 2</u>	<u>QTY/ASSY</u>	<u>REFERENCE DESCRIPTION</u>
SF1081A(DEMO)	DEMO BOARD,SF1081A			
400-1400-001	PCB,DEMO BOARD,SF1081A		1.0000	
400-0533-001	SHIELD,TO-39 TEST FIXTURE		1.0000	
500-0319-001	TAPE,COPPER FOIL,SCOTCH	TYPE 1181,44F3260,1/2"	0	
SF1081A(LRIP)	FILTER,SM,71.000MHZ		1.0000	
SF1081A-000	ASSY DIAGRAM,DEMO BOARD,	SF1081A	0	
500-0003-560	CAP,CHIP,NPO,56(J),STD		1.0000	C 1
500-0003-820	CAP,CHIP,NPO,82(J),STD		1.0000	C 2
500-0248-001	CONN,COAX,FLANGE MT.JACK	4 HOLE	2.0000	J 1,2
500-0010-221	IND,CHIP,1008CS,220NH,10%		2.0000	L 1,4
500-0010-330	IND,CHIP,1008CS,33NH,10%		2.0000	L 2,3

[查询"SF1081A"供应商](#)

	SIZE	FSCM NO.	DWG NO.	
	A	2U874	SF1081A(DEMO)	
SCALE	NONE	W/O or ECN	REV	SHEET
		6524	A	1 OF 2

