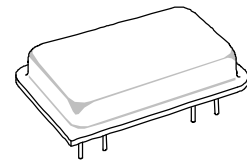


SF1058-1 167 MHz SAW Filter



- Designed for GSM DCS Receiver IF Applications
- Simple External Impedance Matching
- Hermetic Metal DIP
- Unbalanced Input and Output
- Relaxed Rejection Version of the SF1058



Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc		167.000		MHz	1
Passband	Insertion Loss at fc	IL	8	10.0	dB	1, 2
	1 dB Passband	BW ₁	±70	±100	kHz	
	3 dB Passband	BW ₃		±170		
	Group Delay Variation over fc ±180 kHz	GDV		500	ns _{p-p}	
Rejection	fc-400 to fc-250 and fc+250 to fc+400 kHz		5		dB	1, 2, 3
	Fc-600 to fc-400 and fc+400 to fc+600 kHz		15			
	141 MHz to fc-600 kHz and fc+725 kHz to 193 MHz		35			
Operating Temperature Range	T _A	-10		+85	°C	1

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	DIP14L-8 22.1 x 12.6 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF1058-1 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 (See note 3)

Connection	Terminals
Port 1 Hot	1
Port 1 Gnd Return	14
Port 2 Hot	8
Port 2 Gnd Return	7
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. All "NC" or "no connection pins" should be grounded.
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.

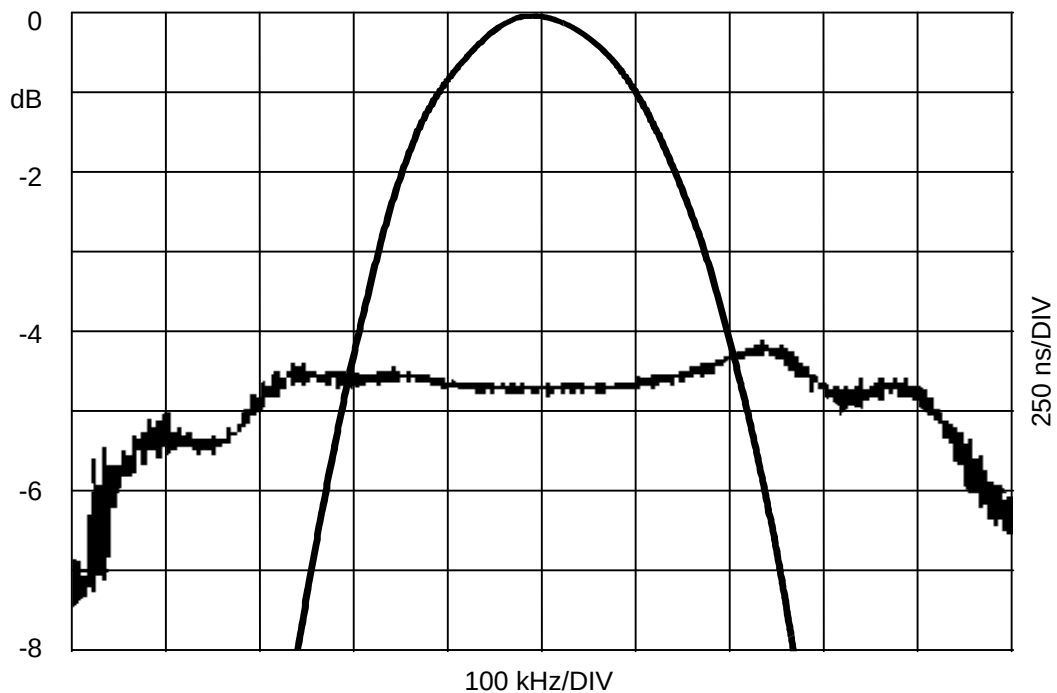
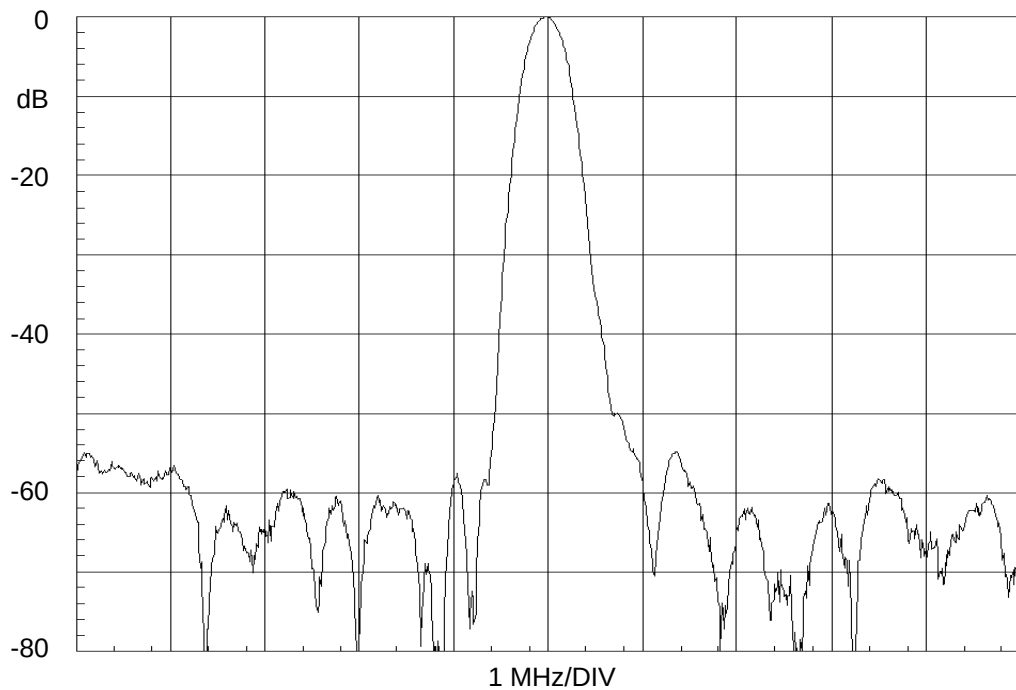


RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

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

SF1058-1 167 MHz SAW Filter

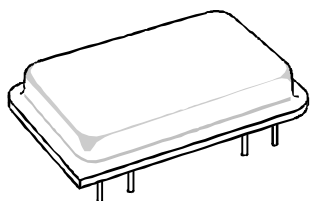


RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

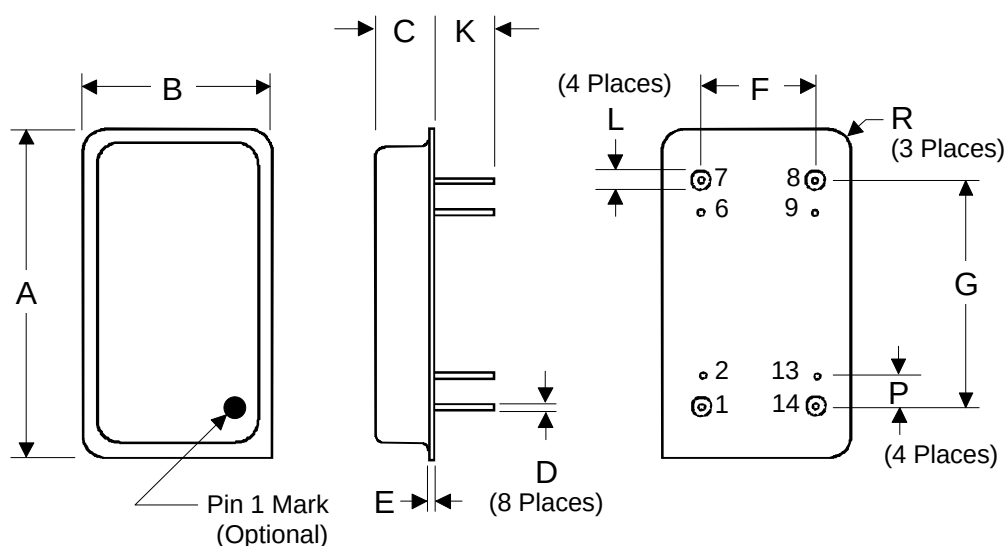
Phone: +1(972)233-2903
Fax: +1(972)387-8148
e-mail: info@rfm.com
Home page: www.rfm.com

European Sales Office
44 1963 251383
44 1963 251510

Metal 8-Pin DIP in 14-Pin (Long) Configuration 22.1 x 12.6 mm Nominal Footprint



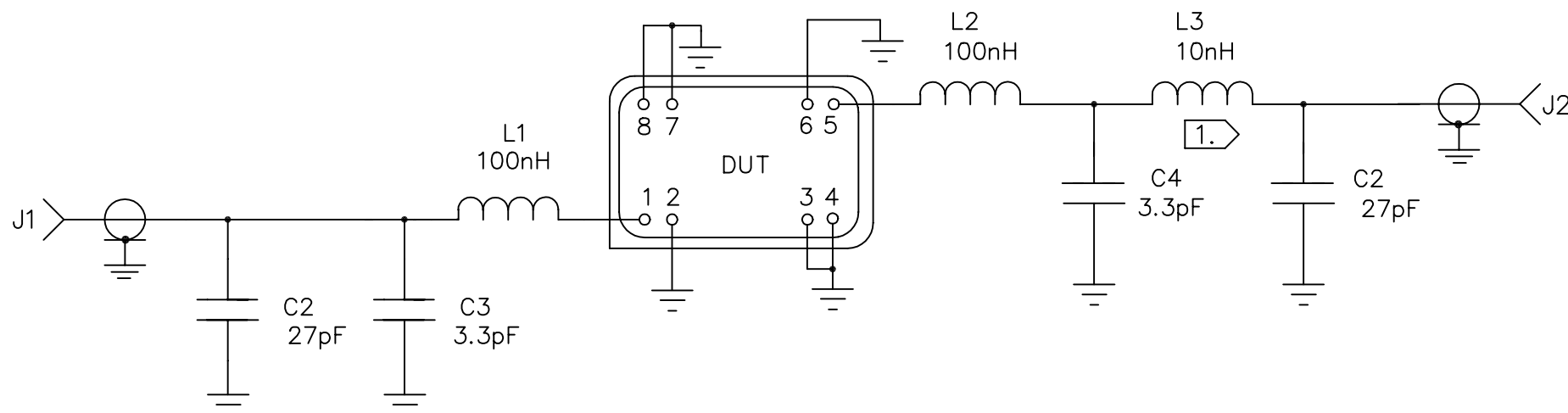
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		22.10	22.50		0.870	0.886
B		12.55	13.00		0.494	0.512
C		3.56	3.81		0.140	0.150
D	0.41	0.48	0.51	0.016	0.019	0.020
E		0.89			0.035	
F		7.62			0.300	
G		15.24			0.600	
K	3.30	3.81	6.73	0.130	0.150	0.265
L	1.37	1.45	1.52	0.054	0.057	0.060
P		2.54			0.100	
R		1.60			0.063	



NOTES:

1. L3 MAY OR MAY NOT BE USED DEPENDING ON TUNED RESPONSE.

REV	ECN NO.	DESCRIPTION	DATE
A	6623	INITIAL RELEASE	4/2/98



DRAWN BY/DATE: J.J. LAYTON

04/02/98

TITLE: ASSEMBLY, DEMO, SF1058-1

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

SIZE
A

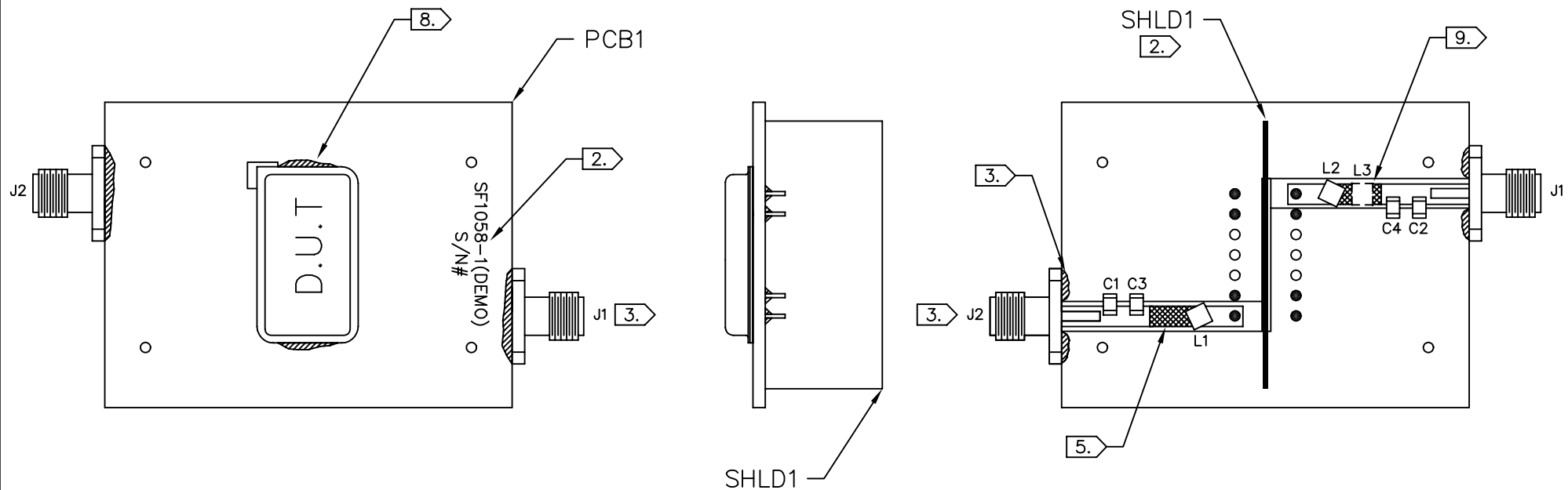
CODE IDENT
2U874

DWG. NO. SF1058-1-000

REV
A

SHEET
1/4

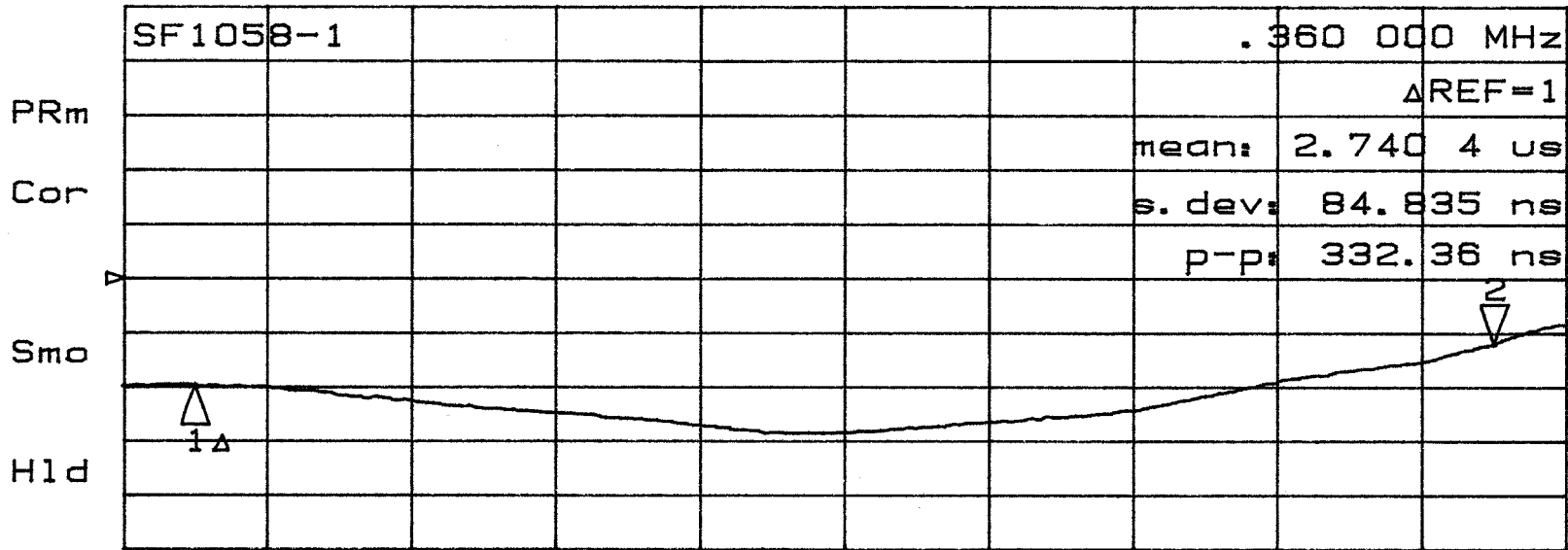
2. SOLDER SHLD1 TO PCB1. CUT SHLD1 FLUSH WITH PCB1.
3. SOLDER J1,2 TO PCB1 AS SHOWN.
4. SOLDER COMPONENTS AS SHOWN.
5. SOLDER TAPE1 TO PCB1 AS SHOWN.
6. LABEL PCB1 WITH PART NUMBER AND S/N#.
7. ORIENT L1,L2 90° TO EACH OTHER AS SHOWN.
8. SOLDER DUT TO PCB1 IN 2 PLACES AS SHOWN.
9. L3 MAY OR MAY NOT BE USED IF NOT USED EXTEND TAPE1 TO TRACE.



M.7. 3-12-98 DC#9809 SF1058-1 (DEMO)

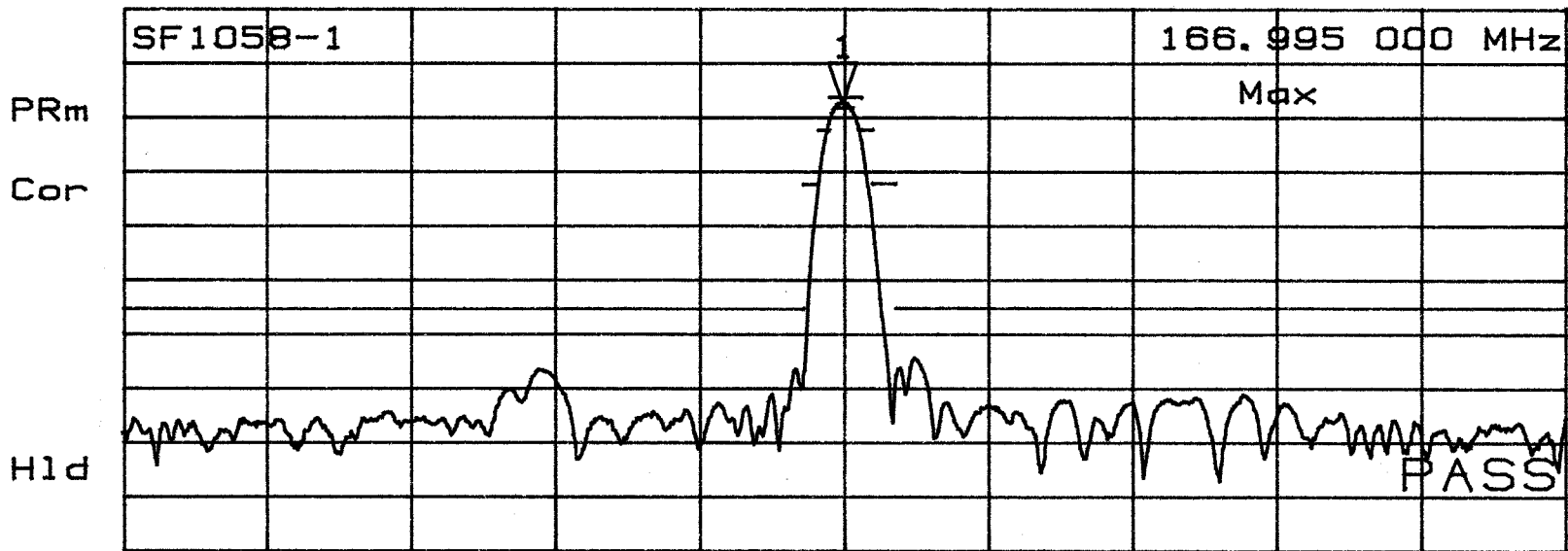
12 Mar 1998 20:55:50

CH1 S₂₁ delay 200 ns/ REF 3.2 us 2 151.52 ns

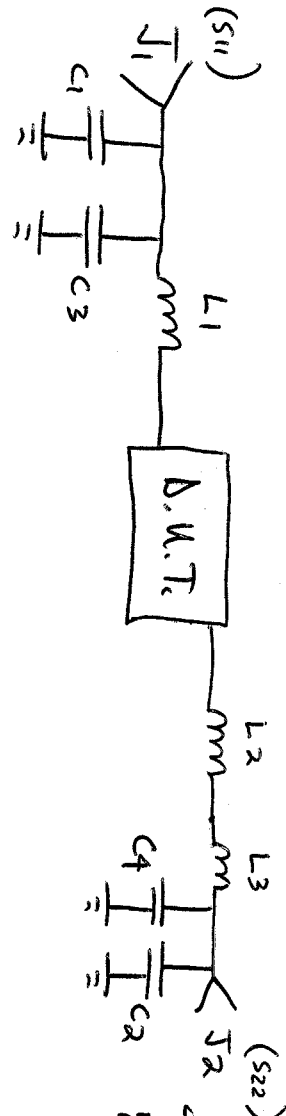


CH1 CENTER 167.000 000 MHz SPAN .400 000 MHz

CH2 S₂₁ log MAG 10 dB/ REF -9 dB 1 -6.1792 dB



CH2 CENTER 167.020 000 MHz SPAN 20.000 000 MHz



C₁, C₂ = 27 pF
 C₃, C₄ = 3.3 pF
 L₁, L₂ = 100 nH
 L₃ = 10 nH

REV: A SF1058-1-000

3 of 4

12 Mar 1998 20:59:22

CH1 S₁₁ 1 U FS

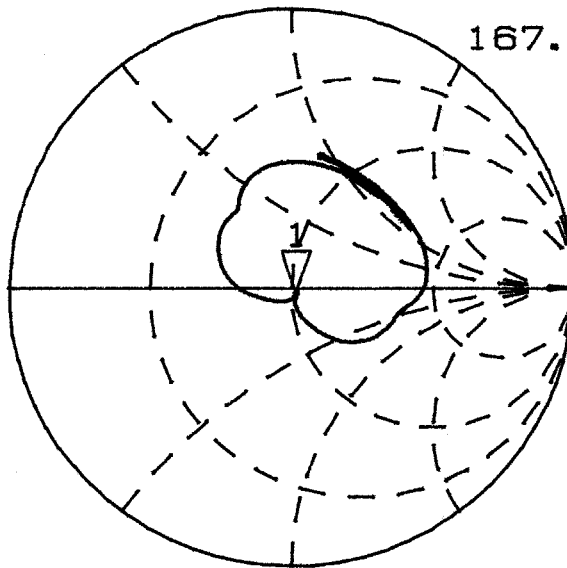
L 51.99 Ω -1.5449 Ω 616.88 pF

62

167.000 000 MHz

PRm

Cor



H1d

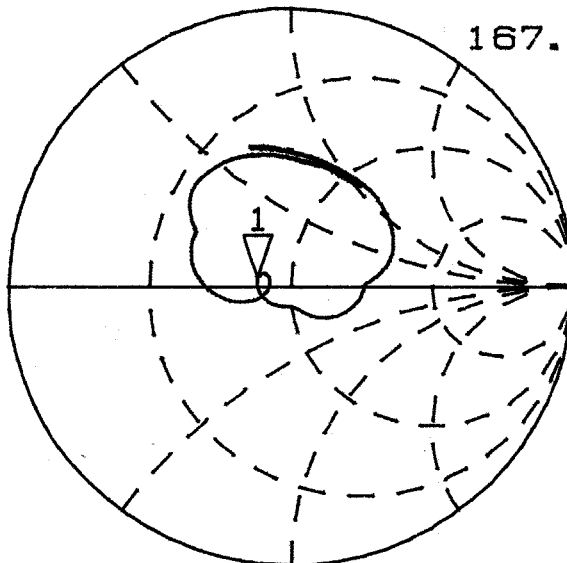
CH2 S₂₂ 1 U FS

L 39.777 Ω 3.0508 Ω 2.9075 nH

167.000 000 MHz

PRm

Cor



H1d

CENTER 167.000 000 MHz

SPAN 5.000 000 MHz

REV: A

SF1058-1-000

4 of 4

BILL OF MATERIALS

<u>PART IDENTIFIER</u>	<u>DESCRIPTION 1</u>	<u>DESCRIPTION 2</u>	<u>QTY/ASSY</u>	<u>REFERENCE DESCRIPTION</u>
SF1058-1-DEMO	DEMO BOARD,SF1058-1			
SF1058-1-000	ASSY DIAGRAM,DEMO BOARD	SF1058-1	0	
SF1058-1-LRIP	FILTER,167.000MHZ		1.0000	
400-0612-001	PCB,TEST FIXTURE,	14-PIN	1.0000	PCB1
400-0533-001	SHIELD,TO-39 TEST FIXTURE		1.0000	SHD1
500-0319-001	TAPE,COPPER FOIL,SCOTCH	TYPE 1181,44F3260,1/2"	0	TAPE1
500-0003-270	CAP,CHIP,NPO,27(J),STD		2.0000	C 1,2
500-0003-033	CAP,CHIP,NPO,3.3(C),STD		2.0000	C 3,4
500-0248-001	CONN,COAX,FLANGE MT.JACK	4 HOLE	2.0000	J 1,2
500-0010-101	IND,CHIP,1008CS,100NH,10%		2.0000	L 1,2
500-0010-100	IND,CHIP,1008CS,10NH,10%		1.0000	L 3 MAY/MAY NOT BE USED



SIZE
A

FSCM NO.
2U874

DWG NO.
SF1058-1(DEMO)

SCALE **NONE**

W/O or ECN **6623**

REV **A**

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

