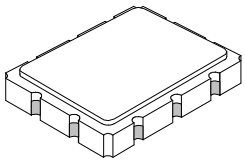
SF1063A

549.00 MHz SAW Filter

- ***Designed for CATV Applications (Pilot Tone)***
- ***Low Insertion Loss***
- ***9.1 x 7.1 mm Surface-Mount Case***
- ***Unbalanced Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM9171-10

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		549.000		MHz
Passband	Insertion Loss at fc	IL			7.5	9.0	dB
	0.5 dB Passband	$BW_{0.5}$	1, 2	±100			kHz
	3 dB Passband	BW_3			±630		dB_{P-P}
	Amplitude Ripple over fc ±100 kHz					0.5	ns_{P-P}
Rejection	529.04 MHz to 545.75 MHz		1, 2, 3	40			dB
	551.4 MHz to 569.04 MHz			35			
	Ultimate				50		
Operating Temperature Range		T_A	1	-20		+85	°C

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 SF1063A XX

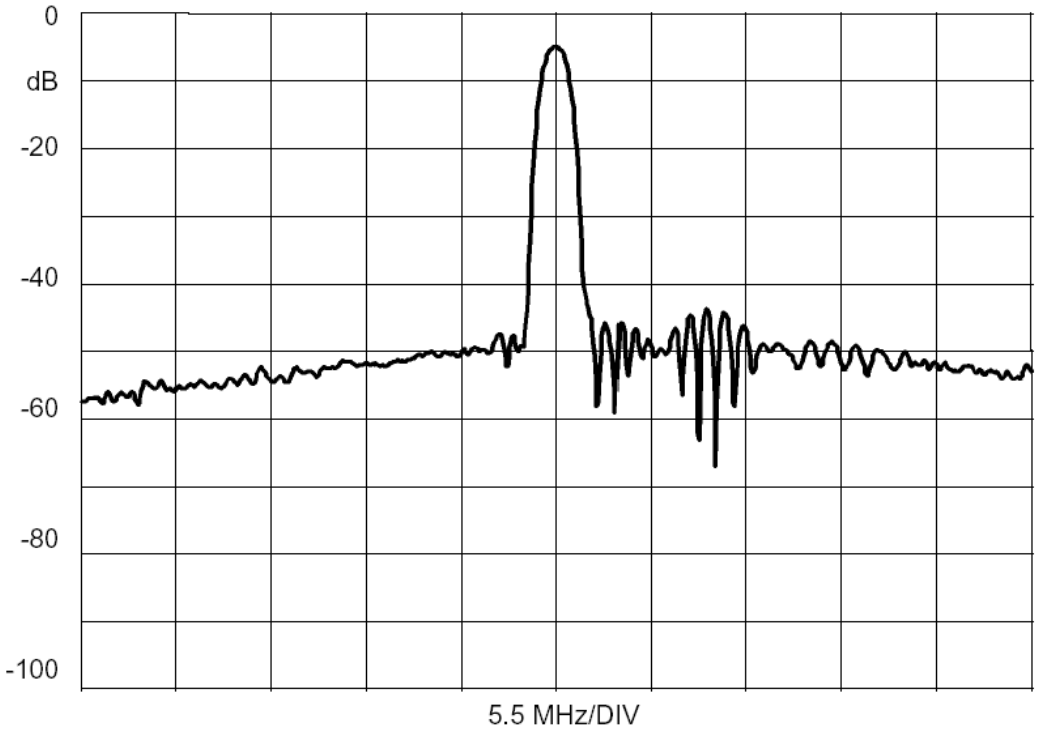
Electrical Connections

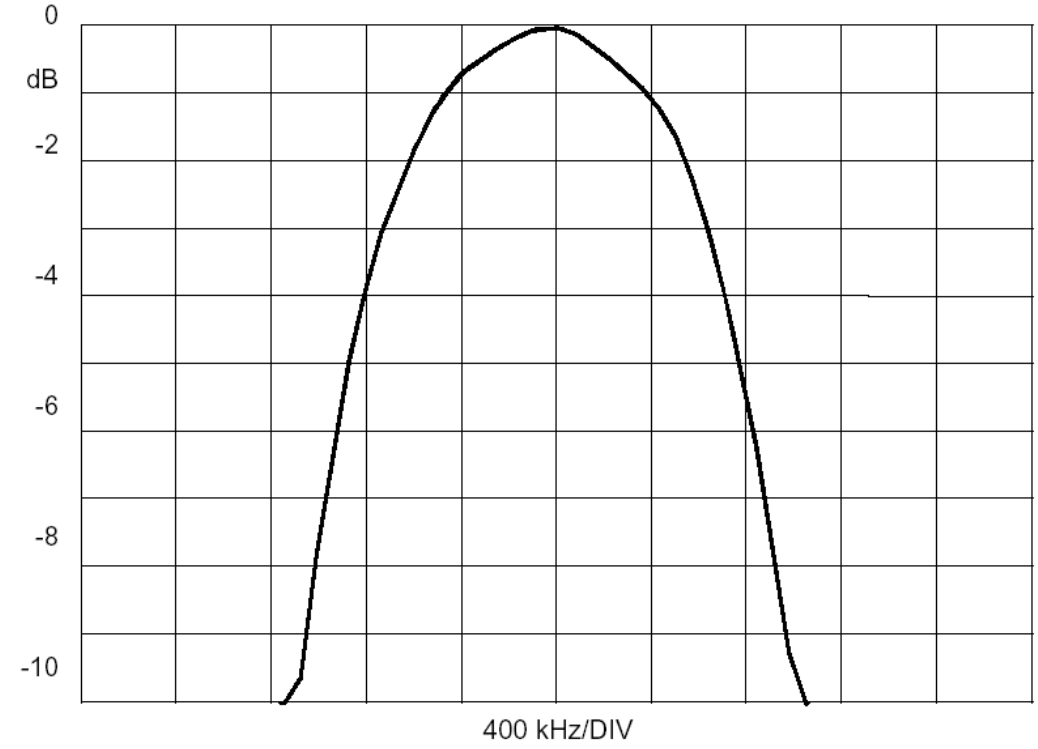
Connection	Terminals
Port 1 Hot	10
Port 1 Gnd Return	1
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others

Notes:

1. Unless noted otherwise, all specitication apply over the operating temperature range with filter soldered to the specified demonstration board with impedanced matching to 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specitications 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. Electrostatic Sensitive Device. Observe precautions for handling.

RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-9148 E-mail: info@rfm.com
RFM Europe Phone: 44 1963 251383 Fax: 44 1963 251510 http://www.rfm.com

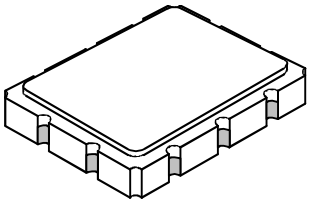




RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-9148 E-mail: info@rfm.com
RFM Europe Phone: 44 1963 251383 Fax: 44 1963 251510 http://www.rfm.com

SM9171-10 Case

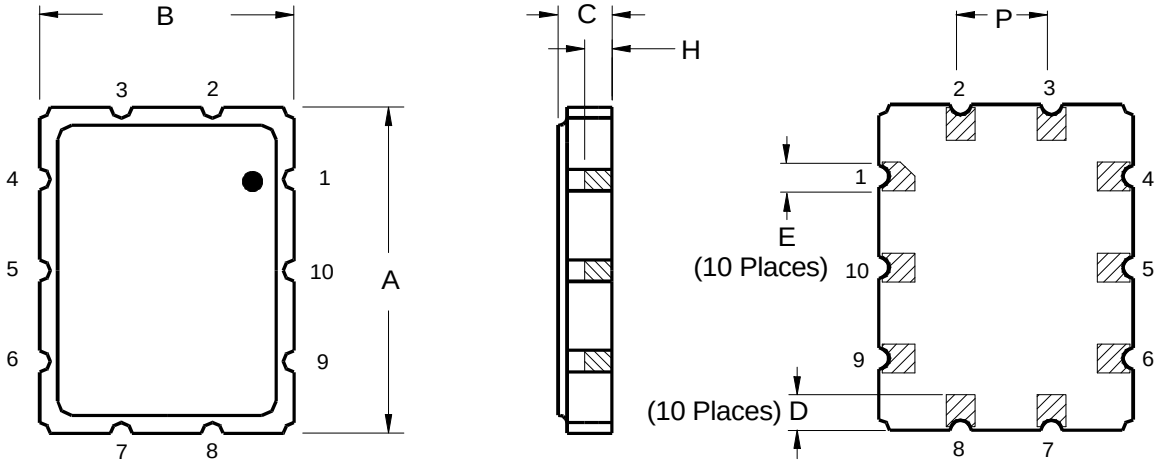
10-Terminal Ceramic Surface-Mount Case
9.1 x 7.1 mm Nominal Footprint



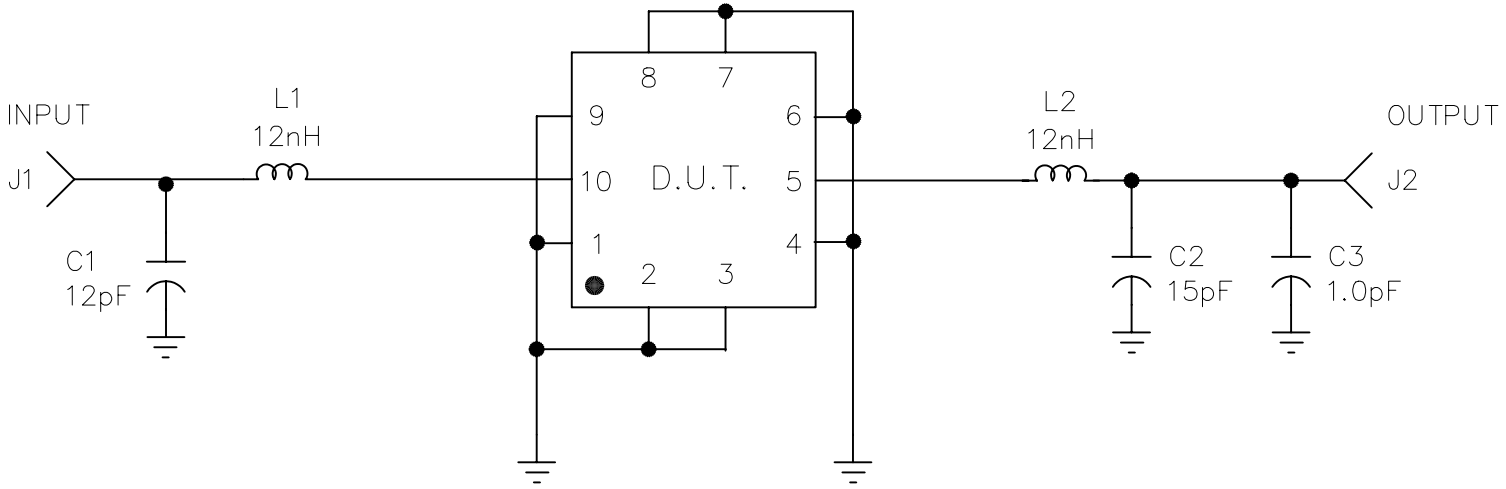
Case Dimensions						
Dimension	**mm**			**Inches**		
	Min	**Nom**	**Max**	**Min**	**Nom**	**Max**
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

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_2O_3 Ceramic
Pb Free	

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	5073	INITIAL RELEASE	

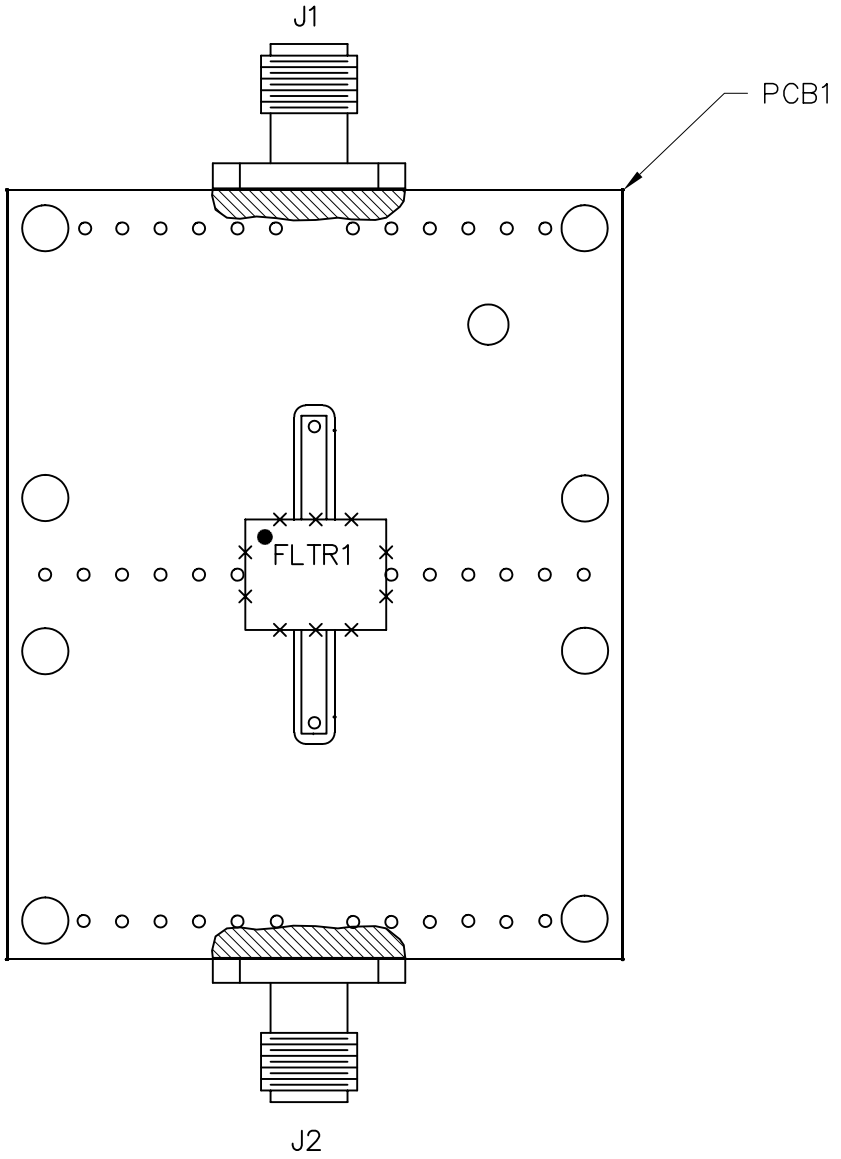


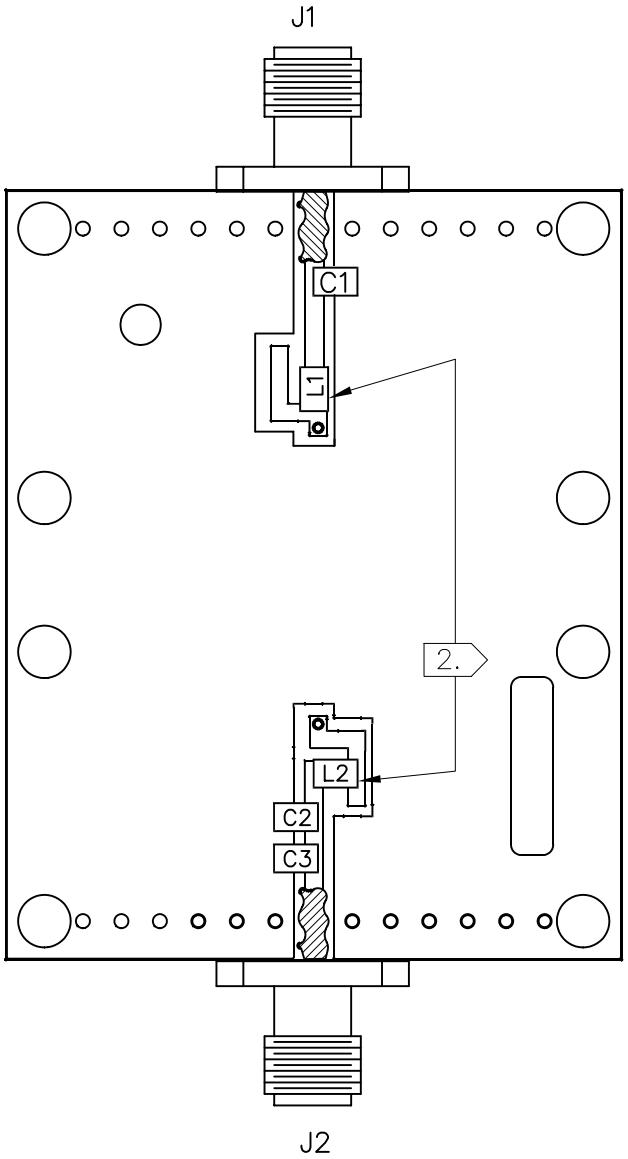
SCHEMATIC

DRAWN BY/DATE: J.J. LAYTON 11/13/96			TITLE: ASSEMBLY DIAGRAM, SF1063(DEMO)				
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE **A**	CODE IDENT **2U874**	DWG. NO. SF1063A-000		REV A	SHEET 1/6

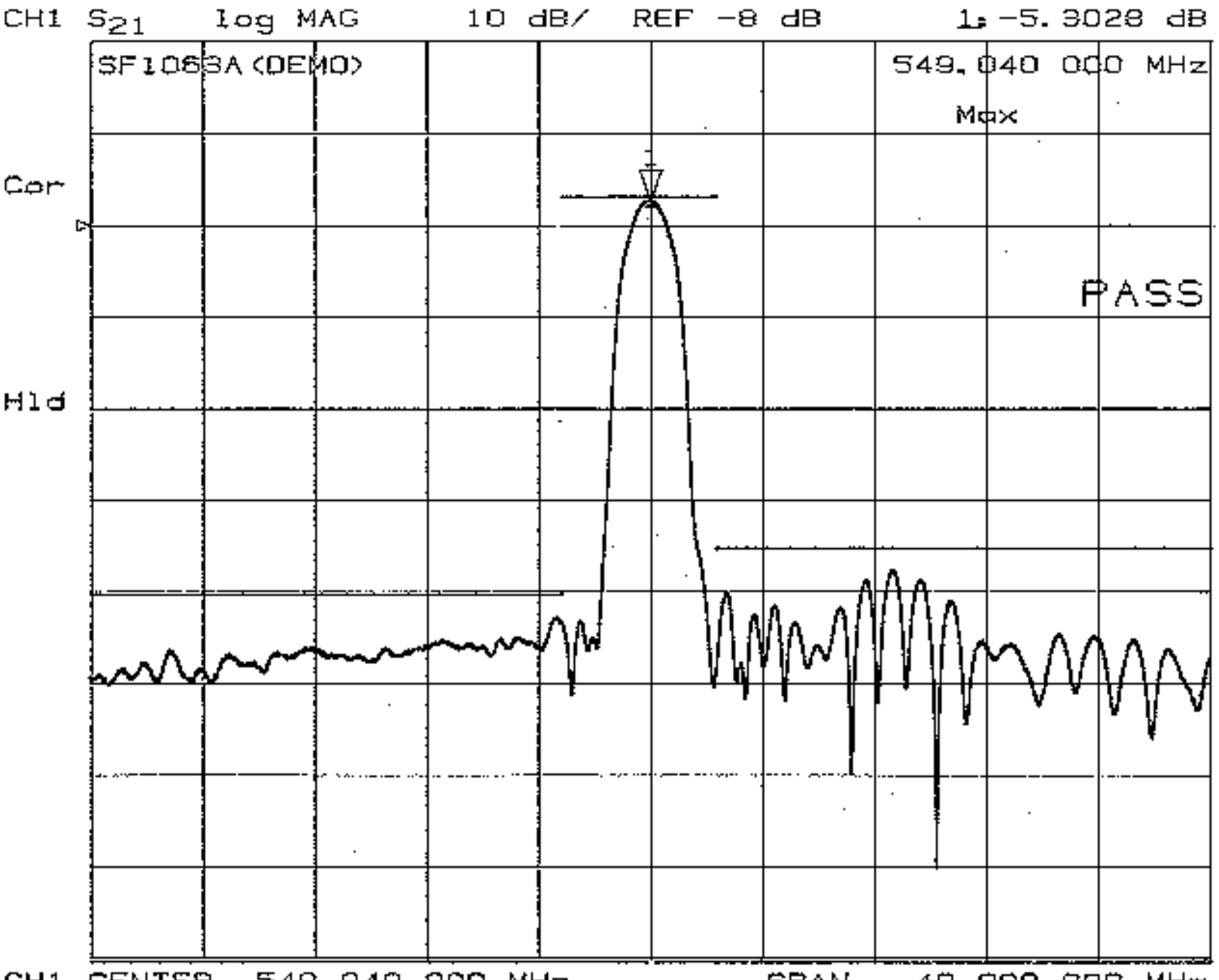
NOTES:

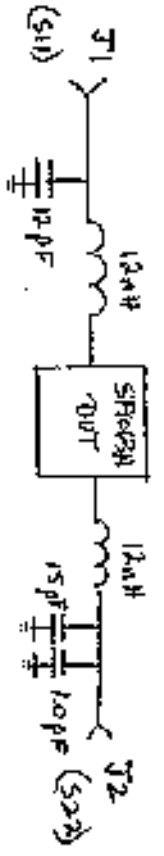
1. SOLDER MOUNT COMPONENTS, CONNECTORS, TO PCB1
2. NOTE PROPER ORIENTATION OF INDUCTORS [L1, L2] SHOULD BE 90° TO EACH OTHER.
3. COMPONENTS MAY NEED TO BE TRADED FOR SLIGHTLY HIGHER OR LOWER DUE TO TOLERANCE LEVELS.





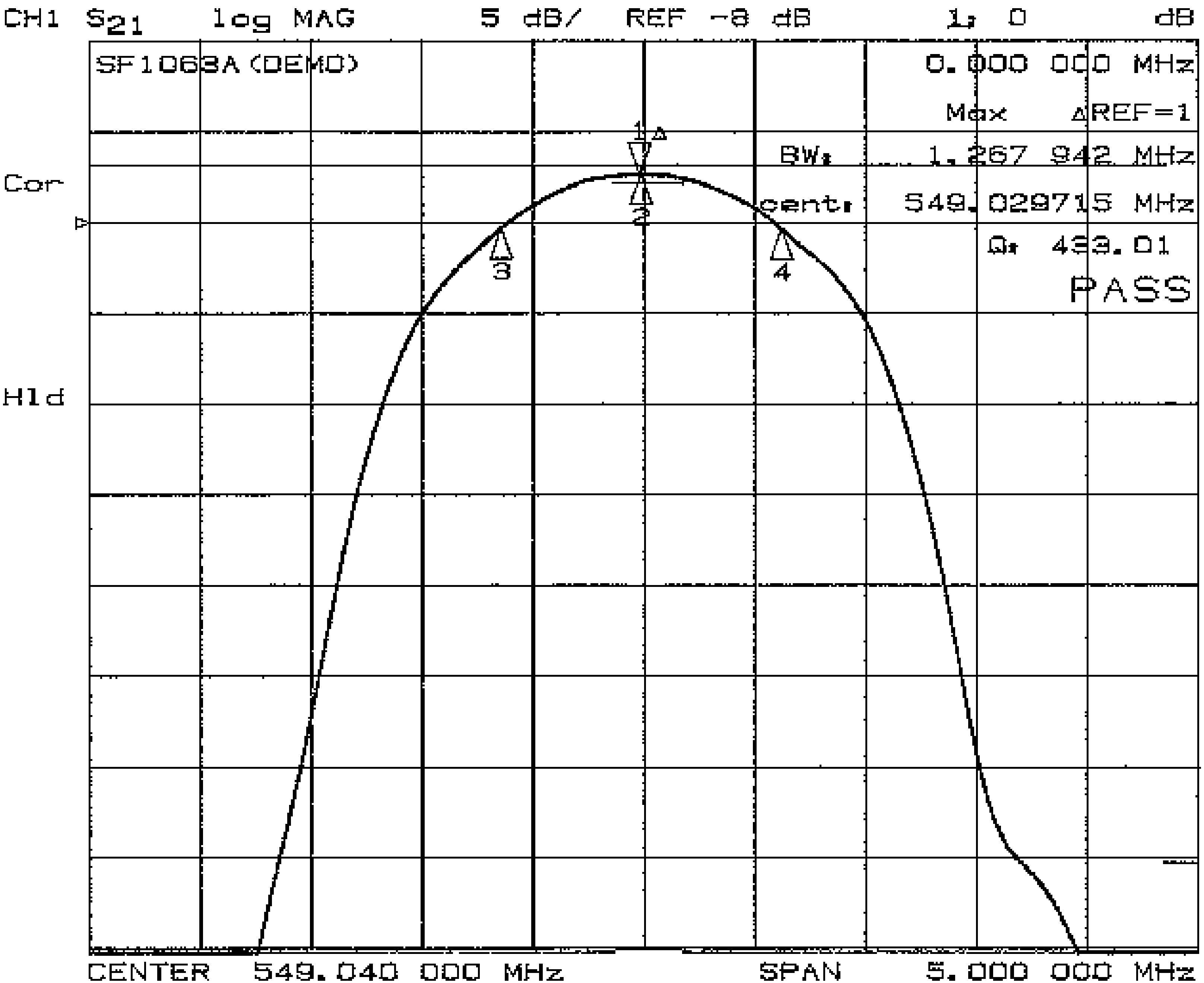
RF Monolithics, Inc. DALLAS, TEXAS 75244		SIZE A	CODE IDENT 2U874	DWG. NO. SF1063A-000	REV A	SHEET 2

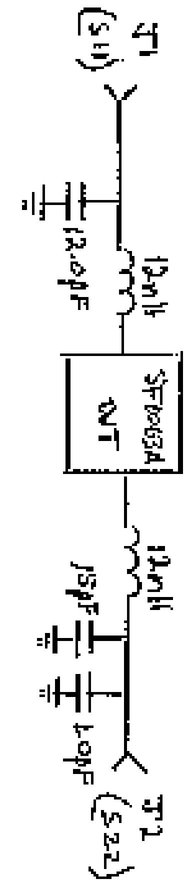




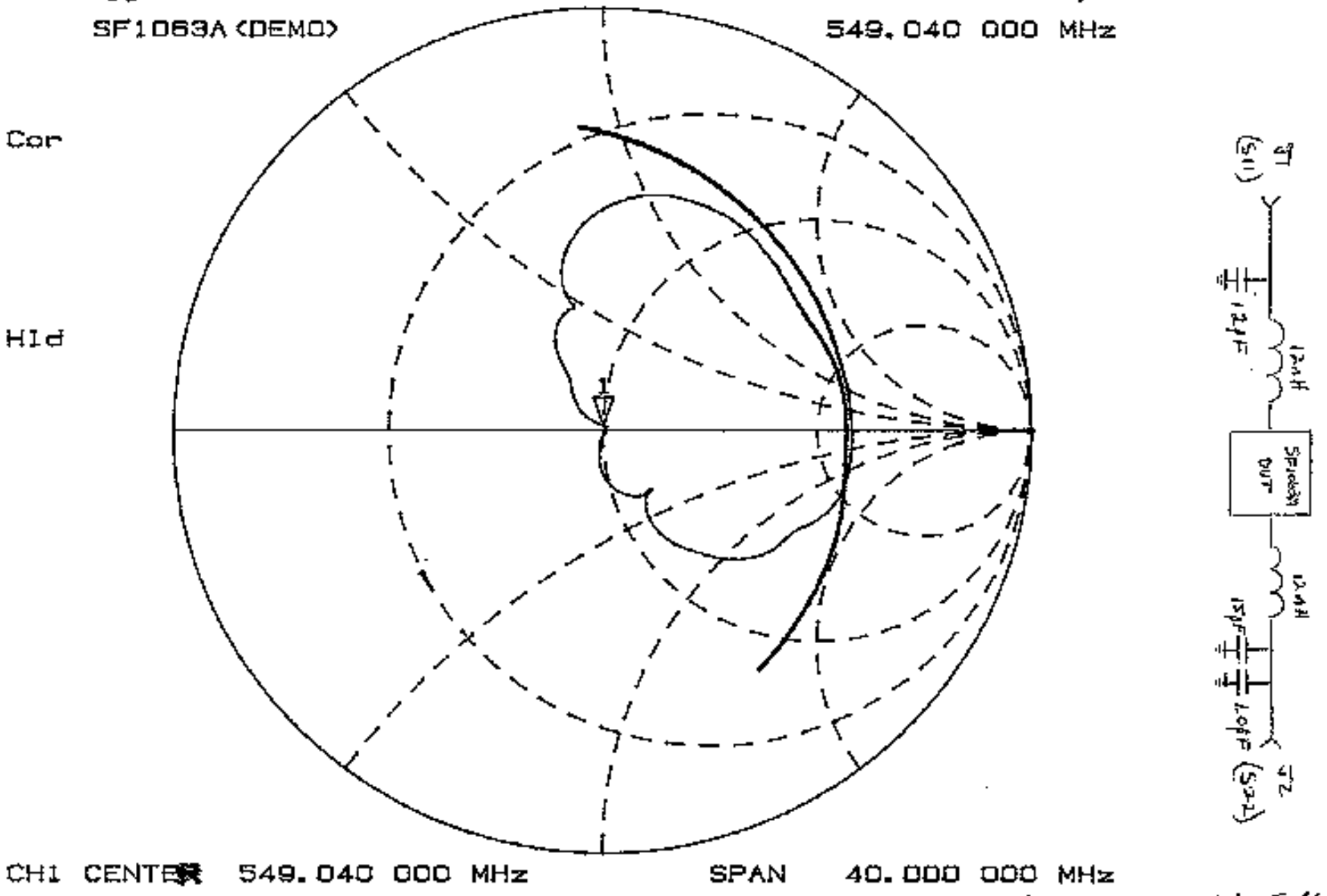
SF1063A-000

REV: A



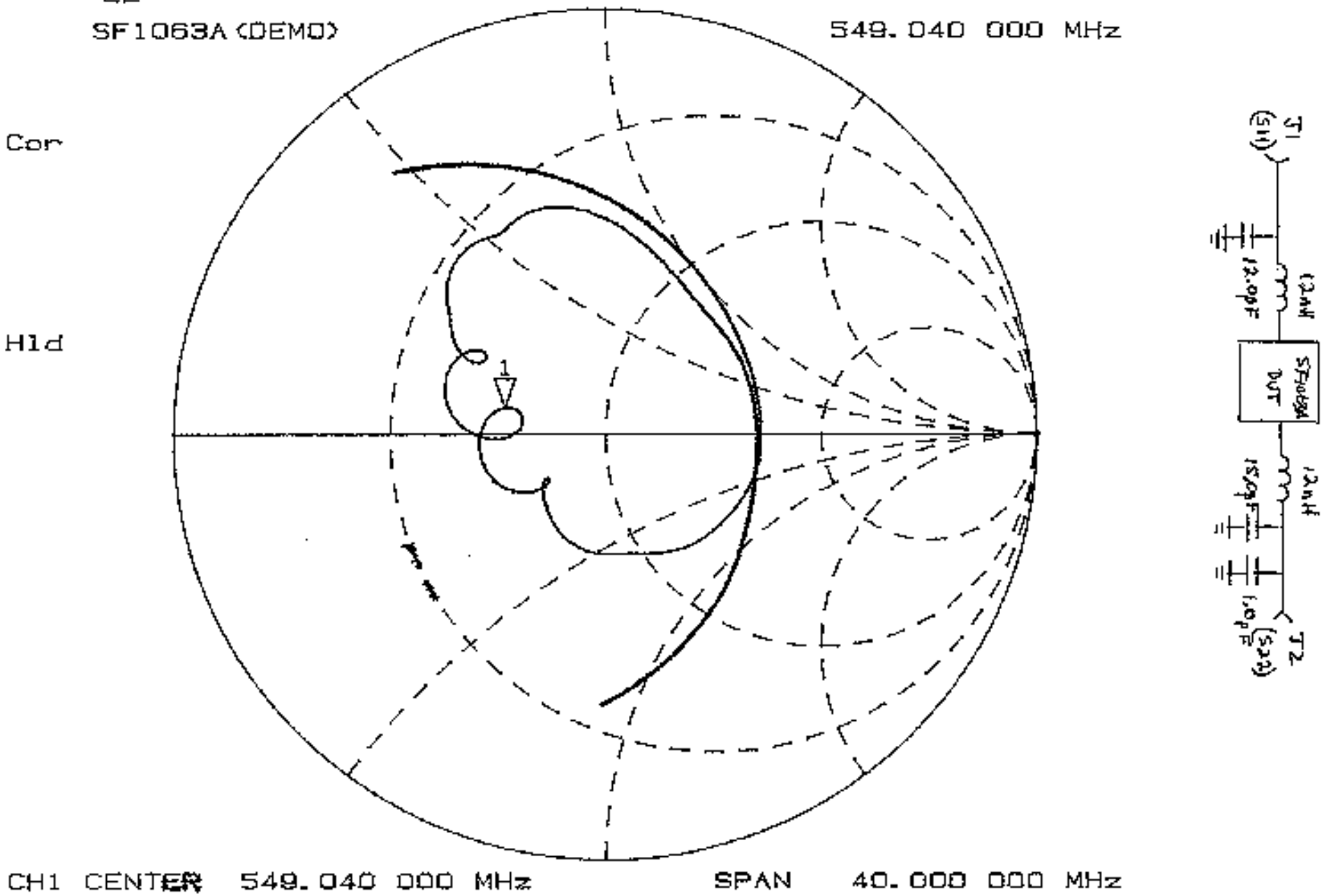


JF1063A-000 JLA 4 of 6
REV: A



SF1063A-000 SW 5066

REV: A



SF1063A-000 SLF 6086

REV: A

BILL OF MATERIALS

PART IDENTIFIER	DESCRIPTION 1	DESCRIPTION 2	QTY/ASSY	REFERENCE DESCRIPTION
SF1063A(DEMO)	BOM,DEMOBOARD,SF1063A			
500-0003-120	CAP,CHIP,NPO,12(J),STD		2.0000	C1
500-0003-015	CAP,CHIP,NPO,1.5(C),STD		1.0000	C2
500-0003-010	CAP,CHIP,NPO,1.0(C),STD		1.0000	C3
SF1063A	FILTER,SM,549.000MHZ	C-COR	1.0000	FLTR1
500-0248-001	CONN,COAX,FLANGE MT.JACK		2.0000	J1,2
500-0619-120	IND,CHIP,0603,12NH,10%		2.0000	L1,2
400-0845-001	PCB, SMT FILTER,	TEST FIXTURE	1.0000	PCB1

FRIEM®	SIZE A	FSCM NO. 2U874	DWG NO. SF1063A(DEMO)	
SCALE NONE	W/O or ECN 5073	REV B	SHEET 1 OF 2	

REV HISTORY

REV	ECN	DATE	DESCRIPTION
A	4805	06/12/96	INITIAL RELEASE
B	5073	10/23/96	UPDATE AND MOVE ASSEMBLY DIAGRAM TO SEPARATE DOCUMENT

RFMI®	SIZE A	FSCM NO. 2U874	DWG NO. SF1063A(DEMO)	
SCALE NONE	W/O or ECN 5073	REV B	SHEET 2 OF 2	