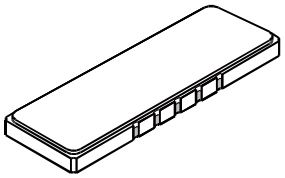
SF1062A

211.0 MHz SAW Filter

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



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		211.000		MHz
Passband	Insertion Loss at fc	IL			6	9.0	dB
	1.5 dB Passband	$BW_{1.5}$	1, 2	±50			kHz
	2 dB Passband	BW_2		±80			
	3 dB Passband	BW_3		±100	±135		
	Amplitude Ripple over fc±50 kHz					1.5	dB_{P-P}
	Group Delay Variation over fc ±50 kHz	GDV			200	500	ns_{P-P}
	Absolute Group Delay	GD			2.6		µs
Rejection	fc-400 to fc-200 and fc+200 to fc+400 MHz		1, 2, 3	5			dB
	fc-600 to fc-400 and fc+400 to fc+600 MHz			25			
	fc-800 to fc-600 and fc+600 to fc+800 MHz			30	35		
	191 MHz to fc-800 kHz and fc+800 kHz to 231 MHz			35	45		
Operating Temperature Range		T_A	1	-40		+85	°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 SF1062A YYWW

Electrical Connections

Connection	Terminals
Port 1Hot	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

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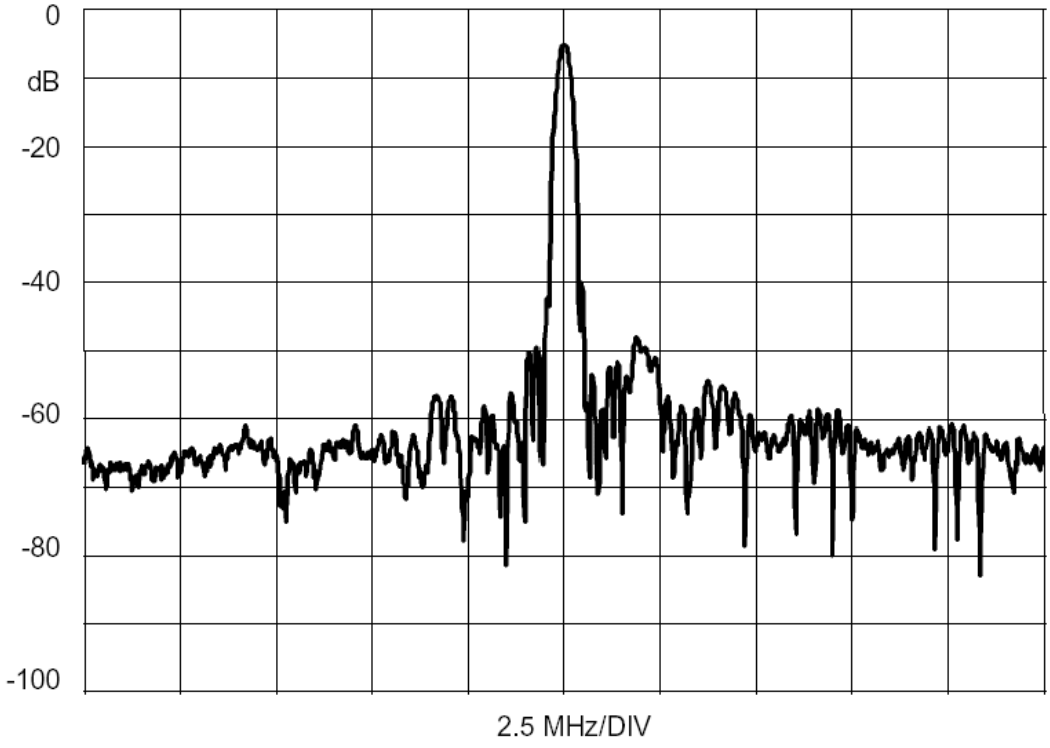
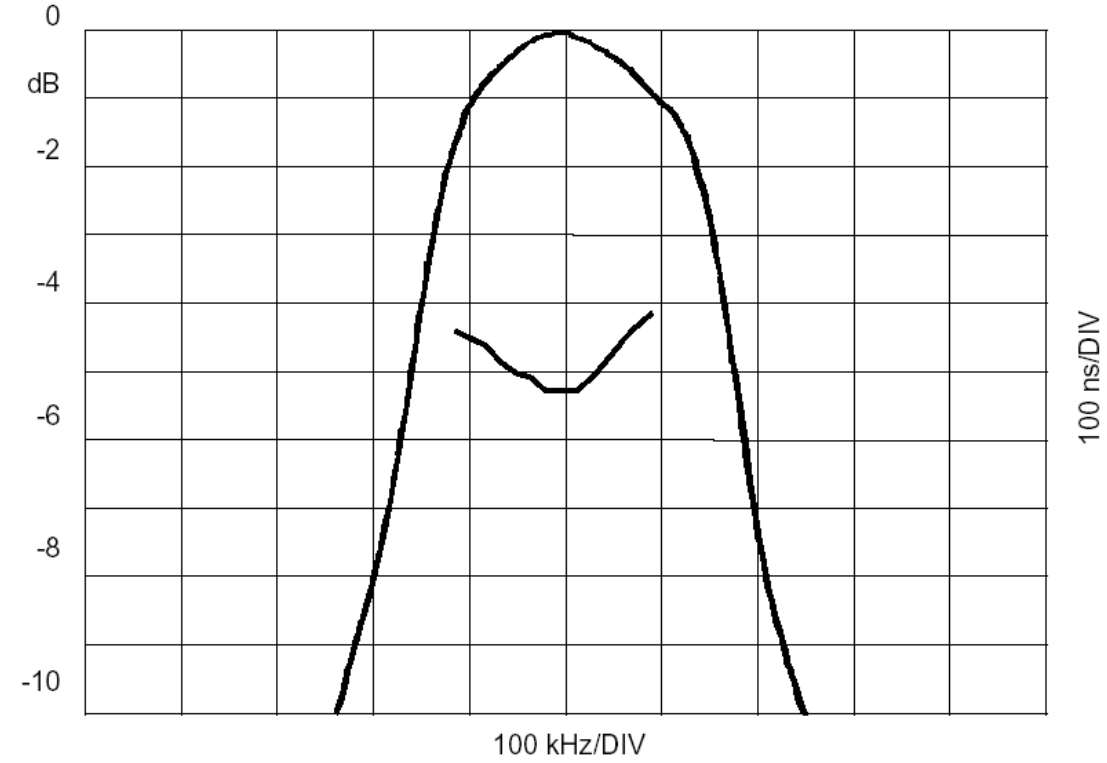
211.00 MHz SAW Filter





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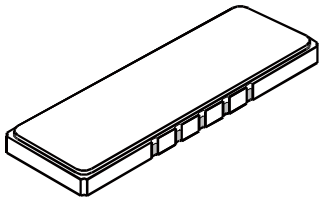
SMP-87 Case

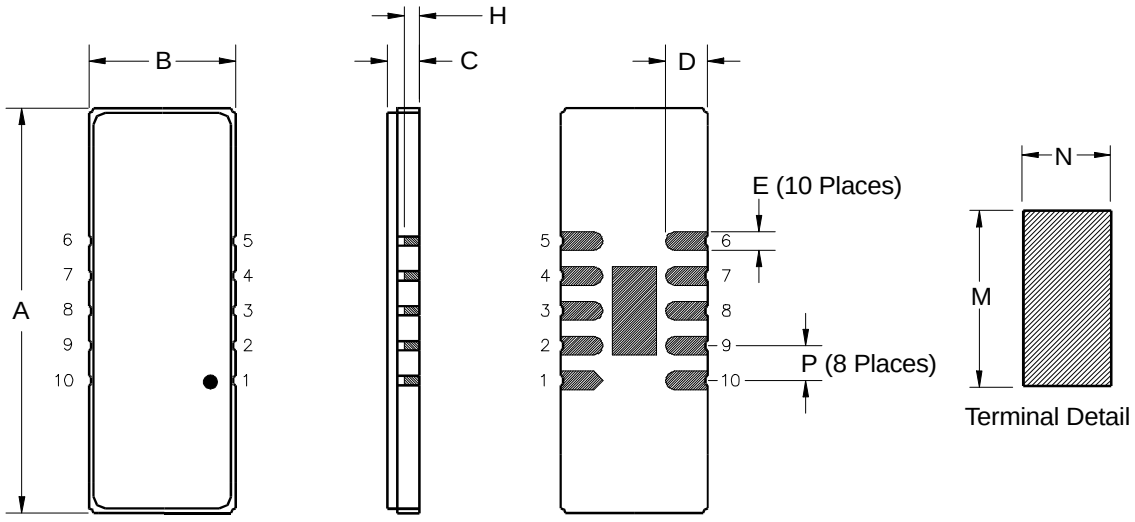
10-Terminal Ceramic Surface-Mount Case
22.1 x 8 mm Nominal Footprint



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_2O_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**



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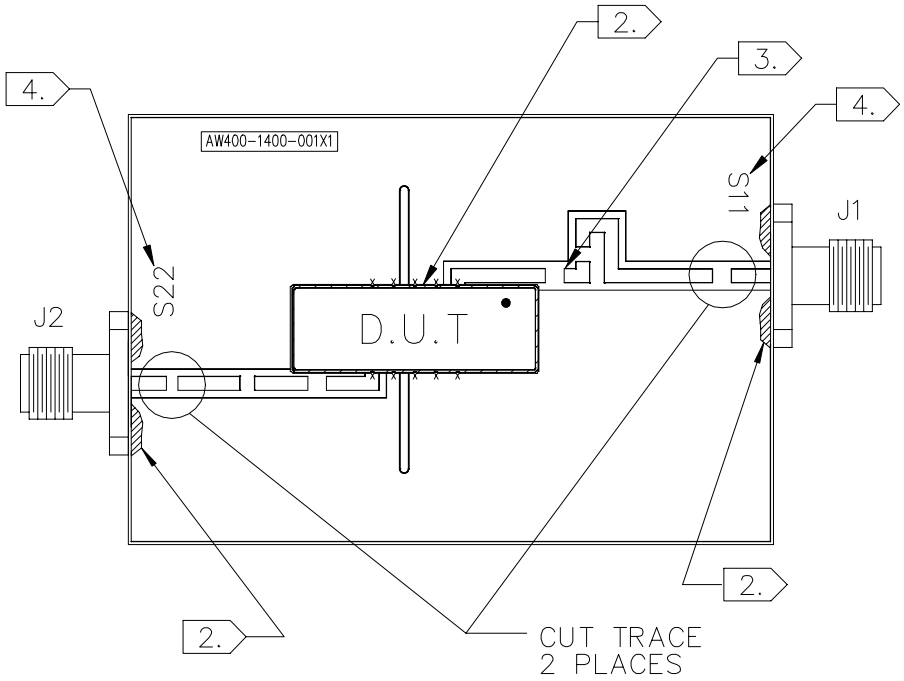
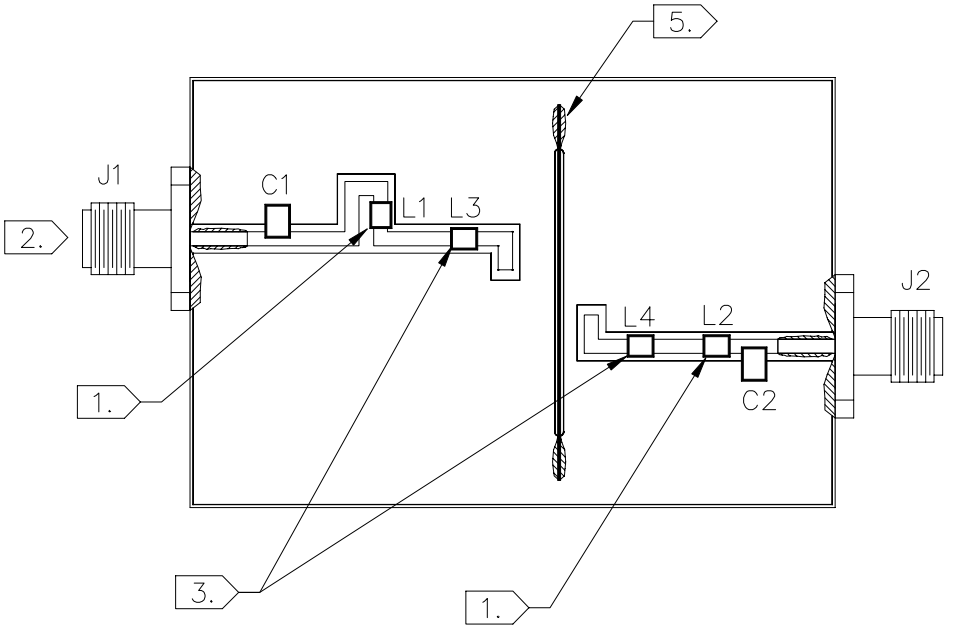
NOTES:

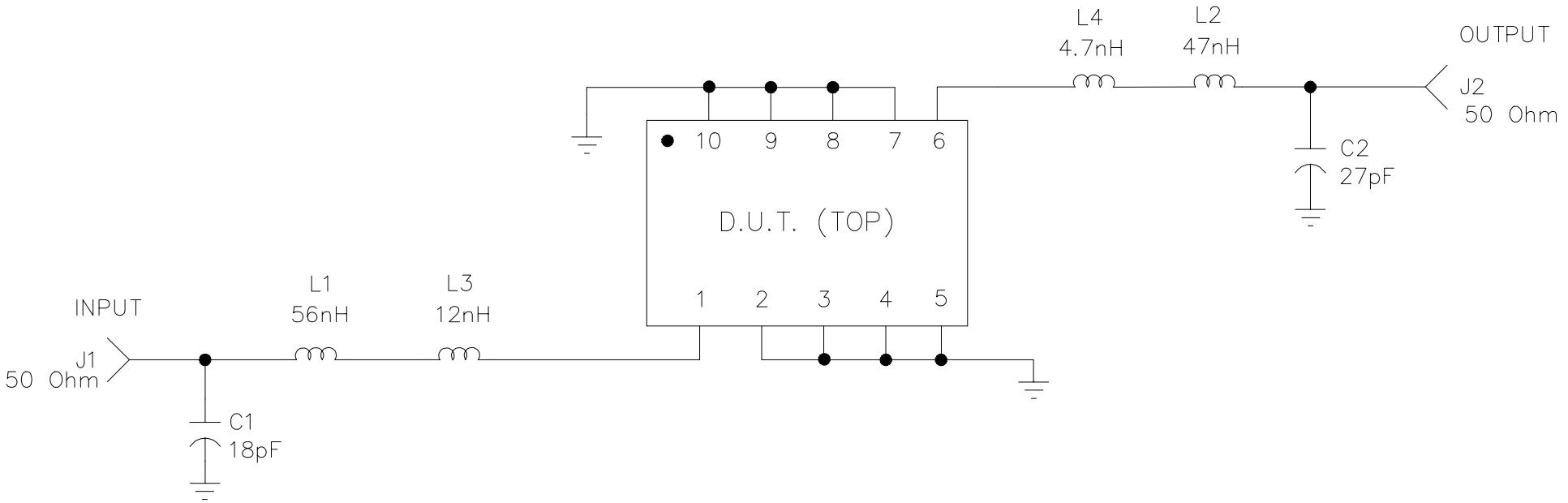
1. NOTE PROPER ORIENTATION OF INDUCTORS L1 & L4. THEY ARE TO BE POSITIONED 90° TO EACH OTHER.
2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 10 PLACES AND CONNECTORS AS SHOWN.
3. CUT TRACES ON BOTH SIDES OF THE PCB BETWEEN THE SAME HOLES TO PROVIDE GAP FOR L3 & L4.
4. LABEL BOARD USING ELECTRONIC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

REV	ECN NO.	DESCRIPTION	DATE
A	7387	INITIAL RELEASE	12jan99

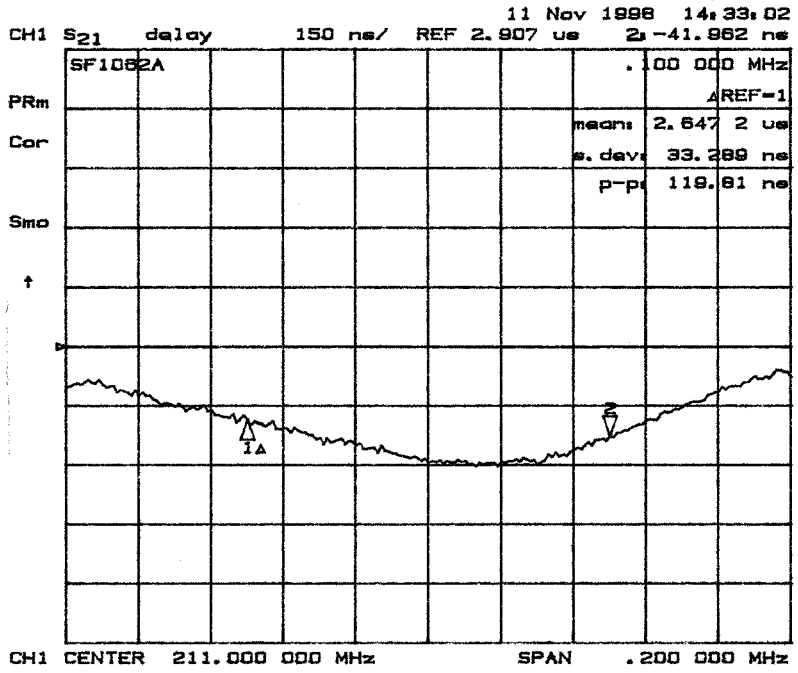


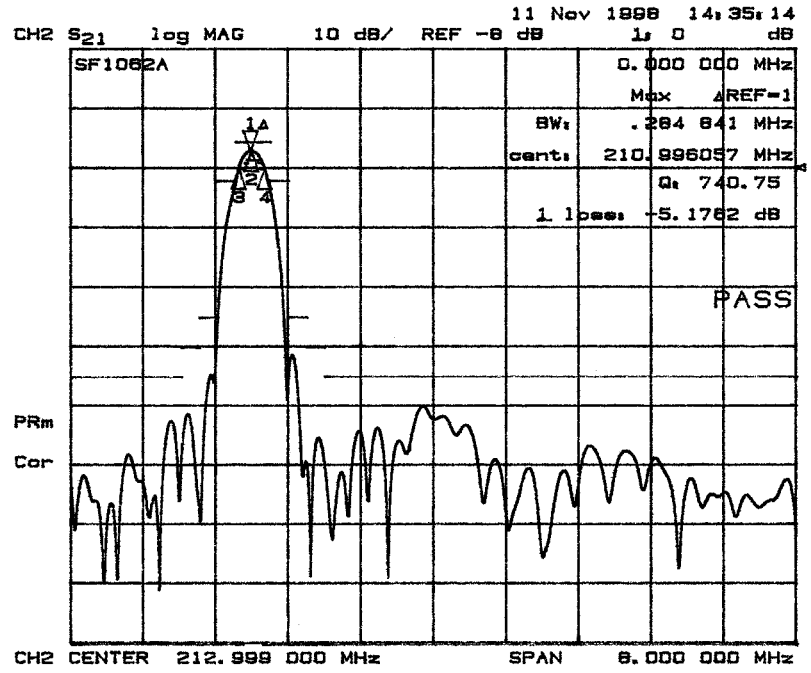


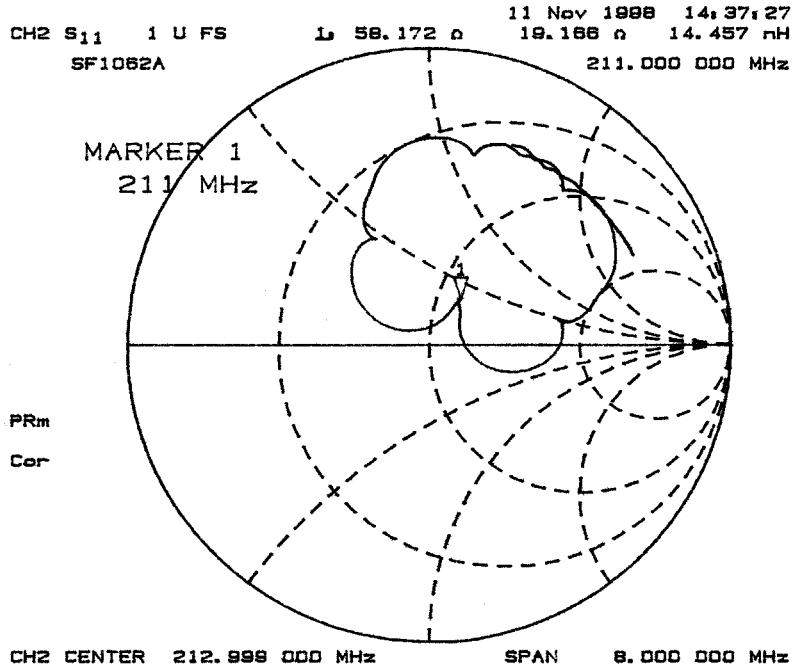
DRAWN BY/DATE: L. ASHMORE 11 JAN 99			TITLE: ASSEMBLY DIAGRAM, SF1062A-DEMO				
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE A	CODE IDENT 2U874	DWG. NO. SF1062A-000		REV A	SHEET 1/3

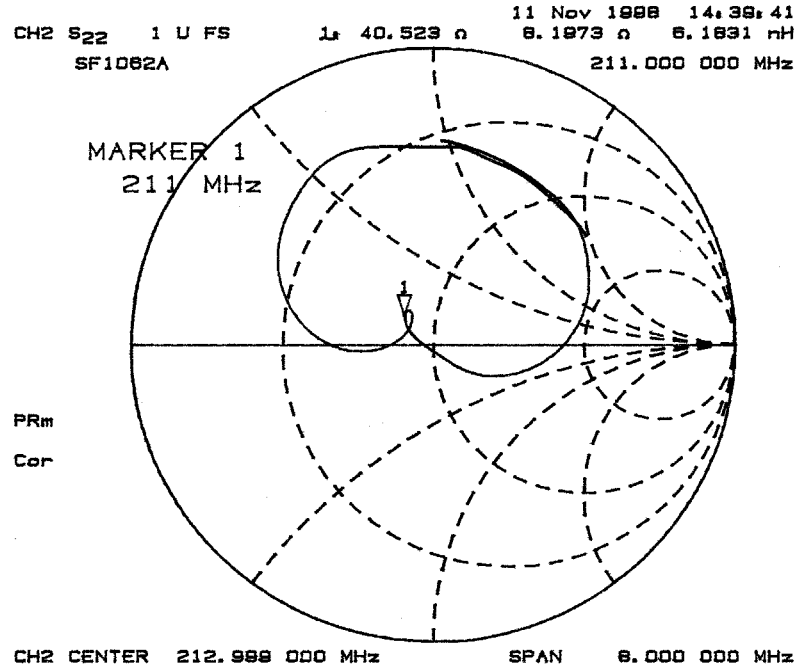


RF Monolithics, Inc. DALLAS, TEXAS 75244		SIZE A	CODE IDENT 2U874	DWG. NO. SF1062A-000	REV A	SHEET 2

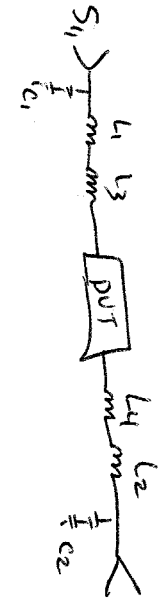








SF1062
Demo #2
Epat-338468
11/11/98
LP



L_1 - 56nH
L_2 - 47nH
L_3 - 12nH
L_4 - 4.7nH

C_1 - 18pF
C_2 - 27pF

BILL OF MATERIALS

PART IDENTIFIER	DESCRIPTION 1	DESCRIPTION 2	QTY/ASSY	REFERENCE DESCRIPTION
SF1062A-DEMO	DEMO BOARD, SF1062A,	NORTEL MATRA CELLULAR		
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	
SF1062A-LRIP	FILTER, SM, 211.000 MHZ	NORTEL MATRA	1.0000	
SF1062A-000	ASSY DIAGRAM, DEMO BOARD,	SF1062A	0	
500-0003-180	CAP, CHIP, NPO, 18(J), STD		1.0000	C 1
500-0003-270	CAP, CHIP, NPO, 27(J), STD		1.0000	C 2
500-0248-001	CONN, COAX, FLANGE MT. JACK	4 HOLE	2.0000	J 1, 2
500-0010-560	IND, CHIP, 1008CS, 56 NH, 10%	COIL CRAFT 1008CS-560	1.0000	L 1
500-0010-470	IND, CHIP, 1008CS, 47 NH, 10%		1.0000	L 2
500-0010-120	IND, CHIP, 1008CS, 12 NH, 10%		1.0000	L 3
500-0010-047	IND, CHIP, 1008CS, 10%		1.0000	L4

REV HISTORY

REV	ECN	DATE	DESCRIPTION
A	7387	01/06/99	INITIAL RELEASE

FRFM	SIZE A	FSCM NO. 2U874	DWG NO. SF1062A-DEMO
SCALE NONE	W/O or ECN 7387	REV A	SHEET 2 OF 2