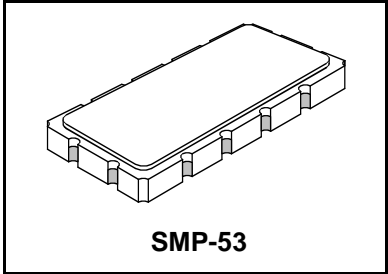




SF1125A

380 MHz SAW Filter



- **Designed for WCDMA 3G IF Applications**
- **Excellent Size-to-Performance Ratio**
- **Hermetic 13.3 x 6.5 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



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	380.000			MHz
Passband	Insertion Loss at f_C	IL		16.5	18	dB
	1 db Passband	BW_1	4.45	5.0		MHz
	3 db Passband	BW_3	5.1	5.4		
	Amplitude Ripple over $f_C \pm 2.25$ MHz		1, 2	0.75	1.25	dB _{P-P}
	Phase Linearity over $f_C \pm 2.25$ MHz			7.5	TBD	° _{P-P}
Group Delay Variation over $f_C \pm 2.25$ MHz	GDV			150	175	ns _{P-P}
Rejection	$f_C - 3.95$ to $f_C - 3.33$ and $f_C + 3.3$ to $f_C + 3.95$ MHz		10			dB
	$f_C - 4.125$ to $f_C - 3.95$ and $f_C + 3.95$ to $f_C + 4.125$ MHz	1, 2, 3	30			
	$f_C \pm 4.125$ to $f_C \pm 60$ MHz		40			
Part to Part Average Group Delay Variation		4			±5	nsec
Operating Temperature Range	T_A	1	-10	+25	+85	°C
Frequency Temperature Coefficient	FTC			-18		ppm/°C

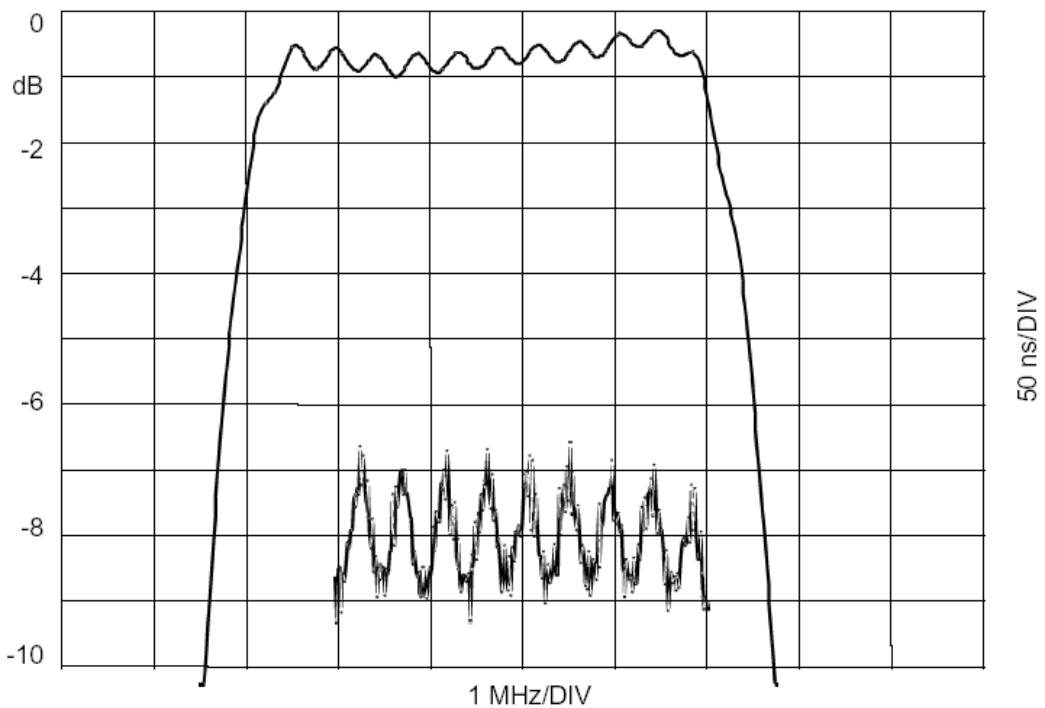
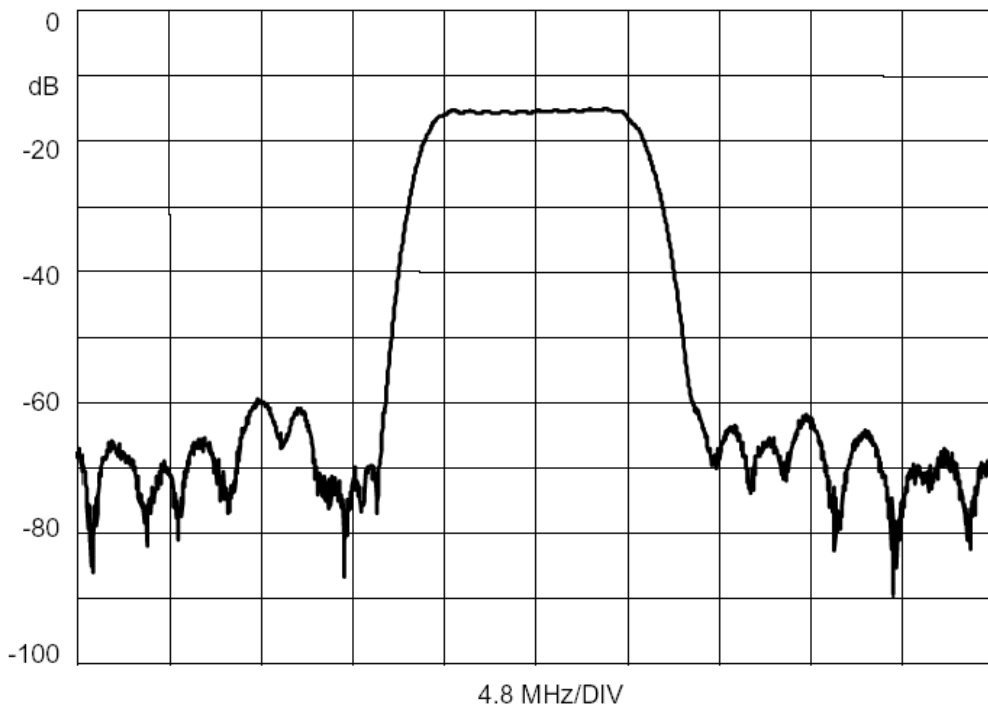
Matching to 50Ω Balanced or Single Ended Impedance	External L-C
Case Style	SMP-53 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF1125A YYWW

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, f_C .
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. Part to part absolute delay measurement records the absolute delay mean across 1 dB passband.
5. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. 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.
8. US and international patents may apply.
9. Electrostatic Sensitive Device. Observe precautions for handling. 

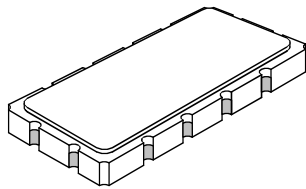
Electrical Connections

Connection	Terminals
Port 1 Hot	11
Port 1 Gnd Return	12
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others



SMP-53 Case

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



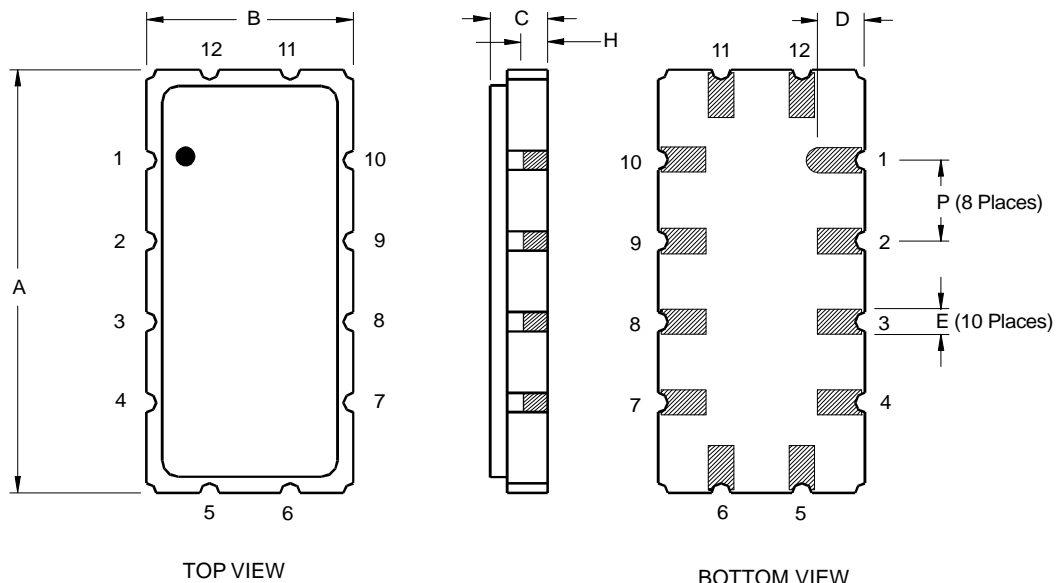
Case Dimensions

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	

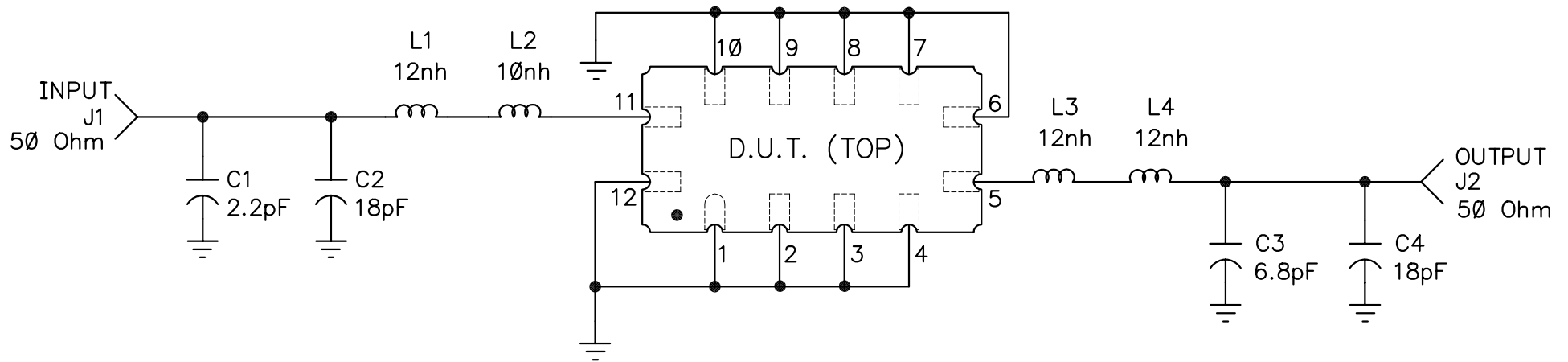
Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	11
	Return or Input	12
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	APP/DATE
A	9198	INITIAL RELEASE	27nov00



DRAWN BY/DATE: J.F.Christopherson 27nov00

TITLE: SF1125A DEMO PCB

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

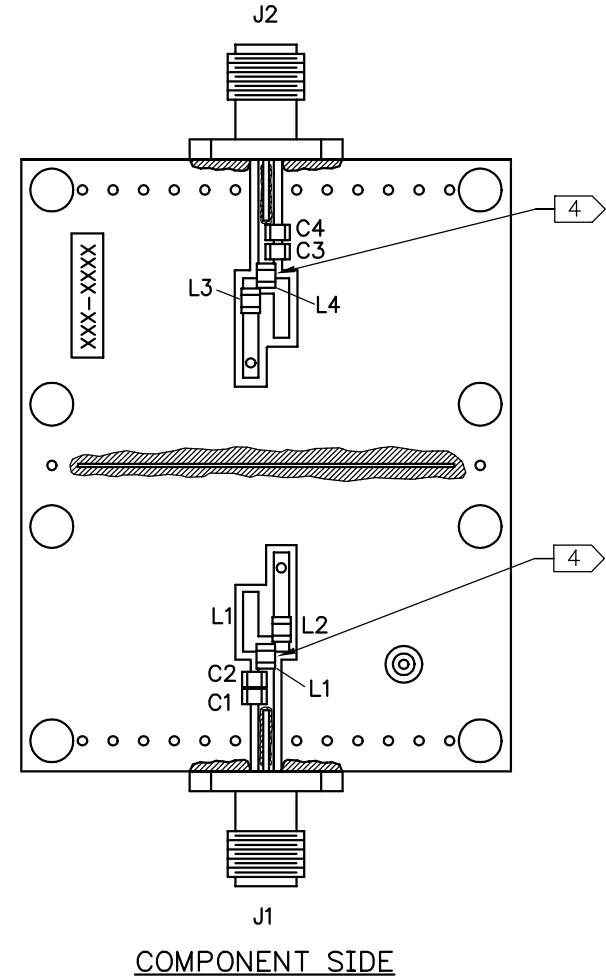
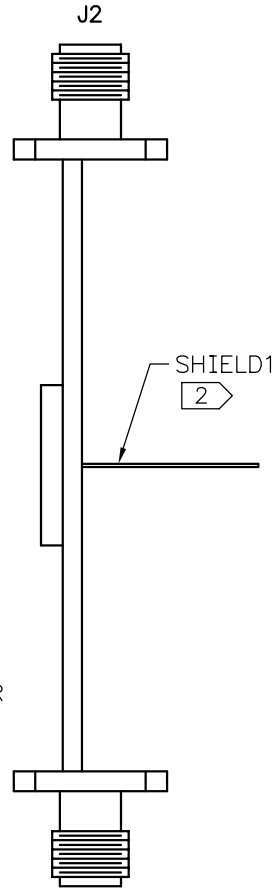
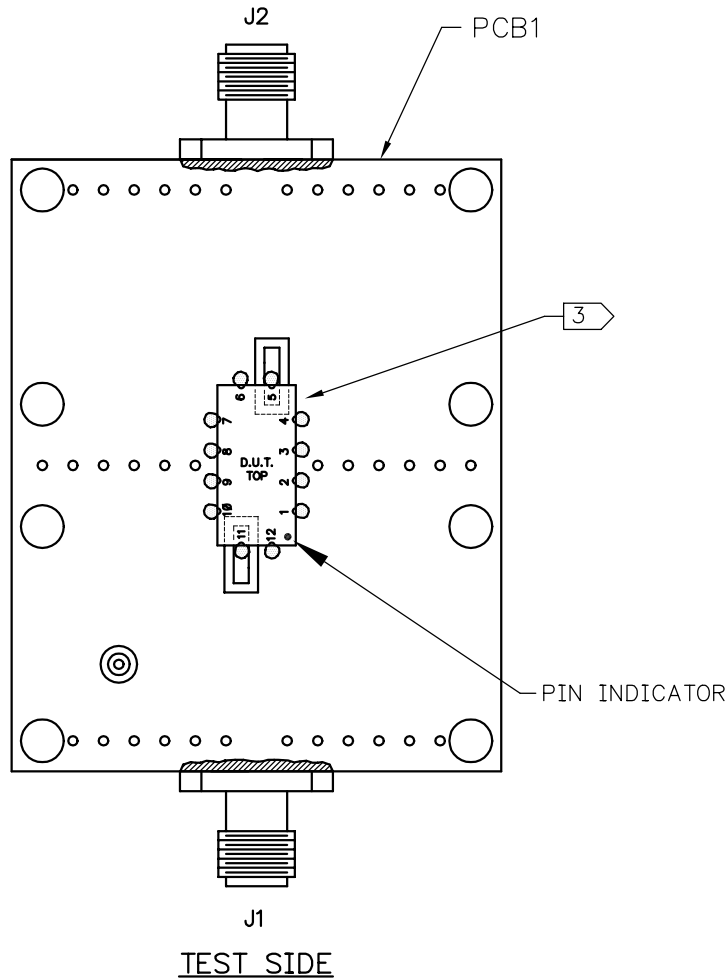
SIZE **A**
CODE IDENT **2U874**

DWG. NO. SF1125A-000

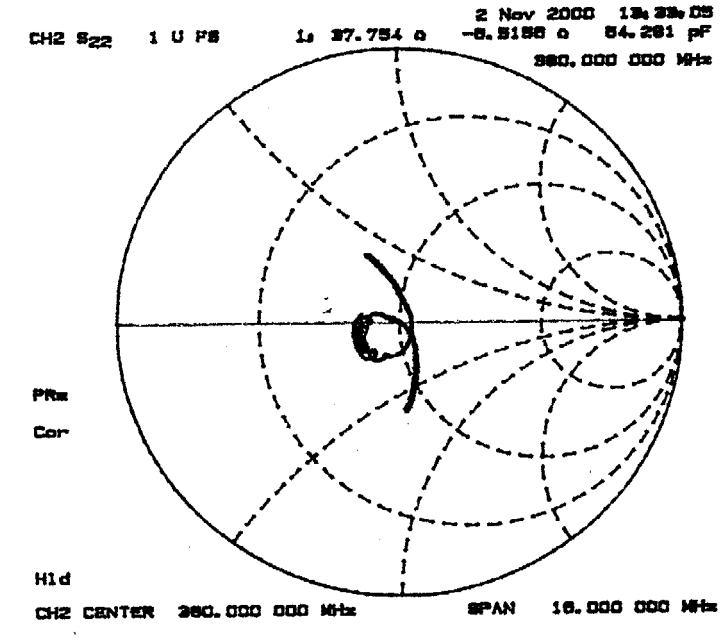
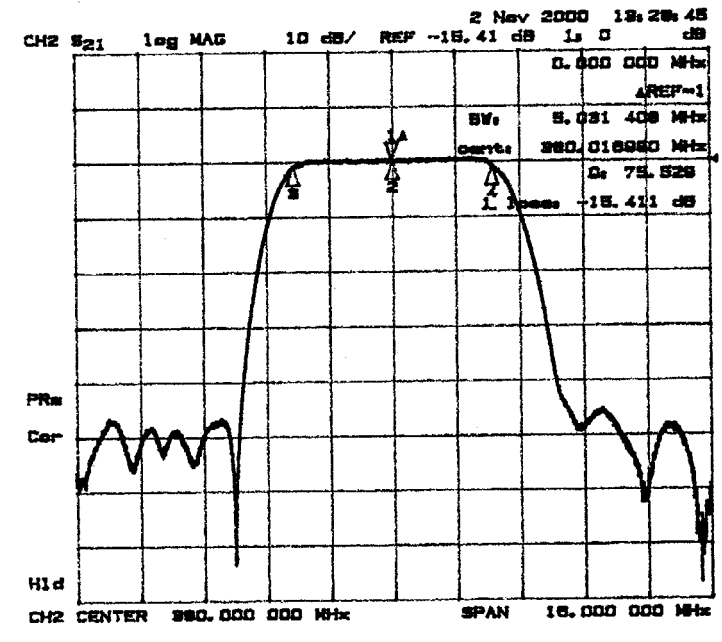
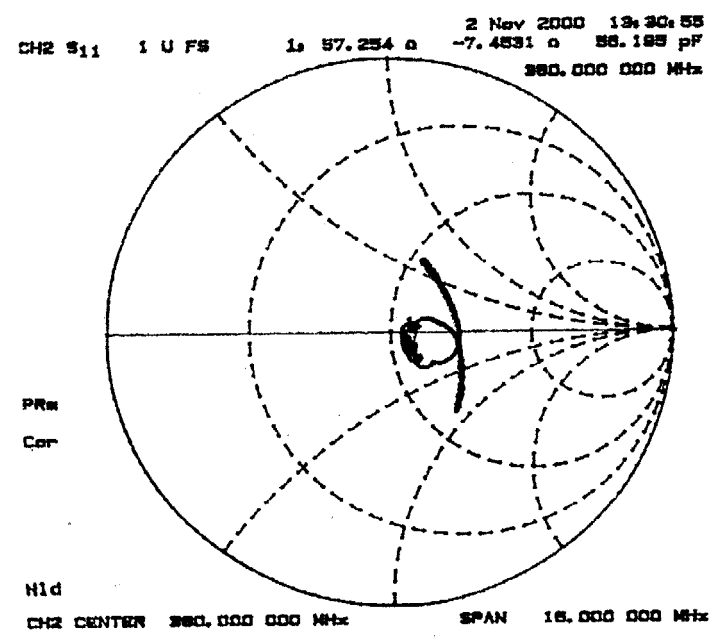
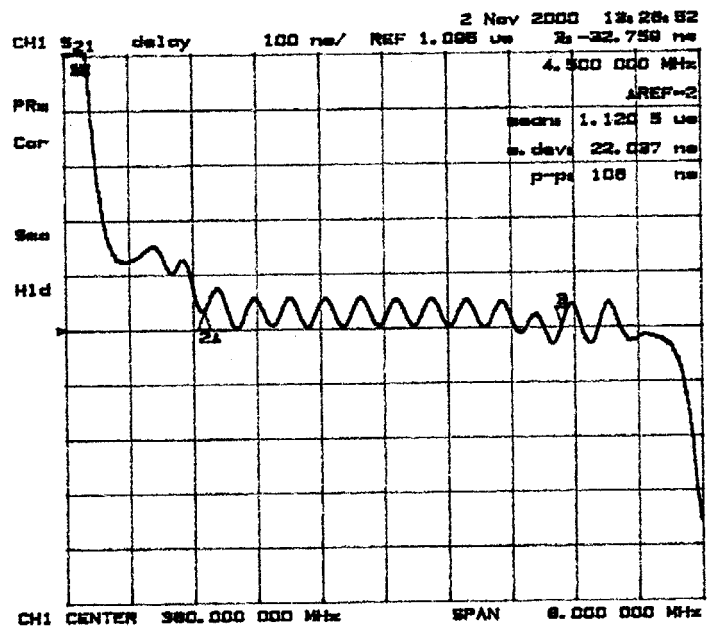
REV **A** SHEET 1/3

NOTES:

1. SOLDER MOUNT COMPONENTS & CONNECTORS TO PCB1.
2. SOLDER SHIELD1 AS SHOWN AND TRIM TAB FROM SHIELD SO THAT IT IS FLUSH WITH PCB.
3. ORIENT THE FLTR1 AND SOLDER IT DOWN TO THE BOARD AS SHOWN.
4. CUT TRACE TO ACCOMODATE INDUCTOR.



SF1125A
 DEMO 2
 11-2-00
 RT



C1=2.2pF
 C2=C4=18pF
 C3=6.8pF
 L1, L3, L4=12nH
 L2=10nH

