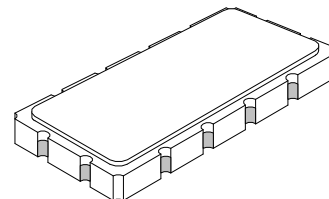


# SF1125A 380 MHz SAW Filter



- Designed for WCDMA 3G IF Applications
- Excellent Size-to-Performance Ratio
- Hermetic 13.3 x 6.5 mm Surface-Mount Case



## Associated Plots Attached

Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc	380.000			MHz	1
Passband	Insertion Loss at fc	IL	16.5	18	dB	1, 2
	1 dB Passband	BW <sub>1</sub>	4.45	5.0	MHz	
	3 dB Passband	BW <sub>3</sub>	5.1	5.4	MHz	
	Amplitude Ripple over fc ±2.25 MHz		0.75	1.25	dB <sub>P-P</sub>	
	Phase Variation over fc ±2.25 MHz		7.5	TBD	° <sub>P-P</sub>	
Group Delay Variation over fc ±2.25 MHz	GDV		150	175	ns <sub>P-P</sub>	
Rejection	fc-3.95 to fc-3.3 and fc+3.3 to fc+3.95 MHz		10		dB	1, 2, 3
	fc-4.125 to fc-3.95 and fc+3.95 to fc+4.125 MHz		30			
	fc±4.125 to fc±60 MHz		40			
			TBD			
Part to Part Average Group Delay Variation				±5	nsec	4
Operating Temperature Range	T <sub>A</sub>	-10	+25	+85	°C	1
Frequency Temperature Coefficient	FTC		-18		ppm/°C	

Matching to 50 Ω 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) See note 4	RFM SF1125A 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

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

## Notes:

- All specifications apply filter soldered to the RFM 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, fc.
- 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.
- Part to part absolute delay measurement records the absolute delay mean across 1dB passband.
- "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.

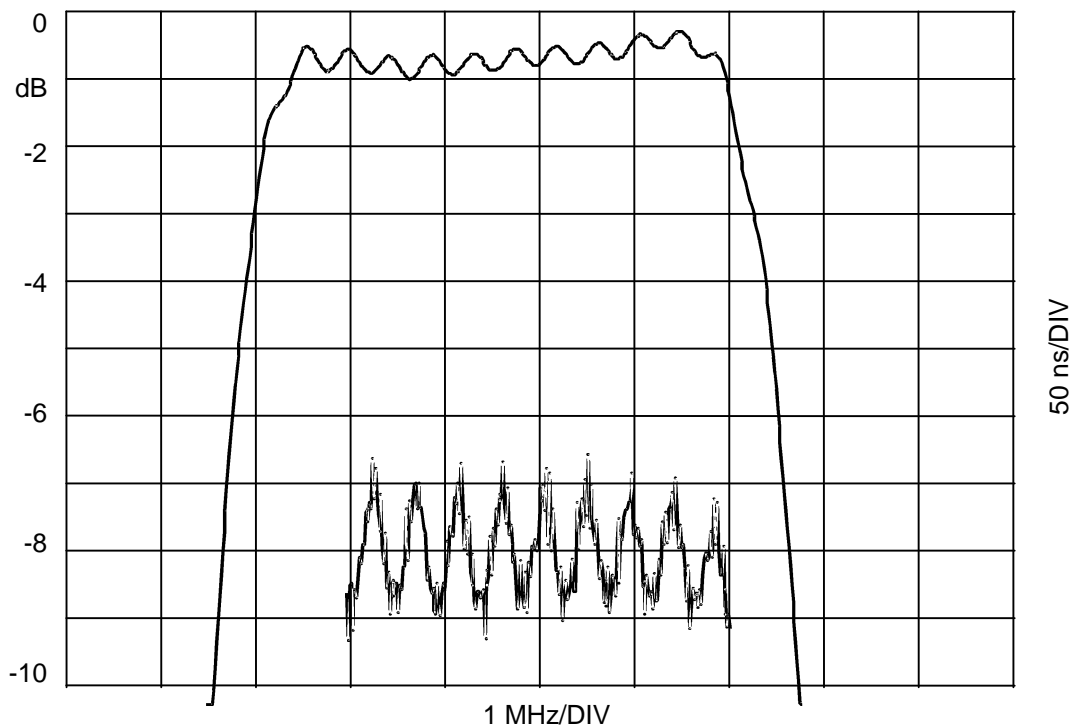
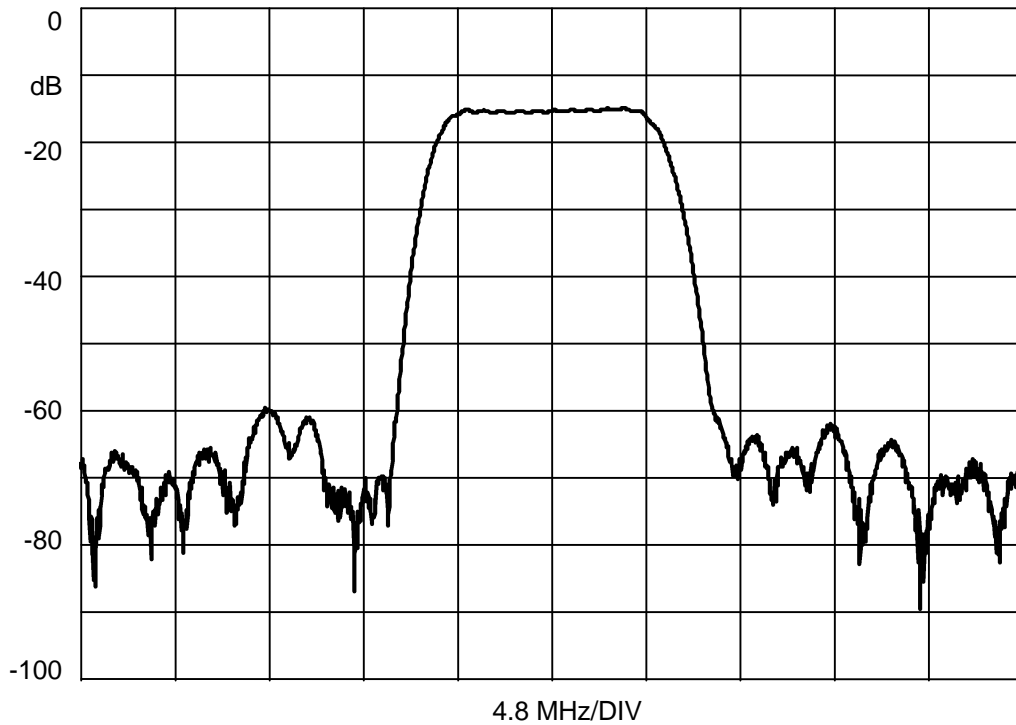


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**European Sales Office**  
44 1963 251383  
44 1963 251510

# SF1125A 380 MHz SAW Filter

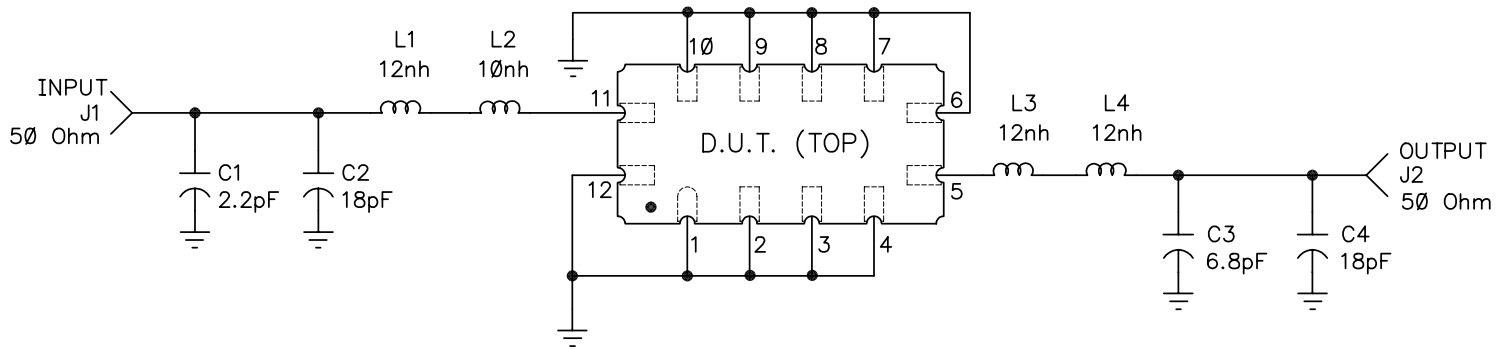


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44 1963 251510

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

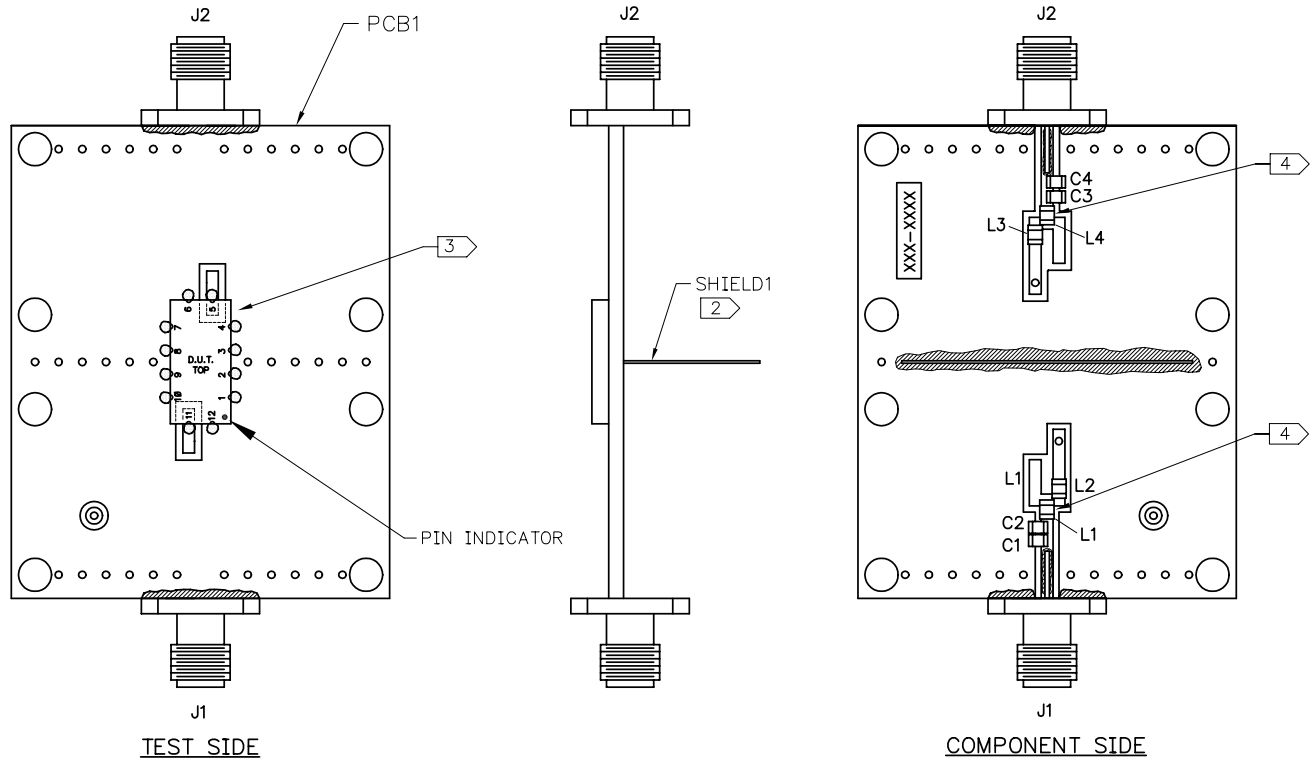
SIZE **A**  
CODE IDENT **2U874**

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 ACCOMMODATE INDUCTOR.



**RF Monolithics, Inc.**  
DALLAS, TEXAS 75244

SIZE  
**A**

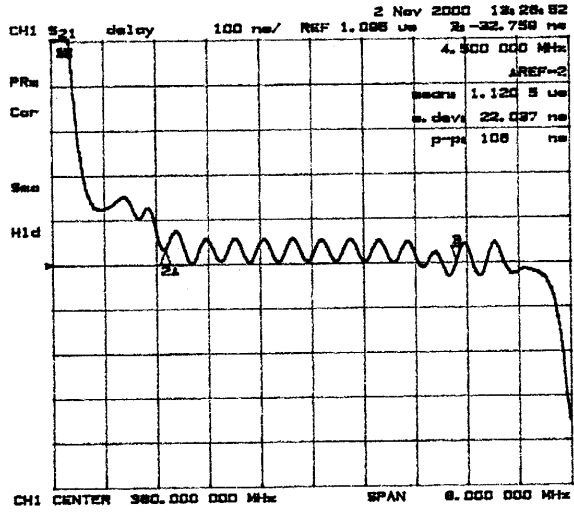
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**2U874**

DWG. NO. **SF1125A-000**

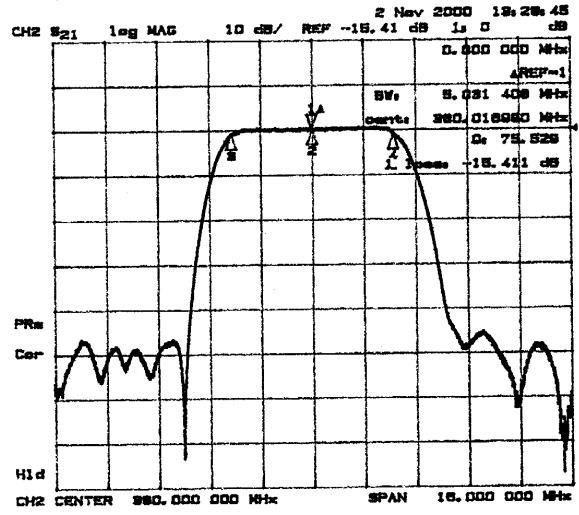
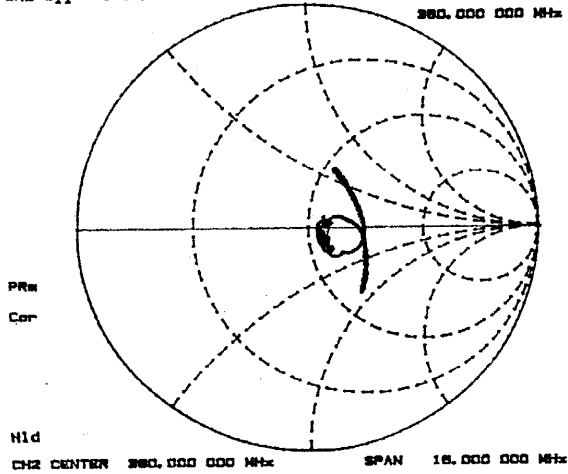
REV  
**A**

SHEET  
**2**

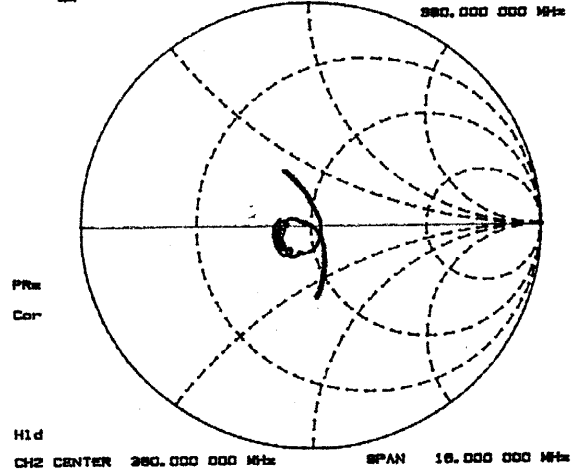
SF1125A  
 DEMO 2  
 11-2-00  
 RT



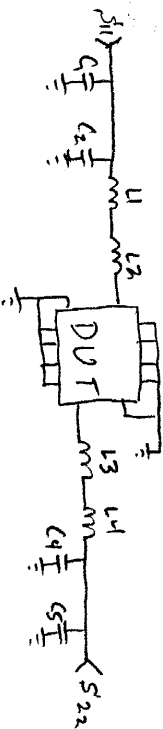
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 380.000 000 MHz



2 Nov 2000 13:33:05  
 CH2 S<sub>22</sub> 1 U FS 1s 37.754 n -8.5155 n 54.281 pF  
 380.000 000 MHz



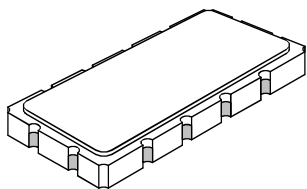
C1=2.2nF  
 C2,C4=18pF  
 C3=6.8pF  
 L1,L3,L4=12nH  
 L2=10nH



# SAW Filters Packages

## 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	

#### 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
<b>Single Ended Operation</b>		<b>Return is ground</b>
<b>Differential Operation</b>		<b>Return is hot</b>

