

- Designed for GSM BTS Receiver IF Applications
- Low Insertion Loss
- Excellent Size-to-Performance Ratio
- Hermetic SMP-75 Surface-Mount Case
- Unbalanced Input and Output
- Complies with Directive 2002/95/EC (RoHS)

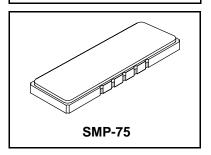


Absolute Maximum Ratings

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		

SF1088A

170.6 MHz SAW Filter



Electrical Characteristics

	Characteristic	Sym	Notes	Min	Тур	Max	Units
Nominal Center Fr	equency	f _C	1		170.600		MHz
Passband	Insertion Loss at fc	IL	1			8.0	dB
	1 dB Passband		1, 2	±90			kHz
	Amplitude Ripple over fc±90 kHz		†			1.0	dB _{P-P}
	Group Delay Variation over fc ±190 kHz	GDV	†		<500	1000	ns _{P-P}
Rejection	fc-0.6 to fc-0.4 and fc+0.4 to fc+0.6 MHz		1, 2, 3	13	15		dB
	fc-0.8 to fc-0.6 and fc+0.6 to fc+0.8 MHz		†	27	35		
	fc-1.6 to fc-0.8 and fc+0.8 to fc+1.6 MHz		†	40	45		
	fc-3.0 to fc-1.6 and fc+1.6 to fc+3.0 MHz		†	43	55		
	fc-5.8 to fc-3.0 and fc+3.0 to fc+5.8 MHz		†	47	55		
	fc-35 to fc-5.8 and fc+5.8 to fc+35 MHz		†	50	55		
	fc-75 to fc-35 and fc+35 to 75 MHz		†	45	55		
	DC to fc-75 and fc+75 to fc+1000 MHz		†	40			
Operating Tempera	ature Range	T _A	1	-10		+85	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SMP-75 19 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF1088A YYWW

Notes:

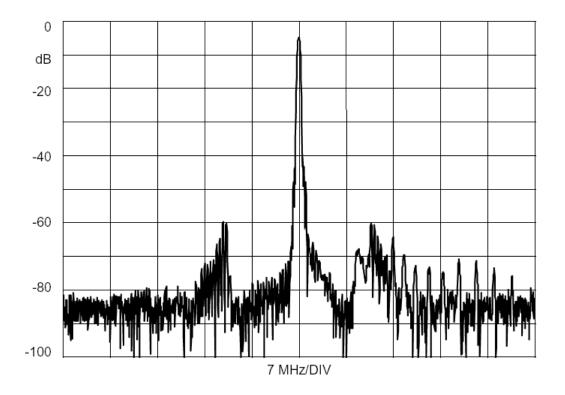
- 1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 W and measured with 50 Ω network analyzer.
- 2. Unless noted otherwise, all frequency specifications are referenced to the 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.
- "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. Electrostatic Sensitive Device. Observe precautions for handling.

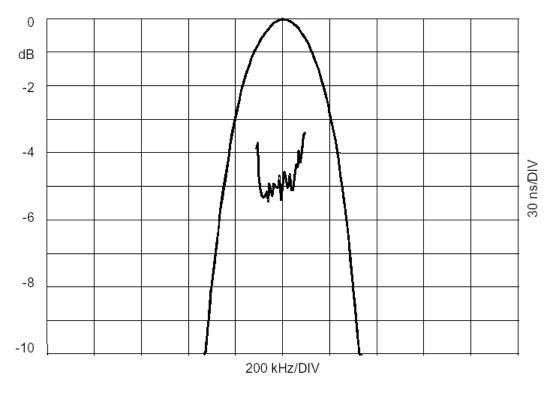


Electrical Connections

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

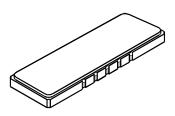
RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-9148
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SMP-75 Case

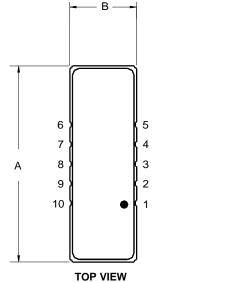
10-Terminal Ceramic Surface-Mount Case 19 x 6.5 mm Nominal Footprint

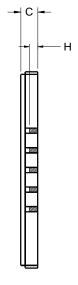


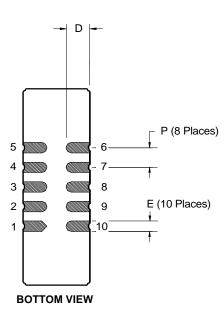
	Case Dimensions								
Dimension		mm		Inches					
	Min	Nom	Max	Min	Nom	Max			
Α	18.80	19.00	19.30	0.740	0.748	0.760			
В	6.30	6.50	6.80	0.248	0.256	0.268			
С		1.75	2.00		0.069	0.079			
D		2.29			0.090				
E		1.02			0.040				
Н		1.0			0.039				
Р		1.905			0.075				

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 ₂ O 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				
Differer	tial Operation	Return is hot				







RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-9148 RFM Europe Phone: 44 1963 251383 Fax: 44 1963 251510 \odot 2001 by RF Monolithics, Inc. The stylized RFM logo are registered trademarks of RF Monolithics, Inc.

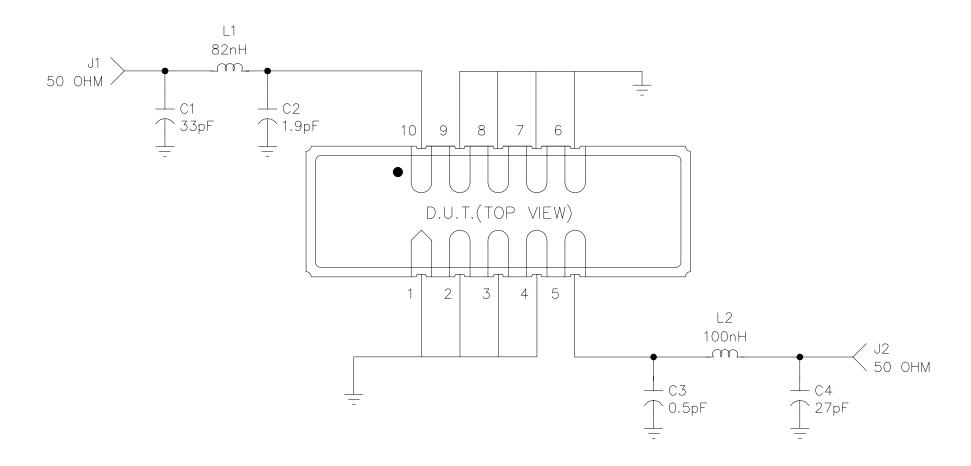
NOTES:

1. NOTE PROPER ORIENTATION OF INDUCTORS L1 & L2. THEY ARE TO BE POSITIONED 90° TO EACH OTHER.

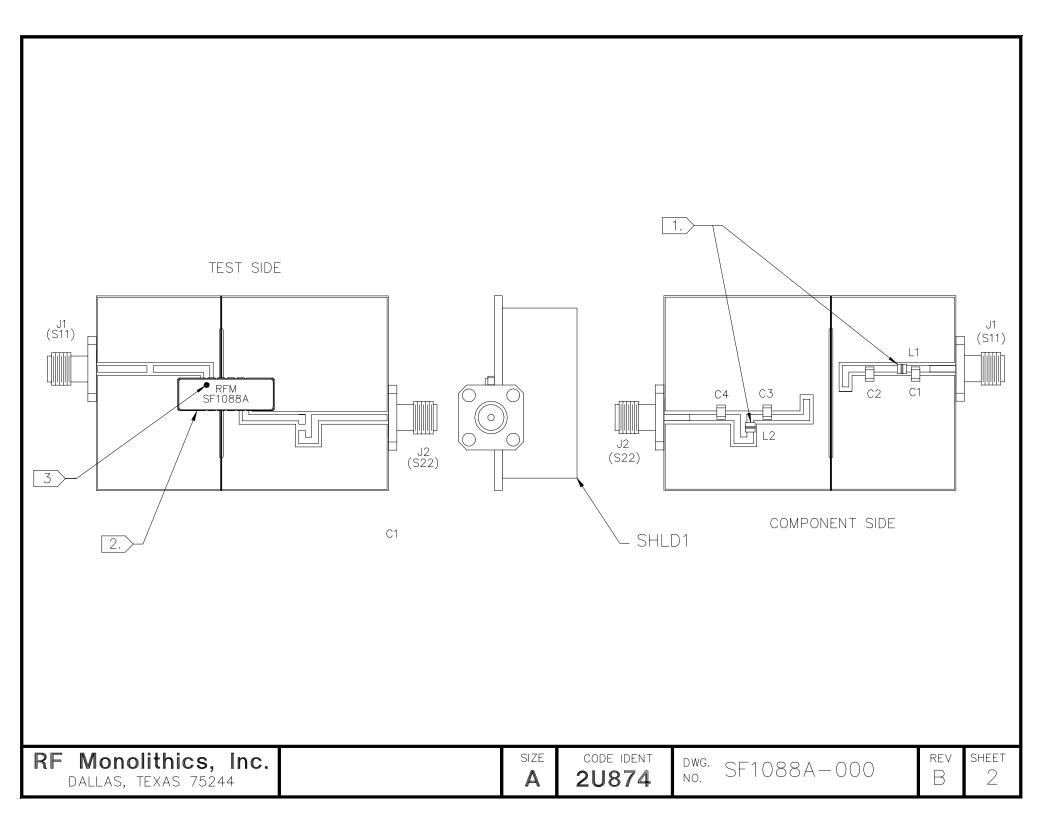
REV	ECN NO.	DESCRIPTION	DATE
Α	6724	INITIAL RELEASE	5/28/98
В	7000	ROTATE VIEW 180	3SEP98

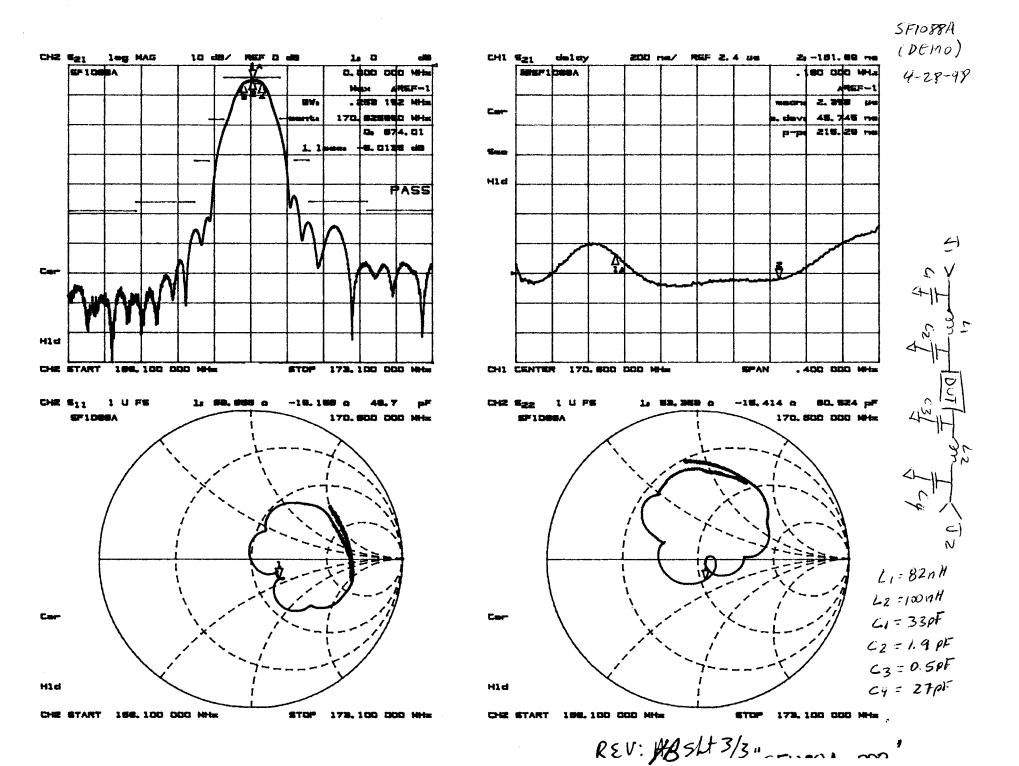
2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 10 PLACES AS SHOWN.

3 > PACKAGE PIN 10 INDICATOR



DRAWN BY/DATE: J. LAYTON 05/28/98			ASSEME	3LY [DIAGRAM, SF1088A	(DEI	MO)
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE A	code ident 2U874	DWG. NO.	SF1088A-000	rev B	SHEET 1/3





BILL OF MATERIALS

DESCRIPTION 1	DESCRIPTION 2	QTY/ASSY	REFERENCE DESCRIPTION
DEMO BOARD,SF1088A			
PCB,DEMO BOARD,19MM		1.0000	
SHIELD,TO-39 TEST FIXTURE		1.0000	
ASSY DIAGRAM, DEMO BOARD,	SF1088A	0	
FILTER,SM,170.600MHZ		1.0000	
CAP,CHIP,NPO,33(J),STD		1.0000	C 1
CAP,CHIP,NPO,1.9(C),STD		1.0000	C 2
CAP,CHIP,NPO,0.5(C),STD		1.0000	C 3
CAP,CHIP,NPO,27(J),STD		1.0000	C 4
CONN,COAX,FLANGE MT.JACK	4 HOLE	2.0000	J 1,2
IND,CHIP,0805CS,82NH,2%		1.0000	L 1
IND,CHIP,0805CS,100NH,2%		1.0000	L 2
	DEMO BOARD,SF1088A PCB,DEMO BOARD,19MM SHIELD,TO-39 TEST FIXTURE ASSY DIAGRAM,DEMO BOARD, FILTER,SM,170.600MHZ CAP,CHIP,NPO,33(J),STD CAP,CHIP,NPO,1.9(C),STD CAP,CHIP,NPO,0.5(C),STD CAP,CHIP,NPO,27(J),STD CONN,COAX,FLANGE MT.JACK IND,CHIP,0805CS,82NH,2%	DEMO BOARD,SF1088A PCB,DEMO BOARD,19MM SHIELD,TO-39 TEST FIXTURE ASSY DIAGRAM,DEMO BOARD, SF1088A FILTER,SM,170.600MHZ CAP,CHIP,NPO,33(J),STD CAP,CHIP,NPO,1.9(C),STD CAP,CHIP,NPO,0.5(C),STD CAP,CHIP,NPO,27(J),STD CONN,COAX,FLANGE MT.JACK IND,CHIP,0805CS,82NH,2%	DEMO BOARD,SF1088A PCB,DEMO BOARD,19MM SHIELD,TO-39 TEST FIXTURE ASSY DIAGRAM,DEMO BOARD, FILTER,SM,170.600MHZ CAP,CHIP,NPO,33(J),STD CAP,CHIP,NPO,1.9(C),STD CAP,CHIP,NPO,0.5(C),STD CAP,CHIP,NPO,27(J),STD CONN,COAX,FLANGE MT.JACK IND,CHIP,0805CS,82NH,2% 1.0000



SIZE

FSCM NO.

2U874

DWG NO.

SF1088A-DEMO

NONE

W/O or ECN

6724

REV

SHEET

				REV HISTORY							
REV	ECN	DATE			С	DESCRIPTION					
А	6724	06/01/98	INITIAL RELEAS	SE							
			-								
					SIZE	FSCM NO.	DWG NO.				
				RIFIM.	Α	2U874		SI	F1088	A-DEM	0
				SCALE NONE	W/O or EO		REV	Α	SHEET	2 OF	