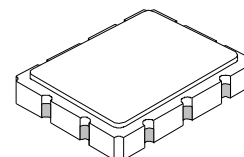


SF1115A 199 MHz SAW Filter



- Designed For GSM BTS Receiver IF
- Compatible with National Semiconductor Chip Set
- Very Flexible Impedance Matching
- Unbalanced or Balanced Input or Output
- 9.1 x 7.1 mm Version of the SF1115A-1



Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc	199.000			MHz	1
Passband	Insertion Loss at fc	IL		7.0	dB	1, 2
	1 dB Passband	BW ₁	±100		kHz	
	Amplitude Ripple over fc ±100 kHz			0.5	dB _{P-P}	
	Group Delay Variation over fc ±100 kHz	GDV		500	ns _{P-P}	
Rejection	fc-800 to fc-600 and fc+600 to fc+800 kHz		20		dB	1, 2, 3
	fc-30 MHz to fc-800 kHz		30			
	fc+800 kHz to fc+17 MHz		30			
	fc-80 MHz to fc-30 MHz		35			
	fc+17 MHz to fc+80 MHz		35			
Operating Temperature Range		T _A	-35	+85	°C	1
Impedance Matching to 50 Ω unbalanced		External L-C				
Impedance Matching to 200 Ω balanced		External L-C				
Case Style		SM9171-10 9.1 x 7.1 mm Nominal Footprint				
Lid Symbolization (YY = year, WW = Week)		RFM SF1115A YYWW				

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+15	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	10
Port 1 Return	1
Port 2 Hot	5
Port 2 Return	6
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.

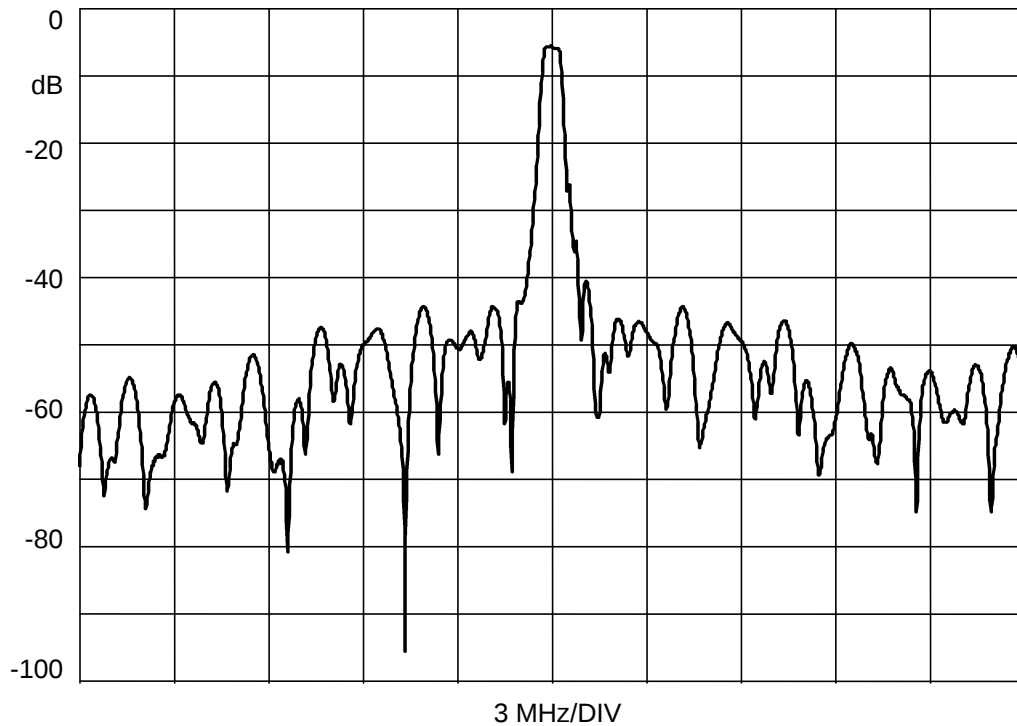


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Home page: www.rfm.com

European Sales Office
44 1963 251383
44 1963 251510

SF1115A-1 199 MHz SAW Filter

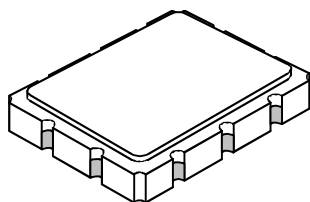


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10-Terminal Ceramic Surface-Mount Case 9.1 x 7.1 mm Nominal Footprint

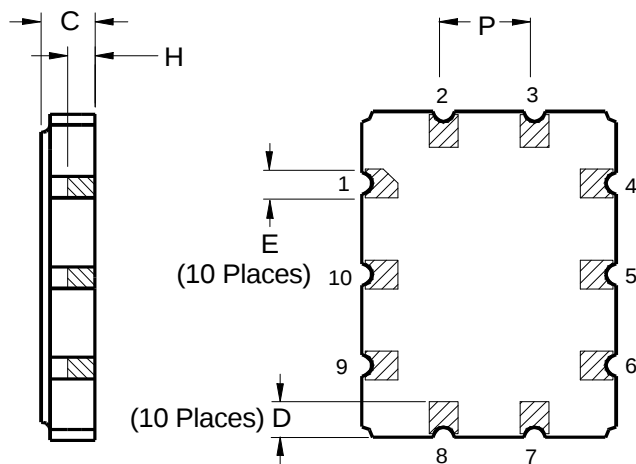
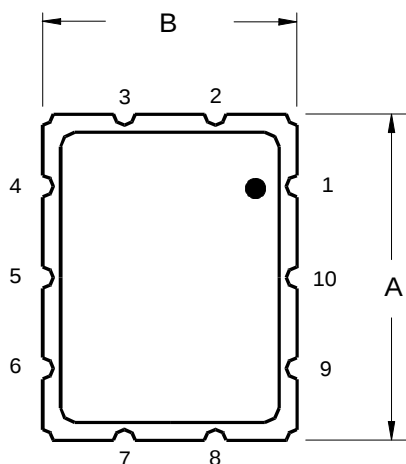


Case Dimensions

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	

Electrical Connections

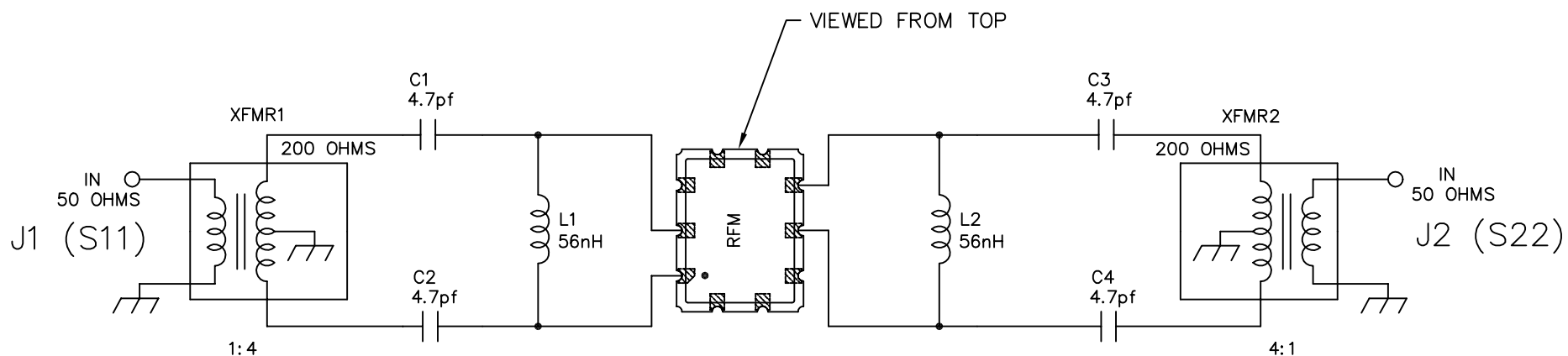
Connection		Terminals
Port 1	Input or Return	6
	Return or Input	5
Port 2	Output or Return	1
	Return or Output	10
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot



NOTES:

- 1 SOLDER "TAPE" 4 PLACES ONTO COMPONENT SIDE OF PCB AS SHOWN.
(EXTEND TAPE FOR C1 AND C2 PLACEMENT)
- 2 USE A WRIST STRAP WHEN SOLDERIING TRANS 1, AND TRANS 2 TO PCB.
(CUT LEADS .07 IN.)
- 3 MOUNT AND SOLDER ALL COMPONENTS ON PCB.
- 4 CUT CENTER CONDUCTORS FROM J1 AND J2 TO .10 IN.
- 5 MOUNT J1 AND J2 AS SHOWN (SOLDER BACKSIDE ALSO).
- 6 LABEL DEMO BOARD ACCORDINGLY.
- 7 MOUNT "FILTER" ON TOPSIDE OF PCB AS SHOWN.

REV	ECN NO.	DESCRIPTION	DATE
A	8381	NEW DESIGN	04jan00



DRAWN BY/DATE: J.F.Christopherson 19aug99

TITLE: DEMO BOARD, SF1115A

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

SIZE
A

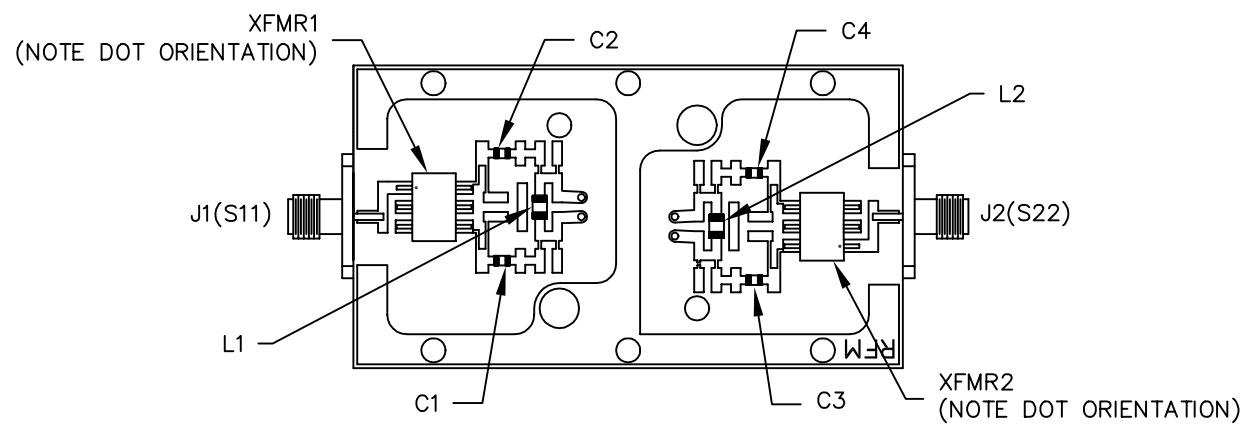
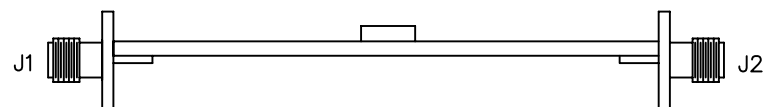
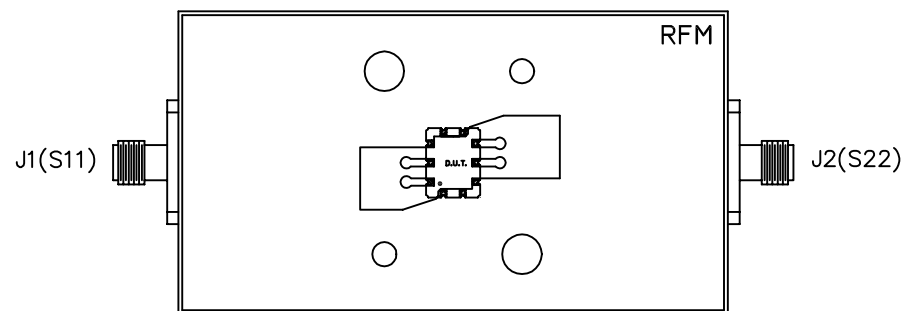
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2U874

DWG.
NO.

SF1115A-000

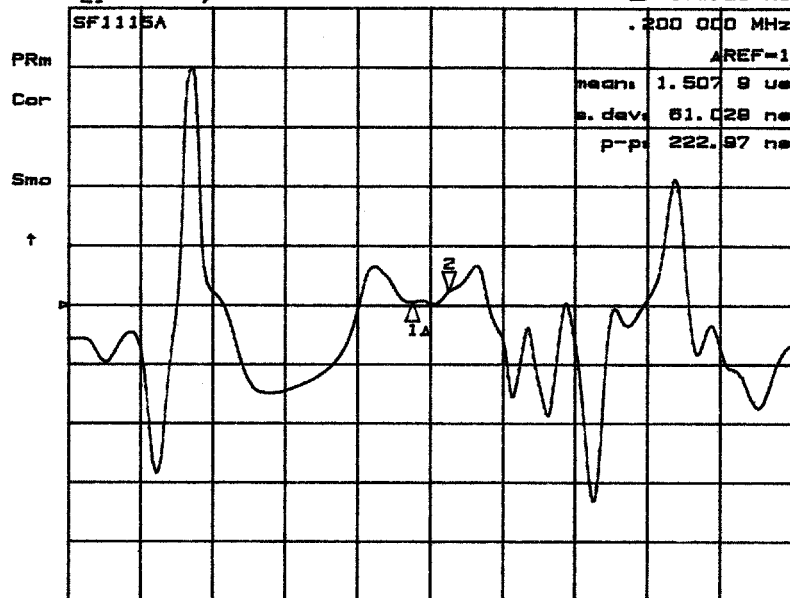
REV
A

SHEET
1/3



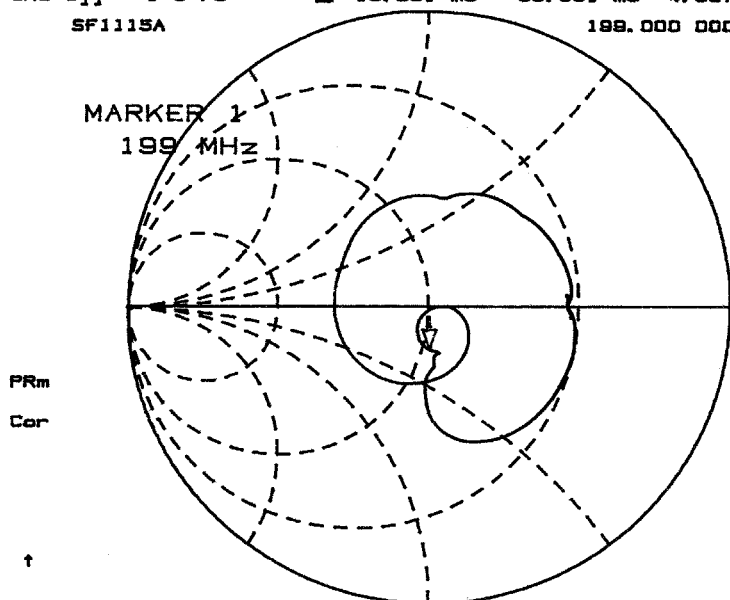
SIZE	CODE IDENT	DWG.		REV	SHEET
A	2U874	NO.	SF1115A-000	A	2

9 Jul 1998 11:48:04
CH1 S21 delay 1 us/ REF 1.436 us 2: 179.29 ne



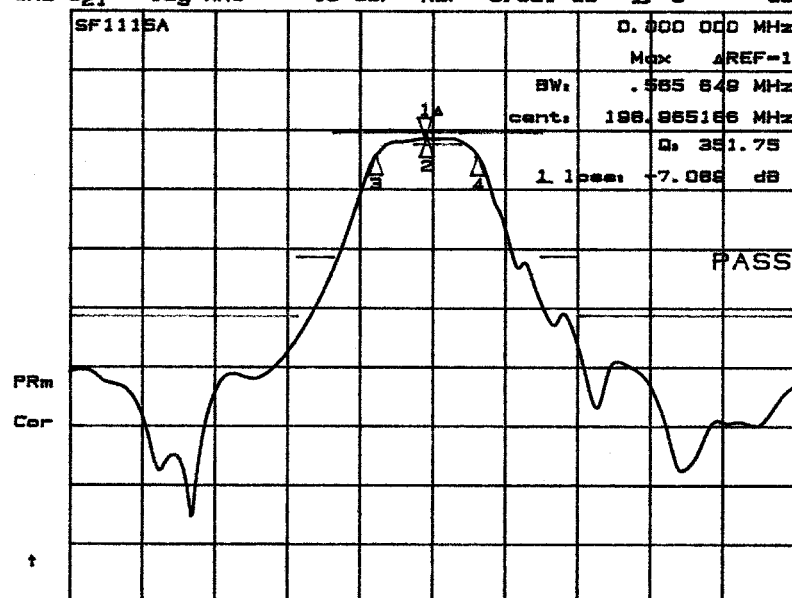
CH1 CENTER 199.000 000 MHz SPAN 4.000 000 MHz

9 Jul 1998 11:50:54
CH2 S11 1 U FS 1: 19.081 mS 05.661 mS 4.5275 pF
SF1115A 199.000 000 MHz



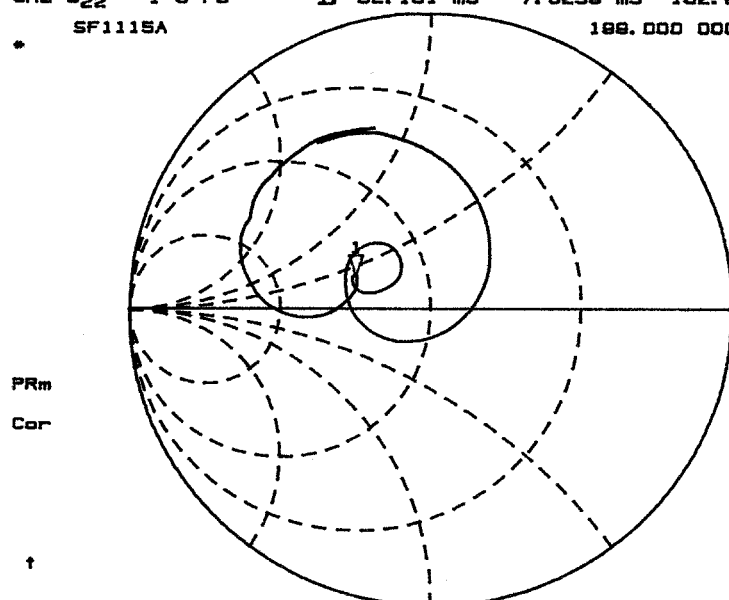
CH2 CENTER 199.000 000 MHz SPAN 4.000 000 MHz

9 Jul 1998 11:47:11
CH2 S21 log MAG 10 dB/ REF -5.621 dB 1: 0 dB



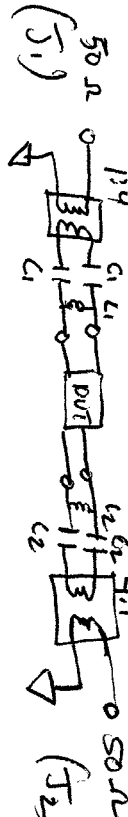
CH2 CENTER 199.000 000 MHz SPAN 4.000 000 MHz

9 Jul 1998 12:21:33
CH2 S22 1 U FS 1: 32.131 mS -7.6239 mS 102.22 nH
SF1115A 199.000 000 MHz



CH2 CENTER 199.000 000 MHz SPAN 4.000 000 MHz

SF1115A-Eng
VAFer #4
Balanced
tuned
tested at 50.0
7-9-99
New Alum
Duro.



C1,2-4.7pF
L1,2-56nH