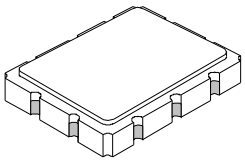
SF1115A 199 MHz SAW Filter

- *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 dB Passband	BW_1	±100			kHz	1, 2
	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 Impedance Matching to 200 Ω balanced	External L-C 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.
10. Electrostatic Sensitive Device. Observe precautions for handling.

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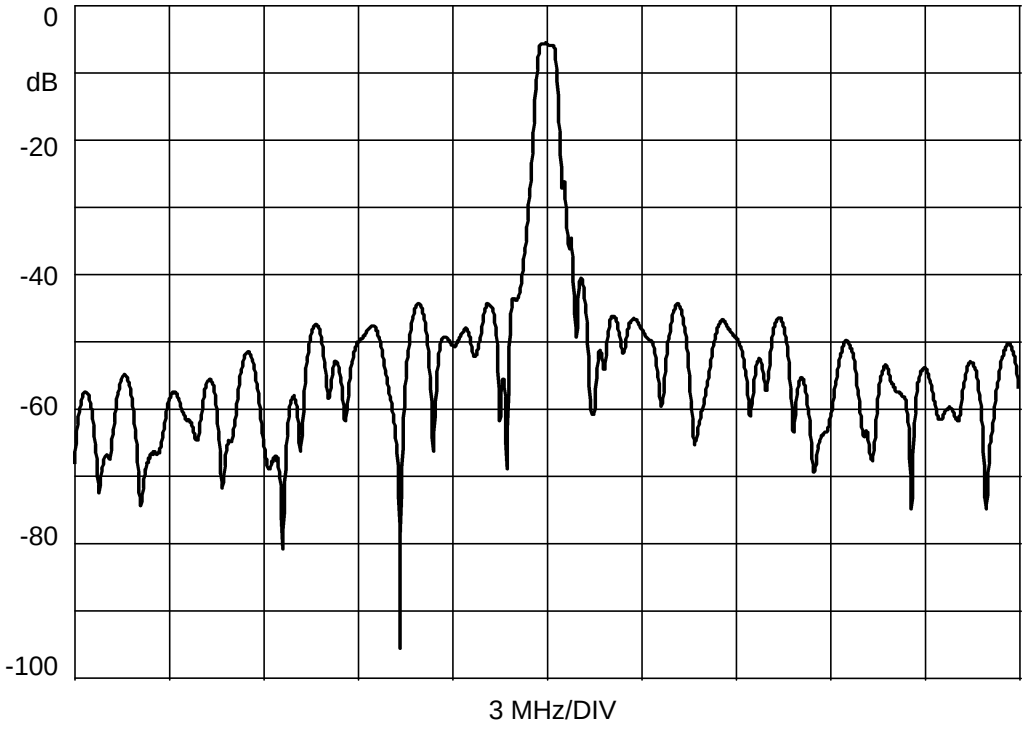
European Sales Office
44 1963 251383
44 1963 251510

SF1115A-1 199 MHz SAW Filter



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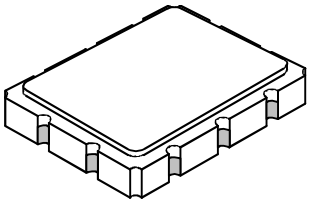
SM9171-10 Case

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

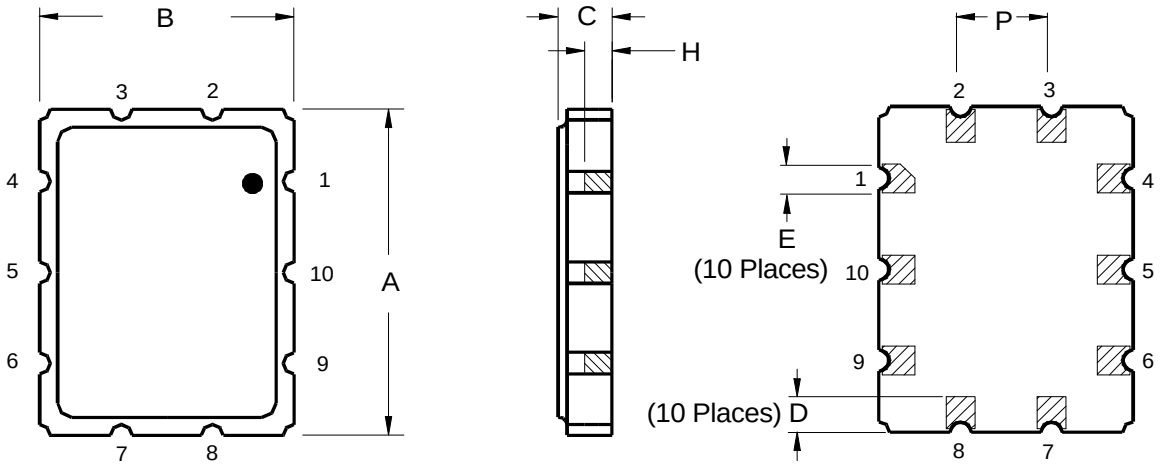


Case Dimensions

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**



RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-8148 E-mail: info@rfm.com
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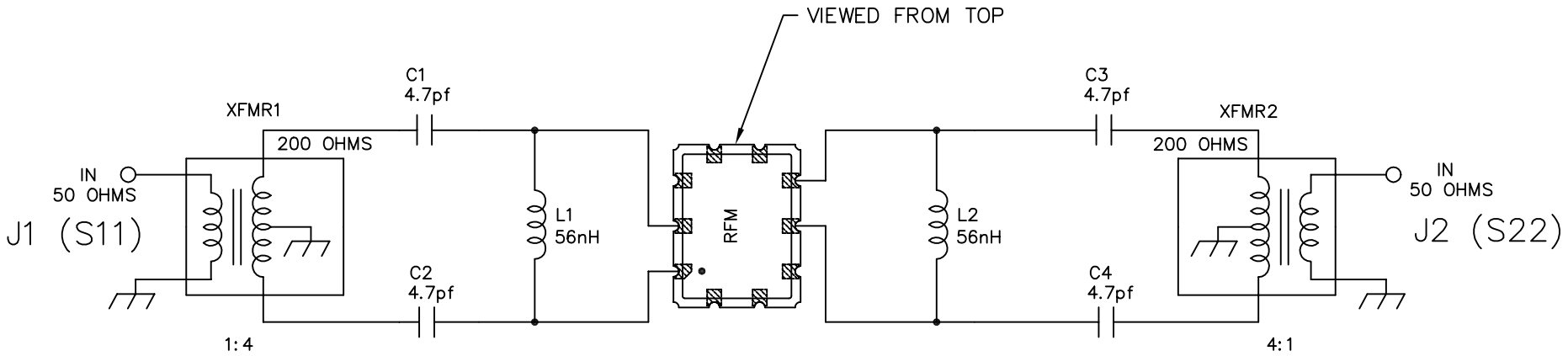
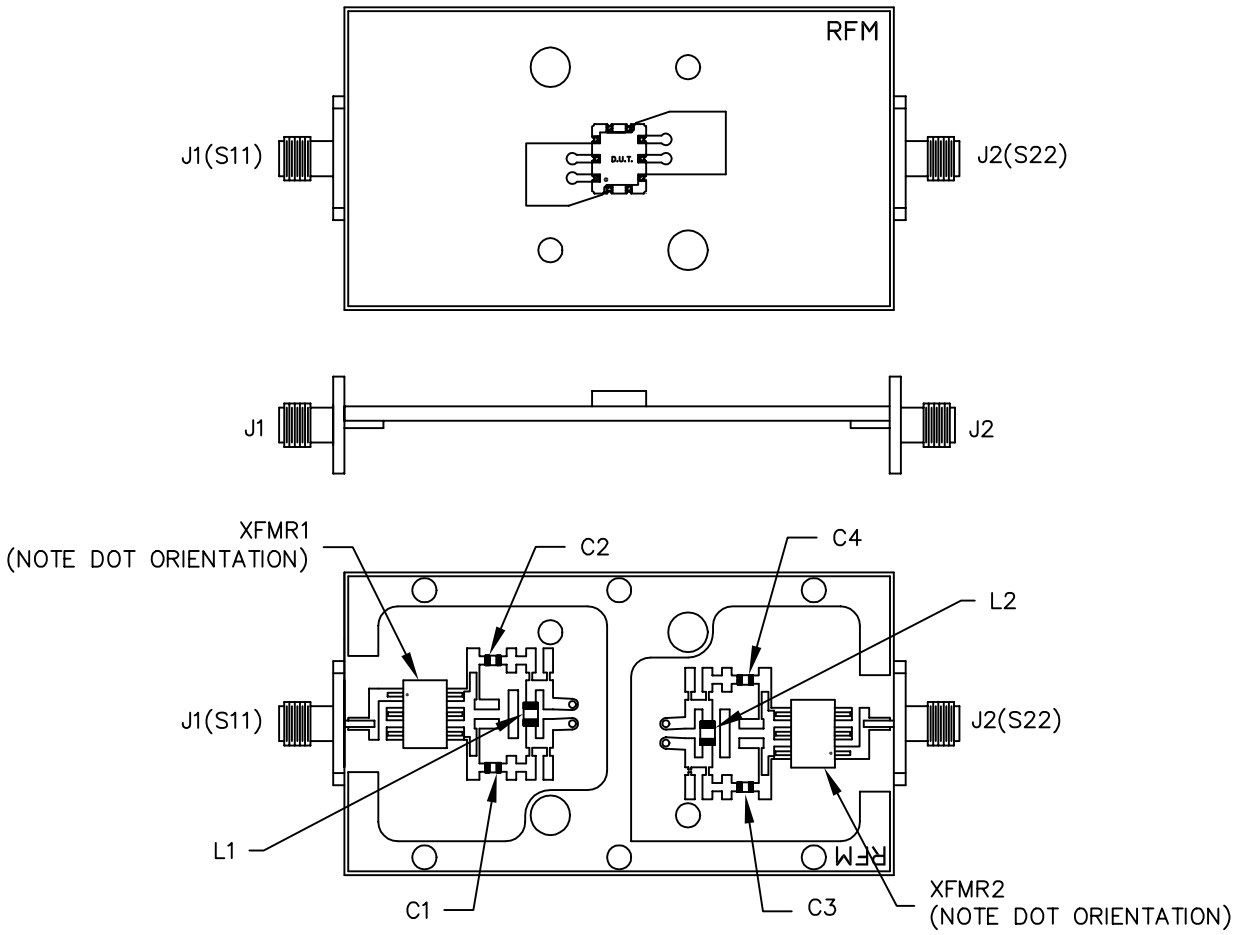
NOTES:

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.

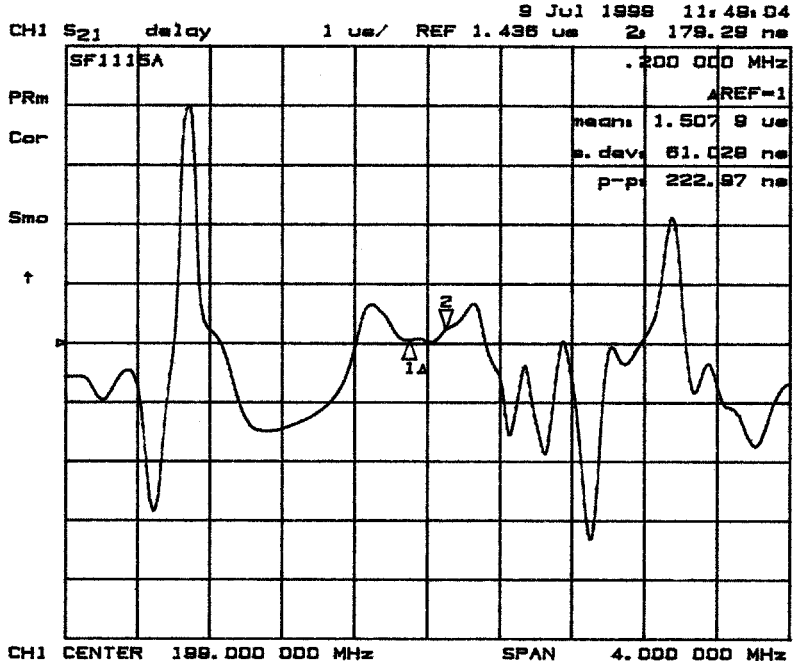
REV	ECN NO.	DESCRIPTION	DATE
A	8381	NEW DESIGN	04jan00

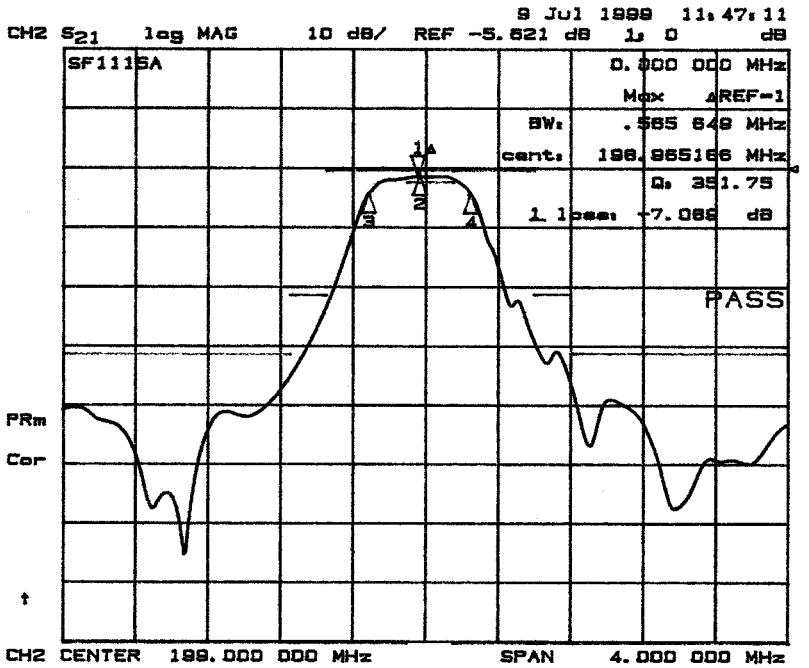


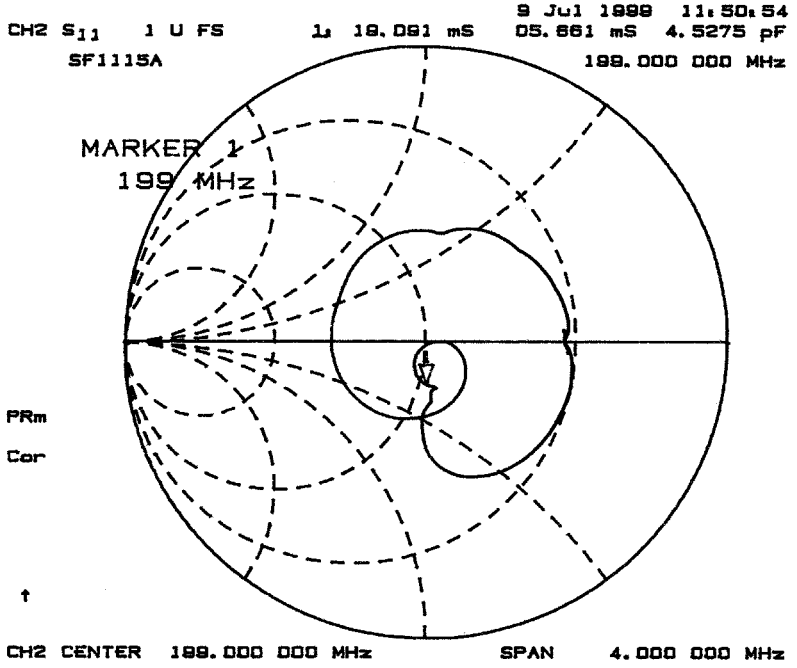
DRAWN BY/DATE: J.F.Christopherson 19aug99		TITLE: DEMO BOARD, SF1115A					
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE A	CODE IDENT 2U874	DWG. NO. SF1115A-000		REV A	SHEET 1/3

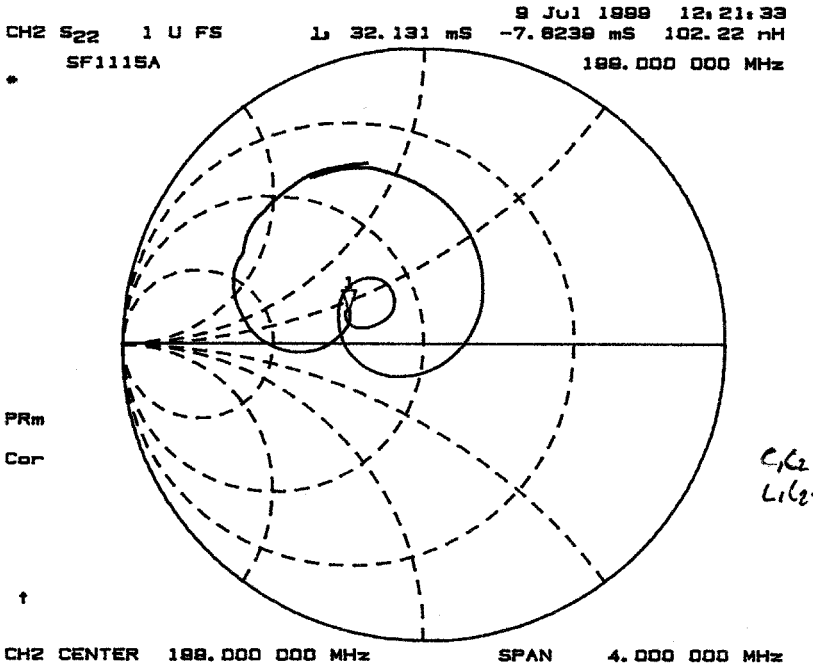


SIZE	CODE IDENT	DWG. NO.	REV	SHEET
A	2U874	SF1115A-000	A	2

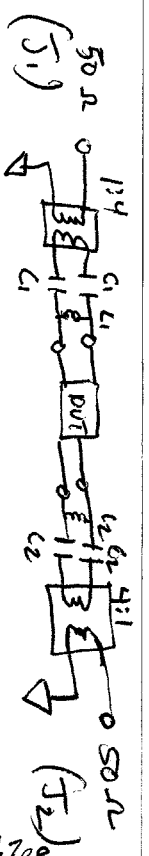








SF1115A-Eng
VAfer #4
Balanced
tuned
tested at 50Ω
7-9-99
New Alum
Demo.



C1,C2 - 4.7pF
L1,L2 - 56nH

SF1115A-000 REV. X1 SH. 2