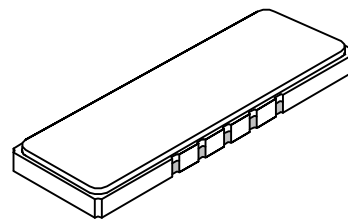


SF1095A 153.6 MHz SAW Filter



- Designed for CDMA BTS Transmitter Applications
- Hermetic SMP-75 Surface-Mount Case
- Unbalanced Input and Output



Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc		153.600		MHz	1
Passband	Insertion Loss at fc	IL	16	18.0	dB	1, 2
	1 dB Passband	BW ₁	±920		kHz	
	Amplitude Ripple over fc ±630 kHz		0.3	0.5	dB _{P-P}	
	Group Delay Variation over fc ±630 kHz	GDV	100	140	ns _{P-P}	
Rejection	Group Delay	GD	2.0		μs	1, 2, 3
	fc-1.98 to fc-1.25 and fc+1.25 to fc+1.98 MHz		4	6	dB	
	fc-2.25 to fc-1.98 and fc+1.98 to fc+2.25 MHz		10	25		
	fc-3.66 to fc-2.25 and fc+2.25 to fc+3.66 MHz		17.5	35		
	fc-4.90 to fc-3.66 and fc+3.66 to fc+4.90 MHz		20.5	38		
	fc-6.70 to fc-4.90 and fc+4.90 to fc+6.70 MHz		32	40		
65 MHz to fc-6.70 and fc+6.70 to 240 MHz			37.5	42		
Operating Temperature Range			-40	+85	°C	1
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 SF1095A 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	1
Port 1 Gnd Return	10
Port 2 Hot	6
Port 2 Gnd Return	5
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.

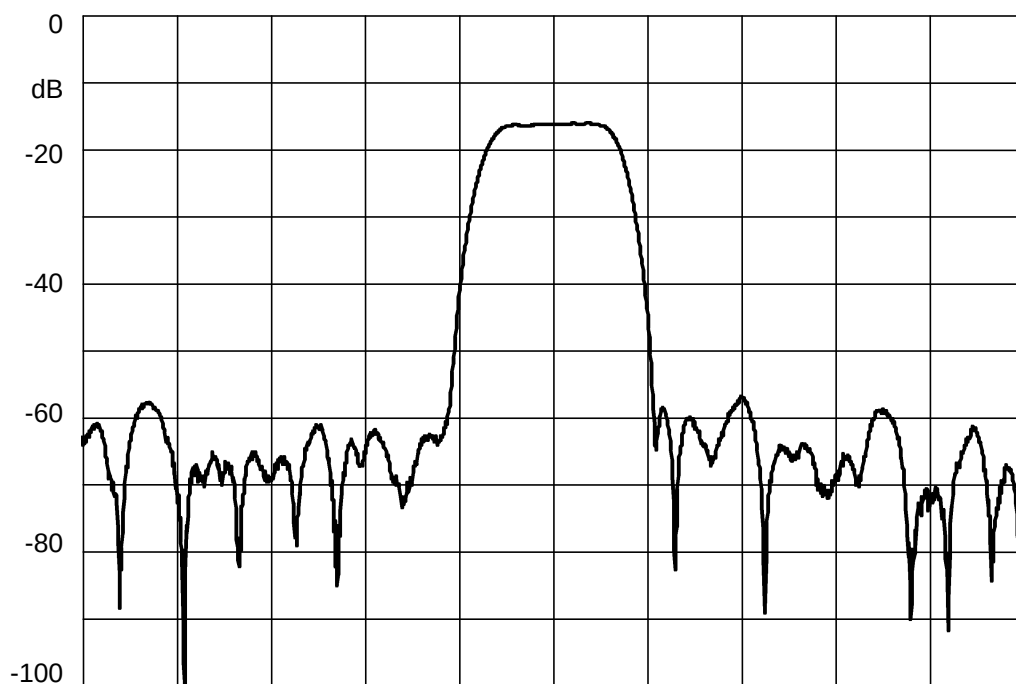


RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

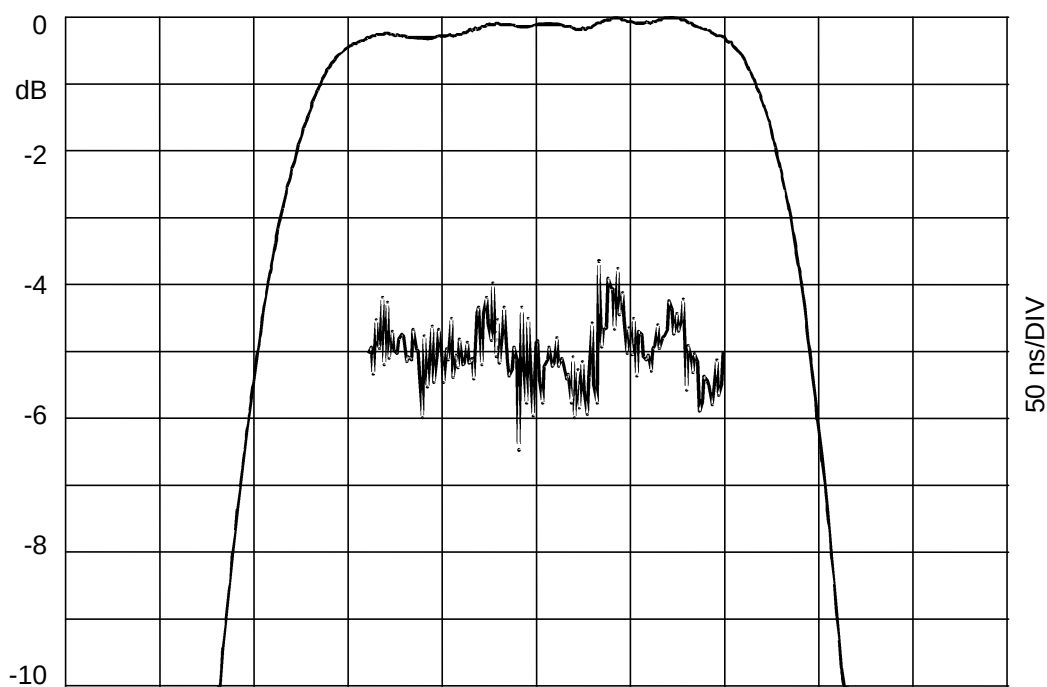
Phone: +1(972)233-2903
Fax: +1(972)387-8148
e-mail: info@rfm.com
Home page: www.rfm.com

European Sales Office
44 1963 251383
44 1963 251510

SF1095A 153.6 MHz SAW Filter



1.6 MHz/DIV



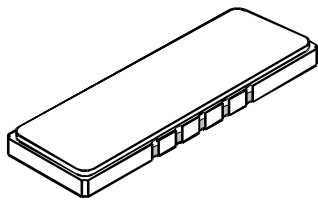
400 kHz/DIV

RF Monolithics, Inc.
4347 Sigma Road
Dallas, Texas 75244
USA

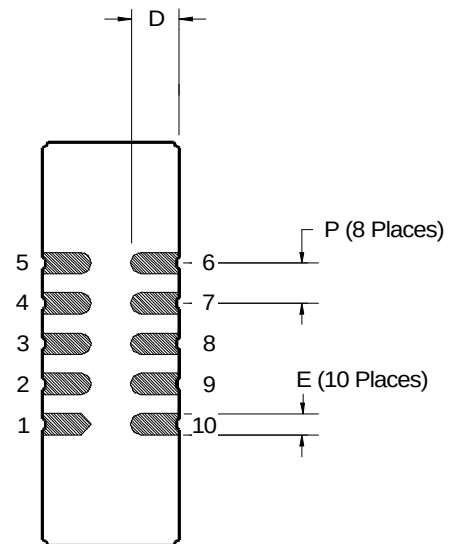
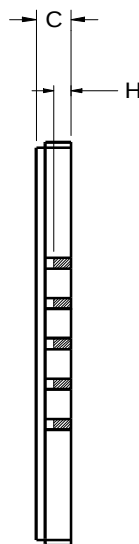
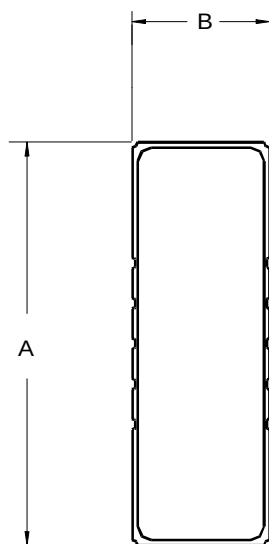
Phone: +1(972)233-2903
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e-mail: info@rfm.com
Home page: www.rfm.com

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44 1963 251383
44 1963 251510

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



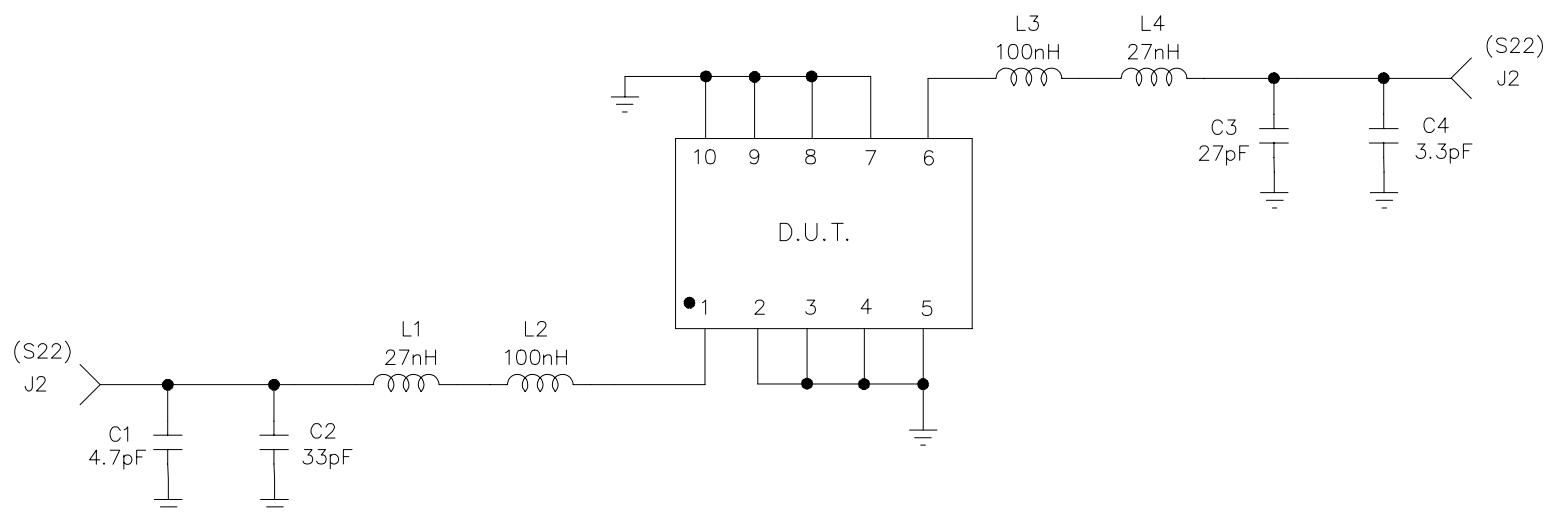
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	18.80	19.00	19.30	0.740	0.748	0.760
B	6.30	6.50	6.80	0.248	0.256	0.268
C		1.75	2.00		0.069	0.079
D		2.29			0.090	
E		1.02			0.040	
H		0.76			0.030	
P		1.905			0.075	



NOTES:

1. NOTE THE POSITION OF L1 AND L2 AND L3 AND L4.
THEY SHOULD BE POSITIONED 90° RELATIVE TO EACH OTHER.
2. MAKE CUTS IN TRACE FOR L2 AND L4.

REV	ECN NO.	DESCRIPTION	DATE
A	7714	INITIAL RELEASE	27may99



DRAWN BY/DATE: L. ASHMORE 27 MAY 99

TITLE: ASSY DIAGRAM, DEMO BOARD, SF1095A

RF Monolithics, Inc.
DALLAS, TEXAS 75244

CHECKED/APPROVED

SIZE
A

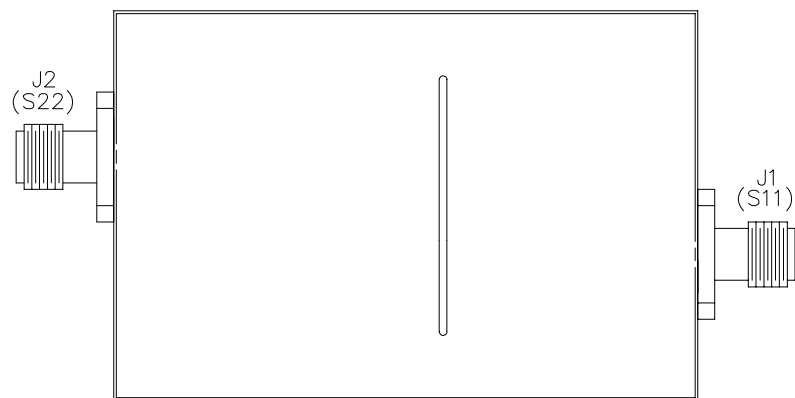
CODE IDENT
2U874

DWG.
NO.

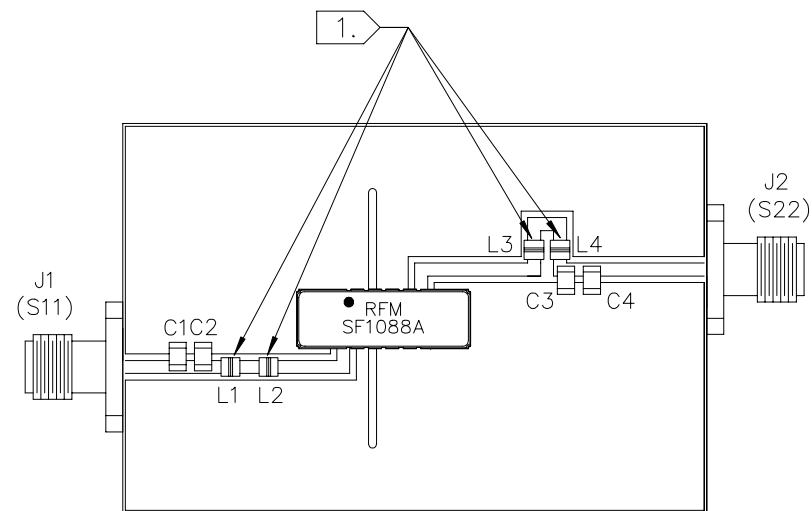
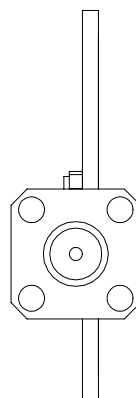
SF1095A-000

REV
A

SHEET
1/2



GROUNDING SIDE



COMPONENT SIDE

SF1095A

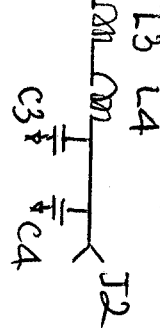
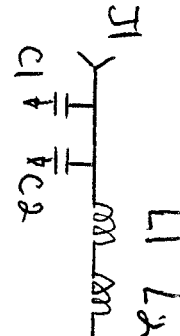
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E #3403-4

DMO #1

BN

2-11-99

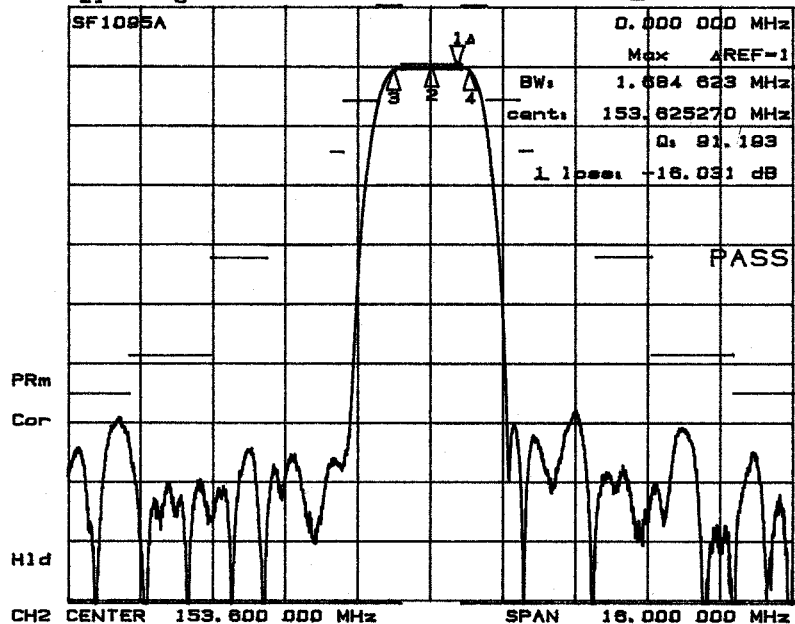


L1 }
L4 } 27nH

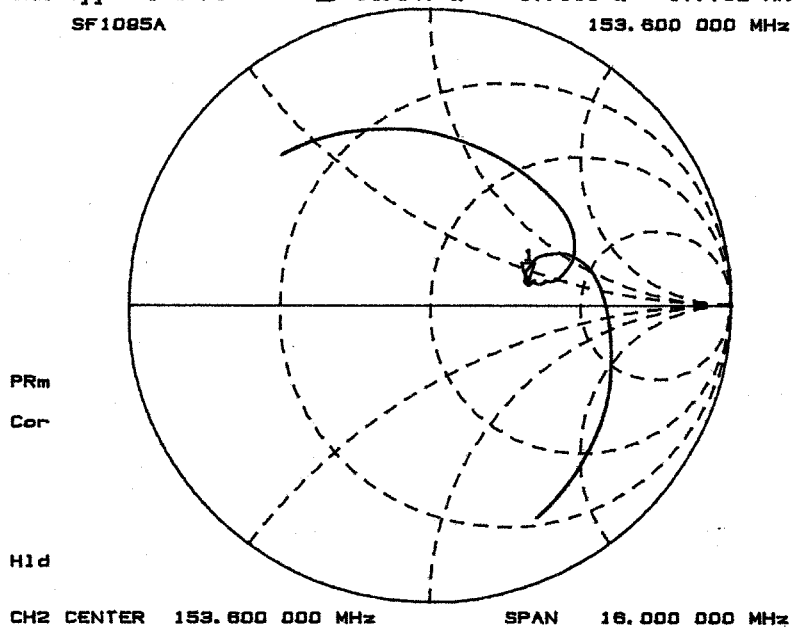
L2 }
L3 } 100nH

C1 } 4.7pF
C2 } 33pF
C3 } 27pF
C4 } 3.3pF

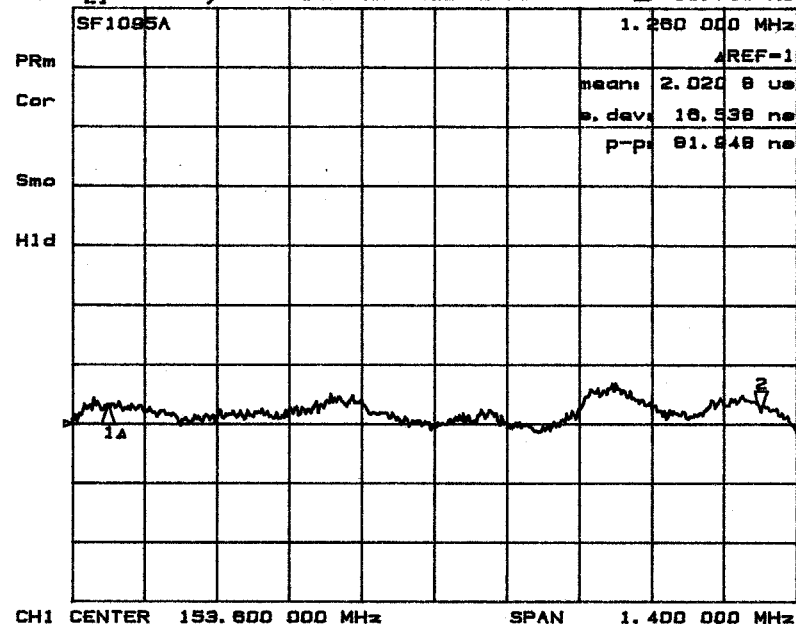
11 Feb 1999 10:22:53
CH2 S₂₁ log MAG 7 dB/ REF -16.17 dB L 0 dB



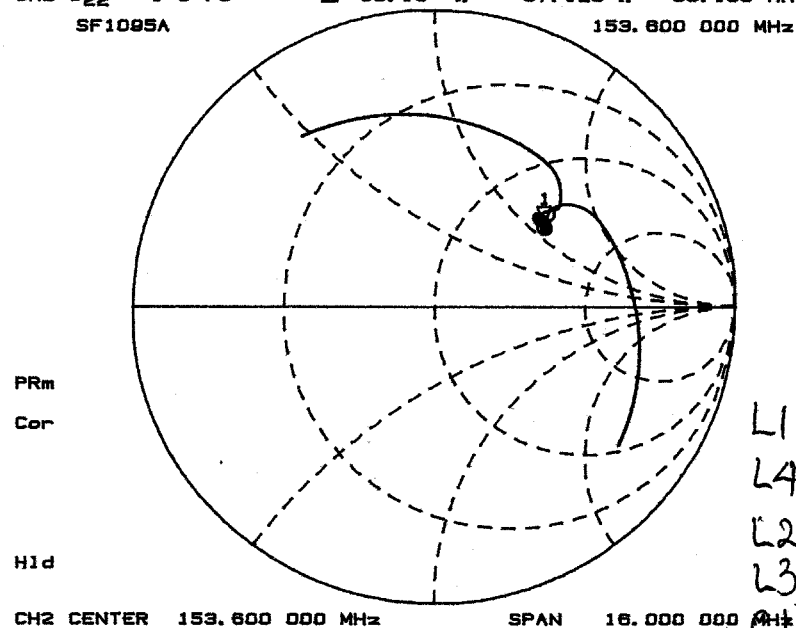
11 Feb 1999 10:25:26
CH2 S₁₁ 1 U FS L 96.547 n 17.113 n 17.732 nH
SF1095A 153.600 000 MHz



1999 10:31:43
CH1 S₂₁ delay 100 ns/ REF 2 us 2 -10.763 ns



11 Feb 1999 10:27:45
CH2 S₂₂ 1 U FS L 83.16 n 57.129 n 59.195 nH
SF1095A 153.600 000 MHz



SF1095A - 000 page 3 of 3

BILL OF MATERIALS

<u>PART IDENTIFIER</u>	<u>DESCRIPTION</u>	<u>QTY/ASSY</u>	<u>REFERENCE DESCRIPTION</u>
SF1095A-DEMO	DEMO BOARD, SF1095A		
SF1095A-000	ASSY DIAGRAM, DEMO BOARD, SF1095A	0	
SF109A-LRIP	FILTER, SM, 153.600 MHZ	1.0000	
400-1415-001	PCB, DEMO BD, 19 MM X 6.5 MM, REDESIGN	1.0000	
500-0003-047	CAP, CHIP, NPO, 4.7 (C), STD	1.0000	C 1
500-0003-330	CAP, CHIP, NPO, 33 (J), STD	1.0000	C 2
500-0003-270	CAP, CHIP, NPO, 27 (J), STD	1.0000	C 3
500-0003-033	CAP, CHIP, NPO, 3.3 (C), STD	1.0000	C 4
500-0248-001	CONN, COAX, FLANGE MT. JACK, 4 HOLE	2.0000	J 1, 2
500-0782-270	IND, CHIP, 0805CS, 27 NH, 5%	2.0000	L 1, 4
500-0781-101	IND, CHIP, 0805CS, 100 NH, 2%	2.0000	L 2, 3



SIZE

A

FSCM NO.

2U874

DWG NO.

SF1095A-DEMO

SCALE

NONE

W/O or ECN

7714

REV

A

SHEET

1OF **2**

REV HISTORY	
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[illegible]