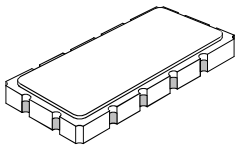
SF1056A

110.592 MHz SAW Filter

- ***Designed for DECT and WLAN IF Applications***
- ***Low Insertion Loss***
- ***Excellent Size-to-Performance Ratio***
- ***Hermetic 13.3 X 6.5 mm Surface-Mount Case***
- ***Unbalanced Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM13365-12

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	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C	1		110.592		MHz
Passband	Insertion Loss at fc	IL			8.5	10.0	dB
	3 dB Passband	BW_3	1, 2	±576	±750		kHz
	Group Delay Variation over fc ±576 kHz	GDV			<150	200	ns_{P-P}
Rejection	fc-3.4 to fc-1.728 and fc+1.728 to fc+3.4 MHz		1, 2, 3	28	40		dB
	DC to fc-3.4 and fc+3.4 to 200 MHz			40	>45		
	Ultimate				45		
Operating Temperature Range		T_A	1	-10		+60	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SM13365-12 13.3 X 6.5 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week) See note 4	RFM SF1056A YYWW

Electrical Connections

Connection	Terminals
Port 1Hot	2
Port 1 Gnd Return	3
Port 2 Hot	8
Port 2 Gnd Return	9
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.
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9. ©Copyright 1999, RF Monolithics Inc.
10. Electrostatic Sensitive Device. Observe precautions for handling

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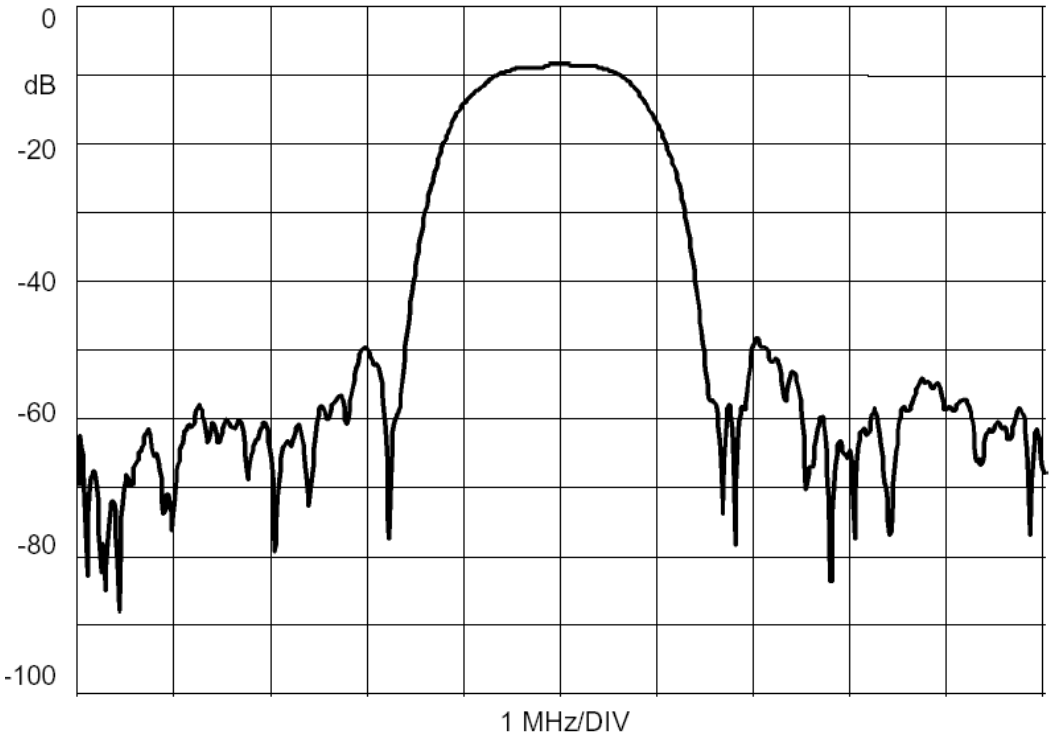
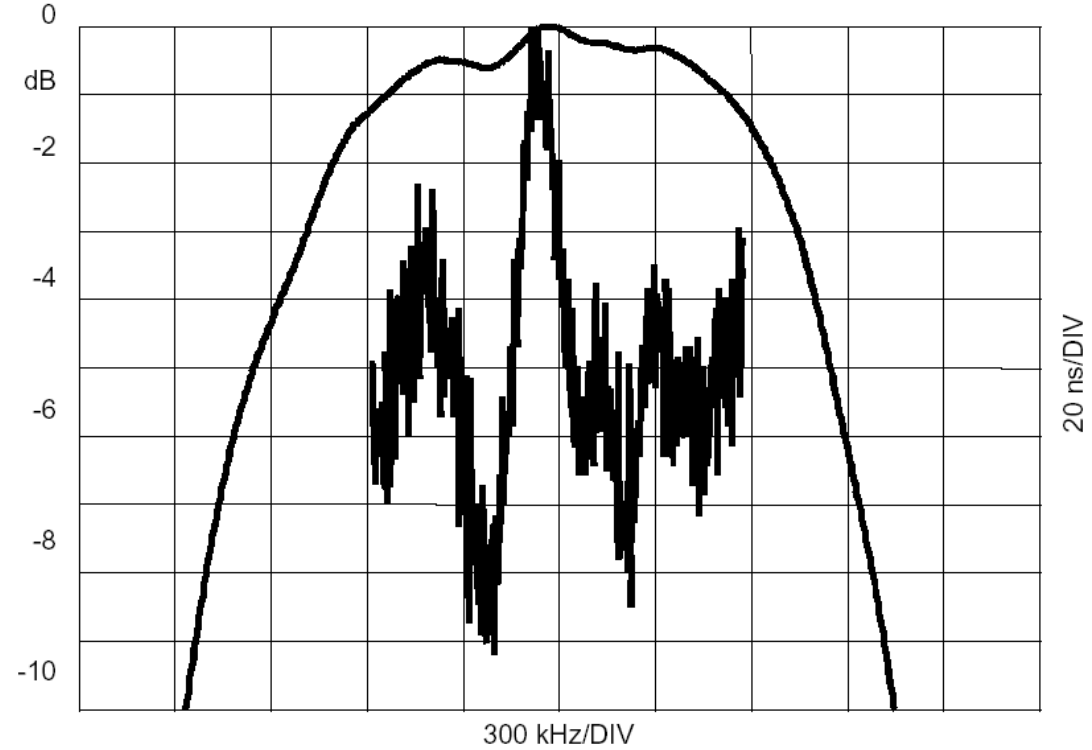
RFM Europe Phone: 44 1963 251383 Fax: 44 1963 251510 http://www.rfm.com

110.592 MHz SAW Filter





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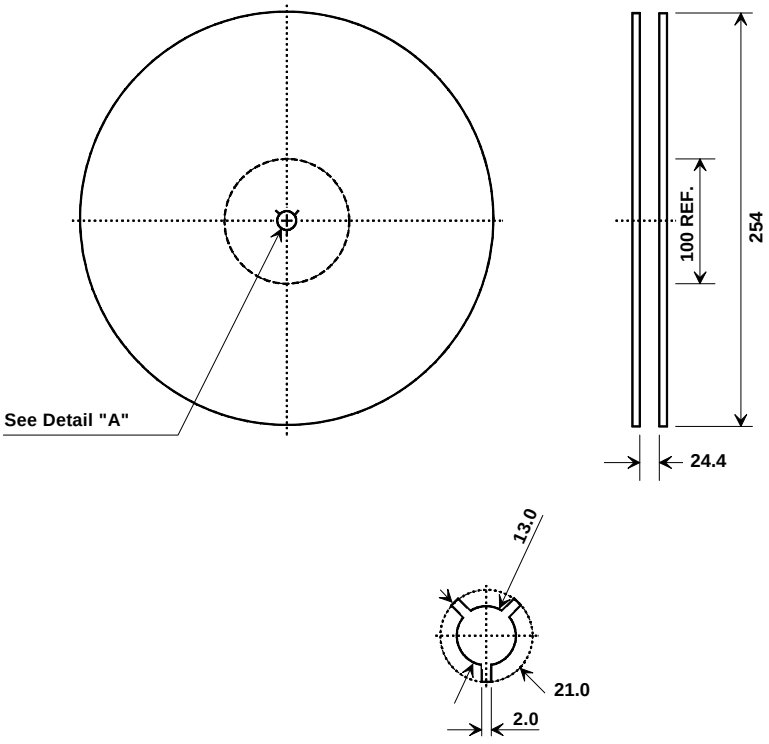
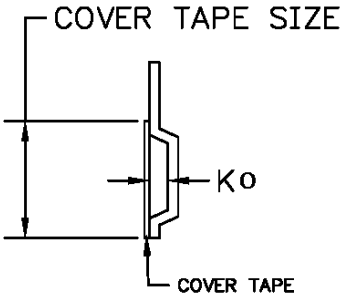
Tape and Reel Specifications

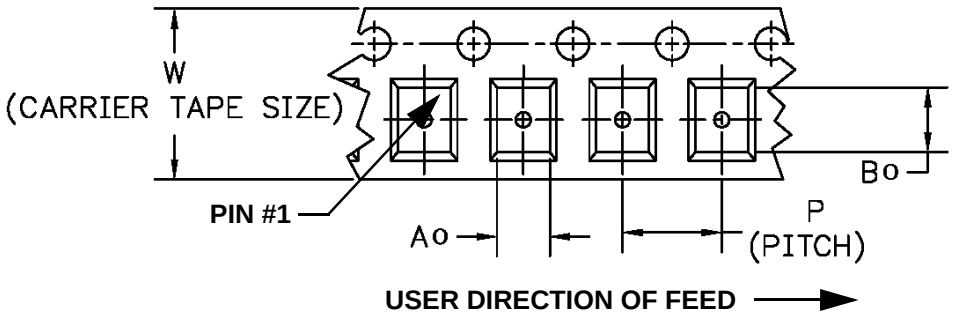


Quantity Per Reel
100 Min
1000 Max

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	7.0 mm
Bo	13.8 mm
Ko	2.0 mm
Pitch	12.0 mm
W	24.0 mm





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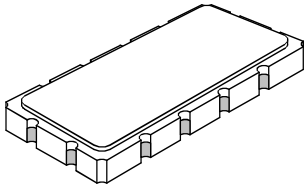
SM13365-12 Case

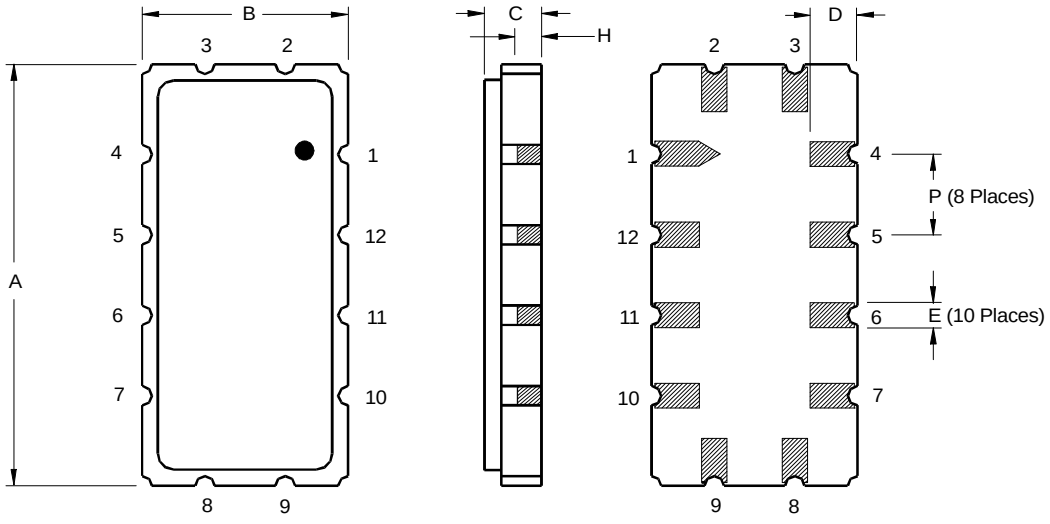
12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint



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	

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_2O_3 Ceramic
Pb Free	

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	2
	Return or Input	3
Port 2	Output or Return	8
	Return or Output	9
	Ground	All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**



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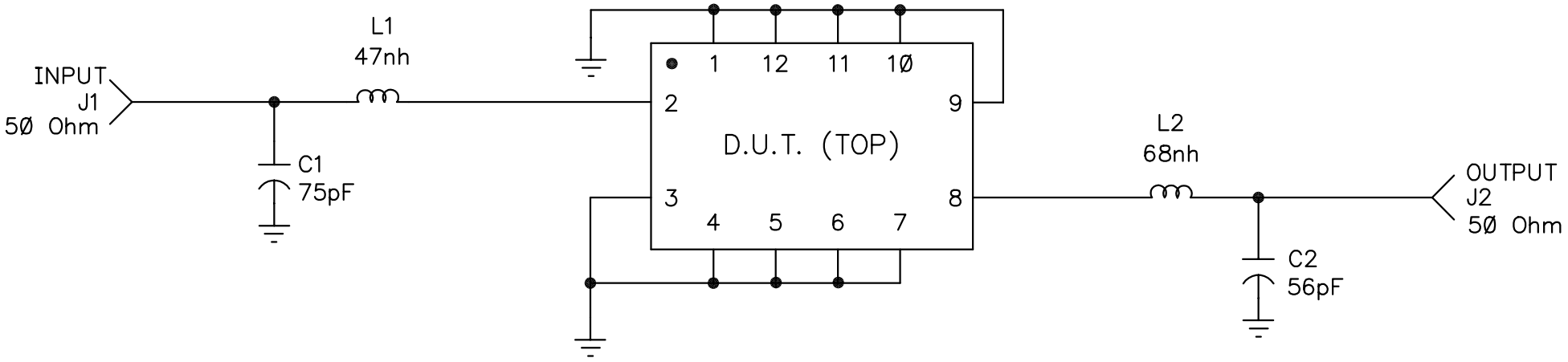
NOTES:

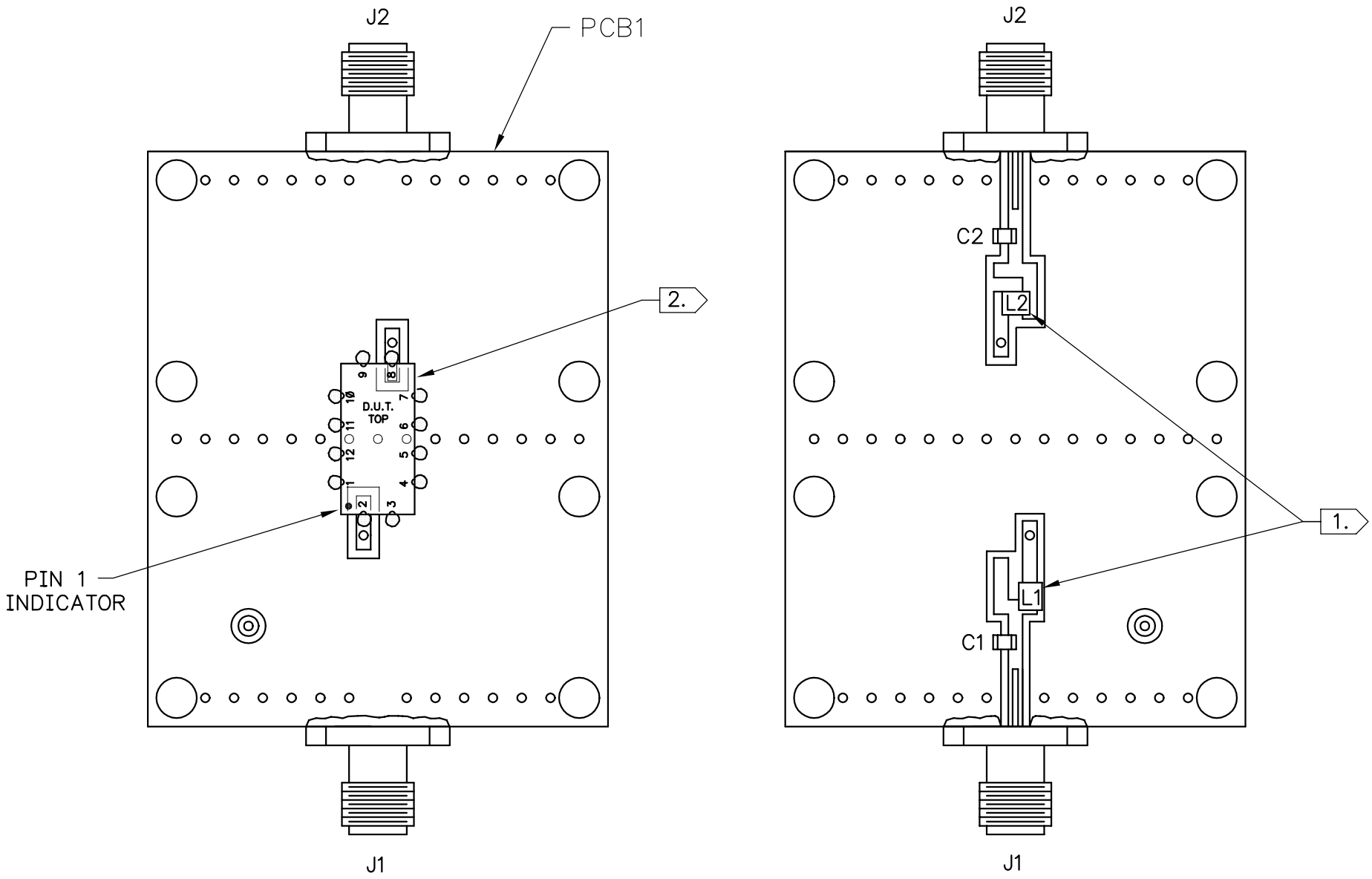
1. NOTE PROPER ORIENTATION OF INDUCTORS L1 AND L2. THEY ARE TO BE POSITIONED 9Ø° TO EACH OTHER.

2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 12 PLACES AS SHOWN.

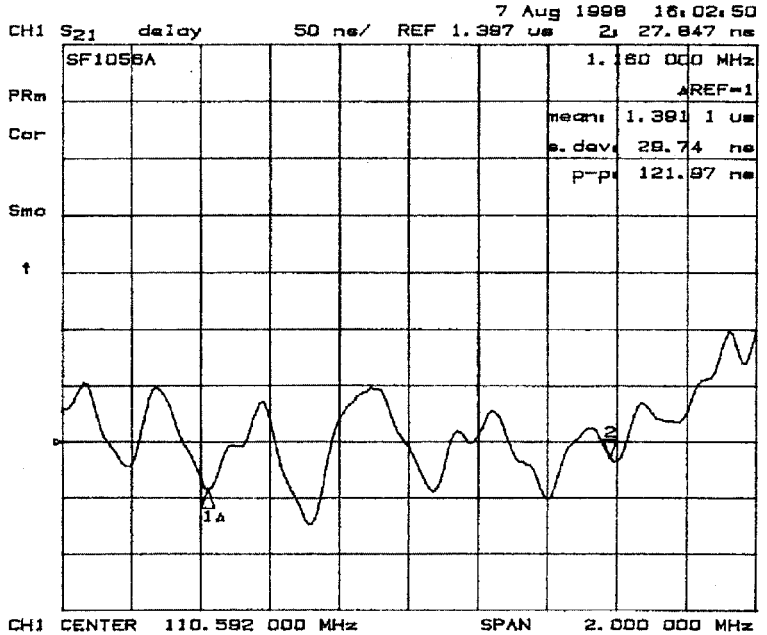
REV	ECN NO.	DESCRIPTION	DATE
A	72Ø2	INITIAL RELEASE	
B	1Ø145	REVISED PIN NUMBERING	14sepØ1

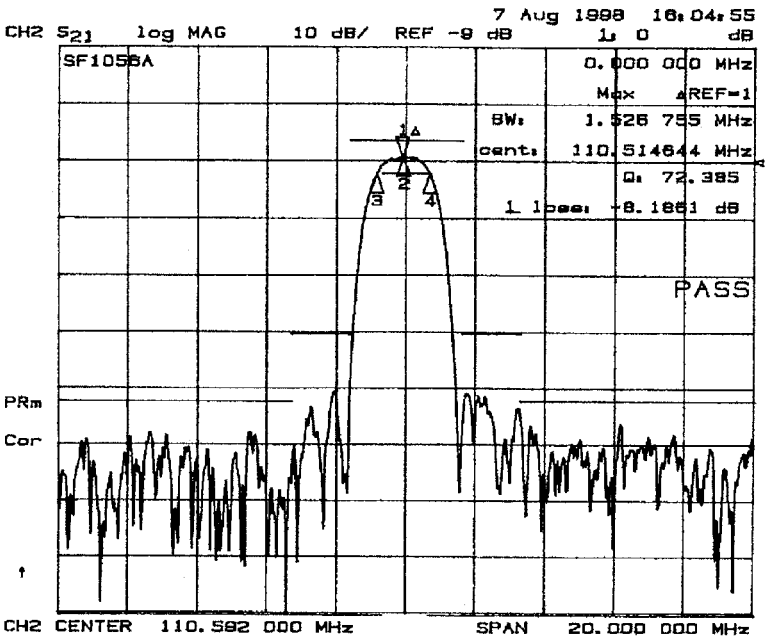


DRAWN BY/DATE: L. ASHMORE 15dec98		TITLE: SF1Ø56A DEMO PCB					
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE **A**	CODE IDENT **2U874**	DWG. NO. SF1Ø56A-ØØØ	REV B	SHEET 1/3	

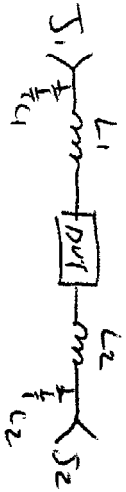


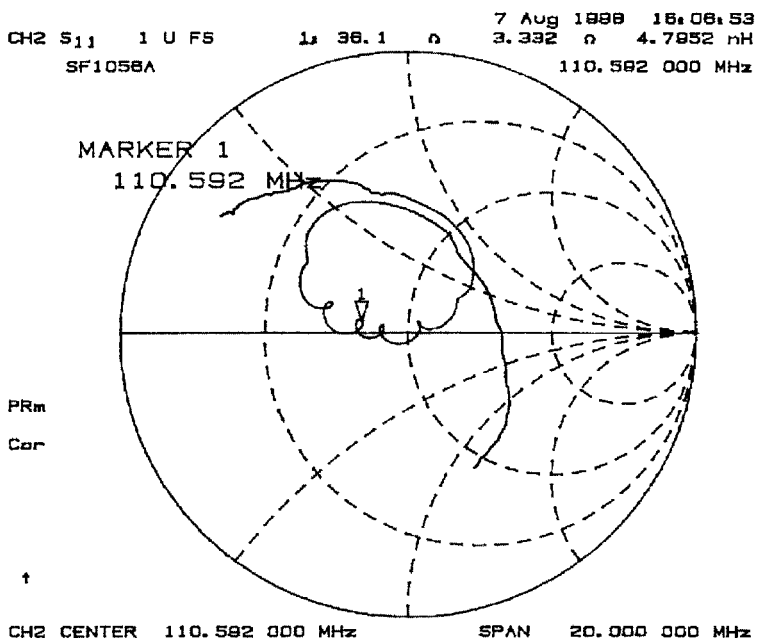
RF Monolithics, Inc. DALLAS, TEXAS 75244		SIZE A	CODE IDENT 2U874	DWG. NO. SF1056A-000	REV B	SHEET 2

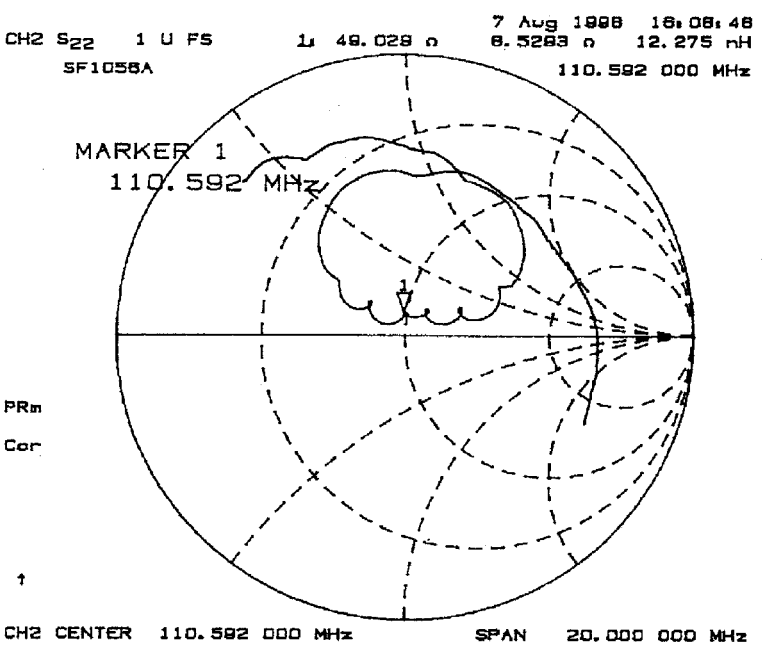




SF1056A
Demo #1
8-7-98
LP







C1 - 75pf
C2 - 56pf
L1 - 47nH
L2 - 68nH

SF1056A-000 Rev B

BILL OF MATERIALS

PART IDENTIFIER	DESCRIPTION 1	DESCRIPTION 2	QTY/ASSY	REFERENCE DESCRIPTION
SF1056A-DEMO	DEMO BOARD, SF1056A			
SF1056A-000	ASSY DIGRAM, DEMO BOARD	SF1056A	0	
400-0735-001	PCB, DEMO BOARD, 13.3 X 6.5		1.0000	PCB1
500-0003-750	CAP ,CHIP, NPO, 75 (J), STD		1.0000	C 1
500-0003-560	CAP, CHIP, NPO, 56 (J), STD		1.0000	C 2
500-0010-470	IND, CHIP, 1008CS, 47 NH, 10%		1.0000	L 1
500-0010-680	IND, CHIP, 1008CS, 68 NH, 10%		1.0000	L 2
500-0248-001	CONN,COAX,FLANGE MT.JACK	4 HOLE	2.0000	J 1,2

RFMI	SIZE A	FSCM NO. 2U874	DWG NO. SF1056A-DEMO
SCALE NONE	W/O or ECN 7202	REV A	SHEET 1 OF 2

REV HISTORY

REV	ECN	DATE	DESCRIPTION
A	7202	12/07/98	INITIAL RELEASE

FRFM	SIZE A	FSCM NO. 2U874	DWG NO. SF1056A-DEMO
SCALE NONE	W/O or ECN 7202	REV A	SHEET 2 OF 2