

Engineering Development Model

Low Pass Filter

LFCN-ED13263/3

SMT

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : FV1206

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 1 dB)	1		1200	MHz
fco Nom. (Loss 3 dB)	--	1530	--	MHz
Stopband F 20 (loss, dB)	1865	--	--	MHz
30 (loss, dB)	--	2000-5000	--	MHz
FR 20 (loss, dB)	--	6200	--	MHz
Passband VSWR	--	1.2	--	(:1)
Stopband VSWR	--	20	--	(:1)

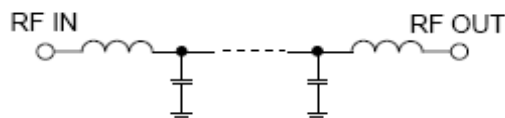
MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W at 25°C

*Derate linearly to 3.5W at 100°C ambient.

PIN CONNECTIONS	
RF IN	1**
RF OUT	3**
GROUND	2,4

**RF IN & RF OUT can be interchanged.

Functional Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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REV. X1
LFCN-ED13263/3
12/2/2008
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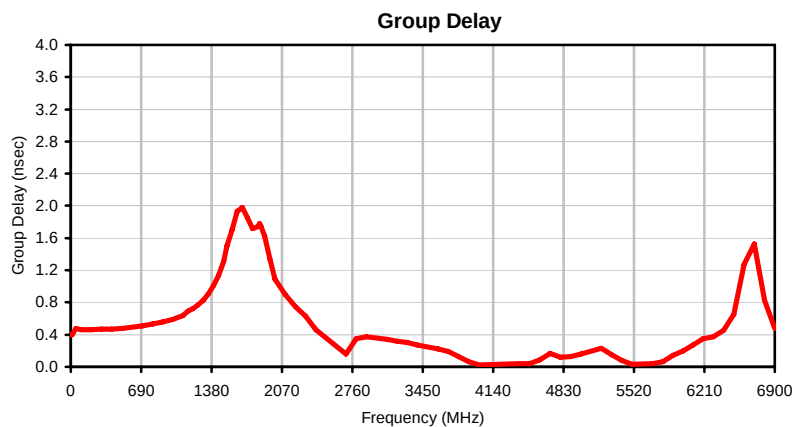
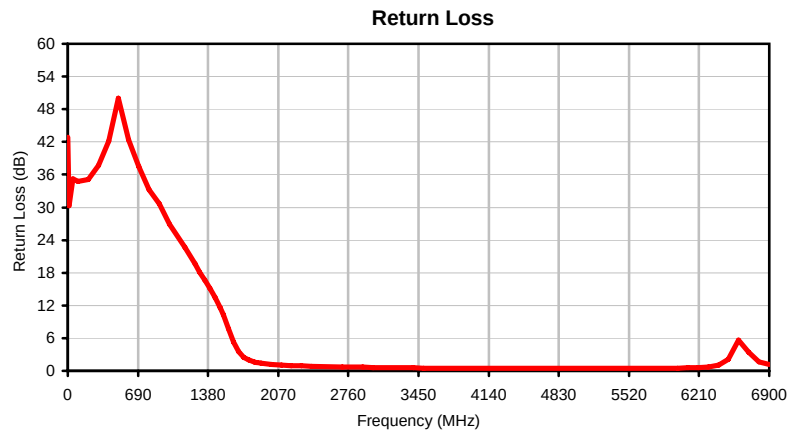
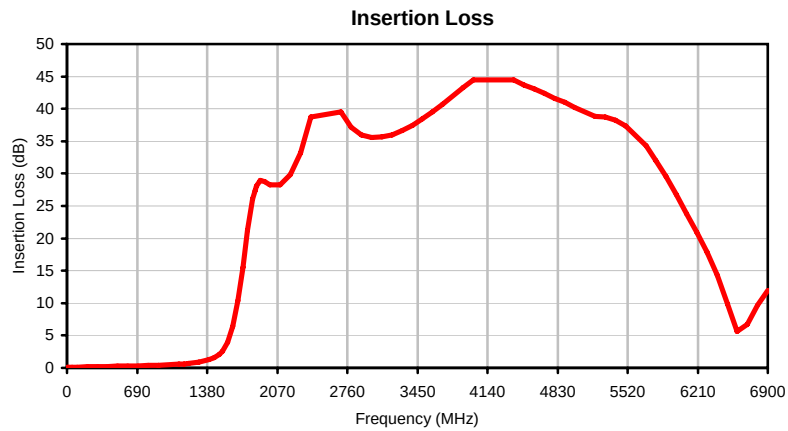
Low Pass Filter

LFCN-ED13263/3

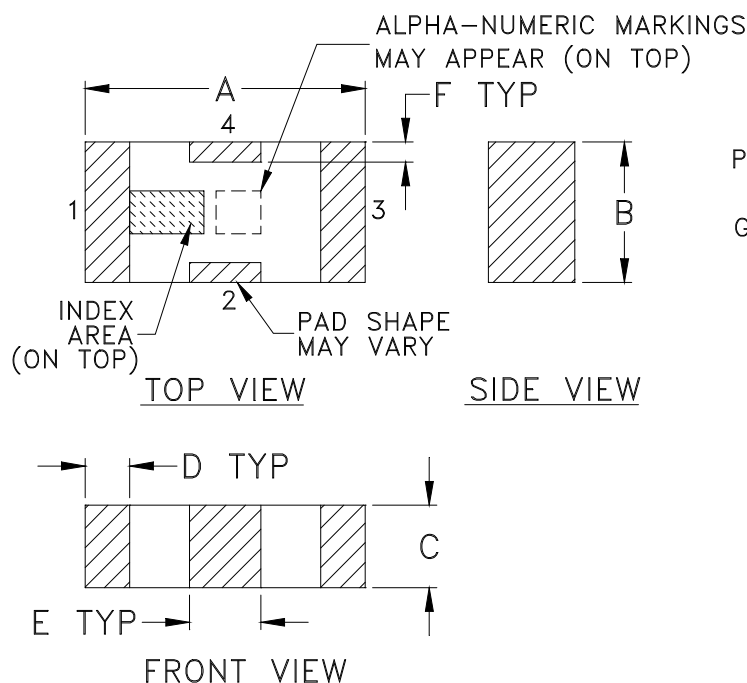
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	0.05	42.87	1.0	0.40
10.0	0.07	30.30	10.0	0.40
50.0	0.12	35.17	50.0	0.48
100.0	0.14	34.76	100.0	0.46
200.0	0.18	35.13	200.0	0.46
300.0	0.21	37.69	300.0	0.47
400.0	0.24	42.11	400.0	0.47
500.0	0.27	50.07	500.0	0.48
600.0	0.31	42.44	600.0	0.49
700.0	0.34	37.51	700.0	0.51
800.0	0.38	33.23	800.0	0.53
900.0	0.43	30.60	900.0	0.56
1000.0	0.49	26.90	1000.0	0.59
1100.0	0.57	24.09	1100.0	0.64
1150.0	0.63	22.70	1150.0	0.69
1200.0	0.69	21.12	1200.0	0.72
1250.0	0.78	19.55	1250.0	0.77
1300.0	0.89	18.08	1300.0	0.83
1350.0	1.04	16.62	1350.0	0.91
1400.0	1.25	15.09	1400.0	1.01
1450.0	1.58	13.49	1450.0	1.14
1500.0	2.10	11.61	1500.0	1.31
1530.0	2.59	10.29	1530.0	1.50
1580.0	3.95	7.75	1580.0	1.70
1630.0	6.44	5.30	1630.0	1.93
1680.0	10.39	3.53	1680.0	1.98
1730.0	15.56	2.51	1730.0	1.85
1780.0	21.20	1.97	1780.0	1.72
1830.0	26.05	1.66	1830.0	1.74
1850.0	27.39	1.57	1850.0	1.78
1865.0	28.11	1.51	1865.0	1.75
1900.0	28.91	1.40	1900.0	1.62
1950.0	28.76	1.28	1950.0	1.34
2000.0	28.28	1.19	2000.0	1.09
2100.0	28.24	1.06	2100.0	0.90
2200.0	29.87	0.98	2200.0	0.75
2300.0	33.17	0.91	2300.0	0.63
2400.0	38.78	0.86	2400.0	0.46
2700.0	39.54	0.74	2700.0	0.16
2800.0	37.11	0.70	2800.0	0.35
2900.0	36.00	0.67	2900.0	0.37
3000.0	35.58	0.64	3000.0	0.36
3100.0	35.63	0.61	3100.0	0.34
3200.0	36.01	0.58	3200.0	0.32
3300.0	36.63	0.56	3300.0	0.30
3400.0	37.47	0.54	3400.0	0.27
3500.0	38.43	0.52	3500.0	0.25
3600.0	39.51	0.50	3600.0	0.22
3700.0	40.71	0.49	3700.0	0.19
3800.0	42.00	0.48	3800.0	0.13
3900.0	43.29	0.46	3900.0	0.06
4000.0	44.47	0.45	4000.0	0.02
4400.0	44.43	0.44	4400.0	0.04
4500.0	43.64	0.43	4500.0	0.04
4600.0	43.08	0.44	4600.0	0.09
4700.0	42.41	0.43	4700.0	0.17
4800.0	41.59	0.43	4800.0	0.12
4900.0	41.03	0.43	4900.0	0.13
5000.0	40.17	0.44	5000.0	0.16
5200.0	38.87	0.45	5200.0	0.23
5300.0	38.73	0.45	5300.0	0.15
5400.0	38.24	0.45	5400.0	0.08
5500.0	37.32	0.45	5500.0	0.03
5700.0	34.32	0.45	5700.0	0.04
5800.0	32.04	0.46	5800.0	0.06
5900.0	29.53	0.47	5900.0	0.14
6000.0	26.81	0.51	6000.0	0.20
6100.0	23.85	0.56	6100.0	0.27
6200.0	20.94	0.62	6200.0	0.35
6300.0	17.86	0.75	6300.0	0.37
6400.0	14.29	1.08	6400.0	0.45
6500.0	9.85	2.09	6500.0	0.65
6600.0	5.64	5.68	6600.0	1.27
6700.0	6.67	3.46	6700.0	1.53
6800.0	9.69	1.68	6800.0	0.83
6900.0	11.93	1.18	6900.0	0.48

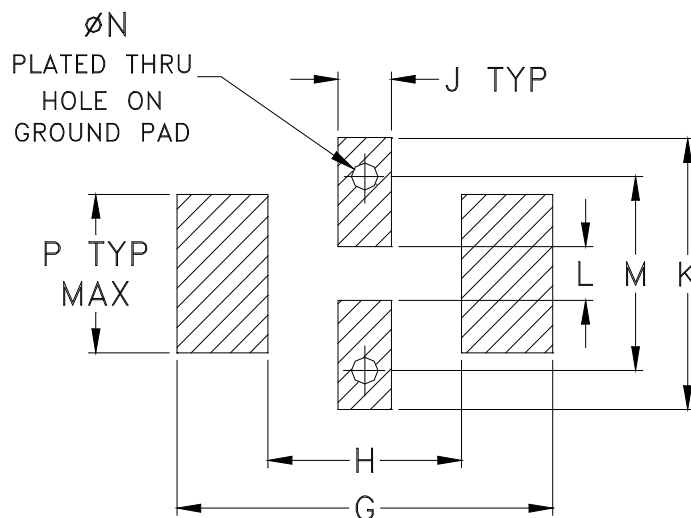
Typical Performance Curves



Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	L	M	N	P	WT. GRAM
FV1206	.126 (3.20)	.063 (1.60)	.037 (0.94)	.020 (0.51)	.032 (0.81)	.009 (0.23)	.169 (4.29)	.087 (2.21)	.024 (0.61)	.122 (3.10)	.024 (0.61)	.087 (2.21)	.012 (0.30)	.071 (1.80)	.020

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3 Pl. $\pm .005$

Notes:

- Open style, ceramic base.
- Termination finish: **as shown below or indicated on Data Sheet.**
For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.



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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F71

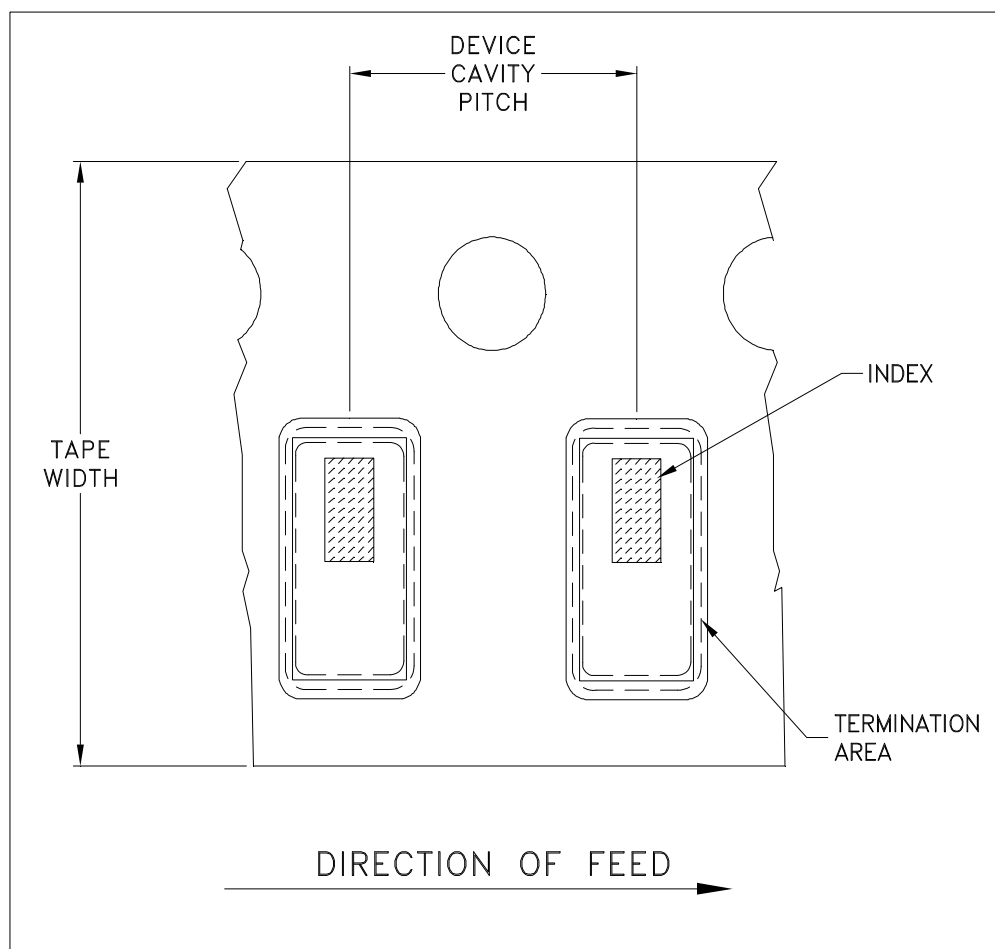


ILLUSTRATION 1

Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
8	4	7	Small quantity standards (see note)	20
				50
				100
				200
				500
				1000
			Standard	3000

Note: Please Consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



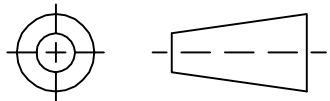
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RF/IF MICROWAVE COMPONENTS

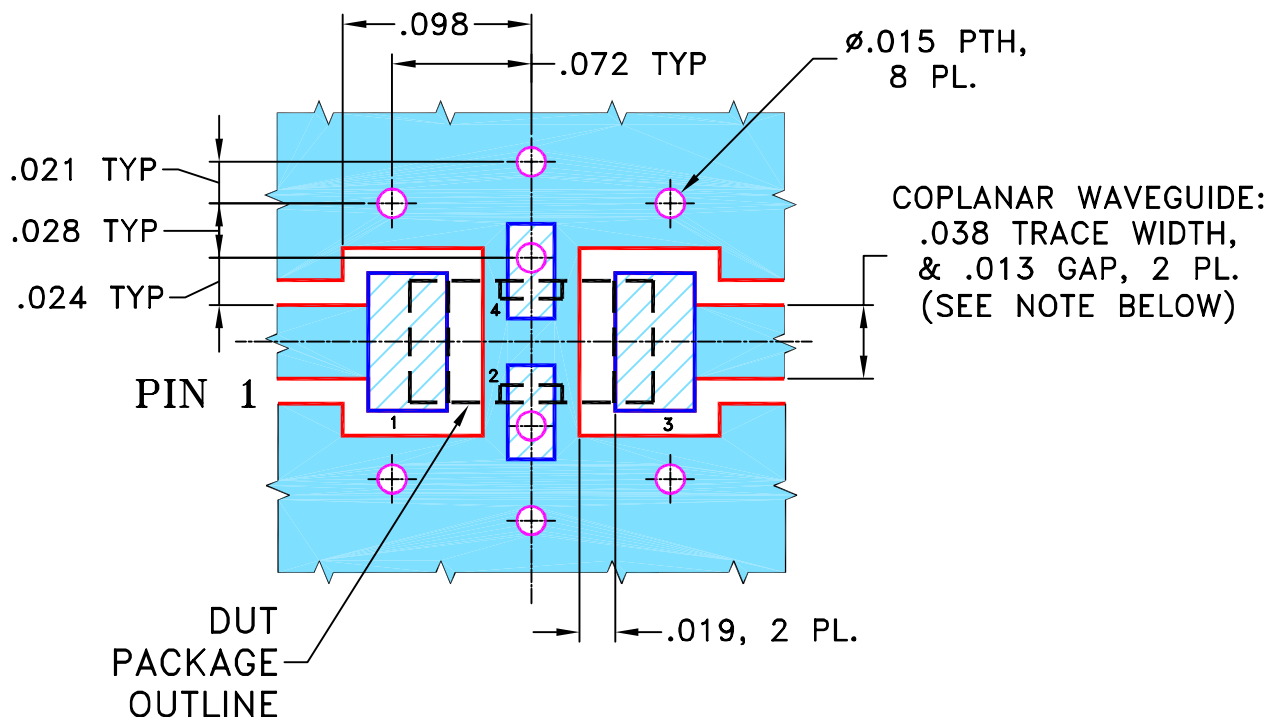
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M88634	NEW RELEASE	08/28/03	GF	ABD
A	M102713	ADDED "...WITH SMOBC"	01/17/06	MMG	IL

SUGGESTED MOUNTING CONFIGURATION
FOR FV1206 CASE STYLE, "nx" PIN CONNECTION

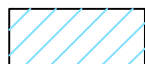


NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS R04350B WITH THICKNESS .020" $\pm$.0015".
 COPPER: 1/2 OZ. EACH SIDE.
 FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



DENOTES PCB COPPER LAYOUT WITH SMOBC
 (SOLDER MASK OVER BARE COPPER)



DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

UNLESS OTHERWISE SPECIFIED

INITIALS

DATE

DIMENSIONS ARE IN INCHES

TOLERANCES ON:

2 PL DECIMALS $\pm$ 3 PL DECIMALS $\pm$.005ANGLES $\pm$ FRACTIONS $\pm$

DRAWN

GF

08/27/03

CHECKED

AV

08/28/03

APPROVED

ABD

08/28/03



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 Brooklyn NY 11235

PL, nx, FV1206, LFCN/HFCN, TB-270

SIZE

A

CODE IDENT

15542

DRAWING NO:

98-PL-137

REV:

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FILE:

98PL137

SCALE:

10:1

SHEET:

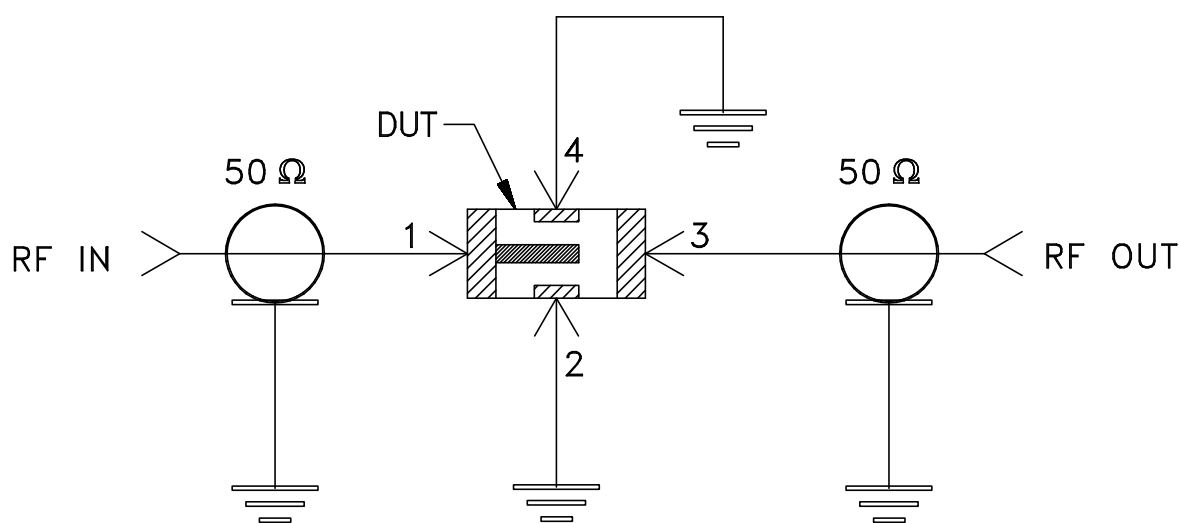
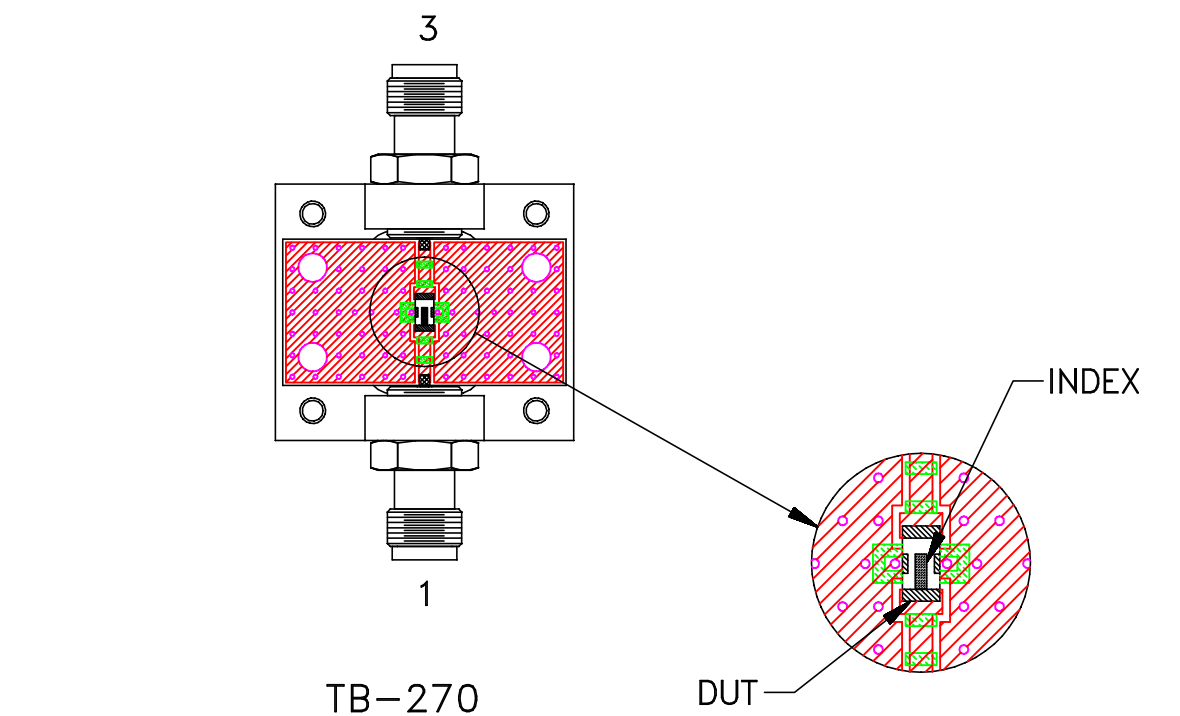
1 OF 1

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ASHEETA1.DWG REV:A DATE:01/12/95

Evaluation Board and Circuit



Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: ROGERS RO4350 or equivalent,
Dielectric Constant=3.5, Thickness=.020 inch.

 **Mini-Circuits®**



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A