

Engineering Development Model

RF Transformer

ADT1-ED12888/1

Impedance Ratio : 1

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 : CD542

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		0.3		500	MHz
Insertion Loss *	3 dB Bandwidth		0.3 - 500		MHz
	2 dB Bandwidth		0.6 - 300		MHz
	1 dB Bandwidth		3 - 100		MHz

Notes:

* Insertion Loss is referenced to mid-band loss, 0.37dB typ.

MAXIMUM RATINGS	
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25 W
DC Current	30 mA

Configuration :



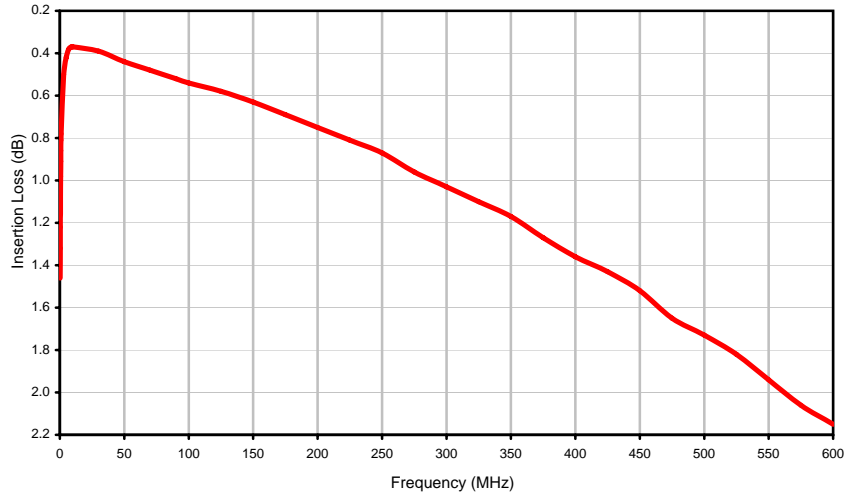
PIN CONNECTIONS	
PRIMARY DOT	3
PRIMARY	1
SECONDARY DOT	4
SECONDARY	6
SECONDARY CT	5
ISOLATE	2

Typical Performance Data

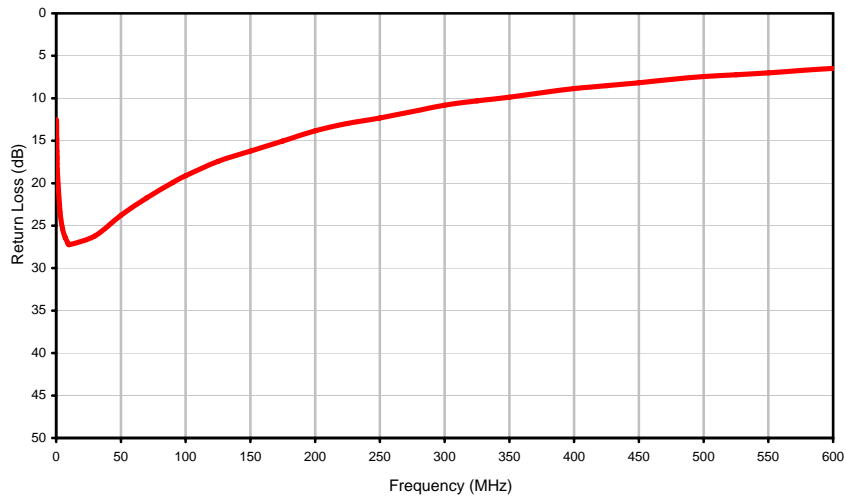
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.3	1.46	12.53
0.4	1.32	13.41
0.4	1.22	14.13
0.5	1.14	14.77
0.5	1.08	15.32
0.6	0.98	16.26
0.7	0.91	17.04
0.8	0.86	17.70
0.9	0.81	18.29
1	0.78	18.76
3	0.50	23.37
5	0.42	25.36
7	0.38	26.41
9	0.37	27.03
10	0.37	27.25
30	0.39	26.21
50	0.44	23.78
70	0.48	21.73
90	0.52	19.94
100	0.54	19.12
125	0.58	17.43
150	0.63	16.22
175	0.69	15.04
200	0.75	13.83
225	0.81	12.96
250	0.87	12.32
275	0.96	11.57
300	1.03	10.82
325	1.10	10.31
350	1.17	9.88
375	1.27	9.34
400	1.36	8.85
425	1.43	8.52
450	1.52	8.18
475	1.65	7.79
500	1.73	7.45
525	1.82	7.23
550	1.94	7.00
575	2.06	6.72
600	2.15	6.48

Typical Performance Curves

Insertion Loss



Return Loss



Case Style

CD

CD541
CD542
CD636
CD637

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	WT, GRAM
CD541					.082 (2.08)							.15
CD542	.272 (6.91)	.310 (7.87)	.220 (5.58)	.100 (2.54)	.112 (2.84)	.055 (1.40)	.100 (2.54)	.030 (0.76)	.026 (0.66)	.065 (1.65)	.300 (7.62)	.20
CD636					.162 (4.11)							.25
CD637					.206 (5.23)							.40

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

Notes:

- Case material: Plastic.
- Termination finish:
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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Tape & Reel Packaging TR-F34



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel see note	
16	12	7	Small quantity standard (see note)	20
				50
			100	
			200	
		13	Standard	500
				1000

Note: Availability of small reel quantity varies by model.
Refer to pricing and availability on individual model dashboard.

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.

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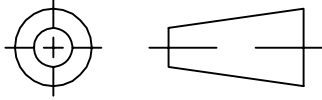
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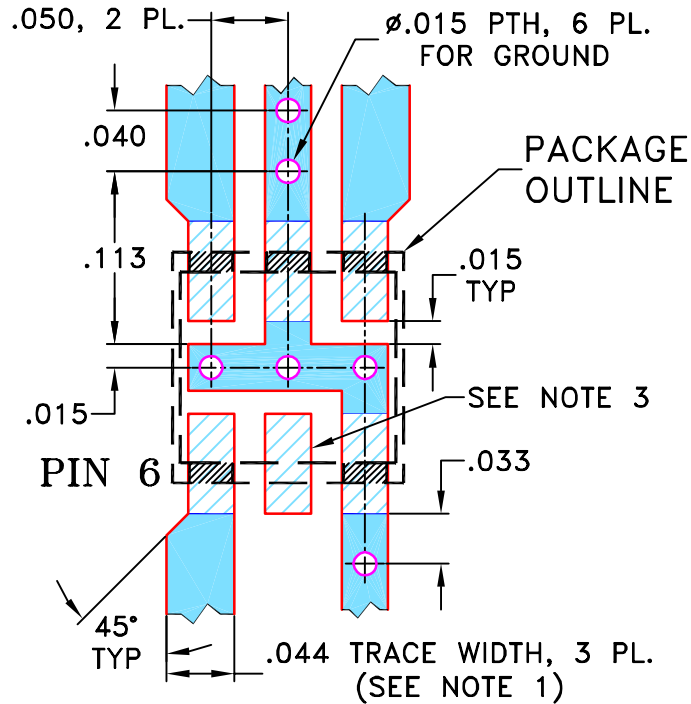
THIRD ANGLE PROJECTION



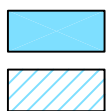
REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M106563	NEW RELEASE	08/23/06	AV	IG

SUGGESTED MOUNTING CONFIGURATION
FOR AT224/DB714 CASE STYLE, "gs/ha/hd" PIN CONNECTIONS
(FOR SINGLE ENDED TO BALANCED APPLICATION)



- NOTES:**
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.



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 ±
 3 PL DECIMALS ± .005
 ANGLES ±
 FRACTIONS ±

DRAWN	AV	07/28/06
CHECKED	IL	08/23/06
APPROVED	IG	08/23/06



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 Brooklyn NY 11235

PL, gs/ha/hd, AT224/DB714, TC/TCM, TB-145

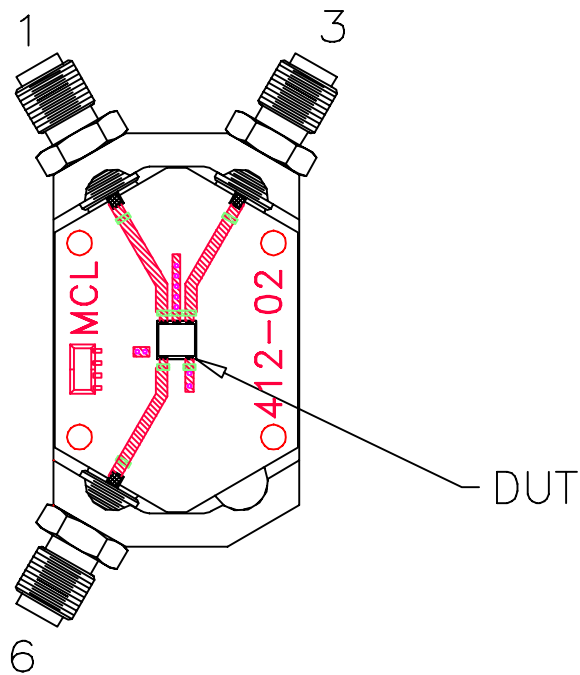
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SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-244	OR

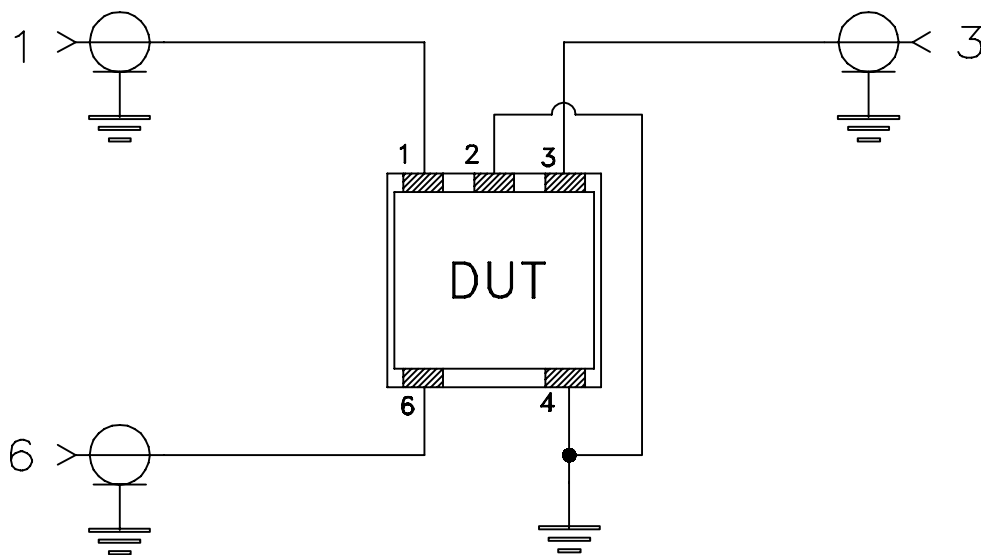
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Evaluation Board and Circuit

For Pin Connections refer to Data Sheet of the DUT




TB-145



Schematic Diagram

Notes:

1. 50 Ohm SMA Female connectors.
2. PCB Material: Rogers RO4350B or its equivalent, Dielectric Constant=3.5, Thickness=.020"

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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	-40° to 85°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
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
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, 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
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215