Engineering Development Model

RF Transformer ADTT1-ED7554A/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.

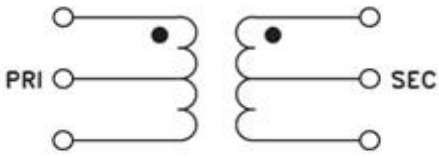
CASE STYLE : CD637

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		0.004		339.5	MHz
Insertion Loss *	**3 dB Bandwidth**		0.004 - 339.5		MHz
	2 dB Bandwidth		0.007 - 251		MHz
	1 dB Bandwidth		0.01 - 153		MHz
Ampitude Unbalance	**over 3dB Bandwidth**		0.5		dB
	over 1dB Bandwidth		0.1		dB
Phase Unbalance	**over 3dB Bandwidth**		5.0		deg.
	over 1dB Bandwidth		1.00		deg.

Note:
* Insertion Loss is referenced to mid-band loss, 0.17dB typ.Insertion loss is specified with input at pin 3 and output at pin 6 with pins 1 and 4 grounded and pins 2 and 5 are open.

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 : B



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

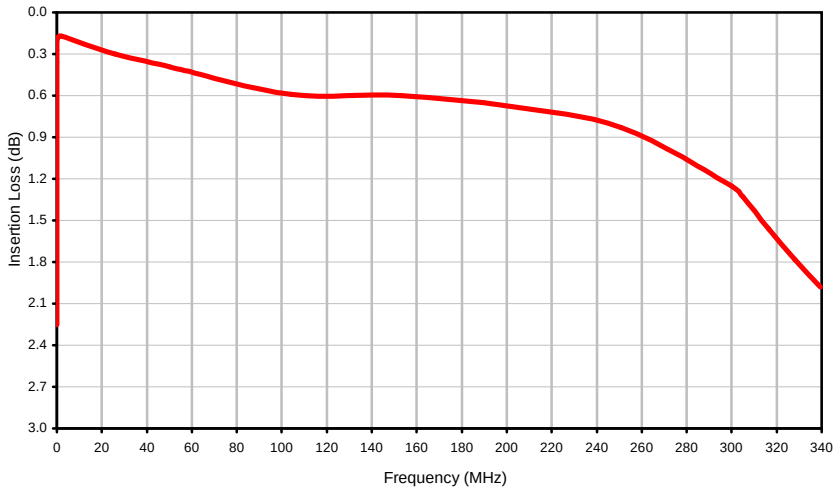
RF Transformer ADTT1-ED7554A/1

Typical Performance Data

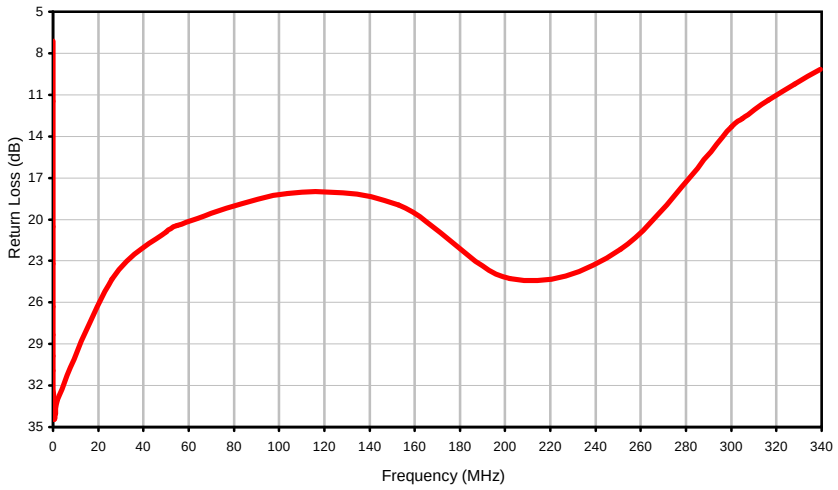
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.004	2.25	7.13
0.006	1.20	11.47
0.020	0.36	20.53
0.030	0.27	23.23
0.047	0.21	26.29
0.065	0.20	28.36
0.083	0.19	29.85
0.100	0.19	30.93
0.200	0.18	33.62
0.600	0.18	34.44
1.000	0.17	34.01
2.000	0.17	33.00
26.000	0.30	24.30
50.000	0.39	20.89
55.000	0.41	20.42
104.000	0.59	18.11
153.000	0.60	18.96
202.000	0.68	24.28
251.000	0.83	22.16
300.000	1.25	13.34
305.000	1.33	12.71
316.500	1.56	11.39
328.000	1.78	10.23
339.500	1.98	9.18

Typical Performance Curves

Insertion Loss



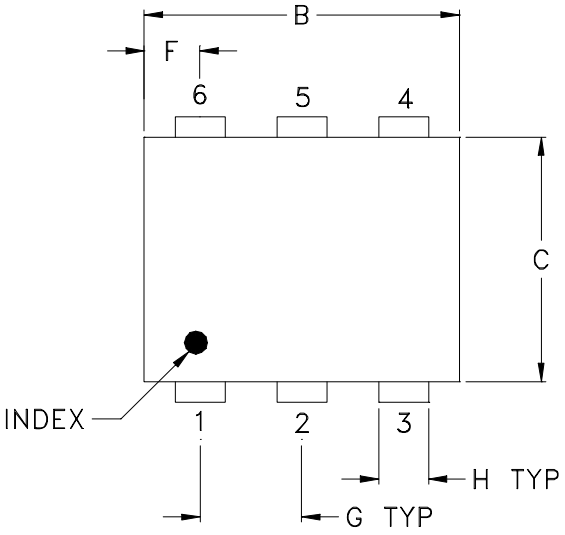
Return Loss

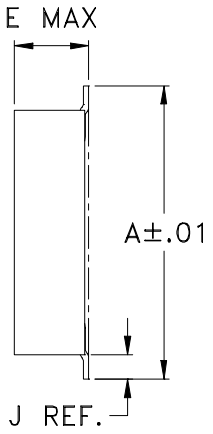


Case Style CD

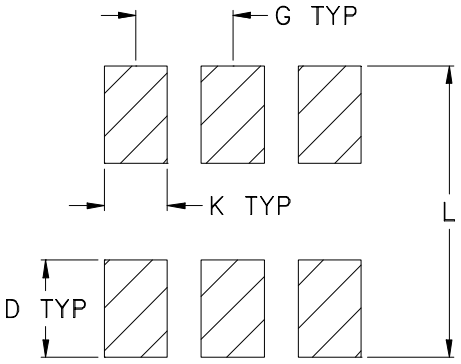
CD541
CD542
CD636
CD637

Outline Dimensions





PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

CASE#	A	B	C	D	E	F	G	H	J	K	L	WT, GRAM
CD541	.272 (6.91)	.310 (7.87)	.220 (5.58)	.100 (2.54)	.082 (2.08)	.055 (1.40)	.100 (2.54)	.030 (0.76)	.026 (0.66)	.065 (1.65)	.300 (7.62)	.15
CD542					.112 (2.84)							.20
CD636					.162 (4.11)							.25
CD637					.206 (5.23)							.40

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

Notes:

1. Case material: Plastic.
2. 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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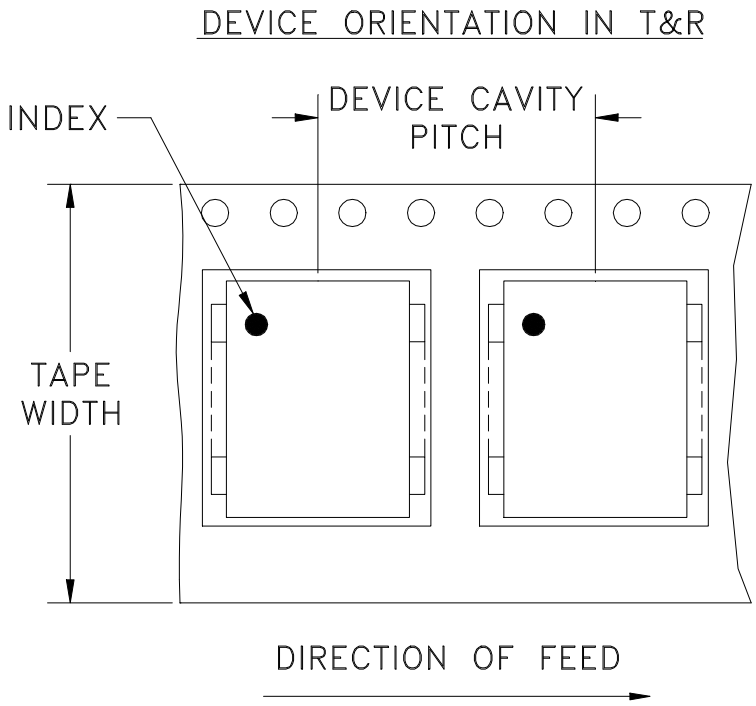
Tape & Reel Packaging TR-F46



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
16	12	13	900

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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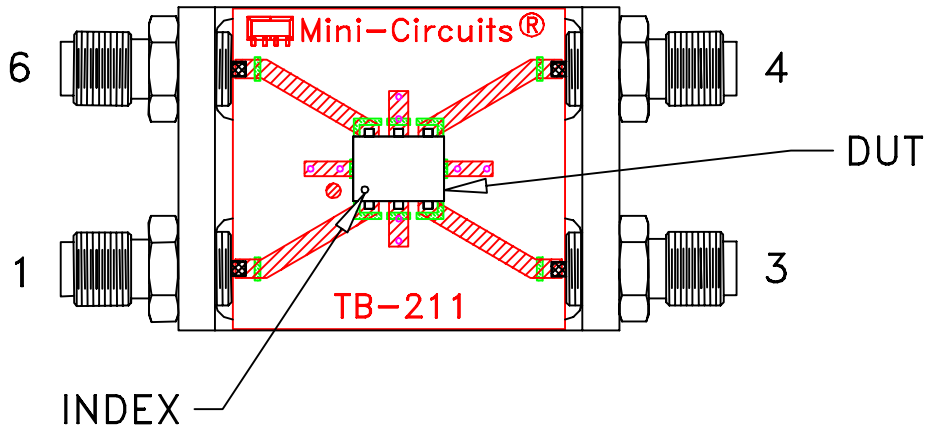
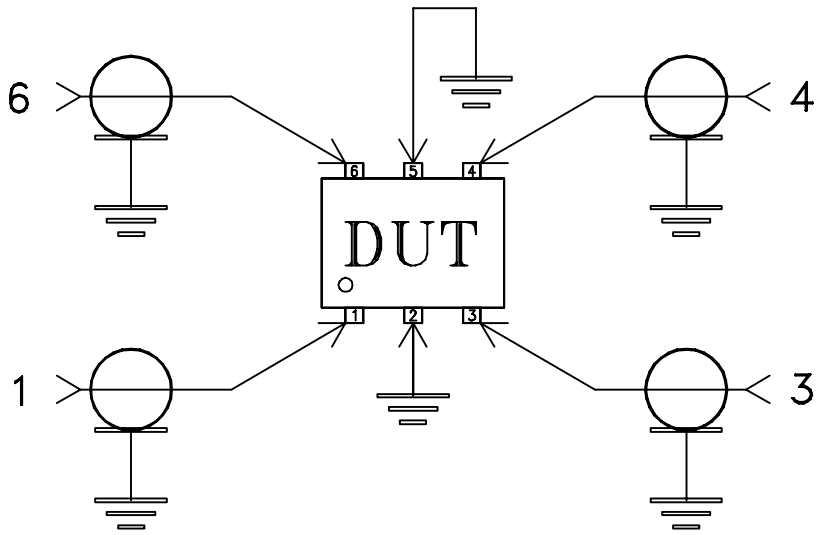
Evaluation Board and Circuit

For Pin Connections refer to Data Sheet of the DUT



TB-211



Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: Rogers RO4350 or equivalent, Dielectric Constant=3.5, Thickness=.030 inch.

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Environmental Specifications ENV02

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	-20° 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

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