

# RF Transformer

## ADT1-1WT-1+

75Ω 1 to 400 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD542

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

**Available Tape and Reel at no extra cost**

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

### Maximum Ratings

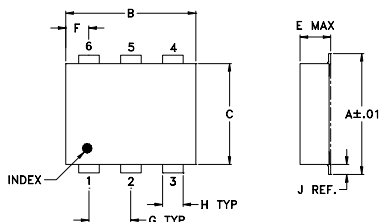
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	250mW
DC Current	30mA

Permanent damage may occur if any of these limits are exceeded.

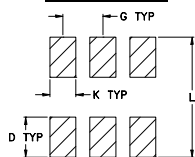
### Pin Connections

PRIMARY DOT	3
PRIMARY	1
SECONDARY DOT	4
SECONDARY	6
SECONDARY CT	5
NOT USED	2

### Outline Drawing



### PCB Land Pattern



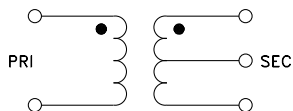
Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L	wt		
.030	.026	.065	.300	grams		
0.76	0.66	1.65	7.62	0.20		

Demo Board MCL P/N: TB-430

### Config. A



### Features

- 1dB bandwidth covers entire frequency range
- good return loss, 21 dB typ.
- leaded surface mount
- aqueous washable
- protected under US patent 6,133,525

### Applications

- high speed data communications
- baluns

### Transformer Electrical Specifications

Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*	PHASE UNBALANCE (Deg.) Typ.	AMPLITUDE UNBALANCE (dB) Typ.	RETURN LOSS** (dB)	
					Typ.	Min.
1	1-400	1-400 1dB MHz	5 1 dB bandwidth	0.7 1 dB bandwidth	21	16

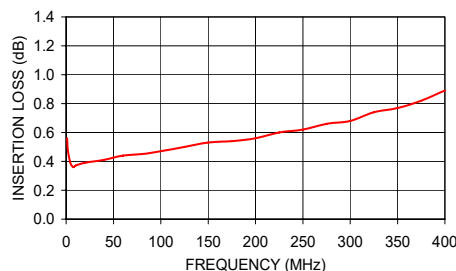
\* Insertion Loss is referenced to mid-band loss, 0.5 dB typ.

\*\* Return loss specified from 1 to 250 MHz

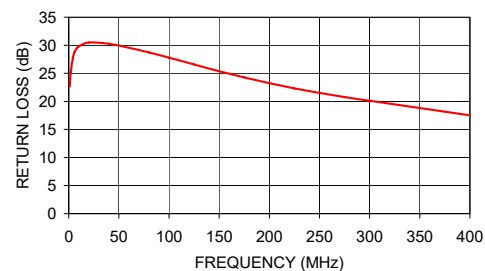
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
1.00	0.56	22.65	0.05	0.28
2.00	0.47	25.12	0.03	0.16
4.00	0.40	27.64	0.02	0.08
6.00	0.37	28.83	0.02	0.03
8.00	0.36	29.44	0.01	0.02
10.00	0.37	29.80	0.01	0.01
20.00	0.39	30.47	0.01	0.29
40.00	0.41	30.27	0.00	0.56
60.00	0.44	29.55	0.02	0.83
80.00	0.45	28.73	0.03	1.18
100.00	0.47	27.78	0.07	1.44
125.00	0.50	26.57	0.11	1.84
150.00	0.53	25.39	0.17	2.23
175.00	0.54	24.26	0.22	2.63
200.00	0.56	23.23	0.29	3.04
225.00	0.60	22.30	0.37	3.40
250.00	0.62	21.50	0.45	3.72
275.00	0.66	20.78	0.54	4.20
300.00	0.68	20.11	0.65	4.57
325.00	0.74	19.48	0.76	4.98
350.00	0.77	18.81	0.87	5.34
375.00	0.82	18.16	1.01	5.66
400.00	0.89	17.52	1.16	5.96

INSERTION LOSS



INPUT RETURN LOSS



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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