*Surface Mount*

# RF Transformer

## 75Ω 0.4 to 800 MHz

# ADT1-1WT+
# ADT1-1WT



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" | 20, 50, 100, 200, 500 |
| 13" | 500,1000 |

## Maximum Ratings

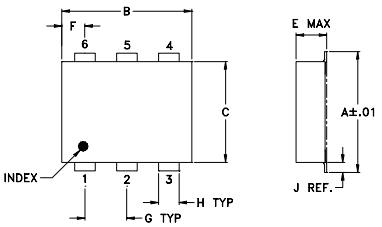
| | |
|---|---|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.5W |
| DC Current | 30mA |

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

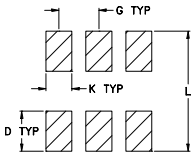
## Pin Connections

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

## Outline Drawing




**PCB Land Pattern**




Suggested Layout,
Tolerance to be within ±.002

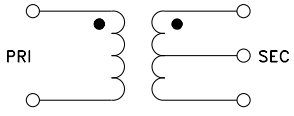
## Outline Dimensions (inch / mm)

| 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

- excellent amplitude unbalance, 0.1 dB typ. and phase unbalance, 1 deg. typ. in 1 dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

## Applications

- impedance matching
- balanced amplifier

## Transformer Electrical Specifications

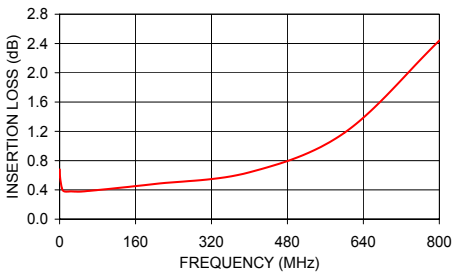
| Ω RATIO | FREQUENCY (MHz) | INSERTION LOSS* | | | PHASE UNBALANCE (Deg.) Typ. | | AMPLITUDE UNBALANCE (dB) Typ. | |
|---|---|---|---|---|---|---|---|---|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz | 1 dB bandwidth | 2 dB bandwidth | 1 dB bandwidth | 2 dB bandwidth |
| 1 | 0.4-800 | 0.4-800 | 0.5-700 | 1-400 | 1 | 4 | 0.1 | 0.5 |

* Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

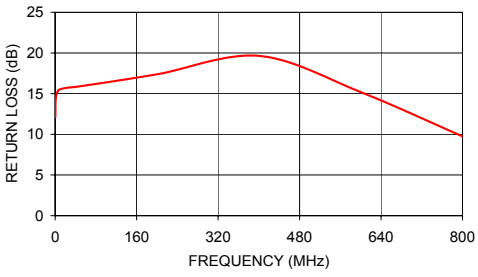
## Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|---|---|---|---|---|
| 0.30 | 0.68 | 12.11 | 0.15 | 0.25 |
| 1.00 | 0.57 | 14.38 | 0.07 | 0.36 |
| 5.00 | 0.42 | 15.29 | 0.03 | 0.41 |
| 10.00 | 0.38 | 15.54 | 0.00 | 0.40 |
| 25.00 | 0.38 | 15.73 | 0.02 | 0.37 |
| 50.00 | 0.38 | 15.91 | 0.03 | 0.49 |
| 200.00 | 0.48 | 17.38 | 0.03 | 1.48 |
| 400.00 | 0.64 | 19.64 | 0.26 | 2.02 |
| 600.00 | 1.18 | 15.20 | 0.79 | 1.45 |
| 800.00 | 2.44 | 9.75 | 1.72 | 0.40 |

ADT1-1WT
INSERTION LOSS




ADT1-1WT
INPUT RETURN LOSS




Notes
A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp