



**THE DATASHEET OF  
ADTL1-15-75+**



# Surface Mount RF Transformer

## ADTL1-15-75+

75Ω 10 to 1500 MHz

### Maximum Ratings

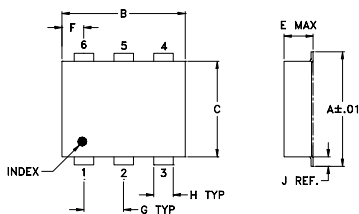
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 0.5W           |
| DC Current            | 30mA           |

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

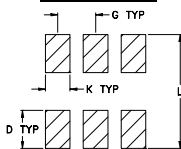
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

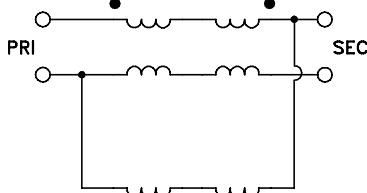


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch)

|      |      |      |      |       |      |      |
|------|------|------|------|-------|------|------|
| 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  |      |      |

### Config. K



### 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.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- wideband, 10 to 1500 MHz
- balanced transmission line
- excellent amplitude & phase unbalance
- aqueous washable
- protected by US Patent 6,133,525

### Applications

- impedance matching
- balanced amplifier
- cellular
- GPS

### Transformer Electrical Specifications

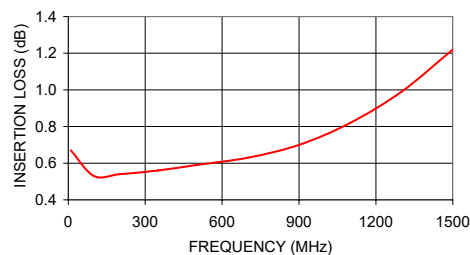
| Ω RATIO | FREQUENCY (MHz) | *INSERTION LOSS over frequency range (MHz) |         |         | PHASE UNBALANCE (Deg.) Typ. |                 | AMPLITUDE UNBALANCE (dB) Typ. |                 |
|---------|-----------------|--|---------|---------|-----------------------------|-----------------|-------------------------------|-----------------|
|         |                 | 3 dB                                       | 2 dB    | 1 dB    | over 1 dB Freq.             | over 2 dB Freq. | over 1 dB Freq.               | over 2 dB Freq. |
| 1       | 10-1500         | —  | 10-1500 | 30-1000 | 3                           | 3               | 0.15                          | 0.3             |

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

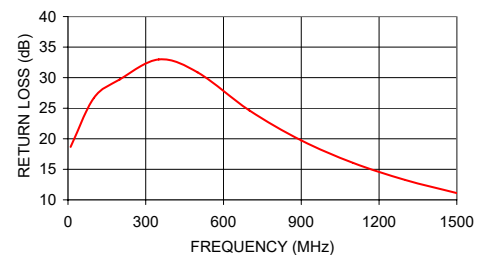
### Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|-----------------|---------------------|--------------------|--------------------------|------------------------|
| 10.00           | 0.67                | 18.66              | 0.10                     | 0.28                   |
| 100.00          | 0.53                | 26.67              | 0.09                     | 0.36                   |
| 200.00          | 0.54                | 29.71              | 0.07                     | 0.89                   |
| 350.00          | 0.56                | 32.98              | 0.04                     | 1.55                   |
| 500.00          | 0.59                | 30.88              | 0.00                     | 1.99                   |
| 700.00          | 0.63                | 24.64              | 0.09                     | 2.37                   |
| 900.00          | 0.70                | 19.73              | 0.20                     | 2.28                   |
| 1100.00         | 0.82                | 16.05              | 0.34                     | 1.72                   |
| 1300.00         | 0.99                | 13.27              | 0.45                     | 0.90                   |
| 1500.00         | 1.22                | 11.11              | 0.58                     | 0.33                   |

ADTL1-15-75+  
INSERTION LOSS



ADTL1-15-75+  
INPUT RETURN LOSS



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            |

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