

# Surface Mount RF Transformer

## TC4-1W-17LN+

50Ω 100 to 500 MHz



CASE STYLE: AT224-1  
PRICE: \$1.19 ea. QTY (100)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Maximum Ratings

|                                  |                |
|----------------------------------|----------------|
| Operating Temperature            | -40°C to 85°C  |
| Storage Temperature              | -55°C to 100°C |
| RF Power                         | 0.25W          |
| DC DWV                           | 500V           |
| DC Current (Primary)             | 0mA            |
| DC Current (Secondary)           | 150mA*         |
| Insulation Resistance Pri to Sec | 1M Ohms        |

\*Applied through center tap, equal current to secondary dot & secondary.

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

### Pin Connections

|               |   |
|---------------|---|
| PRIMARY DOT   | 6 |
| PRIMARY       | 4 |
| SECONDARY DOT | 1 |
| SECONDARY     | 3 |
| SECONDARY CT  | 2 |

### Features

- wideband, 100 to 500 MHz
- good return loss
- plastic base with leads
- aqueous washable

### Applications

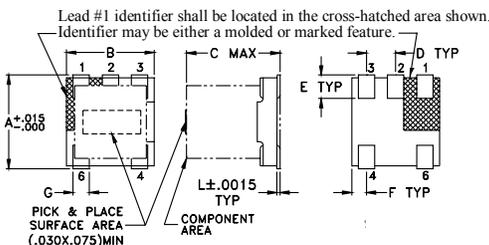
- push-pull amplifier
- impedance matching

### Transformer Electrical Specifications

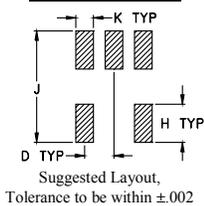
| Ω RATIO<br>(Secondary/<br>Primary) | FREQUENCY<br>(MHz) | INSERTION LOSS*          | PHASE<br>UNBALANCE<br>(Deg.)<br>Typ. | AMPLITUDE<br>UNBALANCE<br>(dB)<br>Max. | RETURN LOSS<br>(dB)<br>Typ. |
|------------------------------------|--------------------|--------------------------|--------------------------------------|--|-----------------------------|
| 4                                  | 100 - 500          | 1 dB<br>MHz<br>100 - 500 | 3                                    | 1.0                                    | 10                          |

\*Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

### Outline Drawing AT224-1



### PCB Land Pattern



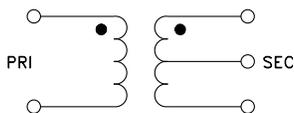
### Outline Dimensions (inch/mm)

| A    | B    | C    | D    | E    | F    |
|------|------|------|------|------|------|
| .150 | .150 | .160 | .050 | .040 | .025 |
| 3.81 | 3.81 | 4.06 | 1.27 | 1.02 | 0.64 |

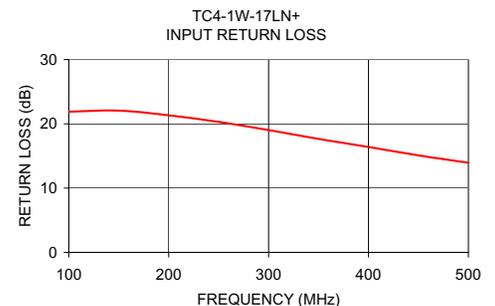
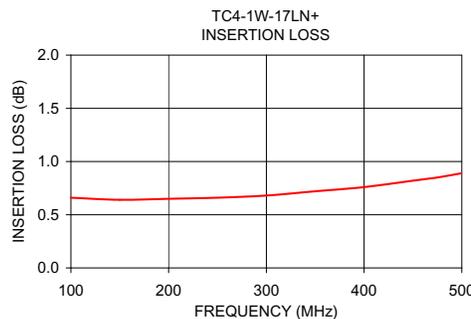
| G    | H    | J    | K    | L    | wt    |
|------|------|------|------|------|-------|
| .028 | .065 | .190 | .030 | .007 | grams |
| 0.71 | 1.65 | 4.83 | 0.76 | 0.18 | 0.15  |

### Config. A



### Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 100.00          | 0.66                | 21.89              |
| 150.00          | 0.64                | 22.06              |
| 200.00          | 0.65                | 21.32              |
| 250.00          | 0.66                | 20.30              |
| 300.00          | 0.68                | 19.03              |
| 350.00          | 0.72                | 17.66              |
| 400.00          | 0.76                | 16.40              |
| 450.00          | 0.82                | 15.09              |
| 475.00          | 0.85                | 14.51              |
| 500.00          | 0.89                | 13.95              |



**Mini-Circuits**  
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IF/RF MICROWAVE COMPONENTS

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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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).

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TC4-1W-17LN+  
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