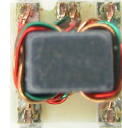


Surface Mount RF Transformer

TC4-1W-7ALN+

50Ω

5 to 500 MHz



CASE STYLE: AT224-1

Maximum Ratings

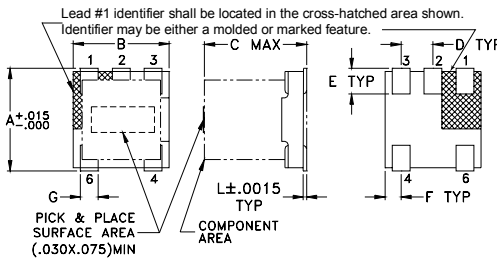
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 150mA |

*Applied through center tap, equal current to secondary dot & secondary.
Permanent damage may occur if any of these limits are exceeded.

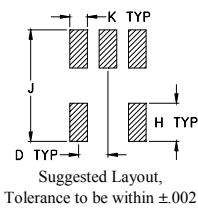
Pin Connections

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

Outline Drawing AT224-1



PCB Land Pattern



Outline Dimensions (inch)

| 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 |

Features

- good return loss
- impedance matching
- plastic base with leads
- aqueous washable

Applications

- wireless infrastructure
- Impedance matching

+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" | 1000, 2000 |

Transformer Electrical Specifications

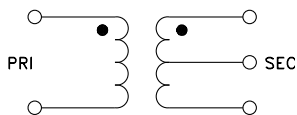
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS | | |
|-----------------------------------|--------------------|----------------|-------------|-------------|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz |
| 4 | 5-500 | 5-500 | 10-300 | 25-200 |

Note: Electrical specifications defined with DC current at secondary and secondary dot equal.
For DC imbalance of up to 7.5mA, the insertion loss degrades less than 1 dB.

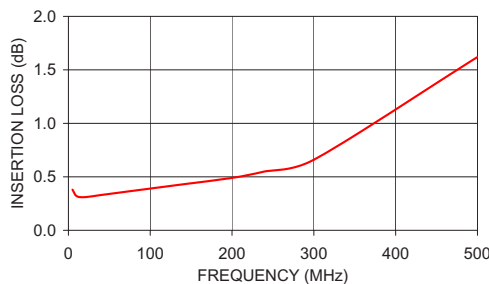
Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|--------------------|---------------------------|--------------------------|
| 5.0 | 0.38 | 28.17 |
| 10.0 | 0.32 | 31.57 |
| 20.0 | 0.31 | 34.24 |
| 40.0 | 0.33 | 35.27 |
| 80.0 | 0.37 | 33.01 |
| 140.0 | 0.43 | 28.01 |
| 200.0 | 0.49 | 23.35 |
| 300.0 | 0.66 | 17.23 |
| 400.0 | 1.02 | 12.75 |
| 500.0 | 1.62 | 9.57 |

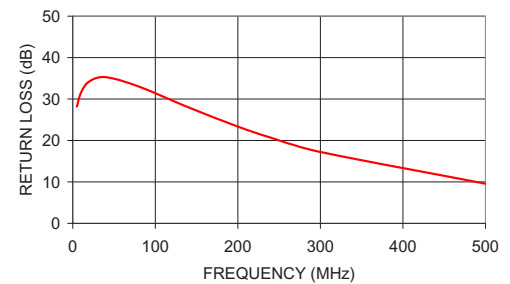
Config. A



TC4-1W-7ALN+
INSERTION LOSS



TC4-1W-7ALN+
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.
- 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

