

Surface Mount RF Transformer

50Ω 0.4 to 500 MHz

Maximum Ratings

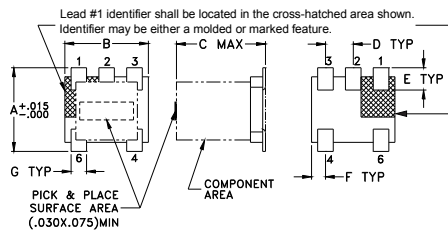
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

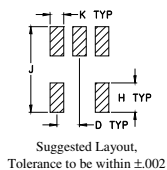
Pin Connections

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

Outline Drawing AT224-1A



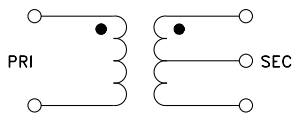
PCB Land Pattern



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 | wt | |
| .028 | .065 | .190 | .030 | grams | |
| 0.71 | 1.65 | 4.83 | 0.76 | 0.15 | |

Config. A



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

Features

- usable over 0.4-500 MHz
- excellent amplitude unbalance, 0.1 dB typ. and phase unbalance, 2 deg typ. in 1 dB bandwidth
- good return loss
- plastic base with leads
- aqueous washable

Applications

- VHF/UHF receivers/transmitters
- push-pull amplifiers

TC1-1T+



CASE STYLE: AT224-1A

***Addition of Top hat™ feature Benefits**

- Allows faster pick-and-place
- Enables visual identification marking

+RoHS Compliant

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

| Reel Size | Devices/Reel |
|-----------|-----------------------|
| 7" | 20, 50, 100, 200, 500 |
| 13" | 1000, 2000 |

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 | 0.4-500 | 0.4-500 | 0.5-300 | 1-100 | 2 | 5 | 0.1 | 0.6 |

* Insertion Loss is referenced to mid-band loss, 0.35 dB typ.

Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|-----------------|---------------------|--------------------|--------------------------|------------------------|
| 0.30 | 0.88 | 15.46 | 0.06 | 0.03 |
| 1.00 | 0.57 | 21.01 | 0.04 | 0.05 |
| 5.00 | 0.33 | 27.35 | 0.02 | 0.01 |
| 10.00 | 0.32 | 28.55 | 0.02 | 0.15 |
| 50.00 | 0.40 | 23.46 | 0.02 | 0.63 |
| 100.00 | 0.51 | 18.34 | 0.06 | 1.24 |
| 200.00 | 0.78 | 13.01 | 0.21 | 2.57 |
| 300.00 | 1.10 | 10.06 | 0.47 | 3.99 |
| 400.00 | 1.46 | 8.16 | 0.82 | 5.66 |
| 500.00 | 1.84 | 6.90 | 1.26 | 7.50 |

