

Surface Mount RF Transformer

50Ω 20 to 300 MHz

TC16-1TX+
Upgraded Version*

TC16-1T+



CASE STYLE: AT224-1

*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

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -20°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 | 3 |
| PRIMARY | 1 |
| SECONDARY DOT | 4 |
| SECONDARY | 6 |
| SECONDARY CT | 2 |

Features

- good return loss, 15 dB typ. in 1 dB bandwidth
- plastic base with leads
- aqueous washable

Applications

- catv

Transformer Electrical Specifications

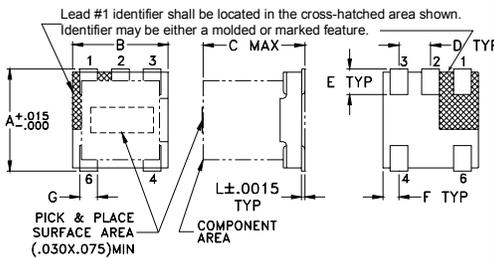
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | | | PHASE UNBALANCE (Deg.) Typ. | | AMPLITUDE UNBALANCE (dB) Typ. | |
|-----------------------------------|--------------------|-----------------|-------------|-------------|--------------------------------------|-------------------|--|-------------------|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz | 1 dB bandwidth | 2 dB bandwidth | 1 dB bandwidth | 2 dB bandwidth |
| 16 | 20-300 | 20-300 | 30-200 | 50-150 | 4 | 5 | 0.3 | 0.5 |

* Insertion Loss is referenced to mid-band loss, 1 dB typ.

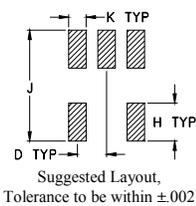
**Available Tape and Reel
at no extra cost**

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

Outline Drawing AT224-1



PCB Land Pattern



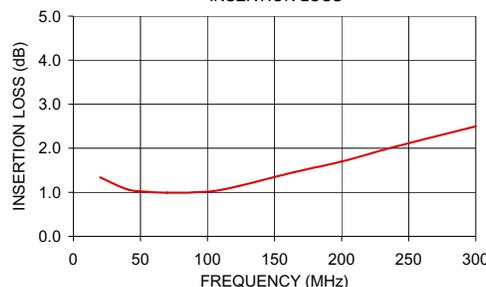
Outline Dimensions (inch/mm)

| 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 |

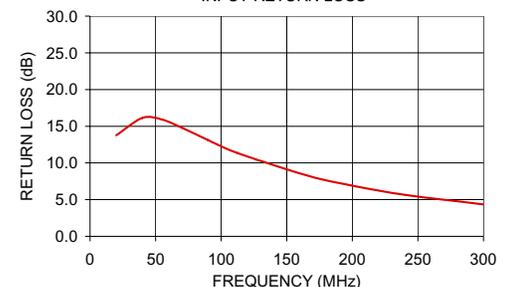
Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 20.00 | 1.34 | 13.77 |
| 40.00 | 1.07 | 16.14 |
| 55.00 | 1.01 | 15.90 |
| 70.00 | 0.99 | 14.80 |
| 90.00 | 1.00 | 13.12 |
| 112.50 | 1.07 | 11.35 |
| 165.00 | 1.46 | 8.32 |
| 200.00 | 1.70 | 6.90 |
| 240.60 | 2.04 | 5.63 |
| 300.00 | 2.50 | 4.34 |

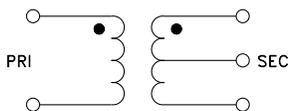
TC16-1T+
INSERTION LOSS



TC16-1T+
INPUT RETURN LOSS



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

