

Surface Mount  **RF Transformer**

50Ω 0.5 to 2200 MHz

TC1.5-1X+



Generic photo used for illustration purposes only

CASE STYLE: AT1521

+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 |

Features

- wideband, 0.5-2200 MHz,
- excellent return loss
- terminations, solder plated with nickel barrier for solderability & excellent each resistance
- autotransformer
- plastic base with leads
- aqueous washable

Applications

- impedance matching

Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|--|-----------------|------|------|------|------|
| Impedance Ratio (<i>secondary/primary</i>) | | | 1.5 | | Ohm |
| Frequency Range | | 0.5 | | 2200 | MHz |
| Insertion Loss* | 0.5 - 2200 | | 3.0 | | dB |
| | 1 - 2000 | | 2.0 | | |
| | 2 - 1100 | | 1.0 | | |

* Insertion Loss is referenced to mid-band loss, .3 dB typ.

Maximum Ratings

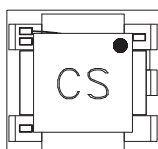
| Parameter | Ratings |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

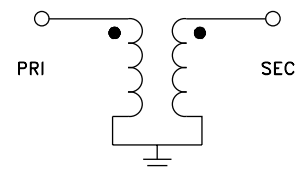
Pin Connections

| Function | Pin Number |
|---------------|------------|
| PRIMARY DOT | 6 |
| PRIMARY | 4 |
| SECONDARY DOT | 1 |
| SECONDARY | 4 |
| NOT USED | 2,3 |

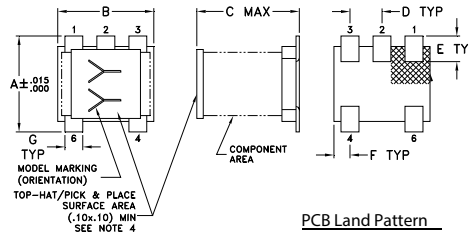
Product Marking



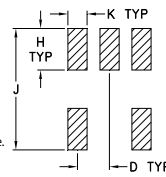
Config. D



Outline Drawing



PCB Land Pattern



Note:

1. Case Material Plastic
2. Termination Finish: Tin plate over Nickel plate.
3. Lead #1 identifier shall be located in the cross-hatched area shown, on bottom view. Identifier may be either a molded or marked feature.
4. Top-Hat total thickness: .013 inches max.

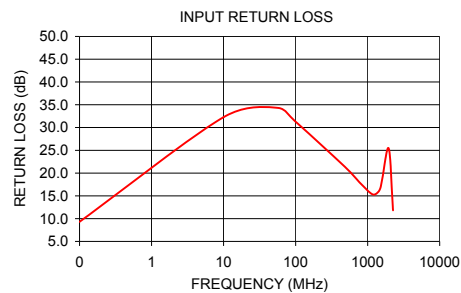
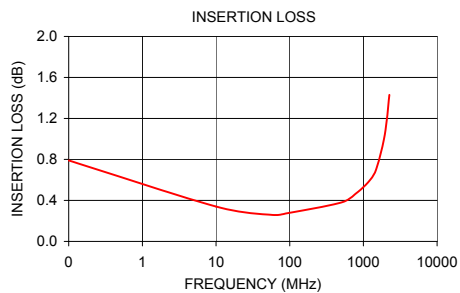
Suggested Layout,
Tolerance to be within $\pm .002$

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 | |

Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 0.10 | 0.79 | 9.30 |
| 10.00 | 0.34 | 32.27 |
| 55.00 | 0.26 | 34.33 |
| 100.00 | 0.28 | 31.27 |
| 500.00 | 0.38 | 21.15 |
| 800.00 | 0.47 | 17.71 |
| 1200.00 | 0.59 | 15.28 |
| 1500.00 | 0.71 | 16.70 |
| 1950.00 | 1.04 | 25.47 |
| 2250.00 | 1.43 | 11.82 |



Additional Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. 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