

# Surface Mount RF Transformer

50Ω 20 to 300 MHz

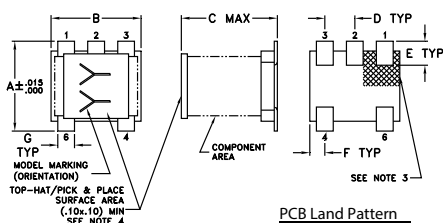
## Maximum Ratings

|   |                |
|---|----------------|
| 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. |                |

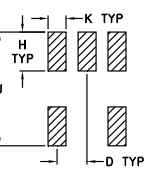
## Pin Connections

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

## Outline Drawing AT1521



### PCB Land Pattern

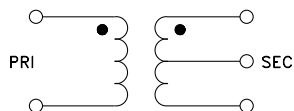


Note:  
1. Case Material Plastic.  
2. Termination Finish: Tin plate over Nickel plate.  
3. Lead #1 identifier shall be located in the cross-hatched area shown, on bottom view. Identifier may be either a molded or marked feature.  
4. Top-Hat total thickness: 0.13 inches max.

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

## Config. A



## Features

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

## Applications

- catv

TC16-1TX+



CASE STYLE: AT1521

## +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            |

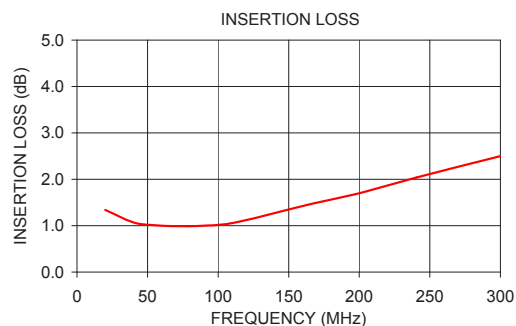
## Transformer Electrical Specifications

| Ω<br>RATIO<br>(Secondary/Primary) | FREQUENCY<br>(MHz) | INSERTION LOSS* |             |             | PHASE<br>UNBALANCE<br>(Deg.)<br>Typ. |                   | AMPLITUDE<br>UNBALANCE<br>(dB)<br>Typ. |                   |
|-----------------------------------|--------------------|-----------------|-------------|-------------|--------------------------------------|-------------------|--|-------------------|
|                                   |                    | 3 dB<br>MHz     | 2 dB<br>MHz | 1 dB<br>MHz | 1 dB<br>bandwidth                    | 2 dB<br>bandwidth | 1 dB<br>bandwidth                      | 2 dB<br>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.

## Typical Performance Data

| FREQUENCY<br>(MHz) | INSERTION<br>LOSS<br>(dB) | INPUT<br>R. LOSS<br>(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                     |



## 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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