

# Surface Mount RF Transformer

75Ω

50 to 1000 MHz

## JTX-2-10T+ JTX-2-10T



Generic photo used for illustration purposes only

CASE STYLE: BH292

**+RoHS Compliant**

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

### Maximum Ratings

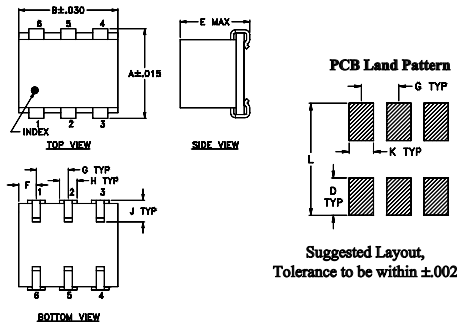
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 0.25W          |
| DC Current            | 30mA           |

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

### Pin Connections

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

### Outline Drawing



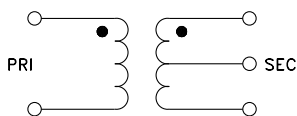
### Outline Dimensions (inch)

| A    | B    | C  | D    | E    | F    | G    |
|------|------|----|------|------|------|------|
| .280 | .310 | -- | .100 | .225 | .055 | .100 |
| 7.11 | 7.87 | -- | 2.54 | 5.72 | 1.40 | 2.54 |

| H    | J    | K    | L    | wt    |
|------|------|------|------|-------|
| .047 | .065 | .065 | .300 | grams |
| 1.19 | 1.65 | 1.65 | 7.62 | 0.45  |

Demo Board MCL P/N: TB-169

### Config. A



### Features

- excellent return loss, 26 dB typ. in 1 dB bandwidth
- excellent amplitude unbalance, 0.4 dB typ. and phase unbalance, 3 deg. typ. in 1 dB bandwidth
- excellent insertion loss flatness, ±0.25 dB

### Applications

- impedance matching
- balanced amplifiers

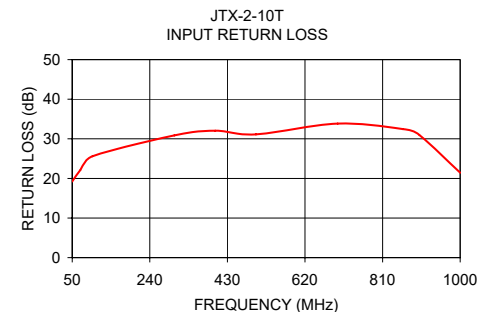
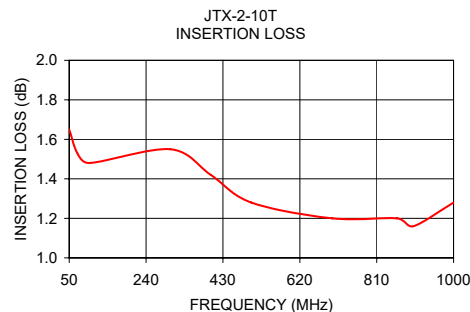
### Transformer Electrical Specifications

| 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 |
| 2                                 | 50-1000            | —               | —           | 50-1000     | 3                                    | —                 | 0.4                                    | —                 |

\* Insertion Loss is referenced to mid-band loss, 1.5 dB typ.

### Typical Performance Data

| FREQUENCY<br>(MHz) | INSERTION<br>LOSS<br>(dB) | INPUT<br>R. LOSS<br>(dB) | AMPLITUDE<br>UNBALANCE<br>(dB) | PHASE<br>UNBALANCE<br>(Deg.) |
|--------------------|---------------------------|--------------------------|--------------------------------|------------------------------|
| 50.00              | 1.65                      | 19.25                    | 0.03                           | 0.18                         |
| 70.00              | 1.53                      | 22.13                    | 0.06                           | 0.29                         |
| 100.00             | 1.48                      | 25.62                    | 0.10                           | 0.66                         |
| 300.00             | 1.55                      | 30.86                    | 0.02                           | 2.40                         |
| 400.00             | 1.42                      | 32.04                    | 0.10                           | 2.27                         |
| 500.00             | 1.28                      | 31.12                    | 0.23                           | 2.01                         |
| 700.00             | 1.20                      | 33.85                    | 0.37                           | 0.66                         |
| 860.00             | 1.20                      | 32.46                    | 0.36                           | 0.87                         |
| 900.00             | 1.16                      | 30.98                    | 0.34                           | 1.40                         |
| 1000.00            | 1.28                      | 21.44                    | 0.19                           | 2.47                         |



### 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.
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