*Surface Mount*

# RF Transformer

## TCM3-1T+

50Ω 2 to 500 MHz

CASE STYLE: DB714
PRICE: $2.09 ea. QTY (20)
$1.09 ea. QTY (100)

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

### Features

- excellent amplitude unbalance. 0.1 dB typ.
- excellent phase unbalance, 2 deg. typ. in 1 dB bandwidth
- plastic base with solder plated leads
- aqueous washable

### Applications

- impedance matching

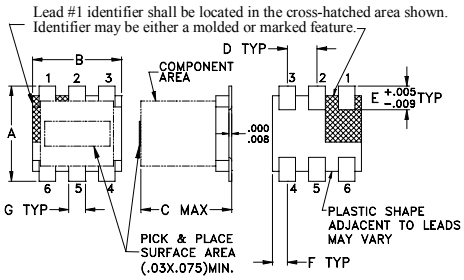
***+RoHS Compliant***

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

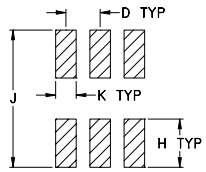
*Available Tape and Reel at no extra cost*

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

### Outline Drawing




**PCB Land Pattern**



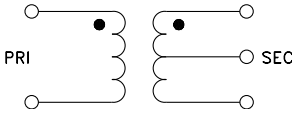

Suggested Layout,
Tolerance to be within ±.002

### Outline Dimensions (inch / mm)

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| .160 | .150 | .160 | .050 | .040 | .025 |
| 4.06 | 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




### Transformer Electrical Specifications

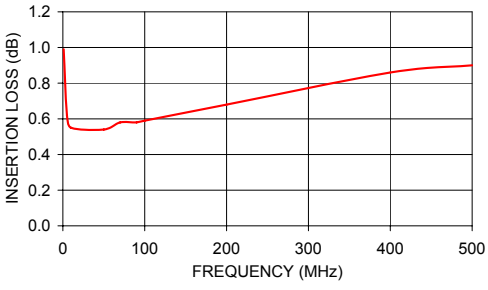
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | |
|---|---|---|---|
| | | 2 dB MHz | 1 dB MHz |
| 3 | 2-500 | 2-500 | 5-300 |

* Insertion Loss is referenced to mid-band loss, 0.5 dB typ.

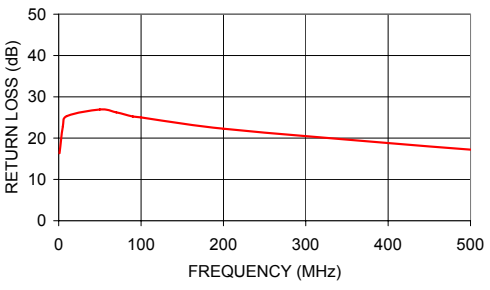
### Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|---|---|---|
| 1.00 | 0.99 | 16.34 |
| 5.00 | 0.62 | 22.80 |
| 10.00 | 0.55 | 25.33 |
| 50.00 | 0.54 | 26.93 |
| 70.00 | 0.58 | 26.24 |
| 90.00 | 0.58 | 25.23 |
| 100.00 | 0.59 | 25.02 |
| 200.00 | 0.68 | 22.28 |
| 400.00 | 0.86 | 18.81 |
| 500.00 | 0.90 | 17.21 |

INSERTION LOSS




INPUT RETURN LOSS




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