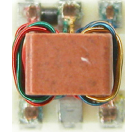


# Surface Mount RF Transformer

50Ω 500 to 2500 MHz

## TCM4-25+



CASE STYLE: DB714

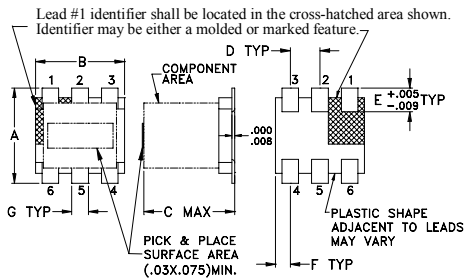
### Maximum Ratings

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

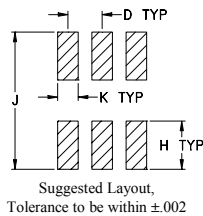
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

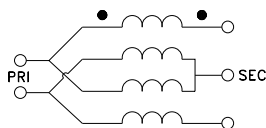


### Outline Dimensions (inch/mm)

|      |      |      |      |      |       |
|------|------|------|------|------|-------|
| 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  |

Demo Board MCL P/N: TB-145

### Config. H



### 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)

### Features

- wide bandwidth, 500 to 2500 MHz
- balanced transmission line with secondary center tap
- good return loss
- plastic base with solder plated leads
- aqueous washable

### Applications

- PCS
- cellular

**+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            |

### Transformer Electrical Specifications

| Ω RATIO<br>(Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* |          |          |
|--------------------------------|-----------------|-----------------|----------|----------|
|                                |                 | 3 dB MHz        | 2 dB MHz | 1 dB MHz |
| 4                              | 500-2500        | 500-2500        | 700-1500 | 750-1200 |

\* Insertion Loss is referenced to mid-band loss, 0.2 dB typ.

### Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 400.00          | 1.66                | 6.09               |
| 500.00          | 1.07                | 8.37               |
| 600.00          | 0.74                | 10.92              |
| 700.00          | 0.54                | 13.81              |
| 800.00          | 0.42                | 17.29              |
| 900.00          | 0.38                | 21.02              |
| 1000.00         | 0.37                | 22.67              |
| 1100.00         | 0.40                | 20.79              |
| 1200.00         | 0.43                | 18.40              |
| 1300.00         | 0.48                | 16.41              |
| 1400.00         | 0.53                | 14.94              |
| 1500.00         | 0.59                | 13.79              |
| 1600.00         | 0.64                | 12.90              |
| 1800.00         | 0.74                | 11.65              |
| 2000.00         | 0.84                | 10.75              |
| 2200.00         | 0.96                | 10.03              |
| 2400.00         | 1.08                | 9.35               |
| 2500.00         | 1.14                | 8.96               |
| 2800.00         | 1.38                | 7.82               |
| 3000.00         | 1.59                | 7.06               |

