

Surface Mount RF Transformer

50Ω 1.5 to 500 MHz

TCM1-1X+
Upgraded Version*

- *Addition of Top-hat® feature
- Benefits
 - Allows faster pick-and-place
 - Enables visual identification marking

TCM1-1+



Generic photo used for illustration purposes only

CASE STYLE: DB714

+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

- excellent amplitude unbalance. 0.2 dB typ.
- excellent phase unbalance, 4 deg. typ. in 1 dB bandwidth
- plastic base with solder plated leads
- aqueous washable

Applications

- impedance matching
- balanced to unbalanced transformation
- push-pull amplifier

Electrical Specifications

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------|-----------------|------|------|------|------|
| Impedance Ratio | | | 1 | | Ohm |
| Frequency Range | | 1.5 | | 500 | MHz |
| Insertion Loss* | 1.5 - 500 | | 3 | | dB |
| | 2.5 - 400 | | 2 | | |
| | 5 - 350 | | 1 | | |

* Insertion Loss is referenced to mid-band loss, 0.9 dB typ.

Maximum Ratings

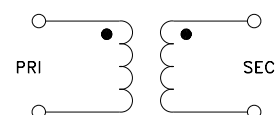
| Parameter | Ratings |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

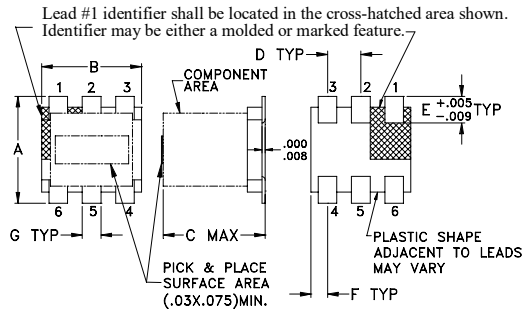
Pin Connections

| Function | Pin Number |
|---------------|------------|
| PRIMARY DOT | 6 |
| PRIMARY | 4 |
| SECONDARY DOT | 1 |
| SECONDARY | 3 |
| NOT USED | 2,5 |

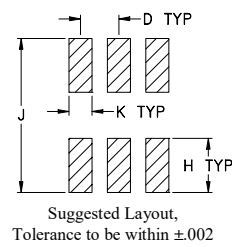
Config. C



Outline Drawing



PCB Land Pattern

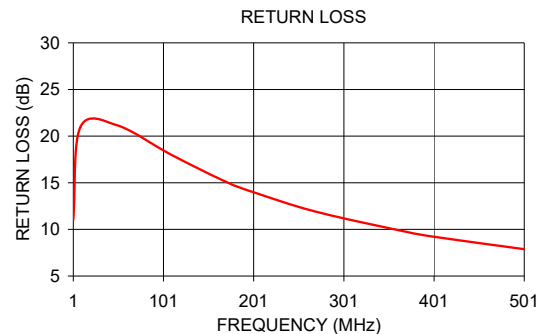
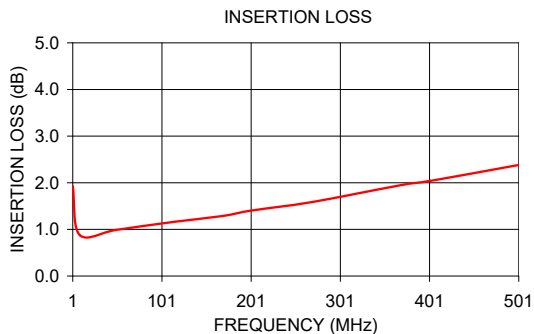


Outline Dimensions (inch/mm)

| 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 | |

Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 1.00 | 1.93 | 11.00 |
| 8.80 | 0.88 | 20.96 |
| 50.00 | 0.99 | 21.15 |
| 110.00 | 1.15 | 17.98 |
| 170.00 | 1.29 | 15.11 |
| 200.00 | 1.40 | 14.01 |
| 270.00 | 1.59 | 11.90 |
| 369.00 | 1.95 | 9.77 |
| 402.00 | 2.04 | 9.20 |
| 501.00 | 2.38 | 7.88 |



Additional 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

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