

Surface Mount RF Transformer

50Ω 2 to 500 MHz

TCM3-1T+ TCM3-1T



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

+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

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

Maximum Ratings

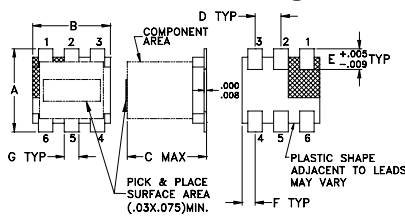
| | |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

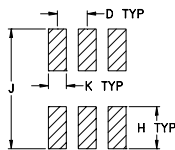
Pin Connections

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

Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±0.02

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 |

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

Transformer Electrical Specifications

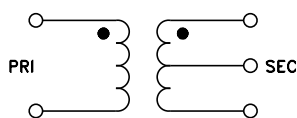
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | |
|-----------------------------------|--------------------|-----------------|-------------|
| | | 2 dB MHz | 1 dB MHz |
| 3 | 2-500 | 2-500 | 5-300 |

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

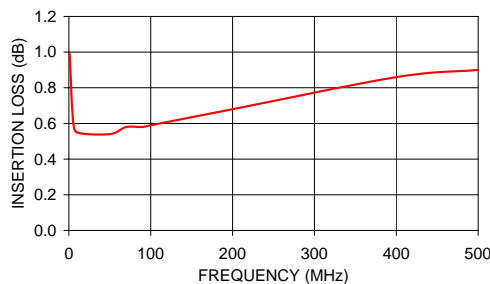
Typical Performance Data

| 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 |

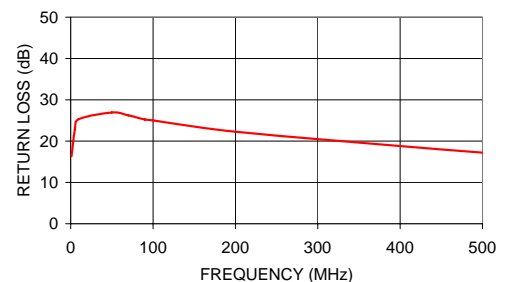
Config. A



TCM3-1T
INSERTION LOSS



TCM3-1T
INPUT RETURN LOSS



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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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