

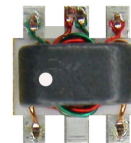
# Surface Mount RF Transformer

50Ω

3 to 800 MHz

TCM4-1W+

TCM4-1WX+  
Upgraded Version\*



CASE STYLE: DB714

## Maximum Ratings

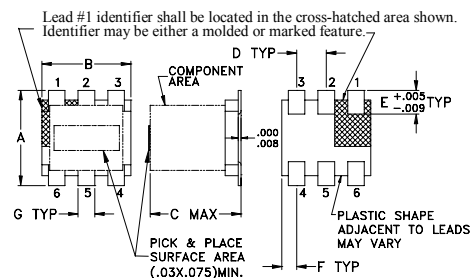
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 0.25W          |
| DC Current            | 30mA           |

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

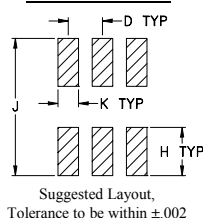
## Pin Connections

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

## Outline Drawing



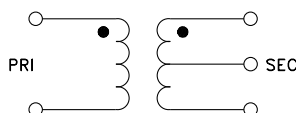
## PCB Land Pattern



## 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



## Features

- wide bandwidth. 3 to 800 MHz
- good return loss
- plastic base with solder plated leads
- aqueous washable

## Applications

- CATV
- VHF/UHF
- balanced amplifier
- impedance matching

## Transformer Electrical Specifications

| Ω<br>RATIO<br>(Secondary/Primary) | FREQUENCY<br>(MHz) | INSERTION LOSS* |             |             |
|-----------------------------------|--------------------|-----------------|-------------|-------------|
|                                   |                    | 3 dB<br>MHz     | 2 dB<br>MHz | 1 dB<br>MHz |
| 4                                 | 3-800              | 3-800           | 5-400       | 10-100      |

\* Insertion Loss is referenced to mid-band loss, 0.8 dB typ.

\*Addition of Top hat™ feature

### Benefits

- Allows faster pick-and-place
- Enables visual identification marking

### +RoHS Compliant

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



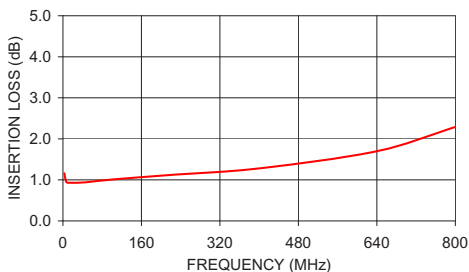
Available Tape and Reel  
at no extra cost

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

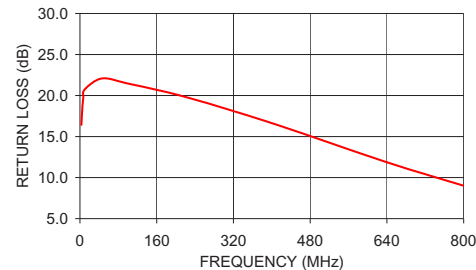
## Typical Performance Data

| FREQUENCY<br>(MHz) | INSERTION<br>LOSS<br>(dB) | INPUT<br>R. LOSS<br>(dB) |
|--------------------|---------------------------|--------------------------|
| 3.00               | 1.16                      | 16.43                    |
| 5.00               | 1.02                      | 18.47                    |
| 7.00               | 0.95                      | 19.69                    |
| 10.00              | 0.93                      | 20.74                    |
| 46.00              | 0.94                      | 22.08                    |
| 100.00             | 1.01                      | 21.46                    |
| 220.00             | 1.12                      | 19.83                    |
| 400.00             | 1.28                      | 16.64                    |
| 640.00             | 1.70                      | 11.87                    |
| 800.00             | 2.29                      | 9.01                     |

INSERTION LOSS



RETURN LOSS



## 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)



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REV. F  
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