

## Non-Catalog Model

# RF Transformer

Impedance Ratio: 16:1

## T16-1T-X65

### Important Note

This is a non-catalog model and can be manufactured on specific request.  
Pricing and delivery information can be supplied upon request.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE: X65

### ELECTRICAL SPECIFICATIONS 50Ω @+25°C P<sub>IN</sub>=0 dBm

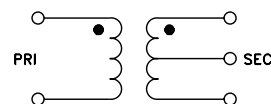
| Parameter       |               | Min. | Typ. | Max. | Units |
|-----------------|---------------|------|------|------|-------|
| Frequency       |               | 0.3  |      | 120  | MHz   |
| Insertion Loss* | 3dB bandwidth | 0.3  |      | 120  | MHz   |
|                 | 2dB bandwidth | 0.7  |      | 80   | MHz   |
|                 | 1dB bandwidth | 5    |      | 20   | MHz   |

\*Referenced to midband loss .9dB typ.

### MAXIMUM RATINGS

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 250mW          |
| DC Current            | 30mA           |

### Configuration A



### PIN CONNECTIONS

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



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RF/IF MICROWAVE COMPONENTS

REV. OR  
M114099  
T16-1T-X65  
080228

# RF Transformer

## T16-1T

### Typical Performance Data

| FREQUENCY<br>(MHz) | INSERTION LOSS<br>(dB) | RETURN LOSS<br>(dB) |
|--------------------|------------------------|---------------------|
| 0.30               | 1.52                   | 7.57                |
| 0.40               | 1.30                   | 8.82                |
| 0.50               | 1.19                   | 9.76                |
| 0.60               | 1.13                   | 10.47               |
| 0.70               | 1.09                   | 11.06               |
| 0.80               | 1.05                   | 11.57               |
| 0.90               | 1.02                   | 12.03               |
| 1.00               | 1.00                   | 12.43               |
| 2.00               | 0.81                   | 15.38               |
| 4.00               | 0.72                   | 18.43               |
| 5.00               | 0.71                   | 19.30               |
| 10.00              | 0.71                   | 20.53               |
| 15.00              | 0.73                   | 19.63               |
| 20.00              | 0.75                   | 18.25               |
| 30.00              | 0.80                   | 15.67               |
| 40.00              | 0.84                   | 13.62               |
| 50.00              | 0.87                   | 11.99               |
| 60.00              | 0.89                   | 10.66               |
| 70.00              | 0.93                   | 9.53                |
| 80.00              | 0.99                   | 8.57                |
| 90.00              | 1.07                   | 7.76                |
| 100.00             | 1.17                   | 7.04                |
| 110.00             | 1.29                   | 6.44                |
| 120.00             | 1.41                   | 5.90                |



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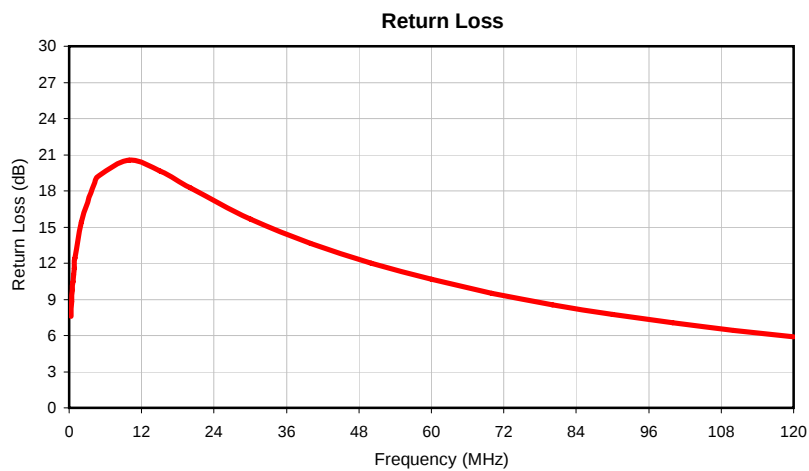
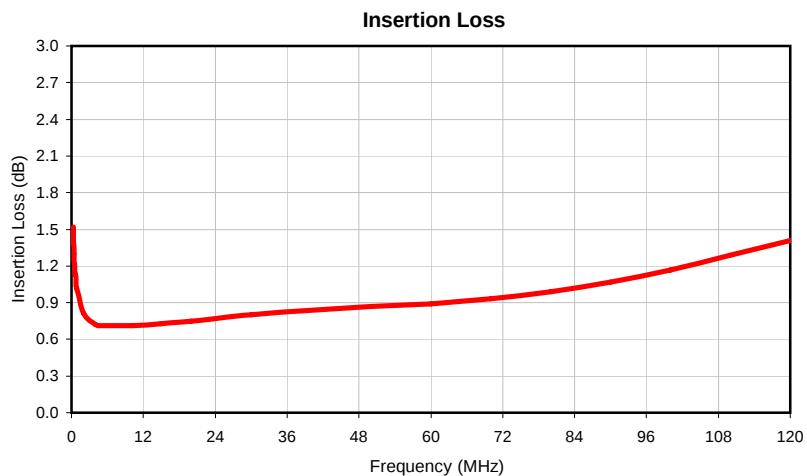
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## Typical Performance Data



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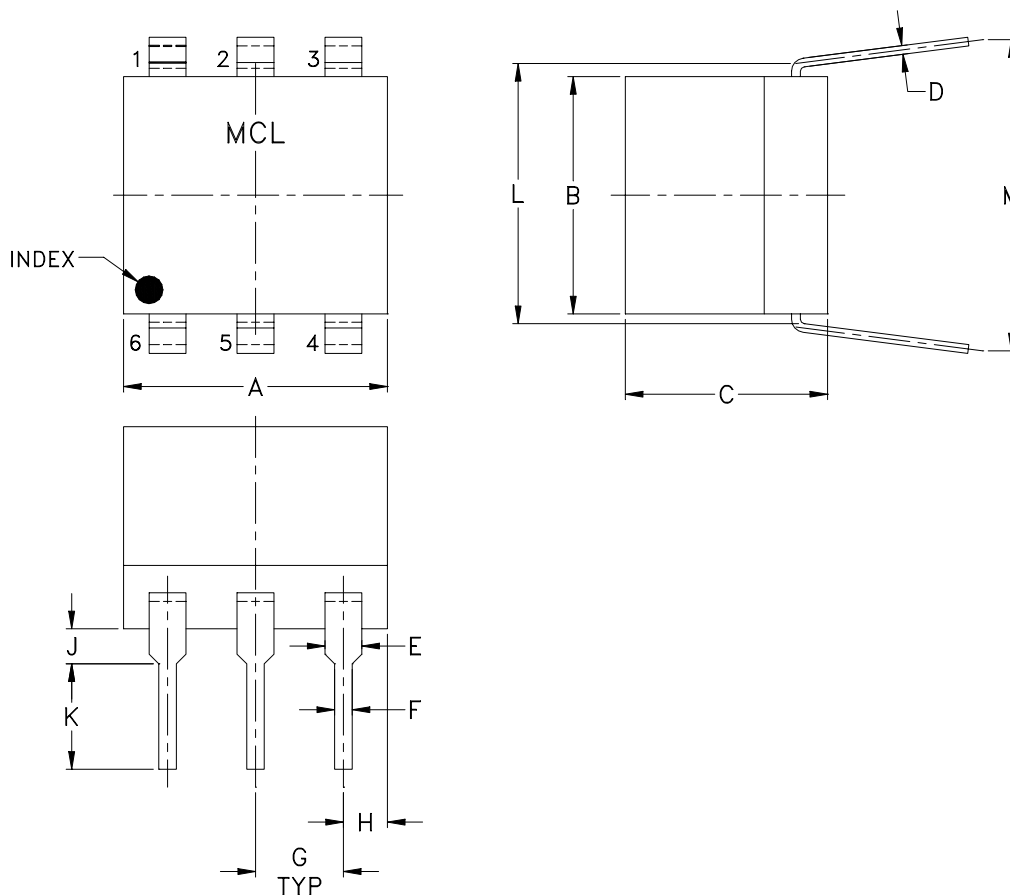
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## Outline Dimensions

**X65**



| CASE # | A             | B             | C             | D              | E              | F              | G              | H             | J             | K             | L              | M             | WT. GRAM |
|--------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|---------------|----------|
| X65    | .30<br>(7.62) | .27<br>(6.86) | .23<br>(5.84) | .010<br>(0.25) | .042<br>(1.07) | .020<br>(0.51) | .100<br>(2.54) | .05<br>(1.27) | .04<br>(1.02) | .11<br>(2.79) | .300<br>(7.62) | .35<br>(8.89) | .50      |

Dimensions are in inches (mm)

### Notes:

- Case material: Plastic.  
Termination finish: For RoHS Case Styles: Tin Plate over Nickel Plate.  
For RoHS-5 Case Styles: Tin-Lead Plate.



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Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification                  | Test/Inspection Condition                                                                                                                                       | Reference/Spec                                        |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Operating Temperature          | -20° to 85°C<br>Ambient Environment                                                                                                                             | Individual Model Data Sheet                           |
| Storage Temperature            | -55° to 100° C<br>Ambient Environment                                                                                                                           | Individual Model Data Sheet                           |
| Thermal Shock                  | -55° to 100°C, 100 cycles                                                                                                                                       | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Solder Reflow Heat             | Sn-Pb Eutetic Process: 225°C peak<br>Pb-Free Process 245° - 250°C peak                                                                                          | J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1         |
| Solderability                  | 10X Magnification                                                                                                                                               | J-STD-002, Para 4.2.5, Test S, 95% Coverage           |
| Vibration (High Frequency)     | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)                                                                             | MIL-STD-202, Method 204, Condition D                  |
| Mechanical Shock               | 50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes                                                                                               | MIL-STD-202, Method 213, Condition A                  |
| Lead Integrity                 | 2 Pound Pull, perpendicular to edge of unit                                                                                                                     | MIL-STD-202, Method 211, Condition A                  |
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C;<br>distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215                               |