

Surface Mount RF Transformer

50Ω 0.5 to 550 MHz

TC1.5-52TG2+



Generic photo used for illustration purposes only

CASE STYLE: AT224-3

+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

- suitable for tin/lead and RoHS solder systems
- low insertion loss, 0.4 dB typ. in 1 dB Bandwidth
- excellent return loss, 25 dB typ. in 1 dB Bandwidth
- plastic base with leads
- aqueous washable

Applications

- impedance matching, 50 to 75 ohms
- balanced amplifier

Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-------------------------------------|-----------------|------|------|------|------|
| Impedance Ratio (Secondary/Primary) | | | 1.5 | | Ohm |
| Frequency Range | | 0.5 | | 550 | MHz |
| Insertion Loss* | 0.5-550 | | 3 | | dB |
| | 1-350 | | 2 | | |
| | 2-200 | | 1 | | |

*Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

Maximum Ratings

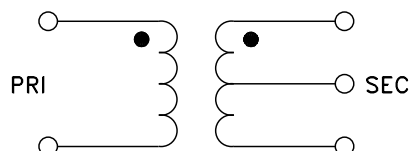
| Parameter | Ratings |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

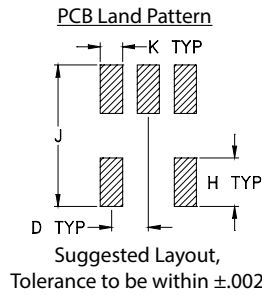
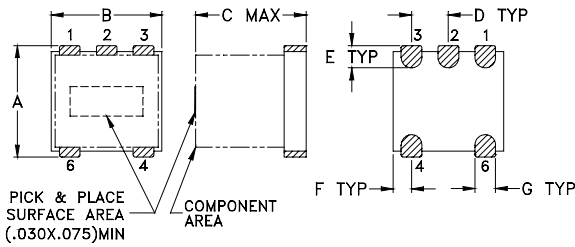
Pin Connections

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

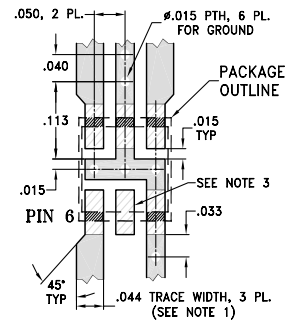
Config. A



Outline Drawing



Demo Board MCL P/N: TB-145
Suggested PCB Layout (PL-244)



Outline Dimensions (inch)

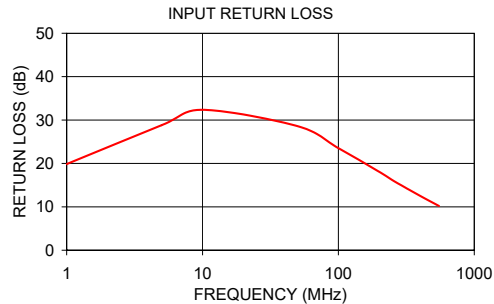
| A | B | C | D | E | F |
|------|------|------|------|-------|------|
| .150 | .150 | .150 | .050 | .030 | .025 |
| 3.81 | 3.81 | 3.81 | 1.27 | 0.76 | 0.64 |
| G | H | J | K | wt | |
| .028 | .065 | .190 | .030 | grams | |
| 0.71 | 1.65 | 4.83 | 0.76 | 0.10 | |

NOTES:

- THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.
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Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) |
|-----------------|---------------------|--------------------|
| 0.50 | 0.82 | 15.72 |
| 1.00 | 0.61 | 19.84 |
| 5.00 | 0.33 | 28.81 |
| 10.00 | 0.29 | 32.35 |
| 50.00 | 0.35 | 28.60 |
| 100.00 | 0.41 | 23.52 |
| 200.00 | 0.53 | 18.07 |
| 250.00 | 0.61 | 16.13 |
| 300.00 | 0.70 | 14.71 |
| 400.00 | 0.90 | 12.52 |
| 550.00 | 1.28 | 10.19 |



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.
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