

Surface Mount RF Transformer

50Ω 0.25 to 300 MHz

ADTT1.5-1+



Generic photo used for illustration purposes only

CASE STYLE: CD636

+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 |
| 13" | 500, 1000 |

Maximum Ratings

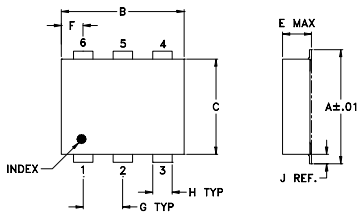
| | |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

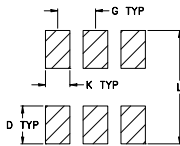
Pin Connections

| | |
|---------------|---|
| PRIMARY DOT | 3 |
| PRIMARY | 1 |
| PRIMARY CT | 2 |
| SECONDARY DOT | 4 |
| SECONDARY | 6 |
| SECONDARY CT | 5 |

Outline Drawing



PCB Land Pattern



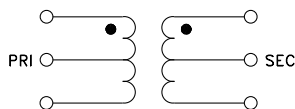
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch)

| | | | | | | |
|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G |
| .272 | .310 | .220 | .100 | .162 | .055 | .100 |
| 6.91 | 7.87 | 5.59 | 2.54 | 4.11 | 1.40 | 2.54 |
| H | J | K | L | | | wt |
| .030 | .026 | .065 | .300 | | | grams |
| 0.76 | 0.66 | 1.65 | 7.62 | | | 0.25 |

Demo Board MCL P/N: TB-211

Config. B



Features

- excellent return loss, 15 dB in 1 dB bandwidth
- excellent amplitude unbalance, 0.15 dB typ. and phase unbalance, 1 deg. typ. in 1 dB bandwidth
- aqueous washable
- protected under U.S. Patent 6,133,525

Applications

- impedance matching
- balanced amplifier

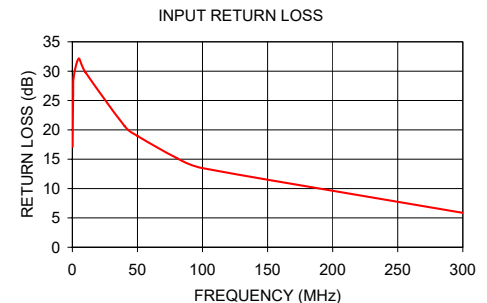
Transformer Electrical Specifications

| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | | | PHASE UNBALANCE (Deg.) Typ. | | AMPLITUDE UNBALANCE (dB) Typ. | |
|-----------------------------------|--------------------|-----------------|-------------|-------------|-----------------------------------|-------------------|-------------------------------------|-------------------|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz | 1 dB bandwidth | 2 dB bandwidth | 1 dB bandwidth | 2 dB bandwidth |
| 1.5 | 0.25-300 | 0.25-300 | 0.3-175 | 0.5-100 | 1 | 2 | 0.15 | 0.3 |

* Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|--------------------|---------------------------|--------------------------|--------------------------------|------------------------------|
| 0.20 | 0.29 | 17.11 | 0.07 | 0.08 |
| 0.60 | 0.30 | 26.04 | 0.10 | 0.00 |
| 1.00 | 0.29 | 29.04 | 0.07 | 0.04 |
| 5.00 | 0.23 | 32.13 | 0.07 | 0.04 |
| 10.00 | 0.23 | 29.83 | 0.08 | 0.19 |
| 40.00 | 0.33 | 20.68 | 0.08 | 0.72 |
| 50.00 | 0.38 | 18.96 | 0.11 | 0.94 |
| 80.00 | 0.47 | 15.23 | 0.18 | 1.45 |
| 100.00 | 0.53 | 13.49 | 0.25 | 1.81 |
| 300.00 | 1.87 | 5.87 | 1.59 | 6.47 |



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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