

Surface Mount RF Transformer

50Ω 1.5 to 160 MHz

ADT16-1T+ ADT16-1T



Maximum Ratings

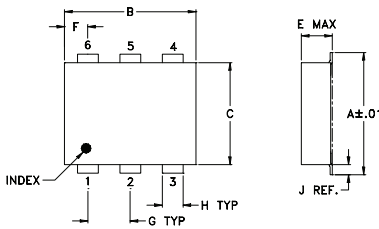
| | |
|-----------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 0.25W |
| DC Current | 30mA |

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

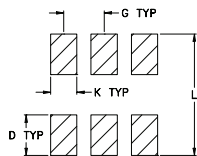
Pin Connections

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

Outline Drawing



PCB Land Pattern



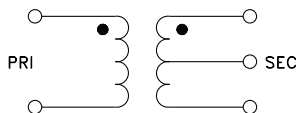
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|------|------|------|------|-------|------|------|
| .272 | .310 | .220 | .100 | .112 | .055 | .100 |
| 6.91 | 7.87 | 5.59 | 2.54 | 2.84 | 1.40 | 2.54 |
| H | J | K | L | wt | | |
| .030 | .026 | .065 | .300 | grams | | |
| 0.76 | 0.66 | 1.65 | 7.62 | 0.20 | | |

Demo Board MCL P/N: TB-430

Config. A



Features

- excellent return loss, 16 dB typ. in 1 dB bandwidth
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1 deg. typ. in 1 dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

Applications

- impedance matching
- baluns

CASE STYLE: CD542
PRICE: \$4.25 ea. QTY (20)

+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" | 500, 1000 |

Transformer Electrical Specifications

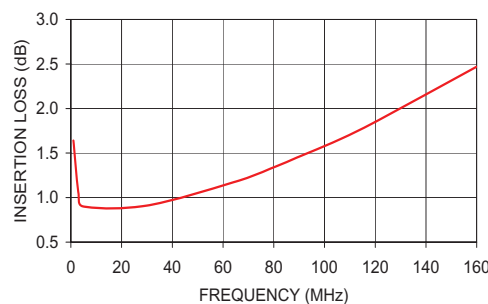
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | | | PHASE UNBALANCE (Deg.) Typ. | | AMPLITUDE UNBALANCE (dB) Typ. | |
|-----------------------------------|--------------------|-----------------|-------------|-------------|--------------------------------------|-------------------|--|-------------------|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz | 1 dB bandwidth | 2 dB bandwidth | 1 dB bandwidth | 2 dB bandwidth |
| 16 | 1.5-160 | 1.5-160 | 3-105 | 5-65 | 1 | 1 | 0.1 | 0.1 |

* Insertion Loss is referenced to mid-band loss, 0.9 dB typ.

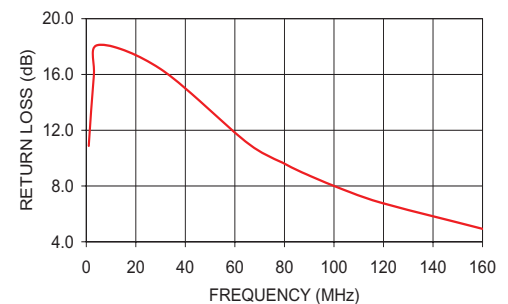
Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|--------------------|---------------------------|--------------------------|--------------------------------|------------------------------|
| 1.00 | 1.64 | 10.88 | 0.01 | 0.06 |
| 3.00 | 1.05 | 15.81 | 0.01 | 0.03 |
| 5.00 | 0.90 | 18.12 | 0.01 | 0.02 |
| 30.00 | 0.91 | 16.39 | 0.01 | 0.03 |
| 65.00 | 1.18 | 11.10 | 0.00 | 0.04 |
| 80.00 | 1.34 | 9.60 | 0.00 | 0.04 |
| 90.00 | 1.46 | 8.75 | 0.00 | 0.11 |
| 105.00 | 1.64 | 7.66 | 0.01 | 0.03 |
| 120.00 | 1.85 | 6.75 | 0.01 | 0.02 |
| 160.00 | 2.47 | 4.93 | 0.04 | 0.07 |

ADT16-1T
INSERTION LOSS



ADT16-1T
INPUT 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



www.minicircuits.com P.O. Box 35166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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