

Surface Mount RF Transformer

50Ω 0.25 to 105 MHz

ADT16-6+



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 | 0.5W |
| 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 |
| NOT USED | 2,5 |

Features

- excellent amplitude unbalance, 0.1 dB typ. and phase unbalance, 3 deg. typ. in 1 dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

Applications

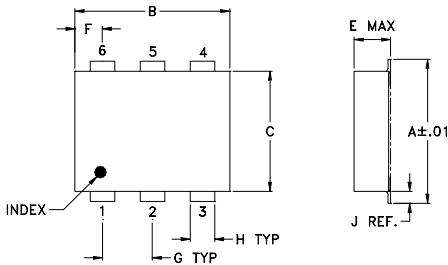
- impedance matching
- balanced amplifier

Transformer Electrical Specifications

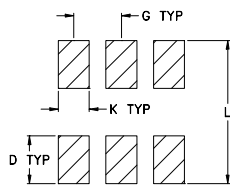
| Ω RATIO (Secondary/Primary) | FREQUENCY (MHz) | INSERTION LOSS* | | | PHASE UNBALANCE (Deg.) Typ. | | AMPLITUDE UNBALANCE (dB) Typ. | |
|-----------------------------------|--------------------|-----------------|-------------|-------------|-----------------------------------|-------------------|-------------------------------------|-------------------|
| | | 3 dB MHz | 2 dB MHz | 1 dB MHz | 1 dB bandwidth | 2 dB bandwidth | 1 dB bandwidth | 2 dB bandwidth |
| 16 | 0.25-105 | 0.25-105 | 0.45-75 | 1-40 | 2 | 5 | 0.1 | 0.2 |

* Insertion Loss is referenced to mid-band loss, 0.5 dB typ.

Outline Drawing



PCB Land Pattern



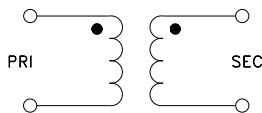
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

| | | | | | | |
|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G |
| .272 | .310 | .220 | .100 | .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-430

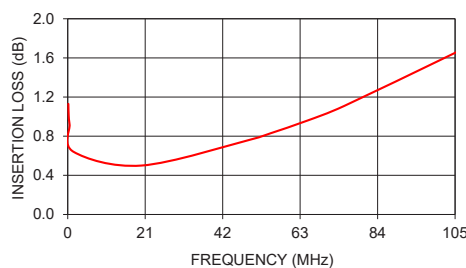
Config. C



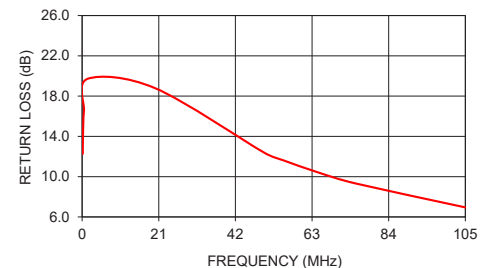
Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|--------------------|---------------------------|--------------------------|--------------------------------|------------------------------|
| 0.17 | 1.13 | 12.27 | 0.01 | 0.03 |
| 0.26 | 1.01 | 14.51 | 0.01 | 0.03 |
| 0.50 | 0.92 | 16.52 | 0.01 | 0.06 |
| 1.60 | 0.64 | 19.73 | 0.01 | 0.18 |
| 20.00 | 0.50 | 18.79 | 0.02 | 2.32 |
| 50.00 | 0.77 | 12.36 | 0.12 | 4.94 |
| 55.00 | 0.83 | 11.64 | 0.13 | 5.27 |
| 65.00 | 0.96 | 10.38 | 0.15 | 5.75 |
| 75.00 | 1.11 | 9.32 | 0.15 | 6.13 |
| 106.00 | 1.67 | 6.87 | 0.01 | 6.64 |

ADT16-6+
INSERTION LOSS



ADT16-6+
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.
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