

Transformer, 1:1 Transmission Line Transformer 4.5 to 3000 MHz

Rev. V2

Features

- 1:1 Impedance ratio
- Surface mount
- Available on tape and reel
- RoHS compliant and lead free
- 260°C reflow compatible
- Excellent temperature stability
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems

Description

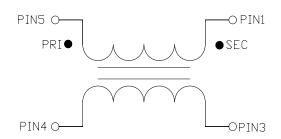
M/A-Com Technology Solutions MABA-007327-CT1A40 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



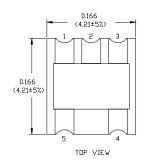
Pin Configuration

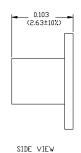
| Pin no. | Function | |
|---------|---------------|--|
| 1 | Secondary Dot | |
| 2 | Not connected | |
| 3 | Secondary | |
| 4 | Primary | |
| 5 | Primary Dot | |

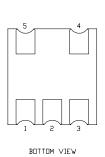
Schematic

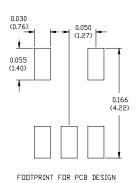


Component dimensions









Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010,

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions

is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

• India Tel: +91.80.43537383

• China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.



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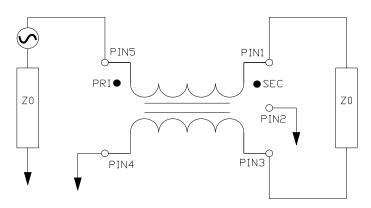
Electrical Specifications: $T_A = 25$ °C, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0$ dBm

| Parameter | Frequency | Units | Min | Тур | Max |
|---------------------------------|--|----------------|-------------|-------------------|-------------------|
| Insertion Loss 1 | 4.5 - 1000MHz 1000 - 2000MHz 2000 - 3000 MHz | dB dB dB | - - - | 0.8 1.6 2.5 | 1.0 2.0 3.5 |
| Amplitude Balance (Nominal 0dB) | 4.5 - 3000 MHz | dB | - | ±0.50 | ±1.0 |
| Phase Balance (Nominal 180°) | 4.5 - 3000 MHz | 0 | - | ±10.0 | ±20.0 |
| | | | | | |

Recommended Maximum Ratings

| Parameter | Value |
|-----------------------|-----------------|
| Input power | At least 250mW |
| DC current | At least 30mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +100°C |

Application Circuit



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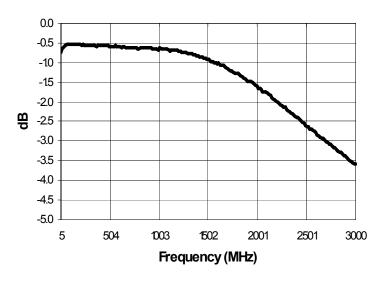


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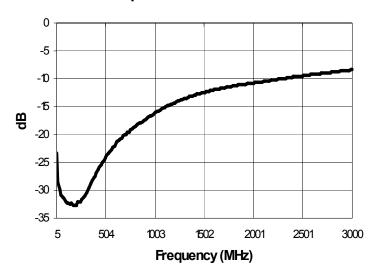
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Typical Performance Curves: $T_A = 25^{\circ}C$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0dBm$

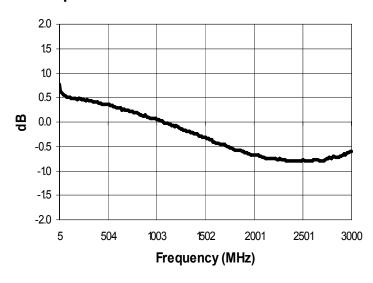
Insertion Loss



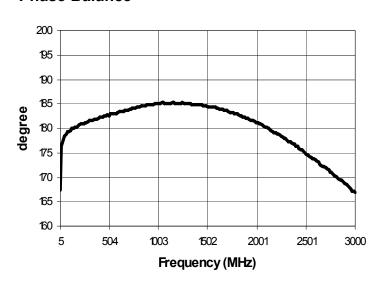
Return Loss: Input



Amplitude Balance



Phase Balance



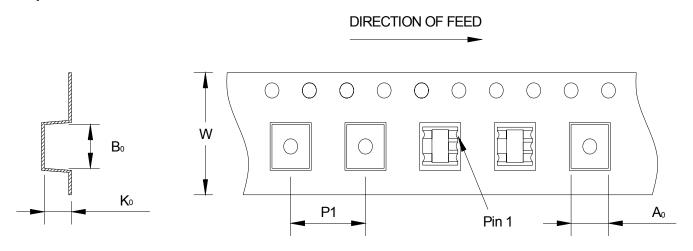
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Tape & Reel Information



| Item | Dimension | | |
|------|------------------|--|--|
| Ao | 4.50mm +/- 0.1mm | | |
| Во | 4.50mm +/- 0.1mm | | |
| Ko | 2.73mm +/- 0.1mm | | |
| W | 12.0mm +/- 0.3mm | | |
| P1 | 8.0mm +/- 0.1mm | | |

Ordering Information

| Part number | Description |
|--------------------|---------------------|
| MABA-007327-CT1A40 | 2000 piece reel |
| MABA-007327-CT1ATB | Customer Test Board |

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