## MABA-007159-000000

25-07177



Rev. V4

## E-Series RF 1:1 Transmission Line Transformer 4.5 - 3000 MHz

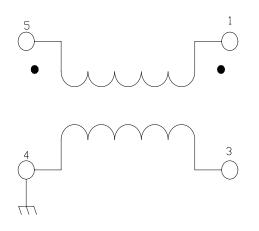
Features

- Surface mount
- Wide frequency range
- 1:1 impedance
- Lead Free
- RoHS\* Compliant
- 260°C reflow compatible
- Available on Tape and Reel

## Description

M/A-COM Technology Solutions MABA-007159-000000 is a RoHS compliant 1:1 RF transmission line transformer in a low cost, surface mount package. The windings of the MABA-007159-000000 are welded to the package substrate for improved reliability and to eliminate lead content. Ideally suited for high volume cellular and wireless application. Parts are packaged in tape & reel.

## Schematic

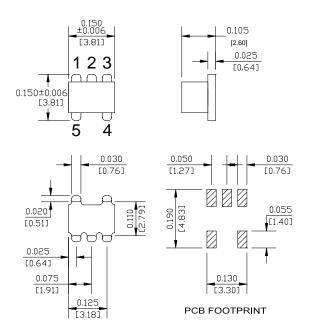


## **Pin Configuration**

1

| Pin No. | Function      |  |  |
|---------|---------------|--|--|
| 1       | Secondary Dot |  |  |
| 2       | Not Connected |  |  |
| 3       | Secondary     |  |  |
| 4       | Primary       |  |  |
| 5       | Primary Dot   |  |  |

## **Component Dimension**



\* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

## **Recommended Maximum Ratings**<sup>1,2</sup>

| Parameter             | Absolute Maximum |
|-----------------------|------------------|
| DC Power              | 250 mW           |
| DC Current            | 30 mA            |
| Operating Temperature | -40°C to +85°C   |
| Storage Temperature   | -55°C to +125°C  |

 Exceeding any one or combination of these limits may cause permanent damage to this device.

2. M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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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: +91.80.4155721
   China Tel: +86.21.2407.1588
- Visit www.macomtech.com for additional data sheets and product information.

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## Electrical Specifications: $T_A = 25^{\circ}C$ , $Z_0 = 50\Omega^{-1}$

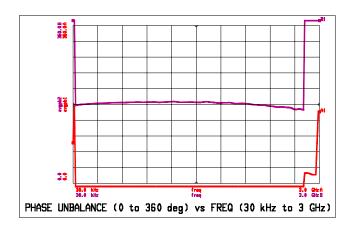
| Parameter           | Test Conditions | Test Conditions                          | Units          | Min | Тур            | Max               |
|---------------------|-----------------|--|----------------|-----|----------------|-------------------|
| RF Frequency        | -               | 4.5 - 3000                               | MHz            | -   | -              | -                 |
| Insertion Loss      | -               | 4.5 - 1000<br>1000 - 2000<br>2000 - 3000 | dB<br>dB<br>dB | -   | 0.32<br>-<br>- | 1.0<br>2.0<br>3.5 |
| Amplitude Unbalance | -               | 4.5 - 1000                               | dB             | -   | -              | 1.0               |
| Phase Unbalance     | -               | 4.5 - 1000                               | Degrees        | -   | -              | 20                |

## **Typical Performance Curves**

#### Insertion Loss



#### Phase Unbalance

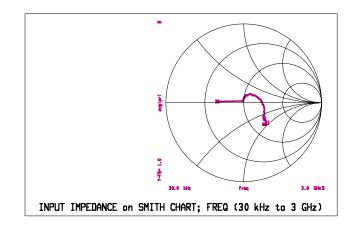


2

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#### Input Impedance



## Amplitude Unbalance



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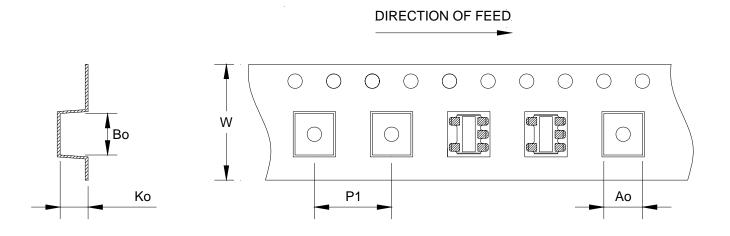


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#### Tape & Reel Information



| ltem | Dimension        |
|------|------------------|
| Ao   | 4.00mm +/-0.1mm  |
| Во   | 4.30mm +/-0.1mm  |
| Ko   | 2.90mm +/-0.1mm  |
| W    | 12.00mm +/-0.3mm |
| P1   | 8.00mm +/-0.1mm  |

## **Ordering Information**

| Part Number        | Package         |
|--------------------|-----------------|
| MABA-007159-000000 | 2000 piece reel |

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