# MABA-007159-000000



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

Rev. V4

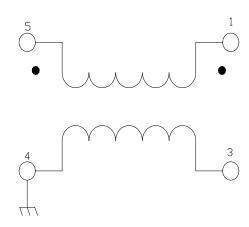
#### **Features**

- 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.

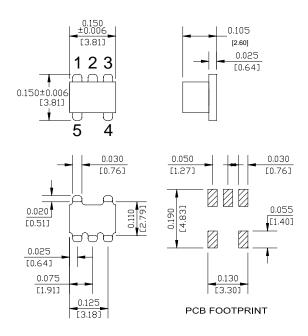
### **Schematic**



### **Pin Configuration**

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.

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

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make shareses (sy the grocus) by information contained herein without notice.

# MABA-007159-000000



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

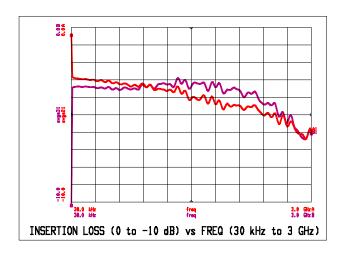
Rev. V4

# Electrical Specifications: $T_A = 25$ °C, $Z_0 = 50\Omega^1$

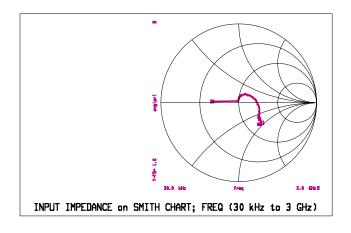
Parameter	Test Conditions	Test Conditions	Units	Min	Тур	Max
RF Frequency	-	4.5 - 3000	MHz	-	-	-
Insertion Loss	-	4.5 - 1000 1000 - 2000 2000 - 3000	dB dB dB	- - -	0.32	1.0 2.0 3.5
Amplitude Unbalance	-	4.5 - 1000	dB	-	-	1.0
Phase Unbalance	-	4.5 - 1000	Degrees	-	-	20

# **Typical Performance Curves**

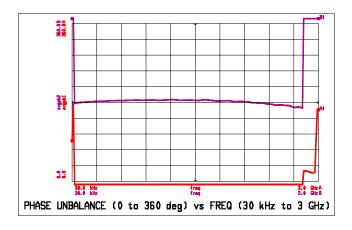
#### **Insertion Loss**



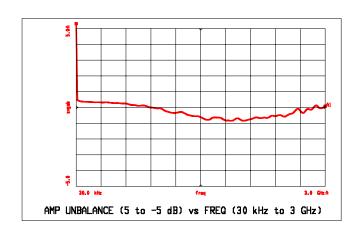
## Input Impedance



#### Phase Unbalance



#### Amplitude Unbalance



2

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: +91.80.4155721 • China Tel: +86.21.2407.1588

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

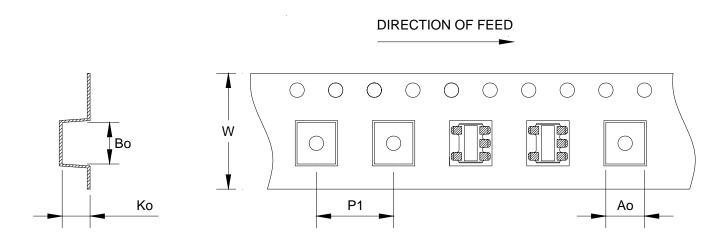
# MABA-007159-000000



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

Rev. V4

# **Tape & Reel Information**



Item	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	

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 quaranteed.

• 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.