# MABA-007159-000000

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

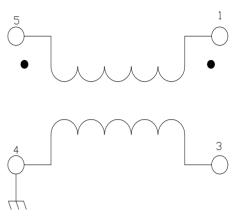
## Features

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

# Description

The MABA-007159 is a RoHS compliant 1:1 RF transmission line transformer in a low cost, surface mount package. The windings of the MABA-007159 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	

# Electrical Specifications: RF Freq. = 4.5 - 3000 MHz, $T_A = 25^{\circ}C$ , $Z_0 = 50 \Omega$

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

## **Ordering Information**

Part Number	Package
MABA-007159-000000	2000 piece reel

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

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

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

 MACOM does not recommend sustained operation near these survivability limits.

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For further information and support please visit: <u>https://www.macom.com/support</u>



Rev. V5

# MABA-007159-000000

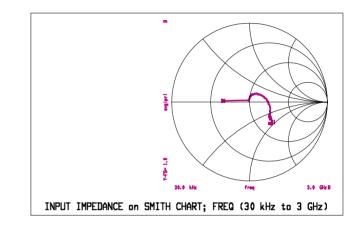
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# **Typical Performance Curves**

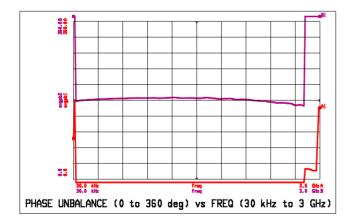
### **Insertion Loss**



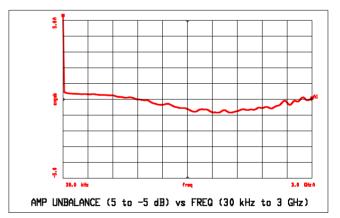
### Input Impedance



### Phase Unbalance



#### Amplitude Unbalance





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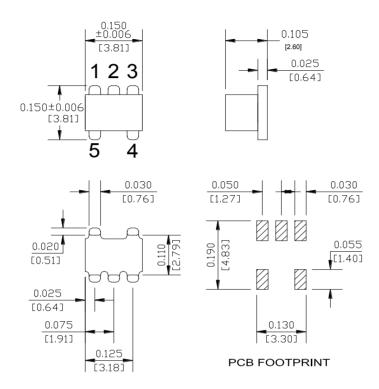
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Rev. V5

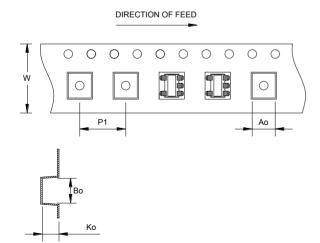
MACOM

# **Outline Drawing**



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

## **Tape & Reel Information**



# **Tape & Reel Information**

ltem	Dimension (mm)
Ao	4.00 +/-0.1
Во	4.30 +/-0.1
Ко	2.90 +/-0.1
W	12.00 +/-0.3
P1	8.00 +/-0.1

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<sup>3</sup>