

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

Rev. V5

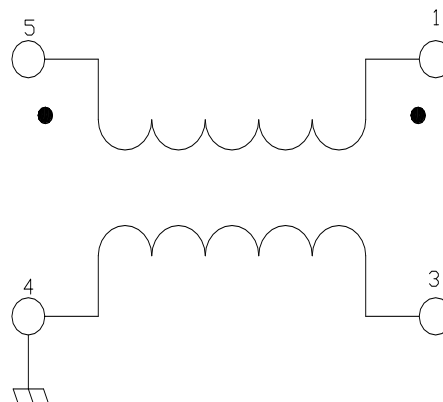
Features

- Surface mount
- Wide frequency range
- 1:1 impedance
- Lead Free
- RoHS* Compliant
- 260°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°C, Z₀ = 50 Ω

Parameter	Test Frequency	Units	Min.	Typ.	Max.
Insertion Loss	4.5 - 1000	dB	—	0.32	1.0
	1000 - 2000			—	2.0
	2000 - 3000			—	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^{1,2}

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

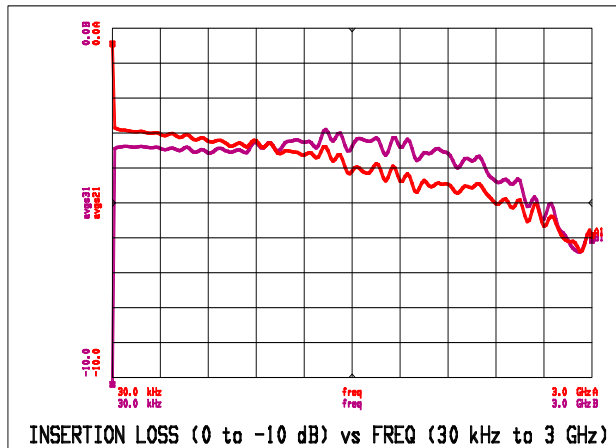
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

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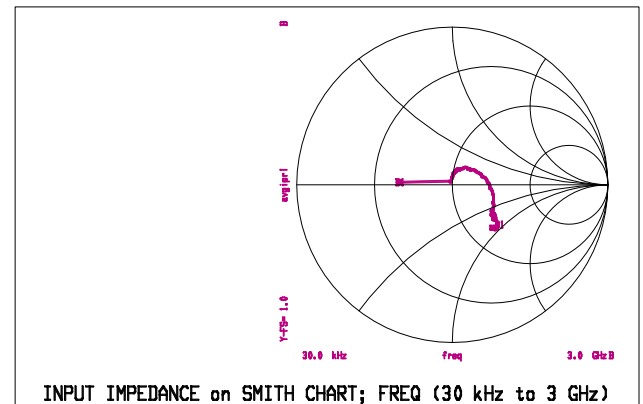
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Typical Performance Curves

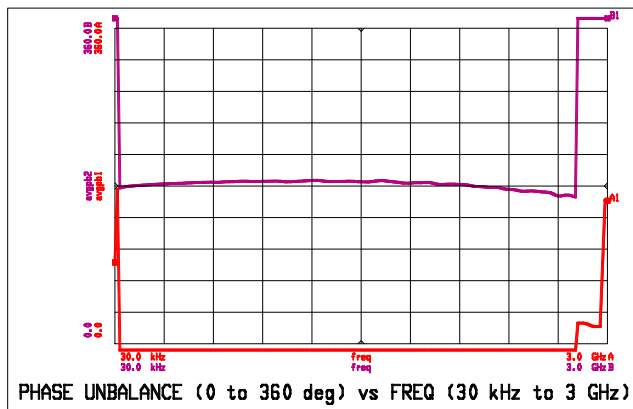
Insertion Loss



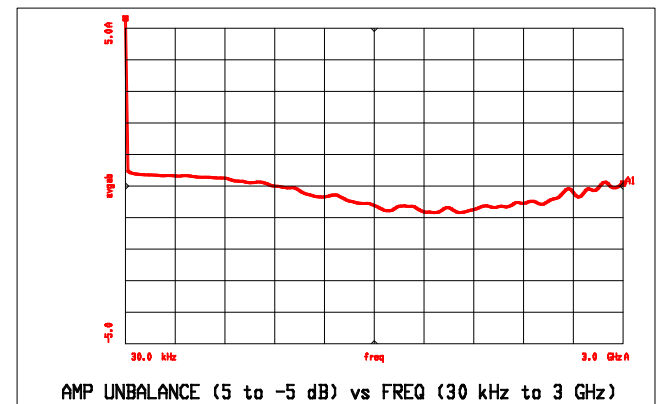
Input Impedance



Phase Unbalance



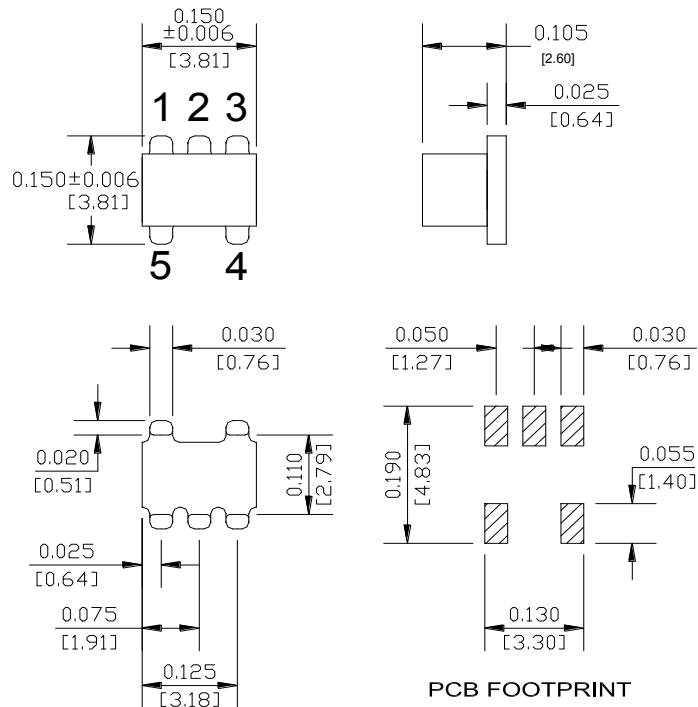
Amplitude Unbalance



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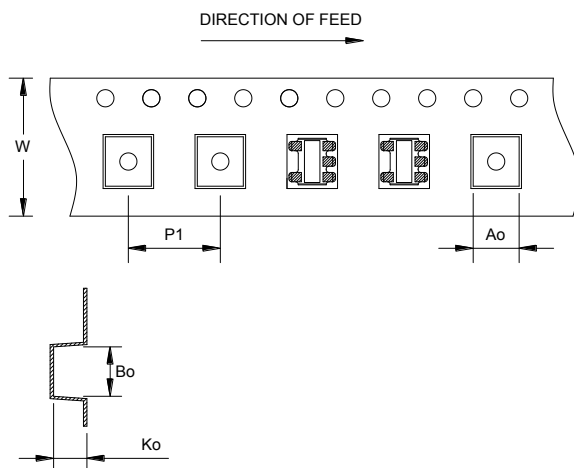
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Outline Drawing



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

Tape & Reel Information



Tape & Reel Information

Item	Dimension (mm)
Ao	4.00 +/-0.1
Bo	4.30 +/-0.1
Ko	2.90 +/-0.1
W	12.00 +/-0.3
P1	8.00 +/-0.1

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