

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

Rev. V5

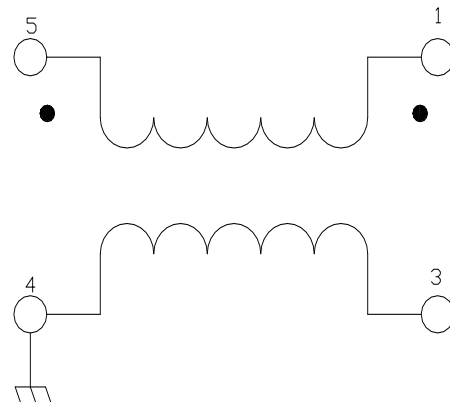
Features

- 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, $T_A = 25^\circ\text{C}$, $Z_0 = 50 \Omega$

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

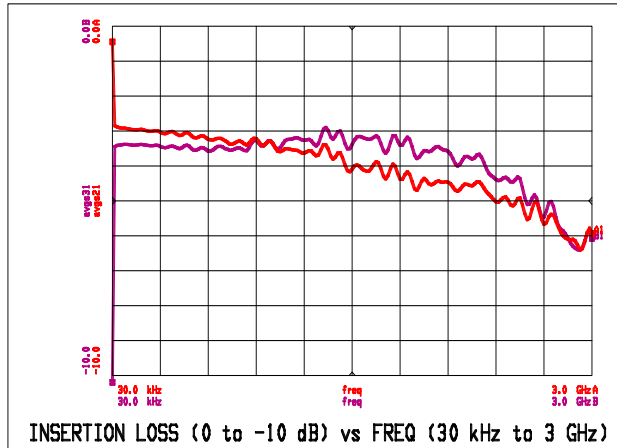
Recommended Maximum Ratings^{1,2}

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

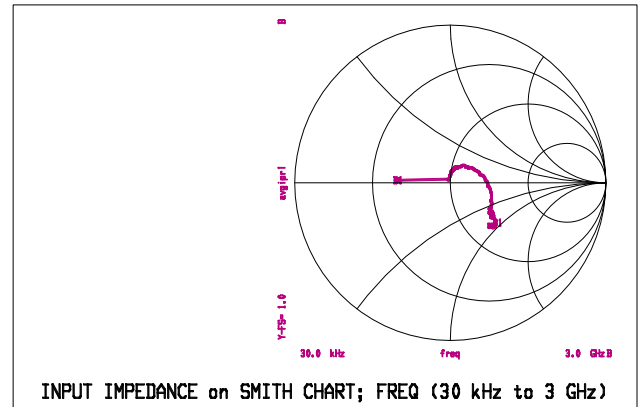
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves

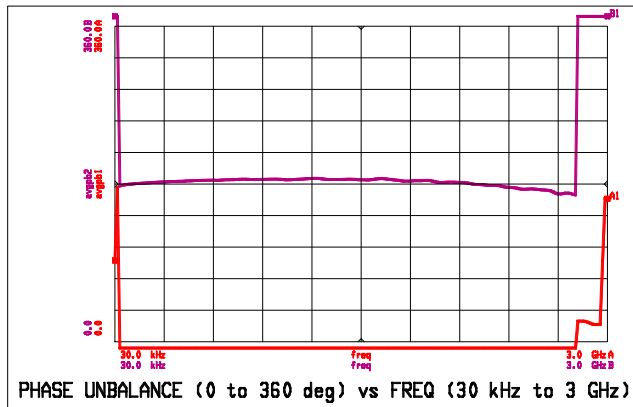
Insertion Loss



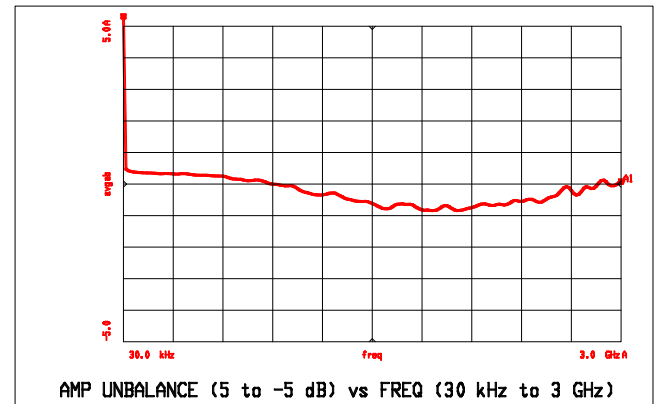
Input Impedance



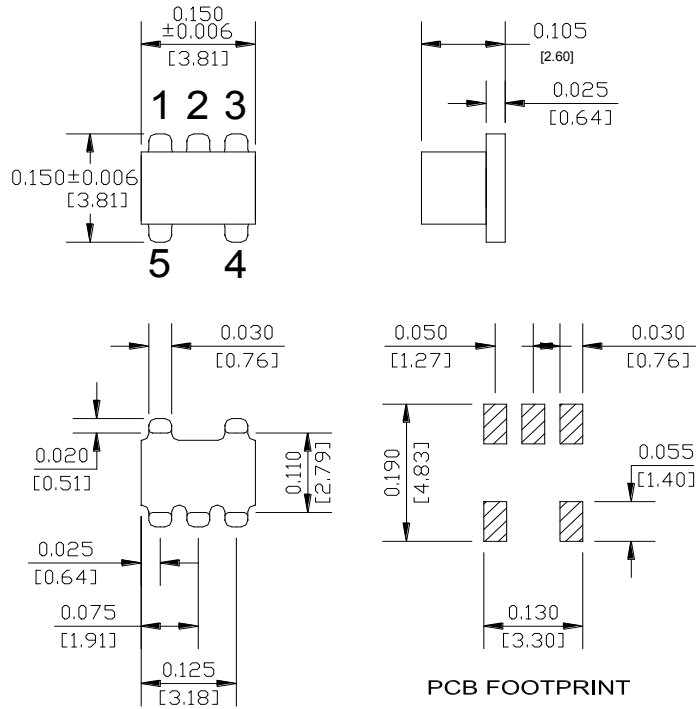
Phase Unbalance



Amplitude Unbalance

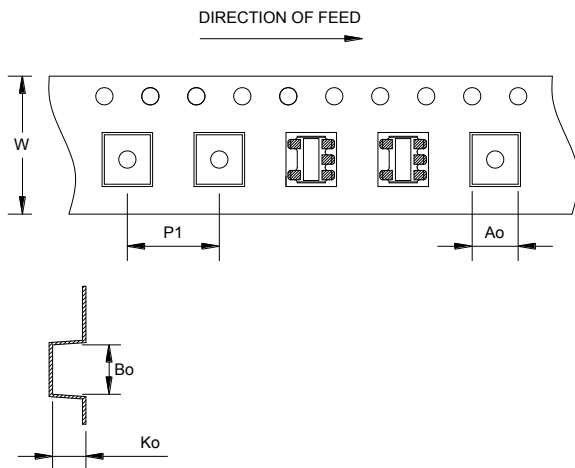


Outline Drawing



* 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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