

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

Rev. V4

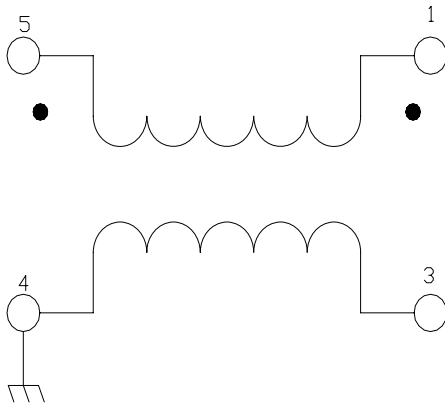
Features

- 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.

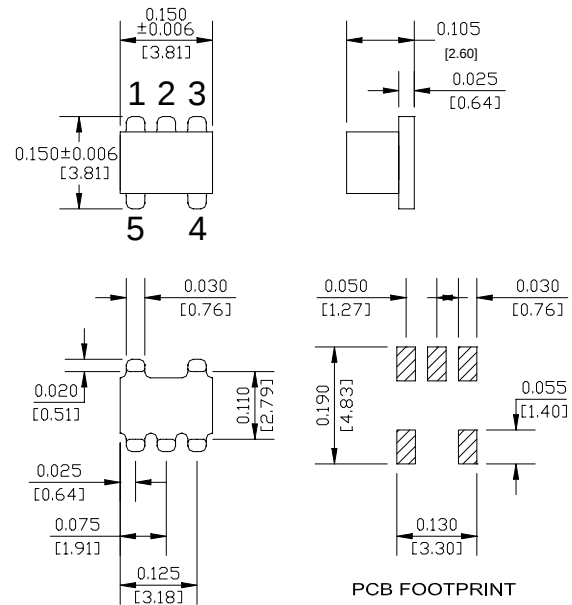
Schematic



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^{1,2}

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

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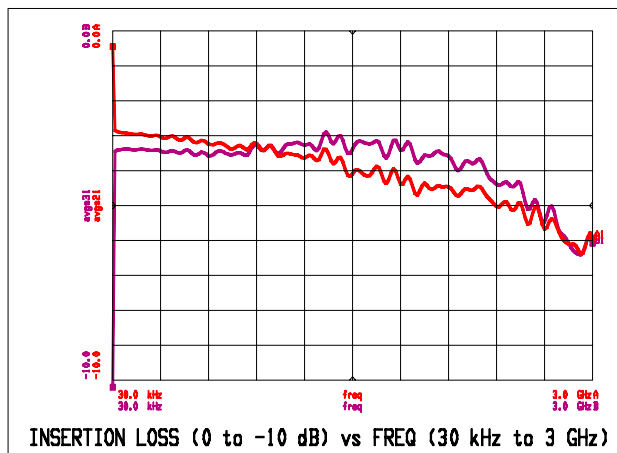
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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

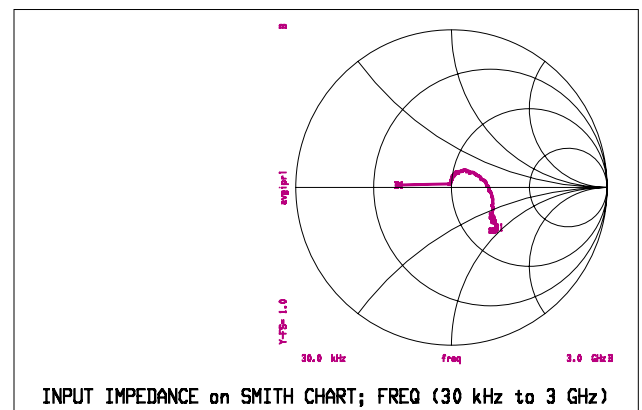
Parameter	Test Conditions	Test Conditions	Units	Min	Typ	Max
RF Frequency	-	4.5 - 3000	MHz	-	-	-
Insertion Loss	-	4.5 - 1000	dB	-	0.32	1.0
		1000 - 2000	dB	-	-	2.0
		2000 - 3000	dB	-	-	3.5
Amplitude Unbalance	-	4.5 - 1000	dB	-	-	1.0
Phase Unbalance	-	4.5 - 1000	Degrees	-	-	20

Typical Performance Curves

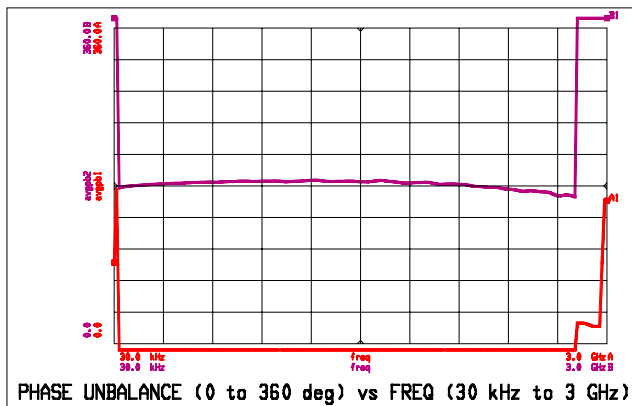
Insertion Loss



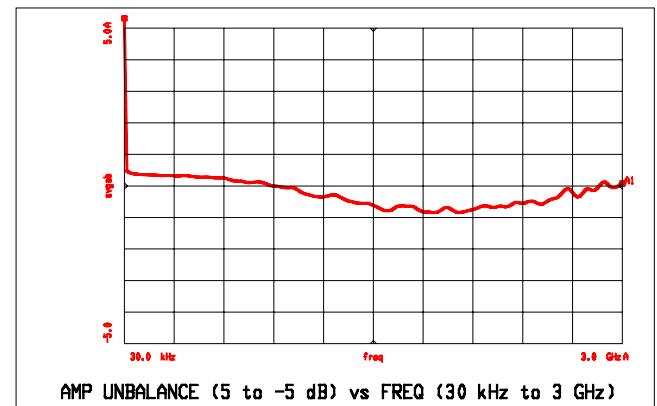
Input Impedance



Phase Unbalance

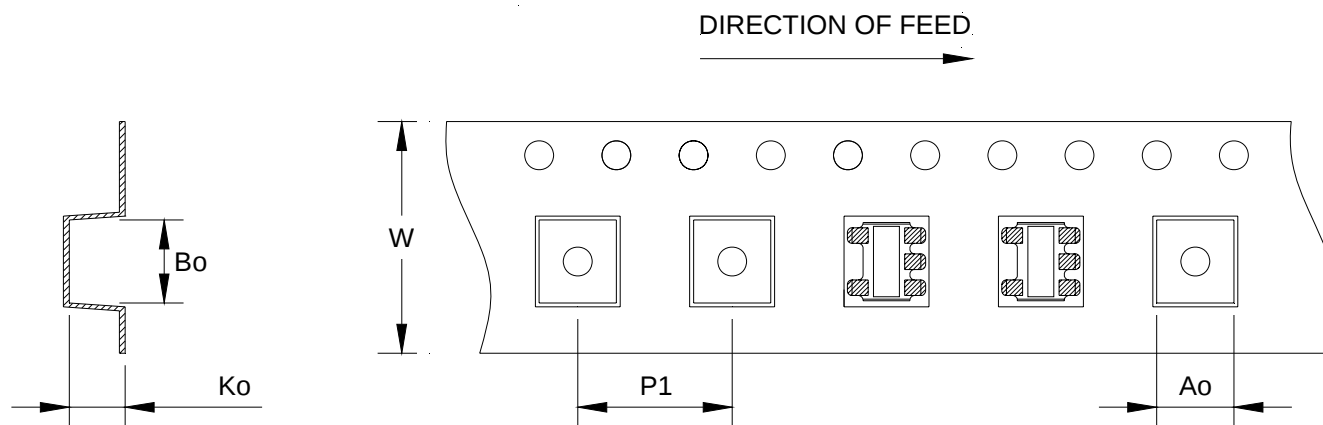


Amplitude Unbalance



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Tape & Reel Information


Item	Dimension
Ao	4.00mm +/-0.1mm
Bo	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