

1:2 Transmission Line Transformer 1 - 1600 MHz

Rev. V4

Features

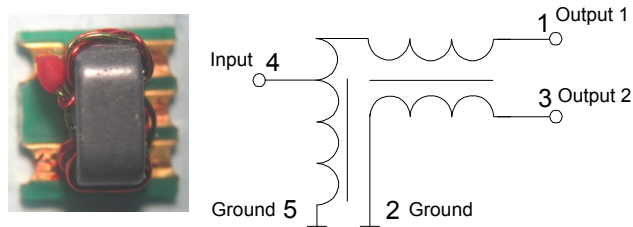
- Surface Mount Package
- 1:2 Impedance
- RoHS* Compliant
- 260°C Reflow Compatible
- Tape and Reel Package

Description

The MABA-010247-2R1250 is a RoHS compliant 1:2 RF transmission line transformer in a surface mount package. The windings of this device are welded to the package substrate for improved reliability and to eliminate lead content.

Ideally suited for high volume cellular and wireless application.

Functional Schematic



Pin Configuration

Pin #	Function
1	Secondary
2	Ground
3	Secondary Dot
4	Primary Dot (Input)
5	Primary (Ground)

Electrical Specifications: Freq. = 1 - 1600 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 50\ \Omega$, $P_{IN} = 0\ \text{dBm}$

Parameter	Test Conditions Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	1 - 750 750 - 1250 1250 - 1600	dB	—	1.0 1.5 2.0	— 2.5 4.0
Input Return Loss	1 - 500 500 - 1600	dB	20 10	30 15	—
Amplitude Unbalance	1 - 1250 1250 - 1600	dB	—	0.5 1.0	1.0 1.2
Phase Unbalance	1 - 1600	°	—	5	10

Ordering Information

Parameter	Package
MABA-010247-2R1250	2000 piece reel

Absolute Maximum Ratings

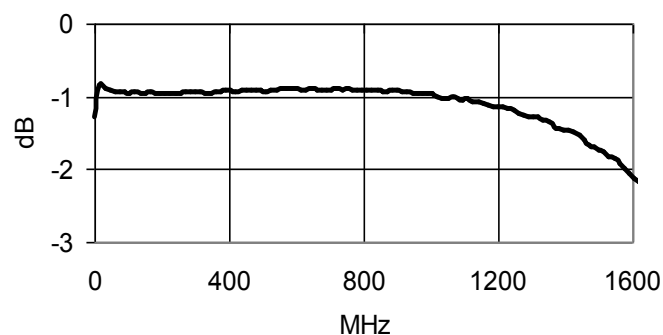
Parameter	Absolute Maximum
RF Input Power	250 mW
DC Current	50 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

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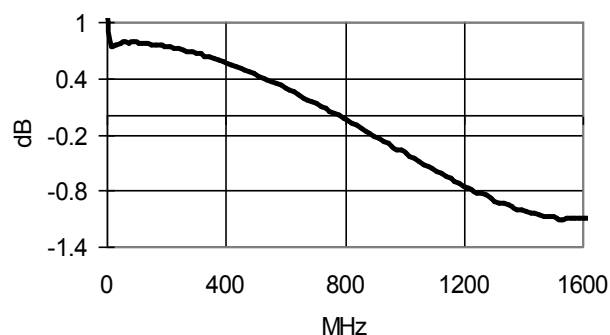
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Typical Performance: $T_A = 25^\circ\text{C}$

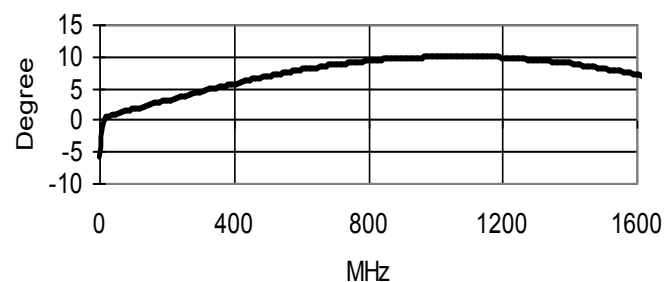
Insertion Loss



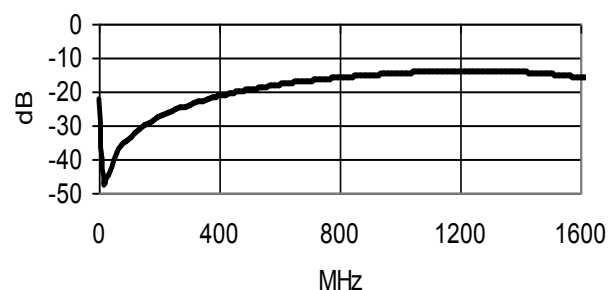
Amplitude Unbalance



Phase Unbalance



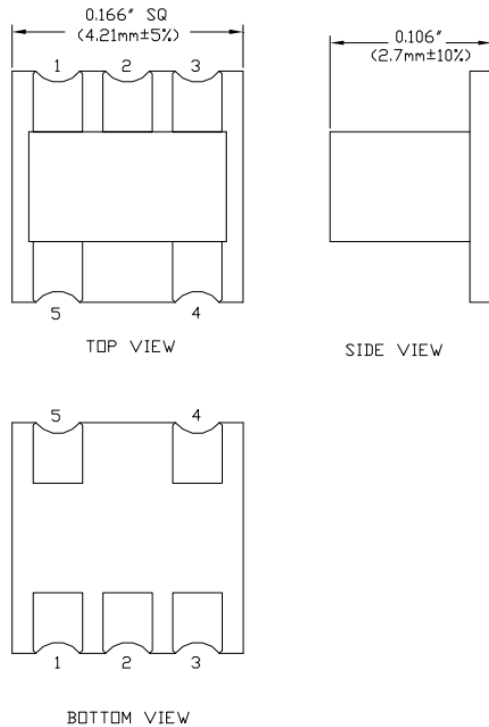
Input Return Loss



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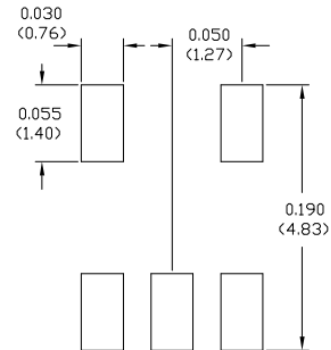
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Outline Drawing

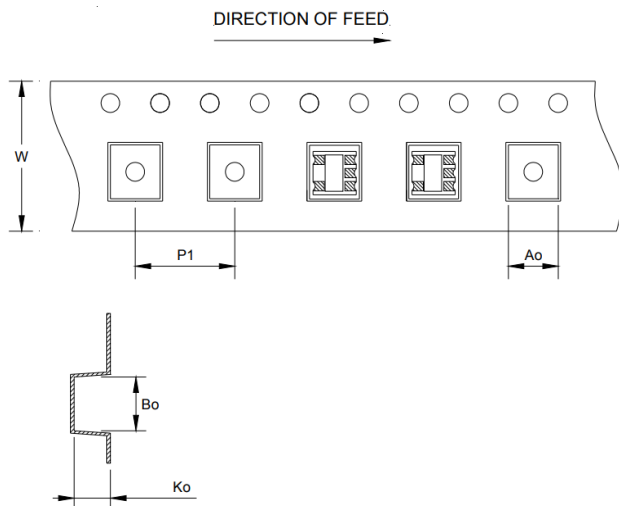


Dimensions in inches (mm). ±0.015 (0.38).
Tolerance: ±0.015 (0.38) unless otherwise noted.

Recommended Footprint



Tape & Reel Information



Tape & Reel Information

Item	Units	Dimension
Qty. per reel	mm	2000
A _o	mm	4.55 ± 0.1
B _o	mm	4.75 ± 0.1
K _o	mm	3.10 ± 0.1
W	mm	12.00 ± 0.3
P1	mm	8.00 ± 0.1

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