

RF 1:1 Transmission Line Transformer 4.5 - 3000 MHz

Rev. V6

Features

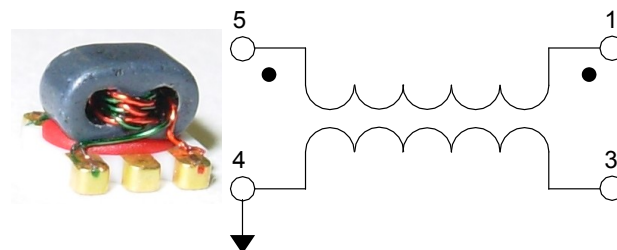
- 1:1 Impedance Ratio
- Surface Mount Package
- Tape and Reel Packaging Available
- RoHS* Compliant & 260°C Reflow Compatible

Description

The MABA-010125-TC1113 is a RoHS compliant 1:1 RF transmission line transformer in a surface mount package. The windings are welded to the package substrate for improved reliability and to eliminate lead content.

Ideally suited for high volume cellular and wireless application.

Schematic



Pin Configuration

Pin #	Function	Pin #	Function
1	Secondary Dot	4	Primary
2	No Connection	5	Primary Dot
3	Secondary		

Electrical Specifications: Freq. = 4.5 - 3000 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 50\ \Omega$, $P_{IN} = 0\ \text{dBm}$

Parameter	Freq. Test Conditions (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	4.5 - 1000	dB	—	0.3	1.0
	1000 - 2000			1.5	2.0
	2000 - 3000			2.8	—
Amplitude Unbalance	4.5 - 3000	dB	—	0.5	1.0
Phase Unbalance	4.5 - 3000	°	—	5	20

Ordering Information

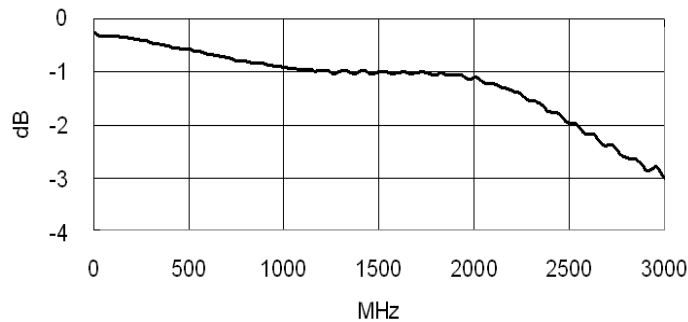
Parameter	Package
MABA-010125-TC1113	2000 piece reel

Absolute Maximum Ratings

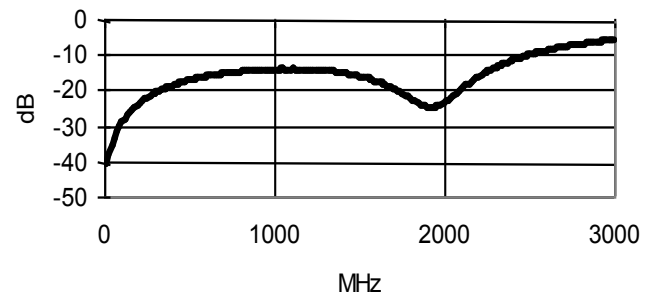
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	50 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

Typical Performance Curves

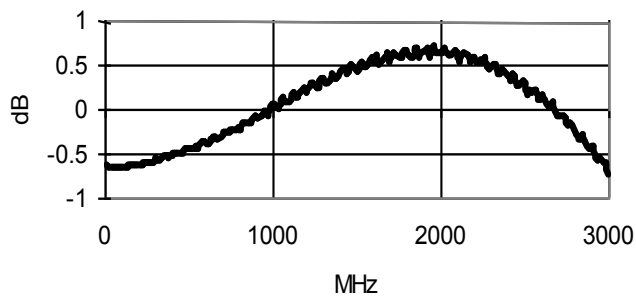
Insertion Loss



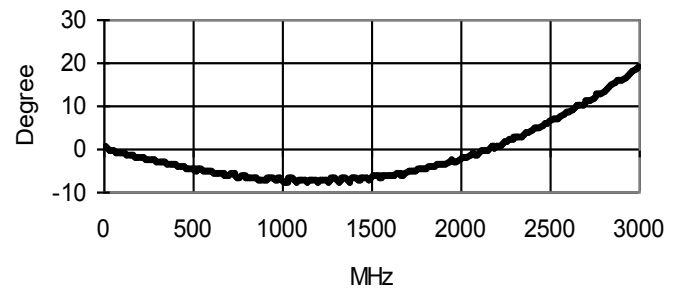
Input Return Loss



Amplitude Unbalance



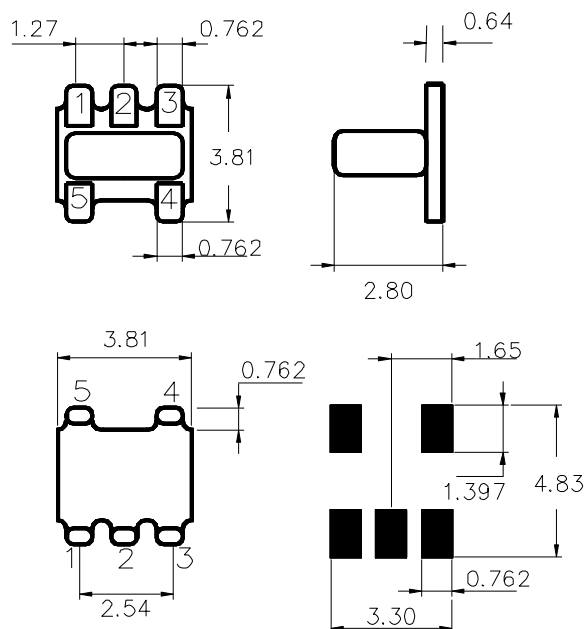
Phase Unbalance



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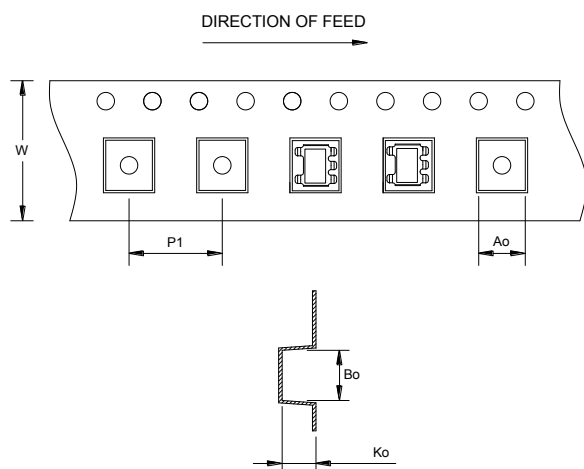
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Outline Drawing



Dimensions are inches (millimeters) ± 0.015 (0.38) unless otherwise specified.
Drawing not to scale.

Tape & Reel Information



Dimensions

Item	Dimension (mm)
A _o	4.00 ± 0.1
B _o	4.00 ± 0.1
K _o	2.90 ± 0.1
W	12.00 ± 0.3
P1	8.00 ± 0.1

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