

# Transformer, 1:1 Transmission Line 45 - 1200 MHz



MABA-011014

Rev. V5

## Features

- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be used on 50  $\Omega$  & 75  $\Omega$  Systems
- Available on Tape & Reel
- RoHS\* Compliant



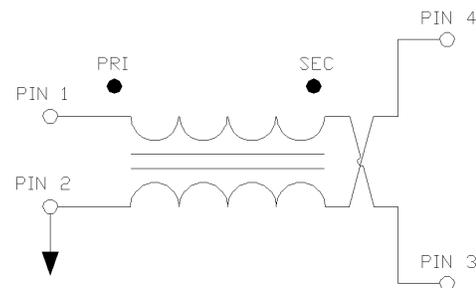
## Applications

- CATV, Broadband and FTTx applications

## Description

The MABA-011014 has a 1:1 impedance ratio and is available in a surface mount package. This device is well suited for CATV, Broadband, and FTTx applications.

## Schematic



## Ordering Information

Part Number	Description
MABA-011014	Tape & Reel
MABA-011014-TB	Evaluation Board

## Pin Configuration

Pin #	Function	Pin #	Function
1	Primary Dot	3	Secondary
2	Primary	4	Secondary Dot

## Electrical Specifications: Freq. = 45 - 1200 MHz, $Z_0 = 75 \Omega$ , $T_A = 25^\circ\text{C}$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	Ratio	—	1:1	—
Insertion Loss (Pin1 - Pin4)	45 - 100 MHz	dB	—	0.9	1.1
	100 - 600 MHz			0.9	1.2
	600 - 1000 MHz			1.0	1.3
	1000 - 1200 MHz			1.0	1.4
Insertion Loss (Pin1 - Pin3)	45 - 100 MHz	dB	—	-0.2	0.1
	100 - 600 MHz			-0.1	0.2
	600 - 1000 MHz			0.2	0.5
	1000 - 1200 MHz			0.35	0.7
Amplitude Balance	45 - 600 MHz	dB	—	1.1	$\pm 1.4$
	600 - 1000 MHz			0.9	$\pm 1.5$
	1000 - 1200 MHz			0.9	$\pm 1.5$
Phase Balance	45 - 600 MHz	°	—	2	$\pm 6$
	600 - 1000 MHz			4	$\pm 10$
	1000 - 1200 MHz			4	$\pm 10$
Input Return Loss (Pin1)	45 - 600 MHz	dB	20	30	—
	600 - 1000 MHz		20	31	
	1000 - 1200 MHz		20	31	

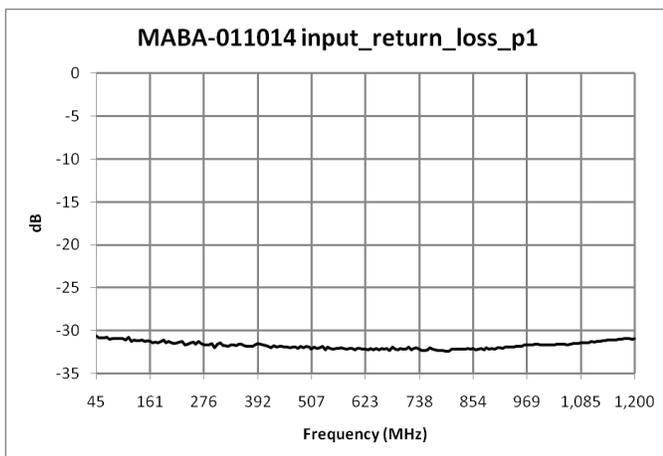
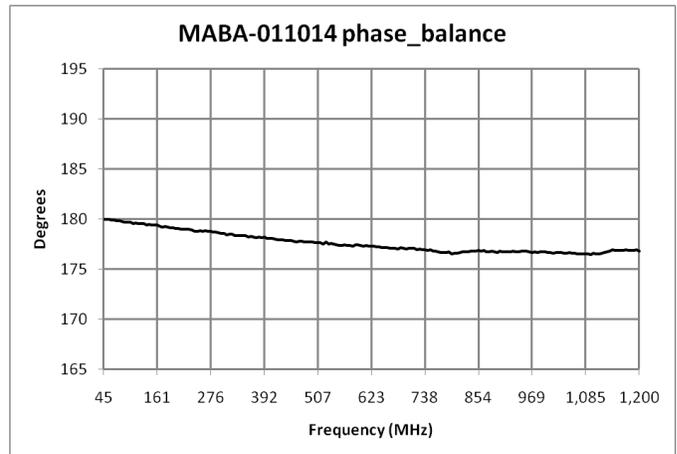
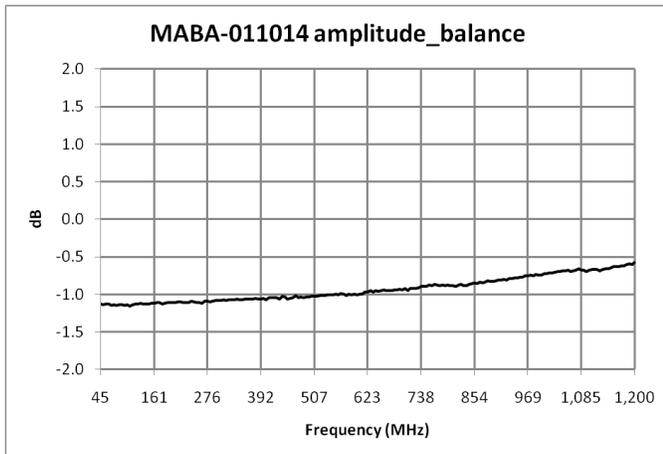
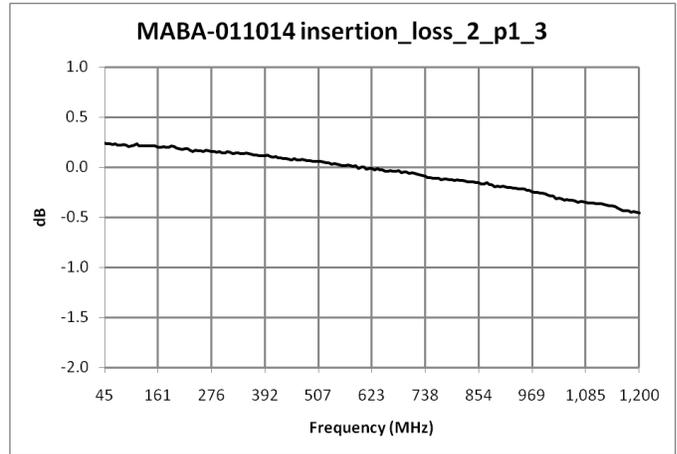
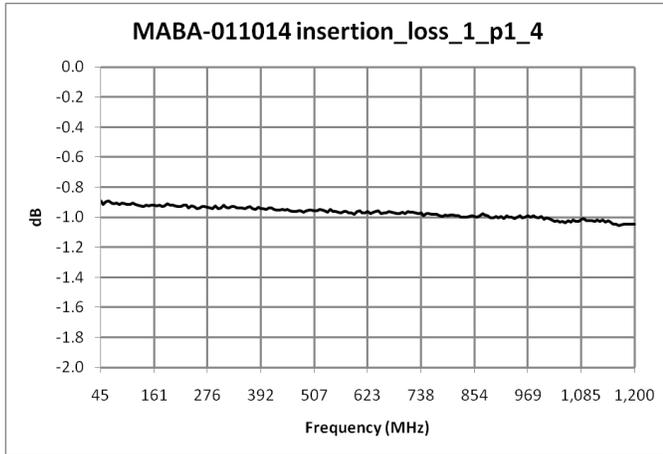
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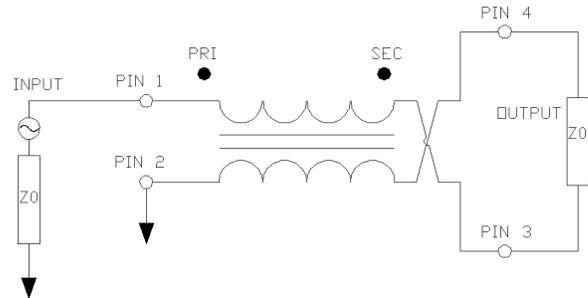
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## Recommended Maximum Ratings

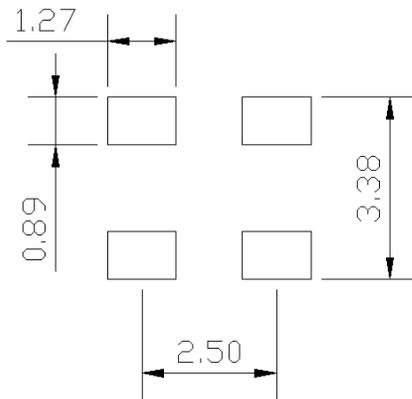
Parameter	Units
Input Power	2 W
DC Current	200 mA
Operating Temperature	-40°C to +100°C

Temperature data available on request

## Application Circuit



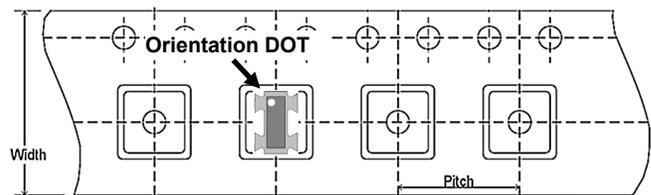
## Recommended Footprint



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width	mm	12.00
Pitch	mm	8.00
Orientation	-	F51
Reference Application note ANI-019 for orientation		

## Carrier Tape Orientation



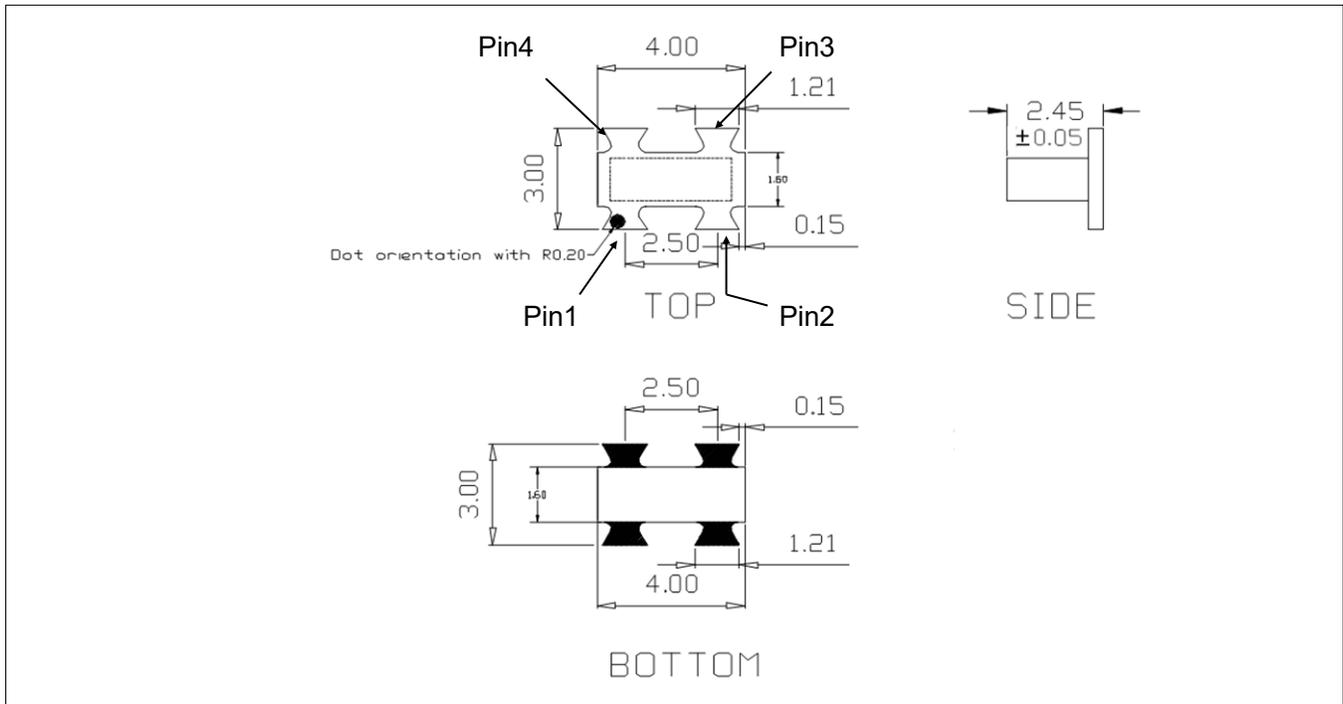
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## Outline Drawing



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: 96.5 % tin, 3% silver, and 0.5% copper

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