

# Transformer, 4:1 Transmission Line 5 - 1000 MHz



MABACT0066

Rev. V5

## Features

- Surface Mount Technology
- 4:1 Impedance Ratio
- Excellent Amplitude & Phase Balance
- Suitable for Both 50  $\Omega$  & 75  $\Omega$  Systems
- RoHS\* Compliant

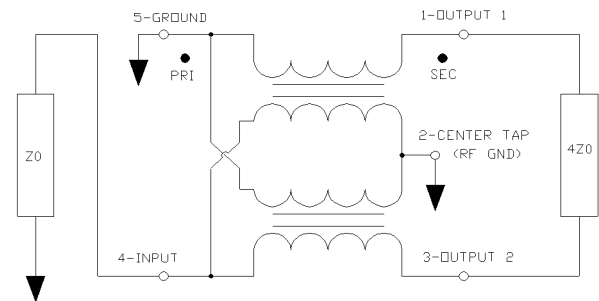
## Applications

- CATV Broadband

## Description

The MABACT0066 is a 4:1 RF flux coupled step up transformer in a surface mount package. Ideally suited for broadband CATV Broadband applications.

## Schematic



## Pin Configuration

Pin #	Function
1	Secondary dot (Output 1)
2	Centre tap (Ground)
3	Secondary (Output 2)
4	Primary (Input)
5	Primary dot (Ground)

## Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Test Conditions Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	5 - 50	dB	—	1.5	2.0
	50 - 879			1.0	1.5
	879 - 1000			1.5	2.0
Amplitude Unbalance (Nominal 0 dB)	5 - 1000	dB	—	$\pm 0.25$	$\pm 0.5$
Phase Unbalance (Nominal 180°)	5 - 500	°	—	$\pm 4$	$\pm 8$
	500 - 1000			$\pm 8$	$\pm 12$

## Ordering Information

Part Number	Description
MABACT0066	2000 piece reel
MABA-007968-CT66TB	customer test board

## Recommended Maximum Ratings<sup>1,2</sup>

Parameter	Value
Input Power	250 mW
DC Current	120 mA
Operating & Storage Temperature	-40°C to +85°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.

1 \* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

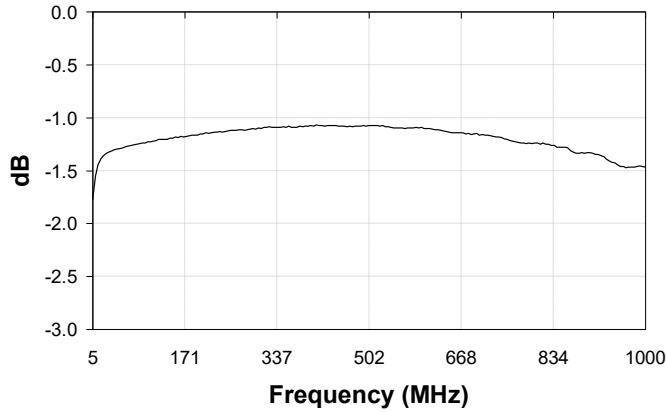
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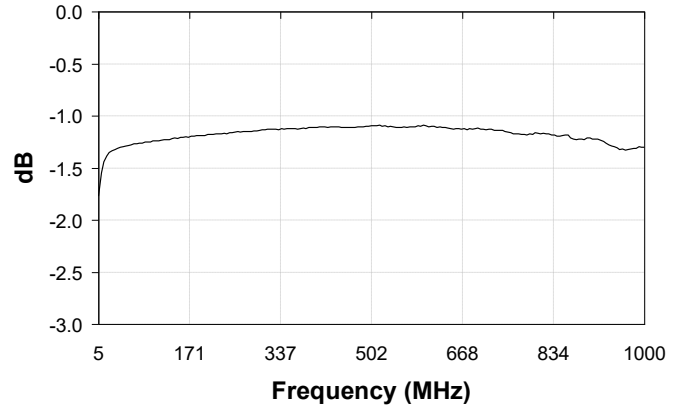
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50 \Omega$ ,  $P_{IN} = 0 \text{ dBm}$

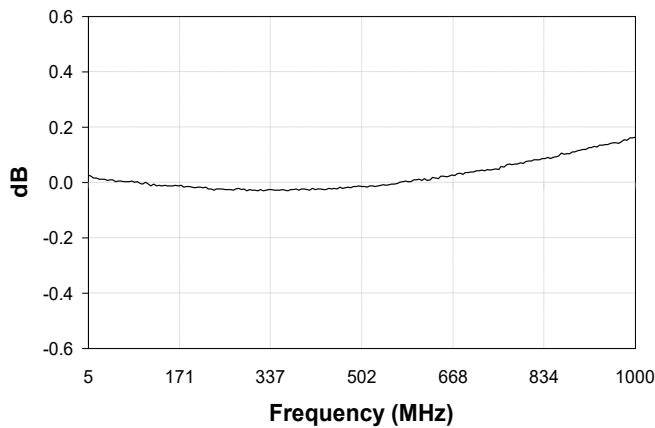
**Insertion Loss 1: coupled pin 4 to pin 1**



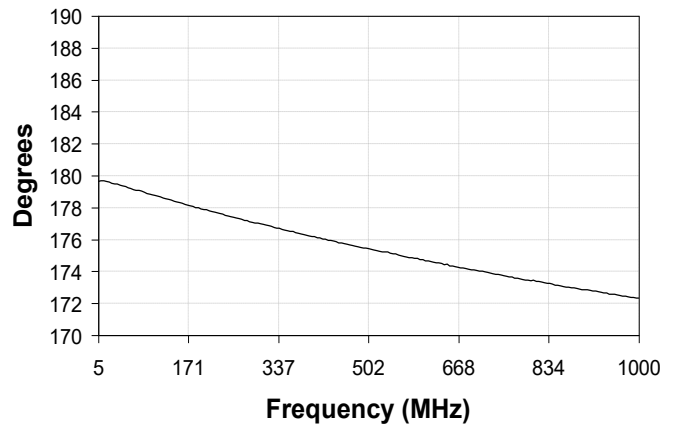
**Insertion Loss 2: coupled pin 4 to pin 3**



**Amplitude Balance**



**Phase Balance**

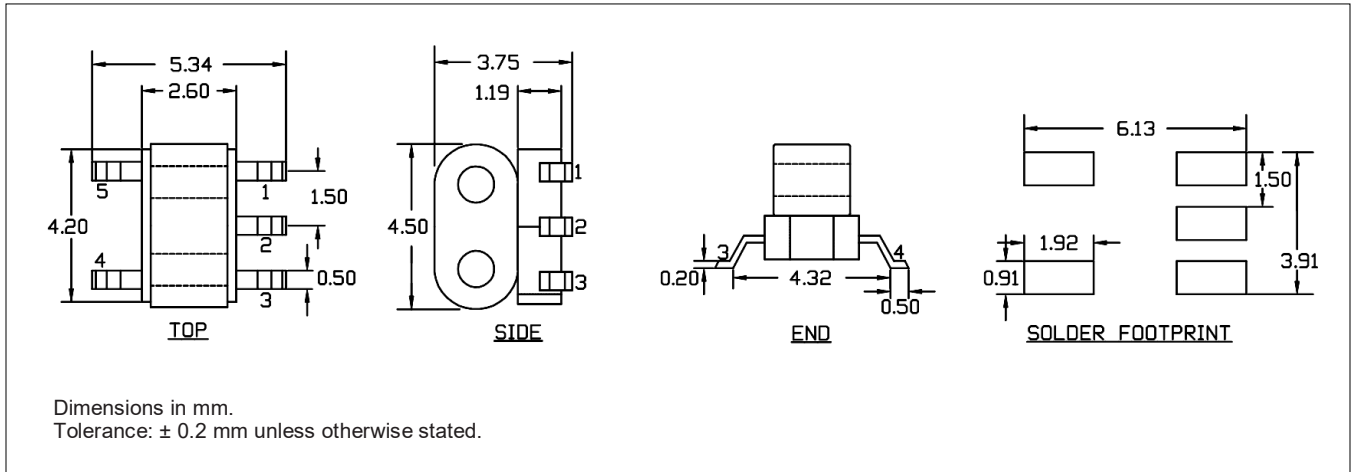


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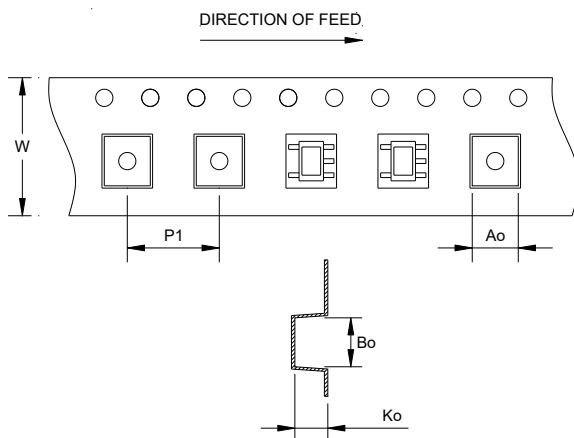


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## Component Dimensions



## Carrier Tape Orientation



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Orientation	-	F26
Reference Application Note ANI-019 for orientation		

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