

# 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

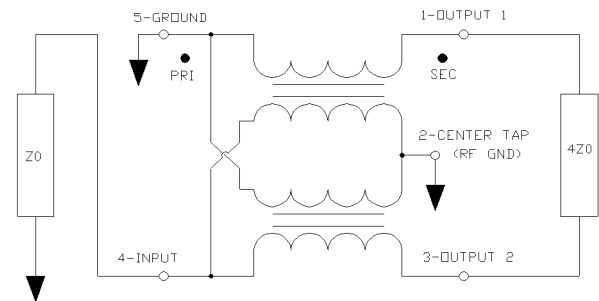
## Applications

- 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.

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

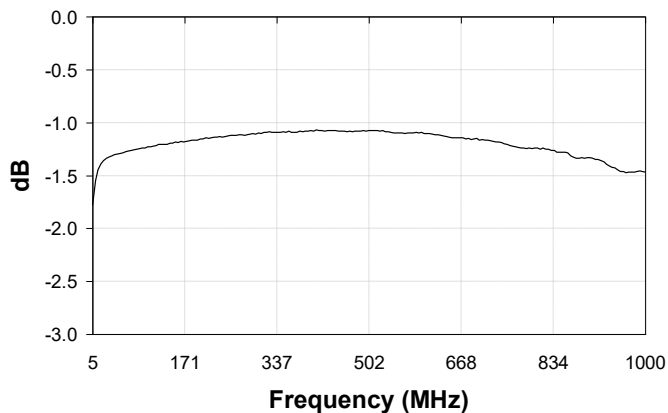


MABACT0066

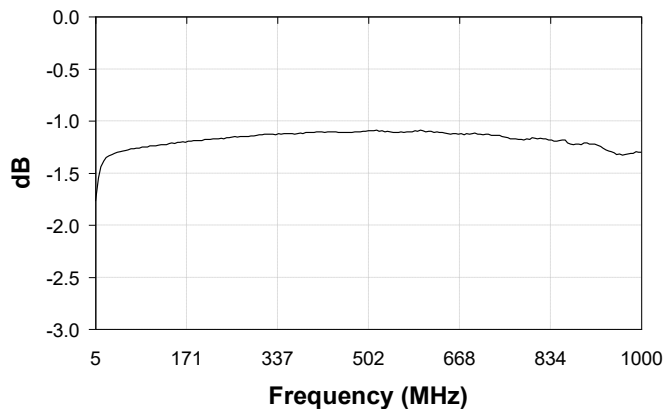
Rev. V5

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

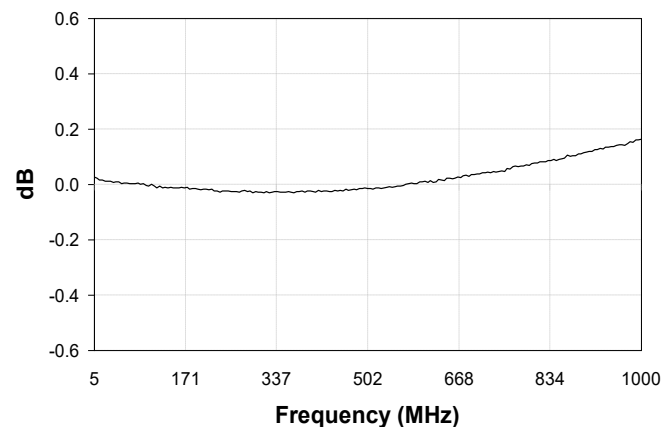
**Insertion Loss 1: coupled pin 4 to pin 1**



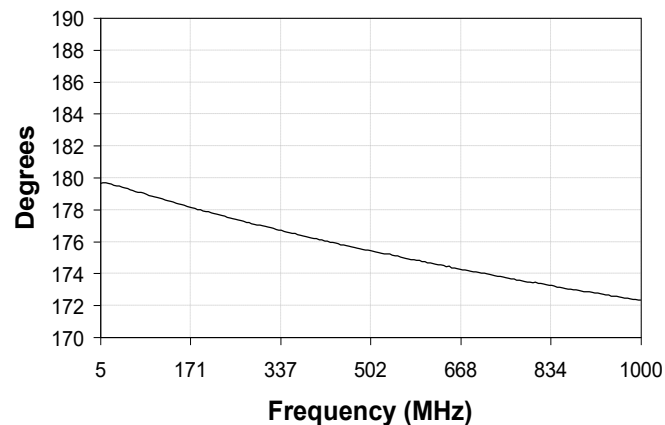
**Insertion Loss 2: coupled pin 4 to pin 3**



**Amplitude Balance**



**Phase Balance**



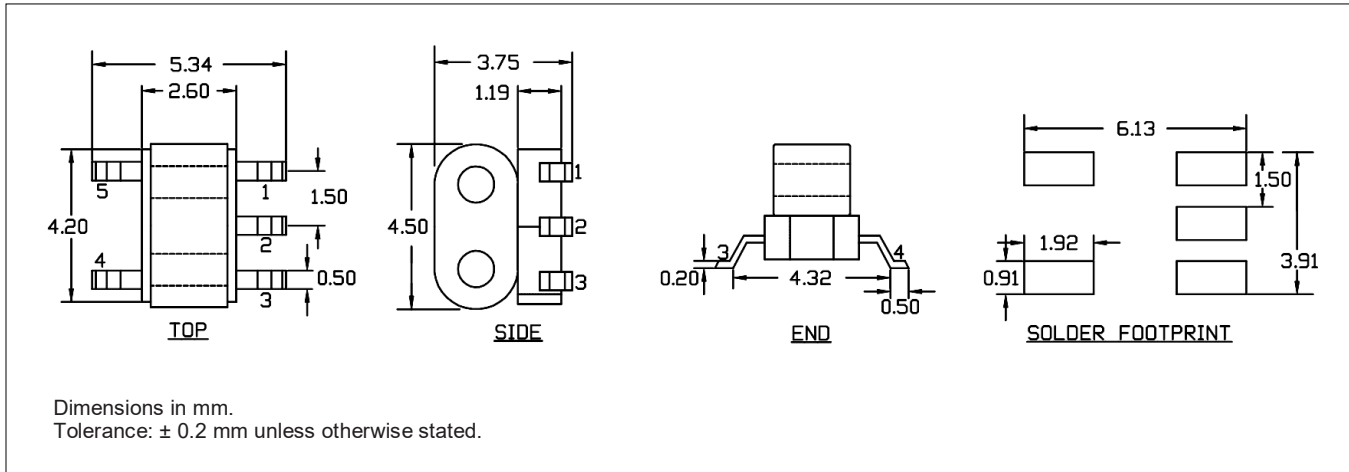
# Transformer, 4:1 Transmission Line 5 - 1000 MHz



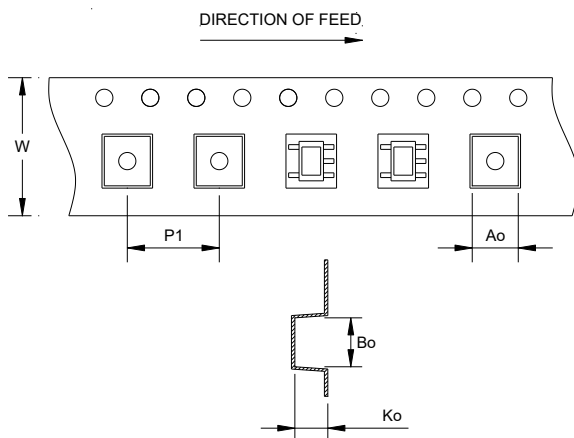
MABACT0066

Rev. V5

## 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		

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



MABACT0066

Rev. V5

MACOM Technology Solutions Inc. ("MACOM"). All rights reserved.

These materials are provided in connection with MACOM's products as a service to its customers and may be used for informational purposes only. Except as provided in its Terms and Conditions of Sale or any separate agreement, MACOM assumes no liability or responsibility whatsoever, including for (i) errors or omissions in these materials; (ii) failure to update these materials; or (iii) conflicts or incompatibilities arising from future changes to specifications and product descriptions, which MACOM may make at any time, without notice. These materials grant no license, express or implied, to any intellectual property rights.

THESE MATERIALS ARE PROVIDED "AS IS" WITH NO WARRANTY OR LIABILITY, EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHT, ACCURACY OR COMPLETENESS, OR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.