

# RoHS Compliant



1:1 Transmission Line Transformer  
5-3000MHz

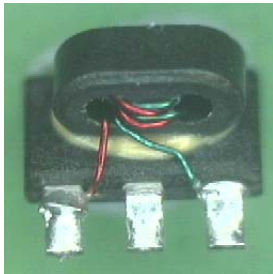
MABACT0039  
V2

## Features

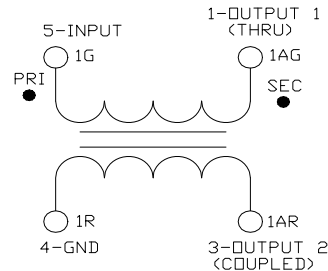
- Surface Mount
- 1:1 Impedance
- 260°C Reflow Compatible
- RoHS\* Compliant
- Available on Tape and Reel. Reel quantity 2000

## Description

M/A-COM's MABACT0039 is a low cost SMT 1:1 Transmission Line Transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems.



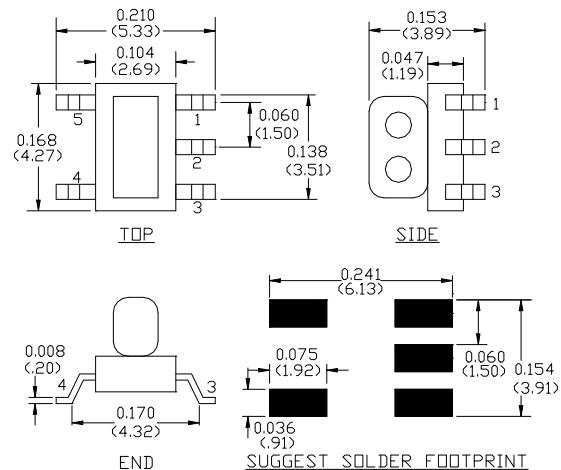
## Schematic



## Pin Configuration

Pin No.	Function
1	Secondary Dot (Output 1)
2	Not Used
3	Secondary (Output 2)
4	Primary (Ground)
5	Primary Dot (Input)

## Case Style: SM-138



## Ordering Information

Part Number	Package
MABACT0039	2000
MABA-008031-CT39TB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

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**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>

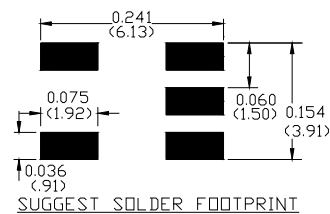
Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss	50 - 2150 MHz	dB	-	1.0	2.0
	5 - 3000 MHz	dB	-	1.5	3.5
Amplitude Balance	50 - 2150 MHz	dB	-	1.0	±2.2
Phase Balance	50 - 2150 MHz	°	-	5.0	±13.0
Input Return Loss	5 - 550 MHz	dB	20	30	-
	550 - 2100 MHz	dB	8	15	-

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

Parameter	Absolute Maximum
RF Power	250 mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

## Recommended PCB Configuration

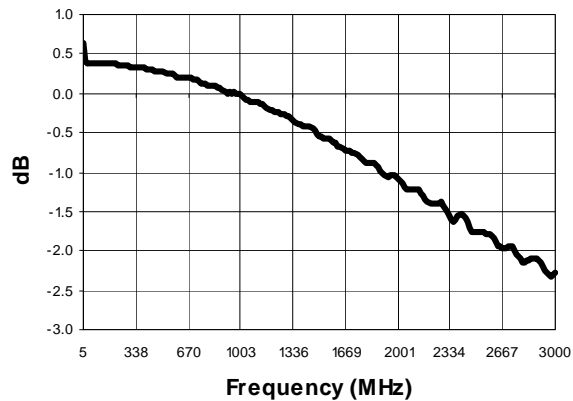


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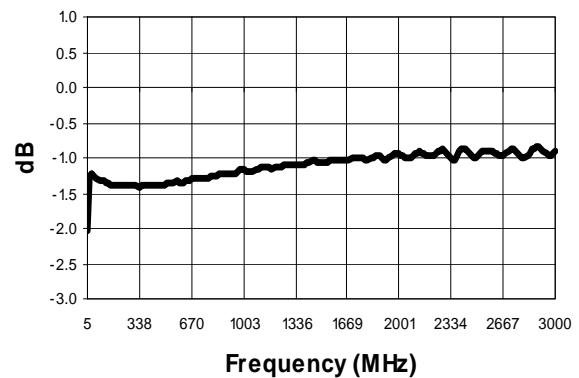
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>

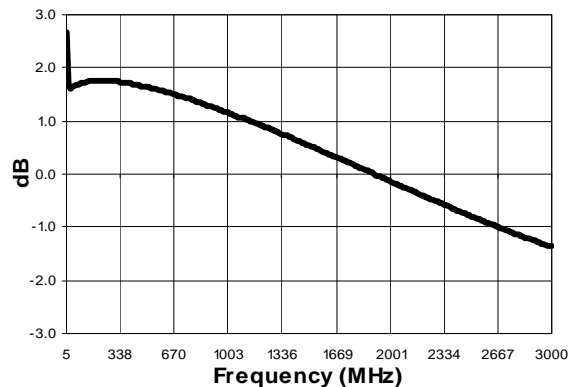
Insertion Loss 1 Pin5-Pin1 (through)



Insertion Loss 2 Pin5-Pin3 (coupled)



Amplitude Balance



Phase Balance

