

# RoHS Compliant



1:1 Transmission Line Transformer  
5-1200MHz

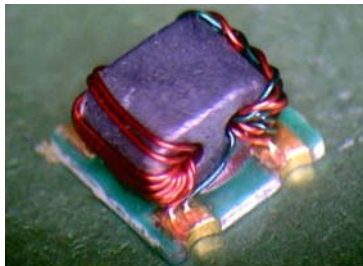
MABACT0060  
V1P

## Features

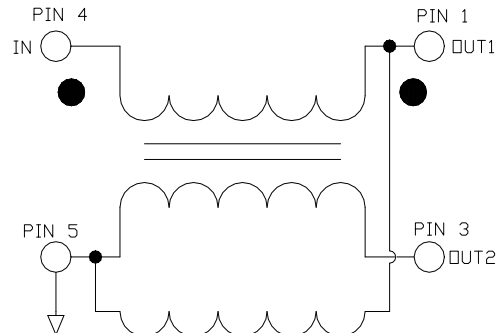
- Surface Mount
- 1:1 Impedance, with tertiary winding.
- Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS\* Compliant
- Available on Tape and Reel. Reel quantity 2000

## Description

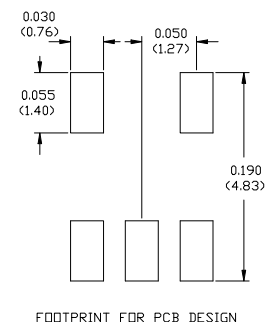
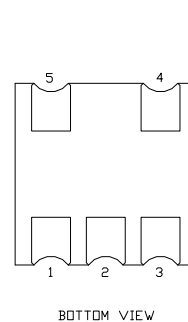
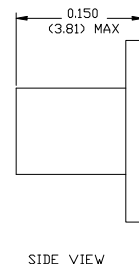
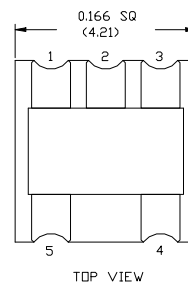
M/A-COM's MABACT0060 is a 1:1 RF transmission line balun transformer in a low cost, surface mount package. The tertiary winding improves amplitude and phase balance. Ideally suited for high volume CATV/Broadband applications.



## Schematic



## Case Style: SM-164



## Pin Configuration

Pin No.	Function
1	Secondary Dot (output 2)
2	Not Connected (ground)
3	Secondary (output 1)
4	Primary Dot (input)
5	Primary (ground)

## Ordering Information

Part Number	Package
MABACT0060TR	2000 piece reel

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

**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.  
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V1P

Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$ <sup>1</sup>

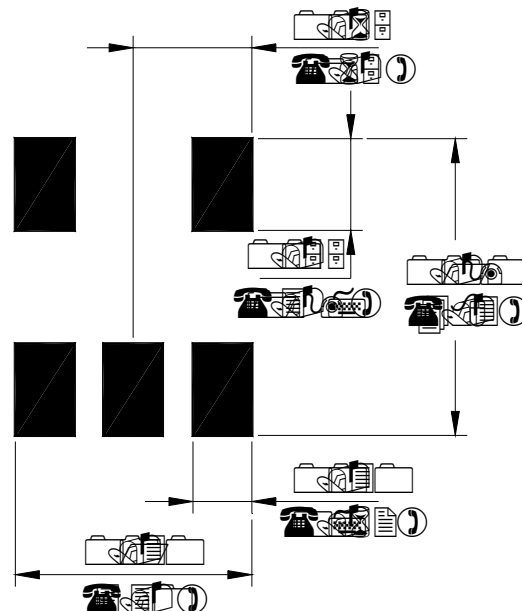
Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 1000 MHz	dB	-	0.6	1.0
Insertion Loss	1000 - 1200 MHz	dB	-	0.8	1.1
Amplitude Unbalance (Nominal 0dB)	5 - 50 MHz	dB	-	0.35	± 0.8
Amplitude Unbalance (Nominal 0dB)	50 - 1200 MHz	dB	-	0.1	± 0.5
Phase Unbalance (Nominal 180°)	5 - 50 MHz	°	-	3	± 13.0
Phase Unbalance (Nominal 180°)	50 - 1000 MHz	°	-	2	± 4.5
Phase Unbalance (Nominal 180°)	1000 - 1200 MHz	°	-	3	± 10.0
Input Return Loss	5 - 50 MHz	dB	18	24	-
Input Return Loss	50 - 1200 MHz	dB	10	13	-

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

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	240mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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

## Recommended PCB Configuration



# RoHS Compliant

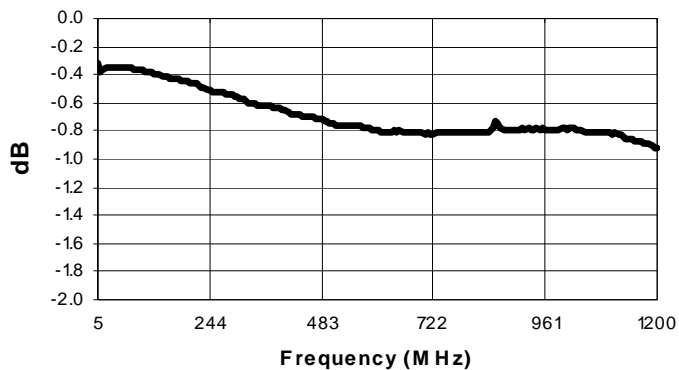


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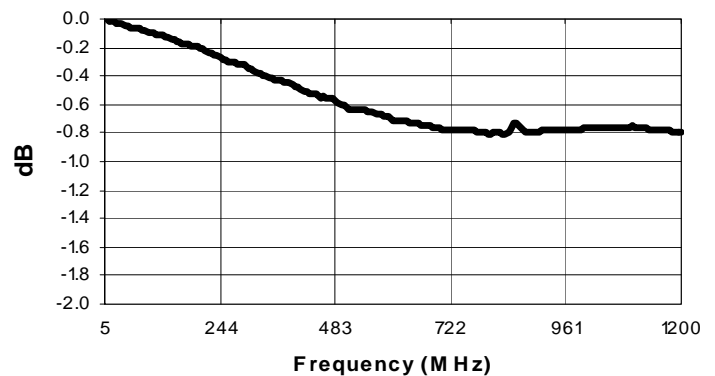
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## Typical Performance Curves, $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$

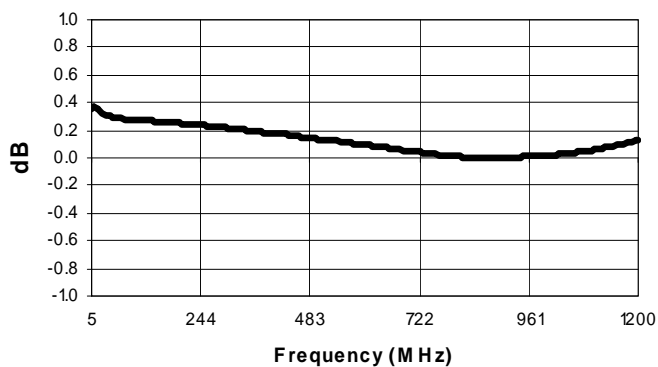
Insertion Loss 1 (through pin 4 to pin 3)



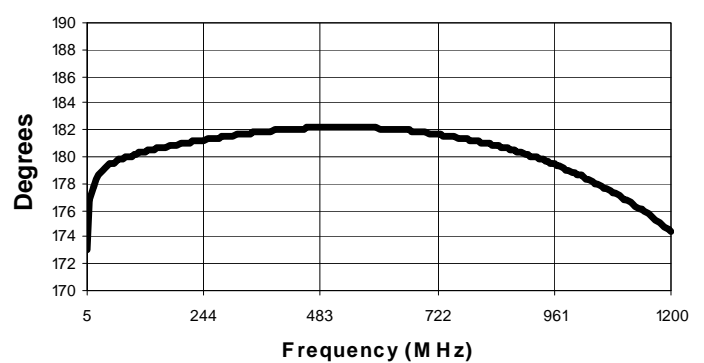
Insertion Loss 2 (coupled pin 4 to pin 1)



Amplitude Unbalance



Phase Balance



Input Return Loss

