

# RoHS Compliant



1:1 Flux Coupled Transformer  
0.3-200MHz

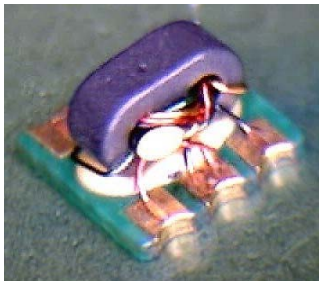
MABACT0071  
V1

## Features

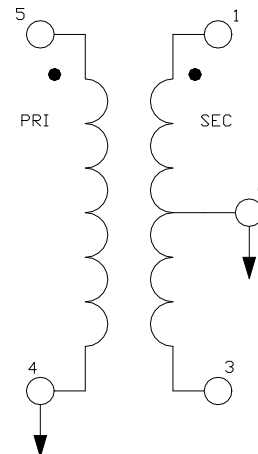
- Surface Mount
- 1:1 Impedance
- Centre tap on secondary
- 260°C Reflow Compatible
- RoHS\* Compliant
- Available on Tape and Reel. Reel quantity 2000

## Description

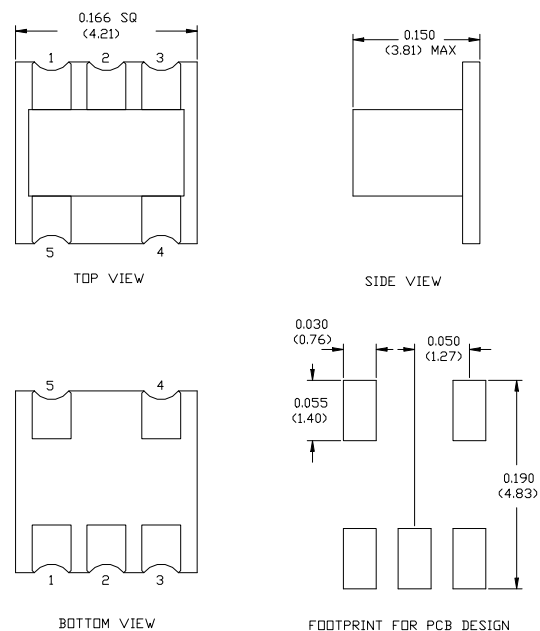
M/A-COM's MABACT0071 is a 1:1 RF flux coupled transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.



## Schematic



## Case Style: SM-164



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

## Pin Configuration

Pin No.	Function
1	Secondary Dot
2	Secondary centre tap
3	Secondary
4	Primary
5	Primary Dot

## Ordering Information

Part Number	Package
MABACT0071TR	2000 piece reel
MABA-008350-CT71TB	Customer test board

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

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

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

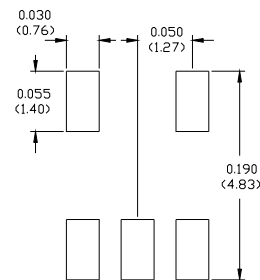
Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss 1 (Pin 1-5)	0.3 - 5 MHz	dB	-	1.0	2.6
	5 - 200 MHz	dB	-	0.5	0.9
Insertion Loss 2 (Pin 3-5)	0.3 - 10 MHz	dB	-	1.0	2.6
	10 - 200 MHz	dB	-	0.4	0.75
Amplitude Unbalance (Nominal 0dB)	0.3 - 200 MHz	dB	-	$\pm 0.1$	$\pm 0.3$
Phase Unbalance (Nominal 180°)	0.3 - 200 MHz	°	-	$\pm 0.3$	$\pm 3.0$
Input Return Loss	0.3 - 5 MHz	dB	5	13	-
	5 - 120 MHz	dB	19	27	-
	120 - 200 MHz	dB	15	21	-

**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**



FOOTPRINT FOR PCB DESIGN

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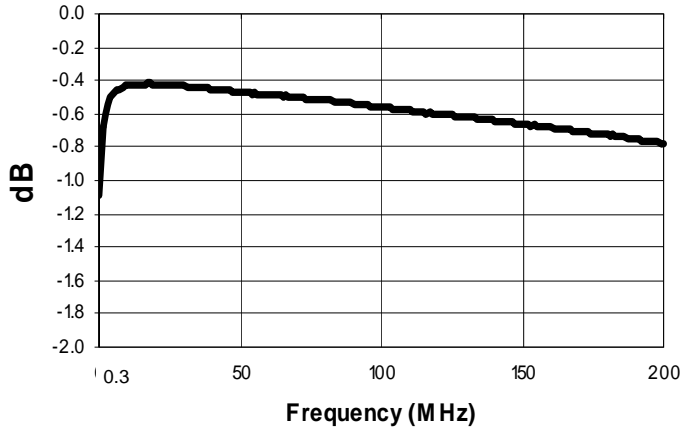


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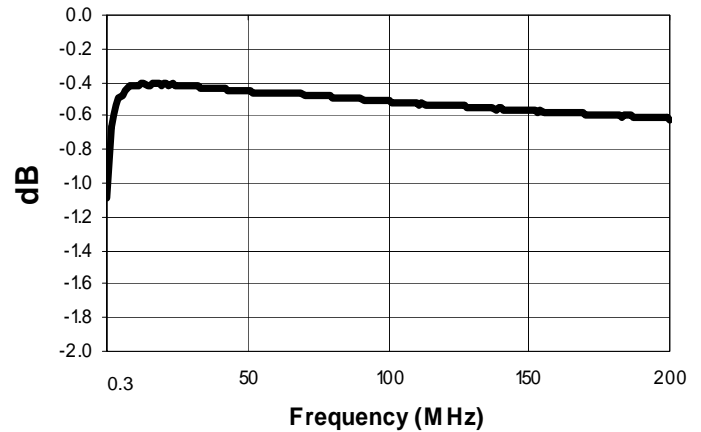
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>

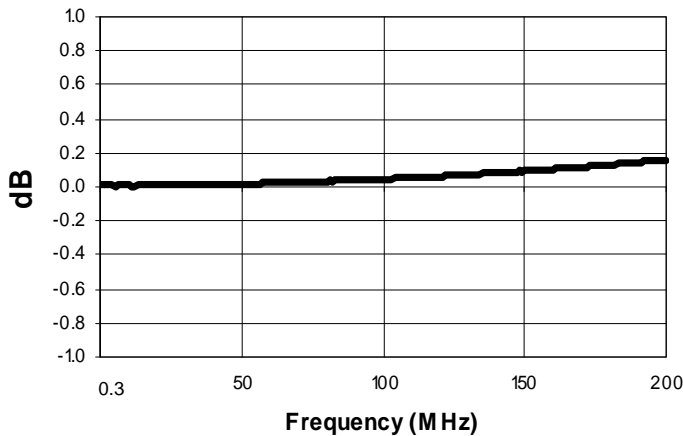
Insertion Loss 1: (Pin 5 to 1)



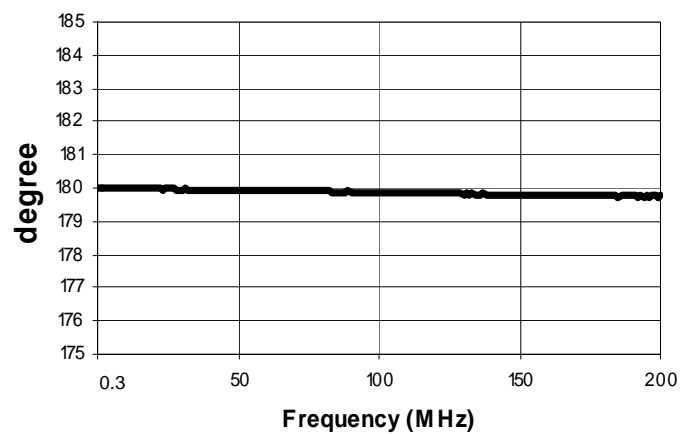
Insertion Loss 2: (Pin 5 to 3)



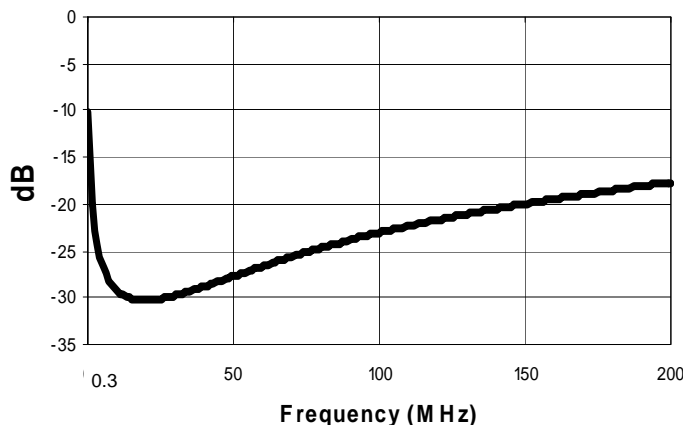
Amplitude Unbalance



Phase Balance



Input Return Loss



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