

**1:1 Transmission Line Transformer  
4.5-2000MHz**

**MABACT0056  
V1P**

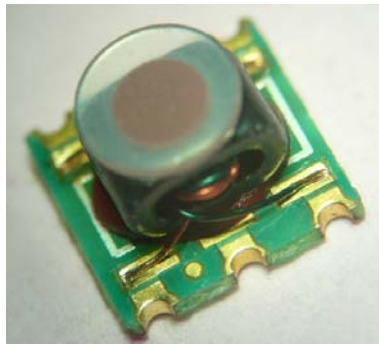
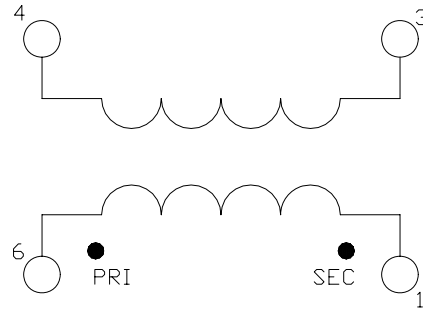
**Features**

- Surface Mount
- 1:1 Impedance Ratio
- Available on Tape and Reel. Reel quantity 2500
- RoHs Version of MABAES0018

**Description**

M/A-COM's MABACT0056 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for high volume CATV/ Broadband applications.

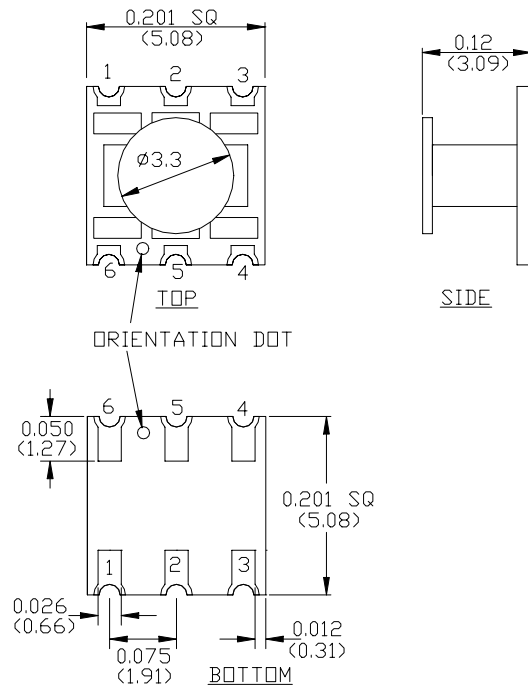
**Schematic**



**Pin Configuration**

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

**Case Style: SM-136**



Dimensions in inches (mm) Tolerance: .xx ± .02, .xxx ± .010

**Ordering Information**

Part Number	Package
MABACT0056TR	2500 piece reel
MABA-007975-CT56TB	Customer Test Board

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

1

M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

**1:1 Transmission Line Transformer  
4.5-2000MHz**

**MABACT0056  
V1P**

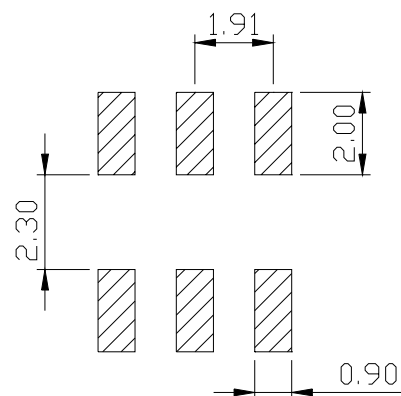
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>**

Parameter	Frequency	Units	Min	Typ	Max	Mean(x)	Sigma( $\sigma$ )
Insertion Loss	4.5 - 1100 MHz	dB	-	0.10	1.0	-	-
	1100 - 1800 MHz	dB	-	0.95	2.0	0.32	0.036
	1800 - 2000 MHz	dB	-	1.30	2.5	-	-
Amplitude Unbalance (Nominal 0dB)	4.5 - 1100 MHz	dB	-	0.3	$\pm 1.0$	-	-
	1100 - 2000 MHz	dB	-	0.7	$\pm 1.5$	-	-
Phase Unbalance (Nominal 180°)	4.5 - 50 MHz	°	-	6.0	$\pm 15$	-	-
	50 - 1500 MHz	°	-	4.0	$\pm 7$	-	-
	1500 - 2000 MHz	°	-	7.0	$\pm 20$	-	-
Input Return Loss	4.5 - 200MHz	dB	20	35	-	-	-
	200 - 1000MHz	dB	12	18	-	-	-
	1000 - 2000MHz	dB	6	13	-	-	-

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

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

**Recommended PCB Configuration**

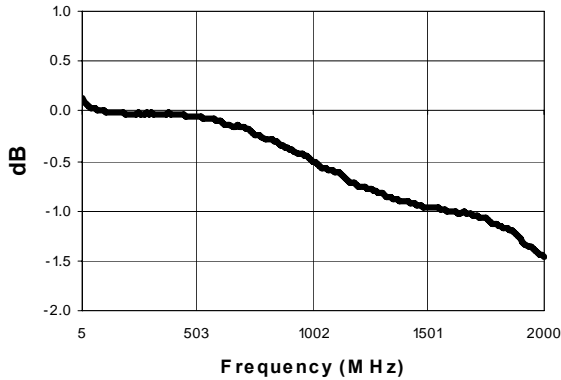


Dimensions in mm

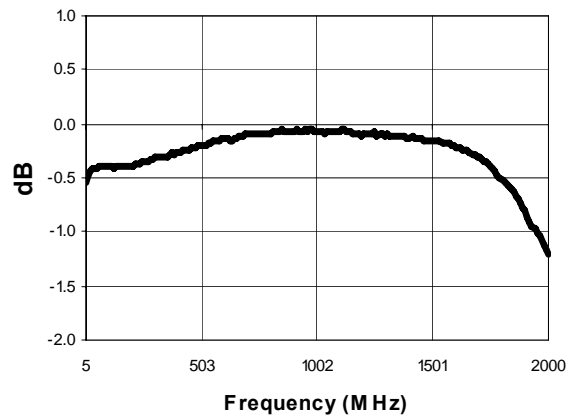
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

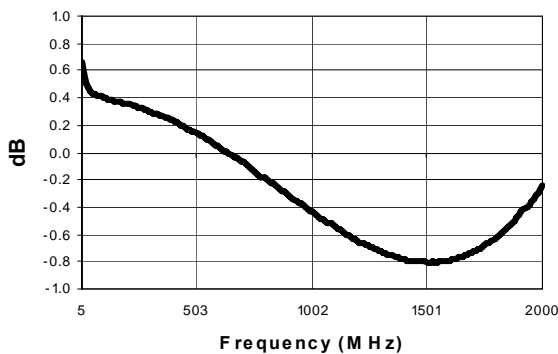
**Insertion Loss 1: Pin 4 to Pin 3**



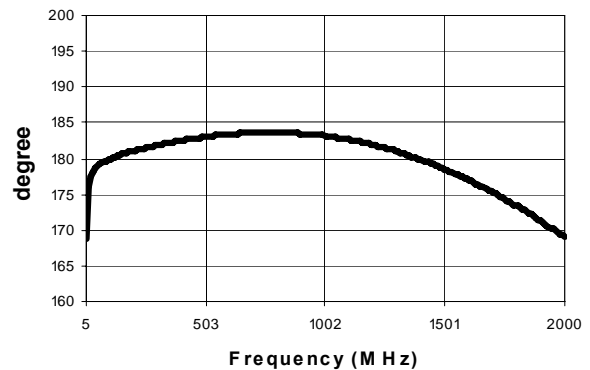
**Insertion Loss 2: Pin 4 to Pin 1**



**Amplitude Unbalance**



**Phase Unbalance**



**Input Return Loss**

