

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

**MABACT0056
V1P**

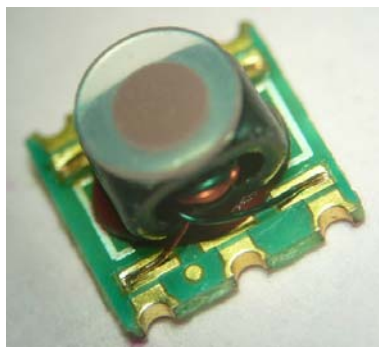
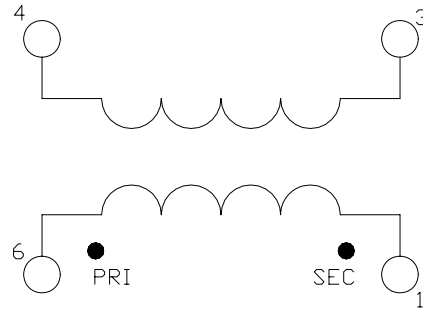
Features

- 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.

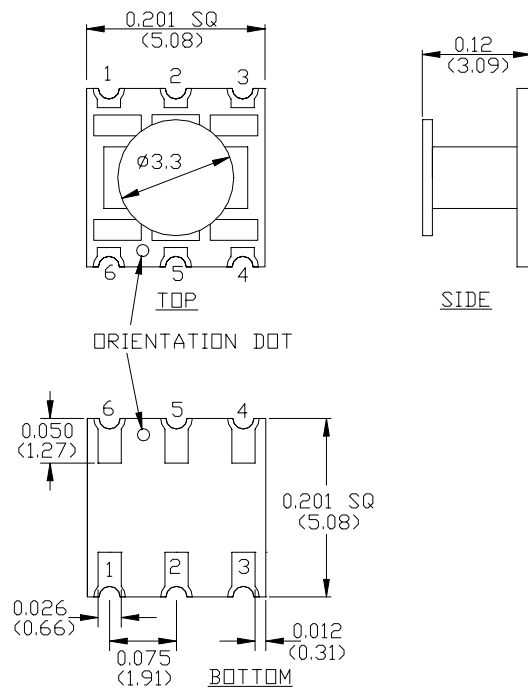
Schematic



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.

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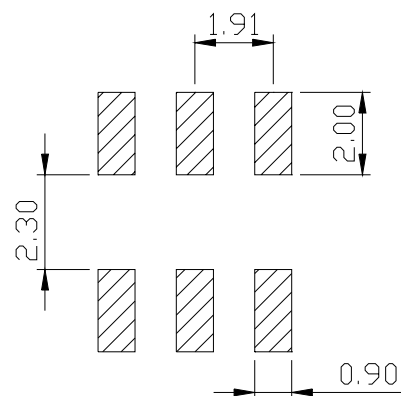
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

Parameter	Frequency	Units	Min	Typ	Max	Mean(x)	Sigma(σ)
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	± 1.0	-	-
	1100 - 2000 MHz	dB	-	0.7	± 1.5	-	-
Phase Unbalance (Nominal 180°)	4.5 - 50 MHz	°	-	6.0	± 15	-	-
	50 - 1500 MHz	°	-	4.0	± 7	-	-
	1500 - 2000 MHz	°	-	7.0	± 20	-	-
Input Return Loss	4.5 - 200MHz	dB	20	35	-	-	-
	200 - 1000MHz	dB	12	18	-	-	-
	1000 - 2000MHz	dB	6	13	-	-	-

Absolute Maximum Ratings ^{1,2}

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

- 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.

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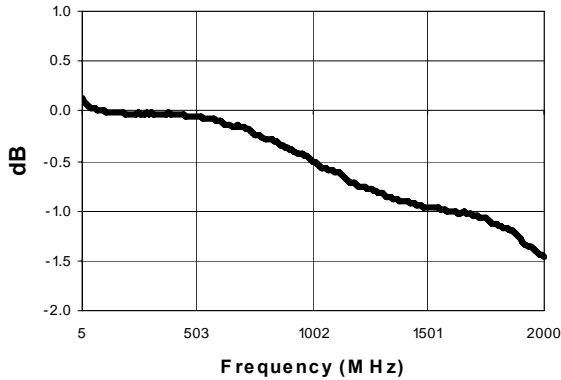
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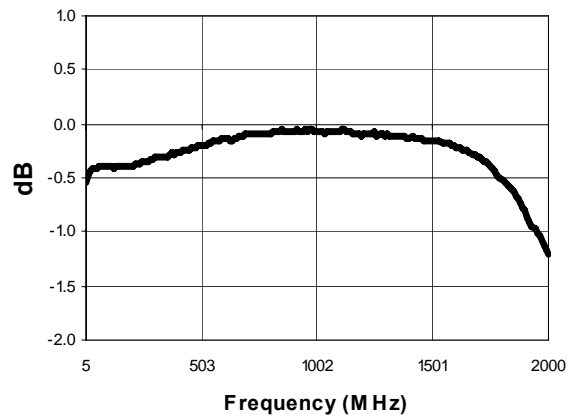
Visit www.macom.com for additional data sheets and product information.

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

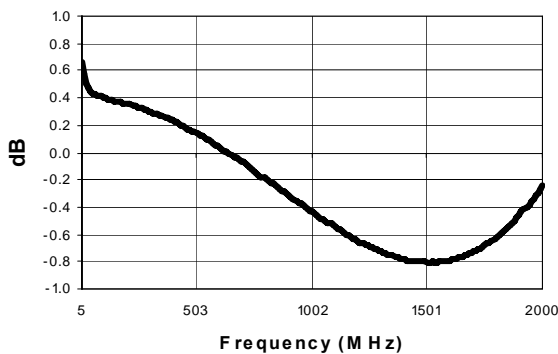
Insertion Loss 1: Pin 4 to Pin 3



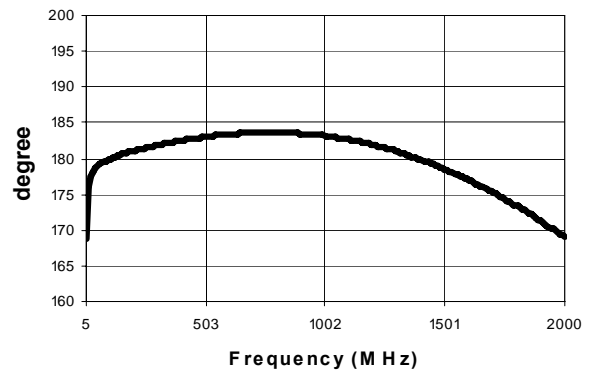
Insertion Loss 2: Pin 4 to Pin 1



Amplitude Unbalance



Phase Unbalance



Input Return Loss

