tyco Electronics

RoHS Compliant

MACOM

1:1 Transmission Line Transformer 4.5-2000MHz

MABACT0056
V1P

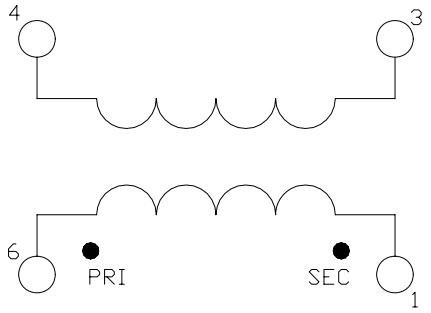
Features

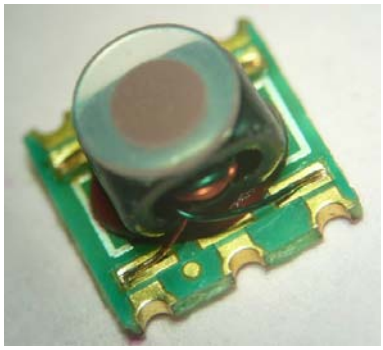
- Surface Mount
- 1:1 Impedance Ratio
- Available on Tape and Reel. Reel quantity 2500
- RoHs Version of MABAES0018

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

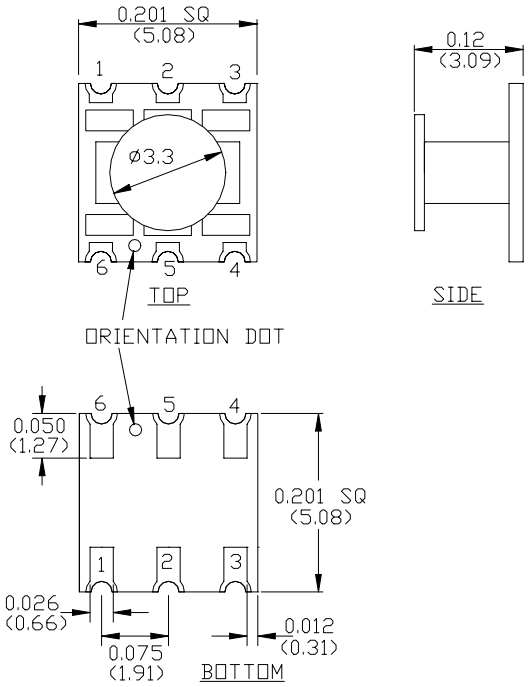




Pin Configuration

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.

- **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 for additional data sheets and product information.

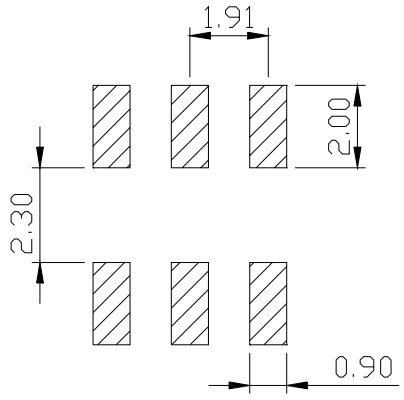
Electrical Specifications: T_A = 25°C, Z_0 = 75Ω [1]

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

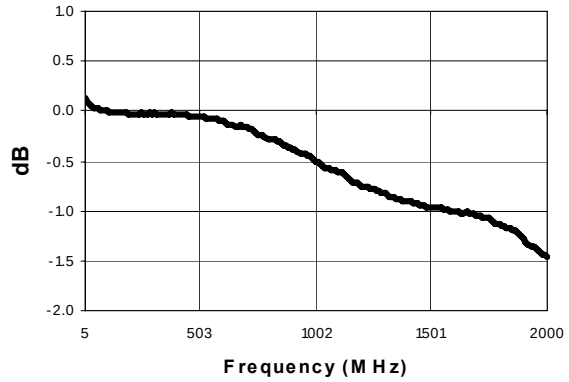
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

• **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

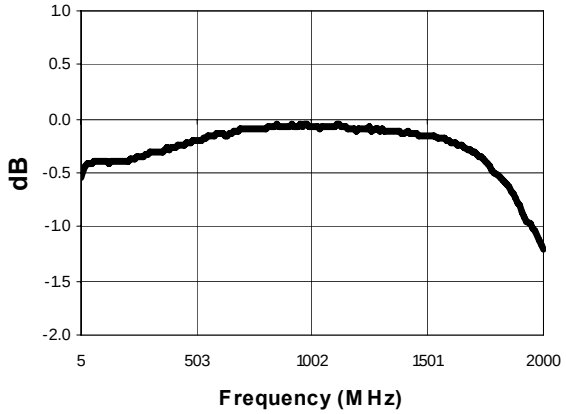
Visit www.macom.com for additional data sheets and product information.

Typical Performance Curves: T_A = 25°C, Z_0 = 75Ω [1]

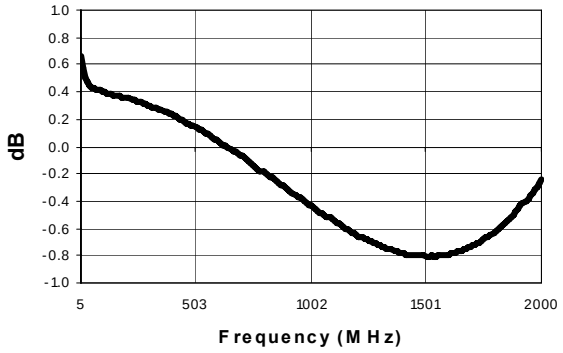
Insertion Loss 1: Pin 4 to Pin 3



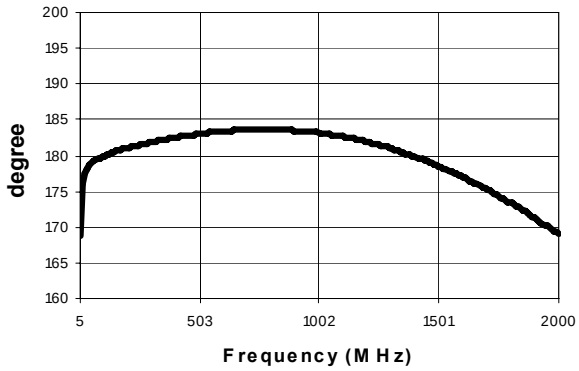
Insertion Loss 2: Pin 4 to Pin 1



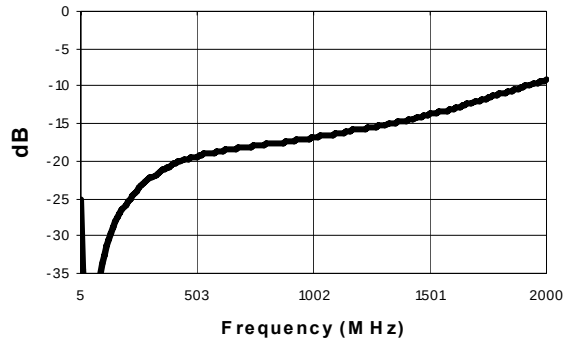
Amplitude Unbalance



Phase Unbalance



Input Return Loss



- **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 for additional data sheets and product information.