tyco Electronics

RoHS Compliant

MACOM

1:1 Transmission Line Transformer 5-1200MHz

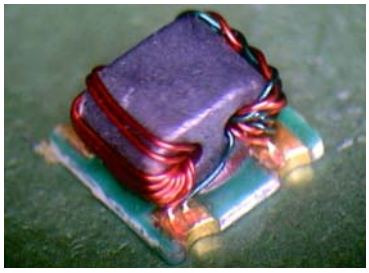
MABACT0060
V1P

Features

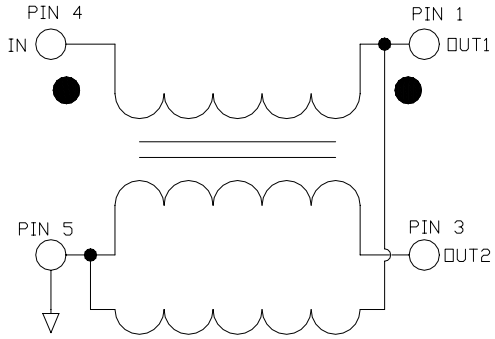
- Surface Mount
- 1:1 Impedance, with tertiary winding.
- Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel. Reel quantity 2000

Description

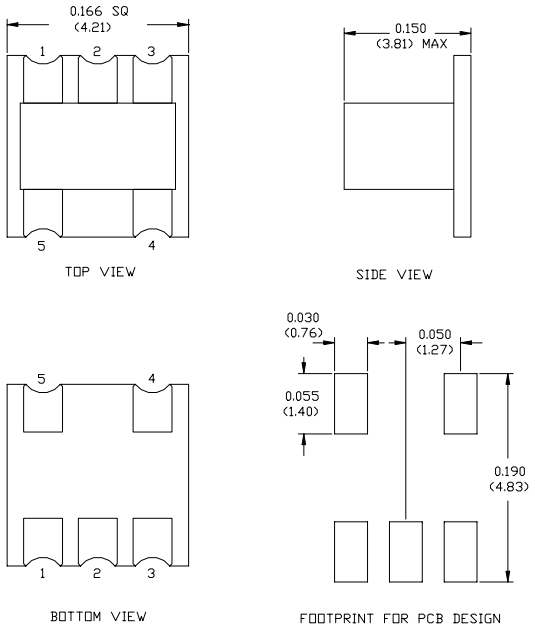
M/A-COM's MABACT0060 is a 1:1 RF transmission line balun transformer in a low cost, surface mount package. The tertiary winding improves amplitude and phase balance. Ideally suited for high volume CATV/Broadband applications.



Schematic



Case Style: SM-164



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

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.

- **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 = 50Ω [1]

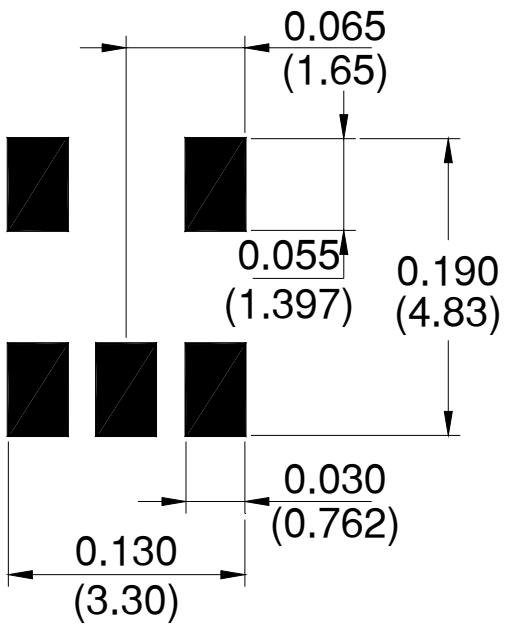
Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 1000 MHz	dB	-	0.6	1.0
Insertion Loss	1000 - 1200 MHz	dB	-	0.8	1.1
Amplitude Unbalance (Nominal 0dB)	5 - 50 MHz	dB	-	0.35	± 0.8
Amplitude Unbalance (Nominal 0dB)	50 - 1200 MHz	dB	-	0.1	± 0.5
Phase Unbalance (Nominal 180º)	5 - 50 MHz	º	-	3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

Absolute Maximum Ratings [1,2]

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

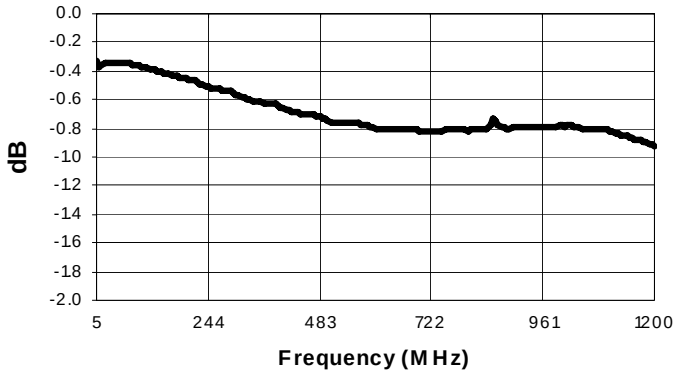


• **North America** Tel: 800.366.2266 / Fax: 978.366.2266
• **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
• **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

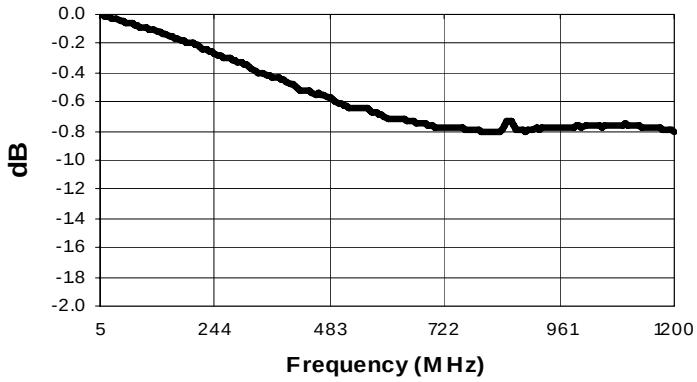
Visit www.macom.com for additional data sheets and product information.

Typical Performance Curves, T_A = 25°C, Z_0 = 50Ω

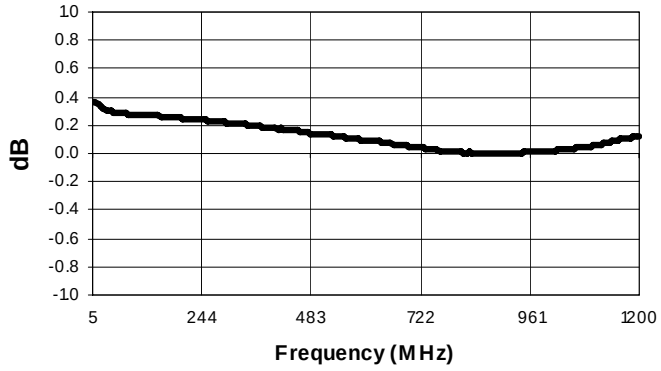
Insertion Loss 1 (through pin 4 to pin 3)



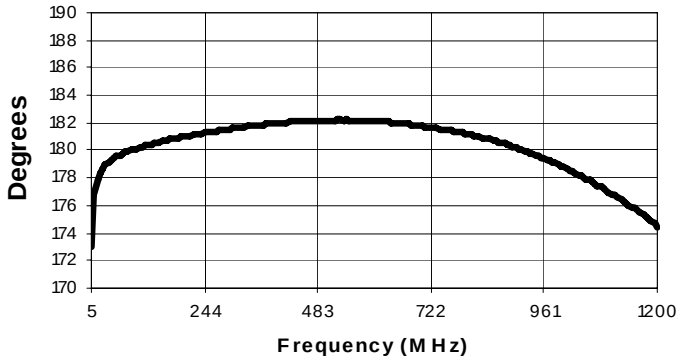
Insertion Loss 2 (coupled pin 4 to pin 1)



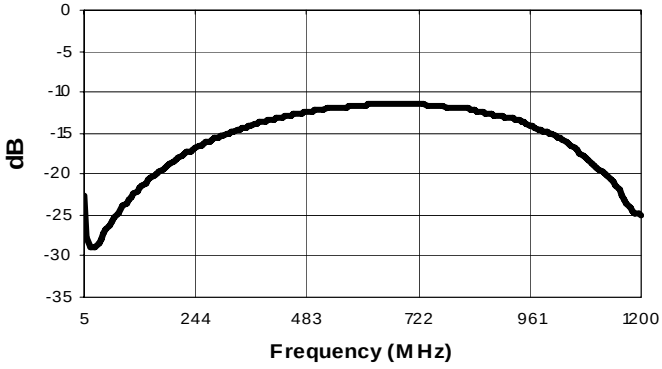
Amplitude Unbalance



Phase Balance



Input Return Loss



- **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.