RoHS Compliant

1:1 Transmission Line Transformer, with center tap 5-1000MHz

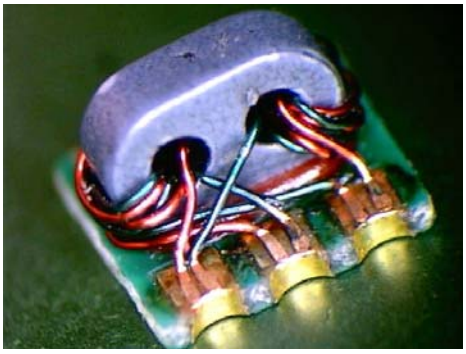
MABACT0040
V1P

Features

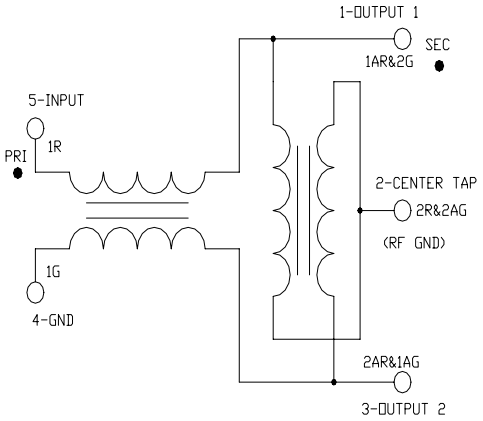
- Surface Mount
- 1:1 Impedance
- Centre tap on secondary
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel. Reel quantity 2000

Description

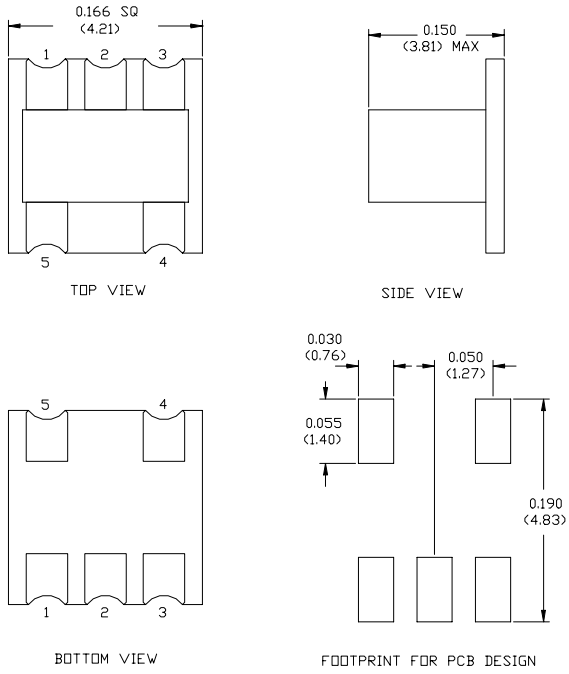
M/A-COM's MABACT0040 is a 1:1 RF Transmission Line transformer in a low cost, surface mount package. Excellent Return Loss. Ideally suited for high volume CATV/Broadband applications.



Schematic



Case Style: SM-164



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

Pin Configuration

Pin No.	Function
1	Secondary Dot (Output 1)
2	Secondary centre tap (Ground)
3	Secondary (Output 2)
4	Primary (Ground)
5	Primary Dot (Input)

Ordering Information

Part Number	Package
MABACT0040TR	2000 piece reel

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

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

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
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RoHS Compliant

1:1 Transmission Line Transformer, with center tap
5-1000MHz

MABACT0040
V1P

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

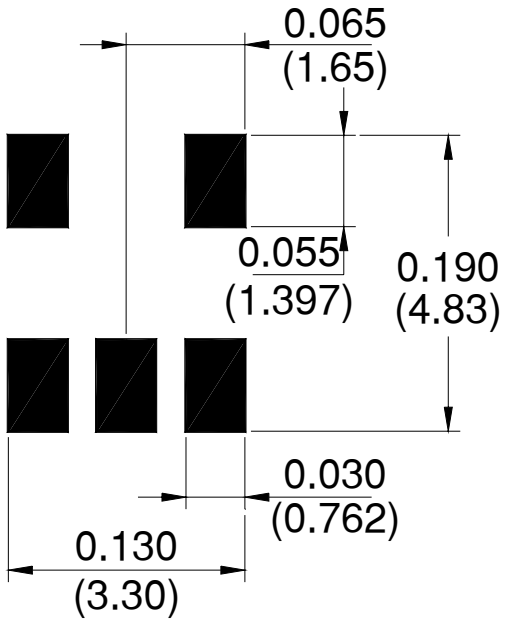
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	-	5 - 1000 MHz	dB	-	1.1	1.6
Amplitude Unbalance (Nominal 0dB)	-	5 - 1000 MHz	dB	-	±0.1	±0.5
Phase Unbalance (Nominal 180º)	-	5 - 1000 MHz	º	-	5	±10
Input Return Loss	-	5 - 1000 MHz	dB	16	24	-

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



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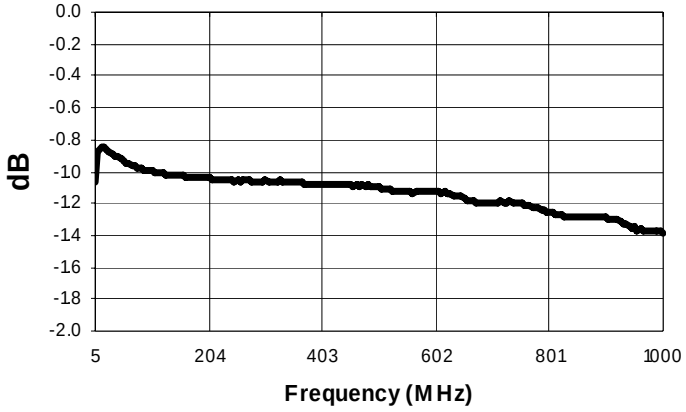
RoHS Compliant

1:1 Transmission Line Transformer, with center tap
5-1000MHz

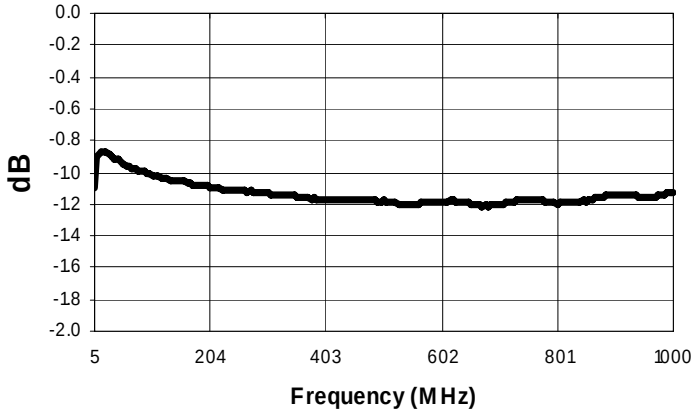
MABACT0040
V1P

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

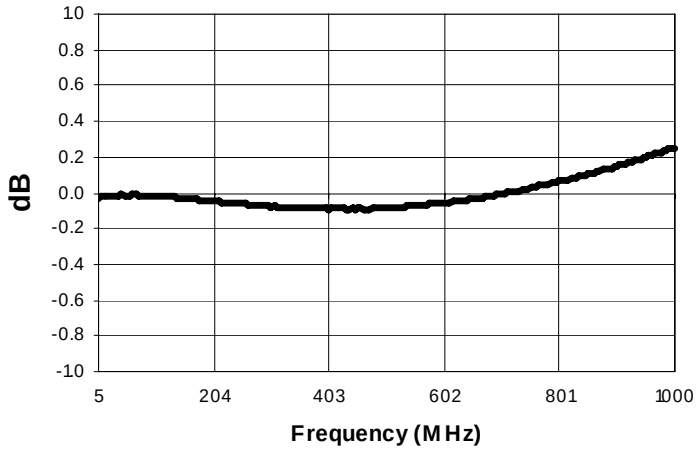
Insertion Loss 1: Pin 5 to 1



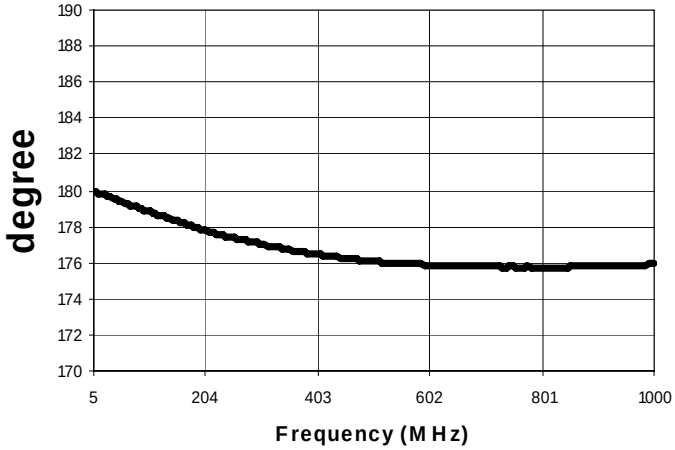
Insertion Loss 2: Pin 5 to 3



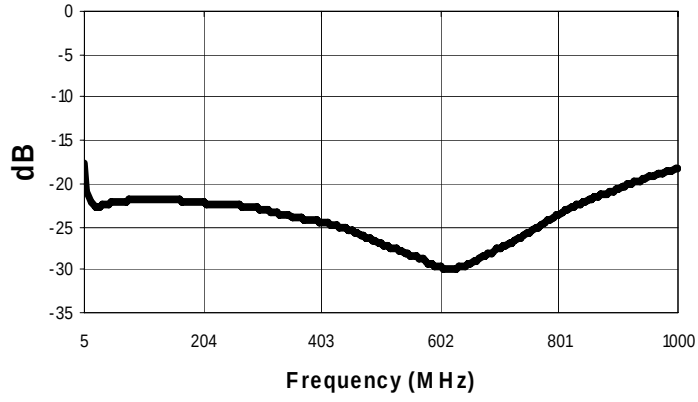
Amplitude Unbalance



Phase Balance



Input Return Loss



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