



MABACT0061

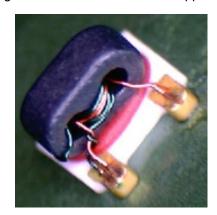
# 4:1 Auto Transformer 5-1200MHz

#### **Features**

- Surface Mount
- 4:1 Impedance, unbalanced to unbalanced
- 260°C Reflow Compatible
- RoHS\* Compliant
- Available on Tape and Reel. Reel quantity 2000

## **Description**

M/A-COM's MABACT0061 is a 4:1 Auto transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.



# **Pin Configuration**

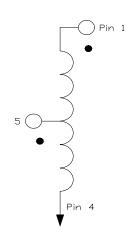
| Pin No. | Function                     |  |
|---------|------------------------------|--|
| 1       | Secondary Dot (e.g. 200 Ohm) |  |
| 2       | Not connected (ground)       |  |
| 3       | Not connected (ground)       |  |
| 4       | Primary & Secondary (ground) |  |
| 5       | Primary Dot (e.g. 50 Ohms)   |  |

## **Ordering Information**

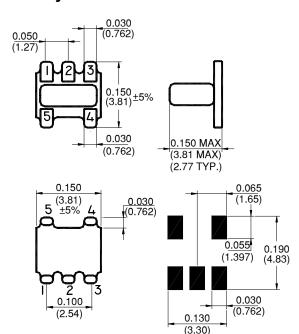
| Part Number  | Package         |
|--------------|-----------------|
| MABACT0061TR | 2000 piece reel |
|              |                 |

Note: Reference Application Note M513 for reel size information.

#### **Schematic**



Case Style: SM-22



Dimensions in inches [mm] Tolerance:  $.xx \pm .02$ ,  $.xxx \pm .010$ 

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<sup>\*</sup> Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.





**4:1 Auto Transformer** 5-1200MHz

MABACT0061

Electrical Specifications:  $T_A = 25^{\circ}C$ ,  $Z_0 = 50\Omega^{1}$ 

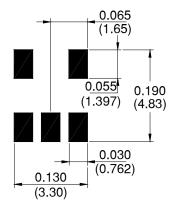
| Test Conditions | Units  | Min  | Тур  | Max   |
|-----------------|--|--|--|---|
| 5 - 600 MHz     | dB   | -  | 1.2  | 1.5   |
| 600 - 1000 MHz  | dB   | -  | 1.6  | 2.1   |
| 1000 - 1200 MHz | dB   | -  | 2.1  | 2.6   |
| 5 - 20 MHz      | dB   | 9  | 11   | -   |
| 20 - 120 MHz    | dB   | 11   | 13   | -   |
| 120 - 1000 MHz  | dB   | 5  | 10   | -   |
| 1000 - 1200 MHz | dB   | 4  | 5  | -   |
|                 |  |  |  |   |
|                 |  |  |  |   |
|                 |  |  |  |   |
|                 |  |  |  |   |
|                 | 5 - 600 MHz<br>600 - 1000 MHz<br>1000 - 1200 MHz<br>5 - 20 MHz<br>20 - 120 MHz<br>120 - 1000 MHz | 5 - 600 MHz dB<br>600 - 1000 MHz dB<br>1000 - 1200 MHz dB<br>5 - 20 MHz dB<br>20 - 120 MHz dB<br>120 - 1000 MHz dB | 5 - 600 MHz dB - 600 - 1000 MHz dB - 1000 - 1200 MHz dB - 5 - 20 MHz dB 9 20 - 120 MHz dB 11 120 - 1000 MHz dB 5 | 5 - 600 MHz dB - 1.2 600 - 1000 MHz dB - 1.6 1000 - 1200 MHz dB - 2.1 5 - 20 MHz dB 9 11 20 - 120 MHz dB 11 13 120 - 1000 MHz dB 5 10 |

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

| 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.
- M/A-COM does not recommend sustained operation near these survivability limits.

# **Recommended PCB Configuration**



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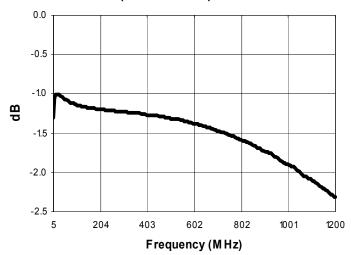


**4:1 Auto Transformer** 5-1200MHz

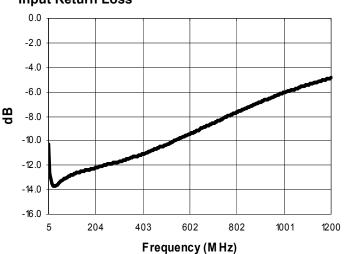
MABACT0061 V<sub>1</sub>P

Typical Performance Curves:  $T_A = 25^{\circ}C$ ,  $Z_0 = 50\Omega^{1}$ 

## Insertion Loss (Pin 5 to Pin 1)



## **Input Return Loss**



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