# MABACT0062



1:1 Transformer

3 - 200 MHz Rev. V6

#### **Features**

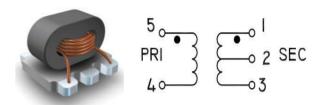
- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be used in both 50  $\Omega$  & 75  $\Omega$  Systems
- 260°C Reflow Compatible
- RoHS Compliant Version of ETC1-1T & MABACT0012
- · Available on Tape & Reel

## **Description**

MABACT0062 is a 1:1 RF flux coupled transformer in a surface mount package.

Ideally suited for high volume CATV/Broadband applications.

#### **Schematic**



### **Pin Configuration**

| Pin # | Function      |  |  |
|-------|---------------|--|--|
| 1     | Secondary Dot |  |  |
| 2     | Secondary CT  |  |  |
| 3     | Secondary     |  |  |
| 4     | Primary       |  |  |
| 5     | Primary Dot   |  |  |

## Electrical Specifications: $T_A = 25$ °C, $Z_0 = 50 \Omega P_{IN} = 0 dBm$

| Parameter                        | Frequency Test Conditions (MHz) | Units | Min.     | Тур.              | Max.              |
|----------------------------------|---------------------------------|-------|----------|-------------------|-------------------|
| Insertion Loss                   | 3 - 50<br>50 - 160<br>160 - 200 | dB    | _        | 0.2<br>0.5<br>0.8 | 0.5<br>1.0<br>1.2 |
| Amplitude Balance (Nominal 0 dB) | 3 - 50<br>50 - 200              | dB    | _        | 0.02<br>0.06      | ±0.1<br>±0.5      |
| Phase Balance (Nominal 180°)     | 3 - 50<br>50 - 200              | 0     | _        | 0.2<br>0.5        | ±1.5<br>±5.0      |
| Input Return Loss                | 3 - 200<br>5 - 100              | dB    | 10<br>15 | 20<br>25          | _                 |

## Electrical Specifications: $T_A = 25$ °C, $Z_0 = 75 \Omega P_{IN} = 0 dBm$

| Parameter                        | Frequency Test Conditions (MHz)          | Units | Min.                 | Тур.                 | Max.              |
|----------------------------------|--|-------|----------------------|----------------------|-------------------|
| Insertion Loss                   | 3 - 5<br>5 - 65<br>65 - 200              | dB    | _                    | 0.5<br>0.4<br>0.6    | 1.0<br>0.6<br>1.0 |
| Amplitude Balance (Nominal 0 dB) | 3 - 65<br>65 - 200                       | dB    | _                    | 0.02<br>0.04         | ±0.2<br>±0.3      |
| Phase Balance (Nominal 180°)     | 3 - 65<br>65 - 200                       | o     | _                    | 0.4<br>1.2           | ±2.0<br>±5.0      |
| Input Return Loss                | 3 - 5<br>5 - 65<br>65 - 100<br>100 - 200 | dB    | 18<br>21<br>19<br>14 | 24<br>29<br>25<br>20 | _                 |

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## **Ordering information**

| Part #             | Description         |  |
|--------------------|---------------------|--|
| MABACT0062         | 2000 piece reel     |  |
| MABA-008115-CT62TB | Customer Test Board |  |

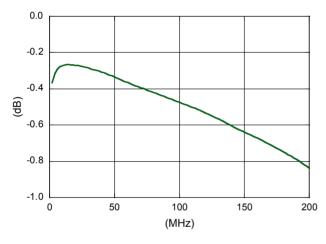
Reference Application Note M513 for reel size information.

### **Recommended Maximum Ratings**

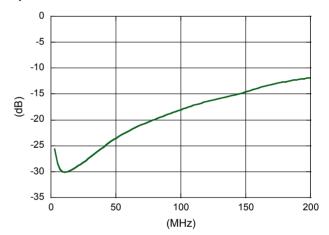
| Parameter             | Value           |
|-----------------------|-----------------|
| Input Power           | 250 mW          |
| DC Current            | 200 mA          |
| Operating Temperature | -40°C to +85°C  |
| Storage Temperature   | -55°C to +125°C |

## Typical Performance Curves: $T_A = 25^{\circ}C$ , $Z_0 = 50 \Omega P_{IN} = 0 dBm$

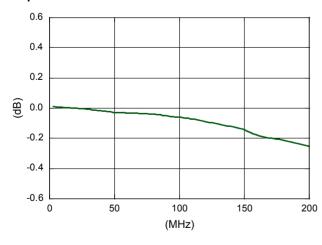
#### Insertion Loss



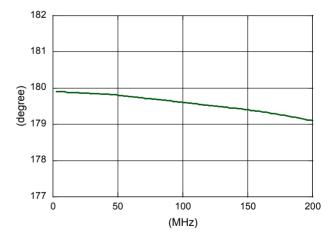
#### Input Return Loss



#### Amplitude Balance



#### Phase Balance

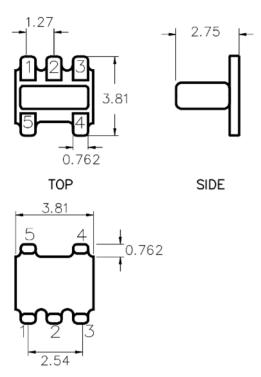




1:1 Transformer

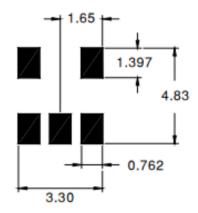
3 - 200 MHz Rev. V6

#### **Outline Drawing**



- 1. Dimensions in mm.
- 2. Tolerance: ±0.2 mm unless otherwise noted.
- 3. Model number and lot code are printed on the reel.

## **Recommended Footprint**



**Tape & Reel Information** 

| Parameter  | Units | Value |  |
|--|-------|-------|--|
| Qty per reel                                       | -     | 2000  |  |
| Reel Size  | mm    | 330   |  |
| Tape Width   | mm    | 12.00 |  |
| Pitch  | mm    | 8.00  |  |
| Ao   | mm    | 4.00  |  |
| Во   | mm    | 4.00  |  |
| Ko   | mm    | 2.90  |  |
| Orientation  | -     | F5    |  |
| Reference Application Note ANI-019 for orientation |       |       |  |

Reference Application Note ANI-019 for orientation

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