

## 1:1 Transformer 3 - 200 MHz

Rev. V5

### Features

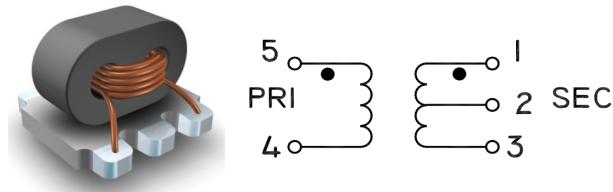
- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be used in both  $50\ \Omega$  &  $75\ \Omega$  Systems
- $260^{\circ}\text{C}$  Reflow Compatible
- RoHS Compliant Version of ETC1-1T & MABACT0012
- Available on Tape & Reel

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

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	3 - 50 MHz 50 - 160 MHz 160 - 200 MHz	dB	—	0.2 0.5 0.8	0.5 1.0 1.2
Amplitude Balance (Nominal 0dB)	3 - 50 MHz 50 - 200 MHz	dB	—	0.02 0.06	$\pm 0.1$ $\pm 0.5$
Phase Balance (Nominal 180°)	3 - 50 MHz 50 - 200 MHz	°	—	0.2 0.5	$\pm 1.5$ $\pm 5.0$
Input Return Loss	3 - 200 MHz 5 - 100 MHz	dB	10 15	20 25	—

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

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	3 - 5 MHz 5 - 65 MHz 65 - 200 MHz	dB	—	0.5 0.4 0.6	1.0 0.6 1.0
Amplitude Balance (Nominal 0dB)	3 - 65 MHz 65 - 200 MHz	dB	—	0.02 0.04	$\pm 0.2$ $\pm 0.3$
Phase Balance (Nominal 180°)	3 - 65 MHz 65 - 200 MHz	°	—	0.4 1.2	$\pm 2.0$ $\pm 5.0$
Input Return Loss	3 - 5MHz 5 - 65 MHz 65 - 100 MHz 100 - 200 MHz	dB	18 21 19 14	24 29 25 20	—

1:1 Transformer  
3 - 200 MHz

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## Ordering information

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

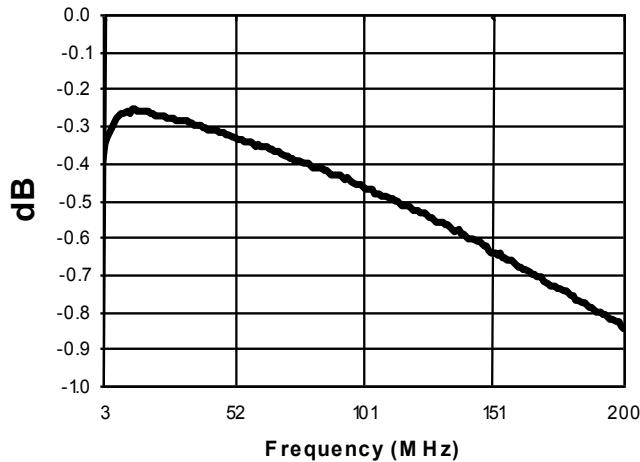
Reference Application Note **M513** for reel size information.

## Recommended Maximum Ratings

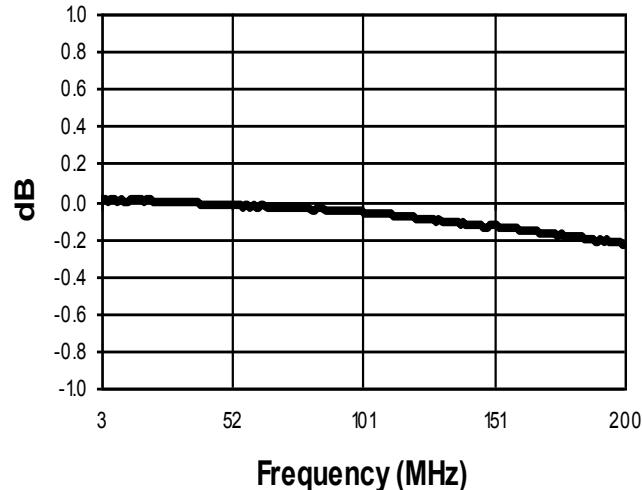
Parameter	Value
Input Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

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

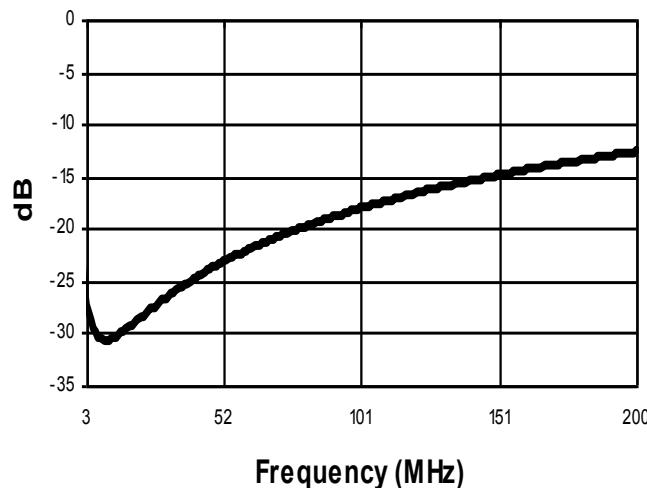
### Insertion Loss



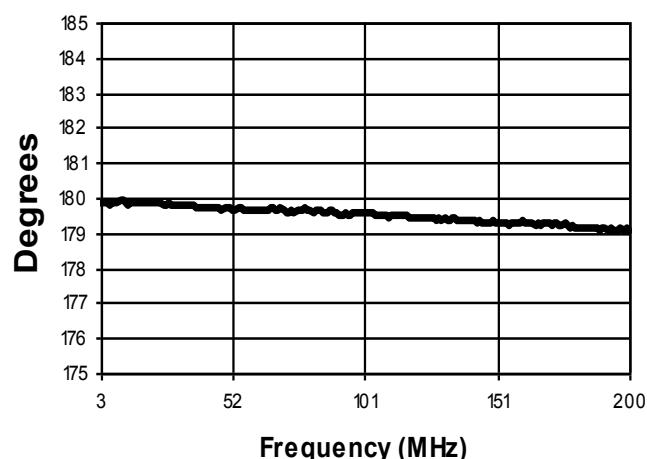
### Amplitude Balance



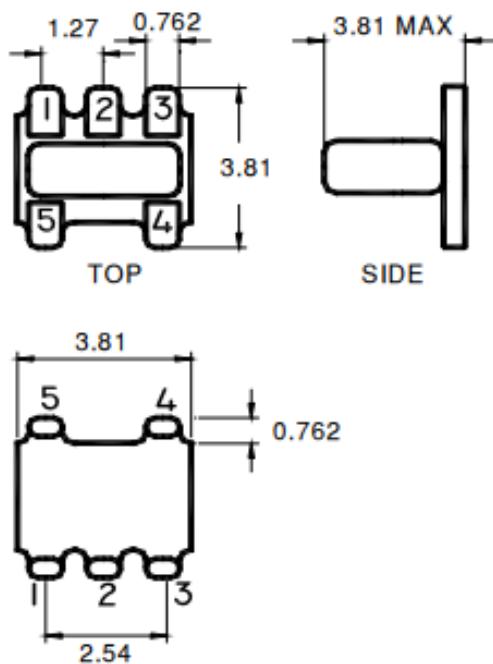
### Input Return Loss



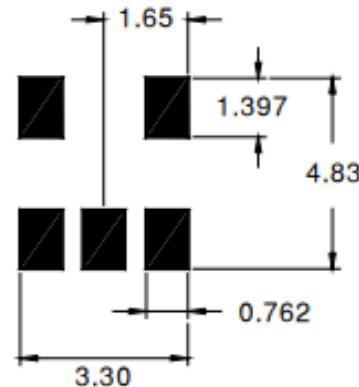
### Phase Balance



## Outline Drawing



## Recommended Footprint



## Tape &amp; 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
Bo	mm	4.00
Ko	mm	2.90
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

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

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