Transformer, 4:1 transmission line 5 to 1000 MHz

## Features

- Surface mount
- 4:1 Impedance ratio
- Excellent amplitude and phase balance
- Can be used in both $50 \Omega$ and $75 \Omega$ systems
- $260^{\circ} \mathrm{C}$ reflow compatible
- RoHS* compliant, Pb free
- Available on tape and reel.


## Description

M/A-Com Technology Solutions MABACT0066 is a 4:1 RF flux coupled step up transformer in a low cost, surface mount package. Ideally suited for broadband CATV Broadband applications.


## Schematic

## Component Dimensions



Dimensions in inches [mm] Tolerance: . $x x \pm .02, . x x x \pm .010$, unless otherwise stated


## Pin configuration

| Pin no. | Function |
| :---: | :---: |
| 1 | Secondary dot (Output 1) |
| 2 | Centre tap (Ground) |
| 3 | Secondary (Output 2) |
| 4 | Primary (Input) |
| 5 | Primary dot (Ground) |

[^0]Electrical Specifications: $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}, \mathrm{Z}_{0}=50 \Omega, \mathrm{P}_{\mathrm{in}}=0 \mathrm{dBm}$

| Parameter | Test Conditions | Units | Min | Typ | Max |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Insertion Loss 1 | $5-50 \mathrm{MHz}$ | dB | - | 1.5 | 2.0 |
|  | $50-879 \mathrm{MHz}$ | dB | - | 1.0 | 1.5 |
| Amplitude Unbalance | $879-1000 \mathrm{MHz}$ | dB | - | 1.5 | 2.0 |
| (Nominal 0dB) | $5-1000 \mathrm{MHz}$ | dB | - | $\pm 0.25$ | $\pm 0.5$ |
| Phase Unbalance |  |  |  |  |  |
| (Nominal $180^{\circ}$ ) | $5-500 \mathrm{MHz}$ | $\circ$ | - | $\pm 4$ | $\pm 8$ |

Recommended Maximum Ratings ${ }^{1,2}$

| Parameter | Value |
| :---: | :---: |
| Max input power | 250 mW |
| DC current | 120 mA |
| Operating Temperature | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| Storage Temperature | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |

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.

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Typical Performance Curves: $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}, \mathrm{Z}_{0}=50 \Omega, \mathrm{P}_{\text {in }}=0 \mathrm{dBm}$


Insertion Loss 2: through pin 4 to pin 3



Phase Balance


MACOM.

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| Item | Dimension |
| :---: | :---: |
| Ao | $6.10 \mathrm{~mm}+/-0.1 \mathrm{~mm}$ |
| Bo | $4.60 \mathrm{~mm}+/-0.1 \mathrm{~mm}$ |
| Ko | $4.00 \mathrm{~mm}+/-0.1 \mathrm{~mm}$ |
| W | $12.00 \mathrm{~mm}+/-0.3 \mathrm{~mm}$ |
| P1 | $8.00 \mathrm{~mm}+/-0.1 \mathrm{~mm}$ |

## Ordering information

| Part number | Description |
| :---: | :---: |
| MABACT0066 | 2000 piece reel |
| MABA-007968-CT66TB | Customer Test Board |

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[^0]:    * Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

