

Features

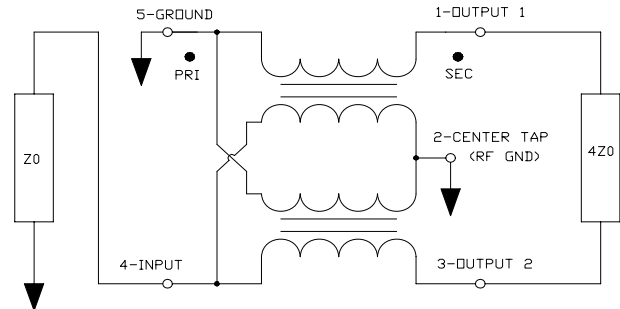
- Surface mount
- 4:1 Impedance ratio
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- 260°C reflow compatible
- RoHS* compliant, Pb free
- Available on tape and reel.

Description

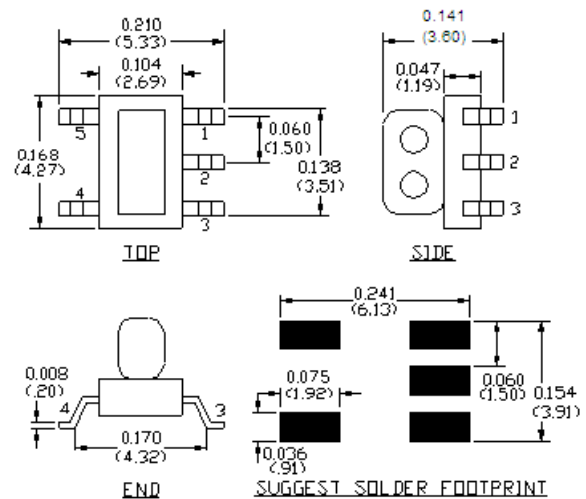
M/A-Com Technology Solutions MABACT0066 is a 4:1 RF flux coupled step up transformer in a low cost, surface mount package. Ideally suited for broadband CATV Broadband applications.



Schematic



Component Dimensions



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) |

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

* 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
 • **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
 Visit www.macomtech.com for additional data sheets and product information.

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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 1 | 5 - 50 MHz | dB | - | 1.5 | 2.0 |
| | 50 - 879 MHz | dB | - | 1.0 | 1.5 |
| | 879 - 1000 MHz | dB | - | 1.5 | 2.0 |
| Amplitude Unbalance (Nominal 0dB) | 5 - 1000 MHz | dB | - | ± 0.25 | ± 0.5 |
| Phase Unbalance (Nominal 180°) | 5 - 500 MHz | ° | - | ± 4 | ± 8 |
| | 500 - 1000 MHz | ° | - | ± 8 | ± 12 |

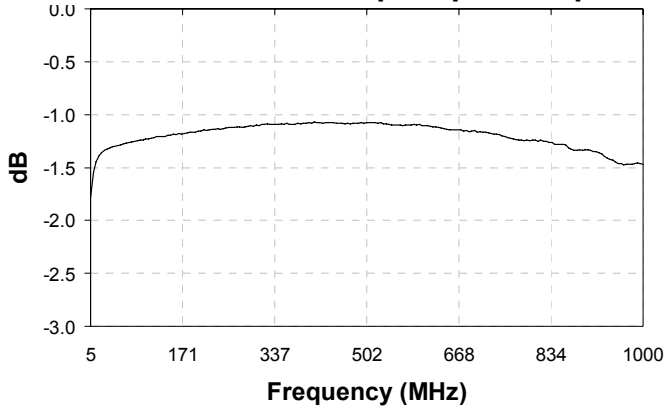
Recommended Maximum Ratings^{1,2}

| Parameter | Value |
|-----------------------|----------------|
| Max input power | 250mW |
| DC current | 120mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -40°C to +85°C |

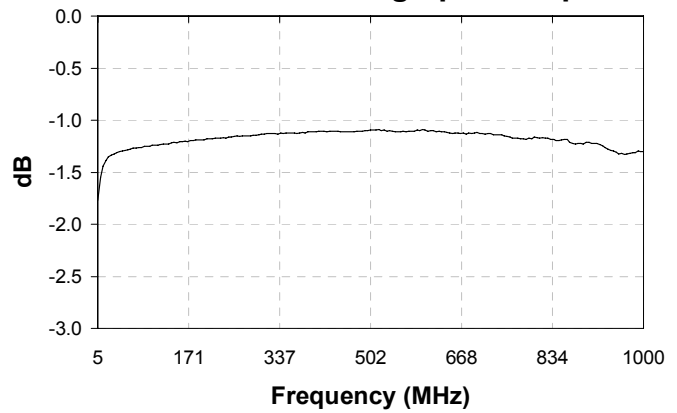
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

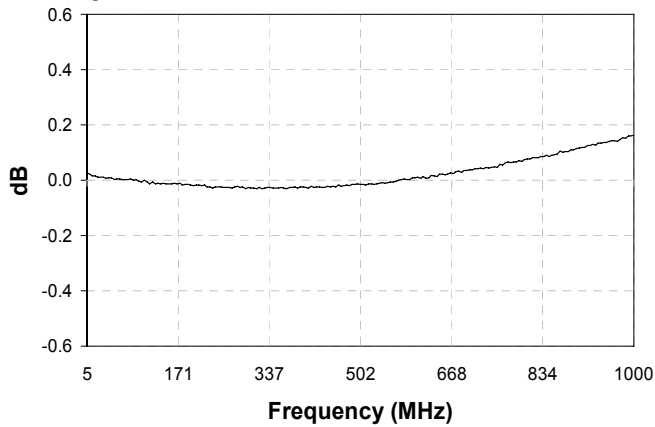
Insertion Loss 1: coupled pin 4 to pin 1



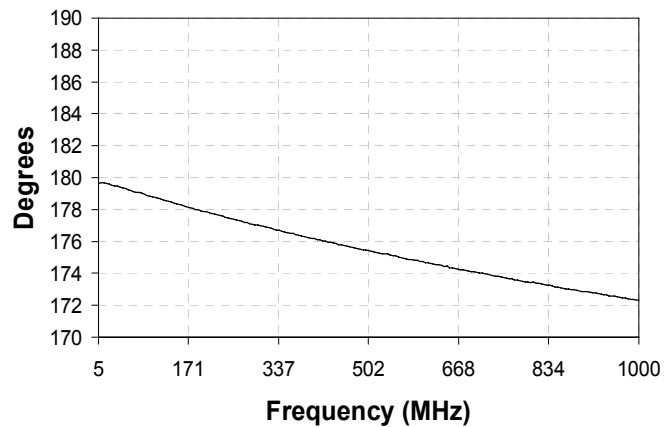
Insertion Loss 2: through pin 4 to pin 3



Amplitude Balance



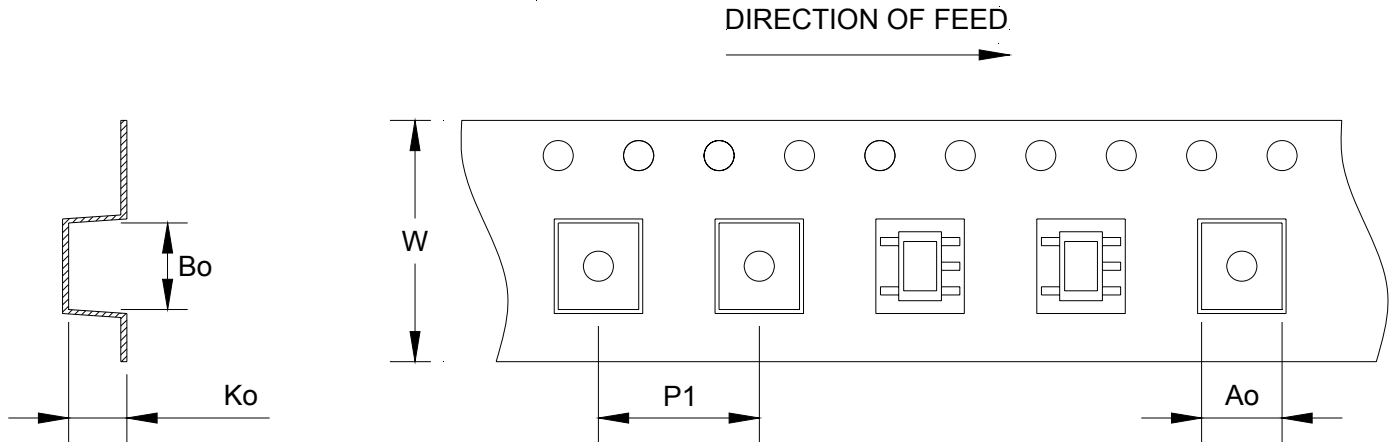
Phase Balance



MABACT0066

Transformer, 4:1 transmission line
5 to 1000 MHz

Rev. V3



| Item | Dimension |
|------|-------------------|
| Ao | 6.10mm +/- 0.1mm |
| Bo | 4.60mm +/- 0.1mm |
| Ko | 4.00mm +/- 0.1mm |
| W | 12.00mm +/- 0.3mm |
| P1 | 8.00mm +/- 0.1mm |

Ordering information

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

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