

Transformer, 4:1 transmission line
5 to 1000 MHz

Rev. V4

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

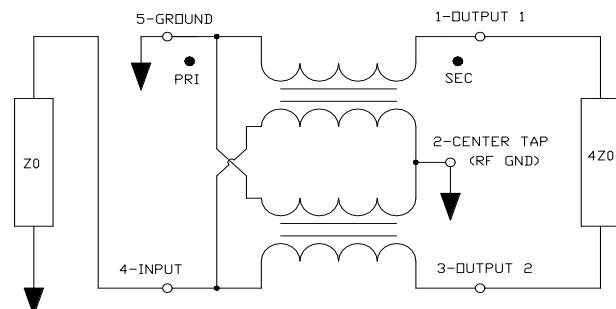
M/A-Com Technology Solutions MABACT0066 is a 4:1 RF flux coupled step up transformer in a low cost, surface mount package. Ideally suited for broadband CATV Broadband applications.



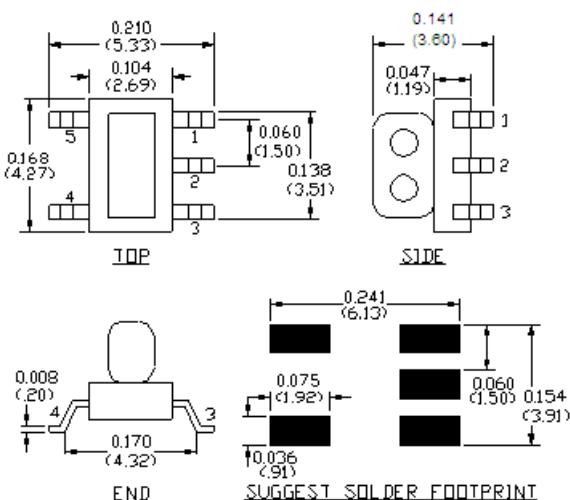
Pin configuration

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

Schematic



Component Dimensions



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

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

Transformer, 4:1 transmission line
5 to 1000 MHz

Rev. V4

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

| Parameter | Test Conditions | Units | Min | Typ | Max |
|--------------------------------------|--|-------|-----|--------------------|---------------------|
| Insertion Loss 1 | 5 - 50 MHz 50 - 879 MHz 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 500 - 1000 MHz | ° | - | ± 4 ± 8 | ± 8 ± 12 |

Recommended Maximum Ratings^{1,2}

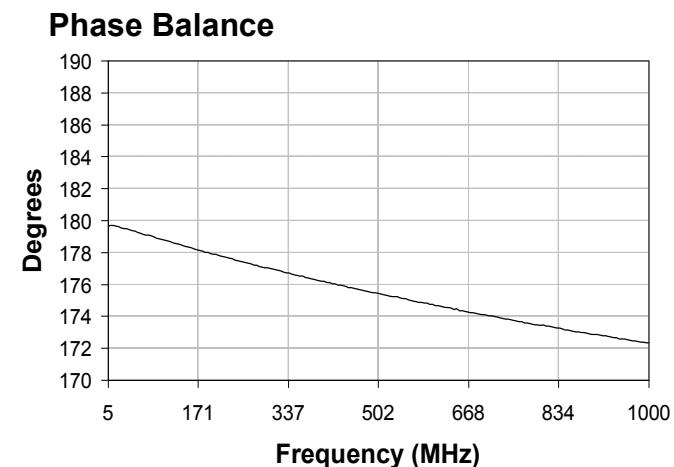
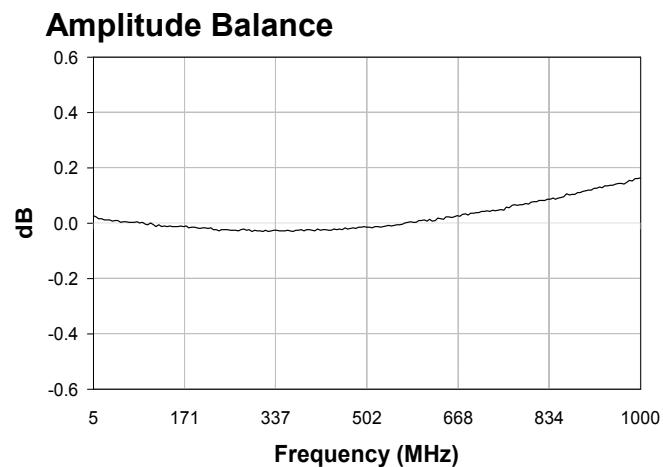
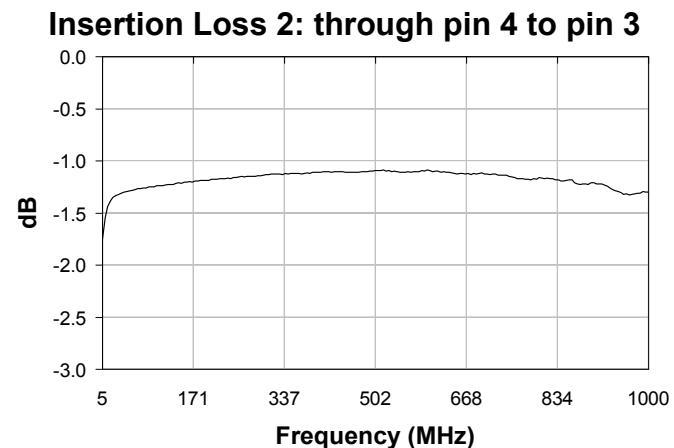
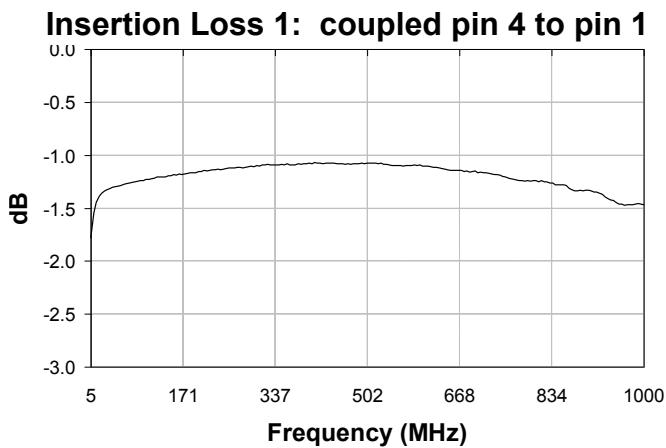
| Parameter | Value |
|-----------------------|----------------|
| Max input power | 250mW |
| DC current | 120mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -40°C to +85°C |

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.

Transformer, 4:1 transmission line
5 to 1000 MHz

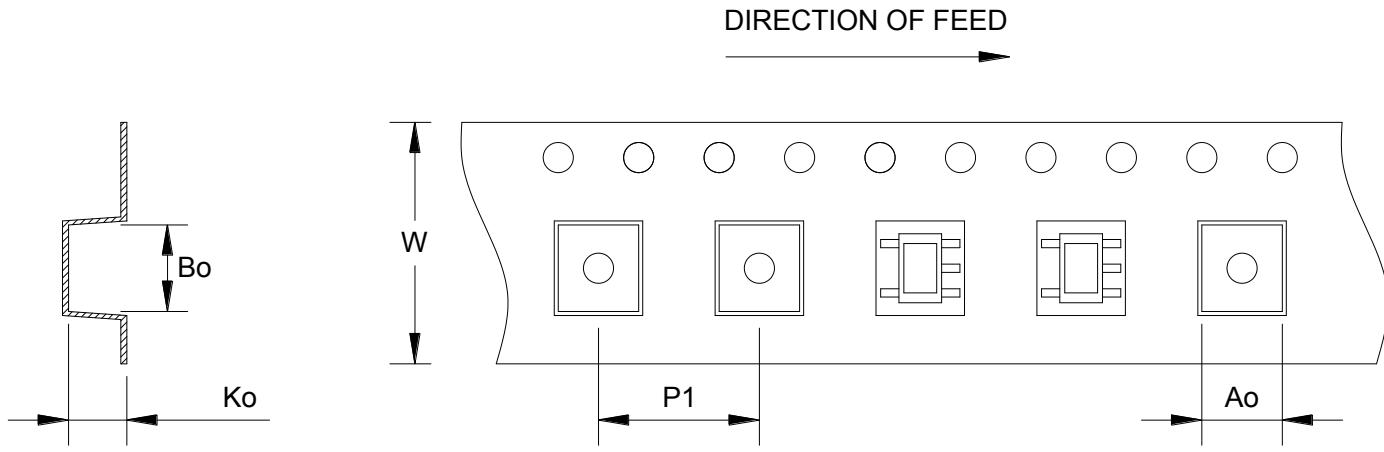
Rev. V4

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



Transformer, 4:1 transmission line
5 to 1000 MHz

Rev. V4



| 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 |

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.