

**4:1 Transmission Line Transformer
500-3000MHz**

**MABACT0065
V1**

Features

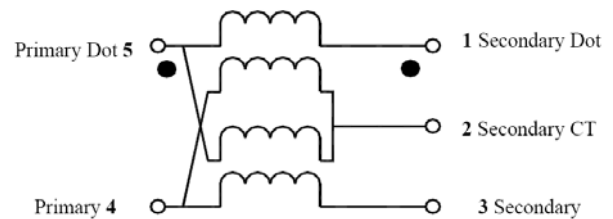
- Surface Mount
- 4:1 Impedance, unbalanced to unbalanced
- Centre tap on secondary
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of ETC1.6-4-2-3
- Available on Tape and Reel. Reel quantity 2000

Description

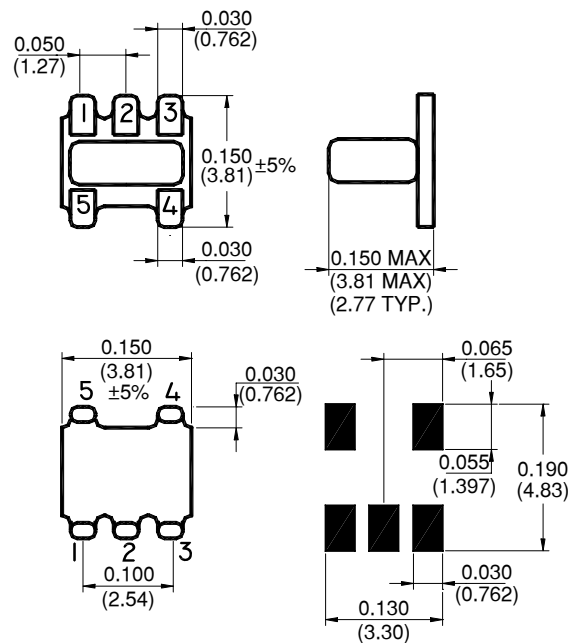
M/A-COM's MABACT0065 is a 4:1 RF transmission line step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.



Schematic



Case Style: SM-22



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

Pin Configuration

| Pin No. | Function |
|---------|-------------------------------|
| 1 | Secondary Dot (output 1) |
| 2 | Secondary centre tap (ground) |
| 3 | Secondary (output 2) |
| 4 | Primary (ground) |
| 5 | Primary Dot (input) |

Ordering Information

| Part Number | Package |
|--------------------|---------------------|
| MABACT0065TR | 2000 piece reel |
| MABA-007949-CT65TB | Customer test board |

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

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

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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

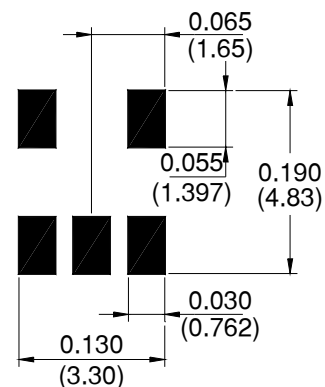
| Parameter | Units | Nominal | Maximum | Mean (x) | Sigma (σ) |
|--------------------------------|-----------------|---------|---------|----------|--------------------|
| Frequency Range 500 - 3000 | MHz | — | — | — | — |
| Insertion Loss ($f_L - f_U$) | 500 - 750 MHz | — | 3.0 | — | — |
| | 750 - 1200 MHz | — | 1.0 | 0.22 | 0.159 |
| | 1200 - 3000 MHz | — | 3.0 | — | — |

Absolute Maximum Ratings ^{1,2}

| Parameter | Absolute Maximum |
|-----------------------|------------------|
| Max Input Power | 250mW |
| DC current | 30mA |
| Operating Temperature | -30°C to +85°C |
| Storage Temperature | -30°C to +85°C |

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

Recommended PCB Configuration

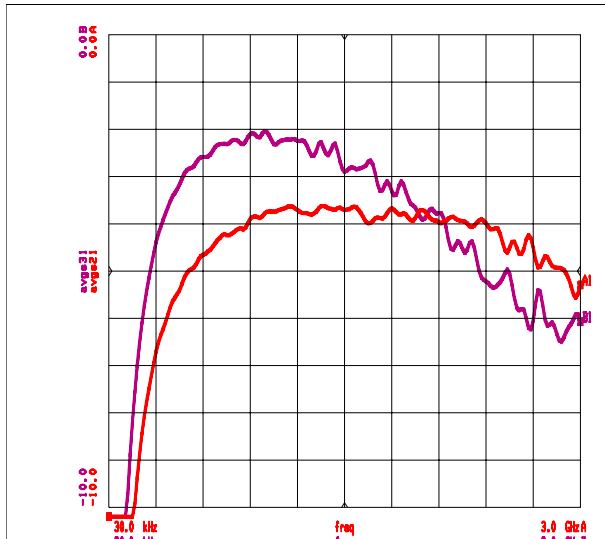


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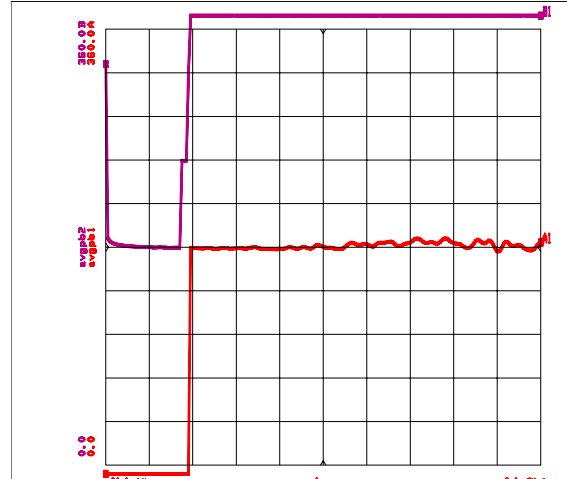
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

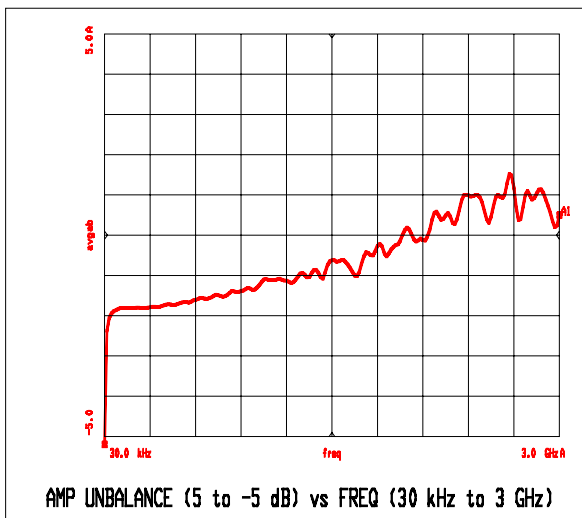
Insertion Loss



Phase Unbalance



Amplitude Unbalance



Input Impedance

