

1:1 Transmission Line Transformer with tertiary winding 50-1200MHz

Rev. V3

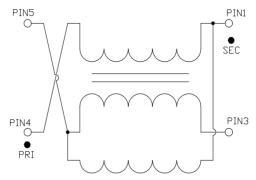
Features

- Surface Mount
- 1:1 Impedance
- · Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel.

Description

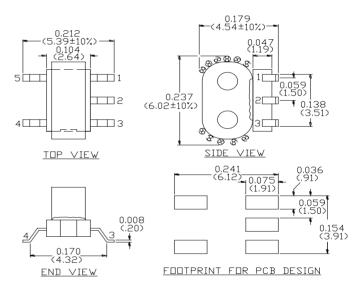
M/A-COM's MABACT0069 is a 1:1 RF transmission line transformer with tap in a low cost, surface mount package. Ideally suited for high volume CATV applications.







Case Style: SM-158



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

Pin Configuration

| Pin No. | Function | | |
|---------|-----------------------------------|--|--|
| 1 | Output 1: Through (Secondary dot) | | |
| 2 | Ground, not used | | |
| 3 | Output 2: Coupled (Secondary) | | |
| 4 | Input (Primary dot) | | |
| 5 | 5 Ground (Primary) | | |

Ordering Information

| Part Number | Description |
|--------------------|---------------------|
| MABACT0069 | 1500 piece reel |
| MABA-008509-CT69TB | Customer test board |

^{1 *} Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.



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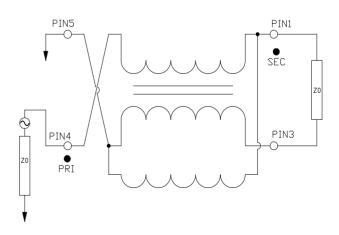
Electrical Specifications: $T_A = 25^{\circ}C$, $Z_0 = 75\Omega$, $P_{in} = 0$ dBm

| Parameter | Test Conditions | Units | Min | Тур | Max |
|-------------------------------------|---|----------------|-------------|----------------------|-----------------------|
| Insertion Loss 1: Pin 4-1 (Through) | 50 - 600 MHz 600-1000 MHz 1000-1200 MHz | dB dB dB | - - - | 0.4 0.8 1.2 | 0.8 1.1 1.5 |
| Insertion Loss 2: Pin 4-3 (Coupled) | 50 - 600 MHz 600-1200 MHz | dB dB | - | 0.5 0.5 | 0.7 1.0 |
| Amplitude Unbalance (Nominal 0dB) | 50 - 600 MHz 600-1200 MHz | dB dB | - | ±0.1 ±0.4 | ± 0.3 ± 0.9 |
| Phase Unbalance (Nominal 180°) | 50 - 870 MHz 870-1000 MHz 1000-1200 MHz | o o o | - - - | ±1.0 ±1.5 ±4.5 | ±3.0 ±5.0 ±10.0 |
| Input Return Loss | 5 - 1200 MHz | dB | 12 | 16 | - |
| | | | | | |

Recommended Maximum Ratings

| Parameter | Value |
|-----------------------|-----------------|
| Max Input Power | 250mW |
| DC current | 30mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +100°C |

Application Circuit



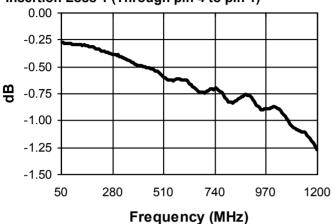


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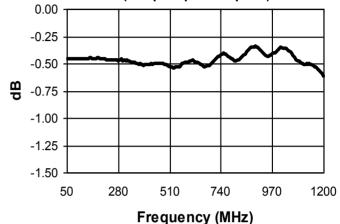
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Typical Performance Curves: $T_A = 25^{\circ}C$, $Z_0 = 75\Omega$, $P_{in} = 0$ dBm

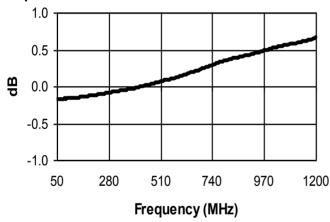




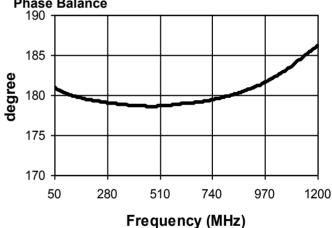
Insertion Loss 2 (Coupled pin 4 to pin 3)



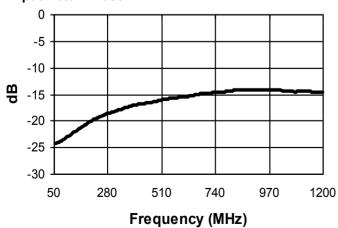
Amplitude Unbalance



Phase Balance



Input Return Loss



MABACT0069



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