

MABA-010247-2R1250



RF 1:2 Transmission Line Transformer
1-1600 MHz

Rev. V2

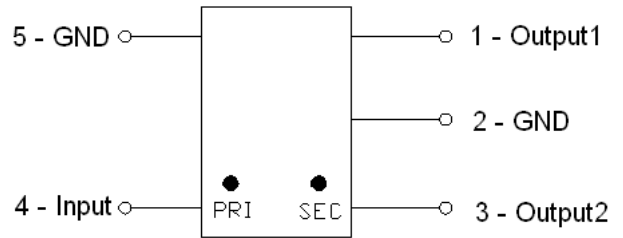
Features

- Surface mount
- 1:2 impedance
- RoHS* Compliant
- 260°C reflow compatible
- Tape and Reel Package

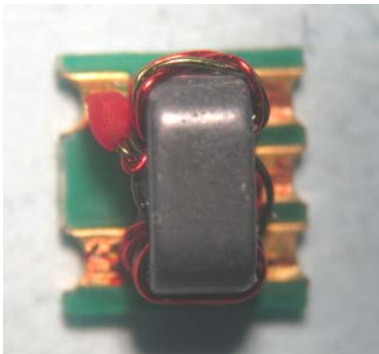
Description

M/A-COM's MABA-010247-2R1250 is a RoHS compliant 1:2 RF transmission line transformer in a low cost, surface mount package. The windings of the MABA-010247-2R1250 are welded to the package substrate for improved reliability and to eliminate lead content. Ideally suited for high volume cellular and wireless application. Parts are packaged in tape & reel.

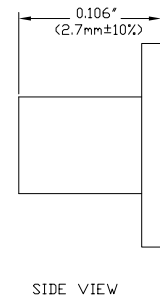
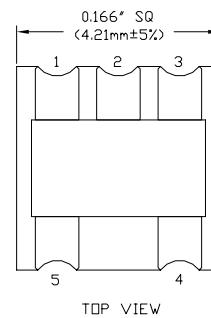
Functional Block Diagram



Product Image

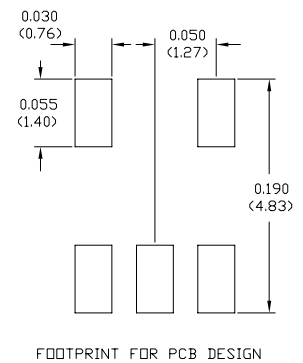
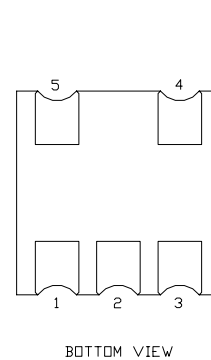


SM-197 package



Pin Configuration

| Pin No. | Function |
|---------|---------------------|
| 1 | Secondary |
| 2 | GND |
| 3 | Secondary Dot |
| 4 | Primary Dot (Input) |
| 5 | Primary (GND) |



Dimensions are inches (millimeters) ± 0.015 (0.38) unless otherwise specified.

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

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

| Parameter | Test Conditions | Test Conditions | Units | Min | Typ | Max |
|---------------------|-----------------|-----------------|---------|-----|-----|-----|
| RF Frequency | - | 1 - 1600 | MHz | - | - | - |
| Insertion Loss | - | 1 - 750 | dB | - | 1.0 | - |
| | | 750 - 1250 | dB | - | 1.5 | 2.5 |
| | | 1250 - 1600 | dB | - | 2.0 | 4.0 |
| Input Return Loss | - | 1 - 500 | dB | 20 | 30 | - |
| | | 500 - 1600 | dB | 10 | 15 | - |
| Amplitude Unbalance | - | 1 - 1250 | dB | - | 0.5 | 1.0 |
| | | 1250 - 1600 | dB | - | 1.0 | 1.2 |
| Phase Unbalance | - | 1 - 1600 | Degrees | - | 5 | 10 |

Absolute Maximum Ratings^{1,2}

| Parameter | Absolute Maximum |
|-----------------------|------------------|
| DC Power | 250 mW |
| DC Current | 50 mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +125°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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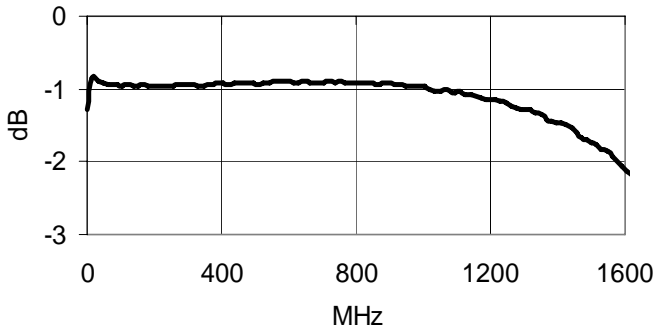


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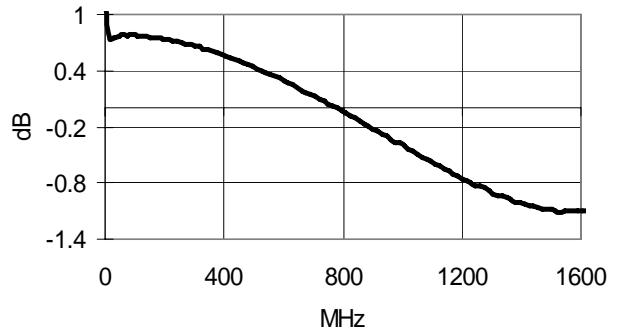
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Typical Performance Curves

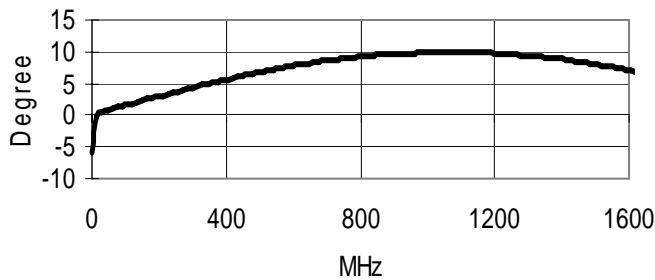
Insertion Loss



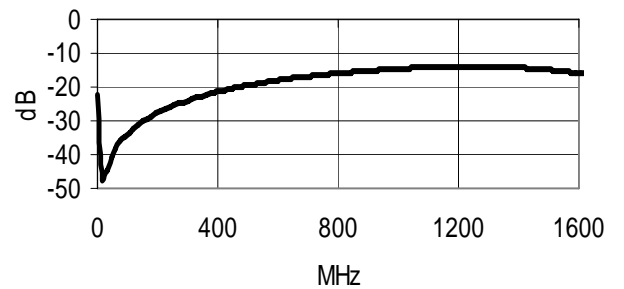
Amplitude Unbalance



Phase Unbalance



Input Return Loss



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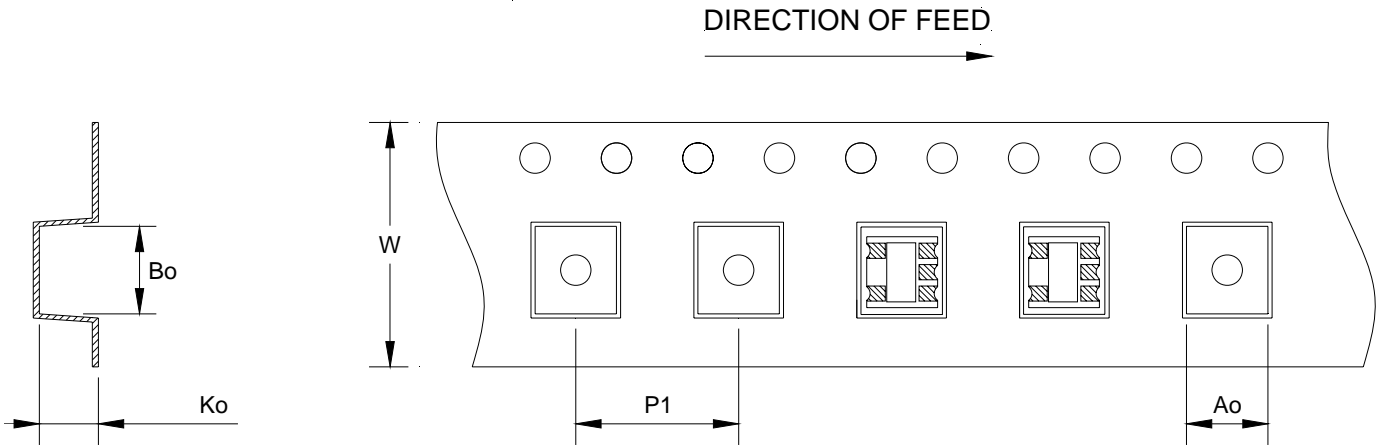
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Tape & Reel Information



| Item | Dimension |
|------|------------------|
| Ao | 4.55mm +/-0.1mm |
| Bo | 4.75mm +/-0.1mm |
| Ko | 3.10mm +/-0.1mm |
| W | 12.00mm +/-0.3mm |
| P1 | 8.00mm +/-0.1mm |

Ordering Information

| Part Number | Package |
|--------------------|---------------------------------|
| MABA-010247-2R1250 | Tape and Reel (2000 piece Reel) |

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