

MACP-010446-C80370

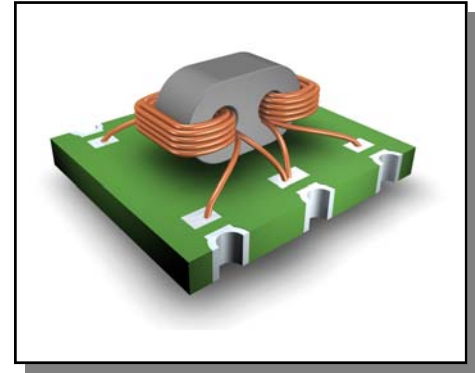


Coupler, 8dB
5 MHz - 1200 MHz

Rev. V2

Features

- ◆ 8dB coupling Typical
- ◆ Surface mount
- ◆ Available on tape and reel
- ◆ Low Profile
- ◆ RoHS Compliant and Pb free
- ◆ Excellent temperature stability
- ◆ All wires welded to substrate



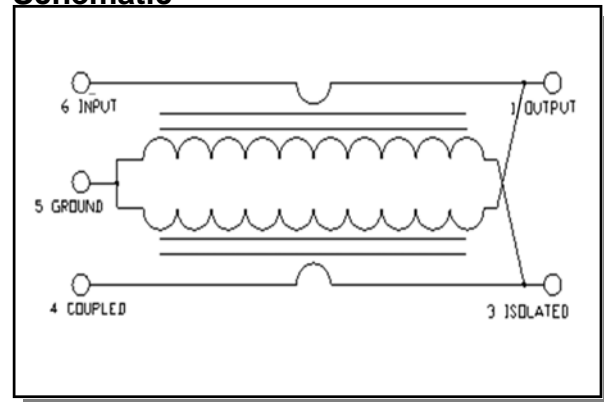
Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

| Parameter | Conditions | Units | Min | Typ | Max |
|------------------------------|-----------------|----------|------|------|------|
| Frequency Range | | MHz | 5 | | 1200 |
| Impedance | | Ω | | 75 | |
| Coupling Ratio | | dB | | 8 | |
| Main Line Loss (Pin6 - Pin1) | 5 – 870MHz | dB | 2.0 | 1.5 | - |
| | 870 – 1002 MHz | dB | 2.3 | 1.85 | - |
| | 1002 - 1200 MHz | dB | 2.6 | 2.1 | - |
| Coupling (Pin6 - Pin4) | 5 – 1002MHz | dB | 8.5 | 8.0 | 7.5 |
| | 1002 – 1200 MHz | dB | 8.7 | 8.0 | 7.3 |
| Coupling Flatness | 5 - 1200 MHz | dB | - | 0.5 | 0.8 |
| Directivity | 5 - 870 MHz | dB | - | 17.5 | 11.0 |
| | 870 - 1200 MHz | dB | - | 12.8 | 9.0 |
| Return Loss: Input (Pin6) | 5 - 50 MHz | dB | 17 | 18 | - |
| | 50 - 1200 MHz | dB | 16.5 | 18.7 | - |
| Return Loss: Output (Pin1) | 5 - 50 MHz | dB | 23 | 31.3 | - |
| | 50 - 870 MHz | dB | 20 | 33.5 | - |
| | 870 - 1200 MHz | dB | 20 | 32.0 | - |
| Return Loss: Coupling (Pin4) | 5 - 1200 MHz | dB | 16 | 18.5 | - |

Pin Configuration

| Pin No. | Function |
|---------|---------------|
| 1 | Output |
| 2 | Not Connected |
| 3 | Isolated |
| 4 | Coupled |
| 5 | Ground |
| 6 | Input |

Schematic



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ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering test. 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.

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Visit www.macomtech.com for additional data sheets and product information.

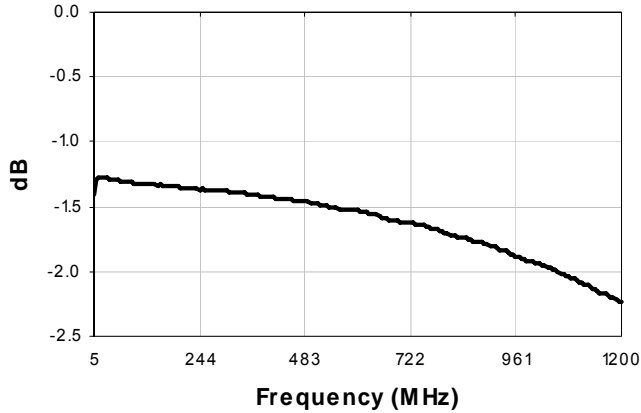
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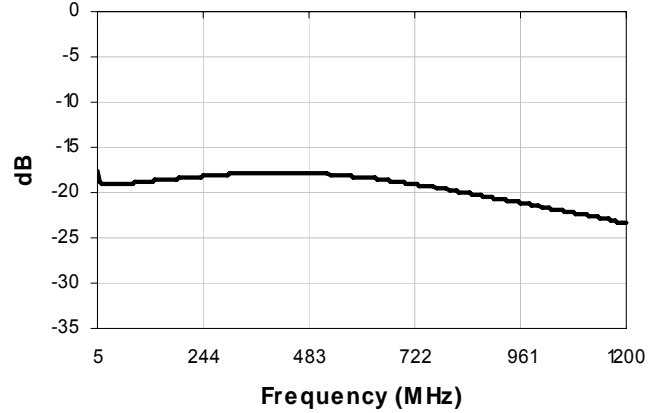
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5 MHz - 1200 MHz

Rev. V2

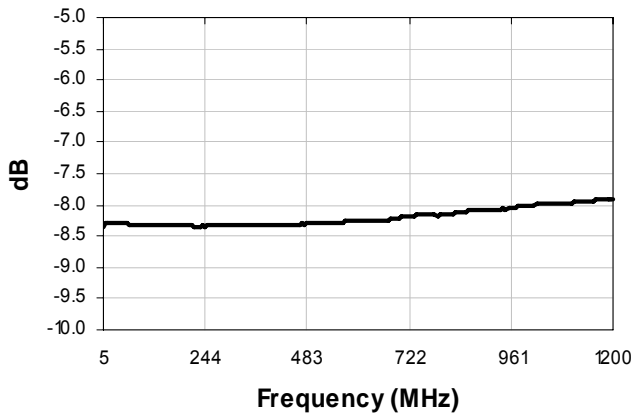
Mainline Loss



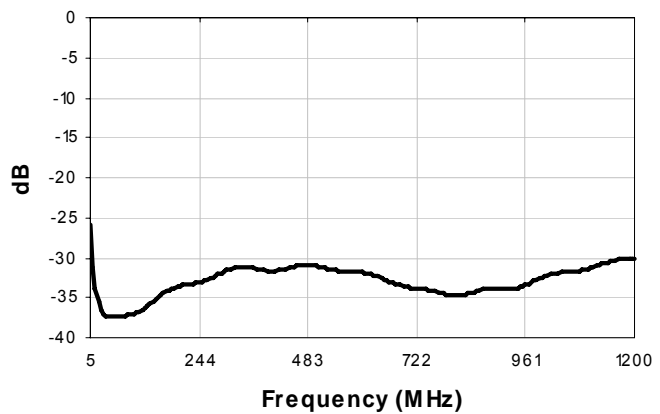
Input Return Loss



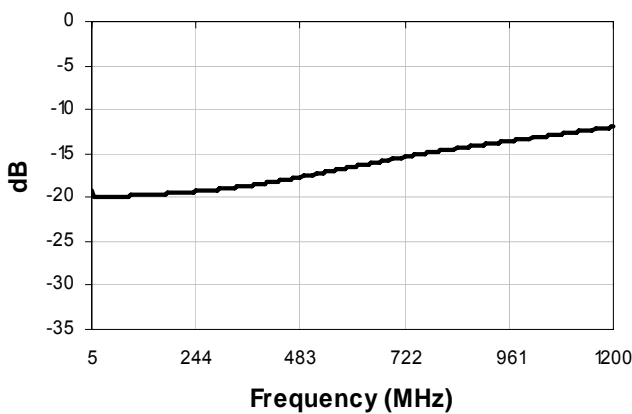
Coupling



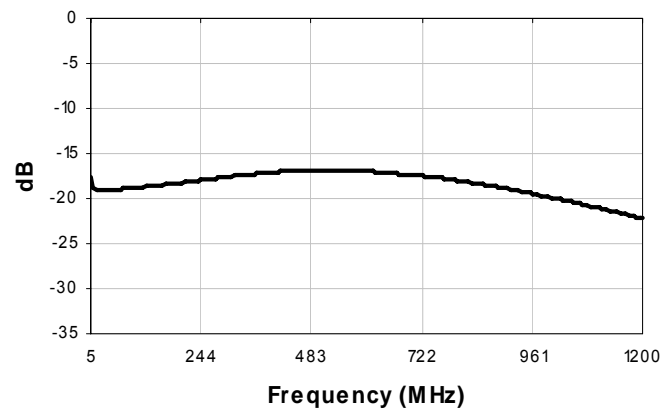
Output Return Loss



Directivity

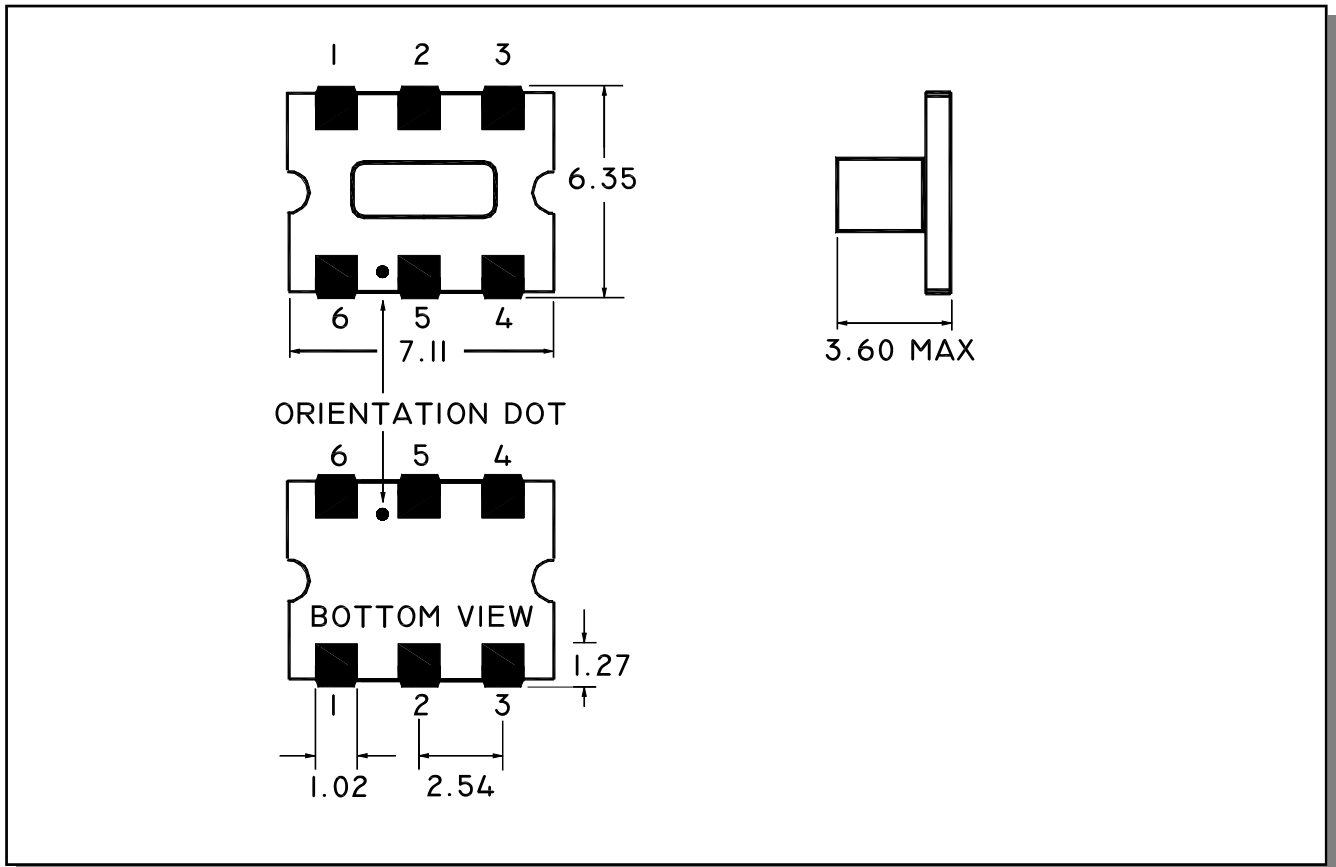


Coupled Return Loss



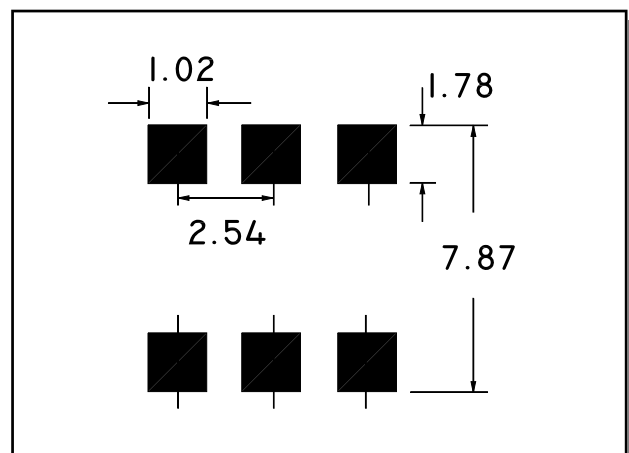
Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μ m gold over 3 to 6 μ m nickel

Recommended Footprint



Coupler, 8dB
5 MHz - 1200 MHz

Rev. V2

Tape & Reel Information

| Parameter | Units | Value |
|-------------------------|-------|-------|
| Qty per reel | - | 900 |
| Reel size | mm | 330 |
| Tape width (W) | mm | 16.0 |
| Pitch (P ₁) | mm | 12.0 |
| A ₀ | mm | 6.7 |
| B ₀ | mm | 7.4 |
| K ₀ | mm | 3.1 |
| Orientation | - | F15 |

Reference Application note ANI-019 for orientation

Ordering Information

| Part Number | Description |
|--------------------|---------------------------|
| MACP-010446-C80370 | Tape & Reel |
| MACP-010446-C803TB | Customer Evaluation Board |

Recommended Maximum Ratings

| Parameter | Units | Min | Max |
|-----------------------------|-------|-----|-----|
| Input Power | mW | | 250 |
| DC Current | mA | | 30 |
| Operating Temperature Range | °C | -20 | +85 |
| Storage Temperature Range | °C | -20 | +85 |

Temperature data available on request

ECO History

| Rev | Date | Description | ECO |
|-----|-------------|---|----------|
| V1 | 4 Aug 2010 | Released | 20100998 |
| V2 | 21 Sep 2010 | Correct typ spec for i/p ret loss: was 1.8 is 18, on page 1/4 | 20101363 |
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