

MACP-009404-C80370

Coupler, 8dB
5 to 1000 MHz

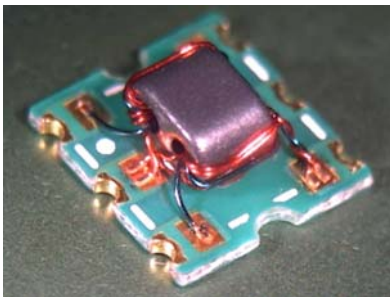
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Features

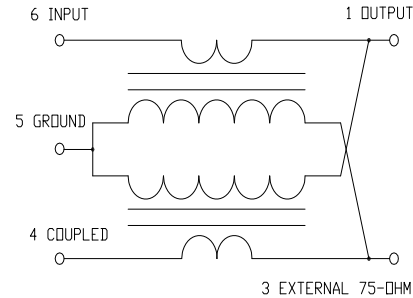
- Surface mount
- Coupling 8dB typical
- 260°C reflow compatible
- RoHS* compliant, lead free
- Available on tape and reel.

Description

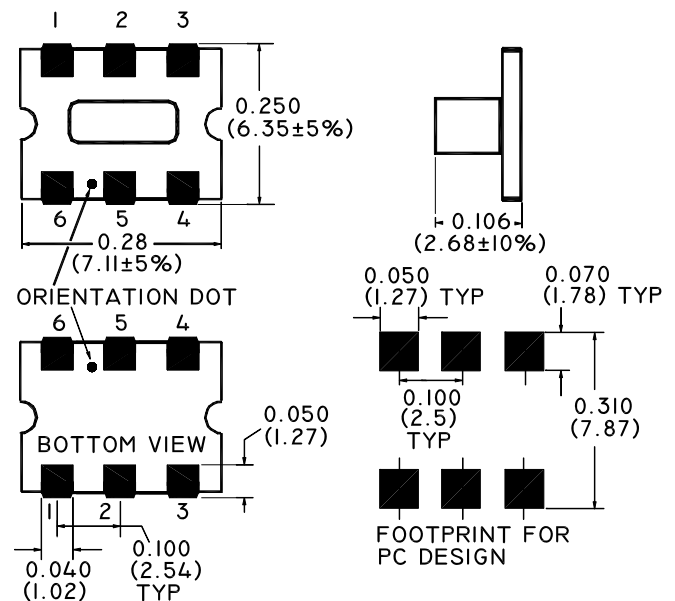
The MACP-009404-C80370 is a high performance 75Ω, 8dB coupler, in a SM-55 low cost surface mount package. It is designed for use in high volume CATV applications. Typical applications include set-top boxes, network interface units, broadband amplifiers and head-end equipment.



Schematic



Case style: SM-55



Pin configuration

| Pin no. | Function |
|---------|-----------------|
| 1 | Output |
| 2 | Not Connected |
| 3 | External 75 Ohm |
| 4 | Coupled |
| 5 | Ground |
| 6 | Input |

Ordering information

| Part number | Description |
|--------------------|---------------------|
| MACP-009404-C80370 | Reel quantity 900 |
| MACP-009404-C803TB | 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: $T_A=25^{\circ}\text{C}$, $Z_0=75\Omega$

| Parameter | Test Conditions | Units | Min | Typ | Max |
|---------------------|-----------------|-------|-----|-----|-----------|
| Coupling | 5 - 870 MHz | dB | - | 7.9 | ± 0.6 |
| | 870 - 1000 MHz | dB | - | 7.9 | ± 0.8 |
| Main Line Loss | 5 - 870 MHz | dB | - | 1.5 | 2.3 |
| | 870 - 1000 MHz | dB | - | 2.1 | 2.6 |
| Coupling Flatness | 5 - 1000 MHz | dB | - | - | 0.9 |
| Directivity | 5 - 870 MHz | dB | - | 17 | 11 |
| | 870 - 1000 MHz | dB | - | 13 | 10 |
| Input Return Loss | 5 - 50 MHz | dB | 17 | 18 | - |
| | 50 - 870 MHz | dB | 16 | 18 | - |
| | 870 - 1000 MHz | dB | 16 | 20 | - |
| Output Return Loss | 5 - 50 MHz | dB | 24 | 22 | - |
| | 50 - 870 MHz | dB | 20 | 34 | - |
| | 870 - 1000 MHz | dB | 18 | 24 | - |
| Coupled Return Loss | 5 - 50 MHz | dB | 16 | 19 | - |
| | 50 - 870 MHz | dB | 16 | 20 | - |
| | 870 - 1000 MHz | dB | 16 | 20 | - |

Absolute Maximum Ratings

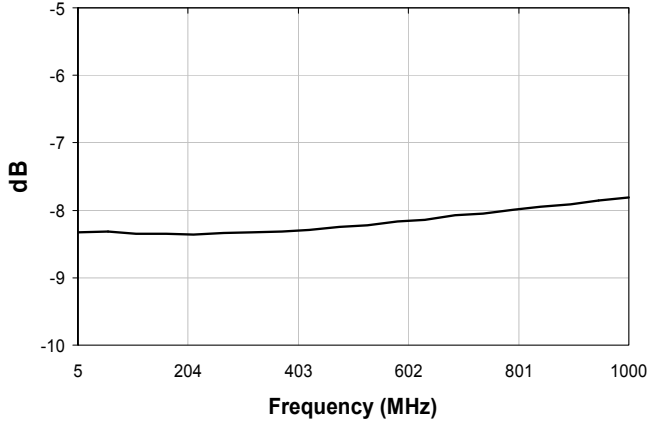
| Parameter | Absolute maximum |
|-----------------------|------------------|
| RF power | 250mW |
| DC current | 30mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -40°C to +85°C |

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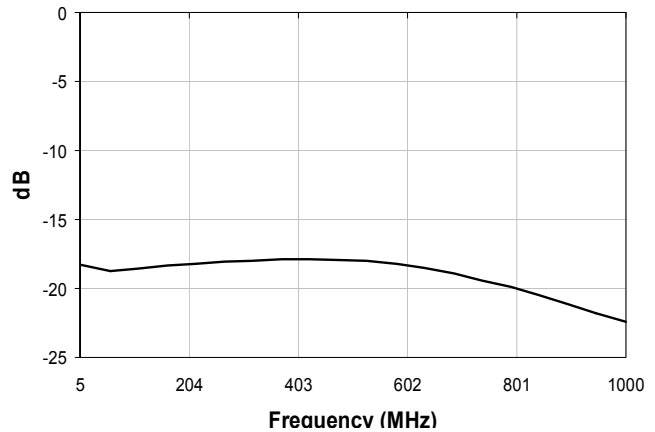
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Typical Performance Curves: $T_A=25^\circ\text{C}$, $Z_0=75\Omega$

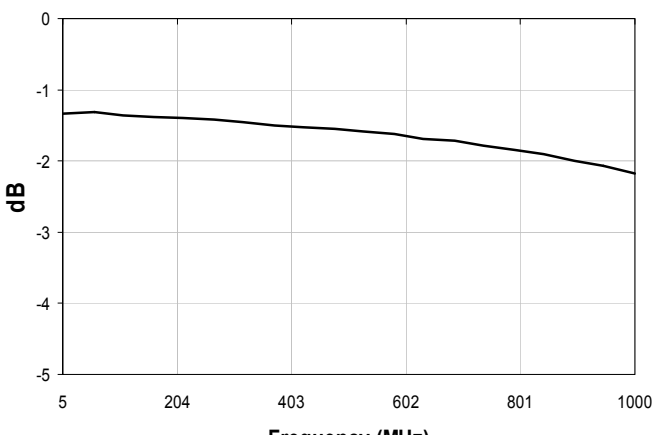
Coupling



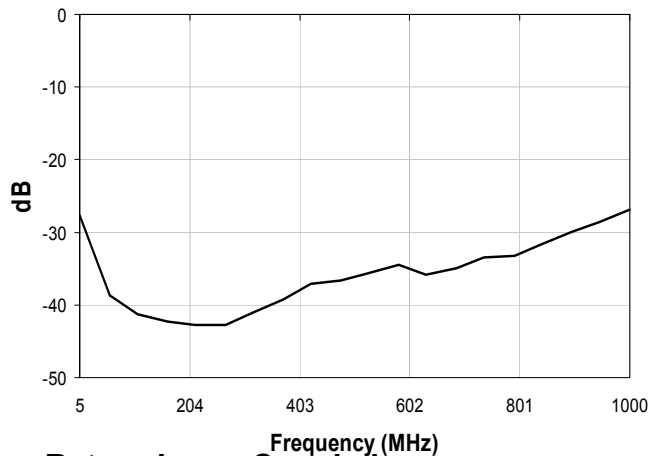
Return Loss: Input



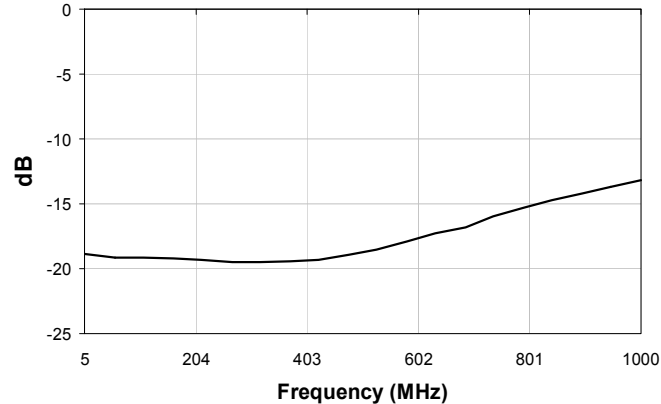
Main Line Loss



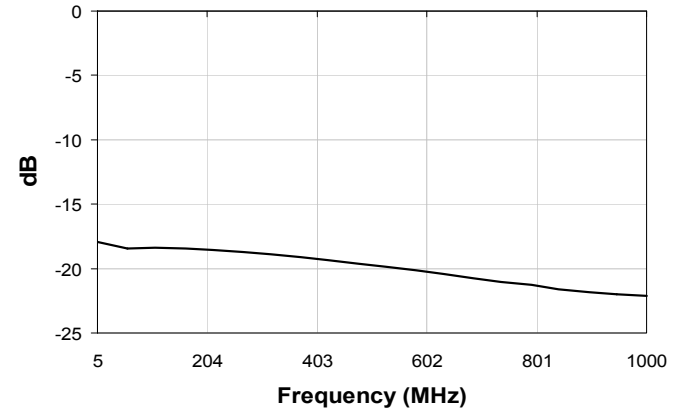
Return Loss: Output



Directivity



Return Loss: Coupled



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