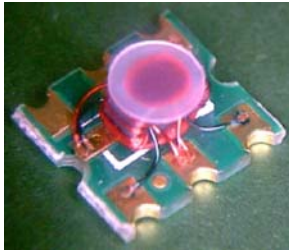


Features

- Surface Mount
- Typical Coupling +17dB
- 260°C Reflow Compatible
- RoHS* Compliant, lead free
- Available on Tape and Reel
- All wires are welded to the substrate

Description

M/A-COM Technology Solutions MACP-009943-CH07F0 is a 17dB broadband Coupler in a low cost, surface mount package. It offers low loss, good Isolation, good input/output matching and exceptional coupling repeatability. Ideally suited for high volume CATV/Broadband applications.



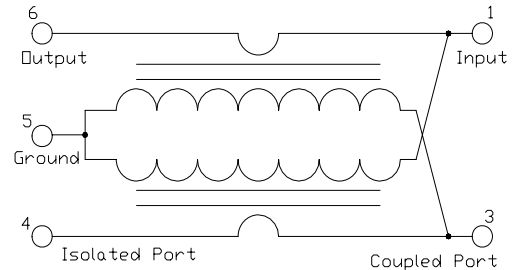
Pin Configuration

| Pin No. | Function |
|---------|---|
| 1 | Input |
| 2 | Not Used (short to ground) |
| 3 | Coupled |
| 4 | Isolated (external 75 Ohms termination) |
| 5 | Ground |
| 6 | Output |

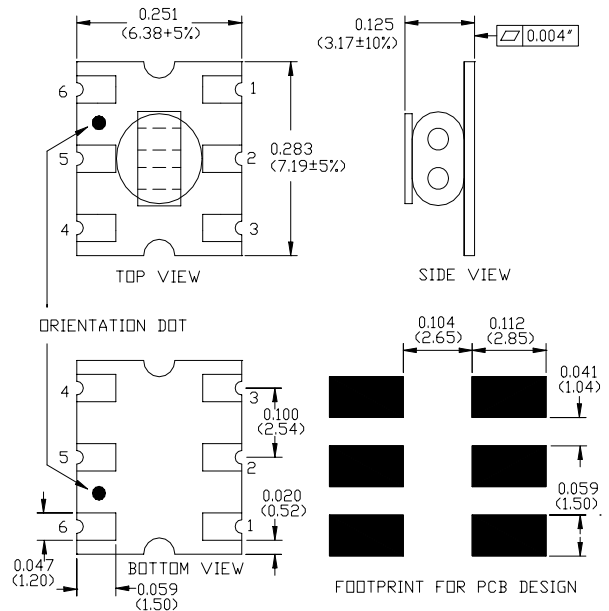
Note: Reference Application Note **M513** for reel size information.

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

Schematic



Case Style: SM-55A



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

Ordering Information

| Part number | Description |
|--------------------|---------------------|
| MACP-009943-CH07F0 | 900 piece reel |
| MABA-009943-CH07TB | Customer Test Board |

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. 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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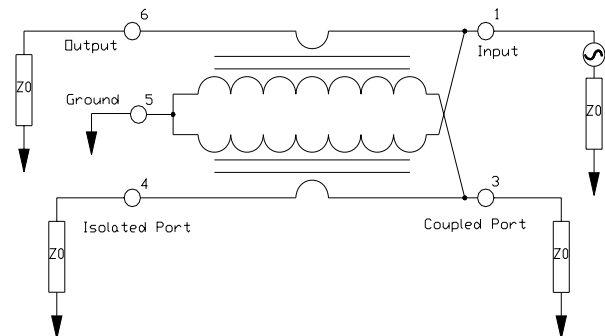
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

| Parameter | Test Conditions | Units | Min | Typ | Max |
|----------------------|-----------------|-------|-----|------|-----------|
| Coupling | 5 - 860 MHz | dB | - | 17.2 | ± 0.7 |
| | 860 - 1000 MHz | dB | - | 17.0 | ± 0.8 |
| Main Line Loss | 5 - 860 MHz | dB | - | 0.6 | 1.0 |
| | 860 - 1000 MHz | dB | - | 0.8 | 1.2 |
| Coupling Flatness | 5 - 1000 MHz | dB | - | - | 1.0 |
| Directivity | 5 - 50 MHz | dB | 30 | 40 | - |
| | 50 - 500 MHz | dB | 12 | 20 | - |
| | 500 - 1000 MHz | dB | 5 | 12 | - |
| Input Return Loss | 5 - 50 MHz | dB | 24 | 28 | - |
| | 50 - 500 MHz | dB | 24 | 28 | - |
| | 500 - 1000 MHz | dB | 20 | 25 | - |
| Output Return Loss | 5 - 50 MHz | dB | 20 | 25 | - |
| | 50 - 500 MHz | dB | 20 | 25 | - |
| | 500 - 1000 MHz | dB | 20 | 23 | - |
| Coupling Return Loss | 5 - 50 MHz | dB | 20 | 25 | - |
| | 50 - 500 MHz | dB | 20 | 25 | - |
| | 500 - 1000 MHz | dB | 18 | 23 | - |

Recommended Maximum Ratings

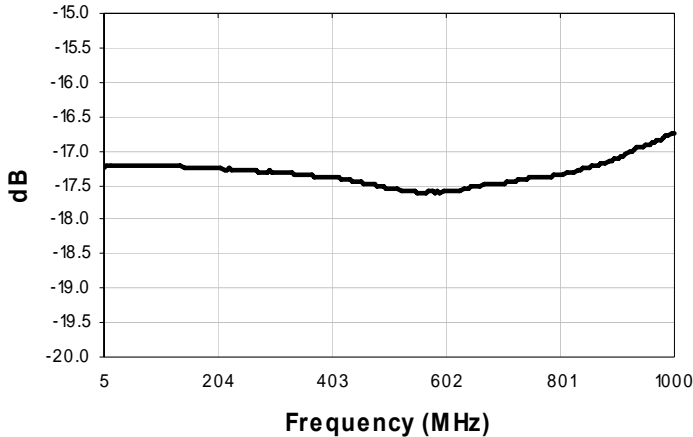
| Parameter | Value |
|-----------------------|---|
| Max Input Power | 250mW |
| DC current | 30mA |
| Operating Temperature | -40°C to $+85^\circ\text{C}$ |
| Storage Temperature | -55°C to $+100^\circ\text{C}$ |

Application Circuit

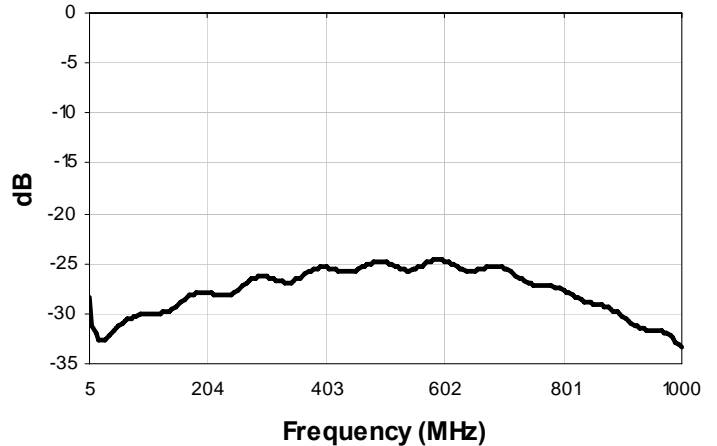


Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

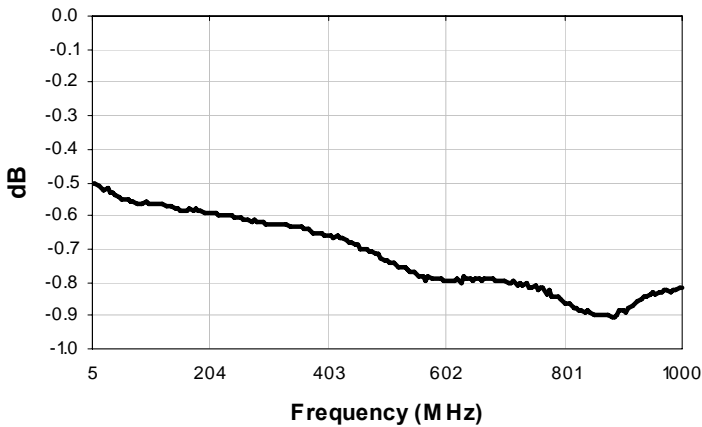
Coupling (Pin1 - Pin3)



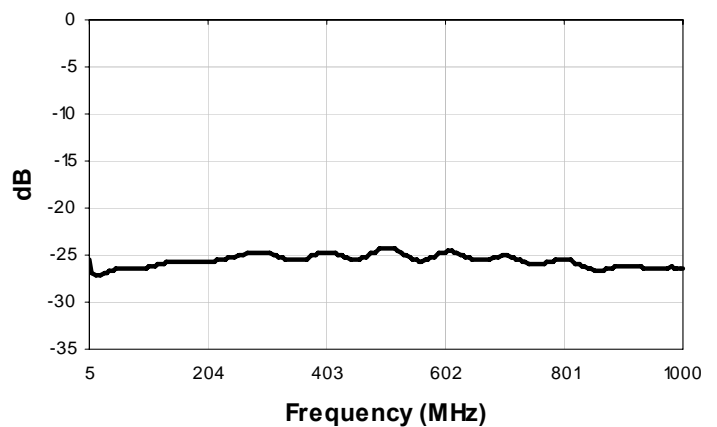
Return Loss: Input (Pin 1)



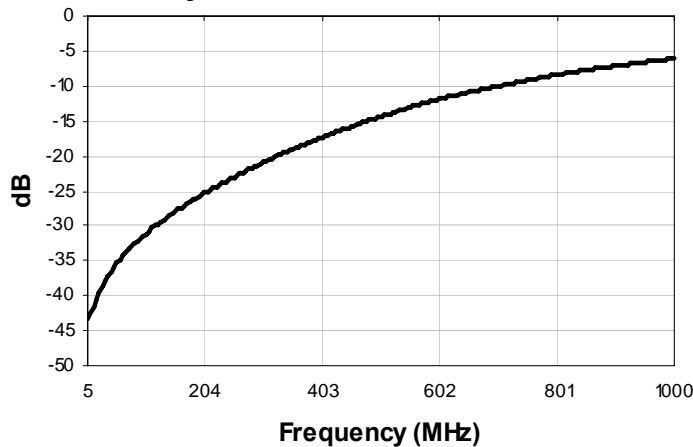
Main Line Loss (Pin1 - Pin6)



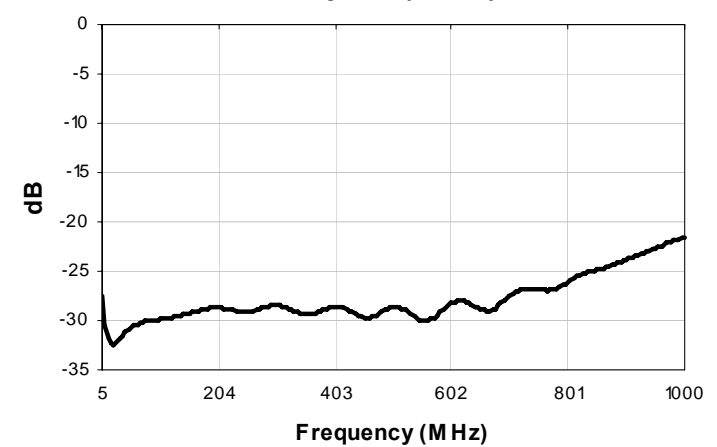
Return Loss: Output (Pin 6)



Directivity



Return Loss: Coupled (Pin 3)



3

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