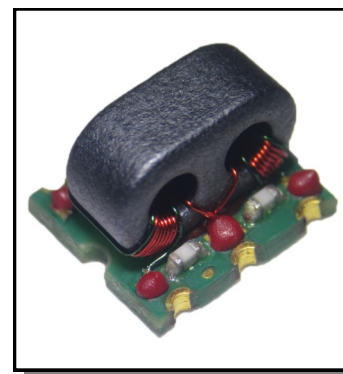


12 dB Coupler 5 - 1225 MHz

V2

Features

- Surface mount
- 12dB Coupler
- 260°C reflow compatible
- RoHS Compliant, lead-free
- Available on tape and reel



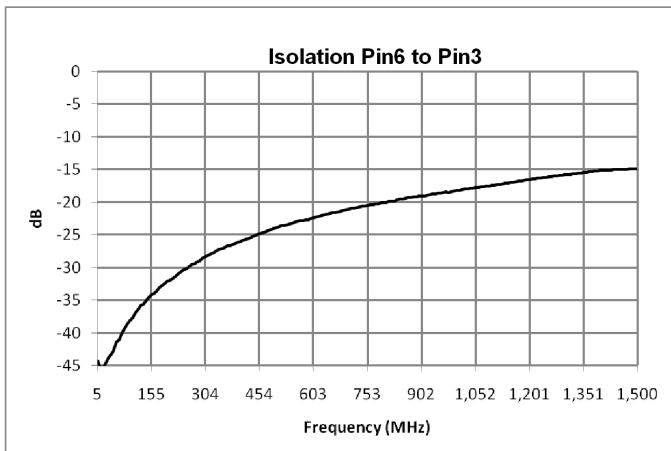
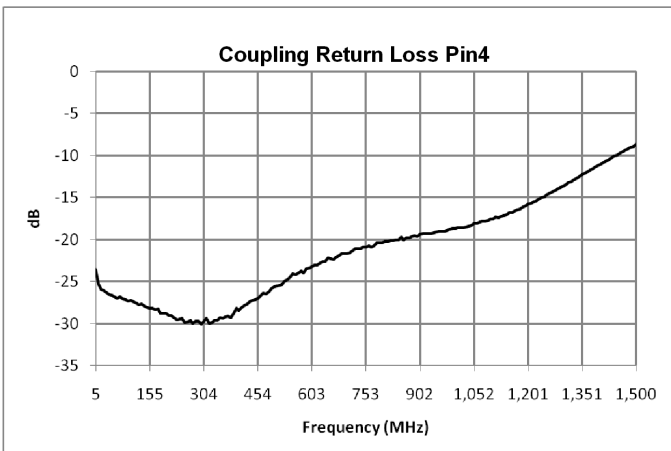
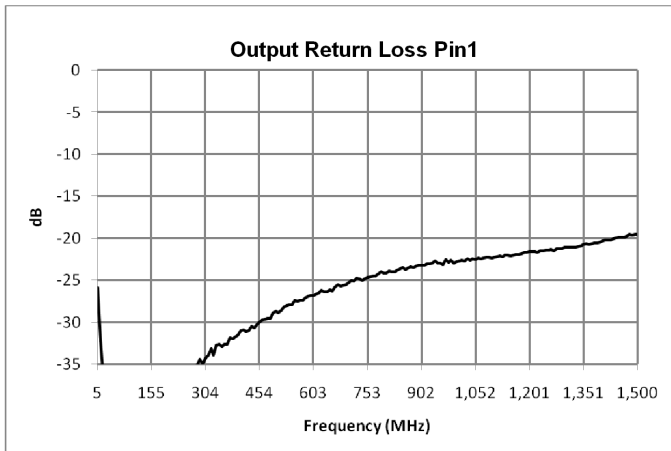
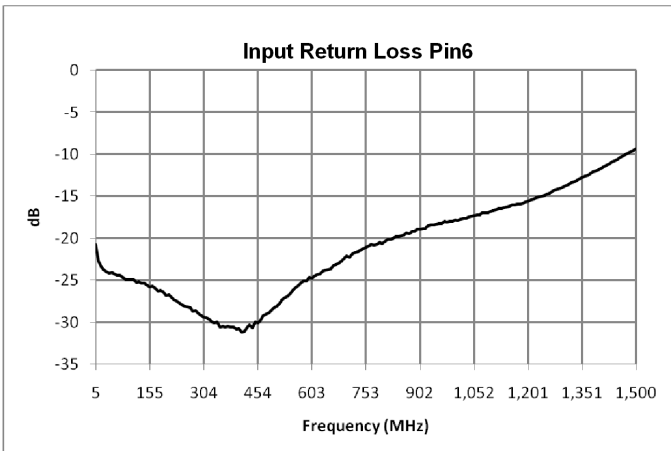
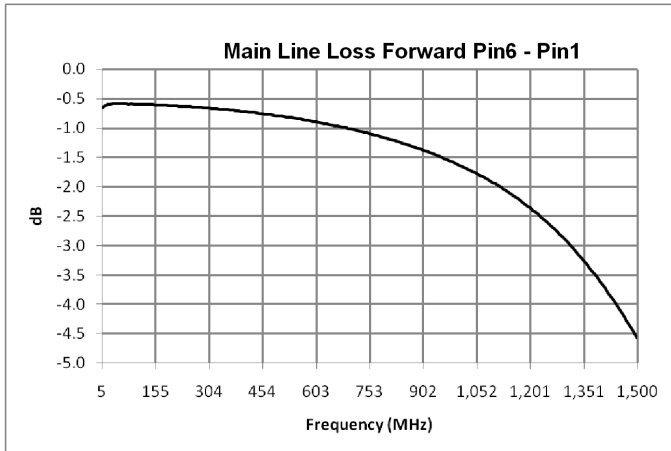
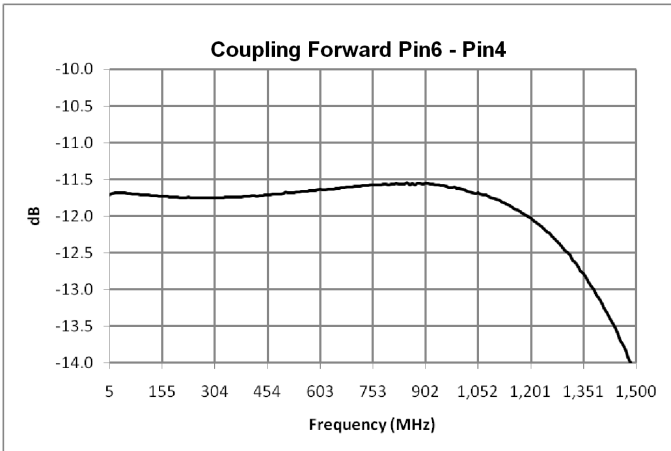
Description

M/A-Com's MACP-011010 is a 12dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.

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 | | 1225 |
| Impedance | | Ω | - | 75 | |
| Coupling (pin6-4) | 5 - 500 MHz | dB | 11.4 | 11.7 | 12.0 |
| | 501 - 750 MHz | dB | 11.1 | 11.6 | 12.0 |
| | 751 - 900 MHz | dB | 11.1 | 11.6 | 12.1 |
| | 901 - 1140 MHz | dB | 11.1 | 11.6 | 12.6 |
| | 1141 - 1225 MHz | dB | 11.1 | 11.9 | 13.0 |
| Main Line Loss (pin6-1) | 5 - 46 MHz | dB | - | 0.6 | 0.9 |
| | 47 - 870 MHz | dB | - | 0.7 | 1.5 |
| | 871 - 1140 MHz | dB | - | 1.6 | 2.7 |
| | 1141 - 1225 MHz | dB | - | 2.2 | 3.0 |
| Coupling Flatness | 5 - 1225 MHz | dB | - | - | 1.0 |
| Input Return Loss (pin6) | 5 - 46 MHz | dB | 19 | 24 | - |
| | 47 - 450 MHz | dB | 23 | 28 | - |
| | 451 - 600 MHz | dB | 21 | 27 | - |
| | 601 - 900 MHz | dB | 16 | 21 | - |
| | 901 - 1225 MHz | dB | 12 | 17 | - |
| Output Return Loss (pin1) | 5 - 450 MHz | dB | 22 | 37 | - |
| | 451 - 900 MHz | dB | 18 | 25 | - |
| | 901 - 1,000MHz | dB | 17 | 23 | - |
| | 1001 - 1225 MHz | dB | 16 | 22 | - |
| Coupled Return Loss (pin4) | 5 - 46 MHz | dB | 20 | 26 | - |
| | 47 - 300 MHz | dB | 25 | 28 | - |
| | 301 - 450MHz | dB | 22 | 29 | - |
| | 451 - 850 MHz | dB | 17 | 22 | - |
| | 851 - 970 MHz | dB | 14 | 19 | - |
| | 971 - 1225 MHz | dB | 11 | 18 | - |

12 dB Coupler
5 - 1225 MHz V2

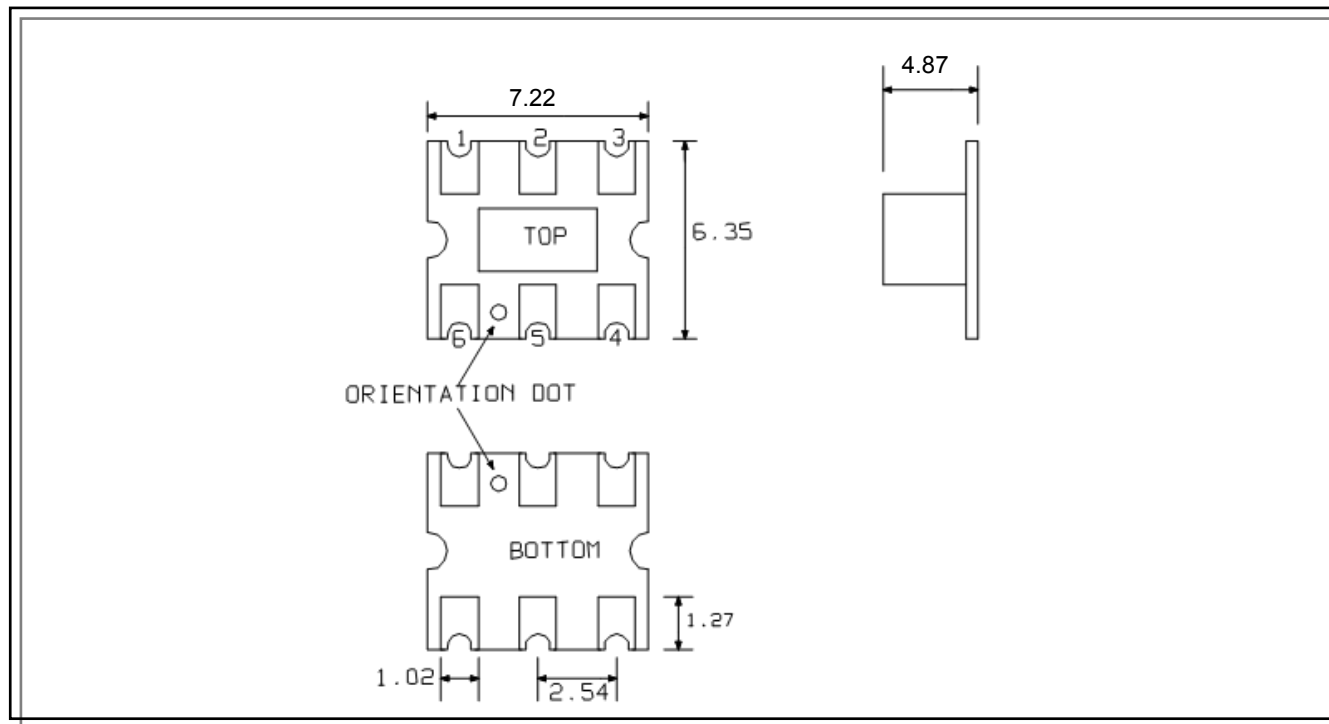


Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

12 dB Coupler
5 - 1225 MHz

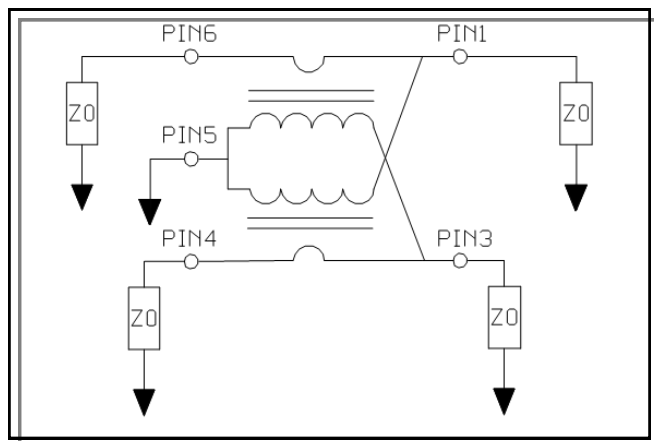
V2

Outline Drawing

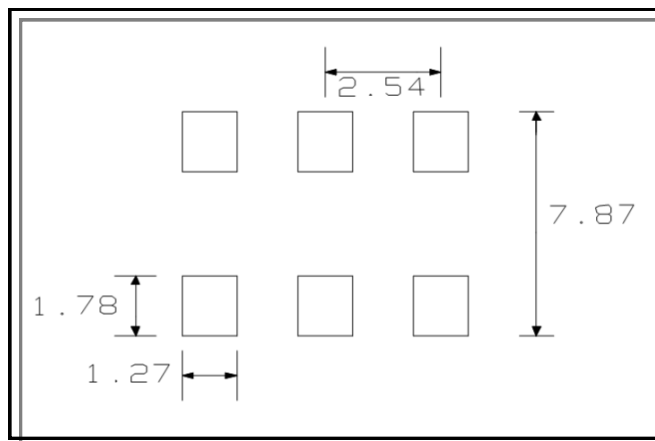


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Electroless nickel immersion gold (ENIG)

Application Circuit



Recommended Footprint



12 dB Coupler
5 - 1225 MHz V2

Tape & Reel Information

| Parameter | Units | Value |
|--|-------|-------|
| Qty per reel | - | 900 |
| Reel Size | mm | 330 |
| Tape Width | mm | 16.00 |
| Pitch | mm | 12.00 |
| Ao | mm | 6.80 |
| Bo | mm | 7.60 |
| Ko | mm | 5.30 |
| Orientation | - | F15 |
| Reference Application Note ANI-019 for orientation | | |

Ordering Information

| Part Number | Description |
|----------------|---------------------|
| MACP-011010 | Tape & Reel |
| MACP-011010-TB | Customer Test Board |

Recommended Maximum Ratings

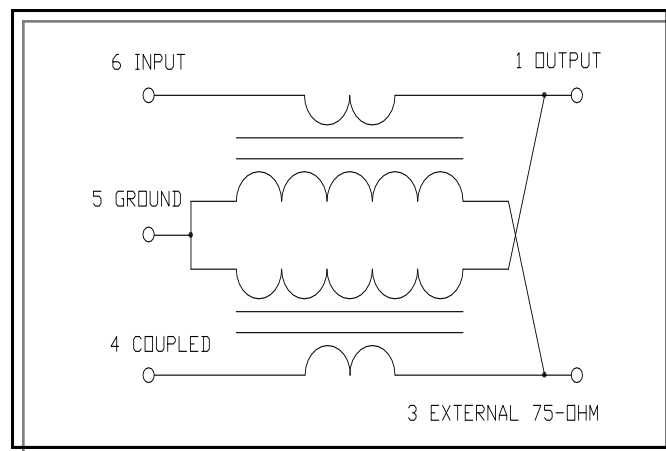
| Parameter | Units | Min | Max |
|-----------------------------|-------|-----|-----|
| Input Power | mW | | 250 |
| DC Current | mA | | 30 |
| Operating Temperature Range | °C | -40 | +85 |

Full temperature plots available on request

Pin Configuration

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

Schematic



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