**Features**
- Coupling +10 dB
- Stable Over Large Temperature Range
- Surface Mount Technology
- Available on Tape & Reel
- RoHS* Compliant

**Applications**
- High Volume CATV / Broadband

**Description**
The MACP-010045-CA08A0 is a 10 dB broadband coupler in a 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.

**Electrical Specifications:** \( T_A = 25^\circ C, P_{IN} = 0 \text{ dBm}, Z_0 = 75 \Omega \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupling (Pin 1-3)</td>
<td>5 - 1200 MHz</td>
<td>dB</td>
<td>—</td>
<td>10</td>
<td>±0.4</td>
</tr>
</tbody>
</table>
| Main Line Loss (Pin 1-5)   | 5 - 50 MHz
50 - 1000 MHz
1000 - 1200 MHz | dB | — | 1.2 | 1.4 | 1.5 | 1.6 | 1.8 |
| Coupling Flatness (Pin 1-3)| 5 - 1200 MHz          | dB    | —    | —    | 0.5  |
| Isolation (Pin 1-4)        | 5 - 50 MHz
50 - 1000 MHz
1000 - 1200 MHz | dB | 25 | 20 | 19 | 23 | 32 |
| Return Loss: Input (Pin 1) | 5 - 50 MHz
50 - 1000 MHz
1000 - 1200 MHz | dB | 16 | 18 | 19 | 18 | 21 | 22 |
| Return Loss: Output (Pin 5)| 5 - 50 MHz
50 - 1000 MHz
1000 - 1200 MHz | dB | 20 | 22 | 22 | 22 | 37 | 30 | 28 | — |
| Return Loss: Coupling (Pin 3)| 5 - 50 MHz
500 - 1000 MHz
1000 - 1200 MHz | dB | 16 | 18 | 19 | 18 | 22 | 22 | — |

**Ordering Information**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACP-010045-CA08A0</td>
<td>2000 piece reel</td>
</tr>
<tr>
<td>MACP-010045-CA08TB</td>
<td>Customer Test Board</td>
</tr>
</tbody>
</table>

1. Reference Application Note M513 for reel size information.

**Recommended Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>30 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +100°C</td>
</tr>
</tbody>
</table>

* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

For further information and support please visit: https://www.macom.com/support
Broadband CATV 10 dB Directional Coupler
5 - 1200 MHz

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

**Coupling**

**Main Line Loss**

**Return Loss: Input**

**Return Loss: Output**

**Return Loss: Coupled**

**Isolation**
Broadband CATV 10 dB Directional Coupler
5 - 1200 MHz

Application Circuit

Case Style: SM-138

Dimensions in inches [mm] tolerance: x.xx ± 0.02, x.xxx ± 0.010, unless otherwise stated.
Plating finish: CuSn6

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