MACP-009730-C60370

E-Series 6dB Coupler
5 to 1200 MHz

Features
- Surface mount
- 6dB Coupler
- 260°C reflow compatible
- RoHS* compliant, lead-free
- Available on tape and reel.

Description
M/A Com’s MACP-009730-C60370 is a 6dB coupler in a low cost, surface mount package. Excellent coupling flatness. Ideally suited for broadband CATV applications.

Schematic

Case style: SM-55

Pin configuration

<table>
<thead>
<tr>
<th>Pin no.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Output</td>
</tr>
<tr>
<td>2</td>
<td>Ground (Not used)</td>
</tr>
<tr>
<td>3</td>
<td>Isolated (75Ω termination)</td>
</tr>
<tr>
<td>4</td>
<td>Coupled</td>
</tr>
<tr>
<td>5</td>
<td>Ground</td>
</tr>
<tr>
<td>6</td>
<td>Input</td>
</tr>
</tbody>
</table>

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

Ordering information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACP-009730-C60370</td>
<td>900 piece reel</td>
</tr>
<tr>
<td>MACP-009730-C6037TB</td>
<td>Customer Test Board</td>
</tr>
</tbody>
</table>

Note: Reference Application Note M513 for reel size information.


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 tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

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

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# Electrical Specifications

T<sub>A</sub> = 25°C, 0dBm,  Z<sub>0</sub> = 75Ω, P<sub>in</sub> = 0dBm

<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</td>
<td>5 - 1200 MHz</td>
<td>dB</td>
<td>-</td>
<td>5.8</td>
<td>±0.5</td>
</tr>
<tr>
<td>Main Line Loss</td>
<td>400 - 870 MHz</td>
<td>dB</td>
<td>-</td>
<td>2.3</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>870 - 1000 MHz</td>
<td>dB</td>
<td>-</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>1000 - 1200 MHz</td>
<td>dB</td>
<td>-</td>
<td>2.9</td>
<td>3.3</td>
</tr>
<tr>
<td>Directivity</td>
<td>5 - 50 MHz</td>
<td>dB</td>
<td>11</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>50 - 600 MHz</td>
<td>dB</td>
<td>7.0</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600 - 1000 MHz</td>
<td>dB</td>
<td>3.0</td>
<td>7.2</td>
<td>-</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 500 MHz</td>
<td>dB</td>
<td>15</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>500 - 1000 MHz</td>
<td>dB</td>
<td>11</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>5 - 500 MHz</td>
<td>dB</td>
<td>19</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>500 - 1000 MHz</td>
<td>dB</td>
<td>13</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td>Coupling Return Loss</td>
<td>5 - 500 MHz</td>
<td>dB</td>
<td>12</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>500 - 1000 MHz</td>
<td>dB</td>
<td>9.0</td>
<td>12</td>
<td>-</td>
</tr>
</tbody>
</table>

## Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF power</td>
<td>250mW</td>
</tr>
<tr>
<td>DC current</td>
<td>30mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.
Typical Performance Curves: $T_A = 25^\circ C$, $0 \text{dBm}$, $Z_0 = 75 \Omega$, $P_{in} = 0 \text{dBm}$

**Coupling**

![Coupling Graph]

**Return Loss: Input**

![Return Loss: Input Graph]

**Return Loss: Coupling**

![Return Loss: Coupling Graph]

**Main Line Loss**

![Main Line Loss Graph]

**Return Loss: Output**

![Return Loss: Output Graph]

**Directivity**

![Directivity Graph]