MACP-009821-CG0650

16dB 75Ohm Coupler
5 to 862MHz

M/A-COM Products
Rev. V1

Features
• Surface Mount
• Coupling 16dB typical
• 260°C Reflow Compatible
• RoHS Compliant, Lead free
• RoHS version of EMDC-16-11-75
• Available on Tape and Reel.

Description
M/A-COM’s MACP-009821-CG0650 is a high performance 75 Ohm Coupler, in a SM-101 low cost, surface mount package. The MACP-009821-CG0650 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Broadband Amplifiers and Headend equipment.

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Pin configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Input</td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>Coupled</td>
</tr>
<tr>
<td>4</td>
<td>Isolated, external 75 Ohms</td>
</tr>
<tr>
<td>5</td>
<td>Not Connected</td>
</tr>
<tr>
<td>6</td>
<td>Output</td>
</tr>
</tbody>
</table>

Note: Reference Application Note M513 for reel size information.

Ordering information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACP-009821-CG0650</td>
<td>900 piece reel</td>
</tr>
<tr>
<td>MACP-009821-CG06TB</td>
<td>Customer Test Board</td>
</tr>
</tbody>
</table>


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.

Visit www.macomtech.com for additional data sheets and product information.
**Parameter** | **Frequency** | **Units** | **Min** | **Typ** | **Max**
---|---|---|---|---|---
Mainline Loss | 5 - 862 MHz | dB | - | 1.05 | 1.25
Coupling | 5 - 44 MHz | dB | - | 16 | ±0.5
 | 45 MHz | dB | - | 16 | ±0.2
 | 862 MHz | dB | - | 15.6 | ±0.3
Coupling Flatness | 5 - 862 MHz | dB | - | - | ±0.3
Isolation | 5 - 862 MHz | dB | 29 | 33 | -
Input Return Loss | 5 - 862 MHz | dB | 18 | 25 | -
Output Return Loss | 5 - 862 MHz | dB | 18 | 25 | -
Coupled Return Loss | 5 - 862 MHz | dB | 18 | 25 | -

**Recommended Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</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>
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Typical Performance Curves: $T_A = 25^\circ C$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0$dBm

Coupling

Main Line Loss

Return Loss: Input

Return Loss: Output

Isolation

Return Loss: Coupled

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