Coupler, 10 dB
5 - 870 MHz

MACP-010252-CA0370
Rev. V2

Features
- Coupling 10dB Typical
- Surface mount
- low profile
- 260°C reflow compatible
- Excellent Return Loss
- Available on Tape & Reel
- RoHS compliant, lead free

Applications
- CATV

Description
MACP-010252-CA0370 is a high performance 75 Ω coupler, surface mount package. This coupler is designed for use in high volume CATV applications. Typical applications include Set top Boxes, Network Interface Units, Line Amplifiers and Head end equipment.

Electrical Specifications: Freq. = 5 - 1800 MHz, T_A = 25°C, Z_0 = 75 Ω, P_IN = 0 dBm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions Frequency (MHz)</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Line Loss</td>
<td>5 - 500 500 - 870</td>
<td>dB</td>
<td>—</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Coupling</td>
<td>5 - 870</td>
<td>dB</td>
<td>—</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Coupling Flatness</td>
<td>-</td>
<td>dB</td>
<td>—</td>
<td>10</td>
<td>±0.5</td>
</tr>
<tr>
<td>Directivity</td>
<td>5 - 500 500 - 870</td>
<td>dB</td>
<td>—</td>
<td>20</td>
<td>23</td>
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<tr>
<td>Input Return Loss</td>
<td>5 - 870</td>
<td>dB</td>
<td>20</td>
<td>18</td>
<td>—</td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>5 - 870</td>
<td>dB</td>
<td>20</td>
<td>18</td>
<td>—</td>
</tr>
<tr>
<td>Coupling Return Loss</td>
<td>5 - 870</td>
<td>dB</td>
<td>20</td>
<td>18</td>
<td>—</td>
</tr>
</tbody>
</table>

Ordering Information
- MACP-010252-CA0370 900 piece reel
- MACP-010252-CA0370B Customer test board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

Absolute Maximum Ratings
- Input RF Power: 250 mW
- DC Current: 30 mA
- Operating Temperature: -40°C to +85°C

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

Coupling:

Main Line Loss:

Input Return Loss:

Output Return Loss

Coupled Return Loss:

Directivity:

6. Full temperature plots available on request.
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Application Schematic

Outline Drawing

Recommended Board Layout

Carrier Tape Orientation

Tape & Reel Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
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<tbody>
<tr>
<td>Qty per reel</td>
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<td>900</td>
</tr>
<tr>
<td>Reel Size</td>
<td>mm</td>
<td>330</td>
</tr>
<tr>
<td>Tape Width</td>
<td>mm</td>
<td>16.00</td>
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<tr>
<td>Pitch</td>
<td>mm</td>
<td>12.00</td>
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<tr>
<td>Orientation</td>
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Reference Application Note ANI-019 for orientation
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