Isolated Combiners, CM-x8D series

4 x 4 Hybrid Coupler Matrix, Combiner & Splitter
Wireless Bands from 350 to 2700 MHz
Rev. D

- Connects 4 inputs to 4 outputs
- Up to 30 dB Isolation, Low VSWR
- Low Specified PIM
- Indoor and Outdoor Applications
- Up to 150W/Input Continuous Avg. Power
- Same DIN Connector Spacing
- RoHS compliant

The 4x4 Hybrid is a matrix of four 3 dB Hybrid Couplers arranged so that signals applied to any of the four inputs will be split equally between the four outputs. This allows simple combining of multiple signals in the same wireless band to a common feeder cable, as might be required in a neutral host in-building distributed antenna system, or the decoupled combining of 4 transmitter or receiver signals equally to 4 antennas. Unused ports must be terminated externally in 50Ω, with an appropriate PIM performance. Note that the phase relationship of the outputs in these models is not consistent.

Special attention has been directed in these versions to maximize isolation in the wireless bands and minimize passive intermodulation (PIM). For outdoor environments add the suffix ‘P’ to Model No. (e.g. CM-58DP).

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Frequency Range, MHz</th>
<th>Coupling dB</th>
<th>Input Isolation* typical</th>
<th>Return Loss, dB</th>
<th>Power per Input Avg.</th>
<th>Weight, nom. lbs. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-58D</td>
<td>1710 - 2700</td>
<td>6.2 ± 0.8</td>
<td>27 dB</td>
<td>&gt;23 dB</td>
<td>100W</td>
<td>4.9 (2.2)</td>
</tr>
<tr>
<td>CM-68D</td>
<td>694 - 960</td>
<td>6.0 ± 1.8</td>
<td>23 dB</td>
<td>&gt;18 dB</td>
<td>150W</td>
<td>3.3 (1.5)</td>
</tr>
<tr>
<td>CM-88D</td>
<td>694 - 800</td>
<td>6.2 ± 1.2</td>
<td>23 dB</td>
<td>&gt;18 dB</td>
<td>150W</td>
<td>3.3 (1.5)</td>
</tr>
<tr>
<td>CM-98D</td>
<td>350 - 380</td>
<td>6.0 ± 0.8</td>
<td>33 dB</td>
<td>&gt;25 dB</td>
<td>150W</td>
<td>3.5 (1.6)</td>
</tr>
<tr>
<td></td>
<td>380 - 520</td>
<td>6.1 ± 0.6</td>
<td>30 dB</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Requires all unused ports to be terminated with loads of return loss > 32dB

DC Paths
All paths DC Isolated except:
- Input 1 to Output 1
- Input 2 to Output 2
- Input 3 to Output 3
- Input 4 to Output 4

Note: Specifications are subject to change without prior notification.

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