4 x 4 Hybrid Combiner, CM-14

Broadband Hybrid Combining System for Co-Siting
350 - 5,850 MHz, N or 7-16 mm DIN
Rev. C

- Minimum Loss, 4 hybrid design
- High Isolation, Low VSWR
- Multi-Band Range
- 200 Watt per Input Continuous Average Power up to 2.1 GHz†
- High Reliability, RoHS compliant
- Guaranteed PIM performance
- Portable package

These Combiner Boxes have been designed to meet the special needs of the wireless market. The CM-14 series now covers the extended bandwidth of 350 - 5,850 MHz, previously offered as a CM-13 series.

They are most commonly used to combine up to four wireless carriers in the operating band to single or multiple antenna feeds or distribution cables. In situations where four similar feeds can be utilized, as required in many in-building applications, all four outputs may be used, eliminating the need for terminating unused ports and the 6 dB hybrid loss.

Port return loss and isolation has been optimized while passive intermodulation (PIM) is minimized. Input and output connectors have been separately grouped for convenient connection and each connector is spaced to allow controlled wrench tightening of connectors.

<table>
<thead>
<tr>
<th>Model Number/Conn.</th>
<th>Frequency Range, MHz</th>
<th>Isolation dB</th>
<th>Coupling dB</th>
<th>VSWR Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-16 DIN N-conn.</td>
<td></td>
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<tr>
<td>CM-14D</td>
<td>350 - 1,500</td>
<td>&gt;25 dB</td>
<td>6.3 ± 1.0</td>
<td>1.30:1</td>
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<tr>
<td></td>
<td>1,500 - 2,500</td>
<td>&gt;20 dB</td>
<td>6.5 ± 1.0</td>
<td>1.35:1</td>
</tr>
<tr>
<td></td>
<td>2,500 - 2,700</td>
<td>&gt;18 dB</td>
<td>6.6 ± 1.1</td>
<td>1.70:1</td>
</tr>
<tr>
<td></td>
<td>2,700 - 4,900</td>
<td>&gt;15 dB</td>
<td>7.0 ± 1.3</td>
<td>2.00:1</td>
</tr>
<tr>
<td></td>
<td>4,900 - 5,850</td>
<td>&gt;15 dB</td>
<td>7.2 ± 1.5</td>
<td>1.40:1</td>
</tr>
</tbody>
</table>

Power per input: 200W up to 2.1 GHz†, 3.0 kW pk
Impedance: 50Ω nominal
Environment: -15°C to +65°C, Indoor
PIM (Intermod): < -160 dBc (+43dBm x2)
Finish: Housing: Passivated aluminum
Connectors: triplate, (f-f)
Weight: 14 lbs (6.4 kg) nom.

† De-rated by 13.3 W per 1 GHz from 2.1 to 5.85 GHz (max 150 Watts/input at 5.85 GHz)