2 ch Combiner and Duplexer System

Key features:

Two transmitter duplexing with amplifier on a single antenna.

- Two Base Stations to operate on a single antenna
- Low Noise amplifier included for maximum sensitivity
- Band-pass selectivity in the duplexer for high level carrier suppression
- Test port included for accurate receiver sensitivity measurements
- Integrated isolators on the Duplex system shelf
- Low PIM design for a two channel duplexer
- Integrated receive distribution for one or two channels
- Hybrid design to allow combining without regard to transmit frequency separation
- Compact 19” design
- Wide bandwidth for UHF
- Full band for 7/8/900 MHz
- Multiple units allows more than two channels to be combined on multiple antennas
- Very economical compared to two duplexers, two antennas, and two antenna cables

Cost advantages:

- Reduces the number of antennas and cables on the tower, reducing wind loading, icing problems, tower climbs, etc.
- Reduced time for installation, less time at the site.
- Less cable on the tower and fewer antennas results in lower long-term maintenance costs.
- Compact – takes up less rack space.
- Fewer tower climbs, a distinct cost advantage.

Installation advantages:

- Plug and play solution
- Reduced installation time. Attach cabling and ready to go
- Reduced setup time
- No tuning required
- Reduced need for tower crew
- Integrated solution for two channels
- Smaller package, easier to install.
- System shares single antenna.
Part Numbers | Description
---|---
CP05445 | 2 ch duplexer 400-420 MHz
CP04491 | 2 ch duplexer 450-460 MHz
CP05446 | 2 ch duplexer 480-500 MHz
CP05455 | 2 ch duplexer 700 MHz Rx: 793-805 MHz/ Tx: 763-775 MHz
CP05456 | 2 ch duplexer 800 MHz Rx: 806-824 MHz / Tx: 851-869 MHz
CP01031 | 2 ch duplexer 900 MHz Rx: 896-902 MHz / Tx: 935-941 MHz

Specification, System

- **Frequency**: According to part number
- **Tx / Rx bandwidth UHF**: See table below
- **Duplex spacing UHF**: See table below
- **Tx insertion loss**: See table below
- **Tx input power**: 2*100 W
- **Tx input return loss**: >18 dB
- **Tx-Tx isolation**: >75 dB
- **Tx to ANT selectivity in Rx band**: >80 dB
- **ANT port return loss in Rx band**: >17 dB
- **PIM**: Tolerant
- **Rx gain**: 4 dB to 14 dB in 1 dB steps settable by rotary switch
- **Noise figure**: See table below
- **Integrated test port**: 30 dB
- **OIP3**: >+35 dBm
- **Rx port return loss**: >15 dB
- **Rx to Rx isolation**: >20 dB
- **ANT to Rx selectivity in Tx band**: >80 dB
- **ANT port return loss in Rx band**: >17 dB
- **Operating temp.**: -10°C to 60°C
- **Enclosure**: Indoor
- **Connectors, Tx**: N-female in the back
- **Connector, ANT**: 7-16 female in the back
- **Connectors, Rx and TEST**: BNC-female in the back
- **Dimensions**: 19", 2U, 15.8" deep
- **Weight**: 25 lbs

<table>
<thead>
<tr>
<th>Part number</th>
<th>Band width</th>
<th>Duplex spacing</th>
<th>Tx-insertion loss (typical)</th>
<th>Rx noise figure (typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP05445</td>
<td>5 MHz</td>
<td>10 MHz</td>
<td>5.3 dB</td>
<td>3 dB</td>
</tr>
<tr>
<td>CP04491</td>
<td>2.5 MHz</td>
<td>5 MHz</td>
<td>5.8 dB</td>
<td>3 dB</td>
</tr>
<tr>
<td>CP04446</td>
<td>5 MHz</td>
<td>10 MHz</td>
<td>5.3 dB</td>
<td>3 dB</td>
</tr>
<tr>
<td>CP05455</td>
<td>Full band</td>
<td>Full band</td>
<td>4.8 dB</td>
<td>2.7 dB</td>
</tr>
<tr>
<td>CP05456</td>
<td>Full band</td>
<td>Full band</td>
<td>4.8 dB</td>
<td>2.7 dB</td>
</tr>
<tr>
<td>CP01031</td>
<td>Full band</td>
<td>Full band</td>
<td>4.8 dB</td>
<td>2.7 dB</td>
</tr>
</tbody>
</table>