Twin Triplexer, 555-894/PCS/AWS+WCS, dc Sense, 4.3-10
- BTS-to-feeder and feeder-to-antenna application
- New 4.3-10 connectors for improved PIM performance and size reduction
- DC Load Sense in Feeder-to-Antenna applications
- Automatic dc switching with dc sense
- Convertible mounting brackets

General Specifications
Product Family: CBC61923
Modularity: 2-Twin
Includes: Mounting hardware

Electrical Specifications
Sub-module: 1 | 2
Branch: 1 | 2
Port Designation: 555-894 MHz
License Band: CEL 850
USA 700
USA 750
USA 600

Electrical Specifications, Band Pass
Frequency Range:
- 555–894 MHz
- 1850–1990 MHz
- 2305–2360 MHz
- 1695–1780 MHz
- 2110–2200 MHz
Insertion Loss, typical:
- 0.15 dB
- 0.25 dB
- 0.25 dB
Total Group Delay, typical:
- 3 ns
- 15 ns
- 15 ns
Return Loss, typical:
- 24 dB
- 24 dB
- 24 dB
Isolation, typical:
- 55 dB
- 55 dB
- 55 dB
Input Power, RMS, maximum:
- 200 W
- 200 W
- 200 W
Input Power, PEP, maximum:
- 2000 W
- 2000 W
- 2000 W
3rd Order PIM, typical:
- -161 dBc
- -161 dBc
3rd Order PIM Test Method:
- 2 x 20 W CW tones
- 2 x 20 W CW tones
Higher Order PIM, minimum:
- -161 dBc
Higher Order PIM Test Method:
- 2 x 20 W CW tones

Product Classification
Product Type: Triplexer

Common Port Electrical Specifications
Composite Power, RMS: 250 W
**AISG Electrical Specifications**

**AISG Carrier**
2176 KHz $\pm$ 100 ppm

**Insertion Loss, maximum**
1.00 dB

**Return Loss, minimum**
15 dB

**dc Power/Alarm Electrical Specifications**

**Voltage**
7–30 Vdc

**dc/AISG Pass-through Method**
Auto sensing

**dc/AISG Pass-through Path**
See logic table

**Lightning Surge Current**
10 kA

**Lightning Surge Current Waveform**
8/20 waveform

**Electrical Specifications**

**Impedance**
50 ohm

**Block Diagram**
## Logic Table

### Combining Mode Operation (Ground Based)

<table>
<thead>
<tr>
<th>RF Ports Input Voltage</th>
<th>PCS</th>
<th>AWS/WCS</th>
<th>COMMON</th>
<th>DC/AISG Path Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>555 to 894 MHz</td>
<td>&lt;7</td>
<td>&lt;7</td>
<td>&lt;7</td>
<td>555 to 894 MHz to COMMON &quot;ON&quot;</td>
</tr>
<tr>
<td>7 ≤ V ≤ 30</td>
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<td>&lt;7</td>
<td>&lt;7</td>
<td>AWS/WCS to COMMON &quot;ON&quot;</td>
</tr>
</tbody>
</table>

### Splitting Mode Operation (Tower Top)

<table>
<thead>
<tr>
<th>RF Ports Impedance DC (Load sensing)</th>
<th>PCS</th>
<th>AWS/WCS</th>
<th>COMMON</th>
<th>DC/AISG Path Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>555 to 894 MHz</td>
<td>short</td>
<td>short</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to 555-894 &quot;ON&quot;</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>short</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to PCS &quot;ON&quot;</td>
</tr>
<tr>
<td>short</td>
<td>open/load</td>
<td>short</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to AWS/WCS &quot;ON&quot;</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>open/load</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to 555-894 &quot;ON&quot;</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>open/load</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to PCS &quot;ON&quot;</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>open/load</td>
<td>7 ≤ V ≤ 30</td>
<td>COMMON to AWS/WCS &quot;ON&quot;</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>open/load</td>
<td>7 ≤ V ≤ 30</td>
<td>ALL ports ON</td>
</tr>
<tr>
<td>open/load</td>
<td>short</td>
<td>short</td>
<td>7 ≤ V ≤ 30</td>
<td>ALL ports OFF</td>
</tr>
</tbody>
</table>

## Mechanical Specifications

- **RF Connector Interface**: 4.3-10 Female
- **RF Connector Interface Body Style**: Long neck
- **Ground Screw Diameter**: 6.00 mm
- **Color**: Gray
- **Mount Type**: Pole | Wall
- **Mounting Pipe Diameter**: 40–160 mm
- **Mounting Pipe Hardware**: Band clamps (2)

## Dimensions

- **Height**: 176.0 mm | 6.9 in
- **Width**: 198.0 mm | 7.8 in
- **Depth**: 116.0 mm | 4.6 in
- **Volume**: 4.0 L
- **Weight, without mounting hardware**: 6.0 kg | 13.2 lb
- **Mounting Hardware Weight**: 0.5 kg | 1.1 lb
Environmental Specifications

**Operating Temperature**  
-40 °C to +65 °C (-40 °F to +149 °F)

**Ingress Protection Test Method**  
IEC 60529:2001, IP67

**Corrosion Test Method**  
IEC 60068-2-11, 30 days

Outline Drawing