

CBC61923-DS-43 | E14F10P57



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
- Automatic dc switching with dc sense
- Convertible mounting brackets
- DC Load Sense in Feeder-to-Antenna applications

Product Classification

Product Type Triplexer

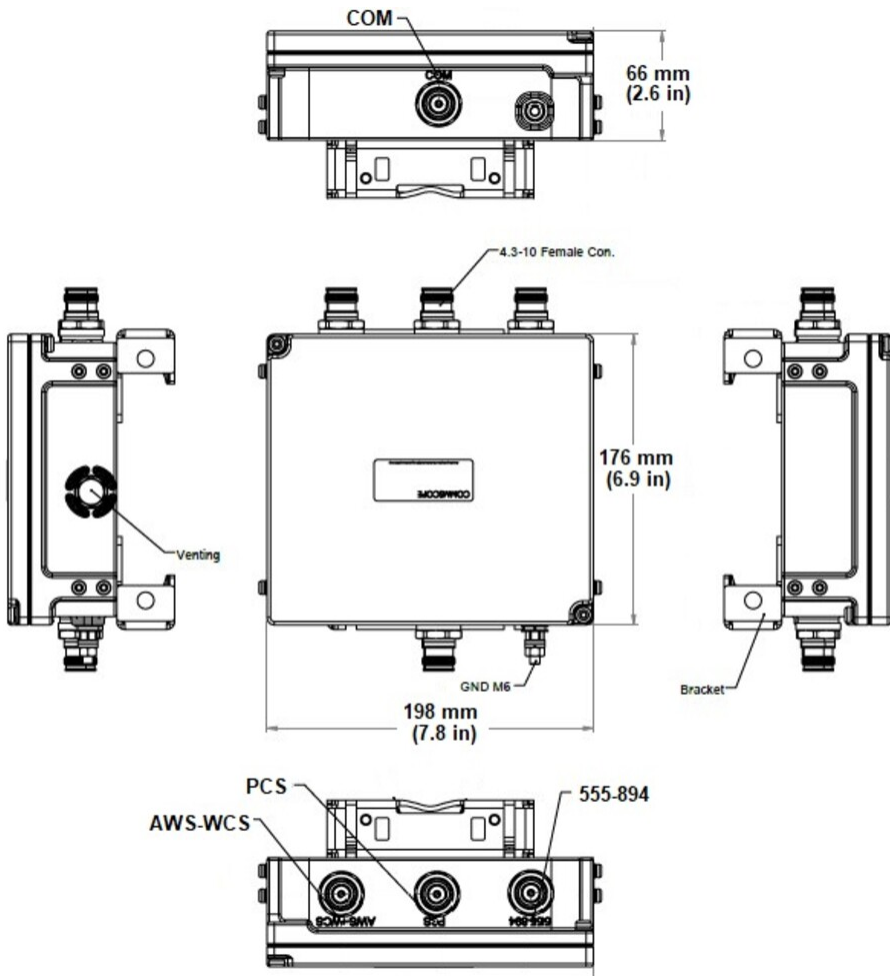
General Specifications

Product Family CBC61923
Color Gray
Common Port Label Common
Modularity 1-Single
Mounting Pole | Wall
Mounting Pipe Hardware Band clamps (2)
RF Connector Interface 4.3-10 Female
RF Connector Interface Body Style Long neck

Dimensions

Height 176 mm | 6.929 in
Width 198 mm | 7.795 in
Depth 66 mm | 2.598 in
Ground Screw Diameter 6 mm | 0.236 in
Mounting Pipe Diameter Range 40–160 mm

Outline Drawing



Electrical Specifications

| | |
|--------------------------------|--|
| Impedance | 50 ohm |
| License Band, Band Pass | AWS 1700 CEL 850 LMR 750 PCS 1900 USA 600 USA 700 USA 750 WCS 2300 |

Electrical Specifications, Common Port

| | |
|-----------------------------|-------|
| Composite Power, RMS | 250 W |
|-----------------------------|-------|

Electrical Specifications, dc Power/Alarm

| | |
|---|-----------------|
| 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 |

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Voltage 7–30 Vdc

Electrical Specifications, AISG

AISG Carrier 2176 KHz ± 100 ppm
Insertion Loss, maximum 1 dB
Return Loss, minimum 15 dB

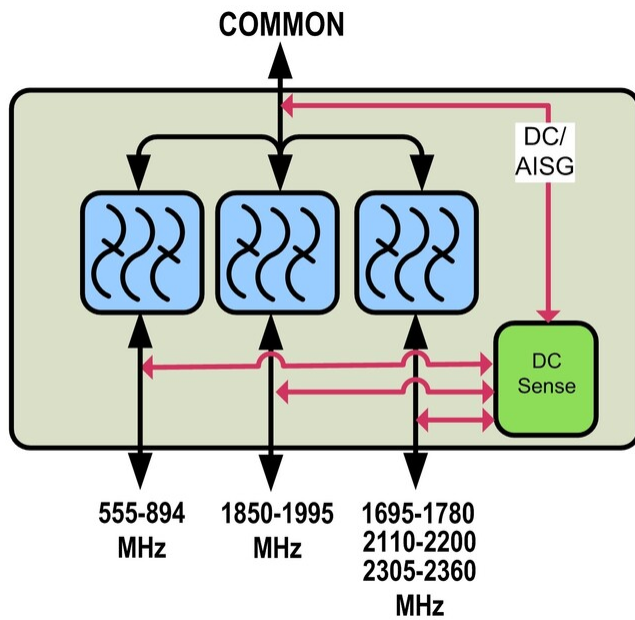
Electrical Specifications

| | | | |
|-------------------------|--|---------------------|--|
| Sub-module | 1 | 1 | 1 |
| Branch | 1 | 2 | 3 |
| Port Designation | 555-894 | PCS | AWS-WCS |
| License Band | CEL 850, Band Pass USA 700, Band Pass USA 750, Band Pass USA 600, Band Pass | PCS 1900, Band Pass | AWS 1700, Band Pass WCS 2300, Band Pass |

Electrical Specifications, Band Pass

| Frequency Range, MHz | 555–894 | 1850–1995 | 1695–1780 2110–2200 2305–2360 |
|---------------------------------------|-------------------|-------------------|--|
| Insertion Loss, typical, dB | 0.1 | 0.25 | 0.25 |
| Total Group Delay, maximum, ns | 10 | 20 | 25 |
| Return Loss, minimum, dB | 21 | 21 | 21 |
| Isolation, minimum, dB | 50 | 50 | 50 |
| Input Power, RMS, maximum, W | 200 | 200 | 200 |
| Input Power, PEP, maximum, W | 2000 | 2000 | 2000 |
| 3rd Order PIM, maximum, dBc | -161 | -161 | |
| 3rd Order PIM Test Method | 2 x 20 W CW tones | 2 x 20 W CW tones | |
| Higher Order PIM, maximum, dBc | | | -161 |
| Higher Order PIM Test Method | | | 2 x 20 W CW tones |

Block Diagram



Logic Table

| Combining Mode Operation (Ground Based) | | | | |
|---|--------------------|--------------------|--------|-------------------------------|
| RF Ports Input Voltage | | | | |
| 555 to 894 MHz | PCS | AWS/WCS | COMMON | DC/AISG Path Selection |
| $7 \leq V \leq 30$ | <7 | <7 | <7 | 555 to 894 MHz to COMMON "ON" |
| <7 | $7 \leq V \leq 30$ | <7 | <7 | PCS to COMMON "ON" |
| <7 | <7 | $7 \leq V \leq 30$ | <7 | AWS/WCS to COMMON "ON" |
| $7 \leq V \leq 30$ | $7 \leq V \leq 30$ | <7 | <7 | 555 to 894 MHz to COMMON "ON" |
| $7 \leq V \leq 30$ | <7 | $7 \leq V \leq 30$ | <7 | AWS/WCS to COMMON "ON" |
| <7 | $7 \leq V \leq 30$ | $7 \leq V \leq 30$ | <7 | AWS/WCS to COMMON "ON" |
| $7 \leq V \leq 30$ | $7 \leq V \leq 30$ | $7 \leq V \leq 30$ | <7 | AWS/WCS to COMMON "ON" |

| Splitting Mode Operation (Tower Top) | | | | |
|--------------------------------------|-----------|-----------|--------------------|--|
| RF Ports Impedance DC (Load sensing) | | | | |
| 555 to 894 MHz | PCS | AWS/WCS | COMMON | DC/AISG Path Selection |
| open/load | short | short | $7 \leq V \leq 30$ | COMMON to 555-894 "ON" |
| short | open/load | short | $7 \leq V \leq 30$ | COMMON to PCS "ON" |
| short | short | open/load | $7 \leq V \leq 30$ | COMMON to AWS/WCS "ON" |
| open/load | open/load | short | $7 \leq V \leq 30$ | COMMON to 555-894 "ON" COMMON to PCS "ON" |
| open/load | short | open/load | $7 \leq V \leq 30$ | COMMON to 555-894 "ON" COMMON to AWS/WCS "ON" |
| short | open/load | open/load | $7 \leq V \leq 30$ | COMMON to PCS "ON" COMMON to AWS/WCS "ON" |
| open/load | open/load | open/load | $7 \leq V \leq 30$ | ALL ports ON |
| short | short | short | $7 \leq V \leq 30$ | ALL ports OFF |

Environmental Specifications

| | |
|---------------------------------------|--------------------------------------|
| Operating Temperature | -40 °C to +65 °C (-40 °F to +149 °F) |
| Corrosion Test Method | IEC 60068-2-11, 30 days |
| Ingress Protection Test Method | IEC 60529:2001, IP67 |

Packaging and Weights

| | |
|--|--------------------|
| Included | Mounting hardware |
| Mounting Hardware Weight | 0.5 kg 1.102 lb |
| Volume | 2.3 L |
| Weight, without mounting hardware | 3.15 kg 6.945 lb |