

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

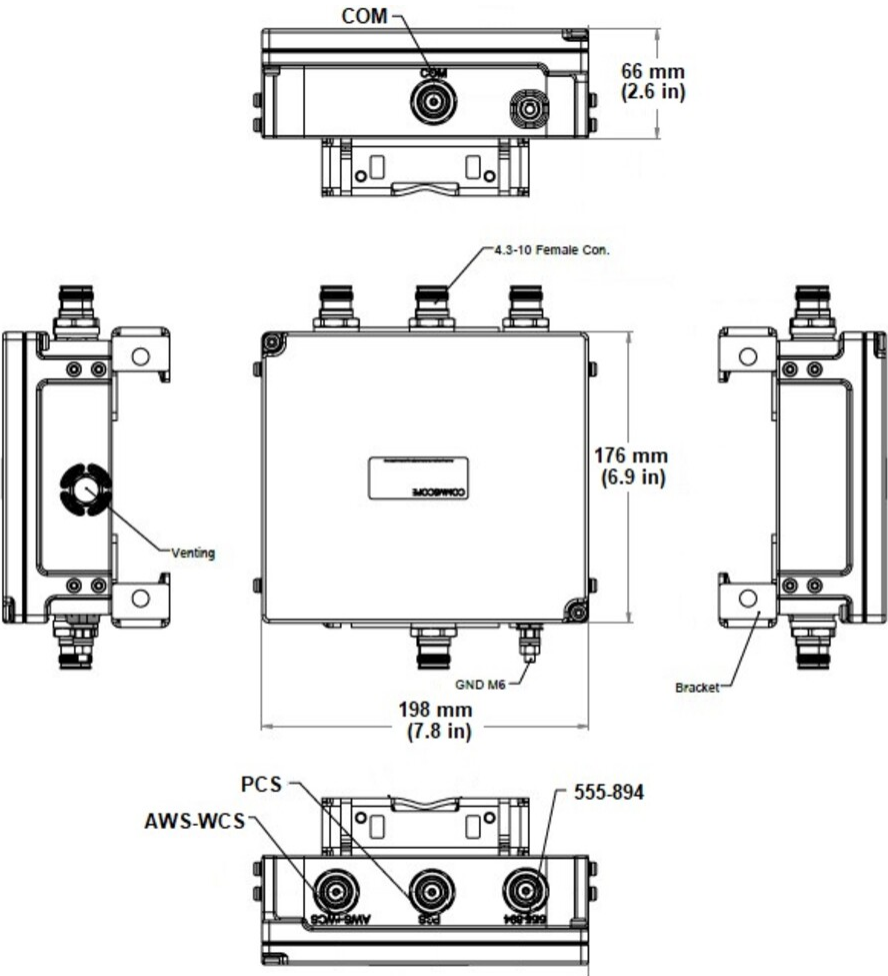
Width 198 mm | 7.795 in

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 |

Voltage7–30 Vdc

Electrical Specifications, AISG

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

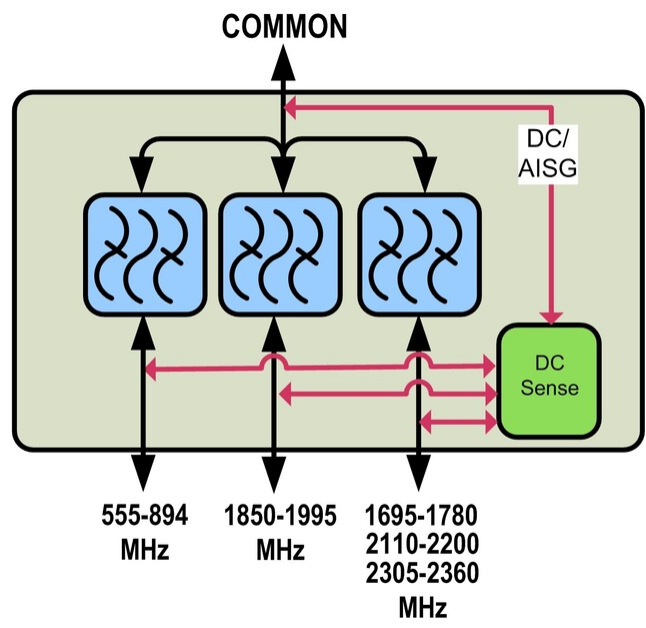
Electrical Specifications

| | | | |
|------------------|--|---------------------|--|
| 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 ≤ V ≤ 30 | <7 | <7 | <7 | 555 to 894 MHz to COMMON "ON" |
| <7 | 7 ≤ V ≤ 30 | <7 | <7 | PCS to COMMON "ON" |
| <7 | <7 | 7 ≤ V ≤ 30 | <7 | AWS/WCS to COMMON "ON" |
| 7 ≤ V ≤ 30 | 7 ≤ V ≤ 30 | <7 | <7 | 555 to 894 MHz to COMMON "ON" |
| 7 ≤ V ≤ 30 | <7 | 7 ≤ V ≤ 30 | <7 | AWS/WCS to COMMON "ON" |
| <7 | 7 ≤ V ≤ 30 | 7 ≤ V ≤ 30 | <7 | AWS/WCS to COMMON "ON" |
| 7 ≤ V ≤ 30 | 7 ≤ V ≤ 30 | 7 ≤ V ≤ 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 ≤ V ≤ 30 | COMMON to 555-894 "ON" |
| short | open/load | short | 7 ≤ V ≤ 30 | COMMON to PCS "ON" |
| short | short | open/load | 7 ≤ V ≤ 30 | COMMON to AWS/WCS "ON" |
| open/load | open/load | short | 7 ≤ V ≤ 30 | COMMON to 555-894 "ON" COMMON to PCS "ON" |
| open/load | short | open/load | 7 ≤ V ≤ 30 | COMMON to 555-894 "ON" COMMON to AWS/WCS "ON" |
| short | open/load | open/load | 7 ≤ V ≤ 30 | COMMON to PCS "ON" COMMON to AWS/WCS "ON" |
| open/load | open/load | open/load | 7 ≤ V ≤ 30 | ALL ports ON |
| short | short | short | 7 ≤ V ≤ 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 |