



Tower Mounted Amplifier, Twin Diplexed PCS/AWS 1-4, 555-894 MHz bypass 4.3-10

- New 4.3-10 connectors for improved PIM performance and size reduction
- Includes 600 MHz and AWS-3/4 bands

## Product Classification

**Product Type** 1-BTS:2-ANT (Diplex) | Tower mounted amplifier

## General Specifications

**Color** Gray

**Modularity** 2-Twin

**Mounting** Pole | Wall

**Mounting Pipe Hardware** Band clamps (2)

**RF Connector Interface** 4.3-10 Female

## Dimensions

**Height** 231.5 mm | 9.114 in

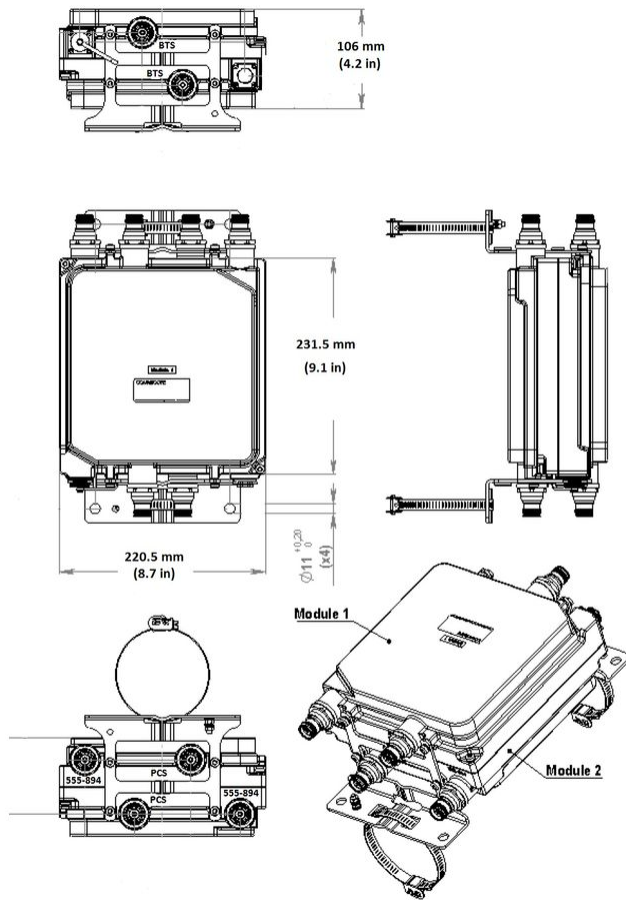
**Width** 220.5 mm | 8.681 in

**Depth** 106 mm | 4.173 in

**Ground Screw Diameter** 6 mm | 0.236 in

**Mounting Pipe Diameter Range** 40-160 mm

## Outline Drawing



## Electrical Specifications

|                                |   |
|--------------------------------|---|
| <b>License Band, Band Pass</b> | APT 700   CEL 850   EDD 800   LMR 750   LMR 800   USA 700   USA 750 |
| <b>License Band, LNA</b>       | AWS 1700   PCS 1900   |

## Electrical Specifications, dc Power/Alarm

|   |               |
|---|---------------|
| <b>dc Switching/Redundancy</b>          | Yes           |
| <b>Lightning Surge Current</b>          | 10 kA         |
| <b>Lightning Surge Current Waveform</b> | 8/20 waveform |
| <b>Operating Current at Voltage</b>     | 240 mA @ 12 V |
| <b>Voltage</b>                          | 7–30 Vdc      |
| <b>Voltage, CWA Mode</b>                | 10–18 Vdc     |

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**Alarm Current, CWA Mode** 30–170 mA @ 10–18 V

## Electrical Specifications, AISG

**AISG Carrier** 2.176 MHz ± 100 ppm  
**AISG Connector** 8-pin DIN Female  
**AISG Connector Standard** IEC 60130-9  
**Default Protocol** AISG 2.0  
**Protocol** AISG 1.1 | AISG 2.0  
**Voltage, AISG Mode** 10–30 Vdc

## Electrical Specifications

| Sub-module                     | 1   2                 | 1   2         | 1   2         |
|--------------------------------|-----------------------|---------------|---------------|
| <b>Branch</b>                  | 1                     | 2             | 3             |
| <b>Port Designation</b>        | 555–894               | AWS–PCS       | AWS–PCS       |
| <b>AISG 2.0 Device Subunit</b> |                       | E14R00P09 2/4 | E14R00P09 1/3 |
| <b>License Band</b>            | [1, 4, 7, 10, 11, 16] | AWS 1700, LNA | PCS 1900, LNA |

## Electrical Specifications Rx (Uplink)

|  | 1695–1780 | 1850–1910 |
|--|-----------|-----------|
| <b>Frequency Range, MHz</b>                      | 1695–1780 | 1850–1910 |
| <b>Bandwidth, MHz</b>                            | 85        | 60        |
| <b>Gain, nominal, dB</b>                         | 12        | 12        |
| <b>Gain Tolerance, dB</b>                        | ±1.2      | ±1.2      |
| <b>Noise Figure, typical, dB</b>                 | 1         | 1.3       |
| <b>Total Group Delay, typical, ns</b>            | 30        | 110       |
| <b>Return Loss, typical, dB</b>                  | 22        | 22        |
| <b>Insertion Loss - Bypass Mode, typical, dB</b> | 1.3       | 2.2       |
| <b>Return Loss - Bypass Mode, typical, dB</b>    | 16        | 16        |
| <b>TX Band Rejection, minimum, dB</b>            | 60        | 60        |

## Electrical Specifications Tx (Downlink)

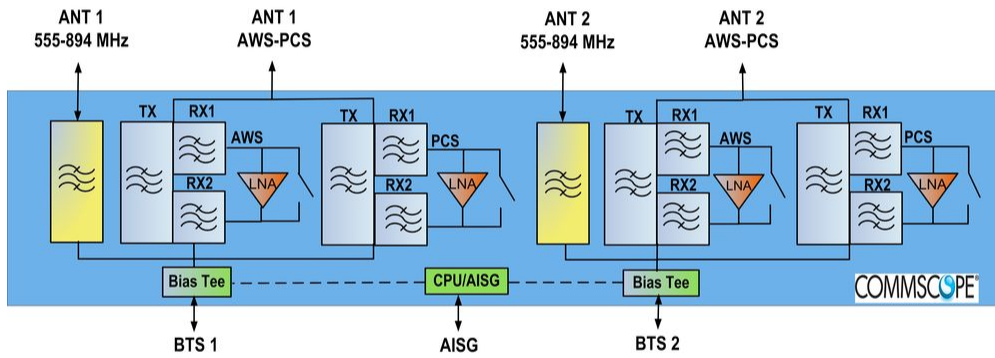
|                                       | 2110–2200 | 1930–1990 |
|---------------------------------------|-----------|-----------|
| <b>Frequency Range, MHz</b>           | 2110–2200 | 1930–1990 |
| <b>Bandwidth, MHz</b>                 | 90        | 60        |
| <b>Insertion Loss, typical, dB</b>    | 0.15      | 0.45      |
| <b>Total Group Delay, typical, ns</b> | 10        | 35        |
| <b>Return Loss, typical, dB</b>       | 22        | 22        |
| <b>RX Band Rejection, minimum, dB</b> | 55        | 45        |

|                                     |        |                   |
|-------------------------------------|--------|-------------------|
| <b>Input Power, RMS, maximum, W</b> | 200    | 200               |
| <b>Input Power, PEP, maximum, W</b> | 3000   | 3000              |
| <b>3rd Order PIM, typical, dBc</b>  | -156   | -156              |
| <b>3rd Order PIM Test Method</b>    | [2, 4] | 2 x 20 W CW tones |

## Electrical Specifications, Band Pass

|                                       |                   |
|---------------------------------------|-------------------|
| <b>Frequency Range, MHz</b>           | <b>555–894</b>    |
| <b>Insertion Loss, typical, dB</b>    | 0.1               |
| <b>Total Group Delay, typical, ns</b> | 4                 |
| <b>Return Loss, typical, dB</b>       | 22                |
| <b>Isolation, minimum, dB</b>         | 50                |
| <b>Input Power, RMS, maximum, W</b>   | 200               |
| <b>Input Power, PEP, maximum, W</b>   | 3000              |
| <b>3rd Order PIM, typical, dBc</b>    | -156              |
| <b>3rd Order PIM Test Method</b>      | 2 x 20 W CW tones |

## Block Diagram



## Material Specifications

**Finish** Painted

## Environmental Specifications

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

**Relative Humidity** Up to 100%

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

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

## Packaging and Weights

**Included** Mounting hardware

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|  |                    |
|--|--------------------|
| <b>Mounting Hardware Weight</b>          | 0.9 kg   1.984 lb  |
| <b>Weight, without mounting hardware</b> | 7.1 kg   15.653 lb |

## \* Footnotes

**License Band, Band Pass** License Bands that are to be passed through with no amplification

**License Band, LNA** License Bands that have RxUplink amplification