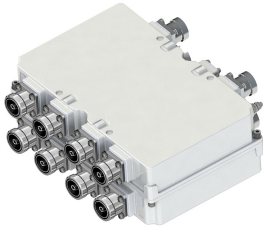


TMAQ23B78-21A | E15R07P01



Quad Tower Mounted Amplifier WCS with 700-850 Bypass AISG

This product will be discontinued on: March 30, 2024

Replaced By:

TMAQ192123B68-21 Tower Mounted Amplifier, Quad Dplx'd PCS/AWS/WCS, 617-894 MHz bypass 4.3-10
E14R00P32

Product Classification

Product Type Tower mounted amplifier

General Specifications

RF Connector Interface 7-16 DIN Female

RF Connector Interface Body Style Long neck

Dimensions

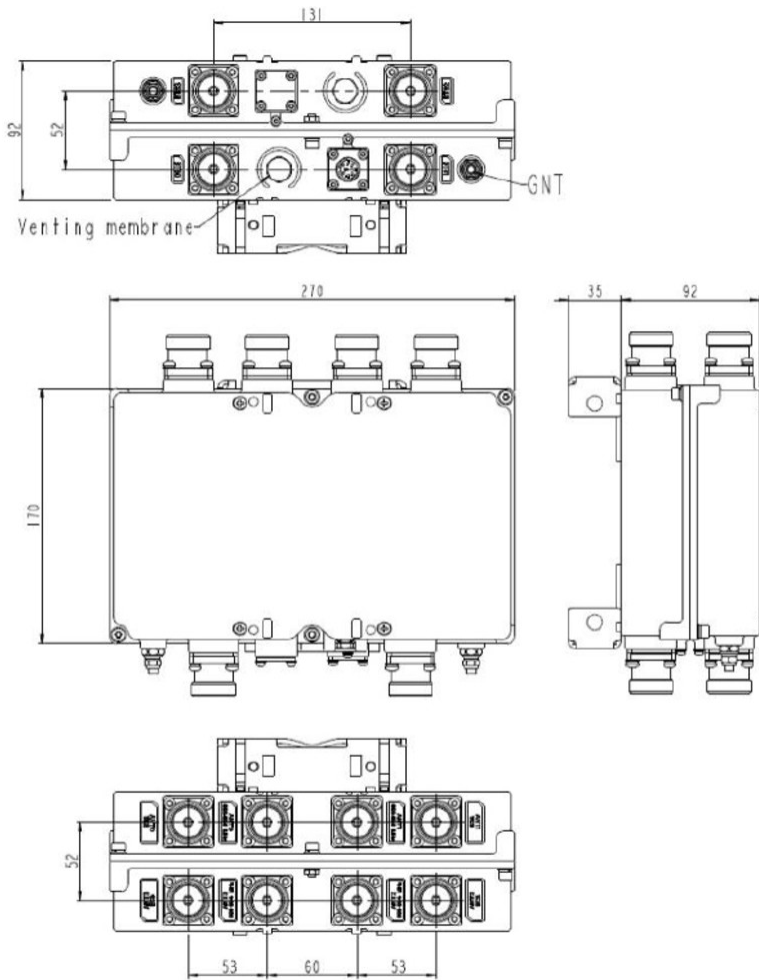
Height 170 mm | 6.693 in

Width 270 mm | 10.63 in

Depth 90 mm | 3.543 in

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Outline Drawing



Electrical Specifications

License Band, Band Pass CEL 850 | USA 700 | USA 750

License Band, LNA WCS 2300

Electrical Specifications, dc Power/Alarm

Lightning Surge Current 10 kA

Lightning Surge Current Waveform 8/20 waveform

Operating Current at Voltage 210 mA @ 12 Vdc

Voltage, CWA Mode 10–18 Vdc

Alarm Current, CWA Mode 150 mA +/- 10 mA (10-18 VDC)

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Electrical Specifications, AISG

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

Electrical Specifications

| | | |
|--------------------------------|--|-------------------|
| Sub-module | 1 2 | 1 2 |
| Branch | 1 | 2 |
| Port Designation | ANT 1 698-894 | ANT 2 WCS |
| AISG 2.0 Device Subunit | | E25A01P03 1/2/3/4 |
| License Band | CEL 850, Band Pass USA 700, Band Pass USA 750, Band Pass | WCS 2300, LNA |

Electrical Specifications Rx (Uplink)

| | |
|----------------------------------|------------------|
| Frequency Range, MHz | 2305–2315 |
| Gain, nominal, dB | 13 |
| Gain Tolerance, dB | +/-1 |
| Noise Figure, typical, dB | 1.7 |

Electrical Specifications Tx (Downlink)

| | |
|---------------------------------------|-------------------|
| Frequency Range, MHz | 2350–2360 |
| Insertion Loss, maximum, dB | 0.6 |
| Insertion Loss, typical, dB | 0.5 |
| Total Group Delay, maximum, ns | 50 |
| Return Loss, minimum, dB | 18 |
| Return Loss, typical, dB | 20 |
| Input Power, RMS, maximum, W | 200 |
| Input Power, PEP, maximum, W | 3000 |
| 3rd Order PIM, typical, dBc | -153 |
| 3rd Order PIM Test Method | 2 x 20 W CW tones |

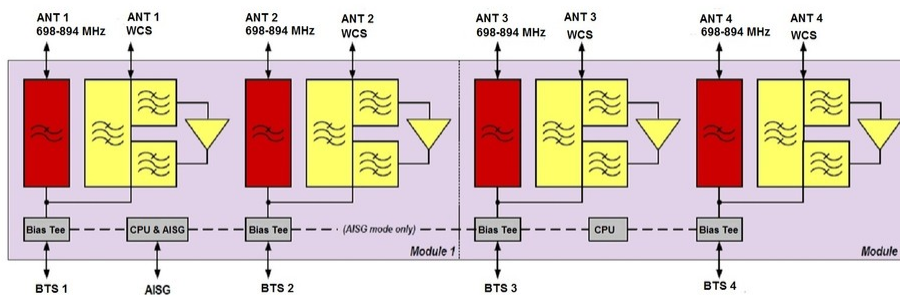
Electrical Specifications, Band Pass

| | |
|-----------------------------|----------------|
| Frequency Range, MHz | 698–894 |
|-----------------------------|----------------|

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| | |
|-------------------------------------|-------------------|
| Insertion Loss, maximum, dB | 0.2 |
| Return Loss, minimum, dB | 18 |
| Return Loss, typical, dB | 20 |
| Isolation, minimum, dB | 60 |
| Input Power, RMS, maximum, W | 200 |
| Input Power, PEP, maximum, W | 3000 |
| 3rd Order PIM, maximum, dBc | -153 |
| 3rd Order PIM Test Method | 2 x 20 W CW tones |

Block Diagram



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

Weight, net 7.8 kg | 17.196 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