

TMAT21X23B68-31-43 | E14R00P04



Twin TMA AWS/WCS with 555-894 Bypass, 4.3-10 connectors

Product Classification

Product Type Tower mounted amplifier

General Specifications

RF Connector Interface 4.3-10 Female

RF Connector Interface Body Style Long neck

Dimensions

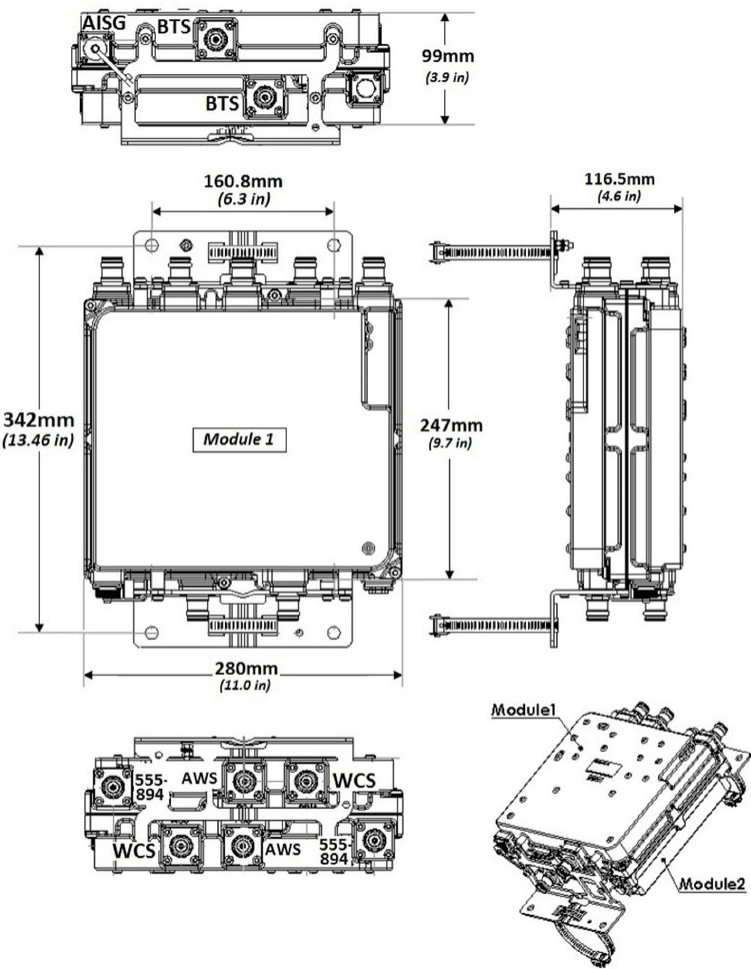
Height 247 mm | 9.724 in

Width 280 mm | 11.024 in

Depth 99 mm | 3.898 in

Ground Screw Diameter 5 mm | 0.197 in

Outline Drawing



Electrical Specifications

License Band, Band Pass	CEL 850 USA 700 USA 750
License Band, LNA	AWS 1700 AWS 2000 WCS 2300

Electrical Specifications, dc Power/Alarm

dc Switching/Redundancy	Yes
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

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

Electrical Specifications, AISG

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

Electrical Specifications

Sub-module	1 2	1 2	1 2
Branch	1	2	3
Port Designation	ANT 555-894	ANT AWS	ANT WCS
AISG 2.0 Device Subunit		E25A01P12 1/3	E25A01P12 2/4
License Band	CEL 850, Band Pass USA 700, Band Pass USA 750, Band Pass	AWS 1700, LNA	WCS 2300, LNA
Return Loss, typical, dB		20	21
Return Loss - Bypass Mode, typical, dB		18	18

Electrical Specifications Rx (Uplink)

Frequency Range, MHz	1695–1780	2305–2315
Gain, nominal, dB	13	13
Noise Figure, typical, dB	1.4	1.8
Total Group Delay, maximum, ns	80	150
Insertion Loss - Bypass Mode, typical, dB	2.2	3

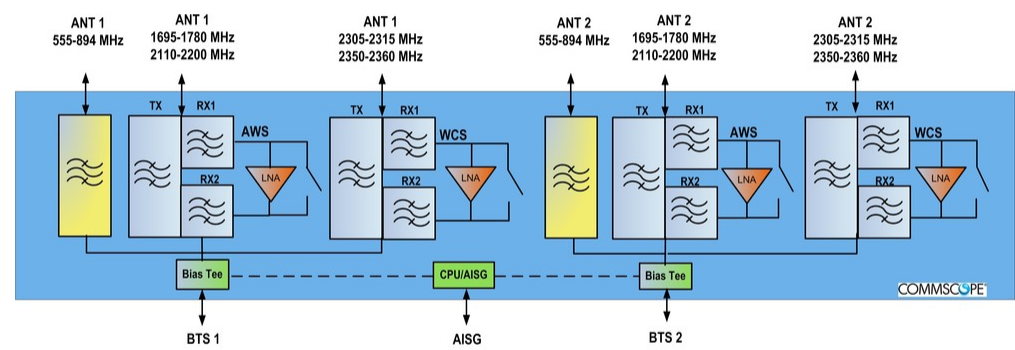
Electrical Specifications Tx (Downlink)

Frequency Range, MHz	2110–2200	2350–2360
Insertion Loss, typical, dB	0.25	0.5
Total Group Delay, maximum, ns	15	50
Return Loss, typical, dB	22	22
Input Power, RMS, maximum, W	200	200
Input Power, PEP, maximum, W	2000	2000
Higher Order PIM, maximum, dBc	-153	-153
Higher Order PIM Test Method	2 x 20 W CW tones	2 x 20 W CW tones

Electrical Specifications, Band Pass

Frequency Range, MHz	555–894
Insertion Loss, maximum, dB	0.2
Return Loss, minimum, dB	20
Isolation, minimum, dB	60
Input Power, RMS, maximum, W	200
Input Power, PEP, maximum, W	2000
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

Mounting Hardware Weight	0.7 kg 1.543 lb
Weight, without mounting hardware	9.6 kg 21.164 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