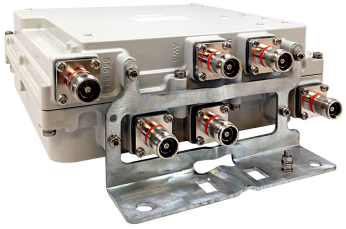
TMAT21X23B68-31-43 | E14R00P04



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

OBSOLETE

This product was discontinued on: March 30, 2024

Replaced By:

TMAT192123B68-31 E14R00P33	Tower Mounted Amplifier,Twin Configuration PCS/AWS 1–4 WCS, 617–894 MHz bypass 4.3-10

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

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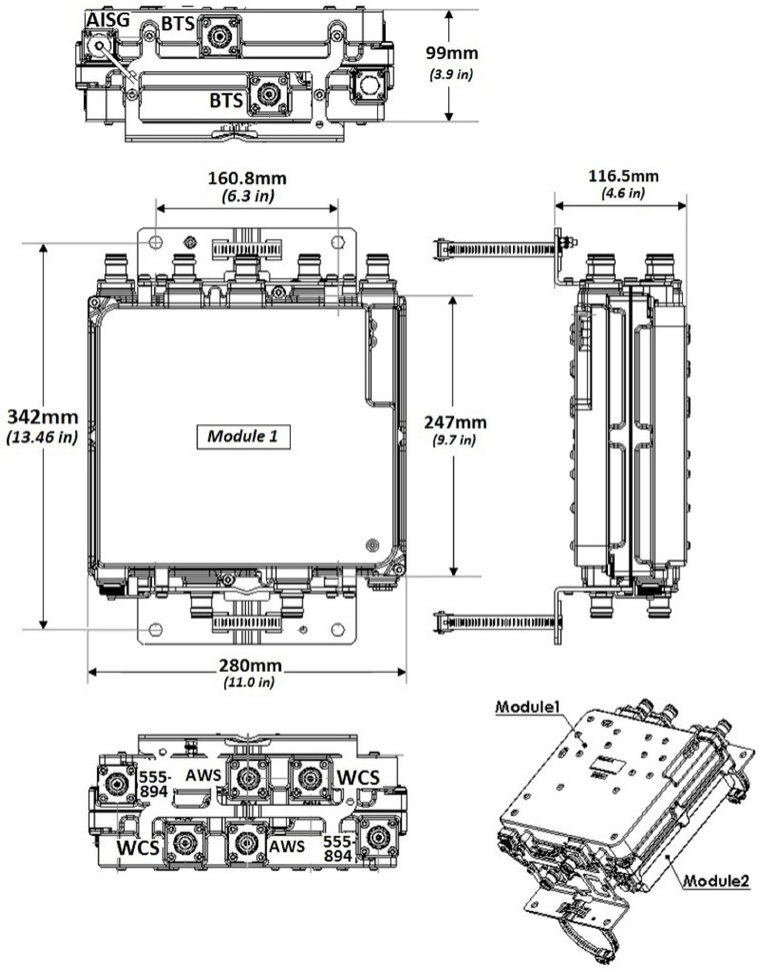
Outline Drawing



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

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

Electrical Specifications, AISG

AISG Carrier	2.176 MHz ± 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

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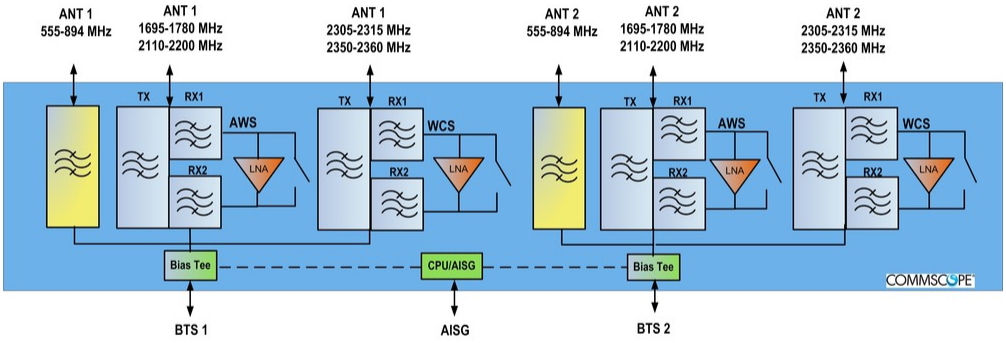
Block Diagram



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