

TMAT1921B68-21-43 | E14R00P09



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

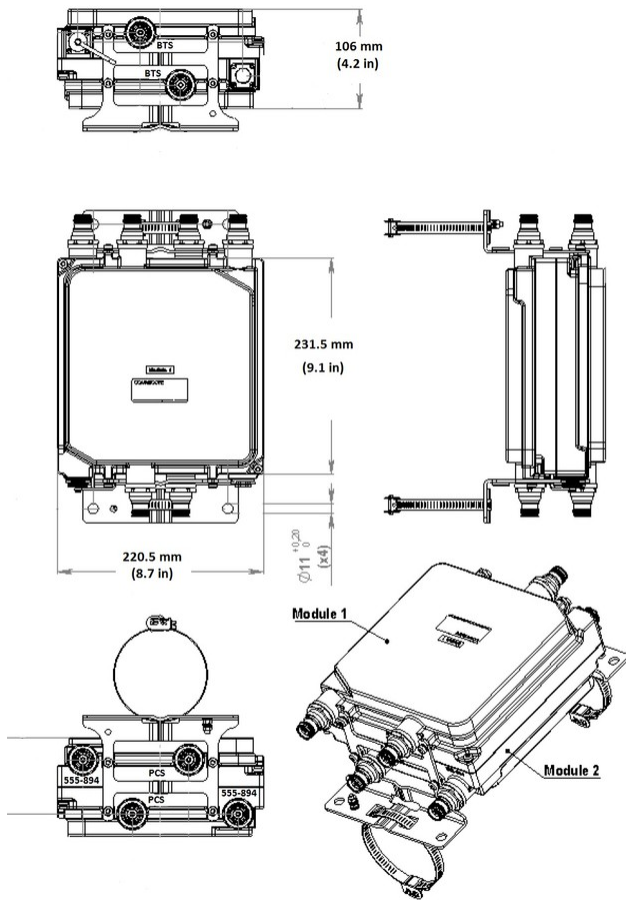
Width 220.5 mm | 8.681 in

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

License Band, Band Pass	APT 700 CEL 850 EDD 800 LMR 750 LMR 800 USA 700 USA 750
License Band, LNA	AWS 1700 PCS 1900

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	240 mA @ 12 V
Voltage	7–30 Vdc

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Voltage, CWA Mode	10–18 Vdc
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
Branch	1	2	3
Port Designation	555–894	AWS–PCS	AWS–PCS
AISG 2.0 Device Subunit		E14R00P09 2/4	E14R00P09 1/3
License Band	APT 700, Band Pass CEL 850, Band Pass EDD 800, Band Pass LMR 750, Band Pass LMR 800, Band Pass USA 750, Band Pass	AWS 1700, LNA	PCS 1900, LNA
Return Loss, typical, dB		22	22
Return Loss - Bypass Mode, typical, dB		16	16
TX Band Rejection, minimum, dB		60	60

Electrical Specifications Rx (Uplink)

Frequency Range, MHz	1695–1780	1850–1910
Bandwidth, MHz	85	60
Gain, nominal, dB	12	12
Gain Tolerance, dB	±1.2	±1.2
Noise Figure, typical, dB	1	1.3
Total Group Delay, typical, ns	30	110
Insertion Loss - Bypass Mode, typical, dB	1.3	2.2

Electrical Specifications Tx (Downlink)

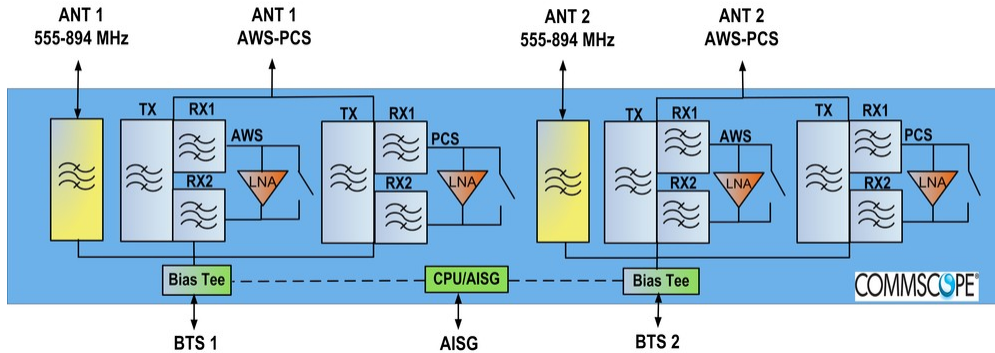
Frequency Range, MHz	2110–2200	1930–1990
Bandwidth, MHz	90	60

Insertion Loss, typical, dB	0.15	0.45
Total Group Delay, typical, ns	10	35
Return Loss, typical, dB	22	22
RX Band Rejection, minimum, dB	55	45
Input Power, RMS, maximum, W	200	200
Input Power, PEP, maximum, W	3000	3000
3rd Order PIM, typical, dBc	-156	-156
3rd Order PIM Test Method	1 x 20 W AWS CW tone 1 x 20 W PCS CW tone	2 x 20 W CW tones

Electrical Specifications, Band Pass

Frequency Range, MHz	555–894
Insertion Loss, typical, dB	0.1
Total Group Delay, typical, ns	4
Return Loss, typical, dB	22
Isolation, minimum, dB	50
Input Power, RMS, maximum, W	200
Input Power, PEP, maximum, W	3000
3rd Order PIM, typical, dBc	-156
3rd Order PIM Test Method	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

Mounting Hardware Weight 0.9 kg | 1.984 lb

Weight, without mounting hardware 7.1 kg | 15.653 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



* 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