

TMAT1921XB68-21AV | E15Z01P38



Tower Mounted Amplifier, Twin Dplexed PCS/AWS 1-4, 555-894 MHz bypass with AISG and Variable Gain

OBSOLETE

Replaced By:

TMAT1921B68-21-43
E14R00P09

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

Product Classification

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

General Specifications

Color Gray

Modularity 2-Twin

Mounting Pole | Wall

Mounting Pipe Hardware Band clamps (2)

RF Connector Interface 7-16 DIN Female

RF Connector Interface Body Style Long neck

Dimensions

Height 230 mm | 9.055 in

Width 220.5 mm | 8.681 in

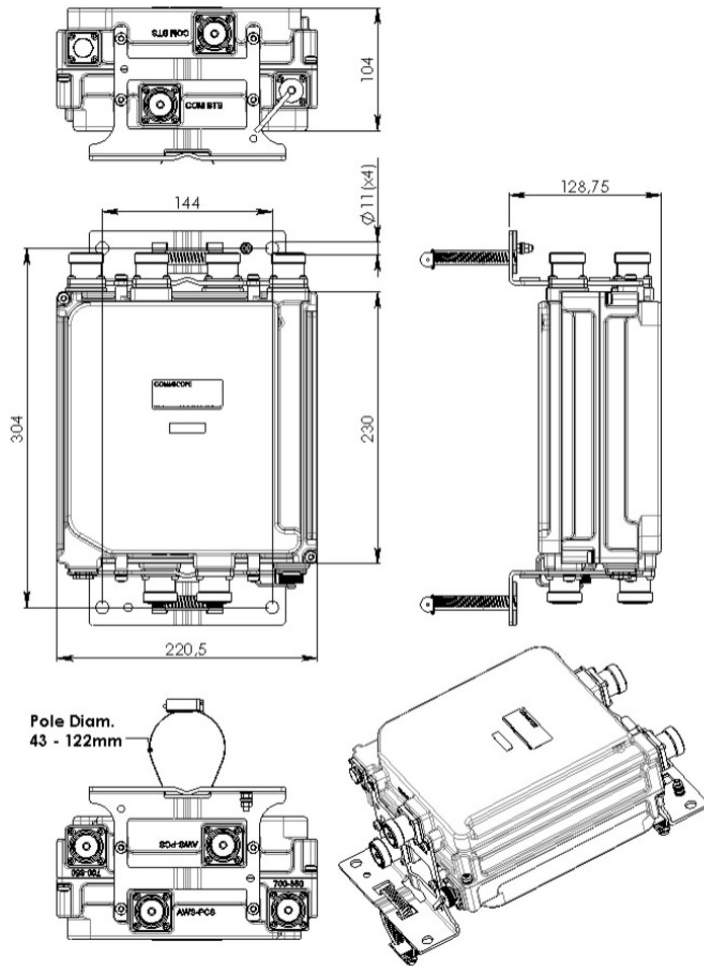
Depth 104 mm | 4.094 in

Ground Screw Diameter 6 mm | 0.236 in

Mounting Pipe Diameter Range 40-160 mm

Outline Drawing

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

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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
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	600–850	AWS–PCS	AWS–PCS
AISG 2.0 Device Subunit		E25A01P01 2/4	E25A01P01 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 700, Band Pass USA 750, Band Pass	AWS 1700, LNA	PCS 1900, LNA
Return Loss, typical, dB		24	24
Return Loss at 8 dB, typical, dB		22	22
Return Loss at 4 dB, typical, dB		22	22
Return Loss - Bypass Mode, typical, dB		16	16

Electrical Specifications Rx (Uplink)

	1695–1780	1850–1910
Frequency Range, MHz		
Gain, nominal, dB	12	12
Gain Tolerance, dB	±1.0	±1.0
Gain Adjustment Range, dB	4-12	4-12
Noise Figure at 8 dB, maximum, dB	2.2	2.5
Noise Figure at 4 dB, maximum, dB	3	3.2
Noise Figure, typical, dB	1.3	1.3
Noise Figure at 8 dB, typical, dB	1.6	1.7
Noise Figure at 4 dB, typical, dB	2.1	2.1
Total Group Delay, maximum, ns	80	150
Return Loss at 8 dB, minimum, dB	20	20

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Return Loss at 4 dB, minimum, dB	20	20
Insertion Loss - Bypass Mode, typical, dB	1.7	2.2

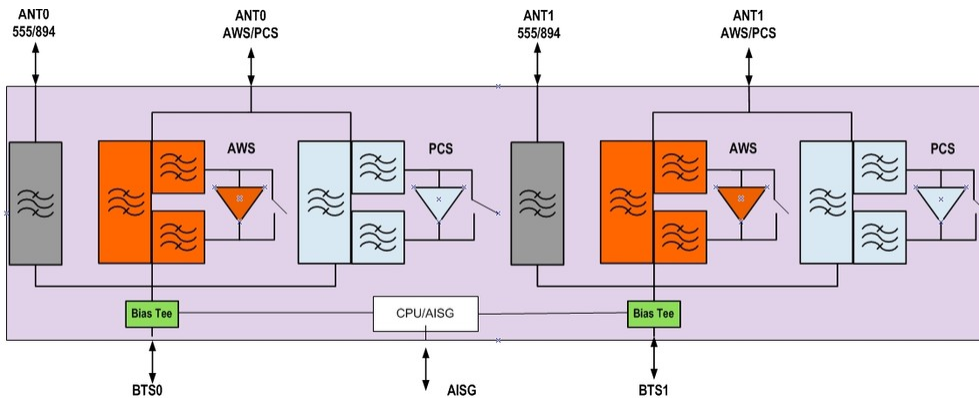
Electrical Specifications Tx (Downlink)

Frequency Range, MHz	2110–2200	1930–1990
Insertion Loss, typical, dB	0.3	0.45
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	3000	3000
3rd Order PIM, minimum, dBc	-153	-153
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, maximum, dB	0.2
Insertion Loss, typical, dB	0.1
Total Group Delay, maximum, ns	8
Return Loss, typical, dB	22
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



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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

Weight, net 8 kg | 17.637 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