TMAT19G21B68-21 | E14R00P71

Tower Mounted Amplifier, Twin Diplexed PCS(B25)/AWS 1–4, 555–894 MHz bypass 4.3-10

- Includes 600 MHz, Band 25 and AWS-3/4 bands
- New 4.3-10 connectors for improved PIM performance and size reduction

OBSOLETE

This product was discontinued on: March 30, 2024

Replaced By:

TMAT19G21BL26-21 E14R00P79	Tower Mounted Amplifier, Twin Triplexed PCS(B25), AWS 1–4 and B41 (bypass), with 617–894 MHz bypass, 4.3-10

Product Classification

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

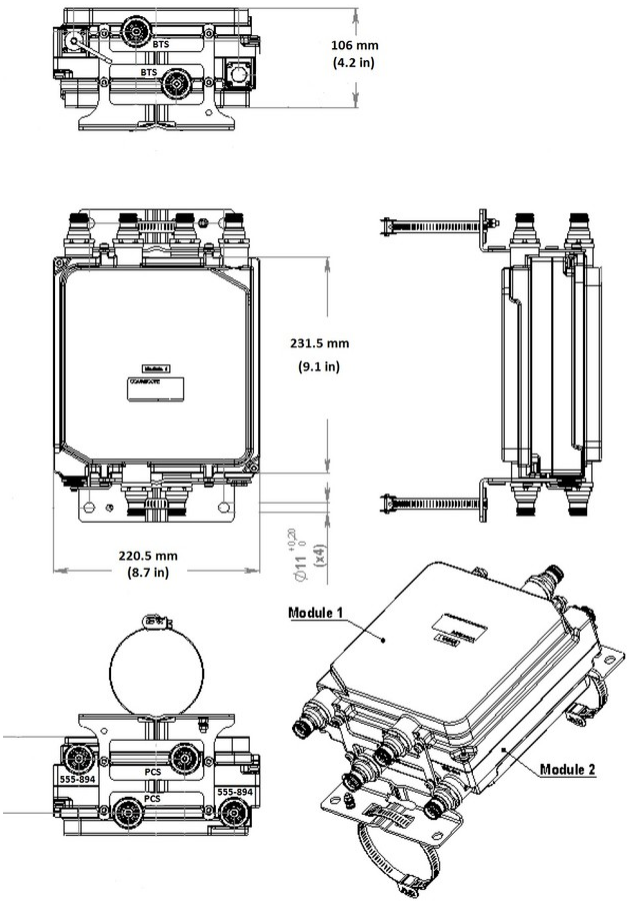
General Specifications

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	5 mm | 0.197 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

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**	**1 | 2**
Branch	1	2	2	2
Port Designation	555–894	AWS–PCS	AWS–PCS	AWS-PCS
AISG 2.0 Device Subunit		E14R00P09 2/4	E14R00P09 1/3	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	PCS 1900, LNA
Return Loss, typical, dB		22	22	22
Return Loss - Bypass Mode, typical, dB		16	16	16
TX Band Rejection, minimum, dB		60	55	55

Electrical Specifications Rx (Uplink)

Frequency Range, MHz	**1695–1780**	**1850–1910**	**1910–1915**
Bandwidth, MHz	85	60	5
Gain, nominal, dB	12	12	12
Gain Tolerance, dB	±1.2	±1.2	±1.2
Noise Figure, typical, dB	1.3	1.3	1.6
Total Group Delay, typical, ns	60	100	110
Insertion Loss - Bypass Mode, typical, dB	1.7	2.2	2.5

Electrical Specifications Tx (Downlink)

Frequency Range, MHz	**2110–2200**	**1930–1990**	**1990–1995**

Bandwidth, MHz	90	60	5
Insertion Loss, typical, dB	0.15	0.4	0.4
Total Group Delay, typical, ns	15	35	35
Return Loss, typical, dB	22	22	22
RX Band Rejection, minimum, dB	55	40	40
Input Power, RMS, maximum, W	200	200	200
Input Power, PEP, maximum, W	3000	3000	3000
3rd Order PIM, typical, dBc	-156	-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	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

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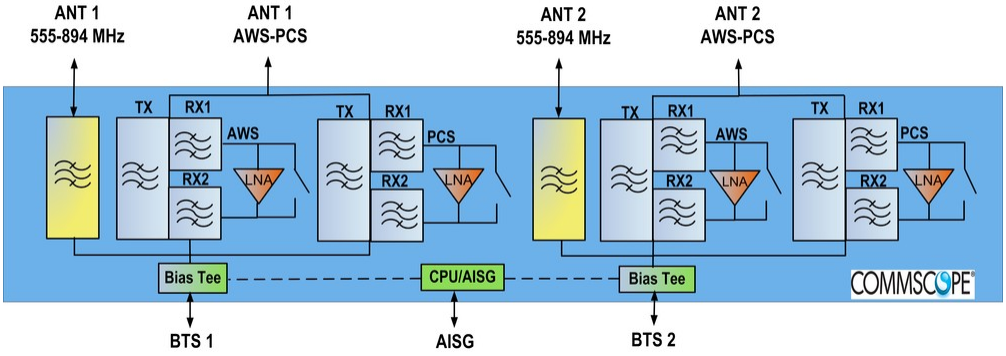
Block Diagram



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	0.7 kg | 1.543 lb
Weight, without mounting hardware	6.8 kg | 14.991 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