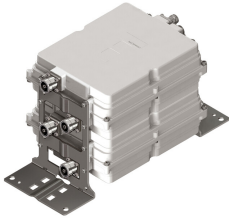


# E15S02P98



Quad Dual Band Tower Mounted Amplifier, 1800//2100 MHz, 12 dB, 4 BTS & 4 ANT ports, AISG with 1 RET connector per TMA (2 device with 2 sub-units each)

- Industry leading PIM performance
- TMA is operating in AISG & CWA mode, Alarm Current consumption CWA mode 250 mA
- Designed to boost UP-Link Coverage and KPIs
- Quad configuration, 4x4 MIMO ready
- 4 input ports and 4 output ports

## OBSOLETE

This product was discontinued on: December 31, 2023

### Replaced By:

E16S02P98

Quad Dual Band Tower Mounted Amplifier, 1800//2100 MHz, 12 dB, 4 BTS & 4 ANT ports, AISG with 1 RET connector per TMA (2 device with 2 sub-units each) with 4.3-10 connectors

## Product Classification

**Product Type** 1-BTS:1-ANT (Uniplex) | 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

## Dimensions

**Height** 212 mm | 8.346 in

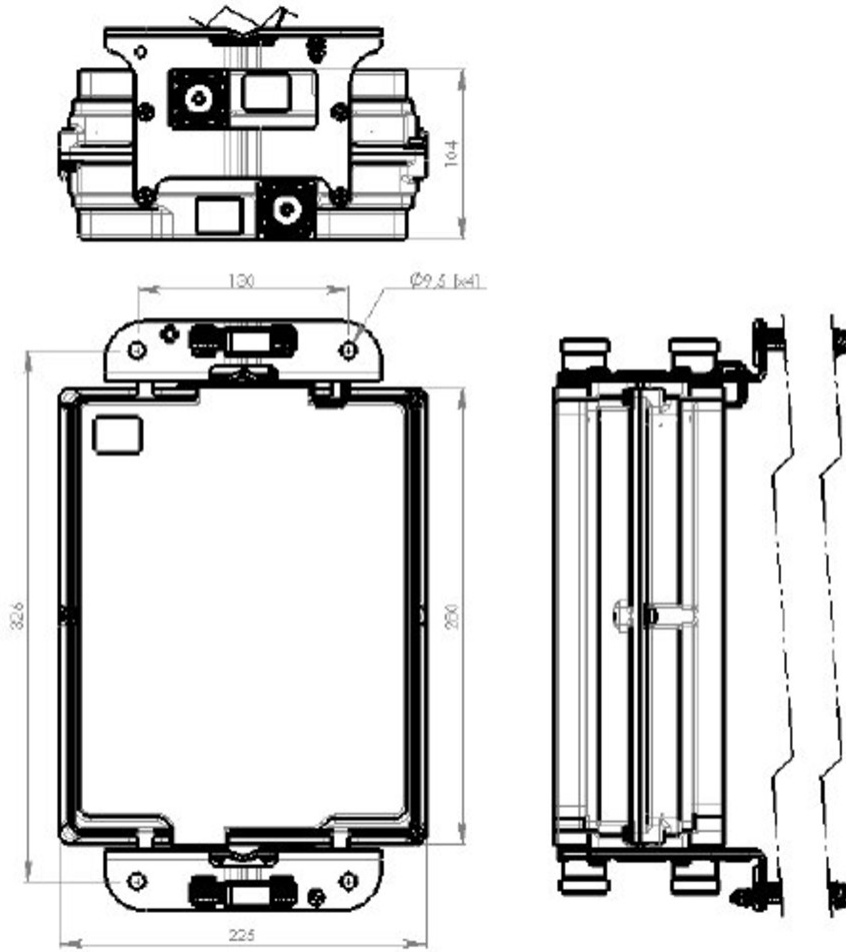
**Width** 225 mm | 8.858 in

**Depth** 280 mm | 11.024 in

**Mounting Pipe Diameter Range** 50–120 mm

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## Outline Drawing



## Electrical Specifications

**License Band, LNA** DCS 1800 | IMT 2100

## Electrical Specifications, dc Power/Alarm

<b>dc Switching/Redundancy</b>	Yes
<b>Lightning Surge Current</b>	10 kA
<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Voltage</b>	7–30 Vdc
<b>Alarm Current, CWA Mode</b>	250 mA $\pm$ 15 mA

## Electrical Specifications, AISG

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<b>AISG Connector</b>	8-pin DIN Female
<b>AISG Connector Standard</b>	IEC 60130-9
<b>Protocol</b>	AISG 2.0
<b>Voltage, AISG Mode</b>	10–30 Vdc

## Electrical Specifications

<b>Sub-module</b>	<b>1   2</b>	<b>1   2</b>
<b>Branch</b>	1	1
<b>Port Designation</b>	ANT	ANT
<b>License Band</b>	DCS 1800, LNA	IMT 2100, LNA
<b>Return Loss - Bypass Mode, typical, dB</b>	15	15

## Electrical Specifications Rx (Uplink)

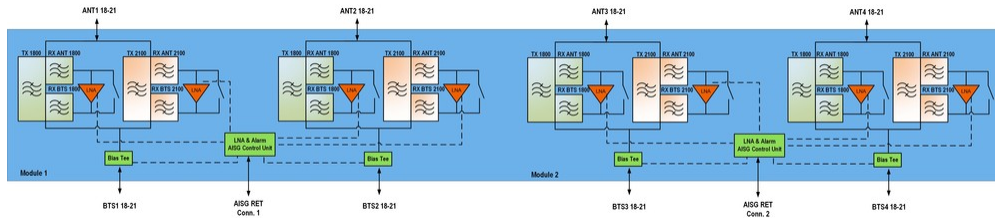
<b>Frequency Range, MHz</b>	<b>1710–1785</b>	<b>1920–1980</b>
<b>Bandwidth, MHz</b>	75	60
<b>Gain, nominal, dB</b>	12	12
<b>Noise Figure, typical, dB</b>	1.5	1.5
<b>Group Delay Variation, maximum, ns</b>	30	16
<b>Group Delay Variation Bandwidth, MHz</b>	5	5
<b>Total Group Delay, maximum, ns</b>	100	80
<b>Return Loss, minimum, dB</b>	18	18
<b>Insertion Loss - Bypass Mode, typical, dB</b>	2	2

## Electrical Specifications Tx (Downlink)

<b>Frequency Range, MHz</b>	<b>1805–1880</b>	<b>2110–2170</b>
<b>Bandwidth, MHz</b>	75	60
<b>Insertion Loss, typical, dB</b>	0.4	0.4
<b>Group Delay Variation, maximum, ns</b>	10	4
<b>Group Delay Variation Bandwidth, MHz</b>	5	5
<b>Total Group Delay, maximum, ns</b>	45	25
<b>Return Loss, minimum, dB</b>	18	18
<b>Input Power, RMS, maximum, W</b>	200	200
<b>Input Power, PEP, maximum, W</b>	2000	2000
<b>3rd Order PIM, typical, dBc</b>	-160	-160
<b>3rd Order PIM Test Method</b>	Two +43 dBm carriers	Two +43 dBm carriers

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## Block Diagram



## Environmental Specifications

<b>Operating Temperature</b>	-40 °C to +65 °C (-40 °F to +149 °F)
<b>Relative Humidity</b>	Up to 100%
<b>Corrosion Test Method</b>	IEC 60068-2-11, 30 days
<b>Ingress Protection Test Method</b>	IEC 60529:2001, IP67

## Packaging and Weights

<b>Included</b>	Mounting hardware
<b>Volume</b>	13.4 L
<b>Weight, net</b>	15 kg   33.069 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



## \* Footnotes

<b>License Band, LNA</b>	License Bands that have RxUplink amplification
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