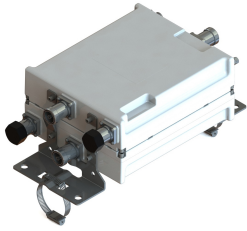


# TMA-S-DB1921-ID-A | E15S09P41



Tower Mounted Amplifier, Twin Diplexed BTS Ports Dual Band PCS /AWS with AISG

**OBSOLETE**

## Product Classification

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

## General Specifications

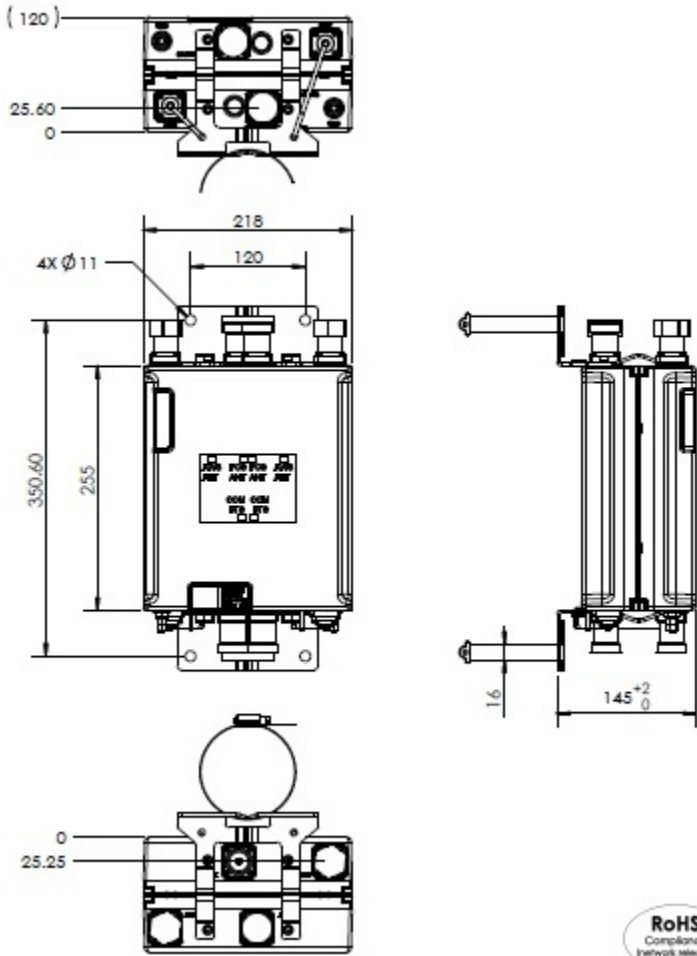
**Color** Gray  
**Modularity** 2-Twin  
**Mounting** Pole | Wall  
**Mounting Pipe Hardware** Band clamps (2)  
**RF Connector Interface** 7-16 DIN Female  
**RF Connector Interface Body Style** Long neck

## Dimensions

**Height** 255 mm | 10.039 in  
**Width** 218 mm | 8.583 in  
**Depth** 120 mm | 4.724 in  
**Ground Screw Diameter** 6 mm | 0.236 in  
**Mounting Pipe Diameter Range** 40–160 mm

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## Outline Drawing



## Electrical Specifications

**License Band, LNA** AWS 1700 | PCS 1900

## Electrical Specifications, dc Power/Alarm

<b>dc Switching/Redundancy</b>	No
<b>Lightning Surge Current</b>	20 kA
<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Operating Current at Voltage</b>	130 mA @ 12 V
<b>Operating Current Tolerance</b>	±20 mA
<b>Voltage</b>	7–30 Vdc
<b>Voltage, CWA Mode</b>	10–18 Vdc

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**Alarm Current, CWA Mode** 190 mA ±10 mA

## Electrical Specifications, AISG

**AISG Connector** 8-pin DIN Female (2)  
**AISG Connector Standard** IEC 60130-9  
**Protocol** AISG 2.0  
**Voltage, AISG Mode** 10–30 Vdc

## Electrical Specifications

<b>Sub-module</b>	<b>1   2</b>	<b>1   2</b>
<b>Branch</b>	1	2
<b>Port Designation</b>	ANT AWS	ANT PCS
<b>AISG 2.0 Device Subunit</b>	E15S09P41 1	E15S09P41 2
<b>License Band</b>	AWS 1700, LNA	PCS 1900, LNA
<b>Return Loss - Bypass Mode, typical, dB</b>	16	16

## Electrical Specifications Rx (Uplink)

<b>Frequency Range, MHz</b>	<b>1710–1755</b>	<b>1850–1910</b>
<b>Bandwidth, MHz</b>	45	60
<b>Gain, nominal, dB</b>	12	12
<b>Gain Tolerance, dB</b>	±1	±1
<b>Noise Figure, maximum, dB</b>		1.7
<b>Noise Figure, typical, dB</b>	1.5	1.4
<b>Group Delay Variation, maximum, ns</b>	10	10
<b>Group Delay Variation Bandwidth, MHz</b>	5	0.24
<b>Total Group Delay, maximum, ns</b>	50	150
<b>Output IP3, minimum, dBm</b>	20	20
<b>Return Loss, minimum, dB</b>	20	20
<b>Insertion Loss - Bypass Mode, typical, dB</b>	1.9	2.9

## Electrical Specifications Tx (Downlink)

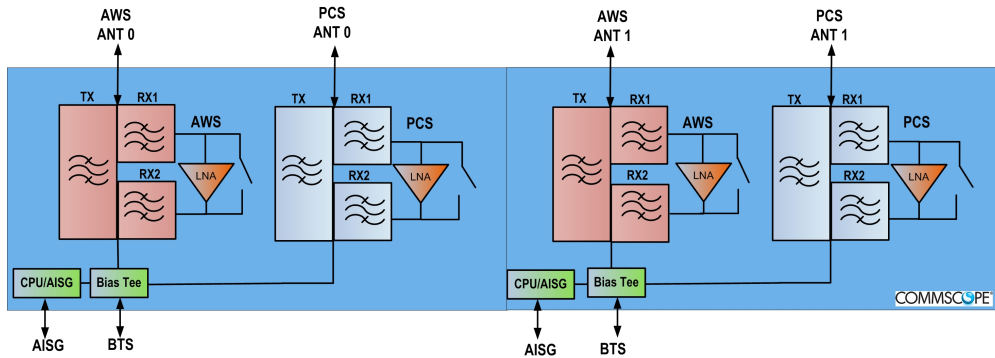
<b>Frequency Range, MHz</b>	<b>2110–2155</b>	<b>1930–1990</b>
<b>Bandwidth, MHz</b>	45	60
<b>Insertion Loss, maximum, dB</b>	0.3	0.7
<b>Group Delay Variation, maximum, ns</b>	8	18

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<b>Group Delay Variation Bandwidth, MHz</b>	5	5
<b>Total Group Delay, maximum, ns</b>	15	55
<b>Return Loss, minimum, dB</b>	20	20
<b>3rd Order PIM, typical, dBc</b>		-153
<b>3rd Order PIM Test Method</b>		2 x 20 W CW tones
<b>Higher Order PIM, typical, dBc</b>	-153	
<b>Higher Order PIM Test Method</b>	1 x 20 W AWS CW tone 1 x 20 W PCS CW tone	
<b>VSWR Alarm Threshold, dB</b>	9.54	9.54
<b>VSWR Alarm Threshold Tolerance, dB</b>	±2	±2

## Block Diagram



## Material Specifications

**Finish** Painted

## Mechanical Specifications

**Wind Speed, maximum** 200 km/h (124 mph)

## 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

**Volume** 6.6 L

**Weight, net** 10 kg | 22.046 lb

## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015

### Classification

Designed, manufactured and/or distributed under this quality management system



## \* Footnotes

**License Band, LNA** License Bands that have RxUplink amplification