

# E15S09P56

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## Tower Mounted Amplifier, Diplexed 1900/850 Bypass

### **OBSOLETE**

This product was discontinued on: February 1, 2023

## Product Classification

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

## General Specifications

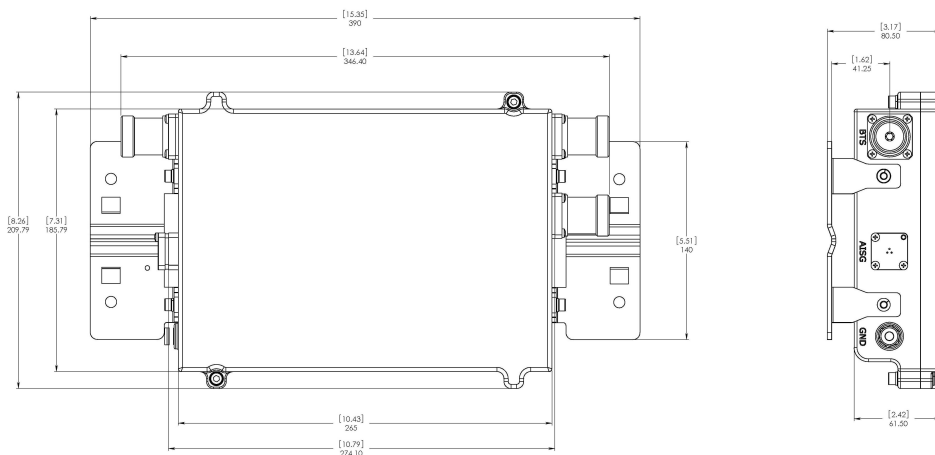
**Color** Gray  
**Modularity** 1-Single  
**Mounting** Pole | Wall  
**Mounting Pipe Hardware** Band clamps (2)  
**RF Connector Interface** 7-16 DIN Female  
**RF Connector Interface Body Style** Long neck

## Dimensions

**Height** 275 mm | 10.827 in  
**Width** 210 mm | 8.268 in  
**Depth** 62 mm | 2.441 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** PCS 1900

## Electrical Specifications, dc Power/Alarm

<b>Lightning Surge Current</b>	20 kA
<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Operating Current at Voltage</b>	100 mA @ 12 V
<b>Operating Current Tolerance</b>	±15 mA
<b>Voltage</b>	7–30 Vdc
<b>Voltage, CWA Mode</b>	10–18 Vdc
<b>Alarm Current, CWA Mode</b>	180–200 mA @ 10–18 V

## Electrical Specifications

<b>Sub-module</b>	<b>1</b>	<b>1</b>
<b>Branch</b>	1	2
<b>Port Designation</b>	850	1900
<b>License Band</b>	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	PCS 1900, LNA
<b>Return Loss - Bypass Mode, typical, dB</b>		18

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## Electrical Specifications Rx (Uplink)

<b>Frequency Range, MHz</b>	<b>1850–1910</b>
<b>Bandwidth, MHz</b>	60
<b>Gain, nominal, dB</b>	12
<b>Gain Tolerance, dB</b>	±1.0
<b>Noise Figure, typical, dB</b>	1.5
<b>Group Delay Variation, maximum, ns</b>	50
<b>Group Delay Variation Bandwidth, MHz</b>	5
<b>Total Group Delay, maximum, ns</b>	150
<b>Output IP3, minimum, dBm</b>	22
<b>Return Loss, minimum, dB</b>	18
<b>Insertion Loss - Bypass Mode, typical, dB</b>	2

## Electrical Specifications Tx (Downlink)

<b>Frequency Range, MHz</b>	<b>1930–1990</b>
<b>Bandwidth, MHz</b>	60
<b>Insertion Loss, maximum, dB</b>	0.7
<b>Insertion Loss, typical, dB</b>	0.3
<b>Group Delay Variation, maximum, ns</b>	15
<b>Group Delay Variation Bandwidth, MHz</b>	5
<b>Total Group Delay, maximum, ns</b>	50
<b>Return Loss, minimum, dB</b>	18
<b>Input Power, RMS, maximum, W</b>	300
<b>Input Power, PEP, maximum, W</b>	3000
<b>3rd Order PIM, maximum, dBc</b>	-150
<b>3rd Order PIM Test Method</b>	2 x 20 W CW tones

## Electrical Specifications, Band Pass

<b>Frequency Range, MHz</b>	<b>698–894</b>
<b>Insertion Loss, maximum, dB</b>	0.3
<b>Group Delay Variation, maximum, ns</b>	6
<b>Group Delay Variation Bandwidth, MHz</b>	5
<b>Total Group Delay, maximum, ns</b>	7
<b>Return Loss, minimum, dB</b>	18
<b>Input Power, RMS, maximum, W</b>	500

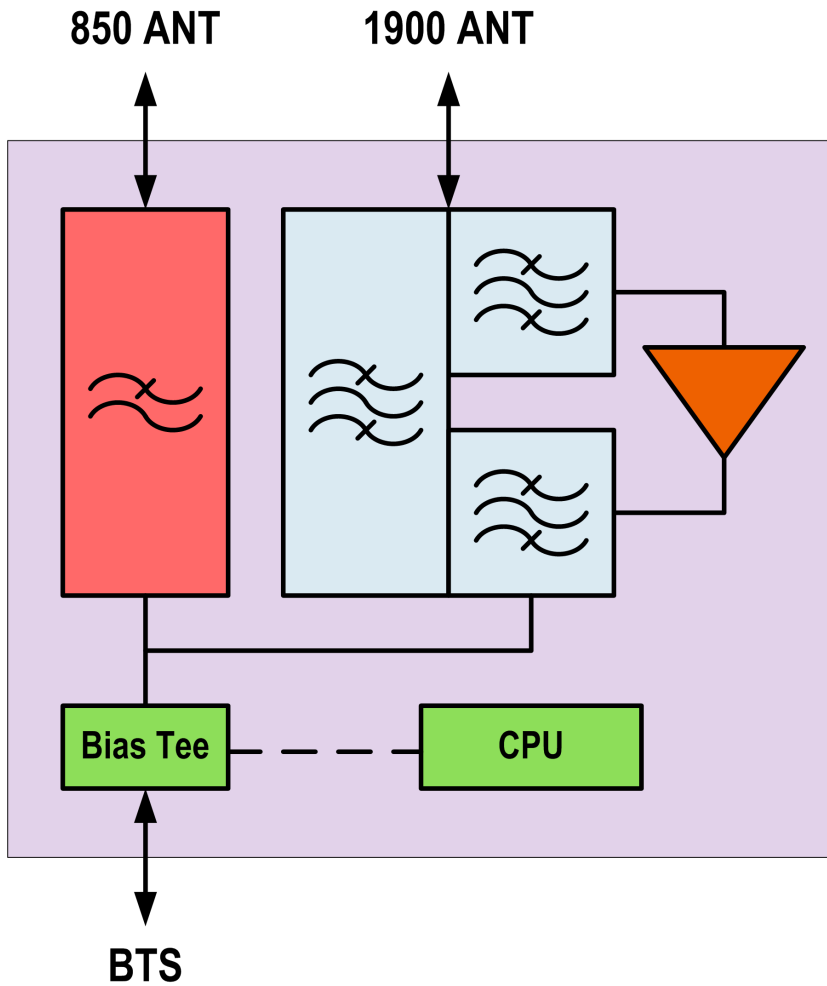
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<b>Input Power, PEP, maximum, W</b>	5000
<b>3rd Order PIM, maximum, dBc</b>	-150
<b>3rd Order PIM Test Method</b>	2 x 20 W CW tones

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## Block Diagram



## Material Specifications

**Finish** Painted

## Mechanical Specifications

**Wind Loading @ Velocity, maximum** 54.0 N @ 115 km/h (12.1 lbf @ 115 km/h)

## 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

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**Ingress Protection Test Method** IEC 60529:2001, IP67

## Packaging and Weights

**Included** Mounting hardware

**Weight, net** 4.2 kg | 9.259 lb

## Regulatory Compliance/Certifications

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



## \* 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