



ETW190VS12UB | E15S09P94
Tower Mounted Amplifier, Twin PCS with AISG

General Specifications

Product Type	1-BTS:1-ANT (Uniplex)
Modularity	2-Twin
Includes	Mounting hardware

Electrical Specifications

Sub-module	1 2
Branch	1
Port Designation	ANT
AISG 2.0 Device Subunit	E15S09P94 1/2
License Band	PCS 1900, LNA

Electrical Specifications Rx (Uplink)

Frequency Range	1850–1910 MHz
Bandwidth	60.00 MHz
Gain, nominal	12.0 dB
Gain Tolerance	±1.0 dB
Noise Figure, typical	1.3 dB
Group Delay Variation, maximum	50 ns
Group Delay Variation Bandwidth	5.00 MHz
Total Group Delay, maximum	150 ns
Output IP3, minimum	26 dBm
Return Loss, minimum	18 dB
Insertion Loss - Bypass Mode, typical	1.7 dB

Electrical Specifications Tx (Downlink)

Frequency Range	1930–1990 MHz
Bandwidth	60.00 MHz
Insertion Loss, maximum	0.70 dB
Insertion Loss, typical	0.30 dB
Group Delay Variation, maximum	15 ns
Group Delay Variation Bandwidth	5.00 MHz
Total Group Delay, maximum	50 ns
Return Loss, minimum	18 dB
Input Power, RMS, maximum	500 W
Input Power, PEP, maximum	5000 W
3rd Order PIM, typical	-150 dBc (relative to carrier)

ETW190VS12UB | E15S09P94

3rd Order PIM Test Method	2 x 20 W CW tones
VSWR Alarm Threshold	9.54 dB
VSWR Alarm Threshold Tolerance	±2 dB

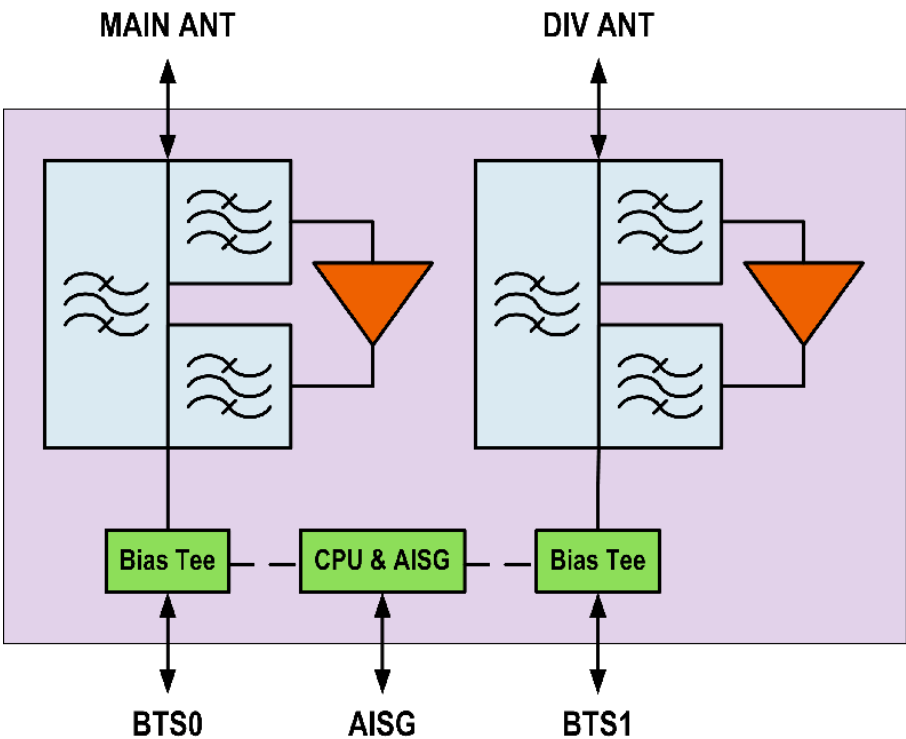
AISG Electrical Specifications

Voltage, AISG Mode	10–30 Vdc
Default Protocol	AISG 2.0
Protocol	AISG 2.0
AISG Carrier	2.176 MHz ± 100 ppm
AISG Connector	8-pin DIN Female
AISG Connector Standard	IEC 60130-9

dc Power/Alarm Electrical Specifications

Voltage	7–30 Vdc
Voltage, CWA Mode	10–18 Vdc
dc Switching/Redundancy	Yes
Operating Current at Voltage	135 mA @ 12 V
Operating Current Tolerance	±15 mA
Alarm Current, CWA Mode	180–200 mA @ 10–18 V
Lightning Surge Current	20 kA
Lightning Surge Current Waveform	8/20 waveform

Block Diagram



Mechanical Specifications

RF Connector Interface	7-16 DIN Female
RF Connector Interface Body Style	Long neck
Ground Screw Diameter	6.00 mm
Color	Gray
Finish	Painted
Mount Type	Pole Wall
Mounting Pipe Diameter	40-160 mm
Mounting Pipe Hardware	Band clamps (2)

Dimensions

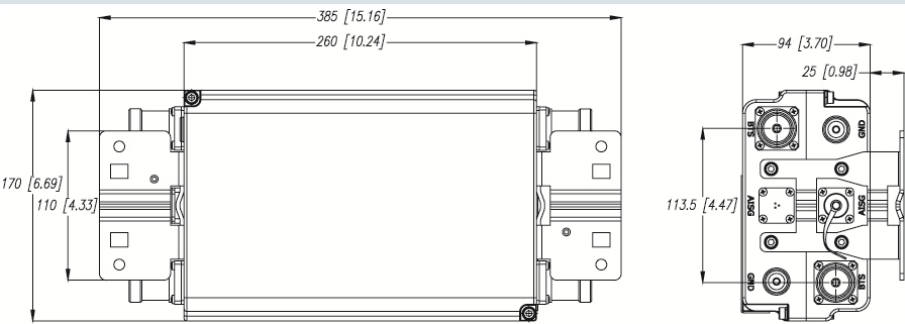
Height	260.0 mm 10.2 in
Width	170.0 mm 6.7 in
Depth	94.0 mm 3.7 in
Volume	4.1 L
Weight	6.6 kg 14.6 lb

Environmental Specifications

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Relative Humidity	Up to 100%
Ingress Protection Test Method	IEC 60529:2001, IP67

ETW190VS12UB | E15S09P94

Outline Drawing



Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system