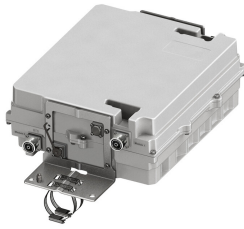


# E15R02P29



Tri Band Tower Mounted Amplifier, 700//850//900 MHz, 12 dB, 2 BTS & 2 ANT ports, AISG with 1 RET connector (3 devices with 2 sub-units each)

- TMA is operating in AISG & CWA mode, Alarm Current consumption CWA mode 190 mA
- 2 input ports and 2 output ports
- Designed to boost UP-Link Coverage and KPIs
- 3 devices with 2 sub-units
- Automatic LNA by-pass function
- Connectors "in line"
- Single AISG with 1 RET connector
- Built in lightning protection

## OBSOLETE

This product was discontinued on: December 31, 2023

### Replaced By:

E16R02P29

Tri Band Tower Mounted Amplifier, 700//850//900 MHz, 12 dB, 2 BTS & 2 ANT ports, AISG with 1 RET connector (3 devices 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** 151 mm | 5.945 in

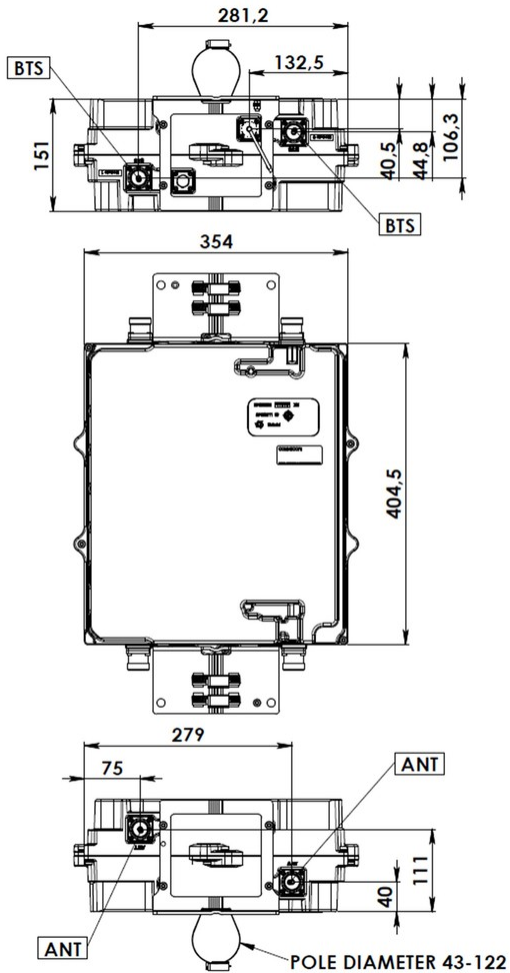
**Width** 355 mm | 13.976 in

**Depth** 405 mm | 15.945 in

**Mounting Pipe Diameter Range** 42.6–122 mm

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## Outline Drawing



## Electrical Specifications

### License Band, LNA

APT 700 | CEL 850 | CEL 900 | DCS 1800 | IMT 2100 | IMT 2600

## 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>                          | 10–18 Vdc     |
| <b>Voltage, CWA Mode</b>                | 10–18 Vdc     |
| <b>Alarm Current, CWA Mode</b>          | 190 mA ±10 mA |

# E15R02P29

## Electrical Specifications, AISG

|                                |                  |
|--------------------------------|------------------|
| <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>1   2</b> |
| <b>Branch</b>                                 | 1            | 2            | 3            |
| <b>Port Designation</b>                       | ANT          | ANT          | ANT          |
| <b>License Band</b>                           | APT 700, LNA | CEL 850, LNA | CEL 900, LNA |
| <b>Return Loss, typical, dB</b>               | 20           | 20           | 20           |
| <b>Return Loss - Bypass Mode, typical, dB</b> | 18           | 18           | 18           |

## Electrical Specifications Rx (Uplink)

|  |                |                |                |
|--|----------------|----------------|----------------|
| <b>Frequency Range, MHz</b>                      | <b>703–748</b> | <b>825–835</b> | <b>898–915</b> |
| <b>Bandwidth, MHz</b>                            | 45             | 10             | 16.6           |
| <b>Gain, nominal, dB</b>                         | 13             | 13             | 13             |
| <b>Noise Figure, maximum, dB</b>                 | 2              | 2              | 2              |
| <b>Noise Figure, typical, dB</b>                 | 1.5            | 1.5            | 1.5            |
| <b>Group Delay Variation, maximum, ns</b>        | 190            | 60             | 60             |
| <b>Group Delay Variation Bandwidth, MHz</b>      | 5              | 5              | 5              |
| <b>Return Loss, minimum, dB</b>                  | 16             | 16             | 16             |
| <b>Insertion Loss - Bypass Mode, typical, dB</b> | 1.3            | 1.8            | 1.8            |

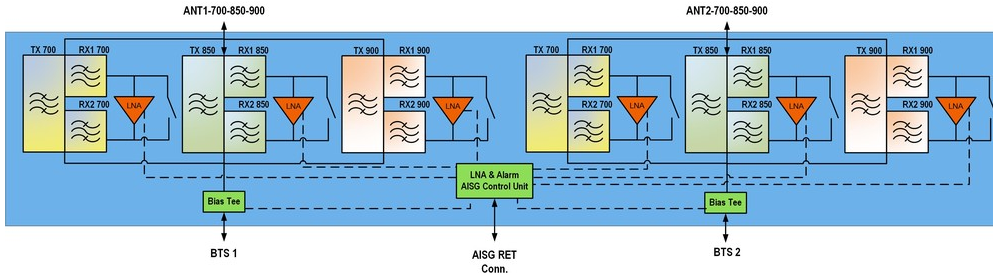
## Electrical Specifications Tx (Downlink)

|   |                |                |                |
|---|----------------|----------------|----------------|
| <b>Frequency Range, MHz</b>                 | <b>758–803</b> | <b>870–880</b> | <b>943–960</b> |
| <b>Bandwidth, MHz</b>                       | 45             | 10             | 16.6           |
| <b>Insertion Loss, maximum, dB</b>          | 0.6            | 0.5            | 0.5            |
| <b>Group Delay Variation, maximum, ns</b>   | 35             | 10             | 20             |
| <b>Group Delay Variation Bandwidth, MHz</b> | 5              | 5              | 5              |
| <b>Return Loss, minimum, dB</b>             | 18             | 18             | 18             |
| <b>Return Loss, typical, dB</b>             | 20             | 20             | 20             |
| <b>Input Power, RMS, maximum, W</b>         | 200            | 200            | 200            |

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|                                     |                      |                      |                      |
|-------------------------------------|----------------------|----------------------|----------------------|
| <b>Input Power, PEP, maximum, W</b> | 2500                 | 2500                 | 2500                 |
| <b>3rd Order PIM, typical, dBc</b>  | -153                 | -153                 | -153                 |
| <b>3rd Order PIM Test Method</b>    | Two +43 dBm carriers | Two +43 dBm carriers | Two +43 dBm carriers |

## 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>      | 19 L              |
| <b>Weight, net</b> | 25 kg   55.115 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 |
|--------------------------|--|