

Single Compact TMA 700uC/850MHz, Diplexed BTS/ANT, Variable Gain and AISG

• Support DC/AISG antenna Auto-forward

#### OBSOLETE

| Product Classification            |   |
|-----------------------------------|---|
| Product Type                      | 1-BTS:1-ANT (Uniplex)   Tower mounted amplifier |
| General Specifications            |   |
| Color                             | Gray  |
| Modularity                        | 1-Single  |
| Mounting                          | Pole   Wall                                     |
| Mounting Pipe Hardware            | Band clamps (4)                                 |
| RF Connector Interface            | 7-16 DIN Female                                 |
| RF Connector Interface Body Style | Long neck                                       |
| Dimensions                        |   |
| Height                            | 291 mm   11.457 in                              |
| Width                             | 275 mm   10.827 in                              |
| Depth                             | 93.6 mm   3.685 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

CEL 850 | USA 750

#### Electrical Specifications, dc Power/Alarm

| dc Switching/Redundancy          | Yes           |
|----------------------------------|---------------|
| Lightning Surge Current          | 10 kA         |
| Lightning Surge Current Waveform | 8/20 waveform |
| Operating Current at Voltage     | 240 mA @ 12 V |
| Operating Current Tolerance      | ±20 mA        |
| Voltage                          | 7-30 Vdc      |

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| Voltage, CWA Mode               | 10-18 Vdc           |
|---------------------------------|---------------------|
| Alarm Current, CWA Mode         | 30-170 mA @ 10-18 V |
| Electrical Specifications, AISG |                     |

# AISG Carrier2.176 MHz ± 100 ppmAISG Connector8-pin DIN FemaleAISG Connector StandardIEC 60130-9ProtocolAISG 2.0Voltage, AISG Mode10-30 Vdc

#### **Electrical Specifications**

| Sub-module                             | 1            | 1            |
|--|--------------|--------------|
| Branch                                 | 1            | 2            |
| AISG 2.0 Device Subunit                | E15R02P58 1  | E15R02P58 2  |
| License Band                           | USA 750, LNA | CEL 850, LNA |
| Return Loss, typical, dB               | 24           | 24           |
| Return Loss at 8 dB, typical, dB       | 22           | 22           |
| Return Loss at 4 dB, typical, dB       | 20           | 20           |
| Return Loss - Bypass Mode, typical, dB | 14           | 14           |

#### Electrical Specifications Rx (Uplink)

| Frequency Range, MHz                         | 777.5-787 | 824-849 |
|--|-----------|---------|
| Gain, nominal, dB                            | 13        | 13      |
| Gain Adjustment Range, dB                    | 4-13      | 4-13    |
| Gain Adjustment Range Increments, dB         | 1         | 1       |
| Noise Figure, typical, dB                    | 1.8       | 1.9     |
| Noise Figure at 8 dB, typical, dB            | 2.1       | 2.4     |
| Noise Figure at 4 dB, typical, dB            | 3.1       | 3.2     |
| Group Delay Variation, maximum, ns           | 160       |         |
| Group Delay Variation Bandwidth, MHz         | 5         |         |
| Total Group Delay, maximum, ns               |           | 150     |
| Insertion Loss - Bypass Mode, typical,<br>dB | 3.1       | 3.2     |

### Electrical Specifications Tx (Downlink)

| Frequency Range, MHz |  |
|----------------------|--|
|----------------------|--|

869-894

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746-756



| Insertion Loss, typical, dB  | 0.5               | 0.5               |
|------------------------------|-------------------|-------------------|
| Return Loss, typical, dB     | 24                | 24                |
| Input Power, RMS, maximum, W | 200               | 500               |
| Input Power, PEP, maximum, W | 2000              | 5000              |
| 3rd Order PIM, minimum, dBc  |                   | -161              |
| 3rd Order PIM Test Method    |                   | 2 x 20 W CW tones |
| 7th Order PIM, minimum, dBc  | -161              |                   |
| 7th Order PIM Test Method    | 2 x 20 W CW tones |                   |

#### Electrical Specifications, Band Reject

| Frequency Range, MHz     | 763-775 | 851-856 |
|--------------------------|---------|---------|
| Attenuation, minimum, dB | 27      | 20      |

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#### Block Diagram



#### Material Specifications

Finish Painted

#### 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                    |
| Weight, net                    | 8 kg   17.637 lb                     |

#### \* Footnotes

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License Band, LNA License Bands that have RxUplink amplification

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