

CriticalPoint™ Public Safety Bi-Directional Amplifier

RX-7W22 Class A PS 700/800MHz BDA

Features

- Digital/programmable utilizing FPGA
- Supports public safety 700/800MHz in single band or dual band version
- Supports P25 P1/P2 digital and conventional analog communications simultaneously
- Supports FirstNet™ LTE band 14
- Single band versions include license to switch from original band to alternate band
- Single band can be upgraded to dual band via license key
- Each band supports up to 32 channels
- 2W output power for each band
- Channelized Auto Gain Control (AGC) / Channelized uplink squelch
- Built-in mandatory isolation test to prevent BDA oscillation
- Auto shutdown with alarm upon oscillation detection
- Web based GUI for intelligent configuration, SNMP supported
- NFPA compliant dry contact alarms, NEMA 4X enclosure
- **FCC: PX8RX-7W22-A, IC: 11919A-RX7W22**
- **UL certificate for AC: SGSNA/17/GZ/00139, for DC: SGSNA/17/GZ/00138**



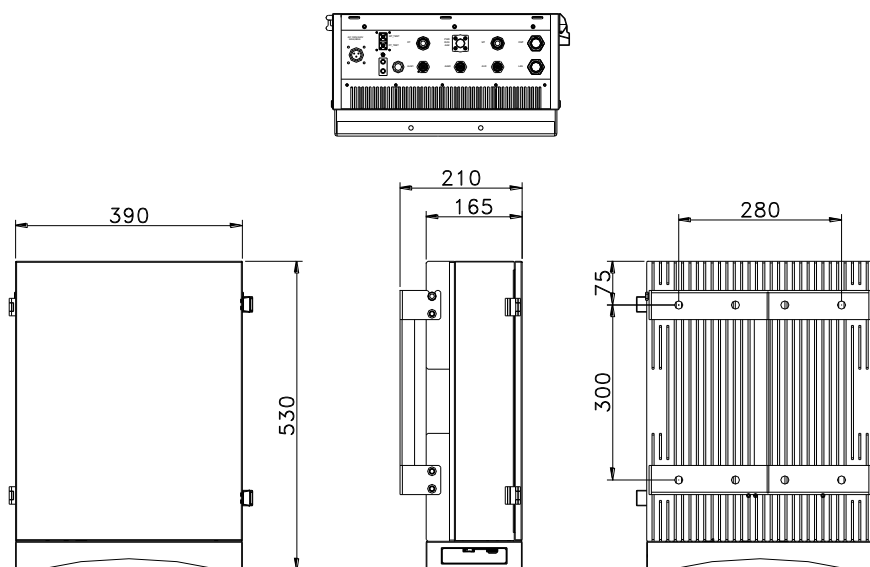
Specifications

| Electrical | | | 700MHz | 800MHz |
|--|------------------------|------|--|-------------------------------|
| Frequency Range, Uplink | MHz | | US: 788-805, CA: 798-806 | 806-824 |
| Frequency Range, Downlink | MHz | | US: 758-775, CA: 768-776 | 851-869 |
| Channel Bandwidth | KHz | | 12.5/25/75+10MHz (LTE, US) | 12.5/25/75 |
| Number of Channels | | | US: 32+1 (LTE), CA: 32 | 32 |
| Total Output Power, Uplink | dBm | | 27 | |
| Total Output Power, Downlink | dBm | | 33 | 33 |
| Maximum System Gain | dB | | 90 | 90 |
| Gain Adjustment Range (1dB step) | dB | | 0-30 | 0-30 |
| Pass Band Ripple, p-p | dB | | ≤ 5 | ≤ 5 |
| Uplink Noise Figure | dB | | ≤ 5 | ≤ 5 |
| System Group Delay | Bandwidth: 12.5KHz | μsec | ≤ 35 | ≤ 35 |
| | Bandwidth: 25KHz | | ≤ 27 | ≤ 27 |
| | Bandwidth: 75KHz | | ≤ 15 | ≤ 15 |
| | Bandwidth: 10MHz (LTE) | | ≤ 6.5 | NA |
| Out-of-Band Suppression | Bandwidth: 12.5KHz | dBc | ≥ 80 @ filter center + 75KHz | ≥ 80 @ filter center + 75KHz |
| | Bandwidth: 25KHz | | ≥ 80 @ filter center + 75KHz | ≥ 80 @ filter center + 75KHz |
| | Bandwidth: 75KHz | | ≥ 80 @ filter center + 200KHz | ≥ 80 @ filter center + 200KHz |
| | Bandwidth: 10MHz (LTE) | | ≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz | NA |
| Intermodulation | dBm | | ≤ -13 | ≤ -13 |
| Spurious | 9kHz to 1GHz | dBm | FCC Compliance | FCC Compliance |
| | 1GHz to 12.75GHz | dBm | | |
| Maximum RF Input Power without Damage | dBm | | -10 | -10 |
| Maximum RF Input Power without Overdrive | dBm | | -20 | -20 |
| Input VSWR | | | ≤ 1.5 | ≤ 1.5 |
| Impedance | Ω | | 50 | 50 |

| Mechanical | | | |
|------------------------------------|-------------|---------|-------------------------------------|
| Dimensions, H x W x D | | in(mm) | 20.9 x 15.4 x 8.3 (530 x 390 x 210) |
| Weight (without bracket) | | lb(kg) | 50.7 (23) |
| Power Supply | | VAC | 100-240/47-63Hz |
| | | VDC | -40 ~ -58 |
| Power Consumption | Single band | W | 80 |
| | Dual band | W | 100 |
| Enclosure Cooling | | | Convection |
| RF Connectors | | | N-Female |
| Test Port | | | SMA, -22dB |
| Maximum Input for Dry Contact Port | | | 24VDC, 1A / 110VAC, 0.5A |
| Operating Temperature | | °F (°C) | -27 to +140 (-33 to +60) |
| Operating Humidity | | | ≤ 95% |
| Environmental Class | | | NEMA 4X |
| MTBF | | hr | ≥ 100,000 @ 77 °F |

Note: Typical specifications at room temperature,

Outline Drawing



Part Numbers

| Product Type | PN (AC Version) | PN (DC Version) |
|--------------------------------|-----------------|-----------------|
| Class A (US) | | |
| Single band 700MHz | RX7W22-07AA33AC | RX7W22-07AA3348 |
| Single band 800MHz | RX7W22-08AA33AC | RX7W22-08AA3348 |
| Dual band 700/800MHz | RX7W22-78AA33AC | RX7W22-78AA3348 |
| Class A (Canada) | | |
| Single band 700MHz | RX7W22-C7AA33AC | RX7W22-C7AA3348 |
| Single band 800MHz | RX7W22-C8AA33AC | RX7W22-C8AA3348 |
| Dual band 700/800MHz | RX7W22-CFAA33AC | RX7W22-CFAA3348 |
| License | | |
| Dual Band (700/800MHz) License | RX7W22-L783233 | |