

# CriticalPoint™ Public Safety Bi-Directional Amplifier

## RX-7W22 Class B 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 3 sub bands
- 2W output power for each band
- 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-B, IC: 11919A-RX7W22**
- **UL certificate for AC: SGSNA/17/GZ/00139, for DC: SGSNA/17/GZ/00138**



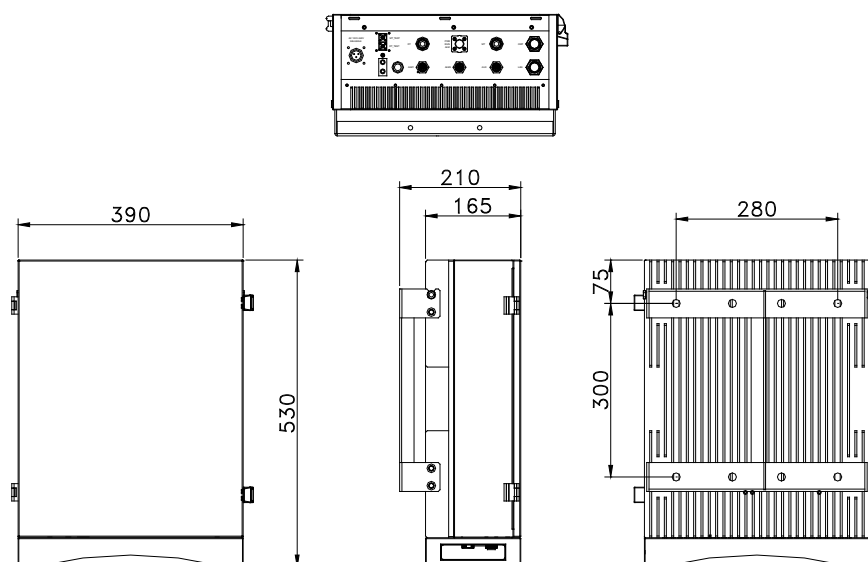
### Specifications

Electrical			700MHz	800MHz
Frequency Range, Uplink	MHz		US: 788-805, CA: 798-806	US:806-817, CA:806-824
Frequency Range, Downlink	MHz		US: 758-775, CA: 768-776	US:851-862, CA:851-869
Operating Bandwidth	MHz		0.2-10	0.2-10
Number of Sub Bands			3	3
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	μsec		≤ 6.5	≤ 6.5
Out-of-Band Suppression	dBc		≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz	≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz
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

<b>Mechanical</b>			
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)
<b>Class B(US)</b>		
Single band 700MHz	RX7W22-07B333AC	RX7W22-07B33348
Single band 800MHz	RX7W22-08B333AC	RX7W22-08B33348
Dual band 700/800MHz	RX7W22-78B333AC	RX7W22-78B33348
<b>Class B (Canada)</b>		
Single band 700MHz	RX7W22-C7B333AC	RX7W22-C7B33348
Single band 800MHz	RX7W22-C8B333AC	RX7W22-C8B33348
Dual band 700/800MHz	RX7W22-CFB333AC	RX7W22-CFB33348
<b>License</b>		
Dual Band (700/800MHz) License	RX7W22-L78B333	