

CriticalPoint™ Public Safety Bi-Directional Amplifier

RX-7W22 PS 700/800MHz BDA UL2524 Compliant

Features

- Digital/programmable utilizing FPGA
- Supports public safety 700/800MHz band
- Supports P25 P1/P2 digital and conventional analog communications simultaneously
- Supports FirstNet™ LTE band 14
- Each band supports up to 32 narrow band filters
- Channelized Auto Level Control (ALC) / Channelized uplink squelch
- **NetProtect** Uplink PA shutdown during no traffic periods to minimize noise being introduced to the network
- 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, UL50E Type 4 enclosure
- **Complies with NFPA 1221 2016 / 2019 edition, IFC 2018 Section 510**
- **FCC: PX8RX-7W22-B (Class B)**
- **UL 2524 Compliant**



Specifications

Electrical			700MHz	800MHz
Total Output Power, Downlink		dBm	33/27	33/27
Total Output Power, Uplink		dBm	27	
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
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
ALC Range		dB	60	60
Input VSWR			≤ 1.5	≤ 1.5
Impedance		Ω	50	50
Filter Specification				
Frequency Range, Uplink		MHz	US: 788-805	806-824
Frequency Range, Downlink		MHz	US: 758-775	851-869
Filter Bandwidth		KHz	12.5/100/150+10MHz (LTE)	12.5/100/150
Number of Filters			32+1 (LTE)	32

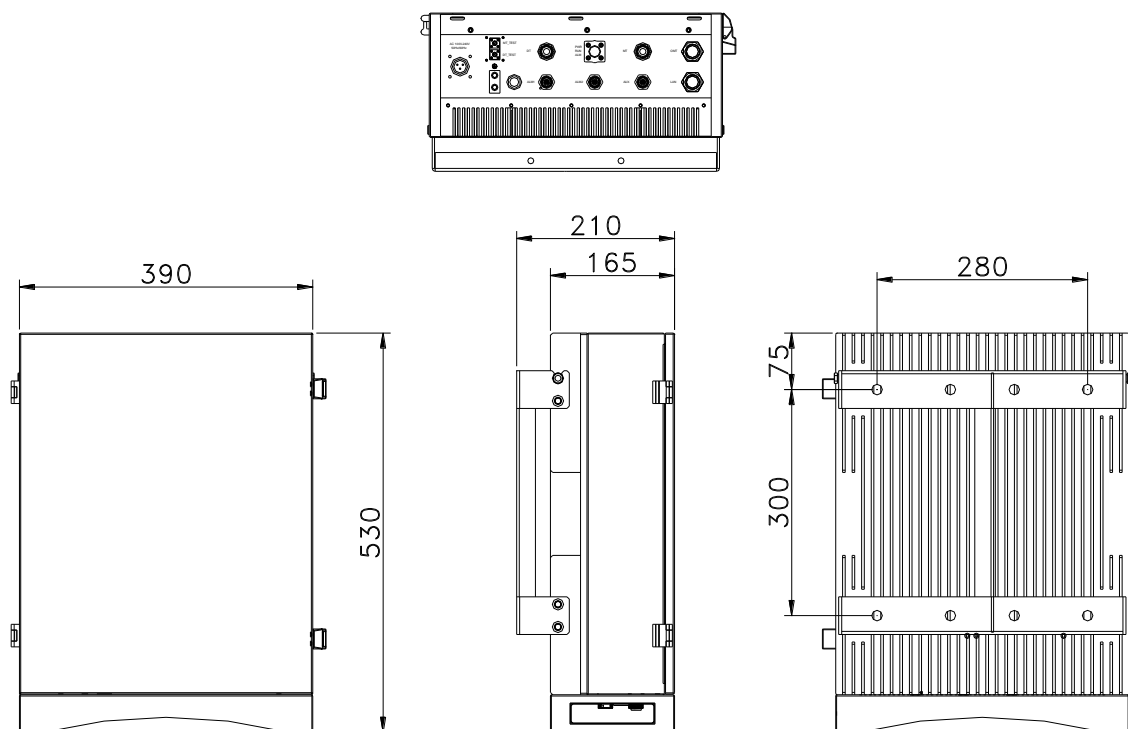
System Group Delay	Bandwidth: 12.5KHz	μsec	≤ 35	≤ 35
	Bandwidth: 100KHz		≤ 15	≤ 15
	Bandwidth: 150KHz		≤ 12	≤ 12
	Bandwidth: 10MHz (LTE)		≤ 6.5	NA
Out-of-Band Suppression	Bandwidth: 12.5KHz	dBc	≥ 80 @ filter center + 75KHz	≥ 80 @ filter center + 75KHz
	Bandwidth: 100KHz		≥ 60 @ filter center + 200KHz	≥ 60 @ filter center + 200KHz
	Bandwidth: 150KHz		≥ 35 @ filter center + 200KHz	≥ 35 @ filter center + 200KHz
	Bandwidth: 10MHz (LTE)		≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz	NA

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)
		VDC	-40 ~ -58
Power Consumption	Dual band	W	100 (33dBm), 90 (27dBm)
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			UL50E Type 4
MTBF		hr	≥ 100,000 @ 77 °F

Note: Typical specifications at room temperature.

Outline Drawing



Part Numbers

Configuration	33dBm DC	27dBm DC
Dual band 700/800MHz	RX78SF-B3348-UL	RX78SF-B2748-UL

Battery Backup Unit	
CPBBUV1-48055-UL	100-240VAC Input / -48VDC Output, 55AH batteries, UL2524 compliant