

CriticalPoint™ Public Safety Bi-Directional Amplifier

Class B Channelized (Specialized Filtering)

RXxxV2 PS 700/800MHz BDA (DC Version)

UL 2524 Standard Certified

Features

- Digital Multi-Channel, Field Programmable BDA using FPGA Technology
- Supports public safety 700/800MHz dual band
- Supports P25 P1/P2 digital and conventional analog communications simultaneously
- Each band supports up to 32 (12.5/100/150KHz) filters
- Channelized Auto Level Control (ALC) / 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, UL50E Type 4
- **Complies with NFPA 1221 2016 / 2019 edition, IFC 2018 Section 510**
- **FCC: Class B (PX8RXB37)**
- **UL2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524 Standard Certified – SGS Certificate No.: SGSNA/20/GZ/00125**



Specifications

Electrical		700MHz	800MHz
Total Output Power, Downlink	dBm	37	37
Total Output Power, Uplink	dBm	30	
Maximum System Gain	dB	100	100
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	FCC Compliance	FCC Compliance
	1GHz to 12.75GHz		
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	799-805	806-817
Frequency Range, Downlink	MHz	769-775	851-862
Filter Bandwidth	KHz	12.5/100/150	12.5/100/150
Number of Filters		32	32

System Group Delay	Bandwidth: 12.5KHz	μsec	≤ 35	≤ 35
	Bandwidth: 100KHz		≤ 15	≤ 15
	Bandwidth: 150KHz		≤ 12	≤ 12
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

Mechanical

Dimensions, H x W x D	in(mm)	22.4 x 15.4 x 9.0 (570 x 390 x 228)
Weight (without bracket)	lb(kg)	66.2 (30)
Power Supply	VDC	-40 ~ -58
Power Consumption	W	165
Enclosure Cooling		Convection
RF Connectors		N-Female
Test Port		SMA, -27dB
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.

Part Numbers

Configuration	Part Number
Dual band 700/800MHz 37dBm DC Class B Specialized Filtering BDA	RX78SF-B3748-UL
Battery Backup Unit 12H backup with Lead Acid Battery	CPBBUV1-48055-UL
Battery Backup Unit 24H backup with Lithium Iron Phosphate Battery	CPBBUV2-48100-UL

Mechanical Drawing

