TXRX Systems
Public Safety
Distributed Antenna System

6/13/2024
DS039622

Bi-directional Amplifier – 700/800MHz & UHF

64-84-1-65-DF-RD-NF

Product Features

- Class A and/or Class B BDA
- Supports All Five Public Safety and Federal Bands + FirstNet
- 1 Watt RF Output (1W for 700 & 1W for 800)
- Field Upgradeable – add new channels and new bands
- Small Size: 15 x 12 or 19 x 18 inch, NEMA 4
- Very compact size, Low power consumption
- Lowest Spurious due to advanced filtering design
- Unique front-end design, exceptional filtering
- FCC Certified, UL 2524 Listed, US designed and manufactured

Product Description

TX RX System's passive Distributed Antenna System (DAS) utilizes a unique architecture that provides a modular, upgradeable, redundant and power efficient Public Safety in-building coverage solution. This innovative approach utilizes dedicated parallel channel processing assuring the lowest spurious and highest signal performance for clear mission-critical coverage enhancement. The modular card system permits single channel expansion on any frequency thanks to its Micro-Power™ amp architecture. The design is the most compact BDA available – fitting up to 5 bands into a 19x18x7inch NEMA 4 unit. All this with the industry's lowest power consumption of 50 watts* avg. at quiescent operation. This also makes the battery backup system the smallest available with 12 or 24 hours packed into < 0.5 ft3. This high-quality manufacturing system and superior applications support assures your success and the public's safety.

NFPA Alarms:

- System Component Failure – Summary Alarm
- Active emitter fail / Power amp / Oscillation indicator
- Donor Antenna Fail
- Battery Charge Fail
- AC Power loss
- Low Battery Capacity
- Com-Link (data connection to Remote Annunciator)
- Plus a Door Alarm

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Specifications

Parameter	Value
Output Power per Band - 700/800 MHz: - UHF:	 30dBm +/- 2dB 28dBm +/- 2dB
Class A filter latency 12.5kHz 25kHz 50kHz 75 kHz 200 kHz 500 kHz	 60us 35us 25us 15us 10us 8us
RF Input, max, no damage	0 dBm
Noise Figure, typ.	5 - 8 dB
Gain, typ. (consult applications)	50 - 90 dB
Spurious	FCC Compliant
Gain Control	30 dB
Operating Temperature	0 to +50° C
Power (DC via Battery Backup)	25 to 65W typ.*
NEMA4: Size Type 1	12 x 15 x 7 inches, ~25lbs
NEMA4: Size Type 2	18 x 19 x 7 inches, ~40lbs

RF output power, noise figure and power consumption depends on configuration. CTCSS & DCS squelch available. Simplex options available. Simplex function available. Consult TX RX Sales department.

The TX RX Systems Public Safety Bidirectional Amplifier (BDA) features:

- **Plug-in Modular Card System**: Each low-cost card performs narrow-band signal processing on a single frequency. This allows wide flexibility in configuring the system with mixed frequency bands, for example three VHF, eight UHF and five 800 MHz frequencies in one Class A channelized unit.

- **Excellent wall plug efficiency**: Due to the modular architecture, frequencies that are not keyed up can have their cards shut down to preserve power. This reduces heat within the NEMA enclosure, relaxes demand on battery backup reducing costs, and improves reliability for a longer life and fewer failures.

- **Advanced Super-heterodyne front end**: Significantly improves near-far performance compared to legacy technology, eases close-in TX and RX frequency management, and therefore interlaced frequencies are handled with ease – as close as <200kHz.
  Consult with Applications Engineering with your challenging frequency spectrum.

VHF:	**64-38-05-65-DF-RD-NF**
UHF:	**64-68-06-65-DF-RD-NF**
700/800	**64-82N-1-65-DF-RD-NF**
Tri-Band:	**64-05-1-65-DF-RD-NF**
VHF/UHF:	**64-02-06-65-DF-RD-NF**
VHF/800:	**64-03-1-65-DF-RD-NF**
UHF/800:	**64-84-1-65-DF-RD-NF**
12 HR Battery backup:	**95-BBU-12**
24 HR Battery backup:	**95-BBU-24**
Annunciator:	**95-ANC-NFPA-FM**

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