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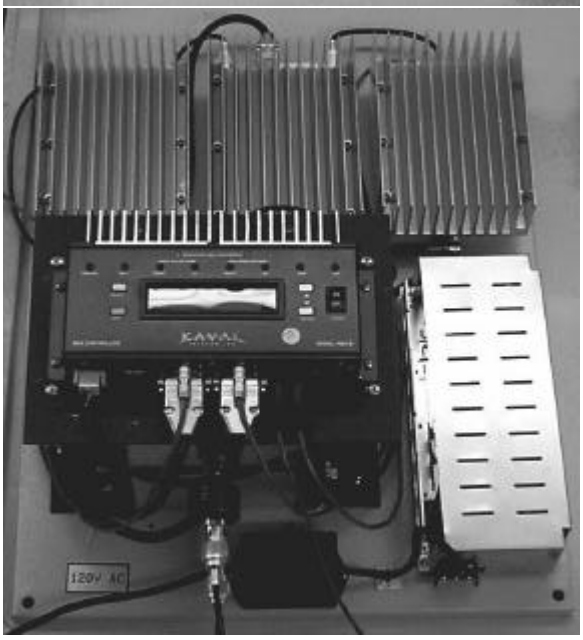
BDA1200 BI-DIRECTIONAL AMPLIFIERS, 800 & 900 MHz



Product Description

The Kaval Bi-Directional Amplifier **(BDA)** is a full duplex broadband linear amplifier with unlimited channel capacity within the pass-band. The BDA is available in 800 and 900 MHz bands and is ideal for extending coverage for two-way voice and data communications such as Trunking and Cellular, into buildings, tunnels, garages, and other RF shielded locations. Other bands are also available.

Key Features and Benefits

Microprocessor Controlled
With simple controls and text display for setting of fault thresholds, gain levels, AGC, etc.

Broad Bandwidth
Allows unlimited channel capacity within pass-band.

Linear Amplification
Amplifies all analog and digital formats.

Modular Design
Allows for easy maintenance and repair.

Weatherproof Housing
Lockable for secure indoor and outdoor use.

Low or High Power Options
Available with Low Power Boosters only, or with Boosters followed by a High Power PA.

FCC Type Acceptance	**H6M-BDA1200**
Industry Canada Type Acceptance	**xxxxxx**

Band-Splits and Power Options

Model & Suffix	Description	Uplink Freq.	Downlink Freq.
BDA1200-0xxy-00	800 Services & Trunking	806-824 MHz	851-869 MHz
BDA1200-1xxy-00	800 15 MHz Sub-Band *	806-821 MHz	851-866 MHz
BDA1200-2xxy-00	800 5 MHz Sub-Band *	806-824 MHz	851-869 MHz
BDA1200-3xxy-00	800 3 MHz Sub-Band *	806-824 MHz	851-869 MHz
BDA1200-4xxy-00	Cellular A	824-846.5 MHz	869-891.5 MHz
BDA1200-5xxy-00	Cellular B	835-849 MHz	880-894 MHz
BDA1200-6xxy-00	1 MHz of 900 Trunking *	896-902 MHz	935-941 MHz

xx = "BB" Downlink and Uplink are Boosters only.
xx = "PB" Downlink is a Booster and PA, and Uplink is a Booster only.
xx = "BP" Downlink is a Booster only, and Uplink is a Booster and PA.
xx = "PP" Downlink and Uplink are Boosters and PA's.

y = "8" Maximum BDA Gain is 80 dB.
y = "6" Maximum BDA Gain is 65 dB.
y = "4" Maximum BDA Gain is 40 dB.

* Customers must specify exact frequency band required. Please consult Kaval Telecom for other custom options.

RF Performance	
Nominal Max. Gain	70 dB Max with Booster only 80 dB Max with Booster & PA
Gain Adjustment	31dB with Booster only, 26 dB with Booster & PA (in 1dB steps) The AGC provides up to an additional 23 dB gain reduction depending upon input.
Max. Allowable Input	-15 dBm In-Band, however when Gain Adjustment and AGC are considered, the output must not be allowed to exceed the 1 dB Compression Point for a single carrier, or the De-rated Power Output (see next page) for multiple carriers.
1 dB Compression Point	+27 dBm with Booster only +40 dBm with Booster & PA
3rd Order Intercept Point IP3	+37 dBm with Booster only +50dBm with Booster & PA
Impedance	50 ohms Nominal
VSWR	1.5:1 Max
BDA Controller	
Features	Microprocessor Controller
	Current Monitoring for 2 Boosters, 2 PA's, 2 Fans
	Full Gain Control
	Battery Backup Control & Charging
Electrical	
Primary AC Power	Switchmode Universal 120/230V AC +/- 10%, 50-60Hz
Total DC Current Drain	Nominal 2 to 6 Amps @ 28 VDC
BDA Controller	300 ma @ 28 VDC
1W Boosters	650 ma @ 28 VDC Fault thresholds Typically 200 ma and 900 ma
20 Watt PA's	1.5A @ 28 VDC Fault thresholds Typically 160 ma and 1.8 A
Batteries	Two 12 VDC Sealed Lead -Acid Batteries, 10-100 AH Battery Backup Time: Boosters only, 20 AH - 8 hrs Typical Battery Backup Time: Boosters & PA's, 100 AH - 8 hrs Typical Charge Time: 10 AH - Approx. 6 hrs, 100 AH - Approx. 48 hrs. Typical Charge Current from BDA Controller is 3 Amps Maximum The BDA will shut down for Battery Voltages below 21 VDC.
Mechanical	
Dimensions W x H x D	20" x 24"x12"
Weight	100 lbs. approx.
Housing	Rugged Nema-Style Cabinet - Wall Mountable
Connectors	N female
Operating Temperature Range	-30 to +50°C
Operating Humidity Range	95% RH Max, Non-Condensing