

**BDA-40-SERIES (VHF and UHF)**

Designed and engineered to meet the fire protection codes (NFPA and IFC standards), our Bi-Directional Amplifier (BDA) features advanced Alarm, Monitoring & Control capabilities ensuring continuous availability of mission-critical services. Certified: FCC and IC.

- Available in VHF and UHF Public Safety bands
- Ideal for indoor applications in commercial and government buildings, parking garages, mining facilities, subway stations and tunnels
- Rack mounted or in NEMA 4/4x waterproof, stainless steel enclosures
- Low noise figure, wide dynamic range
- Visual alarms and remote failure monitoring with Graphical User Interface



Electrical Specifications	BDA 138174	BDA 380512
Frequency Range, MHz	138-174	380-512
Passband Ripple, dB	+/- 1.5	+/- 1.5
Automatic Gain Control (AGC), dB	30	30
Maximum Gain, dB	+80	+80
Input Manual Attenuation, dB	30 in 2 dB Steps	30 in 2 dB Steps
Output Manual Attenuation, dB	15 in 1 dB Steps	15 in 1 dB Steps
Noise Figure, dB	2	2
Output Power, dBm	30	31.5
VSWR	1.5:1	1.5:1
IP3, dBm (2 tones; 32 dBm each)	50	50
1dB Compression, dBm	39 dBm minimum	39 dBm minimum
Input Voltage, Volts	AC: 115-220 DC: 48	AC: 115-220 DC: 48
Power Consumption, W	35W when connected to 48V DC (max. 700 mA) 40W when connected to 120V AC (max. 3100 mA)	
Temperature Range, °C	-30 to +60	-30 to +60
Connectors	N Female	N Female
Alarms	AGC, S/D, Power	AGC, S/D, Power
Mechanical Specifications	BDA 138174	BDA 380512
Enclosure	NEMA 4 Painted Steel	NEMA 4 Painted Steel
Dimensions, in. H, W, D	Depends on filtering	24 x 13.5 x 20

\* See next page (p.2) for certification numbers

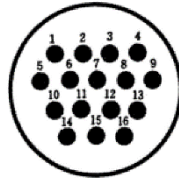


**BI-DIRECTIONAL AMPLIFIER (BDA)**

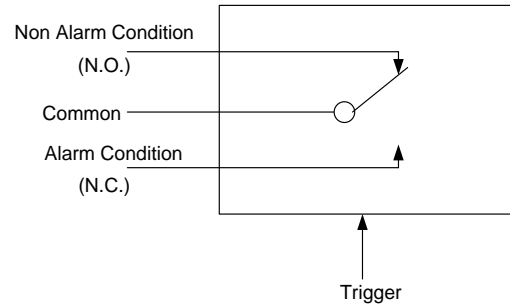
**138-174 & 380-512 MHz**

Certification Numbers	BDA 138174	BDA 380512
FCC ID	WDM-BDA138174	WDM-BDA380512
IC	7755A-BDA138174	7755A-BDA380512

**Dry Contact Alarms:**



UL or DL



UL Dry Contact Alarm connection		DL Dry Contact Alarm connection	
Pin	Description	Pin	Description
1	NC DC Relay	1	NC DC Relay
2	COM DC Relay	2	COM DC Relay
3	NO DC Relay	3	NO DC Relay
4	NC Oscillation	4	NC Oscillation
5	COM Oscillation	5	COM Oscillation
6	NO Oscillation	6	NO Oscillation
7	NC RF System Failure Relay	7	NC RF System Failure Relay
8	COM RF System Failure Relay	8	COM RF System Failure Relay
9	NO RF System Failure Relay	9	NO RF System Failure Relay
10	NC AC Relay	10	NC AC Relay
11	COM AC Relay	11	COM AC Relay
12	NO AC Relay	12	NO AC Relay
13		13	
14	NC VSWR Donor Antenna Relay	14	NC VSWR Donor Antenna Relay
15	COM VSWR Donor Antenna Relay	15	COM VSWR Donor Antenna Relay
16	NO VSWR Donor Antenna Relay	16	NO VSWR Donor Antenna Relay

Monitoring and Control via Built-in via RS-232 Connector (USB Optional)

Monitor	Alarm	Control
- TX/RX System Gain	- TX Input Over Power	- HPA On/Off
- TX/RX Attenuation	- TX/RX Output Over Power	- Gain
- TX Input Power	- AGC Range Alarm	- AGC On/Off
- TX/RX Output Power	- TX/RX Shutdown	- Shutdown On/Off
- DC Voltage/Current	- PSU Alarm	- MCU Reset
- System Temperature	- Over Temperature	- Alarm Limit
	- VSWR	
	- Oscillation	

The screenshot displays the 'UDA RF GUI V1.0[20170818]' interface. On the left, there is a sidebar with a dropdown menu set to 'COM25', a 'Connect' button, and a 'MENU' section containing 'Status & Control', 'Download', 'Alarm History', and 'Maintenance'. The main area is titled 'Monitoring' and features a table with two columns for channel #1 and #2. The table includes rows for 'UDA ON/OFF', 'Input Power(dBm)', 'Output Power(dBm)', 'Gain(dB)', 'AGC(User) Atten1(dB)', 'AGC(User) Atten2(dB)', 'AGC Level(dBm)', 'AGC Window(dB)', 'ASD Level(dBm)', 'ASD Time(min) / Count', 'OSC Time(min) / Count', 'VSWR', and 'VSWR Limit(dBm) / Count(Sec)'. Below the table are control buttons for 'AGC Enable', 'OSC Enable', 'ASD Enable', 'HPA OFF Case', and 'HPA Enable'. At the bottom, there are 'Over TEMP Enable' and 'Over TEMP Level(°C)' settings. On the right side, an 'Alarm' section lists various indicators with status icons (green for OK, red for alarm), including 'Input Power #1', 'Output Power #1', 'AGC Range #1', 'ShutDown #1', 'VSWR #1', 'OSC #1', 'Input Power #2', 'Output Power #2', 'AGC Range #2', 'ShutDown #2', 'VSWR #2', 'OSC #2', 'PSU Fail', 'Over Temp', and 'Door'. A 'System' section at the bottom right shows 'DC Voltage(V)', 'Current #1(A)', and 'Current #2(A)'. An 'Info' section at the bottom left provides details like 'Maker: COMPROD', 'Model: UDA RF', 'Hw Ver: 1.0', 'Sw Ver: 1.0', and 'Temp: 26 °C'. At the very bottom, there are 'TX' and 'RX' status indicators, a 'REFRESH' button, and 'Environment', 'Repeater Reset', and 'CONTROL' buttons.

Visual Alarms and Remote Failure Monitoring with Graphical User Interface