

# Broadband Distribution Amplifiers

## BIDA 5400 Series



The BIDA 5400 Series are professional quality, broadband, two-way capable, indoor hybrid distribution amplifiers. These amplifiers are ideal for multi-channel RF distribution systems for which the input source is a “cable drop” or the output of a MATV/SMATV/CATV headend.

The BIDA-5400 Series is available in either 550 or 750 MHz bandwidths with push-pull hybrid technology. For 2-way operation, optional field installable diplexers and return amplifiers are used to provide either an active or passive 5-30 MHz return. Passive return configurations require only the diplexers, whereas active return requires installation of both the diplexers and the amplifier.

### ○ Features & Benefits

- 5-30 MHz Return Capability With Optional Plug-ins
- Dual Push Pull Hybrid Modules
- Interstage Variable Gain and Slope Controls
- Optional Plug-in Fixed Equalizer and Attenuator Capability For Input Signal Conditioning
- Input and Output Test Ports
- Large Heat Sinks for Exceptional Heat Dissipation

### ○ Specifications

#### General

Power Requirements  
 Frequency: 60 Hz  
 Voltage: 117, ±10% VAC  
 Power: 21 W  
 Fuse: 3/8 A  
 Temperature Range (°C):  
 -20 to +60

#### Indicators

Power On: LED, Red

#### Controls

Gain: Control; Slope: Control

#### Mechanical

Dimensions (W x H x D):  
 7.13 x 11.50 x 2.68 in.  
 181 x 292 x 68 mm  
 Weight:  
 5.75 lb., 2.61 kg

#### Connectors

RF Input: "F", Female  
 RF Output: "F", Female  
 Input Test Port: "F", Female  
 Output Test Port: "F", Female

### ○ Specifications

RF	BIDA-RF		BIDA-RA	BIDA		BIDA
	Low	High		550-30	550-50	
Frequency Range (MHz):	5-30	47-800	5-30	47-550	47-550	47-750
Channel Loading	-	-	3	77	77	110
Flatness (dB):	±0.25	±0.25	±0.50	±0.75	±0.75	±1
Hybrid Technology (dB):				Push-Pull	Push-Pull	Push-Pull
Gain (dB):	-0.50	-0.50	24	33	50	31
Noise Figure (dB) (a):	-	-	6.0	7.0	7.0	9.0
Output Level - Max (dBmV):	-	-	+42	36/44	36/44	36/44
Test Port Level (dB):	-	-	-	-30, ±2	-30, ±2	-30, ±2
Gain Control Range (dB):	-	-	≥12	15	15	15
Slope Control Range (dB):	-	-	≥12	10	10	10
Composite Triple Beat - CTB (dB) (b):	-	-	-60	-64	-64	-60
Cross Modulation -XMOD (dB) (b):	-	-	-60	-64	-64	-61
Composite Second Order - CSO (dB) (b):	-	-	-72	-64	-64	-61
Hum Modulation (dB):	-	-	-65	-70	-70	-70
Impedance -All Ports (Ω):	-	-	-	75	75	75
Return Loss						
Input (dB):	21	16	16	14	14	13
Output (dB):	21	16	16	14	14	13

Notes (a) Measured at full gain with 0 dB slope  
 (b) At rated output capability and channel loading

### ○ Ordering Information

Model	Stock No.	Description
BIDA 550-30	5400 53	Broadband Indoor Distribution Amplifier 30 dB, 47-550 MHz
BIDA 550-50	5400 55	Broadband Indoor Distribution Amplifier 50 dB, 47-550 MHz
BIDA 750-30	5400 73	Broadband Indoor Distribution Amplifier 30 dB, 47-750 MHz
<b>Accessories</b>		
BIDA-RF	54071	BIDA Series Plug-In Return Filter, 5-30 MHz NOTE: For 5400 Series Amplifiers Only
BIDA-RA	5402	BIDA Series Amplifier, 5-30 MHz NOTE: For 5400 Series Amplifiers Only
BIDA-CE-5	5475	BIDA Series Plug-In Cable Equalizer 550 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-CE-7	5477	BIDA Series Plug-In Cable Equalizer 750 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-FA	5411A	BIDA Series Plug-In Fixed Attenuator 1000 MHz, Values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 dB

# Two-way Broadband Distribution Amplifiers

BIDA 5800 & 5900 Series



## ○ Features & Benefits

- Interstage Variable Gain and Slope Controls
- Optional Plug-in Fixed Equalizer and Attenuator Capability For Input Signal Conditioning
- Integrated Return Path Configurable for either Passive or Active Operation
- Push-Pull and Powering Doubling Hybrid Models Available
- Input and Output Test Ports
- Large Heat Sinks for Exceptional Heat Dissipation

The BIDA 5800 and 5900 Series are professional quality, two-way broadband indoor distribution amplifiers. These amplifiers are ideal for multi-channel RF distribution systems the input source is a “cable drop” or the output of a MATV/SMATV/CATV headend.

The BIDA 5800 Series features models having RF bandwidths of 550,750,860 and 1000 MHz. The BIDA 5900 Series is available in 860 MHz bandwidth. Push-pull and power-doubling hybrid amplifier technologies are available on both series. The BIDA 5800 and 5900 series are factory equipped for 2-way operation. The 5800 series has a 36/49 MHz split and the 5900 series has a 42/54 MHz split. Both series leave the factory set for passive return path operation. Active return path operation can easily be accomplished by reconfiguring a few internal jumpers.

The BIDA 5800/5900 Series utilizes an external power transformer providing 26 VAC to the amplifier. This enables the amplifiers to be remotely powered via low voltage AC wiring should a 120 VAC electrical outlet not be in close proximity to the desired amplifier location.

## ○ Common Specifications

Gain Control Range: 10 dB	Weight: 6 lbs. 2.7 kg
Slope Control Range: 8 dB	Power Requirements:
Hum Modulation: 70 dB	105-130 VAC
Impedance - All Ports : 75 Ω	60 Hz
Return Loss	0.38 Amps (Max)
Input: 16 dB	
Output: 16 dB	
Size (W x H x D):	
7.25 x 3.25 x 10.25 in.	
18.42 x 8.26 x 26.04 cm	

Notes  
(a) Measured at full gain with 0 dB slope  
(b) At rated output capability and channel loading

## ○ Specifications

RF	Integrated Active Return Path 5800 / 5900	BIDA 55A-30	BIDA 55A-30P	BIDA 55A-43	BIDA 55A-43P	BIDA 55A-50
Frequency Range (MHz):	5-36 / 5-42	49 - 550	49 - 550	49 - 550	49 - 550	49-550
Channel Loading:	3	77	77	77	77	77
Flatness (dB):	±0.5 ref. to +1 dB tilt	±0.5	±0.5	±0.5	±0.5	±0.5
Hybrid Technology (dB):	-	Push-Pull	Power Doubling	Push-Pull	Power Doubling	Push-Pull
Gain (dB):	20 (Passive -1.5)	30	30	43	43	50
Noise Figure (dB) (a):	6	7.0	7.0	7.0	7.0	7.0
Output Level (dBmV):+	+42	+36/44	+36/44	+36/44	+36/44	+36/44
Test Port Level: Input/Output (dB):	-	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2
Composite Triple Beat - CTB (dB) (b):	-60	-64	-71	-63	-68	-63
Cross Modulation - XMOD (dB) (b):	-60	-67	-74	-66	-69	-66
Composite Second Order - CSO (dB) (b):	-60	-61	-65	-60	-58	-60

Ordering Information is located on the following page.

# BIDA 5800 & 5900 Series

## ○ Specifications - Continued

RF	BIDA 75A-30	BIDA 75A-30P	BIDA 75A-43	BIDA 75A-43P	BIDA 86A/B-30 5800/5900	BIDA 86A/B-30P 5800/5900	BIDA 86A/B-43 5800/5900	BIDA 86A/B-43P 5800/5900	BIDA 100A-30
Frequency Range (MHz):									
5800 Series	49-750	49-750	49-750	49-750	49-860	49-860	49-860	49-860	49-1000
5900 Series					54-860	54-860	54-860	54-860	
Channel Loading:	110	110	110	110	129	129	129	129	150
Flatness (dB):	±0.7	±0.7	±0.7	±0.7	±0.75	±0.75	±0.7	±0.7	±0.75
Hybrid Technology (dB):	Push-Pull	Power Doubling	Push-Pull	Power Doubling	Push-Pull	Power Doubling	Push-Pull	Power Doubling	Push-Pull
Gain (dB):	30	30	43	43	30	30	43	43	30
Noise Figure (dB) (a):	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Output Level (dBmV):	36/44	36/44	36/44	36/44	36/44	36/44	36/44	36/44	32/40
Test Port Level: Input/Output (dB):	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2	-30, ±2
Composite Triple Beat - CTB (dB) (b):	-60	-64	-56	-64	-54	-62	-56	-60	-59
Cross Modulation - XMOD (dB) (b):	-62	-68	-60	-68	-54	-62	-60	-65	-60
Composite Second Order - CSO (dB) (b):	-56	-61	-59	-61	-57	-61	-59	-59	-59

Notes  
 (a) Measured at full gain with 0 dB slope  
 (b) At rated output capability and channel loading

## ○ Ordering Information

Model	Stock No.	Description
BIDA 550-30	5400 53	Broadband Indoor Distribution Amplifier 30 dB, 47-550 MHz
BIDA 550-50	5400 55	Broadband Indoor Distribution Amplifier 50 dB, 47-550 MHz
BIDA 750-30	5400 73	Broadband Indoor Distribution Amplifier 30 dB, 47-750 MHz
BIDA 55A-30	5800 53	Broadband Indoor Distribution Amplifier 30 dB, 49-550 MHz, Integrated Active Return (5-36 MHz)
BIDA 55A-30P	5800P53	Broadband Indoor Distribution Amplifier 30 dB, 49-550 MHz, Integrated Active Return (5-36 MHz)
BIDA 55A-43	5800 54	Broadband Indoor Distribution Amplifier 43 dB, 49-550 MHz, Integrated Active Return (5-36 MHz)
BIDA 55A-43P	5800P54	Broadband Indoor Distribution Amplifier 43 dB, 49-550 MHz, Integrated Active Return (5-36 MHz)
BIDA 55A-50	5800 55	Broadband Indoor Distribution Amplifier 50 dB, 49-550 MHz, Integrated Active Return (5-36 MHz)
BIDA 75A-30	5800 73	Broadband Indoor Distribution Amplifier 30 dB, 49-750 MHz, Integrated Active Return (5-36 MHz)
BIDA 75A-30P	5800P73	Broadband Indoor Distribution Amplifier 30 dB, 49-750 MHz, Integrated Active Return (5-36 MHz)
BIDA 75A-43	5800 74	Broadband Indoor Distribution Amplifier 44 dB, 49-750 MHz, Integrated Active Return (5-36 MHz)
BIDA 75A-43P	5800P74	Broadband Indoor Distribution Amplifier 43 dB, 49-750 MHz, Integrated Active Return (5-36 MHz)
BIDA 86A-30	5800 83	Broadband Indoor Distribution Amplifier 30 dB, 49-860 MHz, Integrated Active Return (5-36 MHz)
BIDA 86A-30P	5800P83	Broadband Indoor Distribution Amplifier 30 dB, 49-860 MHz, Integrated Active Return (5-36 MHz)
BIDA 86A-43	5800 84	Broadband Indoor Distribution Amplifier 44 dB, 49-860 MHz, Integrated Active Return (5-36 MHz)
BIDA 86A-43P	5800P84	Broadband Indoor Distribution Amplifier 44 dB, 49-860 MHz, Integrated Active Return (5-36 MHz)
BIDA 86B-30	5900 83	Broadband Indoor Distribution Amplifier 30 dB, 54-860 MHz, Integrated Active Return (5-42 MHz)
BIDA 86B-30P	5900P83	Broadband Indoor Distribution Amplifier 30 dB, 54-860 MHz, Integrated Active Return (5-42 MHz)
BIDA 86B-43	5900 84	Broadband Indoor Distribution Amplifier 44 dB, 54-860 MHz, Integrated Active Return (5-42 MHz)
BIDA 86B-43P	5900P84	Broadband Indoor Distribution Amplifier 44 dB, 54-860 MHz, Integrated Active Return (5-42 MHz)
BIDA 100A-30	5800 13	Broadband Indoor Distribution Amplifier 30 dB, 49-1000 MHz, Integrated Active Return (5-36 MHz)

### Accessories

BIDA-CE-5	5475	BIDA Series Plug-In Cable Equalizer 550 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-CE-7	5477	BIDA Series Plug-In Cable Equalizer 750 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-CE-8	5478	BIDA Series Plug-In Cable Equalizer 860 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-CE-10	5479	BIDA Series Plug-In Cable Equalizer 1000 MHz, Values: 3, 6, 9, 12, 15, 18 dB
BIDA-FA	5411A	BIDA Series Plug-In Fixed Attenuator 1000 MHz, Values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 dB