

# RMDA Series

## Rack-Mount Distribution Amplifiers



The RMDA Series are professional quality, broadband, rack-mounted hybrid distribution amplifiers. The RMDA's are ideal as a headend launch amplifier or distribution amplifier for MATV, SMATV or CATV applications requiring rack mounting. A variety of models are available with operational gains of 15, 30, 43 or 50 dB and frequency ranges from 47 to 450, 550, 750, 860 or 1000 MHz. Refer to the RMDA specifications for available gain and bandwidth combinations.

The RMDA Series amplifiers have built-in variable gain and slope controls. The 5500S-XX models use a single push-pull hybrid module providing excellent performance and economy for headend applications. The 5500-XX employ dual push-pull hybrid modules and the 5500P-XX have a push-pull hybrid followed by a power doubling hybrid. The dual hybrid models will have better CNR performance, compared to single hybrid models in applications with low input levels coupled with reduced gain settings. Test ports for both the input and output are provided for monitoring signal levels without interrupting service (not available on 5500S-XX). The RMDA Series products are housed in a single height, 1.75" high, rack mountable, aluminum chassis that provides exceptional heat dissipation.

### ○ Features & Benefits

- Rack Mount - 1 EIA (1.75") Spacing, Rugged Aluminum Chassis
- Available in Frequency Ranges up to 1000 MHz
- Push-Pull and Power Doubling Models for High Output and Low Distortion
- Built-in Variable Gain and Slope Controls
- C-UL Listed

### ○ Specifications

#### General

Power Requirements  
Voltage: 117 VAC,  $\pm 10\%$   
Frequency: 60 Hz  
Power (c): 10-21 W  
Fuse: 1/2 A  
Temperature Range: -20 to +60 °C

#### Mechanical

Dimensions (WxHxD): 19.00" x 1.75" x 5.13"  
(483 x 44 x 130 mm)  
Weight: 8.00 lb (3.64 kg)

#### Indicators

Power ON: LED, red

#### Connectors (Rear Panel)

RF Input: Type "F", female  
RF Output: Type "F", female

#### Connectors (Front Panel)

Input Test Port (g): Type "F", female  
Output Test Port (g) : Type "F", female

#### Controls (Front Panel)

Gain: Var. Control  
Slope: Var. Control

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## Rack-Mount Distribution Amplifiers

### ○ Specifications

RF	RMDA 450-30S	RMDA 450-30	RMDA 450-30P	RMDA 450-50
Frequency Range (MHz):	47-450	47-450	47-450	47-450
Channel Loading (dB):	60	60	60	60
Flatness (dB):	±0.75	±0.75	±0.75	±0.75
Hybrid Technology:	Push-Pull	Push-Pull	Power Doubling	Push-Pull
Gain (dB):	33	33	33	50
Noise Figure (dB) (a):	7.5	6.0	6.0	6.0
Output Level (dBmV):	+38/+46	+38/+46	+38/+46	+38/+46
Test Port Level (dB)				
Input:	NA	-20, ±2	-20, ±2	-20, ±2
Output:	NA	-20, ±2	-20, ±2	-20, ±2
Gain Control Range (dB):	15	15	15	15
Slope Control Range (dB):	10	10	10	10
Composite Triple Beat - CTB (dB) (b):	-66	-66	-72	-66
Composite Second Order - CSO (dB) (b):	-66	-66	-73	-66
Cross Modulation - XMOD (dB) (b):	-64	-64	-71	-64
Hum Modulation (dB):	-70	-70	-70	-70
Number of Hybrids:	1	2	2	2
Impedance - All Ports (Ohm):	75	75	75	75
Return Loss (dB)				
Input:	14	14	14	14
Output:	14	14	14	14

  

RF	RMDA 550-30S	RMDA 550-30	RMDA 550-30P	RMDA 550-50
Frequency Range (MHz):	47-550	47-550	47-550	47-550
Channel Loading:	77	77	77	77
Flatness (dB):	±0.75	±0.75	±0.75	±0.75
Hybrid Technology:	Push-Pull	Push-Pull	Power Doubling	Push-Pull
Gain (dB):	33	33	33	50
Noise Figure (dB) (a):	8.0	7.0	7.0	7.0
Output Level (dBmV):	+36/+44	+36/+44	+36/+44	+36/+44
Test Port Level (dB)				
Input:	NA	-20, ±2	-20, ±2	-20, ±2
Output:	NA	-20, ±2	-20, ±2	-20, ±2
Gain Control Range (dB):	15	15	15	15
Slope Control Range (dB):	10	10	10	10
Composite Triple Beat - CTB (dB) (b):	-65	-66	-72	-65
Composite Second Order - CSO (dB) (b):	-65	-66	-68	-63
Cross Modulation - XMOD (dB) (b):	-64	-64	-71	-63
Hum Modulation (dB):	-70	-70	-70	-70
Number of Hybrids:	1	2	2	2
Impedance - All Ports (Ohm):	75	75	75	75
Return Loss (dB)				
Input:	14	14	14	14
Output:	14	14	14	14

# RMDA Series

## Rack-Mount Distribution Amplifiers

RF	RMDA 750-15S	RMDA 750-30	RMDA 750-30P	RMDA 860-30	RMDA 860-30P	RMDA 860-43P	RMDA 1000-30
Frequency Range (MHz):	47-750	47-750	47-750	47-860	47-860	47-860	47-1000
Channel Loading:	110	110	110	129	129	129	152
Flatness (dB):	±1.00	±1.00	±1.00	±1.00	±1.00	±1.00	±1.00
Hybrid Technology:	Push-Pull	Push-Pull	Power Doubling	Push-Pull	Power Doubling	Power Doubling	Push Pull
Gain (dB):	16	31	31	31	30	43	30
Noise Figure (dB) (a):	7.5	7.0	7.0	8.0	8.5	7.0	8.0
Output Level (dBmV) :	+36/+44	+36/+44	+36/+44	+34/+42	+36/+44	+36/+44	+30/+38
Test Port Level (dB)							
Input:	NA	-20, ±2	-20, ±2	-20, ±2	-20, ±2	-20, ±2	-20, ±2
Output:	NA	-20, ±2	-20, ±2	-20, ±2	-20, ±2	-20, ±2	-20, ±2
Gain Control Range (dB):	15	15	15	15	15	15	15
Slope Control Range (dB):	10	10	10	10	10	10	10
Composite Triple Beat - CTB (dB) (b):	-61	-61	-66	-60	-62	-62	-67
Cross Modulation - XMOD (dB) (b):	-64	-64	-70	-57	-67	-67	-67
Composite Second Order - CSO (dB) (b):	-59	-59	-64	-64	-67	-67	-67
Hum Modulation (dB):	-70	-70	-70	-70	-70	-70	-70
Number of Hybrids:	1	2	2	2	2	2	2
Impedance - All Ports (Ohm):	75	75	75	75	75	75	75
Return Loss (dB)							
Input:	14	14	14	14	14	14	14
Output:	14	14	14	14	14	14	14

### Notes

(a) Measured at full gain with 8 dB slope

(b) At rated output capability and channel loading

(c) Power consumption varies by model. Range for all models provided.

## Ordering Information

Model	Stock No.	Description
RMDA 450-30	5500 43	Rack Mounted Distribution Amplifier 30dB, 47-450MHz
RMDA 450-30P	5500P43	Rack Mounted Distribution Amplifier 30dB, 47-450MHz, Power Addition
RMDA 450-30S	5500S43	Rack Mounted Distribution Amplifier 30dB, 47-450MHz, Single Hybrid
RMDA 450-50	5500 45	Rack Mounted Distribution Amplifier 50dB, 47-450MHz
RMDA 550-30	5500 53	Rack Mounted Distribution Amplifier 30dB, 47-550MHz
RMDA 550-30P	5500P53	Rack Mounted Distribution Amplifier 30dB, 47-550MHz, Power Addition
RMDA 550-30S	5500S53	Rack Mounted Distribution Amplifier 30dB, 47-550MHz, Single Hybrid
RMDA 550-50	5500 55	Rack Mounted Distribution Amplifier 50dB, 47-550MHz
RMDA 750-30	5500 73	Rack Mounted Distribution Amplifier 30dB, 47-750MHz
RMDA 750-30P	5500P73	Rack Mounted Distribution Amplifier 30dB, 47-750MHz, Power Addition
RMDA 750-S15	5500S71	Rack Mounted Distribution Amplifier 15dB, 47-750MHz, Single Hybrid
RMDA 860-30	5500 83	Rack Mounted Distribution Amplifier 30dB, 47-860MHz
RMDA 860-30P	5500P83	Rack Mounted Distribution Amplifier 30dB, 47-860MHz, Power Addition
RMDA 860-43P	5500P84	Rack Mounted Distribution Amplifier 43dB, 47-860MHz, Power Addition
RMDA 1000-30	5500 13	Rack Mounted Distribution Amplifier 30dB, 47-1000MHz

# RMDA-ARP

## Rack-Mounted Two-Way Distribution Amplifier



### Features & Benefits

- 860 MHz Push Pull Hybrid Technology
- 5-40 MHz Return Path, Field Selectable Active/Passive Operation
- Built-in Variable Gain and Slope Controls
- Optional Plug-in Forward Equalizer and Attenuator
- Optional Plug-in Reverse Attenuator

The RMDA-ARP (active return path) are rack mounted 2-way broadband distribution amplifiers. Utilizing push-pull hybrid amplifier technology, they are ideal for MATV, SMATV or CATV applications. The amplifiers have a forward bandwidth of 54 - 860 MHz with a gain of 30 dB. The reverse path of 5-40 MHz is field configurable for active or passive operation.

The RMDA-ARP amplifier has built-in variable gain controls on both the forward and reverse paths. A forward path variable slope control is provided inter-stage as is the variable gain control. Additionally, a fixed forward equalizer and forward and reverse attenuator plug-ins can be installed for further signal conditioning at the input to the amplifier. 30 dB back-matched test ports at the input and output are provided for monitoring both forward and reverse signal levels without interrupting service. The amplifier is housed in a 1RU aluminum chassis that provides exceptional heat dissipation.

### Specifications

RF	RMDA-86A-30	Return Path
Frequency Range (MHz):	54-860	5-40
Channel Loading:	129	5
Flatness (dB):	±1	±0.5
Gain (dB):	32	22 (Active) -1.5 dB (Passive)
Noise Figure (dB) (a):	8.5	6
Output Level (dBmV):	34/42	+48
Test Port Level (dB):	-30, ± 2	-30, ± 2
Gain Control Range (dB):	10	18
Slope Control Range (dB):	8	-
Composite Triple Beat - CTB (dB) (b):	-58	-66 dB
Composite Second Order - CSO (dB) (b):	-59	-70
Cross Modulation - XMOD (dB) (b):	-58	-60
Hum Modulation (dB):	-70	-65
Impedance - All Ports (Ohm):	75	75
Return Loss (dB)		
Input:	14	15
Output:	14	15
Operating Temperature (°C):	-20 to +60	-20 to +60
Power Supply		
117 VAC, 60 Hz:	26W	-
26 VAC, 60 Hz:	1.0 Amp	-
Size:	19 x 1.75 x 5.13 in. 483 x 44 x 130 mm	
Weight:	6 lbs 2.7 kg	
Number Of Hybrids:	2 Fwd, 1 Rev	
Hybrid Technology:	Push-Pull	

Notes

(a) Measured at full gain with 8 dB slope

(b) At specified channel loading at rated output capability

### Ordering Information

Model	Stock No.	Description
RMDA-86A-30	5200-83	860 MHz, 30 dB Push-Pull Amp with Active Return Path

#### Options

Model	Stock No.	Description
VMI-CEQ8V	9377A-xx	Plug-in Equalizer , 860 MHz, Values 0-20 dB
VMI-AT	9320-xx	Plug-in Attenuator, 1000 MHz, Values 0-18 dB