

## RMDA Series

### Rack-Mount Distribution Amplifier

#### RMDA Series

##### Rack-Mount Distribution Amplifiers



#### Specifications

##### General

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

##### Mechanical

|                     |   |
|---------------------|---|
| Dimensions (WxHxD): | 19.00" x 1.75" x 5.13"<br>483 x 44 x 130 mm |
| Weight:             | 8.00 lbs (3.64 kg)                          |

##### Indicators

|           |          |
|-----------|----------|
| Power ON: | LED, red |
|-----------|----------|

##### Connectors (Side Panel)

|            |                 |
|------------|-----------------|
| RF Input:  | Type "F" female |
| RF Output: | Type "F" female |

##### Connectors (Front Panel)

|                   |                 |
|-------------------|-----------------|
| Input Test Port:  | Type "F" female |
| Output Test Port: | Type "F" female |

##### Controls (Front Panel)

|        |                  |
|--------|------------------|
| Gain:  | Variable Control |
| Slope: | Variable Control |

#### Features

- 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

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 5500S-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.

#### RMDA-ARP Series

##### Rack-Mount Two-Way Distribution



#### Features

- 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.

## RMDA Series

### Rack-Mount Distribution Amplifier

#### SPECIFICATIONS RF SPECIFICATIONS

|  | RMDA 550-30S | RMDA 550-30 | RMDA 550-30P   | RMDA-550-50 | RMDA 750-15S | RMDA 750-30 | RMDA 750-30P   |
|--|--------------|-------------|----------------|-------------|--------------|-------------|----------------|
| Frequency Range (MHz):                 | 47-550       | 47-550      | 47-550         | 47-550      | 47-750       | 47-750      | 47-750         |
| Channel Loading:                       | 77           | 77          | 77             | 77          | 110          | 110         | 110            |
| Flatness (dB):                         | ±0.75        | ±0.75       | ±0.75          | ±0.75       | ±1.00        | ±1.00       | ±1.00          |
| Hybrid Technology :                    | Push-Pull    | Push-Pull   | Power Doubling | Push-Pull   | Push-Pull    | Push-Pull   | Power Doubling |
| Gain (dB):                             | 33           | 33          | 33             | 50          | 16           | 31          | 31             |
| Noise Figure (dB) (a):                 | 8.0          | 7.0         | 7.0            | 7.0         | 7.5          | 7.0         | 7.0            |
| Output Level - Max (dBmV):             | +36/+44      | +36/+44     | +36/+44        | +36/+44     | +36/+44      | +36/+44     | +36/+44        |
| Test Port Level (dB):                  |              |             |                |             |              |             |                |
| Input:                                 | NA           | -20, ±2     | -20, ±2        | -20, ±2     | NA           | -20, ±2     | -20, ±2        |
| Output:                                | NA           | -20, ±2     | -20, ±2        | -20, ±2     | NA           | -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):  | -65          | -66         | -72            | -65         | -61          | -61         | -66            |
| Composite Second Order - CSO (dB) (b): | -65          | -66         | -68            | -63         | -59          | -59         | -64            |
| Cross Modulation - XMOD (dB) (b):      | -64          | -64         | -71            | -63         | -64          | -64         | -70            |
| Hum Modulation (dB):                   | -70          | -70         | -70            | -70         | -70          | -70         | -70            |
| Number of Hybrids:                     | 1            | 2           | 2              | 2           | 1            | 2           | 2              |
| Impedance - All Ports (Ohm):           | 75           | 75          | 75             | 75          | 75           | 75          | 75             |
| Return Loss                            |              |             |                |             |              |             |                |
| Input (dB):                            | 14           | 14          | 14             | 14          | 14           | 14          | 14             |
| Output (dB):                           | 14           | 14          | 14             | 14          | 14           | 14          | 14             |

|  | RMDA 860-30 | RMDA 860-30P   | RMDA 860-43P   | RMDA 1000-30 | RMDA 86A-30  | Return Path                 |
|--|-------------|----------------|----------------|--------------|--------------|-----------------------------|
| Frequency Range (MHz):                 | 47-860      | 47-860         | 47-860         | 47-1000      | 47-860       | 5-40                        |
| Channel Loading:                       | 129         | 129            | 129            | 152          | 129          | 5                           |
| Flatness (dB):                         | ±1.00       | ±1.00          | ±1.00          | ±1.00        | ±1           | ±0.5                        |
| Hybrid Technology :                    | Push-Pull   | Power Doubling | Power Doubling | Push-Pull    | Push-Pull    |                             |
| Gain (dB):                             | 31          | 30             | 43             | 30           | 32           | 22(Active)<br>-1.5(Passive) |
| Noise Figure (dB) (a):                 | 8.0         | 8.5            | 7.0            | 8.0          | 8.5          | 6                           |
| Output Level - Max (dBmV):             | +34/+42     | +36/+44        | +36/+44        | +30/+38      | +34/+42      | +48                         |
| Test Port Level (dB):                  |             |                |                |              |              |                             |
| Input:                                 | -20, ±2     | -20, ±2        | -20, ±2        | -20, ±2      | -30, ±2      | -30, ±2                     |
| Output:                                | -20, ±2     | -20, ±2        | -20, ±2        | -20, ±2      | -30, ±2      | -30, ±2                     |
| Gain Control Range (dB):               | 15          | 15             | 15             | 15           | 10           | 18                          |
| Slope Control Range (dB):              | 10          | 10             | 10             | 10           | 8            | -                           |
| Composite Triple Beat - CTB (dB) (b):  | -60         | -62            | -62            | -67          | -58          | -66                         |
| Composite Second Order - CSO (dB) (b): | -64         | -67            | -67            | -67          | -59          | -70                         |
| Cross Modulation - XMOD (dB) (b):      | -57         | -67            | -67            | -67          | -58          | -60                         |
| Hum Modulation (dB):                   | -70         | -70            | -70            | -70          | -70          | -65                         |
| Number of Hybrids:                     | 2           | 2              | 2              | 2            | 2 fwd, 1 rev |                             |
| Impedance - All Ports (Ohm):           | 75          | 75             | 75             | 75           | 75           | 75                          |
| Return Loss                            |             |                |                |              |              |                             |
| Input (dB):                            | 14          | 14             | 14             | 14           | 14           | 15                          |
| Output (dB):                           | 14          | 14             | 14             | 14           | 14           | 15                          |

#### ORDERING INFORMATION

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

#### RMDA-ARP Model

|             |          |  |
|-------------|----------|--|
| RMDA 86A-30 | 5200 83  | 860 MHz, 30 dB Push-Pull Amp with Active Return Path |
| 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         |