

Features and Benefits

ANTRONIX®

VoIP Residential Amplifier VRA Series Passive Return

The Antronix VoIP Residential Amplifier provides a passive VoIP port for reliable voice service, even when power is disrupted to the amplifier. VRA series provides subscriber premise amplification in a convenient package where the output ports are facing down to simplify coaxial cable wiring in NID enclosures or small spaces. Our patented CamPort® provides the only auto-seizing F-port for maximum contact area and reliability for multimedia applications. Ideal for both indoor and outdoor applications, the VRA was engineered to withstand the harshest environmental threats with the capability of enduring repeated high power surges.



- **Port Configuration Ideal for NID Enclosures**
The micro-housing allows all outputs ports of the amplifier to be facing down to simplify coaxial cable writing in NID enclosures or small spaces.
- **CamPort® Auto-Seizing F-Port**
Patented auto-seizing F-port features a “Cam Activated Mechanism” to provide full contact pressure (>2,000 grams) on the center conductor for maximum reliability.
- **Passive Port Maintains High RF Performance**
The passive VoIP bypass port provides a passive loss, even when power is disrupted to maintain critical voice service. The VoIP bypass path maintains high RF performance, even when power is disrupted to the amplifier.
- **6 kV Surge Protection**
Unique surge protection on all ports without the use of arc gaps which may cause high impulse noise during discharge.
- **Gallium Arsenide Technology for Low Distortion**
Provides improved distortion and noise performance.
- **15 psi Sealed SCTE Compliant CamPort®**
Sealed brass CamPort® prevents water migration.
- **5-42/52-1002 MHz Diplex Filter**
True 5-42 MHz return band and full 1002 MHz downstream spectrum for more useable bandwidth.
- **Nickel Plated Housing**
Provides the excellent corrosion resistant protection against salt fog and rust.
- **Powered Locally or Remotely**
Power the amplifier locally with supplied adaptor or remotely with an optional power inserter.
- **PTC Short-Circuit Protected UL Listed Adaptor**
Self-resetting circuit protection provides safe protection against short-circuits to minimize maintenance costs.
- **Dual Compartment Power Inserter**
Provides high AC to RF isolation to minimize ingress.
- **Exceeds all SCTE Standards**

Electrical Specifications VRA Series Passive Return

| | | VRA2-11 | VRA4-7 | VRA8-3 |
|---|------------|-------------|-------------|-------------|
| Forward Specification | Freq (MHz) | 1+1P output | 3+1P output | 7+1P output |
| Gain (dB nominal) | 52-1002 | 11.0 | 7.0 | 3.0 |
| Passive Port Insertion Loss (dB) | 52-1002 | <4.8 | <4.8 | <4.8 |
| Return Loss (dB) | 52-1002 | >20 | >20 | >20 |
| Output-to-Output Isolation (dB) | 52-1002 | N/A | >23 | >23 |
| Noise Figure of Gain Block (dB) | 52-1002 | <4.0 | <4.0 | <4.0 |
| Flatness (dB) | 52-1002 | ±0.5 | ±0.5 | ±0.5 |
| AC/RF Isolation (dB) | 52-1002 | >60 | >60 | >60 |
| Group Delay (nS/3.58 MHz) | Ch. 2 | <20.0 | <20.0 | <20.0 |
| | Ch. 3 | <8.0 | <8.0 | <8.0 |
| | Ch. 4 | <5.0 | <5.0 | <5.0 |
| | Ch. 5 & up | <3.0 | <3.0 | <3.0 |
| Distortions¹ | | | | |
| Composite Triple Beat (dBc) | | -75 | -75 | -75 |
| Composite Second Order (dBc) | | -62 | -62 | -62 |
| Cross Modulation (dBc) | | -75 | -75 | -75 |
| Hum Modulation (dBc) | | -80 | -85 | -80 |
| Return Specification | | | | |
| Insertion Loss (dB) | 5-42 | <5.5 | <12.0 | <15.5 |
| Passive Port Insertion Loss (dB) | 5-42 | <4.0 | <4.0 | <4.0 |
| Return Loss (dB) | 5-42 | >20 | >20 | >20 |
| Port-to-Port Isolation (dB) | 5-42 | N/A | >23 | >23 |
| Group Delay (nS/1.0 MHz) | 5.0-6.5 | <20 | <20 | <20 |
| | 6.5-8.0 | <15 | <15 | <15 |
| | 8.0-34 | <5 | <5 | <5 |
| | 34-42 | <20 | <20 | <20 |



Specifications VRA Series Passive Return

| General | |
|---|---|
| Amplifier Type | Gallium Arsenide Technology |
| Nominal Impedance | 75 Ω |
| RFI | >120 dB |
| F-Connector Type | ANSI/SCTE 01 (formerly IPS-SP-400) Compliant Brass Sealed CamPort® |
| Pressure Seal | 15 psi |
| Surge Withstand | 6 kV Combination Wave: IEEE C62.41-1991 Cat. B3 on Input Port 6 kV Ring Wave: IEEE C62.41-1991 Cat. B3 on all RF Ports |
| Operating Temperature | -40 °C to +60 °C |
| Warranty | 5 Years |
| Power Adaptor | 12 VDC/200 mA Output UL Listed, PTC Short-Circuit Protected, Self-Resetting Adaptor |
| Dimensions/Weight (weight is without power supply) | VRA2-11: 4.6" W x 2.6" H x 0.9" D / 0.6 lb. VRA4-7: 4.9" W x 3.0" H x 1.4" D / 0.7 lb. VRA8-3: 5.9" W x 3.0" H x 1.4" D / 0.9 lb. |

¹ +10 dBmV flat input, 79 analog channels from 55 MHz to 550 MHz. Digital channels from 550 MHz to 750 MHz at 6 dB down.

Ordering Guide

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|--------------------|--|
| VRA2-11/AC* | 2 Output Amplifier, 120 VAC PS |
| VRA4-7/AC* | 4 Output Amplifier, 120 VAC PS |
| VRA8-3/AC* | 8 Output Amplifier, 120 VAC PS |
| ARPI-2000 | Power Inserter for Remote Powering |
| ARAC-12N | Power Adaptor, 120 VAC/60Hz Input, 12 VDC Output, 200 mA |

