Features and Benefits

ANTRONIX®

MVRA902B

MoCA Enhanced VoIP Residential Amplifier (42/54 MHz)

With MoCA (Multimedia over Coax Alliance) having widespread deployment for high speed in-home networking, this amplifier has enhanced performance in the MoCA band to optimize the data rates for video sharing, multi-room DVR service, video conferencing and other MoCA applications. The amplifier has eight amplified output ports and a reliable passive VoIP port, which maintains RF integrity even when power is disrupted to the amplifier. The passive VoIP port provides a MoCA path to the amplified output ports to ensure full MoCA compatibility. This amplifier utilizes the Antronix patented CamPort®. This auto-seizing F-port ensures maximum contact area and reliability for multimedia applications. The integrated MoCA point of entry filter prevents MoCA signals from interfering with an adjacent subscriber. The amplifier can be mounted in an all-ports-down configuration which allows for ease of installation in a NID enclosure. An EZ mounting bracket is also available.

- **MoCA Enhanced**
  Optimized RF performance in the MoCA band ensures maximum data rates for MoCA enabled devices. Integrated MoCA point of entry filter prevents MoCA signals from interfering with adjacent subscribers.
- **Passive VoIP Port for Critical Voice Service**
  The passive VoIP port provides continuous service when power is disrupted to maintain critical voice service. The VoIP port also supports MoCA band communications to the amplified output ports.
- **Self-Terminating Internal Switch**
  An internal self-terminating switch provides excellent bi-directional RF performance between the input port and VoIP port even when power is disrupted.
- **Unity Gain Forward and Return**
  Active gain in the forward and return band provides unity gain in both directions for ease of installation.
- **CamPort® Auto-Seizing F-port**
  Patented auto-seizing brass F-port features a "Cam Activated Mechanism" to provide full contact pressure (> 2000 grams) on the center conductor for maximum reliability.
- **All-Ports-Down Configuration for NID Enclosures**
  Amplifier can be mounted with all ports facing down configuration to provide clean wiring within a NID enclosure.
- **6 kV Surge Protection**
  Unique 6 kV surge protection without the use of arc gaps which may cause high impulse noise during discharge.
- **Powder Coated Aluminum Housing**
  Provides the most corrosion resistant protection against salt fog and rust.
- **Optional Power Inserter for Remote Powering**
  The amplifier can be powered remotely with a dual isolation compartment power inserter for high AC to RF isolation to prevent ingress.
- **PTC Short-Circuit Protected UL Listed Adaptor**
  Self-resetting circuit provides safe protection against short-circuits to minimize maintenance costs.
- **Optional EZ Mounting Bracket**
  Amp easily snaps into bracket screwed into NID box.

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Electrical Specifications
MVRA902B
MoCA Enhanced VoIP Residential Amplifier (42/54 MHz)

Forward Specifications	Frequency (MHz)	Specifications
Gain (Outputs 1–8) (dB nom)	54-1002	0±1.5
Return Loss[1] (dB min)	54-1002	18
Output Port to Port Isolation (dB min)	54-1002	23
VoIP to Output Port Isolation (dB min)	54-1002	25
Noise Figure[4] (dB max)	54-1002	4
Group Delay (ns/3.58 MHz)	Ch. 2	30
	Ch. 3	15
	CH. 4 & up	5
Distortions[2]		
Composite Triple Beat (dBc)		-75
Composite Second Order (dBc)		-63
Cross Modulation (dBc)		-70
Hum Modulation (dBc)		-80
Return Specifications	**Frequency** (MHz)	**Specifications**
Gain (Outputs 1–8) (dB nom)	5-42	0±1.5
Return Loss[1] (dB min)	5-42	18
Output Port to Port Isolation (dB min)	5-42	23
VoIP to Output Port Isolation (dB min)	5-42	25
Noise Figure[4] (dB max)	5-42	7
Group Delay (ns/1.0 MHz)	5-8	30
	8-38	10
	38-42	20
Distortions[3]		
Discrete Second Order (dBc)		-60
Discrete Third Order (dBc)		-60
Cross Modulation (dBc)		-65
MoCA Specifications	**Frequency** (MHz)	**Specifications**
Insertion Loss		
Output Port to Output Port (dB max)	1125-1675	35
Output Port to VoIP Port (dB max)	1125-1675	40
Isolation		
Output Port to Input Port (dB min)	1125-1675	38
VoIP Port to Input Port (dB min)	1125-1675	35
VoIP Port Specifications	**Frequency** (MHz)	**Specifications**
Insertion Loss (dB nom)	5-1002	5.5
Return Loss[1] (dB min)	5-1002	18

Notes:

1. Input port and VoIP port return loss remains at 18 dB even upon power failure.
2. +10 dBmV flat input, analog channels from 54 MHz to 550 MHz. Digital channels from 550 MHz to 1002 MHz at 6 dB below the analog channels.
3. Two +55 dBmV carriers at 13 MHz and 19 MHz.
4. Noise figure of gain chip.

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Specifications
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General	
Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE 01 Brass Compliant Sealed CamPort®
Power Adaptor	15 VDC/500 mA output, UL, PTC short-circuit protected
Dimensions/Weight	6.0″ W x 3.8″ H x 1.5″ D/0.72 lb.
Environmental	
Pressure Seal	15 psi
Surge Withstand	6 kV/3 kA Combo Wave (IEEE C62.41-1991 Cat. B3) on all RF ports 6 kV/200 A Ring Wave (IEEE C62.41-1991 Cat. A3) on all RF ports
RFI Screening Effectiveness	-100 dB
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE specification

Ordering Guide

MVRA902B/AC	8 amplified outputs + 1 VoIP port amplifier. Active return. AC power adaptor included.
ARAC-15N-50E6	AC power adaptor, 120 VAC/60 Hz Input, 15 VDC output, 500 mA, Efficiency Level VI
ARPI-2000	Optional power inserter for remote powering
MB100P	Optional NID enclosure mounting bracket to snap amplifier in place.

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