

REGAL® HOUSE AMPLIFIER



APPLICATION

Regal's House Amplifier (HA1) is intended for applications in the cable television industry. The HA1 is installed in the cable distribution network at the customer's premise (house drop), either indoors or outdoors inside a Network Interface Device (NID).

Its function is to boost signals to the home, where needed, without readjusting levels elsewhere in the system to compensate for cable loss.

HA1 has two configurations:

- 1-output port (HA1-1)
- 4-output ports (HA1-4)

Both configurations include a wall plug-in transformer to power the amplifier. Both amplifiers provide two power inputs; one via direct connection to the power input port, or second, via one of the RF output ports using a power insertion device.



SPECIFICATIONS

Transmission Characteristics

General

EMI Isolation (dB) (Below RF Output Level)	>100
Impedance (All RF Ports) (ohms Nominal)	75
Return Loss (All RF Ports) (dB)	≥15

Forward Path

Bandwidth (MHz)	54-1000
Flatness Peak-to-Valley (dB)	<1.0
Internal Tilt (4-Output) (dB Up-Tilt)	<1.5
Isolation P-to-P (4-Output) (dB)	>20
Gain	
1-Output (dB)	13.5-16
4-Output (dB)	6-9
Output Level	
1-Output (dBmV)	<+22
4-Output (dBmV)	<+14

Reverse Path

Bandwidth (MHz)	5-41
Flatness Peak-to-Valley (dB)	<0.75
Insertion Loss	
1-Output (dB)	<1.0
4-Output (dB)	<8.0

Distortions	Minimum	Typical
CTB ¹ (dB)	68	74
CSO ¹ (dB)	59	62
Cross-Modulation (dB)		70
Noise Figure (dB)		<5.0
Hum Modulation (dB)		70

Note 1: Specification are based on 79 NTSC channels at maximum output levels with the highest frequency being 547.25 MHz

Specifications are subject to change without notice.

SPECIFICATIONS

Powering

External Transformer	
Input	120 V ac, 60 Hz, 100 mA
Output	13.2 V dc, 375 mA
Ripple	1.0 V pp

Amplifier Powering

Input Voltage (V dc)	9-16
DC Current (mA)	50-150

Compliance

Wall Mount Power Supply	UL [®] Class II 1310
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Environmental and Mechanical Specifications

Temperature Range	
Operational	-40 to 60 °C
Storage	-40 to 70 °C
Operating Humidity	90% Non Condensing
Lightning Protection	
RF Input Port (kV)	3.0
RF Output Ports (kV)	1.0
Dimensions	
Amplifier (W x H x D) in. (cm)	5.9 x 3.6 x 1.0 (14.99 x 6.16 x 2.54)
Wall Plug-In Power Supply (W x H x D) in. (cm)	3.1 x 1.9 x 1.6 (7.87 x 4.83 x 4.06)
Weight lbs. (kg)	1.58 (0.72) (Including Wall Plug-In Power Supply)

ORDERING INFORMATION

Description	Model#	Part #
1 Port Output House Amplifier 13.5-16 dB Gain, 1 GHz	HA1-1	252289
4-Port Output House Amplifier 6-9 dB Gain, 1 GHz	HA1-4	252292

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