



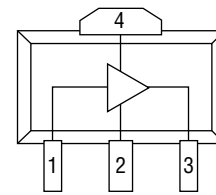
Product Features

- 50-860 MHz Bandwidth
- -61 dBc CTB, 110 Channels
- -63 dBc CSO, 110 Channels
- 3.0 dB Noise Figure
- 16 dB Gain
- 20 dBm P1dB
- High Reliability
- SOT-89 Surface Mount Package
- Single +5 V Supply

Product Description

The AH2 is a general purpose, high dynamic range amplifier targeting cable TV markets. The combination of gain flatness, high linearity and bandwidth make it ideal for CATV distribution, cable modem and laser diode driver applications. The AH2 is designed for 75 Ω systems and requires minimal off chip biasing elements. The device is manufactured using GaAs MESFET technology and boasts an MTTF of >100 years at a mounting temperature of 85°C. All devices are 100% RF tested.

Functional Diagram



Function	Pin No.
Input	1
Ground	2
Output Bias	3
Ground	4

Specifications

Parameter	Units	Minimum	Typical	Maximum	Condition
Frequency Range	MHz		50-860		
Gain	dB		16.5		50 MHz, Using specified application circuit
Gain	dB		15.5		860 MHz, Using specified application circuit
S11	dB		-10		Using specified application circuit 50-860 MHz
S22	dB		-15		Using specified application circuit 50-860 MHz
Output IP3	dBm		38		
Output IP2	dBm		48		
Noise Figure	dB		3.0		
Output P1dB	dBm		20		68.7 dBmV
CSO	dBc		-53		83 channels, 30 dBmV/ch, single
CSO	dBc		-63		110 channels, 40 dBmV/ch, push-pull
CTB	dBc		-75		83 channels, 30 dBmV/ch, single
CTB	dBc		-61		110 channels, 40 dBmV/ch, push-pull
Operating Current Range	mA	120	150	180	Vdd = 5.0 V
Supply Voltage	V		5		

Test conditions unless otherwise noted. T = 25°C, Vdd = 5.0 V, 75 Ω system.

1. Typical specifications reflect AH2 measured with external matching circuits.

2. OIP3 measured with 2 tones at an output power of 5 dBm/tone separated by 10 MHz. The suppression on the largest IM3 product is used to calculate OIP3 using a 2:1 slope rule.

Absolute Maximum Ratings

Parameter	Rating
Operating Case	-40 to +85°C
Storage Temperature	-40 to +125 °C
Junction Temperature	+155°C
Supply Voltage	+6.0 V
Input RF Power (continuous)	+15 dBm

Ordering Information

Part No.	Description
AH2	Linear Amplifier, 500 pieces per reel
AH2-PCB	Fully assembled application circuit