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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8349A

HP Agilent 8349A Microwave Amplifier 2 to 20 GHz The HP 8349A is a self-contained solid-state microwave amplifier covering 2 to 20 GHz. OEM 8349A operating and service manual 08349-90001 and HP product data list a minimum 100 mW (+20 dBm) unlevelled and 80 mW (+19 dBm) levelled output, plus or minus 1.25 dB levelled flatness, and 15 dB minimum small-signal gain at minus 5 dBm input. Boosting sweeper or synthesizer outputs for LO drive, antenna measurements, and increasing scalar-network dynamic range by about 20 dB. The HP 8349A is a self-contained solid-state microwave amplifier covering 2 to 20 GHz. OEM 8349A operating and service manual 08349-90001 and HP product data list a minimum 100 mW (+20 dBm) unlevelled and 80 mW (+19 dBm) levelled output, plus or minus 1.25 dB levelled flatness, and 15 dB minimum small-signal gain at minus 5 dBm input. Boosting sweeper or synthesizer outputs for LO drive, antenna measurements, and increasing scalar-network dynamic range by about 20 dB. 2 to 20 GHz broadband solid-state amplifier



MODEL

**Agilent / Keysight
8349A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8349A

LISTING

<https://aumictechlabs.com/products/8349a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8349A is a broadband microwave amplifier delivering consistent gain and levelled output power across 2 to 20 GHz. Built on a multi-stage GaAs FET architecture, it has minimum 15 dB small-signal gain with 80 mW levelled output power and ± 1.25 dB flatness from 2 to 18.6 GHz, typically extending to 20 GHz. The amplifier achieves a 1 dB compression point of

+21 dBm nominal and third-order intercept of +33 dBm nominal, making it suitable for dynamic range extension and signal boosting in test and measurement systems. Noise figure remains below 13 dB typical. Fast pulse transmission capability - rise/fall time under 10 ns and input-to-output delay under 8 ns - supports pulsed signal applications. Harmonics are controlled to -30 to -20 dBc across the band, with non-harmonic spurious content at -55 dBc or better.

Technical Specifications

Frequency Range: 2 to 20 GHz
Gain: >15 dB (full band); minimum 15 dB small signal at -5 dBm input
Output Power (Leveled): 80 mW (+19 dBm), 2 to 18.6 GHz, typically to 20 GHz
Output Power (Unleveled): 100 mW (+20 dBm)
Power Flatness (Leveled): ± 1.25 dB
1 dB Compression Point: +21 dBm nominal
Noise Figure: <13 dB typical
Third Order Intercept: +33 dBm nominal
Input SWR: ≤ 2.8
Output SWR (Leveled): ≤ 2.5
Maximum Input Power: +27 dBm RF; ± 10 V DC
Harmonics: -20 dBc or better (2.0 to <11.0 GHz at +20 dBm output); -30 dBc or better (11.0 to 20.0 GHz at +20 dBm output)
Non-Harmonic Spurious: ≤ -55 dBc
Pulse Rise/Fall Time: <10 ns typical
Pulse Delay (Input to Output): <8 ns typical
RF Connectors: Type N female
Dimensions: 133 mm (H) $\times$ 214 mm (W) $\times$ 366 mm (D)
Weight: 7 kg net; 14 kg shipping

Key Features

- Multi-stage GaAs FET design for wide-band amplification
- Leveled output maintains power flatness across frequency sweep
- Low harmonics and spurious performance
- Fast pulse response for time-domain measurements

Typical Applications

- Signal boosting in test and measurement setups
- Scalar network analyzer dynamic range extension
- RFI susceptibility testing
- Antenna efficiency and pattern measurements

Use with fixed or swept frequency sources

Compatibility & Integration

Designed for interfacing with HP microwave sources including 8350 or 8620C sweep oscillators, 8340A/8341A synthesized sweepers, and 8672A or 8673 synthesized signal generators. Compatible with HP 8755C, 8736A, and 8757A scalar network analyzers when used with sweep oscillators for extended measurement capability.

8349A Characteristics / Specifications

PARAMETER	VALUE
Model	8349A
Instrument Type	Microwave amplifier
Frequency Range	2 GHz to 20 GHz
Unleveled Output Power	at least 100 mW (+20 dBm)
Leveled Output Power	at least 80 mW (+19 dBm)
Leveled Flatness	plus or minus 1.25 dB
Small Signal Gain	at least 15 dB at minus 5 dBm input
Rf Connectors	TypeNfemale input and output
Leveling	internal leveling with power readout
Source Compatibility	fixed or swept frequency sources
Literature	HP 8349A Operating and Service Manual 08349-90001 February 1984
Architecture	solid state broadband microwave amplifier
Mechanical Package	benchtop microwave instrument
Manufacturer	HP Agilent Keysight
Scalar Dynamic Range Increase	about 20 dB when used in scalar systems
Maximum Frequency	20 GHz
Minimum Frequency	2 GHz
Gain Reference Input	minus 5 dBm small-signal condition
Output Monitor	internal leveling eliminates external meter and coupler for monitoring
Cooling	instrument airflow
Duty	continuous RF amplification
Grounding	chassis ground

8349A Specifications

PARAMETER	VALUE
HP Agilent 8349A Microwave Amplifier 2 to 20 GHz	Overview
Applications	Boosting sweeper or synthesizer outputs for LO drive, antenna measurements, and increasing scalar-network dynamic range by about 20 dB.
Key Features	2 to 20 GHz broadband solid-state amplifier
Use with fixed or swept sources	Leveled flatness plus or minus 1.25 dB
Technical Specifications	Model: 8349A

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes	
From HP 8349A Microwave Amplifier operating literature and HPWiki/product data quoting 08349-90001. Confirm connector sex and leveling detector on the installed unit.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.