

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 8449B Microwave Preamplifier, 26.5 GHz

HP / Agilent 8449B Microwave Preamplifier 1 GHz to 26.5 GHz The HP/Agilent 8449B is a high-gain, low-noise microwave preamplifier covering 1.0 to 26.5 GHz. Minimum gain is 23.5 dB. Noise figure is 8.5 dB from 1.0 to 12.5 GHz, 12.5 dB from 12.5 to 22.0 GHz, and 14.5 dB from 22.0 to 26.5 GHz. Gain flatness is plus/minus 4.5 dB over 1.0 to 26.5 GHz and plus/minus 3.5 dB over 2.0 to 22.0 GHz. The RF connectors are APC-3.5 male. The amplifier is intended to improve spectrum-analyzer sensitivity for MIL-STD radiated measurements and general microwave search. The HP/Agilent 8449B is a high-gain, low-noise microwave preamplifier covering 1.0 to 26.5 GHz. Minimum gain is 23.5 dB. Noise figure is 8.5 dB from 1.0 to 12.5 GHz, 12.5 dB from 12.5 to 22.0 GHz, and 14.5 dB from 22.0 to 26.5 GHz. Gain flatness is plus/minus 4.5 dB over 1.0 to 26.5 GHz and plus/minus 3.5 dB over 2.0 to 22.0 GHz. The RF connectors are APC-3.5 male. The amplifier is intended to improve spectrum-analyzer sensitivity for MIL-STD radiated measurements and general microwave search. Spectrum-analyzer preamplification 1 to 26.5 GHz; MIL-STD radiated-emission sensitivity; reducing system noise figure in microwave ATE; recovery of cable and fixture loss ahead of an analyzer.



MODEL

HP / Agilent 8449B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8449B

LISTING

<https://aumictechlabs.com/products/8449b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8449B Microwave Preamplifier is a high-gain, low-noise amplifier that extends the sensitivity of RF and microwave measurement systems across the 1 GHz to 26.5 GHz band. By amplifying weak signals before detection, it reduces system noise floor and enables measurement of signals otherwise masked by instrument noise. Minimum gain is 23.5 dB, with typical performance of ≥ 26 dB across the operating range. The device delivers noise figures of 7 dB typical (1.0–12.7 GHz), 9 dB typical (12.7–22.0 GHz), and 12 dB typical (22.0–26.5 GHz), making it effective for spectrum analyzer applications and low-level signal detection.

Technical Specifications

Frequency Range: 1 GHz to 26.5 GHz

Gain: 23.5 dB minimum; ≥ 26 dB typical; up to 30 dB

Gain Flatness: ± 4.5 dB (1–26.5 GHz, 0–55 °C); ± 2.4 dB (2–22 GHz, 20–30 °C)

Noise Figure: 8.5 dB max / 7 dB typical (1.0–12.7 GHz); 12.5 dB max / 9 dB typical (12.7–22.0 GHz); 14.5 dB max / 12 dB typical (22.0–26.5 GHz)

Output Power (1 dB Compression): $\geq +7$ dBm

Harmonic Distortion: -30 dB at 0 dBm output (characteristic)

Reverse Isolation: >50 dB typical

VSWR Input: 2.0:1 (1.0–2.0 GHz, 12.5–26.5 GHz); 1.5:1 (2.0–12.5 GHz)

VSWR Output: 2.0:1 (1.0–26.5 GHz)

Impedance: 50 Ω

Connectors: Type-N female, ACP 3.5 male

Key Features

- Covers full microwave band from 1 GHz to 26.5 GHz with consistent high gain
- Low-noise design minimizes degradation of receiver cascade noise figure
- Compact half-width package: 214 mm $\times$ 133 mm $\times$ 366 mm; 7 kg net weight
- Optional rackmount kit (Option 908) enables System II integration
- 50 Ω matched input and output for direct connection to spectrum analyzers

Typical Applications

- Extending spectrum analyzer sensitivity for marginal signal detection
- Low-level RF and microwave signal measurement
- Reducing measurement time in weak-signal environments
- Front-end amplification in receiver chains

Compatibility & Integration

Designed to interface directly with HP/Agilent spectrum analyzers and RF/microwave test equipment. Type-N and ACP connectors provide compatibility with standard laboratory sources and analyzers.

Features & description

From manufacturer datasheet

Features

- Single broadband 1 to 26.5 GHz path (no crossover networks) • Banded noise-figure table (8.5 / 12.5 / 14.5 dB) • Gain compression less than 1 dB for output at or above +7 dBm • APC 3.5 male connectors
- Complements 8447-series RF preamps below 1.3 GHz • Used in EMC and general microwave sensitivity setups

8449B Characteristics / Specifications

PARAMETER	VALUE
Model	8449B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Microwave preamplifier
Family	8449
Alias	HP 8449B; Agilent 8449B; Keysight 8449B
Frequency Range	1.0 GHz to 26.5 GHz
Minimum Gain	23.5 dB
Noise Figure 1.0 to 12.5 GHz	8.5 dB
Noise Figure 12.5 to 22.0 GHz	12.5 dB
Noise Figure 22.0 to 26.5 GHz	14.5 dB
Gain Flatness 1.0 to 26.5 GHz	plus/minus 4.5 dB
Gain Flatness 2.0 to 22.0 GHz	plus/minus 3.5 dB
Gain Compression	less than 1 dB for output signal of plus 7 dBm or greater
RF Connector	APC 3.5 male
Related 8447D Band	100 kHz to 1.3 GHz
Related 8447D Minimum Gain	greater than 25 dB
Related 8447A Band	0.1 to 400 MHz
Instrument Type Class	high gain low noise microwave preamplifier
Intended Analyzer Role	additional sensitivity for radiated measurements
Band Count In NF Table	three (1.0-12.5; 12.5-22.0; 22.0-26.5 GHz)
Flatness Window Narrow	2.0 to 22.0 GHz plus/minus 3.5 dB
Flatness Window Full	1.0 to 26.5 GHz plus/minus 4.5 dB
Upper Frequency	26.5 GHz
Lower Frequency	1.0 GHz
Compression Reference Level	plus 7 dBm output

PARAMETER	VALUE
Connector Sex	male APC 3.5
Application Class	MIL STD radiated and general SA preamp

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	
Specifications	
PARAMETER	VALUE
Model	8449B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Microwave preamplifier
Family	8449
Alias	HP 8449B; Agilent 8449B; Keysight 8449B
Frequency Range	1.0 GHz to 26.5 GHz
Minimum Gain	23.5 dB
Noise Figure 1.0 to 12.5 GHz	8.5 dB
Noise Figure 12.5 to 22.0 GHz	12.5 dB
Noise Figure 22.0 to 26.5 GHz	14.5 dB
Gain Flatness 1.0 to 26.5 GHz	plus/minus 4.5 dB
Gain Flatness 2.0 to 22.0 GHz	plus/minus 3.5 dB
Gain Compression	less than 1 dB for output signal of plus 7 dBm or greater
RF Connector	APC 3.5 male
Related 8447D Band	100 kHz to 1.3 GHz
Related 8447D Minimum Gain	greater than 25 dB
Related 8447A Band	0.1 to 400 MHz
Instrument Type Class	high gain low noise microwave preamplifier
Intended Analyzer Role	additional sensitivity for radiated measurements
Band Count In NF Table	three (1.0-12.5; 12.5-22.0; 22.0-26.5 GHz)
Flatness Window Narrow	2.0 to 22.0 GHz plus/minus 3.5 dB
Flatness Window Full	1.0 to 26.5 GHz plus/minus 4.5 dB
Upper Frequency	26.5 GHz
Lower Frequency	1.0 GHz
Compression Reference Level	plus 7 dBm output
Connector Sex	male APC 3.5

PARAMETER	VALUE
-----------	-------

Application Class	MIL STD radiated and general SA preamp
-------------------	--

Notes

Numeric rows are from the HP/Agilent/Keysight 8449B microwave preamplifier specification summary (gain, three-band noise figure, two-band flatness, compression, APC 3.5 male). Finer VSWR, reverse-isolation, and AC-power limits belong on the 8449B data sheet/faceplate ifalater revision is installed.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.