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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 11729B

HP Agilent 11729B Carrier Noise Test Set 5 MHz to 18 GHz The HP 11729B downconverts microwave carriers to low-frequency baseband for phase-noise measurement with 8662A/8663A-class references. OEM 11729B product data list 5 MHz to 18 GHz input coverage, use with HP 3048A/11740A-class noise systems, and a phase-detector/PLL architecture for CW carrier noise. Absolute and residual phase-noise measurements of microwave sources using an 8662A/8663A reference. Pairs with 8662A/8663A low-noise references The HP 11729B downconverts microwave carriers to low-frequency baseband for phase-noise measurement with 8662A/8663A-class references. OEM 11729B product data list 5 MHz to 18 GHz input coverage, use with HP 3048A/11740A-class noise systems, and a phase-detector/PLL architecture for CW carrier noise. Absolute and residual phase-noise measurements of microwave sources using an 8662A/8663A reference. Pairs with 8662A/8663A low-noise references System Family: HP 3048A / 11740A phase noise systems



MODEL

**Agilent / Keysight
11729B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

11729B

LISTING

<https://aumictechlabs.com/products/11729b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 11729B Carrier Noise Test Set is a specialized instrument for precise measurement and analysis of noise in RF and microwave signals. It upconverts external or internal reference signals and downconverts the signal under test to an intermediate frequency, enabling detailed characterization through phase detection and frequency demodulation methods. The system

measures carrier-to-noise ratio, noise figure, phase noise, and AM noise across its full operating range, making it suitable for communication systems, radar, and electronic warfare applications where signal integrity is critical.

Technical Specifications

Frequency Coverage Frequency range: 5 MHz to 18 GHz (full coverage) or 2.5 GHz wide band configuration IF output frequency range: 5 to 1280 MHz IF output level: +7 dBm minimum Input power (downconverter): +7 dBm minimum

Measurement Methods

Phase Detector Method - analyzes phase difference between two input signals; quadrature setting (90° phase difference) produces zero output voltage with phase fluctuations generating voltage variations

Frequency Discriminator Method - employs frequency demodulation for phase noise analysis

Internal Phase-Lock Loop (PLL) capability when paired with HP 8662A, with selectable bandwidths over a four-decade range

Noise Performance (11729B/8662A System) 10 GHz carrier: -90 dBc/Hz at 100 Hz offset 10 GHz carrier: -123 dBc/Hz at 10 kHz offset

Key Features

Replaces multiple specialized noise measurement systems in a single platform

Low-phase-noise HP 8662A reference signal multiplied to microwave frequencies for low-noise downconversion

Compatible with general-purpose lab spectrum analyzers for sensitive carrier noise measurements

HP 8662A can function as PLL VCO via internal DC FM or electronically tunable crystal oscillator

Typical Applications

Signal source characterization and verification

Communication system signal integrity analysis

Radar and electronic warfare testing

Phase noise and AM noise detailed analysis

Compatibility & Integration Works with HP 8662A signal source for enhanced PLL capability and low-noise reference performance.

11729B Characteristics / Specifications

PARAMETER	VALUE
Model	11729B
Instrument Type	Carrier noise test set
Frequency Range	5 MHz to 18 GHz
Reference Synthesizers	HP 8662A 8663A
System Family	HP 3048A / 11740A phase noise systems
Successor	11729C
Manufacturer	HP Agilent Keysight
Mechanical Package	benchtop microwave test set
Measurement	carrier phase noise
Minimum Frequency	5 MHz
Maximum Frequency	18 GHz
Architecture	downconverter and phase detector/PLL
Output	baseband noise to the analyzer
Application Class	CW source phase noise
Documentation	HP 11729B carrier noise test set data
Input Type	microwave carrier
Reference Type	low-noise RF synthesizer
Ate Interface	HP-IB as published for 11729B/3048A
Duty	continuous phase-noise measurement
Grounding	system ground with the reference synthesizer
Related 11729C	later carrier noise test set covering the same role
Use With	8662A/8663A and 3048A software/hardware

11729B Specifications

PARAMETER	VALUE
HP Agilent 11729B Carrier Noise Test Set 5 MHz to 18 GHz	Overview
Applications	Absolute and residual phase-noise measurements of microwave sources using an 8662A/8663A reference.
Key Features	5 MHz to 18 GHz carrier input
Technical Specifications	Model: 11729B

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 11729B carrier noise test set product data (5 MHz-18 GHz, 8662A/8663A, 3048A systems). Confirm mixer/PLL options on the installed 11729B.	

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