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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 53149A

Agilent 53149A Microwave Counter Power Meter DVM The Agilent 53149A combines a CW microwave frequency counter, a true 8480-series power meter, and a ± 50 Vdc DVM in one portable package. OEM Keysight 53140 Series technical overview 5988-0300EN lists Channel 1 from 10 Hz to 125 MHz, Channel 2 from 50 MHz to 46 GHz, power minus 70 to +44 dBm (sensor dependent), and GPIB plus RS-232. Point-to-point microwave-link install and maintenance; ATE rack-space reduction; antenna AGC alignment with the DC DVM. Selectable 1 Hz to 1 MHz frequency resolution The Agilent 53149A combines a CW microwave frequency counter, a true 8480-series power meter, and a ± 50 Vdc DVM in one portable package. OEM Keysight 53140 Series technical overview 5988-0300EN lists Channel 1 from 10 Hz to 125 MHz, Channel 2 from 50 MHz to 46 GHz, power minus 70 to +44 dBm (sensor dependent), and GPIB plus RS-232. Point-to-point microwave-link install and maintenance; ATE rack-space reduction; antenna AGC alignment with the DC DVM. Selectable 1 Hz to 1 MHz frequency resolution Optional oven timebase (Option 001) and internal battery (Option 002)

**MODEL****Agilent / Keysight
53149A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****53149A****LISTING**<https://aumictechlabs.com/products/53149a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 53149A is a portable 46 GHz CW microwave frequency counter, power meter, and DC digital voltmeter integrated into a single instrument. It consolidates three essential test functions for field technicians and bench engineers working with microwave systems,

telecommunications infrastructure, and RF circuit validation. The dual-channel architecture supports both low-frequency baseband measurements and high-frequency microwave analysis, eliminating the need to carry separate meters for frequency, power, and voltage monitoring.

Technical Specifications

Frequency Counter Two-channel architecture: Channel 1 covers 10 Hz to 125 MHz; Channel 2 extends to 46 GHz CW Selectable resolution from 1 Hz to 1 MHz Typical measurement time: $1/\text{Resolution} + 30 \text{ ms}$ (Channel 1); $1/\text{Resolution} + \text{Acquisition Time} + 30 \text{ ms}$ (Channel 2) Acquisition time (1 MHz FM rate, power meter off): 150 ms (FM Auto) or 125 ms (FM Off) FM tolerance to 20 MHz p-p at 10 MHz rate (up to 26.5 GHz); 12 MHz p-p above 26.5 GHz Amplitude discrimination (Channel 2, >300 MHz): Automatically selects largest signal when >10 dB above adjacent signals within 75 MHz spacing, or >20 dB above signals separated by >75 MHz

Power Meter Measurement range: -70 dBm to +44 dBm (sensor dependent) Resolution: 0.01 dB (log) or 0.1% full scale (linear) Basic accuracy: $\pm 0.02 \text{ dB}$ Power reference: 1.00 mW ($\pm 0.7\%$ factory set, NIST traceable) Reference accuracy: $\pm 1.2\%$ worst case over one year Display modes: Absolute (dBm, Watts) and Relative (dB, %) DC Digital Voltmeter Range: $\pm 50 \text{ Vdc}$ with 2 mV resolution Accuracy: $\pm 0.25\%$ of reading $\pm 10 \text{ mV}$ Input impedance: $0.5 \text{ M}\Omega$ nominal Damage level: $\pm 60 \text{ Vdc}$ General $50 \text{ }\Omega$ input impedance (microwave) GPIB and RS-232 interfaces LCD display with switchable backlight Power: 100-240 VAC, 50/60 Hz Stores up to 9 complete setups Portable design with optional battery and DC input (Option 002)

Key Features Integrated frequency, power, and voltage measurement eliminates multi-instrument setups True power meter with Keysight 8480 series sensor compatibility Enhanced stability available via oven timebase option Field-ready with optional carrying case and battery pack

Typical Applications Point-to-point microwave link installation and maintenance Telecommunications infrastructure testing RF and microwave circuit characterization Automated test equipment (ATE) integration

Compatibility & Integration Supports Keysight 8480 series power sensors. Rack-mount configuration available via Option 1CM.

53149A Characteristics / Specifications

PARAMETER	VALUE
Model	53149A
Instrument Type	Microwave frequency counter, power meter, and DVM
Series Family	Agilent 53140 Series
Channel 1 Frequency Range Normal	10 Hz to 125 MHz
Channel 1 Frequency Range Low Pass	10 Hz to 50 kHz with low-pass filter enabled
Channel 2 Frequency Range	50 MHz to 46 GHz
Channel 1 Sensitivity 10 To 30 Hz	40 mVrms
Channel 1 Sensitivity 30 Hz To 125 Mhz	25 mVrms
Channel 2 Sensitivity 50 To 300 Mhz	minus 20 dBm
Channel 2 Sensitivity 0.3 To 12.4 Ghz	minus 33 dBm
Channel 2 Sensitivity Upper Bands	minus 30 dBm 12.4 to 18 GHz; minus 27 dBm 18 to 26.5 GHz; minus 23 dBm 26.5 to 40 GHz; minus 17 dBm 40 to 46 GHz
Channel 1 Maximum Input	2 Vrms
Channel 2 Maximum Input 50 Mhz To 2 Ghz	+5 dBm
Channel 2 Maximum Input 2 Ghz And Above	+13 dBm
Channel 1 Damage Level	120 V (dc + ac pk) linearly derated to 5 Vrms at 125 MHz
Channel 2 Damage Level	+27 dBm
Channel 1 Impedance	1 M Ω / 60 pF nominal
Channel 2 Impedance	50 Ω
Channel 2 Connector	2.92 mm removable, SMA/APC-3.5 compatible female
Frequency Resolution	1 Hz to 1 MHz selectable
Frequency Accuracy	± 1 LSD $\pm$ residual stability $\pm$ (timebase error times frequency)
Channel 2 Residual Stability	1.25 LSD rms (counter and source on same timebase)
Channel 2 Acquisition Time Typical	165 ms FM Auto / 140 ms FM Off typical
Power Meter Frequency Range	100 kHz to 50 GHz, sensor dependent

PARAMETER	VALUE
Power Meter Power Range	minus 70 dBm to +44 dBm, sensor dependent
Power Meter Instrumentation Accuracy	±0.02 dB or ±0.5 percent
Power Reference Output	1.00 mW at 50 MHz nominal, factory set to ±0.7 percent NIST traceable
Dvm Range	±50 Vdc
Dvm Resolution	2 mV
Dvm Accuracy	±0.25 percent of reading ±10 mV
Line Voltage	90 to 132 Vac 47.5 to 66 Hz or 360 to 440 Hz; 216 to 264 Vac 47.5 to 66 Hz
Power Consumption	80 VA max, 32 W typical
Operating Temperature	0 C to 55 C (0 C to 40 C with battery option)
Dimensions With Bumpers	330 mmWx 156 mmHx 376 mmDWeight Without Battery: 4.5 kg nominal

General Specifications & Supplementary Characteristics

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Dimensions With Bumpers	330 mmWx 156 mmHx 376 mmDWeight Without Battery: 4.5 kg nominal Notes Numeric rows from Keysight 53140 Series Microwave Counter, Power Meter and DVM in One Portable Package technical overview 5988-0300EN. Channel-2 upper-band sensitivity is model-specific as tabulated for 53149A.

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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Channel 2 Damage Level	+27 dBm
Channel 1 Impedance	1 MΩ / 60 pF nominal
Channel 2 Impedance	50 Ω
Channel 2 Connector	2.92 mm removable, SMA/APC-3.5 compatible female
Frequency Resolution	1 Hz to 1 MHz selectable
Frequency Accuracy	±1 LSD ± residual stability ± (timebase error times frequency)
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Channel 1 Sensitivity 30 Hz To 125 Mhz: 25 mVrms

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Channel 2 Sensitivity 50 To 300 Mhz	minus 20 dBm
Channel 2 Sensitivity 0.3 To 12.4 Ghz	minus 33 dBm
Channel 2 Sensitivity Upper Bands	minus 30 dBm 12.4 to 18 GHz; minus 27 dBm 18 to 26.5 GHz; minus 23 dBm 26.5 to 40 GHz; minus 17 dBm 40 to 46 GHz
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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.