

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N1922A

The Keysight N1922A is a P-Series wideband power sensor designed for high-performance peak, average, and peak-to-average ratio measurements over a broad frequency range of 50 MHz to 40 GHz. Operating in conjunction with the N1911A and N1912A P-Series power meters, the N1922A provides internal zeroing and calibration to streamline test setups in aerospace, defense, and wireless communications applications.

SPECIFICATIONS

General

Interfaces	Proprietary multi-pin sensor cable interface to P-Series power meters
------------	---

Physical

Power Supply	Powered directly by compatible P-Series power meter via sensor cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	127 mm × 40 mm × 27 mm mm
Weight	0.226 kg kg

RF Performance

Frequency Range	50 MHz to 40 GHz
Power Measurement Range (Normal Mode)	-35 dBm to +20 dBm
Power Measurement Range (Average-Only Mode)	-30 dBm to +20 dBm
Maximum Continuous Power (Average)	+23 dBm
Maximum Peak Power	+30 dBm (< 1 μs)
Maximum DC Input Voltage	5 VDC
Video Bandwidth (VBW)	30 MHz
Rise Time	≤ 13 ns (for power levels ≥ 0 dBm)
Fall Time	≤ 13 ns (for power levels ≥ 0 dBm)
Minimum Pulse Width	50 ns
Maximum Sampling Rate	100 MSamples/s (continuous sampling)
VSWR (50 MHz to 10 GHz)	≤ 1.25
VSWR (10 GHz to 20 GHz)	≤ 1.30
VSWR (20 GHz to 26.5 GHz)	≤ 1.50
VSWR (26.5 GHz to 40 GHz)	≤ 1.70
RF Input Impedance	50 Ω nominal
RF Input Connector	2.4 mm (male)

Measurement Accuracy & Uncertainty

Power Linearity (-10 dBm to +20 dBm)	±4.0%
Sensor Calibration Type	Internal zeroing and calibration using built-in electronic RF switch

Measurement Capabilities

Measurement Types	Peak, average, peak-to-average ratio (PAR), rise time, fall time, pulse width, pulse period, pulse repetition frequency (PRF), duty cycle
Statistical Measurements	CCDF (Complementary Cumulative Distribution Function), PDF (Probability Density Function)
Time-Gated Measurements	Up to 4 independent gates
Internal Trigger Level Range	-20 dBm to +20 dBm
Internal Trigger Level Resolution	0.1 dB

System Compatibility

Compatible Power Meters	Keysight N1911A (single-channel) and N1912A (dual-channel) P-Series Power Meters
Sensor Cable Length Options	1.5 m (standard), 3.0 m (Option 105), 10.0 m (Option 106)

Environmental & Standards

Storage Temperature Range	-40 °C to +75 °C
Operating Relative Humidity	Up to 95% RH at 40 °C (non-condensing)
Storage Relative Humidity	Up to 90% RH at 65 °C
Operating Altitude	Up to 3,000 meters (9,840 feet)
Storage Altitude	Up to 15,240 meters (50,000 feet)
EMC Standards Compliance	Complies with EN 61326-1, ICES-001
Safety Standards Compliance	IEC 61010-1, CSA C22.2 No. 61010-1
Vibration Resistance Rating	MIL-PRF-28800F Class 3 (random vibration)
Shock Resistance Rating	MIL-PRF-28800F Class 3 (half-sine shock)

Power & Calibration Requirements

Calibration Cycle	1 year
Onboard Calibration Storage	Internal EEPROM contains calibration factors and 3D linearity correction data

Performance

Zero Set (Normal Mode)	250 nW
Zero Set (Average-Only Mode)	150 pW
Zero Drift (Normal Mode)	100 nW
Zero Drift (Average-Only Mode)	60 pW
Measurement Noise (Normal Mode)	50 nW
Measurement Noise (Average-Only Mode)	150 pW
Video Bandwidth Settings	High (30 MHz), Medium (1.5 MHz), Low (300 kHz)
Rise Time (Medium Bandwidth Setting)	230 ns
Rise Time (Low Bandwidth Setting)	1.2 μ s

Calibration

Internal Zeroing Time	< 10 s (typical)
Internal Calibration Time	< 10 s (typical)

Triggering

Internal Trigger Latency	160 ns $\pm$ 10 ns
Internal Trigger Jitter	1 ns RMS
Trigger Delay Range (Pre-Trigger)	-40 ms to 0 s
Trigger Delay Range (Post-Trigger)	0 s to 1 s
Trigger Delay Resolution	1% of delay setting or 10 ns (whichever is greater)

TECHNOLOGY

Diode Power Sensor

APPLICATIONS

RF and Microwave Power Measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.