

KEYSIGHT TECHNOLOGIES (AGILENT HP)

U2002A

The Keysight (formerly Agilent) U2002A is a high-performance USB average power sensor covering a frequency range from 50 MHz to 24 GHz and a wide dynamic range from -60 to +20 dBm. Operating as a standalone test instrument without the need for a separate power meter, it connects directly to a PC or compatible Keysight instrument via USB. The sensor features an internal triggering mechanism and provides fast measurement speeds and excellent SWR performance, making it highly suitable for RF and microwave power measurements in manufacturing, R&D, and field service.

SPECIFICATIONS

General

Interfaces	USB 2.0
Warm-up Time	30 minutes
Recommended Calibration Cycle	1 year

Physical

Power Supply	USB bus powered (+5 VDC)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	46 × 35.9 × 163.75 mm
Weight	0.262 kg

Frequency and Power Ratings

Frequency Range	50 MHz to 24 GHz
Power Range (dBm)	-60 dBm to +20 dBm
Power Range (Watts)	1 nW to 100 mW
Dynamic Range	80 dB
Damage Level (Average Power)	+25 dBm
RF Impedance	50 Ω
RF Connector Type	3.5 mm (male)

Measurement Accuracy and Performance

Sensor Type	Average power sensor
Measurement Speed	Up to 1000 readings/s (fast mode, buffered)
Maximum SWR (50 MHz to 150 MHz)	1.15
Maximum SWR (150 MHz to 2 GHz)	1.15
Maximum SWR (2 GHz to 12.4 GHz)	1.20
Maximum SWR (12.4 GHz to 18 GHz)	1.25
Maximum SWR (18 GHz to 24 GHz)	1.30

Triggering Specifications

Trigger Source	Internal, External
External Trigger Voltage Level	TTL compatible

Interface and Software

Host PC Interface	USB 2.0
Command Language	SCPI

Environmental Specifications

Storage Temperature	-30 °C to +70 °C
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Features

Internal Calibration	Yes (no external reference required)
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Connectivity

Cable Length Options	1.5 m (5 ft), 3.0 m (10 ft), or 5.0 m (16.4 ft)
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Environmental

Operating Humidity	Up to 95% RH at 40 °C (non-condensing)
Operating Altitude	Up to 4600 m (15,000 ft)
Shock and Vibration	MIL-PRF-28800F Class 3

Compliance

EMC Compliance	IEC 61326-1 / EN 61326-1
Safety Compliance	IEC 61010-1 / EN 61010-1

Software & Control

Supported Software	Keysight BenchVue, N1918A Power Analysis Manager
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TECHNOLOGY

Diode-based Average Power Sensor

APPLICATIONS

RF & 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.