

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8991A

The Agilent Keysight 8991A Peak Power Analyzer provides complete and accurate characterization of complex pulsed RF and microwave signals. It features two dedicated sensor channels and two oscilloscope/video channels, allowing for the simultaneous measurement of modulating signals and detector power envelopes.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488.2)
Display	Monochrome CRT

Physical

Power Supply	115 Vac (90 to 127 Vac) / 230 Vac (195 to 253 Vac), 48 - 66 Hz (or 360 - 440 Hz at 115 Vac), 250 VA max
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	425 mm × 194 mm × 366 mm mm
Weight	11 kg kg

Frequency and Power Measurement Specifications

Frequency Range	50 MHz to 40 GHz (sensor dependent)
Power Measurement Range	-32 to +20 dBm (sensor dependent)
Dynamic Range	52 dB (sensor dependent)
Minimum Pulse Width	20 ns
Rise Time	<5 ns (with 84812A/13A/14A sensors)

Sensor Compatibility and Inputs

Number of Channels	4 (2 sensor channels, 2 oscilloscope/video channels)
Sensor Input Channels	Ch 1 and Ch 4
Oscilloscope/Video Channels	Ch 2 and Ch 3
Compatible Sensor Models	Agilent 84812A, 84813A, 84814A, 84815A
Internal Calibrator Frequency	1.00 GHz
Internal Calibrator Power Level	10.0 mW (+10 dBm)
Internal Calibrator Connector	Type-N (female) on front panel
Calibrator Power Uncertainty	±1.5% (at 10 mW)
Video Channel Bandwidth	100 MHz (Channels 2 and 3)
Video Channel Input Impedance	1 MOhm (nominal)

Display and Automated Measurements

Automatic Timing Measurements	Rise time, fall time, pulse width, PRI, PRF, duty cycle, delay
Automatic Power Measurements	Peak power, average power, pulse top amplitude, pulse base amplitude, overshoot
Marker Functions	Amplitude and Time markers

Triggering and Timebase

Timebase Range	2 ns/div to 5 s/div
Trigger Modes	Auto, Normal, Single
Trigger Sources	Channel 1, 2, 3, or 4

Measurement Accuracy and Resolution

Vertical Resolution	8 bits (12 bits with averaging)
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Environmental and Safety

Storage Temperature Range	-40 to +75 °C
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Timebase

Timebase Accuracy	±0.005%
Timebase Resolution	100 ps

Video Channels

Video Channel Vertical Sensitivity Range	2 mV/div to 5 V/div
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Power Requirements

Line Voltage	115 Vac (90 to 127 Vac) / 230 Vac (195 to 253 Vac)
Line Frequency	48 to 66 Hz (at 115/230 Vac) or 360 to 440 Hz (at 115 Vac)
Power Consumption	250 VA maximum

Environmental

Operating Humidity	Up to 95% RH at +40 °C (non-condensing)
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Options

Option 001	Deletes channel 3 and channel 4 (reduces instrument to 1 sensor channel and 1 video channel)
Option 002	Rear panel inputs (sensor/video inputs and calibrator output on the rear panel)
Option 908	Rackmount kit without handles
Option 913	Rackmount kit with handles
Option 003	Rear panel sensor inputs

System & Control

HP-IB Interface Capabilities	SH1, AH1, T5, TE0, L3, LE0, SR1, RL1, PP0, DC1, DT1, C0, E2
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Inputs & Outputs

Auxiliary Trigger Connector	BNC (rear panel)
Auxiliary Trigger Input Impedance	Selectable 1 M (approx. 30 pF) or 50 Ω
Auxiliary Trigger Maximum Input Voltage	±40 V (dc + peak ac) @ 1 M, 5 V rms @ 50 Ω
Recorder Output Connector	BNC (rear panel)
Recorder Output Voltage Range	0 to 1 V

Internal Calibrator

Internal Calibrator SWR	1.05 typical, 1.10 maximum
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TECHNOLOGY

RF/Microwave Peak Power Analysis

APPLICATIONS

Characterization of pulsed RF signals, radar testing, and peak power measurements

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