

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9320B

The Keysight (formerly Agilent) N9320B is a general-purpose RF spectrum analyzer operating from 9 kHz to 3 GHz. Designed for bench repair, RF education, and R&D applications, it provides essential measurement functions including a standard power suite (channel power, ACP, OBW, SEM, and TOI) alongside SCPI compatibility for automated environments. Equipped with a digital IF, the N9320B resolves fine signal details with a 10 Hz minimum resolution bandwidth and reveals low-level signals with a -148 dBm displayed average noise level (DANL). Optional features such as a 3 GHz tracking generator (Option TG3) and pre-amplifier (Option PA3) further expand its measurement utility.

SPECIFICATIONS

General

Interfaces	USB Host, USB Device, LAN (10/100Base-T), GPIB (Option G01)
Display	6.5-inch TFT color LCD
Warm-up Time	45 minutes

Physical

Power Supply	100 to 240 VAC, 50/60 Hz, < 65 W
Operating Temperature	5 to 45 °C
Dimensions (W×H×D)	320 × 132.5 × 400 mm
Weight	7.6 kg

Frequency Specifications

Frequency Range	9 kHz to 3 GHz
Resolution Bandwidth (RBW) Range	10 Hz to 1 MHz (1-3-10 sequence)
Video Bandwidth (VBW) Range	1 Hz to 1 MHz (1-3-10 sequence)
Internal Reference Frequency	10 MHz
Internal Reference Aging Rate	±1 ppm / year
Phase Noise (10 kHz Offset)	< -90 dBc/Hz (at 1 GHz)

Amplitude Specifications

Displayed Average Noise Level (DANL) - Preamp On	-148 dBm (typical, 10 Hz RBW)
Displayed Average Noise Level (DANL) - Preamp Off	-130 dBm (typical, 1 GHz, 10 Hz RBW)
Maximum Safe DC Voltage	50 VDC
Absolute Amplitude Accuracy	±1.5 dB
Third-Order Intermodulation (TOI)	+10 dBm (typical, at 1 GHz)
Input Attenuator Range	0 to 70 dB
Input Attenuator Step Size	1 dB

Sweep Specifications

Sweep Time (Span > 0 Hz)	10 ms to 1000 s
Minimum Non-Zero Span Sweep Time	10 ms

Tracking Generator Specifications (Option)

Output Frequency Range	100 kHz to 3 GHz (Option TG3)
Output Power Level Range	-30 dBm to 0 dBm (Option TG3)
Output Power Resolution	0.1 dB (Option TG3)

Measurement Features and Options

Standard Power Suite	Channel Power, ACP, OBW, SEM, TOI
Pre-amplifier Range (Option)	1 MHz to 3 GHz (Option PA3)
EMI Filter Bandwidths (Option)	200 Hz, 9 kHz, 120 kHz, 1 MHz (Option EMC)
Power Sensor Support	Keysight / Agilent U2000 Series (USB)

Inputs and Outputs

RF Input Connector Type	Type-N Female
RF Input Impedance	50 Ω
Tracking Generator Output Connector Type	Type-N Female
Tracking Generator Output Impedance	50 Ω
10 MHz Reference Input	BNC Female
10 MHz Reference Output	BNC Female

General, Physical, and Power

Display Resolution	640 x 480 pixels
Programming Language	SCPI (ESA-L Series compatible)
Recommended Calibration Cycle	1 year

Inputs & Outputs

External Trigger Input	BNC (female), 5 V TTL
Input VSWR	< 1.5:1 nominal (10 MHz to 3 GHz, ≥ 10 dB attenuation)

Performance

Amplitude Range	DANL to +30 dBm
Number of Traces	4
Trace Functions	Clear/write, Maximum hold, Minimum hold, Average
Trigger Sources	Free run, Video, External, Line
Phase Noise (100 kHz Offset)	< -100 dBc/Hz ($f_c = 1$ GHz)
Phase Noise (1 MHz Offset)	< -110 dBc/Hz ($f_c = 1$ GHz)
Residual Responses	< -85 dBm (input terminated, 0 dB attenuation)

Power

Power Consumption	< 25 W
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Environmental

Storage Temperature	-20 °C to +70 °C
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Frequency

Span Range	0 Hz (zero span), 100 Hz to 3 GHz
Marker Frequency Resolution	Span / (Sweep points - 1)
Internal Reference Temperature Stability	±1 ppm (5 °C to 45 °C)

Sweep

Sweep Points	461
Sweep Modes	Continuous, single

Amplitude

Reference Level Range	-100 dBm to +30 dBm
Reference Level Resolution	0.1 dB

Tracking Generator (Option TG3)

Tracking Generator Output Flatness	±3 dB (10 MHz to 3 GHz, Option TG3)
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Options & Capabilities

AM/FM Demodulation Analysis	Supported via Option AMA
ASK/FSK Demodulation Analysis	Supported via Option DMA
EMI Filter and Quasi-Peak Detector	Supported via Option EMC

TECHNOLOGY

RF

APPLICATIONS

Electronics manufacturing, bench repair, RF education, automated test, and R&D projects

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