

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9340A

The Keysight N9340A (formerly Agilent N9340A) is a handheld RF spectrum analyzer covering 100 kHz to 3 GHz, optimized for field installation, maintenance, spectrum monitoring, and on-site repair. It features a high-brightness 7.2-inch transfective LCD, 4-hour battery life, and rapid sweep capability down to 10 ms.

SPECIFICATIONS

General

Interfaces	USB host (Type-A), USB device (Mini-B)
Display	7.2 in transfective TFT LCD, 640 x 480 pixels
Internal Storage Capacity	16 MB (up to 256 traces, states, or limit lines)
Recommended Calibration Cycle	1 year
Warm-up Time	30 minutes
PC Companion Software	N9340A PC Software

Physical

Power Supply	100 to 240 V AC, 50 to 60 Hz (AC adapter input); 15 V DC, 4.0 A (AC adapter output)
Operating Temperature	0 to 40 °C (battery power); 0 to 50 °C (AC power) °C
Dimensions (W×H×D)	318 mm × 207 mm × 101 mm mm
Weight	3.5 kg (with battery); 2.8 kg (without battery) kg

Frequency

Frequency Range	100 kHz to 3 GHz (tunable to 9 kHz)
Frequency Span Range	0 Hz (zero span), 100 Hz to 3 GHz
Frequency Span Accuracy	±1% (nominal)
Frequency Reference Aging Rate	< ±1 ppm/year
Frequency Reference Temperature Stability	< ±1 ppm (0 to 50 °C)
Frequency Reference Calibration Accuracy	< ±1 ppm
Marker Frequency Counter Resolution	1 Hz, 10 Hz, 100 Hz, 1 kHz
Marker Frequency Counter Accuracy	±(marker frequency × frequency reference error + counter resolution)

Bandwidth

Resolution Bandwidth (RBW) Range	30 Hz to 1 MHz (in 1-3-10 sequence)
RBW Shape Factor (60 dB/3 dB)	< 5:1 (typical)
Video Bandwidth (VBW) Range	3 Hz to 1 MHz (in 1-3-10 sequence)
Video Bandwidth (VBW) Accuracy	±10% (nominal)

Amplitude

Amplitude Measurement Range	DANL to +20 dBm
Maximum DC Input Voltage	50 V DC
Input Attenuation Range	0 to 51 dB in 1 dB steps
DANL (Preamplifier Off)	≤ -120 dBm (typical -124 dBm, RBW 30 Hz, VBW 3 Hz, 10 MHz to 3 GHz)
DANL (Preamplifier On)	≤ -140 dBm (typical -144 dBm, RBW 30 Hz, VBW 3 Hz, 10 MHz to 3 GHz)
Absolute Amplitude Accuracy	± 0.5 dB

Sweep and Trigger

Sweep Time Range (Span ≥ 100 Hz)	10 ms to 1000 s
Sweep Time Range (Zero Span)	6 μ s to 200 s
Sweep Triggers	Free run, Video, External
Sweep Mode	Continuous, Single
Number of Traces	4

Phase Noise and Spurious Responses

SSB Phase Noise at 30 kHz Offset	< -87 dBc/Hz (typical -90 dBc/Hz, $f_c = 1$ GHz)
SSB Phase Noise at 100 kHz Offset	< -95 dBc/Hz (typical -100 dBc/Hz, $f_c = 1$ GHz)
SSB Phase Noise at 1 MHz Offset	< -112 dBc/Hz (typical -115 dBc/Hz, $f_c = 1$ GHz)
Residual Responses	< -90 dBm (typical -98 dBm, input terminated, 0 dB attenuation)
Input Related Spurious	< -60 dBc (with -30 dBm signal at mixer)
Second Harmonic Distortion (SHI)	+30 dBm (typical, $f_c = 10$ MHz to 1.5 GHz, mixer level -30 dBm)
Third-Order Intermodulation Distortion (TOI)	+10 dBm (typical, 300 MHz to 3 GHz)

Measurement Features

One-Button Power Measurements	Channel Power, Occupied Bandwidth (OBW), Adjacent Channel Power Ratio (ACPR)
Other Measurement Features	Spectrum Emission Mask (SEM), Field Strength Measurement
Spectrogram (Waterfall View)	Available with Option SPC
AM/FM Demodulation Analysis	Available with Option AMA

Inputs and Outputs

RF Input Connector	N-type female, 50 Ω nominal
RF Input VSWR	$< 1.5:1$ (typical, 100 kHz to 3 GHz, attenuation ≥ 10 dB)
External Reference Input	BNC female, 10 MHz, -10 to +10 dBm
External Trigger Input	BNC female, 5 V TTL level
Audio Jack	3.5 mm mini-jack (for AM/FM demodulation monitoring)

Display and UI

Display Type	Transflective color TFT LCD
Display Size	7.2 inches (183 mm) diagonal
Display Resolution	640 × 480 pixels
Language Support	11 languages (including English, French, German, Spanish, Portuguese, Italian, Russian, Japanese, Korean, Simplified and Traditional Chinese)

Power and Battery

Battery Type	Li-ion smart battery, 11.1 V, 7.2 Ah
Battery Operating Time	4 hours
Battery Charging Time	4 hours (charge off), 6 hours (charge on)
Power Consumption	< 15 W (typical)

Environmental

Storage Temperature Range	-20 to 70 °C (without battery)
Weight (with Battery)	3.5 kg
Weight (without Battery)	2.8 kg
Shock and Vibration	Meets MIL-PRF-28800F Class 2
Operating Altitude	Up to 3,000 m (9,843 ft)
Operating Humidity	15% to 95% RH (non-condensing)

Hardware Options

Tracking Generator Option	3 GHz tracking generator
Preamplifier Option	3 GHz pre-amplifier
Hard Transit Case Option	Available
Automotive DC Adapter Option	12 V DC adaptor

ASK/FSK Demodulation (Option DMA)

ASK Modulation Depth Range	10% to 100% (Option DMA dependent)
ASK Symbol Rate Range	1 kHz to 100 kHz (Option DMA dependent)
FSK Frequency Deviation Range	1 kHz to 400 kHz (Option DMA dependent)
FSK Symbol Rate Range	1 kHz to 100 kHz (Option DMA dependent)

Tracking Generator (Option TG3)

Tracking Generator Frequency Range	10 MHz to 3 GHz (Option TG3 dependent)
Tracking Generator Output Level Range	-30 dBm to 0 dBm (Option TG3 dependent)
Tracking Generator Output Level Resolution	1 dB steps (Option TG3 dependent)

Preamplifier (Option PA3)

Preamplifier Frequency Range	100 kHz to 3 GHz (Option PA3 dependent)
Preamplifier Gain	20 dB nominal (Option PA3 dependent)

Connectivity

USB Host Port	USB 1.1 Type-A female
USB Device Port	USB 1.1 Type-B female

Power

AC Adapter Input Voltage	100 to 240 V AC, 50 to 60 Hz
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Environmental & Standards

Environmental Compliance	Meets MIL-PRF-28800F Class 2
Safety Compliance	IEC/EN 61010-1 2nd Edition, CAN/CSA-C22.2 No. 61010-1-04
EMC Compliance	IEC/EN 61326-1, AS/NZS CISPR 11

Inputs & Outputs

RF Input Impedance	50 Ω (nominal)
USB Interface Version	USB 1.1 (Host and Device)

Performance

Number of Markers	6
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Power Supply

AC/DC Adapter Output	15 VDC, 4.0 A (60 W)
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Options

Security Option (Option SEC)	Clears user memory and disables USB write capability
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TECHNOLOGY

RF

APPLICATIONS

Spectrum analysis, field maintenance, spectrum monitoring

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