

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9342C

The Keysight (Agilent) N9342C Handheld Spectrum Analyzer (HSA) is a rugged, fanless, and highly portable instrument designed for field installation, maintenance, and troubleshooting of RF systems. Operating over a frequency range of 100 kHz to 7 GHz (tunable to 9 kHz), it is characterized by its high amplitude accuracy, fast sweep times under 2 ms, and an integrated task planner that automates routine testing in the field.

SPECIFICATIONS

General

Interfaces	USB Host (Type-A), USB Device (Type-B), LAN (RJ-45)
Display	6.5-inch TFT color LCD, 640 × 480 resolution with automatic brightness control
Calibration Cycle	1 year

Physical

Power Supply	100 to 240 V AC, 50/60 Hz (via AC/DC adapter); 15 V DC input; Lithium-ion battery
Operating Temperature	-10 to +50 °C (battery operating) °C
Dimensions (W×H×D)	318 mm × 207 mm × 69 mm mm
Weight	3.2 kg (with battery) kg

Frequency Specifications

Frequency Range	100 kHz to 7 GHz (tunable to 9 kHz)
Frequency Span Range	0 Hz (zero span), 100 Hz to 7 GHz
Phase Noise @ 30 kHz Offset	Phase Noise @ 10 kHz Offset = -86 dBc/Hz
Phase Noise @ 1 MHz Offset	-117 dBc/Hz (typical)
Internal Reference Frequency Aging Rate	±1 ppm/year
Internal Reference Frequency Temperature Stability	±1 ppm

Bandwidth Specifications

Resolution Bandwidth (RBW) Range	10 Hz to 3 MHz
RBW Steps	1-3-10 sequence
Video Bandwidth (VBW) Range	1 Hz to 3 MHz
VBW Steps	1-3-10 sequence

Amplitude Specifications

Displayed Average Noise Level (DANL) - Preamplifier On	-166 dBm/Hz (typical)
Displayed Average Noise Level (DANL) - Preamplifier Off	-146 dBm/Hz (typical)
Absolute Amplitude Accuracy	Absolute Amplitude Accuracy = ± 0.3 dB
Third-Order Intercept (TOI)	+10 dBm
Maximum Safe Input Level (AC)	+30 dBm (1 W)
Maximum Safe Input Level (DC)	± 50 VDC
Input Attenuator Range	0 to 50 dB, in 5 dB steps

Sweep and Trigger

Sweep Time (Span > 0 Hz)	2 ms to 1000 s
Sweep Time (Zero Span)	600 ns to 200 s

Inputs and Outputs

RF Input Connector Type	Type-N female
RF Input Impedance	50 Ω
External Reference Input	10 MHz, BNC female
GPS Receiver	Built-in GPS receiver and GPS antenna

Measurement Modes and Suites

Standard Measurement Functions	Channel power, ACPR (Adjacent Channel Power Ratio), OBW (Occupied Bandwidth)
Spectrum Monitor Feature	Spectrogram record and playback
Task Planner Feature	Saves up to 95% test setup time and enables test automation
High-Accuracy Power Measurement Support	Compatible with Keysight U2000 Series USB power sensors

Environmental and Compliance

Storage Temperature Range	-40 to +70 °C (without battery)
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System and User Interface

Keypad Backlight	Automatic control for night viewing
Security Feature	User data erase for security purpose

Physical and Power Specifications

Battery Operating Time	4 hours (typical)
Weight without Battery	2.8 kg

Available Options and Hardware Configurations

Internal Preamplifier Option	Option up to 7 GHz
Tracking Generator Option	Option up to 7 GHz

Tracking Generator (Option TG7)

Tracking Generator Frequency Range	5 MHz to 7 GHz (Option TG7 dependent)
Tracking Generator Output Level Range	-30 to 0 dBm (Option TG7 dependent)
Tracking Generator Output Level Resolution	1 dB (Option TG7 dependent)

Cable and Antenna Analyzer (Option CA7)

CAT Frequency Range	2 MHz to 7 GHz (Option CA7 dependent)
CAT Measurement Modes	Return Loss, VSWR, Cable Loss, Distance-to-Fault (DTF) (Option CA7 dependent)

Frequency

Frequency Resolution	1 Hz
Marker Frequency Counter Resolution	1 Hz
Phase Noise @ 100 kHz Offset	<-97 dBc/Hz (typical -100 dBc/Hz) at 1 GHz carrier

Trigger

Trigger Sources	Free Run, Video, External, RF Burst
Trigger Input Connector	BNC female, 10 k Ω nominal impedance

Demodulation & Analysis

Modulation Analysis Options	AM, FM, ASK, FSK (Option AMA dependent)
Audio Demodulation Output	Built-in speaker, 3.5 mm headphone jack (standard)

Environmental

Shock and Vibration Specification	MIL-PRF-28800F Class 2
Operating Altitude	Up to 3,000 m (10,000 ft)

Amplitude

Input VSWR	< 1.5 (100 MHz to 7 GHz, $\geq$ 10 dB attenuation, typical)
Second Harmonic Distortion (SHI)	+40 dBm (typical)

Sweep

Sweep Points	461
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Traces

Number of Traces	4
Trace Detectors	Normal, Positive Peak, Sample, Negative Peak, Average (RMS)

Power & Battery

Power Consumption	14 W (typical), 36 W (maximum)
Battery Specifications	11.1 V, 7.2 Ah, Li-Ion
Battery Charge Time	4 hours (typical, analyzer off)

System & Memory

Internal User Memory	64 MB
External Memory Support	USB Flash Drive (up to 32 GB)

Physical & Environmental

Operating Humidity	95% relative humidity (non-condensing) up to 40 °C
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Compliance

EMC Compliance	Complies with European EMC Directive 2004/108/EC, EN 61326-1, Class A
Safety Compliance	Complies with European Low Voltage Directive 2006/95/EC, EN 61010-1 2nd Edition

TECHNOLOGY

Superheterodyne Spectrum Analysis

APPLICATIONS

RF system installation, maintenance, spectrum monitoring, and interference troubleshooting

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