

KEYSIGHT TECHNOLOGIES (AGILENT HP)

3561A

The HP 3561A is a classic single-channel Fast Fourier Transform (FFT) dynamic signal analyzer featuring a frequency range up to 100 kHz. Known for its high accuracy in acoustic, audio, and vibration analysis, it delivers an 80 dB dynamic range alongside comprehensive 1/3 octave and full octave formatting capabilities. Built-in mathematical operations, an internal source generator, and HP-IB programmability make it a highly capable instrument for benchtop and system applications.

SPECIFICATIONS

General

Interfaces	HP-IB (IEEE-488)
Display	Built-in CRT
Built-in Self-Test	Power-on and user-initiated self-tests
Calibration Reference	Internal calibration signal

Physical

Power Supply	110 / 120 / 220 / 240 VAC (+5%, -10%), 48 to 66 Hz, 150 VA max
Operating Temperature	0 °C to 55 °C °C
Dimensions (W×H×D)	425 mm × 222 mm × 533 mm mm
Weight	15 kg kg

Frequency Characteristics

Frequency Range	Up to 100 kHz
Real-time Bandwidth	13 kHz
Frequency Resolution (Narrow Band)	400 lines
Resolution at Maximum Span	250 Hz (for 100 kHz display span)
Resolution at Minimum Span	25.6 microHz (for 0.01024 Hz display span)
Display Span Range	0.01024 Hz to 100 kHz

Amplitude & Input Characteristics

Number of Channels	1 channel
Maximum Safe Input Voltage	42 V peak
Minimum Full Scale Input Range	-51 dBV (2.82 mVrms)
Dynamic Range	80 dB
ICP Transducer Power	Integrated Circuit Piezoelectric current source available
Acoustic Filter	A-weighting filter available

Measurement & Analysis Functions

Measurement Formats	Narrowband, 1/3 octave, full octave
Averaging Modes	RMS, RMS exponential weighting, time averaging
Peak Hold Mode	Captures maximum amplitude
Overload Reject Mode	Excludes overloaded measurements from averaging
Mathematical Operations	Addition, subtraction, multiplication, division, integration, differentiation
Time Buffer Capture	Captures narrowband data for post-processing

Display & User Interface

Display Presentation Formats	Single trace, top-bottom dual trace, front-back dual trace, map-type format
Waterfall Map Capacity	Up to 60 traces
Amplitude Scaling	Linear or logarithmic

Connectivity, Interfaces & Storage

Internal Storage (Standard)	Nonvolatile memory for 6 setups and 2 traces
Optional Storage	Bubble memory (setups, traces, and time capture storage)
HP-IB Plotter and Printer Support	Direct output plotting and printing via HP-IB
Remote Programmability	Fully remote programmable via HP-IB

Signal Source (Generator) Characteristics

Source Waveforms	Periodic chirp, random noise, impulse
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Input Characteristics

Input Impedance	1 M Ω shunted by < 100 pF
Input Coupling	AC, DC
Common Mode Rejection	> 80 dB at 50/60 Hz

Environmental

Storage Temperature	-40 °C to +75 °C
Relative Humidity	< 95% at 40 °C (non-condensing)

Frequency

Number of Lines	400 lines
Frequency Accuracy	$\pm 0.003\%$ of reading

Amplitude

Spurious Responses	<-80 dB relative to full scale
Anti-alias Filter Attenuation	>80 dB

Signal Source

Source Output Impedance	50 Ω (nominal)
Source Output Level	+10 dBV to -50 dBV (1 V to 3.16 mV rms)

Signal Processing

Window Functions	Flat Top, Hann (Hanning), Uniform
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TECHNOLOGY

FFT Dynamic Signal Analysis

APPLICATIONS

Acoustic, audio, and vibration analysis

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