

Output level: variable from < 1 mV to > 3 V rms into 600 Ω with 10 dB/step Level control and > 10 dB Vernier adjustment. OSC Level position on function switch allows a quick check of oscillator level without disconnecting leads to device under test. Off position on Oscillator Level control provides fast signal-to-noise measurement capability. Oscillator output terminals remain terminated in 600Ω.

Frequency accuracy: ± 2% of selected frequency (with Frequency Vernier in Cal position).

Level flatness: 20 Hz to 20 kHz: ≤ ± 0.1 dB
10 Hz to 110 kHz: ≤ ± 0.2 dB

Distortion (≥ 600Ω load, ≤ 3V output)

10 Hz to 20 kHz: < -93 dB (0.0022%) THD
20 kHz to 30 kHz: < -85 dB (0.0056%) THD
30 kHz to 50 kHz: < -80 dB (0.01%) THD
50 kHz to 80 kHz: < -70 dB (0.032%) THD
80 kHz to 110 kHz: < -65 dB (0.056%) THD

Output resistance: 600Ω ± 5%

Voltmeter

Voltage range: 1 mV rms full scale to 300 V rms full scale (-60 dB to + 50 dB full scale, meter calibrated in dBV and dBm into 600Ω).

Detection and meter indication: true rms detection for waveforms with crest factor ≤ 3. Meter reads true rms volts, dBm into 600Ω, and dBV.

Accuracy (% of range setting)

20 Hz to 20 kHz: ± 2%

10 Hz to 110 kHz: ± 4%

Frequency range: 10 Hz to 110 kHz.

Input impedance: 100 kΩ ± 1% shunted by < 100 pF between input High to Low.

Monitor: provides scaled presentation of input signal for further analysis using oscilloscope or low frequency spectrum analyzer. Output voltage: 1V rms ± 5% open circuit for full scale meter indication, proportional to meter deflection. Output resistance: 1 kΩ ± 5%.

Option 001

Voltage range: 0.1 mV rms full scale to 300 V rms full scale (-80 dBV to +50 dBV full scale); (.1 mV and .3 mV ranges—external source resistance must be < 10 kΩ).

Accuracy: 1 mV to 300 V Ranges

20 Hz to 20 kHz ±2%

10 Hz to 110 kHz

.1 mV and .3 mV Ranges

20 Hz to 20 kHz: ±2%

10 Hz to 30 kHz: ±4%

30 kHz to 80 kHz: +10/-30%

Noise Floor (600Ω source impedance)

30 kHz filter < 6 μV

80 kHz filter < 8 μV

AM Detector

Frequency range: carrier frequencies: 550 kHz to 1.6 MHz. Modulation frequencies: 20 Hz to 20 kHz.

Distortion introduced by AM detector (with 30 kHz filter switched IN): up to 85% Modulation: < -36 dB (1.6%) THD
85% to 95% Modulation: < -30 dB (3%) THD

Input level: maximum: 60V peak. Modulation signal level: 2V rms minimum; 10V rms maximum.

Monitor (with modulated RF carrier applied to AM detector input).

Distortion mode: provides scaled presentation of demodulated input signal after fundamental is removed.

Voltmeter and relative input mode: provides scaled presentation of demodulated input signal. Output voltage and output resistance are the same as in Distortion mode.

General

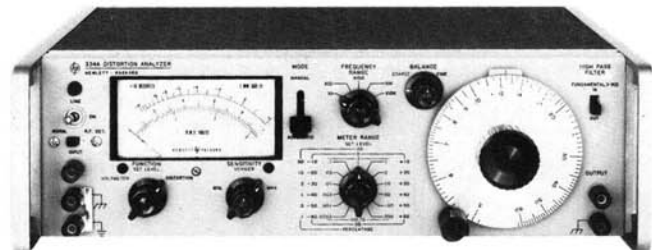
Power: 100/120/220/240 V + 5%, - 10% 48 Hz to 66 Hz line operation, 200 mA maximum.

Size: 146 mm H x 426 mm W x 375 mm D (5.75" x 16.75" x 14.75").

Weight: net 8.2 kg (18 lb). Shipping 11.3 kg (25 lb).

**HP 339A Distortion Measurement Set
Option 001**

\$3,600
add \$275



HP 334A

Test Equipment Depot
99 Washington Street

Description

Melrose, MA 02176-6024

Hewlett-Packard's model HP 334A Distortion Analyzer measures total distortion down to 0.1% full scale at any fundamental frequency between 5 Hz and 600 kHz; harmonics are indicated up to 3 MHz. Noise levels as low as 25 microvolts can be measured. The HP 334A includes automatic fundamental nulling and amplitude modulation detector. A Meter with VU ballistic characteristics and a 30 kHz low pass filter are optional.

HP 334A Specifications

Input level for distortion measurements: 0.3 V rms for 100% set level or 0.245 V for 0 dB set level (up to 300 V may be attenuated to set level reference).

Harmonic Measurement Accuracy (full scale)

Fundamental Input Less Than 30 V

Range	±3%	±6%	±12%
100%-0.3%	10 Hz-1 MHz	10 Hz-3 MHz	
0.1%	30 Hz-300 kHz	20 Hz-500 kHz	10 Hz-1.2 MHz

Fundamental rejection: > 80 dB

Residual distortion: > -70 dB (0.03%) from 5 Hz to 200 kHz; > -64 dB (0.06%) from 200 kHz to 600 kHz. Meter indication is proportional to average value of a sine wave.

Frequency calibration accuracy: better than ±5% from 5 Hz to 300 kHz. Better than ±10% from 300 to 600 kHz.

Input impedance: distortion mode: 1 MΩ ±5% shunted by < 70 pF.

DC isolation: signal ground may be ±400 V dc from external chassis
Voltmeter range: 300 μV to 300 V rms full scale (13 ranges) 10 dB per range. Average responding calibrated in rms.

Noise measurements: voltmeter residual noise on the 300 μV range: < 25 μV rms, when terminated in 600 (shielded) ohms.

Output: 0.1 ± 0.01 V rms open circuit.

Output impedance: 2 kΩ

Automatic nulling mode: set level: at least 0.2 V rms

Frequency ranges: X1, manual null tuned to less than 3% set level; total frequency hold-in ±0.5% about true manual null. X10 through X10k, manual null tuned to less than 10% of set level; total frequency hold-in ±1% about true manual null.

Automatic null accuracy: 5 Hz to 100 Hz: meter reading within 0 to +3 dB of manual null. 100 Hz to 600 kHz: meter reading within 0 to +1.5 dB of manual null.

High pass filter: 3 dB point at 400 Hz with 18 dB per octave roll off.

AM detector: 550 kHz to 65 MHz; 40 Vp-p max input.

Distortion introduced by detector: carrier frequency: 550 kHz-1.6 MHz: < 50 dB (0.3%) for 3-8 V rms carriers modulated 30%. 1.6 MHz-65 MHz: < 40 dB (1%) for 3-8 V rms carriers modulated 30%.

General

Power: 115 or 230 V ±10%. 48 to 66 Hz.

Size: 426 mm W x 126 mm H x 337 mm D (16.75" x 5" x 13.25").

Weight: net 7.89 kg (17.75 lb). Shipping 10.35 kg (23 lb).

HP 334A Distortion Analyzer

Opt 001 VU Characteristics

Opt 002 30 kHz low pass filter

Opt 003 (combined 001 and 002)

www.testequipmentdepot.com

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