ABRIDGED SPECIFICATIONS

HP Model 8568A Spectrum Analyzer

Frequency

MEASUREMENT RANGE: 100 Hz to 1500 MHz dc coupled; 100 kHz to 1500 MHz ac coupled.

DISPLAYED RANGE: From 100 Hz full span to 1500 MHz full span.

RESOLUTION: 3-dB bandwidths of 10 Hz to 3 MHz in 1,3,10 sequence.

SPECTRAL PURITY: Noise sidebands >60 dB below peak of CW signal at frequency offsets ≥30 × resolution bandwidth setting, for resolution bandwidths ≥300 Hz.

ACCURACY

CENTER FREQUENCY: ±(2% of frequency span + frequency reference error × tune frequency + 10 Hz) using error correction.

MARKER FREQUENCY COUNT: Frequency reference error × displayed frequency ±2 counts (span ≤ 100 kHz)

FREQUENCY REFERENCE ERROR (aging rate): $< 1 \times 10^{-9}$/day (2×10^{-7}/yr).

Amplitude

MEASUREMENT RANGE: −135 dBm to +30 dBm or equivalent in dBmV, dBμV; 40 nV to 7V.

DISPLAYED RANGE: 10,5,2,1 dB/div and linear calibration; 10-division vertical scale.

DYNAMIC RANGE

SPURIOUS RESPONSES: Second harmonic distortion and third-order intermodulation distortion ≤70 dB below signal levels that are ≤ −30 dBm at the input mixer.

AVERAGE NOISE LEVEL: ≤ −135 dBm in 10-Hz resolution bandwidth.

ACCURACY: Measurement accuracy is a function of technique. The following sources of uncertainty can be summed to determine achievable accuracy.

CALIBRATOR UNCERTAINTY: ±0.2 dB.

FREQUENCY RESPONSE UNCERTAINTY: ±1.0 dB.

COMPARISON UNCERTAINTY (resulting from one of the following techniques for comparing the unknown signal with the calibration level):

REPOSITIONING SIGNAL TO CALIBRATION LEVEL: ±0.7 dB.

USING MARKER: ±1.7 dB.

Sweep

TIME: 20 ms full span to 1500 s full span. With zero frequency span, 1 μs full sweep to 1500 s full sweep.

TRIGGER: Free run, line, video, or external

MODE: Continuous or single (by trigger after arming).

Input

RF INPUTS: 100 Hz to 1500 MHz, 50Ω dc coupled (BNC fused); 100 kHz to 1500 MHz, 50Ω ac coupled (type N).

MAX INPUT LEVEL

AC: +30 dBm (1 watt) continuous power; 100 watts, 10 μs pulse into ≥50 dB attenuation.

DC: 0 volts dc coupled input; ±50 volts for ac coupled input.

ATTENUATOR: 70-dB range in 10-dB steps.

Output

DISPLAY: X, Y, and Z outputs for auxiliary CRT display.

RECORDER: Horizontal sweep (X), video (Y), and penlift/blanking (Z) to drive an X-Y recorder.

AUXILIARY: 21.4-MHz IF, 2—3.7-GHz 1st LO, Calibrator, Frequency Reference.

Instrument State Storage

Up to 6 sets of user defined control settings may be saved and recalled.

Remote Operation

All analyzer control settings (with the exception of video trigger level, focus, align, intensity, frequency zero, and amplitude cal) may be programmed via the Hewlett-Packard Interface Bus (HP-IB).

General

POWER: 100, 120, 220, 240V (±5%, −10%), 50 to 60 Hz, approximately 450 VA.

DIMENSIONS: 280 mm H × 425 mm W × 560 mm D (11 × 16¾ × 22 in).

WEIGHT: 45 kg (100 lb).

OPTIONS: 75Ω input impedance (Opt 001); 400-Hz powerline operation (Opt 400).

PRICE IN U.S.A.: 8568A, $27,800. Opt 001, $200. Opt 400, $400.

MANUFACTURING DIVISION: SANTA ROSA DIVISION
1400 Fountain Grove Parkway
Santa Rosa, California 95404 U.S.A.

ABRIDGED SPECIFICATIONS

HP Model 3585A Spectrum Analyzer

Frequency

MEASUREMENT RANGE: 20 Hz to 40.1 MHz.

DISPLAYED RANGE: 0 Hz full span to 40.1 MHz full span.

RESOLUTION: 3-dB bandwidths of 3 Hz to 30 kHz in 1,3,10 sequence.

ACCURACY

CENTER FREQUENCY: $\pm 1 \times 10^{-7}$/mo

MARKER

NORMAL: ±2% of full span + resolution bandwidth ± 1×10^{-7}/mo.

COUNTER: ±3 Hz ± 1×10^{-7}/mo.

Amplitude

MEASUREMENT RANGE: −135 dBm to −30 dBm.

DISPLAYED RANGE: 10,5,2,1 dB/div, over 10-division scale.

DYNAMIC RANGE: Harmonic distortion and third-order intermodulation distortion >80 dB below signals equal to or less than input range.

AVERAGE NOISE LEVEL: < −135 dBm in 3-Hz resolution bandwidth.

ACCURACY: Best achievable accuracy over measurement range is ±1.5 dB to ±1.3 dB depending on level.

Display

TRACE: Two memories, A and B, each 1001 points horizontally by 1024 points vertically can be displayed. A is updated by analyzer sweep, B by transfer from A. Can display A−B and MAX HOLD in A.

TRACE DETECTION: Positive peak signal excursions between horizontal data points are retained and displayed.

Sweep

TIME: 200 ms full sweep to 11,603 hrs full sweep.

TRIGGER: Free run, line, or external.

MODES: Continuous, single, or manual.

Input

SIGNAL INPUTS

50Ω and 75Ω, return loss >26 dB.

1 MΩ; ±3% shunted by <35 pf

MAXIMUM INPUT LEVEL

50/75Ω, +30 dBm (1 watt).

1 MΩ; 22 Vrms.

Output

TRACKING GENERATOR: 0 dBm to −11 dBm

DISPLAY: X,Y, and Z outputs for auxiliary CRT display

RECORDER: Horizontal sweep (x), video (y), and penlift/blanking outputs to drive an X-Y recorder

AUXILIARY: 350 kHz IF, video, 10-MHz frequency reference.

INSTRUMENT STORAGE: Up to three sets of user defined control settings may be saved and recalled.

REMOTE OPERATION: All analyzer control settings (with the exception of tracking generator level, CRT intensity, focus, astigmatism, and graticule) may be programmed via the Hewlett-Packard Interface Bus (HP-IB).

General

POWER: 100, 120, 200, 240V (±5%, −10%), 48 to 66 Hz, 250 VA.

DIMENSIONS: 229 mm H × 426 mm W × 635 mm D (9 × 16¾ × 25 in).

WEIGHT: 39.9 kg (88 lb)

PRICE IN U.S.A.: $17,500.

MANUFACTURING DIVISION: LOVELAND INSTRUMENT DIVISION
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Loveland, Colorado 80537 U.S.A.