

HP 3585A

HP 3585A Spectrum Analyzer 20 Hz - 40 MHz,
23.5 kV Max Acc. Volt

Features

- 0.1 Hz Resolution
- 3 Hz Resolution Bandwidth
- -137 dBm to +30 dBm Measurement Range
- 50 Ohm, 75 Ohm, and 1 Mohm Selectable Input Impedance
- Built-in Tracking Generator
- Autoranging Input Attenuator
- Readout on CRT of panel settings & markers
- 1001 X 1024 Digital Storage Display
- HP-IB Interface
- 80 dB dynamic range
- ± 0.4 dB Amplitude Accuracy



Description

The HP 3585A Spectrum Analyzer delivers high performance where it counts - at baseband frequencies. With unmatched accuracy, resolution, and dynamic range, the 3585A is HP's best solution for signal analysis at the critical frequencies comprising voice, picture, or digital information.

In today's high speed, high density information processing systems, maintaining the integrity of data signals requires more measurement performance than ever before. The 3585A provides 80 dB of spurious-free dynamic range, a sharp 3 Hz resolution bandwidth, and fully synthesized tuning. Its 20 Hz - 40.1 MHz frequency range is more than adequate to cover most information bandwidths.

Measurement performance is critically important at baseband frequencies, because signal degradation occurring here is typically not recoverable elsewhere in the system. As a result, test requirements for baseband signals and circuits often demand a level of performance that only a high-performance, low-frequency signal analyzer such as the HP 3585A can provide.

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Inside the HP 3585A

The HP 3585A is a swept heterodyne, triple conversion circuit with several major improvements. Frequency tuning is accomplished by a fully synthesized, phase continuous local oscillator, assuring excellent frequency stability for narrowband analysis across the entire frequency range. Internal microprocessors manage several functions including front panel operation, 1001-point digital vector storage display, and periodic calibration of amplitude and frequency offsets. An accurate internal narrowband frequency counter can discriminate between the frequencies of closely spaced sinusoids with 0.1 Hz resolution. Finally, the HP 3585A contains fast-settling narrow resolution bandwidth filters that are among the best in the industry.

Fast, Flexible Frequency Sweeps

Well-designed filters and the phase-continuous, synthesized local oscillator team up to give the HP 3585A very fast sweep speeds. A 40-MHz sweep using the 30-kHz resolution bandwidth takes only 200 milliseconds, fast enough for high-resolution spectrum surveillance. A 1-MHz sweep using a 1-kHz bandwidth takes only 2 seconds.

Sweep width can be set to any arbitrary span between 0 and 40.1 MHz, or adjusted from 100 Hz to 40 MHz in a 1,2,5 step format. Resolution bandwidth and sweep time automatically track the selected frequency span to ensure optimum performance, or can be manually controlled.

Front Panel Convenience

The HP 3585A's microprocessor-controlled front panel and CRT readout simplify complicated measurements. Frequency and amplitude settings may be entered directly using the keypad, incrementally stepped, or varied continuously using the rotary pulse generator.

An autoranging input attenuator eliminates the task of manually adjusting attenuation to achieve the correct mixer level. The input Range can also be manually adjusted from -25 dBm to +30 dBm in 5-dB steps.

With its primary marker set to a signal peak or other point of interest, the HP 3585A displays amplitude and frequency numerically on the CRT. A second marker numerically displays amplitude and frequency offsets between two markers. Programmable Offset Step allows an operator to move easily between harmonically-related signals or evenly-spaced communication channels.