

KEYSIGHT TECHNOLOGIES (AGILENT HP)

3585A

The HP Agilent 3585A is a high-performance spectrum analyzer optimized for low-frequency applications, covering the 20 Hz to 40.1 MHz frequency range. Utilizing an internal microprocessor and calibration routine, it achieves a high overall measurement accuracy within 0.4 dB, and offers excellent frequency resolution down to 0.1 Hz. The instrument is equipped with a built-in tracking generator and a dynamic range better than -80 dB, making it highly effective for precision RF and baseband measurements.

SPECIFICATIONS

General

Interfaces	HP-IB (GPIB)
Display	9-inch Vector-drawn CRT

Physical

Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	426 × 222 × 630 mm mm

Frequency Specifications

Frequency Range	20 Hz to 40.1 MHz
Frequency Span Range	0 Hz (zero span) to 40.1 MHz (full span)
Frequency Resolution	0.1 Hz

Bandwidth Specifications

Resolution Bandwidth (RBW) Range	3 Hz to 30 kHz
RBW Steps	1-3-10 sequence

Amplitude Specifications

Amplitude Measurement Range	-137 dBm to +30 dBm (50/75 Ω) or 31 nV to 22 V (1 MΩ)
Dynamic Range	Better than -80 dB
Overall Amplitude Accuracy	Within 0.4 dB (maintained by internal auto-calibration)

Tracking Generator

Tracking Generator Frequency Range	20 Hz to 40.1 MHz
Tracking Generator Output Level Range	0 dBm to -11 dBm
Tracking Generator Output Level Adjustment	Single-turn knob

Inputs & Outputs

RF Input Impedance Options	50 Ω, 75 Ω, 1 MΩ
RF Input Connectors	BNC
Maximum Input Level	+30 dBm (50 Ω/75 Ω), 42 V peak (1 MΩ)

Sweep	
Sweep Time Range	0.2 s to 9999 s
Bandwidth	
Video Filter Bandwidth Range	1 Hz to 30 kHz
Amplitude	
Average Noise Level	-137 dBm (with 50 Ω input, 3 Hz RBW)
Reference Level Range	-100 dBm to +30 dBm
Input Attenuator Range	0 to 50 dB in 10 dB steps
Performance	
Spurious Responses (Non-Harmonic)	<-80 dBc
Harmonic Distortion	<-80 dBc
Marker Resolution	0.1 Hz (frequency), 0.01 dB (amplitude)
Frequency Reference	
External Reference Input	1, 2, 5, or 10 MHz (at least 0 dBm into 50 Ω)
Internal Reference Output	10.000 MHz (at least 0 dBm into 50 Ω)
RF Inputs	
1 M Ω Input Capacitance	< 30 pF
Maximum Input Level (1 M Ω)	42 V peak (AC + DC)
Marker Features	
Marker Amplitude Resolution	0.01 dB
Dynamic Range & Rejection	
Image Response Rejection	> 80 dB
IF Feedthrough Rejection	> 80 dB
Environmental	
Storage Temperature Range	-40 $^{\circ}$ C to +75 $^{\circ}$ C

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

Low-frequency RF measurements, baseband testing, and filter characterization

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