

# SIGNAL ANALYZERS

## Spectrum Analyzers, 1 kHz to 325 GHz (cont'd)

Models 8561A, 8562A/B

**Third Order Intermodulation Distortion:** for mixer level <-30dBm: <-70 dBc, 10 MHz to 2.9 GHz; <-75 dBc above 2.75 GHz.

**Image, Multiple, and Out-of-Band Responses:** <-70 dBc, 10 MHz - 22 GHz (8562B unspecified); <-60 dBc, 10 MHz - 22 GHz (8562B unspecified)

**Residual Responses:** No signal at input, 0 dB input atten. <-90 dBm, 200 kHz to 6.46 GHz.

### Amplitude Accuracy

**Frequency Response (flatness):** 10 dB attenuation.

Frequency Range	8561A/8562A	8562B
1 kHz - 2.9 GHz	±1.0 dB	±1.0 dB
2.75 - 6.46 GHz	±1.5 dB	±1.0 dB
5.86 - 13.0 GHz	±2.0 dB	±1.5 dB
12.4 - 19.7 GHz	±3.0 dB	±1.5 dB
19.1 - 22.0 GHz	±3.0 dB	±2.0 dB
19.1 - 26.5 GHz (Opt. 026)	±3.0 dB	

**Calibrator Accuracy:** ±0.3 dB

**IF Gain Uncertainty:** ±1 dB for 0 dBm to -80 dBm reference level

**Scale Fidelity:** 0.4 dB/4 dB to a maximum of ±1.5 dB over 0 to 90 dB range. Linear: ±3% of Reference Level

**Input Attenuator Switching Accuracy:** With 20 to 70 dB settings referenced to 10 dB. 1 kHz - 2.9 GHz ±0.6 dB/10 dB step, 1.8 dB max

**Resolution Bandwidth Switching Uncertainty:** ±0.5 dB reference to 300 kHz BW

**Pulse Digitization Uncertainty:** Pulse response mode, PRF > 720/sweep time. Log (peak to peak): 1.25 (RBW ≤ 1 MHz), 3 dB (RBW = 2 MHz) dB; Linear (peak to peak): 4% of ref level, (RBW ≤ 1 MHz), 12% of ref level, nominal standard deviation: 0.2 dB

### Sweep

#### Sweep Time

**Range:** 50 usec to 60 sec for zero span, 50 msec to 100 sec for span ≥ 2.5 kHz

**Sweep Trigger:** Free Run, Line, Single, Video, External

### Demodulation

**Modulation Type:** AM and FM

**Audio Output:** Speaker and phone jack with volume control

### Inputs & Outputs

#### Front Panel Connectors

**RF Input:** Precision type N female, nominal impedance 50 Ω

**VSWR:** <1.5:1 for <2.9 GHz and ≥10 dB Input Attenuation (nominal); <2.3:1 for >2.9 GHz and ≥10 dB Input Attenuation (nominal); <3.0:1 for 0 dB Input Attenuation (nominal)

**LO Emission Level (average):** With 10 dB input atten. <-80 dBm (8561A/8562A nominal), <-10 dBm (8562B nominal)

**Second IF Input:** SMA female, nominal frequency: 310.7 MHz; NF: 7 dB (nominal); Gain Compression: -20 dBm (nominal)

**First LO Output:** SMA female, nominal impedance: 50 ohm; nominal frequency range: 3.0000 - 6.8107 GHz; amplitude +16.5 dBm ±2 dB (20°-30°C)

**Calibrator Output:** BNC female, nominal impedance: 50 ohm

#### Rear Panel Connectors

**10 MHz Reference (Input/Output):** BNC female, nominal impedance: 50 ohm; nominal input range: -2 to +10 dBm

**Video Output:** BNC female, nominal impedance: 50 ohms (DC coupled)

**LO Sweep/0.5 V per GHz Output:** Shared BNC female, nominal impedance: 2K ohm (DC coupled); nominal LO sweep output: 0 to +10V (no load)

**External Trigger Input:** BNC female, nominal impedance: >10K ohm; trigger level: rising edge of TTL level

**HP-IB:** Interface Functions: SH1, AH1, T6, L4, SR1, RL1, PPO, DC1, DT1, CO, E1. Direct plotter outputs: HP 7225A, 7440A, 7470A, 7475A, 7550A, 9872A/B/C/T. Printer: HP 3630A Paintjet; HP 2225A Thinkjet; other printers with IEEE 488 interface may work.

### General Specifications

#### Environmental

**Military Specification:** Meets MIL-T-28800C, Type III, Class Style C.

**Calibration Interval:** 1 year

**Warmup:** 5 minutes from ambient conditions

**Temperature:** Operating: -10° to +55°C. Non-operating: -60 to +85°C

**Humidity:** 95% @ 40°C for 5 days

**Altitude:** Operating: 15,000 ft. Non-operating: 50,000 ft.

**Rain Resistance:** Drip-proof at 16 liters/hour/square foot

**Vibration:** 5-15 Hz: 0.059 inch p-p excursion; 15-25 Hz: 0.039 inch p-p excursion; 25-55 Hz: 0.020 inch p-p excursion

**Pulse Shock:** half sine: 30 g's for 11 ms duration

**Transit Drop:** 8-inch drop on 6 faces and 8 corners

**Electromagnetic Compatibility:** Conducted and radiated interference is in compliance with CISPR publication 11 (1985) and FCC 526/527/79. Meets MIL-STD-461B, Part 4, with the exceptions shown below.

**Conducted Emissions.** CE01 (Narrowband): 1 kHz to 15 kHz only. CE03 (Narrowband): Full limits. CE03 (Broadband): 20 relaxation from 15 kHz to 100 kHz.

**Conducted Susceptibility.** CS01: Full limits (limited to 36 V for HP 8562B). CS02: Full limits. CS06: Full limits.

**Radiated Emissions.** RE01: 15 dB relaxation to 28 kHz, and captioned from 28 kHz to 50 kHz. RE02: Full limits <1 GHz.

**Radiated Susceptibility.** RS01: Full limits. RS02: Exception. RS03: Limited to 1 V/meter from 14 kHz to 1 GHz, with 20 dB relaxation at IF frequencies.

#### Power Requirements

**115 VAC operation:** Voltage: 90 - 140 V RMS; Current: 3.2 RMS MAX; Frequency: 47 - 440 Hz

**230 VAC operation:** Voltage: 180 - 250 V RMS; Current: 1.8 RMS Max; Frequency: 47 - 66 Hz

**Maximum Power Dissipation:** 180 Watts

**Nominal Audible Noise:** 5.0 Bels power at room temperature (IEC DP7779)

**Nominal Weight:** 8561A/8562A: 20 kg (44 lbs.); 8562B: 19 kg (42 lbs.)

**Dimensions:** 163 mm high × 325 mm wide × 427 mm deep (nominal, without handle, feet, or cover).

#### Ordering Information

HP 8561A Spectrum Analyzer \$28,000

HP 8562A Spectrum Analyzer \$35,000

HP 8562B Spectrum Analyzer \$31,000

Option 001: Second IF Output \$500

Option 026: Extended Frequency Coverage \$3,000 (HP 8562A only)

Option 908: Rackmount Kit with flanges \$500

Option 909: Rackmount Kit with handles and flanges \$500

Option 910: Extra Manual Set \$500

Option 915: Technical Reference Manual \$500

Option 916: Extra Pocket Operating Guide (English) \$500

Option K08: Soft Carrying Case \$500

HP 8561A Option W30: \$500

Additional Two Years of HP Service \$500

HP 8562A Option W30: \$500

2 additional years Return-to-HP Service \$500

HP 8562B Option W30: \$500

2 additional years Return-to-HP Service \$500

HP 85620A Mass Memory Module \$2,000

HP 85629B Test and Adjustment Module \$2,000

HP 85700A 32 K Byte RAM Memory Card \$500

HP 85710A Digital Radio Personality \$500

HP 85901A Portable AC Power Source \$500

Product Support Kit P/N 08562-60021 \$500

HP 8561A and 8562A/B +22C 1 year Return-to-HP CAL \$500

HP 8561A and 8562A/B +22X 1 year Return-to-HP MIL-STD CAL \$500