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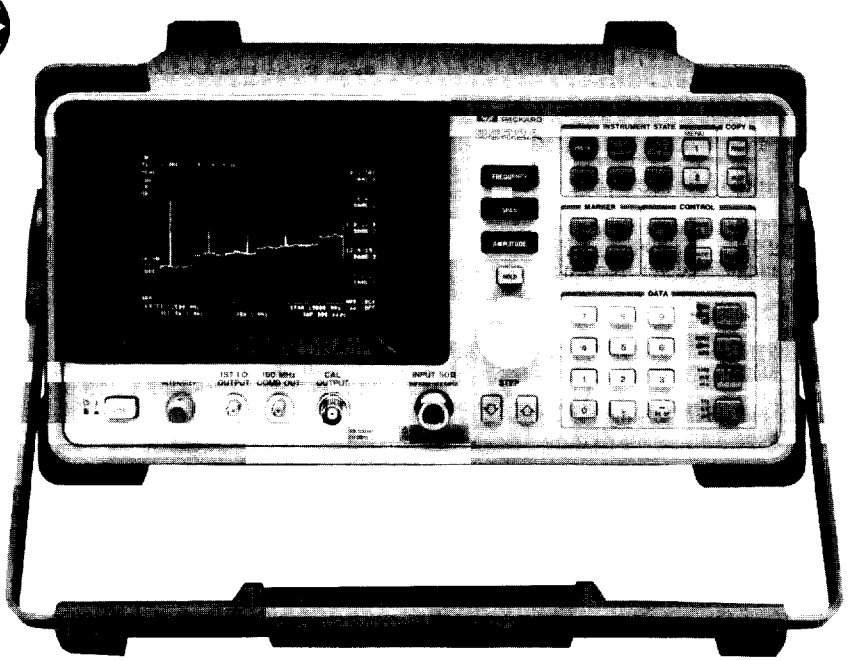
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Find the *Keysight / Agilent 8592A* at our website: ***Click HERE***

- Built-in 100 MHz comb generator
- Programmable via HP-IB, RS232C, or HP-IL
- Direct printer and plotter output
- Internal preselection, 2.75 to 22 GHz
- Personalities—Digital Radio and CATV
- Optional 25 GHz operation

NEW



HP 8592A

DESIGNED FOR HP-IB SYSTEMS

HP 8592A Portable Microwave Spectrum Analyzer

Never before could you get so much from a portable microwave spectrum analyzer for so small an investment. The HP 8592A is loaded with features and benefits that don't just help you make measurements, but help you make them more easily and more conveniently. The analyzer's wide frequency range (50 kHz to 22 GHz) and amplitude range (−109 dBm to +30 dBm) enable you to make almost any RF and microwave measurement.

An the internal preselector eliminates the worry about identifying signals that exist with unpreselected microwave analyzers. A built-in comb generator significantly improves frequency accuracy, especially in the upper frequency range. And if you want programmability, this analyzer's got it. Over 100 different functions are programmable over three different interfaces, allowing you to use a wide variety of computers. Whether your needs are in the field or in the factory, the HP 8592A has so much to offer that you can't afford to be without it.

It's Easy—Just Push a Button and Turn the Knob

Unquestionably the HP 8592A is one of the easiest spectrum analyzers you'll ever operate whether you are an experienced or a first-time user. Simply use the spectrum analyzer's three main control keys and its data-entry knob or key pad to measure any signal. The analyzer automatically adjusts internal parameters such as resolution bandwidth, video bandwidth, sweep time, IF gain, and input attenuation. You won't waste any time figuring out its operation.

Frequently-used functions are built into dedicated keys, and for additional measurement capability, display-menu softkeys give you nearly 100 more analysis and measurement functions. Easy-to-read control settings surround the graticule, and you can add a 50-character label at the top of the screen to identify traces and to get hardcopy data using HP printers and plotters.

Powerful New Functions

Many functions previously available only in our high-performance spectrum analyzers are available in our portable analyzers, including the HP 8592A. With markers, the analyzer will automatically indicate the signal amplitude and frequency, sparing you from visually interpolating between graticule lines. Trace functions offer a multitude of display manipulations. You can store and recall up to nine different analyzer settings and five trace displays in non-volatile memory. The CORRECT TO COMB function can be used to get ±2.7 MHz frequency accuracy at 22 GHz, and even better accuracy at lower frequencies and smaller spans. Just temporarily connect the built-in, 100 MHz comb generator, press the CORRECT TO COMB softkey, and use the markers to read the corrected frequency. Special functions perform complex measurements such as percent AM, 99% power bandwidth, and 3- or 6-dB points. The FFT (Fast Fourier Transform) function measures AM sidebands such as power-line hum, even though the sidebands may be less than the minimum resolution bandwidth of 1 kHz.

Lightweight and Portable

Weighing only 15 kg (33 lb), the HP 8592A does what you need at any location. Its small, compact size and light weight make it ideal for moving between lab benches or transporting to remote sites. Like other portable HP analyzers, it fits under an airplane seat.

HP 8592A Option H25 25 GHz Operation

Option H25 extends the upper limit of the HP 8592A's frequency range to 25 GHz.

HP 8592A Option H50 CATV Functions

Similar to HP 8590A Option H50 (see page 134).

HP 8592A Option H52 Digital Radio

This option adds functions and capability for making easy measurements on digital radio signals. A compare-to-mask function makes a mean power measurement and then compares the result to the mask. The mask can be any of 4 agency masks or of 12 user created masks. Mean power level, recording transient occurrences, and frequency response are also single-button measurements. All tests can be recorded with a hardcopy output.

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SIGNAL ANALYZERS
Spectrum Analyzer, 50 kHz to 22 GHz (cont'd)
Model 8592A

Specifications

Frequency
Frequency Range: 50 kHz - 22 GHz

Band	N	
0	1–	50 kHz - 2.9 GHz
1	1–	2.75 GHz - 6.2 GHz
2	2–	6.0 GHz - 12.8 GHz
3	3–	12.4 GHz - 19.4 GHz
4	4–	19.1 GHz - 22 GHz

Frequency Readout Accuracy: ±(2% of span + 5 MHz) for center frequency ≤ 2.75 GHz; ±(2% of span + 0.2% of center frequency) for center frequency > 2.75 GHz
Frequency Readout Accuracy with CORRECT TO COMB function:
± (2% of separation between signal and nearest reference frequency + 0.5% of span + 0.007% of reference frequency) for spans >17 MHz and ≤ 400 MHz and no change in center frequency or span
Frequency Stability
Drift (nominal): <60•N kHz / 5 minutes, after 2-hour warm-up and 5 minutes after setting center frequency
Noise Sidebands: <–65 dBc/kHz for (50 kHz-6.2 GHz), >30 kHz offset, 1 kHz RBW, 30 Hz VBW
Frequency Span Range: zero span, 0 –2.9 GHz, 2.75 - 22 GHz
Readout Accuracy: <±2% of indicated setting for spans >17 MHz; <±5% of indicated setting for spans ≤ 17 MHz
Bandwidth: –3 dB nominal
Resolution: 1 kHz - 3 MHz in 1,3 sequence
Video: 30 Hz - 3 MHz in 1.3 sequence
Sweep Time Range: 20 ms - 100 s
Readout Accuracy: <±10% of indicated setting
Comb Generator: 100 MHz Fundamental Frequency
Frequency Accuracy: ± 0.007%

Amplitude Accuracy
Frequency Response

Absolute Variation:	<±2.0 dB	50 kHz-2.9 GHz
	<±2.0 dB	2.75-6.2 GHz
	<±3.5 dB	6.0-12.8 GHz
	<±4.0 dB	12.4-19.4 GHz
	<±5.0 dB	19.1-22 GHz
	for 10 dB atten., presel peak, Ref. to Cal Out signal, including bandswitching uncertainty	
Peak Variation: (Flatness)	<±1.0 dB	50 kHz-2.9 GHz
	<±1.5 dB	2.75-6.2 GHz
	<±2.0 dB	6.0-12.8 GHz
	<±2.0 dB	12.4-19.4 GHz
	<±2.0 dB	19.1-22 GHz
	Ref. to midpoint between highest and lowest peak excursions	

Calibrator Accuracy: 299.9 MHz ±300kHz; –20dBm ±1 dB
Reference Level Setting: <±1.5 dB for +30 to –120 dBm (0-60 dB atten.); <±1.0 dB for 0 to –120 dBm (10 dB atten.); <±0.5 dB for 0 to –59 dBm (10 dB atten.)
Resolution BW Switching: <±0.25 dB for 3 kHz to 3 MHz
Log Scale Switching: No significant error for 1-20 dB/div. scale range
Log Scale Fidelity: <±0.1 dB/dB change over 70 dB range;±0.75 dB max. over –60 dB range from Ref. Level
Linear Accuracy: <±3% of Reference Level setting
Input Atten Step Accuracy: <±0.5 dB; ≤ 60 dB atten.
(@300 MHz)[2] <±0.75 dB; ≤ 70 dB atten.

General Characteristics
Temperature: 0 to +55 C operating; –40 to +75 C storage
Temperature Stability: 2 hours after storage at a constant temperature after turn-on at the same constant temperature.
EMI Compatibility[2]: CISPR pub. 11(1985) and FTZ 526/527/79
Audible Noise: <37.5 dBA pressure and <5.0 Bels power (ISO DP7779)
Power Requirements: 86-127 or 195-253 V RMS; 47-66 Hz;< 160 VA
Weight/Size: 15 kg (33 lbs) 213mm(8.4")H X 366mm(14.4")W X 460mm(18.1")D
Warranty[2]: One year limited warranty for materials and workmanship

Amplitude
Amplitude Range: –109 dBm to +30 dBm
Readout Resolution (with Markers): <0.05 dB for log scale; 0.05% of ref. level for linear scale
Amplitude Units: dBm, dBmV, dBuV, volts, and watts
Amplitude Scale: log(1-20 dB/div. in 1 dB steps) and linear
Maximum Safe Input Level
Average Continous Power: +30 dBm (1watt,7.1Vrms)
DC: 0 volts
Peak Pulse Power: +50 dBm (100W) for <10 usec pulse width, <1% duty cycle
Maximum Dynamic Range: 70 dB on-screen viewing; 70 dB signal-to- distortion
Displayed Average Noise:

–90 dBm - 0.00038% of center frequency	(50 kHz –5 MHz)
–109 dBm	(5 MHz-2.9 GHz)
–105 dBm	(2.75-6.2 GHz)
–99 dBm	(6.0-12.8 GHz)
–92 dBm	(12.4-19.4 GHz)
–87 dBm	(19.1-22 GHz)

for 0 dB atten., 1 kHz RBW, 30 Hz VBW
Gain Compression: <0.5 dB for –4 dBm total power at input mixer
Spurious Responses
Second Harmonic: <–70 dBc (10 MHz-2.9 GHz); <–100 dBc[1] (>2.75 GHz for –40 dBm total power at input mixer
Third Order Intermod.: <–70 dBc (10 MHz-22 GHz) for two –30 dBm signals at the input mixer with > 50 kHz spacing
Residual Responses: <–95 dBm (5 MHz-2.9 GHz);<–90 dBm (2.75-6.2 GHz) for 0 dB atten. and 50 Ω termination on input
Image, Multiple, and Out-of-Band Responses: <–70 dBc (50 kHz-2.9 GHz) applied freq. ≤10 GHz;<–70 dBc (2.75 GHz-22GHz) applied freq. ≤18 GHz;<–60 dBc (2.75 GHz-22 GHz) applied freq. ≤22 GHz

Input/Output Characteristics
Front Panel Connectors
Input: 50Ω Type N
Cal Output: 50Ω BNC, –20 dBm, 299.9 MHz
1st LO Output: 50Ω SMA, 3.0 - 6.66 GHz
100 MHz Comb Out: 50Ω SMA, 100 MHz ±0.007%
Rear Panel Connectors
Aux Video Out: 50Ω BNC, 0-1 V
Monitor Out: 50Ω BNC, NTSC Format, 19.2 kHZ horizontal synch.
High Sweep In/Out: BNC, high TTL = sweep, low TTL = retrace
Sweep Output: BNC, 5K Ω, 0 to +10 V ramp
Aux IF Output: 50Ω BNC, –10 to –60 dBm, 21.4 MHz
Ext. Trigger Input: BNC, TTL levels, positive edge trigger
Interface Connector: HP-IB(Opt. 021), HP-IL(Opt. 022), RS-232(Opt. 023)
HP-IB Codes: SH1,AH1,T6,L4,SR1,RL1,PP0,DC1,C1,C2,C3, & C28

Recommended Accessories
HP 2225A/B/D Thinkjet Printer
HP 11694A 50-75 Ω Matching Transformer
HP 85901A Portable Battery Pack

Ordering Information

	Price
HP 8592A Portable Microwave Spectrum Analyzer	$17,000
Option 021: HP-IB Interface	$600
Option 022: HP-IL Interface	$600
Option 023: RS232C Interface	$600
Option 040: Front Panel Cover	$200
Option 908: Rack Mount without Handles	$250
Option 909: Rack Mount with Handles	$300
Option 910: Extra Operating and Installation Manuals	$69
Option 915: Support Manual and Extra Operating and Installation Manuals	$64
Option H25: 25 GHz upper frequency extension	$2,500
Option H50: CATV personality	$590
Option H52: Digital radio personality	$750
Option K08: Soft Carrying Case	$250
Option W30: Additional Two Years of HP Service	$399

[1]May be below the displayed average noise.
[2]Refer to Installation Manual (08592-90003) and Operation Manual (08592-90005) for more information.

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