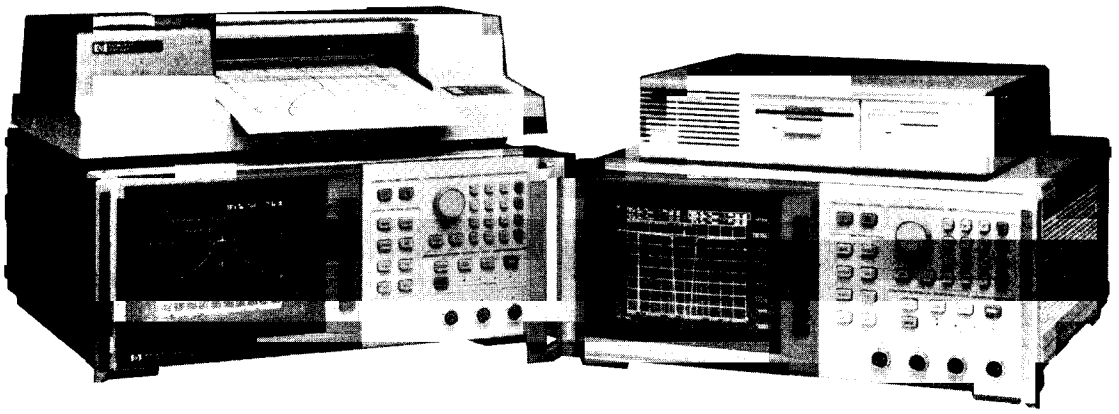
- 76 dB dynamic range
- Accurate swept power measurements
- 40 dB directivity bridges
- 40 GHz in coax, 110 GHz in waveguide
- Buffered plotter/printer output
- External disk and internal register save/recall
- Limit testing built in
- Precision color display

NEW

DESIGNED FOR HP-IB SYSTEMS



HP 8757E and HP 8757C option 001

Measure insertion loss, gain, return loss, SWR, and power quickly and accurately with either the HP 8757C or HP 8757E Scalar Network Analyzers. With high-performance detectors and directional bridges, and a companion HP source and digital plotter, the HP 8757C and 8757E become the basis of a complete measurement system with superb performance.

A Choice of Two Analyzers

For an economical measurement solution, choose the HP 8757E Scalar Network Analyzer. The HP 8757E features three detector inputs and two independent display channels, allowing simultaneous ratioed or non-ratioed measurement of your device's transmission and reflection characteristics, 76 dB dynamic range (+16 to −60 dBm) for measuring high rejection devices, and a choice between AC (square wave modulated) or DC detection techniques. The internal plotter/printer buffer allows you to send your measurement data directly to a plotter and then proceed to the next measurement, typically in less than 5 seconds. The HP 8757E includes a user-friendly interface, and menu-driven, direct-access softkeys, which simplify its operation.

When your application demands maximum system versatility, choose the HP 8757C Scalar Network Analyzer. It offers all of the performance of the HP 8757E, plus more features, limit testing, external disk save/recall, and a color display. Limit testing reduces test time by letting the analyzer make quick and objective pass/fail decisions. External disk save/recall allows your measurement state to be preconfigured by an engineer or skilled specialist and then automatically recalled by production technicians. The result is reduced setup time and greater test integrity at each production station. The precision color display simplifies the separation of measurement information while providing a pleasant display for the technician.

Systems from 10 MHz to 110 GHz

You can conveniently obtain a 20 GHz or 40 GHz coaxial measurement system by ordering the HP 8757XA (10 MHz to 20 GHz) or HP 8757XB (10 MHz to 40 GHz) scalar measurement system. Or, you can configure your own system to 50 GHz in coax or 110 GHz in waveguide.

The HP 8350B sweep oscillator family offers the benefits of a modular system with choices in source frequency range and output power. When testing narrowband, frequency-selective devices, choose a synthesized sweeper from the HP 8360 series or an HP 8340B or 8341B. The HP 8360 series, 8340B, and 8341B provide excellent frequency stability and up to 1 Hz frequency resolution.

Accessories Ensure Measurement Accuracy

Minimize transmission measurement uncertainty by using detectors with an unrivaled match (HP 85025E: >25 dB return loss to 25 GHz). Maximize your reflection measurement accuracy with high directivity directional bridges (HP 85027A,B,D: >40 dB to 20 GHz, HP 85027D: >25 dB to 47 GHz). The HP 8757C/E are compatible with a broad line of high-performance detectors, directional bridges, and other accessories that help reduce your measurement errors.

Feature	HP 8757C			HP 8757E
Display	Color			Monochrome
Display channels	4			2
Detector inputs	3 standard 4 with option 001			3
Dynamic range	76 dB			76 dB
AC/DC detection mode	Yes			Yes
Measurement points: Selectable values	101, 201, 401, 801, 1601			101, 201, 401
Channels Displayed	3 or 4	2	1	1 or 2
Max Points per channel	401	801	1601	401
Plotter/printer buffer	Yes			Yes
Noise figure display capability	Yes			Yes
External disk save/recall	Yes			No
Internal save/recall registers	9			9
Limit testing (channels 1 and 2)	Yes			No
Adaptive normalization	Yes			No
Cursor search functions	Max, Min, bandwidth, n dB			Max, min
SWR display mode	Yes			Yes
Non-standard sweep mode	Yes			Yes
Auxilary voltage display mode	Yes			Yes

NETWORK ANALYZERS
System Specifications
Model 8757

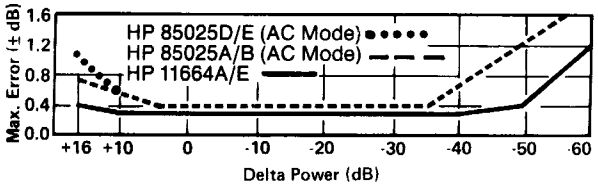
System Specifications

ACCURACY

Transmission Loss or Gain Measurement Accuracy: Transmission loss or gain measurements are made relative to a 0 dB reference point established at calibration. The measurement accuracy is equal to the uncertainty due to the change in power level, called dynamic accuracy, plus mismatch uncertainty. The frequency response errors of the source, detectors, bridge and power splitter may be removed via calibration.

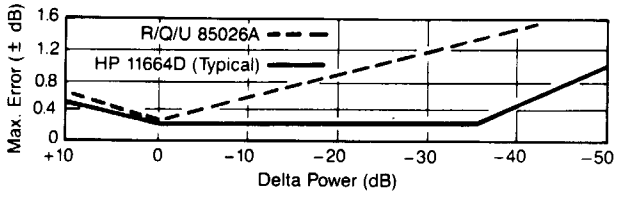
Dynamic Power Accuracy (25 ±5°C, 0 dBm reference):

Coax Detectors* (50 MHz)



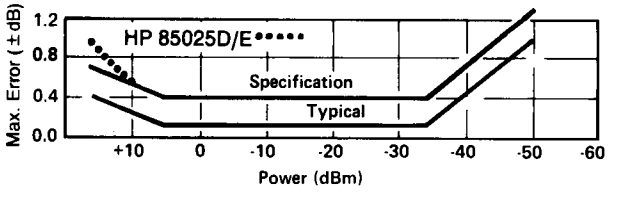
*For ≤20 dB change of power within +10 to −40 dBm, the specification for the HP 8757 with the HP 11664A/E is ±(0.1 dB + 0.01 dB/dB).

Waveguide Detectors

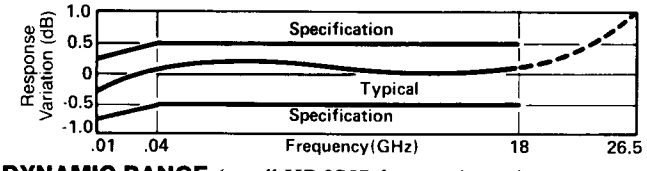


Absolute Power Measurement Accuracy: This specification is useful for determining the accuracy of power measurements in dBm when using the HP 85025A/B/D/E detectors in the DC mode. The total uncertainty is the sum of the detector frequency response, power accuracy, and mismatch uncertainties.

Absolute Power Accuracy (HP 85025A/B/D/E detectors in DC mode, detector offsets removed via power meter cal, 25 ±5°C):



Detector Frequency Response (HP 85025A/B detectors, −10 dBm, 25 ±5°C):

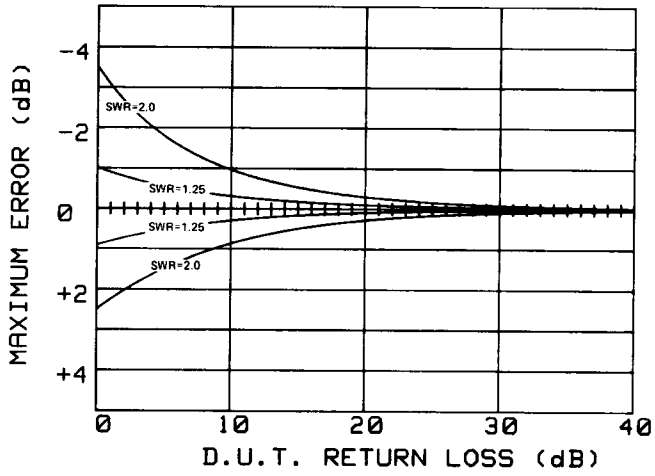


DYNAMIC RANGE (on all HP 8757 detector inputs):

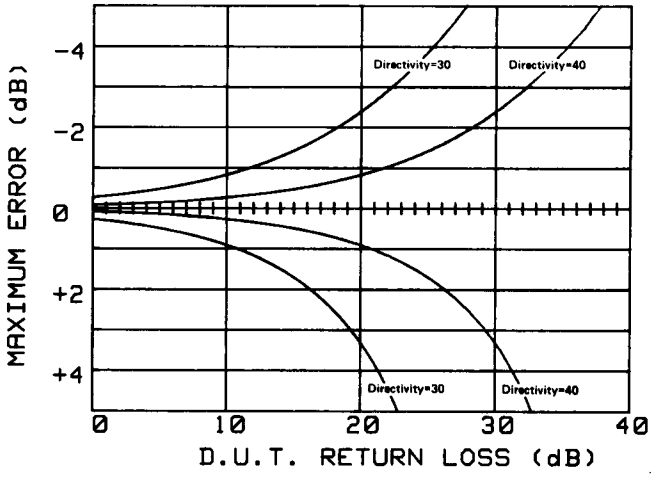
Detector	AC Mode	DC Mode
HP 11664A/E	+16 to −60 dBm	
HP 11664D	+10 to −50 dBm	
HP 85025A/B/D/E	+16 to −55 dBm	+16 to −50 dBm
HP R/Q/U85026A	+10 to −50 dBm	+10 to −45 dBm

Reflection Measurement Accuracy: Uncertainties due to calibration error and the frequency response of the source, detectors and bridge are removed via open/short averaging. The remaining uncertainties are primarily the sum of directivity uncertainty, effective source match uncertainty, and dynamic power accuracy. As shown in the graphs below, directivity is the dominant error term when measuring small reflected signals (high return loss) and source match is dominant when measuring large reflected signals (low return loss).

The Effect of Effective Source Match on Reflection Uncertainty:



The Effect of Directivity on Reflection Uncertainty:



Dynamic Power Accuracy (HP 85027/20 bridges, 50 MHz, 25 ±5°C, +7 dBm input):