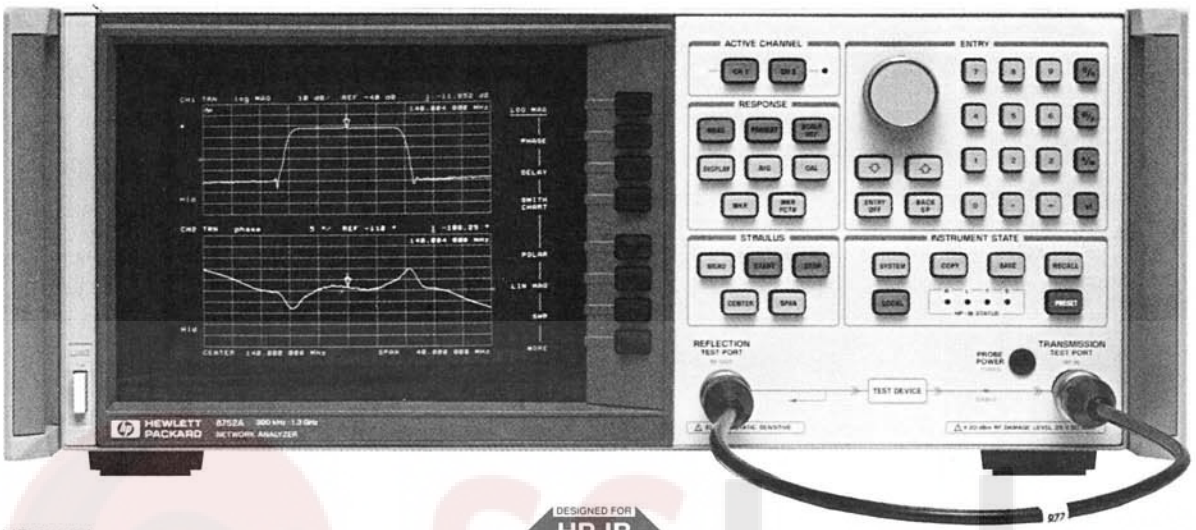
NETWORK ANALYZERS

RF Network Analyzer, 300 kHz to 3 GHz

HP 8752A/B

- 300 kHz to 1.3 or 3 GHz
- Integrated 1 Hz resolution synthesized source
- Integrated transmission/reflection test set
- 50 Ω or 75 Ω system impedance
- Direct save/recall to an external disk drive
- Execute complex test procedures with the test sequence function
- 100 dB of dynamic range
- Group delay and deviation from linear phase
- Superb uncorrected performance



HP 8752A

DESIGNED FOR HP-IB SYSTEMS

HP 8752A/B RF Network Analyzers

The HP 8752A/B RF network analyzers provide simple and complete vector network measurements in a compact and fully integrated RF network analyzer. Characterize your RF components and networks accurately and economically with the HP 8752A/B RF network analyzers in the 300 kHz to 1.3 or 3 GHz frequency range. Integration of the swept synthesized source, test set, and receiver results in a network analyzer that is easy to set up and use, which is ideal for service, incoming inspection, production, and final test measurements.

The integrated synthesized source provides measurement port power level of +5 to −20 dBm with linear, log, list, power, and CW sweep types. The sensitive tuned receivers provide 100 dB of dynamic range.

With two independent display channels available, you can simultaneously measure the reflection and transmission characteristics of the device under test on the crisp color display. Data can be displayed in log magnitude, linear magnitude, SWR, phase, group delay, polar, real, or Smith chart formats. The easy-to-use softkey measurement functions allow you to quickly measure the desired characteristic of your device under test.

Designed for Manufacturing

The productivity features of the HP 8752A/B increase your throughput in production. The test sequence function provides rapid and consistent execution of complex, repetitive tests with a single keystroke. In sequencing mode, you make the measurement once from the front panel and the instrument automatically saves the keystrokes without an external computer.

The HP 8752A/B offers excellent uncorrected performance, allowing simple and accurate measurements of your device under test without the need for measurement calibration. Other productivity enhancements include a plot/print buffer, limit testing, arbitrary frequency testing, and marker tracking functions. Up to four on-screen markers per channel are available for hardcopy outputs or for tuning at specific frequencies.

Time Domain Analysis

The HP 8752A/B with Option 010 has the capability of displaying the time domain response of a network, obtained by computing the inverse Fourier transform of the frequency domain response. Two time domain modes are offered with the HP 8752A/B. The low-pass mode provides traditional time domain reflector (TDR) measurement capability and gives the response of a mathematically simulated step or impulse response. The bandpass mode, which has only the impulse stimulus, provides the time domain response of frequency-selective devices such as SAW filters and antennas.

Specifications Summary

Source

Frequency characteristics

Range: 300 kHz to 1.3 GHz
(Opt 003: 300 kHz to 3 GHz)
Resolution: 1 Hz
Accuracy: ±10 ppm

Output characteristics

Power range: −20 to +5 dBm
Resolution: 0.1 dB
Flatness: < 2 dB peak-to-peak
Level accuracy (50 MHz, −5 dBm): ±0.5 dB
Level linearity (relative to −5 dBm):
−20 to −15 dBm: ±0.5 dB
−15 to 0 dBm: ±0.2 dB
0 to +5 dBm: ±0.5 dB
Impedance: 50 Ω (HP 8752A), 75 Ω (HP 8752B)

Receiver

Frequency range: 300 kHz to 1.3 GHz
(Opt 003: 300 kHz to 3 GHz)
Noise level: Reflection −85 dBm (typical), Transmission −110 dBm (typical) @ 10 Hz bandwidth
Maximum input level: 0 dBm
Impedance: 50 Ω (HP 8752A), 75 Ω (HP 8752B)
Crosstalk: (300 kHz to 1.3 GHz) 100 dB
(1.3 to 3 GHz) 90 dB
Dynamic accuracy: ±0.05 dB, ±0.3° over a 50 dB input range

Delay characteristics

Range: ½* (minimum aperture)
Aperture (selectable): frequency span/(# points −1) to 20% of the frequency span
Accuracy: (phase accuracy)/(360* aperture in Hz)

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RF Connectors
Test Ports: 50 Ω Type N (female) (HP 8752A)
75 Ω Type N (female) (HP 8752B)
Physical Characteristics
Size: 178 mm H × 425 mm W × 498 mm D (7.0 in × 16.75 in × 20.0 in)
Weight: Net, 25 kg (56 lb); shipping, 28 kg (63 lb)

Upgrade Kits

HP 11885A 3 GHz Frequency Upgrade Kit
The HP 11885A upgrade kit adds Option 003 to extend the operating frequency range of the HP 8752A/B from 1.3 GHz to 3 GHz. Installation at an HP service center is included.

HP 85019C Time Domain Upgrade Kit
The HP 85019C upgrade kit adds time domain analysis capability (Option 010) to an existing HP 8752A/B network analyzer. This kit is user installable.

Accessories

HP 11878A 3.5 mm Adapter Kit
The HP 11878A Adapter Kit provides the RF components generally required when an SMA or 3.5 mm device needs to be measured with the HP 8752A standard Type N configuration. The kit includes four Type N to 3.5mm adapters for both male and female connectors.

HP 11853A 50 Ω Type N Accessory Kit
The HP 11853A Accessory Kit furnishes the RF components required for measurement of devices with 50 Ω Type N connectors.

HP 11854A 50 Ω BNC Accessory Kit
The HP 11854A Accessory Kit furnishes the RF components required for measurement of devices with 50 Ω BNC connectors.

HP 11855A 75 Ω Type N Accessory Kit
The HP 11855A Accessory Kit furnishes the RF components required for measurement of devices with 75 Ω Type N connectors.

HP 11856A 75 Ω BNC Accessory Kit
The HP 11856A Accessory Kit furnishes the RF components required for measurement of devices with 75 Ω BNC connectors.

Test Port Cables
Additional or replacement cables for the HP 8752A/B:
HP p/n 8120-4781 Type N 50 Ω—HP 8752A
HP p/n 8120-2408 Type N 75 Ω—HP 8752B

HP 11852B 50 Ω/75 Ω Minimum Loss Pad
The HP 11852B is a low SWR minimum loss pad required when measurements are made on 75 Ω devices with the HP 8752A network analyzer. Measurements on two port devices require two HP 11852B pads and one 50 Ω Type N barrel.
Frequency range: dc to 2.0 GHz
Insertion loss: 5.7 dB
Return loss: 75 Ω typically > 30 dB, 50 Ω typically > 26 dB
Connectors: 50 Ω Type N (f) and 75 Ω Type N (m) standard, 50 Ω Type N (m) and 75 Ω Type N (f) Option 004

Calibration Kits

The calibration kits in the HP 8752A/B family contain precision standards used in accuracy enhancement procedures to characterize the systematic errors of an HP 8752A/B measurement system. Standards include fixed terminations, open circuits, and short circuits.

HP 85032B 50 Ω Type N Calibration Kit
Contains precision 50 Ω Type N standards used to calibrate the HP 8752A for measurements of devices with 50 Ω Type N connectors. This kit can also be used to perform system verification. Option 001 removes the precision phase-matched 7mm to Type N adapters.

HP 85036B 75 Ω Type N Calibration Kit
Contains precision 75 Ω Type N standards used to calibrate the HP 8752B for measurements of devices with 75 Ω Type N connectors. This kit can also be used to perform system verification.

HP 85033C 3.5 mm Calibration Kit
Contains precision 3.5 mm standards used to calibrate the HP8752A network analyzer for measurements of devices with 3.5 mm or SMA connectors. Option 001 removes the precision phase-matched 7mm to 3.5mm adapters.

Ordering Information

	Price
HP 8752A/B Network Analyzer	$24,000
Opt 003 3 GHz Frequency Extension	+$4,000
Opt 010 Time Domain Capability	+$5,300
Opt 802 Add Dual Disk Drive and Cable	+$1,745
Opt 908 Rack Mount Kit (w/o handles 5062-3978)	+$35
Opt 910 Extra Manual (08752-90001)	+$150
Opt 913 Rack Mount Kit (w/handles 5062-4072)	+$40
HP 11885A 3 GHz Frequency Upgrade	$4,500
HP 85019C Time Domain Upgrade	$5,300
HP 85032B 50 Ω Type N Calibration Kit	$1,700
Opt 001 Deletes 7mm to Type N adapters	−$500
HP 85036B 75 Ω Type N Calibration Kit	$2,000
HP 85033C 3.5 mm Calibration Kit	$2,600
Opt 001 Deletes 7mm to 3.5 mm adapters	−$500
HP 11878A 3.5 mm Adapter Kit	$550
HP 11853A 50 Ω Type N Accessory Kit	$500
HP 11854A 50 Ω BNC Accessory Kit	$500
HP 11855A 75 Ω Type N Accessory Kit	$500
HP 11856A 75 Ω BNC Accessory Kit	$500
HP 11852B 50 Ω/75 Ω Minimum Loss Pad	$500
Opt 004 50 Ω N (m) and 75 Ω N (f) connectors	+$75
HP 8120-4781 50 Ω Type N Test Port Cable	$300
HP 8120-2408 75 Ω Type N Test Port Cable	$875
HP 85024A High Frequency Probe	$2,500

☎ For off-the-shelf shipment, call 800-452-4844.

HP 85024A High Frequency Probe

The HP 85024A High Frequency Probe makes it easy to perform in-circuit measurements. An input capacitance of only 0.7 pF shunted by 1 megohm of resistance permits high frequency probing without adversely loading the circuit under test. Excellent frequency response and unity gain guarantee high accuracy in swept measurements with this probe. High probe sensitivity and low distortion levels allow measurements to be made while taking advantage of the full dynamic range of HP RF analyzers. Spectrum analyzers that supply probe power from the front panel include the HP 8568B, 8590B, 8591A, 8560A, 8561B, 8562A/B, and 71100A. RF network analyzers such as the HP 8753C, 8752A, 8751A, 3577A, and 4195A are also directly compatible. You can use the HP 85024A with other instruments by using the HP 1122A Probe Power Supply or any dual ±15V, 130 mA supply.

HP 85024A

Specifications Summary

Input Capacitance (@ 500 MHz): <0.7 pF (nominal)
Input Resistance: 1 MΩ (nominal)
Bandwidth: 300 kHz to 3 GHz
Gain (@ 500 MHz): 0 dB ±1 dB
Average Noise Level (10 Hz to 10 MHz): <1 mV
Frequency Response: ±1.25 dB (300 kHz to 1 GHz)
+2, −3 dB (1 GHz to 3 GHz)
Input Voltage for 1 dB Compression: 0.3 V
Maximum Safe RF Voltage: 1.5V peak (with 10:1 divider 15 V peak)
Noise Figure: <50 dB (<100 MHz)
<24 dB (100 MHz to 3 GHz)
Distortion (@ 0.3 V): < −30 dBc
Includes: Type N male adapter, 10:1 divider, spare probe tips, 3½ in ground lead, hook tip, spanner tip, and probe tip nut driver.

For the most current prices and product information, contact your local Hewlett-Packard sales office—see page 654.