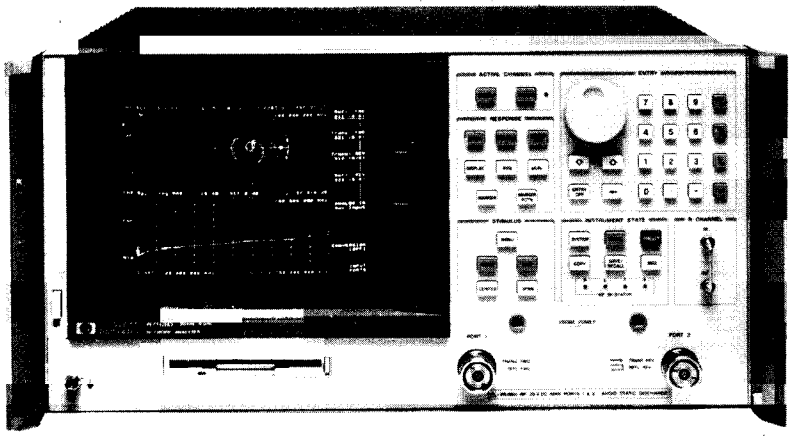
NETWORK ANALYZERS

RF Network Analyzer, 30 kHz to 6 GHz

HP 8753D

- 30 kHz to 6 GHz frequency range
- Integrated S-parameter test set
- Integrated 1-Hz resolution synthesized source
- Optional time-domain and swept-harmonic measurements
- Up to 110 dB of dynamic range
- Group delay and deviation from linear phase
- Save/recall to built-in disk drive
- Built-in accuracy enhancement



HP 8753D

HP 8753D RF Network Analyzer

The HP 8753D RF network analyzer provides affordable excellence in RF network measurement for laboratory and production testing. It has an integrated S-parameter test set for longer-lasting calibrations, exceptional reliability, and improved resistance to electrostatic discharge. The HP 8753D gives you a complete solution for characterizing active or passive networks, devices, or components from 30 kHz to 6 GHz—with a cost savings over the previous model with a test set.

The network analyzer has two independent display channels for simultaneous display of reflection and transmission, magnitude and phase, or time-domain and swept-frequency measurements. Easy-to-use softkeys let you access measurement functions quickly, and you can view results in overlay or split-screen format on the crisp color display.

Maximum Versatility and Performance

An integrated, synthesized source provides > 100 mW of output power, 1 Hz frequency resolution, and linear, log, list, power, and CW sweep types. Three tuned receivers allow independent power measurements or simultaneous ratio measurements over a wide dynamic range of 105 dB at 6 GHz (with Option 006 frequency extension) or 110 dB at 3 GHz (standard). The integrated test set allows you to measure transmission and reflection characteristics of a device to 6 GHz without a frequency doubler.

TRL*/LRM*[1] calibration has been added for convenient, accurate measurements in noncoaxial environments. A high-stability frequency reference, Option 1D5, improves the frequency accuracy of measurements on high-Q devices such as SAW resonators or dielectric resonance filters. For configuration flexibility, Option 011 deletes the built-in test set so that you can select your own. The HP 8753D Option 011 works with the HP 85046A/B, 85047A, and other test sets.

Productivity Enhancements

A test-sequence function allows rapid, repeated execution of complex tasks with a single keystroke. In sequencing mode, you make a measurement once from the front panel, and the analyzer stores the keystrokes so that no additional programming is required. You can also use a test sequence to control external devices through the parallel port.

Other productivity enhancements include a built-in disk drive supporting LIF and DOS formats, a faster CPU clock rate, non-volatile memory of 512 KB, serial and parallel interfaces, a DIN keyboard interface, and a real-time clock for time-stamping of printouts and files. Limit testing, arbitrary frequency testing, and marker tracking functions are included. Segmented calibration and interpolative error correction allow you to apply vector accuracy enhancement over a subset of the analyzer's calibrated frequency range.

Nonlinear Device Testing

For nonlinear device characterization, Option 002 adds harmonic measurement capability. Swept second- and third-harmonic levels of an amplifier can be displayed directly or in dBc. With the press of a button, you can measure harmonics down to –40 dBc. Power meter calibration provides leveled absolute power to devices that are sensitive to absolute input or output levels. The HP 8753D automatically controls an HP 436A, 437B, or 438A power meter to set the power anywhere in the test configuration with power meter accuracy. The analyzer also performs mixer tracking and conversion loss measurements. Both fixed and swept IF measurements can be made.

Time-Domain Analysis

With Option 010, you can view responses in the time domain. The analyzer computes the inverse FFT of the frequency-domain data to display the reflection or transmission coefficient versus time. Two time-domain analysis modes enable you to view the step or impulse response of your device, or to remove unwanted responses such as connector mismatch using gating.

[1] TRL* and LRM* are three-sampler implementations of the through-reflect-line and line-reflect-match calibration techniques.

Specifications Summary

Test Set
Integrated S-parameter with complete forward and reverse measurements in 50 Ω (standard) or 75 Ω (Option 075). External test sets supported with Option 011.

Test Port Output

Frequency Characteristics
- **Range:** 30 kHz to 3 GHz (std.); 30 kHz to 6 GHz (Option 006)
  300 kHz to 3 GHz (Option 011)
  30 kHz to 6 GHz (Option 011, 006)
- **Resolution:** 1 Hz
- **Accuracy:** ±10 ppm at 25°C± 5° C

Output Characteristics
- **Power range:** –85 to 10 dBm
- **Resolution:** 0.05 dB
- **Sweep Range:** 25 dB
- **Level Accuracy:** ±1.0 dB relative to 0 dBm output level
- **Level Linearity:** (–15 to +5 dBm) ±0.2 dB typical 30 kHz to 300 kHz
  (+5 to +10 dBm) ±0.5 dB typical 30 kHz to 300 kHz

Impedance: 50 Ω
2nd Harmonic: <–25 dBc at +10 dBm (16 MHz to 3 GHz)
3rd Harmonic: <–25 dBc at +10 dBm (16 MHz to 2 GHz)
Nonharmonic Spurious (typical)
- **Mixer-related:** <–30 dBc at +10 dBm

Test Port Input Characteristics
Frequency Range: 30 kHz to 3 GHz (std.); 30 kHz to 6 GHz (Option 006)
Average Noise Level
- **3 kHz BW:** –82 dBm (< –3 GHz), –77 dBm (3 to 6 GHz)
- **10 Hz BW:** –102 dBm (< –3 GHz), –97 dBm (3 to 6 GHz)

Maximum Input Level: +10 dBm
Damage Level: +26 dBm or 35 Vdc
Impedance: 50 Ω (75 Ω with Option 075)
Harmonics: (Option 002)
2nd Harmonic: <–15 dBc at +8 dBm
3rd Harmonic: <–30 dBc at +8 dBm
Harmonic Measurement Accuracy (25 ±5°C)
16 MHz to 3 GHz ± 1 dB
3 GHz to 6 GHz ± 3 dB (with Option 006)
Harmonic Measurement Dynamic Range
–40 dBc (output= –10 dBm, input < –15 dBm)
Group Delay Characteristics
Range: 1/(2 x minimum aperture)
Aperture (selectable)
Maximum: 20% of frequency span
Minimum: (frequency span)/(no. of pts. –1)
Group Delay Accuracy (in seconds): ± (phase accuracy in degrees)/(360 x aperture in Hz)
Physical Characteristics
- **Size:** 425 mm W x 222 mm H x 508 mm D (16.75 in x 8.75 in x 20.0 in)
- **Weight:** 34 kg (75 lb) net; 37 kg (82 lb) shipping

Upgrade Kits

Upgrade kits retrofit the latest operating systems or add optional measurement capability to existing HP 8753A/B/C/D network analyzers.

HP 11883A Harmonic Measurements Upgrade
This upgrade kit adds harmonic measurement capability (Option 002) to an HP 8753C/D network analyzer. This kit includes installation at an HP service center.

HP 11884A 6 GHz Receiver Upgrade
This kit extends the operating frequency range of the HP 8753B/C receiver from 3 GHz to 6 GHz. To make transmission/reflection measurements above 3 GHz, the HP 85047A S-parameter test set is required. This kit includes installation at an HP service center.

HP 11884B 6 GHz Upgrade for HP 8753D Standard
This kit extends the operating frequency range of the HP 8753D from 3 GHz to 6 GHz. No additional test set is needed. Includes installation at an HP service center. Not compatible with Option 075 or Option 011.

HP 11884C 6 GHz Upgrade for HP 8753D Option 011
This kit extends the operating frequency range of the HP 8753D Option 011 from 3 GHz to 6 GHz. Includes installation at an HP service center. Not compatible with Option 075.

HP 85019B Time-Domain Upgrade Kit
This upgrade kit adds time-domain analysis capability (Option 010) to an existing HP 8753C/D network analyzer. This kit is user-installable.

Transmission/Reflection Test Sets
Transmission/reflection test sets provide the capability to simultaneously measure the reflection and transmission characteristics of two port devices. The device must be physically turned around to measure its reverse direction characteristics. These test sets are used with the HP 8753A/B/C or the HP 8753D Option 011 only.

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Specifications Summary

	HP 85044A	HP 85044B
Impedance:	50 Ω	75 Ω
Frequency Range:	300 kHz to 3 GHz	300 kHz to 2 GHz
Directivity:[3]	35 dB to 1.3 GHz 30 dB to 3.0 GHz	35 dB to 1.3 GHz 30 dB to 2.0 GHz
Typical Tracking		
Transmission Magnitude, Phase:[1,2,3]		
0.3 MHz to 2.0 MHz	±1.5 dB, ±10°	±1.5 dB, ±10°
2.0 MHz to F_{max}	±1.5 dB, ±10°	±1.5 dB, ±10°
Reflection Magnitude, Phase:[1,2,3]		
0.3 MHz to 2.0 MHz	±1.5 dB, ±25°	±1.5 dB, ±25°
2.0 MHz to F_{max}	±1.5 dB, ±10°	±1.5 dB, ±10°
Effective Source Match[2,3] **(test ports):**		
0.3 MHz to 2.0 MHz	14 dB	14 dB
2.0 MHz to 1.3 GHz	20 dB	17 dB
1.3 GHz to F_{max}	16 dB	16 dB
RF Connectors		
Test Port:	Precision 7 mm	75 Ω type-N (female)
All Others:	50 Ω type-N (female)	50 Ω type-N (female)

Physical Characteristics
- **Size:** 191 mm W x 62 mm H x 204 mm D (7.5 in x 2.44 in x 8.0 in)
- **Weight:** Net, 1.7 kg (3.8 lb); shipping, 2.0 kg (4.4 lb)

[1]Degrees, specified as deviation from linear phase.
[2]F_{max} is the upper frequency limit of the associated test set.
[3]Can be improved through accuracy enhancement.

NETWORK ANALYZERS
S-Parameter Test Sets
HP 8753D Series

S-Parameter Test Sets

The S-parameter test sets provide the capability to measure reflection and transmission characteristics (including S-parameters) of two port devices in either direction with a single connection. The test sets are controlled from the analyzer and include programmable step attenuators. These test sets are used with the HP 8753A/B/C or the HP 8753D Option 011 only.

HP 85046A/B S-Parameter Test Sets

The HP 85046A/B test sets provide the capability to simultaneously measure the transmission and reflection characteristics of 50 and 75 ohm devices, respectively.

Specifications Summary

	HP 85046A	HP 85046B
Impedance:	50 Ω	75 Ω
Frequency Range:	300 kHz to 3 GHz	300 kHz to 2 GHz
Directivity:	35 dB to 1.3 GHz	35 dB to 1.3 GHz
	30 dB to 3.0 GHz	30 dB to 2.0 GHz
Typical Tracking		
Transmission Magnitude, Phase:[1,2,3]		
0.3 MHz to 2.0 MHz	±1.5 dB, ±20°	±1.5 dB, ±20°
2.0 MHz to F_{max}	±1.5 dB, ±10°	±1.5 dB, ±10°
Reflection Magnitude, Phase:[1,2,3]		
0.3 MHz to 2.0 MHz	±1.5 dB, ±25°	±1.5 dB, ±25°
2.0 MHz to F_{max}	±1.5 dB, ±10°	±1.5 dB, ±10°
Effective Source Match[3] **(test ports):**		
0.3 MHz to 2.0 MHz	14 dB	14 dB
2.0 MHz to 1.3 GHz	20 dB	17 dB
2.0 MHz to F_{max}	16 dB	16 dB
RF Connectors		
Test Ports:	Precision 7 mm	75 Ω type-N (female)
All Others:	50 Ω Type-N (female)	50 Ω Type-N (female)

Includes: Four 190-mm (7.5 in) cables with Type-N (male) connectors for connection to the HP 8753. One HP 8753 test set interconnect cable.
Physical Characteristics
Size: 426 mm W x 90 mm H x 508 mm D (16.75 in x 3.5 in x 20 in)
Weight: Net, 6.8 kg (15 lb); shipping, 9.1 kg (20 lb)

HP 85047A S-Parameter Test Set

The HP 85047A test set includes a frequency doubler that can be switched in to measure 3 MHz to 6 GHz in a single sweep or switched out to measure 300 kHz to 3 GHz in a single sweep. The HP 8753B/C controls the frequency doubler. (The HP 8753D Option 006 and 011 with built-in 6 GHz source does not use the frequency doubler.) Option 006 (6 GHz receiver) is required to activate the HP 85047A.

Specifications Summary

Impedance: 50 Ω
Frequency Ranges: 300 kHz to 3 GHz
3 MHz to 6 GHz
300 kHz to 6 GHz (HP 8753D Option 006 and 011)
Directivity: 300 kHz to 1.3 GHz: 35 dB
1.3 GHz to 3 GHz: 30 dB
3 GHz to 6 GHz: 25 dB

[1]Degrees, specified as deviation from linear phase.
[2]F_{max} is the upper frequency limit of the associated test set.
[3]Can be improved through accuracy enhancement.

Typical Tracking
Transmission Magnitude, Phase:
300 kHz to 3 GHz: ±1.5 dB, ±10°
3 GHz to 6 GHz: +0.5, −2.5 dB, ±20°
Reflection Magnitude, Phase:
300 kHz to 3 GHz: ±1.5 dB, ±10°
3 GHz to 6 GHz: ±1.5 dB, ±20°
Effective Source Match:
300 kHz to 1.3 GHz: 20 dB
1.3 GHz to 3 GHz: 16 dB
3 GHz to 6 GHz: 14 dB
RF Connectors
Test Ports: Precision 7 mm
All Others: 50 Ω Type-N (female)
Includes: Four 190 mm (7.5 in) cables with Type-N (male) connectors for connection to the HP 8753, one HP 8753 test set interconnect cable.

Physical Characteristics
Size: 426 mm W x 90 mm H x 508 mm D (16.75 in x 3.5 in x 20 in)
Weight: Net, 10 kg (22 lb); shipping, 15 kg (33 lb)

Special Test Sets

HP 8753D Option K36 Duplexer Test Adapter enables single-connection error corrected measurement of return loss at Tx, Rx, and Ant ports, and insertion loss from Tx-to-Ant, Ant-to-Tx, Rx-to-Ant, and Ant-to-Rx ports.

For applications requiring Tx-to-Rx and Rx-to-Tx measurements, Option K39 three-port test set is recommended.

Contact HP for technical specifications and information about additional special options.

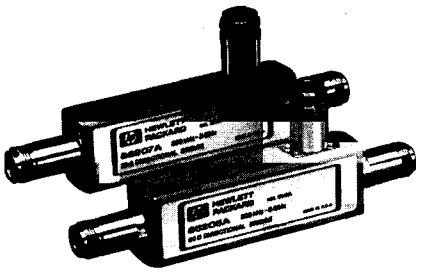
Solid-State Switching

Solid-state switching allows for simultaneous measurement of forward and reverse parameters and continuous update of all four S-parameters as required for two-port error correction (used to achieve best possible measurement accuracy). Option 009 replaces the standard solid-state RF test port switch with a mechanical RF switch. HP 8753 system specifications for standard and Option 009 test sets are identical. Nominal insertion loss of the solid-state switch is less than 2 dB (at 3 GHz) or 3 dB (at 6 GHz), relative to a mechanical switch.

HP 86389A/B Solid-State Switch Upgrade Kits

The HP 86389A/B kits retrofit any existing HP 85046A/B and HP 85047A S-parameter test set by replacing the mechanical RF test port switch with a solid-state RF switch. This solid-state switch allows for simultaneous measurement of forward and reverse parameters and continuous measurement of all four S-parameters (required for two-port error correction).

The HP 86389A retrofits HP 85046A/B test sets, and the HP 86389B retrofits HP 85047A test sets. HP 8753C network analyzers with firmware revision 4.0 or higher support solid-state test sets.



HP 86205A/86207A

Accessories

HP 86205A/86207A RF Bridges

The HP 86205A/86207A high directivity RF bridges offer unparalleled performance in a variety of general-purpose applications. They are ideal for accurate reflection measurements and signal leveling applications.

Specifications Summary

	HP 86205A	HP 86207A
Impedance:	50 Ω	75 Ω
Frequency Range:	300 kHz to 6 GHz	300 kHz to 3 GHz
Directivity:	30 dB, 0.3 MHz to 5 MHz	30 dB, 0.3 MHz to 5 MHz
	40 dB, 5 MHz to 2 GHz	40 dB, 5 MHz to 1.3 GHz
	30 dB, 2 GHz to 3 GHz	35 dB, 1.3 GHz to 2 GHz
(typical)	20 dB, 3 GHz to 5 GHz	30 dB, 2 GHz to 3 GHz
(typical)	16 dB, 5 GHz to 6 GHz	
Coupling Factor:	(< 3 GHz) 16.0 dB, + 0.15 dB/GHz	
	(> 3 GHz) 16.5 dB, – 0.20 dB/GHz	
Insertion Loss:	1.5 dB, + 0.1 dB/GHz	
Maximum Input:	25 dBm	
RF Connectors:	50 Ω Type-N (female)	75 Ω Type-N (female)

Physical Characteristics
Size: 93 mm H x 160 mm W x 23 mm D (3.7 in x 6.3 in x 1 in)
Weight: Net, 0.57 kg (1.3 lb); shipping, 1.8 kg (4 lb)

HP 11850C/D Three-Way Power Splitters Specifications Summary

	HP 11850C	HP 11850D
Impedance:	50 Ω	75 Ω
Frequency Range:	DC to 3 GHz	DC to 2 GHz
Tracking:	±0.25 dB, ±3°	±0.2 dB, ± 2.5°
Equivalent Source Match (ratio or leveling):	30 dB at 1.3 GHz 20 dB at 3 GHz	30 dB at 1.3 GHz 20 dB at 3 GHz
Nominal Insertion Loss:	9.5 dB + 1 dB/GHz	7.8 dB
Input Port Match:		
DC to 1.3 GHz	20 dB	20 dB
1.3 GHz to F_{max}[1]	10 dB	10 dB
RF Connectors		
RF Input: (female)	50 Ω Type-N	50 Ω Type-N
All Others: (female)	50 Ω Type-N	75 Ω Type-N

[1] F_{max} is the upper frequency limit of the associated power splitter.

HP 11851B RF Cable Kit

This kit includes three 610-mm (24-in) 50 Ω cables phase matched to 4° at 1.3 GHz and one cable 860 mm (34-in). Connectors are type-N (male).

HP 11852B 50 Ω /75 Ω Minimum Loss Pad

The HP 11852B is a low SWR minimum loss pad required for measurements on 75 Ω devices with the HP 8753C/D receiver.
Frequency Range: DC to 2.0 GHz
Insertion Loss: 5.7 dB
Return Loss: 75 Ω typically ≥ 30 dB, 50 Ω typically ≥ 26 dB
Maximum Input Power: 250 mW (+24 dBm)
RF 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

Type-N Accessory Kits

Each kit contains a type-N (female) short, a type-N (male) short, two type-N (male) barrels, two type-N (female) barrels, and a storage case.

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 using the HP 11850C, 85044A, 85046A, or 85047A.

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 using the HP 11850D, 85044B, or 85046B. This kit also contains a 75 Ω type-N (male) termination.

BNC Accessory Kits

The BNC accessory kit contains two type-N (male) to BNC(female) adapters, two type-N (male) to BNC (male) adapters, two type-N (female) to BNC (female) adapters, two type-N (female) to BNC (male) adapters, a BNC (male) short, and a storage case.

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 using the HP 11850C, 85044A, 85046A, or 85047A.

HP 11856A 75 Ω BNC Accessory Kit

The HP 11856A furnishes RF components required for measurement of devices with 75 Ω BNC connectors using the HP 11850D, 85044B, or 85046B. This kit also contains a 75 Ω BNC (male) termination.

Test Port Cables

HP 11857D 50 Ω APC-7 Test Port Cables

The HP 11857D includes two precision 61-cm (24-in) cables, phase matched to 2° at 1.3 GHz for use with the HP 8753D, 85046A or 85047A S-parameter test sets. Connectors are 50 Ω APC-7.

HP 11857B 75 Ω Type-N Test Port Cables

The HP 11857B includes two precision 61-cm (24-in) cables, phase matched to 2° at 1.3 GHz for use with the HP 8753D Option 075 or HP 85046B S-parameter test set. One cable has 75 Ω type-N (male) connectors on both ends; the other has one type-N (male) and one type-N (female) connector.

HP 85043D System Cabinet

The HP 85043D system cabinet has been ergonomically-designed specifically for the HP 8753 and the HP 85046A/B or 85047A S-parameter test sets. The 132-cm (52-in) system cabinet includes a bookcase, a drawer, and a convenient work surface.

Calibration Kits

The calibration kits in the HP 8753 family contain precision standards used in accuracy enhancement procedures to characterize the systematic errors of an HP 8753 measurement system.

HP 85031B 7-mm Calibration Kit

The HP 85031B Calibration Kit contains a set of precision 7-mm fixed terminations, and a one-piece open/short circuit used to calibrate the HP 8753 and its 50 Ω test sets for measurement of devices with precision 7-mm connectors. This kit is specified 300 kHz to 6 GHz.

NETWORK ANALYZERS
Accessories (cont'd)
HP 8753D Series

HP 85032B 50 Ω Type-N Calibration Kit

The HP 85032B calibration kit contains precision 50 Ω type-N standards used to calibrate the HP 8753 and its 50 Ω test sets for measurement of devices with 50 Ω type-N connectors. Precision phase-matched 7 mm to 50 Ω type-N adapters are included for accurate measurements of non-insertable devices. Standards include fixed terminations, open circuits, and short circuits in both sexes. This kit is specified from dc to 6 GHz.

HP 85032E 50 Ω Type-N Economy Calibration Kit

The HP 85032E calibration kit contains a type-N(m) fixed termination and a one-piece type-N(m) open/short circuit. The kit is specified from dc to 6 GHz.

HP 85033D 3.5-mm Calibration Kit

The HP 85033D calibration kit contains fixed loads and open and short circuits in both sexes to calibrate the HP 8753 and 50 Ω test sets for measurement of devices with precision 3.5-mm and SMA connectors. Phase-matched 7-mm to 3.5-mm adapters for male and female connectors are included for use with 7-mm test port cables. This kit is specified from dc to 6 GHz.

HP 85036B 75 Ω Type-N Calibration Kit

The HP 85036B calibration kit contains precision 75 Ω type-N standards used to calibrate the HP 8753 and its 75 Ω test sets for measurement of devices with 75 Ω type-N connectors. Standards include fixed terminations, open circuits, and short circuits in both sexes. Precision phase-matched adapters are included for accurate measurements of non-insertable devices. This kit is specified from dc to 3 GHz.

HP 85039A Type-F Calibration Kit

The HP 85039A calibration kit contains type-F male open, short, and load standards to calibrate the HP 8753 and 75 Ω test sets for measurement of devices with 75 Ω type-F connectors. The kit also includes type-N to type-F adapters. This kit is specified from dc to 3 GHz.

HP 85060 Series Electronic Calibration Modules and Control Unit

This series provides electronic calibration (ECal) capability for the HP 8753D. The usual calibration kit standards are replaced by two solid-state calibration modules that can be programmed by a control unit to present many different impedances to the test ports. A full two-port calibration can be done with a single connection in just a few minutes, with less chance for error and less wear on connectors. ECal requires an HP 85060C electronic calibration control unit and HP 85060 series calibration modules of the appropriate connector type.

Verification Kits

Measuring known devices, other than the calibration standards, is a convenient way of verifying that the HP 8753 measurement system is operating properly.

HP 85029B 7-mm Verification Kit

The HP 85029B verification kit contains a set of precision 7-mm devices, with data traceable to NIST, used to verify the calibrated performance of an HP 8753A/B/C/D measurement system. The devices have precision 7-mm connectors and include a 20 dB pad, a 50 dB pad, and a mismatch attenuator. The verification process requires only an HP 85031B calibration kit, and an HP 85029B verification kit.

Option 001 is intended solely for use with the HP 8702B lightwave component analyzer. Option 001 adds verification data that is compatible with the HP 8702B.

Ordering Information	Price
HP 8753D Network Analyzer, 30 kHz to 6 GHz Integrated network analyzer with built-in color display, S-parameter test set, disk drive, and 30 kHz to 3 GHz synthesized source. Standard 50 Ω version has two 7-mm test ports.	$34,500
Opt 002 Harmonic Measurement Capability	+$3,500
Opt 006 6 GHz Frequency Extension	+$5,000
Opt 010 Time-Domain Capability	+$5,300
Opt 011 Delete Built-in Test Set	–$6,500
Opt 075 75 Ω Impedance	$0
Opt 1D5 High-Stability Frequency Reference	+$1,000
HP 85047A 50 Ω S-Parameter Test Set—6 GHz	$11,000
Opt 009 Mechanical Test Port Switch	–$1,020
Opt 913 Rackmount Kit (5062-4069)	+$41 ☎
HP 85046A 50 Ω S-Parameter Test Set—3 GHz	$9,180
Opt 009 Mechanical Test Port Switch	–$1,020
Opt 913 Rackmount Kit (5062-4069)	+$41 ☎
HP 85046B 75 Ω S-Parameter Test Set—300 kHz-2 GHz	$9,180
Opt 009 Mechanical Test Port Switch	–$1,020
Opt 913 Rackmount Kit (5062-4069)	+$41 ☎
HP 85029B Precision 7-mm Verification Kit	$1,735
Opt 001 Data for HP 8702B	$0
HP 85031B Precision 7-mm Calibration Kit	$1,225
HP 85032B 50 Ω Type-N Calibration Kit	$1,940
HP 85032E 50 Ω Type-N Economy Calibration Kit	$665
HP 85033D 3.5-mm Calibration Kit	$2,950
HP 85036B 75 Ω Type-N Calibration Kit	$2,040
HP 85039A Type-F Calibration Kit	$2,350
HP 85060C Electronic Calibration Control Unit	$6,100
HP 85060 Series Electronic Calibration Modules	Price varies
HP 85043D System Rack	$3,265
HP 11883A Harmonic Measurements (Option 002) Upgrade	$3,570
HP 11884A 6 GHz Receiver (Option 006) Upgrade	$3,570
HP 11884B 6 GHz (Option 006) Upgrade Kit for HP 8753D	$6,000
HP 11884C 6 GHz (Option 006) Upgrade Kit for HP 8753D Option 011	$6,000
HP 85019B Time Domain (Option 010) Upgrade (HP8753B/C/D)	$5,410
HP 86389A Solid-State Switch Upgrade Kit (for HP 85046A/B Test Sets)	$1,530
HP 86389B Solid-State Switch Upgrade Kit (for HP 85047A Test Sets)	$1,530
HP 86205A 50 Ω Bridge	$1,325
HP 86207A 75 Ω Bridge	$1,325
HP 8753D	
Opt K36 Duplexer Test Adapter	+$4,000
Opt K39 Three-Port Test Set Adapter	+$7,000
HP 11850C 50 Ω Power Splitter	$970
HP 11850D 75 Ω Power Splitter	$1,735
HP 11851B 50 Ω/Type-N RF Cable Kit	$1,020
HP 11852B 50 Ω/75 Ω Minimum Loss Pad	$510
HP 11853A 50 Ω Type-N Accessory Kit	$510
HP 11854A 50 Ω BNC Accessory Kit	$510
HP 11855A 75 Ω Type-N Accessory Kit	$510
HP 11856A 75 Ω BNC Accessory Kit	$510
HP 11857B 75 Ω Type-N Test Port Extension Cables	$1,485
HP 11857D 50 Ω APC-7 Test Port Extension Cables	$1,275

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