

Network Analyzers

RF Economy Network Analyzers, 300 kHz to 3.0 GHz

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HP 8711C
HP 8712C
HP 8713C
HP 8714C

Calibration Kits

Accuracy enhancement removes systematic errors by measuring known devices (standards) over the frequency range of interest. Kits for the RF economy network analyzer family contain standards to characterize these errors.

HP 85032E 50 Ω Type-N Economy Calibration Kit

The HP 85032E contains 50 Ω type-N standards to calibrate network analyzers to measure devices with 50 Ω type-N connectors. Standards include a fixed termination, open circuit, and short circuit.

HP 85033D 3.5-mm Calibration Kit

The HP 85033D contains 50 Ω 3.5-mm standards to calibrate network analyzers to measure devices with 50 Ω 3.5-mm connectors. Standards include a fixed termination, open circuit, and short circuit.

HP 85036E 75 Ω Type-N Economy Calibration Kit

The HP 85036E contains 75 Ω type-N standards to calibrate network analyzers to measure devices with 75 Ω type-N connectors. Standards include a fixed termination, open circuit, and short circuit.

HP 85039B 75 Ω Type-F Calibration Kit NEW

The HP 85039B contains 75 Ω type-F standards, both male and female, to calibrate network analyzers for measurements of common broadband and CATV components with 75 Ω type-F connectors. Standards include a fixed load, open circuit, and short circuit. The following adapters are also included: type-F (f-f), type-F (m-m), type-N (f) to type-F (m) and type-N (m) to type-F (f). A complete male set of standards (fixed-load, open, short) and (m-m) adapter can be ordered as HP 85039B Option 00M, and a complete female set as HP 85039B Option 00F.

Additional type-F adapters available: type-F (m) to type-N (m) (85039-60010), type-F (m) to type-F (f) (85039-60012), and type-F (f) to type-N (f) (85039-60014).

Specifications Summary

	HP 8711/12	HP 8713/14
Source Characteristics		
Frequency Range		
Min. frequency	300 kHz	300 kHz
Max. frequency	1.3 GHz	3.0 GHz
Resolution	1 Hz	1 Hz
Accuracy	<5 ppm	<5 ppm
Output Characteristics		
Power Range (standard)		
<1000 MHz	0 to 16 dBm	-5 to 10 dBm
>1000 MHz	0 to 13 dBm	-5 to 10 dBm
With Attenuator		
<1000 MHz	-60 to 13 dBm	-60 to 7 dBm
>1000 MHz	-60 to 10 dBm	-60 to 7 dBm
With 75 Ω		
With Group Delay		
	reduces output by 3 dB	reduces output by 3 dB
Test Port Accuracy and Flatness		
Standard	± 1.0 dB	± 1.0 dB
Option 1 EC	± 1.5 dB	± 1.5 dB
Option 1 E1	± 2.0 dB	± 2.0 dB
Option 1 EC and 1E1	± 3.0 dB	± 3.0 dB
Signal Purity		
Harmonics	(at +7 dBm)	
<1 MHz	<-20 dBc	<-30 dBc
>1 MHz	<-30 dBc	<-30 dBc
	HP 8711/12	HP 8713/14
Receiver Characteristics		
Frequency Range		
Narrowband	300 kHz to 1.3 GHz	300 kHz to 3.0 GHz
Broadband	10 MHz to 1.3 GHz	10 MHz to 3.0 GHz
Dynamic Range		
Narrowband		
<5 MHz	>60 dB	>80 dB
>5 MHz	>100 dB	>100 dB
Broadband		
Internal	>66 dB	>60 dB
External	>66 dB	>66 dB
Maximum Input		
Narrowband	10 dBm	10 dBm
(at 0.8 dBm compression)		
Broadband	16 dBm	16 dBm
(at 0.5 dBm compression)		
Input Damage Level	20 dBm	20 dBm

AM Delay Characteristics

Apertures: 55.56 kHz

Input Amplifier Range: -10 to +13 dBm

Resolution: 0.5 ns

Range: 30 μ s (9000 m)

Accuracy: ± 4 ns

Test Set Characteristics

Reflection Port Match: 30 dB

Transmission Port Match: 18 dB typical

System Directivity: 40 dB

RF Connectors

Test Ports: All models are available in 50 Ω or 75 Ω type-N (f)

Physical Characteristics

Size: 179 mm H x 425 mm W x 514 mm D (7.0 in x 16.75 in x 20.25 in)

Weight: Net, 20.5 kg (45 lb); shipping, 25 kg (55 lb)

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 85039B Type-F Calibration Kit

The HP 85039B contains 75 Ω type-F calibration standards, both male and female, to calibrate the HP 8753D for measurements of common broadband and CATV components. Standards include a fixed load, open circuit, and short circuit. The following adapters are also included: type-F (f-f), type-F (m-m), type-N (f) to type-F (m) and type-N (m) to type-F (f). A complete male set of standards (fixed load, open, short) and (m-m) adapter can be ordered as HP 85039B Option 00M and a complete female set as HP 85039B Option 00F.

Additional type-F adapters available: type-F (m) to type-N (m) (85039-60010), type-F (m) to type-F (f) (85039-60012), and type-F (f) to type-N (f) (85039-60014).

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 3 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	+\$3,570
Opt 006 6 GHz Frequency Extension	+\$5,100
Opt 010 Time-Domain Capability	+\$5,405
Opt 011 Delete Built-in Test Set	-\$6,630
Opt 075 75 Ω Impedance	\$0
Opt 1D5 High-Stability Frequency Reference	+\$1,020
HP 85047A 50 Ω S-Parameter Test Set—6 GHz	\$11,000
Opt 009 Mechanical Test Port Switch	-\$1,040
Opt 913 Rackmount Kit (5062-4069)	+\$42
HP 85046A 50 Ω S-Parameter Test Set—3 GHz	\$9,365
Opt 009 Mechanical Test Port Switch	-\$1,040
Opt 913 Rackmount Kit (5062-4069)	+\$42
HP 85046B 75 Ω S-Parameter Test Set—300 kHz–2 GHz	\$9,365
Opt 009 Mechanical Test Port Switch	-\$1,040
Opt 913 Rackmount Kit (5062-4069)	+\$42
HP 85029B Precision 7-mm Verification Kit	\$1,770
Opt 001 Data for HP 8702B	\$0
HP 85031B Precision 7-mm Calibration Kit	\$1,250
HP 85032B 50 Ω Type-N Calibration Kit	\$2,030
HP 85032E 50 Ω Type-N Economy Calibration Kit	\$678
HP 85033D 3.5-mm Calibration Kit	\$3,060
HP 85036B 75 Ω Type-N Calibration Kit	\$2,080
HP 85039A Type-F Calibration Kit	\$2,395
HP 85060C Electronic Calibration Control Unit	\$5,200
HP 85060 Series Electronic Calibration Modules	Varies
HP 85043D System Rack	\$3,330
HP 11883A Harmonic Measurements (Option 002) Upgrade	\$3,640
HP 11884A 6 GHz Receiver (Option 006) Upgrade	\$3,640
HP 11884B 6 GHz (Option 006) Upgrade Kit for HP 8753D	\$6,120
HP 11884C 6 GHz (Option 006) Upgrade Kit for HP 8753D Option 011	\$6,120
HP 85019B Time Domain (Option 010) Upgrade	\$5,520
HP 86389A Solid-State Switch Upgrade Kit (for HP 85046A/B Test Sets)	\$1,560
HP 86389B Solid-State Switch Upgrade Kit (for HP 85047A Test Sets)	\$1,560
HP 86205A 50 Ω Bridge	\$1,350
HP 86207A 75 Ω Bridge	\$1,350
HP 8753D	
Opt K36 Duplexer Test Adapter	+\$4,000
Opt K39 Three-Port Test Set Adapter	+\$7,000
HP 11850C 50 Ω Power Splitter	\$989
HP 11850D 75 Ω Power Splitter	\$1,770
HP 11851B 50 Ω/Type-N RF Cable Kit	\$1,040
HP 11852B 50 Ω/75 Ω Minimum Loss Pad	\$500
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 11857B 75 Ω Type-N Test Port Extension Cables	\$1,515
HP 11857D 50 Ω APC-7 Test Port Extension Cables	\$1,300

↻ Indicates QuickShip availability.

HP 8753D Series