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NETWORK ANALYZERS

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Accessories (cont'd)
HP 8753C 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 8753C 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.

Option 001 is intended solely for use with the HP8752A network analyzer. Option 001 removes the precision phase-matched 7 mm to Type N adapters.

HP 85033C 3.5 mm Calibration Kit

The HP 85033C Calibration Kit contains precision 3.5 mm standards used to calibrate the HP 8753C and its 50 Ω test sets for measurement of devices with 3.5 mm and SMA connectors. Standards include fixed terminations, open circuits, and short circuits. Precision 7 mm to 3.5 mm adapters are included for accurate measurements of non-insertable devices.

Option 001 is intended solely for use with the HP 8752A network analyzer. Option 001 removes the precision phase-matched 7 mm to 3.5 mm adapters.

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 8753C 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. Precision phase-matched adapters are included for accurate measurements of non-insertable devices.

Verification Kits

Measuring known devices, other than the calibration standards, is a convenient way of verifying that the HP 8753C 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 8753C 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, an HP 85029B verification kit, and an external 3.5-inch disk drive connected to the HP 8753C.

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.

Software

Software operates with a BASIC operating system, using an HP Series 300/400 computer (2 MB of memory required).

HP 85160A Measurement Automation Software

Measurement automation software simplifies device measurements by providing guided measurements, limit testing, sequencing to test all four S-parameters, data formatting flexibility (data files can be formatted to be compatible with Touchstone® linear circuit simulation programs), and complete save/recall capability to a floppy disk. After it is configured, you simply recall a test file and calibration data, connect the device under test, and output the results.

HP 85165A Resonator Measurement Software

Resonator measurement software performs complete characterization of crystals, SAWs, and other resonant devices using the HP 8753C. The software guides the user through the measurement process and calculates key parameters of the device under test according to the EIA-512 resonator measurement standard.

Systems

Two measurement systems are available that will increase measurement efficiency in research and development and production.

HP 8753C Option E02 S-Parameter/Noise Figure Measurement System

Combining the capabilities of the HP 8753C Network Analyzer, the HP 8970B Noise Figure Meter, and a specially designed S-Parameter Test Set, this system allows your key amplifier measurements of gain, phase/linearity, and noise figure to be made through a single RF test port connection.

HP 8753C Option E20 Frequency Converter Measurement System

The HP 8753C Option E20 test system combines the capabilities of the HP 8753C Network Analyzer and a specially designed test set to characterize frequency converter performances with a single RF connection. Make measurements of:
- Conversion loss
- Compression
- Group delay
- Amplitude/phase tracking
- RF and IF port SWR
- IO feedthrough
- Isolation (RF/IF and IF/RF)
- Output power

Ordering Information

	Price
HP 8753C Network Analyzer	$26,500
Opt 002 Harmonic Measurement Capability	+ $3,500
Opt 006 6 GHz Receiver Option	+ $3,500
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 (08753-90153)	+ $150 ☎
Opt 913 Rack Mount Kit (w/handles 5062-4072)	+ $40 ☎
Opt E02 S-Parameter-Noise Figure Measurement System	+ $37,650
Opt E20 Frequency Connector Measurement System	+ $40,115
HP 85047A 50 Ω S-Parameter Test Set—6 GHz	$10,800
Opt 009 Mechanical Test Port Switch	− $1,000
Opt 913 Rack Mount Kit (5062-4069)	+ $40 ☎
HP 85046A 50 Ω S-Parameter Test Set—3 GHz	$9,000
Opt 009 Mechanical Test Port Switch	− $1,000
Opt 913 Rack Mount Kit (5062-4069)	+ $40 ☎
HP 85046B 75 Ω S-Parameter Test Set—3 GHz	$9,000
Opt 009 Mechanical Test Port Switch	− $1,000
Opt 913 Rack Mount Kit (5062-4069)	+ $40 ☎
HP 85044A 50 Ω Transmission/Reflection Test Set	$3,200
HP 85044B 75 Ω Transmission/Reflection Test Set	$3,700
HP 85029B Precision 7 mm Verification Kit	$1,600
Opt 001 Data for HP 8702B	$0
HP 85031B Precision 7 mm Calibration Kit	$1,200
HP 85032B 50 Ω Type N Calibration Kit	$1,600
Opt 001 Deletes 7 mm to Type N adapters	− $500
HP 85033C Precision 3.5 mm Calibration Kit	+ $2,500
Opt 001 Deletes 7 mm to 3.5 mm adapters	− $500
HP 85036B 75 Ω Type Calibration Kit	$2,000
HP 85043B Systems Rack	$3,200
HP 85160A Measurement Automation Software	$1,550
HP 85165A Resonator Measurement Software	$5,000
HP 11882A Upgrade Kit for HP 8753A	$3,400
HP 11883A Harmonic Measurements (Opt 002) Upgrade	$3,500
HP 11884A 6 GHz Receiver (Opt 006) Upgrade	$3,500
HP 85019A Time Domain (Opt 010) Upgrade (HP 8753A)	$5,300
HP 85019B Time Domain (Opt 010) Upgrade (HP8753B/C)	$5,300
HP 86388A Upgrade Kit for HP 8753B (Rev. 3.00)	$300
HP 86389A Solid-State Switch Upgrade Kit (for HP 85046A/B test sets)	$1,500
HP 86389B Solid-State Switch Upgrade Kit (for HP85047A test sets)	$1,500
HP 11850C 50 Ω Power Splitter	$950
HP 11850D 75 Ω Power Splitter	$1,500
HP 11851B 50 Ω/Type N RF Cable Kit	$950
HP 11852B 50 Ω/75 Ω Minimum Loss Pad	$400
HP 11853A 50 Ω Type N Accessory Kit	$400
HP 11854A 50 Ω BNC Accessory Kit	$400
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	$1,455
HP 11857D 50 Ω APC-7 Test Port Extension Cables	$1,050
HP 11600B/11602B Transistor Fixtures	$1,800
HP 11858A Transistor Fixture Adapter	$980

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

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RF Connectors
Test Ports: 50 Ω Type-N (female)
75 Ω Type-N (female) (Opt 075)
Physical Characteristics
Size: 178 mm H × 425 mm W × 508 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 8752C 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 8752C network analyzer. This kit is user installable.
HP 11884D 6 GHz Upgrade Kit for HP 8752C
Includes installation at a local HP service center. Not for use with HP 8752C Opt 075.
HP p/n 08752-60019 Step Attenuator Retrofit Kit

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 8752C 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 8752C:
HP p/n 8120-4721 Type-N 50 Ω (both connectors male)
HP p/n 8120-2408 Type-N 75 Ω (both connectors male)
HP p/n 8120-2409 Type-N 75 Ω (one male, one female connector)
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 8752 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 8752C family contain precision standards used in accuracy enhancement procedures to characterize the systematic errors of an HP 8752C 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 8752C for measurements of devices with 50 Ω Type-N connectors. This kit can also be used to perform system verification. Opt 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 or 8752C Option 075 for measurements of devices with 75 Ω Type-N connectors. This kit can also be used to perform system verification.
HP 85033D 3.5 mm Calibration Kit
Contains precision 3.5 mm standards used to calibrate the HP8752C network analyzer for measurements of devices with 3.5 mm or SMA connectors. Opt 001 removes the precision phase-matched 7mm to 3.5mm adapters.
HP 85039A Type-F Calibration Kit
Contains fixed load, open and short circuits, and adapters to calibrate the HP 8752C for measurements of devices with 75 Ω Type-F connectors.

For the most current prices and product information, contact your local Hewlett-Packard sales office—see page 691.

Ordering Information
HP 8752C Network Analyzer
Opt 003 3 GHz Frequency Extension
Opt 004 Step Attenuator
Opt 006 6 GHz Frequency Extension
Opt 010 Time Domain Capability
Opt 075 75 Ω Impedance
Opt 802 Add Dual Disk Drive and HP-IB Cable
Opt AFN Add 50 Ω Test Port Cable
Opt AFP Add 75 Ω Test Port Cable
HP 11885A 3 GHz Frequency Upgrade
HP 85019C Time Domain Upgrade
HP 11884D 6 GHz Upgrade Kit
HP 85032B 50 Ω Type-N Calibration Kit
Opt 001 Deletes 7mm to Type-N adapters
HP 85036B 75 Ω Type-N Calibration Kit
HP 85033D 3.5 mm Calibration Kit
HP 85039A Type-F 75 Ω Calibration Kit
HP 11878A 3.5 mm Adapter Kit
HP 11853A 50 Ω Type-N Accessory Kit
HP 11854A 50 Ω BNC Accessory Kit
HP 11855A 75 Ω Type-N Accessory Kit
HP 11856A 75 Ω BNC Accessory Kit
HP 11852B 50 Ω/75 Ω Minimum Loss Pad
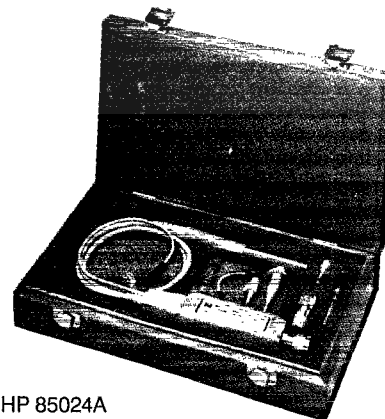**Opt 004** 50 Ω Type-N (m) and 75 Ω Type-N (f) connectors
HP 8120-4781 50 Ω Type-N Test Port Cable
HP 8120-2408 75 Ω Type-N Test Port Cable
HP 85024A High Frequency Probe

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 8753D, 8752C, 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 (at 500 MHz): <0.7 pF (nominal)
Input Resistance: 1 MΩ (nominal)
Bandwidth: 300 kHz to 3 GHz
Gain (at 500 MHz): 0 dB ±1 dB
Average Noise Level (10 Hz to 10 MHz): <1 mV
Frequency Response: ±1 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)
<25 dB (100 MHz to 3 GHz)
Distortion (at 0.3 V): < −30 dBc
Includes: Type-N male adapter, 10:1 divider, spare probe tips, 2½-in ground lead, hook tip, spanner tip, and probe tip nut driver.

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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 8753D 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.

HP 85033D 3.5 mm Calibration Kit

The HP 85033D calibration kit contains fixed loads and one-piece open and short circuits 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.

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. Precision phase-matched adapters are included for accurate measurements of non-insertable devices.

HP 85039A Type-F Calibration Kit

The HP 85039A calibration kit contains Type-F male open, short, and load standards to calibrate the HP 8753D 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.

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, 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

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.

Opt 002 Harmonic Measurement Capability
Opt 006 6 GHz Frequency Extension
Opt 010 Time Domain Capability
Opt 011 Delete Built-in Test Set
Opt 075 75 Ω Impedance
Opt 1D5 High Stability Frequency Reference
HP 85047A 50 Ω S-Parameter Test Set—6 GHz
Opt 009 Mechanical Test Port Switch
Opt 913 Rack Mount Kit (5062-4069)
HP 85046A 50 Ω S-Parameter Test Set—3 GHz
Opt 009 Mechanical Test Port Switch
Opt 913 Rack Mount Kit (5062-4069)
HP 85046B 75 Ω S-Parameter Test Set—3 GHz
Opt 009 Mechanical Test Port Switch
Opt 913 Rack Mount Kit (5062-4069)
HP 85044A 50 Ω Transmission/Reflection Test Set
HP 85044B 75 Ω Transmission/Reflection Test Set
HP 85029B Precision 7 mm Verification Kit
Opt 001 Data for HP 8702B
HP 85031B Precision 7 mm Calibration Kit
HP 85032B 50 Ω Type-N Calibration Kit
HP 85033D 3.5 mm Calibration Kit
HP 85036B 75 Ω Type-N Calibration Kit
HP 85039A Type-F Calibration Kit
HP 85060C Electronic Calibration Control Unit
HP 85060 Series Electronic Calibration Modules
HP 85043D System Rack
HP 11882A Upgrade Kit for HP 8753A
HP 11883A Harmonic Measurements (Opt 002) Upgrade
HP 11884A 6 GHz Receiver (Opt 006) Upgrade
HP 11884B 6 GHz (Opt 006) Upgrade Kit for HP 8753D
HP 11884C 6 GHz (Opt 006) Upgrade Kit for HP 8753D Opt 011
HP 85019A Time Domain (Opt 010) Upgrade (HP 8753A)
HP 85019B Time Domain (Opt 010) Upgrade (HP8753B/C/D)
HP 86387A Mixer Measurement Upgrade Kit for the HP 8753B
HP 86387B Mixer Measurement Upgrade Kit for the HP 8753C
HP 86388A Upgrade Kit for HP 8753B (Rev. 3.00)
HP 86389A Solid-State Switch Upgrade Kit (for HP 85046A/B Test Sets)
HP 86389B Solid-State Switch Upgrade Kit (for HP 85047A Test Sets)
HP 86205A 50 Ω Bridge
HP 86207A 75 Ω Bridge
HP 11850C 50 Ω Power Splitter
HP 11850D 75 Ω Power Splitter
HP 11851B 50 Ω/Type-N RF Cable Kit
HP 11852B 50 Ω/75 Ω Minimum Loss Pad
HP 11853A 50 Ω Type-N Accessory Kit
HP 11854A 50 Ω BNC Accessory Kit
HP 11855A 75 Ω Type-N Accessory Kit
HP 11856A 75 Ω BNC Accessory Kit
HP 11857B 75 Ω Type-N Test Port Extension Cables
HP 11857D 50 Ω APC-7 Test Port Extension Cables