

# Agilent 8752C and 8753D Network Analyzers

**Configuration Guide** 

# 300 kHz to 1.3, 3 or 6 GHz 30 kHz to 3 or 6 GHz

The Agilent Technologies 8752C and 8753D are part of a family of compatible products. For flexibility in specifying a solution that meets your exact needs, a system may be ordered as multiple line items. This guide should be used with the 8752C and 8753D Data Sheet, which has a full description of the items listed.

# **System Configuration Summary**

This summary lists the main components required to form basic measurement systems. Options or peripherals may be added to provide enhanced capability, data storage, or copies of the analyzer's data or display. This configuration guide provides descriptions of product options and compatible accessories. Information on 8753D systems begins on page 2. For 8752C systems, see page 7. Service and support products for both the 8753D and 8752C are listed on the last page.

## Basic transmission/reflection measurements

- □ Agilent 8752C Network Analyzer
- Calibration kit for applicable connector type (optional)

#### Full S-parameter measurements

- □ Agilent 8753D Network Analyzer
- $\Box$  Test port return cables, 50 or 75 ohms
- □ Calibration kit for applicable connector type

System with user-selected test set

- □ Agilent 8753D Network Analyzer
- **Option 011** Delete Built-in Test Set
- $\hfill\square$  Transmission/reflection or S-parameter test set
- $\hfill\square$  Test port return cables for selected test set
- $\hfill\square$  Calibration kit for applicable connector type



#### **Ordering Information**

#### Network analyzer, Agilent 8753D (30 kHz to 3 or 6 GHz systems)

Integrated network analyzer with built-in color display, S-parameter test set, disk drive, and 30 kHz to 3 GHz synthesized source. A standard (50 ohm) 8753D has two 7 mm test ports. An operating and programming manual set is included with each instrument.

**Option 002** Harmonic Measurement Capability For measuring swept second and third harmonic responses. Option 006 extends harmonic measurement capability to 6 GHz.

**Option 006** 6 GHz Frequency Extension Provides source and receiver operation to 6 GHz. Do not order Option 006 with Option 075.

**Option 010** Time Domain Capability

For viewing reflection and transmission responses in time or distance domain.

**Option 011** Delete Built-in Test Set

Removes test set components and allows direct access to the R, A, and B receiver inputs. Source start frequency limited to 300 kHz. Do not order Option 011 with Option 075.

**Option 075** 75 Ohm Impedance

Replaces the standard 50 ohm test set with a 75 ohm test set. Test ports are 75 ohm type-N connectors. Do not order Option 075 with Option 006 or Option 011.

**Option 1D5** High Stability Frequency Reference Provides improved frequency accuracy over time and with temperature variation.

**Option 0B0** Delete Operating Manual Set

**Option 0B1** Add Extra Operating Manual Set

**Option 1CM** Rack Mount Kit (without handles)

**Option 1CP** Rack Mount Kit With Handles

**Option 1BN** MIL-STD 45662A Calibration Certification

**Option 1BP** MIL-STD 45662A Calibration with Test Data

**Option UK6** Commercial Calibration Certificate with Test Data

**Option W08** Convert one year on-site warranty to three-year return-to-Agilent warranty

□ **Option W31** Two additional years of on-site service (where available) The following localization options provide manuals that are partially or completely translated into the specified languages, depending on the region.

**Option AB0** Taiwan - Chinese Localization

**Option AB1** Korea - Korean Localization

**Option AB2** China - Chinese Localization

**Option ABD** Germany - German Localization

**Option ABE** Spain - Spanish Localization

**Option ABF** France - French Localization

□ Option ABJ Japan - Japanese Localization

**Option ABZ** Italy - Italian Localization

#### **Measurement Accessories**

Accessories are available in these connector types: 3.5 mm, 7 mm, 50 ohm type-N, 75 ohm type-N, and type-F. A standard or Option 075 8753D includes a built-in test set. A calibration kit and test port cables should be added for a complete measurement system. For an 8753D Option 011 network analyzer, you will also need to add a power splitter or test set.

Test port cables are used to connect to the device under test. Calibration kits include standards, such as open/short circuits and loads, that are measured by the network analyzer for increased measurement accuracy. A verification kit is used to verify system performance.

#### For 50 ohm Device Measurement Test Port Cables

- □ 50 ohm 7 mm test port return cables, Agilent 11857D A pair of 610 mm (24 in.) cables, for use with the standard 8753D network analyzer or the 85046A and 85047A test sets.
- □ 50 ohm type-N RF cable set, Agilent 11851B For systems based on an 8753D Option 011. Includes three phase-matched 610 mm (24 in.) cables and one 860 mm (34 in.) cable. Used with the 85044A and 85044B test sets, and the 11850C and 11667A power splitters.

#### **Calibration Kits**

Choose a kit for each connector type to be used.

- □ 7 mm calibration kit, Agilent 85031B Contains fixed loads, and open/short circuit.
- □ **50 Ohm type-N calibration kit, Agilent 85032B** Contains fixed loads, open and short circuits, and 7 mm to type-N adapters for both connector sexes for use with 7 mm test port cables.
- 3.5 mm calibration kit, Agilent 85033D
   Contains fixed loads, one-piece open and short circuits, and 7 mm to 3.5 mm adapters for both connector sexes for use with 7 mm test port cables.

#### Electronic calibration modules and control unit, Agilent 85060 Series

This product family provides electronic calibration (ECal) capability. With ECal, the usual calibration kit standards are replaced by two solid state calibration modules which 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. There is less chance for error and less wear on connectors. ECal requires the 85060C ECal Control Unit in addition to 85060 series calibration modules in the appropriate connector type.

#### Verification Kit

#### □ 7 mm verification kit, Agilent 85029B

Includes attenuators and mismatch attenuator with data on a 3.5 inch disk for use in confirming accuracy enhanced system measurement performance, traceable to national standards. Test procedure is provided in the service manual. For use with a standard 8753D, or with systems including an 8753D Option 011 and an 85044A, 85046A, or 85047A test set. The 85031B 7 mm calibration kit and 11857D test port cables are also required.

# Adapters

- □ 50 ohm type-N accessory kit, Agilent 11853A Contains type-N male to type-N male adapters, type-N female to type-N female adapters, and type-N male and female shorts.
- □ 50 ohm BNC accessory kit, Agilent 11854A Contains type-N to BNC adapters for both connector sexes and a BNC male short.

## For 75 ohm Device Measurements Test Port Cables

- □ **75 ohm type-N Test Port Cables, Agilent 11857B** A pair of 610 mm (24 in.) cables, for use with the 8753D Option 075 or the 85046B S-parameter test set.
- □ 50 ohm type-N RF Cable Kit, Agilent 11851B For systems based on an 8753D Option 011. Includes three phase-matched 610 mm (24 in.) cables and one 860 mm (34 in.) cable. Used with the 85044A and 85044B test sets, and the 11850C and 11667A power splitters. An 11852B minimum loss pad is also required with the 85044B.

## **Calibration Kits**

□ 75 ohm type-N calibration kit, Agilent 85036B

Contains 75 ohm fixed loads, open/short circuits, and adapters.

□ **Type-F calibration kit, Agilent 85039A** Contains type-F male fixed load, open and short circuits, type-F female to type-F female adapters, and 75 ohm type-N to type-F adapters.

#### **Minimum Loss Pads and Adapters**

11852B 50 to 75 ohm minimum loss pad (300 kHz to 2 GHz)

Adapts from 50 ohm type-N female to 75 ohm type-N male. Nominal insertion loss is 5.7 dB. **Option 004** 

Provides 50 ohm type-N male and 75 ohm type-N female connectors

□ 75 ohm type-N accessory kit, Agilent 11855A

Contains 75 ohm type-N male to type-N male adapters, type-N female to type-N female adapters, type-N male and female shorts, and type-N male termination.

□ 75 ohm BNC accessory kit, Agilent 11856A

Contains 75 ohm type-N to 75 ohm BNC adapters for both connector sexes, a BNC male short, and BNC male termination.

# Test Sets (For use with Agilent 8753D Option 011)

Transmission/reflection test sets provide the capability to measure transmission and reflection characteristics of a two-port device in the forward direction. S-parameter test sets can measure the characteristics of a two-port device in either direction with a single connection.

# For 50 ohm Device Measurements

# □ 50 ohm transmission/reflection test set, Agilent 85044A 300 kHz to 3 GHz

Includes one 7 mm to type-N (f) adapter. Requires the 11851B RF Cable Kit for connection to the 8753D Option 011.

 50 ohm S-parameter test set, Agilent 85046A 300 kHz to 3 GHz

Requires the 11857D 7 mm Test Port Return Cables for two-port device measurements. Includes a test set interconnect cable and four RF cables to connect to the 8753D Option 011. **Option 009** 

Substitute mechanical transfer switch 
Option 913
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- Rack Mount Kit
- 50 ohm S-parameter test set, Agilent 85047A
   300 kHz to 6 GHz

Requires the 11857D 7 mm Test Port Return Cables for two-port device measurements. Includes a test set interconnect cable and four RF cables to connect to the 8753D Option 011.

Substitute mechanical transfer switch 
□ Option 913

Rack Mount Kit

50 ohm type-N three-way power splitter, Agilent 11850C
 300 kHz to 3 GHz

Requires the 11851B RF Cable Kit.

50 ohm type-N two-way power splitter, Agilent 11667A DC to 18 GHz

Requires the 11851B RF Cable Kit.

# For 75 Ohm Device Measurements

75 ohm transmission/reflection test set, Agilent 85044B
 300 kHz to 2 GHz

Includes one 11852B 50 to 75 ohm minimum loss pad. Requires the 11851B RF cable kit for connection to the 8753D Option 011.

75 ohm S-parameter test set, Agilent 85046B
 300 kHz to 2 GHz

Requires the 11857B 75 ohm test port return cables. Includes a test set interconnect cable and four RF cables to connect to the 8753D Option 011. **Option 009** Substitute mechanical transfer switch **Option 913** Rack mount kit

 75 ohm type-N three-way power splitter, Agilent 11850D 300 kHz to 2 GHz

Includes three 11852B 50 to 75 ohm minimum loss pads for use with the 8753D Option 011 (50 ohms). Requires the 11851B RF cable kit.

# **Other Accessories**

Probe

□ High frequency probe, Agilent 85024A Provides high impedance in-circuit test capability, from 300 kHz to 3 GHz.

## Amplifier

#### □ RF power amplifier, Agilent 8347A

Used to set leveled output power or increase system dynamic range, from 100 kHz to 3 GHz.

## **Power Meters**

For accurate control of leveled test port power. Requires an 8480 series power sensor and a GPIB cable for connection to the 8753D.

- Dever meter, Agilent 436A
- Dever meter, Agilent 437B
- Dual channel power meter, Agilent 438A

## Keyboard

- Keyboard with mini-DIN cable, Agilent C1405B Option ABA
- □ Mini-DIN to DIN adapter, part number C1405-60015 The keyboard with cable and adapter can be connected to the 8753D's DIN interface to form a remote front panel and to provide a quicker, more convenient way to enter titles, labels, and file names. Both of these parts are required and must be ordered separately.

#### System Rack and Related Accessories System rack kit, Agilent 85043D

132 cm (52.0 in.) high x 60 cm (23.6 in.) wide x 90.5 cm (35.6 in.) deep. Supplied with antistatic mat (part number 85043-80013), support rails, rack mounting hardware, and power distribution system.

□ Option 230 220/240 Volt Operation

#### Anti-static mat kit, part number 85043-80013

## **Retrofit Kits**

These kits are used to add additional capability to the 8753D.

- □ Harmonic measurement upgrade kit, Agilent 11883A Includes installation at a local service center. The serial number of the 8753D to be retrofitted must be specified when ordering this kit.
- G GHz upgrade kit for 8753D, Agilent 11884B
   Adds Option 006 to an 8753D that does not have Option 011. Includes installation at a local service center. The serial number of the 8753D to be retrofitted must be specified when ordering this kit. Do not use with an 8753D that has Option 011 or Option 075.
- □ 6 GHz upgrade kit for 8753D Option 011, Agilent 11884C Adds Option 006 to an 8753D with Option 011. Includes installation at a local service center. The serial number of the 8753D to be retrofitted must be specified when ordering this kit. Do not use with an 8753D that has Option 075.
- □ 6 GHz upgrade kit for 8753D Option 011, Agilent 11884C Adds Option 006 to an 8753D with Option 011. Includes installation at a local service center. The serial number of the 8753D to be retrofitted must be specified when ordering this kit. Do not use with an 8753D that has Option 075.
- □ **Time domain upgrade kit, Agilent 85019B** The serial number of the 8753D to be retrofitted must be specified when ordering this kit. Installation is not included.
- High stability frequency reference retrofit kit, part number 08753-60236
   Installation not included.

#### **Upgrade Kits for Other Agilent 8753 Products**

These kits are used to upgrade older existing 8753 systems.

- □ 8753A to 8753B upgrade kit, Agilent 11882A Includes installation at a local Agilent service center. The serial number of the 8753A to be upgraded must be specified when ordering this kit.
- Mixer measurement upgrade kit for the 8753C, Agilent 86387B

Includes installation at a local service center. Not required for 8753C with Rev. 4.02 or higher firmware.

#### Solid state switch upgrade kit for the 85046A/B, Agilent 86389A

Includes installation at a local service center. Requires 8753B/C with Rev. 3.0 or higher firmware, or 8753D Option 011.

 Solid state switch upgrade kit for the 85047A, Agilent 86389B
 Includes installation at a local service center. Requires 8753B/C with Rev. 3.0 or higher

firmware, or 8753D Option 011.

# Agilent 8753C vs. 8753D Configuration Cross-Reference

The following table provides a summary to help customers who are familiar with the 8753C to decide what they need to order for an equivalent 8753D system.

Type of System	8753C Configuration	8753D Configuration
3 GHz S-parameter (50 ohm)	8753C and 85046A	8753D
6 GHz S-parameter (50 ohm)	8753C Option 006 and 85047A	8753D Option 006
75 ohm S-parameter	8753C and 85046B	8753D Option 075
3 GHz with user-selected test set	8753C and test set	8753D Option 011 and test set
6 GHz with user-selected test set	Not available	8753D Options 006 and 011 and test set

#### Ordering Information Agilent 8752C Network Analyzer (300 kHz to 1.3 GHz, 3 GHz, or 6 GHz systems)

#### □ Network analyzer, Agilent 8752C

Integrated network analyzer with built-in color display, transmission/reflection test set, and synthesized 300 kHz to 1.3 GHz source. Includes one type-N male to type-N male test port cable, whose errors have been removed by the built-in factory calibration. An operating and programming manual set is included with each instrument.

**Option 003** 3 GHz frequency extension Provides source and receiver operation to 3 GHz. Do not order both Option 003 and Option 006.

**Option 004** Step attenuator

Provides source output power range from -85 to +10 dBm.

**Option 006** 6 GHz frequency extension Provides source and receiver operation to 6 GHz. Do not order Option 006 with Option 003 or Option 075.

**Option 010** Time domain capability For viewing reflection and transmission responses in time or distance domain.

**Option 075** 75 ohm impedance

Test ports are 75 ohm type-N connectors. Do not order Option 075 with Option 006.

**Option 802** Add dual disk drive and GPIB cable

□ Option AFN Add 50 ohm test port cable Provides a second type-N male to type-N male test port cable, part number 8120-5639, and a type-N female to type-N female adapter, part number 1250-1472. Instructions are provided for storing a new internal calibration to account for the effect of this cable. **Option AFP** Add 75 ohm test port cable Provides a 75 ohm type-N male to type-N female cable, part number 8120-2409. Instructions are provided for storing a new internal calibration to account for the effect of this cable.

**Option 0B0** Delete operating manual set

**Option 0B1** Add extra operating manual set

**Option 1CM** Rack mount kit without handles

**Option 1CP** Rack mount kit with handles

□ Option 1BN MIL-STD 45662A

Calibration certification

□ Option 1BP MIL-STD 45662A

Calibration with test data

**Option UK6** Commercial calibration certificate with test data

**Option W08** Convert one year on-site warranty to three-year return-to-Agilent warranty

□ **Option W31** Two additional years of on-site service (where available). The following localization options provide manuals that are partially or completely translated into the specified languages, depending on the region.

**Option AB0** Taiwan - Chinese Localization

**Option AB2** China - Chinese Localization

- **Option ABD** Germany German Localization
- **Option ABE** Spain Spanish Localization
- **Option ABF** France French Localization
- **Option ABJ** Japan Japanese Localization
- **Option ABZ** Italy Italian Localization

#### **Measurement Accessories**

Accessories are available in these connector types: 50 ohm type-N, 75 ohm type-N, 3.5 mm, BNC, and type-F. The Agilent 8752C's internal error correction compensates for loss and mismatch errors up to its type-N test ports. For most applications, no additional calibration is required. External user calibration is recommended to remove the effects of cables and adapters that are not part of the system, or when the highest accuracy is desired.

Calibration kits include standards that are required for vector accuracy enhancement. Unlike the 8753D system, the 8752C does not offer a verification kit. Instead, the Agilent 85032B 50 ohm and 85036B 75 ohm type-N calibration kits can be used to verify the performance of these systems.

#### **Calibration Kits**

Choose a kit for each connector type to be used.

#### □ 50 ohm type-N calibration kit, Agilent 85032B

Contains fixed loads, open and short circuits, and 7 mm to type-N adapters for both connector sexes. This kit is also used to verify the 8752C system performance.

#### **Option 001**

Deletes 7 mm to type-N adapters These adapters are not needed when this kit is used exclusively with an 8752C system.

#### **3.5 mm calibration kit, Agilent 85033D**

Contains fixed loads, one-piece open and short circuits, and 7 mm to 3.5 mm adapters for both connector sexes.

#### **Option 001**

Deletes 7 mm to 3.5 mm adapters These adapters are not needed when this kit is used exclusively with an 8752C system.

□ **75 ohm type-N calibration kit, Agilent 85036B** Contains 75 ohm fixed loads, open/short circuits, and 75 ohm type-N adapters of both sexes. This kit is also used to verify the 8752C Option 075 system performance.

#### □ Type-F calibration kit, Agilent 85039A

Contains fixed load, open and short circuits, type-F female to type-F female adapter, and 75 ohm type-N to type-F adapters.

#### Adapters

- 50 to 75 ohm minimum loss pad (300 kHz to 2 GHz), Agilent 11852B
   Adapts from 50 ohm type-N female to 75 ohm type-N male. Nominal insertion loss is 5.7 dB.
   Option 004
   Provides 50 ohm type-N male and 75 ohm type-N female connectors
   50 ohm type-N accessory kit, Agilent 11853A
- Contains type-N male to type-N male adapters, type-N female to type-N female adapters, and type-N male and female shorts.
- □ 50 ohm BNC accessory kit, Agilent 11854A Contains type-N to BNC adapters and a BNC male short.
- □ **75 ohm type-N accessory kit, Agilent 11855A** Contains 75 ohm type-N male to type-N male adapters, type-N female to type-N female adapters, type-N male and female shorts, and type-N male termination.
- □ **75 ohm BNC accessory kit, Agilent 11856A** Contains 75 ohm type-N to 75 ohm BNC adapters for both connector sexes, a BNC male short, and BNC male termination.
- □ **3.5 mm adapter kit, Agilent 11878A** Contains 50 ohm type-N to 3.5 mm adapters.
- □ Input/output control adapter, part number 08752-60020 Attaches to the "test set interconnect" on the rear panel of the 8752C to allow access to general purpose input/output signal lines. Female SMB connectors are provided for four TTL outputs, one TTL input, an end-of-sweep output, and a limit test output.

#### **Test Port Cables**

- □ **50 ohm type-N test port cable, part number 8120-5639** (both connectors are type-N male)
- □ **75 ohm type-N test port cable, part number 8120-2408** (both connectors are type-N male)
- □ **75 ohm type-N test port cable, part number 8120-2409** (one male, one female connector)

#### Other Accessories Retrofit Kits

These kits are used to add additional capability to the Agilent 8752C.

- □ **3 GHz frequency extension upgrade kit, Agilent 11885A** Includes installation at a local Agilent service center. The serial number of the 8752C to be retrofitted must be specified when ordering this kit.
- □ 6 GHz upgrade kit for the 8752C, Agilent 11884D Includes installation at a local Agilent service center. The serial number of the 8752C to be retrofitted must be specified when ordering this kit. Do not use with an 8752C that has Option 075.
- □ **Time domain retrofit kit, Agilent 85019C** The serial number of the 8752C to be retrofitted must be specified when ordering this kit. Installation not included.
- **Step attenuator retrofit kit, part number 08752-60019** Installation is not included.

# Peripherals

The following peripherals may be used with either the 8753D or the 8752C. Other peripherals not listed here may also be compatible with these instruments.

## Monitors

- □ 12" Medium resolution color monitor, HP 35741A
- □ 12" Medium resolution color monitor, HP 35741B (international)

## Plotters

An external computer is not required to copy the analyzer's display to a plotter.

- □ Six-Pen Graphics Plotter, HP 7475A Option 002 ISO A4 and A3 or 8.5 x 11 in. and 11 x 17 in. chart sizes. Option 002 specifies a GPIB interface.
- □ Eight-Pen Graphics Plotter, HP 7550B ISO A4 and A3 or 8.5 x 11 in. and 11 x 17 in. chart sizes.

#### **Printers**

An external computer is not required to copy or list data from the analyzer's display to a printer. Some printers have options to specify the interface. Consult your local Agilent Technologies office for more details. Other printers not listed here may also be compatible.

- DeskJet 520 printer, HP C2170A
- DeskJet 560C printer, HP C2168A
- DeskJet 310 portable InkJet printer, HP C2621A
- PaintJet color graphics printer, HP 3630A
- LaserJet series 4 printer, HP C2001A

#### **Disk Drives**

Measurement data, instrument states, calibration data, and test sequences may be stored directly to an external disk drive without the aid of a computer. The 8753D has a built-in disk drive, but an external disk drive can be added. The 8752C and 8753D are compatible with CS80 format drives, such as the ones listed here.

- □ **3.5 in. dual disk drive, Agilent 9122C** May be ordered as 8752C Option 802.
- Winchester disk drive, Agilent 9153C
   Option 020

20 Mbyte Winchester hard drive with 3.5 in. floppy disk drive

#### **Interface Cables**

Choose the appropriate cables to connect each peripheral to the network analyzer.

- **GPIB Cable, Agilent 10833A** 1.0 m (3.3 ft.)
- □ GPIB Cable, Agilent 10833B 2.0 m (6.6 ft.)
- □ GPIB Cable, Agilent 10833D 0.5 m (1.6 ft.)
- □ Centronics (Parallel) Printer Cable, Agilent 92284A, 2.0 m (6.6 ft.)
- □ RS-232C Printer Cable, Agilent C2913A 1.2 m (3.9 ft.)
- □ Serial Plotter Cable, Agilent C2914A 1.2 m (3.9 ft.)

#### **Printer Interface Adapter**

Adapts the 8752C's GPIB interface for connection to parallel printers or plotters. Not required for the 8753D since it has a built-in Centronics parallel interface.

- □ GPIB to Parallel Interface Converter, ITEL-45CHVU U.S. and Canada version. Converts GPIB to Centronics parallel interface for connecting to printers.
- □ **GPIB to Parallel Interface Converter, ITEL-45CHVE** International version. Converts GPIB to Centronics parallel interface for connecting to printer.

# **Service and Support Products**

The 8752C and 8753D include a one-year on-site service warranty at no extra charge. On-site service may not be available in all areas. Return-to-Agilent service is provided where on-site service is unavailable. Customers may convert the standard one-year on-site warranty to a three-year return-to-Agilent warranty by ordering Option W08. Option W08 must be specified at the time of the analyzer's purchase.

Selected service and support products are listed below. For more information on training, service, and support products for these analyzers, consult your local Agilent sales and service office.

#### Follow-on On-site Service

Option W31, Agilent 8752C

Two Additional Years of On-site Service

Option W31, Agilent 8753D

Two Additional Years of On-site Service Option W31 adds two additional years of on-site support to the analyzer's normal one-year on-site warranty.

□ Option W51, Agilent 8752C Four Additional Years of On-site Service

## Option W51, Agilent 8753D

Four Additional Years of On-site Service Option W51 adds four additional years of on-site support to the analyzer's normal one-year on-site warranty.

#### **Calibration Agreements**

- Option W32, Agilent 8752C Three Year Customer Return Calibration Agreement
- Option W32, Agilent 8753D Three Year Customer Return Calibration Agreement

Option W32 provides return-to-Agilent commercial calibration in the second and third year, plus full calibration after any repair provided by Agilent for three full years.

□ Option W34, Agilent 8752C Three Year Customer Return Standards-Compliant Calibration Agreement

# Option W34, Agilent 8753D

Three Year Customer Return Standards-Compliant Calibration Agreement

Option W34 provides return-to-Agilent standardscompliant calibration in the second and third year, plus full calibration after any repair provided by Agilent for three full years.

#### Agilent Technologies' Test and Measurement Support, Services, and Assistance

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

#### **Our Promise**

"Our Promise" means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

#### Your Advantage

"Your Advantage" means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, outof-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

By internet, phone, or fax, get assistance with all your test and measurement needs.

#### Online Assistance

www.agilent.com/find/assist

#### Phone or Fax United States:

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Europe: (tel) (31 20) 547 2323 (fax) (31 20) 547 2390

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Latin America: (tel) (305) 269 7500 (fax) (305) 269 7599

Australia: (tel) 1 800 629 485 (fax) (61 3) 9272 0749

New Zealand: (tel) 0 800 738 378 (fax) (64 4) 495 8950

Asia Pacific: (tel) (852) 3197 7777 (fax) (852) 2506 9284

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# Agilent Technologies

Innovating the HP Way