
17 Fixtures, Test Sets and Accessories for the HP 8751A

Application Brief AN 1202-2

HP 8751A Network Analyzer 5 Hz to 500 MHz

Summary: Having the right instrument is important for obtaining good measurements. However, it is equally important to have the proper interface between the HP 8751A and the device-under-test. This brief describes some of the products available to help you get the most from your HP 8751A Network Analyzer.

S-Parameter Test Sets

Measure all four S-parameters with a single connection of the test device. These test sets, along with a good fixture, allow accurate and convenient S-parameter measurements.

Transmission / Reflection Test Sets

These are an economical alternative to S-parameter test sets. They allow S-parameter measurements in a single direction.

Semiconductor and Transistor Test

Hewlett-Packard makes several fixtures to test semiconductor and transistor devices.

Active & Passive Probes

When you can't bring the device to the analyzer use HP probes. They provide reliable in-circuit analysis with high input impedance and low capacitance.

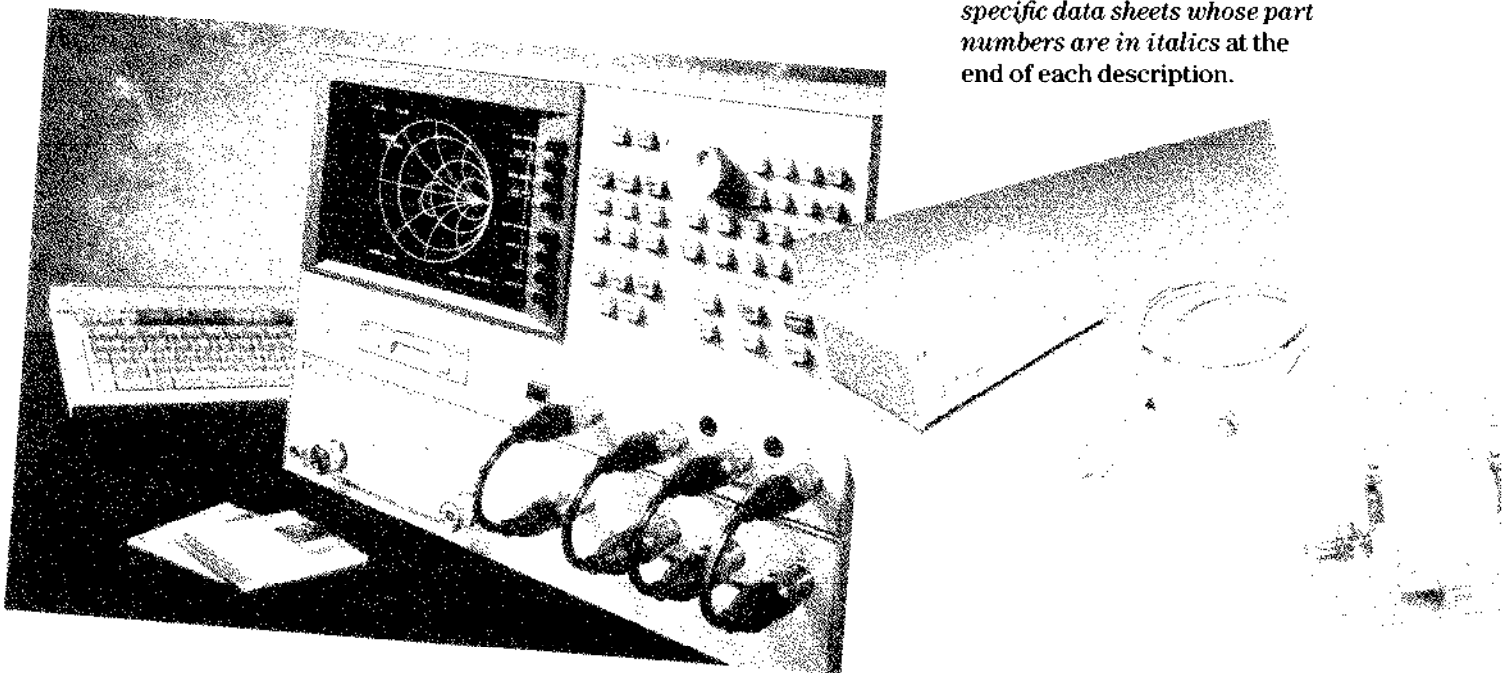
Crystal and Diode Detectors

The HP 8751A can measure dc voltage on channel B. With a detector, you can measure non-linear devices. Correction for diode non-linearities is included in the HP 8751A.

Specialty Fixtures and Accessories

Add external dc bias capability with HP accessories. In addition, balanced-to-unbalanced transformers and special-purpose test fixtures are available from third-parties to solve more of your measurement problems.

For more information on these products please see the annual HP general catalog or refer to the *specific data sheets whose part numbers are in italics* at the end of each description.



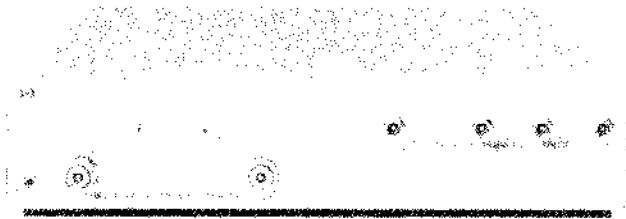
S-Parameter Test Sets

The HP 8700 family of network analyzers are built with a common interface. This means that any test set from the family can be used with any HP 8700 analyzer.

HP 87511A/B

- 100 kHz to 500 MHz
- HP 87511A-50 Ω
- HP 87511B-75 Ω

Data sheet 5952-2373



HP 85046A/B

- 300 kHz to 3 GHz (A, 50 Ω)
- 300 kHz to 2 GHz (B, 75 Ω)
- Can apply external dc bias

Data sheet 5952-3528

HP 85047A

- 300 kHz to 6 GHz
- Solid-state switch standard
- Can apply external dc bias

Data sheet 5952-3528

Transmission/Reflection Test Sets

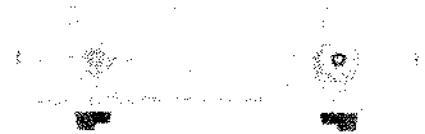


HP 87512A/B

Transmission/Reflection Test Kit

- 5 Hz to 500 MHz
- HP 87512A-50 Ω
- HP 87512B-75 Ω
- Complete with DUT return cable, connect cable, short and load.

Data sheet 5952-2373



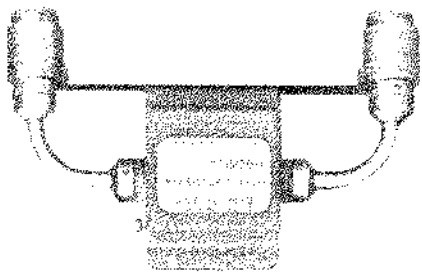
HP 85044A/B

Transmission/Reflection Test Set

- 300 kHz to 3 GHz (A, 50 Ω)
- 300 kHz to 2 GHz (B, 75 Ω)
- Can apply external DC bias

Data sheet 5952-2373

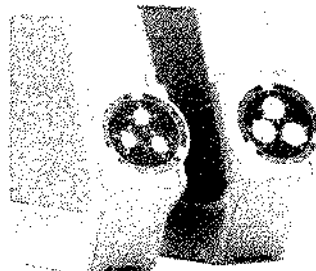
Semiconductor and Transistor Test Fixtures



HP 11608A

Transistor Fixture

- dc to 12.4 GHz
- Complete characterization of stripline transistor
- Includes through-line microstrip and bolt-in grounding structure which can be machined by user



HP 11600B

HP 11602B

Transistor Fixtures

- dc to 2 GHz
- Mounts to front of S-parameter test sets
- HP 11600B: TO-18 / TO-72 packages
- HP 11602B: TO-5 / TO-12 packages

Active & Passive Probes

HP 41800A

Active Probe

- 5 Hz to 500 MHz
- In-circuit network analysis
- 100 k Ω / 3 pF; 1 M Ω / 1 pF input impedance
- Retractable metal sleeve protects tip
- Probe power supplied by front panel of HP 8751A

Data sheet 5952-2373 or 5950-2962

HP 85024A

Active Probe

- 300 kHz to 3 GHz
- In-circuit network analysis
- 1 M Ω input resistance
- Probe power supplied by front panel of HP 8751A

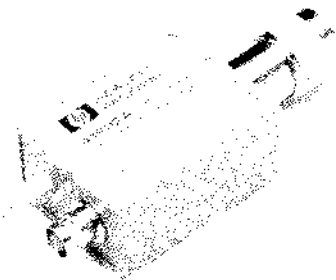
Data sheet 5954-8393

HP 41802A

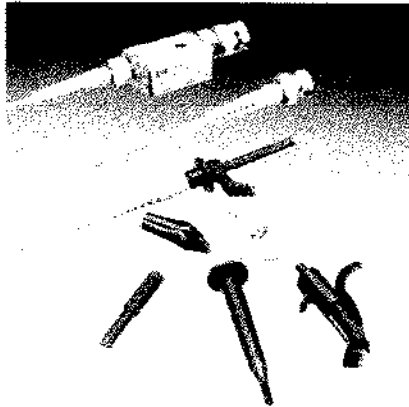
1 M Ω Input Adapter

- 5 Hz to 100 MHz
- Use with passive oscilloscope probes
- Robust construction ensures long service life
- Power supplied by front panel of HP 8751A

Data sheet 5952-2373



HP Oscilloscope Probes 1 M Ω & 10 M Ω Models



- Many popular HP oscilloscope probes can be used with the HP 8751A together with the HP 41802A
- Compatible Probes:
HP 10432A, HP 10433A
HP 10435A, HP 10440A
HP 10017A, HP 10018A
HP 10080A, HP 10081A

Crystal Detectors



HP 8471D Planar-Doped Barrier Detectors

- 100 kHz to 2 GHz
- >0.5 mV/ μ W sensitivity
- BNC connector
- Low cost
- Positive or negative polarity

HP 1141A Differential Probe

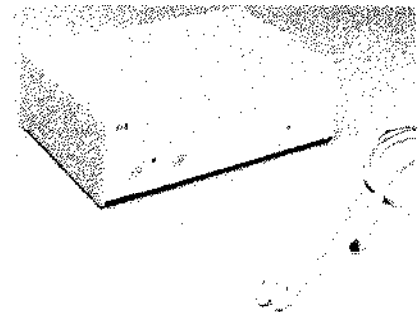
Features:

- dc to 200 MHz
- \pm 200 V max.
- dc offset and dc reject
- Rugged construction

Applications include:

- Disk drives
- Voice and data communications
- Automotive electronics
- Power supplies

Data sheet 5952-3291

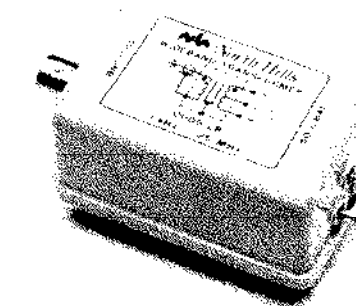
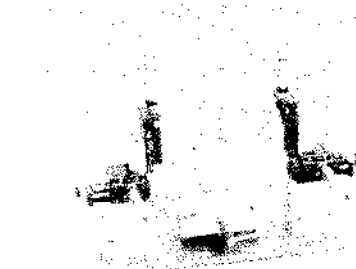


HP 8474A/B/C/D/E High Performance Planar-Doped Barrier Detectors

- Extremely flat frequency response
- Good frequency stability vs. temperature
- 7 mm, type-N and 2.4 mm connectors available

Please see the *Microwave Test Accessories Catalog*, published annually.

Specialty Fixtures and Accessories



HP 11612A Bias Network

Allows dc bias to the center conductor of coaxial line connected to the DUT. Provides a dc block to the RF input port.

Inter-Continental Microwave Universal Test Platform-3000

- Package and component measurements
- Custom probes
- x,y,z axis adjustment
- Inter-Continental Microwave
1515 Wyatt Drive,
Santa Clara, CA 95054
Tel: (408) 727-1596

*HP Data Sheet 5091-0772E or
contact ICM*

Balanced-unbalanced transformers

- Transform single-end 50 Ω
coax to balanced (differential)
- Vendors include:
North Hills Electronics, Inc.
1 Alexander Place,
Glen Cove, NY 11542-3796
(516) 671-5700
- Contact North Hills or HP for
application assistance

For more information, call your local HP sales office listed in your telephone directory or an HP regional office listed below for the location of your nearest sales office.

United States:
Hewlett-Packard Company
4 Choke Cherry Road
Rockville, MD 20850
(301) 670-4300

Hewlett-Packard Company
5201 Tollview Drive
Rolling Meadows, IL 60008
(708) 255-9800

Hewlett-Packard Company
5161 Lankershim Blvd.
No. Hollywood, CA 91601
(818) 505-5600

Hewlett-Packard Company
2015 South Park Place
Atlanta, GA 30339
(404) 955-1500

Canada:
Hewlett-Packard Ltd.
6877 Goreway Drive
Mississauga, Ontario L4V 1M8
(416) 678-9430

Japan:
Yokogawa-Hewlett-Packard Ltd.
15-7, Nishi Shinjuku 4 Chome
Shinjuku-ku
Tokyo 160, Japan
(03) 5371-1351

Latin America:
Hewlett-Packard
Latin American Region Headquarters
Monte Pelvoux No. 111
Lomas de Chapultepec
11000 Mexico, D.F.
(525) 202-0155

Australia/New Zealand:
Hewlett-Packard Australia Ltd.
31-41 Joseph Street
Blackburn, Victoria 3130
Australia (A.C.N. 004 394 763)
(03) 895-2895

Far East:
Hewlett-Packard Asia Ltd.
22/F Bond Centre
West Tower
89 Queensway
Central, Hong Kong
(852) 848 7777

Europe/Africa/Middle East:
Hewlett-Packard S.A.
Marcom Operations Europe
P.O. Box 529
1180 AM Amstelveen
The Netherlands

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Many of the products in this brief can be used outside of the 5 Hz to 500 MHz frequency range of the HP 8751A and can be used with other HP instruments. This gives you added flexibility and a higher return on your investment.

Also ask for:

**HP 8751A Network Analyzer
Brochure**
(part number: 5952-2370)

HP 8751A Technical Data Sheet
(part number: 5952-2373)

HP 8751A Ordering Guide
(part number: 5952-2372)

**HP Instrument Basic
HP 8751A Option 002**
(part number: 5091-2034E)

**Designing Impedance Matching
Networks With the HP 8751A**
Application Note 1202-1
(part number: 5091-1560E)