

Agilent 41800A Active Probe, 5 Hz to 500 MHz Technical Overview

The Agilent 41800A active probe provides high input impedance from 5 Hz to 500 MHz. The 41800A is a valuable tool when used with a network and spectrum analyzer for circuit signal analysis. The 41800A improves your circuit design and evaluation for audio, video, HF, and VHF bands. The low input capacitance offers probing with negligible circuit loading, making it effective for precise in-circuit measurements.



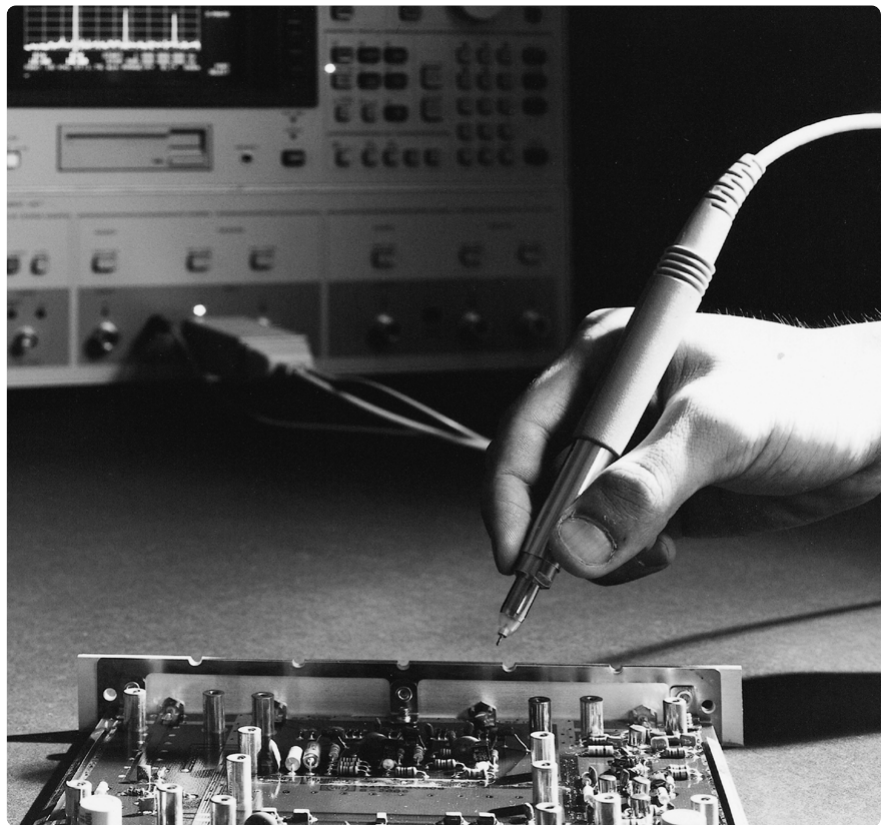
Reliable In-Circuit
Signal Analysis

For Both Spectrum and Network Analysis

The 41800A can be used with a spectrum analyzer to evaluate the quality of circuits by measuring spurious level, harmonics, and noise. The active probe can also be used with a network analyzer to perform gain, phase, and group-delay measurements at the circuit-level.

Retractable Metal Sleeve for Protection

In addition to excellent performance, the 41800A also has a design to protect the probe tip. The probe has a retractable metal sleeve which protects the probe tip from a physical damage when not used and also from electro-static discharge (ESD) damage.



Agilent Technologies

Compatible with Agilent Network and Spectrum Analyzers

The 41800A is directly compatible with Agilent network and spectrum analyzers shown in the table below.

These Agilent analyzers have the probe power supplied from the front panel. In addition, you can use the Agilent 11899A probe power supply with other analyzers that don't have a compatible power supply for the 41800A.

Network/Spectrum/Impedance Analyzer	Spectrum Analyzer	Network Analyzer
4395A, 4396B	8590 Series	E5100A

Specifications

(Terminated with Agilent part number 11880-60001 type-N adapter)

Bandwidth:	5 Hz to 500 MHz
Probe gain:	0 dB \pm 0.5 dB @ 50 MHz
Input R, C (typical):	100 kW, 3 pF (probe alone) 1 MW, 1 pF (with 10:1, 100:1 divider)
Frequency response relative to 50 MHz:	+1/-2 dB @ < 50 Hz \pm 1 dB @ 50 Hz to 200 MHz +1.5/-2 dB @ > 200 MHz
Average noise level (typical):	10 nV/ $\sqrt{\text{Hz}}$ @ \geq 300 kHz +3 dB/Oct @ <300 kHz
2nd harmonic distortion (typical):	< -50 dBc @ -20 dBm (250 MHz) input
3rd order intermodulation distortion (typical):	< -70 dBc @ -26 dBm two signals input (400 MHz, 400.5 MHz)
1 dB gain compression:	> +3 dBm input @ 500 MHz
Maximum allowable input (DC + AC):	\pm 40 V
Output connector:	50 W type-N male
Power:	+15 V/85 mA, -12.6 V/65 mA
Weight:	0.3 kg (probe alone) 2 kg (including accessories)
Length:	Approximatly 1.2 m
Operating temperature humidity:	0 °C to 55 °C, RH \leq 95% (40 °C)
Accessories furnished:	Type BNC male adapter, 10:1, 100:1 dividers, Hook tip, 2.5 inch ground lead, 30 mil, 12 mil spare probe tips, spanner tip assembly, probe tip nut driver, operating note, carrying case

Optional Accessories

Agilent 11899A probe power supply
Agilent part number 11880-60001 type-N male adapter

Option Ordering Information

Option 41800A-UK6:

41800A active probe

Commercial calibration certificate with test data

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, out-of-warranty repairs, and onsite education and training, as well as design, system integration, project management, and other professional engineering 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.

Agilent T&M Software and Connectivity

Agilent's Test and Measurement software and connectivity products, solutions and developer network allows you to take time out of connecting your instruments to your computer with tools based on PC standards, so you can focus on your tasks, not on your connections. Visit www.agilent.com/find/connectivity for more information.

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

Phone or Fax

United States:
(tel) 800 452 4844

Canada:
(tel) 877 894 4414
(fax) 905 282 6495

China:
(tel) 800 810 0189
(fax) 800 820 2816

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

Japan:
(tel) (81) 426 56 7832
(fax) (81) 426 56 7840

Korea:

(tel) (82 2) 2004 5004
(fax) (82 2) 2004 5115

Latin America:

(tel) (305) 269 7500
(fax) (305) 269 7599

Taiwan:

(tel) 0800 047 866
(fax) 0800 286 331

Other Asia Pacific

Countries:
(tel) (65) 6375 8100
(fax) (65) 6836 0252

Email:

tm_asia@agilent.com

Online Assistance:

www.agilent.com/find/assist

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2003
Printed in USA, April 10, 2003
5950-2962



Agilent Email Updates

www.agilent.com/find/emailupdates
Get the latest information on the products and applications you select.



Agilent Technologies