

## 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.



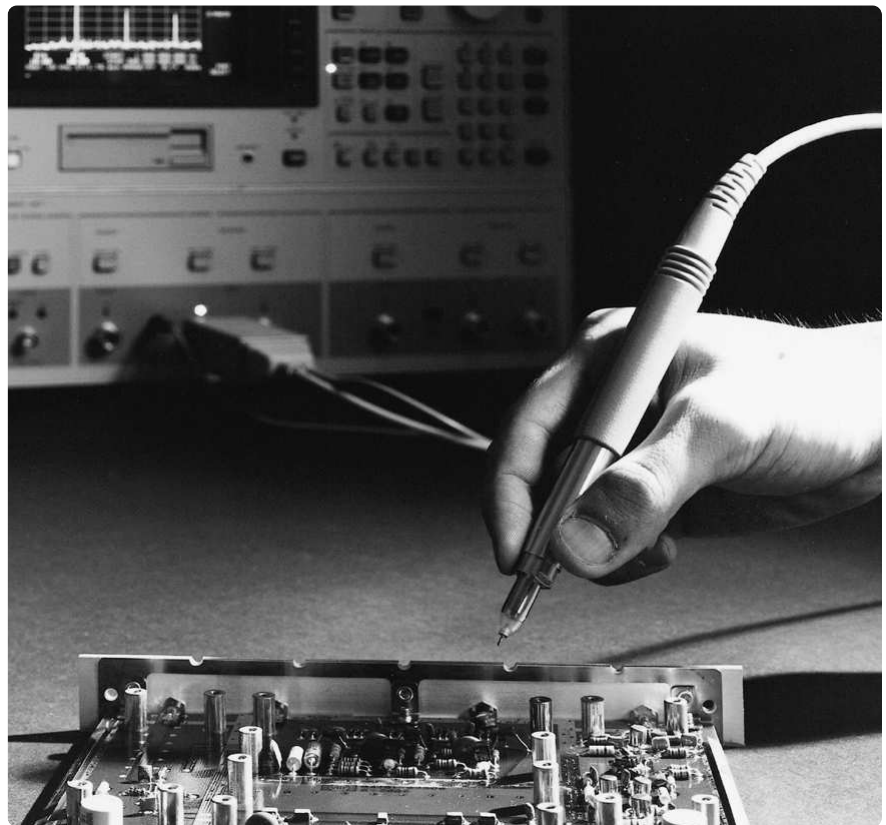
Reliable In-Circuit  
Signal Analysis

### 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.



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## 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:	Approximately 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

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