Impedance Measuring Instruments

Impedance/Gain-Phase Analyzer, LF Impedance Analyzer

- Wide range impedance measurement: 100 Hz to 40 MHz, $10m\Omega$ to $100M\Omega$ 10 kHz to 100 MHz, 0.1Ω to $10M\Omega$, when used with HP 41941A/B
- 10 Hz to 100 MHz Gain-phase measurement
- Flexible measurement, computation, and analysis capabilities on a color graphic display



HP 4194A with HP 41941A

HP 4194A Impedance/Gain-Phase Analyzer

The HP 4194A impedance/gain-phase analyzer is an integrated solution for efficient measurement and analysis or go/no-go testing of components and circuits. Detailed impedance and transmission characteristics, including secondary parameter derivations, can be simply and quickly evaluated or tested. The HP 4194A can contribute to improving engineering productivity and reducing test cost. The analyzer has wide measurement capabilities in both impedance and transmission measurements.

Specifications

Impedance Measurements

Measurement Parameters: $|Z|,|Y|,\Theta,R,X,G,B,L,C,D,\Omega$ Measurement Range: 10 mΩ to 100 MΩ Test Frequency: 100 Hz to 40 MHz

OSC Level: 10 mV to 1 V (≤10MHz), 10 mV to 0.5 V (>10MHz)

DC Bias: 0 to ± 40 V Basic Accuracy: 0.17%

Gain-Phase Measurements

Measurement Frequency: 10 Hz to 100 MHz OSC Level: –65 dBm to +15 dBm

Basic Accuracy: 0.1dB, 0.5°

Impedance Measurements Using the HP 41941A/B

The specifications listed are for the HP 4194A when used with the

HP 41941A/B.

Test Frequency: 10kHz to 100MHz

OSC Level:

Opt 350: 10 mV to 1.28 V **Opt 375:** 10 mV to 1.54 V

DC Bias: 0 to ± 40 V

Measurement Range: $100 m\Omega$ to $1 M\Omega$

Basic Accuracy: ± 1.5% to 3% (≥ 100kHz), ± 3% to 6% (<100 kHz)

Ordering Information

HP 4194A Impedance/Gain-Phase Analyzer
Opt 350* 50Ω System
Opt 375* 75Ω System
Opt 001 High-Stability Frequency Reference
HP 41941A Impedance Probe Kit (1.5m)
HP 41941B Impedance Probe Kit (3m)

* Must select either Option 350 or 375

- 5 Hz to 13 MHz variable frequency
- Gain-phase measurement: amplitude, phase, group display
- Floating or grounded devices
 - Impedance measurement: $|Z|, |Y|, \theta, R, X, G, B, L, C, D, Q, \Delta, \Delta\%$
- Standard GPIB



HP 4192A (shown with Option 907 handles)

HP 4192A LF Impedance Analyzer



Specifications

(Refer to data sheet for complete specifications.)

Frequency Range: 5 Hz to 13 MHz OSC Level: 5 mV to 1.1 mV

DC Bias: 0 to ± 35V

Measurement Range: $1.0000~\Omega$ to $1.000M\Omega$

Basic Accuracy: 0.15%

Ordering Information

HP 4192A LF Impedance Analyzer

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HP 4192A HP 4194A