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Data Sheet
August 14, 2026

HP / AGILENT

HP / Agilent 4192A LF Impedance Analyzer, 5 Hz to 13 MHz

HP Agilent 4192A LF Impedance Analyzer 5 Hz to 13 MHz The HP/Agilent 4192A isafully automatic LF impedance and gain-phase analyzer covering 5.000 Hz to 13.000000 MHz. OEM operation-manual synthesizer specifications list frequency accuracy ±50 ppm at 23±5 C, OSC level 5 mVrms to 1.1 Vrms, internal DC bias for impedance measurements, dual DISPLAY A/B readouts, and approximately five measurements per second in NORMAL mode. Component and material impedance vs frequency, filter/crystal network analysis with gain-phase, semiconductor C-V style bias sweeps, and automated LF impedance characterization over HP-IB. The HP/Agilent 4192A isafully automatic LF impedance and gain-phase analyzer covering 5.000 Hz to 13.000000 MHz. OEM operation-manual synthesizer specifications list frequency accuracy ±50 ppm at 23±5 C, OSC level 5 mVrms to 1.1 Vrms, internal DC bias for impedance measurements, dual DISPLAY A/B readouts, and approximately five measurements per second in NORMAL mode. Component and material impedance vs frequency, filter/crystal network analysis with gain-phase, semiconductor C-V style bias sweeps, and automated LF impedance characterization over HP-IB.

MODEL **HP / Agilent 4192A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **4192A**	LISTING **https://aumictechlabs.com/products/4192a-2/**

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NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 4192A LF Impedance Analyzer measures impedance and admittance across the 5 Hz to 13 MHz frequency range, delivering 4½-digit resolution for characterizing components, filters, and materials in development, quality control, and production settings. This analyzer tests both floating and grounded devices with direct readout of 13 impedance parameters - |Z|, |Y|, R, X, L, C, Q, D, and associated phase and loss metrics - plus gain-phase measurements including amplitude, phase, and group delay. Technical Specifications Frequency Range 5 Hz to 13 MHz with 1 mHz maximum resolution Frequency step size: 0.001 Hz (5 Hz to 10 kHz), 0.01 Hz (10 kHz to 100 kHz), 0.1 Hz (100 kHz to 1 MHz), 1 Hz (1 MHz to 13 MHz) Measurement Parameters Impedance: |Z|, |Y|, Theta, R, X, G, B, L, C, D, Q, Delta, Delta% Gain-Phase: Amplitude, Phase, Group Delay Display: 4½ digits with series and parallel equivalent circuit modes Test Signal Level range: 5 mV to 1.1 Vrms Accuracy: ±((5 + 10/f)% of setting + 2 mV) for 5 Hz to 1 MHz; ±((4 + 15 × F)% of setting + 2 mV) for 1 MHz to 13 MHz Internal DC Bias ±35 V with 10 mV increments Setting accuracy: 0.5% of setting + 5 mV Measurement Range Impedance: 0.1 mΩ to 1 MΩ Admittance: 1 nS to 10 S Accuracy: |Z|/R/X ±0.15%, |Y|/G/B ±0.15%, Theta ±0.08°, L ±0.27%, C ±0.15% Key Features Built-in frequency synthesizer with linear or logarithmic sweep modes Automatic ZERO adjustment for test fixture offset normalization Spot and swept control via front panel or HP-IB 425.5 mm W × 235 mm H × 615 mm D; approximately 19 kg Typical Applications Telecommunication filter characterization Audio/video circuit analysis Material property evaluation Component impedance profiling across low-frequency spectrum Compatibility & Integration HP-IB (IEEE-488) interface for remote operation and data acquisition

Features & description

From manufacturer datasheet

Built-in frequency synthesizer with sweep capability

Combined impedance and amplitude/phase (gain-phase) measurements Internal DC bias source for impedance measurements Level monitor of voltage/current at the DUT AVERAGE measurement mode and dual parameter displays Technical Specifications Frequency Range: 5.000 Hz to 13.000000 MHz Frequency Resolution 5 Hz to 10 kHz: 1 mHz Frequency Resolution 10 kHz to 100 kHz: 10 mHz Frequency Resolution 100 kHz to 1 MHz: 100 mHz Frequency Resolution 1 MHz to 13 MHz: 1 Hz Frequency Accuracy 23±5 C: ±50 ppm OSC Level Range: 5 mVrms to 1.1 Vrms OSC Level Resolution 5 to 100 mV: 1 mV OSC Level Resolution 100 mV to 1.1 V: 5 mV OSC Output Resistance Amplitude Phase: 50 ohm OSC Output Resistance Impedance At Or Above 38 kHz: 100 ohm OSC Output Resistance Impedance Below 38 kHz: 100 ohm to 10 kΩ depending on range DC Bias Impedance Measurements: -35 V to +35 V class in 10 mV steps Display Resolution: 4.5 digit class dual DISPLAYAand DISPLAYBNormal Mode Speed: approximately 5 measurements per second Warmup Time: greater than 30 minutes External Reference Input: rear-panel BNC for external timebase class Measurement Domains: impedance and amplitude/phase Interface: HP-IB programmable Form Factor: bench/system LF impedance analyzer

4192A Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	5.000 Hz to 13.000000 MHz
Frequency Resolution 5 Hz to 10 kHz	1 mHz
Frequency Resolution 10 kHz to 100 kHz	10 mHz
Frequency Resolution 100 kHz to 1 MHz	100 mHz
Frequency Resolution 1 MHz to 13 MHz	1 Hz
OSC Level Range	5 mVrms to 1.1 Vrms
OSC Level Resolution 5 to 100 mV	1 mV
OSC Level Resolution 100 mV to 1.1 V	5 mV
OSC Output Resistance Amplitude Phase	50 ohm
OSC Output Resistance Impedance At Or Above 38 kHz	100 ohm
OSC Output Resistance Impedance Below 38 kHz	100 ohm to 10 kΩ depending on range
DC Bias Impedance Measurements	-35 V to +35 V class in 10 mV steps
Display Resolution	4.5 digit class dual DISPLAYAand DISPLAYBNormal Mode Speed: approximately 5 measurements per second
Warmup Time	greater than 30 minutes
External Reference Input	rear-panel BNC for external timebase class
Measurement Domains	impedance and amplitude/phase
Interface	HP-IB programmable
Form Factor	bench/system LF impedance analyzer
DUT Stimulus	programmable frequency, OSC level, and bias
Sweep Capability	built-in synthesizer and bias sweep
Operating Accuracy Temperature Window	23 C ±5 C (error limits double 0 C to 55 C class)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications list frequency accuracy ±50 ppm at 23±5 C, OSC level 5 mVrms to 1.1 Vrms, internal DC bias for impedance measurements, dual DISPLAY A/B readouts, and approximately five measurements per second in NORMAL mode.

Applications
Component and material impedance vs frequency, filter/crystal network analysis with gain-phase, semiconductor C-V style bias sweeps, and automated LF impedance characterization over HP-IB.

Key Features
Built-in frequency synthesizer with sweep capability
Combined impedance and amplitude/phase (gain-phase) measurements
Internal DC bias source for impedance measurements
Level monitor of voltage/current at the DUT
AVERAGE measurement mode and dual parameter displays

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Frequency Range	5.000 Hz to 13.000000 MHz
Frequency Resolution 5 Hz to 10 kHz	1 mHz
Frequency Resolution 10 kHz to 100 kHz	10 mHz
Frequency Resolution 100 kHz to 1 MHz	100 mHz
Frequency Resolution 1 MHz to 13 MHz	1 Hz

Frequency Accuracy 23±5 C: ±50 ppm
OSC Level Range: 5 mVrms to 1.1 Vrms
OSC Level Resolution 5 to 100 mV: 1 mV
OSC Level Resolution 100 mV to 1.1 V: 5 mV
OSC Output Resistance Amplitude Phase: 50 ohm
OSC Output Resistance Impedance At Or Above 38 kHz: 100 ohm

Specifications

PARAMETER	VALUE
OSC Output Resistance Impedance Below 38 kHz	100 ohm to 10 kΩ depending on range
DC Bias Impedance Measurements	-35 V to +35 V class in 10 mV steps
Display Resolution	4.5 digit class dual DISPLAYAand DISPLAYBNormal Mode Speed: approximately 5 measurements per second
Warmup Time	greater than 30 minutes
External Reference Input	rear-panel BNC for external timebase class
Measurement Domains	impedance and amplitude/phase
Interface	HP-IB programmable

PARAMETER	VALUE
Form Factor	bench/system LF impedance analyzer
DUT Stimulus	programmable frequency, OSC level, and bias
Sweep Capability	built-in synthesizer and bias sweep
Operating Accuracy Temperature Window	23 C ±5 C (error limits double 0 C to 55 C class)

Notes
Synthesizer and OSC figures from HP 4192A Operation Manual specification excerpts. Impedance accuracy vs range/frequency tables are extensive in the same manual; use those tables and the fixture compensation procedure for authoritative uncertainty.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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