

- 1 MHz to 1 GHz, with 10 kHz steps
- 1% basic accuracy
- High-speed measurements: 15 ms
- 1 m/3 m errorless cable with APC-3.5 test head



HP 4286A

HP 4286A RF LCR Meter



High Accuracy with Wide Impedance Range

The HP 4286A RF LCR meter offers accurate and reliable measurements in order to improve the quality and performance of your electronic components or circuit design. The HP 4286A employs direct-current voltage-measurement technique, as opposed to the reflection-measurement technique, for more accurate impedance measurement over wide impedance range. Also, Q measurement can be much improved due to advanced calibration technique (typical Q accuracy: 6% @ 100 MHz, Q=100). So you can reduce the design uncertainty by measuring your device's true impedance values at RF range.

Ease of Use

The HP 4286A can be easily operated by pressing the front panel keys. In addition, the HP 4286A with Option 1C2 HP-IBASIC allows you to customize measurement, test sequences, process control, and perform data analysis. Also, a number of APC-7 SMD test fixtures are applicable to the HP 4286A with the furnished fixture stand and APC-3.5-to-APC-7 adapter. You don't need to build your own fixture.

Simplified System Integration and High Throughput

The HP 4286A is suitable for testing the electronic components in the production line at RF range. The 1 m/3 m option-selectable errorless cable with test head can be easily connected closely to the tip of the device-under-test of the handler without accuracy decrease. The built-in comparator function, a high-speed HP-IB interface, and an optional handler interface, are available for easily combining with the handler. The HP 4286A also allows you to reduce test time and improve testing efficiency and reliability. The measurement speed is especially remarkable (approximately 15 ms).

Specifications

(Refer to Data Sheet for complete specifications.)

Measurement Parameters: Z , Y , Theta, R, X, G, B, L, C, Q, D, ESR

Measurement Circuit Mode: Series and parallel

Operating Frequency: 1 MHz to 1 GHz

Frequency Resolution: 10 kHz

Source Characteristics:

OSC Level: 10 mVrms to 1 Vrms; (output terminal open);

10 mVrms to 0.5 Vrms @ 3 m test head, ≥ 500 MHz

Basic OSC Level Accuracy: 2 dB @ $V \geq 0.25$ V

Display Level Unit: V, I, dBm

Level Monitor Function: Voltage, current

Connector: APC-3.5

Output Impedance (Nominal Value): 50 Ω

Trigger: Internal, external, manual, and HP-IB

Delay Time: Point delay time, list-sweep delay time

Averaging: Point average, list-sweep average

Impedance Measurement Range: 200 m Ω to 3 k Ω

Basic Measurement Accuracy: Z : 1%, D: 0.01

Measurement Time: 15 ms

Interface: HP-IB, handler interface

Display: 7-inch B/W CRT display

Storage:

Type: Built-in 3.5-inch floppy disk drive; backup SRAM disk memory

Disk Format: LIF, DOS

Programming: HP Instrument BASIC (Option 1C2)

General Specifications

Operating Temperature/Humidity: 10 to 50° C/15% to 80% RH

Warm-Up Time: 30 min.

Power Requirements: 90 V to 132 V, or 198 V to 264 V,

47 Hz to 66 Hz, 500 VA max.

Size/Weight

Main Frame: 426 mm W x 234 mm H x 537 mm D; 28 kg

Test Head: 110 mm W x 55 mm H x 28 mm D; 0.3 kg

Key Literature

HP Precision LCR Meter Family Data Sheet, p/n 5963-5391E

HP 4286A Technical Specifications, p/n 5963-5394E

LCR Meters, Impedance Analyzers and Test Fixtures Selection Guide, p/n 5952-1430E

Ordering Information

HP 4286A RF LCR Meter

Furnished Accessories: Right Angle Test Head (1m), APC-3.5-to-APC-7 Adapter, Test Fixture Stand, HP 16195A APC-7 Calibration Kit, Operation Manual, Floppy Disk, and Power Cable. (No test fixture is supplied with the HP 4286A.)

Options

Opt 021 Add Straight-Angle Test Head (1 m)

Opt 022 Add Straight-Angle Test Head (3 m)

Opt 031 Delete Right-Angle Test Head (1 m)

Opt 032 Add Right-Angle Test Head (3 m)

Opt 001 Delete HP 16195A Calibration Kit

Opt 002 Delete Test Fixture Stand

Opt 004 Add Working Standard Set

Opt 1C2 Add HP-IBASIC, Keyboard, Cable

Accessories Available

HP 16190A Performance Test Kit

HP 16191A Side Electrode SMD Fixture

HP 16192A Parallel Electrode SMD Fixture

HP 16193A Small Side Electrode SMD Fixture

HP 16194A High-Temperature Test Fixture

HP 16195A APC-7 Calibration Kit

HP 16092A Test Fixture (≤ 500 MHz)

HP 16093A Binding Post Fixture (≤ 250 MHz)

HP 16093B Binding Post Fixture (≤ 125 MHz)

HP 16094A Probe Test Fixture (≤ 125 MHz)