

KEYSIGHT TECHNOLOGIES (AGILENT HP)

4280A

The Keysight/Agilent/HP 4280A is a dedicated 1 MHz Capacitance-Voltage (C-V) and Capacitance-Time (C-t) meter/plotter designed for comprehensive characterization of semiconductor devices. It features high-speed measurement capabilities, a built-in staircase sweep DC voltage source, and high-resolution capacitance and conductance measurement ranges.

SPECIFICATIONS

General

Interfaces	HP-IB (IEEE-488), Analog Plotter Output
Display	7-segment LED display

Physical

Power Supply	100 / 120 / 220 / 240 V AC ($\pm 10\%$), 48 to 66 Hz
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	426 mm × 177 mm × 498 mm mm
Weight	19.5 kg

Core Signal and Electrical Performance

Test Frequency	1 MHz
AC Test Signal Levels	10 mV, 30 mV, 100 mV rms
Basic Accuracy (Capacitance)	$\pm 0.1\%$

Measurement Capabilities and Timing

Capacitance Measurement Ranges	10 pF, 100 pF, 1000 pF
Conductance Measurement Ranges	10 μ S, 100 μ S, 1000 μ S, 10 mS
Capacitance Best Resolution	1 fF (0.001 pF) on the 10 pF range
Measurement Parameters	C, G, C-V, C-t, G-V, G-t
Sweep Function Types	Staircase, dual staircase

Power and Electrical Specifications

Internal DC Bias Range	0 to ± 100 V
DC Voltage Resolution	10 mV (on the 10 V range), 100 mV (on the 100 V range)

Physical and Mechanical Attributes

Form Factor	Benchtop / Rackmount (4U height)
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Measurement Features

External DC Bias	Up to ± 200 V
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TECHNOLOGY

Semiconductor Test / LCR Measurement

APPLICATIONS

Semiconductor C-V / C-t Characterization

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