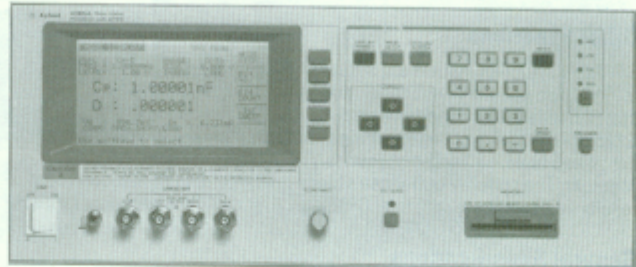


- 20 Hz to 1 MHz, with over 8,600 test frequencies
- 0.05% basic accuracy, 6-digit resolution
- Constant V or I test signal level
- 20 Vrms level option (Option 001)
- 40 Adc with 42841A
- List sweep measurement capability



4284A

- 75 kHz to 30 MHz in 100 Hz steps
- 0.1% basic accuracy
- High-speed measurements: 30 ms/meas.
- Constant V or I test signal level
- 10 Adc with 42841A
- List sweep measurement capability



4285A

4284A, 4285A Precision LCR Meters



The Agilent 4284A and 4285A precision LCR meters are cost-effective solutions for component and material measurement. They can be used to improve component quality by providing an accurate, high-throughput test solution. The wide 20 Hz to 1 MHz test frequency range and superior test-signal performance allow the 4284A to test components to the most commonly-used test standards, such as IEC/MIL standards, and under conditions that simulate the intended application. For demanding RF component tests, the 4285A offers a higher test-frequency range, from 75 kHz to 30 MHz. Whether in research and development, production, quality assurance, or incoming inspection, the 4284A and 4285A will meet all of your LCR meter test and measurement requirements.

Specifications

(Refer to Data Sheet for complete specifications.)

Measurement Parameters: Z , Y , θ , R , X , G , B , L , C , D , Q , ESR; Deviation and % deviation

Measurement Circuit Modes: Series and parallel

Ranging: Auto and manual

Trigger: Internal, external, manual, and bus (GPIB)

Delay Time: 0s to 60.000s in 1 ms steps

Measurement Terminals: 4-terminal pair

Test Cable Length:

4284A: Standard: 0 and 1 m; with Option 006: 0, 1, 2 and 4 m

4285A: 0, 1 and 2 m

Integration Time: Short, medium, and long

Averaging: 1 to 256, programmable

Test Signal:

4284A: 20 Hz to 1 MHz $\pm 0.01\%$, 8610 selectable frequencies

4285A: 75 kHz to 30 MHz $\pm 0.01\%$, 100 Hz steps

Test Signal Modes:

Normal: Programs selected voltage or current at the measurement terminals open or shorted, respectively, and not at the device-under-test.

Constant: Maintains selected voltage or current at the device-under-test independent of changes in the device's impedance.

Test Signal Levels (rms)	Normal	Constant
4284A	5 mV to 2 V, 50 μ A to 20 mA	10 mV to 1 V, 100 μ A to 10 mA
Option 001	5 mV to 20 V, 50 μ A to 200 mA	10 mV to 10 V, 100 μ A to 100 mA
4285A	5 mV to 2 V, 200 μ A to 20 mA	10 mV to 1 V, 100 μ A to 20 mA

DC Bias:

4284A Standard: 0 V, 1.5 V and 2 V

4284A/4285A Option 001: 0 V to ± 40 V

Measurement Display Range

Parameter	Range
Z , R , X	0.01 m Ω to 99.9999 M Ω
Y , G , B	0.01 nS to 99.9999 S
C	4284A: 0.01 fF to 9.9999 F 4285A: 0.01 fF to 999.999 μ F
L	4284A: 0.01 nH to 99.9999 μ H 4285A: 0.001 nH to 99.9999 H
D	0.000001 to 9.99999
Q	0.01 to 99999.9
θ	-180.000° to 180.000°
$\Delta\%$	-999.999% to 999.999%

Basic Measurement Accuracy

	Z , C , L	D
4284A	0.05%	0.0005
4285A	0.1%	0.001

@ 23°C $\pm 5^\circ$ C, after OPEN and SHORT correction

Supplemental Characteristics

Measurement Time: Typical measurement time from the trigger command to the end of measurement (EOM) output at the handler interface connector

	4284A at 1 KHz	4285A 75 kHz to 30 MHz
SHORT	40 ms	30 ms
MEDIUM	190 ms	65 ms
LONG	830 ms	200 ms

Option 001 DC Bias Current Output: 100 mA max.

Display

LCD dot-matrix display: Displays measured values, control settings, comparator limits and decisions, list sweep tables, self-test messages, and annunciators.

Correction Function

Zero OPEN/SHORT: Eliminates measurement errors due to the test fixture's stray parasitic impedance.

Load: Improves measurement accuracy by using a calibrated device as reference.

List Sweep Function

A maximum of ten frequencies or test signal levels can be programmed. Single or sequential testing can be performed. When Option 001 is installed, dc voltage bias testing can also be performed.