



LCR-8200(A) Series

High Frequency LCR Meter

FEATURES

- Wide Test Frequency :
LCR-8200A : DC, 10Hz ~ 50/30/20/10/5 MHz
LCR-8200 : DC, 10Hz ~ 30/20/10/5/1 MHz
- 7" LCD color Display
- 0.08% Basic Accuracy
- Displaying Four Measurement Results Simultaneously From 17 Selectable Measurement Parameters Freely
- 15 Steps List Measurement
- Two Curves Sweep Mode
- Equivalent Circuit Model Analysis (LCR-8200A only)
- Internal DC Bias Voltage $\pm 12V$
- USB Storage Available
- ALC Function Available
- Standard Interfaces : RS-232C, USB Host/Device, LAN, GPIB and Handler
- Universal Power Input



GW INSTEK
Simply Reliable

GW Instek's high-frequency LCR tester ~ LCR-8200 (A), which includes two series, LCR-8200A and LCR-8200, has ten models and the maximum test frequency is up to 50MHz. The entire series adopts 7-inch color display and features a high measurement accuracy (0.08%). The measurement results can be presented numerically or graphically according to the selected measurement mode, allowing users to optimally interpret the characteristics of the DUT. At the same time, a full range of standard interfaces such as USB device / RS-232C / Handler and GPIB allow users to control the instrument by the most familiar interface without worrying about additional hardware investment costs. Furthermore, the series also provides USB storage function when operating in the graphics mode. The measured characteristic curves and values of the DUT are saved for subsequent analysis. The wide variety of features of the LCR-8200 (A) can help users easily respond to the test requirements of passive components in R&D, engineering, and production.

Under the numerical measurement mode, it is divided into MEAS measurement and LIST measurement. Under the MEAS measurement mode, users can select up to 4 (at least 1) desired measurement items from the 17 measurement parameters. Each selected measurement item can be set to compare (PASS/FAIL judgement) or to the BIN function to conduct judgement and sorting, so that users can easily learn the results of the measurement by color and sound. Under the LIST mode, users is allowed to set 15 test points and each test point can set parameters independently, including frequency/voltage/bias, and it even can set independent comparison function and numerical display mode (value, difference value, difference percentage). On top of that, under the LIST mode, the automatic trigger mode is also provided. After each LIST measurement is completed, the instrument will be in the mechanism of standby trigger. Users only need to place the next DUT, and the LIST test can be automatically performed that saves time of repeatedly pressing the trigger button.

Under the graphical measurement mode, the SWEEP measurement provides the ability to sweep two parameters simultaneously (TRACE A / TRACE B). The relative parameters of the sweep, including the sweep source (frequency, voltage, current or bias voltage), horizontal / vertical axis scale (LINEAR / LOG), speed...etc., even adding a bias, can be set and tested according to the actual needs of users. Besides, the LCR-8200A series provides 7 different equivalent circuit models which allows user analysis by 3-components or 4-components combination to characterize the operational characteristics of the circuit. After the sweep is completed, the scale can be automatically adjusted according to the selected TRACE, so that the whole observation is clearer and easier to read. Other than that, the swept graphics (bmp) and values (csv) can be saved to the flash drive for subsequent analysis and applications.

Whether it is for measurement data collection during the test process or the collocation for the system integration, the LCR-8200 (A) series offers the most comprehensive communications interfaces, including USB device, RS-232C, LAN for PC connection and even GPIB, which are all standard communications interfaces. Users can choose according to the habits of use and the convenience of the system architecture without any additional cost. In addition, the LCR-8200 (A) series also provides a Handler interface for system integration of PLCs or sorters.

PANEL INTRODUCTION

The image shows the front and rear panels of the GW Instek LCR-8200A LCR tester. The front panel features a 7-inch TFT-LCD display (2) showing measurement results for Ls, Q, θ, and Rdc. It includes a power button (1), a system button (3), a numeric keypad with arrow keys and an enter key (4), a key lock (5), a DC bias button (6), a trigger host button (7), and test terminals (8). The rear panel shows a handler I/O port (9), an RS-232C port (10), a GPIB port (11), a LAN port (12), a trigger device port (13), and a USB device port (14). A table of communication interfaces is also provided.

CE	USB Device	USB Host	LAN	RS-232
Trigger	GPIB	PC Software	Handler	

1. USB Host
2. 7" TFT-LCD Display
3. System
4. Arrow Keys/Enter
5. Key Lock
6. DC BIAS
7. Trigger Host
8. Test Terminals
9. Handler I/O Port
10. RS-232 Port
11. GPIB Port
12. LAN Port
13. Trigger Device
14. USB Device

SPECIFICATIONS

	LCR-8250A	LCR-8230A	LCR-8220A	LCR-8210A	LCR-8205A	-
	-	LCR-8230	LCR-8220	LCR-8210	LCR-8205	LCR-8201
TEST FREQUENCY	DC, 10Hz~50MHz; 6 Digits, ±0.0007%	DC, 10Hz~30MHz; 6 Digits, ±0.0007%	DC, 10Hz~20MHz; 6 Digits, ±0.0007%	DC, 10Hz~10MHz; 6 Digits, ±0.0007%	DC, 10Hz~5MHz; 6 Digits, ±0.0007%	DC, 10Hz~1MHz; 6 Digits, ±0.0007%
OUTPUT IMPEDANCE	25 Ω / 100 Ω SELECTABLE					
BASIC ACCURACY	±0.08%					
TEST SPEED	MAX: 2.5ms(>10kHz), FAST: 50ms(>20Hz), MEDIUM: 100ms, SLOW: 300ms, SLOW2: 600ms					
TEST SIGNAL LEVEL	10mV ~ 2Vrms (FREQ. ≤1MHz), 10mV ~ 1Vrms (FREQ. > 1MHz or FREQ. ≤1MHz and RO=25 Ω) 100 μ A ~ 20mArms (RO=100 Ω), 200 μ A ~ 40mArms (RO=25 Ω) 1Vdc (40mA max.)					
MEASUREMENT PARAMETERS	Maximum four parameters can be measured and displayed at the same time Impedance (Z), Inductance (Ls / Lp), Capacitance (Cs / Cp), AC Resistance (Rs / Rp), Quality Factor (Q), Dissipation Factor (D), Admittance (Y), Conductance (G), Reactance (X), Phase Angle (θ d / θ r), Susceptance (B), DC Resistance (Rdc)					
LIST MEASUREMENT	Listed Steps: 15 Listed Parameters: Freq/Vac/Iac/DC Bias/Comp/BIN Trigger: AUTO, REPEAT, SINGLE					
SWEEP MEASUREMENT	Swept Graphical: Two of measurement parameters Swept Parameters: Freq/Vac/Iac/BIAS V, Keep Trace					
EQUIVALENT CIRCUIT MODEL ANALYSIS ("A" series only)	7 different equivalent circuit models, 3-components, 4 types, 4-components, 3 types					
OTHER FUNCTIONS	Auto Level Control (ALC): Standard DC Bias: 0 ~ ±12V Handler: PASS, FAIL and OK, NG or BIN 1-9					
OTHER FEATURES	Correction: Open/Short/HF Load/Load V/I Monitor: Vac, Iac, Vdc, Idc Comparator: Value, Δ, Δ% Buzzer: OFF, Pass, Fail Average: 1 to 64					
DISPLAY	7" LCD color display (800 x 480)					
INTERFACE	USB/GPIB/LAN/RS-232/Handler/USB Host/TRIGGER Input					
POWER SOURCE	AC 100V~240V, 50/60Hz; Consumption: 65VA (max.)					
DIMENSIONS & WEIGHT	346 (W) x 145 (H) x 335 (D) mm; Approx. 3.3kg					

* Difference between "A" series and "Non-A" series is only the "A" series provides the equivalent circuit model analysis.

Specifications subject to change without notice.

LCR-8000ACD1BH

ORDERING INFORMATION

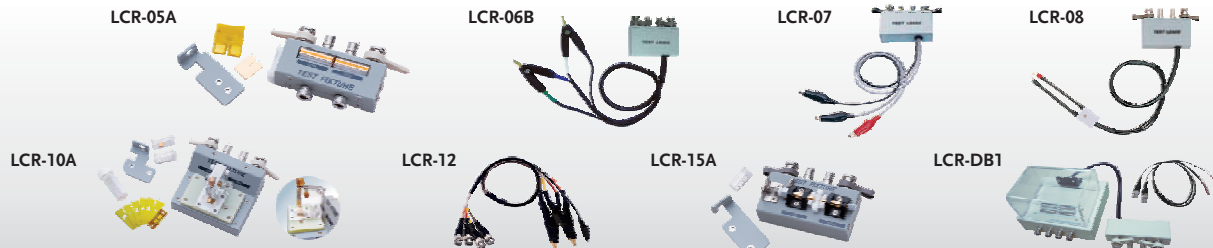
LCR-8250A	DC, 10Hz~50MHz High Frequency LCR Meter
LCR-8230A	DC, 10Hz~30MHz High Frequency LCR Meter
LCR-8220A	DC, 10Hz~20MHz High Frequency LCR Meter
LCR-8210A	DC, 10Hz~10MHz High Frequency LCR Meter
LCR-8205A	DC, 10Hz~5MHz High Frequency LCR Meter
LCR-8230	DC, 10Hz~30MHz High Frequency LCR Meter
LCR-8220	DC, 10Hz~20MHz High Frequency LCR Meter
LCR-8210	DC, 10Hz~10MHz High Frequency LCR Meter
LCR-8205	DC, 10Hz~5MHz High Frequency LCR Meter
LCR-8201	DC, 10Hz~1MHz High Frequency LCR Meter

ACCESSORIES

User Manual (CD) x 1, AC Power Cord x 1, Test Fixture LCR-06B x 1, Safety Sheet x 1

OPTION

LCR-05A	Test Fixture for Axial & Radial Lead Components (up to 50MHz)	LCR-15A	Test Fixture for SMD/Chip components (up to 50MHz)
LCR-06B	Test Lead with Kelvin clip(4 wire type)	GTL-234	RS-232C cable
LCR-07	Test Lead with Alligator clip(2 wire type)	GTL-248	GPIB Cable
LCR-08	Test Fixture(Tweezers) for SMD/Chip Components	GTL-246	USB Cable
LCR-10A	Test Fixture for Bottom Electrode Components (up to 50MHz)	LCR-DB1	External DC Bias Voltage Box
LCR-12	Test Lead with Kelvin clip(4 wire type)		
GRA-445	Rack Mount Kit, 19" 4U size		



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