

HF LCR Meter

MODEL 11050

Key Features

- Test Parameter: L/C/R/Z/Y/DCR/Q/D/ θ
- Test Frequency: 1kHz ~ 10MHz
- Test Level: 10mV ~ 5V
- Basic Accuracy: 0.1%
- 15ms fast speed measurement
- 3 output impedance modes
- Test signal monitoring function
- Compare & bin-sorting function
- Open/short zeroing & load correction function
- Detached measurement & display unit design
- Standard Handler, RS-232C, USB storage & external bias current control interface
- Optional GPIB or LAN interface



HF LCR METER MODEL 11050

The Chroma 11050 HF LCR Meter is a precision test instrument designed to accurately measure and evaluate passive components at high speeds. Its measurement capabilities cover the primary and secondary parameters required for testing the inductance, capacitance, resistance, quality factor and loss factor of passive components. The HF LCR Meter has a broad testing frequency range from 1kHz to 10MHz suitable for analyzing the components' characteristics under different frequencies. Its 0.1% basic measurement accuracy provides stable and highly reliable results. A fast 15ms measurement speed effectively increases productivity when working in an automated environment.

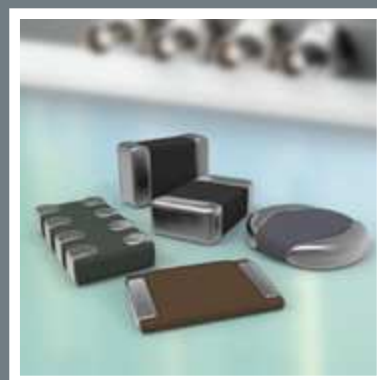
In addition to the excellent measurement features found in other Chroma LCR Meters, the 11050 includes additional useful functions. It has 3 output impedance modes to satisfy demands of measuring and working with other instruments. The versatile digital display can be configured to best fit the current testing resolution; furthermore, the test signal monitoring function displays the voltage and current that is actually carried to the DUT. The timing settings of trigger delay, measure delay and average number of times allow the measurements to transfer seamlessly to an automated test environment providing accurate results within a limited testing time.

The detached design adopted by the Chroma 11050 provides several advantages. Since test processing and the display use separate CPUs, the testing speed is increased and shorter test leads are needed when integrated into an automated test environment. Shorter test leads improve the accuracy of high frequency measurements.

Chroma's 11050 HF LCR Meter has multiple remote interface options. Handler and RS-232C remote interfaces come standard for software or hardware control of test conditions, measurement trigger, judge test results, and collect measured data. The standard USB port saves device settings and controls the output of an external DC bias current source. Optional GPIB and Ethernet remote interfaces are available as well for software control.

Due to the design of modern portable electronic communication devices with thin form factors and low power consumption, required frequency testing of power inductors is increasing. The equivalent series resistance of components has become a critical indicator to identify if it is good or bad. The buffer capacitor plays an important role for overall circuit reliability and must function properly under various voltage transient conditions; the equivalent series resistance must remain at a very low level when operated at high frequencies. The Chroma 11050 is focused on testing passive components at high frequencies and with enhanced key measurement capabilities during R&D so that it simulates the user's actual application as closely as possible. The increased accuracy of low impedance measurements demonstrates the usefulness of Chroma 11050 in high frequency testing applications.

The Chroma 11050 HF LCR Meter was designed with many enhancements and key features to make it the best choice to meet the demands of modern component characterization analysis and high speed testing for automated production line or incoming/outgoing inspection applications.



Chroma

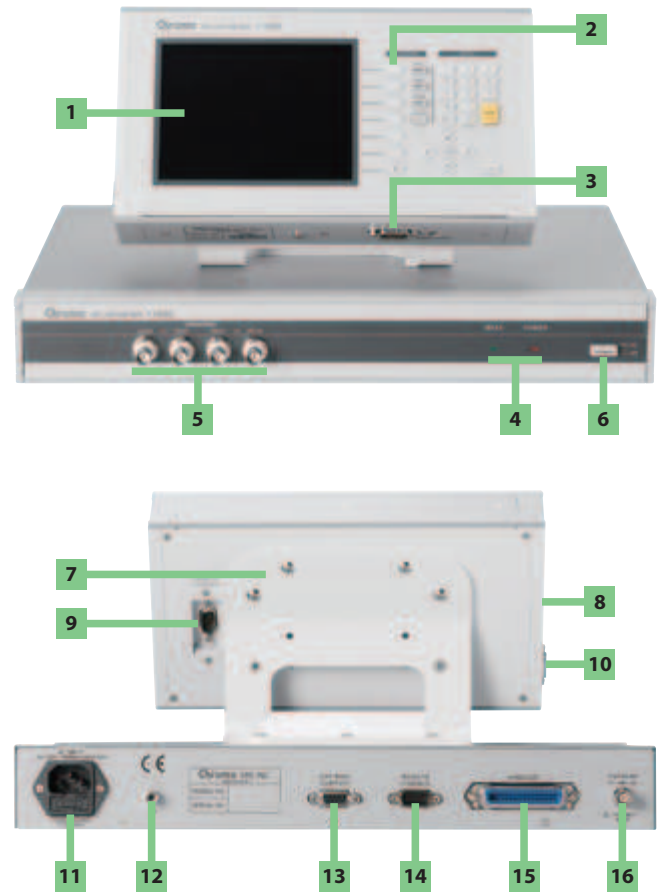


SPECIFICATIONS

Model	11050
Test Parameter	L, C, R, Z, Y, DCR, Q, D, θ
Test Signal	
Test Frequency	1kHz ~ 10MHz \pm (0.1% + 0.01Hz)
Test Level	\leq 1MHz: 10mV ~ 5V; \pm [(10 + fm)% + 1mV] > 1MHz: 10mV ~ 1V; \pm [(10 + fm)% + 1mV] fm : test frequency [MHz]
Output Impedance	100 Ω , 25 Ω , OFF
Measurement Display Range	
L	0.00001 μ H ~ 99.999MH
C	0.00001 pF ~ 999.999F
R, Z	0.01m Ω ~ 9999.99M Ω
DCR	0.01m Ω ~ 999.99M Ω
Q, D	0.00001 ~ 99999
θ	-90.00° ~ 90.00°
Basic Accuracy	
Z	\pm 0.1%
DCR	\pm 0.1%
θ	\pm 0.04°
Measurement Speed	
	Fast : 15ms Medium : 150ms Slow : 295ms (1kHz)
Communication Interface	
	RS-232C, Handler, USB storage, External bias current control, GPIB (option), LAN (option)
Measurement Functions	
Trigger Mode	Internal, Manual, External, Bus
Range Switching Mode	Auto, Hold
Equivalent Circuit Mode	Series, Parallel
Judgment	Compare, Bin-sorting
Correction	Open/Short Zeroing, Load Correction
Others	
Operating Environment	Temperature : 10°C ~ 40°C ; Humidity : 10% ~ 75%
Power Consumption	80VA max.
Power Requirement	90 ~ 132Vac or 180 ~ 264Vac, 47Hz ~ 63Hz
Dimension (H x W x D)	Display Unit : 150 x 260 x 50 mm / 5.91 x 10.24 x 1.97 inch Measurement Unit : 65 x 390 x 320 mm / 2.56 x 15.35 x 12.60 inch
Weight	Approx. 7 kg / 15.43 lb

*All specifications are subject to change without notice. Please visit our website for the most up to date specifications.

PANEL DESCRIPTION



- | | |
|----------------------------|------------------------------------|
| 1. LCD Panel | 9. Remote Control Port |
| 2. Buttons | 10. RS-232C & USB Ports |
| 3. Remote Control Port | 11. Power Inlet |
| 4. Power & Test Indicator | 12. Grounding Terminal |
| 5. Measurement Terminals | 13. Ext. Bias Current Control Port |
| 6. Power Switch | 14. Remote Control Port |
| 7. Panel Bracket | 15. Handler Interface |
| 8. Optional Interface Slot | 16. Ext. Voltage Terminal |

ORDERING INFORMATION

11050 : HF LCR Meter

A110501 : 4-Terminal SMD Test Fixture

A110211 : Test Fixture (DIP)

A110234 : Test Leads (1M)

A133509 : GPIB Interface

A133510 : LAN & USB-H Interface

Developed and Manufactured by :

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