



## KEY FEATURES

- 0.1% basic accuracy
- Transformer test parameters (11025), Turns Ratio, DCR, Mutual Inductance
- 50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz test frequencies
- 21ms measurement time ( $\geq 100\text{Hz}$ )
- Agilent 4263B LCR Meter commands compatible
- 4 different output resistance modes selectable for non-linear inductor and capacitor measuring
- High resolution in low impedance (0.01m $\Omega$ ) and high accuracy 0.3% till 100m $\Omega$  range
- Adjustable DC bias current up to 200mA (constant 25 $\Omega$ ) (11025)
- 1320 Bias Current Source directly control capability
- 0.01m $\Omega$  ~ 99.99M $\Omega$  wide measurement range (4 1/2 digits)
- Dual frequency function for automatic production
- BIAS comparator function
- Comparator function and 8/99 bin-sorting function
- Pass/fail judge result for automatic production
- Handler interface trigger edge (rising/falling) programmable
- Test signal level monitor function
- Standard GPIB, RS-232, and handler interface
- Open/short zeroing, load correction
- LabView<sup>®</sup> Driver

The Chroma 11022 and 11025 LCR Meters are the measurement instruments for passive components. They are applicable to the automatic manufacturers for passive components in material inspection. With the features of 21ms high-speed measurement and 0.1% accuracy, 11022 LCR Meter fulfills the requirements for fast production. Its functions of 8-level counting, 8/99 Bin-sorting, pass/fail judgment, and 50 sets of internal save and recall settings totally meet the production line requirements for easy operation.

The four impedance output modes can measure the results with the LCR Meters of other brands to get a common measurement standard. Chroma 11025 LCR Meter is compatible with HP 4263B LCR Meter IEEE-488.2 control interface and has three impedance output modes for selection. The measurement results can also be compared with other brand of LCR Meters. Chroma 11022/11025 is the ideal selection for passive components quality assurance and automatic production.



## ORDERING INFORMATION

- 11022** : LCR Meter
- 11025** : LCR Meter
- A110104** : SMD Test Cable #17
- A110211** : Component Test Fixture
- A110212** : Component Remote Test Fixture
- A110232** : 4 BNC Test Cable with Clip#18
- A110234** : High Frequency Test Cable
- A110236** : 19" Rack Mounting Kit
- A110239** : 4 Terminals SMD Electrical Capacitor Test Box (Patent)
- A110242** : Battery ESR Test Kit
- A110244** : High Capacitance Capacitor Test Fixture
- A110245** : Ring Core Test Fixture
- A113012** : Vacuum Generator for A132574
- A113014** : Vacuum Pump for A132574
- A132574** : Test Fixture for SMD power choke
- A133004** : SMD Test Box
- A133019** : BNC Test Lead, 2M (single side open)
- A165009** : 4 BNC Test Cable with Probe

## SPECIFICATIONS

Model	11022	11025
<b>Test Parameter</b>	L, C, R,  Z , Q, D, ESR, X, $\theta$	L, C, R,  Z , Q, D, ESR, X, $\theta$ DCR4, M, Turns Ratio, L2, DCR2
<b>Test Signals</b>		
Level	10 mV~1V, step 10 mV; $\pm(10\% + 3\text{ mV})$	
Frequency	50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz; $\pm 0.01\%$	
Output Impedance (Nominal Value)	Constant 107 x : 25 $\Omega$ ; Constant 320 x : 100 $\Omega$ Constant 106x: 2 $\Omega$ , for $Z \geq 10\Omega$ , 100mA (1V setting) for reactive load $\leq 10\Omega$ Constant 102x: 25 $\Omega$ , for $Z < 1\Omega$ , 100 $\Omega$ for else	
DC Bias Current (Freq. $\geq 1\text{kHz}$ )	--	50mA max. for Constant 100 $\Omega$ 200mA max for Constant 25 $\Omega$ (AC level $\leq 100\text{mV}$ )
<b>Measurement Display Range</b>		
C (Capacitance)	0.001pF ~ 1.9999F	
L, M, L2 (Inductance)	0.001 $\mu\text{H}$ ~ 99.99k	
Z (Impedance), ESR	0.01m $\Omega$ ~99.99M $\Omega$	
Q (Quality Factor)	0.0001 ~ 9999	
D (Dissipation Factor)	0.0001 ~ 9999	
$\theta$ (Phase Angle)	-180.00° ~ +180.00°	
Turns Ratio (Np:Ns)	--	0.9~999.99
DCR	--	0.01m $\Omega$ ~99.99M $\Omega$
<b>Basic Measurement Accuracy *1</b>	$\pm 0.1\%$	
<b>Measurement Time (Fast) *2</b>	21ms	
<b>Interface &amp; I/O</b>		
Interface	handler (50pin), GPIB, RS-232	
Output Signal	Bin-sorting & HI/GO/LOW judge	
Comparator	Upper/Lower limits in value	
Bin Sorting	8/99 bin limits in %, ABS	
Trigger Delay	0~9999ms	
<b>Display</b>	240 x 64 dot-matrix LCD display	
<b>Function</b>		
Correction	Open/ Short zeroing, load correction	
Averaging	1~256 programmable	
Cable Length	0m, 1m, 2m, 4m	
Test Sig. Level Monitor	Voltage, Current	
Equivalent Circuit mode	Series, Parallel	
<b>Memory (Store/ Recall)</b>	50 instrument setups	
<b>Trigger</b>	Internal, Manual, External, BUS	
<b>General</b>		
Operation Environment	Temperature : 10°C~40°C Humidity : < 90 % R.H.	
Power Consumption	65VA max	
Power Requirements	90 ~ 132Vac or 180 ~ 264Vac, 47 ~ 63Hz	
Dimension (H x W x D)	100 x 320 x 347.25 mm / 3.94 x 12.6 x 13.67 inch	
Weight	5.5 kg / 12.11 lbs	

**Note\*1** : 23  $\pm$  5°C after OPEN and SHORT correction. Slow measurement speed. Refer to Operation Manual for detail measurement accuracy descriptions.

**Note\*2** : Measurement time includes sampling, calculation and judge of primary and secondary test parameter measurement.