LCR METER
MODEL 11022/11025

The Chroma 11022 and 11025 LCR Meters are passive component testers that give you the most cost effective alternative equivalent to other high priced meters. They are designed for the demanding applications of production test, incoming inspection, component design and evaluation. Programmable test signal level settings are from 10mV to 1V in steps of 10mV, and the VM/IM signal level monitor functions allow you to evaluate your devices at the level you specify. Ten test frequencies of 50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, and 100kHz, can be used to evaluate passive components and transformers/ LF coils.

Other low cost LCR meters on the market have shortcomings when used for low impedance component evaluations, such as the large capacitance of electrolytic capacitors and low inductance of coils. As the 11022/11025 are equipped with high resolution (0.01mΩ) in low impedance, and high accuracy (0.3%) untill 100mΩ range, they can be used to evaluate low impedance components to meet measurement requirements.

The 11025 LCR Meter can also measure DC resistance, turn ratio and mutual inductance of transformers. It is suitable for pulse transformer or LF coil evaluation. Chroma's Transformer Test Fixture used with the 11025, can measure both the primary and the secondary parameters automatically by changing the internal relays in the 11025. With this, there is no need to change the connections required for measuring transformer parameters. With an adjustable internal DC bias current source up to 200mA as a standard function, the 11025 is the right tool for inductance inspection of telecom transformers and small power chokes under DC bias current.

The 11022/11025 LCR Meters provide a powerful combination of features designed to maximize productivity in all testing environments. Measurement speed in the SHORT integration time mode is 15mS(≧100Hz). Handler interface, Pin-out, GPIB Interface, and IEEE 488 commands are compatible with 4263B.

Finally, the 11022/11025 have a built in comparator, 8 bin sorting, trigger delay functions, and handler interface trigger functions, making system integration easy, and improving measurement throughput as well as reliability.

GPIB HANDLER RS-232 CE

MODEL 11022/11025

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 (≧ 100Hz)
- Agilent 4263B LCR Meter commands compatible
- 4 different output resistance modes selectable for non-linear inductor and capacitor measuring
- High resolution in low impedance(0.01mΩ) and high accuracy 0.3% till 100mΩ range
- Adjustable DC bias current up to 200mA (constant 25Ω) (11025)
- 1320 Bias Current Source directly control capability
- 0.01mΩ ~ 99.99MΩ 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® Driver

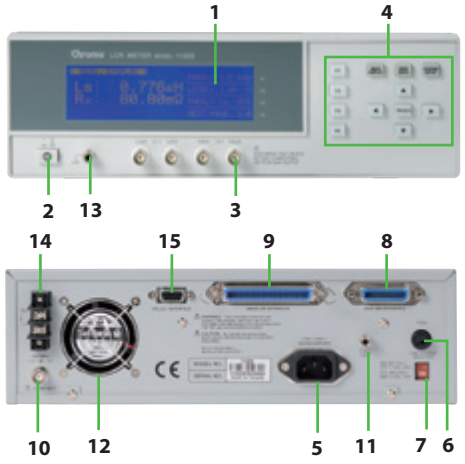
Chroma

SPECIFICATIONS

Model	11022	11025
Test Parameter	L,C, R,|Z|, Q, D, ESR, X, θ	L,C, R,|Z|, Q, D, ESR, X, θ DCR4, M, Turns Ratio, L2, DCR2
Test Signals		
Level	10 mV~1V , step 10 mV; ±(10% + 3 mV)	
Frequency	50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz ; ±0.01%	
Output Impedance (Nominal Value)	Constant 107X : 25Ω ; Constant 320X : 100Ω ; Constant 106X : 2Ω ,for Z≧10Ω , 100mA (1V setting) for reactive load≦10Ω ; Constant 102X : 25Ω , for Z<1Ω , 100Ω for else	
DC Bias Current (Freq. ≧ 1kHz)	- -	50mA max. for Constant 100Ω , 200mA max for Constant 25Ω (AC level ≦ 100mV)
Measurement Display Range		
C (Capacitance)	0.001pF ~ 1.9999F	
L, M, L2 (Inductance)	0.001μH ~ 99.99k	
Z (Impedance), ESR	0.01mΩ ~99.99MΩ	
Q (Quality Factor) ; D (Dissipation Factor)	0.0001 ~ 9999	
θ (Phase Angle)	-180.00° ~ +180.00°	
Turns Ratio (Np:Ns)	--	0.9~999.99
DCR	--	0.01mΩ~99.99MΩ
Basic Measurement Accuracy *1	±0.1%	
Measurement Time (Fast) *2	21ms	
Interface & I/O		
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	
Display	240 x 64 dot-matrix LCD display	
Function		
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	
Memory (Store/ Recall)	50 instrument setups	
Trigger	Internal, Manual, External, BUS	
General		
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 ± 5°C after OPEN and SHORT correction. Slow measurement speed. Refer to Operation Manual for detailed measurement accuracy descriptions.
Note*2 : Measurement time includes sampling, calculation and judgment of primary and secondary test parameter measurement.

PANEL DESCRIPTION



1. **LCD Display**
2. **LINE Switch**
3. **Measurement Terminals**
4. **Function Keys**
5. **Power Cord Receptacle**
6. **LINE Fuse Holder**
7. **LINE Voltage Selector**
8. **GPIB Interface**
9. **Handler Interface**
10. **External DC Bias Terminal**
11. **Ground Terminal**
12. **Fan**
13. **Ground Terminal**
14. **DC Bias Trimmer Terminal**
15. **RS-232 interface**

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

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