

# Component Parameter Test Instruments

## A. TH2822 Series Handheld LCR Meter

### Features

- Max. Basic accuracy: 0.25%
- Maximum test signal frequency : 100kHz
- Selectable test signal level
- With DCR function
- Enhanced protection capability of input terminal impact
- 40000 counts for primary parameter, D/Q resolution 0.0001
- Typical ultra-low consumption: 25mA
- Innovatively compatible terminal configuration: 5-terminal test slot and 3-terminal rubber jack
- Intellectualized auto LCR function
- AC test speed up to 4 meas/sec (DCR: 3 meas/sec), fast automatic range switch design
- Constant 100Ω output impedance
- Percentage display and 4-tolerance comparator: 1/5/10/20%
- Battery charge in startup & shutdown
- Test terminal protection function
- Data-hold, Max./Min./Average value recording
- Real-time function configuration selection and working condition hold capacity
- Standard configuration Mini – USB communication interface and SCPI command set
- Free FastAccess PC communication software on our website
- Gorgeous dual-color cast shell



TH2822 series

### Brief Introduction

■ With its advanced impedance test technology, Tonghui has launched TH2822 series handheld LCR meters. This series currently possess the most powerful functions and outstanding performance in this industry comparable with bench LCR meters. Meanwhile it is the achievement of Tonghui after years of efforts and research in the passive-component testing field.

TH2822 series apply the ultra-low power consumption design and high density SMD assembly techniques and can simultaneously display primary and secondary parameters on a LCD display with backlight. The dual-color shell is gorgeously once shaped; and functions are easy to operate. The test frequency is up to 100 kHz, the readings of primary parameter 40,000 counts and the resolution of dissipation factor 0.0,001. Accurate and convenient measurements of passive-components can be achieved in different occasions for a long time. In order to meet different market demand, multiple signal level and DCR test function are increased on TH2822D/E. The test accuracy can reach 0.1%. With USB interface, TH2822 series can conveniently communicate with a PC and be remotely controlled by a PC. In order to satisfy the increasing test requirements for SMD and balance the different needs for performance and price, two types of 4-terminal Kelvin test tweezers: TH26009C and TH26029C are optional for users' choice.

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### Specifications

Model	TH2822A	TH2822C	TH2822D	TH2822E
Function				
Test Parameter	Primary parameters: L / C / R / Z Secondary parameters: D / Q / R / $\theta$ / ESR		Primary parameters: L / C / R / Z / DCR Secondary parameters: D / Q / R / $\theta$ / ESR	
Equivalent Circuit	Series and Parallel			
Parameter and Equivalent Mode	Hold, Auto			
Ranging Mode	Auto			
Measurement Terminals	3-terminal, 5-terminal			
Measuring Speed	4meas/sec, 1.5meas/sec			
DCR Measuring Speed	-----		3meas/sec	
Calibration Function	Open, short			
Comparator Function	1%, 5%, 10%, 20%		1%, 5%, 10%, 20%	
Input fuse	0.1A / 250V			
Interface	Mini-USB (virtual serial port)			
Test signal				
Test Frequency	100Hz, 120Hz, 1kHz, 10kHz,	100Hz, 120Hz, 1kHz, 10kHz, 100kHz	100Hz, 120Hz, 1kHz, 10kHz,	100Hz, 120Hz, 1kHz, 10kHz, 100kHz
Test Level	0.6Vrms		0.3 Vrms, 0.6 Vrms, 1 Vrms	
Output Resistance	100 $\Omega$			
Display				
Display	LCD Primary-Secondary dual display, with backlight (TH2822 not available)			
Reading	Max. Primary parameters: 40,000 digits, secondary parameters D/Q Minimum resolution: 0.0001			
Basic accuracy	0.25%		0.1%	
Measuring Range				
L	0.00 $\mu$ H - 1000.0H	0.000 $\mu$ H - 1000.0H	0.00 $\mu$ H - 1000.0H	0.000 $\mu$ H - 1000.0H
C	0.00pF - 20.000mF	0.000pF - 20.000mF	0.00pF - 20.000mF	0.000pF - 20.000mF
Z/R	0.0000 $\Omega$ - 10.000M $\Omega$			
DCR	-----	-----	0.0000 $\Omega$ - 20.000M $\Omega$	
ESR	0.0000 $\Omega$ - 999.9 $\Omega$			
D	0.0000 - 9.999			
Q	0.0000 - 9999			
$\theta$	0.00° - $\pm$ 180.0°			
Power Requirements				
Battery model	TH2822 / A : IEC 6LR61, 9V alkaline battery TH2822C/D/E : LH-200H7C,8.4V Ni-MH 200mAH rechargeable battery			
AC power adapter	Input: 220V/50Hz, Output: 12V-15V(100 $\Omega$ Load)			
Standby Currant	Max.2 $\mu$ A	18 $\mu$ A	11 $\mu$ A	
Battery life	16 hours (typical) , new alkaline battery, with backlight off			
Auto power off	5min, 15min, 30min, 60min, OFF available; Factory Default : 5min			
Low voltage indicator	When battery voltage drops below 6.8V, low voltage indicator turns on.			