

# ST2827 Series Precision LCR Meter

## Features

- 4.3-inch TFT LCD display
- Selectable Chinese and English operation interfaces
- Maximum test frequency of 1MHz, resolution of 10mHz
- Transformer parameter test function
- Maximum test speed: 13ms/time
- Automatic level control (ALC) function for V and I
- Test signal level monitor function for V and I
- Included interior DC bias source
- External DC bias source of large current
- 10-point list sweep function
- Selectable internal resistance of 30Ω, 50Ω and 100Ω
- Built-in comparator:10-bin sorting and bin counter
- Internal file storage and external USB-disk file storage
- Test data can be saved to USB-disk directly
- RS232C, USB, LAN, HANDLER, GPIB, DCI interface



ST2827 Series



## Specifications

Display		800×RGB×480 4.3-inch TFT LCD display
Frequency of test signal	ST2827A	20Hz—300kHz
	ST2827C	20Hz—1MHz
	Minimum resolution	10mHz, 4-digit frequency input
	Accuracy	0.01%
AC Level	Voltage range of test signal	5mV—2Vrms
	Minimum resolution of voltage	100µV, 3-digit input
	Accuracy	ALC ON 10% x set voltage + 2mV
		ALC OFF 6% x set voltage + 2mV
	Current range of test signal	100µA—20mA
	Minimum resolution of current	1µA, 3-digit input
	Accuracy	ALC ON 10% x set current + 20µA
		ALC OFF 6% x set voltage + 20µA
DC bias voltage source	Voltage /Current range	0V—±5V / 0mA—±50mA
	Resolution	0.5mV / 5µA
	Voltage accuracy	1% x set voltage + 5mV
	ISO ON	Be used for the bias test of inductance and transformer
AC Source impedance	ISO ON	100Ω
	ISO OFF	30Ω、50Ω、100Ω selectable
DCR source impedance		30Ω、50Ω、100Ω selectable
Test parameters of LCR		Z ,  Y , C, L, X, B, R, G, D, Q, θ, DCR, Vdc-ldc
Parameter display of test page		One set of main/sub parameter, 10-point list sweep
Test parameters of transformer		DCR1(primary, 2-terminal), DCR2(secondary, 2-terminal), M (mutual inductance), N, 1/N, Phase, Lk(leakage inductance), C(primary, secondary capacitance),

## Brief Introduction

■ ST2827 series is a new precision LCR meter with various functions and a higher test frequency. With small size and portable appearance, it is convenient for use on the shelves. This instrument has a basic accuracy of 0.05%, maximum test frequency of 1MHz and resolution of 10 mHz. It is easy to operate with a 4.3-inch LCD screen as well as selectable Chinese and English operation interfaces. Integrated transformer test function greatly improve the test efficiency. The instrument is also provided with multiple interfaces which can meet various requirements of the automatic sorting test, data transmission and storage.

Basic accuracy	LCR test parameter	0.05%
	N	0.1%
	Calibration	Warm-up time ≥ 30 seconds; Environment temperature: 23±5°C; Signal voltage: 0.3Vrms-1Vrms; Zeroing: After OPEN or SHORT; Length of test cable: 0 m
Measurement time ( $\geq 10$ kHz)		Fast: 13 ms / time Medium: 67 ms / time Slow: 187 ms / time Plus the refresh time of display character
Display range of LCR parameter	Z , R, X, DCR	0.00001Ω — 99.9999MΩ
	Y , G, B	0.00001μs — 99.9999s
	C	0.00001pF — 9.99999F
	L	0.00001μH — 99.9999kH
	D	0.00001 — 9.99999
	Q	0.00001 — 99999.9
	θ(DEG)	-179.999° — 179.999°
	θ(RAD)	-3.14159 — 3.14159
	Δ%	-999.999% — 999.999%
Equivalent circuit		Serial, Parallel
Range mode		Auto, Hold
Trigger mode		Internal, Manual, External, Bus
Average times		1-255
Calibration function		Open, short calibration with full frequency or dot frequency, Load
Math operation		Direct reading, ΔABS, Δ%
Delay time setup		0-999, minimum resolution: 100us
Comparator	10-bin sorting, BIN1-BIN9, NG, AUX	
	Bin counter	
	PASS/FAIL on front panel, LED indication	

List sweep	·201 points list sweep ·Frequency, AC voltage/current, internal/external bias voltage/current can be swept. ·Each sweep point can be sorted separately.	
Internal nonvolatile memory	40 sets of LCRZ setting files	
External USB memory	GIF files LCRZ setting files Test data can be stored via USB memory directly.	
I/O interface	HANDLER on rear panel	
SCI	USB, RS232C	
Interface PCI	GPIO (optional)	
NI	LAN	
Memory interface	USB HOST (front panel)	
General Specifications		
Operating temperature and humidity	0°C—40°C, ≤ 90%RH	
Power supply	Voltage	99V-121V, 198V-242V AC
	Frequency	47Hz-63Hz
Consumption		Max. 80 VA
Dimension(W×H×D)		320 mm × 88 mm × 370 mm (with no sheath) 369 mm × 108 mm × 408 mm (with sheath)
Weight		Approx. 5 kg

## Standard Accessories

Power cord	
ST26010	Gold-plated short circuit board
ST26011AS	4 terminal pair Kelvin test clip leads(only ST2827A)
ST26011BS	4 terminal pair Kelvin test clip leads(only ST2827C)
ST26048	Four-terminal test fixture
ST26038	Four-terminal test fixture