

ST2851 Series Precision Impedance Analyzer

NEW

Features

- Test frequency: 10Hz-130MHz
- High precision: using automatic balance bridge technology, four-terminal pair test configuration
- High stability and consistency
- High speed: the fastest test speed up to 5ms
- High resolution: 10.1-inch capacitive touch screen, resolution 1280*800
- Three test methods: point test, list scan, and graph scan
- 1601 point multi-parameter list scanning function
- Four-parameter measurement
- 4-channel graphic scanning function, each channel can display 4 curves, 16 kinds of split-screen display modes for channels and curves
- Powerful sorting: 10 grades sorting in LCR mode
- Graphic scanning mode, each curve is sorted individually
- High compatibility: Support SCPI instruction set, compatible with KEYSIGHT E4990A, E4980A, E4980AL, HP4284A



Standard	RS232	USB HOST	USB DEVICE	LAN
	HANDLER	GPIO	HDMI	VGA

Dimension: 428mm(W)x220mm(H)x325mm(D)

Weight: 14.5kg

Applications

- **Passive component:**
Impedance parameter estimation and performance analysis of capacitor, inductor, magnetic core, resistor, piezoelectric devices, transformers, chip components and network components
- **Semiconductor component**
Parasitic parameter test and analysis of LED driver integrated circuit C-VDC features of varactors
Parasitic parameter analysis of transistors or integrated circuit
- **Other components**
Impedance assessment of printed circuit boards, relays, switches, cables, batteries

- **Dielectric material**
Dielectric constant and loss angle evaluation of plastics, ceramics and other materials
- **Magnetic materials**
Magnetic permeability and loss angle assessment of ferrite, amorphous body and other magnetic materials
- **Semiconductor materials**
Dielectric constant, electrical conductivity and C-V characteristics of semiconductor materials
- **Liquid crystal cell**
Dielectric constant, elastic constant and C-V characteristics of liquid crystal cell

Specifications

Model		ST2851-015	ST2851-030	ST2851-050	ST2851-080	ST2851-130
Display		10.1 Inches TFT LCD Display 1280×RGB×800, Touch Screen				
AC Parameter		Cp/Cs、Lp/Ls、Rp/Rs、 Z 、 Y 、R、X、G、B、 θ 、D、Q、V _{AC} 、I _{AC}				
DC Parameter		V _{DC} 、I _{DC} 、DCR				
Test Frequency	Range	10Hz--15MHz	10Hz--30MHz	10Hz--50MHz	10Hz--80MHz	10Hz--130MHz
	Resolution	1mHz				
	Relative frequency tolerance	$\pm 0.0007\%$				
Test Level	AC Voltage	5mV—2Vrms				
	Resolution	1mV				
	AC Current	50uA—20mArms				
	Resolution	10uA				
DC Bias	Voltage	0V-±40V				
	Resolution	1mV				
	Current	0mA-±100mA				
	Resolution	40 μ A				
Test terminal configuration		Four Terminal Pair				
Output impedance		25 Ω / 100 Ω				
Typical Test time (Speed)		Five Shift: 1(Fast)—5(Accuracy) 1: 2.5ms 2: 10ms 3: 40ms 4: 80ms 5: 400ms (Does not include the arithmetic average of the communication time, each frequency test speed will be slightly different)				
Max Accuracy		1kHz: 0.08% 1MHz: 0.08% 2MHz: 0.5% 10MHz: 1% 130MHz: 5.0%				

Test Display Range		E: 1×10^{18}
Cs, Cp		-9.99999EF ~ +9.99999EF
Ls, Lp		-9.99999EH ~ +9.99999EH
D		-9.99999E ~ +9.99999E
Q		-9.99999E ~ +9.99999E
R, Rs, Rp, X, Z, R _{DC}		-9.99999E Ω ~ +9.99999E Ω
G, B, Y		-9.99999ES ~ +9.99999ES
Vdc		-9999V ~ +9999V
Idc		-9999mA ~ +9999mA
θ_r		-999999rad ~ +999999rad
θ_d		-180.0deg ~ +180.0deg
$\Delta \%$		-999999% ~ +999999%
Multi-function parameter list scan		1601 points, each point can be set to average, and each point can be sorted separately Sweep parameters: measurement parameters, test frequency, AC voltage, AC current, DC BIAS voltage, DC BIAS current
Graphic scan	parameter	Frequency, ACV, ACI, DCV, DCI
	Types	Logarithmic, linear, frequency segmentation
	Points	2-1601
	Number of channels	4
	Number of curves	4 Per Channel
	Split Screen	14 (Channel and Curve)
Equivalent circuit analysis		3-element model: 4, 4-element model: 3
Sorting		10 levels of sorting in LCR mode; each curve in scan mode is sorted individually
Interface		RS232C, USB HOST, USB DEVICE, LAN, GPIB, HANDLER, VGA, HDMI
Power-on warm-up time		60 Minutes
Input Voltage		100-120VAC/198-242VAC Option, 47-63Hz
Power consumption		Max 150VA
Measurement (WxHxD) mm ³		428x220x325
Weight		14.5kg

Standard accessories

Power cord

ST26010	Gold-plated short circuit board
ST26047A	Test fixture
ST26005D	Four-terminal test fixture
ST26082A	100 Ω standard resistance
ST26061D_P1	Calibration kit
AR05TTS1000N	Chip resistor