

Component Parameter Test Instruments

I. TH2851 Series Impedance Analyzer

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

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



NEW

RS232	GPIO	LAN	HANDER
standard	standard	standard	standard
USB HOST	USB DEVICE	HDMI	VGA
standard	standard	standard	standard

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

Weight: 14.5kg

■ 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		TH2851-015	TH2851-030	TH2851-050	TH2851-080	TH2851-130
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	$\leq\pm 0.0007\%$				
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	40μA				
Test terminal configuration		Four Terminal Pair				
Output impedance		25Ω / 100Ω				
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)				

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Max Accuracy		1kHz: 0.08% 1MHz: 0.08% 2MHz: 0.5% 10MHz: 1% 130MHz: 5.0%
Test 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}		-9.99999EΩ ~ +9.99999EΩ
G, B, Y		-9.99999ES ~ +9.99999ES
Vdc		-9999V ~ +9999V
Idc		-9999mA ~ +9999mA
θ _r		-999999rad ~ +999999rad
θ _d		-180.0deg ~ +180.0deg
Δ%		-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

Three core power cord
 TH26010 Gold-plated short circuit board
 TH26005D Test fixture
 TH26047A Test fixture

TH26082A 100Ω Standard Resistance
 TH26061D_P1 Calibration Kit
 AR05TTS1000N