

Component Parameter Test Instruments

I. TH2829 Series of Automatic Component Analyzer

Features

- 800×RGB×480 7-inch TFT LCD display
- Basic accuracy: 0.05%
- Test signal frequency of 1MHz, resolution of 1mHz, 5-digit frequency input
- Strongest signal source selection:
10V/100mA programmable AC test level
10V/100mA programmable DC bias supply
10V/50mA standalone DC voltage source
1A/2A interior DC bias current source (optional)
120A external bias source (optional)
- Maximum test speed: 9ms/time
- Simultaneous display of 4 kinds of test parameters
- 201 -point list sweep function
- Continuous curve scanning/graphical analysis function
- Internal storage of 100 sets of LCRZ setting files and 10 sets of GIF image
- GIF image and CSV data files can be saved to USB storage directly
- HANDLER, USB, LAN, RS232C, GPIB (option), DCI interface



RS232	USB HOST	USB DEVICE	HANDLER	LAN	GPIB
standard	standard	standard	standard	standard	option

TH2829A/TH2829C

Dimension (mm): 400(W) x 132(H) x 385(D)
Net weight : 13kg

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

Display			800×RGB×480 7-inch TFT LCD display
Frequency of test signal	TH2829A		20Hz—300kHz
	TH2829C		20Hz—1MHz
	Minimum resolution		1mHz, 5-digit frequency input
	Accuracy		0.01%
AC Level	Voltage range of test signal		5mV—10Vrms
	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		50μA—100mA
	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— ±10V / 0mA—±100mA
	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, 100Ωselectable
DCR Source impedance			30Ω, 50Ω, 100Ωselectable
DC Independent voltage source	Voltage/current range		0V— ±10V / 0mA—±50mA
	Resolution		0.5mV / 5μA
	Voltage accuracy		1% x set voltage + 5mV
	Output resistance		100Ω
Test parameters of LCR			Z , Y , C, L, X, B, R, G, D, Q, θ, DCR, Vdc-Idc
Parameter display of test page			Two sets of main/sub parameters, the second set can be set as ON/OFF; There can be 10 pages of list sweep and 15 points per page at most; Multiple parameters continuous sweep graphical analysis.

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Basic accuracy	LCR test parameter	0.05%
	Calibration	Warm-up time ≥ 30 seconds; Environment temperature: $23 \pm 5^\circ\text{C}$; Signal voltage: 0.3Vrms-1Vrms ; Zeroing: After OPEN or SHORT; Length of test cable: 0 m
Measurement time (≥ 10 kHz)		Fast: 9 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	0.00001 Ω — 99.9999M Ω
	Y ,G,B	0.00001 μs — 99.9999s
	C	0.00001pF — 9.99999F
	L	0.00001 μH — 99.9999kH
	D	0.00001 — 9.99999
	Q	0.00001 — 99999.9
	$\theta(\text{DEG})$	-179.999° — 179.999°
	$\theta(\text{RAD})$	-3.14159 — 3.14159
$\Delta\%$		-999.999% — 999.999%
Equivalent circuit		Serial, Parallel
Range mode		Auto, Hold
Trigger mode		Internal, Manual, External, Bus
Average times		1-256
Calibration function		Open, short calibration with full frequency or dot frequency, Load
Math operation		Direct reading, ΔABS , $\Delta\%$
Delay time setup		0-999, minimum resolution: 100us
Comparator	10-bin sorting, BIN1-BIN9, NG, AUX	
	Bin counter	
List sweep	PASS/FAIL on front panel, LED indication	
	·201 -point list sweep function ·List sweep of frequency, AC voltage/current, internal/external DC bias voltage/current and independent DC source voltage can be performed on each page. Each sweep point can be sorted separately.	
Graphical analysis	·Graph scanning and analysis of frequency, AC level and DC bias can be performed.	
	·Set the sweep start point, end point and each sweep point. ·Display the maximum value, minimum value and read any of the chosen sweep point ·Scanning graphs can be stored into internal or external USB memory.	
Internal nonvolatile memory		100 sets of LCRZ setting files memory, 201 times test results, 10 sets of GIF image, CSV data files
External USB memory		·GIF image, CSV data files ·LCRZ setting files memory ·Test data can be stored via USB memory directly.
Interface	1A bias current source	1A DC bias current source (optional) can be stalled
	I/O interface	HANDLER on rear panel
	SCI	USB, RS232C
	PCI	GPIO(optional)
	NI	LAN
Memory interface		USB HOST(front panel)
General Specifications		
Operating temperature and humidity		0°C – 40°C, $\leq 90\%\text{RH}$
Power supply	Voltage	99V – 121V, 198V – 242V AC
	Frequency	47Hz – 63Hz
Consumption		Max. 80 VA
Dimension(W×H×D)		400mm × 132mm × 385mm
Weight		Approx.13 kg

Standard Accessories

Three core power cord

TH26010 Gold-plated short circuit board

TH26011AS 4 terminal pair Kelvin test clip leads(only TH2829A)

TH26011BS 4 terminal pair Kelvin test clip leads(only TH2829C)

TH26048 Four-terminal test fixture