

Component Parameter Test Instruments

C. TH2819A Precision LCR Meter



TH2819A



Features

- 320×240 dot- matrix large-graphic LCD display
- Chinese and English language user interface selectable
- 2 different signal source output resistances: 30 Ω and 100 Ω
- Open/Short/Load correction
- 10 point list sweep function
- Built-in comparator; 10 bins and bin counters
- Test signal level monitor function
- Automatic level adjustment function for V and I
- 20 sets of settings saved and loaded
- RS232C,HANDLER,GPIB interfaces
- 0V,1.5V and 2V internal DC bias voltage
- Capable to operate with TH1773/TH1775 external DC bias current
- Optional ±10 V(±100mA) and 1A internal DC bias source

Brief Introduction

■ TH2819A is an updated product of TH2819 LCR meter. With high accuracy,wide measurement range, 6-digit resolution,test frequency up to 200KHz with the step of 0.01Hz,signal level from 5mV to 2V and DC internal bias voltage,the meter can be widely used for quality control on production line , incoming inspection , and high-accuracy measurement in lab.And perfect HANDLER interface,RS232C interface and GPIB interface make it easy to build an automatic component test system,communicate with the computer and record the test results.

Specifications

Test Parameter	Z , Y , C, L, X, B, R, G, D, Q, θ ,DCR , Turn-Ratio, Phase
Test Frequency	20Hz to 200KHz, Resolution: 10mHz, Accuracy: 0.01%
Test Level Range	Regual: 5mV to 2V, Turn-ratio: 5mV to 4V,resolution: 1mV, Accuracy: 5%
Output Impedance	30 Ω and 100Ω selectable
Basic accuracy	0.05%
Measuring time (≥1kHz)	Fast: 32ms, Med: 90ms, Slow: 650ms
Equivalent Circuit	Series and Parallel
Ranging Mode	Auto and Hold
Trigger Mode	Internal, Manual, External and Bus
Averaging Rate	1-255

Display Range	Z , R, X	0.00001 Ω — 99.9999 MΩ
	DCR	1mΩ — 99.9999 Ω
	Y , G, B	0.00001μS — 99.9999 S
	C	0.00001 pF — 9.99999 F
	L	0.00001 μH — 99.9999 kH
	D	0.00001 — 9.99999
	Q	0.01 — 99999.9
	θ (DEG)	-179.999° — 179.999°
	θ (RAD)	-3.14159 — 3.14159
	Turns-Ratio	1:0.01 — 100:1
Δ%	-999.999% — 999.999%	
Correction Function	Open, Short and Load	
Internal DC bias source	0V, 1.5V, 2V, Accuracy: 1%	
Comparator Function	10 bins and bin counters	
Memory	20 groups of control settings can be saved	
Interface	RS232C, HANDLER(options), GPIB (options)	

General Specifications

Working Temperature & Humidity	0°C – 40°C, ≤90%RH	
Power supply	Voltage	99V–121V,198V–242V
	Frequency	47.5Hz–63Hz
Power Consumption	≤ 80VA	
Dimensions (W×H×D)	400mmx132mmx385mm	
Weight	Approx. 10kg	

Ordering Information

TH2819A Precision LCR Meter

Instrument Accessories

- TH26005B 4 terminal test fixture
- TH26011A 4 terminal Kelvin test clip leads
- TH26010 Gilded shorting plate

Options

- TH26047 4 terminal test fixture
- TH26048 4 terminal test fixture
- TH26006 Axial component test fixture
- TH26007 Core inductor test fixture
- TH26008A SMD component test fixture
- TH26009B SMD Kelvin test tweezers
- TH10002 GPIB interface board
- TH26033 GPIB interface cable
- TH26034 RS232C interface cable
- TH1902A 100mA/10V DC bias board
- TH1902B 1A DC bias board

Component Parameter Test Instruments

C. TH2816A/TH2816B/TH2817A Precision LCR Meter

Features

- 240×64 dot-matrix graphics LCD display
- Friendly user's interface and easy operation
- TH2816A: Over 12,000 frequency points available from 50Hz to 200kHz
- TH2816B: 37 typical frequency points
- TH2817A: 16 typical frequency points available from 50Hz to 100kHz
- Programmable single-voltage level from 10mVrms to 2.0Vrms
- World-level stability and accuracy
- 6 digit readout resolution
- Up to 30meas/sec Measurement rate
- Precision LOAD correction function
- Selectable signal source output impedances: 30Ω, 100Ω
- Direct control function for TH1773/TH1775 DC bias source
- List sweep function for up to 4 frequencies, signal levels and DC bias levels
- Direct, Δ ABS and Δ% display modes
- 12 control setting files memory
- Built-in comparator, 10 Bins and bin counters (TH2816A/B)
- Built-in comparator, 4 Bins and bin counters (TH2817A)
- Test signal level monitor function
- Key lock function
- Handler interface
- RS-232C and optional GPIB interfaces



TH2816A/TH2816B/TH2817A

Brief Introduction

■ TH2816A/TH2816B/TH2817A is a new precision LCR meter combined with years of technical experience and newest measurement technology of instrument industry. With powerful measurement functions, high performance and low cost, TH2816A/TH2816B/TH2817A have been one of the world advanced instruments, and it provides users a super value measurement resolution and experience. The meter offers stable 6 digit resolution, wide frequency range (50Hz to 100kHz for TH2817A and 50Hz to 200kHz for TH2816A), programmable signal level (0.01V to 2.0V), up to 30 meas/sec measurement rate, 9 measurement ranges, 30Ω or 100Ω constant output impedance and friendly operation interface. TH2816A/TH2816B/TH2817A can be used for incoming inspection of components, quality control of product line and high accuracy laboratory use. The HANDLER, GPIB, RS232C interfaces make it easy to build an automatic component test system, communicate with the computer and record the test results.

Specifications

Measurement function		
Test parameter	Z , C, L, X, B, R, G, D, Q, θ	
Basic accuracy	TH2816A	0.05%
	TH2817A	
	TH2816B	
Equivalent circuit	Series and Parallel	
Math function	Deviation and Percent Deviation	
Ranging mode	Auto, Hold	
Trigger mode	Internal, Manual, External and Bus	
Measuring speed	Slow: 1.5meas/sec	
	Med: 10meas/sec	
	Fast: 30meas/sec	
Correction function	Open, Short and Load corrections	
Measurement terminal	5 terminals	
Averaging rate	1—255, TH2816A/TH2817A only	

Delay time	0—60sec, with step of 1ms
List sweep	List sweep for up to 4 frequencies, signal levels and DC bias levels
Display Mode	Direct, ΔABS, Δ%, V/I(V/I monitor), Bin number and bin counter
Display	240×64 dot-matrix LCD display, 6-digit resolution

Test signal		
Signal frequency	TH2816A	50Hz to 200kHz, over 12,000 points
	TH2816B	50Hz to 200kHz, total 37 points 50Hz, 60Hz, 80Hz, 100Hz, 120Hz, 150Hz, 200Hz, 250Hz, 300Hz, 400Hz, 500Hz, 600Hz, 800Hz, 1kHz, 1.2kHz, 1.5kHz, 2kHz, 2.5kHz, 3kHz, 4kHz, 5kHz, 6kHz, 8kHz, 10kHz, 12kHz, 15kHz, 20kHz, 25kHz, 30kHz, 40kHz, 50kHz, 60kHz, 80kHz, 100kHz, 120kHz, 150kHz, 200kHz
	TH2817A	from 50Hz to 100kHz: 50Hz, 60Hz, 100Hz, 120Hz, 200Hz, 400Hz, 500Hz, 1kHz, 2kHz, 4kHz, 5kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz, 120kHz, 150kHz, 16 points
Output impedance	30Ω, 100Ω	
Test level	10mVrms to 2.0Vrms, 10mV steps	

Measurement display range	
Z , R, X	0.00001Ω — 99.9999MΩ
C	0.00001pF — 999.999mF
L	0.00001μH — 9.99999kH
G, B	0.00001μS — 999.999S
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%

Comparator, memory & interface		
Comparator Function	TH2816A	10 Bins(BIN1 to BIN9, OUT of bins), and additional AUX bin
	TH2816B	
	TH2817A	4 bins(BIN1 to BIN3, OUT of bins), and additional AUX bin
Memory	12 control settings memory for store/recall	
Interface	RS-232C, HANDLER, GPIB (Optional)	

Ordering Information

TH2816A Precision LCR Meter

TH2816B LCR Meter

TH2817A Precision LCR Meter

Instrument Accessories

TH26005A 4 terminal test fixture

TH26011A 4 terminal Kelvin test clip leads

TH26010 Gilded shorting plate

Options

TH26047 4 terminal test fixture

TH26048 4 terminal test fixture

TH26006 Axial component test fixture

TH26007 Core inductor test fixture

TH26008A SMD component test fixture

TH26009B SMD Kelvin test tweezers

TH26033 GPIB interface cable

TH26034 RS232C interface cable

TH10001 GPIB interface board

TH12003 RS232C control software(TH2816A)

TH12004 RS232C control software(TH2817A)

Component Parameter Test Instruments

C. TH2817B/TH2817C LCR Meter

Features

- Special LCD display
- 10 typical measurement frequencies from 50Hz to 100kHz
- Built-in ± 2 VDC bias voltage source, extendable to -5VDC~+5VDC bias voltage or max. bias current of 50mA(only TH2817C)
- 2 selectable source impedance: 30 Ω /100 Ω , easy to be compatible with other LCR meters
- Measurement speed up to 20times/second
- Transformer parameter measurement function (only for TH2817C)
- Built-in 5-bin comparator
- Key lock function
- Automatic LCZ function
- 10 sets of measurement parameters saved
- Automatically recalling saved measurement parameters
- HANDLER and RS232C interfaces
- Optional GPIB (IEEE-488) interface



TH2817B/TH2817C

Brief Introduction

■ TH2817B/TH2817C LCR meter is newly-devolved component measurement instrument providing high performance at low cost. It is perfect combination of general LCR meter and high-performance LCR meter with high-accuracy. The meter provides measurement speed up to 20times/second, 10 measurement frequencies from 50Hz to 100kHz, 3 common typical test levels, 5-digit resolution, two inner-source resistance selections and strong measurement functions. So it's suitable for measurement of quality control on production line, incoming inspection, component design and evaluation.

High performance at low cost

■ With the base of our years' experience of developing LCR meter, the meter reasonably combines easy operation and strong functions, and improves performance of 100kHz LCR meter. It is ideal instrument for incoming inspection and production line use.

Communication interfaces

■ TH2817B/TH2817C provides HANDLER, RS232C, GPIB interfaces, through which the meter can communicate with computer and build automatic measurement system and product test line.

Convenient parameter saving and loading

■ TH2817B/TH2817C can save 10 sets of measurement parameters, and automatically load saved parameters, which doesn't have the trouble of repeat setting.

Useful transformer measurement function

■ TH2817C has transformer measurement function. Using special transformer test fixture, turns ratio (N, 1/N), mutual inductance (M), primary and secondary inductances (L2A, L2B), primary and secondary DC resistances (DCR, R2) can be measured without changing test cable mode. With adjustable bias voltage from -5V to +5V or DC bias current up to 150mA, the meter can conveniently measure communication transformer and choke with small power.

Specifications

	TH2817B	TH2817C
Measurement function		
Measurement parameter	LCR	Z , R, X, G, B, C, L, Q, D, θ (deg), θ (rad)
	Transformer	----- DCR, M, N, 1/N, L2, DCR2
Basic accuracy		0.1%
Equivalents circuit		Series, parallel
Mathematical function		Absolute value deviation, $\Delta\%$
Ranging mode		Auto, Hold, Manual selection
Trigger mode		Internal, Manual, External, BUS
Measurement speed		Fast: 20, Med: 8, Slow: 2 (times/second) (≥ 1 kHz)
Average times		1 - 99
Calibration function		Open/Short frequency point, full frequency correction
Measurement terminal		5-terminal
Display mode		Direct, Δ , $\Delta\%$
Display		5-digit resolution, special LCD display with backlight
Measurement signal		
Signal frequency		10 points: 50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz
Output impedance		30 Ω , 100 Ω
Test level		0.1Vrms, 0.3Vrms, 1Vrms
DC bias source	-----	Fixed ± 2 VDC, 0~ ± 5 VDC adjustable 0~ ± 50 mA DC adjustable
Measurement display range		
Z , R, X		0.0001 Ω - 99.999M Ω
C		0.001pF - 9999.9 μ F
L		0.001 μ H - 99.999kH
D		0.0001 - 9.9999
Q		0.0001 - 9999.9
θ (DEG)		-179.99 $^\circ$ - 179.99 $^\circ$
θ (RAD)		-3.1415 - 3.1415
$\Delta\%$		-99.999% - 999.99%
N, 1/N	-----	0.001 - 999.99
DCR	-----	0.1m Ω - 199.99k Ω
M, L2	-----	0.001 μ H - 99.99kH
Comparator and interface		
Comparator		5 bins (3 PASS bins, 1 FAIL bin), 1 AUX bin
Memory		10 sets of inner instrument settings saved and recalled
Interface		RS-232C, HANDLER, GPIB (option)

General Specifications

Operating temperature & Humidity	0 $^\circ$ C - 40 $^\circ$ C, $\leq 90\%$ RH
Power supply	198V - 242V, 47.5Hz - 52.5Hz
Power consumption	≤ 30 VA
Dimensions (W×H×D)	275mm×120mm×425mm
Weight	Approx. 3.8 kg

Ordering Information

TH2817B LCR Meter

TH2817C LCR Meter

Instrument Accessories

TH26005A	4-terminal test fixture
TH26011A	4-terminal Kelvin test cable
TH26010	Gilded shorting plate
TH26038	transformer test fixture (only for TH2817C)

Options

TH26047	4-terminal test fixture
TH26048	4-terminal test fixture
TH26005B	4-terminal test fixture
TH26006	axial component test fixture (used with TH26005A)
TH26007	core test fixture
TH26008A	SMD component test fixture
TH26009B	SMD test tweezers
TH26029B	SMD test tweezers
TH10001	GPIB interface

Component Parameter Test Instruments

C. TH2825/TH2825A High speed LCR Meter

Features

- Ultrahigh measurement speed: 15ms (frequency \geq 100Hz)
- 240 \times 64 dot-matrix LCD display
- Humanization operation board
- 10 typical frequencies from 50Hz to 100kHz
- Programmable test level from 10mVrms to 1.0Vrms
- Built-in bias voltage source from -5VDC to +5VDC or max DC bias current source of 200mA
- Accurate load correction
- 5 selectable source impedance modes
- List sweep function for up to 4 frequencies, signal levels and DC bias levels
- Measurement signal V/I monitor function
- Transformer parameter measurement function (only for TH2825A)
- Built-in 10-bin comparator, sorting and bin counter
- Hi/Go/Low comparison function and beeper alarm
- Key lock function
- Automatic LCZ function
- 10 sets of measurement parameters saved
- Measurement parameters automatically loaded at the time of turning on instrument
- Handler interface compatible with Agilent 4263B
- IEEE-488 control command compatible with Agilent 4263B



TH2825/TH2825A

Brief Introduction

■ TH2825/TH2825A high-speed LCR meter is new-generation component parameter measurement instrument. It offers high measurement speed up to 20times/second, 10 frequencies from 40Hz to 100kHz, programmable signal level from 0.01V to 1.0V with step of 10mV, 5-digit resolution, multi source resistance selections, and strong measurement functions. So it is suitable for quality control on production line, incoming inspection, and component design.

High measurement speed

■ This instrument, using the most advanced technology in the field, has the strong measurement function which is compatible with advanced products in the world. It provides incomparable measurement speed up to 20times/second, which solves the problem of slow measurement speed at low frequency. So it is ideal instrument to perform high-speed measurement for electrolytic capacitor, ceramic capacitor, and transformer.

Multi selectable signal source impedance modes

■ Different LCR meters get different measurement results because of different impedances. TH2825/TH2825A provides 5 selectable impedance modes to meet different needs, to ensure the consistency of measurement results between different meters. Constant-voltage mode suitable for measurement of multilayer ceramic capacitor(MLCC)

Constant-voltage mode suitable for measurement of multilayer ceramic capacitor (MLCC)

■ MLCC is rather sensitive to signal test level. And TH2825/TH2825A can measure large-amount MLCC with constant high-level signal. It is allowed to measure MLCC of 30 μ F at constant 1kHz/1Vrms, and MLCC pf 300 μ F at constant 100Hz/1Vrms.

Powerful transformer measurement function

■ TH2825A has the function of measuring transformer. Using special transformer test fixture, turns ratio (N, 1/N), mutual inductance (M), primary and secondary inductances (L2A, L2B), primary and secondary DC resistances (DCR, R2) can be measured without changing test cable mode. With adjustable DC bias current up to 200mA (TH2825/TH2825A both have), the meter can conveniently measure communication transformer and choke with small power.

Interface being compatible with famous meters

■ HANDLER, GPIB interfaces and GPIB interface command are completely compatible with Agilent 4263B, which help build conversion with 4263B.

Specifications

		TH2825	TH2825A
Measurement function			
Parameter	LCR	Z ,R, X, G, B, C, L, Q, D, θ (deg), θ (rad)	
	Transformer	-----	DCR, DCR2, M, Turns, N, 1/N, LA, LB
Basic accuracy		0.1%	
Equivalent circuit		Series, parallel	
Mathematical function		Δ ABS (absolute value deviation), $\Delta\%$ (percent deviation)	
Range mode		Auto, Hold, Manual conversion	
Trigger mode		Internal, Manual, External, BUS	
Measurement time		Fast: 20ms (note 1), medium: 60ms, slow: 295ms	
Average times		1—255	
Calibration function		Open, short, load correction	
Measurement terminal		5-terminal	
List sweep		4 frequencies, level, DC bias list sweep measurement	

Component Parameter Test Instruments

C. TH2825/TH2825A High speed LCR Meter

Display mode	Direct, Δ ABS, Δ %, V/I (voltage/current monitor), bin No., and bin counter	
Display	240×64 dot-matrix LCD display with resolution of 5 digits	
Measurement signal		
Signal frequency	Total 10 points: 50Hz,60Hz,100Hz, 120Hz,1kHz,10kHz,20kHz, 40kHz, 50kHz,100kHz	
Output impedance	25 Ω ,100 Ω , 25 Ω /100 Ω ,C.V. (constant voltage)	
Test level	10mVrms—1.0Vrms, with step of 1mV <200mV,step 1mV \geq 200mV,step 10mV	
DC bias source	-----	Fixed \pm 1.75VDC, 0~ \pm 5VDC adjustable
		Resistance is 100 Ω : \pm 50mA Max Resistance is 25 Ω : \pm 200mA Max
Measurement display range		
Z , R, X	0.0001 Ω — 99.999M Ω	
G, B	0.0001 μ S — 999.99S	
C	0.001pF — 1.9999F	
L	0.001 μ H — 99.99kH	
D	0.0001 — 9999	
Q	0.0001 — 99999	
θ (DEG)	-179.99° — 179.99 °	
θ (RAD)	-3.1416 — 3.1416	
Δ %	-99.999% — 999.999%	
N,1/N	-----	0.001—999.99
DCR	-----	0.1 m Ω —199.99 k Ω
M,L2	-----	0.001 μ H—99.99 kH
Comparator and interface		
Files Comparator	10 bins: 8 pass bins, 1 fail bin, 1 AUX bin	
Comparator	HIGH/PASS/LOW	
Memory	12 sets of instrument settings saved and loaded	
Interface	RS-232C, HANDLER, GPIB (option)	

Note 1: Fast measurement time includes A/D, calculation, main/sub parameter comparison judgment, and small-character display of measurement parameter. If measurement parameter is displayed in large character, fastest measurement time is added by 5ms.

General Specifications

Operating temperature	0°C – 40°C	
Operating humidity	\leq 90%RH	
Power supply	Voltage	99V – 242V
	Frequency	47.5Hz – 63Hz
Power consumption	\leq 30VA	
Dimensions (W×H×D)	350mm×120mm×425mm	
Weight	Approx. 4.8 kg	

Ordering Information

TH2825	LCR Meter
TH2825A	LCR Meter

Instrument Accessories

TH26005A	4-terminal test fixture
TH26011A	4-terminal Kelvin test cable
TH26010	Gilded shorting plate

Options

TH26047	4-terminal test fixture
TH26048	4-terminal test fixture
TH26005B	4-terminal test fixture
TH26006	Axial component test fixture (used with TH26005A)
TH26007	Core test fixture
TH26008A	SMD component test fixture
TH26009B	SMD component test tweezers
TH26029B	SMD component test tweezers
TH26004-1	4-terminal test fixture
TH10001	GPIB interface board

Component Parameter Test Instruments

C. TH2810D/TH2811D LCR Meter

Features

- Large character LCD display with backlight
- Easy operation with strong functions
- SMT surface mount technic
- Fast measurement speed (80mS)
- Good Readout stability
- 2 signal source output impedance:30Ω, 100Ω
- 5 Bins comparator and HANDLER interface(TH2810D only)
- RS-232C interface (TH2810D only)
- Optional RS232C operation software(TH2810D only)



TH2810D/TH2811D(Can Alternative TH2810B/C TH2812C/TH2820)

Brief Introduction

■ TH2810D/TH2811D LCR meter is our newly developed successor instrument for low frequency component measurement. TH2810D/TH2811D with its latest measurement technologies, large character LCD display, surface mount technics, easy of use and excellent appearance can be used for quality control on production line, incoming inspection of components and automatic test system. The RS-232C interface can be used to carry out remote control and statistics and analysis of measurement results.

Specifications

	TH2810D	TH2811D
Measurement function		
Test Parameter	L-Q, C-D, R-Q, Z -Q	
Basic Accuracy	0.1%	0.2%
Equivalent circuit	Series, parallel	
Mathematical Functions	Deviation and Percent Deviation	-----
Rang mode	Auto, Hold	
Trigger mode	Internal, Manual and External	Internal
Measurement speed	Fast: 12, Med: 5.1, Slow: 2.5 (meas/sec)	
Correction Function	Open/Short multi-frequency Zeroing	
Measurement Terminals	Five Terminals	
Test Signal		

Test Frequency	100Hz,120Hz,1kHz,10kHz, Accuracy 0.01%	
Output impedance	30Ω , 100Ω	
Signal level	0.1Vrms, 0.3Vrms, 1Vrms	0.3Vrms, 1Vrms
Measurement Display Range		
Z , R	0.1mΩ - 99.99MΩ	
C	100Hz/120Hz	1pF - 99999μ F
	1KHz	0.1pF - 9999.9μ F
	10KHz	0.01pF - 999.99μ F
L	100Hz/120Hz	1μH - 99999H
	1KHz	0.1μH - 9999.9H
	10KHz	0.01μH - 999.99H
D	0.0001 - 9.999	
Q	0.0001 - 9999	
Δ%	-999.99% - 999.99%	
Display		
Display Mode	Direct, Δ%, Δ ABS	Direct
Display	Large character LCD with backlight	
Display digits	Primary and secondary display:5 digits	
Comparator and interface		
Comparator	NG, P1, P2, P3, AUX, 5 bins and alarm selectable	-----
Interface	RS232C, Handler	-----

General Specifications

Operation Temperature & Humidity	0°C - 40°C, ≤90%RH	
Power Requirements	Voltage	99V - 121V, 198V - 242V
	Frequency	47.5Hz - 63Hz
Power Consumption	≤20 VA	
Dimensions (W×H×D)	270mm×130mm×300mm	
Weight	Approx. 3.7kg	

Ordering Information

TH2810D LCR Meter

TH2811D LCR Meter

Instrument Accessories

TH26001A	4 terminal test fixture
TH26004-1	4 terminal Kelvin test clip leads
TH26010	Gilded shorting plate

Options

TH26005A	4 terminal test fixture
TH26006	Axial component test module
TH26007	Core inductor test fixture
TH26008A	SMD component test fixture
TH26009B	SMD Kelvin test tweezers
TH26029B	SMD Kelvin test tweezers
TH26011A	4 terminal Kelvin test clip leads
TH12010	RS232C Control software(th2810D only)

Component Parameter Test Instruments

C. TH2821/TH2821A/TH2821B Portable LCR Meter

Features

- Portable LCR Meter
- Large LCD display
- 0.3% basic accuracy ,resolution:0.01%
- Primary and secondary parameter dual display
- 100Hz,120Hz and 1KHz,10KHz test frequencies
- Complete four-terminal measurement
- Auto Power Off function
- Battery and external power supply
- Sweep frequency correction function
- 4 bins comparator

Portable flexibility & desk meter's performance



TH2821/A



TH2821B

Brief Introduction

■ TH2821Series is the first portable LCR meter with MPU control in China. It can measure following 6 parameters: L,C,R, |Z|,D and Q with 0.3% basic accuracy, 3 meas/sec measurement rate and suitable 4 Bins comparator. The use of complete 4-terminal measurement makes it possible for accurate low dissipation capacitor measurement with a portable meter. This portable meter can be used instead of a general purpose low frequency LCR meter with its good performance. With the battery and external power supply,TH2821 Series is ideal for field and portable applications such as fixed place component inspection and immediate measurement by buyers and maintenance personnel.

Specifications

Test parameter	L-Q, C-D, R-Q, Z -Q	
Test Frequency	TH2821	100Hz, 120Hz,1KHz
	TH2821A	100Hz, 120Hz,1KHz,10KHz
	TH2821B	100Hz, 120Hz,1KHz
Test Level	0.3Vrms(1 ± 10%)	

Basic Accuracy	0.3%		
Measuring Speed	Approx 3 meas/sec		
Equivalent Circuit	Series and Parallel		
Measuring Range	L	100Hz/120Hz	1μH — 9999H
		1KHz	0.1μH — 999.9H
		10KHz	0.01μH — 99.99H
	C	100Hz/120Hz	1pF — 9999μF
		1KHz	0.1pF — 999.9μF
		10KHz	0.01pF — 99.99μF
	R,Z	0.0001Ω — 9.999MΩ	
	Q	0.0001 — 9999	
	D	0.0001 — 9.999	
Δ%	-999.99% — 999.99%		
Ranging Mode	Auto and Hold		
Display mode	TH2821	Direct, Δ%, ΔABS	
	TH2821A	Direct, Δ%, ΔABS	
	TH2821B	Direct	
Measurement Terminals	5 Terminals		
Calibration Function	Open and Short Sweep Zeroing		
Comparator Function	TH2821/TH2821A	4 Bins: NG, P1, P2, P3	
	TH2821B	No	

General Specifications

Operating Temperature And Humidity	0°C–40°C, ≤90%RH	
Power Requirements	TH2821	Battery 1604, 9V or Adapter 12V DC,150mA
	TH2821A	GP17R8H Rechargeable Battery or 12V DC, 150mA
	TH2821B	Battery 1604, 9V or Adapter 12V DC,150mA
Operation current	TH2821/TH2821B	≤ 25mA
	TH2821A	≤ 40mA
Dimensions (W×H×D)	200mm×95mm×40mm	
Weight	Approx. 400 g	

Ordering Information

TH2821 Portable LCR Meter

TH2821A Portable LCR Meter

TH2821B Portable LCR Meter

Instrument Accessories

TH26027 4 terminal Kelvin test clip leads

TH26028 AC power adapter

1604A 9V Model 1604A 9V battery (TH2821/TH2821B)

GP17R8H Rechargeable battery (TH2821A)

Options

TH26029 SMD component test fixture