

Component Parameter Test Instruments

A. TH2817B/TH2817C LCR Meter

Features

- Special LCD display
- 10 typical measurement frequencies from 50Hz to 100kHz
- Built-in $\pm 2\text{VDC}$ bias voltage source, extendable to $-5\text{VDC} \sim +5\text{VDC}$ 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 20 times/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-developed 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 (red)	
	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) ($\geq 1\text{kHz}$)	
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 $\pm 2\text{VDC}$, 0 $\sim\pm 5\text{VDC}$ adjustable 0 $\sim\pm 50\text{mA}$ 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° - 179.99°	
θ (RAD)		-3.1415 - 3.1415	
$\Delta\%$		-99.999% - 999.99%	
N,1/N		-----	0.001 - 999.99
DCR		-----	0.1m Ω - 99.99k 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°C - 40°C, $\leq 90\%$ RH
Power supply	198V - 242V, 47.5Hz - 52.5Hz
Power consumption	$\leq 30\text{VA}$
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)
TH26007A	core test fixture
TH26008A	SMD component test fixture
TH26009B	SMD test tweezers
TH26029B	SMD test tweezers
TH10001	GPIB interface