

# Component Parameter Test Instruments

## A. TH2817B/TH2817C LCR Meter

### Features

- Special LCD display
- 10 typical measurement frequencies from 50Hz to 100kHz
- Built-in  $\pm 2$ VDC bias voltage source, extendable to -5VDC~+5VDC bias voltage or max. bias current of 50mA(only TH2817C)
- 2 selectable source impedance: 30 $\Omega$ /100 $\Omega$ , 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
<b>Measurement function</b>		
Measurement parameter	LCR	Z , R,X,G,B,C, L, Q,D, $\theta$ (deg), $\theta$ (red)
	Transformer	----- DCR, M, N, 1/N, L2, DCR2
Basic accuracy	0.1%	
Equivalent 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) ( $\geq 1$ kHz)	
Average times	1 - 99	
Calibration function	Open/Short frequency point, full frequency correction	
Measurement terminal	5-terminal	
Display mode	Direct, $\Delta$ , $\Delta\%$	
Display	5-digit resolution, special LCD display with backlight	
<b>Measurement signal</b>		
Signal frequency	10 points: 50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz	
Output impedance	30 $\Omega$ , 100 $\Omega$	
Test level	0.1Vrms, 0.3Vrms, 1Vrms	
DC bias source	-----	Fixed $\pm 2$ VDC, 0~ $\pm 5$ VDC adjustable 0~ $\pm 50$ mA DC adjustable
<b>Measurement display range</b>		
Z , R, X	0.0001 $\Omega$ - 99.999M $\Omega$	
C	0.001pF - 9999.9 $\mu$ F	
L	0.001 $\mu$ H - 99.999kH	
D	0.0001 - 9.9999	
Q	0.0001 - 9999.9	
$\theta$ (DEG)	-179.99° - 179.99°	
$\theta$ (RAD)	-3.1415 - 3.1415	
$\Delta\%$	-99.999% - 999.99%	
N, 1/N	-----	0.001 - 999.99
DCR	-----	0.1m $\Omega$ - 199.99k $\Omega$
M, L2	-----	0.001 $\mu$ H - 99.99kH
<b>Comparator and interface</b>		
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	$\leq 30$ 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