

Component Parameter Test Instruments

I. TH283X Series Compact LCR Meter

Features

- Low cost, high performance, small size
 - 4.3 inch TFT LCD Display
 - Soft power switch
 - Selectable Chinese-English operation language
 - Max. 200kHz test frequency
 - Max. 6 digit reading resolution
 - 10mVrms-2.0Vrms programmable signal level,
built-in 0 - ± 5V/50mA bias source
 - DCR, 50mV-2V programmable test level, resolution 10μΩ
 - Ls-Rd / Lp-Rd Function (L, Rd display simultaneously) *
 - Highest test speed 13ms/time
 - Selectable 30Ω/100Ω signal source impedance
 - V/I monitor and auto level adjustment function
 - Built-in comparator, 10 bins sorting and count function
 - File storage and firmware update through U disk
 - RS232, RS485, USB, HANDLER, GPIB interface
- * Rd means DCR.



RS232	USB HOST	USB DEVICE	HANDLER
standard	standard	standard	standard
GPIB	RS485	SCANNER	
option	option	option	

TH283X Series

Rack mount (mm): 215(W) x 88(H) x 335(D)
 Dimension (mm): 235(W) x 105(H) x 360(D)
 Net weight: 3.6 kg

Applications

- Passive components:
 Evaluation of Impedance Parameters for Capacitors, Inductors, Cores, Resistors, piezoelectric devices, Transformers, Chip Components, and Network Components

- Other components:
 Impedance evaluation of printed circuit boards, relays, switches, cables, batteries, etc.

Specifications

Model		TH2830	TH2832
Basic measurement accuracy (See details in technical specification)	LCRZ	0.05%	0.05%
	DCR	0.1%	
	Calibration condition	Warm up time: ≥ 30 minutes ; Environment temperature: 23±5°C Signal level: 1Vrms ; Corretion: after OPEN, SHORT Testing cable length: 0 m	
Test signal frequency		50Hz-100kHz , Continuous	20Hz-200kHz, Continuous
Signal source output impedance		Selectable 30Ω, 100Ω, ±1% @1kHz	
AC test signal level	Normal	10mV—2Vrms	
		Resolution: 10mV, Accuracy: 10% x setting voltage+2mV	
	Constant level (ALC ON)	100μA—20mArms	
		Resolution: 0.1mA	
DCR test signal level		-----	20mV—1Vrms
		-----	Resolution: 10mV , Accuracy: 10%
		-----	200μA—10mArms
		-----	Resolution: 0.1mA
	1V DC	50mV—2V DC	
	-----	Resolution: 0.5mV	

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DC bias voltage source	-----	0V— ± 5V																		
	-----	Resolution: 0.5mV, Accuracy: 1%																		
	-----	0mA—± 50mA																		
	-----	Resolution: 0.5μA																		
Test parameters	Z , Y , C, L, X, B, R, G, D, Q, θ, DCR																			
DCR display range	0.00001 Ω – 99.9999 MΩ																			
LCR parameters display range	<table border="0"> <tr> <td> Z , R, X</td> <td>0.00001Ω — 99.9999MΩ</td> </tr> <tr> <td> Y , G, B</td> <td>0.00001μs — 99.9999s</td> </tr> <tr> <td>C</td> <td>0.00001pF — 9.99999F</td> </tr> <tr> <td>L</td> <td>0.00001μH — 99.9999kH</td> </tr> <tr> <td>D</td> <td>0.00001 — 9.99999</td> </tr> <tr> <td>Q</td> <td>0.00001 — 99999.9</td> </tr> <tr> <td>θ(DEG)</td> <td>-179.999° — 179.999°</td> </tr> <tr> <td>θ(RAD)</td> <td>-3.14159 — 3.14159</td> </tr> <tr> <td>Δ%</td> <td>-999.999% — 999.999%</td> </tr> </table>		Z , R, X	0.00001Ω — 99.9999MΩ	Y , G, B	0.00001μs — 99.9999s	C	0.00001pF — 9.99999F	L	0.00001μH — 99.9999kH	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%
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Δ%	-999.999% — 999.999%																			
Display digits	6	6																		
Measurement time (≥10 kHz)	Fast: 75 meas/sec(13ms), Medium:11 meas/sec(90 ms), Slow: 2.7meas/sec(370 ms)																			
Equivalent circuit	Serial, Parallel																			
Range mode	Auto, Hold																			
Trigger mode	Internal, Manual, External, Bus																			
Average time	1–255																			
Correction	Open, Short, Load																			
Math operation	Direct reading, ΔABS, Δ%																			
Trigger delay time setting	0 - 60.000s, 1ms steps																			
Step delay time setting	0 - 60.000s, 1ms steps																			
List Sweep	<ul style="list-style-type: none"> ·10 points list sweep ·Frequency, AC voltage/current, internal/ external bias voltage/ current can be swept. ·Each sweep point can be sorted separately. 																			
Comparator function	10 bins, BIN1–BIN9, NG, AUX																			
	Bin count function																			
	PASS, FAIL LED display on front panel																			
Built-in Storage	Internal 100 LCRZ instrument setting files, 201 times test results																			
USB Storage	Instrument setting files , measurement result CSV files, printed screen (GIF format)																			
Interface	Control interface	HANDLER																		
	Communication interface	USB HOST, RS232C, RS485(option), GPIB(option)																		
	Storage interface	USB DEVICE (U-disk storage)																		

Standard Accessories

Three core power cord

TH26010 Gold-plated short circuit board

TH26011CS 4 terminal pair Kelvin test clip leads

TH26048A Four-terminal test fixture