Component Parameter Test Instruments

A. TH2638 / TH2638A Precision Capacitance Meter

Features

- 4.3 inch TFT LCD display
- Selectable Chinese and English operation interface
- Max. test frequency: 1MHz
- Highest test speed: 2.3ms/time
- Basic test accuracy : ±0.07%
- Loss factor: ±0.0005
- V, I test signal level monitor function
- Low impedance measurement, signal level compensation function
- Built-in 11-bin comparator
- Internal file storage and external U disk file storage
- Test data can be directly saved in U disk
- Screen shot can be saved in U disk
- Compatible with SCPI commands
- RS232C, USB CDC, LAN, HANDLER, GPIB interfaces
- Manipulator interface and scanner interface
- Contact inspection function
- Synchronizing signal source
- Offset function in 1MHz test frequency (±1, ±2%)

TH2638/A

Rack mount (mm): 280(W) x 88(H) x 370(D)
Dimension (mm): 369(W) x 108(H) x 408(D)
Net weight: 5 kg

Brief Introduction

■ TH2638 series is a new precision capacitance meter with higher test frequency. With small size and portable appearance, it is convenient for use on the shelves. With basic accuracy of ±0.07%, loss accuracy of 0.0005, test frequency up to 1MHz, 4.3 inch LCD screen, selectable Chinese-English operation interface, TH2638 series is easy to operate and provide fast and reliable test for ceramic capacitor production. Also, it can test all kinds of capacitors from low value to high value. The results of testing one capacitor for several times are quite stable and accurate, even for lower value capacitors. The tester is compatible with SCPI command set, and configured with manipulator and scanner interface, the scanner interface can scan the open/short/load error calibration in each channel, 256 channels at most. In low frequency, there is signal level compensation function. When the impedance is very small, the internal resistance in signal source and test cable will cause the voltage on terminal of DUT lower than the set range, then this function will adjust the level to the set range.

There is an additional inspection function for failed contact especially for production lines, which can detect the failed contact between DUTs with tester and no extra time is needed to carry out this operation. It keeps the same signal source function as the real test, where there is the real test, the test signal can be generated in DUT, and there is no any test signal when connect and disconnect the DUT, thus it will reduce the damage to the fixture or test point when there is big current in failed contact. When the test frequency is 1MHz, the test frequency can be set Rel (offset value is ±1%,±2%). In array capacitor test, this function can eliminate the noise between adjacent terminals and reduce the difference of test results. There is feed box with tester, so user can set 9 boxes based on the result of C-D/Q/R/Q to find out the pass and fail products and then put into different boxes.

Specifications

Model		TH2638	TH2638A
Test parameters		Cp-D, Cp-Q, Cp-Rp, Cp-G, Cs-D, Cs-Q, Cs-Rs	
Test signal			
Frequency	Permitted frequency	100Hz,120Hz, 1kHz,10kHz,100kHz,1MHz, 1MHz±1%,1MHz±2%	100Hz,120Hz, 1kHz,10kHz,100kHz
	Accuracy	±0.02%	
Level	Range	0.1V-1V	
	Resolution	0.01V	
	Accuracy	±5%	
Output mode		Continuous or synchronous	
Signal source delay	Range	0-1s	
	Resolution	0.1ms	
Signal level compensation	100/120Hz	220μF, 470μF, 1mF range	
	1kHz	22μF, 47μF, 100μF range	

Component Parameter Test Instruments

A. TH2638 / TH2638A Precision Capacitance Meter

Output impedance	100 Hz 120Hz	SLC OFF (≥ 220μF range) 1.5 Ω SLC ON (≥ 220μF range) 0.3 Ω 2.2μF - 100μF range 0.3 Ω 10 nF - 1μF range 10 Ω	
	1kHz	SLC OFF (≥ 22μF range) 1.5 Ω SLC ON (≥ 22μF range) 0.3 Ω 220 nF - 10μF range 0.3 Ω 100 pF - 100 nF range 10 Ω	
	10kHz/100kHz	10 Ω	
	1MHz	10 Ω	------
Test speed		5-bin test speed: 1, 2, 4, 6, 8	
Max. Test speed	100/120Hz	11ms	
	1kHz	3ms	
	10k/100kHz	2.3ms	
	1MHz	2.3ms	------
Test range mode		Auto, Hold	
Test signal frequency range	100Hz/120Hz	10 nF, 22 nF, 47 nF, 100 nF, 220 nF, 470 nF, 1μF, 2.2μF, 4.7μF, 10μF, 22μF, 47μF, 100μF, 220μF, 470μF, 1 mF	
	1k Hz	100 pF, 220 pF, 470 pF, 1 Nf, 2.2 nF, 4.7 nF, 10 nF, 22 nF, 47 nF, 100 nF, 220 nF ,470 nF, 1μF, 2.2μF, 4.7μF, 10μF, 22μF, 47μF, 100μF	
	10k Hz	100 pF, 220 pF, 470 pF, 1 nF, 2.2 nF, 4.7 nF, 10 nF, 22 nF, 47 nF, 100 nF, 220 nF, 470 nF, 1μF, 2.2μF , 4.7μF, 10μF	
	100k Hz	10 pF, 22 pF, 47 pF, 100 pF, 220 pF , 470 pF, 1 nF, 2.2 nF, 4.7 nF, 10 nF, 22 nF, 47 nF, 100 nF	
	1MHz	1 pF, 2.2 pF, 4.7 pF, 10 pF, 22 pF, 47 pF, 100 pF, 220 pF, 470 pF, 1 nF	------
Average times		1 - 256	
Trigger mode		Internal, Manual, External, Bus	Internal, Manual, External, Bus (except GPIB)
Trigger delay time	Range	0 - 1s	
	Resolution	0.1ms	
Measurement display range			
Parameters	Cs , Cp	±1.000000 aF to 999.9999 EF	
	D	±0.000001 to 9.999999	
	Q	±0.01 to 99999.99	
	Rs, Rp	±1.000000 aΩ to 999.9999 EΩ	
	G	±1.000000 aS to 999.9999 ES	
	Δ%	±0.0001 % to 999.9999 %	
Basic measurement accuracy		C:0.07%, D:0.0005	
Display mode		Floating / fixed decimal point display, ΔABS, Δ%	
List sweep		10 list sweep, sweep item: frequency , voltage	
Comparator function		11 bins: BIN1-BIN9, OUT_OF_BIN, AUX_BIN	
Interface		RS232C,LAN,USB CDC,HANDLER,GPIB, Scanner	RS232C, LAN, USB CDC, HANDLER
Internal storage		40 setting files	
External USB storage		GIF image 40 setting files test data and screen shot can be saved in the USB storage directly	
General Specifications			
Temperature, humidity, height (operating environment)		0 ℃ - 45 ℃, 15% - 85% RH (≤40℃, non-condensing), 0 - 2000m	
Power supply	voltage	90VAC - 264VAC	
	frequency	47Hz - 63Hz	
	power	Max.150VA	
Temperature, humidity, height (Storage environment)		-20 ℃ - 70 ℃，0 - 90% RH (≤65℃，non-condensing)，0 - 4572m	