

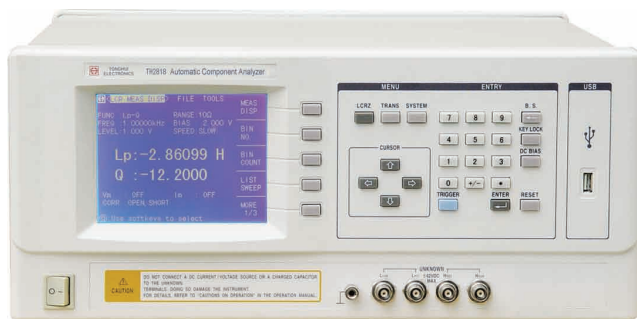
Component Parameter Test Instruments

C. TH2818 Automatic Component Analyzer

Feature

- 320x240 dot-matrix large graphics LCD display
- 20 Hz to 300 kHz test frequencies with 10mHz resolution
- Chinese and English language user interface selectable
- Frequency response analysis and curve display function
- 2 different signal source output impedances: 30Ω and 100Ω
- Open, Short, and Load correction functions
- 10 points list sweep function
- Built-in comparator; 10-bin and bin counters
- Test signal level monitor function
- Automatic level control function for V and I
- 20 control setting files can be saved in the internal non-volatile memory
- RS232C, HANDLER(optional), GIPB(optional) interface
- 0V, 1.5 V and 2 V internal DC bias voltage
- Capable to operate with TH1773/TH1775 external DC bias current source
- Optional ±10V(±100mA) and 1A internal DC bias source
- Optional USB interface and 32MB USB-Disk

Hi-Tech Product of JiangSu Province



TH2818

Brief Introduction

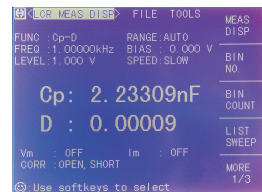
■ TH2818 is an auto component analyzer with high accuracy, wide measurement range and six digit resolution. TH2818 can be used for incoming inspection of components, quality control of product line and laboratory use over a wide range of frequency(20Hz to 300KHz , 0.01 Hz resolution) and test signal level(5 mV to 2V). The HANDLER, GPIB, RS232C interfaces make it easy to build an automatic component test system, communicate with the computer and record the test results.

Direct display mode and simple operation

■ All control settings, softkeys, monitor information and measurement results etc. are directly displayed on the 320×240 dot-matrix large LCD. This display mode helps to simplify key operation, enhance test efficiency and eliminate misreading. The softkeys make instrument operation simple and easy, decrease the key strokes to set the control settings. Move the cursor to the field you want to set using the cursor keys, the correspond softkeys will be displayed in the softkeys and entry keys to set the control setting.

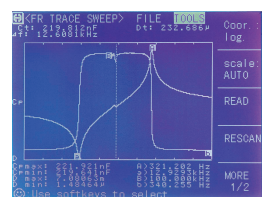
Accurate component measurement

■ The instrument can identify the slight change of the component parameter with its 6 digit resolution, especially when you measure the low dissipation of a capacitor. In order to perform accurate evaluation for core inductor and ceramic capacitor which are level sensitive components, TH2818's auto level control (ALC) function can provide constant test signal level measurement.



Flexible frequency response analysis

■ Usually an inductor/capacitor/resistor is not an ideal pure inductor/capacitor/resistor. In order to evaluate the actual character of a component over a special frequency range, TH2818 provides accurate frequency response analysis over any frequency range especially for the syntonics or anti-syntonics impedance measurement of a wide impedance range and low frequency ceramic oscillator.



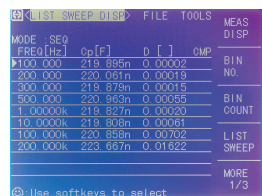
DCR, Turn - Ratio and Lk measurement

■ Inductance, DCR, Turn-Ratio and capacitance between windings are the main parameters of a transformer or a low frequency winding. A traditional LCR meter can not measure these transformer parameters, but TH2818 is specially designed to carry out the measurements of a transformer without any additional options



List Sweep Function

■ Usually the component parameter is sensitive with the actual working conditions, so we should know the changes of the component under different conditions when we are going to select a component. TH2818's list sweep function permits entry of up to ten frequencies, signal levels, or DC bias levels, and measurement limits. These points can be automatically swept, compared and displayed as a list on the LCD. We can know the changes obviously through the list displayed and a lot of time has been saved for measurement and record.



Multi-control Mode for DC Bias Source

■ Now the inductor and transformer are required to be measured under different DC bias current. TH2818 provides several methods to apply the DC bias current to the inductor and transformer. 0-100mA and 0-1A options can be selected and installed inside the instrument as the internal DC bias current source. 0-10A and 0-20A external DC bias current source can also be controlled and used. With the DC bias source, the magnet-conductivity changes can be measured under different DC bias current, and L-IDC and μ-H curves can be plotted with optional application software.

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Specifications

Test Parameter	Z , Y , C, L, X, B, R, G, D, Q, θ DCR, Turn-Ratio, Phase	
Test Frequency	20 Hz to 300 KHz, Resolution: 10mHz, Accuracy: 0.01%	
Test Level Range	Normal: 5mV to 2V, Turn-Ratio: 5mV to 4V Resolution: 1mV, Accuracy: 5%	
Output impedance	Turn-Ratio	$\leq 2V_{rms}$: 10 Ω ; $> 2V_{rms}$: 30 Ω
	Others	30 Ω and 100 Ω selectable
Basic accuracy	0.05%	
Display Range	Z , R, X	0.00001 Ω — 99.9999M Ω
	DCR	0.001 Ω — 99.9999M Ω
	Y , G, B	0.00001 μ S — 99.9999S
	C	0.00001pF — 9.9999F
	L	0.00001 μ H — 9999.99H
	D	0.00001 — 9.99999
	Q	0.00001 — 99999.9
	θ (DEG)	-179.999° — 179.999°
	θ (RAD)	-3.14159 — 3.14159
	Turn-Ratio	1:0.01—1:100
	Δ %	-999.999% — 999.999%
Measuring Time (≥ 1 KHz)	Fast :32ms, Med: 90ms, Slow:650 ms	
Equivalent Circuit	Series and Parallel	
Ranging Mode	Auto and Hold	
Trigger Mode	Internal, Manual and External	
Averaging Rate	1 – 255	
Correction Function	Open, Short and Load	
Internal DC bias source	0V, 1.5V, 2V, Accuracy: 1%	
Comparator function	10 bins and bin cutters	
Memory	20 groups of control setting can be saved	

General Specifications

Operating Temperature and Humidity	0°C–40°C, $\leq 90\%$ RH	
Power Requirements	Voltage	99V–121V, 198V–242V
	Frequency	47.5Hz–63Hz
Power Consumption	≤ 80 VA	
Dimensions (W×H×D)	430mm×185mm×490mm	
Weight	Approx. 13 kg	

Ordering Information

TH2818 Automatic Component Analyzer

Instrument Accessories

TH26005B	4 terminal test fixture
TH26011A	4 terminal Kelvin test clip leads
TH26004B	2 terminals test clip leads
TH26010	Gilded shorting plate

Options

TH26001A	4 terminal test fixture
TH26006	Axial component test fixture
TH26007	Core inductor test fixture
TH26008	SMD component test fixture
TH26009B	SMD Kelvin test tweezers
TH26016	Handler/Scanner control cable
TH26017	USB interface control cable
TH26025	USB disk adapter
TH26026	32MB USB-Disk
TH26033	GPIB interface cable
TH26034	RS232C interface cable
TH1802A	100mA/10V DC bias board
TH1802B	1A DC bias board
TH10002	GPIB interface board
TH10202	Handler/Scanner interface board
TH12001	RS232C control software