TH2819XA/XB

Features

- TH2819XA: 20-channel transformer scanning measurement + LCR meter
- TH2819XB: 20-channel transformer scanning measurement
- 320×240 dot-matrix large graphics LCD display
- Chinese and English operation languages
- Measurement frequency from 20Hz to 200kHz, with resolution of 10mHz
- 4 different signal source output impedances
- Basic accuracy of 0.1%
- Open, Short and Load correction
- 10-point list sweep function (only for TH2819XA)
- Built-in comparator, 10 bins and bin counters (only for TH2819XA)
- Test signal level monitor function (only for TH2819XA)
- Automatic level control function for V and I (only for TH2819XA)
- 0V, 1.5V and 2V internal DC bias voltage
- 20 sets of instrument settings saved and loaded
- 40 sets of transformer scanning settings saved and loaded
- Optional ±10V(±100mA) and 1A internal DC bias source
- Standard RS232C interface and USB interface

TH1901B

Brief Introduction

- TH2819XA/TH2819XB is an automatic transformer multi-parameter measurement instrument used for quality control of electronic transformer over a wide range of frequency (20 Hz to 200 kHz). Almost all low-voltage transformer parameters can be scanned. The primary parameters include Inductance L, Leakage Inductance Lk, Turns-Ratio Tr, DC resistance DCR, Impedance |Z|, and Capacitance (between windings) C etc.; The secondary parameters include Quality Factor Q, ESR and Phase etc., And pin short can also be detected as well.
- The advanced digital sampling technique and high-speed scanning test fixture make the transformer inspection more accurate and efficient, which used to be of low efficiency before such a system was used. The system provides several signal output impedances for selection in order to be compatible with some well-known LCR instrument providers when an inductor is measured. Turns-ratio is calculated by the inductance of primary and secondary windings, which decreases the measurement error caused by large leakage of magnetic flux, for example low-coupling coefficient transformer.
- TH2819XA is also a precise impedance measurement instrument with 6-digit resolution and high speed over a wide measurement range. It can be used for incoming inspection of components, quality control of product line and laboratory use.
Transformer, Motor and Winding Test Instruments

D. TH2819XA/TH2819XB Automatic Transformer Test System

### Specifications

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH2819XA</td>
<td>20-channel transformer scanning measurement + LCR meter</td>
</tr>
<tr>
<td>TH2819XB</td>
<td>20-channel transformer scanning measurement</td>
</tr>
</tbody>
</table>

#### TH2819XA LCR Parameter

- $|Z|$, $|Y|$, $C$, $L$, $X$, $B$, $R$, $G$, $D$, $Q$, $\theta$
- DCR, turns ratio, phase, leakage inductance
- Transformer parameter: turns ratio, turns, phase, L, C, Lk, Q, ACR, DCR, balance, pin short

#### Test Frequency

20 Hz~200 kHz, with resolution of 10mHz

#### Test Level

- LCR measurement: 5mV~2V
- Turns measurement: 5mV~10Vms
- Constant level: 10mV~1V
- Accuracy: 5%
- resolution: 1mV

#### Output Impedance

- Turns - Ratio: ≤2Vrms: 10Ω, 30Ω, 100Ω
- >2Vrms: 30Ω, 100Ω
- Others: 30Ω, 100Ω selectable

#### Basic Accuracy

- LCRZ, DCR: 0.1%
- Turns ratio: 0.5%

#### Display Range

- $|Z|$, $R$, $X$: 0.00001Ω ~ 99.9999MΩ
- $|Y|$, $G$, $B$: 0.00001μS ~ 99.9999S
- $L$: 0.00001μF ~ 9.99999KΩ
- $D$: 0.00001 ~ 99.9999
- $Q$: 0.00001 ~ 99999.9
- DCR: 1mΩ ~ 99.9999MΩ
- $\theta$ (DEG): -179.999° ~ 179.999°
- $\theta$ (RAD): -3.14159 ~ 3.14159
- Turns ratio: 1.001 ~ 100:1
- $\Delta%$: -999.999% ~ 999.999%

#### DCR Display Range

1mΩ ~ 99.9999MΩ

#### Measurement Time

Fast: 32ms, Medium: 90ms, Slow: 650ms

#### Equivalent Circuit

Series, Parallel

#### Range Mode

Auto, Hold

#### Trigger Mode

Internal, Manual, External

#### Average Times

1-255

#### Calibration Function

Open / Short / Load

#### Internal DC Bias Source

0V, 1.5V, 2V, accuracy: 1%

#### Comparator

10-bin sorting and bin counter

#### Memory

- 20 sets of LCRZ setting files saved (TH2819XA)
- 40 sets of scanning setting files saved (TH2819XA)

#### Interface

RS232C, USB

### General Specifications

#### TH2819XA/TH2819XB

- Operating Temperature And Humidity: 0°C~40°C, ≤ 90%RH
- Power Requirements
  - Voltage: 99V - 121V, 198V~242V
  - Frequency: 47.5Hz~63Hz
- Power Consumption: ≤ 80VA
- Dimensions (W×H×D): 400mm×150mm×430mm
- Weight: Approx. 8.5kg

#### TH1901A/TH1901B

- Operating Temperature And Humidity: 0°C~40°C, ≤90%RH
- Dimensions (W×H×D): 270mm×186mm×73mm
- Weight: Approx. 4 kg

### Ordering Information

TH2819XA Automatic Transformer Test System
TH2819XB Automatic Transformer Test System

### Instrument Accessories

- TH26005B: 4 terminal test fixture (only TH2819XA)
- TH26011A: 4 terminal Kelvin test clip leads
- TH26004B: 2 terminals test clip leads
- TH26006: Axial component test fixture
- TH26007: Core inductor test fixture
- TH26008: SMD component test fixture
- TH26009B: SMD Kelvin test tweezers
- TH1901B: Gilded shorting plate (only TH2819XA)
- TH26025: USB Interface Board
- TH1901A: Pneumatic transformer scanning fixture
- TH1801-EXT11A: 5mm DIP test socket

### 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
- TH1901A: Pneumatic transformer scanning fixture
- TH1902A: 100mA/10V DC bias board
- TH1902B: 1A DC bias board
- TH26026: 32 MB USB - Disk
- TH10002: GPIB interface board
- TH26019: RS232C control software (TH2818XA)
- TH26020: RS232C control software (TH2818XB)