

Automatic Transformer Tester



Instrument



Transformer Test Fixture

Brief Introduction

VE2819XA/VE2819XB is an automatic transformer tester with wide range of frequency (20 Hz — 200 kHz) and 20 Pin scanning. It can measure all primary parameters like Inductance L, Leakage Inductance Lk, Turns-Ratio Tr, DC resistance DCR, Impedance |Z|, and Capacitance (between windings) C etc. And secondary parameters include Quality Factor Q, ESR and Phase etc.

It has advanced digital sampling technique and high-speed scanning test fixture that make the transformer testing simple and easy. There is a provision for selecting several signal output impedances. 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.

VE2819XA is also a precise impedance measurement instrument with 6-digit resolution and high speed over a wide measurement range. This instrument can be used for production testing, incoming inspection or QC.

Features for VE2819XA / VE2819XB main instrument

- 20-channel transformer scanning measurement
- 320×240 dot-matrix large graphics LCD display
- Frequency: 20Hz to 200kHz, with 10mHz resolution
- 2 different output impedances: 30 Ohms and 100 Ohms
- Basic accuracy of 0.1%
- Open, Short and Load correction
- 0V, 1.5V and 2V internal DC bias voltage
- 20 sets of instrument settings saved and loaded
- 40 sets of scanning settings saved and loaded
- Optional $\pm 10V(\pm 100mA)$ and 1A DC bias source

The functions below are only for VE2819XA

- LCR Meter
- Built-in comparator, 10 bins and bin counters
- 10-point list sweep function
- Test signal level monitor function
- Automatic level control function for V and I

Features for Transformer Test Fixture

- Standard transformer scanning control interface
- Complete four-terminal test for transformer pins
- Optional pneumatic and manual fixing method
- Optional transformer pin fixture
- Up to 20 pin transformers programmed
- PASS/FAIL LED indication and volume control, including high, low, long and short
- Measurement status and result output through HANDLER interface

Specifications

VE2819XA	20-channel transformer	LCR meter
VE2819XB	scanning measurement	-----
VE2819XA LCR parameter	Z , Y , C, L, X, B, R, G, D, Q, θ 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 – 4V Constant level: 10mV – 1V accuracy: 5% resolution: 1mV	
Output impedance	Turns ratio	$\leq 2V_{rms}$: 10 Ω , 30 Ω , 100 Ω >2Vrms: 30 Ω , 100 Ω
	Others	30 Ω , 100 Ω selectable
Basic accuracy	LCRZ,DCR	0.1%
	Turns ratio :	0.5%
Display range	Z , R, X	0.00001 Ω — 99.9999M Ω
	Y , G, B	0.00001 μ S — 99.9999S
	C	0.00001pF — 9.9999F
	L	0.00001 μ H — 99.9999KH
	D	0.00001 — 9.99999
	Q	0.00001 — 99999.9
	DCR	1m Ω — 99.9999M Ω
	θ (DEG)	-179.999° — 179.999°
	θ (RAD)	-3.14159 — 3.14159
	turns ratio	1:0.01—100:1
$\Delta\%$	-999.999% — 999.999%	
Measurement time (≥ 1 kHz)	Fast: 32ms, Medium: 90ms, Slow: 650ms	
Equivalent circuit	Series, Parallel	
Range mode	Auto, Hold	
Trigger mode	Internal, Manual, External	
Average times	1-255	
Calibration	Open / Short / Load	
DC bias source	0V, 1.5V, 2V, accuracy: 1%	
Comparator	10-bin sorting and bin counter	
Memory	20 sets of LCRZ setting files saved VE2819XA 40 sets of scanning setting files saved	
Interface	RS232C, USB	

General Specifications

Operating temperature & humidity	0°C – 40°C, ≤ 90%RH	
Power supply	Voltage	198V – 242V
	Frequency	47.5Hz – 63Hz
Power consumption	≤ 80VA	
Dimensions (W×H×D)	400mm×150mm×430mm	
Weight	Approx. 8.5kg	