

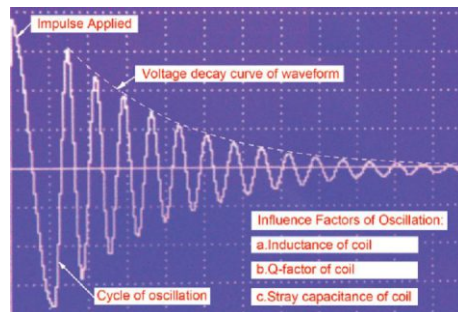
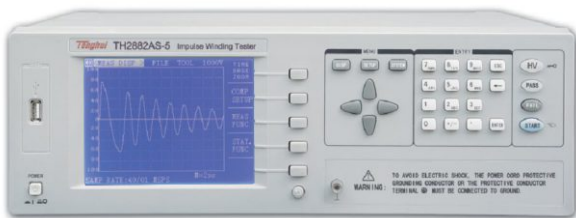
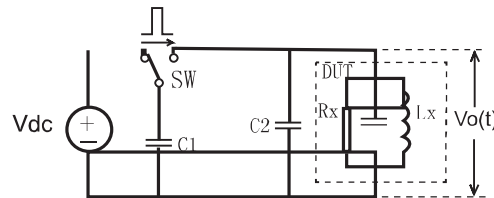
# Transformer, Motor and Winding Test Instruments

## D. TH2882A Series Impulse Winding Tester

### Features

- Low inductance impulse test: down to  $10\mu\text{H}$
- Low energy test without damaging the coil
- Fast detection of winding insulation at a speed of 5.5 meas/sec
- 4 kinds of waveform comparison methods
- Up to 40 MSPS sampling rate
- $320 \times 240$  dot-matrix graphic LCD display
- Chinese and English operation languages
- Friendly user's interface and easy operation
- Multi-trigger mode programmable
- Voltage, Time and Frequency measuring function
- Direct display of comparison result
- Keyboard lock and password protection function
- Handler, RS-232C, and GPIB(optional) interfaces
- 500 groups of waveforms can be stored in USB disk (optional)
- Multi-channel scan control interface: SCANNER (optional)

When testing, TH2882A compares the standard waveform stored in the instrument with current measuring waveform. TH2882A gives the PASS or FAIL comparison result according to Area, Differential Area, Corona Discharge, Differential Phase etc. With strong function, precision test method, flexible operation and various interfaces, TH2882A can provide test solution for most coil winding products.



The Decay curve of winding voltage



### TH2882A Series

### Brief Introduction

■ Due to the influence of coil wire material, magnetic material, framework and manufacture technics etc., coil products (such as transformers, motors, etc.) may have defects of low insulation between coil layers, circles and leads. TH2882A series impulse winding tester, adopting high-speed sampling technique, is a new generation analysis test instrument for insulation performance of coil products.

### Theory of Impulse Test of Coil-winding

■ The impulse winding tester tests the electrical characteristics of coil winding without damaging the DUT. The prerequisite conditions for quality of a coil can be detected at just a glance. The detection is carried out when the same electric impulse by capacitor discharge is applied to the standard and the DUT. The voltage decay waveform is generated in response to the impulse, related to the Q-factor and inductance of the coil. In this sense, the tester can detect turn & layer short, the differences in the number of turns and the material of the core. If high impulse voltage is applied, the poor insulation will appear as a corona or layer discharge.

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### Specifications

Output Impulse Voltage	TH2882A-3	300V-3000V, 50V Steps ±5% of set value±15V
	TH2882A-5 TH2882AS-5	500V-5000V, 100V Steps ±5% of set value± 25V
Voltage Control Mode	Normal	Voltage programmable at the measurement terminals when terminals opened
	Constant	Maintaining selected voltage across the winding independent of changes of the winding impedance
Impulse Energy (1K Ω Resistive Load)	TH2882A-3	≤ Max. 90 milli-Joules
	TH2882A-5 TH2882AS-5	≤ Max. 250 milli-Joules
Inductance Range	TH2882A-3	≥ 10 More than 10μH
	TH2882A-5 TH2882AS-5	≥ 20 More than 20μH
Display	Screen Mode	320x240 dots LCD
	Waveform Display Dots	240x200 dots
	Display Information	Setting parameter , Standard & measuring waveform, Measurement & comparison result
Waveform Sampling	Sampling rate	40MSPS/25ns, 20MSPS/50ns, 10MSPS/100ns, 5MSPS/200ns,2.5MSPS/400ns, 1.25MSPS/800ns, 625kSPS/1.6μs, 312kSPS/3.2μs,
	Resolution	8 digits
	Sampling length	960 Bytes
Input impedance	10MΩ (Resistive voltage divider)	
Measuring speed	5.5 times/sec ( Waveform display OFF, PASS/FAIL ON)	
	3.3 times/sec ( Waveform display ON, PASS/FAIL ON)	
Average Rate	1 to 99 ,Programmable	
Waveform Measurement	Voltage, Time, Frequency	
Trigger Mode	Internal/Manual (Foot)/ External/ BUS	

Comparison Mode	Area size comparison Differential area comparison Corona discharge Differential phase comparison
Area Size Repetition accuracy	±1%
Differential Area Repetition Accuracy	±1%
Detection Output	PASS/FAIL display , Alarm
Alarm Volume	Long high, Long low, Single low, Double low, Off
Memory	60 groups of standard waveform data can be stored in internal non-volatile memory 500 groups in USB flash memory (optional)
Interface	HANDLER(Start, Stop, Pass NG, Busy,EOC,etc.), RS232C, GPIB(optional)

### General Specifications

Operating Temperature and Humidity	0°C-40°C, ≤90%RH	
Power Requirements	Voltage	99V - 121V AC,198V - 242V AC
	Frequency	47.5Hz-63Hz
Power Consumption	≤ 40VA	
Dimensions (W×H×D)	395mmx155mmx445mm	
Weight	TH2882A	Approx. 7.6 kg
	TH2882AS	Approx. 8.4 kg

### Ordering Information

TH2882A-3 Impulse Winding Tester  
TH2882A-5/TH2882AS-5 Impulse Winding Tester

### Instrument Accessories

TH2881-001 Foot Switch  
TH26035 High-voltage test clip leads

### Options

TH10001 GPIB interface board  
TH10102 USB interface board  
TH26026 2GB USB disk  
TH12021 TH2882 RS232C control software

