Impulse Winding Tester

7750

Features

- Lowest Inductance ≥ 0.2μH
- Voltage Compensation Function
- 200MHz/ 9bits High Impulse Test Sampling Rate
- Programmable Impulse voltage
- Built-in storage 128 sets testing waveform
- Total Area Comparison
- Differential Area Comparison
- LAPLACIAN Comparison
- CORONA Comparison
- Support USB Host/Device, RS-232, SIGNAL I/O

Applications

Low inductance coil, High power inductance, Relay, Transformer, Motor stator, Motor rotor, Winding component

CE RS-232 SIGNAL I/O USB Host/ Device

Accessories / Fixtures

Standard

- Power Cord
- 2 terminal HV test cable
- SIGNAL I/O

Optional

- RS-232 cable
- Remote control cable

Specifications

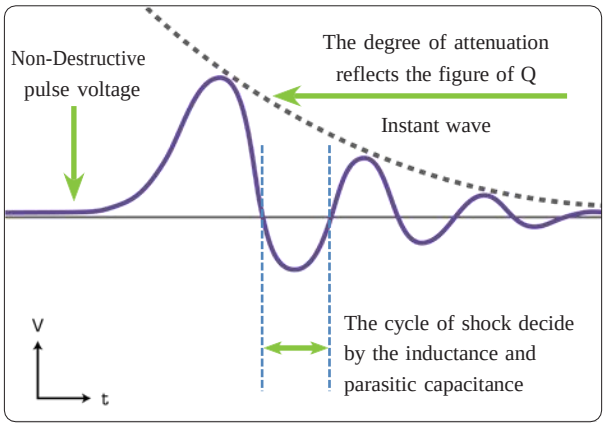
Model	7750-1	7750-5	7750-10
Impulse Voltage	10V-1200V	100V-5200V	200V-12000V
Voltage Resolution	0.1V	1V	5V
Test Inductance Range	≥0.2μH	≥10μH	≥20μH
Impulse VoltageAccuracy	± (1% of setting + 5V)	± (1% of setting + 10V)	± (1% of setting + 20V)
Pulse Number	Max 32		
Sampling Rate	200MHz/9 bit		
Test Time	7 time/ Sec		
Input Impedance	20MΩ		
Waveform Comparison	Area Comparison		
	Area Differential Comparison		
	CORONA Comparison		
	LAPLACIAN Comparison		
Measurement Statistics	●		
Breakdown Voltage	●		

General

SIGNAL I/O Control	START/ STOP
SIGNAL I/O Output	PASS/ FAIL/ TEST/ READ/ HV ON
Safety Switch	When testing, you need to short-circuit the INTER LOCK on the rear of the instrument to output the testvoltage
Built-in Storage	128
Interface	RS-232, Remote, USB Host/ Device (GPIB, LAN-Option)
Power Supply	Voltage: 100Vac-240Vac
	Frequency: 47-63Hz
Power consumption	45W
Display	7"TFT (800*480)
Environment	Temperature: 0℃-40℃, Humidity: 20-80%RH
Dimension(W*H*D)	430x132x370 mm(W*H*D)
Weight	7Kg

Key feature

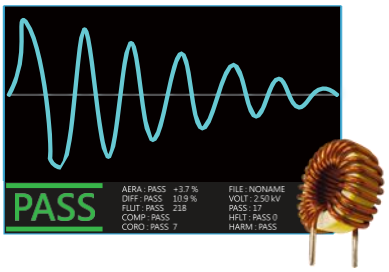
A Technology of Detect Layer Short



"Pulse voltage and waveform comparison" is the way we detect layer short

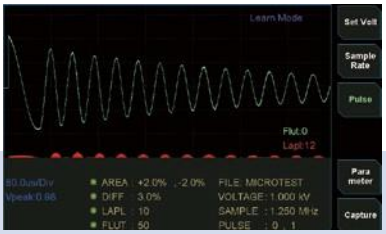
The pulse voltage is non-destructive/instant voltage that apply on both side of winding and detect the DUT without damage it.

By compare the wave with the golden sample, we can judge the DUT.

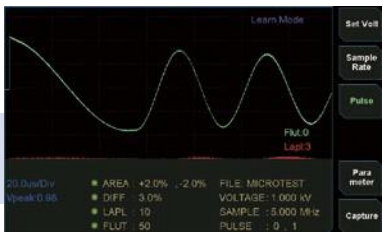


B 7750 Function

200MHz/9bit High Impulse Test Sampling Rate

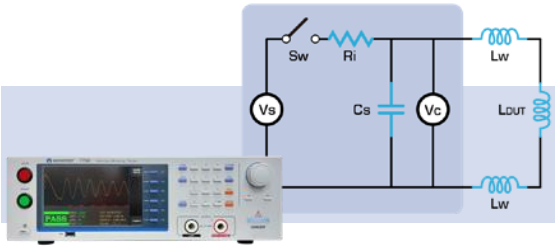


Pulse Number: 32



Voltage Compensation Function

7750 features the Voltage Compensation Function. In order to reduce the possibility of misjudgment.



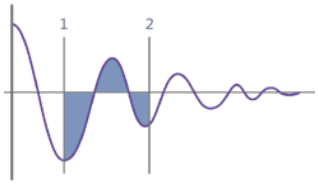
$$V_{DUT} \approx V_C \times \frac{L_{DUT}}{L_{DUT} + 2L_W}$$

Support checking output voltage

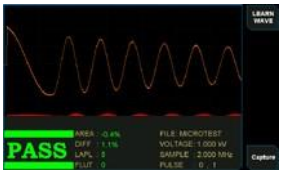
C Provides 4 waveform comparison

1 AREA Comparison

When layer short happened, the loss of power on coil increase, the resonance damping coefficient increase, resonance amplitude decrease, the total area decrease. These are the basic parameterswe check layer short.



Analysis the power loss by this data

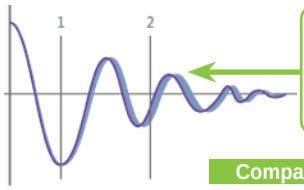


Show by percentage

2 DIFF Comparison

Add up the difference between normal wave and DUT wave call "Area differential" When layer short happened, the inductance reduce(similar the transformer).

The wave phase change and the area differential also change. This will show "fail" on the instrument. However, the parameter might cause deviation because of the deviation of inductance, resonance phase shift.(Silicon steel product such as motor and traditional transformer is not suitable)

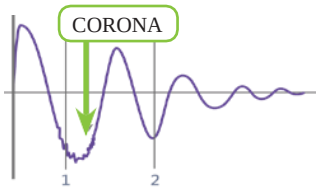


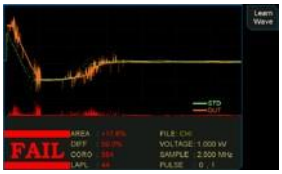
By calculating and comparing the deference of area between golden sample and DUT. To determine the degree of waveform overlap.

Compare the inductance by this mode

3 CORONA Comparison

In pulse test, the insulation defect will cause discharge and create corona. This function is able to count the times that corona happenedbase on the degree of deviation.



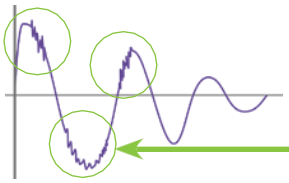


Detect the discharge phenomenon on the coil

4 LAPLACIAN Comparison

Use the second derivative to calculate the Laplacian value.

By the corona waveform of high-frequency to know more about the insulating property of products.



Corona waveform of high-frequency

Electrical discharge or poor electrode welding

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