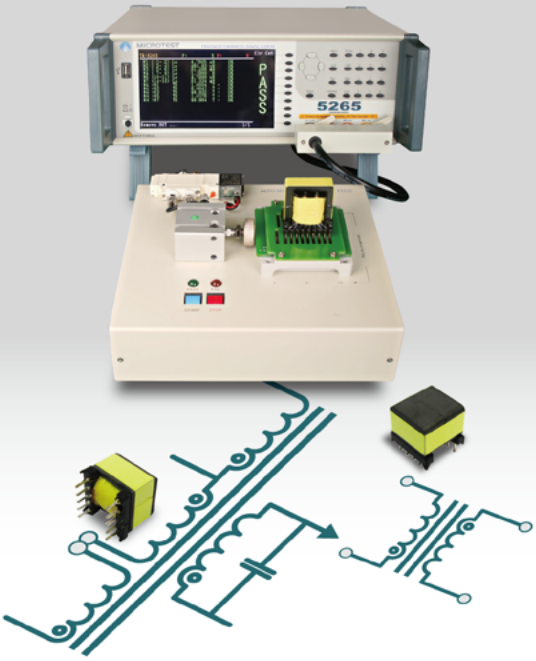
Preferred Solution for Transformer Testing



Short Circuit

Leakage Inductance

Turn Ratio

Series / Parallel Inductance

Winding Resistance

Hipot Test

Isat

All-in-One Test Solution

Complete Transformer Test Solution

One-Station Integrated Automated Testing

5260 Series
(20 Channels)
Transformer Tester

5460 Series
(48 Channels)
Transformer Tester

2 in 1
Transformer Test System
(Low-Voltage + Withstand Voltage)

3 in 1
Transformer Test System
(Low-Voltage+ Withstand Voltage+Impulse Winding Test)

Low-Voltage Electrical Characteristic Test

Series / Parallel Inductance, Quality Factor (Q), Leakage Inductance, Turns Ratio, Winding Resistance, Distributed Capacitance and Dissipation Factor (Df), DC Bias Current

Hipot Test

ACW 5000V, DCW 6000V, IR 12000MΩ

Impulse Winding Test

This technique applies a momentary high-voltage pulse to effectively verify the quality of the enameled wire insulation and overall winding insulation system, ensuring reliable transformer performance.

Transformer Tester

5265/5266/5267/5465/5466/5467

5260/5460 Series

Channel
20/48

MICROTEST
www.microtest.com.tw

• 5265/ 5266/ 5267

The MICROTEST Transformer Tester provides comprehensive measurement of critical transformer parameters in a single instrument. Measurement items include inductance, leakage inductance, DC resistance, AC resistance, quality factor (Q), capacitance, turns ratio, and pin short-circuit detection.It supports test frequencies of 200kHz, 500kHz, and 1MHz, with a built-in LCR meter measurement mode. Equipped with F5620(P) / F5468(P) pneumatic test fixtures, the system offers 20 or 48 channels and supports 100mA DC bias testing. Customized test fixtures are available to meet specific customer requirements.

Application

Power transformers, Electronic transformers

Feature

- Basic accuracy up to ±0.1%
- Support Meter Mode function, simultaneously display four parameters
- Compatible with pneumatic test fixtures with 100 mA DC bias (F5620(P) / F5468(P))
- Open circuit/short circuit function
- USB Host stores can save setting files, data and capture the screen
- 20 channels (5260 Series) | 48 channels (5460 Series)
- Multi-function testing: Inductance, leakage inductance, turns ratio, DC resistance, Q factor, distributed capacitance, and more

• 5465/ 5466/ 5467

CE

Standard Interfaces

RS-232 | USB Host | Handler | EXT. I / O | LAN

Specification

Series	5260			5460		
Model	**5265**	**5266**	**5267**	**5465**	**5466**	**5467**
Test Frequency	10Hz~200kHz	10Hz~500kHz	10Hz~1MHz	10Hz~200kHz	10Hz~500kHz	10Hz~1MHz
Channel	20			48		
Frequency Resolution	5 digits					
AC Drive Level	10mV~2Vrms					
Turn Ratio Frequency	50Hz~200kHz					
Output Impedance	100Ω					
LCR Meter Function	●	●	●	●	●	●
DC Bias Fixture(F5620)	100mA					
Measurement Parameters	Inductance (L), Impedance (Z), Capacitance (C), Resistance (R), Conductance (G), Susceptance (B), Admittance (Y), Alternating Current Resistance (ACR), Quality Factor (Q), Phase angle (Ø), Direct Current Resistance (DCR), Leakage Inductance, Turn Ratio, Balance, Short Circuit					

Parameters Measurement Ranges and Accuracy	Test Item	Range	Basic Accuracy (AC parameter : 1KHz)	Speed
	L, LK	0.1nH~9999.99H	0.1%	25ms
	C	0.00001pF~999.99mF	0.1%	25ms
	Q, D	0.00001~99999	0.0005	25ms
	Z, X, R	0.00001Ω~99.9999MΩ	0.1%	25ms
	Y	0.01nS~99.9999S	0.1%	25ms
	θ	-180°~+180°	0.03°	25ms
	DCR	0.1mΩ~99.999MΩ	0.1%	25ms
	Turn-Ratio	0.1~99999.9 turns	0.5%	50ms
	Pin-Short	12 pairs, between pin to pin (5260 serise) 24 pairs, between pin to pin (5460 serise)	-	15ms

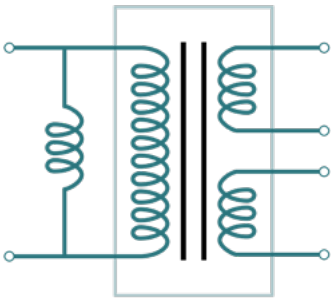
General

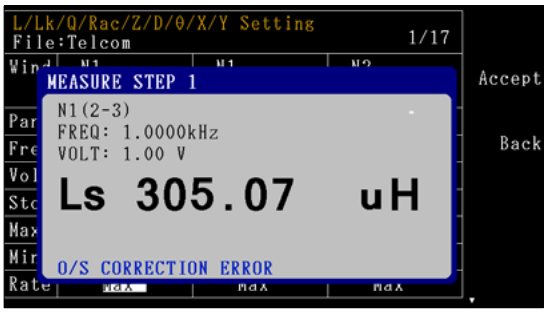
Measurement Mode	LCR + Transformer
Measurement Circuit	Series/ Parallel
Correction	Open Circuit/ Short Circuit
Built-in Storage	Testing files 128 sets
USB Host Storage	Depend on USB capacity
Operation	Auto, Manual, Remote Trigger
Interface	RS-232, Handler, LAN, USB Host, EXT.I/O
PC Link Software	●
Power Supply	Voltage：98Vac~132Vac or 195Vac~264Vac
	Fequency：47~63Hz
Power Consumption	70VA
Display	800*480 Color LCD, 7" TFT
Environment	Temperature：10℃~40℃, Humidity：20~90%RH
Dimension (W*H*D)	344x145x343mm
Weight	9Kg

Functions

Measurement of Series/Parallel Inductance values

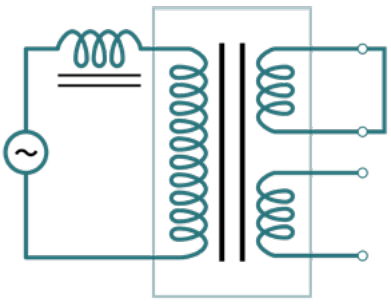
The Transformer Tester 5260/ 5460 series supports inductance measurement using LCR Meter technology, with a frequency range up to 10Hz~1MHz. It measures series/parallel inductance values to ensure the quality of transformer winding, core materials, and gap-related processes.

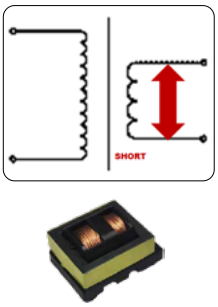




Leakage Inductance measurement

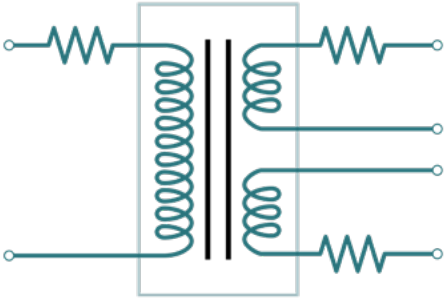
The Transformer Tester 5260/ 5460 series supports leakage inductance measurement to ensure that the magnetic flux between windings is sufficiently concentrated in the expected primary magnetic circuit. During measurement, the transformer's secondary winding must be short-circuited. When the secondary winding is fully short-circuited, the voltage on the secondary winding drops to 0V, which affects the primary winding such that both ends also drop to 0V. The measured inductance of the primary winding in this state represents the true leakage inductance value.





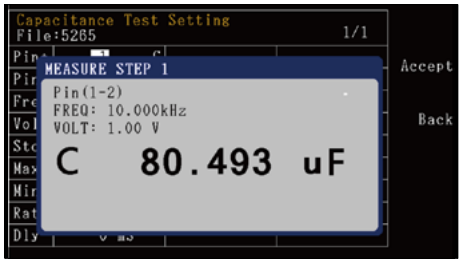
Measurement of Winding Resistance

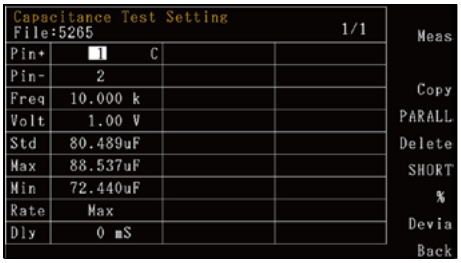
The Transformer Tester 5260/5460 series supports resistance measurement, used to verify the quality of transformer core assembly and ensure there are no short circuits in the transformer windings.

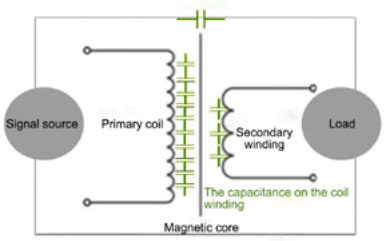


Measurement of Distributed Capacitance

Transformer windings can have distributed capacitance, occurring between primary and secondary windings, or between closely spaced conductors in the secondary windings due to electrostatic coupling. The Transformer Tester 5260/5460 series can measure capacitance values to ensure the insulation system between transformer windings is correct and reliable (in terms of materials and thickness).







Measurement of Turns Ratio

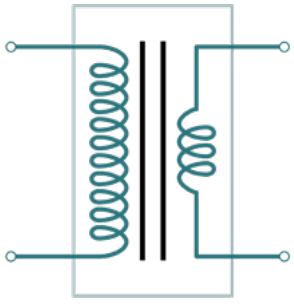
Measurement of turns ratio is conducted on transformers to verify the correctness of winding turns and to confirm the correct winding direction for each winding. MICROTEST supports turns ratio measurement using both inductance and voltage methods.

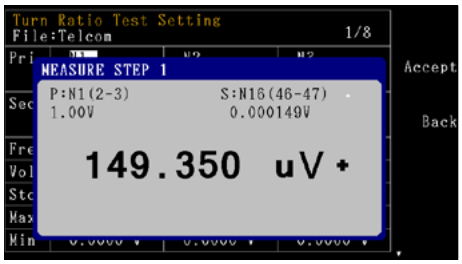
Voltage method

Apply AC voltage to the primary winding and measure the AC voltage on the secondary winding. This method aims to measure the turns ratio and phase relationship between windings.

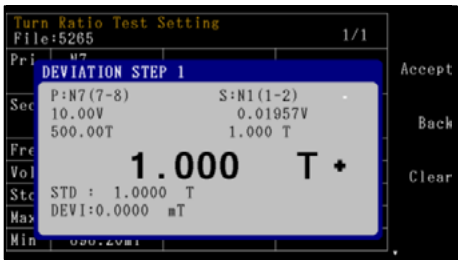
Inductance method

Measure the inductance of each winding and calculate the turns ratio based on these inductance values. This method provides more accurate results for transformers with higher leakage inductance.





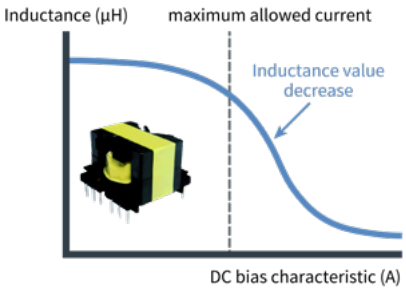
Measurement results displayed as voltage

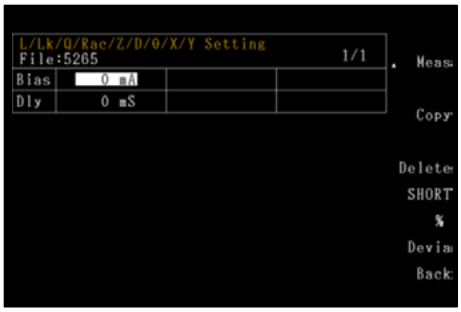


Measurement results displayed as turns ratio

Adding DC bias current measurement to test magnetic core saturation characteristics

Transformer cores exhibit magnetic saturation characteristics. When measuring transformers, it's essential to apply a DC bias current to confirm their saturation properties. The MICROTEST 5260/ 5460 series supports a 100mA DC bias current testing functionality, which measures the inductance of transformers after applying a DC bias current.





Measurement of DC Resistance

When current flows through the windings of a transformer, winding resistance causes voltage drop and loss, leading to overall heating of the transformer and potentially reducing the output voltage. The MICROTEST 5260/ 5460 series employs four-wire measurement technology for DC resistance measurement, ensuring accuracy in assessing the diameter of transformer windings.

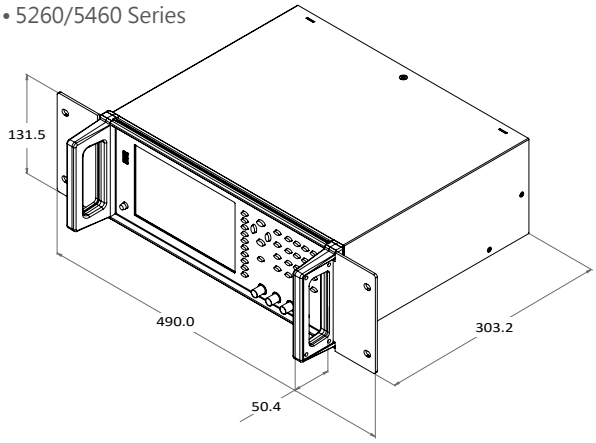
Measurement of Pin Short

The MICROTEST 5260/ 5460 series transformer tester supports pin short measurement functionality, allowing for short circuit testing between any two pins of the transformer. This is done to ensure that during installation onto the framework, there are no short circuits or other contact issues between the pins and winding terminals.

Automatic Chassis Dimension

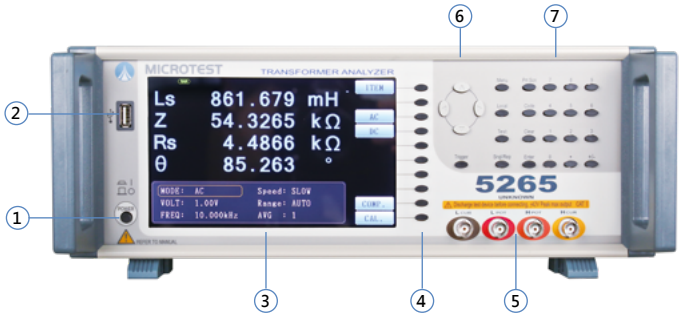
• Dimension (mm)

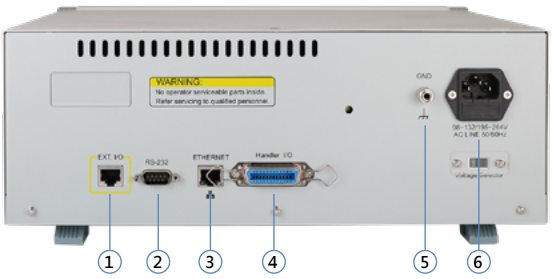
• 5260/5460 Series



Appearance

• 5260/5460 Series





1. Power Switch
2. USB
3. LCD Screen
4. Function
5. BNC Terminal
6. Direction
7. Number/ Menu key

1. EXT. I/O
2. RS232
3. LAN
4. Handler
5. GND
6. AC INPUT/ Fuse Block

Ordering Information

Transformer Tester Series	Standard	Optional
• 5265(Frequency Range 10Hz~200kHz I 20 channels) • 5266(Frequency Range 10Hz~500kHz I 20 channels) • 5267(Frequency Range 10Hz~1MHz I 20 channels) • 5465(Frequency Range 10Hz~200kHz I 48 channels) • 5466(Frequency Range 10Hz~500kHz I 48 channels) • 5467(Frequency Range 10Hz~1MHz I 48 channels)	5260 Series • F5620(P) Transformer Scan Box (Pneumatic)(20CH) • F522001 Fixture Head (7.5/5.0-5.0mm) • F522010 RCA-Foot Switch • TL-000006 LAN Cable • Power Cord 5460 Series • F5648(P) Transformer Scan Box (Pneumatic)(48CH) • F522010 RCA-Foot Switch • TL-000006 LAN Cable • Power Cord	• F564802 Fixture Head (5.0-5.0mm) • F5620(M) Transformer Scan Box (Manual)(20CH) • F5648(M) Transformer Scan Box (Manual)(48CH) • F423501 Kelvin Clip Leads (DC-300kHz) • F423901 Kelvin Clip Leads (DC-1MHz) • HI-0001 Handler Box • TL-000003 RS-232 Cable (180cm) • Handler Cable • PC Link Software

Fixture & Accessories

F5620(P)

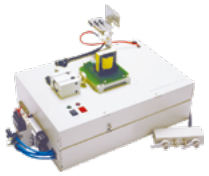
Transformer Scan Box (Pneumatic)

F5648(P)

Transformer Scan Box (Pneumatic)

F7721A

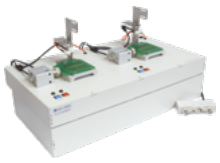
Single Scan Control Box



Applicable Models	5260 Series	5460 Series	2-in-1/ 3-in-1
Accessory Description	20 channels	48 channels	20 channels

F7721-D

Dual Scan Control Box



TL-000006

LAN Cable

F522010

RCA-Foot Switch

Applicable Models	2-in-1/ 3-in-1	5260 Series/ 5460 Series	5260 Series/ 5460 Series
Accessory Description	20 channels I Dual	150cm	External Control

F5620(M)

Transformer Scan Box (Manual)

F5648(M)

Transformer Scan Box (Manual)

HI-0001

Handler Box

Applicable Models	5260 Series/ 5460 Series	5260 Series/ 5460 Series	5260 Series/ 5460 Series
Accessory Description	20 channels	48 channels	External Control

F423501

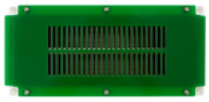
Kelvin Clip Leads

F423901

Kelvin Clip Leads

Applicable Models	5260 Series/ 5460 Series	5260 Series/ 5460 Series
Accessory Description	DC ~300kHz	DC~1MHz

	TL-000003 RS-232 Cable	Handler Cable	TL-000013 D-Sub Cable
			
Applicable Models	5260 Series/ 5460 Series/ 2-in-1/ 3-in-1	5260 Series/ 5460 Series	2-in-1/ 3-in-1
Accessory Description	Connect to a computer, and transmit commands to control the instrument from the computer.	Remote Control	25Pin F /25Pin F

	TL-000002 Banana Plug-HV Test Cable-Red	F522001 Fixture Head	F564802 Fixture Head
			
Applicable Models	2-in-1/ 3-in-1	5260 Series	5460 Series
Accessory Description	HV 20kV | 60cm	7.5/5.0-5.0mm	5.0-5.0mm