



Products Information

Changzhou Tonghui Electronic Co., Ltd



Application in Industry

1. Electronic component
 - Inductors, resistors, capacitors, transformers, motors, relays, connectors, relays, diodes, transistors, MOS tubes, integrated circuits, wafers, switches, etc..
2. Electronic appliances
 - Home appliances: TV, stereo, air conditioner, refrigerator, washing machine, Vacuum cleaners, water heaters, rice cookers, water heaters
 - Consumer electronics: mobile phones, smart watches, Bluetooth headsets
 - Information electronics: computers, routers, broadband modems, memory
3. Materials
 - Magnetic materials, dielectric materials, insulating materials, metal conductor materials, piezoelectric materials, liquid crystal materials
4. Education and scientific research
 - College materials department, electronics and electrical engineering department, military industry, aviation, aerospace, electronic information research institutes

The department which will use Tonghui instruments

- Production Line/Automation Equipment
- Incoming inspection (QC)
- R & D department
- Laboratory (including school teaching laboratory)

Tonghui Introduction in Youtube

2023 Products Range

A. Component Parameter Tester

A. Impedance Analyzer

B. LCR Meter

C. Capacitance Tester

D. Auto Transformer Tester

E. DC Bias current Source

F. Loudspeaker Tester

G. Semiconductor CV Analyzer

B. Micro Signal Type Tester

A. SMU

B. fA Meter

C. IR Meter

D. DCR Meter

E. DIGIT Multimeter

F. Data Recorder

G. AC Resistance Tester

H. Capacitor LC Meter

I. Millivoltmeter

C. Power Electronic Tester

A. DC Power Supply

B. AC Power Supply

C. DC Electronic Load

D. Power Meter/Analyzer

E. Power Electronic System

D. Electrical Safety Tester & Cable Tester

A. Safety PRF Analyzer

B. Winding COMP EST tester

C. Hipot Tester AC/DC/IR

D. Ground Bond Tester

E. Impulse Winding Tester

F. Cable/ harness Tester

A. Component Parameter Tester

A. Impedance Analyzer

B. LCR Meter

C. Capacitance Tester

D. Auto Transformer Tester

E. DC Bias current Source

F. Loudspeaker Tester

G. Semiconductor CV Analyzer

A. Impedance Analyzer-TH2851



Introduction in Youtube
Basic Operation in Youtube

Features

- **Test frequency: 10Hz-130MHz**
- Automatic balance bridge technology, four-terminal pair test configuration
- **Built in Win10 OS**, easy for LAN communication
- High resolution: 10.1-inch capacitive **touch screen**, resolution 1280*800
- Three test methods: **point test, list scan, and graph scan**
- 1601 point multi-parameter list scanning function, four-parameter measurement
- 4-channel graphic scanning function, each channel can display 4 curves, 16 kinds of split-screen display modes for channels and curves
- Graphic scanning mode, each curve is sorted individually
- High compatibility: Support SCPI instruction set, **compatible with KEYSIGHT E4990A, E4980A, E4980AL, HP4284A**

Main Competitor:

- **Keysight E4990A; Wayne Kerr 6500B; Hioki IM7581; Chroma 11050; GW Insteck LCR-8200; Microtest 6632.**

B. LCR Meter-TH2840



- The test speed is as high as 1800 times/s (>10kHz)
- Test level up to 20Vrms
- The bias voltage is built-in ±40V/±100mA/2A
- Linux system, easy for LAN connection
- 10.1 inch 1280×800 capacitive touch screen
- Plug-in structure, easy for repair

A. Impedance Analyzer/LCR Meter Model Selection

Model	Test Frequency	Accuracy	Test Level	DC Bias	Output Impedance	Speed	Graph	Display	System
TH2851-015	10Hz-15MHz	0.08%	0-2V	0 - ±40V	25Ω, 100Ω	2.5ms	Yes	10.1-inch capacitive touch screen	Windows 10
TH2851-030	10Hz-30MHz								
TH2851-050	10Hz-50MHz								
TH2851-080	10Hz-80MHz								
TH2851-130	10Hz-130MHz								
TH2839	20Hz-10MHz	0.05%	0-2V	0 - ±40V	100Ω	5.6ms	Yes	7-inch TFT 800×480LCD	-----
TH2839A	20Hz-5MHz								
TH2836	4Hz-8.5MHz	0.05%	0-2V	0 - ±40V	100Ω	5.6ms	Yes	7-inch TFT 800×480LCD	-----
TH2836A	4Hz-5MHz								
TH2840A	20Hz-500kHz	0.05%	0-20V	0 - ±40V	30Ω, 100Ω	0.56ms	Yes	10.1-inch capacitive touch screen	Linux
TH2840B	20Hz-2MHz								
TH2838H	20Hz-2MHz	0.05%	0-20V	0 - ±40V	100Ω	5.6ms	Yes	7-inch TFT 800×480LCD	-----
TH2838	20Hz-2MHz		0-10V	0 - ±10V					
TH2838A	20Hz-1MHz		0-10V	-----					
TH2826	20Hz-5MHz	0.10%	0-5V	0 - ±5V	10Ω, 30Ω, 50Ω, 100Ω	5ms	Yes	320×240 dot-matrix large graphic LCD	-----
TH2826A	20Hz-2MHz								
TH2829A	20Hz-300kHz	0.05%	0-10V	0 - ±10V	30Ω, 50Ω, 100Ω	9ms	Yes	7-inch TFT 800×480LCD	-----
TH2829C	20Hz-1MHz								

B. LCR Meter Model Selection

Model	Test Frequency	Accuracy	Test Level	DC Bias	Output Impedance	Speed	Display
TH2827A	20Hz-300kHz	0.05%	0-2V	0±5V	30Ω, 50Ω, 100Ω	13ms	4.3 inch TFT480*272LCD
TH2827C	20Hz-1MHz						
TH2832	50Hz-200kHz	0.05%	0-2V	0±5V	30Ω, 100Ω	12.5ms	4.3 inch TFT480*272LCD
TH2830	50Hz-100kHz	0.05%	0-2V	-----	30Ω, 100Ω	12.5ms	
TH2816P	50Hz-200kHz	0.02%	0-2V	-----	30Ω, 100Ω	16.7ms	240×64 dot-matrix graphics LCD
TH2816A+		0.05%					
TH2816B+		0.05%					
TH2817B+	50Hz-100kHz	0.10%	0.01-1V	-----	10Ω, 100Ω	19ms	4.3 inch TFT480*272LCD
TH2817C+	50Hz-100kHz						
TH2810B+	100Hz-10kHz	0.10%	0.01-1V	-----	10Ω, 100Ω	19ms	4.3 inch TFT480*272LCD
TH2810D	100Hz-10kHz	0.10%	0.1V/0.3V/1V	-----	30Ω, 100Ω	84ms	Large character LCD display with backlight
TH2811D	100Hz-10kHz	0.20%	0.3V/1V			84ms	

Main Competitor:

- **Hioko IM3523/IM3533/IM3533-01 (TONGHUI TH2827A/TH2827C)**
- **Keysight E4980AL (TONGHUI TH2829A/TH2829C/TH2840A/TH2840B)**
- **Wayne Kerr 4320/GW Insteek LR821/Chroma 1062A (TONGHUI TH2832/TH2830)**
- **GW Insteek LCR819/LCR829 (TONGHUI TH2817B+/TH2817C+)**
- **Keysight E4981A-001 (TONGHUI TH2638)**

B. Handheld LCR Meter Model Selection

No.	Model	Principle	Test Frequency	Test Parameter	Accuracy	Test Level	Output Impedance	Speed	Display	
1	TH2822A	Auto balance bridge	100Hz, 120Hz, 1kHz	Z , C, L, R, D, Q, θ, ESR	0.25%	0.6V	100Ω	250ms	LCD Primary-Secondary dual display, with backlight	
2	TH2822C		100Hz, 120Hz, 1kHz, 10kHz, 100kHz							
3	TH2822D		100Hz, 120Hz, 1kHz, 10kHz	Z , C, L, R, D, Q, θ, ESR, DCR	0.10%	0.3V/0.6V/1V	100Ω	250ms		
4	TH2822E		100Hz, 120Hz, 1kHz, 10kHz, 100kHz	Z , C, L, R, D, Q, θ, ESR, DCR	0.10%					



Main Competitor:

- Keysight U1731C/U1732C/U1733C

C. Capacitance Meter-TH2638



Test Frequency	TH2638 Performance	100Hz-1MHz
	TH2638A	100Hz-100kHz
	TH2638B	100Hz-10kHz
	TH2638C	100Hz-1kHz
Basic Accuracy	C: 0.07%, D: ±0.0005	
Signal Source	0.1V-1Vrms	
Output Impedance	0.3Ω, 1.5Ω, 10Ω Adjust automatically according to impedance	
Test Speed	2.3ms, 2.5ms, 3ms, 3.3ms, 10ms	

- 4.3-inch TFT LCD display
- Highest test speed: 2.3ms/time
- **Cs-Rs-Ls test technology (TH2638A) for DC_LINK capacitor**
- **Ultra-stable ESR with 1μΩ reading resolution**
- Low impedance measurement, signal level compensation function
- Contact inspection function
- Synchronizing signal source
- Frequency offset function(Only TH2638)

D. Automatic Transformer Test System-TH2840X

2. Performance Feature



Application:

- **Network transformer:** Fast scanning
- Balanced filter, common mode choke
- **Switching transformer,** high frequency transformer
- PCB transformer
- Basic impedance components: capacitor, inductor, PCB inductor, magnetic core, resistor, wireless charging coil, etc..

Main Competitor:

- **Chroma 3250/3252/3302**
- **Mircotest 3250**

Basic Operation in Youtube
Application in Youtube

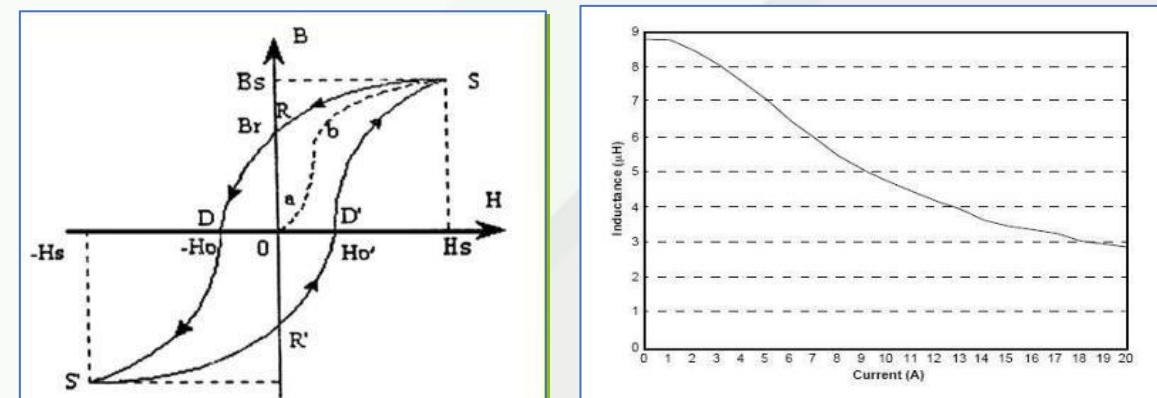
D. Automatic Transformer Test System

Series	Model	Display	PIN	Accuracy	Test Frequency	Test Level	DC Bias	Source Output Impedance	
TH2840X	TH2840AX	10.1 inch 1280×800 capacitive touch screen	24	0.05%	20Hz-500kHz	5mV-20Vrms	±40V/100mA Independent 2A bias source	30Ω, 100Ω	
	TH2840BX		24		20Hz-2MHz				
	TH2840NX		48-288		20Hz-500kHz				
TH2829X	TH2829LX	7-inch TFT LCD	20	0.05%	20Hz-200kHz	5mV-2Vrms Customizable up to 10V	None	10Ω, 30Ω, 50Ω, 100Ω	
	TH2829AX		20		20Hz-200kHz		±10V/100mA Optional 1A/2A bias source		
	TH2829AX-24		24		20Hz-200kHz				
	TH2829AX-48		48		20Hz-200kHz				
	TH2829NX		72/96/120/1 44/168/192		20Hz-200kHz				
	TH2829CX		20		20Hz-1MHz				
TH2832X	TH2832XA	4.3 inch TFT LCD	24	0.05%	20Hz-200kHz	10mV-2Vrms	±5V/50mA	30Ω, 100Ω	
	TH2832XB		24		20Hz-200kHz				
	TH2832XC		12		20Hz-200kHz				

E. Inductance Bias Test System-TH1778A



Model	TH1778A	TH1778B	TH1778AS
Supporting Frequency		20Hz-2MHz	
Current Range		0 - ±20A	
Current Accuracy		±1%	
Current Step		1mA	
Control Mode	Master	--	Slave, stackable 5 sets
Output Voltage		10V	
Output Impedance		$R_{max} = \frac{V_{max}}{I} (\Omega)$	
DCR Voltage		$L_{max} = \frac{V_{max}}{di/dt} (mH)$	



F. Loudspeaker Tester-TH1312



Model	TH1312-20	TH1312-60	TH1312-100
Frequency Range	20Hz-20kHz		
Output Voltage (8Ω)	0-12.8Vrms	0-22Vrms	0-28Vrms
Output Power	20W	60W	100W
Current Accuracy	±1%		
Current Step	1mA		
Frequency Display & Accuracy	3 3/4 digits LCD display, 1% reading ±1 word		
Voltage Display & Accuracy	3 3/4 digits LCD display, 3% (full scale) + 1% reading		
Signal Distortion	≤0.8%		

Application

- Pure tone audiometry
A speaker, sound box, voice coil, etc.
- Signal stimulus source
Acoustics, Vibration, telecommunication, etc.. and other fields



Tonghui® 携手同心 惠及未来

G. Semiconductor C-V Characteristic Analyzer-TH510 Series



Model	TH511	TH512	TH513
Test Frequency	1kHz-2MHz		
Channel	2 channels, optional to 4/6 channels		
Test Parameter	C_{ISS} , C_{OSS} , C_{RSS} , R_g (Arbitrary selection)		
Test Method	Point test, list scan, graph scan(optional)		
Signal Source	2Vrms		
V_{GS} Range	0 - $\pm 40V$		
V_{DS} Range	0 - $\pm 200V$	0 - $\pm 1500V$	0 - $\pm 3000V$

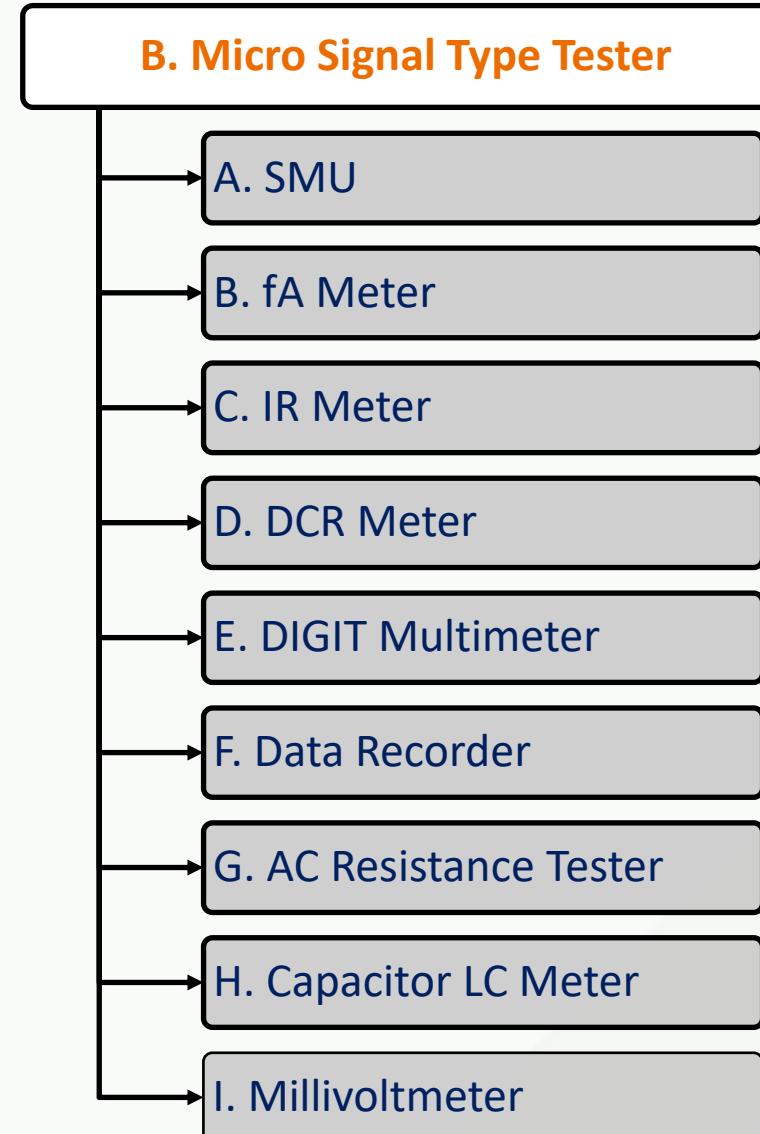
Application

- **Semiconductor** material: Wafer cutting and C-V characteristics analysis
- Semiconductor components/power components:
Parasitic capacitance test of diode, transistor, **MOSFET, IGBT**, thyristor, integrated circuit, photoelectronic chip, etc., and C-V characteristics analysis
- Liquid crystal materials: Elastic constant analysis, liquid crystal cutting
- Capacitive element:
Capacitor C-V characteristic test and analysis, capacitive sensor test analysis

Main Competitor:

- **Keysight B1505;**
- **Hioko CN010;**

2023 Products Range



A. Precision Source Measurement Unit-TH199X Series



- 7-inch capacitive touch screen, resolution 800×480, **Linux system**
- 6.5 digits output and measurement resolution
- **Four quadrants single - and dual-channel precision power output**
- Four basic modes: voltage source, current source, voltmeter, ammeter or resistance meter
- **Up to $\pm 210V$ DC voltage, $\pm 3A$ DC current/ $\pm 10.5A$ pulse**
- 10fA/100nV minimum output and measurement resolution
- Support DC, pulse, scan and list output
- Up to 1,000,000 dots/sec sampling rate
- The pulse width of the pulse output is up to 50 μ s minimum
- Arbitrary waveform generation and list scan function (minimum 1 μ s interval)
- **Diode, transistor, MOSFET and IGBT quickly** generate the characteristic curve of common devices, time domain waveform rolling display function

[Introduction in Youtube](#)

A. Precision Source Measurement Unit-TH199X Series

Specification			TH1991C	TH1991B	TH1991A	TH1991	TH1992A	TH1992		
Source	DC	Voltage	+/- 63V	+/- 210V						
		Current	+/- 1.515A	+/- 3.03A						
	Impulse		N/A		+/- 10.5A					
Resolution	Source		5.5 Digit			6.5 Digit	5.5 Digit	6.5 Digit		
	Measurement		6.5 Digit							
Current Resolution	Source		1pA	100fA	1pA	10fA	1pA	10fA		
	Measurement		100fA	10fA	100fA	10fA	100fA	10fA		
Current Range (DC)			100nA-1.5A	10nA - 3A						
Voltage Resolution	Source		1μV	1μV	1μV	100nV	1μV	100nV		
	Measurement		100nV							
Voltage Range			200mV - 60V	200mV - 200V						
Min Time Interval			50μs	20μs	10μs	1μs	10μs	1μs		
Channel			1				2			

Main Competitor:

- **Keysight B2912A**
- **Keithley 2450**

B. High Resistance Meter/fA Meter/Electrometer/pA Meter-TH2690



- 7-inch capacitive touch screen
- 6½-digit measurement resolution
- 0.1fA (10^{-16} A) minimum current solution
- Built-in voltage source: **±1000V**
- Measure resistance up to **10PΩ** ($10^{16}\Omega$)
- Independent current and voltage measurement
- Input impedance > 200TΩ, supporting 20V voltage measurement
- Realize charge measurement as low as 2nC range
- Time domain view, capture transient signal effects and select specified measurement data

Basic Operation in Youtube

B. High Resistance Meter/fA Meter/Electrometer/pA Meter Model Selection

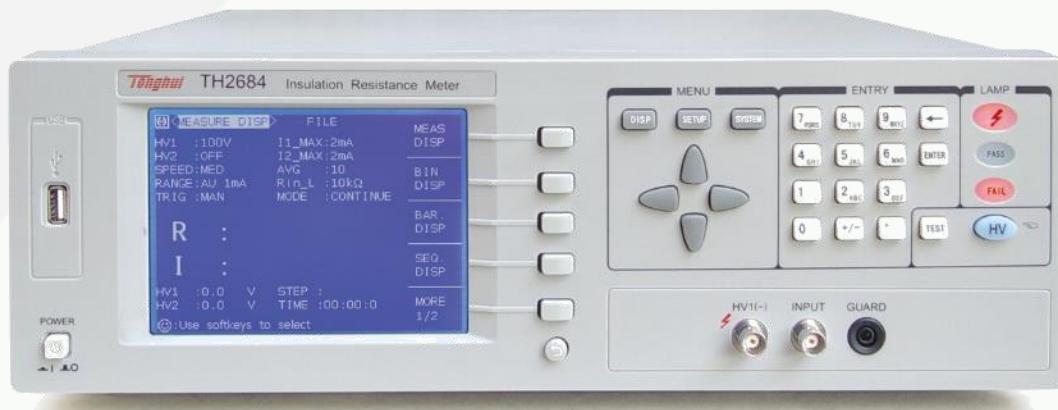
Model	TH2690	TH2690A	TH2691	TH2691A
Voltage Source	± (700μV-1000V)	± (700μV-1000V)	± (700μV-1000V)	± (700μV-1000V)
Accuracy	0.05%	0.05%	0.05%	0.05%
Current Range	0.1fA-20mA	0.01pA-20mA	1fA-20mA	0.01pA-20mA
Current Accuracy	0.05%	0.05%	0.05%	0.05%
Charge Current	20mA (less than20V) 1mA (more than20V)		-----	-----
Resistance Range	1Ω-10PΩ	1Ω-10TΩ	-----	-----
Resistance Accuracy	0.14%	0.14%	-----	-----
Voltage Range	1μV-20V	1μV-20V	-----	-----
Voltage Accuracy	0.05%	0.05%	-----	-----
Temperature/Humidity Measurement	Y	Y	-----	-----
Display	5.0-inch capacitive touch screen			

Main Competitor:

- Keysight B2985A; Keithley 6517B; Hioki SM7110

C. Insulation Resistance Meter-TH2684

2. Performance Feature



- 320×240 dot-matrix LCD
- 100W power supply, powerful **charging function**
- Contact detection function for capacitive components
- The internal resistance technology can be switched to ensure the fast and accurate test of the instrument
- Customizable voltage and current curve test scheme
- R-T and I-T Curve test and display mode

C. Insulation Resistance Meter Model Selection

Model	Voltage Source	Accuracy	Current Range	Current Accuracy	Charge Current	Resistance Range	Resistance Accuracy	Display
TH2684	10 - 500V (Two-way)	2%	1pA-1mA	2%	2/25/200mA	10kΩ-50TΩ	2%	320×240 dot-matrix LCD
TH2684A	10 - 1000V (One way)	2%	1pA-1mA	2%	2/25/100mA	10kΩ-100TΩ	2%	
TH2683A	10 - 1000V	1%	-----	-----	10mA	100kΩ-10TΩ	5%	4.3-inch 480*272 LCD touch screen
TH2683B	10 - 500V	1%	-----	-----	10mA	100kΩ-10TΩ	5%	

D. DCR Meter-TH2515



Model		TH2515	
Resistance Measurement Range		0.1μΩ - 110MΩ	
Resistance Basic Accuracy		0.01%	
Temperature Test	PT100	Range	-10°C - 99.9°C
	PT500	Accuracy	0.1°C
	Analog	Range	0V - 2V
		Accuracy	±1%
Measurement Speed		7ms, 22ms, 102ms, 402ms	

- 4.3-inch 480×272 capacitive LCD display
- Intelligent detection for test state error
- Multiple measurement combinations of R, LPR, T
- Low voltage test mode
- Temperature conversion(Δt)
- **Temperature compensation(TC)**
- Offset voltage compensation (OVC)
- Customer self-correction(0 ADJ)
- Statistics function: CpK, Cp
- Screenshot function
- Data save function
- Compatible with LXI C standard specifications

D. DCR Meter Model Selection

No.	Model	Channel	Measurement Range	Resolution	Accuracy	Test Speed	TC	Display	Interface
1	TH2518	90	1μΩ-200kΩ	1μΩ	0.05%	Single board: 10ms 6 boards: 1.7ms	Y	4.3 inch 480 × 272 LCD touch screen	RS232, USB DEVICE, USB HOST, LAN, HANDLER
2	TH2515	1	0.1μΩ-110MΩ	0.1μΩ	0.01%	7ms	Y	4.3 inch 480 × 272 LCD touch screen	RS232, USB DEVICE, USB HOST, LAN, HANDLER, GPIB(option)
3	TH2516	1	1μΩ-2MΩ	1μΩ	0.05%	10ms	Y	4.3 inch 480 × 272 LCD touch screen	RS232, USB DEVICE, USB HOST, HANDLER
4	TH2516B	1	1μΩ-20kΩ	1μΩ	0.05%	10ms	-----		

Main Competitor:

- **GW Insteek GOM-801G (TONGHUI TH2516B)**

TH2518 Introduction in Youtube

E. Benchtop Digital Multimeter-TH1963

2. Performance Feature



- 4.3-inch LCD color display
- 1,199,999 digits reading
- The highest DC voltage accuracy can reach 0.0035%
- Test speed up to 1000 times/s
- AC low frequency signal can be tested down to 3Hz
- Up to 5V diode test voltage
- Histogram, bar graph, trend chart display
- Storage data up to 10,000
- Compared with **Keysight34461A**, the minimum resistance range is reduced from 100Ω to 10Ω

E. Benchtop Digital Multimeter Model Selection

Model	TH1963		TH1963A	TH1953	TH1952		TH1942		TH1941	
Reading	1,199,999		1,199,999	119,999	120,000		51,000		21,000	
Speed	1ms				10ms		40ms			
Storage	10000									
Parameter	Range	Accuracy	Accuracy	Accuracy	Range	Accuracy	Range	Accuracy	Range	Accuracy
DC Voltage	100mV -1000V	0.00%	0.01%	0.01%	100mV -1000V	0.01%	500mV -1000V	0.02%	200mV -1000V	0.03%
AC Voltage	100mV-750V	0.06%	0.09%	0.09%	100mV-750V	0.05%	500mV-750V	0.35%	200mV-750V	0.40%
DC Current	100μA-10A	0.05%	0.05%	0.05%	100μA-10A	0.20%	5mA-20A	0.05%	2mA-20A	0.08%
AC Current	100μA -10A	0.10%	0.10%	0.10%	100μA -10A	0.50%	5mA -20A	0.50%	2mA -20A	0.50%
DC Resistance	10Ω-100MΩ	0.01%	0.01%	0.03%	10Ω-100MΩ	0.05%	500Ω-50MΩ	0.10%	200Ω-20MΩ	0.10%
Frequency	3Hz-300kHz	0.01%	0.01%	0.01%	1Hz-1MHz	0.01%	5Hz-1MHz	0.01%	5Hz-1MHz	0.01%
Diode	5V	0.01%	0.01%	0.10%	----					
Breakover	1kΩ	0.01%	0.01%	0.10%	----					
Capacitance	1nF-10mF	0.50%	0.50%	0.50%	1nF-10mF	1%	-----			
Temperature	PT100	0.05°C	0.05°C	0.05°C	PT500	0.1°C	-----			
LCD	4.3-inch LCD colour display				VFD double parameter display		VFD double parameter display			
Interface	RS232, USB DEVICE, USB HOST, Optional GPIB, HANDLER				RS232, USB DEVICE, HANDLER		RS232, USB DEVICE		USB DEVICE	

F. Data Recorder-TH2552/TH2553



Not available for International market now.

Installing Structure		Modular
Channel		Standard 8 channels/module, support a maximum of 8 modules, 64 channels
Input Signal	Thermocouple	K, E, R, B, N, T, E, J, S, WRE5-26, WRE3-25
	Thermal Resistance	PT100, Cu50
	Current	4 - 20mA, 0 -10mA, 0 - 20mA
	Voltage	0 - 5V, 0 - 10V, 1 - 5V
Measurement Accuracy		$\leq \pm 0.2\%F.S$
Sampling Frequency		1 - 19999s autonomous setting
Recording Capacity		6 days (64 channels, one second interval probability)
		36 days (64 channels, One minute interval probability)
Recording Mode		Cyclic recording
Alarm Mode		High and low limit alarm, 4 per channel

G. Battery Tester-TH2523



Model	TH2523	TH2523A
Measurement Parameter	R, V, R-V, Z-θ°, Z-θr, L-Q, L-R, R-X, R-Q, C-D, R-C	
Basic Accuracy	R:0.1%, V:0.05%	
Test Signal	1kHz sinusoidal wave	
Measure ment Range	V	100uV - 65V
	R/Z/X	1uΩ - 3.5kΩ
	L	0.2nH - 1H
	C	0.0001pF ~ 9.9999F
	D/Q	0.001 - 9999.9
	θ	Deg: -179.99° ~ 179.99° Rad: -3.1416 ~ 3.1416
	Measurement Speed	20ms, 100ms, 154ms, 333ms

Application

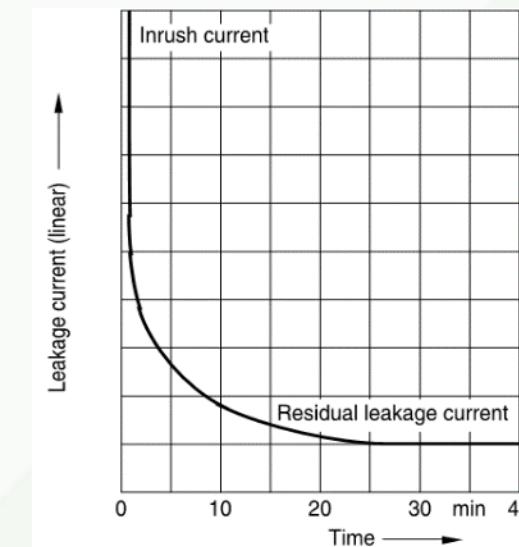
- Various batteries
- Winding element
- Connector
- Circuit board
- Communication antenna

3. Product Application

H. Capacitor Leakage Current, IR Meter-TH2689



- Large LCD 240×64 dot-matrix display
- **Capacitor leakage (LC) measurement**
- Insulation resistance (IR) measurement
- Aluminum foil pressure and rise time test function
- Real-time monitoring of output voltage



H. Capacitor Leakage Current, IR Meter Model Selection

Model	Voltage Range	Voltage Accuracy	Current Range	Current Accuracy	Charge Current	Resistance Range	LCD	Interface
TH2689	1V-800V	0.5%	0.001μA-20mA	0.30%	500mA Max	0.01MΩ - 99.99GΩ	Dot Matrix LCD	RS232, HANDLER
TH2689A	1V-500V							
TH2686C	0V-500V	2%	0-30mA	2%	200mA Max	-----	Voltage LED, Current Pointer	-----
TH2686N	0V-500V	1%	10nA-19.99mA	2%			LED	

I. Digital AC Millivoltmeter-TH1912

1. Basic Parameter



Model	TH1912	TH1912A
Frequency Bandwidth	5Hz-3MHz	5Hz-5MHz
Voltage Test Range	50μV-300V	
Measuring Voltage Range	3.8mV,38mV,380mV,3.8V, 38V,300V	
Basic Accuracy	Reading value ±1%	
Input Resistance	1MΩ 30pF, could switch to 10MΩ	

- 4 1/2 VFD measurement display
- Dual display
 - Absolute value: mV, V, W, dBm, dBV, dBmV, dBμV, Vp-p**
 - Relative value: dB, %, Max/Min**
- Software menu setting: measure power and dBm, set source load resistance arbitrarily
- Measure dB,%, Max/Min reference value setting
- Ground (GND), floating (Float) setting and safety warning

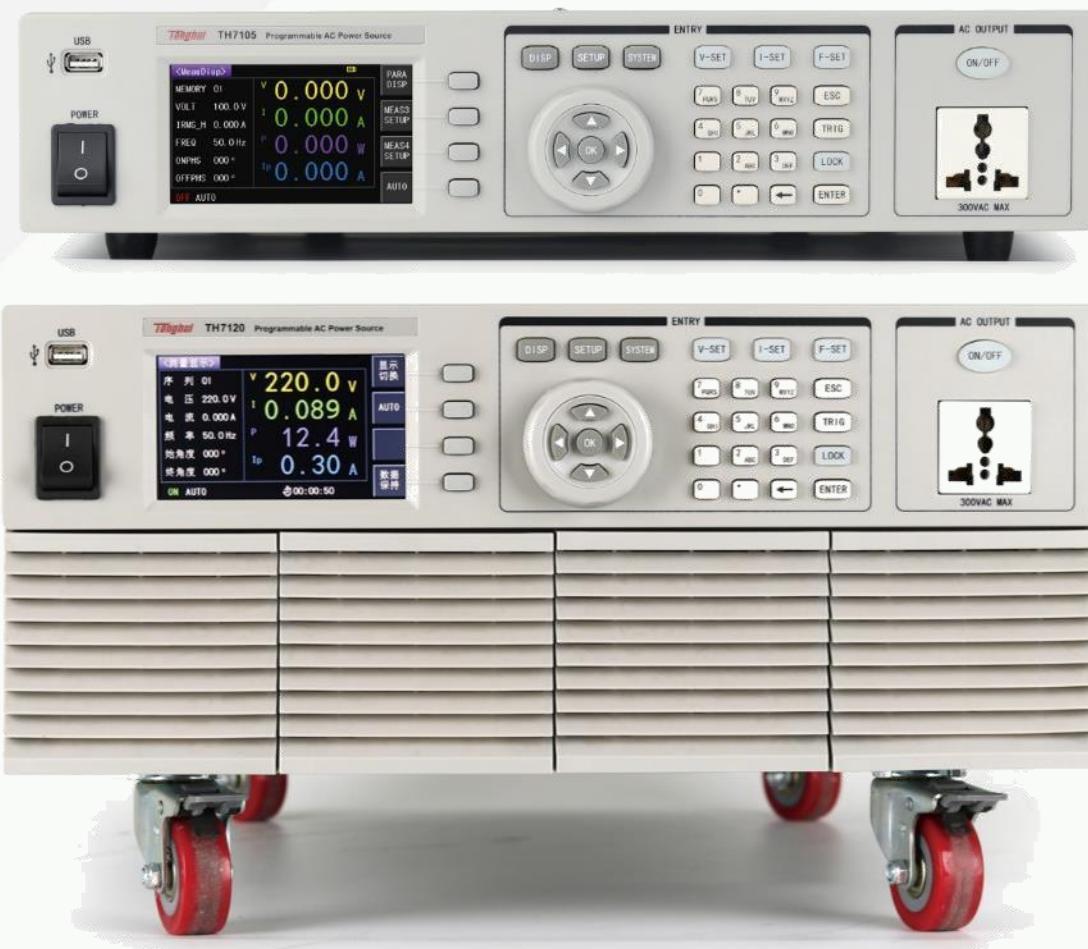
3. Product Application

2023 Products Range

C. Power Electronic Tester

- A. AC Power Supply
- B. DC Power Supply
- C. DC Electronic Load
- D. Power Meter/Analyzer
- E. Power Electronic System

A. Programmable AC Power Supply-TH7100



Model		TH7105	TH7110	TH7120	
Output Power	Range	500W	1000W	2000W	
	Accuracy	$\pm 0.6\% + 5$ digits			
Output Voltage	Range	0 - 300V			
	Accuracy	$\pm 0.5\% + 2$ digits			
Maximum Current	RMS	0-150V	4.2A	8.4A	
		0-300V	2.1A	4.2A	
	Peak	0-150V	16.8A	33.6A	
		0-300V	8.4A	16.8A	
Accuracy		$\pm 0.5\% + 5$ digits			
Frequency		45Hz-500Hz, accuracy ± 0.1 Hz			
Initial / Final Phase Angle		0-359°, accuracy: 1%			
Measurement Function		Voltage, Current, Peak Current, Frequency, Power			

B. Programmable Dual Range DC Power Supply-TH6200



Model	Range	Voltage	Current	Power
TH6201	Range1	0-20V	0-5A	100W
	Range2	0-8V	0-10A	80W
TH6202	Range1	0-32V	0-3A	96W
	Range2	0-15V	0-6A	90W
TH6203	Range1	0-72V	0-1.5A	108W
	Range2	0-32V	0-3A	96W
TH6212	Range1	0-32V	0-6A	192W
	Range2	0-15V	0-12A	180W
TH6213	Range1	0-72V	0-3A	216W
	Range2	0-32V	0-6A	192W

B. Programmable Dual Range DC Power Supply-TH6220

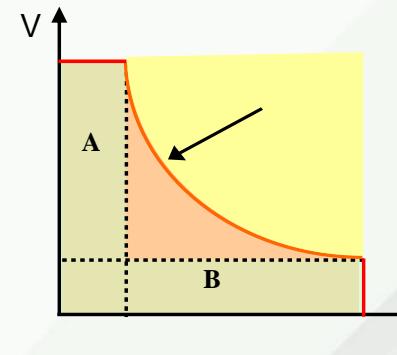


Model	Voltage	Current	Power
TH6222	0-30V	0-3A	90W
TH6223	0-30V	0-6A	180W
TH6223A	0-60V	0-3A	180W

B. Programmable Wide Range DC Power Supply-TH6300



Model	Voltage	Current	Power
TH6301	20V	30A	200W
TH6302	30V	20A	200W
TH6303	60V	10A	200W
TH6304	120V	5A	200W
TH6312	30V	30A	360W
TH6313	60V	15A	360W
TH6314	120V	6A	360W
TH6323	60V	25A	600W
TH6324	120V	10A	600W



B. Programmable Multi Channels DC Power Supply-TH6400



Main Competitor: GOODWILL GPD4303S

Model	CHs	Voltage	Current	Power
TH6402A	CH1	0-30V	0-3A	90W
	CH2	0-30V	0-3A	90W
	CH3	0-5V	0-3A	15W
TH6402B	CH1	0-30V	0-3A	90W
	CH2	0-30V	0-3A	90W
	CH3	0-10V	0-3A	30W
	CH4	0-5V	0-1A	5W
TH6402	CH1	0-30V	0-3A	90W
	CH2	0-30V	0-3A	90W
	CH3	0-6V	0-5A	30W
TH6412	CH1	0-30V	0-6A	180W
	CH2	0-30V	0-6A	180W
	CH3	0-6V	0-5A	30W
TH6413	CH1	0-60V	0-3A	180W
	CH2	0-60V	0-3A	180W
	CH3	0-6V	0-5A	30W

TH6402B Introduction in Youtube

B. Programmable Multi Channels DC Power Supply-TH6420

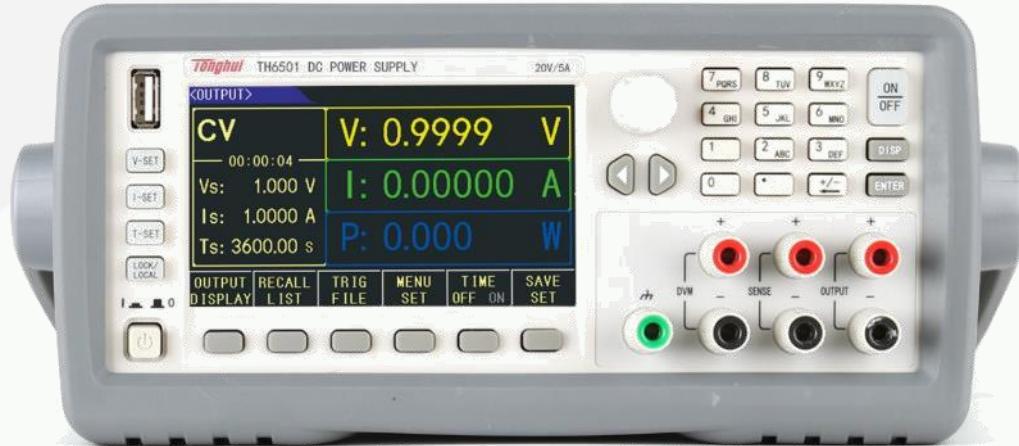


Model	CHs	Voltage	Current	Power	Resolution
TH6422	CH1	0-32V	0-3A	96W	1mV/1mA
	CH2	0-32V	0-3A	96W	1mV/1mA
	CH3	0-5V	0-3A	15W	1mV/1mA
TH6422A	CH1	0-32V	0-3A	96W	10mV/10mA
	CH2	0-32V	0-3A	96W	10mV/10mA
	CH3	0-5V	0-3A	15W	10mV/10mA
TH6423	CH1	0-32V	0-3A	96W	1mV/1mA
	CH2	0-32V	0-3A	96W	1mV/1mA
	CH3	0-5V/ 0-10V	0-3A/ 0-1A	15W	1mV/1mA
	CH4	0-5V	0-1A	5W	1mV/1mA

Main Competitor: GOODWILL GPD4303S

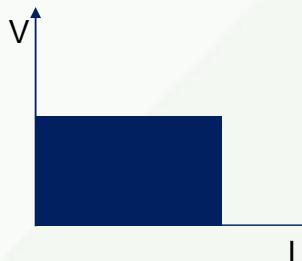
Tonghui® 携手同心 惠及未来

B. Programmable DC Power Supply-TH6500

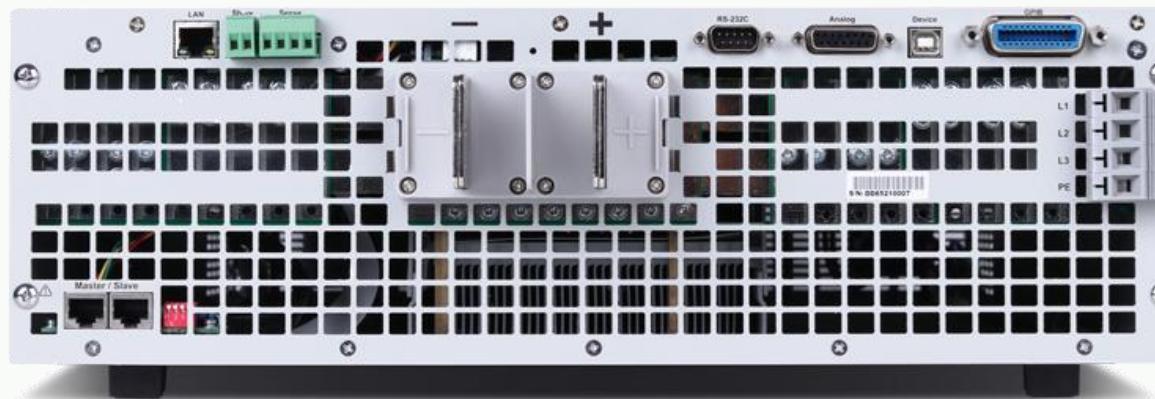
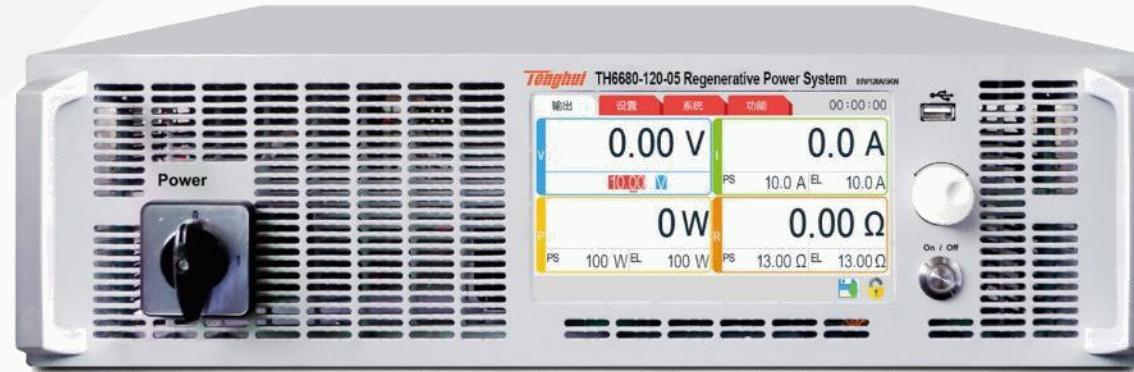


Built-in digital milliohm meter

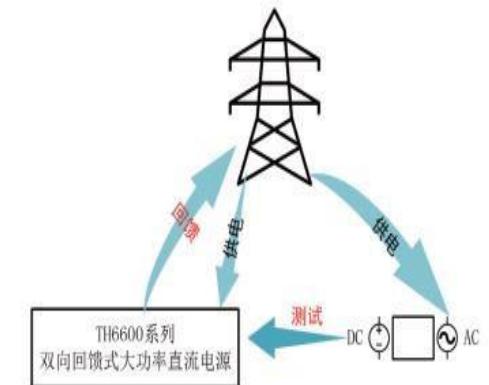
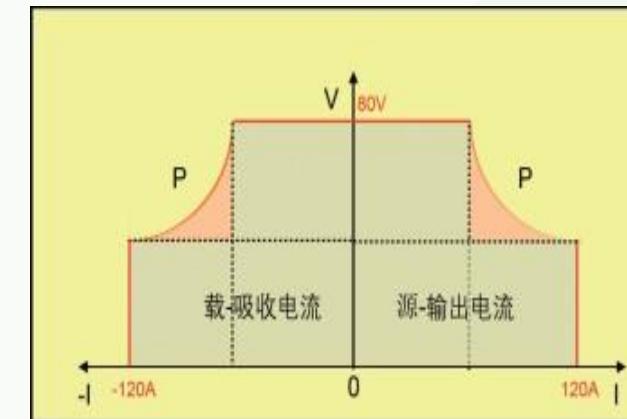
Model	Voltage	Current	Power
TH6501	0-20V	0-5A	100W
TH6502	0-32V	0-3A	96W
TH6503	0-72V	0-1.5A	108W
TH6511	0-20V	0-10A	200W
TH6512	0-32V	0-6A	192W
TH6513	0-72V	0-3A	216W
TH6732	0-250V	8.4A	720W
TH6733	0-250V	12.6A	1080W
TH6741	0-800V	1.32A	360W
TH6742	0-800V	2.64A	720W
TH6743	0-800V	3.96A	1080W



B. Programmable Bi-directional DC Power Supply-TH6600



Model	TH6680-120-05	TH6680 -240-10	TH6680-360-15
Power	5kW	10kW	15kW
Voltage	0-80V		
Current	0-120A	0-240A	0-360A



NOT READY FOR INTERNATIONAL MARKET!

B. Programmable switch DC Power Supply-TH6700



Model	Voltage	Current	Power
TH6711	0-30V	0-33A	360W
TH6712	0-30V	0-66A	720W
TH6713	0-30V	0-100A	1080W
TH6721	0-80V	0-12.5A	360W
TH6722	0-80V	0-25A	720W
TH6723	0-80V	0-37.5A	1080W
TH6731	0-250V	0-4.2A	360W
TH6732	0-250V	0-8.4A	720W
TH6733	0-250V	0-12.6A	1080W
TH6741	0-800V	0-1.32A	360W
TH6742	0-800V	0-2.64A	720W
TH6743	0-800V	0-3.96A	1080W

B. Programmable switch DC Power Supply-TH6700A



Model	Voltage	Current	Power
TH6711A	0-30V	0-33A	360W
TH6712A	0-30V	0-66A	720W
TH6713A	0-30V	0-100A	1080W
TH6721A	0-80V	0-12.5A	360W
TH6722A	0-80V	0-25A	720W
TH6723A	0-80V	0-37.5A	1080W
TH6731A	0-250V	0-4.2A	360W
TH6732A	0-250V	0-8.4A	720W
TH6733A	0-250V	0-12.6A	1080W
TH6741A	0-800V	0-1.32A	360W
TH6742A	0-800V	0-2.64A	720W
TH6743A	0-800V	0-3.96A	1080W

B. Programmable Switch DC Power Supply-TH6900



The master-slave mode supports parallel connection, active current sharing, and **parallel connection of up to 10 units** of the same type

Model	Voltage	Current	Power
TH6940-60	40V	60A	750W
TH6980-30	80V	30A	750W
TH69200-12.5	200V	12.5A	750W
TH69360-7.5	360V	7.5A	750W
TH69500-5	500V	5A	750W
TH69750-3	750V	3A	750W
TH691000-2.5	1000V	2.5A	750W
TH6935-100	35V	100A	1500W
TH6980-60	80V	60A	1500W
TH69200-25	200V	25A	1500W
TH69360-15	360V	15A	1500W
TH69500-10	500V	10A	1500W
TH69750-6	750V	6A	1500W
TH691000-5	1000V	5A	1500W
TH6935-200	35V	200A	3000W
TH6980-120	80V	120A	3000W
TH69200-50	200V	50A	3000W
TH69360-30	360V	30A	3000W
TH69500-20	500V	20A	3000W
TH69750-12	750V	12A	3000W
TH691000-10	1000V	10A	3000W

C. Programmable DC Electronic Load-TH8200/8400



**CR-LED test, arbitrary I-V characteristics,
battery test, dynamic scan test, load effect,
list function**

Application

- Power Chargers, switching power supply, communication power, LED drivers, cell phone batteries, portable power source
- New energy
Solar cells, new power cars, electric bicycles
- Electronic power components
Fuse / Connector / Relay / Sensor
- Automated equipment integration testing



3. Product Application

C. Programmable DC Electronic Load-TH8200/TH8400

Series	Model	Voltage	Current	Power	Resolution	Dynamic frequency	Sampling Rate
TH8200 Series	TH8201	150V	40A	175W	1mV/10µA	50kHz	100kHz
	TH8202	150V	80A	350W	1mV/10µA	50kHz	100kHz
	TH8202A	150V	40A	350W	1mV/10µA	50kHz	100kHz
	TH8202B	150V	80A	500W	1mV/10µA	50kHz	100kHz
	TH8203	150V	160A	700W	1mV/10µA	50kHz	100kHz
	TH8203A	150V	80A	700W	1mV/10µA	50kHz	100kHz
	TH8204	150V	200A	1000W	1mV/10µA	50kHz	100kHz
	TH8204A	150V	100A	1000W	1mV/10µA	50kHz	100kHz
	TH8204B	150V	160A	1200W	1mV/10µA	50kHz	100kHz
	TH8205	150V	200A	2000W	1mV/10µA	50kHz	100kHz
	TH8212	800V	15A	500W	1mV/10µA	50kHz	100kHz
	TH8214	800V	30A	800W	1mV/10µA	50kHz	100kHz
	TH8215	800V	60A	1200W	1mV/10µA	50kHz	100kHz
TH8400 Series	TH8401	150V	30A	175W	0.1mV/0.1mA	25kHz	500kHz
	TH8402A	150V	30A	350W	0.1mV/0.1mA	25kHz	500kHz
	TH8402	150V	60A	350W	0.1mV/0.1mA	25kHz	500kHz
	TH8403	150V	120A	1000W	0.1mV/0.1mA	25kHz	500kHz
	TH8404	150V	180A	1500W	0.1mV/0.1mA	25kHz	500kHz
	TH8405	150V	240A	2000W	0.1mV/0.1mA	25kHz	500kHz
	TH8411	500V	15A	175W	0.1mV/0.1mA	25kHz	500kHz
	TH8412	500V	30A	350W	0.1mV/0.1mA	25kHz	500kHz

C. Programmable Multi Channel DC Electronic Load-TH8300

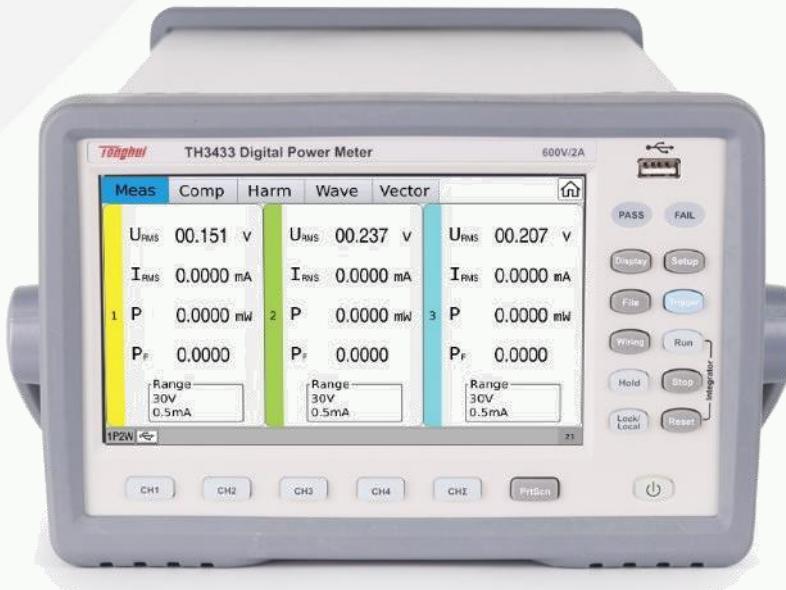


Tonghui® 携手同心 惠及未来

C. Programmable DC Electronic Load-TH8300

Series	Model	Voltage	Current	Power	Resolution	Dynamic frequency	Sampling Rate
TH8300 Series	TH8300	Frame, support 5 Module					
	TH8310	Frame, support 2 Module					
	TH8301-80-20	80V	20A	100W*2	0.1mV/10µA	50kHz	500kHz
	TH8301A-80-20	80V	20A	200W*2	0.1mV/10µA	50kHz	500kHz
	TH8302-80-40	80V	40A	200W	0.1mV/10µA	50kHz	500kHz
	TH8303-80-60	80V	60A	300W	0.1mV/10µA	50kHz	500kHz
	TH8304-80-80	80V	80A	400W	0.1mV/10µA	50kHz	500kHz
	TH8305-80-80	80V	80A	500W	0.1mV/10µA	50kHz	500kHz
	TH8302-600-10	600V	10A	200W	0.1mV/10µA	50kHz	500kHz
	TH8303-600-15	600V	15A	300W	0.1mV/10µA	50kHz	500kHz
	TH8305-600-30	600V	30A	500W	0.1mV/10µA	50kHz	500kHz

D. Digital Power Meter-TH3430/TH3440



Introduction in Youtube

Application

- Motors, transformers; Electronic production design; Lighting
- Aerospace and military industry; Network communication
- Audio and video equipment; Monitoring equipment
- Source class device; Load equipment
- Test and analysis of electrical parameters of AC power supply, DC power supply, linear power supply, switching power supply, and inverter and other source output equipment
- Test and analysis of electrical parameters of various types of household appliances, industrial appliances, various electronic loads and other electrical equipment



3. Product Application

D. Digital Power Meter Model Selection

Model	TH3311	TH3312	TH3321	TH3331	TH3411	TH3421	TH3422	TH3431	TH3432	TH3433	TH3441	TH3442	TH3443								
Voltage	5-600V							1-600V													
Current	20A	20A	2A	40A	20A	20A	2A	2A	2A	2A	20A	20A	20A								
CHs	1			3		4	4	1	3	4	1	3	4								
Bandwidth	400Hz							100kHz													
Accuracy	0.15%							0.10%													
Basic Function	AC, DC, Electric Energy Test, Precision Type, Waveform Graph, Histogram																				
Harmonics	---	Y																			
Integral Data	----			Y			---	Y		---	Y										
Vector Analysis	----			Y			---	Y		---	Y										
Test Speed	143ms							100ms-20s													
Display	4.3 inch 24-bit color 480×272 color TFT				7 inches 800×600 resolution touch screen																

E. Power Electronic System-TH300



Application field

- Testing of chargers for consumer electronics such as mobile phones, PADs, electric toothbrushes, electric shavers,
- electric hair clippers, wireless earphones, etc..
- Test of adapter power supply for laptops, routers, switches, etc..
- Power test for imaging products such as printers, copiers and fax machines
- Industrial power supply and other module power supply (AC/DC, DC/DC) testing

D. Electrical Safety Tester & Cable Tester

- A. Safety PRF Analyzer
- B. Winding Component EST Tester
- C. Hipot Tester AC/DC/IR
- D. Ground Bond Tester
- E. Impulse Winding Tester
- F. Cable/ harness Tester

A. Safety PRF Analyzer- TH9130



Seven in one comprehensive test system

- High-power AC withstand voltage test
- DC withstand voltage test
- Insulation resistance test
- Ground resistance test
- Leakage current test
- Breakover test
- Electrical performance test

Application

- Household appliances

Integrated testing of refrigerator, washing machine, air conditioning, TV, dishwasher, induction cooker, sound equipment, etc..

- Electronic parts

Electronic parts of capacitors, inductors, connectors, etc..

- Wire and cable
- Generator/motor
- Medical equipment

Various medical electronic equipment such as electrocardiogram machine, magnetic resonance machine, first aid equipment, etc.

New products, not ready for international market!

B. Winding Component EST Tester-TH9520

Winding Component EST Tester =

1 set of multi channel Hipot tester

+ 1 set of impulse winding tester

+ 1 set of DCR meter

+1 set of LCR meter



Model		TH9520	TH9520A
AC Withstand Voltage	Voltage	5kV	
	Current	100mA	40mA
	Power	500VA	200VA
DC Withstand Voltage	Voltage	6kV	
	Current	20mA	10mA
	Power	120VA	60VA
Insulation Resistance	Output	5kV	1kV
	Resistance	50GΩ	10GΩ
Interturn Insulation		6kV	3kV
DC Resistance		0.01mΩ - 1.2MΩ, △ Test with Y resistance	
Inductance Test		Yes	Optional

Main Competitor:

- Chroma 19036

C/D. Hipot Tester



Main Competitor:

- Chroma 19020 (TONGHUI TH9010)
- Chroma 19055 (TONGHUI TH9110)
- Chroma 19056/19057 (TONGHUI TH9120A/9120D)
- Kikushi TOS5301 (TONGHUI TH9110A)
- Hioko 3153 (TONGHUI TH9320)

Application

- Automated test system
- Household appliances
- Transformers, motors
- Electrical equipment
- Lighting industry
- New energy vehicles
- Electronic components
- Medical equipment

C/D. Electrical Safety Tester Model Selection

Model	AC		DC		IR		CH	Test Way		Floating	Programmable	ARC	OSC	CK	Ground resistance		
	V	C	V	C	V	R			Sync						C	R	
TH9010	5kV	10mA	6kV	5mA	1kV	10GΩ	8	Y			Y	Y	Y				
TH9010A	5kV	10mA	6kV	5mA	1kV	10GΩ	4	Y			Y	Y	Y				
TH9110	5kV	100mA	6kV	20mA	5kV	50GΩ				Y	Y	Y	Y				
TH9110A	5kV	100mA	6kV	20mA	5kV	50GΩ					Y	Y	Y	Y			
TH9120A	10kV	20mA									Y	Y	Y	Y	Y		
TH9120D			12kV	10mA	5kV	50GΩ					Y	Y	Y	Y	Y		
TH9201	5kV	30mA	6kV	10mA	1kV	10GΩ					Y	Y	Y				
TH9201B	5kV	20mA	6kV	10mA	1kV	10GΩ					Y	Y	Y				
TH9201S	5kV	30mA	6kV	10mA	1kV	10GΩ	8		Y		Y	Y	Y				
TH9310	5kV	10mA	6kV	5mA	1kV	10GΩ					Y	Y	Y				
TH9310B	5kV	10mA									Y	Y	Y				
TH9320	5kV	20mA	6kV	10mA	1kV	10GΩ					Y	Y	Y				
TH9320S4	5kV	20mA	6kV	10mA	1kV	10GΩ	4		Y		Y	Y	Y				
TH9320S8	5kV	20mA	6kV	10mA	1kV	10GΩ	8		Y		Y	Y	Y				
TH9320S4A	5kV	20mA	6kV	10mA	1kV	10GΩ	4		Y		Y	Y	Y	Y	Y		
TH9320S8A	5kV	20mA	6kV	10mA	1kV	10GΩ	8		Y		Y	Y	Y	Y	Y		
TH9403											Y				30A	510mΩ	
TH9410A											Y				45A	600mΩ	
TH9411A											Y				32A	600mΩ	

E. Impulse Winding Tester-TH2883



Main Competitor:

- EGG DWX-01/05/10
- Hioko ST4030
- SPS ST1800B

Application

- Transformer

Test of interlayer short circuit in transformer winding

- Magnetic inductor

Magnetic ring, winding inductance, relay drive coil, etc..

- Motor

Motor winding interlayer short circuit test, maintenance test



E. Impulse Winding Tester Model Selection

Model	TH2883-1	TH2883-5	TH2883-10	TH2883S4-5	TH2883S8-5	TH2882A-3	TH2882A-5	TH2882AS-5		
Channel	1	1	1	4	8	1	1	1		
Impulse Voltage	30V-1.2kV	100V-5kV	500V-10kV	100V-5kV	100V-5kV	300V-3kV	500V-5kV	500V-5kV		
Impulse Energy	≤ 0.02 joule	≤0.25 joule	≤ 0.5 joule	≤0.25 joule	≤0.25 joule	≤ 0.09 joule	≤0.25 joule	≤0.25 joule		
Min Inductance	1uH	10uH	20uH	10uH	10uH	10uH	20uH	200uH		
Sampling Rate	200MSPS					40MSPS				
Resolution						8Bit				
Storage	6k Bytes					960 Bytes				
Sample Average	32					20				
Repeatability	+/-1%					+/-1%				
Test speed	167ms					303ms	500ms			
comparison	Area Size Comparison, Differential Area Comparison, Corona Discharge Comparison, Differential Phase Comparison									
Display	7 inches 800*600 TFT					320*240 LCD				
Waveform	600*256 Dots					240*200 Dots				

F. Cable/Harness Tester-TH8601



Application

- **Communication and IT**

Telephone line, network cable, multi-strand cable, mobile phone screen line, TYPE-C cable, USB cable, laptop screen line, HDMI cable, VGA cable, IDE hard disk cable, SATA hard disk cable, etc.

- **Industrial electronics**

Bar wire, flat wire, connector, power cord, multiway switch, RS232 cable, GPIB cable, USB extension cable, multi-core socket

- **Automotive electronics**

ECU cable, automotive wiring harness, navigation cable, navigation screen cable, vehicle electronic product cable, audio and video cable

- **Component**

Passive devices: capacitors, inductors, resistors, diodes

F. Cable/Harness Tester Model Selection

Model		TH8601	TH8601A	TH8602-1	TH8602-2	TH8602-3	TH8602-4	TH8602-B	TH8602-C	TH8603-4							
Test Pins		128	64	64	128	192	256	64	64	512							
Wire	Four Wire	Y	Y	Y	Y	Y	Y	Y	Y	Y							
	Two Wire									Y							
Type C								Y	Y								
Conductance/ Transient Conduct		10mΩ-950Ω		1mΩ-50Ω					100mΩ- 950Ω								
Open/Short Circuit		1kΩ-50kΩ															
Diode Test		0-10V															
Capacitance Test		10pF-1mF								1nF-1mF							
DCR		10mΩ-1MΩ															
AC Withstand	Voltage	1000V			750V		1000V		750V								
	Current	5mA															
DC Withstand	Voltage	1500V			1000V		1500V		1000V								
	Current	5mA															
Insulation Resistance	Voltage	1500V			1000V		1500V		1000V								
	Resistance	1GΩ															



Optional Accessories



TH26001A



TH26003



TH26004S-1



TH26004A



TH26004B



TH26004C



TH26004D



TH26004E-1



TH26004F



TH26005A



TH26005B



TH26005C

及未来



Optional Accessories

携手同心 惠及未来



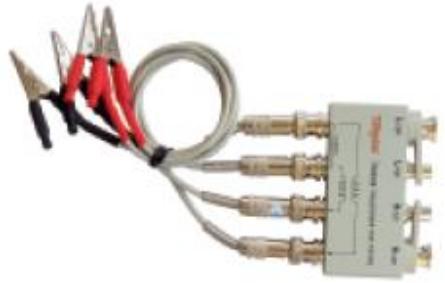
Optional Accessories

A bundle of four grey cables with BNC connectors.	A bundle of three grey cables with BNC connectors.	A bundle of two black cables with BNC connectors.	A bundle of two grey cables with alligator clips and a blue D-sub connector.
A bundle of two grey cables with alligator clips and a blue D-sub connector.	A bundle of two grey cables with alligator clips and a blue D-sub connector.	A black rectangular device with a cable and a BNC connector.	A bundle of two grey cables with alligator clips and a blue D-sub connector.
A bundle of two grey cables with alligator clips and a grey D-sub connector.	A bundle of two grey cables with alligator clips and a blue D-sub connector.	A grey cable with a yellow BNC connector and a grey D-sub connector.	A grey cable with two grey D-sub connectors.
A bundle of two red cables with alligator clips and a grey D-sub connector.	A bundle of two black cables with red alligator clips and a grey D-sub connector.	A bundle of two red cables with alligator clips and a grey D-sub connector.	A bundle of two black cables with red alligator clips and a grey D-sub connector.

携手同心 惠及未来



Optional Accessories



TH26038



TH26039



TH26047



TH26048



TH26048A



TH26049



TH26050S



TH26052



TH26053



TH26056



TH26060E



TH26061D

未来



Optional Accessories

 TH26062	 TH26062A	 TH26063	 TH26065
 TH26069	 TH26071	 TH26072	 TH26077
 TH26078	 TH26108C	 TH2882AS-01	 TH2883-01
 TH90003	 TH90004	 TH90013A	 TH90014



Optional Accessories

 TH90015	 TH90016	 TH90017	 TH90017A
 TH90018	 TH90019	 TH1778-01	 TH1778-02
 TH1778-03	 TH5100-IL	 TH19001/TH19002	 PT500

及未来



Optional Accessories

TH1805	TH1806B	TH1901A	TH1901B
TH1801-001	TH2881-001	TH2829AX-001	TH1801-EXT1A (2.54)
TH1801-EXT2A (FRC40转接头)	TH1801-EXT3A (5.0/5.0)	TH1801-EXT4A	TH1801-EXT8A (3.3/3.3)
TH1801-EXT9A (4.0/4.0)	TH1801-EXT88A (5.0/5.0)	TH1802A	TH2901

携手同心 惠及未来



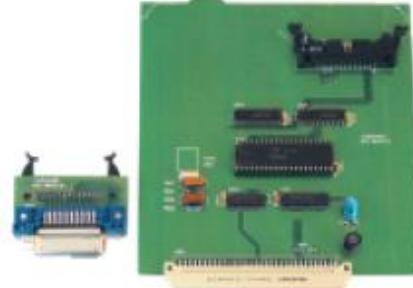
Optional Accessories



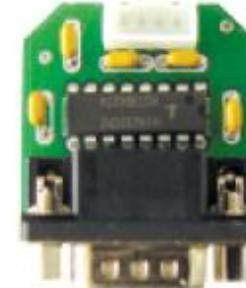
TH1902A



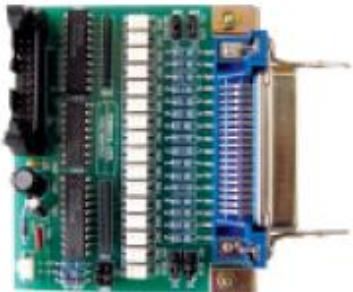
TH10001



TH10002



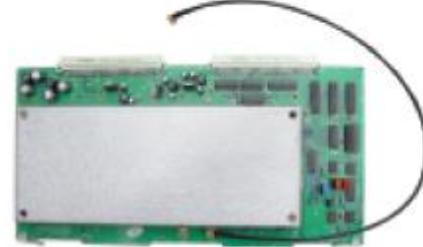
TH10101



TH10201



TH10202



TH10301



TH2829-EXT2



TH2829-EXT3



TH2838-GPIB



TH90003D



TH1901C

未来



Thank you for watching!

Changzhou Tonghui Electronic Co., LTD
No.1, Xinzhu Road, New District, ChangZhou, JiangSu,
213034 China
Tel: +86 519 85195566
Fax: +86 519 85109972
Email: dx.han@tonghui.com.cn
Website: en.tonghui.com.cn
https://www.youtube.com/channel/UCg_edm9TeXoziaprWr8jsg