

Micro Signal Type Tester

I. STB5554 Series Data Acquisition

Features

- 7-inch color capacitive touch screen, 800 x 480 resolution
- Linux operating system
- 5-slot mainframe, standard with 6 1/2 multimetercard
- Stand-alone support for up to 160 channels, single-channel cost is very low
- 6 1/2 multimeter (DMM) card supports DCV, DCI, ACV, ACI, 2WR, 4WR, period, frequency, temperature
- Temperature acquisition supports thermocouples, thermistors, and RTDs
- 0.0035% DC voltage (DCV) measurement accuracy
- 0.0100% base resistance measurement accuracy
- Scanning Speed
Basic card: 90 channels/sec
Fast card: 300 channels/sec
- USB data direct storage Standard SCPI command set
- Standard SCPI command set



RS232	LAN	HANDER	USB HOST	USB DEVICE
standard	standard	standard	standard	standard

STB5554 Series

Rack mount (mm): 215(W) x 132(H) x 490(D)
Dimension (mm) : 250(W) x 154(H) x 530(D)
Weight: 7.8kg

Applications

Industrial

Motor, transformer, magnetic core, etc. temperature rise evaluation Resistance sintering furnace, new energy battery, charging pile, automobile motor, LED lamp, chip temperature test.

Agriculture

Temperature monitoring of vegetable greenhouses, fruit greenhouses, seed refrigerators, etc.

Chemical industry

Temperature monitoring of reaction furnace, production equipment, etc.

Animal husbandry

Temperature monitoring of breeding greenhouses, pens, food preservation, seafood warehouses, etc.

Medicine

Temperature monitoring of wards, examination rooms, drug storage rooms, sperm banks, ambulances, etc.

Specifications

Measurement parameters	Range	Maximum accuracy%
DC voltage (DCV)	0.1 μ V-300.000V	0.0035
DC current (DCI)	0.1nA-3A	0.05
DC resistance (DCR)	10 μ Ω -100.0000M Ω	0.01
AC voltage (ACV)	0.1 μ V-300.000V	0.06
AC current (ACI)	1nA-3A	0.1
Frequency	3Hz-300kHz	0.01
Diode	5V range/1mA test current	0.01
Continuity (conduction)	1k Ω range/1mA test current	0.01
Temperature	PT100 (DIN/IEC 751) probe	Probe accuracy + 0.05° C
	5 k Ω thermistor	Probe accuracy + 0.10° C
Capacitance	0.0001nF-10.000mF	0.5

1. DC Voltage

Range	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
100.0000 mV	0.0030+ 0.0030	0.0040 + 0.0035	0.0050 + 0.0035	0.0065 + 0.0035	0.0005 + 0.0005
1.000000V	0.0020+ 0.0006	0.0030 + 0.0007	0.0040 + 0.0007	0.0055 + 0.0007	0.0005 + 0.0001
10.00000V	0.0015+ 0.0004	0.0020 + 0.0005	0.0035 + 0.0005	0.0050 + 0.0005	0.0005 + 0.0001
100.0000V	0.0020+ 0.0006	0.0035 + 0.0006	0.0045 + 0.0006	0.0060 + 0.0006	0.0005 + 0.0001
300.000V	0.0020+ 0.0006	0.0035+ 0.0010	0.0045+ 0.0010	0.0060 + 0.0010	0.0005 + 0.0001

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2.DC Resistance

Range	Test Current	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
10 Ω	10mA	0.0050+ 0.0030	0.008+ 0.004	0.010+ 0.004	0.012+ 0.004	0.0006 + 0.0005
100 Ω	1mA	0.0030+ 0.0020	0.008+ 0.003	0.010+ 0.003	0.012+ 0.003	0.0006 + 0.0003
1k Ω	1mA	0.0020+ 0.0005	0.008+ 0.001	0.010+ 0.001	0.012+ 0.001	0.0006 + 0.0001
10k Ω	100uA	0.0020+ 0.0005	0.008+ 0.001	0.010+ 0.001	0.012+ 0.001	0.0006 + 0.0001
100k Ω	10uA	0.0020+ 0.0005	0.008+ 0.001	0.010+ 0.001	0.012+ 0.001	0.0006 + 0.0001
1M Ω	5uA	0.002 + 0.001	0.008+ 0.001	0.010+ 0.001	0.012+ 0.001	0.0030+ 0.0030
10M Ω	500nA	0.015 + 0.001	0.020+ 0.001	0.040+ 0.001	0.060+ 0.001	0.0030+ 0.0030
100M Ω	500nA/10M	0.300+ 0.010	0.800+ 0.010	0.800+ 0.010	0.800+ 0.010	0.0030+ 0.0030

3.DC Current

Range	Internal Resistance Voltage Drop	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
100uA	<0.11V	0.010 + 0.020	0.040 + 0.025	0.050 + 0.025	0.060 + 0.025	0.0020+ 0.0030
1mA	<0.11V	0.010 + 0.006	0.030 + 0.006	0.050 + 0.006	0.060 + 0.006	0.0020+ 0.0005
10mA	< 0.5 V	0.010 + 0.020	0.030 + 0.020	0.050 + 0.020	0.060 + 0.020	0.0020+ 0.0020
100mA	< 0.5 V	0.010 + 0.004	0.030 + 0.005	0.050 + 0.005	0.060 + 0.005	0.0020+ 0.0005
1A	< 0.7 V	0.050 + 0.006	0.080 + 0.010	0.100 + 0.010	0.120 + 0.006	0.0050+ 0.0010
3A	< 2.0 V	0.180 + 0.020	0.200 + 0.020	0.200 + 0.020	0.230 + 0.020	0.0050+ 0.0020

4.Diode Test

Function	Test Current	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
5V	1mA	0.002 + 0.030	0.008 + 0.030	0.010+ 0.030	0.012 + 0.030	0.0010+ 0.0020

5.Continuity (Conductivity) Test

Function	Test Current	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
1k Ω	1mA	0.002 + 0.030	0.008 + 0.030	0.010+ 0.030	0.012 + 0.030	0.0010+ 0.0020

6.Temperature Test

Temperature	
PT100 (DIN/ IEC 751)	Probe Accuracy + 0.05 $^{\circ}C$
5 k Ω Thermistor	Probe Accuracy + 0.10 $^{\circ}C$

7.AC Voltage Test

Frequency/Range	24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
3-5 Hz	1.00+0.02	1.00+0.02	1.00+0.03	1.00+0.03	0.100+0.003
5-10 Hz	0.35+0.02	0.35+0.03	0.35+0.03	0.35+0.03	0.035+0.003
10 Hz-20 kHz	0.04+0.02	0.05+0.03	0.06+0.03	0.07+0.03	0.005+0.003
20-50 kHz	0.10+0.04	0.11+0.05	0.12+0.05	0.13+0.05	0.011+0.005
50-100 kHz	0.55+0.08	0.60+0.08	0.60+0.08	0.60+0.08	0.060+0.008
100-300 kHz	4.00+0.50	4.00+0.50	4.00+0.50	4.00+0.50	0.200+0.020

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8.AC Current Test

Frequency/Range		24 Hours $T_{CAL} \pm 1^{\circ}C$	90 Days $T_{CAL} \pm 5^{\circ}C$	1 Year $T_{CAL} \pm 5^{\circ}C$	2 Year $T_{CAL} \pm 5^{\circ}C$	Temperature Coefficient/ $^{\circ}C$
Range	Pressure Drop					
100 μ A	<0.011V					
1mA	< 0.11V					
10mA	<0.05V					
100mA	<0.5V					
3Hz- 5kHz		0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.015+0.006
5kHz - 10kHz		0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.030+0.006
1A Range	<0.7V					
3Hz- 5kHz		0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.015+0.006
5kHz - 10kHz		0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.030+0.006
3A Range	<2.0V					
3Hz- 5kHz		0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.015+0.006
5kHz - 10kHz		0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.030+0.006
10A Range	<0.5V					
3Hz- 5kHz		0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.015+0.006
5kHz - 10kHz		0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.030+0.006

A. STB5554-DMM, 6 1/2 DMM multimeter board

Supports multimeter function, 6 1/2-digit measurement resolution

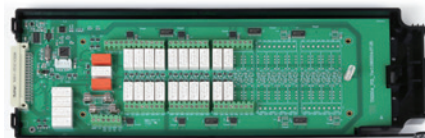
Measurement range:

- DC voltage 0.1 μ V to 300V
- AC voltage 0.1 μ V to 300V
- DC current 10pA to 3A
- AC current 1nA to 3A
- Two-wire and four-wire resistance measurement 0.01m Ω to 120M Ω
- Frequency 2Hz - 1MHz



B. STB5554-01 basic board

1. 20 channels (two-wire)/10 channels (four-wire) input, independent 2-channel current input
2. Voltage test up to 300V, current test up to 1A
3. Thermocouple temperature test with CJC (cold junction compensation)
4. Test port with common port, can be 1 to many
5. All functions of the multimeter board can be tested through the board
6. The fastest scanning speed is 90 channels/second



C. STB5554-02 basic board

1. 40 channels (two-wire)/20 channels (four-wire) input, independent 2-channel current input
2. Voltage test up to 300V, current test up to 1A
3. Thermocouple temperature test with CJC (cold end compensation)
4. The test port has a common port, which can be 1 to many.
5. All functions of the multimeter board can be tested through the board
6. The fastest scanning speed is 90 channels/second



D. STB5554-03, fast board

1. 20-channel solid-state differential multiplexer module, four-wire resistance is 10 channels
2. Voltage test up to 60V, no current test
3. Thermocouple temperature test with CJC (cold end compensation)
4. The test port has a common port, which can be 1 to many.
5. The fastest scanning speed is 300 channels/second

