

BS554

7 in 1 Field Service Multi-function Auto Scope Meter

(25MHz Scope, 6000 counts 3 4/5 digits auto TRMS DMM, high precision LCR measurement, signal generator, frequency counter, component & remote controller test)



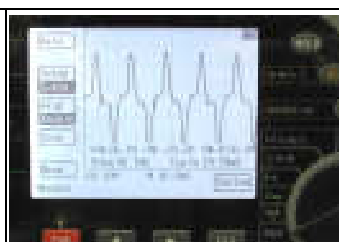
<p>7 in 1 Function for Field & Home Appliances Servicing</p>	<p>25MHz Oscilloscope</p>
<p>6000 Counts True-RMS Auto DMM</p>	<p>Dual High Speed A/D Input Circuit</p>
<p>Component Test [Resistor, Capacitor, Inductor, Diode, Transistor, Crystal Oscillator]</p>	<p>Signal generator, Frequency Counter, Remote Controller Test</p>
	<p>Safety: CATII 300V for Oscilloscope, CAT III 600V for DMM [Pending]</p>



TRMS DMM/ Component Test Mode



Graphical Multimeter Mode

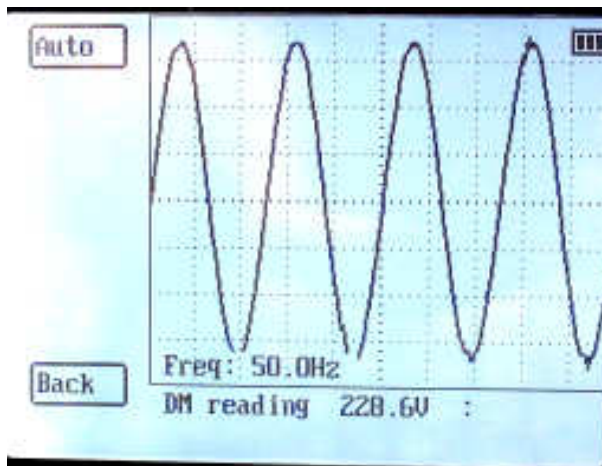


Oscilloscope/ Signal Generator Mode



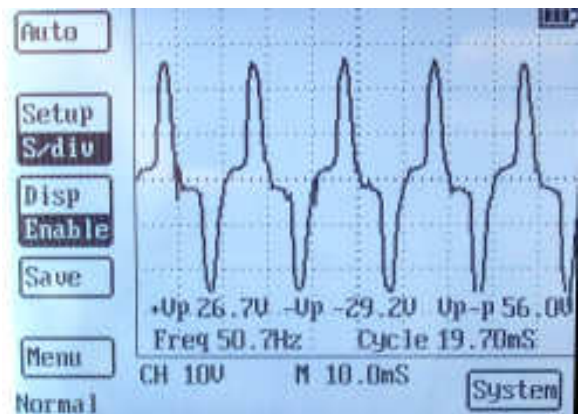
Data Save/Recall and USB-PC Connectivity

BS554 is top of the range in the new BS550 scope meter series. It is probably the first in the field to have the (7in1) integration of a 25M Hz Scope, 6000 counts 3 4/5 digits Auto DMM, high precision LCR measurement (100Hz-156KHz test frequency being used to suppress impedance of the tested inductors to give optimal results which is much more accurate than usual handheld type LCR meter), signal generator (Sine/square/triangular/saw tooth waves, frequency counter (10Hz to 60MHz) /duty cycle, home appliance remote control test and component (diode, transistor, crystal oscillator) test in one casing. The unit is specially designed to make field service becomes ever simple and easy to have only one single instrument for the task.



Thanks to the dual CPU to handle the fast data processing to give super efficiency on the high speed A/D conversion. The BS554 has kept the high impedance of a good performed multimeter, high accuracy with wide measurement functions. During test of AC signals under the DMM mode, direct signal waveforms can be shown on Scope mode (DIS) without interrupting the source under test. High safety design is also one of the key advantages of the product. The Scope circuitry is fully isolated to the DMM section thanks to our design Engineers.

Breakthrough of this BS554 trust will raise the new era of the Scope Meter revolution; we sincerely welcome comment and suggestion to help enhancing our Scope Meter future development.



FEATURES:

<p>Digital Storage Oscilloscope</p> <ul style="list-style-type: none"> - Sampling Rate: 100M Sample/Sec (Single Ch) - Bandwidth: DC~25MHz (<10MHz with X1 Probe) - Mode: Normal, TV, Single Trig Norm--Amplitude/Time Base TV--TV-H, TV-V, Sync - Input: DC, AC - Input Impedance: 1MOhm +/- 2%, 20pF +/- 3pF - Probe: X, X10 - Probe Select: X1, X10, X100 - Max Input Volt.: 300V p-p - A/D Converter: 8bit - Readout: Positive Peak, Negative Peak, Peak-Peak, Frequency, Duty Cycle, TrueRMS - Vertical Sensitivity: 20mV/div to 50V/div - Steps: 1, 2, 5 - Sweep Rate: 10ns/div to 2.5s/div - Waveform Interpolation: (sinx) /x - Waveform storage: 40sets - LCD Resolution: 320x240 pixels - LCD Window Size: 75x58mm - LCD Contrast: Manual Control <p>Signal Generator</p> <ul style="list-style-type: none"> - Signal Output Amplitude: 4.2V p-p - Sine Wave: 10Hz to 156kHz - Square Wave: 10Hz to 156kHz (Duty cycle 1:1) - Triangle Wave: 10Hz to 156kHz - Positive Saw Wave: 10Hz to 156kHz - Negative Saw Wave: 10Hz to 156kHz - T Square Wave: <ul style="list-style-type: none"> (1) 15625Hz (TV) (2) 1000Hz (Calibrate Signal) (3) 200uS (4) 400uS (TV Transformer Test) - Frequency Range: <ul style="list-style-type: none"> 10Hz to 100Hz, Step 1Hz 100Hz to 1000Hz, Step 10Hz 1kHz to 100kHz, Step 100Hz 	<p>Graphical Digital Multimeter & LCR</p> <ul style="list-style-type: none"> - Maximum Counts: 6600 - Auto Range AC/DCV: 6V/60V/600V - Manual Range AC/DCV: 600mV/6V/60V/600V - Frequency Response: 40Hz to 20kHz (6V to 100V) - Auto Range AC/DCA: 60mA/600mA and 10A(with Adaptor) - Frequency Response: 40Hz to 5kHz - Graphical DMM Mode: <ul style="list-style-type: none"> - ACV 40Hz to 50kHz (Auto Range) - ACA 40Hz to 20kHz - Resistance: 600/6k/60k/600k/6M/60MOhm - Capacitance: 6n/60n/600n/6u/60u/600u/6m/60mF - Capacitance Test Time: <1.2 Sec (@6000uF) - Inductance: 10u/100u/1m/10m/100m/2H - Resolution: 0.1uH - Frequency: 10Hz to 60MHz (250V rms) - Duty Cycle: 10% to 94.9% <p>Data Storage</p> <ul style="list-style-type: none"> - Storage Memory: 200sets - Auto Storage Memory: 200sets (Voltage) - Relative Mode: Ohm, Cap, A mode <p>Others</p> <ul style="list-style-type: none"> - Remote Control Test: 38kHz Infrared Receiver - Crystal Test: 32kHz to 10MHz - Transistor hFE Test: 30 to 1000 - 10A Current Test with External Adaptor - Backlight: White LED with Brightness Control
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<p>ACCESSORIES:</p> <ul style="list-style-type: none"> - Test Lead set x 1 - Test Clip set x 1 - 20MHz Oscilloscope probe x 1 - Signal generator connection cable x 1 - Carrying case with neck strap x 1 - 10 A current adaptor - DC12V/1A battery charging adaptor x 1 	<ul style="list-style-type: none"> - Component test adaptor x 1 - Instruction manual x 1 - Built- in AA 1600mAH NiHM Rechargeable battery x 6 <p>OPTIONAL ACCESSORY:</p> <ul style="list-style-type: none"> - USB-PC communication kit (USB cable + Windows software) x 1
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STANDARD:

CE EMC & LVD

GENERAL SPECIFICATIONS:

Display	: 320 x 240 pixel Dot matrix LCD with max. reading of 6600 in DMM mode.
Display size	: 78 x 58 mm
Backlight	: White LED
Polarity	: Automatic, (-) negative polarity indication.
Zero adjustment	: Automatic.
Over range indication	: Only the MSD "OL" is displayed.
Power	: Built- in 6 x AA 1600mAH NiMH Rechargeable battery
Battery life	: Typical 8 Hours
Recharge time	: Typical >8 Hours
External Power	: 12V/1A AC to DC Adaptor
Dimension	: 200 (W) x 135 (H) x 52 (D) mm.
Weight	: Approx. 1000 g (including battery).

ELECTRICAL SPECIFICATION:

 Accuracies are \pm (% of reading + number of least significant digits) at 23°C \pm 5°C, less than 75%RH

Oscilloscope Mode

Bandwidth	DC~20MHz @Probe x 10, DC~6MHz @Probe x 1 (3dB, Sine wave)		
Sampling rate	100M sample /sec.	A/D Converter	8 bits
Channel	Single	Input	DC/AC
Input impedance	1Mohm/20pF	Division	Vertical +/- 4DIV; Horizontal 10DIV
Vertical Sensitivity	20mV/div ~ 500V/div 1-2-5 steps	Timebase range	10ns/div ~ 1s/div 1-2.5-5 steps
Vertical accuracy	\pm (5%+ 0.1div)	Timebase accuracy	\pm (0.01% + 0.1div)
Auto zeroing	Yes	Test Mode	Normal, TV, Single Trig
Trigger Level	\pm 3.8div (step 0.04div)	Trigger Slope	Rising/Falling Edge
Trigger Position	\pm 3.8div (step 0.04div)	Auto config.	Timebase and vertical
Cursor Readout	dV, dt,	Auto readout	Vp-p · +Vp · -Vp · f · T
Auto readout accuracy	\pm (5%+ 0.1div)	Waveform Interpolation	(sinx)/x

Oscilloscope test probe specification

X1 mode	Input impedance 1M Ω ; input capacitance 46pF; bandwidth DC~10MHz; Attenuation 1:1 Input Voltage 30Vp-p
X10 mode	Input impedance 10M Ω ; input capacitance 15pF; bandwidth DC~25MHz; Attenuation 10:1 Input Voltage 300Vp-p

Digital Multimeter Mode
DC Voltage Measurement

Range	Resolution	Accuracy	Input Impedance	Overload Protection
600mV	0.1mV	$\pm(0.8\% + 5d)$	10M Ω	600V DC/AC rms
6V	1mV			
60V	0.01V			
600V	0.1V			
1000V	1V	$\pm(2.5\% + 10d)$		1200V DC/AC rms

AC Voltage Measurement

Range	Resolution	Accuracy	Input Impedance	Overload Protection
600mV	0.1mV	$\pm(1.0\% + 5d)$ @ 50Hz~400Hz	10M Ω	600V DC/AC rms
6V	1mV			
60V	0.01V	$\pm(3.0\% + 10d)$ @ 400Hz~20kHz		
600V	0.1V			
1000V	1V	$\pm(2.5\% + 10d)$ (50Hz~400Hz)		1200V DC/AC rms

Frequency response: 50-20kHz

DC Current Measurement

Range	Resolution	Accuracy	Load Resistance	Overload Protection
60mA	10uA	$\pm(1.0\% + 5d)$	6.5 Ω	F 600mA/250V Fused
600mA	100uA			
10A	10mA	$\pm(2.5\%r + 5d)^*$	0.5 Ω	F 10A/250V Fused <30sec.

*With 10A current adaptor

AC Current Measurement

Range	Resolution	Accuracy	Load Resistance	Overload Protection
60mA	10uA	$\pm(1.5\% + 5d)$	6.5 Ω	F 600mA/250V Fused
600mA	100uA			
10A	10mA	$\pm(2.5\%r + 5d)^*$	0.5 Ω	F 10A/250V Fused <30sec.

Frequency response: 50-5kHz

*With 10A current adaptor

Resistance Measurement

Range	Resolution	Accuracy	Open circuit voltage	Overload Protection
600Ω	0.1Ω	±(1.0%. + 5d)	<1.5V	250V DC/AC rms <10 sec.
6kΩ	1Ω			
60kΩ	0.01kΩ			
600kΩ	0.1kΩ			
6MΩ	1kΩ			
60MΩ	10kΩ	±(3.0%. + 5d)		

Capacitance Measurement

Range	Resolution	Accuracy	Test Time	Overload Protection
6.6nF	1pF	±(3.0%. + 10d)	<1.2Sec @6000uF	250V DC/AC rms <10 sec.
66nF	10pF			
660nF	100pF			
6.6uF	1nF			
66uF	10nF			
660uF	100nF	±(5.0%. + 10d)		
6.6mF	1uF	For reference only		
66mF	10uF			

Inductance Measurement

Range	Resolution	Accuracy*	Impedance	Overload Protection
10.00uH	0.01uH	±(5.0%. + 15d)	0.1Ω	6V DC/AC rms <10 sec.
100uH	0.1uH		0.2Ω	
1mH	1uH		1Ω	
10mH	10uH		20Ω	
100mH	100uH		50Ω	
1H	1mH		1kΩ	
10H	10mH		1.5kΩ	

* Accuracy may vary if impedance of test source is out of the above stated values.
100Hz-156KHz test frequency being used to suppress impedance of the tested inductors to give optimal results.


Frequency Measurement

Range	Resolution	Accuracy*	Input Voltage	Overload Protection
10Hz ~ 50MHz	0.01Hz ~ 10kHz	±(0.2%. + 5d)	> 500mV AC	250V DC/AC rms <10 sec.
50MHz~60MHz		±(0.5%. + 5d)	< 250V AC rms	


Duty Cycle Measurement

Range	Resolution	Accuracy	Input Voltage	Overload Protection
10~94.9%	0.1%	$\pm(0.5\% + 5d)$	> 1Vp-p AC	250V DC/AC rms <10 sec.


Diode Test

Range	Accuracy	Open circuit voltage	Overload Protection
	Approx. 1.5mA	< 3.3V	250V DC/AC rms <10 sec.

Continuity Test

Range		Open Circuit Voltage	Overload Protection
	Buzzer sounds when resistance value < 30	< 1.5V	250V DC/AC rms <10 sec.

Component Test

	Range	Resolution	Accuracy
Crystal Oscillator Test	32k~10MHz	0.01kHz ~ 10kHz	$\pm(0.5\% + 5d)$
Transistor Test (hFE)	30~1000	1	$\pm(1.0\% + 5d)$
Remote Controller Test (38kHz infrared remote)		Buzzer sounds when received Remote Controller signal	

Signal Generator Mode

Standard Waveforms	Sine, Square, Triangle, Positive Saw, Negative Saw and T Square Wave	
Output Amplitude	4.2V p-p fixed	
Frequency Characteristics	Sine Wave: 10Hz ~156kHz Square Wave: 10Hz ~156kHz (Duty cycle 1:1) Triangle Wave: 10Hz ~156kHz Positive Saw Wave: 10Hz ~156kHz Negative Saw Wave: 10Hz ~156kHz	T Square Wave: (1) 15625Hz (TV) (2) 1000Hz (Calibrate Signal) (3) 200uS (4) 400uS (TV Transformer Test)
Continuous Frequency Resolution	10Hz to 100Hz, Step 1Hz 100Hz to 1000Hz, Step 10Hz 1kHz to 100kHz, Step 100Hz	
Square Wave Characteristics	Rise/Fall Time: < 100ns Overshoot: <5%	Asymmetry: 2% + 100ns Duty Cycle: 1:1 fixed

STANDARD ACCESSORIES

Test Lead Set (2pcs)	× 1 set
Test Clip Set (2pcs)	× 1 set
10A Current Adaptor (Fused)	× 1 pc
Component Test Fixture	× 1 pc
Oscilloscope Probe	× 1 pc
BNC – Clip Connection Cable	× 1 pc
12V/1A AC-DC Battery charging Adaptor	× 1 pc
Instruction Manual	× 1 pc
Carrying case with neck strap	× 1 pc

OPTIONAL ACCESSORY

USB cable & PC Software	× 1 set
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