

JT-DSO-LCR500

Portable 3-in-1 device: digital oscilloscope, component tester & signal generator



Our DSO-LCR500 combines the advantages of a digital oscilloscope and a multifunctional component tester in a compact and high-quality case. With the help of the digital oscilloscope, ambitious tinkerers can evaluate time-dependent signals without having to resort to expensive measurement technology.

The multifunctional component tester also allows fast and automatic detection of components. Furthermore, our DSO-LCR500 has additional helpful functions such as a signal generator, an infrared signal decoder and measurement of Zener diodes, DS18B20 sensors and DHT11 sensors.

The device is equipped with a 1500 mAh rechargeable battery, which can be conveniently charged via USB-C. The integrated, fold-out stand additionally eases the operation.

MAIN FEATURES

Functions	Digital oscilloscope, component tester, continuity tester, signal generator, measurement of Zener diodes, measurement of DS18B20 sensors, Measurements of DHT11 sensors, Infrared decoder
Stand function	Integrated 90° foldable stand
Battery	1500 mAh lithium battery, rechargeable via USB-C
Display	2,4" TFT color display, LED-backlight, 320x240 pixel
Available languages	English, German

OSCILLOSCOPE SPECIFICATIONS

Sampling rate	10 MS/s
Analog bandwidth	0 - 500 kHz
Input resistance	1 MΩ
Coupling	AC / DC
Test voltage range	1:1: 80Vpp (- 40 V - 40 V) 10:1: 800Vpp (- 400 V - 400 V)
Vertical sensitivity	10 mV/Div - 10 V/Div
Horizontal time base	10 μs - 10s
Trigger modes	Automatic, normal, single
Trigger types	Falling edge, rising edge

MEASURABLE COMPONENTS

Triodes

$h_{FE} > 10$, $h_{FE} < 600$

Amplification (h_{FE}),
base-emitter-voltage (U_{be}),
collector-emitter reverse
cut-off current (I_{ceo} , I_{ces}),
protection diode forward
voltage drop (U_f)

Diodes

Forward voltage drop < 5 V

Forward voltage drop,
junction capacitance,
reverse leakage current

Zener Diodes

1-2-3 testing range: 0,01 - 4,5 V

K-A-A testing range: 0,01 - 24 V

1-2-3: Forward voltage drop,
reverse breakdown voltage
K-A-A: reverse breakdown
voltage

Field effect transistors

JFET

IGBT

MOSFET

JFET: Gate capacitance (C_g),
drain current (I_d at V_{gs}),
protection diode forward
voltage drop (U_f)
IGBT: drain current (I_d at V_{gs}),
protection diode forward
voltage drop (U_f)
MOSFET: turn-on voltage (V_t),
gate capacitance (C_g),
drain-source resistance (R_{ds}),
protection diode forward
voltage drop (U_f)

Silicon controlled rectifier & triacs

Turn on voltage < 5 V

Gate trigger current < 6 mA

Gate voltage

Capacitors

25 pF - 100 mF

Capacity, loss factor (V_{loss})

Resistors

0,01 Ω - 50 M Ω

Resistance

Inductors

10 μ H - 1000 μ H

Inductance value,
DC resistance

Batteries

0,01 - 4,5 V

Voltage value, positive & nega-
tive polarity

Input voltage

0 - 16 V

Voltage value

SIGNAL-GENERATOR

Sine wave

1 - 100 kHz, 0 - 3,3 V, 50%

Square wave

1 - 100 kHz, 3,3 V, 50%

Pulse wave

1 - 100 kHz, 3,3 V, 0 - 100%

Triangle wave

1 - 100 kHz, 0 - 3,3 V, 50%

Ramp wave

1 - 100 kHz, 0 - 3,3 V, 0 - 100%

DC

0 - 3,3 V

ADDITIONAL FEATURES

DS18B20 measurements	Temperature
DHT11 measurements	Temperature & humidity
Infrared decoding NEC protocol	Display user & data code, display infrared waveform
Testing functions	Continuity test, Voltages up to 40 V

ADDITIONAL INFORMATION

Test probe connection on the device	Micro Coaxial Connector (MCX)
Items shipped	JT-DSO-LCR500, user guide, USB-C cable, 3x test clip, 3x SMD test probes, probe, crocodile clip cable, BNC adapter
Dimensions	85 x 103 x 30 mm
Article no.	JT-DSO-LCR500
EAN	4250236824918
Customs tariff no.	90302000

