

Quick-Test Tweezers

Auto-Scanning



Auto-Scanning

Accuracy matches or exceeds conventional professional devices

Measures Resistance & Capacitance of Components

Precise tips handle components as tiny as 0.3 millimeters

Displays active and reactive impedance components

A compact, lightweight digital meter integrated with comfort-grip tweezers allows fast, precise measurements of small components and circuits.

Newly introduced Quick-Test Tweezers simplify quality assurance inspections of incoming circuit boards or loose components, as well as troubleshooting and production checks by electronic manufacturers. Two models of the versatile tweezers are the latest additions from Aven, Inc.

Because surface mount devices usually are tiny and lack wire leads, they're harder to test and identify than conventional components. The newest battery-powered tweezers are a practical solution, and also can check traditional components with wire leads too short to insert in test terminals.

One-hand use allows note-taking while checking a component's impedance (inductance, capacitance and resistance), testing its diode polarity or measuring currents in operating circuits. The Auto-Scan model immediately recognizes whether a component is a capacitor or resistor, with no mode change needed.

An oversize digital readout clearly shows the type of component, measurement result and test conditions. A bar graph displays an analog indicator of measured input.

Applications include electronics R&D, manufacturing, maintenance and training.

Resistance

Range	Resolution	Accuracy
300Ω/600Ω	0.1Ω	±(1.2% of rdg + 2digits)
3kΩ/6kΩ	1Ω	±(1.2% of rdg + 2digits)
30kΩ/60kΩ	10Ω	±(1.2% of rdg + 2digits)
300kΩ/600kΩ	100Ω	±(1.2% of rdg + 2digits)
3MΩ/6MΩ	1kΩ	±(1.2% of rdg + 2digits)
30MΩ/60MΩ	10kΩ	±(2% of rdg + 5digits)

Capacitance

Range	Resolution	Accuracy
3nF/6nF	1pF	±(5% of rdg + 5digits)
30nF/60nF	10pF	±(3% of rdg + 3digits)
300nF/600nF	100pF	±(3% of rdg + 3digits)
3μF/600μF	100nF	±(3% of rdg + 3digits)
30μF/60μF	10nF	±(5% of rdg + 3digits)
300μF/600μF	100nF	±(5% of rdg + 3digits)
3mF/6mF	1uF	±(5% of rdg + 3digits)
30mF/60mF	10uF	unspecified

Order #

Description

18910	Quick-Test Tweezers
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Smart Tweezers

Custom Products & Services, Inc.

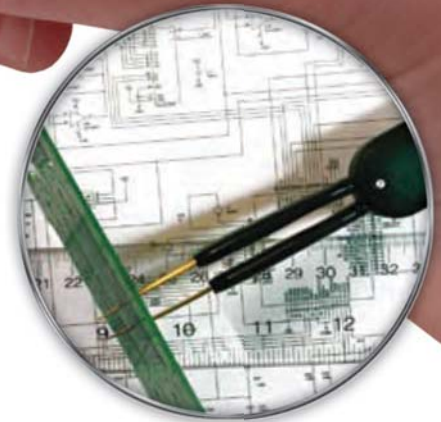
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Automatic high-precision digital R-L-C meter, integrated with a set of tweezers that easily and comfortably fits in one hand, weighing about one tenth of a pound.

Automatically identifies the component measured (R,L,C)

An unrivalled tool for identification and measurement of SMT components. ST does this job in one touch, speeding up the identification process hundreds of times. It can handle the smallest components down to 0.3 mm size.

Accuracy is about 1% for resistance and 3% for capacitance and inductance measurements, which is similar or even higher than that of conventional professional devices.

Smart Tweezers can be used for a circuit on a PCB if you know the circuit and understand how it works. It can also be used for voltage measurements to debug a working circuit.

By measuring a voltage drop on a resistor and the resistor value, current through the resistor is easily calculated, effectively allowing ST use for measuring currents in operating circuits.

Smart Tweezers can be used for a PCB parasitic extraction due to its very low parasitic capacitance of a fraction of a pF. As a result it allows estimating inter-track PCB parasitic capacitance of the order of 1 pF this is very important for high frequency circuits.

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Precision Tools

Summary of Features

Fully Automatic Inductance, Capacitance and Resistance Measurements.

DC/AC Voltage Measurements.

Diode Polarity Test.

Display of Active and Reactive Impedance Components.

Analog Bar Graph.

Automatic Selection of the Best Range.



Accuracy Specifications

RESISTANCE	
Range:	0.05Ω – 9.9MΩ
Accuracy:	1% In range 1.0Ω – 1MΩ
Resolution:	0.01Ω In range 0-10Ω
CAPACITANCE	
Range:	0.5pF – 4.999mF
Accuracy:	3% In range 10pF – 100μF
Resolution:	0.1pF In range 1pF- 100pF
INDUCTANCE	
Range:	0.5μH - 0.999H
Accuracy:	3% In range 10μH – 99mH
	5% In range 0.5μH – 0.999mH
Resolution:	0.1μH In range 1μH – 100μH

Specifications

Size:	14.0 x 2.5 x 3.0 cm (3.94 x 0.9 x 1.5 in)
Weight:	53 grams (0.11lb)
Battery Type:	1.5V LR44 Alkaline or Air zinc
Battery Life:	80 hours typical with alkaline, 240 hours with air zinc battery
Electromagnetic Compatibility (EMC):	Susceptibility and Emission: FCC 15 part B
Measured Parameters:	C, L, R, ESR, Rs, Rp, Q, D
Measuring Frequencies:	100Hz, 1 kHz, 10 kHz
Measurement rate:	1 time per second, default
DC Voltage:	Up to 8V
Resistance:	0.05 Ω to 9.9 M Ω
Capacitance:	0.5 pF to 4.99 9 μ F
Inductance:	0.5μH to 999 mH
Warranty:	1 year

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Precision Tools

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Order

Description

18900	Smart Tweezers with straight tips
18901	Smart Tweezers with straight and curved tips
18902	Replacement Tips – Straight
18903	Replacement Tips – Curved