

# SMART TWEEZERS



## 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

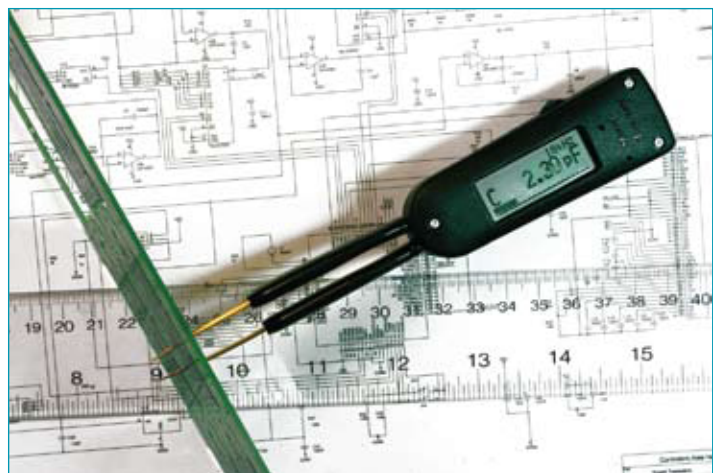
- Range: 0.05  $\Omega$  – 9.9 M $\Omega$
- Accuracy: 1% in range 1.0  $\Omega$  – 1 M $\Omega$
- Resolution: 0.01  $\Omega$  in range 0-10 $\Omega$

### Capacitance

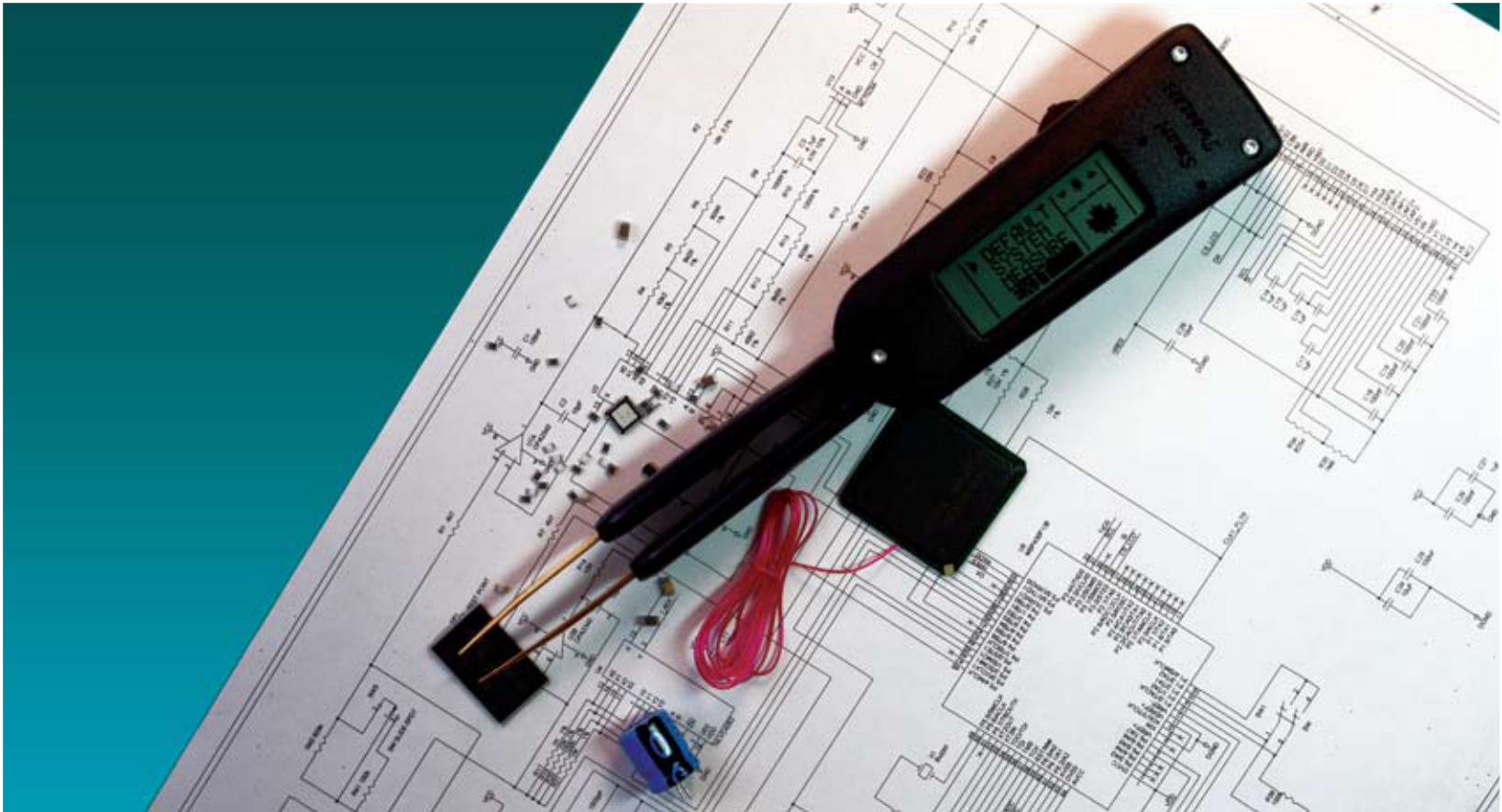
- Range: 0.5 pF – 4.999 mF
- Accuracy: 3% in range 10 pF – 100  $\mu$ F
- Resolution: 0.1 pF in range 1pF- 100 pF

### Inductance

- Range: 0.5  $\mu$ H – 0.999 H
- Accuracy: 3% in range 10  $\mu$ H – 99 mH
- 5% in range 0.5  $\mu$ H – 0.999 mH
- Resolution: 0.1  $\mu$ H in range 1  $\mu$ H – 100  $\mu$ H



4595 Platt Road  
Ann Arbor, MI 48108  
800-624-8170  
[www.aveninc.com](http://www.aveninc.com)  
[sales@aveninc.com](mailto:sales@aveninc.com)

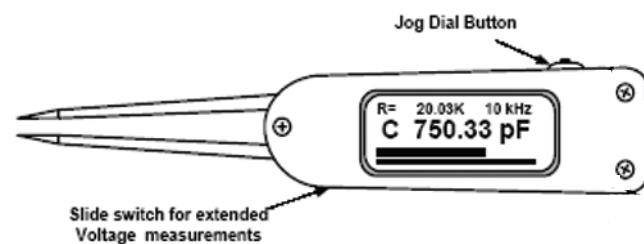


## Physical Specifications

- 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
- Warranty: 1 year

## Basic Specifications

- 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 8 V
- Resistance: 0.05Ω to 9.9 MΩ
- Capacitance: 0.5 pF to 4.999 μF
- Inductance: 0.5μH to 999 mH



## Features

- Smart Tweezers is an automatic high-precision digital R-L-C meter integrated with a set of tweezers that easily fit in one hand.
- Smart Tweezers automatically identifies the component measured (L, C, R) as well as the best measurement range and test frequency, making ST the best tool ever for SMT.
- ST is an unrivalled tool for identification and measurement of SMT components. Weighing about one tenth of a pound 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.
- ST 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 also be used for a PCB parasitics extraction due to its own very low parasitic capacitance of a fraction of a pF. As a result it allows to estimate inter-track PCB parasitic capacitance of the order of 1 pF that is very important for high frequency circuits.