

Smart Tweezers ST-AD

Detailed Accuracy Specifications

Accuracy is specified at 25C (82F), with relative humidity 60%

RESISTANCE

| Range | Accuracy % | Resolution | Test Frequency |
|-----------------------|-------------|------------|----------------|
| <1.00 Ohm | ±5 +offset* | 0.01 Ohm | 0.96 kHz |
| 1.00-10.0 Ohm | ±1 +offset* | 0.01 Ohm | 0.96 kHz |
| 10.0-100 Ohm | ±1 | 0.1 Ohm | 0.96 kHz |
| 100 Ohm-1.00 KOhm | ±1 | 0.1 Ohm | 0.96 kHz |
| 1.00 -100 KOhm | ±1 | 1.0 Ohm | 0.96 kHz |
| 100 KOhm – 1.00 MOhm | ±1 | 10 Ohm | 0.96 kHz |
| 1.00 MOhm – 5.00 MOhm | ±3 | 100 Ohm | 0.96 kHz |

* - typical offset 0.02 Ohms.

CAPACITANCE

| Range | Accuracy % | Resolution | Test Frequency |
|----------------|--------------|------------|----------------|
| <10.0 pF* | ±5 + offset* | 0.1 pF | 9.62kHz |
| 10.0-100 pF | ±3 + offset* | 1.0 pF | 9.62kHz |
| 100 pF-1.00 nF | ±3 | 1.0 pF | 9.62kHz |

* typical offset is 1.7 pF, for 0402 format component.

| | | | |
|------------------|----|--------|----------|
| 100 pF-1.00 nF | ±3 | 1.0 pF | 0.96 kHz |
| 1.00 nF -100 nF | ±3 | 1.0 pF | 0.96 kHz |
| 100 nF – 1.00 µF | ±3 | 10 pF | 0.96 kHz |

| | | | |
|-------------------|-----|---------|---------|
| 1.00 µF – 10.0 µF | ±3 | 0.01 µF | 0.1 kHz |
| 10.0 µF – 100 µF | ±5 | 0.1µF | 0.1kHz |
| 100 µF – 4999 µF | ±10 | 0.1µF | 0.1kHz |

INDUCTANCE

| Range | Accuracy % | Resolution | Test Frequency |
|------------------|---------------|------------|----------------|
| 1.00 µH-10.0 µH* | ±5 + offset** | 0.1 µH | 9.62 kHz |
| 10.0 -100 µH | ±3 | 0.1 µH | 9.62 kHz |
| 100-1.00 mH | ±3 | 1 µH | 0.96 kHz |

** typical offset 0.4 µH, for 0402 format component.

| | | | |
|----------------|----|---------|---------|
| 1.00 -10.0 mH | ±3 | 10.0 µH | 0.1 kHz |
| 10.0 -100 mH | ±3 | 10.0 µH | 0.1 kHz |
| 100 mH – 499mH | ±5 | 100 µH | 0.1 kHz |

AUTOMATIC MEASUREMENT MODE

| Range | | Test Frequency |
|-------------|--------------------|----------------|
| Resistance | 0.1 Ohm - 5.0 MOhm | 0.962 kHz |
| Capacitance | 1 - 1000pF | 9.62 kHz |
| | 1nF – 1µF | 0.96 kHz |
| | 1µF – 4999µF | 0.1 kHz |
| Inductance | 1µH – 100µH | 9.62 kHz |
| | 100µH – 1mH | 0.96 kHz |
| | 1mH – 499mH | 0.1 kHz |