

## CERTIFICATE OF CALIBRATION

Prepared by: Siborg Systems, Inc.  
Serial Number: 16091  
Temperature: 23±2C  
Model: LCRR1  
Certificate Date: 10/1/2015 12:27:31 PM  
Software Version: R.1.04  
Relative Humidity: 50±20%  
Procedure Used: 4/6RES3.07

**This certified that above product was calibrated using applicable procedure.**

As received condition: Factory tested  
As shipped condition: At the completion of calibration this product meets published specification  
Special Requirements: Re-certification of calibration will be performed upon request  
Calibration Equipment Used: Smart Tweezers ST5S Calibration Module LVC139-CAL  
(Certificate of calibration #136455 by Navair Technologies, Inc.)

### Accuracy Specification

Parameter	Measurement Range	Basic Measurement Accuracy *
Resistance	100 $\Omega$ to 10 k $\Omega$	Better than 1%
	0.1 $\Omega$ to 5 M $\Omega$	Better than 0.5%
Capacitance	10 nF to 100 $\mu$ F	Better than 1%
	100 pF to 5000 $\mu$ F	Better than 0.5%
Inductance	1 $\mu$ H to 1 H	Better than 1%
	1.0 $\mu$ H to 999 mH	Better than 1%

### Maximum measurement ranges

Resistance R:	0.05 $\Omega$ to 9.9 M $\Omega$
Inductance L:	0.5 $\mu$ H to 999 mH
Capacitance C:	0.5 pF to 999 $\mu$ F

### Maximum resolution

Resistance: 10 m $\Omega$	Capacitance: 0.1 pF	Inductance: 0.1 $\mu$ H
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\* with 4-wire bench calibration at optimum test frequencies, ranges, DUT value, without offset. 2-wire measurements may introduce precision uncertainty up to 0.5%

Parameter	Measurement Range	Test Frequency
Resistance	0.1 $\Omega$ to 10 M $\Omega$	1 kHz
		10 kHz
		1kHz
		100 Hz
Capacitance	2 pF to 999 pF	
	1000 pF to 1 $\mu$ F	
	1 $\mu$ F	
Inductance	0.5 $\mu$ H to 1mH	10 kHz
	1 mH to 999 mH	1 kHz
	>100 mH	100 Hz

### Typical Offset:

Resistance: 25 m $\Omega$	Capacitance: 0.35 pF	Inductance: 0.1 $\mu$ H
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Offset value should be subtracted from measurement result for small values ( $R < 10\Omega$ ,  $C < 100$  pF,  $L < 10\mu$ H)