

CERTIFICATE OF CALIBRATION

354672

Certification Number

Issued By

WESCAN CALIBRATION
Unit#9 - 12240 Horseshoe Way

Richmond, BC V7A 4X9
Ph: (604) 275-0600
Fax: (604) 275-0610



Certification Issued To: ABC Company Name
123 Street Avenue
Richmond, BC V7B 1K3

Purchase Order Number: RO50070901

Instrument ID: 08782140011040758

Manufacturer: B&K PRECISION

Serial Number: 08782140011040758

Date Instrument Calibrated: Aug 02 2013

Laboratory Temperature: 23 °C

Type: LCR METER, B&K PRECISION 878B

Model Number: 878B

Size: N/A

Date Next Calibration Due: Aug 02 2014

Laboratory Humidity: 41 %RH

Calibration Procedure Used: E1290

Technician Performing Calibration:

ANDREI BRUCAR

Calibration Approved By:

MALCOLM SMITH 08/07/2013
Laboratory Manager

Calibrated In: Wescan Calibration Vancouver

Wescan Calibration certifies that the above instrument was calibrated in compliance with the requirements of ISO/IEC 17025:2005, and /or the technical requirements of the customer. Wescan's quality management system is aligned with the requirements of ISO 9001:2008. All Wescan Calibration measurements are traceable to SI units through the National Research Council (NRC), the National Institute of Standards and Technology (NIST), other National Measurement Institutes (NMIs), or to physical constants, consensus standards, or ratio measurements. Measured values apply only at the time of calibration. After that time any number of factors may cause measured values to change. The information in this certificate applies only to the identified instrument.

See Attached Data Sheet For Additional Calibration Data

Data Sheet
354672
Certification Number

INSTRUMENT ACCURACY

AS PER MANUFACTURER'S SPECIFICATIONS

INSTRUMENT CONDITION

FOUND AND LEFT MEETING SPECIFICATIONS. SEE ATTACHED CALIBRATION DATA.

NOTE 1: WHEN TEST UNCERTAINTY RATIOS (TURS) ARE LESS THAN 4:1 AND GREATER THAN 1.1:1, IN ORDER TO ENSURE 2% OR LESS FALSE ACCEPT PROBABILITIES WHEN MAKING CONFORMANCE STATEMENTS, WESCAN CALIBRATION GUARDBANDS AT A PERCENTAGE OF SPECIFICATION LIMITS.

NOTE 2: WHEN TURS ARE LESS THAN 1.1:1 WESCAN CALIBRATION DOES NOT MAKE CONFORMANCE STATEMENTS BUT INSTEAD REPORTS MEASURED VALUES AND UNCERTAINTIES.

NOTE 3: ON OCCASIONS WHEN TURS FALL IN THE RANGE DESCRIBED IN NOTE 1, BUT GUARDBANDING IS NOT PRACTICAL, THIS IS SEPARATELY NOTED.

STANDARDS USED FOR THIS CALIBRATION

Unique ID	Description	Due Date
102032	DECADE CAPACITANCE BOX, HP 4440B	01/31/2014
102040	RESISTANCE BOX, GEN RESISTANCE RDS74-M	06/30/2014
300295T	STANDARD INDUCTOR, GENERAL RADIO 1482-H	09/30/2015
101081	DECADE RESISTOR, GENERAL RESISTANCE RDS67A	06/30/2014

Traceable Reference: (102032)346142

(102040)351801

(300295T)305617

(101081)351800

End of Report



Test			Lower limit	Test item	Upper limit	% limits used	TUR if <4:1
Resistance							
Range	Applied	Frequency	Observed				
Ω	Ω	Hz	Ω	Ω	Ω		
4	1	120	0.9798	0.9979	1.0202	-10.4%	
40	10	120	9.928	9.995	10.072	-6.9%	
400	100	120	99.48	99.98	100.52	-3.8%	
4000	1000	120	994.8	999.9	1005.2	-1.9%	
kΩ	kΩ	Hz	kΩ	kΩ	kΩ		
40	10	120	9.948	10.000	10.052	0.0%	
400	100	120	99.28	99.99	100.72	-1.4%	
4000	1000	120	974.8	998.9	1025.2	-4.4%	
MΩ	MΩ	Hz	MΩ	MΩ	MΩ		
10	5	120	4.722	4.982	5.278	-6.5%	
Capacitance							
Range	Applied	Frequency	Observed				
pF	pF	Hz	pF	pF	pF		
4000	1000	1000	993.2	1001.6	1006.8	23.6%	2.88
nF	nF	Hz	nF	nF	nF		
4	1.0	120	0.9748	1.0049	1.0252	19.4%	
40	10.0	120	9.935	10.015	10.065	23.2%	2.54
40	10.0	1000	9.957	10.002	10.043	4.6%	1.86
400	100	120	99.55	100.05	100.45	11.1%	2.05
400	100	1000	99.55	99.98	100.45	-4.4%	2.05
4000	1000	120	995.6	1000.1	1004.4	2.3%	2.04
4000	1000	1000	995.6	1000.1	1004.4	2.3%	2.04
Test type							
Range	Applied	Frequency	Observed				
mH	mH	Hz	mH	mH	mH		
40	10.00	120	9.908	9.996	10.092	-4.3%	
40	10.00	1000	9.938	9.991	10.062	-14.5%	

End of calibration data

All points tested met acceptance criteria