Excellence in Resistance

CALIBRATION REPORT

ORDER NO.

JUNE 3, 2019

MANUFACTURER: OHM-LABS
DESCRIPTION: CURRENT SHUNT
MODEL: CS-50
SERIAL:

PROCEDURE: CS CAL
LAB ENVIRONMENT: 23.3 °C / 35 %RH
CALIBRATION DATE: 03/JUN/2019

MEASUREMENT DATA – AS FOUND / AS LEFT				
APPLIED CURRENT	MEASURED VALUE	UNCERTAINTY	TEMPERATURE	TEMPERATURE UNCERTAINTY
10 A	9.999 973 mΩ	4.7 µΩ/Ω	23.6 °C	1.0 °C
20	10.000 050	5.2	27.3	1.6
30	10.000 123	6.1	33.0	1.0
40	10.000 083	7.6	40.1	0.7
50	10.000 033	3.3	50.0	2.4

NOTES:
SHUNT WAS ALLOWED TO FULLY STABILIZE AT EACH APPLIED CURRENT.
REPORTED TEMPERATURE UNCERTAINTY INCLUDES STANDARD DEVIATION OF TEMPERATURE AT EACH CURRENT SETTING.

STANDARDS USED

ID	DESCRIPTION	MAKE & MODEL	CAL DUE
AS3012	RESISTANCE STANDARD	OHM-LABS 201	31/MAR/2020
AS3322	RTD THERMOMETER	DIGI-SENSE 93400	12/OCT/2019
AS3403	RESISTANCE BRIDGE	GUILDLINE 9975	28/FEB/2020
AS3407	RANGE EXTENDER	GUILDLINE 9923	28/FEB/2020

COMMENTS:

OHM-LABS, INC. CERTIFIES THAT THIS CALIBRATION IS TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST), OR ANOTHER RECOGNIZED NATIONAL MEASUREMENT INSTITUTE, OR DERIVED BY A RATIO TYPE SELF-CALIBRATION TECHNIQUE, AND IS ACCREDITED TO ISO/IEC 17025. OHM-LABS' QUALITY CONTROL SYSTEM MEETS THE REQUIREMENTS OF ANSI/NCSL Z540-1-1994. THE REPORTED UNCERTAINTIES REPRESENT EXPANDED UNCERTAINTIES EXPRESSED AT A CONFIDENCE LEVEL OF APPROXIMATELY 95 %, USING A COVERAGE FACTOR OF K=2. THIS UNCERTAINTY IS AT THE TIME OF TEST ONLY AND DOES NOT TAKE INTO ACCOUNT TRANSIT, USAGE, DRIFT OVER TIME, OR OTHER FACTORS AFFECTING STABILITY. THIS DOCUMENT CERTIFIES THAT THE ITEMS IDENTIFIED HEREIN COMPLY WITH ALL REQUIREMENTS OF THE ABOVE PURCHASE ORDER, AND THAT THE CALIBRATION PERFORMED WAS IN ACCORDANCE WITH THE CURRENT REVISION LEVEL OF OHM-LABS' QUALITY CONTROL SYSTEM. TRAINED AND QUALIFIED PERSONNEL PERFORMED THE CALIBRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ISO/IEC 17025. THIS CERTIFICATE SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN PERMISSION BY OHM-LABS, INC.

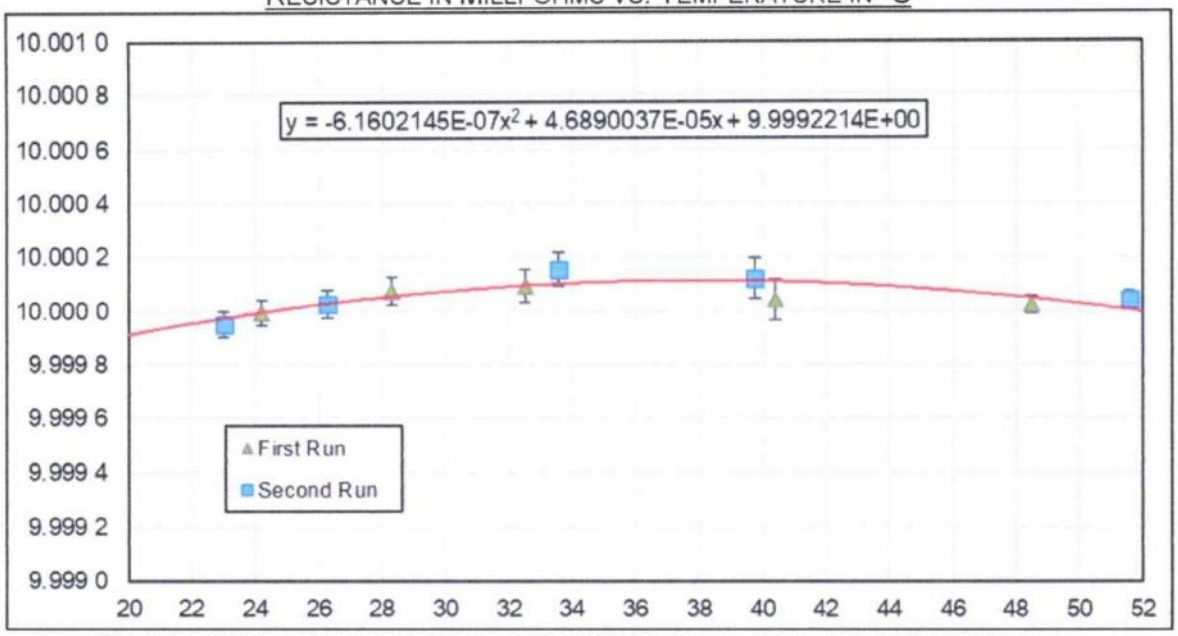
PERFORMED BY

REVIEWED BY:

A2LA ACCREDITED
CERTIFICATE #2481.01

MANUFACTURER: OHM-LABS MODEL: CS-50 SERIAL:

RESISTANCE IN MILLI-OHMS VS. TEMPERATURE IN °C



EQUATION IN ABOVE CHART WAS USED TO CALCULATE VALUES IN BELOW TABLE.

TABLE OF TEMPERATURE VS. RESISTANCE

°C	mΩ	°C	mΩ	°C	mΩ	°C	mΩ
20	9.999 913	30	10.000 074	40	10.000 111	50	10.000 026
21	9.999 934	31	10.000 083	41	10.000 108	51	10.000 011
22	9.999 955	32	10.000 091	42	10.000 104	52	9.999 994
23	9.999 974	33	10.000 098	43	10.000 099	53	9.999 976
24	9.999 992	34	10.000 104	44	10.000 092	54	9.999 957
25	10.000 009	35	10.000 108	45	10.000 084	55	9.999 937
26	10.000 024	36	10.000 111	46	10.000 075	56	9.999 915
27	10.000 038	37	10.000 113	47	10.000 064	57	9.999 893
28	10.000 051	38	10.000 114	48	10.000 053	58	9.999 869
29	10.000 063	39	10.000 113	49	10.000 040	59	9.999 844

END OF REPORT