



CALIBRATION REPORT

ORDER No.

DECEMBER 6, 2016

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MANUFACTURER: OHM-LABS, INC.
 DESCRIPTION: RESISTANCE STANDARD
 MODEL: 111
 SERIAL:

PROCEDURE: RS CAL
 LAB ENVIRONMENT: 23 °C / 29 %RH
 CALIBRATION DATE: 06/DEC/2016
 CALIBRATION DUE:

<u>APPLIED</u>	<u>MEASURED VALUE</u>	<u>UNCERTAINTY</u>
200 V	99.997 3 GΩ	52 μΩ/Ω
500	99.998 0	50
<u>THERMISTOR:</u>	10,725 Ω	1 Ω
<u>TEMPERATURE:</u>	23.138 °C	0.020 °C

<u>ID</u>	<u>DESCRIPTION</u>	<u>STANDARDS USED</u>	
		<u>MAKE & MODEL</u>	<u>CAL DUE</u>
AS3110	RESISTANCE STANDARD	OHM-LABS 111	04/MAY/2017
AS3304	THERMOMETER	ASL F26	04/FEB/2017
AS3420	DUAL SOURCE BRIDGE	OHM-LABS DSB	03/MAY/2017
AS3530	MULTIMETER	AGILENT 3458A	14/JAN/2017

COMMENTS:

VOLTAGE WAS APPLIED FOR 120 SECONDS PRIOR TO MEASUREMENT. THIS VOLTAGE SOAK TIME IS NECESSARY TO DISCHARGE RESIDUAL AND TRIBOELECTRIC CHARGES IN THE SYSTEM. SHORTER SOAK TIMES MAY RESULT IN DIFFERENT MEASURED VALUES.

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





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MANUFACTURER: OHM-LABS, INC.

MODEL: 111

SERIAL:

TEMPERATURE COEFFICIENTS OF RESISTANCE, REFERENCED TO 23.0 °C

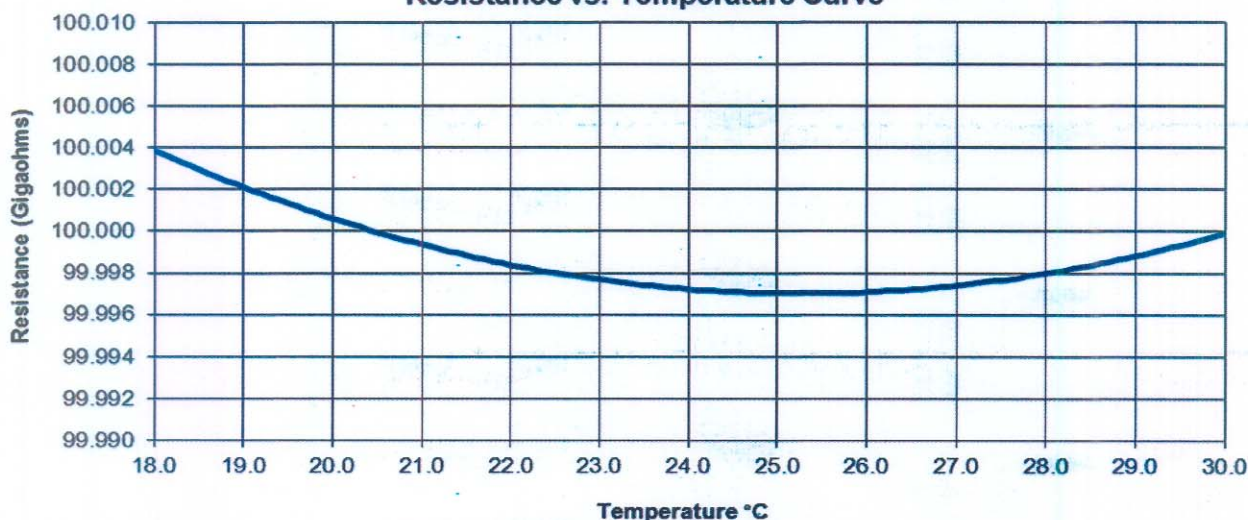
α (ALPHA) = -6.23 E-06

β (BETA) = +1.30 E-06

TABLE OF CORRECTIONS IN PPM FROM MEASURED VALUE AT 23.0 °C

Temp	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
18	61.9	60.1	58.2	56.4	54.6	52.8	51.1	49.3	47.6	46.0
19	44.3	42.7	41.1	39.6	38.0	36.5	35.0	33.6	32.1	30.7
20	29.3	28.0	26.7	25.4	24.1	22.8	21.6	20.4	19.2	18.1
21	17.0	15.9	14.8	13.8	12.7	11.7	10.8	9.8	8.9	8.0
22	7.2	6.3	5.5	4.8	4.0	3.3	2.6	1.9	1.2	0.6
23	0.0	-0.6	-1.1	-1.6	-2.1	-2.6	-3.1	-3.5	-3.9	-4.2
24	-4.6	-4.9	-5.2	-5.4	-5.7	-5.9	-6.1	-6.2	-6.4	-6.5
25	-6.5	-6.6	-6.6	-6.6	-6.6	-6.5	-6.5	-6.4	-6.2	-6.1
26	-5.9	-5.7	-5.5	-5.2	-4.9	-4.6	-4.3	-3.9	-3.5	-3.1
27	-2.7	-2.2	-1.7	-1.2	-0.6	-0.1	0.5	1.2	1.8	2.5
28	3.2	3.9	4.7	5.4	6.2	7.1	7.9	8.8	9.7	10.7
29	11.6	12.6	13.6	14.7	15.7	16.8	18.0	19.1	20.3	21.5

Resistance vs. Temperature Curve



End of Report