

Calibration Certificate

Report No:K1000602-AA

Manufacturer: Keithley
Model Number: 2400
Serial Number: 0798163

Calibration Date: 28 August 2013
Temperature: 21.9 °C
Relative Humidity: 38.2 %
Procedure: QSIW-637 REV. B
Condition as Returned: **IN TOLERANCE**

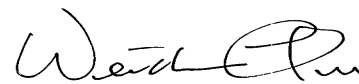
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- Keithley Instruments, a Tektronix Company, certifies that the above instrument meets its published measurement specifications.
 - This instrument has been calibrated using measurement standards traceable to the International System of Units (SI) through NIST or other National Metrology Institutes (such as NIM, NPL, PTB, etc.).
 - This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.
 - This calibration certificate shall not be reproduced, except in full, without the written approval of this calibration laboratory.

Calibration Facility

Tektronix Taiwan Ltd.
3F, No. 89, Sec. 2
Ti Ding A
Taipei City, 114, Taiwan (ROC)

Engineer: _____

Approved By: _____



Weidar Chu
Title: Service Manager
Certificate Issue Date: 28-Aug-2013

Standards Used

<u>Control Number</u>	<u>Description</u>	<u>Due Date</u>
5506	FLUKE 5700A CALIBRATOR	08-Apr-2014
7045	AGILENT 3458A 8-1/2 MULTIMETER	20-Mar-2014
8906	KEITHLEY 2400-756 10 OHM STANDARD	12-Apr-2014

Measurement Report -

As-Returned

Report Number:
K1000602-AA

Test Description	Expected Value	Measured Value	Measurement Uncertainty	Lower Limit	Upper Limit	Test Status
OUTPUT VOLTAGE ACCURACY						
200.000 mV	200.000 mV	199.9986 mV		199.3600 mV	200.6400 mV	Pass
-200.000 mV	-200.000 mV	-200.0002 mV		-200.6400 mV	-199.3600 mV	Pass
2.00000 V	2.00000 V	1.999972 V		1.999000 V	2.001000 V	Pass
-2.00000 V	-2.00000 V	-1.999982 V		-2.001000 V	-1.999000 V	Pass
20.0000 V	20.0000 V	19.99995 V		19.99360 V	20.00640 V	Pass
-20.0000 V	-20.0000 V	-19.99970 V		-20.00640 V	-19.99360 V	Pass
200.000 V	200.000 V	199.9975 V		199.9360 V	200.0640 V	Pass
-200.000 V	-200.000 V	-199.9996 V		-200.0640 V	-199.9360 V	Pass
VOLTAGE MEASUREMENT ACCURACY						
200.000 mV	199.9935 mV	200.000 mV		199.669 mV	200.317 mV	Pass
-200.000 mV	-200.0039 mV	-200.000 mV		-200.328 mV	-199.680 mV	Pass
2.0000 V	1.99997 V	2.0000 V		1.9994 V	2.0005 V	Pass
-2.00000 V	-1.999986 V	-1.99999 V		-2.00053 V	-1.99945 V	Pass
20.0000 V	19.99995 V	20.0000 V		19.9954 V	20.0044 V	Pass
-20.0000 V	-19.99977 V	-19.9999 V		-20.0043 V	-19.9953 V	Pass
200.000 V	199.9979 V	199.997 V		199.958 V	200.038 V	Pass
-200.000 V	-200.0002 V	-200.000 V		-200.040 V	-199.960 V	Pass
OUTPUT CURRENT ACCURACY						
1.00000 µA	1.00000 µA	0.999991 µA		0.999050 µA	1.000950 µA	Pass
-1.00000 µA	-1.00000 µA	-0.999988 µA		-1.000950 µA	-0.999050 µA	Pass
10.0000 µA	10.0000 µA	9.99982 µA		9.99470 µA	10.00530 µA	Pass
-10.0000 µA	-10.0000 µA	-9.99988 µA		-10.00530 µA	-9.99470 µA	Pass
100.000 µA	100.000 µA	99.9983 µA		99.9490 µA	100.0510 µA	Pass
-100.000 µA	-100.000 µA	-99.9987 µA		-100.0510 µA	-99.9490 µA	Pass
1.00000 mA	1.00000 mA	0.999996 mA		0.999460 mA	1.000540 mA	Pass
-1.00000 mA	-1.00000 mA	-0.999995 mA		-1.000540 mA	-0.999460 mA	Pass
10.0000 mA	10.0000 mA	9.99996 mA		9.99350 mA	10.00650 mA	Pass
-10.0000 mA	-10.0000 mA	-9.99990 mA		-10.00650 mA	-9.99350 mA	Pass
100.000 mA	100.000 mA	99.9984 mA		99.9140 mA	100.0860 mA	Pass
-100.000 mA	-100.000 mA	-99.9989 mA		-100.0860 mA	-99.9140 mA	Pass
1.0000 A	1.0000 A	1.00004 A		0.99640 A	1.00360 A	Pass
-1.0000 A	-1.0000 A	-0.99998 A		-1.00360 A	-0.99640 A	Pass
CURRENT MEASUREMENT ACCURACY						
1.00000 µA	0.999974 µA	0.99999 µA		0.99938 µA	1.00056 µA	Pass
-1.00000 µA	-0.999985 µA	-0.99999 µA		-1.00058 µA	-0.99940 µA	Pass
10.0000 µA	9.99976 µA	9.9998 µA		9.9964 µA	10.0032 µA	Pass
-10.0000 µA	-9.99986 µA	-9.9999 µA		-10.0033 µA	-9.9965 µA	Pass
100.000 µA	99.9980 µA	99.999 µA		99.967 µA	100.029 µA	Pass
-100.000 µA	-99.9983 µA	-99.999 µA		-100.029 µA	-99.967 µA	Pass
1.00000 mA	0.999992 mA	1.00000 mA		0.99966 mA	1.00032 mA	Pass
-1.000000 mA	-0.9999919 mA	-0.999996 mA		-1.000322 mA	-0.999662 mA	Pass
10.0000 mA	9.99995 mA	10.0000 mA		9.9958 mA	10.0040 mA	Pass
-10.00000 mA	-9.999883 mA	-9.99990 mA		-10.00398 mA	-9.99578 mA	Pass

Measurement Report - As-Returned

Report Number:
K1000602-AA

Test Description	Expected Value	Measured Value	Measurement Uncertainty	Lower Limit	Upper Limit	Test Status
100.000 mA	99.9984 mA	99.998 mA		99.937 mA	100.059 mA	Pass
-100.000 mA	-99.9986 mA	-100.000 mA		-100.060 mA	-99.938 mA	Pass
1.00000 A	1.000040 A	1.00000 A		0.99727 A	1.00281 A	Pass
-1.00000 A	-0.999967 A	-1.00000 A		-1.00274 A	-0.99720 A	Pass
RESISTANCE MEASUREMENT ACCURACY						
10.0000 Ω	10.00000 Ω	10.0008 Ω		9.9870 Ω	10.0130 Ω	Pass
190.000 Ω	189.9971 Ω	189.994 Ω		189.815 Ω	190.179 Ω	Pass
1.9000 kΩ	1.89999 kΩ	1.9000 kΩ		1.8984 kΩ	1.9016 kΩ	Pass
19.000 kΩ	18.9990 kΩ	18.999 kΩ		18.985 kΩ	19.013 kΩ	Pass
190.000 kΩ	189.9849 kΩ	189.983 kΩ		189.822 kΩ	190.148 kΩ	Pass
1.9000 MΩ	1.89987 MΩ	1.8998 MΩ		1.8975 MΩ	1.9023 MΩ	Pass
19.000 MΩ	18.9992 MΩ	18.999 MΩ		18.977 MΩ	19.021 MΩ	Pass
100.000 MΩ	99.9905 MΩ	99.992 MΩ		99.321 MΩ	100.660 MΩ	Pass

Comments:

***** End of Measurement Report *****