



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc., has assessed the Laboratory of:

***Exphil Calibration Labs, Inc.
415 Central Avenue
Bohemia, NY 11716***

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated January 2009):

***Calibration of Electrical and Frequency Equipment
(As detailed in the supplement)***

Such testing and/or calibration services shall only be offered at or from the address given above. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

The validity of this certificate is mandated through ongoing surveillance.

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
26555 Evergreen, Suite 1325
Southfield, Michigan 48076

Initial Accreditation Date:
September 04, 2009

Issue Date:
September 04, 2009

Revision Date:
May 25, 2010

Expiration Date:
September 03, 2011

Accreditation No.:
65940

Certificate No.:
L09-88-R2

Page No.:
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Certificate of Accreditation: Supplement

Exphil Calibration Labs, Inc.
 415 Central Avenue
 Bohemia, NY 11716

Accreditation is granted to this facility to perform the following calibrations:

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	REMARKS
DC Voltage - Generate	0 mV to 220 mV	7.8 μ V/V + 400 nV	Fluke 5720A
	0 V to 2.2 V	5.6 μ V/V + 700 nV	
	0 V to 22 V	3.7 μ V/V + 4 μ V	
	0 V to 220 V	5 μ V/V + 40 μ V	
	0 V to 1 000 V	7.4 μ V/V + 400 μ V	
	10 V	1.3 μ V/V	Fluke 732B
DC Voltage - Measure	0 mV to 200 mV	8 μ V/V + 100 nV	Fluke 8508A
	200 mV to 2 V	5.5 μ V/V + 400 nV	
	2 V to 20 V	5.5 μ V/V + 4 nV	
	20 V to 200 V	8 μ V/V + 40 nV	
	200 V to 1 000 V	7.5 μ V/V + 500 nV	
	0 V to 5 000 V	3.3 mV/V	Fluke 80B-5
DC Current - Generate	0 μ A to 220 μ A	41 μ A/A + 6 nA	Fluke 5720A
	220 μ A to 2.2 mA	36 μ A/A + 7 nA	
	2.2 mA to 22 mA	39 μ A/A + 40 nA	
	22 mA to 220 mA	45 μ A/A + 700 nA	
	220 mA to 2 A	82 μ A/A + 12 μ A	
Clamp Meters (DC to 440 Hz)	1 A to 11 A	4 mA/A + 480 μ A	w/ Fluke 5725A
	10 A to 1 025 A	1 % + 0.9 A	Fluke 5500A w/ coil
DC Current-Measure	0 μ A to 220 μ A	20 μ A/A + 400 nA	Fluke 8508A
	200 μ A to 2 mA	20 μ A/A + 4 nA	
	2 mA to 20 mA	22 μ A/A + 40 nA	
	20 mA to 200 mA	60 μ A/A + 800 nA	
	200 mA to 2 A	285 μ A/A + 16 μ A	



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AC Voltage - Generate At the listed frequencies			Fluke 5720A
10 Hz to 20 Hz	0 mV to 2.2 mV	1.5 mV/V + 4 μ V	
20 Hz to 40 Hz	0 mV to 2.2 mV	1.1 mV/V + 4 μ V	
40 Hz to 20 kHz	0 mV to 2.2 mV	1.1 mV/V + 4 μ V	
20 kHz to 50 kHz	0 mV to 2.2 mV	1.2 mV/V + 4 μ V	
50 kHz to 100 kHz	0 mV to 2.2 mV	2.4 mV/V + 5 μ V	
100 kHz to 300 kHz	0 mV to 2.2 mV	4.3 mV/V + 10 μ V	
300 kHz to 500 kHz	0 mV to 2.2 mV	6.4 mV/V + 20 μ V	
500 kHz to 1 MHz	0 mV to 2.2 mV	7.7 mV/V + 20 μ V	
AC Voltage - Generate At the listed frequencies			
10 Hz to 20 Hz	2.2 mV to 22 mV	2.5 mV/V + 4 μ V	
20 Hz to 40 Hz	2.2 mV to 22 mV	1.1 mV/V + 4 μ V	
40 Hz to 20 kHz	2.2 mV to 22 mV	7.3 mV/V + 4 μ V	
20 kHz to 50 kHz	2.2 mV to 22 mV	2.5 mV/V + 4 μ V	
50 kHz to 100 kHz	2.2 mV to 22 mV	55 mV/V + 5 μ V	
100 kHz to 300 kHz	2.2 mV to 22 mV	11 mV/V + 10 μ V	
300 kHz to 500 kHz	2.2 mV to 22 mV	1.5 mV/V + 20 μ V	
500 kHz to 1 MHz	2.2 mV to 22 mV	2.7 mV/V + 20 μ V	
AC Voltage - Generate At the listed frequencies			
10 Hz to 20 Hz	22 mV to 220 mV	240 μ V/V + 12 μ V	
20 Hz to 40 Hz	22 mV to 220 mV	90 μ V/V + 7 μ V	
40 Hz to 20 kHz	22 mV to 220 mV	81 μ V/V + 7 μ V	
20 kHz to 50 kHz	22 mV to 220 mV	204 μ V/V + 7 μ V	
50 kHz to 100 kHz	22 mV to 220 mV	460 μ V/V + 17 μ V	
100 kHz to 300 kHz	22 mV to 220 mV	909 μ V/V + 20 μ V	
300 kHz to 500 kHz	22 mV to 220 mV	1.4 mV/V + 25 μ V	
500 kHz to 1 MHz	22 mV to 220 mV	2.7 mV/V + 45 μ V	



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AC Voltage - Generate At the listed frequencies			Fluke 5720A
10 Hz to 20 Hz	0.22 V to 2.2 V	295 μ V/V + 40 μ V	
20 Hz to 40 Hz	0.22 V to 2.2 V	122 μ V/V + 15 μ V	
40 Hz to 20 kHz	0.22 V to 2.2 V	82 μ V/V + 8 μ V	
20 kHz to 50 kHz	0.22 V to 2.2 V	122 μ V/V + 10 μ V	
50 kHz to 100 kHz	0.22 V to 2.2 V	131 μ V/V + 30 μ V	
100 kHz to 300 kHz	0.22 V to 2.2 V	445 μ V/V + 80 μ V	
300 kHz to 500 kHz	0.22 V to 2.2 V	1.1 mV/V + 200 μ V	
500 kHz to 1 MHz	0.22 V to 2.2 V	1.7 mV/V + 300 μ V	
AC Voltage - Generate At the listed frequencies			
10 Hz to 20 Hz	2.2 V to 22 V	240 μ V/V + 400 μ V	
20 Hz to 40 Hz	2.2 V to 22 V	90 μ V/V + 150 μ V	
40 Hz to 20 kHz	2.2 V to 22 V	45 μ V/V + 50 μ V	
20 kHz to 50 kHz	2.2 V to 22 V	82 μ V/V + 100 μ V	
50 kHz to 100 kHz	2.2 V to 22 V	109 μ V/V + 200 μ V	
100 kHz to 300 kHz	2.2 V to 22 V	290 μ V/V + 600 μ V	
300 kHz to 500 kHz	2.2 V to 22 V	1 mV/V + 2 mV	
500 kHz to 1 MHz	2.2 V to 22 V	1.5 mV/V + 3.2 mV	
AC Voltage - Generate At the listed frequencies			
10 Hz to 20 Hz	22 V to 220 V	240 μ V/V + 4 mV	
20 Hz to 40 Hz	22 V to 220 V	90 μ V/V + 1.5 mV	
40 Hz to 20 kHz	22 V to 220 V	55 μ V/V + 0.6 mV	
20 kHz to 50 kHz	22 V to 220 V	90 μ V/V + 1 mV	
50 kHz to 100 kHz	22 V to 220 V	159 μ V/V + 2.5 mV	
AC Voltage - Generate At the listed frequencies			
50 Hz to 300 Hz	220 V to 700 V	428 μ V/V + 16 mV	
300 Hz to 1 KHz	220 V to 700 V	108 μ V/V + 3.5 mV	



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AC Voltage - Measure At the listed frequencies			Fluke 8508A
1 Hz to 10 Hz	0 mV to 200 mV	160 μ V/V + 14 μ V	
10 Hz to 40 Hz	0 mV to 200 mV	130 μ V/V + 4 μ V	
40 Hz to 100 Hz	0 mV to 200 mV	110 μ V/V + 4 μ V	
100 Hz to 2 kHz	0 mV to 200 mV	110 μ V/V + 2 μ V	
2 kHz to 10 kHz	0 mV to 200 mV	110 μ V/V + 4 μ V	
10 kHz to 30 kHz	0 mV to 200 mV	310 μ V/V + 8 μ V	
30 kHz to 100 kHz	0 mV to 200 mV	710 μ V/V + 20 μ V	
AC Voltage - Measure At the listed frequencies			
1 Hz to 10 Hz	0.2 V to 2 V	140 μ V/V + 120 μ V	
10 Hz to 40 Hz	0.2 V to 2 V	110 μ V/V + 20 μ V	
40 Hz to 100 Hz	0.2 V to 2 V	85 μ V/V + 20 μ V	
100 Hz to 2 kHz	0.2 V to 2 V	65 μ V/V + 20 μ V	
2 kHz to 10 kHz	0.2 V to 2 V	85 μ V/V + 20 μ V	
10 kHz to 30 kHz	0.2 V to 2 V	210 μ V/V + 40 μ V	
30 kHz to 100 kHz	0.2 V to 2 V	510 μ V/V + 200 μ V	
AC Voltage - Measure At the listed frequencies			
1 Hz to 10 Hz	2 V to 20 V	140 μ V/V + 1.2 mV	
10 Hz to 40 Hz	2 V to 20 V	110 μ V/V + 200 μ V	
40 Hz to 100 Hz	2 V to 20 V	85 μ V/V + 200 μ V	
100 Hz to 2 kHz	2 V to 20 V	65 μ V/V + 200 μ V	
2 kHz to 10 kHz	2 V to 20 V	85 μ V/V + 200 μ V	
10 kHz to 30 kHz	2 V to 20 V	210 μ V/V + 400 μ V	
30 kHz to 100 kHz	2 V to 20 V	510 μ V/V + 2 mV	



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AC Voltage - Measure At the listed frequencies			Fluke 8508A
1 Hz to 10 Hz	20 V to 200 V	140 μ V/V + 12 mV	
10 Hz to 40 Hz	20 V to 200 V	110 μ V/V + 2 mV	
40 Hz to 100 Hz	20 V to 200 V	85 μ V/V + 2 mV	
100 Hz to 2 kHz	20 V to 200 V	65 μ V/V + 2 mV	
2 kHz to 10 kHz	20 V to 200 V	85 μ V/V + 2 mV	
10 kHz to 30 kHz	20 V to 200 V	210 μ V/V + 4 mV	
30 kHz to 100 kHz	20 V to 200 V	510 μ V/V + 20 mV	
AC Voltage - Measure At the listed frequencies			
1 Hz to 10 Hz	200 V to 1 000 V	140 μ V/V + 70 mV	
10 Hz to 40 Hz	200 V to 1 000 V	105 μ V/V + 20 mV	
40 Hz to 1 kHz	200 V to 1 000 V	108 μ V/V + 20 mV	
AC Current - Measure At the listed frequencies			
1 Hz to 10 Hz	0 μ A to 200 μ A	650 μ A/A + 20 nA	
10 Hz to 10 kHz	0 μ A to 200 μ A	650 μ A/A + 20 nA	
10 kHz to 30 kHz	0 μ A to 200 μ A	650 μ A/A + 20 nA	
30 kHz to 100 kHz	0 μ A to 200 μ A	4 mA/A + 20 nA	
AC Current - Measure At the listed frequencies			
1 Hz to 10 Hz	0.2 mA to 2 mA	650 μ A/A + 200 nA	
10 Hz to 10 kHz	0.2 mA to 2 mA	650 μ A/A + 200 nA	
10 kHz to 30 kHz	0.2 mA to 2 mA	650 μ A/A + 200 nA	
30 kHz to 100 kHz	0.2 mA to 2 mA	4 mA/A + 200 nA	
AC Current - Measure At the listed frequencies			
1 Hz to 10 Hz	2 mA to 20 mA	700 μ A/A + 2 μ A	
10 Hz to 10 kHz	2 mA to 20 mA	700 μ A/A + 2 μ A	
10 kHz to 30 kHz	2 mA to 20 mA	650 μ A/A + 2 μ A	
30 kHz to 100 kHz	2 mA to 20 mA	4 mA/A + 2 μ A	



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AC Current - Measure At the listed frequencies			Fluke 8508A
1 Hz to 10 Hz	20 mA to 200 mA	600 μ A/A + 20 μ A	
10 Hz to 10 kHz	20 mA to 200 mA	600 μ A/A + 20 μ A	
10 kHz to 30 kHz	20 mA to 200 mA	600 μ A/A + 20 μ A	
AC Current - Measure At the listed frequencies			
10 Hz to 2 kHz	0.2 A to 2 A	1.3 mA/A + 200 μ A	
2 kHz to 10 kHz	0.2 A to 2 A	1.5 mA/A + 200 μ A	
10 kHz to 30 kHz	0.2 A to 2 A	3.1 mA/A + 200 μ A	
AC Current - Generate At the listed frequencies			
10 Hz to 20 Hz	0 μ A to 220 μ A	259 μ A/A + 16 nA	
20 Hz to 40 Hz	0 μ A to 220 μ A	168 μ A/A + 10 nA	
40 Hz to 1 kHz	0 μ A to 220 μ A	127 μ A/A + 8 nA	
1 kHz to 5 kHz	0 μ A to 220 μ A	313 μ A/A + 12 nA	
5 kHz to 10 kHz	0 μ A to 220 μ A	1.1 mA/A + 65 nA	
AC Current - Generate At the listed frequencies			
10 Hz to 20 Hz	0.22 mA to 2.2 mA	255 μ A/A + 40 nA	
20 Hz to 40 Hz	0.22 mA to 2.2 mA	164 μ A/A + 35 nA	
40 Hz to 1 kHz	0.22 mA to 2.2 mA	127 μ A/A + 35 nA	
1 kHz to 5 kHz	0.22 mA to 2.2 mA	209 μ A/A + 110 nA	
5 kHz to 10 kHz	0.22 mA to 2.2 mA	1.1 mA/A + 650 nA	
AC Current - Generate At the listed frequencies			
10 Hz to 20 Hz	2.2 mA to 22 mA	259 μ A + 400 nA	
20 Hz to 40 Hz	2.2 mA to 22 mA	163 μ A/A + 350 nA	
40 Hz to 1 kHz	2.2 mA to 22 mA	127 μ A/A + 350 nA	
1 kHz to 5 kHz	2.2 mA to 22 mA	259 μ A/A + 550 nA	
5 kHz to 10 kHz	2.2 mA to 22 mA	1.1 mA/A + 5 μ A	



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AC Current - Generate At the listed frequencies			Fluke 5720A
10 Hz to 20 Hz	22 mA to 220 mA	277 μ A + 4 μ A	
20 Hz to 40 Hz	22 mA to 220 mA	168 μ A/A + 3.5 μ A	
40 Hz to 1 kHz	22 mA to 220 mA	127 μ A/A + 2.5 μ A	
1 kHz to 5 kHz	22 mA to 220 mA	209 μ A/A + 3.5 μ A	
5 kHz to 10 kHz	22 mA to 220 mA	1.1 mA/A + 10 μ A	
AC Current - Generate At the listed frequencies			
20 Hz to 1 kHz	0.22 A to 2.2 A	268 μ A/A + 35 μ A	
1 kHz to 5 kHz	0.22 A to 2.2 A	500 μ A/A + 80 μ A	
5 kHz to 10 kHz	0.22 A to 2.2 A	7 mA/A + 160 μ A	
AC Current - Generate At the listed frequencies			w/ Fluke 5725A
40 Hz to 1 kHz	2.2 A to 11A	13 mA/A + 380 μ A	
1 kHz to 10 kHz	2.2 A to 11A	37 mA/A + 750 μ A	
AC Current - Generate At the listed frequencies			Ballantine 1620A
DC to 10 kHz	0 μ A to 200 μ A	0.5 μ A	
DC to 10 kHz	200 μ A to 2 mA	5 μ A	
DC to 10 kHz	2 mA to 20 mA	50 μ A	
DC to 5 kHz	20 mA to 200 mA	500 μ A	
DC to 10 kHz	200 mA to 2 A	5 mA	
DC to 1 kHz	2 A to 20 A	50 mA	
DC to 1 kHz	20 A to 100 A	290 mA	
DC Current - Generate	0 mA to 20 mA	30 μ A	
	20 mA to 200 mA	300 μ A	
	200 mA to 2 A	4.4 mA	
	2 A to 20 A	44 mA	
	20 A to 100 A	220 mA	
AC Current - Measure At the listed frequencies			Leeds and Northrup 4360
DC to 60 Hz	0 A to 15 A	0.046 mA/A	
DC to 60 Hz	0 A to 100 A	0.041 mA/A	
			Leeds and Northrup 4361



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Resistance - Generate	1 Ω	100 $\mu\Omega/\Omega$	Fluke 5720A
	10 Ω	96 $\mu\Omega/\Omega$	
	100 Ω	24 $\mu\Omega/\Omega$	
	1 k Ω	9.2 $\mu\Omega/\Omega$	
	10 k Ω	9.1 $\mu\Omega/\Omega$	
	100 k Ω	12 $\mu\Omega/\Omega$	
	1 M Ω	21 $\mu\Omega/\Omega$	
	10 M Ω	42 $\mu\Omega/\Omega$	
	100 M Ω	110 $\mu\Omega/\Omega$	
	Resistance - Generate	1 Ω	1.2 $\mu\Omega$
10 k Ω		4.8 m Ω	Fluke 742A-10K
Resistance - Measure	0 Ω to 2 Ω	26 $\mu\Omega/\Omega$ + 4 $\mu\Omega$	Fluke 8508A
	2 Ω to 20 Ω	15 $\mu\Omega/\Omega$ + 14 $\mu\Omega$	
	20 Ω to 200 Ω	13 $\mu\Omega/\Omega$ + 50 $\mu\Omega$	
	200 Ω to 2 k Ω	13 $\mu\Omega/\Omega$ + 0.5 m Ω	
	2 k Ω to 20 k Ω	13 $\mu\Omega/\Omega$ + 5 m Ω	
	20 k Ω to 200 k Ω	13 $\mu\Omega/\Omega$ + 50 m Ω	
	200 k Ω to 2 M Ω	15 $\mu\Omega/\Omega$ + 1 Ω	
	2 M Ω to 20 M Ω	35 $\mu\Omega/\Omega$ + 100 Ω	
20 M Ω to 200 M Ω	205 $\mu\Omega/\Omega$ + 10 k Ω		
Oscilloscopes At the listed frequencies			Fluke 5820A (Output stated as percent of output plus floor specification)
Square 50 Ω @ 1 kHz Source	1 mV to 130 V	0.25 % of output + 40 μ V	
Square 1 M Ω @ 1 kHz Source	1 mV to 130 V	0.09 % of output + 5 μ V	
Leveled Sine Amplitude 50 kHz Reference	50 kHz to 100 MHz	3.5 % of output + 300 μ V	
	100 MHz to 300 MHz	4.0 % of output + 300 μ V	
	300 MHz to 500 MHz	5.5 % of output + 300 μ V	
Leveled Sine Amplitude 10 MHz Reference	500 MHz to 600 MHz	6.0 % of output + 300 μ V	
	600 MHz to 1.1 GHz	7.0 % of output + 300 μ V	
	1.1 GHz to 1.6 GHz	7.0 % of output + 300 μ V	
	1.6 GHz to 2.1 GHz	8.0 % of output + 300 μ V	



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Leveled Sine Flatness Relative to 50 kHz	50 kHz to 100 MHz	3.1 % of output + 100 μ V	Fluke 5820A (Output stated as percent of output plus floor specification)
	100 MHz to 300 MHz	3.7 % of output + 100 μ V	
	300 MHz to 500 MHz	4.3 % of output + 100 μ V	
Leveled Sine Flatness Relative to 10 MHz	500 MHz to 600 MHz	7.4 % of output + 100 μ V	
	600 MHz to 1.1 GHz	8.0 % of output + 100 μ V	
	1.1 GHz to 1.6 GHz	7.9 % of output + 100 μ V	
	1.6 GHz to 2.1 GHz	9.3 % of output + 100 μ V	
Time Marker 50 Ω	5 s to 50 ms	45 parts in 10^{-6} + 50 μ Hz	Fluke 5820A (Output stated as percent of output plus floor specification)
	20 ms to 100 ns	4.5 parts in 10^{-6} + 5 μ Hz	
	50 ns to 20 ns	4.5 parts in 10^{-6} + 5 μ Hz	
	10 ns(5 to 2) ns	4.5 parts in 10^{-6} + 5 μ Hz	
	5 ns to 500 ps	4.5 parts in 10^{-6} + 5 μ Hz	
Rise Time	\leq 150 ps	+ 0 / -50 ps	
Capacitance Measure @ 1 kHz	11 aF to 1.1 uF	0.017 % of reading + 0.000 03 pF	Gen Rad 1615-A
Capacitance Generate @ 1 kHz	1 pF	0.01 % of reading	HP 16380A Capacitor Set
	10 pF	0.01 % of reading	
	100 pF	0.01 % of reading	
	1 000 pF	0.01 % of reading	HP 16385A
	10 000 pF	0.5 % of reading	HP 16387A
	1 μ F	720 μ F/F + 0.5 pF	
Inductance Measure (12 Hz to 100 kHz)	0 to 1 mH	210 μ H/H	GenRad 1689 M
	1 mH to 10 mH	210 μ H/H	
	10 mH to 100 mH	210 μ H/H	
	100 mH to 1 H	230 μ H/H	
	1 H to 10 H	2 500 μ H/H	
Inductance Source Fixed Points (100 Hz to 1 kHz)	100 uH	0.26 μ H	GenRad 1482 B
	1 mH	0.25 μ H	GenRad 1482 E
	10 mH	3.1 μ H	GenRad 1482 H
	100 mH	31 μ H	GenRad 1482 L
	1 H	310 μ H	GenRad 1482 P



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Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J	-210 °C to -100 °C	0.22 °C	Electrical Simulation of Thermocouple Output Martel 3001M
	-100 °C to -30 °C	0.2 °C	
	-30 °C to -150 °C	0.2 °C	
	150 °C to -760 °C	0.16 °C	
	760 °C to -1 200 °C	0.19 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	-200 °C to -100 °C	0.26 °C	
	-100 °C to -25 °C	0.2 °C	
	-25 °C to -120 °C	0.16 °C	
	120 °C to -1 000 °C	0.22 °C	
	1 000 °C to -1 372 °C	0.71 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type E	-250 °C to -100 °C	0.39 °C	
	-100 °C to -25 °C	0.39 °C	
	-25 °C to -120 °C	0.4 °C	
	120 °C to -1 000 °C	0.7 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T	-250 °C to -150 °C	0.64 °C	
	-150 °C to -0 °C	0.24 °C	
	0 °C to -120 °C	0.17 °C	
	120 °C to -400 °C	0.15 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type R	0 °C to 250 °C	0.67 °C	
	250 °C to 400 °C	0.42 °C	
	400 °C to 1 000 °C	0.39 °C	
	1 000 °C to 1 750 °C	0.47 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type S	0 °C to 250 °C	0.66 °C	
	250 °C to 1 000 °C	0.7 °C	
	1 000 °C to 1 400 °C	0.67 °C	
	1 400 °C to 1 750 °C	0.71 °C	
Temperature Calibration, Indication and Control Equipment used with RTD Source	5 Ω to 200 Ω	0.015 Ω	Electrical Simulation of RTD Output Martel 3001M
	200 Ω to 400 Ω	0.02 Ω	
	5 Ω to 4k Ω	0.3 Ω	



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Time and Frequency

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Frequency - Measure	10 Hz to 500 MHz	$1.5 \times 10^{-13} + 1 \text{ Hz}$	HP 5343A
	500 MHz to 26.5 GHz	$1.5 \times 10^{-13} + 1 \text{ Hz}$	
Frequency - Generate	10 MHz	$1.2 \times 10^{-6} \text{ Hz}$	Ball MRT-350 Hewlett Packard 58503A GPS
	10 MHz	$1.2 \times 10^{-6} \text{ Hz}$	

1. Remarks: This column shall include pertinent information about the calibration of the Measured Instrument or parameter. The information should include the type of standards used and any pertinent information about the measurement method. This column is not to be used for commercial advertisement of laboratory services.