SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017,
ANSI/NCSL Z540-1-1994 & ANSI/NCSL Z540.3-2006

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CALIBRATION

Valid To: August 31, 2025 Certificate Number: 2357.27

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 4]:

I. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
DC Voltage – Generate	(0 to 220) mV 220 mV to 2.2 V (2.2 to 11) V (11 to 22) V (22 to 220) V (220 to 1100) V	8.3 µV/V + 0.39 µV 5.3 µV/V + 0.62 µV 3.9 µV/V + 2.3 µV 3.9 µV/V + 3.9 µV 5.2 µV/V + 39 µV 6.7 µV/V + 0.39 mV	Fluke 5720A
DC Current – Generate	Up to 220 µA 220 µA to 2.2 mA (2.2 to 22) mA (22 to 220) mA 220 mA to 2.2 A (2.2 to 3) A (3 to 11) A (11 to 20.5) A (16.5 to 149.999) A (150 to 1025) A	39 µA/A + 5.4 nA 31 µA/A + 6.2 nA 32 µA/A + 39 nA 39 µA/A + 0.62 µA 70 µA/A + 12 µA 0.30 mA/A + 31 µA 0.40 mA/A + 0.39 mA 0.78 mA/A + 0.58 mA 4.4 mA/A + 0.11 mA 5.1 mA/A + 0.39 mA	Fluke 5720A Fluke 5522A Fluke 5522A w/ 5500A coil

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
DC Resistance – Generate	(0 to 10.9999) Ω (11 to 32.9999) Ω (33 to 109.9999) Ω (110 to 329.9999) Ω (0.33 to 1.099 999) kΩ (1.1 to 3.2 999 99) kΩ (3.3 to 10.999 99) kΩ (11 to 32.999 99) kΩ (33 to 109.9999) kΩ (110 to 329.9999) kΩ (0.33 to 1.09 9999) MΩ (1.1 to 3.2 999 99) MΩ (3.3 to 10.999 99) MΩ (11 to 32.999 99) MΩ (33 to 109.9999) MΩ (110 to 329.9999) MΩ (330 to 1100) MΩ	38 µΩ/Ω + 0.78 mΩ 27 µΩ/Ω + 1.2 mΩ 23 µΩ/Ω + 1.1 mΩ 23 µΩ/Ω + 1.6 mΩ 22 µΩ/Ω + 1.6 mΩ 22 µΩ/Ω + 16 mΩ 22 µΩ/Ω + 16 mΩ 24 µΩ/Ω + 0.16 Ω 23 µΩ/Ω + 0.16 Ω 27 µΩ/Ω + 1.6 Ω 27 µΩ/Ω + 1.6 Ω 59 µΩ/Ω + 23 Ω 0.10 mΩ/Ω + 39 Ω 0.20 mΩ/Ω + 1.9 kΩ 0.40 mΩ/Ω + 2.3 kΩ 2.4 mΩ/Ω + 78 kΩ 12 mΩ/Ω + 0.39 MΩ	Fluke 5522A
Fixed Points	1 Ω 1.9 Ω 10 Ω 19 Ω 100 Ω 190 Ω 1 kΩ 1.9 kΩ 10 kΩ 19 kΩ 100 kΩ 190 kΩ 1 MΩ 1.9 MΩ 10 MΩ 19 MΩ 100 MΩ	0.11 mΩ 0.16 mΩ 0.21 mΩ 0.41 mΩ 0.96 mΩ 1.8 mΩ 8.6 mΩ 16 mΩ 80 mΩ 0.15 Ω 1.2 Ω 2.2 Ω 20 Ω 38 Ω 0.37 kΩ 0.84 kΩ 12 kΩ	Fluke 5720A
DC Voltage – Measure	Up to 100 mV (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 1000) V	8.0 µV/V + 0.23 µV 4.7 µV/V + 2.3 µV 4.7 µV/V + 23 µV 6.2 µV/V + 0.23 mV 6.4 µV/V + 2.3 mV	Keysight 3458A

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
DC Current – Measure	Up to 100 nA (0.1 to 1) µA (1 to 10) µA (10 to 100) µA (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	0.24 mA/A + 31 pA 40 µA/A + 31 pA 17 µA/A + 0.078 nA 20 µA/A + 0.62 nA 18 µA/A + 3.9 nA 18 µA/A + 39 nA 30 µA/A + 390 nA 87 µA/A + 7.8 µA	Keysight 3458A
DC Resistance – Measure	(0 to 10) Ω (10 to 100) Ω 100 Ω to 1 kΩ (1 to 10) kΩ (10 to 100) kΩ (0.1 to 1) MΩ (1 to 10) MΩ (10 to 100) MΩ (100 to 1200) MΩ	14 µΩ/Ω + 39 µΩ 12 µΩ/Ω + 0.39 mΩ 10 µΩ/Ω + 0.39 mΩ 10 µΩ/Ω + 3.9 mΩ 11 µΩ/Ω + 39 mΩ 16 µΩ/Ω + 1.6 Ω 53 µΩ/Ω + 78 Ω 0.40 mΩ/Ω + 0.78 kΩ 4.8 mΩ/Ω + 7.8 kΩ	Keysight 3458A

Parameter/Range	Frequency	CMC[2, 4] (±)	Comments
AC Voltage – Generate			
Up to 2.2 mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.55 mV/V + 3.9 µV 0.48 mV/V + 3.9 µV 0.51 mV/V + 3.9 µV 0.5 mV/V + 3.9 µV 2.3 mV/V + 4.7 µV 1.2 mV/V + 9.3 µV 1.7 mV/V + 19 µV 3.3 mV/V + 19 µV	Fluke 5720A
(2.2 to 22) mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.25 mV/V + 3.9 µV 0.12 mV/V + 3.9 µV 0.12 mV/V + 3.9 µV 0.22 mV/V + 3.9 µV 0.49 mV/V + 4.7 µV 1.0 mV/V + 9.3 µV 1.4 mV/V + 19 µV 2.7 mV/V + 19 µV	

Parameter/Range	Frequency	CMC[2, 3] (±)	Comments
AC Voltage – Generate (cont)			
(22 to 220) mV	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.41 mV/V + 12 µV 130 µV/V + 6.2 µV 83 µV/V + 6.2 µV 0.20 mV/V + 6.2 µV 0.47 mV/V + 16 µV 0.86 mV/V + 19 µV 1.3 mV/V + 23 µV 2.6 mV/V + 47 µV	Fluke 5720A
(0.22 to 2.2) V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.50 mV/V + 39 µV 86 µV/V + 16 µV 42 µV/V + 7.8 µV 71 µV/V + 9.3 µV 0.13 mV/V + 31 µV 0.39 mV/V + 78 µV 0.93 mV/V + 0.19 mV 1.6 mV/V + 0.31 mV	
(2.2 to 22) V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.38 mV/V + 0.39 mV 91 µV/V + 0.16 mV 42 µV/V + 54 µV 71 µV/V + 93 µV 94 µV/V + 0.19 mV 0.25 mV/V + 0.62 mV 0.93 mV/V + 1.9 mV 1.4 mV/V + 3.1 mV	
(22 to 220) V	(10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz (0.5 to 1) MHz	0.44 mV/V + 3.9 mV 87 µV/V + 1.6 mV 52 µV/V + 0.54 mV 79 µV/V + 0.93 mV 0.14 mV/V + 2.3 mV 0.85 mV/V + 16 mV 4.2 mV/V + 39 mV 7.8 mV/V + 78 mV	
(220 to 1100) V	(15 to 50) Hz 50 Hz to 1 kHz	0.28 mV/V + 16 mV 71 µV/V + 3.1 mV	
(330 to 1020) V	(0.045 to 1) kHz (1 to 5) kHz (5 to 10) kHz	0.23 mV/V + 7.8 mV 0.20 mV/V + 7.8 mV 0.24 mV/V + 7.8 mV	Fluke 5522A

Parameter/Range	Frequency	CMC[2, 3] (±)	Comments
AC Voltage – Measure			
(0 to 10) mV	(1 to 40) Hz	0.27 µV/V + 2.3 µV	Keysight 3458A
	40 Hz to 1 kHz	0.18 µV/V + 0.85 µV	
	(1 to 20) kHz	0.25 µV/V + 0.85 µV	
	(20 to 50) kHz	0.78 µV/V + 0.85 µV	
	(50 to 100) kHz	3.9 µV/V + 0.85 µV	
	100 kHz to 1 MHz	31 µV/V + 3.9 µV	
	(1 to 4) MHz	54 µV/V + 5.4 µV	
	(4 to 8) MHz	0.16 mV/V + 6.2 µV	
(10 to 100) mV	(1 to 40) Hz	0.13 mV/V + 3.1 µV	
	40 Hz to 1 kHz	71 µV/V + 1.6 µV	
	(1 to 20) kHz	0.11 µV/V + 1.6 µV	
	(20 to 50) kHz	0.23 µV/V + 1.6 µV	
	(50 to 100) kHz	0.62 µV/V + 1.6 µV	
	(100 to 300) kHz	2.3 µV/V + 7.8 µV	
	300 kHz to 1 MHz	7.8 µV/V + 7.8 µV	
	(1 to 4) MHz	31 µV/V + 54 µV	
	(4 to 8) MHz	31 µV/V + 62 µV	
	(8 to 10) MHz	0.12 V/V + 78 µV	
(0.1 to 1) V	(1 to 40) Hz	0.28 mV/V + 31 µV	
	40 Hz to 1 kHz	98 µV/V + 16 µV	
	(1 to 20) kHz	0.14 mV/V + 16 µV	
	(20 to 50) kHz	0.25 mV/V + 16 µV	
	(50 to 100) kHz	0.63 mV/V + 16 µV	
	(100 to 300) kHz	2.9 mV/V + 78 µV	
	300 kHz to 1 MHz	7.9 mV/V + 78 µV	
	(1 to 4) MHz	31 mV/V + 0.54 mV	
	(4 to 8) MHz	31 mV/V + 0.62 mV	
	(8 to 10) MHz	0.12 V/V + 0.78 mV	
(1 to 10) V	(1 to 40) Hz	0.28 mV/V + 0.31 mV	
	40 Hz to 1 kHz	97 µV/V + 0.16 mV	
	(1 to 20) kHz	0.13 mV/V + 0.16 mV	
	(20 to 50) kHz	0.25 mV/V + 0.16 mV	
	(50 to 100) kHz	0.63 mV/V + 0.16 mV	
	(100 to 300) kHz	2.9 mV/V + 0.78 mV	
	300 kHz to 1 MHz	7.9 mV/V + 0.78 mV	
	(1 to 4) MHz	31 mV/V + 5.4 mV	
	(4 to 8) MHz	31 mV/V + 6.2 mV	
	(8 to 10) MHz	0.12 V/V + 7.8 mV	

Parameter/Range	Frequency	CMC[2, 3] (±)	Comments
AC Voltage – Measure (cont)			
(10 to 100) V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz	0.31 mV/V + 3.1 mV 0.17 mV/V + 1.6 mV 0.17 mV/V + 1.6 mV 0.28 mV/V + 1.6 mV 0.93 mV/V + 1.6 mV 3.5 mV/V + 7.8 mV 12 mV/V + 7.8 mV	Keysight 3458A
(100 to 700) V	(1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.42 mV/V + 31 mV 0.32 mV/V + 16 mV 0.47 mV/V + 16 mV 0.93 mV/V + 16 mV 2.3 mV/V + 16 mV	
AC Current – Generate			
Up to 220 µA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.39 mA/A + 16 nA 0.17 mA/A + 10 nA 0.12 mA/A + 8.0 nA 0.28 mA/A + 12 nA 1.0 mA/A + 65 nA	Fluke 5720A
(0.22 to 2.2) mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.35 mA/A + 40 nA 0.19 mA/A + 35 nA 0.16 mA/A + 35 nA 0.23 mA/A + 0.11 µA 1.0 mA/A + 0.65 µA	
(2.2 to 22) mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.34 mA/A + 0.40 µA 0.17 mA/A + 0.35 µA 0.13 mA/A + 0.35 µA 0.20 mA/A + 0.55 µA 1.0 mA/A + 5.0 µA	
(22 to 220) mA	(10 to 20) Hz (20 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.35 mA/A + 4.0 µA 0.17 mA/A + 3.5 µA 0.12 mA/A + 2.5 µA 0.20 mA/A + 3.5 µA 1.0 mA/A + 10 µA	
(0.22 to 2.2) A	20 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.27 mA/A + 35 µA 0.41 mA/A + 80 µA 6.0 mA/A + 0.16 mA	

Parameter/Range	Frequency	CMC[2, 3, 6] (±)	Comments
AC Current – Generate (cont)			
(29 to 329.99) µA	(10 to 30) kHz	12 mA/A + 0.31 µA	Fluke 5522A
(0.33 to 3.2999) mA	(10 to 30) kHz	7.8 mA/A + 0.47 µA	
(3.3 to 32.999) mA	(10 to 30) kHz	3.4 mA/A + 3.1 µA	
(33 to 329.99) mA	(10 to 30) kHz	3.1 mA/A + 0.16 mA	
(2.2 to 10.9999) A	(45 to 100) Hz	0.48 mA/A + 1.6 mA	
	100 Hz to 1 kHz	0.78 mA/A + 1.6 mA	
	(1 to 5) kHz	23 mA/A + 1.6 mA	
(11 to 20.5) A	(45 to 100) Hz	0.95 mA/A + 3.9 mA	
	100 Hz to 1 kHz	1.2 mA/A + 3.9 mA	
	(1 to 5) kHz	23 mA/A + 3.9 mA	
Clamp-On Meters			
Torodial Type Clamps			
(16.5 to 149.999) A	(45 to 65) Hz	0.38 %	Fluke 5522A w/ 5500 coil
(16.5 to 149.999) A	(65 to 440) Hz	0.84 %	
(150 to 1025) A	(45 to 65) Hz	0.37 %	
(150 to 1025) A	(65 to 440) Hz	0.83 %	
Non-Torodial Type Clamps			
(16.5 to 149.999) A	(45 to 65) Hz	0.76 %	
(16.5 to 149.999) A	(65 to 440) Hz	1.2 %	
(150 to 1025) A	(45 to 65) Hz	1.2 %	
(150 to 1025) A	(65 to 440) Hz	1.6 %	
AC Current – Measure			
100 µA Range	(10 to 20) Hz	3.2 mA/A + 23 nA	Keysight 3458A
	(20 to 45) Hz	1.2 mA/A + 23 nA	
	45 Hz to 5 kHz	0.47 mA/A + 23 nA	
1 mA Range	(10 to 20) Hz	3.4 mA/A + 0.16 µA	
	(20 to 45) Hz	1.3 mA/A + 0.16 µA	
	(45 to 100) Hz	0.53 mA/A + 0.16 µA	
	100 Hz to 5 kHz	0.25 mA/A + 0.16 µA	
10 mA Range	(10 to 20) Hz	3.4 mA/A + 1.6 µA	
	(20 to 45) Hz	1.3 mA/A + 1.6 µA	
	(45 to 100) Hz	0.52 mA/A + 1.6 µA	
	100 Hz to 5 kHz	0.26 mA/A + 1.6 µA	
100 mA Range	(10 to 20) Hz	3.5 mA/A + 16 µA	
	(20 to 45) Hz	1.3 mA/A + 16 µA	
	(45 to 100) Hz	0.52 mA/A + 16 µA	
	100 Hz to 5 kHz	0.26 mA/A + 16 µA	
1 A Range	(10 to 20) Hz	3.5 mA/A + 0.16 mA	
	(20 to 45) Hz	1.3 mA/A + 0.16 mA	
	(45 to 100) Hz	0.66 mA/A + 0.16 mA	
	100 Hz to 5 kHz	0.80 mA/A + 0.16 mA	

Parameter/Equipment	Range	CMC[2] (±)	Comments
Electrical Calibration of Thermocouples – Generate and Measure			
Type B	(600 to 800) °C (800 to 1000) °C (1000 to 1550) °C (1550 to 1820) °C	0.34 °C 0.27 °C 0.24 °C 0.26 °C	Fluke 5522A
Type C	(0 to 150) °C (150 to 650) °C (650 to 1000) °C (1000C to 1800) °C (1800 to 2316) °C	0.24 °C 0.21 °C 0.25 °C 0.39 °C 0.65 °C	
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1000) °C	0.39 °C 0.13 °C 0.11 °C 0.13 °C 0.17 °C	
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.25 °C 0.13 °C 0.12 °C 0.14 °C 0.18 °C	
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.26 °C 0.14 °C 0.13 °C 0.20 °C 0.31 °C	
Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1300) °C	0.31 °C 0.17 °C 0.15 °C 0.14 °C 0.21 °C	
Type R	(0 to 250) °C (250 to 400) °C (400 to 1000) °C (1000 to 1767) °C	0.45 °C 0.28 °C 0.26 °C 0.32 °C	

Parameter/Equipment	Range	CMC[2] (±)	Comments
Electrical Calibration of Thermocouples – Generate and Measure (cont)			
Type S	(0 to 250) °C (250 to 1000) °C (1000 to 1400) °C (1400 to 1767) °C	0.38 °C 0.28 °C 0.29 °C 0.36 °C	Fluke 5522A
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.50 °C 0.19 °C 0.13 °C 0.11 °C	
Type U	(-200 to 0) °C (0 to 600) °C	0.44 °C 0.21 °C	
Electrical Calibration of RTD Indicators			
Pt 385, 100 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 400) °C (400 to 630) °C (630 to 800) °C	0.085 °C 0.12 °C 0.12 °C 0.11 °C 0.097 °C 0.11 °C 0.20 °C	Fluke 5522A
Pt 3926, 100 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 400) °C (400 to 630) °C	0.064 °C 0.076 °C 0.075 °C 0.089 °C 0.095 °C 0.17 °C	
Pt 3916, 100 Ω	(-200 to -190) °C (-190 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.21 °C 0.060 °C 0.068 °C 0.070 °C 0.077 °C 0.084 °C 0.090 °C 0.13 °C 0.19 °C	

Parameter/Equipment	Range	CMC[2] (±)	Comments
Electrical Calibration of RTD Indicators (cont)			
Pt 385, 200 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.041 °C 0.043 °C 0.044 °C 0.051 °C 0.098 °C 0.11 °C 0.11 °C 0.13 °C	Fluke 5522A
Pt 385, 500 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.036 °C 0.043 °C 0.044 °C 0.051 °C 0.066 °C 0.066 °C 0.073 °C 0.088 °C	
Pt 385, 1000 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.029 °C 0.029 °C 0.036 °C 0.042 °C 0.050 °C 0.18 °C 0.057 °C 0.18 °C	
PtNi 385, 120 Ω	(-80 to 0) °C (0 to 100) °C (100 to 260) °C	0.081 °C 0.11 °C 0.11 °C	
Cu 427, 10 Ω	(-100 to 260) °C	0.69 °C	

Parameter/Equipment	Range	CMC[2, 3, 6] (±)	Comments
Capacitance – Generate	(0.19 to 1.1) nF (1.1 to 3.3) nF (3.3 to 11) nF (11 to 110) nF (110 to 330) nF (0.33 to 1.1) µF (1.1 to 3.29) µF (3.3 to 11) µF (11 to 33) µF (33 to 110) µF (110 to 330) µF (0.33 to 1.1) mF (1.1 to 3.3) mF (3.3 to 11) mF (11 to 33) mF (33 to 110) mF	4.0 mF/F + 7.8 pF 4.0 mF/F + 7.8 pF 2.0 mF/F + 7.8 pF 2.1 mF/F + 78 pF 2.0 mF/F + 0.23 nF 2.1 mF/F + 0.78 nF 2.1 mF/F + 2.3 nF 2.1 mF/F + 7.8 nF 3.2 mF/F + 23 nF 3.6 mF/F + 78 nF 3.5 mF/F + 0.23 µF 3.5 mF/F + 0.78 µF 3.5 mF/F + 2.3 µF 3.5 mF/F + 7.8 µF 5.8 mF/F + 23 µF 8.5 mF/F + 78 µF	Fluke 5522A
Oscilloscopes – Amplitude DC Signal 50 Ω Load 1 MΩ Load Amplitude Square Wave; 10 Hz to 10 kHz 50 Ω Load 1 MΩ Load Bandwidth / Level Sine Flatness Time Marker Rise Time – Generate Resistance	 0 V to ± 6.6 V 0 V to ± 130 V 1 mV to ± 6.0 V_{p-p} 10 Hz to 10 kHz 1 mV to ± 200 V_{p-p} 10 Hz to 10 kHz 50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz (600 to 1100) MHz 1 ns to 20 ms 50 ms to 5 s Non-Cardinal Point 1 kHz to 2 MHz, (200 to 300) ps (2 to 10) MHz, (200 to 350) ps (40 to 60) Ω (0.6 to 1.5) MΩ	 1.9 mV/V + 31 µV 0.39 mV/V + 31 µV 1.6 mV/V + 31 µV 0.78 mV/V + 31 µV 2.8 % 3.0 % 4.1 % 4.7 % 2.5 µs/s (19 + 38*t*) µs/s 39 µs/s 19 ps 19 ps 0.79 mΩ/Ω 0.79 mΩ/Ω	 Fluke 5522A *t* = time in seconds

II. Time & Frequency

Parameter/Range	Frequency	CMC[2, 5] (±)	Comments
Frequency – Measure	0.001 Hz to 1 kHz (1 to 1000) kHz (1 to 225) MHz (0.225 to 12.4) GHz	0.24 mHz/Hz 2.1 µHz/Hz 0.21 µHz/Hz 0.21 µHz/Hz	Keysight / Agilent / HP 53132A
Frequency – Measuring Equipment	(0.001 to 1000) Hz 1000 Hz to 20 MHz	6.3 µHz/Hz 6.3 µHz/Hz	HP 3325A

[1] This laboratory offers commercial

[2] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[3] The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.

[4] This scope meets A2LA's *P112 Flexible Scope Policy*.

[5] The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

[6] In the statement of CMC, percentages represent the percent of a reading unless otherwise noted.

Accredited Laboratory

A2LA has accredited

TEKTRONIX, INC.

Chaska, MN

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and the requirements of ANSI/NCSL Z540.3-2006 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 24th day of April 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2357.27
Valid to August 31, 2025
Revised January 17, 2024

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.