



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

TEKTRONIX, INC. – N. BILLERICA TEST¹
7 Sterling Road
North Billerica, MA 01862
Matthew Wood Phone: 976 663 2137

MECHANICAL

Valid To: March 31, 2025

Certificate Number: 2357.23

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above, as well as the one satellite location listed below, to perform the following tests on Electronic and Electro-Mechanical Devices:

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
Shock – Up to 30,000 g	MIL-STD-810C: Method 516.2; MIL-STD-810D: Method 516.3; MIL-STD-810E: Method 516.4; MIL-STD-810F: Method 516.5; MIL-STD-810G: Method 516.6; MIL-STD-810G w/ Change 1, 516.7; MIL-STD-810H: 516.8; MIL-STD-202G: Method 213B; MIL-STD-750E: Method 2016; MIL-STD-883-1: Method 2002; RTCA/DO-160E (Section 7); RTCA/DO-160F (Section 7); RTCA/DO-160G (Section 7); IEC 60068-2-27 (2008-02, Edition 4.0); IEC 60068-2-29
Vibration (Sine and Random) – Frequency (5 to 3000) Hz Rating Up to 25,000 ft·lb	MIL-STD-810C, Method 514.2; MIL-STD-810D, Method 514.3; MIL-STD-810E, Method 514.4; MIL-STD-810F, Method 514.5; MIL-STD-810G, Method 514.6; MIL-STD-810G w/ Change 1, 514.7; MIL-STD-810H, 514.8; MIL-STD-810D, Method 520.0; MIL-STD-810E, Method 520.1; MIL-STD-810F, Method 520.2; MIL-STD-810G, Method 520.3; MIL-STD-810G w/ Change 1, 520.4; MIL-STD-810H, 520.5; MIL-STD-810G, Method 520.5; IEC 60068-2-6 (2007-12, Edition 7.0); MIL-STD-202G, Methods 201A, 204D, and 214A; MIL-STD-750E: Methods 2046 and 2056;

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
Vibration (Sine and Random) (cont) – Frequency (5 to 3000) Hz Rating Up to 25,000 ft·lb	MIL-STD-883-1: Method 2007; RTCA/DO-160E (Section 8); RTCA/DO-160F (Section 8); RTCA/DO-160G (Section 8); MIL-STD-167-1; MIL-STD 167-1; ISTA, ASTM D4169, Fixed Displacement, Sine, and Random; IEC 60068-2-6; IEC 60068-2-64
Acceleration – (5000 to 30,000) g (1 to 120) g	MIL-STD-883-1: Method 200; MIL-STD-202G: Method 212 TC, B, and C; MIL-STD-750E: Method 2006; MIL-STD-810C, Method 513.2; MIL-STD-810D, Method 513.3; MIL-STD-810E, Method 513.4; MIL-STD-810F, Method 513.5; MIL-STD-810G, Method 513.6; MIL-STD-810G w/ Change 1, 513.7; MIL-STD-810H, 513.8; MIL-STD-202G, Method 212A; RTCA/DO-160E; RTCA/DO-160F; RTCA/DO-160G
Altitude – Up to 50 000 ft	MIL-STD-202G: Method 105; MIL-STD-750E: Method 1001; MIL-STD-810C: Method 500.1; MIL-STD-810D: Method 500.2; MIL-STD-810E: Method 500.3; MIL-STD-810F: Method 500.4; MIL-STD-810G: Method 500.5; MIL-STD-810G w/ Change 1, 500.6; MIL-STD-810H: 500.6; IEC 60068-2-13; ASTM D4169; ASTM D6653; RTCA/DO-160E (Section 4); RTCA/DO-160F; RTCA/DO-160G
Explosion	MIL-STD-202G: Method 109; MIL-STD-810C: Method 511.1; MIL-STD-810D: Method 511.2; MIL-STD-810E: Method 511.3; MIL-STD-810F: Method 511.4; MIL-STD-810G: Method 511.5; MIL-STD-810G w/ Change 1, Method 511.6; MIL-STD-810H: Method 511.7; MIL-STD-202: Method 109B; RTCA/DO-160E (Section 9.0); RTCA/DO-160F; RTCA/DO-160G;

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
High/Low Temperature – (-75 to +190) °C	MIL-STD-810C: Method 501.1; MIL-STD-810D: Method 501.2; MIL-STD-810E: Method 501.3; MIL-STD-810F: Method 501.4; MIL-STD-810G: Method 501.5; MIL-STD-810G w/ Change 1, Method 501.6; MIL-STD-810H: Method 501.7; MIL-STD-810C: Method 502.1; MIL-STD-810D: Method 502.2; MIL-STD-810E: Method 502.3; MIL-STD-810F: Method 502.4; MIL-STD-810G: Method 502.5; MIL-STD-810G w/ Change 1, Method 502.6; MIL-STD-810H: Method 502.7; IEC 60068-2-1; IEC 60068-2-2; IEC 60068-2-14; RTCA/DO-160E; RTCA/DO-160F; RTCA/DO-160G
Thermal Shock – (-75 to +200) °C	MIL-STD-202G: Method 107; MIL-STD-750E: Method 1051; MIL-STD-810C: Method 503.1; MIL-STD-810D: Method 503.2; MIL-STD-810E: Method 503.3; MIL-STD-810F: Method 503.4; MIL-STD-810G: Method 503.5; MIL-STD-810G w/ Change 1, Method 503.6; MIL-STD-810H: Method 503.7; MIL-STD-883-1: Method 1010; RTCA/DO-160E (Section 5); RTCA/DO-160F (Section 5); RTCA/DO-160G
Humidity – (5 to 95) %RH	MIL-STD-202G: Methods 103 and 106; MIL-STD-750E: Method 1021; MIL-STD-810C: Method 507.1; MIL-STD-810D: Method 507.2; MIL-STD-810E: Method 507.3; MIL-STD-810F: Method 507.4; MIL-STD-810G: Method 507.5; MIL-STD-810G w/ Change 1, Method 507.6; MIL-STD-810H: Method 507.6; MIL-STD-202: Method 103B; MIL-STD-883-1: Method 1004; IEC 60068-2-30; IEC 60068-2-78; ISTA ASTM D4169; ISTA/ASTM D4332; RTCA/DO-160E (6.0); RTCA/DO-160F; RTCA/DO-160G
Drop Testing	ISTA; ASTM D4169; ASTM D7386; MIL-STD-810G: Method 516

¹ This accreditation covers testing performed at the main laboratory listed above, and at the satellite laboratory indicated below:

1133 Route 23 South
 Wayne, NJ 07470
 Matthew Wood Phone: 976 663 2137

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
Shock – Up to 30,000 g	MIL-STD-810C: Method 516.2; MIL-STD-810D: Method 516.3; MIL-STD-810E: Method 516.4; MIL-STD-810F: Method 516.5; MIL-STD-810G: Method 516.6; MIL-STD-810G w/ Change 1, 516.7; MIL-STD-810H: 516.8; MIL-STD-202G: Method 213B; MIL-STD-750E: Method 2016; MIL-STD-883-1: Method 2002; RTCA/DO-160E (Section 7); RTCA/DO-160F (Section 7); RTCA/DO-160G (Section 7); IEC 60068-2-27 (2008-02, Edition 4.0); IEC 60068-2-29
Vibration (Sine and Random) – Frequency (5 to 3000) Hz Rating Up to 25,000 ft·lb	MIL-STD-810C: Method 514.2; MIL-STD-810D: Method 514.3; MIL-STD-810E: Method 514.4; MIL-STD-810F: Method 514.5; MIL-STD-810G: Method 514.6; MIL-STD-810G w/ Change 1, 514.7; MIL-STD-810H: 514.8; MIL-STD-810D: Method 520.0; MIL-STD-810E: Method 520.1; MIL-STD-810F: Method 520.2; MIL-STD-810G: Method 520.3; MIL-STD-810G w/ Change 1, 520.4; MIL-STD-810H: 520.5; MIL-STD-810G: Method 520.5; IEC 60068-2-6 (2007-12, Edition 7.0); MIL-STD-202G: Methods 201A, 204D, and 214A; MIL-STD-750E: Methods 2046 and 2056; MIL-STD-883-1: Method 2007; RTCA/DO-160E (Section 8); RTCA/DO-160F (Section 8); RTCA/DO-160G (Section 8); MIL-STD-167-1; MIL-STD 167-1; ISTA, ASTM D4169, Fixed Displacement, Sine, and Random; IEC 60068-2-6; IEC 60068-2-64

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
Acceleration – (1 to 120) g	MIL-STD-883-1: Method 200; MIL-STD-202G: Method 212 TC, B, and C; MIL-STD-750E: Method 2006; MIL-STD-810C: Method 513.2; MIL-STD-810D: Method 513.3; MIL-STD-810E: Method 513.4; MIL-STD-810F: Method 513.5; MIL-STD-810G: Method 513.6; MIL-STD-810G w/ Change 1, 513.7; MIL-STD-810H: 513.8; MIL-STD-202G: Method 212A; RTCA/DO-160E; RTCA/DO-160F; RTCA/DO-160G
Altitude – Up to 100,000 ft	MIL-STD-202G: Method 105; MIL-STD-750E: Method 1001; MIL-STD-810C, Method 500.1; MIL-STD-810D, Method 500.2; MIL-STD-810E, Method 500.3; MIL-STD-810F, Method 500.4; MIL-STD-810G, Method 500.5; MIL-STD-810G w/ Change 1, 500.6; MIL-STD-810H, 500.6; IEC 60068-2-13; ASTM D4169; ASTM D6653; RTCA/DO-160E Section 4; RTCA/DO-160F; RTCA/DO-160G
High/Low Temperature – (-75 to +190) °C	MIL-STD-810C: Method 501.1; MIL-STD-810D: Method 501.2; MIL-STD-810E: Method 501.3; MIL-STD-810F: Method 501.4; MIL-STD-810G: Method 501.5; MIL-STD-810G w/ Change 1, Method 501.6; MIL-STD-810H: Method 501.7; MIL-STD-810C: Method 502.1; MIL-STD-810D: Method 502.2; MIL-STD-810E: Method 502.3; MIL-STD-810F: Method 502.4; MIL-STD-810G: Method 502.5; MIL-STD-810G w/ Change 1, Method 502.6; MIL-STD-810H: Method 502.7; IEC 60068-2-1; IEC 60068-2-2; IEC 60068-2-14; RTCA/DO-160E; RTCA/DO-160F; RTCA/DO-160G

<u>Test Type/Equipment Capabilities²:</u>	<u>Test Methods:</u>
Thermal Shock – (-75 to +200) °C	MIL-STD-202G: Method 107; MIL-STD-750E: Method 1051; MIL-STD-810C: Method 503.1; MIL-STD-810D: Method 503.2; MIL-STD-810E: Method 503.3; MIL-STD-810F: Method 503.4; MIL-STD-810G: Method 503.5; MIL-STD-810G w/ Change 1, Method 503.6; MIL-STD-810H: Method 503.7; MIL-STD-883-1: Method 1010; RTCA/DO-160E (Section 5); RTCA/DO-160F (Section 5); RTCA/DO-160G
Humidity – (5 to 95) %RH	MIL-STD-202G: Methods 103 and 106; MIL-STD-750E: Method 1021; MIL-STD-810C: Method 507.1; MIL-STD-810D: Method 507.2; MIL-STD-810E: Method 507.3; MIL-STD-810F: Method 507.4; MIL-STD-810G: Method 507.5; MIL-STD-810G w/ Change 1, Method 507.6; MIL-STD-810H: Method 507.6; MIL-STD-202: Method 103B; MIL-STD-883-1: Method 1004; IEC 60068-2-30; IEC 60068-2-78; ISTA ASTM D4169; ISTA/ASTM D4332; RTCA/DO-160E (6.0); RTCA/DO-160F; RTCA/DO-160G;
Drop Testing	ISTA; ASTM D4169; ASTM D7386; MIL-STD-810G: Method 516;

² Also using customer-specified methods directly related to the types of tests, equipment and parameters listed above.



Accredited Laboratory

A2LA has accredited

TEKTRONIX, INC.

N. Billerica, MA

for technical competence in the field of

Mechanical Testing

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 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 28th day of December 2022.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2357.23
Valid to March 31, 2025

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