



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

KEYSTONE COMPLIANCE
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MECHANICAL

Valid To: October 31, 2022

Certificate Number: 3293.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on aerospace components, military equipment, nuclear equipment, commercial, automotive components and medical devices:

Test Description/Test Parameters:

Temperature²
(-70 to 265) °C

Test Method/Test Standards¹:

IEC 60068-2-14; IEC 61215; ASTM F1980;
ASTM F2825; ASTM D3103; SAE J575; TAPPI T453;
RTCA/DO-160G

High Temperature

MIL-STD-810 D-G, Method 501

Low Temperature

MIL-STD-810 D-G, Method 502

Temperature Cycling

MIL-STD-883 F-J, Method 1010

Thermal Shock

ASTM D3103; ASTM F2825;
IEC 60950; IEC 60601-1-11; IEC 61215;
IEC 62108, IEC 61730-2;
MIL-STD-883 F-J, Method 1011;
MIL-STD-202 G, Method 107;
MIL-STD-810 D-G, Method 503;
SAE J575; UL 1703; E50TF424-ACD

Thermal Characteristics

MIL-STD-883 F-J, Method 1012

Temperature Variation

IEC 60601-1-11; RTCA/DO-160 F-G, Section 5.0

Temperature

AREMA 2010, Section 11.5.1

Cold Temperature

EN-60068-2-1

Dry Heat

EN-60068-2-2

Damp Heat

EN-60068-2-30

Ambient Temperature

EN-50155, Section 2.1; ASTM D6653

Altitude

IEC 60601-1-11; MIL-STD-810G Section 500, 524,
SAE J1455; RTCA/DO-160G

Test Description/Test Parameters:**Temperature and Humidity**²

Temperature: (-70 to 175) °C

Humidity: up to 98% RH

Test Method/Test Standards¹:

ASTM F1980; ASTM F2825; ASTM D3103;

ASTM D4332;

IEC 60601-1-11; IEC 61215; IEC 62108;

IEC 61730-2;

MIL-STD-810 D-G, Method 507;

MIL-STD-202 G, Methods 103, 106;

MIL-STD-1344 A, Section 1002;

MIL-STD-883 F-J, Methods 1004, 1013;

RTCA/DO-160 D-G, Section 6.0;

AREMA 2010, Section 11.5.1; SAE J1455;

SAE J575;

TAPPI T402; TAPPI T544; UL 1703

Temperature Life

Steady State Life

MIL-STD-883 F-J, Method 1005

Intermittent Life

MIL-STD-883 F-J, Method 1006

Agree Life

MIL-STD-883 F-J, Method 1007

Stabilization Bake

MIL-STD-883 F-J, Method 1008

Life

MIL-STD-202 G, Method 108

Temperature Cycling

MIL-STD-1344 A, Section 1003

Temperature Life

MIL-STD-1344 A, Section 1005

Shock/Drop

IEC 60068-2-27; IEC 60601-1-11;

ASTM D5276; ASTM D4168

Shock

ASTM D5487; ASTM D6537; ASTM D4168;

MIL-STD-810 D-G, Method 516;

AREMA 2010, Section 11.5.1;

MIL-STD-883J, Method 2002.5, Conditions A & B;

Boeing D6-81926 Sec. 3

Shock¹ (Specified Pulse) up to 1,500 G's

IEC 60601-1-11

Operational Shock

MIL-STD-1344 A, Section 2004;

EN-61373, Section 10.0;

MIL-STD-810 D-G, Method 517;

MIL-STD-202 G, Method 213;

RTCA/DO-160 D-G, Section 7.0

Test Description/Test Parameters:***Vibration***²*Frequency Range: (1 to 3,000) Hz**Displacement: Up to 3 in***Test Method/Test Standards**¹:

IEC 60068-2-6; IEC 60068-2-64;

IEC 60601-1-11;

ANSI C136.31;

ASTM D9999;

MIL-STD-167-1A; SAE J1455

Vibration

ASTM D3580;

ASTM D5112;

ASTM D5416;

IEC 60255-21-1;

MIL-STD-810 D-G, Method 514;

MIL-STD-202 G, Method 201;

RTCA/DO-160 D-G, Section 8.0; SAE J1455;

SAE J575;

Boeing D6-81926 Sec. 3

Vibration High Frequency

AREMA 2010, Section 11.5.1

Random Vibration

MIL-STD-1344A, Section 2005; MIL-STD-883 F-J

Increased Random Vibration

MIL-STD-810 D-G, Method 519;

MIL-STD-202 G, Method 204;

MIL-STD-202 G, Method 214;

EN-61373, Section 8.0; EN-61373, Section 9.0

Water Test/Rain

Rain

ASTM D5276; IEC 62108; IEC 61730-2;

IEC 60068-2-18

Moisture Resistance

MIL-STD-810 D-G, Method 506

Dew Point

MIL-STD-883, Method 1004

Waterproofness

MIL-STD-202, Method 106;

MIL-STD-883, Method 1013;

RTCA/DO-160 D-G, Section 10.0;

SAE J1455; UL 1703

Icing/Freezing Rain

IEC 61730-2; RTCA/DO-160 D-F, Section 24.0;

MIL-STD-810 D-G, Section 521, 524; UL 1703

Salt Fog (Spray)

Salt Fog

IEC 60066-2-11;

MIL-STD-810 D-G, Method 509;

RTCA/DO-160 D-G, Section 14.0; SAE J1455;

SAE J575

Salt Atmosphere

MIL-STD-1344A, Section 1001;

MIL-STD-883 F-J, Method 1009;

Salt Mist

MIL-STD-202 G, Method 101;

EN-50155, Section 10.2.10;

ASTM B117-11; ISO 9227, Section 5.2

Test Description/Test Parameters:***Immersion*****Test Method/Test Standards¹:**

IEC 61215; IEC 62108; IEC 61730-2;
IEC 60068-2-18;
MIL-STD-810 D-G, Method 512;
MIL-STD-883 F-J, Method 1002; SAE J575;
UL 1703

Solar Radiation***(Procedure 1 Heating Effects only)***

IEC 62108; IEC 61730-2;
MIL-STD-810 D-G, Method 505; UL 1703

Ingress Protection

IEC 60529; IEC 60598;
ISO20653; IEC 62108; IEC 61730-2;
IEC 60068-2-18; SAE J1455; SAE J575; UL 1703;
IP1X; IP2X; IP3X; IP4X; IP5X; IP6X (First Char.);
IPX1; IPX2; IPX3; IPX4; IPX5; IPX6; IPX7; IPX8;
XP9 (Second Char.);
NEMA 250, Section 5

Packaging Testing

ISTA Transit Testing Methods

1A, 1B, 1C, 1D, 1E, 1G, 1H, 2A, 2B, 2C, 3A, 3B, 3E,
3K, 4AB, 6-AMAZON.com-OB, 6-AMAZON.com-
SIOC, 6SAMSCLUB, 7D and 7E;
ASTM D4169; ASTM F2096; IEC 60601-1-11

Seal Strength

ASTM F88/F88M-15

Dye Penetration

ASTM F1929-15

Compressive Resistance of
Shipping Containers

ASTM D642-15

Fungus

RTCA/DO-160; MIL-STD-810G

¹ When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories.

² Also using customer supplied test methods directly related to the capabilities and test methods listed.



Accredited Laboratory

A2LA has accredited

KEYSTONE COMPLIANCE

New Castle, PA

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 24th day of November 2020.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3293.02
Valid to October 31, 2022

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