



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

KEYSTONE COMPLIANCE  
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MECHANICAL

Valid To: May 31, 2020

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:**

**Temperature**<sup>1</sup>  
(-70 to 265) °C

High Temperature

Low Temperature

Temperature Cycling

Thermal Shock

Thermal Characteristics

Temperature Variation

Temperature

Cold Temperature

Dry Heat

Damp Heat

Ambient Temperature

Altitude

**Test Method/Test Standards:**

IEC 60068-2-14; IEC 61215; ASTM F1980; ASTM F2825;  
ASTM D3103; SAE J575; TAPPI T453; RTCA/DO-160G  
MIL-STD-810 D-G, Method 501

MIL-STD-810 D-G, Method 502

MIL-STD-883 F-J, Method 1010

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

MIL-STD-883 F-J, Method 1012

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

AREMA 2010, Section 11.5.1

EN-60068-2-1

EN-60068-2-2

EN-60068-2-30

EN-50155, Section 2.1; ASTM D6653

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

**Test Description/Test Parameters:**

***Temperature and Humidity***<sup>1</sup>

*Temperature: (-70 to 175) °C*

*Humidity: up to 98% RH*

**Test Method/Test Standards:**

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

Shock<sup>1</sup> (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

***Vibration***<sup>1</sup>

*Frequency Range: (1 to 3,000) Hz*

*Displacement: Up to 3 in*

IEC 60068-2-6;  
IEC 60068-2-64;  
IEC 60601-1-11;  
ANSI C136.31;  
ASTM D9999;  
MIL-STD-167-1A; SAE J1455

**Test Description/Test Parameters:**

**Test Method/Test Standards:**

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
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
<b><i>Water Test/Rain</i></b>	
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
<b><i>Icing/Freezing Rain</i></b>	
IEC 61730-2; RTCA/DO-160 D-F, Section 24.0; MIL-STD-810 D-G, Section 521, 524; UL 1703	
<b><i>Salt Fog (Spray)</i></b>	
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
<b><i>Immersion</i></b>	
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	



**Test Description/Test Parameters:**

*Solar Radiation*

*(Procedure 1 Heating Effects only)*

*Ingress Protection*

*Packaging Testing*

ISTA Transit Testing Methods

*Fungus*

**Test Method/Test Standards:**

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

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

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

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

<sup>1</sup> 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 17025:2005 *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 8<sup>th</sup> day of May 2018.

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 May 31, 2020  
Revised September 10, 2019

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