



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

KEYSTONE COMPLIANCE
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ELECTRICAL (EMC)

Valid To: May 31, 2018

Certificate Number: 3293.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on telecommunications terminal equipment (TTE), network equipment, information technology equipment (ITE), medical electrical equipment, aerospace components, military equipment, nuclear equipment and commercial and automotive components:

Test:

Test Method:

Emissions

Radiated and Conducted
(up to 40 GHz)

FCC CFR 47 Part 15B (using ANSI C63.4:2014);
 FCC CFR 47 Part 18 (using MP-5:1986);
 ANSI C63.4:2003;
 EN 55011; EN 55022 (2006);
 ICES-001; ICES-003;
 VCCI V-3 *(up to 6 GHz)*;
 MIL-STD-461E/F, Methods RE101, RE102, CE101, CE102;
 EN 55032;
 KN 35; TCVN 7189:2009

Current Harmonics

EN 61000-3-2

Voltage Fluctuations & Flicker

EN 61000-3-3

Conducted Emissions

RTCA/DO-160F, Section 21

150 kHz to 30 MHz (Power Lines)

150 kHz to 100 MHz (Interconnecting Cables)

Radiated Emissions

RTCA/DO-160F, Section 21

150 kHz to 6 GHz

Immunity

ESD

IEC/EN/KN 61000-4-2

Test:**Test Method:*****Immunity (cont.)***

Radiated, Radio-frequency, Electromagnetic Field Immunity Test	IEC/EN/KN 61000-4-3
Electrical Fast Transient/Burst Immunity Test	IEC/EN/KN 61000-4-4
Surge Immunity Test	IEC/EN/KN 61000-4-5
Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields	IEC/EN/KN 61000-4-6
Power Frequency Magnetic Field Immunity Test	IEC/EN/KN 61000-4-8
Pulse Magnetic Field Immunity Test	IEC/EN 61000-4-9
Damped Oscillatory Magnetic Field Immunity Test	IEC/EN 61000-4-10
Voltage Dips, Short Interruptions and Voltage Variations Immunity Test	IEC/EN/KN 61000-4-11
Ring Wave Immunity Test	IEC/EN 61000-4-12
Harmonics and Inter-Harmonics Including Mains Signaling at A.C. Power Port, Low Frequency Immunity Tests	IEC/EN 61000-4-13
Test for Immunity to Conducted, Common Mode Disturbances in the Frequency Range 0 Hz to 150 kHz	IEC/EN 61000-4-16
Radiated Susceptibility	MIL-STD-461E/F, Methods RS101, RS103
Conducted Susceptibility	MIL-STD-461E/F, Methods CS101, CS106, CS114, CS115, CS116
Magnetic Effect	RTCA/DO-160F, Section 15
Power Input	RTCA/DO-160F, Section 16
Voltage Spike	RTCA/DO-160F, Section 17
AF Conducted Susceptibility	RTCA/DO-160F, Section 18



Test:**Test Method:*****Immunity (cont.)***

Induced Susceptibility	RTCA/DO-160F, Section 19
RF Conducted Susceptibility, <i>10 kHz to 400 MHz</i>	RTCA/DO-160F, Section 20
RF Radiated Susceptibility <i>100 MHz to 18 GHz up to 200 V/m (rms)</i>	RTCA/DO-160F, Section 20
Electrostatic Discharge (ESD) <i>15 kV</i>	RTCA/DO-160F, Section 25
Lightning	RTCA/DO-160F, Section 22

Product Family Standards

Medical Equipment	IEC/EN 60601-1-2 (<i>Risk Assessment excluded</i>)
Laboratory Equipment	IEC/EN 61326-1
Information Technology Equipment	IEC/EN 55024; KN 24
Railway Equipment	IEC/EN 50121-4

US NRC EMC Tests

Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety- Related Instrumentation and Control Systems	US NRC Regulatory Guide 1.180, Revision 1
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Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1:

Rule Subpart/Technology	Test Method	Maximum Frequency
Unintentional Radiators Part 15B	ANSI C63.4:2014	40 GHz
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5 (February 1986)	40 GHz





Accredited Laboratory

A2LA has accredited

KEYSTONE COMPLIANCE

New Castle, PA

for technical competence in the field of

Electrical 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 8 January 2009).



Presented this 11th day of July 2016

A handwritten signature in black ink, appearing to read "L. J. ...", positioned above a horizontal line.

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 3293.01
Valid to May 31, 2018
Revised May 10, 2017

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