



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NATIONAL TECHNICAL SYSTEMS (NTS)  
3761 South Central Avenue  
Rockford, IL 61102  
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ELECTRICAL

Valid To: February 29, 2020

Certificate Number: 0214.28

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for the following tests:

**Test Technology:**

**Test Method(s)<sup>1</sup>:**

*Emissions*

Radiated Emissions

47 CFR FCC Parts 15B (using ANSI C63.4:2014);  
47 CFR FCC Part 18 (using MP-5:1986)<sup>2</sup>; VCCI V-3 (up to 6 GHz);  
ANSI C63.4-2009;  
EN 55011; CISPR 11; AS/NZS CISPR 11; KN 11;  
EN 55012; CISPR 12; AS/NZS CISPR 12; KN 12;  
EN 55014-1; CISPR 14-1; AS/NZS CISPR 14-1; KN 14-1;  
EN 55022; CISPR 22; AS/NZS CISPR 22; KN 22;  
EN 55032; CISPR 32; AS/NZS CISPR 32; KN 32;  
EN/IEC 61000-6-3; EN/IEC 61000-6-4;  
AS/NZS 4268 + A1/A2; AS/NZS 4251-1; AS/NZS 4251-2;  
MIL-STD-461 E, F, and G (RE101, RE102, RE103)<sup>3</sup>;  
MIL-STD-462D (RE101, RE102, RE103)<sup>2</sup>;  
MIL-STD-462 (RE01, RE02)<sup>2</sup>;  
RTCA/DO-160 C, D, E, F, G, Section 15<sup>2</sup> and 21<sup>2</sup>

Conducted Emissions<sup>2</sup>

47 CFR FCC Part 15B (using ANSI C63.4:2014);  
47 CFR FCC Part 18 (using MP-5:1986); VCCI V-3;  
ANSI C63.4-2009;  
EN 55011; CISPR 11; AS/NZS CISPR 11; KN 11;  
EN 55012; CISPR 12; AS/NZS CISPR 12; KN 12;  
EN 55014-1; CISPR 14-1; AS/NZS CISPR 14-1; KN 14-1;  
EN 55022; CISPR 22; AS/NZS CISPR 22; KN 22;  
EN 55032; CISPR 32; AS/NZS CISPR 32; KN 32;  
EN/IEC 61000-6-3; EN/IEC 61000-6-4;  
AS/NZS 4268 + A1/A2; AS/NZS 4251-1; AS/NZS 4251-2;  
AS/NZS 4250-1; AS/NZS 4250-2;  
MIL-STD-461 E, F, and G (CE101, CE102, CE106);  
MIL-STD-462 D (CE101, CE102, CE106);  
MIL-STD-462 (CE01, CE03, CE07);  
RTCA/DO-160 C, D, E, F, G, Section 21

Harmonics<sup>2</sup>

EN/IEC 61000-3-2; AS/NZS 61000.3.2

Flicker<sup>2</sup>

EN/IEC 61000-3-3; AS/NZS 61000.3.3

**Test Technology:****Test Method(s)<sup>1</sup>:***Immunity*

Electrostatic Discharge (ESD) <sup>2</sup>	EN/IEC/KN 61000-4-2 <sup>3</sup> ; AS/NZS 61000.4.2 <sup>3</sup> ; RTCA/DO-160 C, D, E, F, G, Section 25; MIL-STD-1686 C; MIL-STD-461G (CS118)
Electrical Fast Transient/Burst <sup>2</sup>	EN/IEC/KN 61000-4-4 <sup>3</sup> ; AS/NZS 61000.4.4 <sup>3</sup>
Surge Immunity <sup>2</sup>	EN/IEC/KN 61000-4-5 <sup>3</sup> ; AS/NZS 61000.4.5 <sup>3</sup> ; IEEE C62.41; IEEE C62.41.1; IEEE C6241.2
Radiated <sup>2</sup>	EN/IEC/KN 61000-4-3 <sup>3</sup> ; AS/NZS 61000.4.3 <sup>3</sup> ; MIL-STD-461 E, F, and G (RS101, RS103, RS105); MIL-STD-462D (RS101, RS103); MIL-STD-462 (RS01, RS02, RS03); RTCA/DO-160 C, D, E, F, G, Section 20
Conducted <sup>2</sup>	EN/IEC/KN 61000-4-6 <sup>3</sup> ; AS/NZS 61000.4.6 <sup>3</sup> ; MIL-STD-461 E, F, and G (CS103, CS104, CS105, CS109, CS114, CS115, CS116); MIL-STD-462D (CS103, CS104, CS105, CS109, CS114, CS115, CS116); MIL-STD-462 (CS01, CS02, CS06); RTCA/DO-160C, D, E, F, G, Section 20
Power Frequency Magnetic Field <sup>2</sup>	EN/IEC/KN 61000-4-8 <sup>3</sup> ; AS/NZS 61000.4.8 <sup>3</sup> ; RTCA/DO-160 C, D, E, F, G, Section 15; MIL-STD-461D, E, F, G, (RS101); MIL-STD-462 (RS01)
Pulsed Magnetic Field <sup>2</sup>	EN/IEC 61000-4-9
Voltage Dips/Interrupts and Variations <sup>2</sup>	EN/IEC/KN 61000-4-11 <sup>3</sup> ; AS/NZS 61000.4.11 <sup>3</sup>
Voltage Spike <sup>2</sup>	RTCA/DO-160 C, D, E, F, G, Section 17; MIL-STD-461F (CS106)
Power Input <sup>2</sup>	RTCA/DO-160 C, D, E, F, G, Section 16; MIL-STD-704 A, B, C, D, E, F, w/ Notice 1
Audio Frequency Conducted Susceptibility <sup>2</sup>	RTCA/DO-160 C, D, E, F, G, Section 18; MIL-STD-461D, E, F, G (CS101); MIL-STD-462 (CS01)
Induced Signal Susceptibility <sup>2</sup>	RTCA/DO-160 C, D, E, F, G, Section 19
Lightning Induced Transient <sup>2</sup>	RTCA/DO-160 C, D, E, F, G, Section 22; MIL-STD-461G (CS117)

*Generic and Product Family Standards*

EN/IEC 61000-6-1; AS/NZS 61000.6.1;  
EN/IEC 61000-6-2; AS/NZS 61000.6.2;  
CISPR 14-2; EN 55014-2; AS/NZS CISPR 14-2;  
CISPR 24; EN 55024; AS/NZS CISPR 24; KN 24; KN 35;  
BS EN/IEC 60601-1-2; BS EN/IEC 60947-1; BS EN/IEC 60439-1;  
BS EN/IEC 61326-1; BS EN/IEC 61326-2; BS EN 50130-4;  
BS EN 50131-1; EN 61800-3; IEC 61800-3 (up to 75A, 1000V);  
BS EN ISO 14982; ISO 14982 (using component methods except  
ISO 7637 and ISO 11452-3)

<sup>1</sup> When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - *General Requirements - Accreditation of ISO-IEC 17025 Laboratories*.

<sup>2</sup> This laboratory meets the requirements in A2LA R104 - *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* to offer field testing services for the noted tests.

<sup>3</sup> The laboratory's accreditation includes all revisions of the noted standards.

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<sup>4</sup>

<b>Rule Subpart/Technology</b>	<b>Test Method</b>	<b>Maximum Frequency (MHz)</b>
<u>Unintentional Radiators</u> Part 15B	ANSI C63.4:2014	10000
<u>Industrial, Scientific, and Medical Equipment</u> Part 18	FCC MP-5 (February 1986)	10000

<sup>4</sup>Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved laboratories.

On the following product types:

Aerospace, Defense, Telecommunications, Electrical, Electronics, Automotive, and Commercial.



# Accredited Laboratory

A2LA has accredited

## NATIONAL TECHNICAL SYSTEMS (NTS)

Rockford, IL

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 April 2017).



Presented this 23<sup>rd</sup> day of July 2018.

A handwritten signature in black ink, appearing to be "L. J. ...".

President and CEO  
For the Accreditation Council  
Certificate Number 0214.28  
Valid to February 29, 2020

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