



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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ELECTRICAL

Valid To: November 30, 2019

Certificate Number: 2829.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on automotive sub-components, information technology equipment (ITE), medical electrical equipment, electric motors, and various electronic and electrical components/systems:

Test Technology:

Test Method(s) ¹:

Automotive EMC

RF Emissions
(Radiated and Conducted)

CISPR 25 (2008); CISPR 25;
EN 55025 (2008); EN 55025;
AS/NZS CISPR 25 (2004); AS/NZS CISPR 25

Electrostatic Discharge (ESD) Immunity

ISO 10605 (2008); ISO 10605

Absorber Lined Shielded Enclosure
(ALSE) RF Immunity

ISO 11452-2 (2004); ISO 11452-2

TEM Cell RF Immunity

ISO 11452-3 (2001); ISO 11452-3

Bulk Current Injection RF Immunity

ISO 11452-4 (2005); ISO 11452-4

Stripline RF Immunity

ISO 11452-5 (2002); ISO 11452-5

Automotive Transient Immunity

ISO 7637-2 (2004); ISO 7637-2;
ISO 7637-3 (2007) (CCC only);
ISO 7637-3 (CCC only)

Electrical Load

ISO 16750-2

Harmonic Current Emissions

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

Voltage Fluctuation &
Flicker Emissions

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

Test Technology:

Test Method(s) ¹:

Immunity

Electrostatic Discharge (ESD) Immunity

EN 61000-4-2 (2009); EN 61000-4-2;
IEC 61000-4-2 (2008); IEC 6100-4-2;
AS/NZS 61000.4.2 (2002); AS/NZS 61000.4.2

Radiated RF Immunity

EN 61000-4-3 (2008); EN 61000-4-3;
IEC 61000-4-3 (2008); IEC 61000-4-3;
AS/NZS 61000.4.3 (2006); AS/NZS 61000.4.3

Electric Fast Transient Burst Immunity

EN 61000-4-4 (2005); EN 61000-4-4;
IEC 61000-4-4 (2004); IEC 61000-4-4;
AS/NZS 61000.4.4 (2006); AS/NZS 61000.4.4

Surge Immunity

EN 61000-4-5 (2006) (*excluding clause 6.2*);
EN 61000-4-5 (*excluding clause 6.2*);
IEC 61000-4-5 (2005) (*excluding clause 6.2*)

Conducted RF Immunity

EN 61000-4-6 (2007); EN 61000-4-6;
IEC 61000-4-6 (2008); IEC 61000-4-6;
AS/NZS 61000.4.6 (2006); AS/NZS 61000.4.6

Power Frequency Magnetic
Field Immunity

EN 61000-4-8 (1994); EN 61000-4-8;
IEC 61000-4-8 (2001); IEC 61000-4-8;
AS/NZS 61000.4.8 (2002); AS/NZS 61000.4.8

Pulse Magnetic Field Immunity

EN 61000-4-9 (1993); EN 61000-4-9;
IEC 61000-4-9 (2001); IEC 61000-4-9

Voltage Dips and Interrupt Immunity

EN 61000-4-11 (2004); EN 61000-4-11;
IEC 61000-4-11 (2004); IEC 61000-4-11;
AS/NZS 61000.4.11 (2004); AS/NZS 61000.4.11

Harmonic and Interharmonic Immunity

IEC 61000-4-13 (2002); IEC 61000-4-13;
EN 61000.4.13 (2009); EN 61000-4-13;
AS/NZS 61000.4.13 (2006); AS/NZS 61000.4.13

DC Dips & Interrupts

AS/NZS/EN/ IEC 61000-4-29

Military EMC

MIL-STD-461E,
(CE101, CE102, RE101, RE102, CS101, CS114,
CS115, CS116, RE101, RE102, RS101, RS103);
MIL-STD-461F,
(CE101, CE102, RE101, RE102, CS101, CS106,
CS114, CS115, CS116, RE101, RE102, RS101,
RS103);
MIL-STD-461D/ MIL-STD-462D,
(CE101, CE102, RE101, RE102, CS101, CS114,
CS115, CS116, RS101, RS103)



Test Technology:

Aircraft

Test Method(s) ¹:

RTCA DO-160F:

- Section 5: Temperature Variation Testing
- Section 6: Humidity Testing
- Section 8: Vibration Testing
- Section 15: Magnetic Effect Testing
- Section 16: Power Input Testing
- Section 18: Audio Frequency Conducted Susceptibility (Power Input Testing)
- Section 20: Radio Frequency Susceptibility (Radiated and Conducted)
- Section 21: Emission of Radio Frequency Energy
- Section 24: Icing Testing (Category A only)
- Section 25: Electrostatic Discharge Immunity

RF Shielding Performance

MIL-STD-285; IEEE 299 ²

RADHAZ (Radiation Hazard)

AS 2772 ²; ARPANSA RHS 30; IEC 62233

Electronic Switches

EN 60669-2-1 (Section 26, *excluding CISPR 14 & CISPR 15 Emissions*);
IEC 60669-2-1 (Section 26, *excluding CISPR 14 & CISPR 15 Emissions*)

Gaming Machine National Standard (GMNS)

AS/NZS GMNS Version 10.3 (Sections 2.3.51 to 2.3.59, 2.4.27, & 2.4.30a to 2.4.30d)

Generic Immunity

EN 61000-6-1; IEC 61000-6-1; AS/NZS 61000-6-1;
EN 61000-6-2; IEC 61000-6-2; AS/NZS 61000-6-2

Household EMC
Household Safety

AS/NZS CISPR 14-2; CISPR 14-2;
IEC 60335-1;
AS/NZS 60335-1 (Sections 14, 15, & 19.11.4);
IEC 61000-4-5 (up to ± 4 KV only)

Information Technology

AS/NZS CISPR 24; CISPR 24

Laboratory

EN 61326-1 (*excluding EN 55011 Emissions*)

Lighting

EN 61547

Maritime

EN 60945 (Sections 5.2.2, 7, 8, & 10)

Medical

EN 60601-1-2 (*excluding CISPR 11, CISPR 14-1, & CISPR 15 Emissions*)

Alarm Systems

EN 50130-4 (*excluding EN 61000-4-20*)

Overhead AC Powerlines &
HV Installations

AS 2344



Test Technology:

Radio Spectrum Matters (ERM)

Railway

Traffic Signals

Environmental Climatic

Temperature/Humidity

Vibration / Shock

1,000 kgf Sine (PK)

1,000 kgf Random (RMS)

2,000 kgf Shock (PK)

(5 to 2,800) Hz

(1 to 2,800) Hz in Manual Mode

Max. Velocity 1.7 m/sec

Max. Acceleration up to 90 g

(bare table)

Max Rated Displacement:

51mm P-P standard

Test Method(s) 1:

ETSI EN 301 489-1

(excluding sections 8.2, 8.3, 8.4, & 8.7);

ETSI EN 300 328; AS/NZS 4268

EN 50121-3-1;

EN 50121-3-2 (Immunity requirements only);

IEC 50155 *(excluding sections 5.1.1.3, 5.1.1.4,*

5.1.2, 5.1.3, 5.1.4, 12.2.8.2, 12.2.9, & 12.2.10);

EN 50155 *(excluding sections 5.1.1.3, 5.1.1.4, 5.1.2,*

5.1.3, 5.1.4, 12.2.8.2, 12.2.9, & 12.2.10)

AS/NZS 2144 *(excluding AS 60068.2.5, and*
sections 5.1, 5.2, & 5.5.7.2);

EN 50293 *(excluding EN 55022 and*

EN 55014 Emissions)

IEC 60068-2-1 (2007); IEC 60068-2-1;

AS 60068.2.1 (2003); AS 60068-2-1;

EN 60068-2-1 (2007); EN 60068-2-1;

IEC 60068-2-2 (2007); IEC 60068-2-2;

EN 60068-2-2 (2007); EN 60068-2-2;

AS 60068.2.2 (2003); AS 60068.2.2;

IEC 60068-2-14 (2009) - Part N;

IEC 60068-2-14 - Part N;

EN 60068-2-14 (2009) - Part N;

EN 60068-2-14 - Part N;

AS 60068-2-14 (2003) - Part N;

AS 60068-2-14 - Part N;

IEC 60068-2-30 (2005); IEC 60068-2-30;

EN 60068-2-30 (2005); EN 60068-2-30;

AS 60068.2.30 (2003); AS 60068-2.30;

MIL-STD-810G

methods 501.5, 502.5, 503.5, & 507.5;

RTCA DO-160G - Section 4 –

Temperature & Altitude *(excluding section 4.6);*

ISO 16750-4 *(excluding ice water shock test and*
gas corrosion test)

IEC 61373; EN 61373;

IEC 60068-2-6; EN 60068-2-6; AS 60068-2-6;

IEC 60068-2-27; EN 60068-2-27; AS 60068-2-27;

MIL-STD-810G;

RTCA DO-160F;

ISO 16750-3 *(vibration only)*

Test Technology:

Test Method(s) ¹:

Ingress Protection

AS 60529; IEC 60529; EN 60529;
MIL-STD-810G method 5010.5;
NEMA 250;
ISO 20653

UV

EN ISO 4892-1:2016;
EN ISO 4892-3:2016

Flammability

AS/NZS 60695.2.10:2001;
AS/NZS 60695.2.11:2001;
RTCA DO-160G - Section 26 - Fire, Flammability

Salt

MIL-STD 810G - Method 509.5 - Salt Fog;
AS 60068.2.11:2003; AS 60068.2.52:2003;
RTCA DO-160G - Section 14 - Salt Fog

¹ When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is expected 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*.

² This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.



Accredited Laboratory

A2LA has accredited

COMPLIANCE ENGINEERING PTY LTD

Keysborough, Victoria, Australia

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 30th day of May 2018

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 2829.01
Valid to November 30, 2019

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