SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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ELECTRICAL

Valid To: May 31, 2018 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]:**
RF Emissions (Radiated and Conducted)	CISPR 25 (2008); CISPR 25; EN 55025 (2008); EN 55025; AS/NZS CISPR 25 (2004); AS/NZS CISPR 25
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
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; ISO 10605 (2008); ISO 10605
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; ISO 11452-2 (2004); ISO 11452-2
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*);

Test Technology:	**Test Method(s)[1]:**
Surge Immunity *(Cont.)*	IEC 61000-4-5 (*excluding clause 6.2*); AS/NZS 61000.4.5 (2006) (*excluding clause 6.2*); AS/NZS 61000.4.5 (*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
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)
Aircraft	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
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

Test Technology:	**Test Method(s)[1]:**
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)
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, e*xcluding 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 CSIPR 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
Radio Spectrum Matters (ERM)	ETSI EN 301 489-1 (*excluding sections 8.2, 8.3, 8.4, & 8.7*); ETSI EN 300 328 V1.8.1; AS/NZS 4268
Railway	EN 50121-3-1; EN 50121-3-2 (Immunity requirements only);

Test Technology:	**Test Method(s)[1]:**
Railway *(Cont.)*	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*)
Traffic Signals	AS/NZS 2144 (*excluding AS 60068.2.5, sections 5.1, 5.2, & 5.5.7.2*); EN 50293 (*excluding EN 55022 and EN 55014 Emissions*)
Environmental Climatic Temperature/Humidity	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
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	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
Ingress Protection	AS 60529; IEC 60529; EN 60529; MIL-STD-810G method 5010.5; NEMA 250; ISO 20653
Impact	EN 60068-2-75 (1997) Hammer Testing (Eh); EN 60068-2-75 Hammer Testing (Eh); IEC 60068-2-75 (1997) Hammer Testing (Eh); IEC 60068-2-75 Hammer Testing (Eh); AS 60068.2.75 (2003) Hammer Testing (Eh); AS 60068.2.75 Hammer Testing (Eh)

[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

Knoxfield, 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 8 January 2009*).

Presented this 9th day of November 2015.

President and CEO
For the Accreditation Council
Certificate Number 2829.01
Valid to May 31, 2018
Revised April 27, 2018

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