



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELECTRONIC TEST CENTRE-AIRDRIE (MPB TECHNOLOGIES INC.)

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ELECTRICAL

Valid To: November 30, 2020

Certificate Number: 2750.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility and product safety tests:

<u>Test</u>	<u>Test Method¹</u>
<i>Emissions</i> Radiated and Conducted	47 CFR FCC Part 15B (using ANSI C63.4:2003, 2009, and 2014); 47 CFR FCC Part 15C (using ANSI C63.4:2009, 2013); 47 CFR FCC Part 18 (using FCC/OET MP-5:1986); ICES-001; ICES-003; CISPR 11; EN 55011; CISPR 22; EN 55022; CISPR 25; CISPR 32; EN 55032; IEC 60945; RSS-GEN; RSS-210; RSS-247; RSS-102 (RF exp.); RTCA/DO-160, Section 21 D, E, F, G; ETSI EN 300 220-1 V3.1.1 (Clause 5.9); ETSI EN 300 220-2 V3.1.1 (Clause 4.2.2); ETSI EN 300 487 V2.1.2 (Clause 5); ETSI EN 300 328 V2.1.1 (Clause 4.3.1.10, 4.3.1.11, 4.3.2.9, 4.3.2.10, 5.4.9, 5.4.10)
Harmonics	EN 61000-3-2; IEC 61000-3-2
Flicker	EN 61000-3-3; IEC 61000-3-3
Magnetic Effects	RTCA/DO-160, Section 15 D, E, F, G

<u>Test</u>	<u>Test Method</u> ¹
<i>Immunity</i>	
Electrostatic Discharge (ESD)	EN 61000-4-2; IEC 61000-4-2; RTCA/DO-160, Section 25 D, E, F, G; ISO 14982; CLAAS CN 050215; ISO 10605
Radiated	EN 61000-4-3; IEC 61000-4-3; ISO 11452-2; IEEE C37.90.2
Electrical Fast Transient/Burst	EN 61000-4-4; IEC 61000-4-4
Surge Immunity	EN 61000-4-5; IEC 61000-4-5
Conducted	EN 61000-4-6; IEC 61000-4-6; ISO 11452-4
Power Frequency Magnetic Field	EN 61000-4-8; IEC 61000-4-8; AS/NZS 61000-4-8
Ripple on DC Input Power Port	IEC 61000-4-17
Automotive Transient	ISO 7637-1 :1990; ISO 7637-2 :1990, 2004, 2011; ISO 7637-3 :2007, 2014
Power Input	RTCA/DO-160 D, E, F, G, Section 16
Voltage Spike	RTCA/DO-160 D, E, F, G, Section 17
Audio Frequency Conducted Susceptibility - Power Inputs	RTCA/DO-160 D, E, F, G, Section 18
Induced Signal Susceptibility	RTCA/DO-160 D, E, F, G, Section 19
Radio Frequency Susceptibility (Conducted & Radiated)	RTCA/DO-160 D, E, F, G, Section 20 (Category S and T for Radiated Susceptibility)
<i>Military EMC</i>	MIL-STD-461G (CE101, CE102, RE101, RE102, CS101, CS114, RS101, RS103 (up to 60V/M))

Test

Test Method¹

Generic and Product Family Standards

CISPR 24;
CISPR 35;
EN 55024;
CISPR 25, Section 6;
EN 60601-1-2;
IEC 61326;
EN 61326;
ISO 14982, Section 6;
ISO 13766, Section 5.6, 5.7, 5.8, 5.9;
EN 13309, Section 4.5, 4.6, 4.7, 4.8;
IEC 60945;
EN 61000-6-1;
EN 61000-6-2;
EN 61000-6-3 (*excluding discontinuous disturbances*);
EN 61000-6-4 (*excluding discontinuous disturbances*);
EN 50121-4:2015;
EN 50121-3-2:2015;
ETSI EN 301 489-1; ETSI EN 301 489-2;
ETSI EN 301 489-3; ETSI EN 301 489-5;
ETSI EN 301 489-7; ETSI EN 301 489-17;
ETSI EN 301 489-19

Product Safety

Insulation Resistance and
Dielectric Withstand Voltage

IEC 60225-5, Section 6.1 (DC – 6kV Maximum,
AC – 5kV Maximum)

¹When 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*.



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.1²

Rule Subpart/Technology	Test Method	Maximum Frequency (MHz)
<u>Unintentional Radiators</u> Part 15B	ANSI C63.4:2014	40000 MHz
<u>Industrial, Scientific, and Medical Equipment</u> Part 18	FCC MP-5:1986	40000 MHz
<u>Intentional Radiators</u> Part 15C	ANSI C63.10:2013	40000 MHz

²Accreditation 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.





Accredited Laboratory

A2LA has accredited

ELECTRONICS TEST CENTRE – AIRDRIE (MPB TECHNOLOGIES INC.)

Airdrie, Alberta, Canada

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *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 15th day of January 2019.

A blue ink signature of the Senior Director, Accreditation Services, written over a horizontal line.

Senior Director, Accreditation Services
For the Accreditation Council
Certificate Number 2750.01
Valid to November 30, 2020

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