SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: June 30, 2027 Certificate Number: 3310.04

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the organization's compliance with A2LA's R256 Specific requirements) accreditation is granted to this laboratory to perform the following EMC, Product Safety, Radio, and Telecommunication tests on IT/Multimedia Equipment, Audio Equipment, Industrial Equipment, Radio Equipment, and Cellular Devices:

Test Technology:	**Test Method(s) [2]:**
Emissions	
Conducted and Radiated	
U.S. / Canada	47 CFR FCC Part 15 Subpart B (using ANSI C63.4-2014[3]); 47 CFR FCC Part 18 (using FCC MP-5:1986); ICES-GEN (Issue 2, February 2024); ICES-001 (Issue 5, July 2020); ICES-002 (Issue 7, September 2020); ICES-003 (Issue 7, October 2020); ICES-004 (Issue 5, October, 2022); ICES-005 (Issue 5, December 2018); ICES-006 (Issue 3, July 2018)
International	IEC/CISPR 11 Ed. 6.0 (2015) +A1 (2016); CISPR 11 Ed. 6.2 (2019); CISPR 11: 2015 A1:2016 A2:2019; IEC/CISPR 11 Ed. 4.1 (2004-06) +A2 (2006); IEC/CISPR 11 Ed. 5 (2009-05) +A1 (2010); IEC/CISPR 11:2024; CISPR 12 (2007) + A1 (2009); CISPR 14-1:2020; CISPR 14-1 (2005) + A1 (2008) + A2 (2011); CISPR 14-1 (2016); CISPR 14-2 (2020); IEC/CISPR 22 Ed. 5 (2005) +A1(2005) +A2 (2006); IEC/CISPR 22 Ed. 6.0 (2008-09); CISPR 32 Ed. 2.1 (2015) + A1(2019); CISPR 32 Ed. 1 (2012-01); CISPR 16-2-1:2014; CISPR 16-2-1:2014+A1:2017; CISPR 16-2-2:2010; CISPR 16-2-3:2016; CISPR 16-2-3:2019

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Test Technology:	**Test Method(s)** [2]**:**
Europe	EN 55011:2016 +A1:2017 +A11:2020 +A2:2021; EN 55011:2016 +A1:2017 +A2:2021; EN 55014-1 (2006) + A1(2009) +A2(2011); EN 55014-1:2017+A11:2020; EN 55032 (2015) +AC(2016) +(2012-05); EN 55032:2015 +A1:2019; EN 55032:2015 + AC:2016-07+A11:2020+A1:2020; EN/IEC 55014-1:2021
Australia / New Zealand	AS/NZS CISPR 32:2015 AMD 1:2020; AS CISPR 11 (2017); AS/NZS 2772.2:2016 AMDT 1:2018; AS/NZS CISPR 12 (2013)
Israel	SI 961 Part 32 (2016); SI 961 Part 35 (replaces part 24)
Japan	VCCI-CISPR 32 (2016); VCCI V-3:2016; JIS C 61326-1; JIS T 0601-1-2
Korea	KS C 3143; KS C 9811; KS C 9814-1; KS C 9832; KS C 9816-2-1; KS C 9816-2-2; KS C 9816-2-3; KS C 9995
South Africa	SANS 211 Ed. 4.1 (2010); SANS 213 Ed. 4 (2011); SANS 214-1 Ed. 3.1 + CISPR-A2 (2009); SANS 215 Ed. 4.2 (2009); SANS 222 Ed. 6 (2009); SANS 2332 Ed. 1 (2017), SANS 2335(2018)
Taiwan	CNS 15936:2016; CNS 13803
Harmonic Current Emissions	IEC 61000-3-2; EN 61000-3-2; KS C 9610-3-2; SANS 61000-3-2 Ed. 3.2 (2009); IEC 61000-3-11 (2017)
Voltage Fluctuations and Flicker	IEC 61000-3-3; EN 61000-3-3; KS C 9610-3-3; SANS 61000-3-3 Ed. 2 (2009); IEC 61000-3-12 Ed. 2.0 (2011); EN 61000-3-12 (2011)
Immunity	
Electrostatic Discharge (ESD)	IEC 61000-4-2; EN 61000-4-2; IEC 61000-4-2 Ed. 2.0 (2008-12); KS C 9610-4-2; SANS 61000-4-2 Ed. 2 (2009)
Radiated Immunity	IEC 61000-4-3; EN 61000-4-3; EN 61000-4-3 (2006) +A1 (2008) +A2 (2010); KS C 9610-4-3; SANS 61000-4-3 Ed. 3.1 (2008)
Electrical Fast Transient/Burst (EFT)	IEC 61000-4-4; EN 61000-4-4; IEC 61000-4-4 (2012-04) + Ed. 2.0 (2004-07)+A1 (2010); KS C 9610-4-4; SANS 61000-4-4 Ed. 2.1 (2011)

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Test Technology:	**Test Method(s) [2]:**
Surge	IEC 61000-4-5; EN 61000-4-5; IEC 61000-4-5 Ed. 3.1 (2017); IEC 61000-4-5 Ed. 3.0 (May 2014); IEC 61000-4-5 Ed. 1.1 (2005-11); EN 61000-4-5 (2014)+A1(2017); KS C 9610-4-5; SANS 61000-4-5 Ed. 2 (2006)
Conducted Immunity	IEC 61000-4-6; EN 61000-4-6; IEC 61000-4-6 Ed. 4.0 (2013); IEC 61000-4-6 Ed. 4 (2008); KS C 9610-4-6; SANS 61000-4-6 Ed. 4 (2017)
Magnetic Field	IEC 61000-4-8; EN 61000-4-8; IEC 61000-4-8, Ed. 1.1 (2001); IEC 61000-4-8 (2009); KS C 9610-4-8; SANS 61000-4-8, Ed. 2 (2009)
Pulsed Magnetic Field	IEC 61000-4-9; EN 61000-4-9; BS EN 61000-4-9 (2016); SANS 61000-4-9 Ed. 1.1 (2003); IEC 61000-4-9 (2016); KS C 9610-4-9
Damped Oscillatory Magnetic Field	IEC 61000-4-10; EN 61000-4-10; IEC 61000-4-10 (2016); SANS 61000-4-10 Ed. 1.1 (2003)
Voltage Dips, Short Interruptions and Voltage Variations	IEC 61000-4-11; EN 61000-4-11; IEC 61000-4-11, Ed. 2.1 (2017); EN 61000-4-11 (2004) +A1 (2017); IEC 61000-4-11 Ed. 2 (2004-03); SANS 61000-4-11 Ed. 1 (2005); KS C 9610-4-11
Mains Harmonics and Interharmonics	IEC 61000-4-13; EN 61000-4-13; SANS 61000-4-13 Ed. 1.1 (2009)
Mains Voltage Fluctuations	IEC 61000-4-14; EN 61000-4-14; IEC 61000-4-14:1999 + AMD1:2001 + AMD2:2009; SANS 61000-4-14 Ed. 1.2 (2009)
Conducted Common Mode Disturbances	IEC 61000-4-16; EN 61000-4-16; IEC 61000-4-16 Ed. 2.0 (2015); BS EN 61000-4-16 (2016); SANS 61000-4-16, Ed. 1.2 (2011)
DC Ripple Input Power	IEC 61000-4-17; EN 61000-4-17; EN 61000-4-17:1999+A2:2009; IEC 61000-4-17 Ed. 1.2 (2009)
Variation of Power Frequency	IEC 61000-4-28; EN 61000-4-28; IEC 61000-4-28 (1999) + A1 (2001) + A2 (2009); SANS 61000-4-28 Ed. 2.1 (2009)
Voltage Dips, Short Interruptions and Voltage Variations on DC Input Power Port	IEC 61000-4-29; EN 61000-4-29; IEC 61000-4-29 (2000); SANS 61000-4-29 Ed. 1 (2005)
Radiated Fields in Close Proximity	IEC 61000-4-39; EN 61000-4-39; IEC 61000-4-39 (2017)

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Test Technology:	**Test Method(s) [2]:**
Generic / Product Family / Product Specific EMC Standards	IEC 61000-6-1 (2016); IEC 61000-6-1, Ed. 2 (2005-03); EN 61000-6-1 (2007); KS C 9610-6-1; EN 61000-6-2 (2016); EN 61000-6-2 (2005) + AC (2005); IEC 61000-6-2 (2016); EN IEC 61000-6-2 (2019); IEC 61000-6-2 Ed. 2.0 (2005-01); EN 61000-6-2 (2005); KS C 9610-6-2; KS C 9610-6-3; KS C 9610-6-4; EN 61000-6-3 (2007) + A1 (2011) + AC (2012); EN IEC 61000-6-3:2021; IEC 61000-6-8:2020; EN 61000-6-4 (2007) + A1 (2011); IEC 61000-6-3 (2020); IEC 61000-6-4 (2018); EN 61326-2-1 (2013); IEC 61326-2-1 (2020); EN IEC 61326-2-1:2021; IEC 61326-2-6 Ed. 2.0 (2012); EN IEC 61326-2-6:2021; IEC 61326-3-1 (2008) + (2017); TCVN 7317:2003 (CISPR 24:1997); AIM 7351731 (2017); AIM 7351731-2021; IEC CISPR 14-2:2020; CISPR 14-2 Ed. 2. (2015); IEC/CISPR 14-2 Ed. 1.2 (2008); CISPR 35 (2016); EN 55035 (2020); KS C 9814-2; KS C 9835; SANS 60601-1-2 Ed. 4 (2018); IEC 60601-1-2 Ed. 2.1 (2004-11); IEC 60601-1-2 Ed. 3.0 (2007); IEC 60601-1-2 Ed. 4.0 (2014)+A1 (2020); KS C IEC 60601-1-2; IEC 60601-1-2 Ed. 4.0 (2014); EN 60601-1-2 (2002); EN 60601-1-2 (2007); EN 60601-1-2 (2015); EN 60601-1-2:2015 +A1:2021; IEC 60601-1-11; EN 60601-1-11; ANSI/AAMI HA60601-1-11; CSA 60601-1-11 clause 12; IEC 60601-1-12; EN 60601-1-12; ANSI/AAMI/IEC 60601-1-12; CSA 60601-1-12 clause 11 (for land-based use); IEC TS 60601-4-2:2024-03; IEC 60601-2-2 (2018), clause 202, Annex BB; IEC 60601-2-2 (2023); IEC 60601-2-4 Ed. 3.0 (2010), clause 202; IEC 60601-2-4:2010 AMD1:2018, clause 202; IEC 60601-2-10:2012 + A1:2016, clause 202; IEC 60601-2-10:2012 + A1:2016 + A2:2023, clause 202; IEC 60601-2-25 Ed. 2.0, (2011-10), clause 202; IEC 60601-2-27 Ed. 3.0 (2011), clause 202; IEC 60601-2-30, clause 202; IEC 60601-2-31 (2008)+A1 (2011), clause 202; IEC 60601-2-31 (2020), clause 202; EN 60601-2-37 (2008) + A1 (2015), clause 202; IEC 60601-2-62:2013, clause 202; IEC 60601-2-47 Ed. 2.0 (2012-02), clause 202; IEC 60601-2-49 (2011), clause 202; EN 60601-2-49 (2015), clause 202; IEC 80601-2-49 (2018), clause 202; ISO 80601-2-55 (2018), clause 202; IEC 60601-2-5: 2009, clause 202; IEC 60601-2-50, Edition 2.1 (2016-04); IEC 60601-2-50:2021; ISO 80601-2-56, clause 202; IEC 80601-2-58:2024

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Test Technology:	**Test Method(s)** [2]**:**
Generic / Product Family / Product Specific EMC Standards (cont.)	IEC 80601-2-30; EN 80601-2-30; ANSI/AAMI/IEC 80601-2-30, clause 202; ISO 80601-2-61 (2017), clause 202; ISO 80601-2-61 (2011), clause 202; ISO 9919 Ed. 2.0 (2005), clause 36; IEC 80601-2-77:2019+A1:2023; EN IEC 80601-2-77:2021+A1:2023; ANSI/AAMI/IEC 80601-2-77:2020; CAN/CSA-C22.2 No. 80601-2-77:19, clause 202; ISO 14117 (2012) sections 4 and 5; ISO 14117 (2019); ISO 14708-1 (2014) clause 27; ISO 14708-3 (2017-04) clause 27; ISO 14708-4 (2008-11-15) clause 27; ISO 14708-4:2022 Clause 27; EN 60945 (2002) [*excluding clauses 8 and 11*]; IEC 60945 (2002) [*excluding clauses 8 and 11*]; GR-1089-CORE, Issue 7; IEC 61000-6-7 (2014); IEC 61000-6-8 (2020); EN 50293:2012; EN 50270:2015; IEC 61131-2 (2017) Sec. 7.3; IEC 61131-6 (2012); EN 61131-6 (2013); EN IEC 61326-1 (2021); IEC 61326-1 (2020); EN 61326-1 (2013); Lloyd's Register - LR Type; Approval System Test Specification 1 (2013, 2015); EN 50130-4 (2011) +A1 (2014); EN 55014-2 (1997); EN 55014-2 (1997) +A1 (2001)+A2 (2008); IEC 60730-1 Ed. 4.0 (2010) +(2013); EN 60730-1 (2011); EN 60730-1:2016 +A2:2022; EN 60730-2-14:2019; IEC 62040-1-2 (2002); EN 12895:2015+A1:2019
Product Safety MED (excluding Risk Assessment, Defibrillation Protection, Cathode Ray Tube, Hand-transmitted Vibration, X-radiation, Ingress of Water or Particulate Matter, IP Testing, and Protection against Hazards of Ignition of Flammable Anesthetic Mixtures, Pressure Test)	IEC 60601-1; EN 60601-1; CAN/CSA-C22.2 No. 60601-1; IEC 60601-1:2005 + A1 (2012); IEC 60601-1:2005+AMD1:2012+AMD2:2020; ANSI/AAMI ES60601-1; ANSI/AAMI ES60601-1:2005/A2:2021; ANSI/AAMI ES60601-1:2005/(R)2012 & A1:2012, C1:2009/(R)2012 & A2:2010/(R)2012 (Cons. Text) [Incl. AMD2:2021] (excluding 8.5.5, 9.6.3, 10.1) IEC 60601-1-6; IEC 60601-1-6:2010+AMD1:2013+AMD2:2020; EN 60601-1-6; CAN/CSA-C22.2 No. 60601-1-6; IEC 60601-1-8, EN 60601-1-8; ANSI/AAMI/IEC 60601-1-8; CAN/CSA-C22.2 No. 60601-1-8 (excluding 6.3.3.1 and 6.3.3.2); IEC 60601-1-11; EN 60601-1-11; ANSI/AAMI HA60601-1-11; CAN/CSA-C22.2 No. 60601-1-11 excluding 8.3.2, 10.1.2, 10.1.3, and 13.1; IEC 60601-1-12; EN 60601-1-12; ANSI/AAMI/IEC 60601-1-12; CAN/CSA-C22.2 No. 60601-1-12; ANSI/AAMI/IEC 60601-1-12:2016 [Including AMD 1:2021] excluding 8.1.1, 8.1.2, 10.1.2, 10,1.3, 10.1.4, 11 (for aircraft use)

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Test Technology:	**Test Method(s) [2]:**
MED (excluding Risk Assessment, Defibrillation Protection, Cathode Ray Tube, Hand-transmitted Vibration, X-radiation, Ingress of Water or Particulate Matter, IP Testing, and Protection against Hazards of Ignition of Flammable Anesthetic Mixtures, Pressure Test) (cont.)	IEC 60601-2-10:2012+AMD1:2016+AMD2:2023 CSV; IEC 60601-2-10; EN 60601-2-10; CAN/CSA-C22.2 No. 60601-2-10; IEC 60601-2-22; EN 60601-2-22; CAN/CSA-C22.2 No. 60601-2-22 excluding 201.12.1.101, 201.12.4.2, 201.13.1.101, 201.13.2; IEC 60601-2-24; EN 60601-2-24; IEC 60601-2-30; EN 60601-2-30; IEC 60601-2-57 Edition 1.0 2011-01; IEC 60601-2-57; EN 60601-2-57; CAN/CSA-C22.2 No. 60601-2-57, (excluding 201.6.1.102, 201.10.103, 201.13.1.101); IEC 60601-2-62:2013; EN 60601-2-62:2015; CAN/CSA-C22.2 No. 60601-2-62:15, (excluding 201.10.102); IEC 60601-2-83; EN 60601-2-83; CAN/CSA-C22.2 No. 60601-2-83, (excluding 201.6.101, 201.10.107); IEC 80601-2-30; EN 80601-2-30; ANSI/AAMI/IEC 80601-2-30 (excluding 201.15.3.5); IEC 80601-2-60; EN 80601-2-60; CAN/CSA-C22.2 No. 80601-2-60, (excluding 201.10.4); ISO 80601-2-61; EN 80601-2-61; CAN/CSA-C22.2 No. 80601-2-61; IEC 80601-2-77:2019+A1:2023; EN IEC 80601-2-77:2021+A1:2023; ANSI/AAMI/IEC 80601-2-77:2020; CAN/CSA-C22.2 No. 80601-2-77:19; IEC 60601-2-5:2009; EN 60601-2-5:2015; CSA C22.2 No. 60601-2-5:11
MEAS (excluding Flammability Test, Ionizing Radiation, UV Radiation, Microwave Radiation, Ultrasonic Pressure, and IP Testing)	IEC 61010-1; EN 61010-1; UL 61010-1; CAN/CSA-C22.2 No. 61010-1; IEC 61010-2-010; EN 61010-2-010; UL 61010-2-010; CAN/CSA-C22.2 No. 61010-2-010; IEC 61010-2-030; EN 61010-2-030; UL 61010-2-030; CAN/CSA-C22.2 No. 61010-2-030; IEC 61010-2-030:2010; IEC 61010-2-040; EN 61010-2-040; UL 61010-2-040; CAN/CSA-C22.2 No. 61010-2-040; IEC 61010-2-081:2019; IEC 61010-2-081; EN 61010-2-081; UL 61010-2-081; CAN/CSA-C22.2 No. 61010-2-081; IEC 61010-2-101; EN 61010-2-101; UL 61010-2-101; CAN/CSA-C22.2 No. 61010-2-101
HOUS (excluding Transient Over Voltages, Resistance to Rusting, Radiation and similar Hazards, Software Evaluation, UV-C Radiation Effect on Non-Metallic Materials)	IEC 60335-1; EN 60335-1; UL 60335-1; CAN/CSA-C22.2 No. 60335-1; IEC 60335-2-45 Ed. 3.2 (2012)

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Test Technology:	**Test Method(s)** [2]**:**
ITAV (excluding Cathode Ray Tube, Flammable Liquids, Ionizing Radiation, Effect of UV Radiation on Material, Mandrel Test and Operating Voltages Test)	IEC 62368-1; EN 62368-1; UL 62368-1; CAN/CSA-C22.2 No. 62368-1; IEC 62368-1:2014; EN 62368-1:2014; IEC 62368-1:2018; IEC 62368-1:2023; EN 62368-1:2024; CSA C22.2 NO. 62368-1-19; UL 62368-1:2019; EN 13611 (2015) + A1 (2016); EN 298 (2012); EN 50156-1 (2015) + A1 (2016)
Radio	
US (FCC)	47 CFR FCC Part 15, Subpart C (using ANSI C63.10;2013); 47 CFR FCC Part 15, Subpart D (using ANSI C63.17:2013); 47 CFR FCC Part 15, Subpart E (using ANSI C63.10:2013 and FCC KDB Publication 905462 D02 (v02)); KDB 291074 D02; 47 CFR FCC Part 15, Subpart F/G/H (using ANSI C63.10:2013); 47 CFR FCC Parts 20, 22, 24, 25, 27, 30, 80, 87, 90, 95, 96, 97, and 101 (using ANSI C63.26:2015 and TIA-102.CAAA-E, ANSI/TIA-603-E); ANSI C63.10:2020; ANSI C63.10a:2024; ANSI C63.27 (2017); ANSI C63.27:2021; ANSI C63.30-2021
Canada (ISED) (up to 220 GHz)	RSS-111; RSS-117; RSS-119; RSS-123; RSS-130; RSS-131; RSS-132; RSS-133; RSS-134; RSS-139; RSS-140; RSS-142; RSS-170; RSS-181; RSS-182; RSS-192; RSS-194; RSS-195; RSS-196; RSS-197; RSS-198; RSS-199; RSS-210; RSS-211; RSS-216; RSS-220; RSS-222; RSS-236; RSS-238; RSS-243; RSS-244; RSS-246; RSS-247; RSS-248; RSS-251; RSS-252; RSS-287; RSS-310; RSS-GEN
Europe (excluding Protocol Testing)	ETSI EN 300 220-1 V3.1.1 (2017-02); ETSI EN 300 220-2 V3.1.1 (2017-02); ETSI EN 300 220-2 V3.2.1 (2018-06); ETSI EN 300 220-3-1 V2.1.1 (2016-12); ETSI EN 300 220-3-2 V1.1.1 (2017-02); ETSI EN 300 220-4 V1.1.1 (2017-02); ETSI EN 300 328 V2.2.2 (2019-07); ETSI EN 300 330 V2.1.1 (2017-02); ETSI EN 300 422-1 V2.1.2 (2017-01); ETSI EN 300 422-1 V2.2.2 (2021-11); ETSI EN 300 422-2 V2.1.1 (2017-02); ETSI EN 300 422-3 V2.1.1 (2017-02); ETSI EN 300 422-4 V2.1.1 (2017-05); ETSI EN 300 440 V2.1.1 (2017-03); ETSI EN 300 440 V2.2.1 (2018-07); ETSI EN 301 166 V2.1.1 (2016-11); ETSI EN 301 357 V2.1.1 (2017-06); ETSI EN 301 502 V12.5.2 (2017-03); ETSI EN 301 511 V12.5.1 (2017-03); ETSI EN 301 511 V12.1.1 (2015-06); ETSI EN 301 839 V2.1.1 (2016-04)

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Test Technology:	**Test Method(s) [2]:**
Europe (excluding Protocol Testing) (cont.)	ETSI EN 301 839 v2.2.1 (2024-11); ETSI EN 301 893 V2.1.1 (2017-05); ETSI EN 301 893 V2.2.1: (2024-11); ETSI EN 301 908-1 V13.1.1 (2019-11); ETSI EN 301 908-1 V15.1.1 (2021-09); ETSI EN 301 908-1 V15.2.1:2023-01; ETSI EN 301 908-2 V13.1.1 (2020-06); ETSI EN 301 908-2 V11.1.2 (2017-08); ETSI EN 301 908-3 V11.1.3 (2017-04); ETSI EN 301 908-3 V13.1.1 (2019-09); ETSI EN 301 908-11 V11.1.2 (2017-01); ETSI EN 301 908-13 V11.1.1 (2016-07); ETSI EN 301 908-13 V11.1.2 (2017-07); ETSI EN 301 908-13 V13.2.1 (2022-02); ETSI EN 301 908-14 V13.1.1 (2019-09); ETSI EN 301 908-14 V15.1.1 (2021-09); ETSI EN 301 908-15 V11.1.2 (2017-01); ETSI EN 301 908-15 V15.1.1 (2020-01); ETSI EN 302 195 V2.1.1 (2016-06); ETSI EN 302 208 V3.3.1 (2020-05); ETSI EN 302 208 V3.4.1 (2023-12); ETSI EN 302 537 V2.1.1 (2016-10); ETSI EN 303 413 V1.1.1 (2017-06); ETSI EN 303 413 V1.2.1 (2021-04); ETSI EN 303 417 V1.1.1 (2017-09); ETSI EN 303 687 V1.1.1 (2023-06); ETSI EN 301 489-1 V2.1.1 (2017-02); ETSI EN 301 489-1 V2.2.3 (2019-11); ETSI EN 301 489-3 V2.3.2 (2023-01); ETSI EN 301 489-3 V2.1.1 (2019-03); ETSI EN 301 489-3 V2.3.2 (2023-01); ETSI EN 301 489-5 V2.2.1 (2019-04); ETSI EN 301 489-5 V2.1.1 (2016-11); ETSI EN 301 489-6 V2.1.1 (2016-11); ETSI EN 301 489-6 V2.2.1 (2019-04); ETSI EN 301 489-9 V1.4.1 (2007-11); ETSI EN 301 489-9 V2.1.1 (2019-04); ETSI EN 301 489-17 V3.1.1 (2017-02); ETSI EN 301 489-17 V3.2.4 (2020-09); ETSI EN 301 489-19 V2.1.1 (2019-04); ETSI EN 301 489-19 v2.2.1 (2022-09); ETSI EN 301 489-27 V2.1.1 (2016-12); ETSI EN 301 489-27 V2.2.1 (2019-04); ETSI EN 301 489-29 V2.1.1 (2016-12); ETSI EN 301 489-29 V2.2.1 (2019-04); ETSI EN 301 489-31 V2.1.1 (2016-11); ETSI EN 301 489-31 V2.2.1 (2019-04); ETSI EN 301 489-33 V2.1.1 (2016-11); ETSI EN 301 489-34 V2.1.1 (2019-04)

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Test Technology:	**Test Method(s)** [2]**:**
Europe (excluding Protocol Testing) (cont.)	ETSI EN 301 489-35 V.2.1 (2016-12); ETSI EN 301 489-50 V2.1.1 (2017-02); ETSI EN 301 489-50 V2.3.1 (2021-03); ETSI EN 301 489-51 V2.1.1 (2019-04); ETSI EN 301 489-52 V1.2.1 (2021-11); ETSI EN 301 489-52 V1.3.1 (2024-11); ETSI EN 303 454 V1.1.1 (2018-01)
Hong Kong	HKCA 1007, Issue 5 (March 2012); HKCA 1008, Issue 4 (November 2013); HKCA 1033, Issue 7 (March 2012); HKCA 1035, Issue 7 (May 2016); HKCA 1039, Issue 6 (June 2015); HKCA 1039, Issue 7 (August 2024); HKCA 1041, Issue 1 (February 2003); HKCA 1042, Issue 2 (February 2003); HKCA 1043, Issue 4 (June 2008); HKCA 1048, Issue 2, (June 2008); HKCA 1049, Issue 1 (April 2005); HKCA 1052, Issue 4 (June 2022); HKCA 1081, Issue 1 (April 2022)
Korea	KS X 3123; KS X 3124; KS X 3125; KS X 3126; KS X 3134; KS X 3270; KSX 3271; KS X 3129; Equipment to be Subject of Test Procedure for Electromagnetic Field Strength and Specific Absorption Rate (RRA Public Notification 2023-12, Jun 30, 2023); RRA Public Notification 2019-32, Dec 31, 2019; Technical Requirements for the Human Protection against Electromagnetic Waves (MSIT Public Notification 2019-4, Jan 16, 2019); Technical Requirements for Measurement of Electromagnetic Field Strength (RRA Public Notification 2023-11, Jun 30, 2023); Notice on Conformity Assessment of Broadcasting and Communications Equipment (RRA Public Notification 2023-3, Feb 3, 2023); Unlicensed Radio Equipment Established Without Notice (MSIT Public Notification 2023-18, June 20, 2023); Unlicensed Radio Equipment Established Without Notice (MSIT Public Notification 2024-10, July 5, 2024); RRA Announce 2011-32, K only (Dec 27, 2011); RRA Public Notification 2012-21 (Nov. 06, 2012); RRA Announce 2013-33, (Jul 26, 2013) Korean only; RRA Notice 2014-2, K only (Feb. 4, 2014); RRA Announce 2014-90 (Dec. 23, 2014); RRA Announce 2015-81 (Sep. 30, 2015) Korea only; RRA Announce 2015-135 (Jan. 5, 2016); RRA Notice 2017-7, Korean only (Aug. 4, 2017); RRA Public Notification 2015-23 (Nov. 18 2015); RRA Public Notification 2017-8 (Aug. 28 2017)

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Test Technology:	**Test Method(s) [2]:**
Korea (cont.)	RRA Public Notification 2011-24 (Dec. 23, 2011); RRA Announce 2012-21, K only (Jun. 28, 2012); RRA 2013-3 and 2013-24, June 17, 2013, Korean only; RRA 2014-8 and RRA 2014-37 (June 23, 2014); RRA Public Notification 2015-27 (Dec. 03 2015); RRA Announce 2015-110 (Dec. 3, 2015); RRA Public Notification 2016-26 (Dec.19 2016); RRA Announce 2016-79 (Dec.19 2016); RRA Public Notification 2017-19 (Dec. 28, 2017); RRA Announce 2017-71 (Dec. 28, 2017); Unlicensed Radio Equipment Established Without Notice (MSIT Public Notification 2023-18, June 20, 2023)
Australia / New Zealand	Radiocommunications Equipment (General) Rules 2021 – Schedule 5, Part 15, Short Range Equipment Standard using AS/NZS 4268:2017 + Amd 1: 2021 ETSI EN 300 440 V2.2.1 (2018-07); Radiocommunications Equipment (General) Rules 2021 – Schedule 4 EME standard using measurement method AS/NZS 2772.2; Radiocommunications Equipment (General) Rules 2021 – Schedule 5, Part 15, Short Range Equipment Standard using test method AS/NZS 4268
Taiwan	LP0002 (2024); IS2019 (2020); RTTE01 (2020)
Singapore	IMDA TS CMT (September 2020); IMDA TS CMT (December 2024); IMDA TS LMR Issue 1 (October 2016); IMDA TS SRD Issue 1, Rev. 3 (Sept 2023); IMDA TS UWB Issue 1 (October 2016); IMDA TS WBA Issue 1 (October 2016)
Japan	2.4 GHz band wide-band Low-power data communication system (Item 19 of Article 2-1):2023; 5 GHz band low-power data communication system (Item 19-3 of Article 2-1):2022; Article 6 Paragraph 1 Item 1 of the Regulations for Enforcement of the Radio Law (Ministry of Posts and Telecommunications Notification No. 127 of 1988); MIC Notice No. 88 Annex 1 and Annex 22-3; MIC Notification 88 Annex 43; MIC Notification No. 88 Annex 22-5; Specified low-power radio equipment Item 8 of Article 2-1:2022
Telecommunication	EN 300 386; Requirements for connection to an air interface of a Telecommunications Network, Part 4: IMT-2000 and IMT-Advanced Customer Equipment AS/CA S042.4:2022

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Test Technology:	Test Method(s) [2]:
Telecommunication (cont.)	Requirements for connection to an air interface of a Telecommunications Network, Part 5: IMT-2020 Customer Equipment AS/CA S042.5:2022; Requirements for connection to an air interface of a Telecommunications Network, Part 1:General AS/CA S042.1:2022; AS/CA A17.5:2022
RF Exposure (excluding SAR and HAC)	RSS-102; RSS-102.NS.MEAS; IEEE Std C95.3:2021; EN 50364 (2018); EN 50383 (2010); EN 50566: 2017 A1 2023 v2.01; EN 50663 (2017); EN 62233 (2008); EN IEC 62311 (2020); EN 62311 (2008) OET Bulletin 65, Edition 97-01; ARPANSA RPS S-1 Rev 1; AS/NZS 2772.2:2016 +A1:2018 KDB 447498 D01

[1] The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

[2] When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard test method, per Annex A, Part C of A2LA's R101 - *General Requirements: Accreditation of Conformity Assessment Bodies.*

[3] ANSI C63.4a:2017 is used to perform NSA in support of ANSI C63.4:2014 and should not be considered its own test method.

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1:

Rule Subpart/Technology	Test Method(s)	Maximum Frequency (MHz)
Unintentional Radiators Part 15B	ANSI C63.4:2014	220000
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5:1986	220000
Intentional Radiators Part 15C	ANSI C63.10:2013 ANSI C63.10:2020	220000

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Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1:

Rule Subpart/Technology	Test Method(s)	Maximum Frequency (MHz)
Unlicensed Personal Communication Systems Devices Part 15D	ANSI C63.17:2013	220000
U-NII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013 ANSI C63.10:2020	220000
U-NII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	220000
UWB Intentional Radiators Part 15F	ANSI C63.10:2013 ANSI C63.10:2020	220000
BPL Intentional Radiators Part 15G	ANSI C63.10:2013 ANSI C63.10:2020	220000
White Space Device Intentional Radiators Part 15H	ANSI C63.10:2013 ANSI C63.10:2020	220000
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	220000
General Mobile Radio Services (FCC Licensed Radio Service Equipment) Parts 22 (non-cellular), 90 (below 3 GHz), 95 (below 3 GHz), 97 (below 3 GHz), and 101 (below 3 GHz)	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	220000
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	220000
Maritime and Aviation Radio Services Parts 80 and 87	ANSI/TIA-603-E; ANSI C63.26:2015	220000

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Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1:

Rule Subpart/Technology	**Test Method(s)**	**Maximum Frequency (MHz)**
Microwave and Millimeter Bands Radio Services Parts 25, 30, 74, 90 (above 3 GHz), 95 (above 3 GHz), 97 (above 3 GHz), and 101	ANSI/TIA-603-E; TIA-102.CAAA-E or ANSI C63.26:2015	220000
Signal Boosters Part 20 (Wideband Consumer Signal Boosters, Provider-specific Signal Boosters, and Industrial Signal Boosters), Section 90.219	ANSI C63.26:2015	220000

Note: 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

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Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY IRVINE

Irvine, CA

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 laboratory also meets the A2LA – R256 – Specific Requirements. 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 28th day of May 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3310.04
Valid to June 30, 2027
Revised June 28, 2025

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

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