



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Washington Laboratories, Ltd.
4840 Winchester Blvd., Suites 5 and 6
Frederick, Maryland 21703

Fulfills the requirements of

ISO/IEC 17025:2017

and

**U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T)
Testing Designation Program**

and the

**Recognition of Telecommunications Testing - Innovation, Science, and Economic Development
(ISED) Canada**

and the

**FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety
and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and
Laboratory Medical Equipment**

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 30 June 2024

Certificate Number: AT-1448



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T) Testing Designation Program ²

Recognition of Telecommunications Testing - Innovation, Science, and Economic Development (ISED) Canada ³

FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment ⁴

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TESTING

Valid to: **June 30, 2024**

Certificate Number: **AT-1448**

Testing performed in support of FCC approval procedures for Certification ²

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014	-	220 GHz
Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment	FCC MP-5, (February 1986)	-	125 GHz
Intentional Radiators (FCC Part 15, Subpart C)	ANSI C63.10-2013	-	220 GHz
U-NII without DFS Intentional Radiators (FCC Part 15, Subpart E) Unlicensed National Information Infrastructure Devices (U-NII without DFS)	ANSI C63.10-2013	KDB Publication 789033	50 GHz
UWB Intentional Radiators (FCC Part 15, Subpart F) Ultra-wideband Operation	ANSI C63.10-2013	-	220 GHz



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Testing performed in support of FCC approval procedures for Certification ²

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
BPL Intentional Radiators (FCC Part 15, Subpart G) Access Broadband Over Power Line (Access BPL)	ANSI C63.10-2013	-	40 GHz
White Space Device Intentional Radiators (FCC Part 15, Subpart H) White Space Devices	ANSI C63.10-2013	-	40 GHz
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Part 22 (cellular) Part 24 Part 25 (below 3 GHz) Part 27	ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015	KDB Publication 971168	220 GHz
General Mobile Radio Services (FCC Licensed Radio Service Equipment) [1] Part 22 (non-cellular) Part 90 (below 3 GHz) Part 95 (below 3 GHz) Part 97 (below 3 GHz) Part 101 (below 3 GHz)	ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015	-	220 GHz
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015	KDB Publication 971168 KDB Publication 940660	40 GHz
Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) Part 80 Part 87	ANSI/TIA-603-E or ANSI C63-26-2015	-	220 GHz
Microwave and Millimeter Bands Radio Services (FCC Licensed Radio Service Equipment) Part 25 Part 30 Part 74 Part 90 (above 3 GHz) Part 95 (above 3 GHz) Part 97 (above 3 GHz) Part 101	ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015	KDB Publication 653005	220 GHz



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Testing performed in support of FCC approval procedures for Certification ²

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
Broadcast Radio Services (FCC Licensed Radio Service Equipment) Part 73 Part 74 (below 3 GHz)	ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015	-	220 GHz

Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada ³

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-GEN	Issue 5, April 2018 Amendment 1, March 2019 Amendment 2, February 2021	General Requirements for Compliance of Radio Apparatus	-
RSS-102	Issue #5 March 2015, Amendment 1, February - 2021	Radio Frequency (RF) Exposure compliance of Radiocommunications Apparatus (All Frequency Bands)	Nerve Stimulation (NS) - Measurement
RSS-102	Issue #5 March 2015, Amendment 1, February - 2021	Radio Frequency (RF) Exposure compliance of Radiocommunications Apparatus (All Frequency Bands)	RF Exposure (RF Exp) - Measurement
RSS-111	Issue #5, September 2014	Broadband Public Safety Equipment Operating in the Band (4 940 to 4 990) MHz	-
RSS-112	Issue #1, February 2008	Land Mobile and Fixed Equipment Operating in the Band (1 670 to 1675) MHz	-
RSS-117	Issue #3, January 2016, Amendment June 2021	Land and Coast Station Transmitters Operating in the Band (200 to 535) kHz	-
RSS-119	Issue #12, May 2015, Amendment April 2022	Land Mobile and Fixed Equipment Operating in the Frequency Range (27.41 to 960) MHz	-
RSS-123	Issue #4, August 2019	Licensed Wireless Microphones	-
RSS-125	Issue #3, June 2020	Land Mobile and Fixed Equipment Operating in the Frequency Range (1.705 to 30) MHz	-
RSS-127	Issue #1, August 2009	Air-Ground Equipment Operating in the Bands (849 to 851) MHz and (894 to 896) MHz	-
RSS-130	Issue #2, February 2019	Equipment Operating in the Frequency Bands (617 to 652) MHz, (663 to 698) MHz, (698 to 756) MHz, and (777 to 787) MHz	-
RSS-131	Issue #3 January 2017 Updated May 2017	Zone Enhancers	-
RSS-132	Issue #3, January 2013	Cellular Telephone Systems Operating in the Bands (824 to 849) MHz and (869 to 894) MHz	-



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Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada³

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-133	Issue #6 January 2018, Amendment January 2018	2 GHz Personal Communications	-
RSS-134	Issue #2, February 2016	900 MHz Narrowband Personal Communication Service	-
RSS-135	Issue #2, June 2009	Digital Scanner Receivers	-
RSS-137	Issue #2, February 2009	Location and Monitoring Service in the Band (902 to 928) MHz	-
RSS-139	Issue #3, July 2015	Advanced Wireless Services (AWS) Equipment Operating in the Bands (1 710 to 1 780) MHz and (2 110 to 2 180) MHz	-
RSS-141	Issue #2, June 2010	Aeronautical Radiocommunication Equipment in the Frequency Band (117.975 to 137) MHz	-
RSS-142	Issue #5, April 2013	Narrowband Multipoint Communication Systems in the Bands (1 429.5 to 1 432) MHz	-
RSS-170	Issue #3, July 2015, Amendment November 2020	Mobile Earth Stations (MESs) and Ancillary Terrestrial Component (ATC) Equipment Operating in the Mobile-Satellite Service Bands (2 483.5 to 2 500) MHz	-
RSS-181	Issue #2 August 2019, Amendment February 2020	Coast and Ship Station Equipment Operating in the Maritime Service in the Frequency Range (1 605 to 28 000) kHz	-
RSS-182	Issue #6, June 2021	Maritime Radio Transmitters and Receivers in the Band (156 to 162.5) MHz	-
RSS-191	Issue #3, April 2008, Note January 2020	Local Multipoint Communication Systems in the Band (25.35 to 28.35) GHz; Point-to-Point and Point-to-Multipoint Broadband Communication Systems in the Bands (24.25 to 24.45) GHz and (25.05 to 25.25) GHz; and Point-to-Multipoint Broadband Communications in the Band (38.6 to 40) GHz	-
RSS-192	Issue #4, May 2020	Flexible Use Broadband Equipment Operating in the Band (3 450 to 3 650) MHz	-
RSS-194	Issue #1, October 2007	Fixed Wireless Access Equipment Operating in the Band (953 to 960) MHz	-



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Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-195	Issue #2, April 2014	Wireless Communication Service (WCS) Equipment Operating in the Bands (2 305 to 2 320) MHz and (2 345 to 2 360) MHz	-
RSS-210	Issue #10 December 2019, Amendment April 2020	License-Exempt Radio Apparatus: Category I Equipment	-
RSS-211	Issue #1, March 2015	Level Probing Radar Equipment	-
RSS-215	Issue #2, June 2009	Analogue Scanner Receivers	-
RSS-216	Issue #2, Amendment September 2020	Wireless Power Transfer Devices	-
RSS-220	Issue #1 March 2009, Amendment 1, July 2018	Devices Using Ultra-Wideband (UWB) Technology	-
RSS-236	Issue #1, September 2012	General Radio Service Equipment Operating in the Band (26.960 to 27.410) MHz (Citizens Band)	-
RSS-238	Issue #1, July 2013	Shipborne Radar in the (2 900 to 3 100) MHz and (9 225 to 9 500) MHz Bands	-
RSS-243	Issue #3, February 2010	Medical Devices Operating in the (401 to 406) MHz Frequency Band	-
RSS-244	Issue #1, June 2013	Medical Devices Operating in the Band (413 to 457) MHz	-
RSS-247	Issue #2 February 2017, Note Mar 2017	Digital Transmission Systems (DTS), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Networks (LE-LAN) Devices	Without DFS
RSS-248	Issue #1 Nov 2021	Radio Local Area Network (RLAN) Devices Operating in the (5 925 to 7 125) MHz Band	Per ISED notice 2021-DRS0011
RSS-251	Issue 2, July 2018	Vehicular Radar and Airport Fixed or Mobile Radar in the (76 to 81) GHz Frequency Band	-
RSS-287	Issue #2, March 2014, Amendment June 2021	Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Beacons (MSLD)	-
RSS-288	Issue #1, January 2012	Global Maritime Distress and Safety System (GMDSS)	-
RSS-310	Issue #5, January 2020	License-Exempt Radio Apparatus: Category II Equipment	-



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Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
SPR-002	Issue #1, September 2016	Supplementary Procedure for Assessing compliance with RSS-102 Nerve Stimulation Exposure Limits	-

Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment⁴

Product Type	Specific Tests or Properties Measured	Specification, Standard, Method, or Technique Used	Comments
Medical Electrical Equipment + Medical Systems	Electromagnetic disturbances	IEC 60601-1-2 Edition 4.0 2014-02 IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Oxygen concentrator equipment	ISO 80601-2-69 Second edition 2020-11	-
Medical Electrical Equipment + Medical Systems	Electromagnetic immunity	IEC TR 60601-4-2 Edition 1.0 2016-05	-
Medical Electrical Equipment + Medical Systems	Usability	IEC60601-1-6 Edition 3.2 2020-07 CONSOLIDATED VERSION, IEC 60601-1-6 Edition 3.1 2013-10	-
Medical Electrical Equipment + Medical Systems	Alarm systems in medical electrical equipment and medical electrical systems	IEC 60601-1-8 Edition 2.1 2012-11 IEC 60601-1-8 Edition 2.2 2020-07 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Physiologic closed-loop controllers	IEC 60601-1-10 Edition 1.1 2013-11	-
Medical Electrical Equipment + Medical Systems	Medical electrical equipment and medical electrical systems used in the home healthcare environment	IEC 60601-1-11 Edition 2.0 2015-01 IEC 60601-1-11 Edition 2.1 2020-07 CONSOLIDATED VERSION ANSI AAMI HA60601-1-11:2015	-
Medical Electrical Equipment + Medical Systems	Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment	IEC 60601-1-12 Edition 1.1 2020-07 CONSOLIDATED VERSION IEC 60601-1-12 Edition 1.0 2014-06	-
Medical Electrical Equipment + Medical Systems	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements	IEC 61010-1 Edition 3.1 2017-01	-



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Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment ⁴

Product Type	Specific Tests or Properties Measured	Specification, Standard, Method, or Technique Used	Comments
Medical Electrical Equipment + Medical Systems	Medical Electrical Equipment – Part 1: General Requirements for Basic safety and essential performance.	ANSI AAMI ES60601-1:2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text)	-

Electromagnetic Compatibility

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Emissions Standards	Radiated and Conducted Emissions (40 Hz to 30 GHz)	FCC Part 15 B/C/D/E using, ANSI C63.4 (2009), ANSI C63.4 (2014) & ANSI C63.17 (2013); ANSI C63.10 (2014); FCC Part 18 using FCC OST/MP-05 (1986); FCC Report and Order ET Docket 98-153(FCC 02-48); Procedures IDB 20040420-001; Procedures in IDB 20021108-001 with FCC Method 47 CFR Part 15, Subpart F: DA 00-705 (March 30, 2000) and KDB Pub. No.558074, KDB Pub. No. 200433; DA 02-2138; CISPR 16-1-4 2007 +A1 2007; CISPR 16-1-4:2010 ; CISPR 22 (1997) +A1, (2000) + A2, (2002), CISPR 22 (2005); CISPR 22 (2008) ; EN 55022 (1998) +A1, (2000) + A2, (2003), EN 55022 (2006), +A1 (2007); EN 55022:2010 ; EN 55022:2010 + AC:2011 ; EN55032:2015;
Emissions Standards	Radiated and Conducted Emissions (40 Hz to 30 GHz)	AS/NZS CISPR 22; CAN/CSA-CEI/IEC CISPR 22; CISPR 32:2015; CNS 13438(up to 6GHz); KS C 9832:2019; CISPR 11 (1997)+A1, (1999)+A2, (2002); CISPR 11: 2004-06;CISPR 11:2009/A1:2010; EN 55011 (1998)+A1, (1999)+A2, (2002); EN 55011:2009 / A1:2010; EN 55011:2016 AS/NZS CISPR 11; CNS 13803 KS C 9811:2019 Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020
Emissions Standards	Harmonics Emissions	IEC 61000-3-2 (2000) +A1, (2001) +A2, (2004), IEC 61000-3-2 (2005); IEC 61000-3-2 Ed 4.0: 2014; EN 61000-3-2 (2000) +A2, (2005), + A1:2008; EN 61000-3-2:2006 + A1:2009 + A2:2009; EN 61000-3-2 (2014); AS/NZS 61000-3-2; KN 61000-3-2



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Electromagnetic Compatibility

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Emissions Standards	Flicker Emissions	IEC 61000-3-3 (1994)+A1, (2001)+A2, (2005), 2008, 2013; EN 61000-3-3 (1995)+A1, (2001)+A2, (2005), 2008, 2013; AS/NZS 61000-3-3; KN 61000-3-3
Emissions Standards	Product Specific Emissions	IEC 61000-6-3; EN 61000-6-3; AS/NZS 61000.6.3; IEC 61000-6-4; EN 61000-6-4; AS/NZS 61000.6.4; CISPR 14-1 (2000) +A1, (2001) +A2, (2002), (excluding measurement of clicks); CISPR 14-1: 2005-11(excluding measurement of clicks); EN 55014-1 (2000)+A1, (2001)+A2, (2002), (excluding measurement of clicks); AS/NZS CISPR 14-1 (excluding measurement of clicks); KS C 9814-1:2020; KS C 9610-6-6:2017; KS C 9610-6-4 2017; Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021 RRA Public Notification 2020-6, Sep 25, 2020; CNS 13783-1 (2001)+A12004, (excluding measurement of clicks); CISPR 25 Ed. 3.0 (2008-03), sections 6.2, 6.3 and 6.4 only CISPR 25: (2016), sections 6.3, 6.4 and 6.5 only
Immunity Standards	ESD Immunity Testing	IEC 61000-4-2 (1995)+A1, (1997)+A2, (1998); IEC 61000-4-2, Ed. 2.0 (2008-12) EN 61000-4-2 (1995)+A1,(1999)+A2, (2001), 2009; KN 61000-4-2 with (RRA Announce 2018-128, Dec 24, 2018)
Immunity Standards	RF Immunity Radiated Immunity (Up to 6.0 GHz, 20 V/m)	IEC 61000-4-3 (1995), A1(1998), A2(2000); IEC 61000-4-3 (2002)+A1, (2002); IEC 61000-4-3 (2006); IEC 61000-4-3, Ed. 3.0 (2006-02) + A1 (2007) + A2 (2010); EN 61000-4-3 (1996), A1(1998), A2 (2001); EN 61000-4-3 (2002)+A1, (2003); EN 61000-4-3 (2006) +A1 (2008) + A2 (2010) KN 61000-4-3 with (RRA Announce RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	EFT	IEC 61000-4-4 (1995) +A1, (2000)+A2, (2001); IEC 61000-4-4 (2004); IEC 61000-4-4, Ed. 2.0 + A1 (2010); IEC 61000-4-4 Ed. 2.1 (2011); IEC 61000-4-4 Ed.3.0 (2012) EN 61000-4-4 (1995) +A1, (2001)+A2, (2002); EN 61000-4-4 (2004) +A1:2010; EN 61000-4-4:2012; KN 61000-4-4 with (RRA Announce 2018-128, Dec 24, 2018)
Immunity Standards	Surge	IEC 61000-4-5 (1995)+A1, (2000), IEC 61000-4-5 (2005);+ Corr 1 (2009); IEC 61000-4-5; Ed 3.0 (2014) EN 61000-4-5 (1995)+A1, (2001), EN 61000-4-5 (2006) EN 61000-4-5 (2014) KN 61000-4-5 with (RRA Announce 2018-128, Dec 24,2018)



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Electromagnetic Compatibility

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Immunity Standards	Conducted Immunity	IEC 61000-4-6 (1996) +A1, (2001), IEC 61000-4-6 (2003) +A1, (2004)+A2, (2006); IEC 61000-4-6 Ed. 3.0 (2008); IEC 61000-4-6 Ed. 4.0 (2013) EN 61000-4-6 (1996) +A1, (2001), EN 61000-4-6 (2007); EN 61000-4-6(2009) ; EN 61000-4-6 (2014) KN 61000-4-6 with (RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Low Frequency Magnetic Immunity	IEC 61000-4-8 (1993)+A1, (2000); IEC 61000-4-8 (2009) EN 61000-4-8 (1994)+A1, (2001); EN 61000-4-8:2010 KN 61000-4-8 with(RRA Announce 2014-38 June 23, 2014)
Immunity Standards	Pulse Magnetic	IEC 61000-4-9 (1993)+A1, (2000); IEC 61000-4-9, Ed 1.1 (2001-03); IEC 61000-4-9, Ed 2.0 (2016) EN 610000-4-9 (1993)+A1, (2001); EN 610000-4-9: (2016); KN 61000-4-9 with(RRA Announce RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Damped Oscillatory Magnetic	IEC 61000-4-10 (1993)+A1, (2000); IEC 61000-4-10, Ed 1.1 (2001-03); IEC 61000-4-10, Ed 2.0 (2016) EN 61000-4-10 (1993)+A1, (2001); EN 61000-4-10: (2017)
Immunity Standards	Power Dips and Interrupts	IEC 61000-4-11 (1993)+A1, (2000); (2004); IEC 61000-4-11: (2004), +A1(2017) EN 61000-4-11 (1993)+A1, (2001); (2004) KN 61000-4-11with (RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Ring Wave Immunity	IEC 61000-4-12 (1995) +A1, (2000), IEC 61000-4-12 (2006); EN 61000-4-12 (1995) +A1, (2001), EN 61000-4-12 (2006)
Immunity Standards	Harmonics and Inter-harmonics	IEC 61000-4-13 Ed. 1.1 (2002) + A1 (2009); IEC 61000-4-13 Ed. 1.2 (2015) EN 61000-4-13 (2002) +A1 (2009) +A2(2016)
Immunity Standards	Immunity, Common Mode Disturbances	IEC 61000-4-16, Edition 1.1 (2002-07), IEC 61000-4-16, ed. 1.2 (2011-05), IEC 61000-4-16, Ed 2.0 (2015); EN 61000- 4-16 (2016)
Immunity Standards	Immunity, Ripple on D.C. input power	IEC 61000-4-17:1999+A1:2001+A2:2008; EN 61000-4-17:1999, +A2(2009)
Immunity Standards	Damped oscillatory wave immunity test	IEC 61000-4-18 ed1.0 (2006);IEC 61000-4-18 Ed1.1 (2011); EN 61000-4-18 (2007)
Immunity Standards	Immunity, Power Frequency Variation I<16A	IEC 61000-4-28:1999, +A1(2001), +A2(2009) EN 61000-4-28: (2000), +A2(2009)



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Electromagnetic Compatibility

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Immunity Standards	Immunity, Voltage dips, short interruptions and voltage variations on d.c. input power port	IEC 61000-4-29:2000 EN 61000-4-29:2001
Immunity Standards	Product Specific Immunity	CISPR 24 (1997)+A1, (2001)+A2, (2002); CISPR 24 ed2.0 (2010-08) EN55024 (2010)+A1, (2015); IEC/EN 55025:2017; EN 55035:2017; CISPR 35:2016 AS/NZS CISPR 24:2002 +A1 (2009); KN 35 with RRA Public Notification 2018-19, Oct 19, 2018; RRA Announce 2018-128, Dec 24, 2018 EN 61000-6-1; EN 61000-6-2; AS/NZS 4254.1; EN 55103-2; EN 50130-4; ISO 7637-2 KS C 9610-6-1:2019; KS C 9610-6-2:2019 Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020
Immunity Standards	Combined Emissions / Immunity Generic / Specific Standards	IEC 60601-1-2; EN 60601-1-2; KS C IEC 60601-1-2:2012 with Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020; IEC 61326; EN 61326 IEC 60533
Emissions & Immunity Guidance Documents	Combined Emissions / Immunity Generic Reference	Regulatory Guide 1.180 EPRI 102323 Rev 2, EPRI 102323 Rev 3, EPRI 102323 Rev 4; Technical Requirements for Telecommunications Terminal Equipment (RRA Public Notification 2019-4, Feb 25, 2019); Technical Requirements for Electromagnetic Compatibility (RRA Public Notification 2018-19, Oct 19, 2018); Test Methods for Electromagnetic Compatibility (RRA Announce 2018-128, Dec 24, 2018);
Electromagnetic Compatibility Directive (2014/30/EU)	2015/208 Annex XV (Agricultural and Forestry vehicles)	EN 61326-3-1 Ed. 2.0 b:2017, EN/ISO 13309, ISO 11454-1/2 ISO/TR 10605 Annex XV (17.2.2015)



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Product Safety

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Product Safety	Measurement Control and Lab Use	IEC 61010-1 (2001); IEC61010-1:2010 EN 61010-1 (2001); EN61010-1:2010 UL61010-1 (2008); UL61010-1 (2012); CAN/CSAC22.2 No.61010-1 (2004); CAN/CSA C22.2 No. 61010-1-2012
Product Safety	ITE	IEC 60950-1 (2005); IEC60950-1:2005+A1:2009+A2 :2013; IEC 60950 Ed 2 (2005) +A1+A2+A3+A4+A11; IEC 60950 Ed 2.2 (2013);EN 60950-1 (2006); EN60950-1:2006 + A11:2009; EN60950-1:2006 + A1:2010; EN 60950-1:2006+A11:2009+A1:2010+A12:2011 AS/NZS 60950-1 (2003); AS/NZS 60950.1 (2003) + A1 (2006) + A2 (2008) + A3 (2008) AS/NZS 60950.1 :2011; AS/NZS 60950.1: 2015; ANSI/UL 60950-1 (2007); ANSI/UL 60950-1 (2003) and CAN/CSA 22.2 No. 60950-1 CAN/CSA C22.2 60950-1-07 (2007) CAN/CSA C22.2 No. 60950-1-07 + A11:2009 + A1:2009 + A12:2011; CAN/CSA C22.2 60950-1-07 (R2012) EN 62368-1:2014/AC:2015; IEC 62368-1 Ed2-2014; IEC 62368-1 Ed3-2018; CSA/UL 62368-1:2014
Product Safety	Medical Equipment	IEC 60601-1:1988+ A1:1991 + A2:1995; IEC60601-1:2005+A1:2012 IEC 60601-1-11:2010; IEC 60601-1-11:2015 IEC 60601-2-10:1987 +A1:2001; IEC 60601-2-10: Ed 2.1: 2016 IEC 60601-2-40:1998 EN 60601-1: 1990 +A1:1993 + A2:1995; EN60601-1:2006+A1:2013; EN 60601-1-11:2010 ; EN 60601-1-11:2015; EN 60601-2-10 :2000 + A1:2001 ; EN 60601-2-10: 2015; EN 60601-2-40 :1998; UL60601-1 (2006); AAMI ES60601-1:2010
Product Safety	Machinery	IEC 60204-1:2005 +A1:2008 ; IEC 60204-1Ed 5.1: 2009; EN60204-1:2006 + A1:2009
Product Safety	Transmitters	EN 60215:1989 + A2:1994; IEC 60215:1987 + A2:1993; IEC 60215 Ed 4.0: 2016



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Product Safety

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Product Safety	Household & Similar Electronics	EN 60335-1:2002 +A14:2010; EN 60335-1 (2012) +A11: 2014 IEC 60335-1:2001 +A2:2006; IEC 60335-1 Ed. 5.0 (2010); IEC 60335-1 Ed. 5.2 (2016); UL60335-1 (2006); UL60335-1 (2011); EN 60335-2-2:2010; IEC 60335-2-2:2009; IEC 60335-2-2 2012-11; IEC 60335-2-2 Ed 6.2: 2016 EN 60335-2-75:2004/A12:2010; IEC 60335-2-75:2012-12; IEC 60335-2-75 Ed 3.1: 2015; EN 60335-2-82:2003/A1:2008; IEC 60335-2-82:2002 + A1:2008; IEC 60335-2-82 Ed 2.2: 2015
Product Safety	Audio, Video and Similar Electronic App.	EN60065:2002 +A2:2010 IEC60065:2001 +A2:2010; IEC 60065 Ed 8.0: 2014; UL60065 (2004); UL 60065: 2015
Product Safety	General (Enclosures)	IEC 60529 Ed 2.2: 2013 Section 13.2 & Sub-sections 14.2.1, 14.2.2, 14.2.7, 14.2.8 UL94 Ed 6.0: 2013; EN 60529: 1992 +A2: 2013 Section 13.2 & Sub-sections 14.2.1, 14.2.2, 14.2.7, 14.2.8

Radio

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Radio Testing	Australia/New Zealand	AS/NZS 4268, AS/NZS 4295, AS/NZS 4365
Radio Testing	Singapore	IDA TS: EMC, IDA TS GMPCS ITU-R M.1343-1
Radio Testing	USA	TIA/EIA 603-E using 47 CFR Parts 2 (cellular and non-cellular), 4, 25, 26, 27, 74, 80, 87, 90, 95, 97 and 101, ANSI C63.26 (2015)
Radio Testing	Korea	KS X3124:2020; KS X3125:2020; KS X3126:2020, KS X3129:2020; Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020 Technical Requirements of other Radio services for Simple Radio station, Space Station and Earth Station (RRA Public Notification 2018-26, Nov 13, 2018); Technical Requirements of Radio Wave Application(RRA Public Notification 2016-20, Sep 27, 2016) Technical Requirements for the Human Protection against Electromagnetic Waves (MSIT Public Notification 2019-4, Jan 16, 2019); Technical Requirements for Measurement of



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Radio

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
		Electromagnetic Field Strength (RRA Public Notification 2019-3, March 4, 2019), Assessment Procedure of Radio Equipment KS X 3123 (RRA Announce 2018-19, Oct 19, 2018) Technical Requirements for Electromagnetic Compatibility (RRA Public Notification 2018-19, Oct 19, 2018); with RRA Announce 2018-128, Dec 24, 2018; Test Technical Requirements for Telecommunications Terminal Equipment (RRA Public Notification 2019-9, Jun 3, 2019)
Radio Testing	Europe	ETSI EN 300 220-1; ETSI EN 300 328; ETSI EN 300 330-2; ETSI EN 300 390-2; ETSI EN 300 440-2; ETSI EN 301 489-1; ETSI EN 301 489-3; ETSI EN 301 489-4; ETSI EN 301 489-5; ETSI EN 301 489-7; ETSI EN 301 489-8; ETSI EN 301 489-12; ETSI EN 301 489-15; ETSI EN 301 489-17; ETSI EN 300 826; ETSI EN 302 208-1; ETSI EN 302 326-1; ETSI EN 301-489-20; ETSI EN 301 428; ETSI EN 301 441; ETSI EN 301 442; ETSI EN 301-443; ETSI EN 301 459; ETSI EN 301 893; ETSI EN 302 208-2; ETSI EN 300-219-2; ETSI EN 300-219-1; ETSI EN 301 681; ETSI EN 301 426 (sections 4.2.1 and 4.2.2 only); ETSI EN 301 721 (sections 4.2.1, 4.2.2, 4.2.3 and 4.2.4)
Military EMC	Conducted Emissions	MIL-STD-461E, F, G: Methods CE101, CE102, CE106; MIL-STD-462D: Methods CE101, CE102, CE106; MIL-STD-462: Methods CE01, CE02, CE03, CE06
Military EMC	Radiated Emissions	MIL-STD-461E, F, G: Methods RE101, RE102 and RE103; MIL-STD-462D: Methods RE101, RE102 and RE 103; MIL-STD-462: Methods RE01, RE02 and RE03
Military EMC	Conducted Susceptibility	MIL-STD-461E, F, G: Methods CS101, CS 103; CS 104; CS 105, CS109, CS114, CS115, CS116; MIL-STD-462D: Methods CS101, CS103, CS114, CS115, CS116; CS118; MIL-STD-462: Methods, CS01, CS02, CS03, CS04, CS05, CS06, CS08
Military EMC	Radiated Susceptibility	MIL-STD-461E, F, G: Methods RS101, RS103; MIL-STD-461/462D: Methods RS101, RS103

Radio

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Military EMC	Vehicle Power	MIL-STD-1275 (A, B, C, D, E)
Military EMC	Aircraft Power	MIL-STD-704 (A, B, C, D, F, G)
Military EMC	Ship Power	MIL-STD-1399 S300 (A, B); MIL-STD-1399 S390
Military EMC	Magnetics (Shipboard)	DOD-STD-1399 S-070
Airborne Equipment	Magnetic Effect	RTCA DO-160E, F, G: Section 15
Airborne Equipment	Power Input	RTCA DO-160E, F, G: Section 16
Airborne Equipment	Voltage Spikes	RTCA DO-160E, F, G: Section 17
Airborne Equipment	Audio Frequency Conducted Susceptibility	RTCA DO-160E, F, G: Section 18
Airborne Equipment	Induced Signal Susceptibility	RTCA DO-160E, F, G: Section 19
Airborne Equipment	Conducted Susceptibility and Radiated Susceptibility	RTCA DO-160E, F, G: Section 20.4 Section 20.5
Airborne Equipment	Conducted and Radiated Emissions	RTCA DO-160E, F, G: Section 21.4 Section 21.5
Airborne Equipment	Lighting Induced Transient Susceptibility	RTCA DO-160E, F, G: Section 22
Airborne Equipment	ESD	RTCA DO-160E, F, G: Section 25
The Radio Equipment Directive (RED) 2014/53/EU	Private/Professional Mobile Radio Transmission Systems	IMT Cellular Network; Essential requirements of article 3.2, Part 1: EN 301-908- v.11.1.1, EN 301-360 V2.1.1 (2016) EN 301-358 V1.1.1 (2001), EN 303-213-6-1 V2.1.1

Environmental

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Humidity	MIL-STD-810, Method 507.4; 507.5; 507.6	General Commercial, Military & Military COTS, Industrial.	-
Salt Fog	MIL-STD-810: Method 509	General Commercial, Military & Military COTS, Industrial	-
Immersion	MIL-STD-810, Method 512.4; 512.5; 512.6	General Commercial, Military & Military COTS, Industrial	-



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Environmental

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Vibration	MIL-STD-810: Method 514.5, 514.6; 514.7	General Commercial, Military & Military COTS, Industrial	-
Shock	MIL-STD-810: Method 516.5; 516.6; 516.7	General Commercial, Military & Military COTS, Industrial	-
Temperature and Altitude	RTCA DO-160E, F, G: Section 4	General Commercial, Military & Military COTS, Industrial	-
Temperature Variation	RTCA DO-160E, F, G: Section 5	General Commercial, Military & Military COTS, Industrial	-
Humidity	RTCA DO-160E, F, G: Section 6	General Commercial, Military & Military COTS, Industrial	-
Operational Shocks and Crash Safety	RTCA DO-160E, F, G: Section 7	General Commercial, Military & Military COTS, Industrial	-
Vibration	RTCA DO-160E, F, G: Section 8	General Commercial, Military & Military COTS, Industrial	-
Waterproofness	RTCA DO-160E, F, G: Section 10	General Commercial, Military & Military COTS, Industrial	-
Fluids Susceptibility	RTCA DO-160E, F, G: Section 11	General Commercial, Military & Military COTS, Industrial	-
Salt Fog	RTCA DO-160E, F, G: Section 14	General Commercial, Military & Military COTS, Industrial	-
Flammability	RTCA DO-160E, F, G: Section 26	General Commercial, Military & Military COTS, Industrial	-
Cold	IEC 60068-2-1	General Commercial, Military & Military COTS, Industrial	-
Dry Heat	IEC 60068-2-2	General Commercial, Military & Military COTS, Industrial	-
Steady State Damp Heat	IEC 60068-2-3	General Commercial, Military & Military COTS, Industrial	-
Sinusoidal Vibration	IEC 60068-2-6	General Commercial, Military & Military COTS, Industrial	-
Salt Mist	IEC 60068-2-11	General Commercial, Military & Military COTS, Industrial	-
Low Air Pressure	IEC 60068-2-13	General Commercial, Military & Military COTS, Industrial	-
Change of Temperature	IEC 60068-2-14	General Commercial, Military & Military COTS, Industrial	-
Shock	IEC 60068-2-27	General Commercial, Military & Military COTS, Industrial	-
Bump	IEC 60068-2-29	General Commercial, Military & Military COTS, Industrial	-
Cyclic Damp Heat	IEC 60068-2-30	General Commercial, Military & Military COTS, Industrial	-

Environmental

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Drop and Topple	IEC 60068-2-31	General Commercial, Military & Military COTS, Industrial	-
Free Fall	IEC 60068-2-32	General Commercial, Military & Military COTS, Industrial	-
Cyclic Composite Temperature and Humidity	IEC 60068-2-38	General Commercial, Military & Military COTS, Industrial	-
Combined Cold / Low Air Pressure	IEC 60068-2-40	General Commercial, Military & Military COTS, Industrial	-
Combined Dry Heat / Low Air Pressure	IEC 60068-2-41	General Commercial, Military & Military COTS, Industrial	-
Immersion in Cleaning Solvents	IEC 60068-2-45	General Commercial, Military & Military COTS, Industrial	-
Combined Cold / Vibration	IEC60068-2-50	General Commercial, Military & Military COTS, Industrial	-
Combined Dry Heat / Vibration	IEC60068-2-51	General Commercial, Military & Military COTS, Industrial	-
Cyclic Salt Mist	IEC60068-2-52	General Commercial, Military & Military COTS, Industrial	-
Test Cb: Damp Heat Steady State	IEC60068-2-56	General Commercial, Military & Military COTS, Industrial	-
Test Fh: Broadband Random Vibration	IEC60068-2-64	General Commercial, Military & Military COTS, Industrial	-
Test Xc: Fluid Contamination	IEC60068-2-74	General Commercial, Military & Military COTS, Industrial	-
Test Cab: Damp heat, steady state	IEC60068-2-78	General Commercial, Military & Military COTS, Industrial	-

Note:

1. This scope of accreditation covers Customer Site Testing.
2. Meets the requirements of the FCC equipment authorization program as detailed in 47 CFR Part 2 Subpart J as defined in the ANAB SR 2412 U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T) Testing Designation Accreditation Program. Recognition by the FCC can be confirmed by visiting their website <https://apps.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm>.
3. Testing performed to meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada. Recognition by ISED can be confirmed by visiting their website https://www.ic.gc.ca/eic/site/mra-arm.nsf/eng/h_nj00091.html.
4. Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment. Recognition by the FDA can be confirmed by visiting their website <https://www.fda.gov/medical-devices/standards-and-conformity-assessment-program/asca-accredited-testing-laboratories>.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1448.



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