CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

UltraTech Engineering Labs Inc.
3000 Bristol Circle
Oakville ON L6H 6G4 Canada

Fulfills the requirements of

ISO/IEC 17025:2017

and the

U.S. Federal Communication Commission (FCC) EMC

and the

Telecommunications (EC&T) Testing Designation Program
Recognition of Telecommunications Testing - Innovation, Science, and Economic Development (ISED) Canada

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.

Jason Stine, Vice President
Expiry Date: 01 December 2025
Certificate Number: AT-1945

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

AND

U.S. FEDERAL COMMUNICATION COMMISSION (FCC) EMC AND TELECOMMUNICATIONS (EC&T) TESTING DESIGNATION PROGRAM [2]

AND

RECOGNITION OF TELECOMMUNICATIONS TESTING - INNOVATION, SCIENCE, AND ECONOMIC DEVELOPMENT (ISED) CANADA [3]

UltraTech Engineering Labs, Inc.

3000 Bristol Circle
Oakville, ON L6H 6G4
Mr. Tri m. Luu 905-829-1570

TESTING

Valid to: **December 1, 2025** Certificate Number: **AT-1945**

Testing performed in support of FCC approval procedures for Certification [2]

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments / Maximum Frequency Tested
Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014	-	220 000 MHz
Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment	FCC MP-5, (February 1986)	-	220 000 MHz
Intentional Radiators (FCC Part 15, Subpart C)	ANSI C63.10-2020	-	220 000 MHz
UPCS (FCC Part 15, Subpart D) Unlicensed Personal Communication Systems devices	ANSI C63.17-2013	-	220 000 MHz
U-NII without DFS Intentional Radiators (FCC Part 15, Subpart E) Unlicensed National Information Infrastructure Devices (U-NII without DFS)	ANSI C63.10-2020	KDB Publication 789033	220 000 MHz
UWB Intentional Radiators (FCC Part 15, Subpart F) Ultra-wideband Operation	ANSI C63.10-2020	-	220 000 MHz

Testing performed in support of FCC approval procedures for Certification [2]

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments / Maximum Frequency Tested
BPL Intentional Radiators (FCC Part 15, Subpart G) Access Broadband Over Power Line (Access BPL)	ANSI C63.10-2020	-	220 000 MHz
White Space Device Intentional Radiators (FCC Part 15, Subpart H) White Space Devices	ANSI C63.10-2020	-	220 000 MHz
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	220 000 MHz
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	-	220 000 MHz
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	220 000 MHz
Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) Part 80 Part 87	ANSI/TIA-603-E or ANSI C63-26-2015	-	220 000 MHz
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	220 000 MHz

Testing performed in support of FCC approval procedures for Certification [2]

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments / Maximum Frequency Tested
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	-	220 000 MHz
RF Exposure Devices subject to SAR requirements	IEEE Std 1528™-2013	KDB Publication 865664 KDB Publication 447498	220 000 MHz
Hearing Aid Compatibility (Part 20) HAC for Commercial mobile services	ANSI C63.19-2019	-	220 000 MHz
Signal Boosters (Part 20) Wideband Consumer signal boosters Provider-specific signal boosters Industrial signal boosters Signal Boosters (Section 90.219)	ANSI C63.26-2015	KDB Publication 935210 D03, D04, and D05 [1]	220 000 MHz

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-HAC	Issue 2, April 2022, Amendment April 2023	Hearing Aid Compatibility and Volume Control	-
RSS-102	Issue 6, December 2023	Radio Frequency (RF) Exposure compliance of Radiocommunications Apparatus (All Frequency Bands)	RF Exposure (RF Exp) - Measurement
RSS-102.NS.MEAS	Issue 1, December 2023	Measurement Procedure for Assessing Nerve Stimulation (NS) Compliance in Accordance with RSS-102	-
RSS-102.SAR.MEAS	Issue 1, December 2023	Measurement Procedure for Assessing Specific Absorption Rate (SAR) Compliance in Accordance with RSS-102	-
RSS-102.IPD.MEAS	Issue 1, December 2023	Measurement Procedure for Assessing Incident Power Density (IPD) Compliance in Accordance with RSS-102	-
RSS-111	Issue 5, September 2014	Broadband Public Safety Equipment Operating in the Band (4 940 to 4 990) MHz	-

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-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	< 26 GHz
RSS-125	Issue 3, June 2020 Note November 2021	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 tot 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 4, December 2022	Zone Enhancers	< 26 GHz
RSS-132	Issue 4, January 2023	Cellular Telephone Systems Operating in the Bands (824 to 849) MHz and (869 to 894) MHz	-
RSS-133	Issue 6, January 2018 Amendment 1, 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 4, September 2022	Advanced Wireless Services (AWS) Equipment Operating in the Bands (1 710 to 1 780) MHZ and (2 110 to 2 180) MHz	-
RSS-140	Issue 1, April 2018	Equipment Operating in the Public Safety Broadband Frequency Bands (758 to 768) MHz and (788 to 798) MHz	-
RSS-141	Issue 2, June 2010	Aeronautical Radiocommunication Equipment in the Frequency Band (117.975 to 137) MHz	-

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-142	Issue 5, April 2013	Narrowband Multipoint Communication Systems in the Bands (1 429.5 to 1 432) MHz	-
RSS-170	Issue 4, Sep. 2022	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, Amendment 2 August 2024	Maritime Radio Transmitters and Receivers in the Band (156 to 162.5) MHz	-
RSS-191	Issue 3, April 2008	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	< 100 GHz
RSS-192	Issue 5, July 2023	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	-
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-196	Issue 2, February 2019	Point-to-Multipoint Broadband Equipment Operating in the Bands (512 to 608) MHz and (614 to 698) MHz for Rural Remote Broadband Systems (RRBS) (TV Channels 21 to 51)	-
RSS-197	Issue 1, February 2010	Wireless Broadband Access Equipment Operating in the Band (3 650 to 3 700) MHz	-
RSS-198	Issue 1, August 2023	Flexible Use Broadband Equipment Operating in the Band 3900 to 3980 MHz	-
RSS-199	Issue 4, July 2023	Broadband Radio Service (BRS) Equipment Operating in the Band (2 500 to 2 690) MHz	-
RSS-210	Issue 10, December 2019 Amendment, April 2020	License-Exempt Radio Apparatus: Category I Equipment	< 100 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-211	Issue 1, March 2015	Level Probing Radar Equipment	< 100 GHz
RSS-213	Issue 3, March 2015	2 GHz License-exempt Personal Communications Service Devices (LE-PCS)	-
RSS-215	Issue 2, June 2009	Analogue Scanner Receivers	< 26 GHz
RSS-216	Issue 2, January 2016 Amendment 1, September 2020	Wireless Power Transfer Devices	< 200 GHz
RSS-220	Issue 1, March 2009 Amendment 1, July 2018	Devices Using Ultra-Wideband (UWB) Technology	< 100 GHz
RSS-222	Issue 3, October 2021	White Space Devices (WSDs)	-
RSS-236	Issue 2, September 2022	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-246	Issue 1, March 2019	Ultra-Low Power (ULP) Wireless Medical Capsule Endoscopy Devices Operating in the (430 to 440) MHz Band	-
RSS-247	Issue 3, August 2023	Digital Transmission Systems (DTS), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Networks (LE-LAN) Devices	< 26 GHz Without DFS
RSS-248	Issue 2, December 2022	Radio Local Area Network (RLAN) Devices Operating in the (5 925 to 7 125) MHz Band	-
RSS-251	Issue 2, July 2018	Vehicular Radar and Airport Fixed or Mobile Radar in the (76 to 81) GHz Frequency Band	-
RSS-252	Issue 1, September 2017	Intelligent Transportation Systems – Dedicated Short Range Communications (DSRC) – On Board Unit (OBU)	-
RSS-287	Issue 2, March 2014 Amendment 2, May 2022	Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Beacons (MSLD)	-

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-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	-
SPR-002	Issue 2, October 2022	Supplementary Procedure for Assessing compliance with RSS-102 Nerve Stimulation Exposure Limits	-
SPR-003	Issue 1, March 2021	Supplementary Procedure for Assessing Radio Frequency Exposure Compliance of Portable Devices Operating in the 60 GHz Frequency Band (57-71 GHz)	-
SPR-APD	Issue 1, June 2022	Supplementary Procedure for Assessing Specific Absorption Rate (SAR) and Absorbed Power Density (APD) Compliance of Portable Devices in the 6 GHz Band (5925-7125 MHz)	-
BETS-1	Issue 1, November 1996	Technical Standards and Requirements for Low Power Announce Transmitters in the Frequency Bands (525 to 1 705) kHz and (88 to 107.5) MHz	-
BETS-4	Issue 1, November 1996 Revised: May 2023	Technical Standards and Requirements for Television Broadcasting Transmitters	-
BETS-5	Issue 1, November 1996 Revised: May 2023	Technical Standards and Requirements for AM Broadcasting Transmitters	-
BETS-6	Issue 2, August 2005	Technical Standards and Requirements for FM Broadcasting Transmitters	-
BETS-7	Issue 4, June 9, 2023	Technical Standards and Requirements for Apparatus Capable of Receiving Television Broadcasting Signals	-
BETS-8	Issue 1, November 1996	Technical Standards and Requirements for FM Transmitters Operating in Small Remote Communities	-
BETS-9	Issue 1, November 1996	Technical Standards and Requirements for Television Transmitters Operating in Small Remote Communities	-

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
Conducted and Radiated Emissions	FCC 47 CFR Parts 11, 15, 18; ANSI C63.4(2014), ANSI C63.10(2020), ANSI C63.17(2013); FCC OST/MP-5(February 1986); ICES 001, 003, 004, 005, 006; CISPR 32; EN 55032; AS/NZS CISPR 32:2015; CAN/CSA-CEI/IEC CISPR 32; CNS 13438:2006 (up to 6 GHz); CNS 15936:2016 (up to 6 GHz); VCCI V-3 and VCCI-CISPR 32: 2016 (up to 6 GHz); CISPR 11; EN 55011, AS/NZS CISPR 11; SANS 211; SANS 222; SANS 215; CISPR 22. EN 55022 CISPR 32, EN55032; EN 50121-3-2, EN 50121-4; EN 50366; EN 55103-1; CISPR 15, EN 55015, KS C 9815:2019, Technical Requirements for Electromagnetic Compatibility (RRA Public Notification 2023-13), Test Methods for Electromagnetic Compatibility (RRA Announce 2023-68), KS C 9811:2019, KS C9832:2019	40 Hz to 40 GHz	-
Harmonic Emissions	IEC 61000-3-2, EN 61000-3-2, AS/NZS 61000-3-2	-	-
Flicker	IEC 61000-3-3, EN 61000-3-3, AS/NZS 61000-3-3	-	-
Product Specific Emissions	IEC 61000-6-3; EN 61000-6-3; KS C 9610-6-3:2017; SANS 61000-6-3, IEC 61000-6-4; EN 61000-6-4; KS C 9610-6-4:2017; SANS 61000-6-4 AS/NZS 61000.6.4; CISPR 12, EN 55012; SANS 212; AS/NZS CISPR 14-1, KS C 9814-1:2020, EN 60255-26; CISPR 13, EN 55013; SANS 213	-	-
Product Specific Emissions	CISPR 14-1; EN 55014-1	-	excluding measurement of clicks
	CISPR 25; SANS 225	-	sections 6.2, 6.3 and 6.4 only

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
ESD Immunity	IEC 61000-4-2, EN 61000-4-2, KS C 9610-4-2:2017 SANS 61000-4-2, DO-160D/E/F: Section 25	-	-
Radiated Immunity	IEC 61000-4-3, EN 61000-4-3, KS C 9610-4-3:2017; SANS 61000-4-3	Up to 6 GHz, 20 V/m	-
EFT	IEC 61000-4-4; EN 61000-4-4; KS C 9610-4-4:2020; SANS 61000-4-4	-	-
Surge	IEC 61000-4-5; EN 61000-4-5; KS C 9610-4-5:2020; SANS 61000-4-5	-	-
Conducted Immunity	IEC 61000-4-6, EN 61000-4-6, KS C 9610-4-6:2020; SANS 61000-4-6	-	-
Low Frequency Magnetic Immunity	IEC 61000-4-8, EN 61000-4-8, KS C 9610-4-8:2017, SANS 61000-4-8	-	-
Pulse Magnetic Immunity	IEC 61000-4-9, EN 61000-4-9	-	-
Damped Oscillatory Magnetic Immunity	IEC 61000-4-10, EN 61000-4-10	-	-
Power Dips and Interrupts	IEC 61000-4-11, EN 61000-4-11, KS C 9610-4-11:2020; SANS 61000-4-11	-	-
Power Dips and Interrupts and voltage variations on dc input power port	IEC 61000-4-29, EN 61000-4-29	-	-
Ring Wave Immunity	IEC 61000-4-12, EN 61000-4-12, ANSI/IEEE C37.90, ANSI/IEEE C62.41	-	-
Harmonics and Inter-harmonics	IEC 61000-4-13, EN 61000-4-13	-	-
Immunity, Common Mode Disturbances	IEC 61000-4-16, EN 61000-4-16	-	-
Damped Oscillatory Waveform Immunity	IEC 61000-4-18, EN 61000-4-18	-	-

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
Product Specific Immunity	CISPR 24; EN55024; AS/NZS CISPR 24; SANS 224; SANS 214-2 EN 61000-6-1; EN 61000-6-2; AS/NZS 4254.1; CISPR 14-2, EN 55014-2, AS/NZS CISPR 14-2, KS C 9814-2:2020, EN 61547, KS C 9547:2020 CISPR 20 and EN 55020; EN 55103-2; EN 50130-4; CISPR 35 and EN 55035 Test Methods for Electromagnetic Compatibility (RRA Announcement 2023-68) KS C 9835:2019, KN 24, KS C 9610-6-1:2019, KS C 9610-6-2:2019 IEC 62236-3-2, KN 50, KN 51, IACS UR E10, Rev.9	-	-
Product Specific Immunity	KS C 9993:2019	-	Sections 16 to 19, 20.4, 20.5, 21.4, 21.5, 22 & 25
Emissions and Immunity Standards	IEC 60601-1-2; EN 60601-1-2; IEC 61326-1; EN 61326-1; IEC 50121; EN 50121; IEC 50155, EN 50155; EN 300 386; ISO 7637-2; ISO 7637-3, IEC/EN 61850-3, IEC 62236-4, KS C IEC 60601-1-2:2012 AREMA C&S Manual, Section 11, Part 11.5.2	-	Combined Generic / Product Specific
SAR (Specific Absorption Rate) RF Exposure MPE (Maximum Permissible Exposure)	OET Bulletin 65, IEEE STD 1528(2013), IEEE STD 1528a, IEEE STD C95.1; IEEE STD C95.3; ANSI C63.19(2019) IEC/EN 62209-1528:2020, IEC 62479, EN 62479, EN 62233, IEC 50360, EN 50360, IEC 50361, EN 50361, IEC 50364, EN 50364, IEC 50371, EN 50371, H46-2/99-273[E], Heath Canada Safety Code 6 KDB Publications 865664 D01 v01r04, 865664 D01 v01r02, 447498 D01 v06, 447498 D02 v02r01, 447498 D03 v01	-	RF Safety and EMF
EMF Lighting Equipment	IEC 62493, EN 62493	-	
EMF Household Appliances	IEC 62232, EN 62232	-	
Conducted Emissions	MIL-STD-461E, F: Methods CE101, CE102, CE106; MIL-STD-462D: Methods CE101, CE102, CE106; MIL-STD-462: Methods CE01, CE02, CE03, CE06	-	Military EMC

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
Radiated Emissions	MIL-STD-461E, F:Methods RE101, RE102 and RE103; MIL-STD-462D:Methods RE101, RE102 and RE 103; MIL-STD-462: Methods RE01, RE02 and RE03	-	
Conducted Susceptibility	MIL-STD-461E, F: Methods CS101, CS 103; CS 104; CS 105, CS109, CS114, CS115, CS116; MIL-STD-462D: Methods CS101, CS103, CS114, CS115, CS116; MIL-STD-462: Methods, CS01, CS02, CS03, CS04, CS05, CS06, CS08	-	Military EMC
Radiated Susceptibility	MIL-STD-461E, F: Methods RS101, RS103; MIL-STD-461/462D: Methods RS101, RS103	-	
Power Input	RTCA DO-160 E, F, G: Section 16	-	Aviation EMC
Voltage Spikes	RTCA DO-160 E, F, G: Section 17	-	
Audio Frequency Conducted Susceptibility	RTCA DO-160 E, F, G: Section 18	-	Aviation EMC
Induced Signal Susceptibility	RTCA DO-160 E, F, G: Section 19	-	
Conducted Susceptibility and Radiated Susceptibility	RTCA DO-160 E, F, G: Section 20.4 Section 20.5	-	
Conducted and Radiated Emissions	RTCA DO-160 E, F, G: Sections 21.4 & 21.5	-	
Lighting Induced Transient Susceptibility	RTCA DO-160 E, F, G: Section 22	-	
ESD	RTCA DO-160 E, F, G: Section 25	-	
Bulk Current Injection	ISO 11452-4	-	Automotive EMC
Radiated Immunity	ISO 11452-2	-	
Transient Immunity	ISO 7637-2	-	
Electrostatic Discharge	ISO 10605	-	

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
Output Power, Power Spectral Density, Conducted Spurious Emissions, Radiated Spurious Emissions, Occupied Bandwidth, Duty Cycle, Frequency Stability, ERP/EIRP, Audio Frequency Response, Modulation Limiting, Transient Frequency Behavior, Intermodulation, Dwell time, Minimum Frequency Occupation & Hopping Sequence, SAR – RF RF Exposure, MPE – RF RF Exposure	USA: TIA-603-E [1] or TIA-102.CAAA-E-2016 [1] using 47 CFR Parts 2, 20, 22(cellular and non-cellular), 24, 25, 27, 73, 74, 80, 87, 90, 95, 96, 97 and 101, ANSI C63.17(2013); ANSI 63.26(2015), KDB Publications 789033 D02 v01r03, 971168 D01 v02r02, 971168 D02 v01, 971168 D03 v01, 935210 D02 v03r02(April 08, 2016), 935210 D03 v04(February 12, 2016), 935210 D04 v02(February 12, 2016), 935210 D05 v01r01(February 12, 2016)	-	Radio Transmitters and Receiver
Telecommunications	FCC/ACTA Part 68 – Analog & Digital ISED CS-03, Part I, Part II and Part V TIA/EIA TSB-31B, TIA/EIA TSB-31C TIA/EIA-968-B	-	Analog PSTN devices – physical layer tests, Hearing Aid Compatibility, Volume control
Mexico	NOM-084-SCT1-2002, NOM-088/1-SCT1-2002, NOM-088/2-SCT1-2002, NOM-208-SCFI-2016; IFT-008-2015	-	-

Electromagnetic Compatibility

Test Method	Test Specification(s)	Range	Comments
Output Power, Power Spectral Density, Conducted Spurious Emissions, Radiated Spurious Emissions, Occupied Bandwidth, Duty Cycle, Frequency Error, Modulation range, ERP/EIRP, Dwell time, Minimum Frequency Occupation & Hopping Sequence, Adjacent channel power, Internodulation attenuation, Transmitter attack time, Transmitter release time, Rx maximum usable senisitivity, Rx average sensitivity, Rx co-channel rejection, Rx spurious response rejection, Rx Intermodulation response rejection, Blocking/ Desensitization	Europe ETSI EN 300 086; ETSI EN 300 220; ETSI EN 300 328; ETSI EN 300 330; ETSI EN 300 386; ETSI EN 300 440; 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 301 489-17; ETSI EN 301-489-24 ETSI EN 300 826; ETSI EN 301 113; ETSI EN 301 459; ETSI EN 301 441; ETSI EN 301 893; ETSI EN 301 721 ETSI EN 302 065; ETSI EN 302 502; ETSI EN 302 372, KS X 3124:2020, KS X 3125:2020, KS X 3127:2014, KN 301 489-7, KS X 3126:2020, KN 301 489-24	-	-

Product Safety

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Power Input, Touch Current/leakage current, creepage and clearances, Dielectric Withstand, Ground Continuity, Durability of Marking, Determination of applied and accessible parts, Working Voltage, Capacitance discharge, Insulation requirements, Humidity, Stability test, Handles, wall mounted equipment, Steady Forces, Impact, Drop, Stress Relief, Sharp Edges, Limited-energy circuit, Limited Power Source, Heating tests, Ball pressure test, Faults and Abnormal conditions, Connection to telecommunications networks and/or cable distribution systems	IEC 60950-1 (2005); IEC 60950-1:2005+A1:2009; EN 60950-1 (2006); EN 60950-1:2006 + A11:2009; EN 60950-1:2006 + A1:2010; EN 60950-1:2006 + A2:2013; CAN/CSA-C22.2 NO. 60950-1-07 (R2012) CAN/CSA-C22.2 NO. 60950-1B-07 - A2:2014	-	All tests except sections 2.10.8 to 2.10.12, 3.2.5.1, 4.2.8, 4.3.6, 4.3.12, 4.3.13.3, 4.3.13.4, 4.3.13.5, 4.6.2, 4.6.5, 4.7.3.6, Annexes AA, A3 and H
Single faults, Mains Supply power input and current, Durability of Marking, Determination of applied and accessible parts, Limit Values for accessible parts, Ground Continuity, Terminals, Creepage and clearances, Touch Current/leakage current, Dielectric Withstand, Impulse voltage withstand, Capacitance discharge, Humidity, Stability tests, Handles and grips, Wall mounting, Steady Forces, Impact, Drop, Limited-energy circuits, Stress Relief, Sharp Edges, Moving Parts, Protection against excessive temperatures and other hazards, Ball pressure test, Mains supply transformers –overheating, Short-circuit, Overload test	IEC 61010-1:2010+A1:2016, EN 61010-1:2010, +A1:2019; UL 61010-1 (Ed. 3.1) CAN/CSA C22.2 NO. 61010-1-12, +A1:2018	-	All tests except sections 6.7.1.2, 11.6, 11.7, 12.2.1, 12.3, 12.4, 12.5.2, 12.6 and 13.3

Product Safety

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Single faults, Input, Touch Current/leakage current, Patient touch current, Dielectric Withstand, Ground Continuity, Faults, Durability of Marking, Legibility of markings, Determination of applied and accessible parts, Working Voltage, creepage and clearances, Capacitance discharge, Insulation requirements, Terminals, Humidity, Instability tests, Steady Forces, Impact, Drop, Stress Relief, Sharp Edges, Limited-energy circuit, Protection against excessive temperatures and other hazards, Ball pressure test, Mains supply transformers –overheating, Short-circuit, Overload test	IEC 60601-1:2005; EN 60601-1:2006; EN 60601-1:2006/A1:2013 +A12:2014; EN 60601-1:2006, +A2:2021	-	All test except 9.6.2 to 9.7.8, 9.8.3, 10.1 to 10.7, 11.2.2 to 11.2.3 and Annex G
Fault conditions, Earth leakage, touch currents, Components, Construction, Markings, Earthing, Enclosures, Mechanical considerations concerning safety devices, Wiring, Insulation, Voltages at the RF output connection, High temperatures, Fire	EN60215:1989 + A1: 1992; +A2:1994	-	All tests except for clauses 21 to 24
Input, Touch and leakage current, Dielectric Withstand, Ground Continuity, Fault conditions, Durability of Marking, Determination of applied and accessible parts, Working Voltage, Capacitance discharge, Insulation requirements, creepage and clearances, Terminals, Humidity, Instability tests, Steady Forces, Impact, Drop, moving parts, Stress Relief, Sharp Edges, Limited-energy circuit, Protection against excessive temperatures and other hazards, Ball pressure test, Mains supply transformer tests, Battery Tests	IEC/EN 62368-1 (2014); UL 62368-1 (2014); CAN/CSA-C22.2 NO. 62368-1-14; EN 62368-1:2020, +A11:2020	-	All tests except sections 5.4.1.10 (Vicat test), 5.4.4.6.5, 5.4.1.5.3, 10, Annex G.7, Annex G.9, Annex G.13.6.2, Annex G.15, Annex J, Annex M.8.2, Annex P.4, Annex S.2, S.3, S.5, and Annex U

Product Safety

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Input, Touch Current/leakage current, Dielectric Withstand, Ground Continuity, Faults, Durability of Marking, Legibility of markings, Determination of applied and accessible parts, Working Voltage, Capacitance discharge, Insulation requirements, Terminals, Humidity, Instability tests, Steady Forces, Impact, Drop, Stress Relief, Sharp Edges, Limited-energy circuit, Protection against excessive temperatures and other hazards, Ball pressure test, Mains supply transformers –overheating, Short-circuit, Overload test	EN 60335-1:2002 +A14:2010 IEC 60335-1:2001 +A2:2006 EN 60335-1:2012 +A1:2019, +A2:2019, +A14:2019 EN 60335-2-29, EN 60335-2-65 EN 60335-2-80, EN 60335-2-109	Battery chargers, Air Cleaning appliances, Fans, UV radiation water treatment appliances	All tests except for clauses 15, 22.3, 22.16, 24.1.3, 24.1.4 to 24.1.9, 30.2.1 to 30.2.4, 31 to 32, Annex C, Annex F, Annex G, Annex H, Annex I, Annex J, Annex N, and Annex R

Notes:

1. For Signal Boosters (Part 20) accreditation is required for Commercial Mobile Services (FCC Licensed Radio Services Equipment) and for Signal Booster (Section 90.219) accreditation is required for General Mobile Radio Services (FCC Licensed Radio Service Equipment).
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. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1945.

Jason Stine, Vice President