CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board
500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

American Certification Body, Inc.
T/A ACB, Inc.
360 Herndon Pkwy, Suite 1400
Herndon, VA 20170

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field of

TESTING

Refer to the accompanying Scope of Accreditation for information regarding the types of tests to which this accreditation applies.

AT-1446
Certificate Number

ANAB Approval

Certificate Valid: 06/09/2016-06/30/2018
Version No. 002 Issued: 06/09/2016

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 January 2009).

ANSI-ASQ National Accreditation Board

ANAB

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

American Certification Body, Inc.
T/A ACB, Inc
360 Herndon Pkwy, Suite 1400, Herndon, VA 20170
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TESTING

Valid to: June 30, 2018 Certificate Number: AT - 1446

I. Electrical

FIELD OF TEST	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD, OR TECHNIQUE USED
Emissions Standards	Radiated and Conducted	FCC Part 15 B/C/D/E using, ANSI C63.4 (2003), ANSI C63.4-2009, ANSI C63.4-2014 & ANSI C63.17 (2013); FCC Part 11 Emergency Alert System (EAS) using ANSI C63.4 (2009 and 2014); ANSI C63.10 (2009), ANSI C63.10 (2013), FCC Part 18 using FCC OST/MP-05 (1986); FCC Report and Order ET Docket 98-153 (FCC 02-48), Procedures in IDB 20021108-001 with FCC Method 47, CFR Part 15, Subpart F; FCC KDB Publication No. 200443; FCC Public Notice, DA 00-705; FCC KDB Publication No. 789033; FCC KDB Publication No. 558074; CISPR 22 (2005), EN 55022 (2006); CISPR 22 (2008); EN 55022 (2010) CAN/CSA-CEI/IEC CISPR 22; CISPR 11, EN 55011
	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
	Generic/Product Specific	IEC 61000-6-3, EN 61000-6-3 IEC 61000-6-4, EN 61000-6-4
	ESD	IEC 61000-4-2, EN 61000-4-2
	Radiated RF	IEC 61000-4-3, EN 61000-4-3

FIELD OF TEST	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD, OR TECHNIQUE USED
Immunity Standards	EFT	IEC 61000-4-4, EN 61000-4-4
	Surge	IEC 61000-4-5, EN 61000-4-5
	Conducted RF	IEC 61000-4-6, EN 61000-4-6
	Low Frequency Magnetic Fields	IEC 61000-4-8, EN 61000-4-8
	Voltage dips and variations	IEC 61000-4-11, EN 61000-4-11, KN 61000-4-11
Radio Testing	Europe	ETSI EN 300 086-1; ETSI EN 300 086-2; ETSI EN 300 113-1; ETSI EN 300 113-2; ETSI EN 300 219-1; ETSI EN 300 219-2; ETSI EN 300 220-1; ETSI EN 300 220-2; ETSI EN 300 220-3; ETSI EN 300 328; ETSI EN 300 330-1; ETSI EN 300 330-2; ETSI EN 300 390-1; ETSI EN 300 390-2; ETSI EN 300 440-1; 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 301 489-15; ETSI EN 301 489-17 ; ETSI EN 301 511 ; ETSI EN 301 908-1; ETSI EN 301 908-2 ETSI EN 301 908-3 ; ETSI EN 301 908-13 ETSI EN 301 489-24; ETSI EN 301 489-34 ; ETSI EN 300 422-1 ; ETSI EN 300 422-2 ; ETSI EN 301 091-1 ; ETSI EN 301 091-2 ; ETSI EN 301 893 ; EN 301 502 V8.1.2 ; EN 301 502 V9.2.1 ; EN 301 502 V11.1.1 ; EN 301 502 V12.1.1 ; EN 300 609-4 V9.2.1 ;EN 300 609-4 V10.2.1 ; EN 301 908-14 ;EN 301 908-15 ;EN 301 908-18
	Europe	ETS 300 577; ETS 300 578; ETS 300 609-4; ETS 300 609-4
	USA	TIA/EIA 603-D (2010) using 47 CFR Parts 2, 20, 22 (cellular and non-cellular), 24, 25, 27, 73, 74, 80, 87, 90, 95, 97 and 101; ANSI C63.4 (2009); ANSI C63.4 (2014) ANSI C63.10 (2009); ANSI C63.10 (2013), ANSI C63.26 (2015); TIA/EIA-382-A + ANSI/TIA/EIA-382-A; FCC KDB Publication No. 935210; FCC KDB Publication No. 971168
	Canada	RSS-GEN, RSS-102, RSS-111, RSS-112, RSS-117, RSS-119, RSS-123, RSS-125, RSS-127, RSS-130, RSS-131, RSS-132, RSS-133, RSS-134, RSS-135, RSS-137, RSS-139, RSS-141, RSS-142, RSS-170, RSS-181, RSS-182, RSS-191, RSS-192, RSS-194, RSS-195, RSS-196, RSS-197, RSS-199, RSS-210, RSS-211, RSS-213, RSS-215, RSS-216, RSS- 220, RSS-222, RSS-236, RSS-238, RSS-243, RSS-244, RSS-247, RSS-251, RSS-287, RSS-288, RSS-310

Scope B1: Article 38-2-2(1) i) of Radio Law (License not required)					
		Specific Radio Type		**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Citizen radio		Item 3	CFR 47 Part 95 C / IC RSS136 / ETSI EN 300 135-1 and -2 V1.2.1 (2008-02)
		Cordless telephone		Item 7	Except for freq band CFR 47 15.214 / IC RSS210 annex 3
		Specified low power radio equipment	Tele-meter, Tele-control, and Data Transmission (315 MHz Band)	Item 8	CFR 47 15.231 / ANSI C63.10 / IC RSS 210 annex 1 / EN 300 220-1&2 V2.3.1 (2010-02)
			Tele-meter, Tele-control, and Data Transmission (426, 920, 950, and 1200 MHz Bands)	Item 8	TIA 603, ANSI C63.10, ETSI EN 300 440, RSS210
			420-450 MHz Medical telemeter Type A, B and C	Item 8	CFR 47 part 95H / KDB771134 med radio / IC RSS210 annex 4 / EN 300 220-1&2 V2.3.1 (2010-02)
			420-450 MHz Medical telemeter Type D and E	Item 8	CFR 47 part 95H / KDB771134 med radio / IC RSS210 annex 4 / EN 300 220-1&2 V2.3.1 (2010-02)
			Implant Data Transmission and Implant Medical Remote Measurement for (402 to 405) MHz	Item 8	CFR 47 95I / KDB771134 med radio / TIA 603C / ANSI C63.10 / IC RSS243 / REC70-03 annex 12 / EN 301 839-1 & 2 v1-3-1
			433 MHz data transmission used for international transportation	Item 8	CFR 47 15.240 / ANSI C63.10 / IC RSS210 annex 5 / EN 300 220-1&2 V2.3.1 (2010-02) / EN 302 066 / REC70-03 annex 1 f1 & annex 6 m

Scope B1: Article 38-2-2(1) i) of Radio Law (License not required)					
		Specific Radio Type		**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Specified low power radio equipment	429 MHz Radio pager	Item 8	TIA603C / RSS119 / EN 300 220-1&2 V2.3.1 (2010-02)
			Radio microphones in the (70 to 300) and 800 MHz band	Item 8	CFR 47 part 74 / TIA 603C / IC RSS210 annex 4 / ANSI C63.10/ ETSI TS 102 192-1&2 V1.1.1 (2004-08) / REC70-03 annex 10
			75 & 169 MHz Radio microphone for hearing aid	Item 8	CFR 47 15.237 / IC RSS210 annex 4 / ANSI C63.10
			Walkie Talkie for (413 and 423) MHz bands	Item 8	RSS119, SRSP501, TIA 603 Part 95 FRS but different Freq range. RSS210 FRS
			75 MHz Voice assist radiotelephone	Item 8	CFR 47 15.237 / IC RSS210 annex 4 / ANSI C63.10
			950 MHz Band identification of moving objects	Item 8	CFR 47 15.245 / ANSI C63.10 / RSS 210 annex 7 / RSS137 / EN 300 220-1&2 V2.3.1 (2010-02) / EN 302 066 / REC70-03 annex 6
			(916.7 to 923.5 MHz band identification of moving objects.	Item 8	CFR 47 15.245 / ANSI C63.10 / RSS 210 annex 7 / RSS137 / EN 300 220-1&2 V2.3.1 (2010-02) / EN 302 066 / REC70-03 annex 6
			Radio equipment in the 2.4 GHz band for use in identification of moving objects	Item 8	CFR 47 90F / FHSS CFR 47 15.247 / ANSI C63.10 / IC RSS210 annex 8 / EN300 328 / REC70-03 annex 1&6
			Millimeter wave radar (60.5 GHz and 76.5 GHz)	Item 8	FCC KDB200443 MMW test procedure CFR47 15.253 IC RSS210 annex 13
			Radio equipment for millimeter wave visual transmission or data transmission in the (57 to 66) GHz band	Item 8	FCC KDB200443 MMW test procedure / CFR 47 15.255 / IC RSS210 annex 13 / REC70-03 annex 1&3

Scope B1: Article 38-2-2(1) i) of Radio Law (License not required)					
		Specific Radio Type		**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Specified low power radio equipment	Detection sensor of moving objects (10.525 GHz and 24.15 GHz band)	Item 8	CFR 47 90F / EN 302 372-1 & 2 V1.1.1 (2006-04) / REC70-03 annex 1&6
			Animal Detection Report for 142 MHz band.	Item 8	TIA 603 ANSI C63.10
		Low Power Security System		Item 13	ANSI C63.10 / ANSI C63.4
		Low Power Data Communications System	In 2.4 GHz Band (2400-2483.5 MHz)	Item 19	CFR 47 15.247 / ANSI C63.10 / RSS210 annex 8 / REC70-03 annex 3 / EN 300 328 v1.7.1
			In 2.4 GHz Band (2471-2497 MHz)	Item 19-2	CFR 47 15.249 / RSS210 annex 2 / REC70-03 annex 1 / EN 300 440
			In 2.4 GHz Band (for Radio Control Model Aircraft, 2400-2483.5 MHz)	Item 19-2-2	ANSI C63.10 / RSS210 annex 8 / REC70-03 annex 3 / EN 300 328 v1.7.1
			In 2.4 GHz Band (for Radio Control Model Aircraft, 2471-2497 MHz)	Item 19-2-3	ANSI C63.10 / RSS210 annex 8 / REC70-03 annex 3 / EN 300 328 v1.7.1
			In the 5.2, 5.3 GHz Band	Item 19-3	CFR47 15E 15..407 / ANSI C63.10 / IC RSS210 annex 9 / REC70-03 annex 3 / EN 301 893
			In 5.6 GHz Band	Item 19-3-2	CFR47 15E 15..407 / ANSI C63.10 / IC RSS210 annex 9 / REC70-03 annex 3 / EN 301 893
			In 25 GHz and 27 GHz Band	Item 19-4	IC RSS210 annex 12

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Scope B1: Article 38-2-2(1) i) of Radio Law (License not required)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Land Mobile Station for 5 GHz Band Wireless Access System (Low Power Type)	Item 19-11	CFR47 90Y / TIA 603C / IC RSS111
		Digital Cordless Telephone in Narrowband	Item 21	Except for freq band CFR47 15E / 15.301 / ANSI C63.10
		Digital Cordless Telephone in Broadband (DECT)	Item 21-2	ETSI EN 301 649 TIA 603, ANSI C63.10 Part 15D
		Digital Cordless Telephone in OFDMA Method (sPHS)	Item 21-3	ETSI EN 301 908-10 Part 15D
		PHS Land Mobile Station	Item 22	CFR 47 24E / TIA 603C / IC RSS213
		Mobile Station for Dedicated Short Range Communication System	Items 32	CFR 47 24E / TIA 603C / IC RSS213
		Test Station for Dedicated Short Range Communications System	Item 33-2	CFR 47 24E / TIA 603C / IC RSS213
		UWB (Ultra Wide Band) Radio System	Item 47	CFR 47 15.501/ 15F / KDB393764 UWB Compliance / IC RSS220 / REC70-03 annex 1 / EN 302 500-2
		26 GHz UWB Radar / (22.0 to 24.25) GHz	Item 47-2	EN 302 435-2 / RSS-220 FCC KDB393764 UWB Compliance Measurements
		Land Mobile for 700 MHz Band Intelligent Transport System	Item 64	TIA 603 ANSI C63.10

Scope B2: Article 38-2-2(1) ii) of Radio Law (Radio Stations Prescribed in Article 27-2(i) (Blanket License)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	MCA (Land Mobile Station) 800 MHz Band Taxi & Transportation Radio	Item 1-4	TIA 603, ANSI C63.10, CFR 47 Part 90
		VSAT (Ku Band)	Item 9	CFR 47 Part 25
		VSAT (Ka Band)	Item 9-2	CFR 47 Part 25
		Mobile Radio Relay Station / Land Mobile Station	Item 10	TIA 603, ANSI C63.10, CFR 47 Part 90
		TDMA Cellular Phone	Item 10-2	TIA 603 ANSI C63.10, CFR 47 Part 22 & 24
		CDMA Cellular Phone	Item 11	TIA 603 ANSI C63.10, CFR 47 Part 22 & 24
		WCDMA Cellular Phone	Item 11-3	TIA 603, ANSI C63.10, CFR 47 Part 22 & 24
		CDMA2000 Cellular Phone	Item 11-4	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		DS-CDMA (HSDPA) Cellular Phone	Item 11-7	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		CDMA2000 (1xEV-DO) Cellular Phone	Item 11-8	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		CDMA2000 (3xEV-DO) Cellular Phone	Item 11-8-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24

Scope B2: Article 38-2-2(1) ii) of Radio Law (Radio Stations Prescribed in Article 27-2(i) (Blanket License)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	TD-CDMA Cellular Phone (except land mobile stations which relays portable radio communication)	Item 11-11	TIA 603. ANSI C63.10, CFR 47 Part 22 and 24
		TD-SCDMA Cellular Phone	Item 11-12	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		TD-OFDMA (XGPHS) Cellular Phone	Item 11-15	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		MBTDD 625k Land Mobile Station	Item 11-17	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		SC-FDMA (LTE) FDD Cellular Phone	Item 11-19	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		SC-FDMA (LTE) TDD Cellular Phone (except land mobile stations which relays portable radio communication)	Item 11-21	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		OFDMA (UMB) FDD Cellular Phone (except land mobile stations which relays portable radio communication)	Item 11-23	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		WiMAX Land Mobile Station	Item 11-25	TIA 603, ANSI C63.10, CFR 47 Part 27
		OFDMA (UMB) TDD Cellular Phone (except land mobile stations which relays portable radio communication)	Item 11-26	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Land Portable Mobile Earth Station for OmniTRACS system (Advanced Vehicle Operation System) (geosynchronous satellite)	Item 14	TIA 603, ANSI C63.10, CFR 47 Part 25
		Portable Mobile Earth Stations for Orbcomm system (no geosynchronous satellite)	Item 14-2	TIA 603, ANSI C63.10, CFR 47 Part 25

Scope B2: Article 38-2-2(1) ii) of Radio Law (Radio Stations Prescribed in Article 27-2(i) (Blanket License)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Land Mobile Station for 26/38 GHz Band Subscriber Radio Access Communication (point to multipoint type)	Item 15-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Station & Portable Station for 5 GHz band Wireless Access System	Item 19-9	TIA 603, ANSI C63.10, CFR 47 Part 15, CFR 47 Part 90
		Land Mobile Station & Portable Station for 5 GHz band Wireless Access System (low spurious type)	Item 19-10	TIA 603, ANSI C63.10, CFR 47 Part 15, CFR 47 Part 90
		Digital MCA (1500 MHz Band)	Item 20	TIA 603, ANSI C63.10, CFR 47 Part 90
		Digital MCA (800 MHz Band)	Item 20-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Portable Mobile Earth Station for Wide-Star (N-STAR) of NTT DoCoMo (geosynchronous satellite)	Item 28	TIA 603, CFR 47 Part 25
		Portable Mobile Earth Station for Iridium System (no geosynchronous satellite)	Item 28-2	TIA 603, CFR 47 Part 25
		Portable Mobile Earth Station for THURAYA	Item 28-2-2	TIA 603 CFR 47 Part 25
		INMARSAT Portable Mobile Earth Station	Item 30	TIA 603, CFR 47 Part 25
		Earth Stations on Board Vessels	Item 30-2	TIA 603, CFR 47 Part 80
		Portable Mobile Earth Station for Helicopter Satellite Communication System	Item 30-3	TIA 603, CFR 47 Part 87
		Rural Subscriber Radio	Item 31	TIA 603, CFR 47 Part 95

Scope B2: Article 38-2-2(1) ii) of Radio Law (Radio Stations Prescribed in Article 27-2(i) (Blanket License)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Land Mobile Station in the 60 GHz band (point to multipoint type)	Item 31-3	TIA 603, ANSI C63.10, CFR 47 Part 101, FCC KDB200443 MMW test procedure
		Digital Airport Radio System (MCA type)	Item 39	TIA 603, ANSI C63.10, CFR 47 Part 90
		Aircraft Earth Station of Aeronautical Mobile-Satellite Service Networks	Item 46	TIA 603, ANSI C63.10, CFR 47 Part 87
		WiMAX Land Mobile Station	Item 51	TIA 603, ANSI C63.10, CFR 47 Part 27
		MBTDD-W Land Mobile Radio	Item 52	TIA 603, ANSI C63.10, CFR 47 Part 90
		TD-OFDMA/TD-SCFDMA Broadband Wireless Access System Landmobile Station	Item 54	TIA 603, ANSI C63.10, CFR 47 Part 90
		MBTDD 625k Land Mobile Station	Item 56	TIA 603, ANSI C63.10, CFR 47 Part 90
		MCA (except for Land Mobile Station) 800 MHz Band Taxi & Transportation Radio	Item 1-4	TIA 603, ANSI C63.10, CFR 47 Part 90
		SSB for Land Mobile Station and Portable Radio Station	Item 1-9	TIA 603, ANSI C63.10, CFR 47 Part 90
		Angle-Modulation System for Land Mobile Stations and Portable Radio Station (F3E etc.)	Item 1-10	TIA 603, ANSI C63.10, CFR 47 Part 90
		Frequency Modulation System for Land Mobile Station and Portable Radio Station (F3E etc.) 60 MHz, 150 MHz, 400 MHz	Item 1-11	TIA 603, ANSI C63.10, CFR 47 Part 90
		Frequency Modulation System for Land Mobile Station and Portable Radio Station (F3E etc.) 30-54, 70-100, 100-142, 162.0375-200, 810-960, 1215-2690 MHz	Item 1-11	TIA 603, ANSI C63.10, CFR 47 Part 90

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Specified Radio Microphone / Radio Microphone	Item 1-12	TIA 603, ANSI C63.10, CFR 47 Part 90
		Specified Radio Microphone / Wireless In Ear Monitor	Item 1-12	TIA 603, ANSI C63.10, CFR 47 Part 90
		Specified Digital Radio Microphone	Item 1-12-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		DSB Maritime Mobile Telephone	Item 1-13	TIA 603, ANSI C63.10, CFR 47 Part 80
		SSB Maritime Mobile Telephone Less than 50 W	Item 1-14	TIA 603, ANSI C63.10, CFR 47 Part 80
		Frequency Modulation System	Item 1-15	TIA 603, ANSI C63.10, CFR 47 Part 90, CFR 47 Part 80 and 87
		Radiolocation	Item 2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Radio Buoys	Item 2-2	TIA 603, ANSI C63.10, CFR 47 Part 80
		Meteorological aids	Item 3-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Convenience Radio (900 MHz Band)	Item 4	TIA 603, ANSI C63.10, CFR 47 Part 15
		Convenience Radio (150, 400 MHz Band)	Item 4-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Convenience Radio (350 MHz Band)	Item 4-3	TIA 603, ANSI C63.10, CFR 47 Part 90
		Convenience Radio (27 MHz Band)	Item 4-4	TIA 603, ANSI C63.10, CFR 47 Part 90

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Digital Convenience Radio (150, 400 MHz Band)	Item 4-5	TIA 603, ANSI C63.10, CFR 47 Part 90
		Digital Convenience Radio (150, 400 MHz Band, with a carrier sensing device)	Item 4-6	TIA 603, ANSI C63.10, CFR 47 Part 90
		Convenience Radio (920 MHz / UHF Band RF-ID)	Item 4-7	TIA 603, ANSI C63.10, CFR 47 Part 90, CFR 47 Part 15
		Convenience Radio (50 GHz Band)	Item 5	TIA 603, ANSI C63.10, CFR 47 Part 90, FCC KDB200443 MMW test procedure
		Premises Radio / UHF Band RF-ID	Item 6	TIA 603, ANSI C63.10, CFR 47 Part 15
		Premises Radio / 1200 MHz Band Data Transmission	Item 6	TIA 603, ANSI C63.10, CFR 47 Part 15
		Premises Radio / 2450 MHz Band RF-ID	Item 6	TIA 603, ANSI C63.10, CFR 47 Part 15
		Premises Radio (920 MHz Band, with a carrier sensing device)	Item 6-2	TIA 603, ANSI C63.10, CFR 47 Part 15
		Premises Radio (950 MHz Band, with a carrier sensing device)	Item 6-2	TIA 603, ANSI C63.10, CFR 47 Part 15
		Premises Radio (2450 MHz Band, using a frequency hopping system)	Item 6-3	TIA 603, ANSI C63.10, CFR 47 Part 15
		Mobile Relay Station/Land Mobile Relay Station	Item 10	TIA 603, ANSI C63.10, CFR 47 Part 90
		Base Station for TDMA Cellular Phone	Item 10-3	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for CDMA Cellular Phone	Item 11-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Femtocell Base Station for CDMA Cellular Phone	Item 11-2-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for CDMA Cellular Phone (In-Door Use)	Item 11-2-3	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for W-CDMA Cellular Phone	Item 11-5	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for CDMA2000 Cellular Phone	Item 11-6	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Femtocell Base Station for W-CDMA Cellular Phone	Item 11-6-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Femtocell Base Station for CDMA2000 Cellular Phone	Item 11-6-3	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for W-CDMA Cellular Phone (In-Door Use)	Item 11-6-4	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base station for CDMA2000 Cellular Phone (In-Door Use)	Item 11-6-5	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for W-CDMA (HSDPA)	Item 11-9	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for CDMA2000 (1xEV-D0)	Item 11-10	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Femtocell Base Station for W-CDMA (HSDPA)	Item 11-10-2	TIA 603, ANSI C63.10, CFR 47 Part 2 and 24
		Femtocell Base Station for CDMA2000 (1xEV-DO)	Item 11-10-3	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for W-CDMA (HSDPA) (In-Door Use)	Item 11-10-4	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Base Station for CDMA2000 (1xEV-DO) (In-Door Use)	Item 11-10-5	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for TD-CDMA	Item 11-13	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for TD-SCDMA	Item 11-14	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for TD-OFDMA (XGPHS) Cellular Phone	Item 11-16	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for MBTDD 625k	Item 11-18	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for SC-FDMA (LTE) FDD Cellular Phone	Item 11-20	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Femtocell Base Station for SC-FDMA (LTE) FDD Cellular Phone	Item 11-20-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for SC-FDMA (LTE) FDD Cellular Phone (In-Door Use)	Item 11-20-3	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for SC-FDMA (LTE) TDD Cellular Phone (except Land Mobile Station Which Relays portable Radio Communication)	Item 11-22	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for OFDMA (UMB) FDD Cellular Phone (except Land Mobile Station Which Relays portable Radio Communication)	Item 11-24	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for WiMAX	Item 11-27	TIA 603, ANSI C63.10, CFR 47 Part 27

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Base Station for OFDMA (UMB) TDD Cellular Phone (except land mobile station which relays portable radio communication)	Item 11-28	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Amateur Station	Item 12	TIA 603, CFR 47 Part 95
		Base Station for 26/38 GHz Band Subscriber Radio Access Communication (point-to-multipoint type)	Item 15	TIA 603, ANSI C63.10, CFR 47 Part 101
		Land Mobile Station for 22/26/38 GHz Band Subscriber Radio Access Communication (point-to-point type)	Item 15-3	TIA 603, ANSI C63.10, CFR 47 Part 101
		Fixed Station for Telemeter and Broadcasting Type Simplex Communication	Item 16	TIA 603, ANSI C63.10, CFR 47 Part 73 and 74
		Fixed Station for Emergency Alarms in the 60 MHz Band	Item 17	TIA 603, ANSI C63.10, CFR 47 Part 73
		Fixed Station for Telecommunications Service in the 22 GHz Band	Item 18	TIA 603, ANSI C63.10, CFR 47 Part 101
		Base Station & Portable Base Station for 5 GHz Band Wireless Access System	Item 19-5	TIA 603, ANSI C63.10, CFR 47 Part 90 and 15
		Base Station & Portable Base Station for 5 GHz Band Wireless Access System (low spurious type)	Item 19-6	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Relay for 5 GHz Band Wireless Access System (limited for use in Special Zones)	Item 19-7	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Relay for 5 GHz Band Wireless Access System (low spurious type) (limited for use in Special Zones)	Item 19-8	TIA 603, ANSI C63.10, CFR 47 Part 90

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Digital MCA (1500 MHz Band, except for Land Mobile Station)	Item 20	TIA 603, ANSI C63.10, CFR 47 Part 90
		Digital MCA (800 MHz Band, except for Land Mobile Station)	Item 20-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		PHS Base Station	Item 23	TIA 603, ANSI C63.10, CFR 47 Part 15
		PHS Relay Station	Item 23-2	TIA 603, ANSI C63.10, CFR 47 Part 15
		PHS Test Station	Item 23-3	TIA 603, ANSI C63.10, CFR 47 Part 15
		Fixed Station for Telecommunications Service in the 38 GHz Band	Item 24	TIA 603, ANSI C63.10, CFR 47 Part 90
		RZSSB System	Item 25	TIA 603, ANSI C63.10, CFR 47 Part 90
		Automatic Frequency Selecting RZSSB System	Item 25-2	TIA 603, ANSI C63.10, CFR 47 Part 90
		Frequency Tracking RZSSB System	Item 25-3	TIA 603, ANSI C63.10, CFR 47 Part 90
		Narrow-band Digital System	Item 25-4	TIA 603, ANSI C63.10, CFR 47 Part 80, 87 and 90
		Automatic Frequency Selecting Narrow-band Digital System	Item 25-5	TIA 603, ANSI C63.10, CFR 47 Part 80, 87 and 90

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Frequency Tracking Narrow-Band Digital System	Item 25-6	TIA 603, ANSI C63.10, CFR 47 Part 90
		Vehicle Detection System	Item 26	TIA 603, ANSI C63.10, CFR 47 Part 90
		Beacon System	Item 27	TIA 603, ANSI C63.10, CFR 47 Part 90
		Radar Class III	Item 28-3	TIA 603, ANSI C63.10
		Radar Class IV	Item 29	TIA 603, ANSI C63.10
		Base Station in the 60 GHz Band	Item 31-2	TIA 603, ANSI C63.10, CFR 47 Part 90, FCC KDB200443 MMW test procedure
		Land Mobile Station in the 60 GHz Band (point-to-point type)	Item 31-4	TIA 603, ANSI C63.10, CFR 47 Part 101, FCC KDB200443 MMW test procedure
		Land Mobile Station in the 80 GHz Band	Item 31-5	TIA 603, ANSI C63.10, CFR 47 Part 90, FCC KDB200443 MMW test procedure
		Base Station for Dedicated Short Range Communication System	Item 33	TIA 603, ANSI C63.10, CFR 47 Part 90
		Fixed Station for the Municipal Digital Disaster Prevention Service in the 60 MHz Band	Item 38	TIA 603, ANSI C63.10, CFR 47 Part 90
		Digital Airport Radio System (MCA and add a direct connection type)	Item 40	TIA 603, ANSI C63.10, CFR 47 Part 90

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Base Station, Land Mobile Relay Station and Land Mobile Station for Telecommunications and Public Service in the 18 GHz Band (point-to-point type)	Item 41	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Station for Telecommunications and Public Service in the 18 GHz Band (point-to-multipoint type)	Item 42	TIA 603, ANSI C63.10, CFR 47 Part 101
		Base Station and Land Mobile Relay Station for Telecommunications and Public Service in the 18 GHz Band (point-to-multipoint type)	Item 43	TIA 603, ANSI C63.10, CFR 47 Part 101
		Fixed Station for Telecommunications Service in the 18 GHz Band	Item 44	TIA 603, ANSI C63.10, CFR 47 Part 90
		Fixed Station for Public Service in the 18 GHz Band	Item 45	TIA 603, ANSI C63.10, CFR 47 Part 90
		Fixed Station for Telecommunications Service in the 1500 MHz Band	Item 48	TIA 603, ANSI C63.10, CFR 47 Part 90
		Base Station for WiMAX	Item 49	TIA 603, ANSI C63.10, CFR 47 Part 27
		Base Station for MBTDD-W	Item 50	TIA 603, ANSI C63.10, CFR 47 Part 27
		Femtocell Base Station for WiMAX	Item 52-2	TIA 603, ANSI C63.10, CFR 47 Part 27
		Base Station for WiMAX (In-Door Use)	Item 52-3	TIA 603, ANSI C63.10, CFR 47 Part 27
		Base Station for XGP	Item 52	TIA 603, ANSI C63.10, CFR 47 Part 27

Scope B3: Article 38-2-2(1) iii) of Radio Law (Other Licensed)				
		Specific Radio Type	**Certification Ordinance Reference Article 2, Paragraph 1**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Japan	Base Station for TD-LTE	Item 53	TIA 603, ANSI C63.10 CFR 47 Part 22 and 24
		Femtocell Base Station for XGP	Item 54-2	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Base Station for XGP (In-Door Use)	Item 54-3	TIA 603, NSI C63.10, CFR 47 Part 22 and 24
		Base Station for MBTDD 625k	Item 55	TIA 603, ANSI C63.10, CFR 47 Part 22 and 24
		Gap Filler for Digital Terrestrial Television Broadcasting (Wireless Facilities to broadcast only by method to relay the broadcast program of other broadcasting stations)	Item 57	TIA 603, ANSI C63.10, CFR 47 Part 74
		Gap Filler for Digital Terrestrial Television Broadcasting (Only the Wireless Facilities to perform relay broadcasting for measures of poor reception)	Item 57-2	TIA 603, ANSI C63.10, CFR 47 Part 74
		Simplistic Automatic Identification System	Item 58	TIA 603, ANSI C63.10, CFR 47 Part 15
		Simplistic International VHF	Item 59	TIA 603, ANSI C63.10
		Simplistic International VHF (portable Type)	Item 60	TIA 603, ANSI C63.10, CFR 47 Part 90
		Base Station for 200 MHz Broadband Mobile Communication System	Item 61	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Station for 200 MHz Broadband Mobile Communication System	Item 62	TIA 603, ANSI C63.10, CFR 47 Part 90
		Base Station for 700 MHz Band Intelligent Transport Systems	Item 63	TIA 603, ANSI C63.10, CFR 47 Part 90
		Land Mobile Station for Telecommunications Service in the 23 GHz Band.	Item 65	TIA 603 ANSI C63.10 CFR 47 Part 101
		Fixed Station for Telecommunications Service in the 23 GHz Band.	Item 66	TIA 603 ANSI C63.10 CFR 47 Part 101

Hong Kong OFCA Specifications				
		Radio Equipment Specifications	**HKCA[4]**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Hong Kong	Single-Sideband Radiotelephone and Receiving Equipment 1.605 – 27.5 MHz for Voluntary Fitting in Small Craft	HKCA 1001	TIA 603-D (2010), ANSI C63.10, ANSI C63.26, CFR 47 Part 90
		ISM Radio-Frequency Equipment	HKCA 1007	CISPR 11
		Low Power Radio Microphones, including Associated Receiving Equipment	HKCA 1008	TIA/EIA 603-D using 47 CFR Part 74 C63.26 ETSI EN 300 422-2
		Radio Equipment Exempted from Licensing	HKCA 1035	FCC Part 15 C / ETSI EN 300 220-1 ETSI EN 300 330-1 ETSI EN 300 440-1 ETSI EN 300 422-1 ETSI EN 301 091-1
		2.4 GHz or 5 GHz FHSS or Digital Modulation	HKCA 1039	FCC Part 15 C & E / C63.10 / KDB 558074 ETSI EN 300 328 / ETSI EN 301 893
		5 GHz Wireless Access	HKCA 1042	FCC Part 15 E
		Base Station and Repeater Equipment for Use in the 3G Mobile Communications Services Employing CDMA2000 Spread Spectrum	HKCA 1053	TIA/EIA 603-D using 47 CFR Parts 22/C63.26
		Short Range Devices 433 MHz	HKCA 1061	FCC Part 15 C / C63.10 ETSI EN 300 220-1
		Mobile Stations and Portable Equipment for Use in GSM in 900 & 1800 MHz Bands	HKCA 1033	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 511
		User Equipment for Use in the 3G Mobile Communications Services Employing CDMA Direct Spread (UTRA FDD)	HKCA 1048	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ETSI EN 301 908-2
		Mobile Station for Use in the 3G Mobile Communications Services Employing CDMA 2000 Spread Spectrum	HKCA 1054	TIA/EIA 603-D using 47 CFR Parts 22/ C63.26

Hong Kong OFCA Specifications				
		Radio Equipment Specifications	**HKCA[4]**	**Equivalent standard with similar or more stringent testing if known (not specific frequencies or power but test methods)**
Radio Testing	Hong Kong	User Equipment for Use in the Public Mobile Communications Services Based on Evolved Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD)	HKCA 1057	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ETSI EN 301 908-13
		User Equipment for Use in Evolved Universal Terrestrial Radio Access (E-UTRA) Time Division Duplex (TDD) Network	HKCA 1073	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ETSI EN 301 908-13
		Base Station System (BSS) and Repeater Equipment for Use in the Public Mobile Communications Service Employing GSM or PCS	HKCA 1020	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 502 V8.1.2 ETSI EN 301 502 V9.2.1 ETSI EN 300 609-4 V9.2.1
		Base Station and Repeater Equipment for 3G Mobile Communications Services Employing CDMA Direct Spread (UTRA FDD)	HKCA 1043	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ETSI EN 301 908-3 ETSI EN 301 908-13
		Base Station and Repeater Equipment for Use in Public Mobile Communication Services Based on Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD)	HKCA 1056	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ETSI EN 301 908-14 ETSI EN 301 908-15
		Multi-Standards Radio (MSR) Base Station	HKCA 1065	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ; ETSI EN 301 908-18
		Base Station for Use in Evolved Universal Terrestrial Radio Access (E-UTRA) Time Division Duplex (TDD) Network	HKCA 1072	TIA/EIA 603-D using 47 CFR Parts 20, 22, 24, 27 / C63.26 ETSI EN 301 908-1 ; ETSI EN 301 908-14

FIELD OF TEST	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD, OR TECHNIQUE USED
RF Exposure Test Methods (Exclusion: SAR Testing)	MPE	IEEE STD C95.1; IEEE STD C95.3; OET Bulletin 65; EN 50371; EN 50385, EN 50401, EN 62311, EN 62479, RSS-102; Safety Code 6 (IC)
Product Safety	ITE	IEC 60065, IEC 60215, IEC 60825, IEC 60950-1; IEC 60950-21; IEC 60950-22, AS/NZS 60950; AS/NZS 60950-1; KN 60950; EN 60065, EN 60215, EN 60825, EN 60950; EN 60950-1; EN 60950-22, UL 60950-1; CAN/CSA C22.2 60950-1

Notes:

1. ** = As Applicable*
2. *For standards or methods listed on the scope of accreditation without a revision number or issue date or with a superseded issue date or revision number, laboratories are expected to be competent in the use of the current version within one year of standard or method publication update (or by the authorized use date of a recognition body or regulatory agency). When an older standard or method is required for an accredited test, the scope will include the superseded date/version if lab demonstrated proficiency for the procedures to be enveloped by and within the limits of the listed tests and the general controls enveloped in ISO/IEC 17025 Accreditation.*
3. *For the CISPR standards, the test laboratory is using the regional test requirement documents as opposed to the base reference documents as defined by the regional regulatory agencies (e.g. AS/NZ representing Australia and New Zealand, EN for the European community).*
4. From 1 April 2012 onward, revised versions of existing HKTA specifications and new specifications prescribed by the CA will be named as HKCA specifications. For the avoidance of doubt, unless the specific issue number of the HKTA specification is explicitly specified, reference in any document to HKTA specification shall be construed as including reference to the corresponding HKCA specification as may be revised from time to time. In addition, reference in any document to HKCA specification shall be construed as referring to the corresponding HKTA specification if the HKCA specification under reference is not yet present
5. *This scope is formatted as part of a single document including the Certificate of Accreditation No. AT-1446*