SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: January 31, 2023 Certificate Number: 5123.03

In recognition of the successful completion of the A2LA evaluation process accreditation is granted to this laboratory to perform the following tests:

Test Technology:	**Test Method(s)[1]:**
Emissions	
Radiated and Conducted	FCC Part 15, Subpart B (using ANSI C63.4:2014)
	FCC Part 18 (using FCC MP-5 1986)
	ANSI C63.4-2014
	ANSI C63.4a-2017
	ANSI C63.4-2014 amended as per ANSI C63.4a-2017
	ICES-001
	ICES-003
	BS EN 55011; EN 55011; CISPR 11; AS/NZS CISPR 11
	BS EN 55013; EN 55013; CISPR 13; AS/NZS CISPR 13
	BS EN 55014-1; EN 55014-1; CISPR 14-1; AS/NZS CISPR 14.1
	BS EN 55015; EN 55015; CISPR 15; AS/NZS CISPR 15
	EN 55022; CISPR 22; AS/NZS CISPR 22
	BS EN 55032; EN 55032; CISPR 32; VCCI-CISPR 32; AS/NZS CISPR 32; CAN/CSA-CISPR 32; KS C 9832
	BS EN 61000-3-2; EN 61000-3-2; EN IEC 61000-3-2; IEC 61000-3-2; AS/NZS 61000.3.2
	BS EN 61000-3-3; EN 61000-3-3; IEC 61000-3-3; AS/NZS 61000.3.3
	BS EN 61000-6-3; EN 61000-6-3; IEC 61000-6-3
	BS EN 61000-6-4; IEC 61000-6-4; EN 61000-6-4; EN IEC 61000-6-4
	VCCI V-3 Technical Requirements
	CNS 13803
	CNS 13438
	CNS 13439
	CNS 13783-1
	MPR II
	JEITA ITR-3004
	BS EN 60601-1-2; IEC 60601-1-2; EN 60601-1-2

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Test Technology:	**Test Method(s)[1]:**
Immunity	
ESD	BS EN 61000-4-2; IEC 61000-4-2; EN 61000-4-2; KS C 9610-4-2
Radiated Immunity	BS EN 61000-4-3; IEC 61000-4-3; EN 61000-4-3; KS C 9610-4-3
EFT	BS EN 61000-4-4; IEC 61000-4-4; EN 61000-4-4; KS C 9610-4-4
Surge	BS EN 61000-4-5; IEC 61000-4-5; EN 61000-4-5; KS C 9610-4-5
Conducted Immunity	BS EN 61000-4-6; IEC 61000-4-6; EN 61000-4-6; KS C 9610-4-6
Magnetic Fields	BS EN 61000-4-8; IEC 61000-4-8; EN 61000-4-8; KS C 9610-4-8
VDI	BS EN 61000-4-11; IEC 61000-4-11; EN 61000-4-11; EN IEC 61000-4-11; KS C 9610-4-11
Ring Wave	BS EN 61000-4-12; IEC 61000-4-12; EN 61000-4-12; KS C 9610-4-12
Generic and Product Specific EMC	
	ETSI EN 300 386
	BS EN 55014-2; EN 55014-2; CISPR 14-2
	BS EN 50130-4; EN 50130-4
	BS EN 55024; EN 55024; CISPR 24
	BS EN 55035; EN 55035; CISPR 35; KS C 9835
	BS EN 61000-6-1; IEC 61000-6-1; EN 61000-6-1; EN IEC 61000-6-1
	BS EN 61000-6-2; EN 61000-6-2; IEC 61000-6-2; EN IEC 61000-6-2
	BS EN 61547; EN 61547; BS EN50121-1; BS EN50121-4; EN50121-1; EN50121-4; BS EN61326-1; BS EN61326-2-1; BS EN61326-2-2; BS EN61326-2-6; EN61326-1; EN61326-2-1; EN61326-2-2; EN61326-2-6
Radio	ETSI EN 300 328
	ETSI EN 301 893
	ETSI EN 300 220-1
	ETSI EN 300 220-2
	ETSI EN 300 220-3-1
	ETSI EN 300 220-3-2
	ETSI EN 300 220-4
	ETSI EN 300 330
	ETSI EN 300 440
	ETSI EN 301 357
	ETSI EN 301 489-1
	ETSI EN 301 489-3
	ETSI EN 301 489-17
	ETSI EN 301 489-19
	ETSI EN 301 511
	ETSI EN 301 908-1
	ETSI EN 301 908-2
	ETSI EN 301 908-13
	EN 302 291-1
	EN 302 291-2
	ETSI EN 303 340
	ETSI EN 303 413
	ETSI EN 303 417
	ETSI EN 303 454
	ETSI EN 302 502

Test Technology:	**Test Method(s)[1]:**
Radio (Cont.)	ARIB STD-33
	ARIB STD-T66
	ARIB STD-T71
	ARIB STD-T81
	ARIB STD-T63
	ARIB STD-T67
	ARIB STD-T81
	ARIB STD-T82
	ARIB STD-T92
	ARIB STD-T104
	ARIB STD-T108
	MIC Article 2 Clause 1 Item 8
	MIC Article 2 Clause 1 Item 19
	MIC Article 2 Clause 1 Item 19-2
	MIC Article 2 Clause 1 Item 19-3
	MIC Article 2 Clause 1 Item 19-3-2
	MIC Article 2 paragraph 1 item (11)-3
	MIC Article 2 paragraph 1 item (11)-7
	MIC Article 2 paragraph 1 item (11)-19
	MIC Article 2 paragraph 1 item (11)-21
	AS/NZS 4268
	3GPP TS 34.108
	3GPP TS 34.121-1, -2
	3GPP TS 34.123-1, -2
	3GPP TS 34.124
	3GPP TS 36.508
	3GPP TS 36.521-1, -2, -3
	3GPP TS 36.523-1, -2
	3GPP TS 51.010-1, -2
	3GPP TS 36.124
	3GPP TS 38 521-1/ETSI TS 138 521-1
	3GPP TS 38 521-3/ETSI TS 138 521-3
	3GPP TS 38 508-1/ETSI TS 138 508-1
	LP0002
	PLMN01
	PLMN08
	PLMN10
	RSS-102 (RF Exposure)
	RSS-119
	RSS-130
	RSS-132
	RSS-133
	RSS-139
	RSS-140
	RSS-192
	RSS-195

Test Technology:	**Test Method(s)[1]:**
Radio (Cont.)	RSS-197
	RSS-199
	RSS-210
	RSS-216
	RSS-310
	RSS-Gen
	RSS-247
.	CFR 47 FCC Subparts 15C, E, (using ANSI C63.4 (2014)
	ANSI C63.10:2013
	DA 00-705
	FCC KDB 662911
	FCC KDB 789033
	FCC KDB 680106
	FCC KDB 905462 D02 (v02); D03; D04; D06; D07
	FCC KDB 558074
Radio (Licensed Services)	
Commercial Mobile Services	CFR 47 FCC Parts 22 (cellular), 24, 25, 27 (using ANSI/TIA-603-E-2016, TIA 102.CAAA-E-2016 and ANSI C63.26-2015); FCC KDB 971168
General Mobile Radio Services	CFR 47, FCC Parts 22 (non-cellular), 90 (below 3GHz), 95, 97 (below 3 GHz), and 101(below 3GHz) (using ANSI/TIA-603-E-2016; ANSI/TIA-102.CAAA-E-2016; ANSI C63.26-2015)
Citizens Broadband Radio Services	CFR 47 FCC Part 96 (using ANSI/TIA-603-E-2016, TIA 102.CAAA-E-2016 and ANSI C63.26-2015)
RF Exposure (MPE calculations only)	RSS-102 (RF Exp.)
	IEEE/ANSI C95.1
	IEEE/ANSI C95.3
	IEC 62232; EN 62232; BS EN 62232
	IEC 62311; EN 62311; EN IEC 62311; BS EN IEC 62311
	IEC 62479; EN 62479; BS EN 62479
	EN 50385; BS EN 50385
	AS/NZS 2772.2
	ACA Radio Communication Standards
	47 CFR §2.1091 /47 CFR §2.1093
	KDB 447498

[1] When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is expected to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - General Requirements - Accreditation of ISO-IEC 17025 Laboratories.

Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1[2]

Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
Unintentional Radiators Part 15B	ANSI C63.4:2014	40000
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5:1986	40000
Intentional Radiators Part 15C	ANSI C63.10:2013	40000
U-NII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013	40000
U-NII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	40000
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI C63.26-2015 ANSI/TIA-603-E-2016; ANSI/TIA-102.CAAA-E-2016	40000
General Mobile Radio Services (FCC Licensed Radio Service Equipment) Parts 22 (non-cellular), 90 (below 3 GHz), 95, 97 (below 3 GHz), and 101 (below 3 GHz)	ANSI/TIA-603-E-2016; TIA-102.CAAA-E-2016; ANSI C63.26-2015	40000
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI/TIA-603-E-2016; TIA-102.CAAA-E-2016; ANSI C63.26-2015	40000

[2] Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (https://apps.fcc.gov/oetcf/eas/) for a listing of FCC approved laboratories.

Accredited Laboratory

A2LA has accredited

BTL INC.

Shanghai, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 8th day of January 2021.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5123.03
Valid to January 31, 2023
Revised August 26, 2022

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