

**Test Technology:**

**Test Method(s) <sup>2</sup>:**

European Radio (cont'd)

ETSI EN 301 908-1 Version 13.1.1 (2019-11);  
 ETSI EN 301 908-13 Version 13.1.1 (2019-11);  
 ETSI EN 300 220-1 Version 3.1.1 (2017-02);  
 ETSI EN 300 220-2 Version 3.2.1 (2018-06);  
 ETSI EN 300 328 Version 2.1.1 (2016-11);  
 ETSI EN 300 328 Version 2.2.2 (2019-07);  
 ETSI EN 300 330 Version 2.1.1 (2017-02);  
 ETSI EN 300 440 Version 2. (22.1 (2018-07);  
 ETSI EN 300 440-2 Version 1.4.1 (2010-08);  
 KS X 3123, KS X 3142, KS X 3270, KS X 3271;  
 LP0002; DGT LP0002;

Korean Radio

Regulations on Radio Equipment  
 (MSIT Ordinance MSIT No. 1 July 26, 2017);  
 Unlicensed Radio Equipment Established Without Notice  
 (MSIT Public Notification 2019-105, December 23, 2019);  
 Technical Requirements for the Human Protection against  
 Electromagnetic Waves  
 (MSIT Public Notification 2019-4, January 16, 2019);  
 Equipment to be Subject of the Test Procedure for  
 Electromagnetic Field Strength and Specific Absorption Rate  
 (RRA Public Notification 2019-1, January 17, 2019);  
 Technical Requirements for Radio Equipment for  
 Telecommunication Services  
 (RRA Public Notification 2019-9, June 3, 2019);  
 Technical Requirements for Measurement of Electromagnetic  
 Field Strength (RRA Public Notification 2019-3, March 4, 2019)

Australia/New Zealand Radio

AS/NZS 4268:2017

Licensed Wireless Devices

ANSI C63.26:2015

(A2LA Cert. No. 2041.01) Revised 05/20/2022



Page 8 of 13

<b>FCC ID:</b> C3K1997	<b>PART 30 MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204040049-03-R1.C3K	<b>Test Dates:</b> 03/14/2022- 06/17/2022	<b>EUT Type:</b> Portable Computing Device	Page 114 of 120

V1.0

**Test Technology:**

OTA  
OTA Anechoic Chambers

**Test Method(s) <sup>2</sup>:**

CTIA Test Plan for Wireless Device Over-the-Air Performance for CDMA, 1xEVDO Rev0/A, GSM, GPRS, EGPRS, UMTS (W-CDMA), LTE, CDMA A-GPS, GSM A-GPS, UMTS WCDMA A-GPS;  
LTE A-GPS A-Glonass and SIB8 / SIB16;  
PTCRB NAPRD03; PTCRB PPMD;  
OTA Carrier Aggregation;  
OTA ECC Measurements;  
VZW OTA Radiated Performance for CDMA & LTE Multimode Devices;  
VZW Location Determination Test Plan;  
VZW LTE-LBS Performance Test Plan;  
SPRINT OTA Antenna Performance Test Plan;  
AT&T 13340 OTA;  
AT&T IoT Accelerator;  
USCC CDMA Over The Air Radiated Test Plan;  
USCC LTE Over The Air Radiated Test Plan;  
CTIA Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices (Wi-Fi Alliance);  
GSMA TS.24 Operator Acceptance Values for Device Antenna Performance;  
3GPP TS 34.114 Technical Specification UE/MS OTA Antenna Performance;  
3GPP TS 37.544 Technical Specification UTRA & E-UTRA UE OTA Antenna Performance

CTIA IoT Security

CTIA Cybersecurity Certification Test Plan for IoT Devices

SunSpec Alliance

SunSpec – CSIP (Common Smart Inverter Profile) Conformance Test Procedures;  
SunSpec – Advanced Function Inverter Test Lab Specification;  
SunSpec – UL1741 Supplement SA/Rule 21 Implementation Guide;  
IEEE 2030.5-2018 Smart Energy Profile Application Protocol

CBRS (OnGo) / WinnForum

CBRS Alliance Certification Test Plan;  
WinnForum Conformance and Performance Test Technical Standards

(A2LA Cert. No. 2041.01) Revised 05/20/2022



Page 9 of 13

<b>FCC ID:</b> C3K1997	<b>PART 30 MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204040049-03-R1.C3K	<b>Test Dates:</b> 03/14/2022- 06/17/2022	<b>EUT Type:</b> Portable Computing Device	Page 115 of 120

V1.0

9017-F/G Mendenhall Court  
Columbia, MD 21045

**Test Technology:**

**Test Method(s) <sup>2</sup>:**

Battery Safety

IEEE 1725 Standard for Rechargeable Batteries for Cellular Telephones;  
CTIA Certification Requirements for Battery System Compliance to IEEE 1725;  
IEEE 1625 Standard for Rechargeable Batteries for Multi-Cell Mobile Computing Devices;  
CTIA Certification Requirements for Battery System Compliance to IEEE 1625;  
UL1642 Standard for Lithium Batteries;  
UL 2054 Household and Commercial Batteries;

UL 62133; IEC 62133 Secondary Cells and Batteries containing Alkaline or other Non-Acid Electrolytes – Safety Requirements for Portable Sealed Secondary Cells & Batteries made from them, for use in Portable Applications

UNDOT  
Battery Transportation Safety

United Nations Document ST/SG/AC.10/11/Section 38.3 Recommendations on the Transport of Dangerous Goods; Manual of Tests and Criteria;  
IEC 62281 – Safety of Primary and Secondary Lithium Cells and Batteries During Transport  
Altitude Simulation  
Temperature Cycling  
Mechanical Shock  
Vibration  
Short Circuit  
Overcharge  
Impact/Crush  
Forced Discharge

Aerospace  
Battery Performance and Safety

NASA Specification for Acceptance Testing of Commercial Lithium Ion Cell Lots Engineering Directorate Propulsion & Power Division, EP-WI-031

Hardware Reliability

CTIA Device Hardware Reliability Test Plan

Determining Battery Life

CTIA Battery Life Test Plan

Safety Requirement for Portable Sealed Secondary Cells

IEC 62133; EN 62133

CEC: Energy Efficient Battery Charger System

Uniform Test Method for Measuring the Energy Consumption of Battery Chargers

Immunity

EN/IEC 61000-4-2

(A2LA Cert. No. 2041.01) Revised 05/20/2022

 Page 10 of 13

<b>FCC ID:</b> C3K1997	<b>PART 30 MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204040049-03-R1.C3K	<b>Test Dates:</b> 03/14/2022- 06/17/2022	<b>EUT Type:</b> Portable Computing Device	Page 116 of 120

V1.0

3801 E. Plano Parkway, Ste 150  
Plano, TX 75074

**Test Technology:**

Radiated Emissions  
(10 Meter Test Distance)  
(Frequency Range, 30 MHz – 1 GHz)

**Test Method(s) <sup>2</sup>:**

CFR 47, FCC Parts 15B (using ANSI C63.4:2014)  
EN55011; EN 55032; CNS 13438 (up to 6 GHz); AS/NZS CISPR  
11; IEC/CISPR 11; CISPR 32; FCC OET/MP-5; ICES-003; KN 11;  
KN 32; VCCI V-3(2016.11);  
VCCI V-3 (2015.04); VCCI 32-1: VCCI-CISPR 32

<sup>2</sup> 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*.

<sup>3</sup> This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1<sup>4</sup>:

<b>Rule Subpart/Technology</b>	<b>Test Method</b>	<b>Maximum Frequency</b>
Unintentional Radiators Part 15B	ANSI C63.4:2014	40000 MHz
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5 (February 1986)	333000 MHz
Intentional Radiators Part 15C	ANSI C63.10:2013	333000 MHz
Unlicensed Personal Communication Systems Devices Part 15D	ANSI C63.17:2013	20000 MHz
U-NIII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013	40000 MHz
U-NIII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	40000 MHz
UWB Intentional Radiators Part 15F	ANSI C63.10:2013	200000 MHz

(A2LA Cert. No. 2041.01) Revised 05/20/2022

 Page 11 of 13

<b>FCC ID:</b> C3K1997	<b>PART 30 MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204040049-03-R1.C3K	<b>Test Dates:</b> 03/14/2022- 06/17/2022	<b>EUT Type:</b> Portable Computing Device	Page 117 of 120

V1.0

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1<sup>4</sup>:

Rule Subpart/Technology	Test Method	Maximum Frequency
BPL Intentional Radiators Part 15G	ANSI C63.10:2013	40000 MHz
White Space Device Intentional Radiators Part 15H	ANSI C63.10:2013	40000 MHz
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	333000 MHz
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; TIA-102.CAAA-E; ANSI C63.26:2015	333000 MHz
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	333000 MHz
Maritime and Aviation Radio Services Parts 80 and 87	ANSI/TIA-603-E; ANSI C63.26:2015	333000 MHz
Microwave and Millimeter Bands Radio Services Parts 25, 30, 74, 90 (M, DSRC, Y, Z), 95 (M and L), and 101	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	333000 MHz
Broadcast Radio Services Parts 73 and 74 (below 3 GHz)	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	333000 MHz
RF Exposure Devices Subject to SAR Requirements	IEEE Std 1528:2013	6000 MHz
Hearing Aid Compatibility Part 20 (HAC for Commercial Mobile Services)	ANSI C63.19:2011	6000 MHz
Signal Boosters Part 20 (Wideband Consumer Signal Boosters, Provider-specific signal boosters, and Industrial Signal Boosters) Section 90.219	ANSI C63.26:2015	333000 MHz

(A2LA Cert. No. 2041.01) Revised 05/20/2022

 Page 12 of 13

FCC ID: C3K1997	PART 30 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204040049-03-R1.C3K	Test Dates: 03/14/2022- 06/17/2022	EUT Type: Portable Computing Device	Page 118 of 120

V1.0

<sup>4</sup>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.

(A2LA Cert. No. 2041.01) Revised 05/20/2022



Page 13 of 13

<b>FCC ID:</b> C3K1997	<b>PART 30 MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204040049-03-R1.C3K	<b>Test Dates:</b> 03/14/2022- 06/17/2022	<b>EUT Type:</b> Portable Computing Device	Page 119 of 120

V1.0



## Accredited Laboratory

A2LA has accredited

### ELEMENT MATERIALS TECHNOLOGY WASHINGTON DC LCC

Columbia, MD

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 29<sup>th</sup> day of September 2020.



Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 2041.01  
Valid to September 30, 2022  
Revised May 20, 2022

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

FCC ID: C3K1997	PART 30 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204040049-03-R1.C3K	Test Dates: 03/14/2022- 06/17/2022	EUT Type: Portable Computing Device	Page 120 of 120

V1.0