

9017-F/G Mendenhall Court
Columbia, MD 21045

Test Technology:

Battery Safety

UNDOT

Battery Transportation Safety

Aerospace

Battery Performance and Safety

Hardware Reliability

Determining Battery Life

Safety Requirement for Portable Sealed
Secondary Cells

CEC: Energy Efficient Battery Charger
System

Immunity

Test Method(s) ²:

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

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

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

CTIA Device Hardware Reliability Test Plan

CTIA Battery Life Test Plan

IEC 62133; EN 62133

Uniform Test Method for Measuring the Energy Consumption of
Battery Chargers

EN/IEC 61000-4-2

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Test Report S/N: 1M2204010046-01.A3L	Test Dates: 4/18 – 6/14/2022	EUT Type: Portable Handset	Page 244 of 248

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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) ²:

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

² 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.

³ 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.1⁴:

Rule Subpart/Technology	Test Method	Maximum Frequency
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-NII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013	40000 MHz
U-NII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	40000 MHz
UWB Intentional Radiators Part 15F	ANSI C63.10:2013	200000 MHz

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Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1⁴:

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

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⁴Accreditation 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.

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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 29th 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.

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