
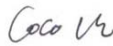


TEST REPORT

Report No.: STS221018001001E
Product: Smart phone
Model No.: BV9200
Applicant: DOKE COMMUNICATION (HK) LIMITED
Address: RM 1902 EASEY COMM BLDG 253-261 HENNESSY
ROAD WANCHAI HK CHINA
Issued by: Shenzhen NTEK Testing Technology Co., Ltd.
Lab Location: 1/F, Building E, Fenda Science Park, Sanwei Community,
Xixiang Street, Bao'an District, Shenzhen 518126 P.R.
China
Tel: 400-800-6106, 0755-2320 0050 / 2320 0090



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TEST REPORT IEC/EN62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	STS221018001001E
Tested by (+ signature)	Elvis Chen 
Approved by (+ signature)	Coco Li 
Date of issue	2022-12-07
Testing laboratory	Shenzhen NTEK Testing Technology Co., Ltd.
Address	1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126P.R. China
Testing location	Same as above
Applicant's name	DOKE COMMUNICATION (HK) LIMITED
Address	RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK CHINA
Test specification:	
Standard	<input type="checkbox"/> IEC 62368-1:2014 (Second Edition) <input checked="" type="checkbox"/> EN 62368-1:2014+A11:2017
Test procedure	CE Scheme
Non-standard test method	N/A
TRF template used	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No	IEC62368_1D
Test Report Form(s) Originator	UL(US)
Master TRF	Dated 2022-04-14
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Test Item description	Smart phone
Trade Mark(s)	Blackview
Manufacturer	Shenzhen DOKE Electronic Co., Ltd 801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China.
Model/Type reference	BV9200
Ratings	Input: (PD)5.0V---3.0A or 9.0V---3.0A or 12.0V---3.0A or 15.0V---3.0A or 20.0V---3.25A (PPS)3.3V-21.0V---3.15A(66.0W Max)(Supplied by AC

Report No. STS221018001001E

adapter)
or 3.87Vdc, 5000mAh, 19.35Wh(Supplied by rechargeable Li-ion battery)

Remark: The Smart phone is supplied by an external GaN Fast Charger, and charger is sold with the smart phone by as-shipped. The GaN Fast attached to the smart phone connection has two charging agreements: PPS(3.3V-21.0V---3.15A) and 5.0V---3.0A

List of Attachments (including a total number of pages in each attachment):

Attachment 1: 10 pages (Nation differences)
Attachment 2: 7 pages (Enclosure)

Summary of testing:

Tests performed (name of test and test clause):

All applicable tests as described in Test Case and Measurement Sections were performed.

Clause(s)	Test(s)
4.1.15 & Annex F & F.3.10	Marking durability test
5.2	Classification of electrical energy sources
5.4.1.4, 9.3, B.1.5, B.2.6	Temperature test
6.2.2	Electrical power sources (PS) measurements for classification
6.2.3.2	Determination of resistive PIS
Annex B.2.5	Input test
Annex B.3, B.4	Abnormal operating and fault condition test
Annex M	Battery Tests
Annex Q.1	Circuits intended for interconnection with building wiring (LPS)
Annex T.4	Steady force test
Annex T.7	Drop tests
Annex T.8	Stress relief test

Testing location:

Unless otherwise indicated, all tests were conducted at Shenzhen NTEK Testing Technology Co., Ltd. Building C, Fenda Science Park, Sanwei, Xixiang, Bao'an District, Shenzhen, Guangdong, China

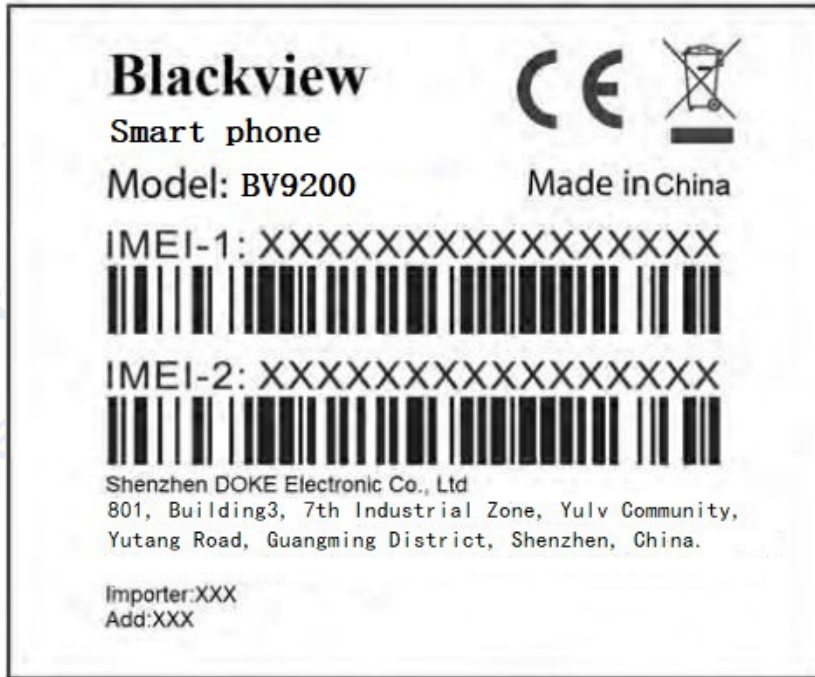
Summary of compliance with National Differences (List of countries addressed):

EU Group Differences
EU=European.

The product fulfils the requirements of _ EN 62368-1:2014+A11:2017_ (insert standard number and edition and delete the text in parenthesis or delete the whole sentence, if not applicable)

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Remark:

- The Manufacturer or import, should indicate their name and address on product label and package.
- The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.
- The CE marking and WEEE symbol should be at least 5.0 mm and 7.0 mm respectively in height.

TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input checked="" type="checkbox"/> Instructed person <input checked="" type="checkbox"/> Skilled person <input checked="" type="checkbox"/> Children likely to be present
Supply Connection	<input type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input checked="" type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance	<input type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ___ % / - ___ % <input checked="" type="checkbox"/> None
Supply Connection – Type	<input type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other: Not directly connect to the mains
Considered current rating of protective device as part of building or equipment installation.....	N/A (Not directly connected to mains) Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility.....	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: Not directly connect to the mains
Class of equipment	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Class II with functional earthing <input type="checkbox"/> Not classified
Access location	<input type="checkbox"/> restricted access area <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maxium operating ambient	_25_ °C (For charging with AC power adapter mode) _40_ °C (For battery discharging mode)
IP protection class	<input type="checkbox"/> IPX0 <input checked="" type="checkbox"/> IP_68__
Power Systems	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - ___ V L-L; <input type="checkbox"/> dc mains <input type="checkbox"/> N/A
Altitude during operation (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ___ m
Altitude of test laboratory (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> ___500__ m

Mass of equipment (kg)	<input type="checkbox"/> _Approx. 0.311_ kg
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing	
Date of receipt of test item	2022-10-19
Date (s) of performance of tests	2022-10-20 to 2022-12-05
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	N/A
General product information and other remarks:	
Product Description –	
<ol style="list-style-type: none"> The product is a Smart phone intended to be used for audio/video, information and communication technology equipment, which supplied by a certified adapter according to EN IEC 62368-1. (Model: QZ-06502EC00). (Recognized as ES1, PS2, see table 4.1.2 for more details). The Smart phone is supplied by an external GaN Fast Charger, and charger is sold with the smart phone by as-shipped. The GaN Fast attached to the smart phone connection has two charging agreements: PPS (3.3V-21.0V---3.15A) and 5.0V---3.0A. The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of: For charging with AC power adapter mode: 25°C For battery discharging mode:40°C Information of Rechargeable Li-ion Battery: (model: Li556578JLY, rating: 3.87Vdc, 5000mAh, 19.35Wh (see table 4.1.2 for more detail) The manufacturer specified highest charging temperature: 60°C The manufacturer specified lowest charging temperature: 0°C 	
Model Differences –	
N/A	
Additional application considerations – (Considerations used to test a component or sub-assembly) –	

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
<p>(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.)</p>	
<p>Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1</p>	
Source of electrical energy	Corresponding classification (ES)
Input circuit	ES1
All the internal circuit	ES1
<p>Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2</p>	
Source of power or PIS	Corresponding classification (PS)
Input circuit	PS2 (Resistive PIS)
Internal circuits	PS2 (Resistive PIS)
Battery pack/cell output	PS2 (Resistive PIS)
<p>Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol</p>	
Source of hazardous substances	Corresponding chemical
Battery pack	Complied with annex M
<p>Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2</p>	
Source of kinetic/mechanical energy	Corresponding classification (MS)
Sharp edges and corners of accessible parts	MS1
Product mass	MS1
<p>Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1</p>	
Source of thermal energy	Corresponding classification (TS)
All accessible parts	TS1
<p>Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1</p>	
Type of radiation	Corresponding classification (RS)
Flash LED	RS1
Acoustic(Type-C interface)	RS2

ENERGY SOURCE DIAGRAM

Indicate which energy sources are included in the energy source diagram. Insert diagram below

ES PS MS TS RS

(Refer to ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE for DETAIL.)

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	ES1: All the circuit	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB	PS2	See 6.3	V-1 or better	N/A
Enclosure	PS2	See 6.3	V-0	N/A
Battery pack	PS2	See 6.3	V-0	N/A
Other combustible components / material	PS2	See 6.3	See 6.4.5	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
Battery pack	Complied with annex M	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	MS1: Sharp edges and corners of accessible parts	N/A	N/A	N/A
Ordinary person	MS1: Product mass	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	RS1: Flash LED	N/A	N/A	N/A
Ordinary person	RS2: Acoustic(Type-C interface)	See 10.6.4	N/A	N/A

Supplementary Information:

- (1) See attached energy source diagram for additional details.
- (2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding limiting the outputs to fulfill ES1 and protection in regard to risk of spread of fire, mechanical and thermal burn injury considered.	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:	(See Annex T.4)	P
4.4.4.3	Drop tests.....:	(See Annex T.7)	P
4.4.4.4	Impact tests.....:		N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests.....:		N/A
4.4.4.7	Thermoplastic material tests.....:		N/A
4.4.4.8	Air comprising a safeguard.....:	(See Annex T.8)	P
4.4.4.9	Accessibility and safeguard effectiveness	All safeguard remain effective	P
4.5	Explosion	No explosion	P
4.6	Fixing of conductors	Class III equipment	N/A
4.6.1	Fix conductors not to defeat a safeguard		N/A
4.6.2	10 N force test applied to.....:		N/A
4.7	Equipment for direct insertion into mains socket - outlets	No such type equipment	N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm).....:		N/A
4.8	Products containing coin/button cell batteries	No such batteries	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	removing the battery.....:		
4.8.4	Battery Compartment Mechanical Tests.....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....:	No opening	N/A

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications.....:	EUT is supplied by approved adapter and battery pack that output voltage is below 60 Vdc and no boost circuits inside EUT. All circuits are classified as ES1.	P
5.2.2	ES1, ES2 and ES3 limits	(See appended table 5.2)	P
5.2.2.2	Steady-state voltage and current.....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits.....:		N/A
5.2.2.4	Single pulse limits.....:		N/A
5.2.2.5	Limits for repetitive pulses.....:		N/A
5.2.2.6	Ringing signals.....:	No such signals.	N/A
5.2.2.7	Audio signals.....:	(See Clause E.1)	P
5.3	Protection against electrical energy sources	All circuits considered ES1	N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
5.3.2.2	Contact requirements		N/A
	a) Test with test probe from Annex V.....:		N/A
	b) Electric strength test potential (V).....:		N/A
	c) Air gap (mm).....:		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		N/A
5.4.1.2	Properties of insulating material		N/A
5.4.1.3	Humidity conditioning.....:		N/A
5.4.1.4	Maximum operating temperature for insulating materials.....:		N/A
5.4.1.5	Pollution degree.....:		—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature		N/A
5.4.1.10.3	Ball pressure		N/A
5.4.2	Clearances		N/A
5.4.2.2	Determining clearance using peak working voltage		N/A
5.4.2.3	Determining clearance using required withstand voltage		N/A
	a) a.c. mains transient voltage		—
	b) d.c. mains transient voltage		—
	c) external circuit transient voltage		—
	d) transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.3	Creepage distances		N/A
5.4.3.1	General		N/A
5.4.3.3	Material Group		—
5.4.4	Solid insulation		N/A
5.4.4.2	Minimum distance through insulation		N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints	No such construction within the EUT	N/A
5.4.4.6	Thin sheet material	No such material	N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs)		N/A
5.4.4.6.3	Non-separable thin sheet material		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6.4	Standard test procedure for non-separable thin sheet material..... :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz..... :		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ) :		—
5.4.6	Insulation of internal wire as part of supplementary safeguard..... :		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		N/A
	Relative humidity (%) :		—
	Temperature (°C) :		—
	Duration (h) :		—
5.4.9	Electric strength test..... :		N/A
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit	No connection to external circuits with transient voltage.	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test :		N/A
5.4.11	Insulation between external circuits and earthed circuitry :		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V) :		—
	Nominal voltage U_{peak} (V) :		—
	Max increase due to variation U_{sp} :		—
	Max increase due to ageing U_{sa} :		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	$U_{op} = U_{peak} + U_{sp} + U_{sa}$		—
5.5	Components as safeguards		N/A
5.5.1	General		N/A
5.5.2	Capacitors and RC units		N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector		N/A
5.5.3	Transformers		N/A
5.5.4	Optocouplers		N/A
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable		N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm ²)		—
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm ²).....		—
	Protective current rating (A)		—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm ²), nominal thread diameter (mm).....		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.6.2	Test Method Resistance (Ω)		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks		N/A
5.7.2.1	Measurement of touch current		N/A
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
	System of interconnected equipment (separate connections/single connection)		—
	Multiple connections to mains (one connection at a time/simultaneous connections)		—
5.7.4	Earthed conductive accessible parts		N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V)		—
	Measured current (mA)		—
	Instructional Safeguard		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA)		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N/A
6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault	(See appended table 6.2.2)	P
6.2.2.4	PS1	(See appended table 6.2.2)	P
6.2.2.5	PS2	(See appended table 6.2.2)	P
6.2.2.6	PS3		N/A
6.2.3	Classification of potential ignition sources		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.3.1	Arcing PIS	All circuits voltage less than 50V	N/A
6.2.3.2	Resistive PIS	All circuits inside enclosure is claimed as Resistive PIS	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method of "control of fire spread" is used. Fire enclosure provided.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		
6.4.3.3	Single Fault Conditions..... :		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G) - Printed boards are rated minimum V-1. - All components and combustible materials other than small parts are either rated at least V-2 or mounted on material with rating minimum V-1. - Battery pack: complying with IEC/EN 62133-2:2017. - Wire insulation and tubing complied with clause 6.5. - Fire enclosure rated V-0 used.	P
6.4.6	Control of fire spread in PS3 circuit		N/A
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General..... :		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8	Fire enclosures and fire barriers	See below	P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier	No fire barrier.	N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings	No Fire enclosure opening	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)		N/A
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)	No doors or covers.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....		N/A
6.5	Internal and external wiring		N/A
6.5.1	Requirements	The internal wire are complied to UL758 standard, which test method and testing condition equal to IEC/EN 60695-11-2	N/A
6.5.2	Cross-sectional area (mm ²)	See table 4.1.2	—
6.5.3	Requirements for interconnection to building wiring		N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1		N/A


7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		P
7.2	Reduction of exposure to hazardous substances	No hazardous chemical within the equipment	N/A
7.3	Ozone exposure	No Ozone production within the equipment	N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions		—
7.5	Use of instructional safeguards and instructions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional safeguard (ISO 7010)		—
7.6	Batteries.....	(See appended tables Annex M)	P
8	MECHANICALLY-CAUSED INJURY		P
8.1	General	Mass less than 7kg, No moving parts in the equipment – see below regarding edges and corners.	P
8.2	Mechanical energy source classifications	MS1: Equipment mass MS1:Sharp edges and corners of equipment	P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test..... :		N/A
8.6	Stability		N/A
8.6.1	Product classification	MS1	N/A
	Instructional Safeguard..... :	Not required	—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....		N/A
	Position of feet or movable parts.....		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N/A
8.7.2	Direction and applied force.....		N/A
8.8	Handles strength	No handles.	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force		N/A
8.9	Wheels or casters attachment requirements	No wheels or casters.	N/A
8.9.1	Classification		N/A
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers	No carts or stands or other carriers.	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N).....		—
8.10.6	Thermoplastic temperature stability (°C).....		N/A
8.11	Mounting means for rack mounted equipment	Not rack mounted.	N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i>		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	No rod antennas.	N/A
	Button/Ball diameter (mm).....		—

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Clause	Requirement + Test	Result - Remark	Verdict
9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	Enclosure is classed as TS1. Internal circuits and parts are claimed as TS3.	P
9.3	Safeguard against thermal energy sources	Enclosure is used as safeguard.	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard		N/A

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1: Flash LED RS2: Acoustic	P
10.3	Protection against laser radiation	No such radiation generated from the equipment.	N/A
	Laser radiation that exists in the equipment:		—
	Normal, abnormal, single-fault.....		N/A
	Instructional safeguard		—
	Tool.....		—
10.4	Protection against visible, infrared, and UV radiation	RS1	P
10.4.1	General	Risk Group 1	P
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person.....		N/A
	Personal safeguard (PPE) instructional safeguard.....		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1.:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....	Safeguard is not required.	N/A
10.4.1.f)	UV attenuation.....	No UV.	N/A
10.4.1.g)	Materials resistant to degradation UV	No UV.	N/A
10.4.1.h)	Enclosure containment of optical radiation.....	No required.	N/A
10.4.1.i)	Exempt Group under normal operating conditions.....		N/A
10.4.2	Instructional safeguard		N/A
10.5	Protection against x-radiation	No such x-radiation generated from the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation :		—
	Abnormal and single-fault condition :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		P
10.6.1	General		P
10.6.2	Classification	RS2	P
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :	FM mode: Maximum volume: Right: 140.0mV; Left: 140.0mV Warning: Right: 24.0mV; Left: 24.0mV Music mode: Maximum volume: Right:100.0mV; Left: 100.0mV Warning: Right: 18.0mV; Left: 18.0mV	P
10.6.4	Protection of persons		P
	Instructional safeguards :	1. Symbol  ; 2. "high sound pressure" or equivalent wording; 3. "hearing damage risk" or equivalent wording; 4. "do not listen at high volume levels for long periods" or equivalent wording.	P
	Equipment safeguard prevent ordinary person to RS2..... :	Warning: "Listening at high volume for long periods may damage your hearing" will appear when the sound exceeds RS1	—
	Means to actively inform user of increase sound pressure..... :	Element 2 provided and the complete warning in the instruction manual provided	—
	Equipment safeguard prevent ordinary person to RS2..... :	See above	—

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements..... :	(See summary of testing and appended table)	P
	Audio Amplifiers and equipment with audio amplifiers..... :	(See annex E)	P
B.2.3	Supply voltage and tolerances		N/A
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	Supplied by an approved adapter	N/A
B.3.4	Setting of voltage selector..... :	No voltage selector	N/A
B.3.5	Maximum load at output terminals..... :	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	(See appended table B.3)	P
B.3.8	Safeguards functional during and after abnormal operating conditions		N/A
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited..... :		N/A
B.4.3	Motor tests	(See appended table B.3)	P
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature..... :		N/A
B.4.4	Short circuit of functional insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards used	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.4)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	Class 1 and Class 2 energy sources were within limits during and after single fault conditions.	P
B.4.9	Battery charging under single fault conditions ... :	(See appended table M)	P
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation	No UV generated from the equipment	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		P
E.1	Audio amplifier normal operating conditions		P
	Audio signal voltage (V)	(See appended table B.2.5)	—
	Rated load impedance (Ω)	8 Ω	—
E.2	Audio amplifier abnormal operating conditions	(See appended table B.3)	P
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructions – Language	Instructions in English are reviewed.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The marking is located on the enclosure of the equipment and is easily visible	P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	See copy of marking plate	—
F.3.2.2	Model identification	See model list for details	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains	The equipment supplied by an approved adapter	N/A
F.3.3.2	Equipment without direct connection to mains		P
F.3.3.3	Nature of supply voltage	Not directly connected to mains	—
F.3.3.4	Rated voltage	See user manual	—
F.3.3.5	Rated frequency		—
F.3.3.6	Rated current or rated power	See user manual	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices	See below.	P
F.3.5.1	Mains appliance outlet and socket-outlet markings.....	No such devices on the equipment.	N/A
F.3.5.2	Switch position identification marking	No such switch on the equipment.	N/A
F.3.5.3	Replacement fuse identification and rating markings.....	No such components	N/A
F.3.5.4	Replacement battery identification marking	See Clause M.10	P
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		N/A
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Neutral conductor terminal		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking	IPX0	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P
F.3.10	Test for permanence of markings	The silk-screened marking was subjected to the permanence of marking test. The marking was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the the marking. The marking did not fade. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		N/A
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General requirements	No switch used	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	General requirements	No relay used	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	Protection Devices		N/A
G.3.1	Thermal cut-offs	No thermal cut-offs used	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω) :		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....		N/A
G.4	Connectors		P
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration	Not mains connector	N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	Wound Components		N/A
G.5.1	Wire insulation in wound components.....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N/A
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	Transformers		N/A
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)		N/A
	Position		—
	Method of protection		—
G.5.3.2	Insulation		N/A
	Protection from displacement of windings		—
G.5.3.3	Overload test		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding Temperatures testing in the unit		N/A
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements	Vibration motor used	P
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.6.2	Tested in the unit		P
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		P
	Electric strength test (V)		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		N/A
G.6.1	General		N/A
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG)		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test		N/A
G.8.3.3	Temporary overvoltage		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiter provided within the equipment	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		—
G.9.1 d)	IC limiter output current (max. 5A)		—
G.9.1 e)	Manufacturers' defined drift		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		N/A
G.11.1	General requirements		N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....		N/A
	Type test voltage Vini		—
	Routine test voltage, Vini,b		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction)..... :		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation..... :		N/A
	Number of insulation layers (pcs) :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements :		N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc 5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage :		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General	Ringling signal is ES1 only, see appended table 5.2.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		—
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N/A
	General requirements		N/A
K	SAFETY INTERLOCKS		N/A
K.1	General requirements	No safety interlocks provided	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A).....		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		N/A
L.1	General requirements		N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Requirements		P
M.2.2	Compliance and test method (identify method) .. :		P
M.3	Protection circuits		P
M.3.1	Requirements		P
M.3.2	Tests		P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		P
	- Excessive discharging rate for any battery		P
M.3.3	Compliance	After above test have not created a hazard in the meaning of this standard	P
M.4	Additional safeguards for equipment containing secondary lithium battery		P
M.4.1	General		P
M.4.2	Charging safeguards		P
M.4.2.1	Charging operating limits		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.2a)	Charging voltage, current and temperature	(See appended table M.4)	—
M.4.2.2 b)	Single faults in charging circuitry	(See appended table M.4)	—
M.4.3	Fire Enclosure	Provided	P
M.4.4	Endurance of equipment containing a secondary lithium battery		P
M.4.4.2	Preparation		P
M.4.4.3	Drop and charge/discharge function tests		P
	Drop	Voltage difference less than 5%	P
	Charge	Operated normally and all safeguards were effective	P
	Discharge	Operated normally and all safeguards were effective	P
M.4.4.4	Charge-discharge cycle test		P
M.4.4.5	Result of charge-discharge cycle test	Operated normally	P
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		P
M.6.1	Short circuits		P
M.6.1.1	General requirements	Has been conducted on the battery as part of compliance with IEC 62133-2:2017	P
M.6.1.2	Test method to simulate an internal fault		P
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		P
M.6.2	Leakage current (mA)		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume Vz (m ³ /s)..... :		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance d (mm) :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) :	Provided the instructions include battery charging, storage and transportation, and disposal and recycling.	N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Metal(s) used :		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N/A
	Figures O.1 to O.20 of this Annex applied :		—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		N/A
P.1	General requirements		N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm) :	No such openings.	—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	T_c (°C)..... :		—
	T_r (°C) :		—
	T_a (°C)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
P.4.2 b)	Abrasion testing		N/A
P.4.2 c)	Mechanical strength testing		N/A
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	(See appended table Q.1 for details.)	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	(See table annex Q.1)	P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		—
	Current limiting method		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A).		NA/
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm).....		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady-state power exceeding 4000 W		N/A
	Samples, material		—
	Wall thickness (mm).....:		—
	Conditioning (test condition), (°C).....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	Not applicable.	N/A
T.3	Steady force test, 30 N	Not applicable.	N/A
T.4	Steady force test, 100 N	(See appended table T.4)	P
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T.7)	P
T.8	Stress relief test	(See appended table T.8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Impact energy (J).....:		—
	Height (m).....:		—
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements	No CRT provided	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:		N/A
V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		N/A
V.1	Accessible parts of equipment		N/A
V.2	Accessible part criterion		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
AC Adapter (EU plug)	Guangdong Quanzhi Technology Co., Ltd.	QZ-06502EC00	Input: 100-240VAC, 50/60Hz, 1.5A Output: USB-C: 5.0V---3.0A or 9.0V---3.0A or 12.0V---3.0A or 15.0V---3.0A or 20.0V---3.25A (PPS) 3.3V-21.0V---3.15A (66.0W Max) Ambient: 25°C Altitude: 2000m	EN 62368-1: 2014+A11:2017	Report No.: LP22110098 C01-05	
Plastic enclosure	Guangdong Guoli Science And Technology Co Ltd	FRPC	V-0, 80°C, Min 0.8mm thickness	UL 94	UL E464857	
PCB	Interchangeable	Interchangeable	V-0, 130°C.	UL 796	UL	
Rechargeable Li-ion battery	Shenzhen Jiuliyuan Electronic Technology Co., LTD	Li556578JLY	3.87V, 5000mAh, 19.35Wh	EC 62133- 2:2017, IEC 62133- 2:2017/AMD1:20 21	TUV Rheinland Report No.: CN220W35 001 Cert. No.: JPTUV- 141545	
USB cable	Interchangeable	Interchangeable	24AWG, 30V, 80°C	UL758	UL	
Speaker	ACC AUOUSTIC TECHNOLOGIE S HOLDINGS INC.	SLS0812A-04	8Ω±15%, 1.0W rated	EN 62368-1	Test with appliance	
(Alternative)	ACC AUOUSTIC TECHNOLOGIE S HOLDINGS INC.	SPS1217H-04- 02	8Ω±10%, 1.0W rated	EN 62368-1	Test with appliance	

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Vibration motor	CHONGQING LINGLONG ELECTRONIC CO.,LTD.	10G20F-070356001-0151	3.0VDC, 75mA Max 13000±2500 rpm	EN 62368-1	Tested with appliance
LCD panel module	SHENZHEN TXD TECHNOLOGY CO.,LTD	TXDY660JBRP UG-29V3	6.583 inch, Active Area: 68.43(W)x 152.57(L), 5.5VDC	EN 62368-1	Tested with appliance
Flash LED	Shineon (Beijing) Technology Co., Ltd	ELCH Series	DC 350mA Exempt Group (IEC 62471) Risk Group 1 (EN 62471)	IEC 62471:2006 EN 62471:2008	Report No.: 10031507 001
Metal enclosure	Interchangeable	Interchangeable	Min 1.0mm thickness	EN 62368-1	Tested with appliance
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests		N/A
(The following mechanical tests are conducted in the sequence noted.)			
4.8.4.2	TABLE: Stress Relief test		---
	Part	Material	Oven Temperature (°C)
	--	--	--
4.8.4.3	TABLE: Battery replacement test		---
	Battery part no.:	--	---
	Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
		1	--
		2	--
		3	--
		4	--
		5	--
		6	--
		8	--
		9	--
		10	--
4.8.4.4	TABLE: Drop test		---
	Impact Area	Drop Distance	Drop No.
	--	--	1
	--	--	2
	--	--	3
4.8.4.5	TABLE: Impact		---
	Impacts per surface	Surface tested	Impact energy (Nm)
	--	--	--
	--	--	--
	--	--	--
4.8.4.6	TABLE: Crush test		---
	Test position	Surface tested	Crushing Force (N)
	--	--	--
	--	--	--
Supplementary information:			

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N/A
Test position	Surface tested	Force (N)	Duration force applied (s)	
--	--	--	--	
--	--	--	--	
--	--	--	--	
Supplementary information:				

5.2	Table: Classification of electrical energy sources						P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	21.0Vdc	Type-C input	Normal	21.0Vrms	--	DC	ES1
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
2	Full charged battery	Battery pack output	Normal	4.45Vrms	--	DC	ES1
			Abnormal	--	--	--	
			Single fault – SC/OC Battery B- to P-	4.45Vrms	--	DC	
3	Full charged battery	Type-C output	Normal	5.13Vrms	--	DC	ES1
			Abnormal: Overload	4.96Vrms	--	DC	
			Single fault: SC/OC U105 pin 1-9	4.22Vrms	--	DC	
			Single fault: SC/OC U225 pin 1-6	5.12Vrms	--	DC	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
--	--	--	Normal	--	--	--
			Abnormal	--	--	
			Single fault – SC/OC	--	--	

5.2.2.4 - Single Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	l _{pk} (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

5.2.2.5 - Repetitive Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	l _{pk} (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

Test Conditions:
 Normal –
 Abnormal -
 Supplementary information: SC=Short Circuit, OC=Short Circuit

IEC 62368-1						
Clause	Requirement + Test	Result - Remark				Verdict
5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V)	Condition A	Condition B	Condition C	--	---
	Ambient T _{min} (°C)	--	--	--	--	---
	Ambient T _{max} (°C)	--	--	--	--	---
	T _{ma} (°C)	See below	See below	See below	--	---
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)
PCB near U100		64.0	50.0	61.0	--	130
PCB near U1200		74.1	57.7	61.8	--	130
PCB near U0306		80.4	52.3	61.2	--	130
PCB near Type-C		45.5	41.1	58.8	--	130
Battery body		34.0	33.5	45.5	--	Ref.
Plastic enclosure inside near U1200		59.0	53.4	58.3	--	80
Plastic enclosure inside near battery		48.8	39.8	55.0	--	80
Ambient		25.0	25.0	40.0	--	--
Accessible parts:						
Plastic enclosure outside near U1200		38.5	43.4	38.4	--	48
Plastic enclosure outside near battery		44.3	46.6	40.8	--	48
Plastic enclosure outside near Type-C		37.1	35.6	37.1	--	48
Metal enclosure outside near SIM port		35.5	40.6	34.8		48
Button(plastic)		34.1	39.3	33.7	--	48
Button(metal)		36.4	37.1	33.4		48
Screen surface		34.8	37.4	33.0	--	48
Adapter surface		38.5	44.9	--	--	77 ^{&}
Ambient		25.0	25.0	25.0	--	--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:							
Condition A: Off mode, supplied by an external AC adapter, charging with an empty battery only.							
Condition B: On mode, charging fully discharged battery by an external AC adapter, WiFi connected, playing three vertical bar, max sound, max brightness.							
Condition C: On mode, supplied by 4.45VDC fully charged battery, WiFi connected, playing three vertical bar, max sound, max brightness, Type-C load: 5Vdc 0.5A.							
&: The external Adapter surface touched occasionally for very short periods (>1 s and < 10 s)							
1. The manufacturer's specified maximum operation temperature :							
For charging with AC power adapter mode: 25°C							
For discharging mode:40°C							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Supplementary information:							
Supplementary information:							
Note 1: Tma should be considered as directed by applicable requirement							
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)							

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics			N/A
Penetration (mm)..... :	--			—
Object/ Part No./Material	Manufacturer/ trademark	T softening (°C)		
--	--	--		
--	--	--		
--	--	--		
Supplementary information:				

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			N/A
Allowed impression diameter (mm) :	≤ 2 mm			—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
--	--	--	--	
--	--	--	--	
--	--	--	--	
Supplementary information:				

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						N/A
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Supplementary information:							
Note 1: Only for frequency above 30 kHz							
Note 2: See table 5.4.2.4 if this is based on electric strength test							
Note 3: Provide Material Group							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			N/A
Overvoltage Category (OV):			--	
Pollution Degree:			--	
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)	
--	--	--	--	
Supplementary information:				

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No	
--	--	--	--	
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					N/A
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
--	--	--	--	--	--	
--	--	--	--	--	--	
Supplementary information:						

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			N/A
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No	
Functional:				
--	--	--	--	
--	--	--	--	
Basic/supplementary:				
--	--	--	--	
--	--	--	--	
Reinforced:				
--	--	--	--	
--	--	--	--	
Routine Tests:				
--	--	--	--	
--	--	--	--	
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors					N/A
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
--	--	--	--	--	--	
--	--	--	--	--	--	
--	--	--	--	--	--	
Supplementary information:						
X-capacitors installed for testing are: <input type="checkbox"/> bleeding resistor rating: <input type="checkbox"/> ICX: Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition						

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.6.6.2	TABLE: Resistance of protective conductors and terminations				N/A
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
--	--	--	--	--	
--	--	--	--	--	
--	--	--	--	--	
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		N/A
Supply voltage	--	—	
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7		Touch current (mA)
	1	--	
	2*	--	
	3	--	
	4	--	
	5	--	
	6	--	
	8	--	
Supplementary Information:			
Notes:			
[1] Supply voltage is the anticipated maximum Touch Voltage			
[2] Earthed neutral conductor [Voltage differences less than 1% or more]			
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3			
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.			
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s ^{*)}	PS Classification
Input circuit	--	Power (W) :	--	--	PS2* (Declared)
		V _A (V) :	--	--	
		I _A (A) :	--	--	

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Internal circuits	--	Power (W) :	--	--	PS2 (Declared)
		V _A (V) :	--	--	
		I _A (A) :	--	--	
Battery pack	Normal condition	Power (W) :	53.40	53.40	PS2
		V _A (V) :	3.35	3.35	
		I _A (A) :	15.94	15.94	
	Single fault Battery B- to P- SC	Power (W) :	30.03	--	PS2
		V _A (V) :	3.84	--	
		I _A (A) :	7.82	--	
Battery cell output	--	Power (W) :	82.58	82.58	PS2
		V _A (V) :	2.96	2.96	
		I _A (A) :	27.90	27.90	
Type-C output	Normal condition	Power (W) :	7.59	--	PS1
		V _A (V) :	4.22	--	
		I _A (A) :	1.80	--	
	Single fault: U225 pin 1- 6 SC	Power (W) :	2.48	--	PS1
		V _A (V) :	4.96	--	
		I _A (A) :	0.5	--	
	Single fault: U105 pin 1- 9 SC	Power (W) :	2.11	--	PS1
		V _A (V) :	4.22	--	
		I _A (A) :	0.5	--	
Supplementary Information:					
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits					
* This product was supplied by input voltage 5VDC USB-C port and was classified as PS2 classification.					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				N/A
Location	Open circuit voltage After 3 s (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No	
--	--	--	--	--	
--	--	--	--	--	
--	--	--	--	--	
Supplementary information:					
An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V _p) and normal operating condition rms current (I _{rms}) is greater than 15.					

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
All internal circuits/parts except Type-C circuit	--	--	--	--	Yes*
Supplementary Information:					
<p>A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.</p> <p>If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.</p> <p>A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, <u>or</u> (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.</p> <p>* All internal circuits were considered as resistive PIS.</p>					

8.5.5	TABLE: High Pressure Lamp			N/A
Description	Values	Energy Source Classification		
Lamp type.....:	--	—		
Manufacturer	--	—		
Cat no.:	--	—		
Pressure (cold) (MPa).....:	--	MS_		
Pressure (operating) (MPa).....:	--	MS_		
Operating time (minutes).....:	--	—		
Explosion method	--	—		
Max particle length escaping enclosure (mm) ..:	--	MS_		
Max particle length beyond 1 m (mm).....:	--	MS_		
Overall result	--			
Supplementary information:				

B.2.5	TABLE: Input test								P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
Powered by a GaN Fast Charger, model : QZ-06502EC00									

IEC 62368-1								
Clause	Requirement + Test				Result - Remark			Verdict
21VDC	--	2.01	3.15	42.01	--	--	--	Condition A Battery current: 7.82A
21VDC	--	2.12	3.15	44.52	--	--	--	Condition B Battery current: 6.94A
Powered by a DC power source: 5V3A								
5VDC	--	2.256	3.0	11.28	--	--	--	Condition A Battery current: 2.774A
5VDC	--	2.344	3.0	11.72	--	--	--	Condition B Battery current: 1.451A
4.45V (Fully charged battery)	--	Battery dis-charge current: 1.29	--	5.741	--	--	--	Condition C Battery current: 1.29A
Supplementary information:								
Equipment may be have rated current or rated power or both. Both should be measured								
1. The measured input power did not exceed the marked input rating by more than 10% when the apparatus was operated to produce the maximum normal input power.								
Condition A: Off mode, supplied by an external AC adapter, charging with an empty battery only.								
Condition B: On mode, charging fully discharged battery by an external AC adapter, WiFi connected, playing three vertical bar, max sound, max brightness.								
Condition C: On mode, supplied by 4.45VDC fully charged battery, WiFi connected, playing three vertical bar, max sound, max brightness, Type-C load: 5Vdc 0.5A.								

B.3 TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)					25, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating ...					See cover page for details			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Motor	Locked	3.0VDC	7hr	--	--	--	--	The motor not emit flames and molten metal, no ignition of wrapping tissue and cheesecloth, no hazard.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Speaker (Under condition B)	SC	21VDC	10min	--	--	--	--	After SC, speaker no voice. No damage, no hazard. Battery, no emission, explosion and chemical leaks. Battery charging current: 6.94A→6.51A
Speaker (Under condition C)	SC	4.45VDC	10min	--	--	--	--	After SC, speaker no voice. No damage, no hazard. Battery, no emission, explosion and chemical leaks.
Type-C output (Under condition C)	OL	4.45VDC	2hr 38min	--	--	See temp. column	PCB near Type-C: 75.7°C Battery cell: 36.8°C Plastic enclosure outside near Type-C: 48.9°C Plastic enclosure outside near U1200: 46.3°C Button (plastic): 38.0°C Button (metal) : 40.9°C Screen surface: 36.6°C Adapter surface: 39.1°C Ambient: 25.0°C	Type-C output max loaded was 1.8A. When loaded to 1.9A, Type-C output shut down immediately, other function operation as normally. Unit turn off when battery is ending. No damage, no hazards. Battery no fire, no leaks, no explosion. Battery cell max. discharging current: 1.29A→2.77A→0A

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict

Type-C output (Under condition C)	SC	4.45VDC	10min	--	--	--	--	Type-C output shut down, and other function operating as normally, no damage, no hazards. Battery no fire, no leaks, no explosion.
-----------------------------------	----	---------	-------	----	----	----	----	--

Supplementary information:

Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.

1. SC – Short Circuit; OC – Open Circuit; OL- Overload;

Condition A: Off mode, supplied by an external AC adapter, charging with an empty battery only.

Condition B: On mode, charging fully discharged battery by an external AC adapter, WiFi connected, playing three vertical bar, max sound, max brightness.

Condition C: On mode, supplied by 4.45VDC fully charged battery, WiFi connected, playing three vertical bar, max sound, max brightness, Type-C load: 5Vdc 0.5A.

B.4		TABLE: Fault condition tests						P
Ambient temperature (°C)		25, if not specified						—
Power source for EUT: Manufacturer, model/type, output rating ..		See cover page for details						—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Condition A:								

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
U1301 pin C1-A4	SC (Over-charge)	21VDC	7hrs	--	--	See temp. column	PCB near U0306: 80.7°C Battery cell: 34.7°C Plastic enclosure outside near battery: 45.1°C Plastic enclosure outside near U1200: 47.1°C Button (plastic): 39.5°C Button (metal) : 37.4°C Screen surface: 37.4°C Adapter surface: 37.6°C Ambient: 25.0°C	Unit normal operation, empty battery charged for 7hours. Battery, no emission, explosion and chemical leaks. Battery charging current: 7.82A→7.89A
U1305 pin C1-A4	SC	21VDC	10min	--	--	--	--	After SC, unit operation normally, no damage, no hazards. Battery no fire, no leaks, no explosion.
U101 pin C2-A2	SC	21VDC	10min	--	--	--	--	After SC, unit operation normally, no damage, no hazards. Battery no fire, no leaks, no explosion.
U1200 pin A1-G1	SC	21VDC	10min	--	--	--	--	After SC, unit shut down, recoverable. No damage, no hazards. Battery no fire, no leaks, no explosion.
U0306 pin C6-A3	SC	21VDC	10min	--	--	--	--	After SC, unit shut down, recoverable. No damage, no hazards. Battery no fire, no leaks, no explosion.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
U0306 pin C6-A7	SC	21VDC	10min	--	--	--	--	After SC, unit shut down, recoverable. No damage, no hazards. Battery no fire, no leaks, no explosion.
U1307 pin C6-A3	SC	21VDC	10min	--	--	--	--	After SC, unit shut down, recoverable. No damage, no hazards. Battery no fire, no leaks, no explosion.
U1307 pin C6-A7	SC	21VDC	10min	--	--	--	--	After SC, unit shut down, recoverable. No damage, no hazards. Battery no fire, no leaks, no explosion.
Battery B- and P-	SC	21VDC	30min	--	--	--	--	After SC, unit operation normally, no damage, no hazards. Battery no fire, no leaks, no explosion.
Condition C:								
U0306 pin A7-A3	SC	4.45VDC	3hr 42min	--	--	See temp. column	PCB near U1200: 59.7°C Battery cell: 34.7°C Plastic enclosure outside near U1200: 48.7°C Plastic enclosure outside near battery: 46.3°C Button (plastic): 41.6°C Button (metal) : 41.3°C Screen surface: 40.9°C Ambient: 25.0°C	After SC, unit operation abnormally. No damage, no hazards. Battery no fire, no leaks, no explosion. Battery discharging current: 1.29A→5.2A

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
U1307 pin A7-A3	SC	4.45VDC	10min	--	--	--	--	After SC, unit operation abnormally. No damage, no hazards. Battery no fire, no leaks, no explosion.
U225 pin 1-6	SC	4.45VDC	10min	--	--	--	--	After SC, unit working normally. No damage, no hazards. Battery no fire, no leaks, no explosion.
U105 pin 1-9	SC	4.45VDC	10min	--	--	--	--	After SC, unit working abnormally. No damage, no hazards. Battery no fire, no leaks, no explosion.
U1901 PIN C6-F4	SC	4.45VDC	10min	--	--	--	--	After SC, speaker working abnormally, other function working normally, no damage, no hazards. Battery no fire, no leaks, no explosion.
U1200 pin F1-G1	SC	4.45VDC	10min	--	--	--	--	After SC, unit operation normally. No damage, no hazard. Battery no fire, no leaks, no explosion.
U1307 pin A3-A7	SC	4.45VDC	10min	--	--	--	--	After SC, unit operation normally. No damage, no hazards. Battery no fire, no leaks, no explosion.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Battery B- to P-	SC	4.45VDC	30min	--	--	--	--	Unit normal operation, no damage, no hazards. Battery no fire, no leaks, no explosion.
Battery pack output "+" to "-"	SC	4.45VDC	30min	--	--	--	--	Unit shut down. Battery no fire, no leaks, no explosion.
Battery B- and B+	SC	4.45VDC	30min	--	--	--	--	Battery no fire, no leaks, no explosion.
Condition B								
U1301 pin C1-A4	SC	21VDC	7hr	--	--	See temp. column	PCB near U1200: 61.5°C Battery cell: 34.6°C Plastic enclosure outside near battery: 39.7°C Plastic enclosure outside near U1200: 44.9°C Button (plastic): 36.0°C Button (metal) : 38.0°C Screen surface: 36.6°C Adapter surface: 39.1°C Ambient: 25.0°C	After SC, unit operation normally. No damage, no hazard. Battery no fire, no leaks, no explosion. Battery charging current: 6.94A→7.02A
Supplementary information:								
1. SC – Short Circuit; OC – Open Circuit; OL- Overload; Condition A: Off mode, supplied by an external AC adapter, charging with an empty battery only. Condition B: On mode, charging fully discharged battery by an external AC adapter, WiFi connected, playing three vertical bar, max sound, max brightness. Condition C: On mode, supplied by 4.45VDC fully charged battery, WiFi connected, playing three vertical bar, max sound, max brightness, Type-C load: 5Vdc 0.5A.								

IEC 62368-1										
Clause	Requirement + Test			Result - Remark				Verdict		
Annex M.3	TABLE: Batteries								P	
The tests of Annex M are applicable only when appropriate battery data is not available									--	
Is it possible to install the battery in a reverse polarity position?..... :							No		--	
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition	--	--	--	7820mA	12500 mA	1290mA	12500 mA	--	--	
Max. current during fault condition: U1301 pin C1-A4 SC	--	--	--	7890mA	12500 mA	--	--	--	--	
Max. current during fault condition: U0306 pin A7-A3 SC	--	--	--	--	--	5200mA	12500 mA	--	--	
Max. current during fault condition: Type-C overload	--	--	--	--	--	2770mA	12500 mA	--	--	
Test results:										
- Chemical leaks							No Chemical leaks		P	
- Explosion of the battery							No explosion		P	
- Emission of flame or expulsion of molten metal							No emission of flame or expulsion of molten metal		P	
- Electric strength tests of equipment after completion of tests							--		--	
Supplementary information:										

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex M.4 Table: Additional safeguards for equipment containing secondary lithium batteries					P
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
Li556578JLY	Normal (Off mode)	4.45Vmax	7.82A	Battery cell surface: 34.0°C Ambient: 25.0°C	Normal operation, no damage, no hazard. NL, NS, NE, NF.
Li556578JLY	Single fault Battery U1301 pin C1-A4 SC (Off mode)	4.45Vmax	7.89A	Battery cell surface: 34.7°C Ambient: 25.0°C	Normal operation, no damage, no hazard. NL, NS, NE, NF.
Li556578JLY	Single fault Battery U1301 pin C1-A4 SC (On mode)	4.45Vmax	7.02A	Battery cell surface: 34.6°C Ambient: 25.0°C	Normal operation, no damage, no hazard. NL, NS, NE, NF.

Supplementary Information:

Information of battery pack:

- The manufacturer specified highest charging temperature: 60°C
- The manufacturer specified lowest charging temperature: 0°C
- Maximum specified charging current: 12.5A
- Maximum specified charging voltage: 4.45VDC

Abbreviation: SC =short Circuit; OC =Open Circuit; OL=overload; NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.

Battery identification	Charging at T _{lowest} (°C)	Observation	Charging at T _{highest} (°C)	Observation
Shenzhen Jiuliyuan Electronic Technology Co., LTD/ Li556578JLY	Battery cell: 0 Ambient: 0	When the temperature of the battery cell reached 0.5°C, unit stop charging. No damage, no hazard. Battery charging current: 0A	Battery cell: 60.0 Ambient: 60.0	When the temperature of the battery cell reached 59.0°C, unit stop charging. No damage, no hazard. Charging current: 0A

Supplementary Information:

The battery surface not exceeds the highest and lowest specified charging temperature under normal operating conditions, abnormal operating conditions or single fault conditions.

IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured U_{oc} (V) with all load circuits disconnected:						
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Type-C output	Normal condition	5.13	1.8	8	7.59	100
	Single fault: U225 pin 1-6 SC	5.12	1.8	8	7.58	100
	Single fault: U105 pin 1-9 SC	4.22	3.98	8	13.74	100
Supplementary Information:						
SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Top of enclosure	Plastic	Min. 0.8	100	5	No damage, no hazards.	
Side of enclosure	Metal	Min. 1.0	100	5	No damage, no hazards.	
Rear of enclosure	Plastic	Min. 0.8	100	5	No damage, no hazards.	
Supplementary information:						

T.6, T.9	TABLE: Impact tests				N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
--	--	--	--	--	
Supplementary information:					

T.7	TABLE: Drop tests				P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Top of enclosure	Plastic	Min. 0.8	1000	No damage, no hazards.	
Side of enclosure	Metal	Min. 1.0	1000	No damage, no hazards.	

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Rear of enclosure	Plastic	Min. 0.8	1000	No damage, no hazards.	
Supplementary information:					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Whole unit	Plastic	Min. 0.8	70	7	No damage, no hazards.	
Supplementary information:						

IEC62368_1D - ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
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ATTACHMENT TO TEST REPORT

IEC 62368-1

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

(Audio/video, information and communication technology equipment - Part 1: Safety requirements)

Differences according to : EN 62368-1:2014+A11:2017

Attachment Form No. : EU_GD_IEC62368_1D_II

Attachment Originator..... : Nemko AS

Master Attachment..... : Date 2021-02-04

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	CENELEC COMMON MODIFICATIONS (EN)					P
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".					P
CONTENT S	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords					P
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:					P
	0.2.1	Note	1	Note 3	4.1.15	Note
	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c
	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3
	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4
	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3
	For special national conditions, see Annex ZB.					P
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.					P

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	<p>Add the following new subclause after 4.9:</p> <p>To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		P
5.4.2.3.2.4	<p>Add the following to the end of this subclause:</p> <p>The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.</p>	No external circuits	N/A
10.2.1	<p>Add the following to ^{c)} and ^{d)} in table 39:</p> <p>For additional requirements, see 10.5.1.</p>	No such radiation from the equipment	N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	<p>Add the following after the first paragraph: <i>For RS 1 compliance is checked by measurement under the following conditions:</i> <i>In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i> NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. <i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.</i> <i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</i> <i>For RS1, the dose-rate shall not exceed 1 μSv/h taking account of the background level.</i> NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.</p>		N/A
10.6.1	<p>Add the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.</p>		N/A
10.Z1	<p>Add the following new subclause after 10.6.5. 10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566</p>		N/A
G.7.1	<p>Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>		P

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Bibliography	<p>Add the following standards:</p> <p>Add the following notes for the standards indicated:</p> <p>IEC 60130-9 NOTE Harmonized as EN 60130-9.</p> <p>IEC 60269-2 NOTE Harmonized as HD 60269-2.</p> <p>IEC 60309-1 NOTE Harmonized as EN 60309-1.</p> <p>IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series.</p> <p>IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4.</p> <p>IEC 60664-5 NOTE Harmonized as EN 60664-5.</p> <p>IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified).</p> <p>IEC 61508-1 NOTE Harmonized as EN 61508-1.</p> <p>IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1.</p> <p>IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4.</p> <p>IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6.</p> <p>IEC 61643-1 NOTE Harmonized as EN 61643-1.</p> <p>IEC 61643-21 NOTE Harmonized as EN 61643-21.</p> <p>IEC 61643-311 NOTE Harmonized as EN 61643-311.</p> <p>IEC 61643-321 NOTE Harmonized as EN 61643-321.</p> <p>IEC 61643-331 NOTE Harmonized as EN 61643-331.</p>		P
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
4.1.15	<p>Denmark, Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord."</p> <p>In Finland: "Laitte on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		P
4.7.3	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.2	<p>Denmark</p> <p>After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A
5.4.11.1 and Annex G	<p>Finland and Sweden</p> <p>To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; <p>the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.1	<p>Norway</p> <p>After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>		N/A
5.5.6	<p>Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.</p>		N/A
5.6.1	<p>Denmark</p> <p>Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.</p>		N/A
5.6.4.2.1	<p>Ireland and United Kingdom</p> <p>After the indent for pluggable equipment type A, the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.</p>		N/A
5.6.5.1	<p>To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm² to 1,5 mm² in cross-sectional area.</p>		N/A
5.7.5	<p>Denmark</p> <p>To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	<p>Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>“Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”</p> <p>NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkøplet utstyr – og er tilkøplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	<p>Denmark</p> <p>To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .</p>		N/A
B.3.1 and B.4	<p>Ireland and United Kingdom</p> <p>The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met</p>		N/A
G.4.2	<p>Denmark</p> <p>To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>United Kingdom</p> <p>To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		N/A
G.7.1	<p>United Kingdom</p> <p>To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
G.7.1	<p>Ireland</p> <p>To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard</p>		N/A
G.7.2	<p>Ireland and United Kingdom</p> <p>To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.</p>		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	<i>ANNEX ZC, NATIONAL DEVIATIONS (EN)</i>		N/A
10.5.2	<p>Germany</p> <p>The following requirement applies:</p> <p>For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i></p> <p>German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p>NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de</p>		N/A

Attachment 2 – Photo Documentation



Fig.1 Overall view

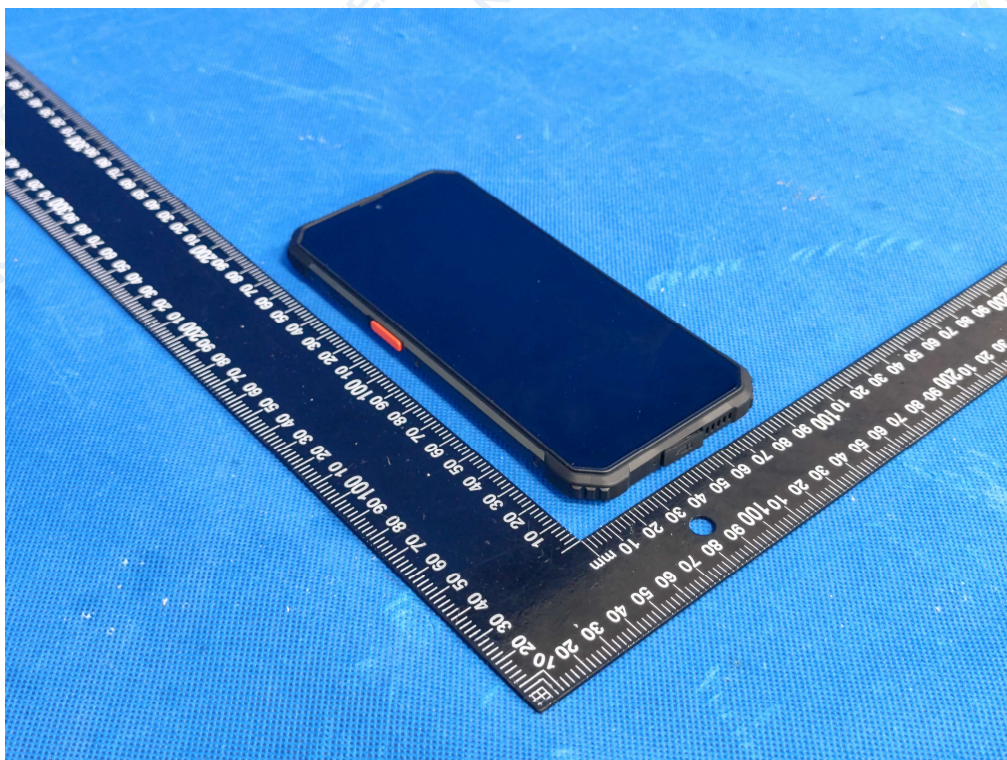


Fig.2 Over view



Fig.3 Over view



Fig.4 Terminal view



Fig.5 Internal view

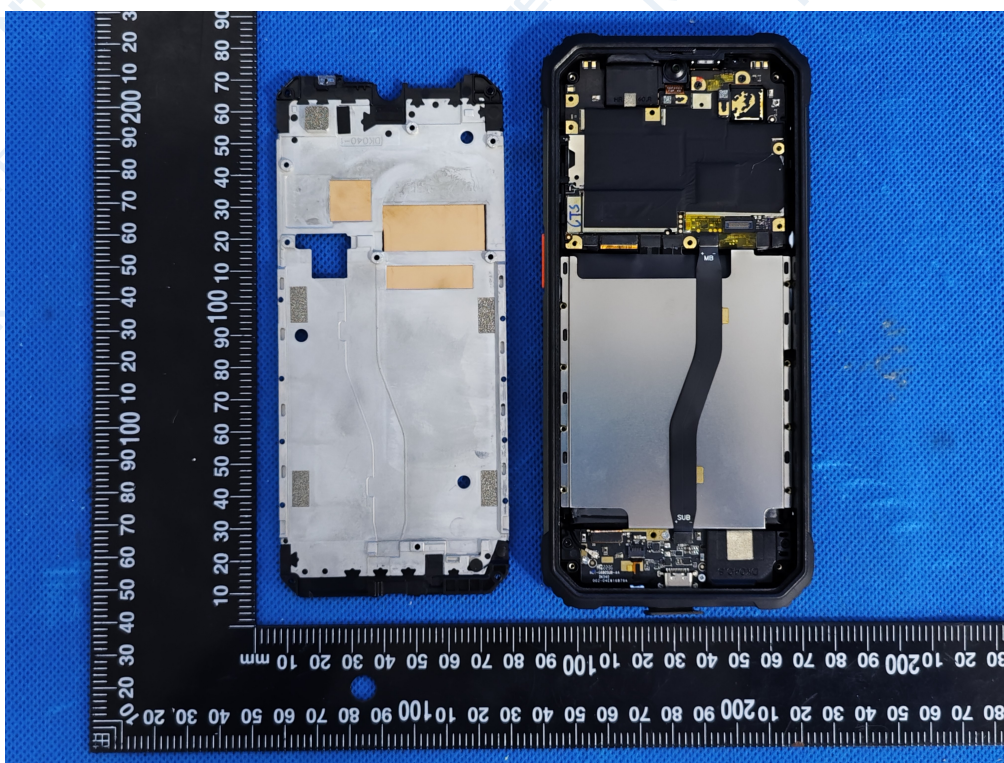


Fig.6 Internal view



Fig.7 Internal view

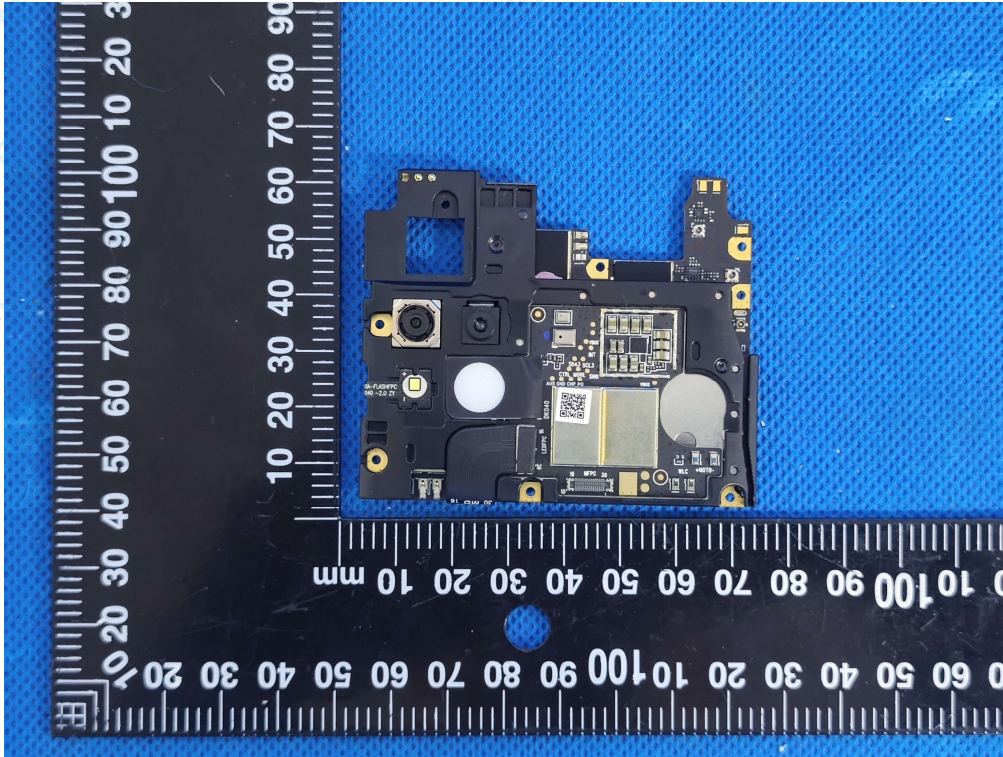


Fig.8 PCB view

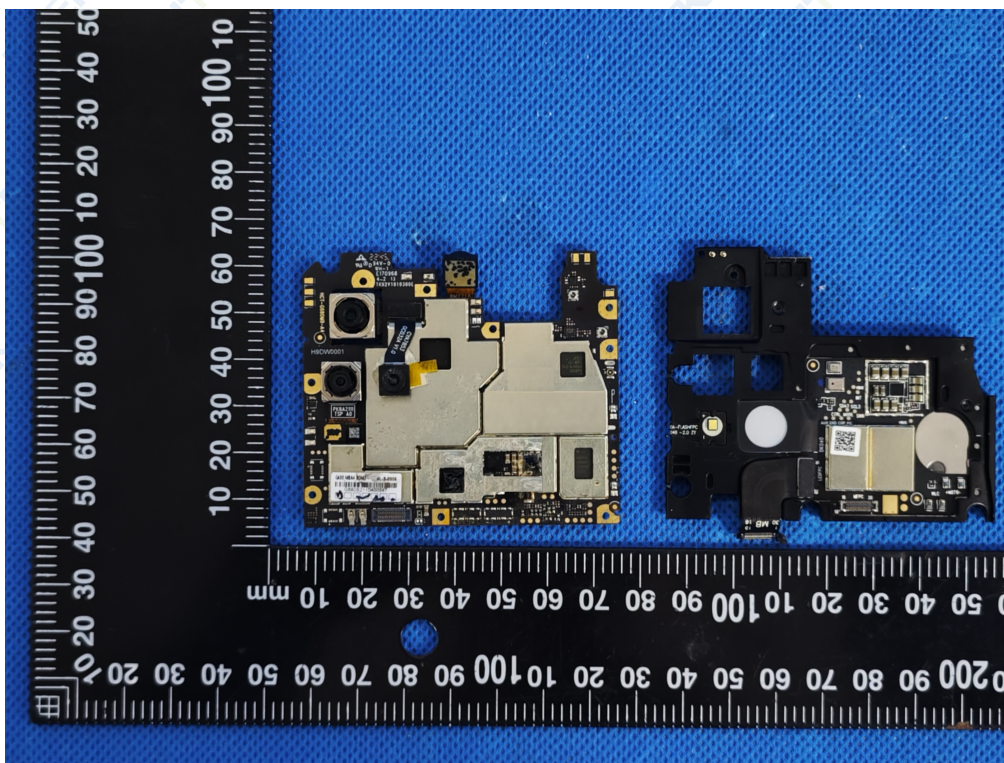


Fig.9 PCB view

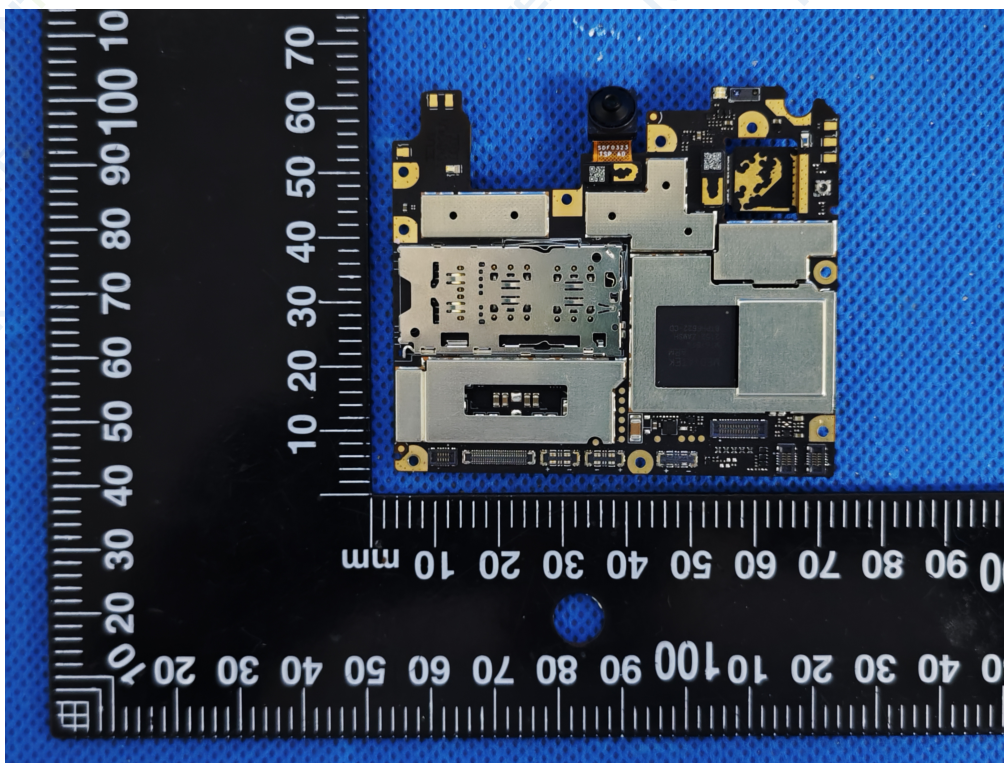


Fig.10 PCB view

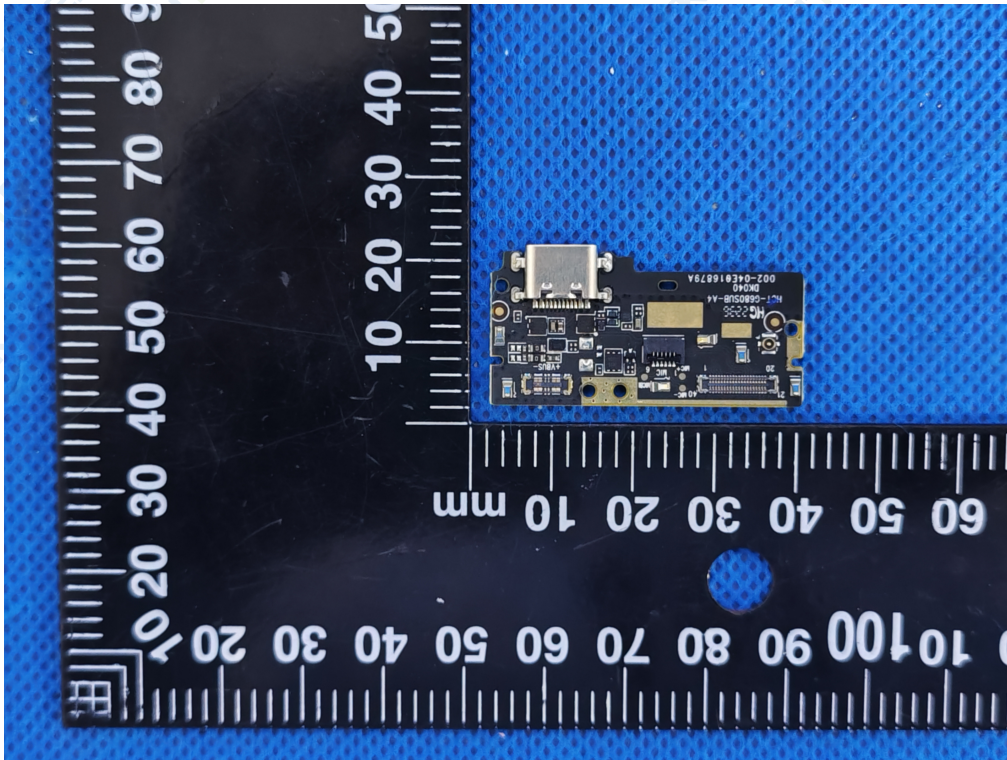


Fig.11 PCB view

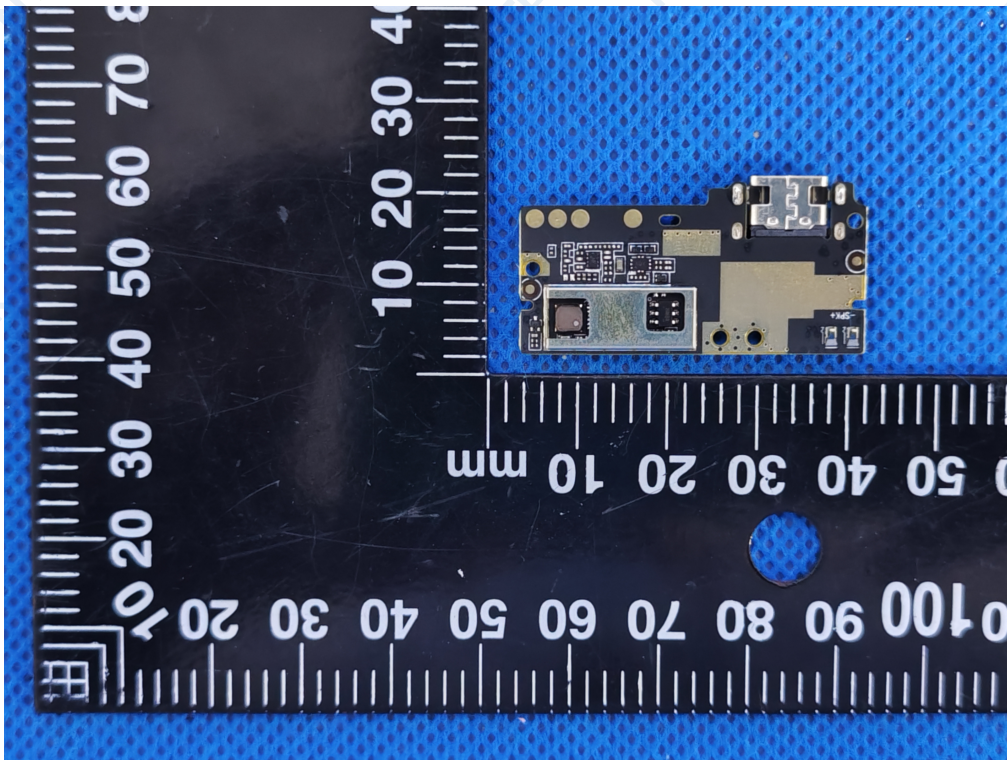


Fig.12 PCB view

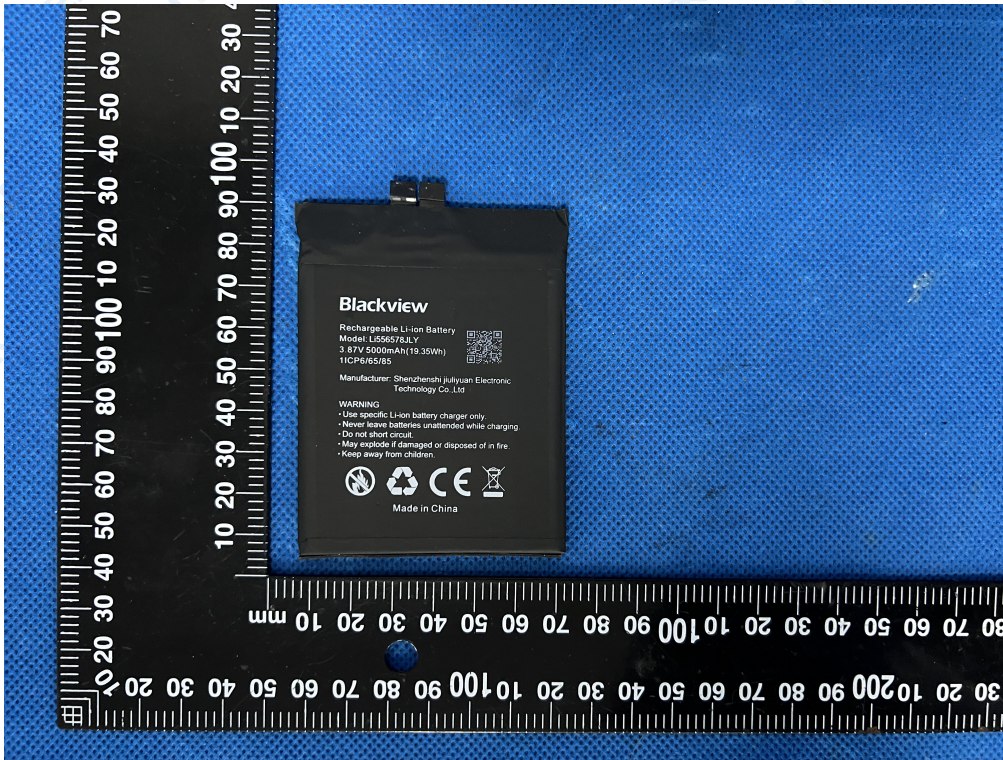


Fig.13 Battery label view



Fig.14 Adapter label view

END OF REPORT