



APPLICATION FOR IEC REPORT

On Behalf of

Jakin Technology Limited

A-Series

Model No.: See the model list

Prepared for: Jakin Technology Limited
Address: Unit 901, 9/F, Fo Tan Industrial Centre, 26-28 Au Pui Wan Street,
Fotan, Shatin, N.T.Hong Kong

Prepared By: Shenzhen Alpha Product Testing Co., Ltd.
Address: Building i, No.2, Lixin Road, Fuyong Street, Bao'an District,
518103, Shenzhen, Guangdong, China

Date of Test: August 30 to September 08, 2021
Date of Report: September 08, 2021
Report Number: A2108261-C01-R01
Version Number: V0

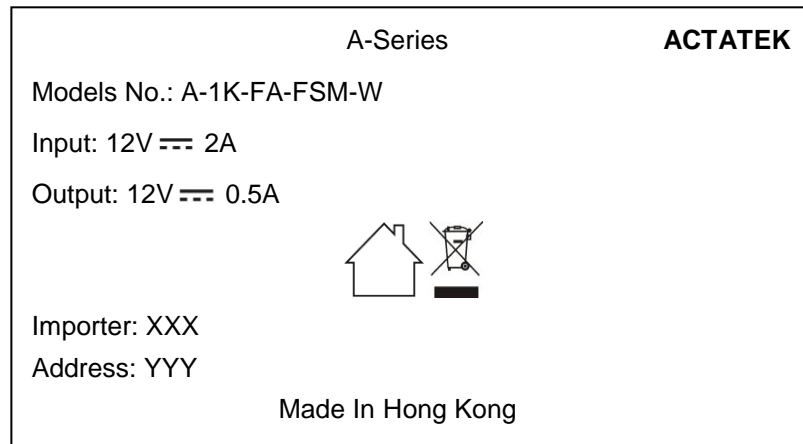
TEST REPORT**IEC 62368-1****Audio/video, information and communication technology equipment****Part 1: Safety requirements****Report Number** : A2108261-C01-R01**Tested by (name + signature)** : Vic Li**Approved by (name + signature)** : Kaiden Guo**Date of issue** : September 08, 2021**Testing Laboratory** : Shenzhen Alpha Product Testing Co., Ltd.**Address** : Building i, No.2, Lixin Road, Fuyong Street, Bao'an District,
518103, Shenzhen, Guangdong, China**Testing location/procedure**..... : TL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐**Address** : Same as above**Applicant's name** : Jakin Technology Limited**Address** : Unit 901, 9/F, Fo Tan Industrial Centre, 26-28 Au Pui Wan Street,
Fotan, Shatin, N.T.Hong Kong**Test specification:****Standard**..... : ☒ IEC 62368-1:2014**Test procedure**..... : IEC report**Non-standard test method** : N/A**Test Report Form No.** : IEC62368_1B**Test Report Form(s) Originator**..... : ALPHA**Master TRF** : 2019-03**Test Item description** : A-Series**Trade Mark**..... : **ACTATEK****Model/Type reference** : See the model list**Model difference**..... : See bellow general product information**Manufacturer** : Jakin Technology Limited**Address** : Unit 901, 9/F, Fo Tan Industrial Centre, 26-28 Au Pui Wan Street,
Fotan, Shatin, N.T.Hong Kong**Rating**..... : Input: 12V $\overline{\text{---}}$ 2A (supplied by external approved adapter)Output: 12V $\overline{\text{---}}$ 0.5A

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 checked="" 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: <u>not directly connected to the mains</u>
Considered current rating of protective device as part of building or equipment installation	_____ A; Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input 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 checked="" 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: <u>not directly connected to the mains</u>
Class of equipment	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III
Access location	<input type="checkbox"/> restricted access location <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 maximum operating ambient .:	40°C
IP protection class	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP____
Power Systems	<input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - _____ V _{L-L}
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input type="checkbox"/> _____ m
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> _____ m
Mass of equipment (kg)	<input checked="" type="checkbox"/> 0.486kg
Possible test case verdicts:	
- test case does not apply to the test object.....	N(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.....	August 27, 2021																																																																																																														
Date (s) of performance of tests.....	August 30 to September 08, 2021																																																																																																														
General remarks:																																																																																																															
<p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(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>																																																																																																															
General product information:																																																																																																															
<p>The appliance is supplied by an external approved adapter, so it belongs to class III equipment.</p> <p>Series models showed as below are identical except model name and colour of appearance.</p> <p>All tests are tested on A-1K-FA-FSM-W.</p> <p>The max.ambient temperature is 40°C.</p> <p>Instructions and equipment marking related to safety is applied in the language that is acceptable in the country in which the equipment is to be sold.</p>																																																																																																															
Model list:																																																																																																															
<table border="1"> <tr> <td>A-1K-P</td> <td>A-1K-P-W</td> <td>A-1K-P-C</td> <td>A-1K-P-C-W</td> <td>A-1K-Q</td> </tr> <tr> <td>A-1K-Q-W</td> <td>A-1K-FA</td> <td>A-1K-FA-W</td> <td>A-1K-FA-ST</td> <td>A-1K-FA-ST-W</td> </tr> <tr> <td>A-1K-FA-SM</td> <td>A-1K-FA-SM-W</td> <td>A-1K-FA-SE</td> <td>A-1K-FA-SE-W</td> <td>A-1K-FA-Hp</td> </tr> <tr> <td>A-1K-FA-Hp-W</td> <td>A-1K-FA-SX</td> <td>A-1K-FA-SX-W</td> <td>A-1K-FA-SY</td> <td>A-1K-FA-SY-W</td> </tr> <tr> <td>A-1K-FA-BC</td> <td>A-1K-FA-BC-W</td> <td>A-1K-FA-SiR</td> <td>A-1K-FA-SiR-W</td> <td>A-1K-FA-FLI</td> </tr> <tr> <td>A-1K-FA-FLI-W</td> <td>A-1K-FA-FST</td> <td>A-1K-FA-FST-W</td> <td>A-1K-FA-FSM</td> <td>A-1K-FA-FSM-W</td> </tr> <tr> <td>A-1K-FA-FSE</td> <td>A-1K-FA-FSE-W</td> <td>A-1K-FA-FHp</td> <td>A-1K-FA-FHp-W</td> <td>A-1K-FA-FSX</td> </tr> <tr> <td>A-1K-FA-FSX-W</td> <td>A-1K-FA-FSY</td> <td>A-1K-FA-FSY-W</td> <td>A-1K-FA-FBC</td> <td>A-1K-FA-FBC-W</td> </tr> <tr> <td>A-1K-FA-FSiR</td> <td>A-1K-FA-FSiR-W</td> <td>A-1K-FLI-C</td> <td>A-1K-FLI-C-W</td> <td>A-1K-FST-C</td> </tr> <tr> <td>A-1K-FST-C-W</td> <td>A-1K-FSM-C</td> <td>A-1K-FSM-C-W</td> <td>A-1K-FSE-C</td> <td>A-1K-FSE-C-W</td> </tr> <tr> <td>A-1K-FHp-C</td> <td>A-1K-FHp-C-W</td> <td>A-1K-FSX-C</td> <td>A-1K-FSX-C-W</td> <td>A-1K-FSY-C</td> </tr> <tr> <td>A-1K-FSY-C-W</td> <td>A-1K-FBC-C</td> <td>A-1K-FBC-C-W</td> <td>A-1K-FSiR-C</td> <td>A-1K-FSiR-C-W</td> </tr> <tr> <td>A-1K-FLI</td> <td>A-1K-FLI-W</td> <td>A-1K-FST</td> <td>A-1K-FST-W</td> <td>A-1K-FSM</td> </tr> <tr> <td>A-1K-FSM-W</td> <td>A-1K-FSE</td> <td>A-1K-FSE-W</td> <td>A-1K-FHp</td> <td>A-1K-FHp-W</td> </tr> <tr> <td>A-1K-FSX</td> <td>A-1K-FSX-W</td> <td>A-1K-FSY</td> <td>A-1K-FSY-W</td> <td>A-1K-FBC</td> </tr> <tr> <td>A-1K-FBC-W</td> <td>A-1K-FSiR</td> <td>A-1K-FSiR-W</td> <td>A-1K-ST-C</td> <td>A-1K-ST-C-W</td> </tr> <tr> <td>A-1K-SM-C</td> <td>A-1K-SM-C-W</td> <td>A-1K-SE-C</td> <td>A-1K-SE-C-W</td> <td>A-1K-Hp-C</td> </tr> <tr> <td>A-1K-Hp-C-W</td> <td>A-1K-SX-C</td> <td>A-1K-SX-C-W</td> <td>A-1K-SY-C</td> <td>A-1K-SY-C-W</td> </tr> <tr> <td>A-1K-BC-C</td> <td>A-1K-BC-C-W</td> <td>A-1K-SiR-C</td> <td>A-1K-SiR-C-W</td> <td>A-1K-ST</td> </tr> <tr> <td>A-1K-ST-W</td> <td>A-1K-SM</td> <td>A-1K-SM-W</td> <td>A-1K-SE</td> <td>A-1K-SE-W</td> </tr> <tr> <td>A-1K-Hp</td> <td>A-1K-Hp-W</td> <td>A-1K-SX</td> <td>A-1K-SX-W</td> <td>A-1K-SY</td> </tr> <tr> <td>A-1K-SY-W</td> <td>A-1K-BC</td> <td>A-1K-BC-W</td> <td>A-1K-SiR</td> <td>A-1K-SiR-W</td> </tr> </table>		A-1K-P	A-1K-P-W	A-1K-P-C	A-1K-P-C-W	A-1K-Q	A-1K-Q-W	A-1K-FA	A-1K-FA-W	A-1K-FA-ST	A-1K-FA-ST-W	A-1K-FA-SM	A-1K-FA-SM-W	A-1K-FA-SE	A-1K-FA-SE-W	A-1K-FA-Hp	A-1K-FA-Hp-W	A-1K-FA-SX	A-1K-FA-SX-W	A-1K-FA-SY	A-1K-FA-SY-W	A-1K-FA-BC	A-1K-FA-BC-W	A-1K-FA-SiR	A-1K-FA-SiR-W	A-1K-FA-FLI	A-1K-FA-FLI-W	A-1K-FA-FST	A-1K-FA-FST-W	A-1K-FA-FSM	A-1K-FA-FSM-W	A-1K-FA-FSE	A-1K-FA-FSE-W	A-1K-FA-FHp	A-1K-FA-FHp-W	A-1K-FA-FSX	A-1K-FA-FSX-W	A-1K-FA-FSY	A-1K-FA-FSY-W	A-1K-FA-FBC	A-1K-FA-FBC-W	A-1K-FA-FSiR	A-1K-FA-FSiR-W	A-1K-FLI-C	A-1K-FLI-C-W	A-1K-FST-C	A-1K-FST-C-W	A-1K-FSM-C	A-1K-FSM-C-W	A-1K-FSE-C	A-1K-FSE-C-W	A-1K-FHp-C	A-1K-FHp-C-W	A-1K-FSX-C	A-1K-FSX-C-W	A-1K-FSY-C	A-1K-FSY-C-W	A-1K-FBC-C	A-1K-FBC-C-W	A-1K-FSiR-C	A-1K-FSiR-C-W	A-1K-FLI	A-1K-FLI-W	A-1K-FST	A-1K-FST-W	A-1K-FSM	A-1K-FSM-W	A-1K-FSE	A-1K-FSE-W	A-1K-FHp	A-1K-FHp-W	A-1K-FSX	A-1K-FSX-W	A-1K-FSY	A-1K-FSY-W	A-1K-FBC	A-1K-FBC-W	A-1K-FSiR	A-1K-FSiR-W	A-1K-ST-C	A-1K-ST-C-W	A-1K-SM-C	A-1K-SM-C-W	A-1K-SE-C	A-1K-SE-C-W	A-1K-Hp-C	A-1K-Hp-C-W	A-1K-SX-C	A-1K-SX-C-W	A-1K-SY-C	A-1K-SY-C-W	A-1K-BC-C	A-1K-BC-C-W	A-1K-SiR-C	A-1K-SiR-C-W	A-1K-ST	A-1K-ST-W	A-1K-SM	A-1K-SM-W	A-1K-SE	A-1K-SE-W	A-1K-Hp	A-1K-Hp-W	A-1K-SX	A-1K-SX-W	A-1K-SY	A-1K-SY-W	A-1K-BC	A-1K-BC-W	A-1K-SiR	A-1K-SiR-W
A-1K-P	A-1K-P-W	A-1K-P-C	A-1K-P-C-W	A-1K-Q																																																																																																											
A-1K-Q-W	A-1K-FA	A-1K-FA-W	A-1K-FA-ST	A-1K-FA-ST-W																																																																																																											
A-1K-FA-SM	A-1K-FA-SM-W	A-1K-FA-SE	A-1K-FA-SE-W	A-1K-FA-Hp																																																																																																											
A-1K-FA-Hp-W	A-1K-FA-SX	A-1K-FA-SX-W	A-1K-FA-SY	A-1K-FA-SY-W																																																																																																											
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A-1K-FA-FSiR	A-1K-FA-FSiR-W	A-1K-FLI-C	A-1K-FLI-C-W	A-1K-FST-C																																																																																																											
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A-1K-FHp-C	A-1K-FHp-C-W	A-1K-FSX-C	A-1K-FSX-C-W	A-1K-FSY-C																																																																																																											
A-1K-FSY-C-W	A-1K-FBC-C	A-1K-FBC-C-W	A-1K-FSiR-C	A-1K-FSiR-C-W																																																																																																											
A-1K-FLI	A-1K-FLI-W	A-1K-FST	A-1K-FST-W	A-1K-FSM																																																																																																											
A-1K-FSM-W	A-1K-FSE	A-1K-FSE-W	A-1K-FHp	A-1K-FHp-W																																																																																																											
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A-1K-Hp-C-W	A-1K-SX-C	A-1K-SX-C-W	A-1K-SY-C	A-1K-SY-C-W																																																																																																											
A-1K-BC-C	A-1K-BC-C-W	A-1K-SiR-C	A-1K-SiR-C-W	A-1K-ST																																																																																																											
A-1K-ST-W	A-1K-SM	A-1K-SM-W	A-1K-SE	A-1K-SE-W																																																																																																											
A-1K-Hp	A-1K-Hp-W	A-1K-SX	A-1K-SX-W	A-1K-SY																																																																																																											
A-1K-SY-W	A-1K-BC	A-1K-BC-W	A-1K-SiR	A-1K-SiR-W																																																																																																											

Copy of marking plate:

Because of the similar of lables, only lable for model A-1K-FA-FSM-W is listed.



ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:

(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.

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

Source of electrical energy	Corresponding classification (ES)
12Vdc input (supplied by external approved adapter)	ES1

Electrically-caused fire (Clause 6):

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS	Corresponding classification (PS)
12Vdc 2A input	PS2
DC output	PS1

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

Source of hazardous substances	Corresponding chemical
N/A	None

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

Source of kinetic/mechanical energy	Corresponding classification (MS)
Edges and corners of enclosure	MS1
Mass of the unit<1kg	MS1
wall-mounted<2m	MS1

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

Source of thermal energy	Corresponding classification (TS)
Thermoplastic enclosure	TS1

Radiation (Clause 10)

(Note: List the types of radiation present in the product and the corresponding energy source classification.)

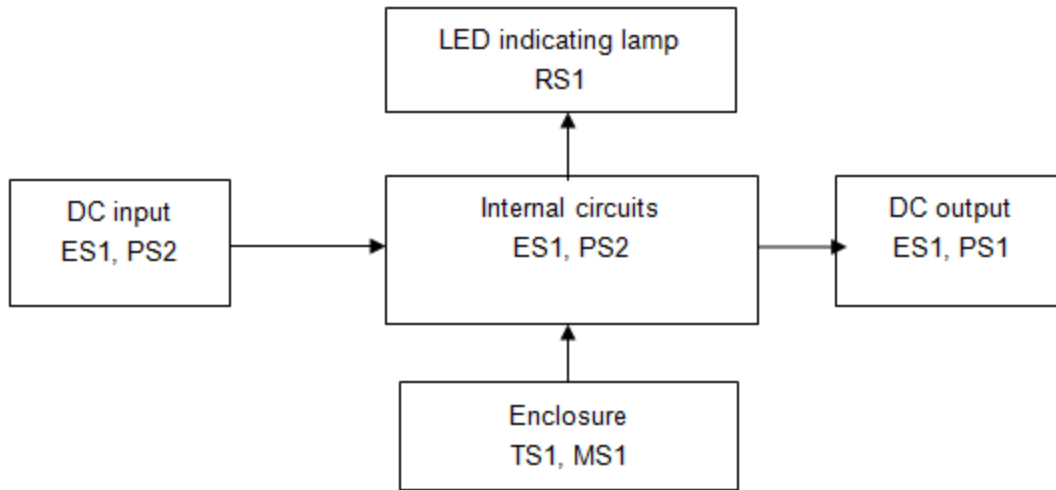
Example: DVD – Class 1 Laser Product

RS1

Type of radiation	Corresponding classification (RS)
LED indicating lamp	RS1

ENERGY SOURCE DIAGRAM

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



☒ ES ☒ PS ☒ MS ☒ TS ☒ RS

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	Supplementa ry	Reinforced (Enclosure)
Ordinary	ES1: 12Vdc input	/	/	/
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source	Safeguards		
		Basic	Supplementa ry	Reinforced
PCB, Internal wire, Enclosure	PS2: 12Vdc, 2A input	Equipment safeguards (no ignition)	See cl. 6.4	/
PCB, Internal wire, Enclosure	PS1: DC output	/	/	/
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementa ry	Reinforced
/	/	/	/	/
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementa ry	Reinforced
Ordinary	MS1: Edges and corners	/	/	/
Ordinary	MS1: Mass of the unit<1kg	/	/	/
Ordinary	MS1: wall-mounted<2m	/	/	/
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementa ry	Reinforced
Ordinary	TS1: Plastic enclosure	/	/	/
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementa ry	Reinforced
Ordinary	RS1: LED indicating lamp	/	/	/
Supplementary Information:				
(1) See attached energy source diagram for additional details.				
(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault				

IEC/EN 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 that 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.	P
4.1.3	Equipment design and construction		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 appended table T.5)	P
4.4.4.3	Drop tests		N
4.4.4.4	Impact tests	(See appended table T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....		N
4.4.4.6	Glass Impact tests.....		N
4.4.4.7	Thermoplastic material tests.....		N
4.4.4.8	Air comprising a safeguard		N
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion	No explosion occur	P
4.6	Fixing of conductors		N
4.6.1	Fix conductors not to defeat a safeguard		N
4.6.2	10 N force test applied to		N
4.7	Equipment for direct insertion into mains socket - outlets		N
4.7.2	Mains plug part complies with the relevant standard.....		N
4.7.3	Torque (Nm)		N
4.8	Products containing coin/button cell batteries	No button cell used	N
4.8.2	Instructional safeguard		N
4.8.3	Battery Compartment Construction		N
	Means to reduce the possibility of children removing the battery		—
4.8.4	Battery Compartment Mechanical Tests		N
4.8.5	Battery Accessibility		N
4.9	Likelihood of fire or shock due to entry of conductive object		P

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications..... :	12Vdc input	P
5.2.2	ES1, ES2 and ES3 limits	ES1	P
5.2.2.2	Steady-state voltage and current :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits :		N
5.2.2.4	Single pulse limits :		N
5.2.2.5	Limits for repetitive pulses :		N
5.2.2.6	Ringing signals :		N
5.2.2.7	Audio signals :		N
5.3	Protection against electrical energy sources		N
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	Only ES1	N
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1	N
5.3.2.2	Contact requirements	Only ES1	N
	a) Test with test probe from Annex V :		N
	b) Electric strength test potential (V) :		N
	c) Air gap (mm) :		N
5.3.2.4	Terminals for connecting stripped wire	Only ES1	N
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning..... :		N
5.4.1.4	Maximum operating temperature for insulating materials :	(See appended table 5.4.1.4, 9.0, B.2.6)	P
5.4.1.5	Pollution degree :	PD 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N
5.4.1.5.3	Thermal cycling		N
5.4.1.6	Insulation in transformers with varying dimensions		N
5.4.1.7	Insulation in circuits generating starting pulses		N
5.4.1.8	Determination of working voltage		N
5.4.1.9	Insulating surfaces		N
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	not directly connected to the mains	N
5.4.1.10.2	Vicat softening temperature..... :		N
5.4.1.10.3	Ball pressure :		N
5.4.2	Clearances		N
5.4.2.2	Determining clearance using peak working voltage	not directly connected to the mains	N

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.3	Determining clearance using required withstand voltage		N
	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
5.4.2.5	Multiplication factors for clearances and test voltages		N
5.4.3	Creepage distances		N
5.4.3.1	General		N
5.4.3.3	Material Group		—
5.4.4	Solid insulation		N
5.4.4.2	Minimum distance through insulation		N
5.4.4.3	Insulation compound forming solid insulation		N
5.4.4.4	Solid insulation in semiconductor devices		N
5.4.4.5	Cemented joints		N
5.4.4.6	Thin sheet material		N
5.4.4.6.1	General requirements		N
5.4.4.6.2	Separable thin sheet material		N
	Number of layers (pcs)		N
5.4.4.6.3	Non-separable thin sheet material		N
5.4.4.6.4	Standard test procedure for non-separable thin sheet material		N
5.4.4.6.5	Mandrel test		N
5.4.4.7	Solid insulation in wound components		N
5.4.4.9	Solid insulation at frequencies >30 kHz		N
5.4.5	Antenna terminal insulation		N
5.4.5.1	General		N
5.4.5.2	Voltage surge test	No such part	N
	Insulation resistance (MΩ).....		—
5.4.6	Insulation of internal wire as part of supplementary safeguard.....		N
5.4.7	Tests for semiconductor components and for cemented joints		N
5.4.8	Humidity conditioning		N
	Relative humidity (%)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Temperature (°C)		—
	Duration (h)		—
5.4.9	Electric strength test.....		N
5.4.9.1	Test procedure for a solid insulation type test		N
5.4.9.2	Test procedure for routine tests		N
5.4.10	Protection against transient voltages between external circuit	not directly connected to the mains	N
5.4.10.1	Parts and circuits separated from external circuits		N
5.4.10.2	Test methods		N
5.4.10.2.1	General		N
5.4.10.2.2	Impulse test		N
5.4.10.2.3	Steady-state test		N
5.4.11	Insulation between external circuits and earthed circuitry		N
5.4.11.1	Exceptions to separation between external circuits and earth		N
5.4.11.2	Requirements		N
	Rated operating voltage U_{op} (V)		—
	Nominal voltage U_{peak} (V).....		—
	Max increase due to variation U_{sp}		—
	Max increase due to ageing ΔU_{sa}		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$		—
5.5	Components as safeguards		
5.5.1	General		N
5.5.2	Capacitors and RC units	No such part	N
5.5.2.1	General requirement		N
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....		N
5.5.3	Transformers		N
5.5.4	Optocouplers		N
5.5.5	Relays		N
5.5.6	Resistors		N
5.5.7	SPD's		N
5.5.7.1	Use of an SPD connected to reliable earthing		N
5.5.7.2	Use of an SPD between mains and protective earth		N
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable		N
5.6	Protective conductor		

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.2	Requirement for protective conductors		N
5.6.2.1	General requirements		N
5.6.2.2	Colour of insulation		N
5.6.3	Requirement for protective earthing conductors		N
	Protective earthing conductor size (mm ²) :		—
5.6.4	Requirement for protective bonding conductors		N
5.6.4.1	Protective bonding conductors		N
	Protective bonding conductor size (mm ²)..... :		—
	Protective current rating (A) :		—
5.6.4.3	Current limiting and overcurrent protective devices		N
5.6.5	Terminals for protective conductors		N
5.6.5.1	Requirement		N
	Conductor size (mm ²), nominal thread diameter (mm). :		N
5.6.5.2	Corrosion		N
5.6.6	Resistance of the protective system		N
5.6.6.1	Requirements		N
5.6.6.2	Test Method Resistance (Ω)..... :		N
5.6.7	Reliable earthing		N
5.7	Prospective touch voltage, touch current and protective conductor current		N
5.7.2	Measuring devices and networks	not directly connected to the mains	N
5.7.2.1	Measurement of touch current..... :		N
5.7.2.2	Measurement of prospective touch voltage		N
5.7.3	Equipment set-up, supply connections and earth connections		N
	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..... :	not directly connected to the mains	N
5.7.5	Protective conductor current		N
	Supply Voltage (V) :		—
	Measured current (mA) :		—
	Instructional Safeguard :		N
5.7.6	Prospective touch voltage and touch current due to external circuits		N
5.7.6.1	Touch current from coaxial cables		N

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Clause	Requirement + Test	Result - Remark	Verdict

5.7.6.2	Prospective touch voltage and touch current from external circuits		N
5.7.7	Summation of touch currents from external circuits		N
	a) Equipment with earthed external circuits Measured current (mA)		N
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....		N

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	12Vdc 2A input	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	Not PS3	N
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	No arcing PIS	N
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	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.....		P
6.3.1 (b)	Combustible materials outside fire enclosure		P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	Method by control of fire spread applied as 6.4.1.	N
6.4.3.1	General		N
6.4.3.2	Supplementary Safeguards		N
	Special conditions if conductors on printed boards are opened or peeled		N
6.4.3.3	Single Fault Conditions		N
	Special conditions for temperature limited by fuse		N
6.4.4	Control of fire spread in PS1 circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5	Control of fire spread in PS2 circuits	Compliance detailed as follows: <ul style="list-style-type: none"> – <u>Printed board</u>: rated min. V-1 – <u>Wire insulation</u>: complying with Clause 6 (See Table 4.1.2 for tubing used). The input lead wire and output cord are complied to UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21. – <u>All other components</u>: at least V-2 except for parts mounted on min. V-1 material or small parts of combustible material (with mass less than 4g) or components complying to relevant IEC standard. 	P
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit	Not PS3	N
6.4.7	Separation of combustible materials from a PIS		N
6.4.7.1	General.....		P
6.4.7.2	Separation by distance	Plastic enclosure rate V-1	P
6.4.7.3	Separation by a fire barrier		N
6.4.8	Fire enclosures and fire barriers		N
6.4.8.1	Fire enclosure and fire barrier material properties		N
6.4.8.2.1	Requirements for a fire barrier		N
6.4.8.2.2	Requirements for a fire enclosure		N
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings	N
6.4.8.3.2	Fire barrier dimensions		N
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)		N
	Needle Flame test		N
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)		N
	Flammability tests for the bottom of a fire enclosure		N
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c).....		N
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....		N
6.5	Internal and external wiring		P
6.5.1	Requirements		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.5.2	Cross-sectional area (mm2)	See table 4.1.2	—
6.5.3	Requirements for interconnection to building wiring		N
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1	Complied	P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N
7.2	Reduction of exposure to hazardous substances		N
7.3	Ozone exposure		N
7.4	Use of personal safeguards (PPE)		N
	Personal safeguards and instructions		—
7.5	Use of instructional safeguards and instructions		N
	Instructional safeguard (ISO 7010)		—
7.6	Batteries	No battery used	N

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications	MS1	P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners	Edges or corners are rounded.	P
8.4.1	Safeguards		N
8.5	Safeguards against moving parts	No moving parts	N
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N
8.5.4.1	Large data storage equipment		N
8.5.4.2	Equipment having electromechanical device for destruction of media		N
8.5.4.2.1	Safeguards and Safety Interlocks		N
8.5.4.2.2	Instructional safeguards against moving parts		N
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N
8.5.4.2.4	Probe type and force (N)		N
8.5.5	High Pressure Lamps		N

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.5.1	Energy Source Classification		N
8.5.5.2	High Pressure Lamp Explosion Test..... :		N
8.6	Stability		N
8.6.1	Product classification		N
	Instructional Safeguard :	Only MS1	—
8.6.2	Static stability		N
8.6.2.2	Static stability test		N
	Applied Force :		—
8.6.2.3	Downward Force Test		N
8.6.3	Relocation stability test		N
	Unit configuration during 10° tilt..... :		—
8.6.4	Glass slide test		N
8.6.5	Horizontal force test (Applied Force)..... :		N
	Position of feet or movable parts :		—
8.7	Equipment mounted to wall or ceiling	wall-mounted<2m, Mass of the unit<1kg	P
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) :	MS1	N
8.7.2	Direction and applied force :		N
8.8	Handles strength		N
8.8.1	Classification		N
8.8.2	Applied Force :		N
8.9	Wheels or casters attachment requirements		N
8.9.1	Classification		N
8.9.2	Applied force :		—
8.10	Carts, stands and similar carriers		N
8.10.1	General		N
8.10.2	Marking and instructions		N
	Instructional Safeguard :		—
8.10.3	Cart, stand or carrier loading test and compliance		N
	Applied force :		—
8.10.4	Cart, stand or carrier impact test		N
8.10.5	Mechanical stability		N
	Applied horizontal force (N) :		—
8.10.6	Thermoplastic temperature stability (°C)..... :		N
8.11	Mounting means for rack mounted equipment		N
8.11.1	General		N

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Clause	Requirement + Test	Result - Remark	Verdict
8.11.2	Product Classification		N
8.11.3	Mechanical strength test, variable N		N
8.11.4	Mechanical strength test 250N, including end stops		N
8.12	Telescoping or rod antennas		N
	Button/Ball diameter (mm)		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	(See appended table 5.4.1.4, 9.0, B.2.6)	P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard	No need instructional safeguard require	N

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

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.2	Instructional safeguard..... :		N
10.5	Protection against x-radiation		N
10.5.1	X- radiation energy source that exists equipment :		N
	Normal, abnormal, single fault conditions		N
	Equipment safeguards :		N
	Instructional safeguard for skilled person..... :		N
10.5.3	Most unfavourable supply voltage to give maximum radiation..... :		—
	Abnormal and single-fault condition :		N
	Maximum radiation (pA/kg)..... :		N
10.6	Protection against acoustic energy sources		N
10.6.1	General		N
10.6.2	Classification		N
	Acoustic output, dB(A) :		N
	Output voltage, unweighted r.m.s..... :		N
10.6.4	Protection of persons		N
	Instructional safeguards..... :		N
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N
10.6.5.1	Corded passive listening devices with analog input		N
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N
	Maximum dB(A) :		—
10.6.5.3	Cordless listening device		N
	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 for tested models, each loaded according to its output ratings. See also appended table B.2.5.)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Audio Amplifiers and equipment with audio amplifiers	No such equipment	N
B.2.3	Supply voltage and tolerances		N
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	No openings	N
B.3.3	D.C. mains polarity test	No directly connection to the mains.	N
B.3.4	Setting of voltage selector		N
B.3.5	Maximum load at output terminals	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N
B.3.7	Abnormal operating conditions as specified in Clause E.2.	No such equipment	N
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited	No such device used.	N
B.4.3	Motor tests	No such part	N
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components	Continuous operation	N
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	Complied	P
B.4.9	Battery charging under single fault conditions		N
C	UV RADIATION		N
C.1	Protection of materials in equipment from UV radiation	No such parts used	N
C.1.2	Requirements		N
C.1.3	Test method		N

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Clause	Requirement + Test	Result - Remark	Verdict

C.2	UV light conditioning test		N
C.2.1	Test apparatus		N
C.2.2	Mounting of test samples		N
C.2.3	Carbon-arc light-exposure apparatus		N
C.2.4	Xenon-arc light exposure apparatus		N

D	TEST GENERATORS		N
D.1	Impulse test generators		N
D.2	Antenna interface test generator		N
D.3	Electronic pulse generator		N

E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N
E.1	Audio amplifier normal operating conditions	No such equipment	N
	Audio signal voltage (V)		—
	Rated load impedance (Ω)		—
E.2	Audio amplifier abnormal operating conditions		N

F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language	Given in English language or local language	—
F.2	Letter symbols and graphical symbols	See marking plate	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	Considered	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The required marking is located on the enclosure of the equipment and is easily visible.	P
F.3.2	Equipment identification markings	See copy of marking plate.	P
F.3.2.1	Manufacturer identification	See copy of marking plate.	—
F.3.2.2	Model identification	See copy of marking plate.	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		N
F.3.3.2	Equipment without direct connection to mains		P
F.3.3.3	Nature of supply voltage	See copy of marking plate.	—

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.4	Rated voltage	See copy of marking plate.	—
F.3.3.4	Rated frequency.....		—
F.3.3.6	Rated current or rated power.....	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections		N
F.3.4	Voltage setting device		N
F.3.5	Terminals and operating devices		N
F.3.5.1	Mains appliance outlet and socket-outlet markings		N
F.3.5.2	Switch position identification marking.....		N
F.3.5.3	Replacement fuse identification and rating markings		N
F.3.5.4	Replacement battery identification marking		N
F.3.5.5	Terminal marking location		N
F.3.6	Equipment markings related to equipment classification		N
F.3.6.1	Class I Equipment	Class III appliance	N
F.3.6.1.1	Protective earthing conductor terminal		N
F.3.6.1.2	Neutral conductor terminal		N
F.3.6.1.3	Protective bonding conductor terminals		N
F.3.6.2	Class II equipment (IEC60417-5172)		N
F.3.6.2.1	Class II equipment with or without functional earth		N
F.3.6.2.2	Class II equipment with functional earth terminal marking		N
F.3.7	Equipment IP rating marking	IPX0	—
F.3.8	External power supply output marking		N
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 label was subjected to the permanence of marking test. The label 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 label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	P
F.4	Instructions		P

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Equipment for use in locations where children not likely to be present - marking		N
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N
	d) Equipment intended for use only in restricted access area		N
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N
	f) Protective earthing employed as safeguard		N
	g) Protective earthing conductor current exceeding ES 2 limits		N
	h) Symbols used on equipment		N
	i) Permanently connected equipment not provided with all-pole mains switch		N
	j) Replaceable components or modules providing safeguard function		N
F.5	Instructional safeguards		N
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N

G	COMPONENTS		P
G.1	Switches		N
G.1.1	General requirements		N
G.1.2	Ratings, endurance, spacing, maximum load		N
G.2	Relays		N
G.2.1	General requirements		N
G.2.2	Overload test		N
G.2.3	Relay controlling connectors supply power		N
G.2.4	Mains relay, modified as stated in G.2		N
G.3	Protection Devices		N
G.3.1	Thermal cut-offs		N
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N
G.3.1.2	Thermal cut-off connections maintained and secure		N
G.3.2	Thermal links		N
G.3.2.1a)	Thermal links separately tested with IEC 60691		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.1b)	Thermal links tested as part of the equipment		N
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω) ..		—
G.3.3	PTC Thermistors		N
G.3.4	Overcurrent protection devices		N
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N
G.3.5.1	Non-resettable devices suitably rated and marking provided		N
G.3.5.2	Single faults conditions		N
G.4	Connectors		N
G.4.1	Spacings		N
G.4.2	Mains connector configuration		N
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N
G.5	Wound Components		N
G.5.1	Wire insulation in wound components.....		N
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N
G.5.1.2 b)	Construction subject to routine testing		N
G.5.2	Endurance test on wound components		N
G.5.2.1	General test requirements		N
G.5.2.2	Heat run test		N
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N
G.5.3	Transformers		N
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)	No such part	N
	Position		—
	Method of protection		—
G.5.3.2	Insulation		N
	Protection from displacement of windings		—
G.5.3.3	Overload test		N
G.5.3.3.1	Test conditions		N
G.5.3.3.2	Winding Temperatures testing in the unit		N
G.5.3.3.3	Winding Temperatures - Alternative test method		N
G.5.4	Motors		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.1	General requirements	No such part	N
	Position		—
G.5.4.2	Test conditions		N
G.5.4.3	Running overload test		N
G.5.4.4	Locked-rotor overload test		N
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N
G.5.4.5.2	Tested in the unit		N
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N
G.5.4.6.2	Tested in the unit		N
	Maximum Temperature		N
	Electric strength test (V)		N
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N
	Electric strength test (V)		N
G.5.4.7	Motors with capacitors		N
G.5.4.8	Three-phase motors		N
G.5.4.9	Series motors		N
	Operating voltage		—
G.6	Wire Insulation		N
G.6.1	General		N
G.6.2	Solvent-based enamel wiring insulation		N
G.7	Mains supply cords		N
G.7.1	General requirements	No directly connection to the mains.	N
	Type		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG)		—
G.7.2	Compliance and test method		N
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N
G.7.3.2	Cord strain relief		N
G.7.3.2.1	Requirements		N

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Clause	Requirement + Test	Result - Remark	Verdict
	Strain relief test force (N) :		—
G.7.3.2.2	Strain relief mechanism failure		N
G.7.3.2.3	Cord sheath or jacket position, distance (mm).... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N
G.7.4	Cord Entry :		N
G.7.5	Non-detachable cord bend protection		N
G.7.5.1	Requirements		N
G.7.5.2	Mass (g) :		—
	Diameter (m) :		—
	Temperature (°C) :		—
G.7.6	Supply wiring space		N
G.7.6.2	Stranded wire		N
G.7.6.2.1	Test with 8 mm strand		N
G.8	Varistors		N
G.8.1	General requirements	No such part	N
G.8.2	Safeguard against shock		N
G.8.3	Safeguard against fire		N
G.8.3.2	Varistor overload test :		N
G.8.3.3	Temporary overvoltage :		N
G.9	Integrated Circuit (IC) Current Limiters		N
G.9.1 a)	Manufacturer defines limit at max. 5A.	No such part	N
G.9.1 b)	Limiters do not have manual operator or reset		N
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
G.9.3	Test Program 2		N
G.9.4	Test Program 3		N
G.10	Resistors		N
G.10.1	General requirements	No such part	N
G.10.2	Resistor test		N
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N
G.10.3.1	General requirements		N
G.10.3.2	Voltage surge test		N
G.10.3.3	Impulse test		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.11	Capacitor and RC units		N
G.11.1	General requirements	No such part	N
G.11.2	Conditioning of capacitors and RC units		N
G.11.3	Rules for selecting capacitors		N
G.12	Optocouplers		N
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... :	No such part	N
	Type test voltage Vini		—
	Routine test voltage, Vini,b		—
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
G.13.4	Insulation between conductors on the same inner surface		N
	Compliance with cemented joint requirements (Specify construction)		—
G.13.5	Insulation between conductors on different surfaces		N
	Distance through insulation		N
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards		N
G.13.6.1	Sample preparation and preliminary inspection		N
G.13.6.2a)	Thermal conditioning		N
G.13.6.2b)	Electric strength test		N
G.13.6.2c)	Abrasion resistance test		N
G.14	Coating on components terminals		N
G.14.1	Requirements		N
G.15	Liquid filled components		N
G.15.1	General requirements		N
G.15.2	Requirements		N
G.15.3	Compliance and test methods		N
G.15.3.1	Hydrostatic pressure test		N
G.15.3.2	Creep resistance test		N
G.15.3.3	Tubing and fittings compatibility test		N
G.15.3.4	Vibration test		N
G.15.3.5	Thermal cycling test		N
G.15.3.6	Force test		N

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Clause	Requirement + Test	Result - Remark	Verdict

G.15.4	Compliance		N
G.16	IC including capacitor discharge function (ICX)		N
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N
b)	Impulse test using circuit 2 with U_c = to transient voltage		N
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N
D2)	Capacitance		—
D3)	Resistance		—

H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N
H.1	General		N
H.2	Method A		N
H.3	Method B		N
H.3.1	Ringing signal		N
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
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N
H.3.2.2	Tripping device		N
H.3.2.3	Monitoring voltage (V)		N

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N
	General requirements		N

K	SAFETY INTERLOCKS		N
K.1	General requirements	No such part	N
K.2	Components of safety interlock safeguard mechanism		N
K.3	Inadvertent change of operating mode		N
K.4	Interlock safeguard override		N

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Clause	Requirement + Test	Result - Remark	Verdict
K.5	Fail-safe		N
	Compliance :		N
K.6	Mechanically operated safety interlocks		N
K.6.1	Endurance requirement		N
K.6.2	Compliance and Test method..... :		N
K.7	Interlock circuit isolation		N
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) :		N
K.7.2	Overload test, Current (A)..... :		N
K.7.3	Endurance test		N
K.7.4	Electric strength test :		N

L	DISCONNECT DEVICES		N
L.1	General requirements	not directly connected to the mains	N
L.2	Permanently connected equipment		N
L.3	Parts that remain energized		N
L.4	Single phase equipment		N
L.5	Three-phase equipment		N
L.6	Switches as disconnect devices		N
L.7	Plugs as disconnect devices		N
L.8	Multiple power sources		N

M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N
M.1	General requirements	No such part	N
M.2	Safety of batteries and their cells		N
M.2.1	Requirements		N
M.2.2	Compliance and test method (identify method) .. :		N
M.3	Protection circuits		N
M.3.1	Requirements		N
M.3.2	Tests		N
	- Overcharging of a rechargeable battery		N
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery		N
M.3.3	Compliance :		N
M.4	Additional safeguards for equipment containing		N

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Clause	Requirement + Test	Result - Remark	Verdict
	secondary lithium battery		
M.4.1	General		N
M.4.2	Charging safeguards		N
M.4.2.1	Charging operating limits		N
M.4.2.2a)	Charging voltage, current and temperature :		—
M.4.2.2 b)	Single faults in charging circuitry :		—
M.4.3	Fire Enclosure		N
M.4.4	Endurance of equipment containing a secondary lithium battery		N
M.4.4.2	Preparation		N
M.4.4.3	Drop and charge/discharge function tests		N
	Drop		N
	Charge		N
	Discharge		N
M.4.4.4	Charge-discharge cycle test		N
M.4.4.5	Result of charge-discharge cycle test		N
M.5	Risk of burn due to short circuit during carrying		N
M.5.1	Requirement		N
M.5.2	Compliance and Test Method (Test of P.2.3)		N
M.6	Prevention of short circuits and protection from other effects of electric current		N
M.6.1	Short circuits		N
M.6.1.1	General requirements		N
M.6.1.2	Test method to simulate an internal fault		N
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) :		N
M.6.2	Leakage current (mA) :		N
M.7	Risk of explosion from lead acid and NiCd batteries		N
M.7.1	Ventilation preventing explosive gas concentration		N
M.7.2	Compliance and test method		N
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N
M.8.1	General requirements		N
M.8.2	Test method		N
M.8.2.1	General requirements		N
M.8.2.2	Estimation of hypothetical volume Vz (m3/s) :		—
M.8.2.3	Correction factors :		—
M.8.2.4	Calculation of distance d (mm) :		—

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Clause	Requirement + Test	Result - Remark	Verdict

M.9	Preventing electrolyte spillage		N
M.9.1	Protection from electrolyte spillage		N
M.9.2	Tray for preventing electrolyte spillage		N
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) :		N

N	ELECTROCHEMICAL POTENTIALS		N
	Metal(s) used..... :		—

O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N
	Figures O.1 to O.20 of this Annex applied :		—

P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		N
P.1	General requirements	No openings	N
P.2.2	Safeguards against entry of foreign object		N
	Location and Dimensions (mm) :		—
P.2.3	Safeguard against the consequences of entry of foreign object		N
P.2.3.1	Safeguards against the entry of a foreign object		N
	Openings in transportable equipment		N
	Transportable equipment with metalized plastic parts..... :		N
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) :		N
P.3	Safeguards against spillage of internal liquids		N
P.3.1	General requirements		N
P.3.2	Determination of spillage consequences		N
P.3.3	Spillage safeguards		N
P.3.4	Safeguards effectiveness		N
P.4	Metallized coatings and adhesive securing parts		N
P.4.2 a)	Conditioning testing		N
	Tc (°C) :		—
	Tr (°C)..... :		—
	Ta (°C)..... :		—
P.4.2 b)	Abrasion testing :		N
P.4.2 c)	Mechanical strength testing..... :		N

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Clause	Requirement + Test	Result - Remark	Verdict

Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		P
Q.1.1 b)	Impedance limited output		N
	- Regulating network limited output under normal operating and simulated single fault condition		N
Q.1.1 c)	Overcurrent protective device limited output		N
Q.1.1 d)	IC current limiter complying with G.9		N
Q.1.2	Compliance and test method	See appended table Q.1	P
Q.2	Test for external circuits – paired conductor cable		N
	Maximum output current (A)		—
	Current limiting method.....		—

R	LIMITED SHORT CIRCUIT TEST		N
R.1	General requirements		N
R.2	Determination of the overcurrent protective device and circuit		N
R.3	Test method Supply voltage (V) and short-circuit current (A)).		N

S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N
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
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	- Material not consumed completely		N
	- Material extinguishes within 30s		N
	- No burning of layer or wrapping tissue		N
S.2	Flammability test for fire enclosure and fire barrier integrity		N
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with		N

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Clause	Requirement + Test	Result - Remark	Verdict

	conditions as set out		
	Test specimen does not show any additional hole		N
S.3	Flammability test for the bottom of a fire enclosure		N
	Samples, material		—
	Wall thickness (mm).....		—
	Cheesecloth did not ignite		N
S.4	Flammability classification of materials		N
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (test condition), (°C).....		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N
	After every test specimen was not consumed completely		N
	After fifth flame application, flame extinguished within 1 min		N

T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N		N
T.3	Steady force test, 30 N		N
T.4	Steady force test, 100 N		N
T.5	Steady force test, 250 N	(See speended table T.5)	P
T.6	Enclosure impact test	(See speended table T.6)	P
	Fall test		P
	Swing test		N
T.7	Drop test		N
T.8	Stress relief test.....		N
T.9	Impact Test (glass)		N
T.9.1	General requirements		N
T.9.2	Impact test and compliance		N
	Impact energy (J)		—
	Height (m).....		—
T.10	Glass fragmentation test.....		N
T.11	Test for telescoping or rod antennas		N

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Clause	Requirement + Test	Result - Remark	Verdict

	Torque value (Nm) :		—
--	---------------------------	--	---

U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N
U.1	General requirements		N
U.2	Compliance and test method for non-intrinsically protected CRTs		N
U.3	Protective Screen..... :		N

V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

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 ADAPTOR	KUANTECH(Bei hai) CO., LTD	KSA-24W- 120200D5	Input: 100- 240Vac, 50/60Hz, 0.6A , Output: 12Vdc, 2.0A	IEC 62368-1	IEC	
Plastic enclosure	Interchangeable	Interchangeable	V-1 or better, 80°C	UL 94	UL	
Metal enclosure	--	--	Min. thickness: 1.8mm	IEC 62368-1	Tested with appliance	
PCB	Interchangeable	Interchangeable	V-0, 130 °C	UL 796	UL	
Internal wire	Interchangeable	Interchangeable	300V, 80°C, VW- 1, min. 28AWG	UL 758	UL	
Relay(K2,K3)	Zettler electonics GmbH	AZ6951-12	250VAC, 5A;30VDC 5A	IEC 61810-1	VDE	
Relay(K1)	American Zettler Inc.	AZ770-1C-12DE	250VAC, 5A;250VAC 3A	IEC 61810-1	VDE	
Supplementary information:						

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2	TABLE: Stress relief test			—
Part		Material	Oven Temperature (°C)	Comments
--		--	--	N
4.8.4.3	TABLE: Battery replacement test			—
Battery part no. :				—
Battery Installation/withdrawal		Battery Installation/Removal Cycle		Comments
--		1		N
		2		N
		3		N
		4		N
		5		N
		6		N
		8		N
		9		N
		10		N
4.8.4.4	TABLE: Drop test			—
Impact Area		Drop Distance	Drop No.	Observations

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N
(The following mechanical tests are conducted in the sequence noted.)				
--	--	1	N	
--	--	2	N	
--	--	--	N	
4.8.4.5	TABLE: Impact			—
Impacts per surface	Surface tested	Impact energy (Nm)	Comments	
--	--	--	N	
--	--	--	N	
--	--	--	N	
4.8.4.6	TABLE: Crush test			—
Test position	Surface tested	Crushing Force (N)	Duration force applied (s)	
--	--	--	--	
Supplementary information:				

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N
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	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	12Vdc	Input	Normal	12V	--	DC	ES1
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
1	12Vdc	output	Normal	11.74V	--	DC	ES1
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

5.2.2.3 - Capacitance Limits						N
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)	Ipk (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)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
Test Conditions: Normal – Abnormal - Supplementary information: SC=Short Circuit, OC=Short Circuit							

5.4.1.4, 6.3.2, 9.0, B.2.6		TABLE: Temperature measurements		P
	Supply voltage (V) :	12Vdc		—
	Ambient Tmin (°C) :	--		—
	Ambient Tmax (°C) :	--		
	Tma (°C) :	40		
Maximum measured temperature T of part/at:		T (°C)	Shift to 40°C	Allowed T _{max} (°C)
Internal wire		35.4	51.3	80
PCB near U1		62.5	78.4	130
PCB near U5		62.8	78.7	130
PCB near U17		59.1	75.0	130
PCB near T1		57.3	73.2	130
PCB near U26		49.8	65.7	130
Inside plastic enclosure		44.8	60.7	80
Ambient		24.1	40.0	Ref
Touch part temperature				
Outside plastic enclosure		39.6	40.5	60
Metal enclosure		35.5	36.4	51

Screen	36.8			37.7			60
Button	37.3			38.2			60
Ambient	24.1			25.0			Ref
Supplementary information:							
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:							
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
Penetration (mm).....:		--		—
Object/ Part No./Material		Manufacturer/t rademark	T softening (°C)	
--		--	--	
supplementary information:				

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

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						N
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	Ur.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
	Overvoltage Category (OV):				--
	Pollution Degree:				--
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)	
--		--	--	--	

5.6.6.2	TABLE: Resistance of protective conductors and terminations				N
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
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	
A	Input 12Vdc	Power (W) :	--	--	PS2 (Declare)	
		VA (V) :	--	--		
		IA (A) :	--	--		
B	DC output	Power (W) :	13.5	13.5	PS1	
		VA (V) :	11.74	11.74		
		IA (A) :	1.45	1.45		
Supplementary Information: (*) Measurement taken only when limits at 3 seconds exceed PS1 limits						

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)	N
----------------	--	----------

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.				

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 /components	--	--	--	--	Yes (Declare)
Supplementary Information: A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. 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.					

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

B.2.5	TABLE: Input test							P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
12Vdc	0.885	2	10.62	--	--	--	Unit as normal work, output load 12Vdc 0.5A	
Supplementary information: 1. Equipment may have rated current or rated power or both. Both should be measured. 2. The steady state input current of the equipment not exceed the rated current by more than 10% under normal load.								

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C) :					See below			—
Power source for EUT: Manufacturer, model/type, output rating :					See copy of marking plate.			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
DC output	O-L	12Vdc	6h40min	--	--	Type-K	PCB near U1: 67.9°C, PCB near U5: 68.0°C, Outside plastic enclosure: 41.6 °C, Metal enclosure: 38.9°C, Button: 39.2°C, Screen: 38.5°C, Ambient: 23.5°C	DC output shutdown when load upto 1.4A, no damaged, no hazard.
Supplementary information: O-L=Overload circuit, S-C=Short circuit 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.								

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) :					25°C or less			—
Power source for EUT: Manufacturer, model/type, output rating :					See copy of marking plate.			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
DC output	S-C	12Vdc	10mins	--	--	--	--	Unit shutdown immediately, recoverable, no damage, no hazard.
C99	S-C	12Vdc	10mins	--	--	--	--	Unit shutdown immediately, recoverable, no damage, no hazard.

D8	S-C	12Vdc	10mins	--	--	--	--	Unit shutdown immediately, recoverable, no damage, no hazard.
U17 pin 1-8	S-C	12Vdc	10mins	--	--	--	--	Unit shutdown immediately, recoverable, no damage, no hazard.
Supplementary information: S-C=Short circuit								

Annex M	TABLE: Batteries								N
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? :						It's obvious impossible		--	
	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	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:								Verdict	
- Chemical leaks								N	
- Explosion of the battery								N	
- Emission of flame or expulsion of molten metal								N	
- Electric strength tests of equipment after completion of tests								N	
Supplementary information:									

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries				N
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary Information:					

Appendix 1
Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE001	Data Acquisition / Switch Unit	Agilent	34970A	MY44011615	2021.8.3	2022.8.2
Aa-SE002	Thermocouple wire	OMEGA	TT-K-30-1000	kxff	2021.8.7	2022.8.6
Aa-SE004	Oven Chamber	Rongfeng	101A-3	31446	2021.8.3	2022.8.2
Aa-SE005	DC Electronic Load	Array	3711A	A06BI03017	2021.8.3	2022.8.2
Aa-SE006	DC Electronic Load	Array	3711A	A06BI02095	2021.8.3	2022.8.2
Aa-SE007	DC Electronic Load	Array	3711A	A06BI03015	2021.8.3	2022.8.2
Aa-SE008	DC Electronic Load	Array	3711A	A06BH02122	2021.8.3	2022.8.2
Aa-SE010	Digital Power Meter	Qingzhi	8716C	870806042	2021.8.3	2022.8.2
Aa-SE011	Digital Power Meter	Qingzhi	8716C	870806037	2021.8.3	2022.8.2
Aa-SE013	Multi Meter	Fluke	115C	96721596	2021.8.3	2022.8.2
Aa-SE014	Desktop Multi Meter	Fluke	45	7662018	2021.8.3	2022.8.2
Aa-SE015	Desktop Multi Meter	Fluke	45	8095018	2021.8.3	2022.8.2
Aa-SE016	Desktop Multi Meter	Fluke	45	6792039	2021.8.3	2022.8.2
Aa-SE017	Grounding Bond Meter	Yang Zhi	YD2654B	548-053	2021.8.3	2022.8.2
Aa-SE018	Leakage Current Meter	EXTECH	7611	1330848	2021.8.6	2022.8.5
Aa-SE019	Insulation Resistance Tester	Yang Zhi	YD9820A	20A-1734	2021.8.3	2022.8.2
Aa-SE022	Push-Pull Scale	Algol	NK-300	67420	2021.8.3	2022.8.2
Aa-SE023	Digital Caliper	Yitu	YT211	P840156	2021.8.3	2022.8.2
Aa-SE025	Goniometer	Wenzhou	JZC-B2	15032	2021.8.3	2022.8.2
Aa-SE026	Tumbling Barrel	Zhilitong	GT-1	G010308	2021.8.3	2022.8.2
Aa-SE027	Audio Generator	LWDQGS	TAG-101	308909	2021.8.3	2022.8.2
Aa-SE028	Noise Generator	DF	DF1681	071001107	2021.8.9	2022.8.8
Aa-SE029	Plug Torque Tester	Zhilitong	LJ-1	LJ010908	2021.8.3	2022.8.2
Aa-SE030	Test Probe 13	Zhilitong	TP13	D3L15	2021.8.9	2022.8.8
Aa-SE031	Test Probe 41	Zhilitong	TP41	D30L80	2021.8.9	2022.8.8
Aa-SE035	Test Probe	Zhilitong	D4L100	60065-913	2021.8.6	2022.8.5
Aa-SE036	Test Probe C	Zhilitong	TP-C	60065-915	2021.8.6	2022.8.5
Aa-SE037	Test Probe D	Zhilitong	TP-D	60065-914	2021.8.6	2022.8.5
Aa-SE039	Test hook	Zhilitong	TH-1	W8L180T1	2021.8.6	2022.8.5
Aa-SE040	Accessibility Probe	Zhilitong	ZA-1	A1310	2021.8.10	2022.8.9
Aa-SE041	UL Finger Probe	Zhilitong	ULP-01	D5L97	2021.8.6	2022.8.5
Aa-SE042	Steel Ball	Zhilitong	GQ-1	G121008	2021.8.3	2022.8.2
Aa-SE043	Ball Pressure Tester	Sinna	SN3407	08051808	2021.8.3	2022.8.2
Aa-SE044	Ball Pressure Tester	Sinna	SN3407	08082302	2021.8.3	2022.8.2
Aa-SE045	Hammer	Sinna	SN3406	08083102	2021.8.9	2022.8.8
Aa-SE046	Torque Driver	kanon	12LTDK	08G338	2021.8.3	2022.8.2
Aa-SE050	hardened steel pin	Zhilitong	SC30	R25N30	2021.8.6	2022.8.5
Aa-SE053	Test rod	Zhilitong	TZ-14	D40N5	2021.8.6	2022.8.5
Aa-SE054	Vibration tester	shengshiwei	SW-TF	20100228	2021.8.3	2022.8.2
Aa-SE056	Digital Power Meter	Qingzhi	8713B1	870909080	2021.8.3	2022.8.2
Aa-SE057	dust chamber	Gongwen	SC-500	100311	2021.8.3	2022.8.2
Aa-SE058	Draught-proof enclosure	Tengbo	TB180	Q100226	2021.8.3	2022.8.2
Aa-SE059	Hammer	Zhilitong	CJ-3	C031026	2021.8.5	2022.8.4
Aa-SE060	Hammer	Zhilitong	CJ-3	C031027	2021.8.9	2022.8.8
Aa-SE061	Hammer	Zhilitong	CJ-3	C031028	2021.8.5	2022.8.4
Aa-SE063	Leakage Current Tester	Simpson	228	7173286	2021.8.10	2022.8.9
Aa-SE064	Temp. & Humid. Chamber	Weihuang	WHTH-1000-40-880	100631	2021.4.21	2022.4.20
Aa-SE066	Oscillating tube	damsion	DMS-E01	2011DNS-E010401	2021.8.3	2022.8.2
Aa-SE067	spray nozzle	Lihui	LH56	63125	2021.8.3	2022.8.2
Aa-SE068	immersion tester	kunshang	IPX7-1	SK2018M5	2021.8.3	2022.8.2
Aa-SE069	Test Probe 18	Aodesaichuang	AUTO-18	auto110721-18-01	2021.8.6	2022.8.5
Aa-SE070	Test Probe 19	Aodesaichuang	AUTO-19	auto110721-19-02	2021.8.6	2022.8.5
Aa-SE071	Data Acquisition / Switch Unit	Agilent	34970A	MY40064740	2021.8.3	2022.8.2
Aa-SE072	Data Acquisition / Switch Unit	Agilent	34970A	MY44052411	2021.8.3	2022.8.2
Aa-SE073	Digital Power Meter	Yokogawa	WT210	91K223105	2021.8.3	2022.8.2
Aa-SE074	Desktop Multi Meter	Agilent	34401A	MY44008459	2021.8.3	2022.8.2
Aa-SE075	Desktop Multi Meter	Agilent	34401A	MY44008472	2021.8.3	2022.8.2
Aa-SE076	Hi-Pot Tester	ME I RUIKE	RK2672D	RK72D111130-010	2021.8.3	2022.8.2
Aa-SE078	Torque Driver	Aigu	10DPSK	356019	2021.8.3	2022.8.2

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE079	Magnifying glass	German	10x	12234	2021.8.3	2022.8.2
Aa-SE080	Regulated Power Supply	APC	AFC-11010G	F310120052	2021.8.3	2022.8.2
Aa-SE081	Air Pressure Gauge	Tianya	N509	/	2021.8.10	2022.8.9
Aa-SE082	Step Temperature Room	Long An	LA-ORT28	LA-201206001	2021.8.3	2022.8.2
Aa-SE083	"GO" Gauge for E27 Caps	KINGPO	7006-27B-1	8688	2021.8.6	2022.8.5
Aa-SE084	"NOT GO" Gauge for E27 Caps	KINGPO	7006-28A-1	8689	2021.8.6	2022.8.5
Aa-SE085	"GO" Gauge for dimension "S1" of E27 Caps	KINGPO	7006-27C-1	8691	2021.8.6	2022.8.5
Aa-SE086	Gauge for E27 Caps for testing contact making	KINGPO	7006-50-1	8693	2021.8.6	2022.8.5
Aa-SE087	Gauge for E27 Caps for testing protection against accidental contact during insertion	KINGPO	7006-51A-2	8690	2021.8.6	2022.8.5
Aa-SE089	Single wing drop tester	FEILING	FL8618	/	2021.8.3	2022.8.2
Aa-SE090	Data Acquisition / Switch Unit	Agilent	34970A	MY44006829	2021.8.3	2022.8.2
Aa-SE091	Thermocouple wire	OMEGA	TT-J-30-1000	/	2021.8.7	2022.8.6
Aa-SE092	Touch current tester	Ceprei	410B	1207AG10	2021.8.9	2022.8.8
Aa-SE093	Cord oscillating tester	Dongguan lixiong	LX-1211	/	2021.8.3	2022.8.2
Aa-SE094	Lampholder digital torsion meter	Inventfine Instrument Co., Ltd.	CH338	1301004	2021.8.9	2022.8.8
Aa-SE095	Straight steel pin	KINGPO	SE095	/	2021.8.9	2022.8.8
Aa-SE096	Digital Caliper	Guanglu	SF2000	C1211225254	2021.8.3	2022.8.2
Aa-SE097	Digital Caliper	Guanglu	SF2000	C1211225024	2021.8.3	2022.8.2
Aa-SE098	Timer	PURSUN	PS-528	/	2021.8.9	2022.8.8
Aa-SE099	Timer	PURSUN	PS-528	/	2021.8.9	2022.8.8
Aa-SE100	Switching Mode DC Power Supply	GW INSTEK	GPS-1850D	EN820728	2021.8.3	2022.8.2
Aa-SE101	Digital Power Meter	EVERFINE	PF9901	1005046	2021.8.3	2022.8.2
Aa-SE102	Digital Power Meter	EVERFINE	PF9901	G100731CJ6331237	2021.8.3	2022.8.2
Aa-SE103	Tape line	YANGGUANG	YG-206	/	2021.8.6	2022.8.5
Aa-SE105	Pressure Gauge	ZHHY	SE105	/	2021.8.6	2022.8.5
Aa-SE106	"GO" Gauge for E14 Caps	GRT/china	7006-27F-1	2013053131	2021.8.6	2022.8.5
Aa-SE107	"NOT GO" Gauge for E14 Caps	GRT/china	7006-28B-1	2013053126	2021.8.6	2022.8.5
Aa-SE108	"GO" Gauge for dimension "S1" of E14 Caps	GRT/china	7006-27G-1	2013053132	2021.8.6	2022.8.5
Aa-SE109	Gauge for E14 Caps for testing contact making	GRT/china	7006-54-2	2013053128	2021.8.6	2022.8.5
Aa-SE110	Gauge for E14 Caps for testing protection against accidental contact during insertion	GRT/china	7006-55-2	2013053129	2021.8.6	2022.8.5
Aa-SE111	"GO" and "NOT GO" Gauge for base GU10	KINGPO	7006-121-1	KingPo12485237	2021.8.9	2022.8.8
Aa-SE112	"GO" plug gauge for E12 lampholder	GRT/china	7006-25C-1	20130512135005	2021.8.6	2022.8.5
Aa-SE113	"NOT GO" plug gauge for E12 lampholder	GRT/china	7006-26B-1	20130512135006	2021.8.6	2022.8.5
Aa-SE114	"GO" Gauge for E26 Caps	GRT/china	7006-27D-3	2013053135	2021.8.6	2022.8.5
Aa-SE115	"NOT GO" Gauge for E26 Caps	GRT/china	7006-29L-4	2013053125	2021.8.6	2022.8.5
Aa-SE116	"GO" Gauge for E40 Caps	ANGUI TESTING	7006-27-7	20140405	2021.8.6	2022.8.5
Aa-SE117	"NOT GO" Gauge for E40 Caps	ANGUI TESTING	7006-28D-1	20140406	2021.8.6	2022.8.5
Aa-SE118	Gauge for E40 Caps for testing contact making	ANGUI TESTING	7006-52-1	20140407	2021.8.6	2022.8.5
Aa-SE119	Gauge for E40 Caps for testing protection against accidental contact during insertion	ANGUI TESTING	7006-53-1	20140408	2021.8.6	2022.8.5
Aa-SE120	"Go" gauge for bi-pin cap on finished lamps G13	KINGPO	7006-45-4	KingPo12485238	2021.8.9	2022.8.8
Aa-SE121	"Go" gauge for bi-pin cap on finished lamps G5	KINGPO	7006-46A-3	KingPo12485230	2021.8.9	2022.8.8
Aa-SE122	Gauge for three-pin flat-pin plugs (10A)	KINGPO	AS/NZS 3112 Fig A 10A	KingPo12485231	2021.8.6	2022.8.5
Aa-SE123	Gauge for three-pin flat-pin	KINGPO	AS/NZS 3112	KingPo12485232	2021.8.6	2022.8.5

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
	plugs (15A)		Fig A 15A			
Aa-SE124	Gauge for three-pin flat-pin plugs (20A)	KINGPO	AS/NZS 3112 Fig A 20A	KingPo12485233	2021.8.6	2022.8.5
Aa-SE125	Gauge for two-pin flat-pin plugs with parallel pins	KINGPO	AS/NZS 3112 Fig B	KingPo12485236	2021.8.6	2022.8.5
Aa-SE126	Gauge for flat and round pin plugs (two flat live pins and a round earth pin)	KINGPO	AS/NZS 3112 Fig F-A	KingPo12485234	2021.8.6	2022.8.5
Aa-SE127	Gauge for flat and round pin plugs (two round live pins and a flat earth pin)	KINGPO	AS/NZS 3112 Fig F-B	KingPo12485235	2021.8.6	2022.8.5
Aa-SE128	Transport type simulation vibration tester	KING DESIGN	KD-9363-550-PC	LT0PCLA13003	2021.8.3	2022.8.2
Aa-SE129	Oven Chamber	Rongfeng	101A-3	33897	2021.8.3	2022.8.2
Aa-SE130	"Go" gauges for caps on finished lamps B22	ANGUI TESTING	1865241	20140404	2021.8.6	2022.8.5
Aa-SE131	"Not Go" gauges for caps on finished lamps B22	ANGUI TESTING	1865210	20140403	2021.8.6	2022.8.5
Aa-SE132	Gauges for testing the insertion of caps in lampholders B22d	ANGUI TESTING	7006-4A-2	20140401	2021.8.6	2022.8.5
Aa-SE133	Gauges for testing the retention of B22d caps in the holder	ANGUI TESTING	7006-4B-1	20140402	2021.8.6	2022.8.5
Aa-SE134	1000:1 Oscilloscope Probe	Pintek	HVP-18HF	13010082	2021.8.9	2022.8.8
Aa-SE136	AC power source	All power	APW-150N	930607	2021.8.3	2022.8.2
Aa-SE137	Horizontal&vertical tester	AUTOSTRONG	AUTO-SPA	AUTO1033	2021.8.3	2022.8.2
Aa-SE138	Tracking index tester	AUTOSTRONG	AUTO-LDA	AUTO1040	2021.8.3	2022.8.2
Aa-SE139	Vicat softening tester	AUTOSTRONG	AUTO-WK	AUTO-20140514WK	2021.8.3	2022.8.2
Aa-SE140	Electroplated coating thickness tester	Guangzhou Dongru electronic	DR280	9324	2021.8.3	2022.8.2
Aa-SE141	Battery Tester	DG	W602	DG2014W6021772	2021.8.3	2022.8.2
Aa-SE142	Test plug for antenna coaxial sockets	ANGUI TESTING	AG-IEC60065F9	/	2021.8.6	2022.8.5
Aa-SE143	SHORE D Durometer	Handpi	LX-D	8134006969	2021.8.6	2022.8.5
Aa-SE144	Steel Ball	ANGUI TESTING	GQ-2	/	2021.8.3	2022.8.2
Aa-SE145	"Go" gauges for caps on finished lamps B15	ANGUI TESTING	1865241	140728017	2021.8.6	2022.8.5
Aa-SE146	"Not Go" gauges for caps on finished lamps B15	ANGUI TESTING	1865210	140728010	2021.8.6	2022.8.5
Aa-SE147	Gauges for testing the insertion of caps in lampholders B15d	ANGUI TESTING	7006-4A-2	140728004	2021.8.6	2022.8.5
Aa-SE148	Gauges for testing the retention of B15d caps in the holder	ANGUI TESTING	7006-4B-1	140728009	2021.8.6	2022.8.5
Aa-SE149	"GO" Gauge for E39 Caps	ANGUI TESTING	7006-24B-1	144509	2021.8.6	2022.8.5
Aa-SE150	Gauge for E39 Caps for testing contact making	ANGUI TESTING	7006-24A-1	144511	2021.8.6	2022.8.5
Aa-SE151	"NOT GO" Gauge for E39 Caps	ANGUI TESTING	7006-24C-1	144510	2021.8.6	2022.8.5
Aa-SE152	Noise Generator/filter	ZCTEK	ZC6221	ZC16120255	2021.8.10	2022.8.9
Aa-SE153	Hi-Pot Tester	ME I RUIKE	RK2671C	RK71C-BEAI005	2021.8.3	2022.8.2
Aa-SE155	AS/NZS3112 High temperature pressure testing device	ANGUI TESTING	AG8113F1	/	2021.8.9	2022.8.8
Aa-SE156	Low Pressure Tester	BELL	BE-ZK-125	201505250002	2021.8.3	2022.8.2
Aa-SE157	Thermal abuse chamber	BELL	BE-101-480B	201505250003	2021.8.3	2022.8.2
Aa-SE158	Temperature control short-circuit tester	BELL	BE-1000W	201505250004	2021.8.3	2022.8.2
Aa-SE159	Projectile Tester	BELL	BE-6046	201505250005	2021.8.3	2022.8.2
Aa-SE160	Test machine for forced internal	BELL	BE-6045W	201505250006	2021.8.3	2022.8.2

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
	short circuit of cells					
Aa-SE161	Crush tester	BELL	BE-6045-2T	201505250007	2021.8.3	2022.8.2
Aa-SE162	Rapid temperature test chamber	BELL	BTKS-408C-5	201505250008	2021.8.3	2022.8.2
Aa-SE163	Mechanical shock(crash hazard)	BELL	BE-5066	201505250009	2021.8.3	2022.8.2
Aa-SE164	Battery Testing System	NEWARE	CT-3008-5V10A-204	T1505-080859	2021.8.3	2022.8.2
Aa-SE165	Battery Testing System	NEWARE	CT-3008-5V10A-204	T1505-080860	2021.8.3	2022.8.2
Aa-SE166	Battery Testing System	NEWARE	CT-3008-20V6A-A	T1505-080861	2021.8.3	2022.8.2
Aa-SE167	Shock tester	LABTONE	HSKT10	L150529	2021.8.3	2022.8.2
Aa-SE168	Electromagnetic vibration tester	LABTONE	CV-700	L150530	2021.8.3	2022.8.2
Aa-SE169	Electronic scales	JM	JM-A	/	2021.8.3	2022.8.2
Aa-SE170	Digital Power Meter	EVERFINE	PF9901	G100731CO1351143	2021.8.3	2022.8.2
Aa-SE171	"GO" and "NOT GO" Gauge for starters	KINGPO	IEC 60155 Fig 6	/	2021.8.9	2022.8.8
Aa-SE172	"NOT GO" Gauge for starters	KINGPO	IEC 60155 Fig 7	/	2021.8.9	2022.8.8
Aa-SE173	"GO" Gauge for starters	KINGPO	IEC 60155 Fig 8	/	2021.8.9	2022.8.8
Aa-SE174	Internal resistance tester	TestPad	BTS-100	IR09100699	2021.8.3	2022.8.2
Aa-SE175	DC Electronic Load	PRODIGIT	3302C	80602C 446	2021.8.3	2022.8.2
Aa-SE176	DC Electronic Load	PRODIGIT	3302C	25689721698	2021.8.3	2022.8.2
Aa-SE177	Data Acquisition / Switch Unit	Agilent	34970A	MY44083167	2021.8.3	2022.8.2
Aa-SE180	Digital Power Meter	EVERFINE	PF9901	G100731CN1351244	2021.8.3	2022.8.2
Aa-SE181	Cord oscillating tester	Futexing	FT-CWT03	CWT1604001	2021.8.3	2022.8.2
Aa-SE182	Pointer type DC current meter	Shanghai Liangbiao	C31-A	6003	2021.8.3	2022.8.2
Aa-SE183	Three phase ammeter	Chengdu Huayi	PMH8161-9K4	20100604801	2021.8.3	2022.8.2
Aa-SE184	Shunt	pulianchuang	FL-2/0.5	/	2021.8.9	2022.8.8
Aa-SE185	Shunt	pulianchuang	FL-2/0.5	/	2021.8.9	2022.8.8
Aa-SE186	Creepage distance testing card-Straight card	ANGUI TESTING	SE-A141	/	2021.8.3	2022.8.2
Aa-SE187	Creepage distance testing card-Bending card	ANGUI TESTING	SE-A142	/	2021.8.3	2022.8.2
Aa-SE188	Conductivity Meters	leici	DDS-11A	163	2021.8.3	2022.8.2
Aa-SE189	Manual Supercharger	Zhejiang Yuhuang	SB-10Mpa	/	2021.8.6	2022.8.5
Aa-SE190	Grounding resistance meter	hangzhoudongshun	ZC29B-2	/	2021.8.3	2022.8.2
Aa-SE191	AC power source	All power	AFW-210A	992429	2021.8.3	2022.8.2
Aa-SE192	Digital Power Meter	EVERFINE	PF9901	G135716CM5361147	2021.8.3	2022.8.2
Aa-SE193	Horizontal distributed photometer	EVERFINE	GO-2000B	G105623CM5361116	2020.5.29	2022.5.28
Aa-SE194	UV-VIS-NIR Spectroradiometer for Photobiological Safety Analysis	EVERFINE	PMS-700	G107114CJ1341112	2020.10.09	2022.10.08
Aa-SE195	Band Radiometer	EVERFINE	RD-2000F	G114280CM1361115	2020.09.30	2022.09.29
Aa-SE196	Pupil Imaging Radiance Meter	EVERFINE	CX-2K	G132536CF1361113	2020.10.09	2022.10.08
Aa-SE197	Digital Power Meter	EVERFINE	PF9811	G135717CJ7361129	2021.8.3	2022.8.2
Aa-SE198	Digital CC&CV DC Power Supply	EVERFINE	WY3010	G111418CM5361135	2021.8.3	2022.8.2
Aa-SE199	AC Power Source	EVERFINE	DPS1005	G119890CJ6361133	2021.8.3	2022.8.2
Aa-SE200	Spectral irradiance standard lamp	EVERFINE	D204BH	G100284CA1361114	2016.9.24	after ignited 50 hours
Aa-SE201	Standard luminance source	EVERFINE	SLS-150	G137329CJ6361112	2016.9.24	after ignited 50 hours

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE202	Standard lamp of ultraviolet radiation	EVERFINE	SIS-631	G110132CA1361120	2016.9.24	after ignited 50 hours
Aa-SE203	Falling water drops device	Gongwen	DJ-B	/	2021.8.3	2022.8.2
Aa-SE204	Continuous immersion in water device	Gongwen	X8	161130	2021.8.3	2022.8.2
Aa-SE205	Torque Driver	kanon	30LTDK	/	2021.8.3	2022.8.2
Aa-SE206	Gauge for single-phase two-pole plug	ANGUI TESTING	AGGB02F6	/	2021.8.6	2022.8.5
Aa-SE207	"GO" and "Not Go" Gauge for plug pins	ANGUI TESTING	AGENF1GO	/	2021.8.6	2022.8.5
Aa-SE208	Gauge for pin diameter	ANGUI TESTING	AGENF2	/	2021.8.6	2022.8.5
Aa-SE209	Gauge for checking impossibility of single-pole insertion of into socket-outlets	ANGUI TESTING	AGENF4	/	2021.8.6	2022.8.5
Aa-SE210	Gauge for plug pins	ANGUI TESTING	AGBS1363F5	/	2021.8.6	2022.8.5
Aa-SE211	12.5mm steel ball	ANGUI TESTING	ST-12.5	/	2021.8.3	2022.8.2
Aa-SE212	Electronic Thermo-Hygrometer	Boyang	HTC-1	SE212	2021.8.7	2022.8.6
Aa-SE213	Electronic Thermo-Hygrometer	Boyang	HTC-1	SE213	2021.8.7	2022.8.6
Aa-SE218	Visual IR Thermometer	FLUKE	VT04	VT04-14060109	2021.8.10	2022.8.9
Aa-SE219	Industrial microscope	SAIKEDIGITAL	SK2610B	/	2021.4.21	2022.4.20
Aa-SE220	Leakage Current Tester	Simpson	229-2	12267	2021.8.3	2022.8.2
Aa-SE221	Portable Ground Fault Circuit Interrupter (GFCI)	Technology research, LLC	25000	/	2018.6.27	2023.6.26
Aa-SE222	"GO" Gauge for starters for class II fluorescent luminaires	ANGUI TESTING	IEC 60155 Fig B.2	/	2021.4.21	2022.4.20
Aa-SE223	Ingestion gauge	ANGUI TESTING	AGB2F3	/	2021.8.6	2022.8.5
Aa-SE224	Heating enclosure for thermally protected ballasts	ANGUI TESTING	AGSB1778	/	2021.8.3	2022.8.2
Aa-SE225	Battery Testing System	NEWARE	CT-4008-6V4A-CCDL	T1505-080859	2021.8.3	2022.8.2
Aa-SE226	125mm diameter circular baffle test finger	Shice testing	SC-F2B-B	SC17110102	2021.8.9	2022.8.8
Aa-SE227	aneroid barometer	Yanrui testing	DYM3	No19378	2021.8.10	2022.8.9
Aa-SE228	Electric humiture grapher	Accurate	TH10W-E	HHW-004	2021.8.7	2022.8.6
Aa-SE229	Electric humiture grapher	Accurate	TH10W-E	HHW-005	2021.8.7	2022.8.6
Aa-SE230	Electric humiture grapher	Accurate	TH10W-E	HHW-006	2021.8.7	2022.8.6
Aa-SE231	Electric humiture grapher	Accurate	TH10W-E	HHW-007	2021.8.7	2022.8.6
Aa-SE232	Electric humiture grapher	Accurate	TH10W-E	HHW-008	2021.8.7	2022.8.6
Aa-SE233	Electric humiture grapher	Accurate	TH10W-E	HHW-009	2021.8.7	2022.8.6
Aa-SE234	8mm diameter test rod	Zhongzheng testing	SZZT-8	2017010202	2021.8.6	2022.8.5
Aa-SE235	Apparatus for refrigerator spillage test	ANBIAO TESTING	ANB-4706.13NS	/	2021.8.9	2022.8.8
Aa-SE236	Apparatus for 30 ml spillage test	ANBIAO TESTING	AT-4706.19-102	/	2021.8.10	2022.8.9
Aa-SE237	Touch current testing network	ANGUI TESTING	AG990F4	/	2021.8.6	2022.8.5
Aa-SE238	Wedge probe	Hanyang testing	FZ-1108A	1905111	2021.4.23	2022.4.22
Aa-SE239	13mm Straight steel pin	KINGPO	9504.6.4.2	/	2021.2.25	2022.2.24
Aa-SE240	LCR meter	TONGHUI	TH2811D	QC-211-05420	2021.2.22	2022.2.21
Aa-SE241	Meter rod	ANGUI TESTING	M6,M7,M8,M9,M10,M11,M12,M13,M14	/	2021.2.25	2022.2.24
Aa-SE242	Pin gauge	ANGUI TESTING	0.5mm,1.0mm,1.5mm,2.0mm,2.5mm,3.0mm,3.5mm,4.0mm,4.5mm,5.0mm,5.5mm,6.0mm	/	2021.2.25	2022.2.24
Aa-SE244	Test circuit for thermally protected lamp controlgear	ANGUI TESTING	AG347B1	/	2021.2.24	2022.2.23
Aa-SE245	Oscilloscope	Tektronix	TDS3032B	B036945	2021.4.23	2022.4.22
Aa-SE246	Glow Wire Test Apparatus	ANGUI TESTING	AGZRS	180121661	2021.4.21	2022.4.20
Aa-SE247	Clamp flow meter	FLUKE	FLUKE 36	67307993	2021.8.3	2022.8.2

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE248	DC Electronic Load	PRODIGIT	3311F	20602FL0450	2021.8.3	2022.8.2
Aa-SE249	DC Electronic Load	PRODIGIT	3311F	20502FL0345	2021.8.3	2022.8.2
Aa-SE250	Hammer	ANGUI TESTING	AGCJ10	1808132041	2021.8.9	2022.8.8
Aa-SE251	Hammer	ANGUI TESTING	AGCJ20	1808132042	2021.8.9	2022.8.8
Aa-SE252	IK Shock tester	ANGUI TESTING	AGCKCJ	1808132043	2021.8.11	2022.8.10
Aa-SE253	Electronic pulse generator	ANGUI TESTING	AG368FD3	/	2021.8.3	2022.8.2
Aa-SE254	Switch life tester	ANGUI TESTING	SLT-10M	/	2021.8.3	2022.8.2
Aa-SE255	Battery Testing System	NEWARE	CT-4008-5V12A-204	T1711-141960	2021.8.3	2022.8.2
Aa-SE256	Digital display inclinometer	AICE	DXL-360S	3609975	2021.8.3	2022.8.2
Aa-SE257	Contact tachometer	SMART	AR925	03301201	2021.8.9	2022.8.8
Aa-SE258	Photoelectric tachometer	SMART	AR926	03171211	2021.8.9	2022.8.8
Aa-SE259	Hemispherical clindrical rod	ANGUI TESTING	AGD40	1810312038	2021.8.3	2022.8.2
Aa-SE260	Single-phase leakage current testing network	ANGUI TESTING	AG335F1	/	2021.4.23	2022.4.22
Aa-SE261	Three-phase leakage current testing network	ANGUI TESTING	AG335F3	/	2021.4.23	2022.4.22
Aa-SE262	Three-phase intelligent electric quantity measuring instrument	EVERFINE	PF9830	P185192CM5381117	2021.4.23	2022.4.22
Aa-SE263	Three-phase leakage current testing network	ANGUI TESTING	AG950F5B	/	2021.4.23	2022.4.22
Aa-SE264	Load cabinet	ANGUI TESTING	AG250V30A	/	2021.4.23	2022.4.22
Aa-SE265	Digital Power Meter	Yokogawa	WT310E-C2-H/G5	C3UH02073E	2021.2.23	2022.2.22
Aa-SE266	Plug pins strength testing apparatus	ANGUI TESTING	AGBSF32	1904151050	2021.4.23	2022.4.22
Aa-SE267	Plus pins mechanical life test apparatus	ANGUI TESTING	AGAS31444	1903231843	2021.4.21	2022.4.20
Aa-SE268	Plug pins reliability test apparatus	ANGUI TESTING	AGBSF7	1904151051	2021.4.21	2022.4.20
Aa-SE269	Plug pins torque test apparatus	ANGUI TESTING	AGBSF33	1904151053	2021.4.21	2022.4.20
Aa-SE270	Plug pins deflection test apparatus	ANGUI TESTING	AGBSF8	1901241557	2021.4.21	2022.4.20
Aa-SE271	Abrasion test apparatus	ANGUI TESTING	AGENF9	1905091509	2021.4.21	2022.4.20
Aa-SE272	"Go" and "Not Go" gauge for unmounted bi-pin cap G5	Hanyang testing	7006-46-3	/	2021.4.23	2022.4.22
Aa-SE273	Low temperature impact test apparatus	ANGUI TESTING	AGASF26	1904151055	2021.4.21	2022.4.20
Aa-SE274	Tumbling barrel	ANGUI TESTING	AGDTBBE	1904151018	2021.4.21	2022.4.20
Aa-SE275	"Go" and "Not Go" gauge for unmounted bi-pin cap G13	Hanyang testing	7006-44-4	/	2021.4.23	2022.4.22
Aa-SE276	Plug temperature rise test apparatus	ANGUI TESTING	AGGBF446A	1904151058	2021.4.23	2022.4.22
Aa-SE277	Plug temperature rise test apparatus	ANGUI TESTING	AGBSF17B	1904151056	2021.4.23	2022.4.22
Aa-SE278	Plug temperature rise test apparatus	ANGUI TESTING	AGASF29A	1904151057	2021.4.23	2022.4.22
Aa-SE279	Electric humiture grapher	Accurate	TH10W-E	HHW-931	2021.4.23	2022.4.22
Aa-SE280	Electric humiture grapher	Accurate	TH10W-E	HHW-932	2021.4.23	2022.4.22
Aa-SE281	Electric humiture grapher	Accurate	TH10W-E	HHW-933	2021.4.23	2022.4.22
Aa-SE282	Electric humiture grapher	Accurate	TH10W-E	HHW-934	2021.4.23	2022.4.22
Aa-SE283	Ohm Meter	Yang Zi	YD2511A	2511-182336	2021.8.3	2022.8.2
Aa-SE284	Electronic Scale	Senssun	ACS-15-S	J5030333	2021.8.3	2022.8.2
Aa-SE285	Needle Flame Test Set	ANGUI TESTING	AG695115	1810071756	2021.4.21	2022.4.20
Aa-SE286	Switching Mode Power Supply	ZHAOXIN	KXN-6030D	18K6030D12183	2021.8.3	2022.8.2
Aa-SE287	100:1 Oscillograph Probe	RIGOL	RP1300H	/	2021.8.9	2022.8.8
Aa-SE289	Digital Power Meter	EVERFINE	PF9901	P185823CA1391202	2021.8.3	2022.8.2
Aa-SE290	Data Acquisition / Switch Unit	Agilent	34970A	US37005584	2021.8.3	2022.8.2
Aa-SE291	Switching Mode Power Supply	Longwei	LW3080KD	190903414	2021.8.3	2022.8.2
Aa-SE292	Electronic scales	JM	JM-A30002	193	2021.8.3	2022.8.2
Aa-SE293	Precision Oven Box	GAOXIN	GX-3020-B50T	1901022	2021.8.3	2022.8.2

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE294	Oscilloscope	Tektronix	MDO34	C018406	2021.8.6	2022.8.5
Aa-SE295	Finger Nail Probe	HANYANG	FZ-1105	1910118	2021.8.6	2022.8.5
Aa-SE296	Thrust Test Finger	HANYANG	FZ-1106	1910104	2021.8.9	2022.8.8
Aa-SE297	Test Probe	HANYANG	FZ-1109	1910096	2021.8.6	2022.8.5
Aa-SE298	Test Probe B Joint Test Finger	HANYANG	FZ-1101A	1910095	2021.8.9	2022.8.8
Aa-SE299	Joint Test Finger	HANYANG	FZ-1101S	1910117	2021.8.6	2022.8.5
Aa-SE300	Pressure Test Apparatus	HANYANG	330N	1910116	2021.8.3	2022.8.2
Aa-SE301	Lampholder bending moment tester	HANYANG	FZ-1202E	1910097	2021.8.9	2022.8.8
Aa-SE302	Luminance Colorimeter	Topcon	BM-7A	990648	2021.8.12	2022.8.11
Aa-SE303	Temp. & Humid. Chamber	Teelong	TL-HW408S	TL-20191205-01	2021.8.3	2022.8.2
Aa-SE304	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN01	2021.8.3	2022.8.2
Aa-SE305	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN02	2021.8.3	2022.8.2
Aa-SE306	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN03	2021.8.3	2022.8.2
Aa-SE307	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN04	2021.8.3	2022.8.2
Aa-SE308	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN05	2021.8.3	2022.8.2
Aa-SE309	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN06	2021.8.3	2022.8.2
Aa-SE310	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN07	2021.8.3	2022.8.2
Aa-SE311	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN08	2021.8.3	2022.8.2
Aa-SE312	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN09	2021.8.3	2022.8.2
Aa-SE313	Battery Testing System	CORSHN	CTS-5V10A08CU	CORSHN10	2021.8.3	2022.8.2
Aa-SE314	Probe for measuring surface temperatures	HANYANG	FZ1121	2005019	2021.8.9	2022.8.8
Aa-SE315	Battery Testing System	CORSHN	CTS-30V10A08CU	CORSHN11	2021.8.3	2022.8.2
Aa-SE316	Battery Testing System	CORSHN	CTS-30V10A08CU	CORSHN12	2021.8.3	2022.8.2
Aa-SE317	Battery Testing System	CORSHN	CTS-30V10A08CU	CORSHN13	2021.8.3	2022.8.2
Aa-SE318	Battery Testing System	CORSHN	CTS-30V10A08CU	CORSHN14	2021.8.3	2022.8.2
Aa-SE319	High Accuracy Array Spectra	EVERFINE	HAAS-2000-IR1	M112279CM1361113	2020.08.29	2022.08.28
Aa-SE320	DC Power Supply	ITECH	IT6872A	800445020747120000	2021.8.3	2022.8.2
Aa-SE321	Multi Meter	HYELEC	MY64	/	2021.8.3	2022.8.2
Aa-SE322	10:1 Oscilloscope Probe	Tektronix	TPP0250	C125615	2021.8.9	2022.8.8
Aa-SE323	Data Acquisition / Switch Unit	Agilent	34970A	MY41000156	2021.2.22	2022.2.21
Aa-SE324	Data Acquisition / Switch Unit	Agilent	34970A	MY44025310	2021.2.22	2022.2.21
Aa-SE325	Data Acquisition / Switch Unit	Agilent	34970A	MY41000172	2021.2.22	2022.2.21
Aa-SE326	Data Acquisition / Switch Unit	Agilent	34970A	MY41000174	2021.2.22	2022.2.21
Aa-SE327	Data Acquisition / Switch Unit	Agilent	34970A	MY44025527	2021.2.22	2022.2.21
Aa-SE328	DC Electronic Load	ITECH	IT8512A+	802143041757210143	2021.2.22	2022.2.21
Aa-SE329	DC Electronic Load	ITECH	IT8512A+	802143041757510007	2021.2.22	2022.2.21
Aa-SE330	DC Electronic Load	ITECH	IT8512A+	802143041757510019	2021.2.22	2022.2.21
Aa-SE331	DC Electronic Load	ITECH	IT8512A+	802143041757510040	2021.2.22	2022.2.21
Aa-SE332	Data Acquisition / Switch Unit	Agilent	34970A	MY41002131	2021.2.22	2022.2.21
Aa-SE333	Data Acquisition / Switch Unit	Agilent	34970A	MY49012230	2021.2.22	2022.2.21
Aa-SE334	Data Acquisition / Switch Unit	Agilent	34970A	MY44025500	2021.2.22	2022.2.21

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
Aa-SE335	Digital Power Meter	EVERFINE	PF9901	P185823CJ7401168	2021.2.23	2022.2.22
Aa-SE336	Digital Power Meter	EVERFINE	PF9901	P185823CJ7401180	2021.2.23	2022.2.22
Aa-SE337	Digital Power Meter	EVERFINE	PF9901	P185823CJ7401175	2021.2.23	2022.2.22
Aa-SE338	Temp. & Humid. Chamber	Teelong	TL-HW408S	TL-20210428-002	2021.8.3	2022.8.2
Aa-SE339	Salt spary tester	Teelong	TL-YW-960	TL-20210428-001	2021.8.3	2022.8.2
Aa-SE340	Electronic platform scale	Jieli	T0066541	TCS-150-A	2021.8.3	2022.8.2

Appendix 2**Photo documentation**

Figure 1 Overall view



Figure 2 External view

Photo documentation

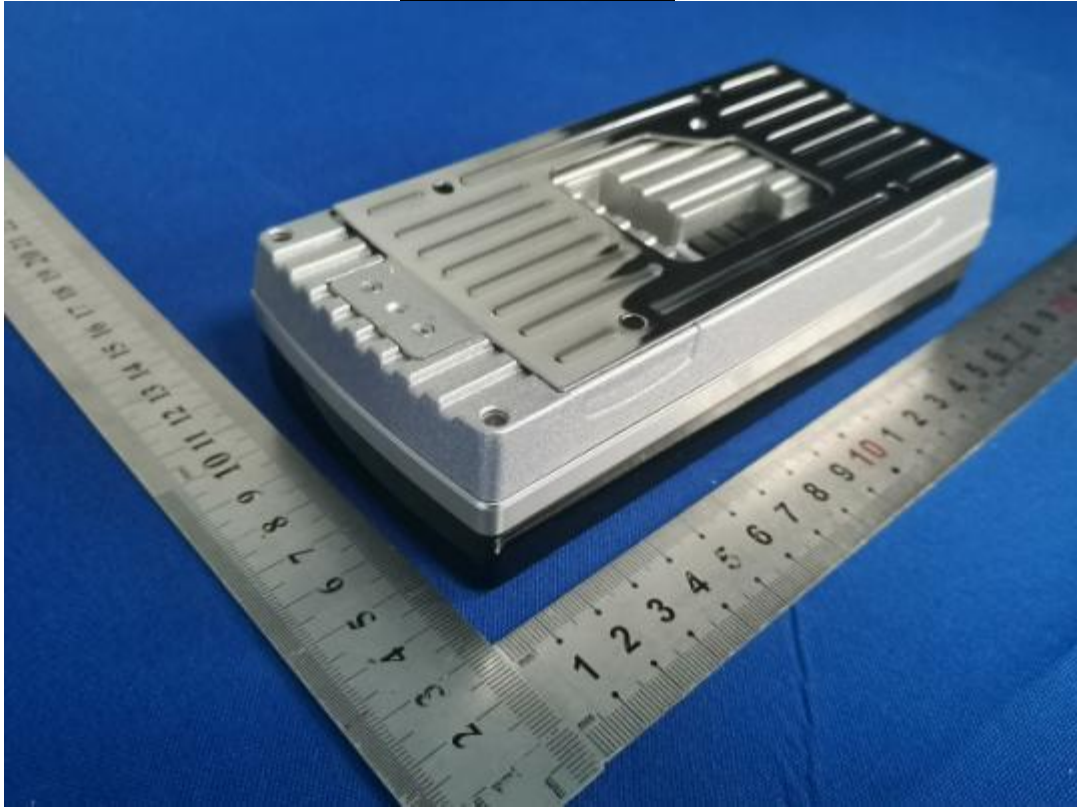


Figure 3 External view



Figure 4 External view

Photo documentation



Figure 5 port view



Figure 6 Internal view

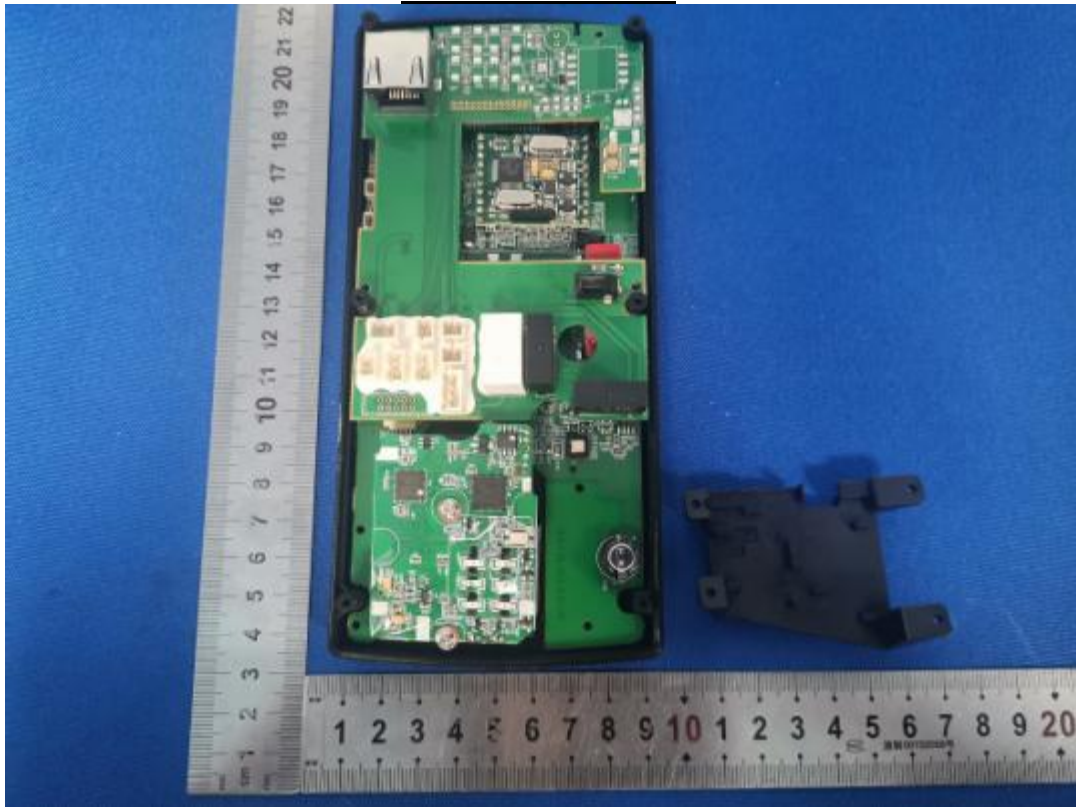
Photo documentation

Figure 7 Internal view

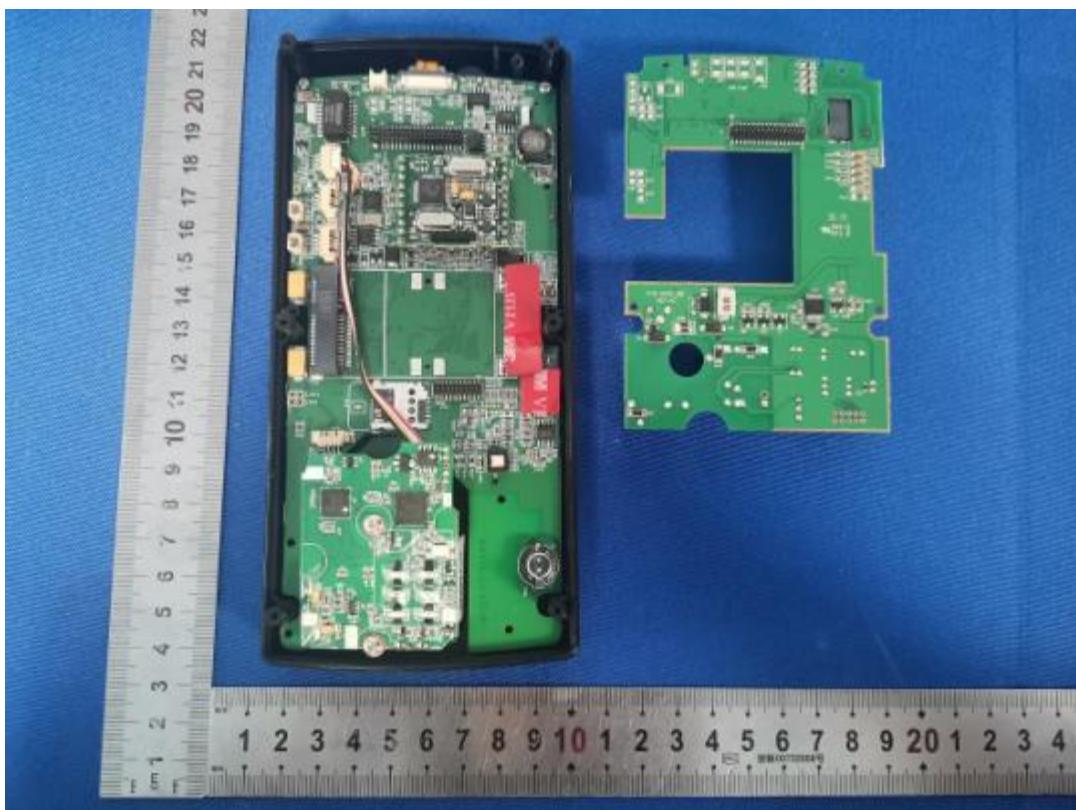


Figure 8 Internal view

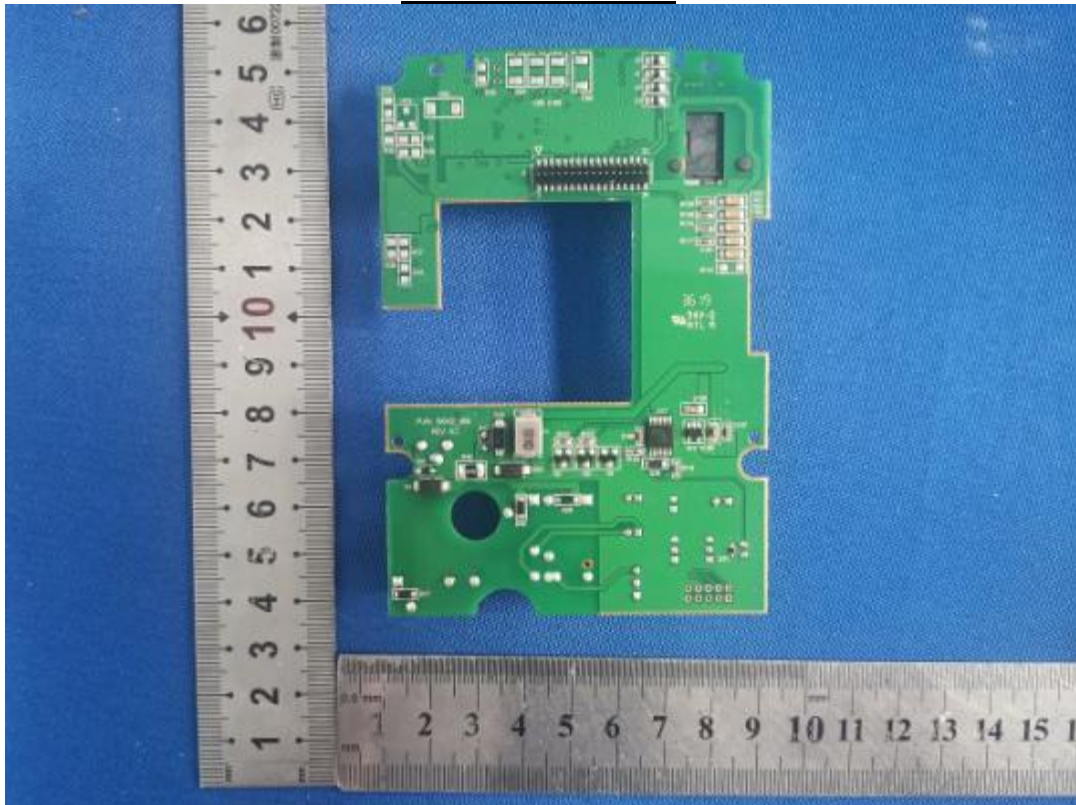
Photo documentation

Figure 9 Internal PCB

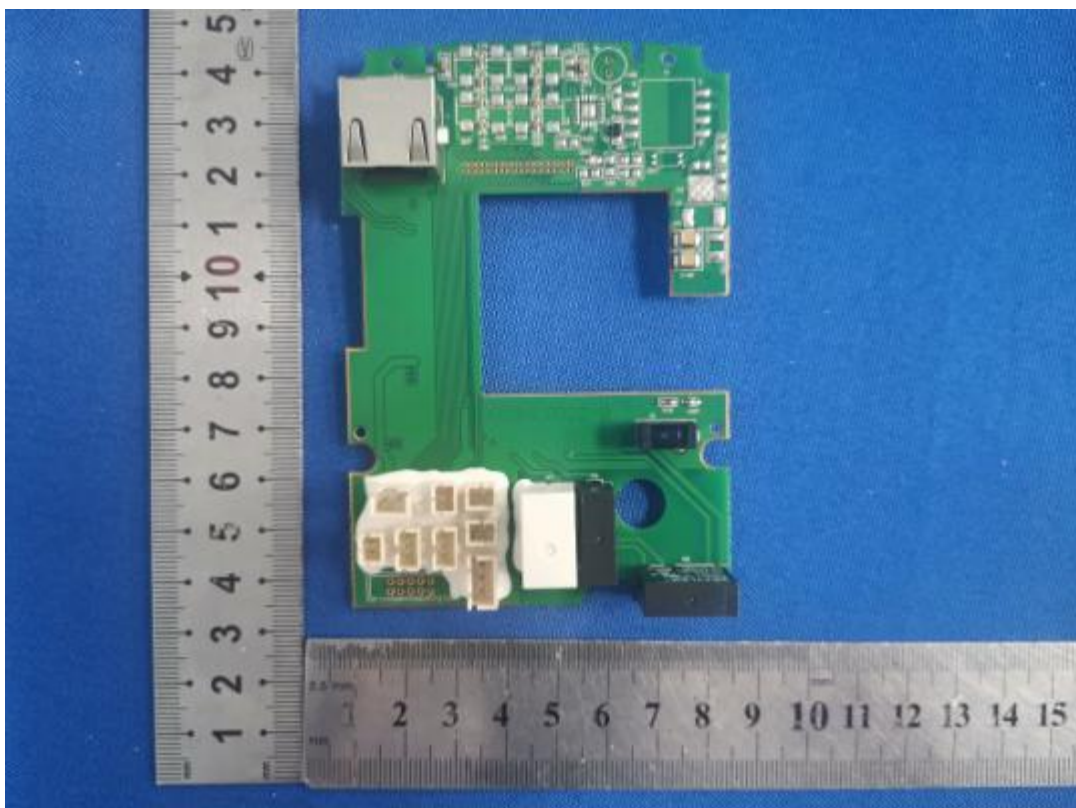


Figure 10 Internal PCB

Photo documentation

Figure 11 Internal view

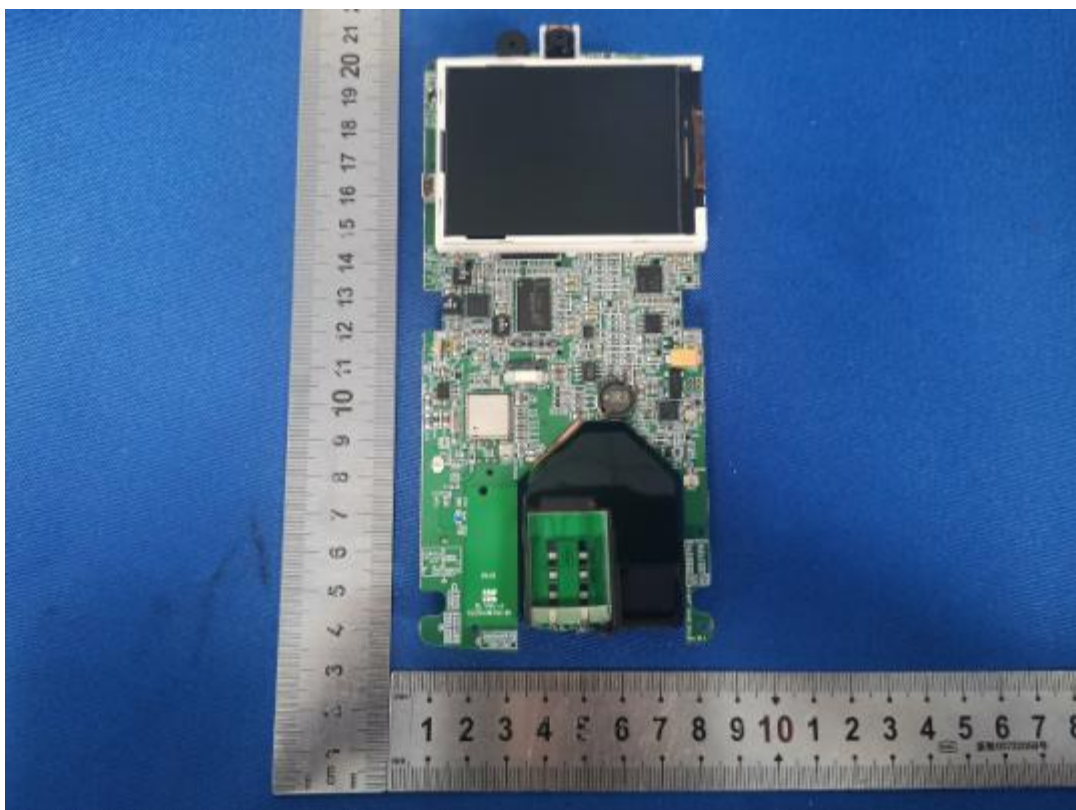


Figure 12 Internal PCB

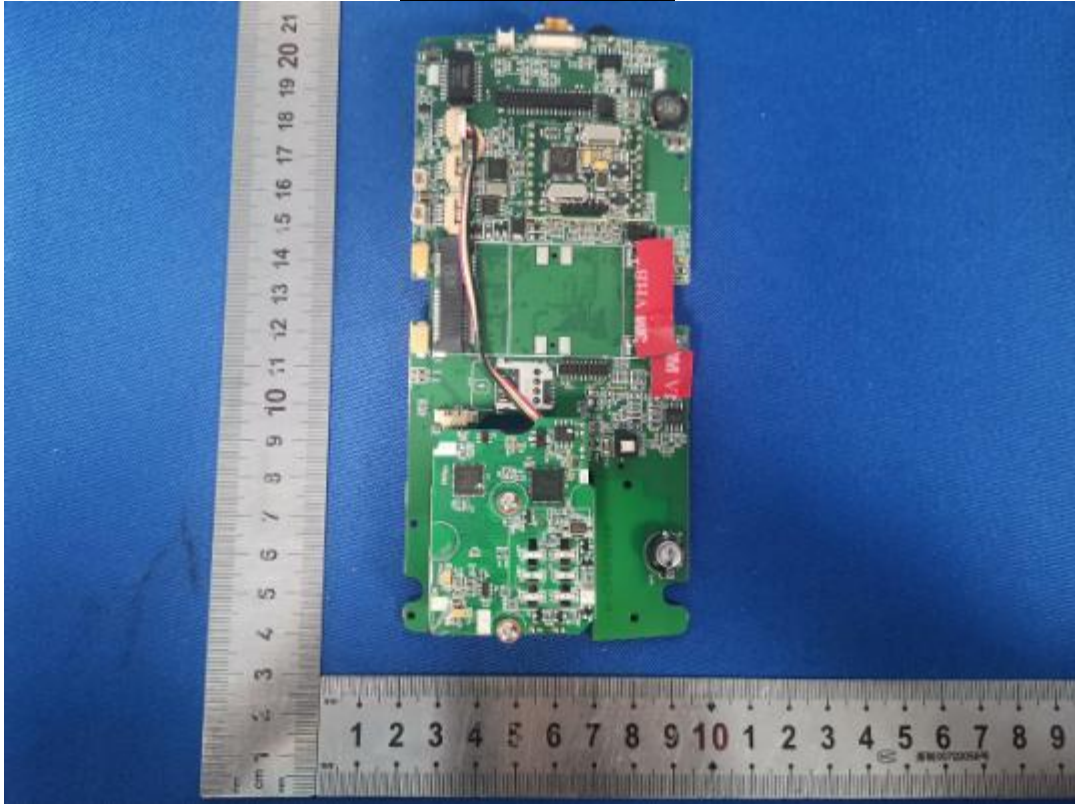
Photo documentation

Figure 13 Internal PCB

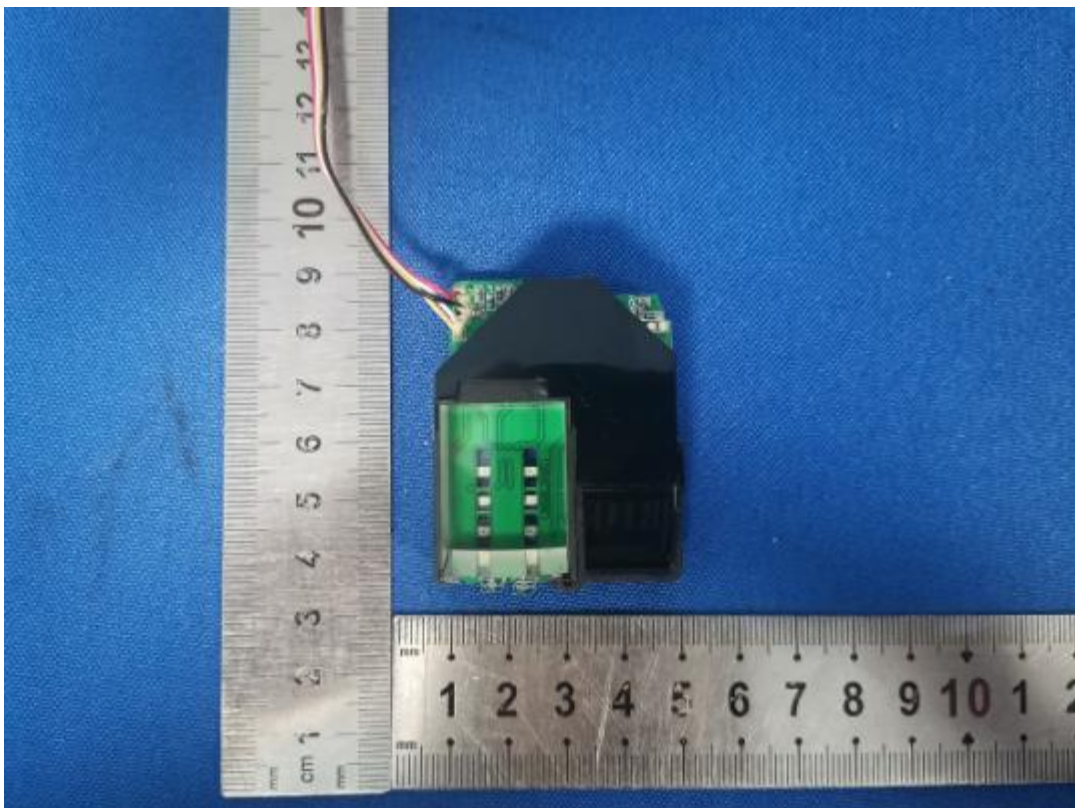


Figure 14 Internal view

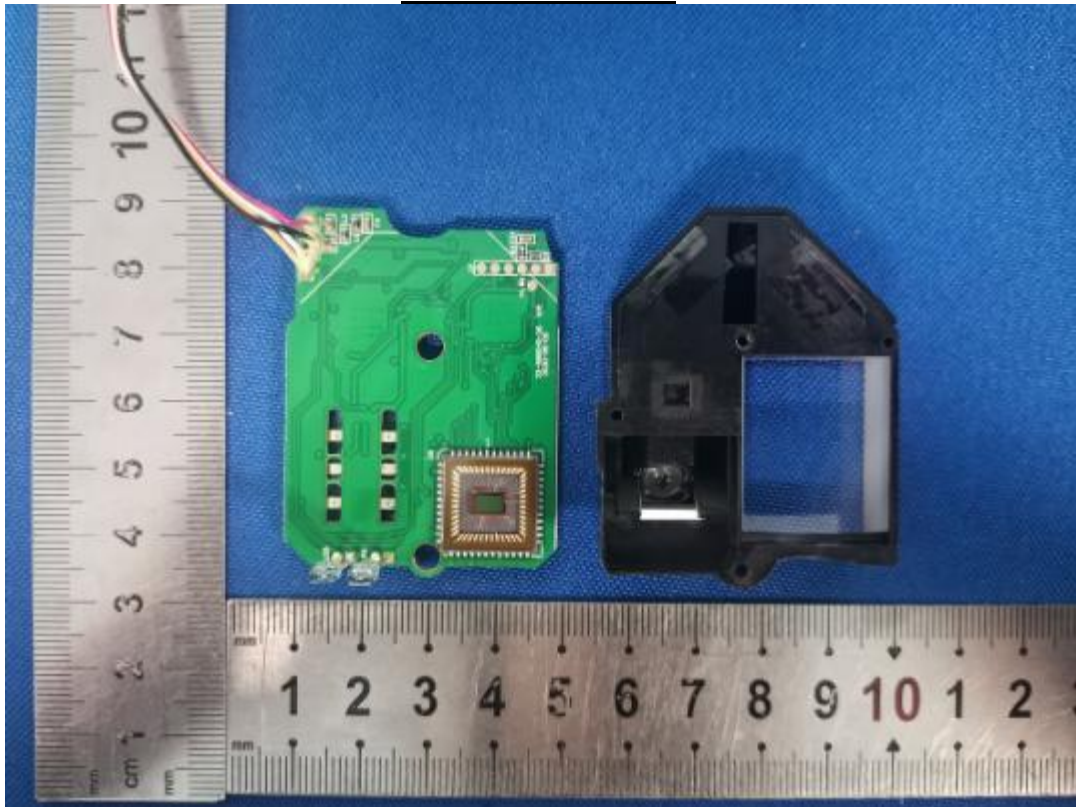
Photo documentation

Figure 15 Internal view

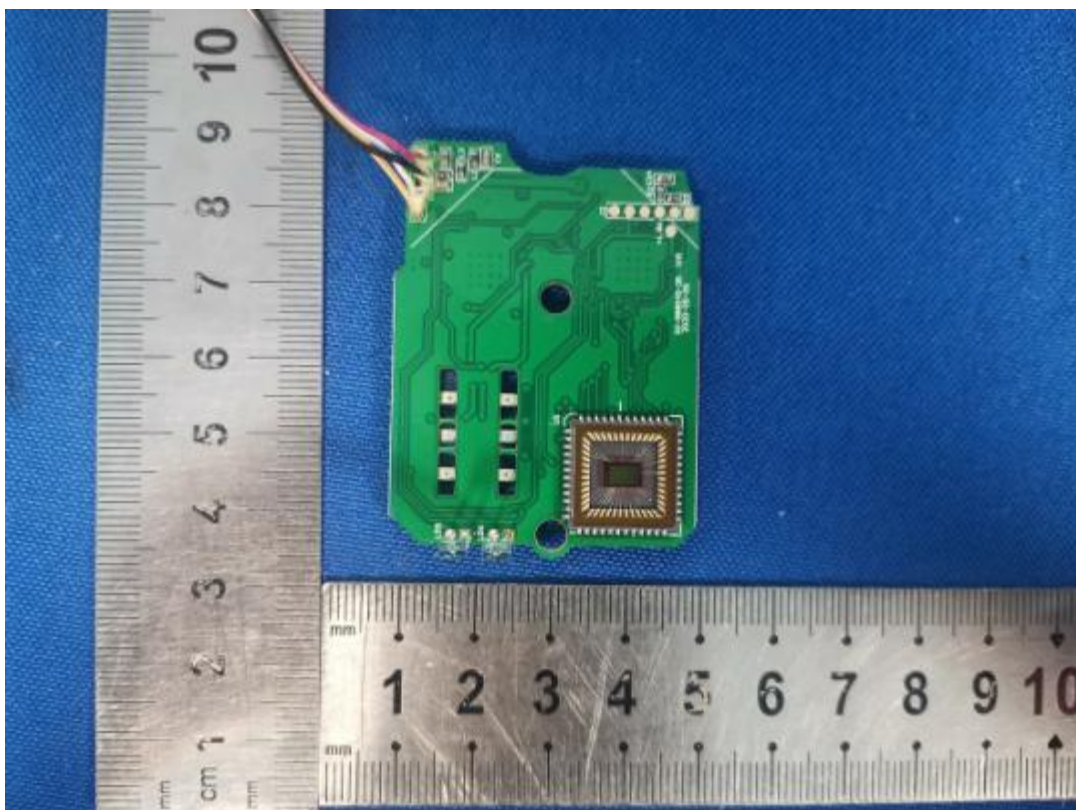


Figure 16 Internal PCB

Photo documentation

Figure 17 Internal PCB



Figure 18 Internal view

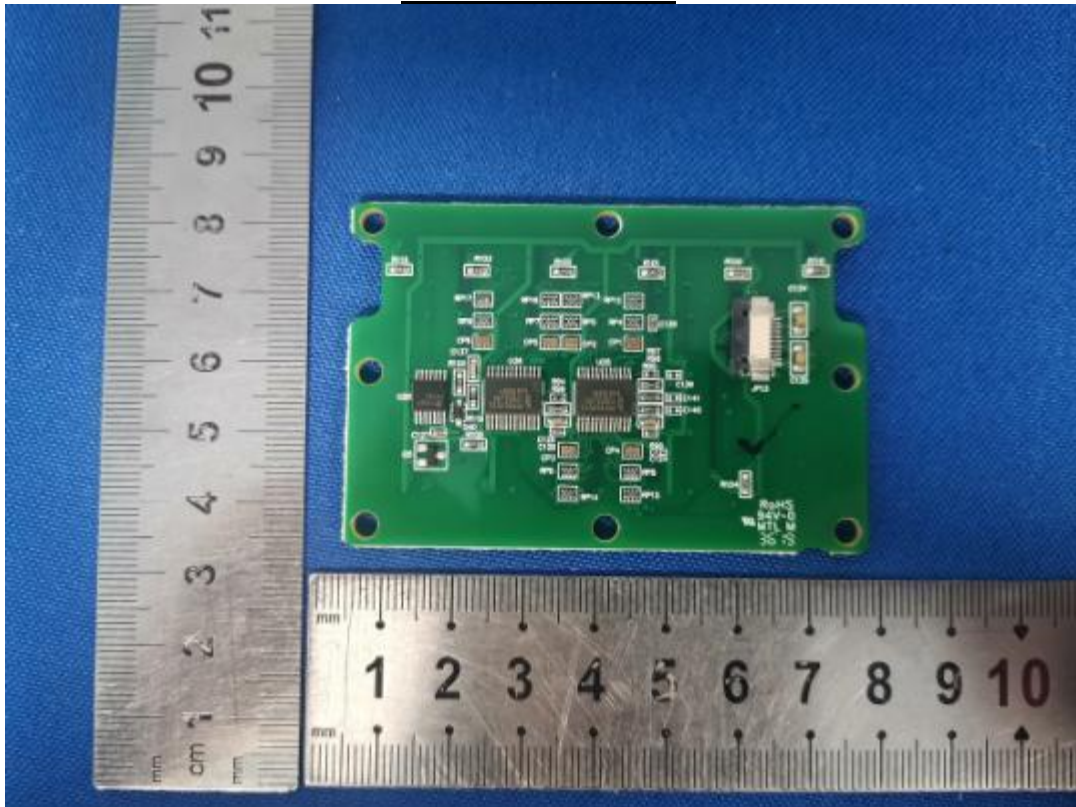
Photo documentation

Figure 19 Internal PCB

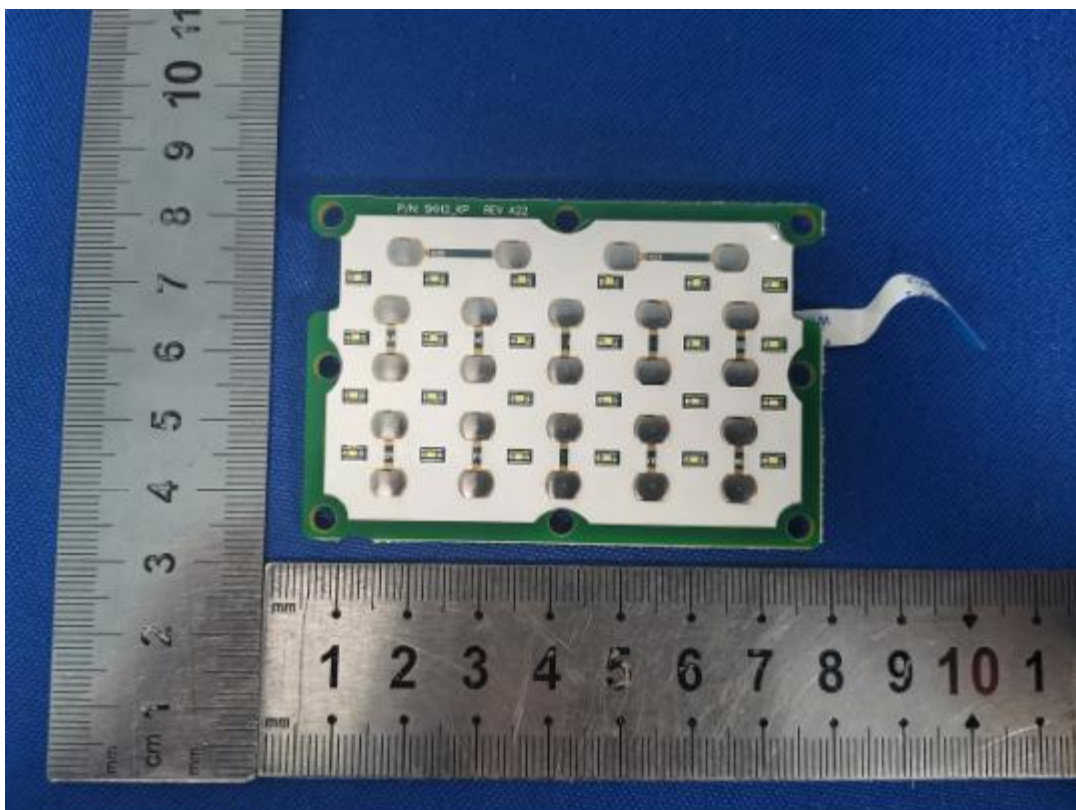


Figure 20 Internal PCB

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