Test Report issued under the responsibility of:

TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number ..... :	SHES240300589902-M1
Date of issue ..... :	2024-04-29; Amendment 1: 2024-11-26
Total number of pages ..... :	25 pages
Name of Testing Laboratory preparing the Report ..... :	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Applicant's name ..... :	Hangzhou Hikvision Digital Technology Co., Ltd.
Address ..... :	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Test specification:	
Standard ..... :	IEC 62368-1:2014
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
TRF template used ..... :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. ..... :	IEC62368_1D
Test Report Form(s) Originator .. :	UL(US)
Master TRF ..... :	Dated 2022-04-14

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description ..... :		Wireless Repeater Plus	
Trade Mark(s) ..... :		HIKVISION	
Manufacturer..... :		Same as applicant	
Model/Type reference ..... :		See page 8	
Ratings ..... :		100 - 240 V a.c., 50/60 Hz, 0,2 A Max; Class II	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.	
Testing location/ address .....:		588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.	
Tested by (name, function, signature) .....:		Emilien Li Project Engineer	
Approved by (name, function, signature) .....:		Leo Wang Reviewer	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 3 :**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature) .....:			
Supervised by (name, function, signature) .....:			

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

Attachment 1 – 2 pages of Photos documents

Summary of testing:

The sample(s) tested complies with the requirements of IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018.

Unless otherwise specified, the EUT with model DS-PR1-WE(B) was selected as representative model for full testing.

Amendment 1:

All test data in this report are based on original test report SHES240300589901 dated on 2024-04-29 with the following changes and/or additions.

- Add a alternative battery pack(model name: 115965-1S1P), please see photo attachment and table 4.1.2

After comparison, following tests were considered necessary.

Annex M.3 Battery

Annex M.4

B.2.5 Input Test

This test report is not valid without the original CB Test Report Ref. SHES240300589901 dated on 2024-04-29.

Heating test:
Tma = 55°C (declared by manufacturer)

K-type thermocouple used for temperature measurement.

Tests performed (name of test and test clause):	**Testing location:**
☒ 7. Injury caused by hazardous substances ☒ Annex B. Normal operating condition tests, abnormal operating condition tests and single fault condition tests ☒ Annex M Equipment containing batteries and their protection circuits	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

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

1. EU Group Differences (EN 62368-1:2014+A11:2017)
2. EU Special National Conditions, EU A-deviations: DE, DK, FI, GB, IE, NO, SE

3. Australia and New Zealand national differences (AS/NZS 62368.1:2018)

Explanation of used codes: DE=Germany, DK=Denmark, FI=Finland, GB= United Kingdom, IE=Ireland, NO=Norway, SE=Sweden

☒ **The product fulfils the above requirements which have been considered in original CB test report Ref. SHES240300589901 dated on 2024-04-29 and this report.**

Use of uncertainty of measurement for decisions on conformity (decision rule) :

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

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

Marking for model DS-PR1-WE(B)

Remark:

1) The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm.

2) The marking plates for other models are of the same pattern except for model name.

3) As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being placed on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

TEST ITEM PARTICULARS:	
Classification of use by ..... :	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☒ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☐ DC Mains ☐ External Circuit – not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ +____%/ -_____% ☐ None
Supply Connection – Type ..... :	☒ pluggable equipment type A - ☐ non-detachable supply cord ☒ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☐ other: Not directly connected to mains
Considered current rating of protective device as part of building or equipment installation ..... :	___-___ A; Installation location: ☐ building; ☐ equipment
Equipment mobility ..... :	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☒ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: Not directly connected to mains
Class of equipment ..... :	☐ Class I ☒ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maximum operating ambient ..... :	55°C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☒ TT ☐ IT - ____ V_{L-L}
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m) ..... :	☐ 2000 m or less ☒ 100 m
Mass of equipment (kg) ..... :	☒ Approx. 0,52 kg

Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	2024-11-12
Date (s) of performance of tests .....:	2024-11-12 to 2024-11-15

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☒ **Yes** ☐ **Not applicable** Factory declaration letter.pdf, dated 2024-03-24.

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....:	1. Hangzhou Hikvision Technology Co., Ltd. No.700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang, 310052, China 2. Hangzhou Hikvision Electronics Co., Ltd. No.299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou, Zhejiang, 311500, China 3. Chongqing Hikvision technology Co., Ltd. No. 118, Haikang Road, Area C, Jianqiao Industrial Park, Dadukou District, Chongqing, 401325, China

General product information and other remarks:

Product Description –

Functions	The equipment under test is Class II Wireless Repeater Plus which is powered by built-in power supply, and the internal battery is powered for the equipment when the AC power is cut off.
Material of enclosure	Plastic
Others	Indoor use only

Model / Type Ref.		
DS-PR1-WE(B)	DS-PR1-WE(B)UHK	DS-PR1-WE(B)CKV
DS-PR1-WE(B)UVS	DS-PR1-WE(B)KVO	DS-PR1-WE(B)HUN
DS-PR1-WB(B)	DS-PR1-WB(B)UHK	DS-PR1-WB(B)CKV
DS-PR1-WB(B)UVS	DS-PR1-WB(B)KVO	DS-PR1-WB(B)HUN

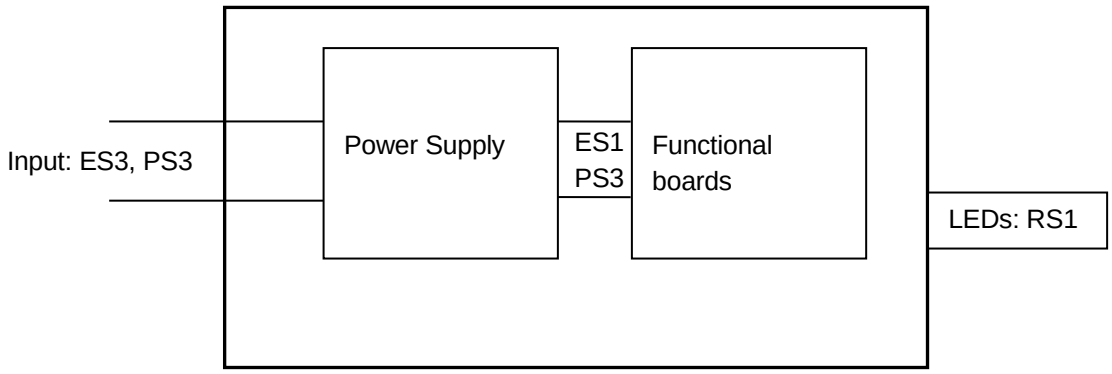
Model Differences –

All the models are identical except for model name, software version and frequency band which have no impact for the safety.

Additional application considerations – (Considerations used to test a component or sub-assembly) – N/A

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)**
Power input	ES3
Internal primary circuit of power supply	ES3
Other secondary circuit	ES1
All accessible parts	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)**
Power input	PS3
All internal circuits	PS3
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**
Lithium battery	Lithium-ion
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
Equipment mass	MS1
Wall/ceiling mount	MS3
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)**
All accessible parts	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)**
LEDs as indicator	RS1

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



Enclosure: ES1, MS1, TS1
Mass: MS1; Wall mounted: MS3

☒ **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	Supplementary	Reinforced (Enclosure)
Ordinary person	ES3: Power input and Internal primary circuit of power supply	Basic Insulation	Supplementary Insulation	Y1 capacitor, transformer, and optocoupler; reinforced clearance and creepage distance. Enclosure
Ordinary person	ES1: Other secondary circuit	N/A	N/A	N/A
Ordinary person	ES1: All accessible parts	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Internal combustible materials	PS3: Internal circuits	1. No ignition occurred. 2. No parts exceeding 90% of its spontaneous ignition temperature. 3. combustible material outside fire enclosure is of min HB	1. PCB is of min V-1 material 2. All other components were mounted on min V-1 PCB or of min V-2 or small parts of combustible material less than 4g. 3. Fire enclosure provided	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	Lithium battery	N/A	N/A	Comply with Annex M
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	MS1: Sharp edges and corners	N/A	N/A	N/A
Ordinary person	MS1: Equipment mass	N/A	N/A	N/A
Ordinary person	MS3: Wall/ceiling mount	N/A	N/A	Comply with clause 8.7.2

9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	RS1: LEDs as indicator	N/A	N/A	N/A
Supplementary Information:				
(1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

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Clause	Requirement + Test	Result - Remark	Verdict
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		P
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions ..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010) .....:		—
7.6	Batteries.....:	(See Annex M)	P
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 Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers ..... :		N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test..... :	(See appended table B.2.5)	P
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Requirements	Certified battery.	P
M.2.2	Compliance and test method (identify method) .. :	Battery complies with IEC 62133-2: 2017	P
M.3	Protection circuits		P
M.3.1	Requirements		P
M.3.2	Tests		P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		P
M.3.3	Compliance .....:	(See appended Tables and Annex M and M.4)	P
M.4	Additional safeguards for equipment containing secondary lithium battery		P
M.4.1	General		P
M.4.2	Charging safeguards		P

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.1	Charging operating limits		P
M.4.2.2a)	Charging voltage, current and temperature :	(See Table M.4)	—
M.4.2.2 b)	Single faults in charging circuitry:	(See Annex B.4)	—
M.4.3	Fire Enclosure	Plastic fire enclosure provided.	P
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Plastic front/back cover	Covestro Deutschland AG [PC Resins]	6487 + (z)(f1)	V-0/5VA, Min. thickness 3,0mm, 115°C	UL746 UL94	UL E41613
PCB	GUANGDONG HETONG TECHNOLOGY CO LTD	JX02	V-0, 130°C	UL796 UL94	UL E305654
Alternative	LONGNAN CHAMPION ASIA ELECTRONIC TECHNOLOGY CO LTD	F-M	V-0, 130°C	UL796 UL94	UL E254215
Alternative	Interchangeable	Interchangeable	V-1 or better, 130°C	UL796 UL94	UL
Battery pack	LIFUN TECHNOLOGY CO., LTD.	765965	3,8 V d.c., 4520 mAh, 17,176Wh	IEC 62133-2:2017	SGS Ref. Certif. No.: JPTUV-106634-M1; Report No.: 60355454 002
Alternative	**LIFUN TECHNOLOGY Co., LTD**	**115965-1S1P**	**3,7Vd.c.; 4950mA, 18,32Wh** **Max Charging Current:** **-10°C to 0°C: 495mA** **0°C to 45°C: 1000mA** **45°C to 60°C: 1000mA** **Max Charging Voltage:** **-10°C to 0°C: 4,2V** **0°C to 20°C: 4,2V** **20°C to 45°C: 4,2V** **45°C to 60°C: 4,1V**	**IEC 62133-2:2017, IEC 62133-2:2017/AMD1:2021**	**TUVSUD Certification No.: SG PSB-BT-05235** **Report No.:** **211-282240674-000**

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Clause	Requirement + Test	Result - Remark	Verdict

RTC battery	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Max Charging Current 300mA, Max Charging Voltage 3,4V	UL1642	MH15628
Building-in power supply (model: AD0-12W1 05)					
Appliance inlet	Zhe Jiang Bei Er Jia Electronic Co., Ltd.	ST-A03-005	2,5A, 250Vac, C8 type	IEC/EN 60320-1	VDE 40014833
Alternative	Steady Electronics Corporation	2123	AC 250 V, 2.5A, C8 type	IEC/EN 60320-1	VDE 40036613
Alternative	Zhejiang Le Ci Electronics Co., Ltd.	DB-8Series	AC 250 V, 2.5A, C8 type	IEC/EN 60320-1	VDE 40032028
Alternative	Dong Guan Yuankai Plastic Co., Ltd.	XHL-052C13	2,5A, 250Vac, C8 type	IEC/EN 60320-1	ENEC U6 001899 0002 Rev.04
PCB	Fujian Milky-way Technology Co Ltd	MW-CEM1	V-0, 130°C	UL 796 UL 94	UL E168066
Alternative	Interchangeable	Interchangeable	V-1 or better, Min. 130°C	UL 796 UL 94	UL
Fuse (F101)	Conquer Electronic.,Ltd.	MST	T2AL, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40017118
Alternative	Shenzhen Lanson Electronics Co Ltd	SMT	T2AL, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40012592
Alternative	Suzhou Walter ElectronicCo. Ltd.	2010	T2AL, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40018781
Alternative	HonghuBluelight Electronic Co.,Ltd	6ET	T2AL, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40034107
Alternative	XC Electronics (Shen Zhen) Corp. Ltd.	5TE	T2AL, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40029550

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Clause	Requirement + Test	Result - Remark	Verdict

Line chock (LF101)	SHENZHEN WANZHIYU TECHNOLOGY CO LTD	HEL-B82/EE8.3-1212	130°C	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
- Bobbin of LF101	SUMITOMO BAKELITE CO LTD	PM-9823	Phenolic, V-0,	UL94	UL E41429
Line chock (LF101) Alternative	HUIZHOUSHI BANQIAO ELECTRONICS CO LTD	HEL-B82/EE8.3-1212	130°C	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
- Bobbin of LF101	ChangChun Plastics Co., LTD.	T200HF/T220NA	Phenolic, V-0	UL94	UL E59481
Line chock (LF101) Alternative	HANGKUN ELECTRNIC TECHNOLOGY CO., LTD	HEL-B82/EE8.3-1212	130°C	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
- Bobbin of LF101	SUMITOMO BAKELITE CO LTD	PM-9823	Phenolic, V-0	UL94	UL E41429
Varistor (MOV101) (Optional)	Thinking Electronic Industrial Co., Ltd	TVR10561-V, TVR10681-V, TVR10471-V, TVR10621-V, TVR14561-V TVR14621-V TVR14681-V TVR14511-V TVR10561, TVR10621, TVR10471, TVR14561, TVR14681, TVR14621. TVR14511	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 005944

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Success Electronics Co Ltd	SVR14D511K, SVR14D561K, SVR14D681K, SVR10D511K, SVR10D621K, SVR10D561K	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 40030401 VDE 123677
Alternative	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	14D471K, 14D511K, 14D561K, 14D621K, 14D681K, 10D471K, 10D511K, 10D561K, 10D621K, 10D681K	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 40023049
Alternative	XIAN XIWUER ELECTRONIC & INFORMATION CO LTD	MYG3-14K325, MYG3-14K360, MYG3-14K385, MYG3-14K420, MYG3-14K460, MYG3-10K325, MYG3-10K360, MYG3-10K385, MYG3-10K420, MYG3-10K460	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 40008528
Alternative	CERGLASS MFG INC	14D471K, 14D511K, 14D561K, 14D621K, 14D681K, 10D471K, 10D511K, 10D561K, 10D621K, 10D681K.	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 40028836

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

Alternative	THERMISTOR-MOV ELECTRONICS CO LTD	HVR14D471-HJ HVR14D511-HJ HVR14D561-HJ, HVR14D621-HJ, HVR14D681-HJ, HVR10D471-HJ, HVR10D511-HJ, HVR10D561-HJ, HVR10D621-HJ, HVR10D681-HJ.	Min. 300Vac, Min. 85°C, (tested by UL for 6KV/3KA combination pulse), Coating rated V-0.	IEC/EN 61051-1 IEC/EN 61051-2	VDE 40028836
Bridge Rectifier (BD101)	Interchangeable	Interchangeable	Min. 1A, min. 1000Vac	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
Electrolytic Capacitor (C101)	Interchangeable	Interchangeable	22-45μF, min. 400V, 105°C	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
Thermistor (NTC101) (Optional)	Interchangeable	Interchangeable	240Vac, min. 1.0A, Min. 1.0 ohm at 25ºC	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
Transistor (Q101)	Interchangeable	Interchangeable	Min. 600V, min. 4A	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance

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

X-Capacitor (CX101)	Dongguan Easy-Gather Electronic Co Ltd	MKP-X2	Max. 0,15µF±10%, min. 250Vac, 105°C, X2 type	IEC/EN 60384-14	VDE 40022258
Alternative	SHENZHEN SURONG CAPACITORS CO LTD	MPX, MKP	Max. 0,15µF±10%, min. 250Vac, 110°C, X2 type	IEC/EN 60384-14	VDE 40008924
Alternative	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	Max. 0,15µF±10%, min. 250Vac, 110°C, X2 type	IEC/EN 60384-14	VDE 40018690
Alternative	Nanjing Tengen Rongguangda Electronics (Group) Co., Ltd.	MKP	Max. 0,15µF±10%, min. 250Vac, 100°C, X2 type	IEC/EN 60384-14	VDE 40028680
Alternative	NANJING TENGEN RONG GUANG DA ELECTRONIC SALES CO LTD	MKP	Max. 0,15µF±10%, min. 250Vac, 100°C, X2 type	IEC/EN 60384-14	VDE 40049725
Alternative	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	Max. 0,15µF±10%, min. 275Vac, 100°C, X2 type	IEC/EN 60384-14	VDE40034679
Alternative	ZHUHAI SUNG HO ELECTRONICS CO LTD	CMPP	Max. 0,15µF±10%, min. 275Vac, 105°C, X2 type	IEC/EN 60384-14	VDE 40026078
Alternative	Europtronic (SuZhou)	MPX2	Max. 0,15µF±10%, min. 250Vac, 110°C, X2 type	IEC/EN 60384-14	VDE40025981
Alternative	Europtronic (SuZhou)	MPX	Max. 0,15µF±10%, min. 250Vac,105°C, X2 type	IEC/EN 60384-14	VDE40018238
Alternative	ANHUI FEIDA ELECTRICAL TECHNOLOGY CO LTD	MKP	Max. 0,15µF±10%, min. 250Vac,110°C, X2 type	IEC/EN 60384-14	VDE40045744

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

Bleeder resistor (R101, R102)	Interchangeable	Interchangeable	Each Max.2,4Mohm, min.1/4W	IEC 62368-1: 2014 (Second Edition), EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018	Test with appliance
Y-Capacitor (CY101)	Guangdong South Hongming Electronic Science & Technology Co., Ltd	F	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 40036393
Alternative	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMENT ZONE SONGTIAN ENTERPRISE CO LTD	CD	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 40025754
Alternative	DONGGUAN EASY-GATHER ELECTRONIC CO LTD	DCF	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 40022942
Alternative	SUCCESS ELECTRONICS CO LTD	SE	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 40020002
Alternative	YINAN DON'S ELECTRONIC COMPONENT CO., LTD	CT81	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 135256
Alternative	HAOHUA ELECTRONIC CO LTD	CT7	Max.1000pF, Min. 250Vac, 125°C, Y1 type.	IEC/EN 60384-14	VDE 40003902
Optical isolator(U102)	COSMO ELECTRONICS CORP	K1010, KPC817	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 101347
Alternative	LITE-ON TECHNOLOGY CORP	LTV-817	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 40015248

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

Alternative	EVERLIGHT ELECTRONICS CO LTD	EL817	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 132249
Alternative	Ct Microelectronics FarEast Led	CT817	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 40039590
Alternative	SHENZHEN ORIENT COMPONENTS CO LTD	ORPC-817x	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 40029733
Alternative	China Resources Semiconductor (ShenZhen) Ltd.	PC817C	Dti. =min. 0,4mm; Ext.dcr. =min.6,0mm; min.100°C	IEC/EN 60747-5-5; IEC/EN 60950-1	VDE 40042139
Transformer (T101)	SHENZHEN TOHO ELECTRONIC TECHNOLOGY CO LTD	PQ2011-005015	Class B	Applicable part of IEC/EN 62368-1 according to IEC/EN 60085	Test with appliance
-Insulation system of Transformer	SHENZHEN TOHO ELECTRONIC TECHNOLOGY CO LTD	TOHO	Class B	UL 1446	UL E493533
- Bobbin	Sumitomo Bakelite Co Ltd	PM-9820 PM-9630	Phenolic, V-0, 150°C, min. 0,51mm thickness	UL746	UL E41429
-Triple Insulated Wire	Furukawa Electric Co.,Ltd.	TEX-E	130°C	UL 2353	UL E206440
- Magnet wire	Interchangeable	Interchangeable	130°C	UL 1446	UL
- Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD.	CT*(c)(g), PZ*(b)	130°C	UL 510	UL E165111
- Varnish	HUI ZHOU QIANG DA ELECTRONICS INDUSTRY CO LTD	DA700*	130°C	UL 1446	UL E347463
Alternative	John C Dolph Co	BC-359 BC-346A	130°C	UL 1446	UL E317427

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

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

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

B.2.5	TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90	50	0,09	--	4,24	--	F101	0,09	Normal work.
100	50	0,08	0,20	4,23	--	F101	0,08	
240	50	0,06	0,20	4,31	--	F101	0,06	
264	50	0,05	--	4,35	--	F101	0,05	
90	60	0,09	--	4,24	--	F101	0,09	
100	60	0,08	0,20	4,24	--	F101	0,08	
240	60	0,05	0,20	4,32	--	F101	0,05	
264	60	0,05	--	4,36	--	F101	0,05	
Full battery discharge	--	0,16	--	0,59	--	--	--	BAT discharge only.
Supplementary information:,								
Equipment may be have rated current or rated power or both. Both should be measured. Test with alternative battery pack (Model: 115965-1S1P)								

Annex M.3	TABLE: Batteries									P
The tests of Annex M are applicable only when appropriate battery data is not available										P
Is it possible to install the battery in a reverse polarity position?..... :							No			N/A
	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.	
Battery pack (Model: 115965-1S1P)										
Max. current during normal condition	--	--	--	0,67A	1A	0,16A	1A	--	--	
Max. current during fault condition	--	--	--	0A (UV1 Pin1-13 SC)	1A	0A (UV1 Pin13-15 Sc)	1A	--	--	
Test results:										Verdict
- Chemical leaks							No			P
- Explosion of the battery							No			P
- Emission of flame or expulsion of molten metal							No			P
- Electric strength tests of equipment after completion of tests							No			P
Supplementary information:										

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

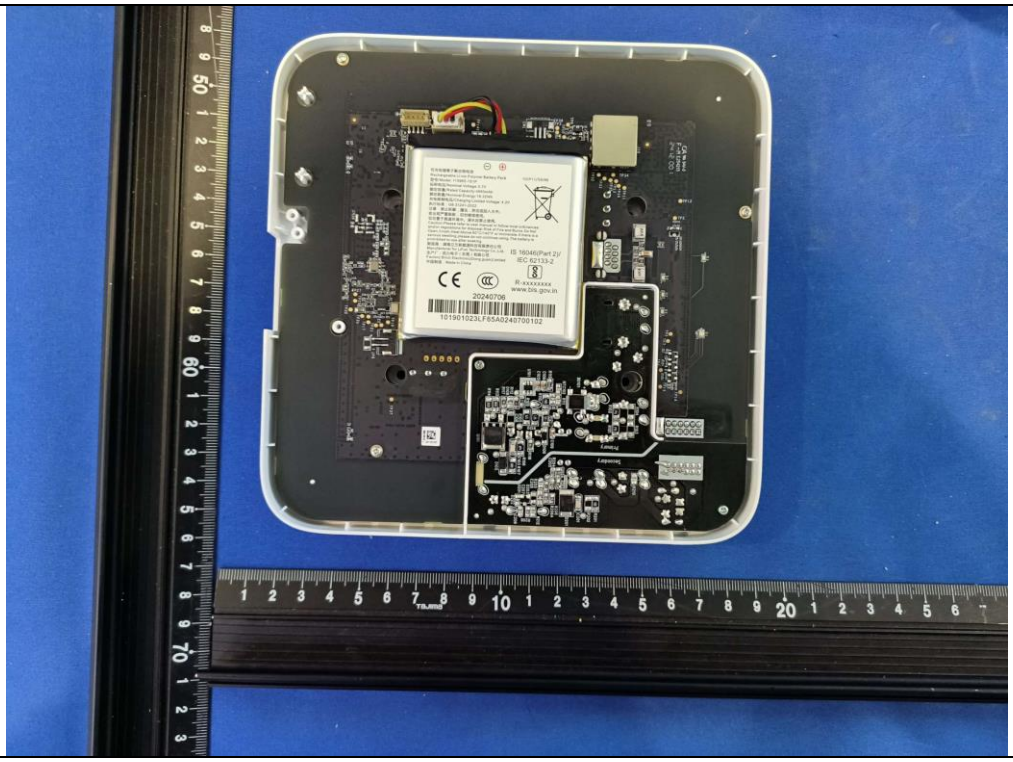
Annex M.3	**TABLE: Batteries**									P
The tests of Annex M are applicable only when appropriate battery data is not available										P
Is it possible to install the battery in a reverse polarity position?..... :						No				N/A
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Battery pack (Model: 115965-1S1P)										
Sc=Short circuit										

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**				P
Battery/Cell No.	Test conditions	Measurements			Observation
		U (V)	I (A)	Temp (C)	
(Model: 115965-1S1P) See table 4.1.2	Single fault – UV1 Pin1-13 Sc	4,2	0	26,3	Did not exceed MSCV.
	Single fault – UV1 Pin1-13 Sc	4,2	0	26,1	Did not exceed MSCC.
Supplementary Information:					
Sc=Short circuit					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
See table 4.1.2	-10	Stop charging	60	Stop charging
See table 4.1.2	0	Charging current: 0,425A, didn't exceed charging limit	45	Charging current: 0,664A, didn't exceed charging limit
Supplementary Information:				
Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature.				

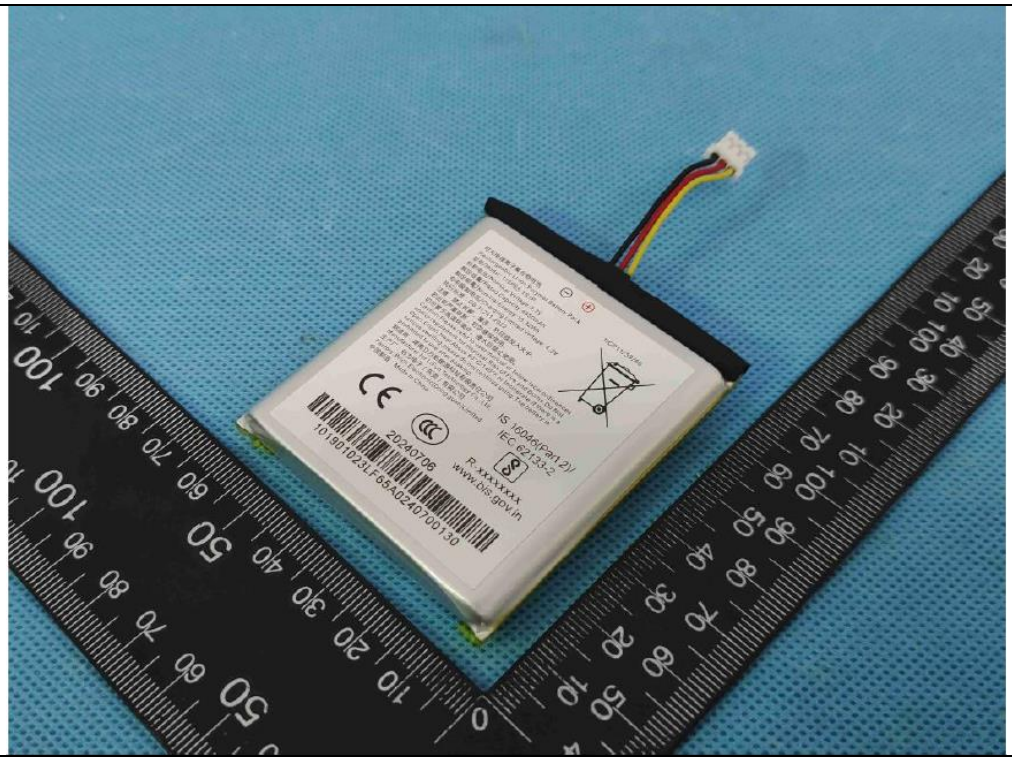
---End of Report---

Details of: Internal View

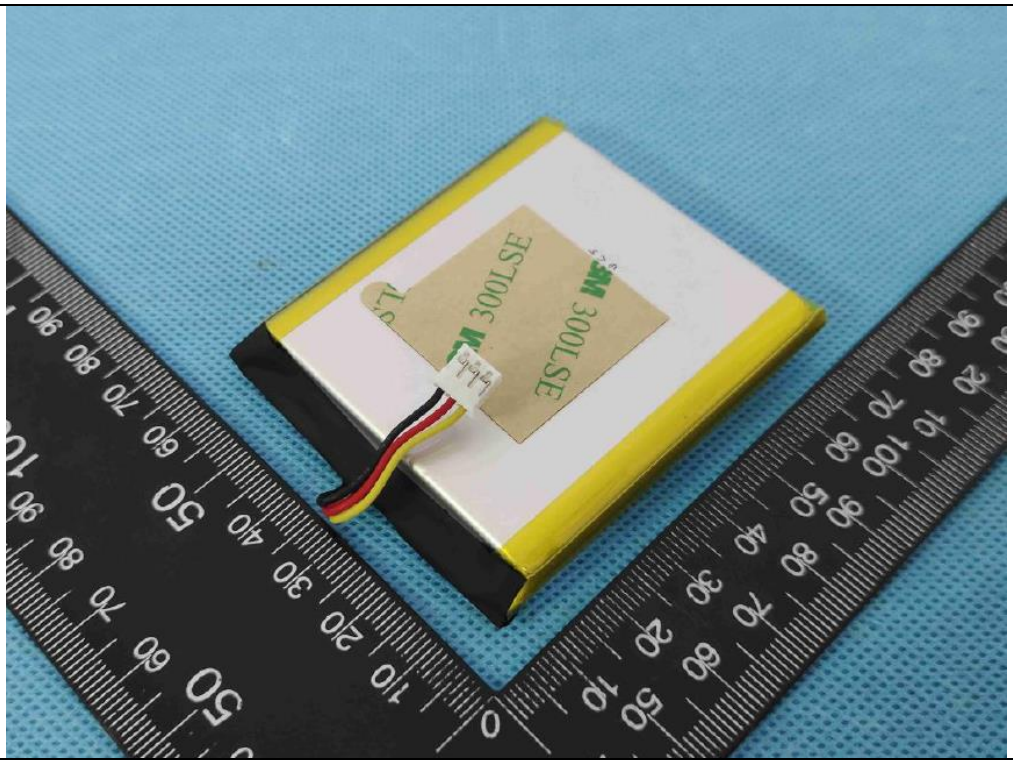


Details of: Battery(Model: 115965-1S1P)

Details of: Battery(Model: 115965-1S1P)



Details of: Battery(Model: 115965-1S1P)



*******End of Attachment 1*******