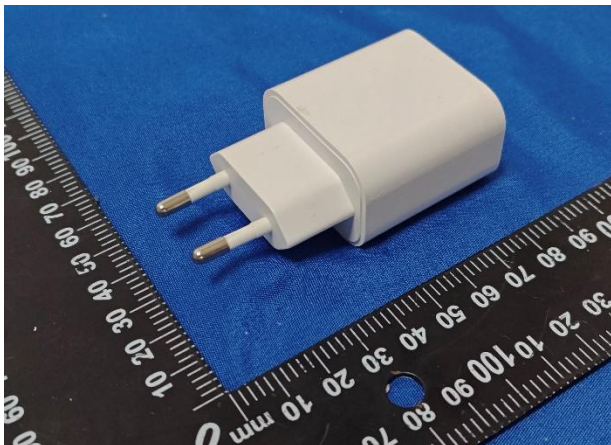


Prüfbericht-Nr.: Test report no.:	CN26GCKK 001	Auftrags-Nr.: Order no.:	27229851	Seite 1 von 71 Page 1 of 71
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2026-04-03	
Auftraggeber: Client:	Dongguan Nahai Supply Chain Management Co., Ltd. Room A602, Unit 1, Building 1, No.1 Nanshan Road, Songshanhu Park, Dongguan City 523799 Guangdong, P.R.China.			
Prüfgegenstand: Test item:	PD20W FAST CHARGING			
Bezeichnung / Typ-Nr.: Identification / Type no.:	Refer to page 5 of the main report (Trademark: N/A)			
Auftrags-Inhalt: Order content:	LVD CoC approval			
Prüfgrundlage: Test specification:	EN 62368-1:2014+A11:2017			
Wareneingangsdatum: Date of sample receipt:	2026-04-03			
Prüfmuster-Nr.: Test sample no.:	PRMS2603480 01-15			
Prüfzeitraum: Testing period:	2026-04-03 to 2026-04-30			
Ort der Prüfung: Place of testing:	See page 6			
Prüflaboratorium: Testing laboratory:	TUV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by: Carol Xiong	☒ <u>Carol Xiong</u>	genehmigt von: authorized by: Sonya Chen	☒ <u>Sonya Chen</u>	
Datum: Date: 2026-06-17		Ausstellungsdatum: Issue date: 2026-06-17		
Stellung / Position:	Project Handler	Stellung / Position:	Authoriser	
Sonstiges / Other:	See page 3			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht-Nr.: CN26GCKK 001
Test report no.:

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Page 2 of 71

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature <i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature</i>
3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

Prüfbericht-Nr.: CN26GCKK 001
Test report no.:

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Page 3 of 71

Other Aspects / Sonstiges:

1. This test report is issued for TÜV Rheinland LVD CoC approval.
2. Tested according to European harmonized standards.
3. This report consists:
 - 71 pages test report including 3 cover pages,
 - Attachment 1 National Difference (9 pages),
 - Attachment 2 Working voltage and construction of transformer (3 pages),
 - Attachment 3 EU plug portion test report (4 pages),
 - Attachment 4: Photo documentation (13 pages),
 - Attachment 5: EMF Assessment Report (2 pages).

TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	See cover page
Date of issue	See cover page
Total number of pages	See cover page
Name of Testing Laboratory preparing the Report	TÜV Rheinland (Shenzhen) Co., Ltd.
Applicant's name	See cover page
Address	See cover page
Test specification:	
Standard	See cover page
Test procedure	See cover page
Non-standard test method	N/A
TRF template used	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No.	IEC62368_1D
Test Report Form(s) Originator ..	UL(US)
Master TRF	Dated 2022-04-14
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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	PD20W FAST CHARGING	
Trade Mark(s)	N/A	
Manufacturer	Same as applicant	
Model/Type reference	TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281, TC-279, TC-278, TC-276	
Ratings	Input: 100-240V~, 50/60Hz, 0.6A Output: see table A for details	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ Testing Laboratory:	See cover page	
Testing location/ address	See cover page	
Tested by (name, function, signature)		
Approved by (name, function, signature)		
☐ Testing procedure: CTF Stage 1:	N/A	
Testing location/ address	N/A	
Tested by (name, function, signature)	N/A	
Approved by (name, function, signature)	N/A	
☐ Testing procedure: CTF Stage 2:	N/A	
Testing location/ address	N/A	
Tested by (name, function, signature)	N/A	
Witnessed by (name, function, signature)	N/A	
Approved by (name, function, signature)	N/A	
☐ Testing procedure: CTF Stage 3 :	N/A	
☐ Testing procedure: CTF Stage 4:	N/A	
Testing location/ address	N/A	
Tested by (name, function, signature)	N/A	
Witnessed by (name, function, signature)	N/A	
Approved by (name, function, signature)	N/A	
Supervised by (name, function, signature)	N/A	

List of Attachments (including a total number of pages in each attachment):																																											
See cover page																																											
Summary of testing:																																											
Tests performed (name of test and test clause): All applicable tests as described in Test Case and Measurement Sections were performed. - Maximal ambient temperature as specified by the manufacturer: +25°C. - The equipment is specified to be operated up to 2000m above sea level. - Load conditions used during testing see appended table B.2.5 for details. Following tests performed during evaluation <table border="1"> <tr><td>4.7.3</td><td>Direct pug-in moment test</td></tr> <tr><td>5.2</td><td>Electrical energy source classifications</td></tr> <tr><td>5.4.1.4, 6.3.2, 9.0, B.2.6</td><td>Maximum operating temperatures for materials, components and systems</td></tr> <tr><td>5.4.1.8</td><td>Determination of working voltage</td></tr> <tr><td>5.4.1.10.3</td><td>Ball pressure test</td></tr> <tr><td>5.4.2.2, 5.4.2.4 & 5.4.3</td><td>Minimum Clearances/Creepage distance</td></tr> <tr><td>5.4.5.1</td><td>Surge test</td></tr> <tr><td>5.4.8</td><td>Humidity conditioning</td></tr> <tr><td>5.4.9</td><td>Electric strength test</td></tr> <tr><td>6.2.2</td><td>Electrical power sources (PS) measurements for classification</td></tr> <tr><td>9.2</td><td>Equipment safeguards for thermal burn</td></tr> <tr><td>B.2.5</td><td>Input tests</td></tr> <tr><td>B.3</td><td>Simulated Abnormal operating condition tests</td></tr> <tr><td>B.4</td><td>Simulated single fault conditions</td></tr> <tr><td>F.3.9</td><td>Durability, legibility and permanence of markings</td></tr> <tr><td>G.5.3.3</td><td>Transformer overload</td></tr> <tr><td>Q.1.2</td><td>Limited power sources</td></tr> <tr><td>T.2</td><td>Steady force test, 10 N</td></tr> <tr><td>T.4</td><td>Steady force test, 100 N</td></tr> <tr><td>T.7</td><td>Drop test</td></tr> <tr><td>T.8</td><td>Stress relief test</td></tr> </table> Unless otherwise specified, all tests were performed on model TC-280 and TC-275 which represent all	4.7.3	Direct pug-in moment test	5.2	Electrical energy source classifications	5.4.1.4, 6.3.2, 9.0, B.2.6	Maximum operating temperatures for materials, components and systems	5.4.1.8	Determination of working voltage	5.4.1.10.3	Ball pressure test	5.4.2.2, 5.4.2.4 & 5.4.3	Minimum Clearances/Creepage distance	5.4.5.1	Surge test	5.4.8	Humidity conditioning	5.4.9	Electric strength test	6.2.2	Electrical power sources (PS) measurements for classification	9.2	Equipment safeguards for thermal burn	B.2.5	Input tests	B.3	Simulated Abnormal operating condition tests	B.4	Simulated single fault conditions	F.3.9	Durability, legibility and permanence of markings	G.5.3.3	Transformer overload	Q.1.2	Limited power sources	T.2	Steady force test, 10 N	T.4	Steady force test, 100 N	T.7	Drop test	T.8	Stress relief test	Testing location: ShenZhen Promise Test Technology Co., Ltd. 103, Building 1, Yibaolai Industrial City, Qiaotou Community, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
4.7.3	Direct pug-in moment test																																										
5.2	Electrical energy source classifications																																										
5.4.1.4, 6.3.2, 9.0, B.2.6	Maximum operating temperatures for materials, components and systems																																										
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T.4	Steady force test, 100 N																																										
T.7	Drop test																																										
T.8	Stress relief test																																										

models. The EUTs passed the test.	
Summary of compliance with National Differences (List of countries addressed): EU Group Differences, EU Special National Conditions. For National Differences see attachment 1 of this test report. ☒ The product fulfils the requirements of EN 62368-1:2014+A11:2017.	
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:

PD20W FAST CHARGING

Model: TC-280

Input: 100-240V ~ 50/60Hz 0.6A

USB-C Output: 5.0V $\Rightarrow$ 3.0A, 9.0V $\Rightarrow$ 2.22A, 12.0V $\Rightarrow$ 1.67A

USB-A Output: 5.0V $\Rightarrow$ 3.0A, 9.0V $\Rightarrow$ 2.0A, 12.0V $\Rightarrow$ 1.5A

USB-C + USB-A Output: 5.0V $\Rightarrow$ 3.0A

PPS: 5.0-11.0V $\Rightarrow$ 1.8A

Dongguan Nahai Supply Chain Management Co., Ltd.

Made in China



PD20W FAST CHARGING

Model: TC-275

Input: 100-240V ~ 50/60Hz 0.6A

Output: 5.0V $\Rightarrow$ 3.0A, 9.0V $\Rightarrow$ 2.22A, 12.0V $\Rightarrow$ 1.67A

PPS: 3.3-5.9V $\Rightarrow$ 3A, 3.3-11V $\Rightarrow$ 2A 20W Max

Dongguan Nahai Supply Chain Management Co., Ltd.

Made in China



Note:

1. Since similar label used, only label for models above listed to represent other similar ones.
2. The contact address of manufacturer and his authorized representative or the importer are affixed to the product prior to marketing of the product in the European Economic Area.

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: _____
Considered current rating of protective device as part of building or equipment installation.....	16A 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 IV ☐ other: _____
Class of equipment	☐ Class I ☐ Class II with functional earthing ☐ Not classified
Access location	☐ restricted access area
Pollution degree (PD)	☐ PD 1
Manufacturer's specified maxium operating ambient	25°C
IP protection class	☒ IPX0 ☐ IP____
Power Systems	☒ TN ☐ TT ☐ IT - ____ V L-L; ☐ dc mains ☐ N/A
Altitude during operation (m)	☒ 2000 m or less ☐ 5000 m
Altitude of test laboratory (m)	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg)	☒ Approx. 0.047Kg

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.....: See cover page

Date (s) of performance of tests See cover page

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.

☐ This Test Report Form contains requirements according to IEC/ISO Standard dated and includes Corrigendum dated

(Note: The above text maybe removed if not applicable)

Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:

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

When differences exist; they shall be identified in the General product information section.
Name and address of factory (ies).....:

Shenzhen Cnbado Electronics Co., Ltd.
Room 101, 2nd Floor and 3rd Floor, Building 4, Wan'an Industrial Zone, Sha Yi Community, Shajing Street, Bao'an District, Shenzhen City 518125 Guangdong, P.R. China

General product information and other remarks:
Product Description:

1. The product is a Class II PD20W FAST CHARGING (direct plug-in type) intended to be used for information and communication technology equipment or Audio/Video and similar electronics apparatus.
2. The top enclosure is secured to bottom enclosure by ultrasonic welding.
3. The plug in part is fixed to the enclosure and the plug portions (incorporate pins) are moulded together with enclosure that effectively prevents any disintegration or conductive parts remaining in the socket.
4. Specified maximum ambient temperature is 25°C.
5. Clearance was evaluated for operating altitude up to 2000m.
6. The tumbling barrel test of European plug according to DIN VDE 0620-2-1:2021, sub-clause 24.2, DIN VDE, 0620-101:1992 clause 7, figure 2 "Gauge for interchange ability" and EN 50075 was been evaluated

Model difference:

All models are the same except for the model name, output ratings, output connector, secondary circuit & PCB layout based on different output connector, some secondary components to adjust output rating.

Table A: Model list and output rating

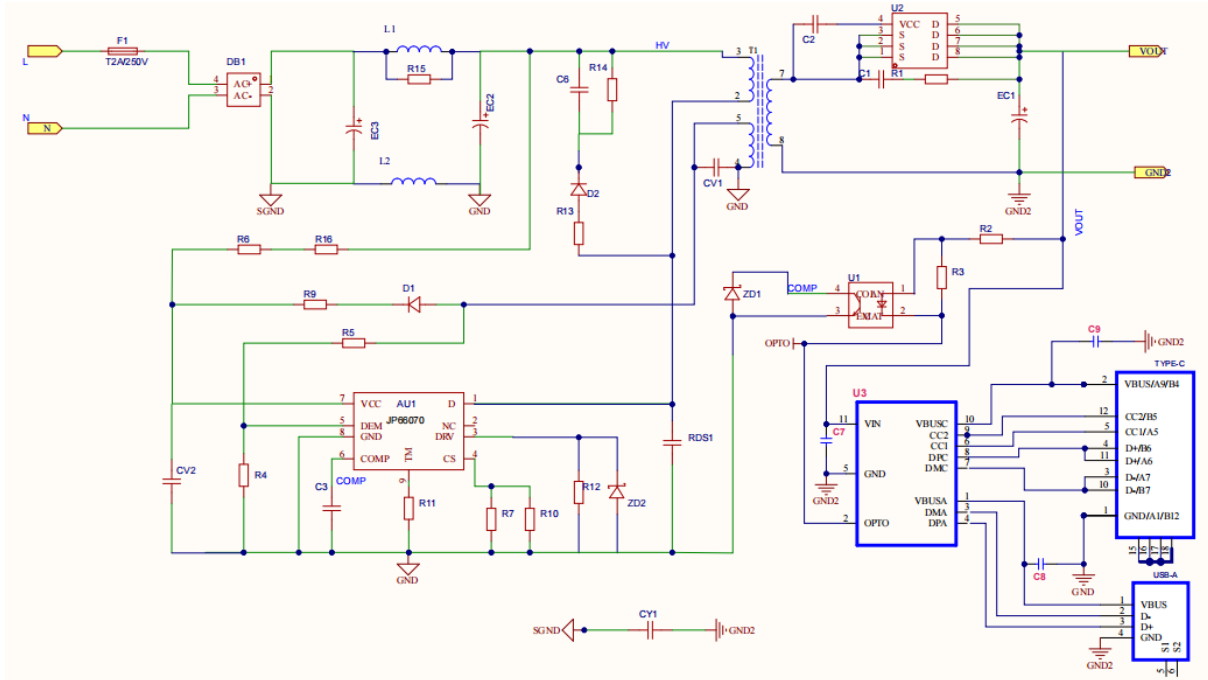
Model No.	Output ratings	Max Power (W)	Output Port
TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286	USB-C: 5.0VDC, 3.0A; 9.0VDC, 2.22A; 12.0VDC, 1.67A PPS: 5.0-11.0VDC, 1.8A USB-A: 5.0VDC, 3.0A; 9.0VDC, 2.0A; 12.0VDC, 1.5A USB-C+USB-A: 5.0VDC, 3.0A.	20	USB-A + USB-C
TC-275, TC-281, TC-279, TC-278, TC-276	USB-C: 5.0VDC, 3.0A; 9.0VDC, 2.22A; 12.0VDC, 1.67A PPS: 3.3-5.9VDC, 3A; 3.3-11VDC, 2A 20W Max.	20	USB-C
Additional application considerations EU plug portion tested according to EN 50075:1990 (details see attachment 3).			

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)
Primary circuits supplied by a.c. mains supply	ES3
Secondary output connector	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)
All internal circuit	PS3
Output connector	PS2
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)	N/A
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	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)
Internal Parts/circuit of the unit in enclosure	TS3
Accessible part of external enclosure surfaces	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)
N/A (None)	N/A

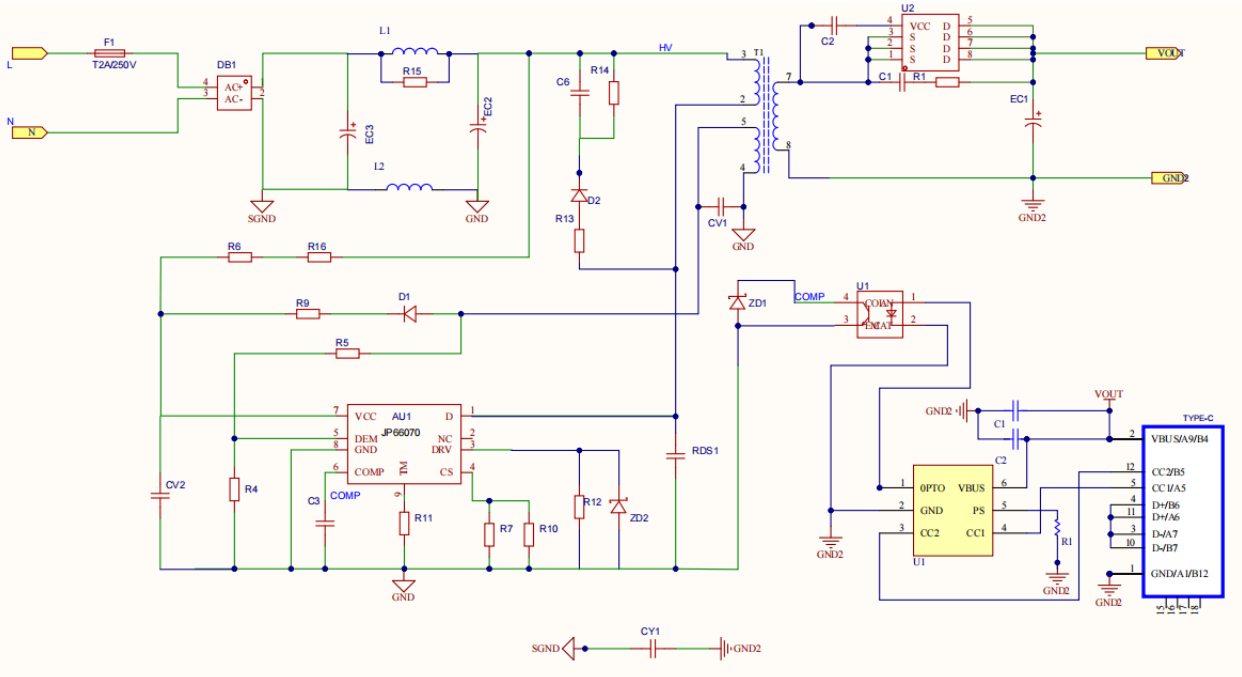
ENERGY SOURCE DIAGRAM

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

USB-A+USB-C:



USB-C:



☒ 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	ES3: All circuits except for secondary circuit after T1	N/A	N/A	Enclosure, See 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.9, 5.5.3 and 5.5.4
Ordinary	ES1: Secondary circuit after T1	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
Enclosure	PS3 circuit	See 6.3	V-0	N/A
PCB	PS3 circuit	See 6.3	V-1	N/A
The other components/materials	PS2/PS3 circuit	See 6.3	See 6.4.5, 6.4.6	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A (no such sources)	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS1: Edges and corners	N/A	N/A	N/A
Ordinary	MS1: Mass of the unit	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: Plastic enclosure	N/A	N/A	N/A
Ordinary	TS3: Internal parts/circuits	N/A	N/A	Enclosure
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A (no such sources)	N/A	N/A	N/A	N/A
Supplementary Information:				

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

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Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding access to ES3 and to limiting the outputs to fulfill ES1, and protection in regard to risk of spread of fire, mechanical-caused injury and thermal burn considered.	P
4.1.15	Markings and instructions	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests	(See Annex T.2, T.4)	P
4.4.4.3	Drop tests	(See Annex T.7)	P
4.4.4.4	Impact tests	(See Annex T.6)	N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests	The external enclosure cannot be opened without damaging the product.	N/A
4.4.4.6	Glass Impact tests	No such glass used.	N/A
4.4.4.7	Thermoplastic material tests	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness	After tests of 4.4.4.2, 4.4.4.3, 4.4.4.4, 4.4.4.7, no safeguard damaged.	P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
4.6.2	10 N force test applied to	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
4.7	Equipment for direct insertion into mains socket - outlets		P
4.7.2	Mains plug part complies with the relevant standard	The dimension of the injection part of EU plug were tested and comply with the relevant	P

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Clause	Requirement + Test	Result - Remark	Verdict
		standard. See appended table 4.1.2 and attachment 3 for details.	
4.7.3	Torque (Nm)	Max. 0.018Nm for all enclosure	P
4.8	Products containing coin/button cell batteries	No coin/button cell batteries used.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery		—
4.8.4	Battery Compartment Mechanical Tests		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....	No likelihood of conductive object entering into enclosure.	P

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....	(See appended table 5.2)	P
5.2.2.3	Capacitance limits		N/A
5.2.2.4	Single pulse limits	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringling signals	No such ringing signals within the EUT	N/A
5.2.2.7	Audio signals	No such audio signals	N/A
5.3	Protection against electrical energy sources	See only 4.3 and 5.3 to 5.6 which applies to protection between the accessible parts and hazardous parts of other circuits.	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See above	P
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit can be accessed for this product.	P
5.3.2.2	Contact requirements	No opening of enclosure, no access with test probe to any ES3 circuit or parts.	P
	a) Test with test probe from Annex V		P
	b) Electric strength test potential (V)		N/A
	c) Air gap (mm)		N/A
5.3.2.4	Terminals for connecting stripped wire	No such terminals.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	The choice and application have been taken into account as specified in this Clause 5 and Annex T. Natural rubber, hygroscopic materials or asbestos are not used as insulation.	P
5.4.1.3	Humidity conditioning	(See sub-clause 5.4.8 and 5.4.9)	P
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied for except as in 5.4.4.	N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the EUT	N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces	Considered for accessible surface of enclosure.	P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	See only 5.4.10.3 below.	P
5.4.1.10.2	Vicat softening temperature.....	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure	Phenolic bobbin material used in transformer and line choke which is acceptable without test. For other parts see appended table 5.4.1.10.3	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See only appended table as below)	N/A
5.4.2.3	Determining clearance using required withstand voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
	a) a.c. mains transient voltage	2500V for Overvoltage category II	—
	b) d.c. mains transient voltage	No such transient	—
	c) external circuit transient voltage	No such transient	—
	d) transient voltage determined by measurement:		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	Using procedure 2 to determine the clearance according to 5.4.2.3.	N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.3	Creepage distances	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group	IIIb	—
5.4.4	Solid insulation	See below	P
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices	(See appended table 5.4.4.2)	N/A
5.4.4.5	Cemented joints	No such construction within the EUT	N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs)		N/A
5.4.4.6.3	Non-separable thin sheet material	No such thin sheet material within the EUT	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material	(see appended table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	See G.5.3 and G.6.1	P
5.4.4.9	Solid insulation at frequencies >30 kHz	(See appended Table 5.4.4.9)	P
5.4.5	Antenna terminal insulation		P
5.4.5.1	General	The power supply will provide non-mains supply voltages to other equipment having antenna terminals.	P
5.4.5.2	Voltage surge test	Surge test with 50 discharges at a maximum rate of 12/min from a 1 nF capacitor charged to 10 kV performed.	P
	Insulation resistance (MΩ).....	Measured 500MΩ between mains supply to output terminals.	—
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire used alone as supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No tests necessary –see only 5.4.4.4.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.8	Humidity conditioning	Humidity treatment performed for 48hrs for equipment with every transformer and insulation tape source, after humidity test, Hi-pot test has been performed (The specified Max. Ambient temperature is 25°C).	P
	Relative humidity (%).....:	93% (By client requested)	—
	Temperature (°C)	30°C (By client requested)	—
	Duration (h)	48h (By client requested)	—
5.4.9	Electric strength test	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test	Compliance was checked immediately following temperature test in 5.4.1.4 on the complete unit and on a sample of the transformer raised to the relevant temperature as measured during that test. (See appended table 5.4.9)	P
5.4.9.2	Test procedure for routine tests	No routine tests considered. To be considered during the relevant national approval.	N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test.....:		N/A
5.4.11	Insulation between external circuits and earthed circuitry	No such connections for external circuit applied within the EUT.	N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such connections to external circuit as above.	N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V).....:		—
	Nominal voltage U_{peak} (V).....:		—
	Max increase due to variation U_{sp}		—
	Max increase due to ageing ΔU_{sa}		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$		—
5.5	Components as safeguards		P
5.5.1	General	See the following details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.2	Capacitors and RC units	Approved capacitor provided. See G.11.1 for compliance and their application.	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:		N/A
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See Annex G.12)	P
5.5.5	Relays	No such component provided	N/A
5.5.6	Resistors	No such component provided	N/A
5.5.7	SPD's	No such component provided	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:	No such external circuits.	N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors	Class II equipment with no means of earthing	N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors	No power cord provided	N/A
	Protective earthing conductor size (mm ²).....:		—
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm ²)......:		—
	Protective current rating (A).....:		—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm ²), nominal thread diameter (mm)......:		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 4 of IEC 60990:1999 was used in determining of the limit of ES1.	P
5.7.2.1	Measurement of touch current	(See appended table 5.2)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:1999 applied.	P
	System of interconnected equipment (separate connections/single connection)	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections)	Single connection.	—
5.7.4	Earthed conductive accessible parts	Class II equipment. (See appended table 5.2)	N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....		—
	Measured current (mA).....		—
	Instructional Safeguard.....	Not exceeding ES1 limit.	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No such external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	No external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA).....		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits.	P
6.2.2.1	General	See the following details.	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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.5	PS2	(See appended table 6.2.2)	P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	See the following details.	P
6.2.3.1	Arcing PIS	All parts in circuits inside enclosure is considered as Arcing PIS (See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS	All parts in circuits and components inside enclosure considered as 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	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Only connector complying with 6.4.5.	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied, V-0 fire enclosure provided.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	See above.	N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions	(See appended table 6.4.3)	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits	No supplementary safeguards are needed for protection against PS1.	N/A
6.4.5	Control of fire spread in PS2 circuits	Compliance detailed as follows: – <u>Printed board</u> : rated min. V-1 – <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. – <u>Isolating transformer</u> : complying with G.5.3.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G)	N/A
6.4.6	Control of fire spread in PS3 circuit	Compliance detailed as follows: – Parts as in 6.4.5 above – Fire enclosure rated V-0 used.	P
6.4.7	Separation of combustible materials from a PIS	Fire enclosure provided for all internal parts.	N/A
6.4.7.1	General	(See tables 6.2.3.1 and 6.2.3.2)	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier	No specific barrier provided.	N/A
6.4.8	Fire enclosures and fire barriers	See below.	P
6.4.8.1	Fire enclosure and fire barrier material properties	The V-0 fire enclosure is used for the whole enclosure.	P
6.4.8.2.1	Requirements for a fire barrier	No fire barrier used.	N/A
6.4.8.2.2	Requirements for a fire enclosure	For available power <4000W, the V-0 fire enclosure is used for the overall enclosure as above.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings in fire enclosure.	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)	No openings	N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)	No openings	N/A
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating	Fire enclosure is made of V-0 material	P
6.5	Internal and external wiring		N/A
6.5.1	Requirements		N/A
6.5.2	Cross-sectional area (mm ²)		—
6.5.3	Requirements for interconnection to building wiring		N/A
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1		P

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Clause	Requirement + Test	Result - Remark	Verdict

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure	No ozone production within the equipment.	N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)		—
7.6	Batteries.....	(See Annex M)	N/A

8	MECHANICALLY-CAUSED INJURY		P
8.1	General	No moving parts in the equipment; see below regarding edges and corners.	P
8.2	Mechanical energy source classifications	MS1 applied for mass of equipment and edges and corners.	P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....	(See appended table 8.5.5.2)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.6	Stability	Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....		N/A
	Position of feet or movable parts		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N/A
8.7.2	Direction and applied force		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (°C).....		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A

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

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	Plastic enclosure considered to be accessible part. The equipment evaluated by temperature test (see table 5.4.1.4).	P
9.3	Safeguard against thermal energy sources	Temperature of plastic enclosure classed as TS1.	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	Enclosure provided to limit the transfer of thermal energy of internal parts under normal operating conditions and abnormal operating conditions.	P
9.4.2	Instructional safeguard		N/A

10	RADIATION		N/A
10.2	Radiation energy source classification		N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation	No laser.	N/A
	Laser radiation that exists in the equipment:		—
	Normal, abnormal, single-fault.....	(See attached laser test report)	N/A
	Instructional safeguard		—
	Tool.....		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person.....		N/A
	Personal safeguard (PPE) instructional safeguard.....		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 .:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions	(See appended table B.3 & B.4)	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.f)	UV attenuation		N/A
10.4.1.g)	Materials resistant to degradation UV		N/A
10.4.1.h)	Enclosure containment of optical radiation.....		N/A
10.4.1.i)	Exempt Group under normal operating conditions.....		N/A
10.4.2	Instructional safeguard		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment :	(See appended table B.3 & B.4)	N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation		—
	Abnormal and single-fault condition	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards		N/A
	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/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)		—

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Clause	Requirement + Test	Result - Remark	Verdict
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 :	Not such equipment.	N/A
B.2.3	Supply voltage and tolerances	Rated voltage tolerance $\pm 10\%$ applied.	P
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 such openings.	N/A
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C.mains	N/A
B.3.4	Setting of voltage selector :	No voltage selector used within the EUT	N/A
B.3.5	Maximum load at output terminals :	(See appended tables B.3)	P
B.3.6	Reverse battery polarity	No battery within the EUT	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	Not such equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective.	P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited :	(See appended table B.4)	N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature :	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation	See the following details.	P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended tables B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended tables B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended tables B.4 for faults on electronic components)	P
B.4.6	Short circuit or disconnect of passive components	(See appended tables B.4)	P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	No change to circuits classified in 5.3.	P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.9	Battery charging under single fault conditions ... :	No battery involved in the EUT	N/A
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation	No such UV generated from the equipment.	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	TEST GENERATORS		P
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		P
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V)		—
	Rated load impedance (Ω)		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements	See the following details.	P
	Instructions – Language	English version provided.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Equipment marking is located on the enclosure surface 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	See the following details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.1	Equipment with direct connection to mains	The equipment is direct connected to AC mains, see F.3.3.3 to F.3.3.6.	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....:	See copy of marking plate.	—
F.3.3.4	Rated voltage	See copy of marking plate.	—
F.3.3.5	Rated frequency	See copy of marking plate.	—
F.3.3.6	Rated current or rated power	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device	Auto range and no voltage selector provide within the equipment.	N/A
F.3.5	Terminals and operating devices	See below.	P
F.3.5.1	Mains appliance outlet and socket-outlet markings	No such devices on the equipment.	N/A
F.3.5.2	Switch position identification marking	No such switch on the equipment.	N/A
F.3.5.3	Replacement fuse identification and rating markings	The current fuses is located within the equipment and not replaceable by an ordinary person or an instructed person. The current fuse is anyway marked with F1 T2A250V.	P
F.3.5.4	Replacement battery identification marking	No such battery on the equipment. See sub-clause F.5	N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification	See below.	P
F.3.6.1	Class I Equipment	Class II equipment.	N/A
F.3.6.1.1	Protective earthing conductor terminal	See above.	N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		P
F.3.6.2.1	Class II equipment with or without functional earth	Symbol IEC60417-5172 used.	P
F.3.6.2.2	Class II equipment with functional earth terminal marking	No such construction	N/A
F.3.7	Equipment IP rating marking	IP X0	—
F.3.8	External power supply output marking	See copy of marking plate.	P
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use	The equipment is intended to be used for information technology equipment	P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No such terminals provided.	N/A
	f) Protective earthing employed as safeguard	Protective earthing used as a safeguard.	N/A
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment	Not permanently connected equipment.	N/A
	i) Permanently connected equipment not provided with all-pole mains switch	No such markings.	N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	General requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	Protection Devices		P
G.3.1	Thermal cut-offs	No thermal cut-off provided within the equipment.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)	See above.	N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)	See above.	N/A
G.3.1.2	Thermal cut-off connections maintained and secure	See above.	N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal link provided within the equipment.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment	See above.	N/A
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω). :		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices	Current fuse complying with IEC 60127 as overcurrent protection device and protected within 1 s.	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....		N/A
G.4	Connectors		P
G.4.1	Spacings	No such connector with insulated surfaces accessible within the EUT	N/A
G.4.2	Mains connector configuration	Mains plug complied with standard.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	Output connector so designed that insert into a mains socket is unlikely to occur.	P
G.5	Wound Components		P
G.5.1	Wire insulation in wound components.....	Approved TIW used for secondary winding of T1.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Physical separation is provided by Insulation tube	P
G.5.1.2 b)	Construction subject to routine testing	See 5.4.9.2.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	Transformers		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....	The transformers meet the requirements given in G.5.3.2 and G.5.3.3.	P
	Position	T1	—
	Method of protection	See G.5.3.3.	—
G.5.3.2	Insulation	Primary windings and secondary windings are separated by Reinforced insulation (The core is considered as primary part as it is not isolated from primary)	P
	Protection from displacement of windings.....	The end-turn of each winding is fixed by insulation tape	—
G.5.3.3	Overload test	(Same as output overload. See appended tables B.3)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment as an SMPS.	P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements	No motor used.	N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N/A
	Electric strength test (V)		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		P
G.6.1	General	Triple insulated winding in T1 primary windings used as reinforced safeguard in the isolating transformer that has separately complied with Annex J. See Appended table 4.1.2. No other wires other than Basic insulated wires not under stress used in the EUT.	P
G.6.2	Solvent-based enamel wiring insulation	Insulation does not rely on solvent-based enamel.	P
G.7	Mains supply cords		N/A
G.7.1	General requirements	No such cord provided	N/A
	Type.....		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG).....		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm)....		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry	(See appended table 5.4.11.1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test		N/A
G.8.3.3	Temporary overvoltage		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiter provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		—
G.9.1 d)	IC limiter output current (max. 5A)		—
G.9.1 e)	Manufacturers' defined drift		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements	Resistor bridging functional insulation	N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.11.1	General requirements	Capacitors used in accordance with their rating and complied with subclasses of IEC 60384-14. (see appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	The optocoupler complied with standard IEC/EN 60747-5-5. (see appended table 4.1.2)	P
	Type test voltage Vini	Min 4000Vpeak	—
	Routine test voltage, Vini,b	Min 4000Vpeak	—
G.13	Printed boards		P
G.13.1	General requirements	See the following details.	P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board or over the outer surface of coated printed boards complied with the minimum clearance and creepage requirements of 5.4.2 and 5.4.3.	P
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	N/A
G.13.4	Insulation between conductors on the same inner surface	See above.	N/A
	Compliance with cemented joint requirements (Specify construction).....:		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation	(See appended table 5.4.4.5)	N/A
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements	No coating on component terminals considered to affect creepage or clearances.	N/A
G.15	Liquid filled components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.1	General requirements	No such device provided within the equipment.	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc 5.4.8 – 120 hours	No such discharge IC used.	N/A
b)	Impulse test using circuit 2 with U_c = to transient voltage		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General	No telephone ringing signal generated within the equipment.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H.3.2.3	Monitoring voltage (V)		—
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
	General requirements	Triple insulated winding wiring used as reinforced safeguard in the isolating transformer that has been evaluated to Annex J as follows: Requirements of Annex U of IEC 60950-1/A2 are identical to Annex J of this standard (for wires providing Reinforced insulation). See Table 4.1.2.	P
K	SAFETY INTERLOCKS		N/A
K.1	General requirements	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		P
L.1	General requirements	AC plug used to disconnect from AC mains	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized	When AC plug is disconnected no hazardous voltage in the equipment.	P
L.4	Single phase equipment	The mains plug disconnects both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices	See above.	P

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Clause	Requirement + Test	Result - Remark	Verdict
L.8	Multiple power sources	Only one a.c. mains connection.	N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements	No battery used.	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
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/A
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
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N/A
M.6.2	Leakage current (mA)		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s).....		—
M.8.2.3	Correction factors.....		—
M.8.2.4	Calculation of distance d (mm)		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing)		N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Metal(s) used		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied	Measurement is in accordance with applicable figures.	—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements	No openings of enclosure.	P
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm)		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard)		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....		—
	Tr (°C)		—
	Ta (°C).....		—
P.4.2 b)	Abrasion testing		N/A
P.4.2 c)	Mechanical strength testing		N/A
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources	See appended table Annex Q.1	P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	A regulating network limits the output in compliance with table Q.1 both under normal operating conditions and after any single fault.	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	See appended table Annex Q.1	P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		—
	Current limiting method.....		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)).		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	Approved fire enclosure with V-0 material used.	N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady-state power exceeding 4000 W		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (test condition), (°C)		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	(See appended table T.2, T.3, T.4, T.5)	P
T.3	Steady force test, 30 N		N/A
T.4	Steady force test, 100 N	(See appended table T.2, T.3, T.4, T.5)	P
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T.7)	P
T.8	Stress relief test	(See appended table T.8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J)		—
	Height (m)		—
T.10	Glass fragmentation test	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements	No CRT provided within the equipment.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs	See above.	N/A
U.3	Protective Screen	See above.	N/A
V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment	No access with test probes to any hazardous parts	P
V.2	Accessible part criterion	See above.	P

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

4.1.2	TABLE: List of critical components				
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹
Plastic enclosure and plug pin holder	SABIC INNOVATIVE PLASTICS US L L C	945(GG)	V-0, min. thickness 1.5mm, 120°C	UL94, UL746C	UL E121562
EU plug	Dongguan Nahai Supply Chain Management Co., Ltd	EU plug	0.6A, 250Vac	EN 50075	Tested with appliance (see attachment 3)
PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-5150	V-0, 130°C	UL 94, UL 796	UL E123995
(Alternative)	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	GF432	V-0, 130°C	UL 94, UL 796	UL E330731
(Alternative)	Interchangeable	Interchangeable	V-1 or better, 130°C	UL 94, UL 796	UL
Fuse(F1)	Dongguan Anlu Electronics Technology Co. Ltd.	AMT	T2AL, 250V	IEC/EN 60127-1 IEC/EN 60127-3 UL 248-14 UL 248-1	VDE 40047322 UL E365174
(Alternative)	Dongguan Reomax Electronics Technology Co., Ltd.	MTS	T2AL, 250V	IEC/EN 60127-1 IEC/EN 60127-3 UL 248-14 UL 248-1	VDE 40039420 UL E340427
(Alternative)	Shenzhen Lanson Electronics Co. Ltd.	SMT	T2AL, 250V	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40012592
(Alternative)	SHENZHEN LANSON ELECTRONICS CO., LTD.	SMT, 3K	T2AL, 250V	UL 248-14 UL 248-1	UL E221465
(Alternative)	Suzhou Walter Electronic Co. Ltd.	2010	T2AL, 250V	IEC/EN 60127-1 IEC/EN 60127-3 UL 248-14 UL 248-1	VDE 40018781 UL E56092

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Insulation sheet	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1880, KLX FRPC-1880B	V-0, min. thickness 0.4mm, 125°C	UL 94, UL746	UL E315185
Rectifier bridge (DB1)	Ping xiang Electronics (Nanjing)Co.,Ltd.	WRABS20M	Min.1000V, min. 2.0A	IEC/EN 62368-1	Tested with appliance
(Alternative)	Interchangeable	Interchangeable	Min.1000V, min. 2.0A	IEC/EN 62368-1	Tested with appliance
Electrolytic Capacitor (EC3, EC2)	DongGuan ChuangHui Electronics Co. Ltd.	15-22UF/400V	15-22uF, Min. 400V, 105°C	IEC/EN 62368-1	Tested with appliance
(Alternative)	Interchangeable	Interchangeable	15-22uF, Min. 400V, 105°C	IEC/EN 62368-1	Tested with appliance
IC(AU1)	Shenzhen Jingzhi Semiconductor Co., Ltd.	JP66070	Min. 2A, Min. 650V	IEC 62368-1	Tested with appliance
(Alternative)	Interchangeable	Interchangeable	Min. 2A, Min. 650V	IEC 62368-1	Tested with appliance
Current sense resistor (R7, R10)	Kingmax Electronics (China) Co., Ltd	1206 1/4W	Min. 0.82ohm, Min. 1/4W	IEC 62368-1	Tested with appliance
(Alternative)	Interchangeable	Interchangeable	Min. 0.82ohm, Min. 1/4W	IEC 62368-1	Tested with appliance
Line chock (L1)	SHENZHEN RUIJINGXING ELECTRONICS TECHNOLOGY CO.,LTD	4*10	130°C, min. 120uH	IEC/EN 62368-1	Tested with appliance
-Magnet wire	DONG GUAN YIDA INDUSTRIAL CO LTD	xUEW(AL)/130, QAL-x/130	130°C	UL 1446	UL E344055
(Alternative)	Interchangeable	Interchangeable	Min. 130°C	UL 1446	UL
-Tubing	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-1000	600V, 125°C	UL 224	UL E180908
Y-Capacitor (CY1)	Sichuan TRX Technology Co.,Ltd.	TRX Series	Max. 2200pF, Min. 250Vac, 125°C, Y1 type	IEC/EN/UL 60384-14	ENEC-05541 UL E315719
(Alternative)	Huizhou Jingqin Electronic Components Co Ltd	SMD series	Max.2200pF, Min.250Vac, 125°C, Y1 type	IEC/EN/UL 60384-14	ENEC-05626 UL E529031

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Opto-coupler (U1)	EVERLIGHT ELECTRONICS CO LTD	EL10XX	Ext.cr≥7.6mm, Dti:>0.4mm, 110°C	IEC/EN 60747-5-5 UL 1577	UL E214129 VDE 40028391
(Alternative)	Shenzhen Orient Components Co. Ltd.	OR1009, OR1008	Ext.cr≥8.0mm, Dti:>0.4mm, 125°C	IEC/EN 60747-5-5 UL 1577	VDE 40029733 UL E323844
(Alternative)	CT Microelectronics Far East Ltd	CT1019	Ext.cr≥7.6mm, Dti:>0.4mm, 110°C	UL 1577	UL E364000
(Alternative)	CT Micro International Corporation	CT1019	Ext.cr≥7.6mm, Dti:>0.4mm, 110°C	IEC/EN 60747-5-5	VDE 40039590
(Alternative)	Everlight Electronics Co., Ltd.	EL1019, EL1018	Ext.cr≥8.1mm, Dti:>0.4mm, 110°C	IEC/EN 60747-5-5 UL 1577	VDE 40028391 UL E214129
Transformer (T1)	Guangxi Qinzhou Xingda Weiye Technology Co.,Ltd	BD-648ZB 20W	Class B	Applicable part of IEC/EN62368-1 And according to IEC60085	Tested with appliance
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9823	Phenolic, V-0, 150°C, Min. thickness 0.5mm	UL 94, UL746C	UL E41429
-Triple insulated wire	FURUKAWA ELECTRIC CO., LTD.	TEX-E, TEX-EA, TEX-ECEW3, TEX-ELZ	130°C	UL 2353	UL E206440
(Alternative)	FURUKAWA ELECTRIC CO., LTD.	TEX-E, TEX-ECEW3	130°C	IEC/EN 62368-1	VDE 006735
-Magnet wire	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD	xUEW/130, QA-x/130	130°C	UL 1446	UL E239508
(Alternative)	Interchangeable	Interchangeable	Min. 130°C	UL 1446	UL
-Insulation tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT*(b)(g), CT*(c)(g)	130°C	UL 510A	UL E165111
-Tube	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-TT-T	300V, 200°C, VW-1	UL 244	UL E180908

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
-Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446	UL E228349
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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

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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests		N/A
(The following mechanical tests are conducted in the sequence noted.)			

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

5.2	Table: Classification of electrical energy sources						P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	264Va.c.	--	60	ES3
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
Test model: TC-280							
2	264Va.c. 60Hz	T1 secondary pin 7-8	Normal	38.0Vpk	--	64.7kHz	ES1
			Single fault: SC T1 pin 7-8	0	--	--	
3	264Va.c. 60Hz	USB-A 12.0Vdc Output “+” to “-”	Normal	12.0Vdc	--	64.7kHz	ES1
3	264Va.c. 60Hz	USB-C 12.0Vdc Output “+” to “-”	Normal:	12.09Vdc	--	--	ES1
			Abnormal Output overload	12.09Vdc	--	--	
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4,	0	--	--	

IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
			output shutdown)			
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4, fuse open)	0	--	--
4	264Va.c. 60Hz	Output “+” and “-” to Earth	Normal:	--	0.390mA _{pk}	--
			Abnormal Output overload	--	0.390mA _{pk}	--
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4, output shutdown)	--	0.390mA _{pk}	--
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4, fuse open)	--	0.417mA _{pk}	--
5	264Va.c. 60Hz	Plastic enclosure to earth	Normal:	--	0.021mA _{pk}	--
			Abnormal Output overload	--	0.021mA _{pk}	--
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4, output shutdown)	--	0.021mA _{pk}	--
			Single fault: SC/OC (Refer to fault condition on table B.3, B.4, fuse open)	--	0.021mA _{pk}	--
5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
--	--	--	Normal	--	--	--

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
			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) :	90V, 60Hz vertical	90V, 60Hz horizontal	264V, 60Hz vertical	264V, 60Hz horizontal	—	
	Ambient T _{min} (°C) :	See below		See below		—	
	Ambient T _{max} (°C) :					—	
	T _{ma} (°C) :	25.0	25.0	25.0	25.0	—	
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)	
Test model: TC-275, PPS output: 5.9VDC,3A							

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Plug holder	34.5	36.3	--	--	120
L1 winding	79.0	85.0	--	--	130
EC3 body	84.8	89.1	--	--	105
EC2 body	90.3	94.1	--	--	105
T1 coil	95.1	97.3	--	--	110
T1 core	86.3	89.4	--	--	110
Insulation sheet	81.6	77.1	--	--	125
EC1 body	89.5	87.9	--	--	105
PCB near U2	90.5	87.8	--	--	130
CY1 body	89.7	90.5	--	--	125
U1 body	83.1	83.8	--	--	110
PCB near AU1	78.4	80.7	--	--	130
PCB near DB1	81.7	85.0	--	--	130
Enclosure inside near T1 top	70.6	72.2	--	--	120
Enclosure outside near T1 top	57.2	58.6	--	--	77*
Enclosure inside under T1 bottom	76.7	79.3	--	--	120
Enclosure outside near T1 bottom	60.3	63.9	--	--	77*
Ambient	25.2	25.3	--	--	--
Test model: TC-280, USB-C output: 9.0VDC, 2.22A					
Plug holder	34.9	34.6	35.4	36.5	120
L1 winding	77.8	82.6	64.3	66.3	130
EC3 body	85.2	88.2	72.1	74.3	105
EC2 body	91.2	93.2	77.4	79.8	105
T1 coil	99.0	99.7	84.5	87.1	110
T1 core	88.5	90.2	76.3	78.6	110
Insulation sheet	88.5	82.2	70.1	72.3	125
EC1 body	101.9	97.8	80.1	82.6	105
PCB near U2	102.8	100.5	79.6	82.1	130
CY1 body	96.0	95.7	79.9	82.4	125
U1 body	88.0	87.8	74.5	76.8	110
PCB near AU1	79.8	81.2	68.2	70.3	130
PCB near DB1	81.9	84.7	67.8	69.9	130
Enclosure inside near T1 top	73.3	74.2	65.0	67.0	120
Enclosure outside near T1 top	59.1	59.4	53.8	55.5	77*
Enclosure inside under T1 bottom	78.8	80.8	68.3	70.5	120
Enclosure outside near T1 bottom	61.3	66.0	56.0	57.7	77*

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
Ambient	24.9	25.5	25.9	26.1	--		
Test model: TC-280, USB-C output: 12.0VDC, 1.67A							
Plug holder	35.2	35.5	35.4	35.7	120		
L1 winding	77.8	82.0	62.2	65.1	130		
EC3 body	83.0	85.1	71.0	72.8	105		
EC2 body	87.8	89.1	77.1	78.2	105		
T1 coil	90.9	90.7	83.9	84.3	110		
T1 core	83.4	84.2	75.2	76.3	110		
Insulation sheet	76.5	69.6	72.5	67.6	125		
EC1 body	80.4	76.2	78.5	75.6	105		
PCB near U2	79.7	77.3	77.9	75.5	130		
CY1 body	84.0	83.3	79.2	78.5	125		
U1 body	78.7	77.8	73.9	73.3	110		
PCB near AU1	76.1	76.7	67.7	68.4	130		
PCB near DB1	79.5	81.5	66.9	68.4	130		
Enclosure inside near T1 top	68.5	67.2	64.6	64.4	120		
Enclosure outside near T1 top	56.2	54.6	53.3	53.1	77*		
Enclosure inside under T1 bottom	73.2	74.7	67.6	68.4	120		
Enclosure outside near T1 bottom	58.4	60.9	54.6	56.7	77*		
Ambient	25.7	25.4	25.5	25.5	--		
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:							
Supplementary information: *Temperature limit for TS1 of accessible enclosure outside according to Table 38. (External surfaces of enclosure will be touched occasionally for very short periods (>1 s and <10 s), so temperature limit 77°C considered. Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (T _{ma}) of 25°C. Note 2: The temperatures were measured under the worse cases normal mode defined in clause B.2.1. Note 3. Temperature limits are calculated as follows: Winding components providing safety isolation: Class B → T _{max} = 120- 10=110°C							

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

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
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			P
Allowed impression diameter (mm) :			≤ 2 mm	—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
Plug pin holder / 945(GG)	SABIC INNOVATIVE PLASTICS US L L C	125	0.7	
Supplementary information:				
The bobbin materials of transformer T1 are phenolic. No other parts need to be tested.				

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)*	cl (mm) ²	Required ³ cr (mm)	cr (mm)
L and N before fuse on PCB trace (BI)	420	250	0.06	1.5	3.6	2.5	3.6
Different polarity of fuse F1 on PCB trace (BI)	420	250	0.06	1.5	2.9	2.5	2.9
Trace of L and primary pin of transformer (BI)	420	250	0.06	1.5	4.1	2.5	4.1
PCB trace under CY1 (RI)	420	250	0.06	3.0	6.5	5.0	6.5
PCB trace under U1 (RI)	420	250	0.06	3.0	7.4	5.0	7.4
PCB trace under T1 (RI)	524	263	64.7	3.0	5.9	5.4	5.9
Transformer primary winding to secondary pin (RI)	524	263	64.7	3.0	6.5	5.4	6.5
Transformer core to secondary pin (RI)	524	263	64.7	3.0	7.2	5.4	7.2
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							
Note 4: BI: Basic insulation; RI: Reinforced insulation.							

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Clause	Requirement + Test	Result - Remark	Verdict

Note 5: All internal wire are double fixed by glue.

Note 6: Triple insulated wire used in secondary side. Core of transformer (T1) is considered as primary.

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV):			II
	Pollution Degree:			2
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
Basic insulation / supplementary insulation (See table 5.4.2.2, 5.4.2.4 and 5.4.3 above)		2500V	1.5	See table 5.4.2.2, 5.4.2.4 and 5.4.3 above
Reinforced insulation (See table 5.4.2.2, 5.4.2.4 and 5.4.3 above)		2500V	3.0	See table 5.4.2.2, 5.4.2.4 and 5.4.3 above
Supplementary information:				
Limits according to 5.4.2.3 applied for the referred table above.				

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				
Using procedure 2 to determine the clearance.				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					P
Distance through insulation di at/of:		Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
Bobbin in transformer (T1)		524	64.7	Phenolic	0.4	1)
Enclosure		420	0.06	Plastic	0.4	1)
Supplementary information:						
1). See appended table 4.1.2.						

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No

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Clause	Requirement + Test	Result - Remark	Verdict

Basic/supplementary:

L to N (with F1 opened)	DC	2500	No
-------------------------	----	------	----

Reinforced:

L/N to output terminal	DC	4000	No
L/N to plastic enclosure wrapped with metal foil	DC	4000	No
Primary to secondary of transformer T1	DC	4000	No
Secondary to core of transformer T1	DC	4000	No
From Enclosure inside to Enclosure outside	DC	4000	No
Insulation sheet	DC	4000	No

Supplementary information:

Core of transformer was considered as primary, Test after humidity treatment, heating test, and for unit primary to secondary, primary to plastic enclosure electric strength after each fault condition test. Tests were performed on product with each source listed in table 4.1.2.

The DC voltage source was performed on all testing once in forward and once in reverse.

5.5.2.2	TABLE: Stored discharge on capacitors					N/A
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
--	--	--	--	--	--	
--	--	--	--	--	--	

Supplementary information:

X-capacitors installed for testing are:

[] bleeding resistor rating:

[] ICX:

Notes:

A. Test Location:

Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth

B. Operating condition abbreviations:

N – Normal operating condition (e.g., normal operation, or open fixed resistor); S –Single fault condition

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

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

6.2.2		Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification	
Test model: TC-280						
USB-C: 5.0Vdc, 3.0A	Normal operation	Power (W) :	--	16.50	PS2	
		V _A (V) :	--	4.76		
		I _A (A) :	--	3.46		
USB-C: 9.0Vdc, 2.22A	Normal operation	Power (W) :	--	29.03	PS2	
		V _A (V) :	--	8.75		
		I _A (A) :	--	3.32		
USB-C: 12.0Vdc, 1.67A	Normal operation	Power (W) :	--	30.40	PS2	
		V _A (V) :	--	11.84		
		I _A (A) :	--	2.57		
USB-C PPS: 5Vdc, 1.8A	Normal operation	Power (W) :	10.78	--	PS1	
		V _A (V) :	5.03	--		
		I _A (A) :	2.15	--		

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Clause	Requirement + Test		Result - Remark		Verdict
USB-C PPS: 11Vdc, 1.8A	Normal operation	Power (W) :	--	28.48	PS2
		V _A (V) :	--	10.96	
		I _A (A) :	--	2.60	
USB-A: 5.0Vdc, 3.0A	Normal operation	Power (W) :	--	18.55	PS2
		V _A (V) :	--	5.02	
		I _A (A) :	--	3.70	
USB-A: 9.0Vdc, 2.0A	Normal operation	Power (W) :	--	23.54	PS2
		V _A (V) :	--	8.99	
		I _A (A) :	--	2.62	
USB-A: 12.0Vdc, 1.5A	Normal operation	Power (W) :	--	24.78	PS2
		V _A (V) :	--	11.99	
		I _A (A) :	--	2.07	
All Output	Single fault: U1 pin 1-2 short circuit #	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
	Single fault: U1 pin 3-4 short circuit #	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
	Single fault: U1 pin 1 open circuit #	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
	Single fault: U1 pin 3 open circuit #	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
	Single fault: R7 short circuit*	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
Supplementary Information:					
(*) F1 opened immediately.					
(#) Unit shut down immediately, recoverable, no hazard.					

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

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Clause	Requirement + Test		Result - Remark	Verdict
All internal circuits/components	--	--	--	Yes (declared)
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 (declaration)
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 ($VA \times IA$) 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/A
Description		Values	Energy Source Classification
Lamp type			—
Manufacturer			—
Cat no.			—
Pressure (cold) (MPa).....			MS_
Pressure (operating) (MPa)			MS_
Operating time (minutes)			—
Explosion method			—
Max particle length escaping enclosure (mm) .:			MS_
Max particle length beyond 1 m (mm).....			MS_
Overall result			
Supplementary information:			

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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	
Test model: TC-275									
90	50	0.429	--	20.87	--	F1	0.429	Normal load: PPS Output: 5.9VDC 3.0A	
90	60	0.434	--	20.92	--	F1	0.434		
100	50	0.407	0.6	20.63	--	F1	0.407		
100	60	0.410	0.6	20.69	--	F1	0.410		
240	50	0.171	0.6	20.10	--	F1	0.171		
240	60	0.175	0.6	20.16	--	F1	0.175		
264	50	0.161	--	20.08	--	F1	0.161		
264	60	0.165	--	20.14	--	F1	0.165		
Test model: TC-280									
90	50	0.461	--	22.70	--	F1	0.461	Normal load: USB-C Output: 9.0VDC 2.22A	
90	60	0.468	--	22.74	--	F1	0.468		
100	50	0.439	0.6	22.51	--	F1	0.439		
100	60	0.445	0.6	22.55	--	F1	0.445		
240	50	0.184	0.6	22.12	--	F1	0.184		
240	60	0.187	0.6	22.17	--	F1	0.187		
264	50	0.169	--	22.16	--	F1	0.169		
264	60	0.173	--	22.23	--	F1	0.173		
90	50	0.463	--	22.66	--	F1	0.463	Normal load: USB-C Output: 12.0VDC 1.67A	
90	60	0.469	--	22.72	--	F1	0.469		
100	50	0.442	0.6	22.51	--	F1	0.442		
100	60	0.447	0.6	22.58	--	F1	0.447		
240	50	0.182	0.6	22.23	--	F1	0.182		
240	60	0.188	0.6	22.28	--	F1	0.188		
264	50	0.168	--	22.29	--	F1	0.168		
264	60	0.174	--	22.36	--	F1	0.174		
Supplementary information:									
The maximum measured current under rated voltage did not exceed 110% of the rated current.									

B.3		TABLE: Abnormal operating condition tests							P
-----	--	---	--	--	--	--	--	--	---

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Clause	Requirement + Test				Result - Remark			Verdict
Ambient temperature (°C)					25°C, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating ..					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-coupl e	Temp. (°C)	Observation
Test model: TC-280								
Output (USB-C: 9.0VDC 2.22A)	OL	264	3h49mins	F1	0.173→ 0.199→ 0.215→ 0.010	Type K	T1 coil=96.4°C T1 core=86.3°C Enclosure outside near T1 top=59.5°C Enclosure outside near T1 bottom=61.7°C Ambient: 25.8°C	Output overload to 2.62A, and unit shutdown at 2.82A, Recoverable when fault removed and no hazards observed. Uout=9.03Vdc Touch current: Output “+/-” to “earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
T1 pin 8-After U2	OL	264	3h51min	F1	0.173→ 0.204→ 0.219→ 0.010	Type K	T1 coil=98.4°C T1 core=88.0°C Enclosure outside near T1 top=60.7°C Enclosure outside near T1 bottom=62.9°C Ambient: 25.8°C	Output rated load 9Vdc, 2.22A, Transformer overload to 0.5A (Constant temperatures were obtained) and shut down at 0.7A. Uout=9.03Vdc Touch current: Output “+/-” to “earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
Supplementary information:								
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.								

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Clause	Requirement + Test	Result - Remark	Verdict

- 1) o-l = overload
- 2) The overloaded condition is applied according to annex G.5.3.3.
- 3) Winding temperature Limit for T1: 175-10=165°C; Enclosure outside=87°C
- 4) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.

B.4 TABLE: Fault condition tests								P
Ambient temperature (°C)					25°C, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating . :					--			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Test model: TC-280								
DB1	SC	264	1S	F1	0	--	--	F1 opened immediately, No hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.417mApeak Plastic enclosure to earth: 0.021mApeak
EC3	SC	264	1S	F1	0	--	--	F1 opened immediately, No hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.417mApeak Plastic enclosure to earth: 0.021mApeak
R7	SC	264	1S	F1	0	--	--	F1 opened immediately, No hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.417mApeak Plastic

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Clause	Requirement + Test					Result - Remark		Verdict
								enclosure to earth: 0.021mA _{peak}
AU1 Pin 1-4	SC	264	1S	F1	0	--	--	F1 opened immediately, No hazard. U _{out} = 0V Touch current: Output "+/-" to "earth": 0.417mA _{peak} Plastic enclosure to earth: 0.021mA _{peak}
AU1 Pin 1-8	SC	264	1S	F1	0	--	--	F1 opened immediately, No hazard. U _{out} = 0V Touch current: Output "+/-" to "earth": 0.417mA _{peak} Plastic enclosure to earth: 0.021mA _{peak}
T1 pin 1-2	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. U _{out} = 0V Touch current: Output "+/-" to "earth": 0.390mA _{peak} Plastic enclosure to earth: 0.021mA _{peak}
T1 Pin 4-5	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. U _{out} = 0V Touch current: Output "+/-" to

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Clause	Requirement + Test				Result - Remark			Verdict
								“earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
T1 Pin 7-8	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output “+/-” to “earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
U1 Pin 1-2	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output “+/-” to “earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
U1 Pin 3-4	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output “+/-” to “earth”: 0.390mApeak Plastic enclosure to earth: 0.021mApeak
U1 Pin 3	OC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no

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Clause	Requirement + Test				Result - Remark			Verdict
								hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.390mApeak Plastic enclosure to earth: 0.021mApeak
U1 Pin 1	OC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.390mApeak Plastic enclosure to earth: 0.021mApeak
EC1	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.390mApeak Plastic enclosure to earth: 0.021mApeak
U2 pin 4-5	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. Uout= 0V Touch current: Output "+/-" to "earth": 0.390mApeak Plastic enclosure to

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Clause	Requirement + Test				Result - Remark			Verdict
								earth: 0.021mA _{peak}
USB-C Output	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. U _{out} = 0V Touch current: Output "+/-" to "earth": 0.390mA _{peak} Plastic enclosure to earth: 0.021mA _{peak}
USB-A Output	SC	264	10mins	F1	0.01	--	--	Unit shutdown immediately and recoverable, no hazard. U _{out} = 0V Touch current: Output "+/-" to "earth": 0.390mA _{peak} Plastic enclosure to earth: 0.021mA _{peak}
Supplementary information:								
Test table is provided to record fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Single Fault" then the condition for Clause B.4. 1. s-c: Short-circuited, o-c: Open-circuited. 2. The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions. 3. The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition. 4. All tests which current fuse opened were repeated with each source of fuse and same result observed. 5. After each of above test, unit can pass the dielectric strength test specified in table 5.4.9.								

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Clause	Requirement + Test	Result - Remark	Verdict

Annex M.3	TABLE: Batteries								N/A	
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? :										
	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										
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries					N/A
Battery/Cell No.	Test conditions	Measurements			Observation	
		U	I (A)	Temp (C)		
	Normal					
	Abnormal					
	Single fault –SC/OC					
	Normal					
	Abnormal					
	Single fault – SC/OC					
Supplementary Information:						
Battery identification	Charging at T _{lowest} (°C)	Observation	Charging at T _{highest} (°C)	Observation		

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Clause	Requirement + Test		Result - Remark	Verdict
Supplementary Information:				

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{oc} (V)	I _{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Test model: TC-280						
USB-C: 5.0Vdc, 3.0A	Normal condition	5.12	3.46	8.0	16.50	100
USB-C: 9.0Vdc, 2.22A	Normal condition	9.03	3.32	8.0	29.03	100
USB-C: 12.0Vdc, 1.67A	Normal condition	12.09	2.57	8.0	30.40	100
USB-C PPS: 5Vdc, 1.8A	Normal condition	5.05	2.15	8.0	10.78	100
USB-C PPS: 11Vdc, 1.8A	Normal condition	11.09	2.60	8.0	28.48	100
USB-A: 5.0Vdc, 3.0A	Normal condition	5.06	3.70	8.0	18.55	100
USB-A: 9.0Vdc, 2.0A	Normal condition	9.00	2.62	8.0	23.54	100
USB-A: 12.0Vdc, 1.5A	Normal condition	12.00	2.07	8.0	24.78	100

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Clause	Requirement + Test			Result - Remark		Verdict
All output	#U1 pin1-2 SC	0	0	8.0	0	100
	#U1 pin3-4 SC	0	0	8.0	0	100
	#U1 pin1 OC	0	0	8.0	0	100
	#U1 pin3 OC	0	0	8.0	0	100
	*R7 SC	0	0	8.0	0	100
Supplementary Information:						
SC=Short circuit, OC=Open circuit (*) F1 opened immediately. (#) indicated the unit shut down, recoverable, no hazard.						

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Enclosure top, closed to transformer (T.4)	1)	1)	100	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure side (T.4)	1)	1)	100	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure bottom, closed to transformer (T.4)	1)	1)	100	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Internal components (T.2)	--	--	10	5	No insulation breakdown. No reduction the clearances and creepage distances	
Supplementary information:						
1) All enclosure materials have been tested, see table 4.1.2 for details.						

T.6, T.9	TABLE: Impact tests	N/A
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IEC 62368-1				
Clause	Requirement + Test		Result - Remark	Verdict
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
Supplementary information:				

T.7	TABLE: Drop tests				P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Enclosure top	1)	1)	1000	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure side	1)	1)	1000	Enclosure remained intact. Internal ES3 voltage was not accessible after test. No insulation breakdown.	
Enclosure bottom	1)	1)	1000	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Supplementary information:					
1) Tested enclosure Material: See table 4.1.2.					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Enclosure	1)	1)	91	7	Enclosure remained intact, no cracking/opening developed in the enclosure joint. Internal ES3, TS3 were not accessible after test. No insulation breakdown	
Insulation Sheet	1)	1)	99	7	Insulation Sheet remained intact, no shrinkage or distortion after test, No insulation breakdown.	
Supplementary information:						
1) Tested enclosure Material: See table 4.1.2.						

IEC62368_1D - ATTACHMENT																																										
Clause	Requirement + Test			Result - Remark		Verdict																																				
ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment - Part 1: Safety requirements)																																										
Differences according to.....:		EN 62368-1:2014+A11:2017																																								
Attachment Form No.:		EU_GD_IEC62368_1D_II																																								
Attachment Originator		Nemko AS																																								
Master Attachment		Date 2021-02-04																																								
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	CENELEC COMMON MODIFICATIONS (EN)																																									
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".																																									
CONTENTS	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords					P																																				
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list: <table><tr><td>0.2.1</td><td>Note</td><td>1</td><td>Note 3</td><td>4.1.15</td><td>Note</td></tr><tr><td>4.7.3</td><td>Note 1 and 2</td><td>5.2.2.2</td><td>Note</td><td>5.4.2.3.2.2 Table 13</td><td>Note c</td></tr><tr><td>5.4.2.3.2.4</td><td>Note 1 and 3</td><td>5.4.2.5</td><td>Note 2</td><td>5.4.5.1</td><td>Note</td></tr><tr><td>5.5.2.1</td><td>Note</td><td>5.5.6</td><td>Note</td><td>5.6.4.2.1</td><td>Note 2 and 3</td></tr><tr><td>5.7.5</td><td>Note</td><td>5.7.6.1</td><td>Note 1 and 2</td><td>10.2.1 Table 39</td><td>Note 2, 3 and 4</td></tr><tr><td>10.5.3</td><td>Note 2</td><td>10.6.2.1</td><td>Note 3</td><td>F.3.3.6</td><td>Note 3</td></tr></table>					0.2.1	Note	1	Note 3	4.1.15	Note	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3	P
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	For special national conditions, see Annex ZB.					P																																				
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.					P																																				
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains , protective devices shall be included either			See below.		P																																				

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Clause	Requirement + Test	Result - Remark	Verdict
	as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		
5.4.2.3.2.4	Add the following to the end of this subclause: The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.	No external circuits.	N/A
10.2.1	Add the following to c) and d) in table 39: For additional requirements, see 10.5.1.	No such radiation from the equipment.	N/A
10.5.1	Add the following after the first paragraph: <i>For RS 1 compliance is checked by measurement under the following conditions:</i> <i>In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i> NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. <i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.</i> <i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the</i>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	<i>measurement is made.</i> <i>For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.</i> NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		
10.6.1	Add the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.	No such x-radiation generated from the equipment.	N/A
10.Z1	Add the following new subclause after 10.6.5. 10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566	Added. The equipment is a low power AC ADAPTER, it does incorporate only non-intentional radiators, but does not contain radio transmitters; the typical usage, installation and physical characteristics make the equipment inherently compliant with all applicable EMF exposure levels (EN 62479:2010 clause 4.1 Route A).	N/A
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		P
Bibliography	Add the following standards: Add the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		P
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.1.15	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord." In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"	Class II equipment	N/A
4.7.3	United Kingdom To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A
5.2.2.2	Denmark After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	No high touch current.	N/A
5.4.11.1 and Annex G	Finland and Sweden To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound	No TNV circuits.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
5.5.2.1	Norway After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.	No such resistors.	N/A
5.6.1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	protected by a 20 A fuse.		
5.6.4.2.1	Ireland and United Kingdom After the indent for pluggable equipment type A , the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm ² to 1,5 mm ² in cross-sectional area.		N/A
5.7.5	Denmark To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	No high protective conductor current.	N/A
5.7.6.1	Norway and Sweden To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.	Not such system.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		
5.7.6.2	Denmark To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .	No external circuits.	N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met	Considered. Use an external protective device rated 32A during single fault condition test, also see test report for details	P
G.4.2	Denmark To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c		
G.4.2	United Kingdom To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
G.7.1	United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	Ireland and United Kingdom To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm²		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	is allowed for equipment which is rated over 10 A and up to and including 13 A.		
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		
10.5.2	Germany The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. <i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de	No CRT within the equipment.	N/A

Measurement Section			
Clause	Requirement + Test	Result - Remark	Verdict

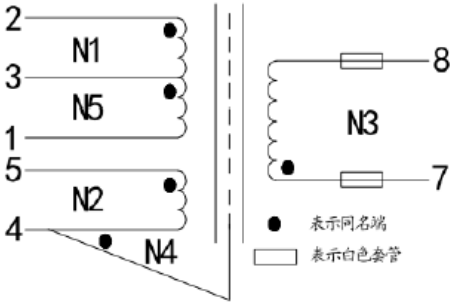
5.4.1.8	TABLE: Working voltage measurement				P
Location	RMS voltage (V)	Peak voltage (V)	Frequency (kHz)	Comments	
Output: 12Vdc, 1.67A					
T1 Pin1-Pin7	212	356	64.7	--	
T1 Pin2-Pin7	254	516		--	
T1 Pin4-Pin7	220	396		--	
T1 Pin5-Pin7	217	430		--	
T1 Pin1-Pin8	211	344		--	
T1 Pin2-Pin8	263	524		Max. Vpeak & Vrms	
T1 Pin4-Pin8	220	360		--	
T1 Pin5-Pin8	213	340		--	
U1 Pin1-Pin2	212	344	60	--	
U1 Pin1-Pin4	211	344	60	--	
U1 Pin2-Pin3	211	344	60	--	
U1 Pin2-Pin4	211	348	60	--	
CY1	213	348	60	--	
supplementary information:					
Supply voltage: 240V, 60Hz.					

G.5.3	TABLE: transformers							P
Loc.	Tested insulation	Working voltage peak / V (5.4.1.8)	Working voltage rms / V (5.4.1.8)	Required electric strength (5.4.9)	Required clearance / mm (5.4.2.2)	Required creepage distance / mm (5.4.3)	Required distance thr. insul. (5.4.4.6)	
Primary winding to second pin (T1)	Reinforced	524	263	4000 Vdc	3.0	5.4	0.4	
Secondary pin to core (T1)	Reinforced	524	263	4000 Vdc	3.0	5.4	0.4	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	
Secondary pin to core (T1)	Reinforced			4000 Vdc	7.2	7.2	TIW	
Primary winding to second pin (T1)	Reinforced			4000 Vdc	6.5	6.5	TIW	
Supplementary information:								

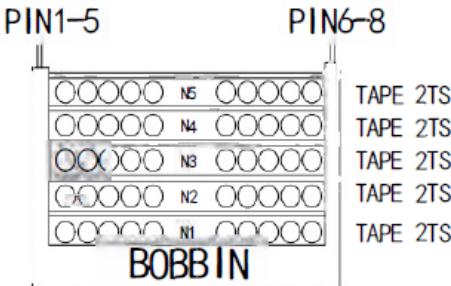
Measurement Section			
Clause	Requirement + Test	Result - Remark	Verdict

Construction:

3:SCHEMATIC: (线路图)



4:WINDING: (剖面图)



REMARK:

1. BOBBIN EI1702-B 5+2+1 排距: 21.0 脚距: 3.0/4.0 空6脚
2. 产品线包使用8.5mm淡黄色胶带;
3. 磁芯组装后包淡黄色胶带10.0mmW*3TS固定;
4. 产品需含浸并烘干, 成品PIN3脚保留。

EN 50075 (partially)

Clause	Requirement - Test	Result - Remark	Verdict
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6	Marking		P
	Appliances shall be marked as follows:		—
	Rated current in amperes (A)	Refer to marking label of final appliance.	N/A
	Rated Voltage in volts (V)	As above	N/A
	Symbol for nature of supply (~)	As above	N/A
	Name, trade mark or identification mark of manufacturer or responsible vendor		P
	Type reference	Incorporated plug portion of adaptor	P

7	Dimensions			P
	Plugs shall comply with Standard Sheet 1		(see attached drawing)	—
	Between two pins (pin base)	18.0 - 19.2 mm	18.50 mm	P
	Between two pins (pin top)	17.0 - 18.0 mm	17.63 mm	P
	Diameter of pin (metallic part)	4 ^{±0.06} mm	3.99 mm	P
	Diameter of pin (pin base)	max. 4.0 mm	3.86 mm	P
	Diameter of pin (middle part)	max. 3.8 mm	3.60 mm	P
	Pin length	19 ^{±0.5} mm	19.10 mm	P
	Length of pin except metal part	10 ^{+1/-0} mm	10.50 mm	P
	Shape of pin top		round shape	P
	Length of plug base	35.3 ^{±0.7} mm	35.68 mm	P
	Width of plug base	13.7 ^{±0.7} mm	14.22 mm	P
	Diagonal dimension of plug base	26.1 ^{±0.5} mm	26.30 mm	P
	within a distance of 18mm	min. 18 mm	18.20 mm	P
	Angle	45°	45 °	P
	Radius	R 5 -0, +1 mm	5.5 mm	P

8.	Protection against electric shock		P
8.1	Live parts of the plug not accessible (standard test finger)	Protected by enclosure of the equipment	P
8.2	No connection between one plug-pin and socket outlet	Checked by gauge of Fig.4	P
8.3	External parts of insulating material	External parts except pins are insulating material.	P

9	Construction		P
9.1	Plugs not replaceable	Not replaceable	P

EN 50075 (partially)			
Clause	Requirement - Test	Result - Remark	Verdict
9.2	Switches, fuses, lampholders not incorporated	Not incorporated	P
9.3	Solid pins	(see clause 13)	P
	Adequate mechanical strength	As above	P
9.4	Pins locked against rotation	(see clause 13.1 and 13.4)	P
	Adequate fixed into the body	Each pin shaft is designed with ridges to lock into the pin holder	P
9.5	Kind of connection	Leads are soldered to the plug portion	P
9.6	Easily to be withdrawn from socket-outlet	The equipment provides sufficient gripping surface	P
10	Resistance to humidity		P
	-Humidity treatment for 48 hours	Tested with the equipment for 48h at 30°C and 95%RH	P
11	Insulation resistance and electric strength		P
11.1	Insulation resistance (500 V, min 5 MΩ)	Pins against body: 100MΩ Each pin against body: 100MΩ Pin against Pin: 100MΩ	P
11.2	Electric strength (2,000 V)	Pins against body: 2000V Each pin against body: 2000V Pin against Pin: 2000V	P
13	Mechanical strength		P
13.1	Pressed with 150 N for 5 min	No deformation or deviation from the dimensions	P
13.2	Tumbling barrel according to Figure 8	Test according to clause 24.2 of DIN VDE 0620-2-1 and also pass the test according to DIN VDE 0620-101:1992 clause 7, figure 2. Weight of adapter: 47g Number of falls: 1000 times	P
	No damages after the test		P
	Requirements of clause 7 and 8.2 still fulfilled	Deformations allowed according to the equipment standard	P
13.3	Rubbing test of plug-pins: 10,000 cycles, 4 N		P
	No damage of the pins	No visible damage	P
13.4	Pull test at 70°C with 40 N		P
	Pins not more than 1 mm displaced	Displacement: 0.2 mm	P

EN 50075 (partially)			
Clause	Requirement - Test	Result - Remark	Verdict

14	Resistance to heat and to ageing		P
14.1	Sufficient resistant to heat	See test below	P
14.1.1	After 1 h in heating cabinet at 100°C no damage shown	No visible damage	P
14.1.2	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Performed a 125°C ball pressure test on the material which maintains live part in position. 0.7 mm measured after 1 hour	P
14.2	Aging test	See test below	P
	- at 70°C for 168h	70°C for 168h applied.	P
	- at room temperature for 96h	96h applied.	P
	No traces of cloth at a force of 5N	Material does not soften	P
	No damage leads to non-compliance	No visible damage	P

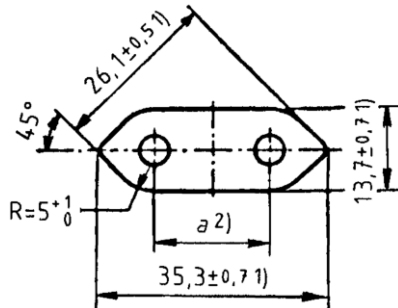
15	Current-carrying parts and connections resistance to heat and to ageing		P
15.1	Connections withstand the mechanical stresses occurring in normal use	See below	P
15.2	Contact pressure not through isolating material	Complied	P
15.3	Current carrying parts of copper	Copper content min. 58.0 % No rolled sheet used	P
	No electroplated coating when part is subjected to mechanical wear	No electroplated coating	P
	Other metals having a mechanical strength, an electrical conductivity and a resistance to corrosion	No such materials used.	N/A

16	Creepage distances, clearances and distances through insulation		P
	Live parts of different polarity: 3 mm	>3 mm	P
	Through insulation between live parts and accessible surfaces: 1.5 mm	>1.5 mm	P

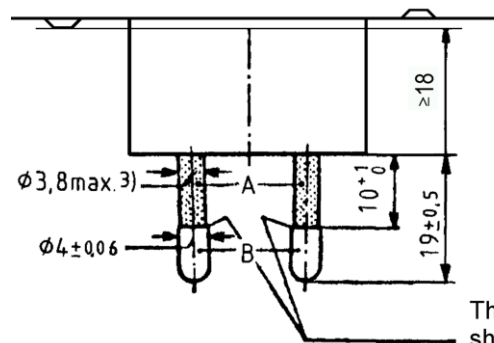
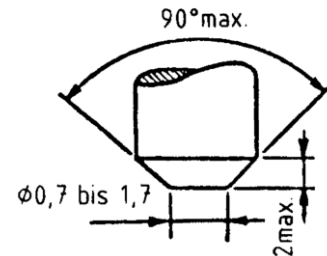
17	Resistance of insulating material to abnormal heat and fire		P
	Glow-wire test (750 °C): no visible flame, no sustained glowing or flames and glowing extinguish within 30 s after removal of glow-wire	On pin holder	P
	Glow-wire test (650 °C): no visible flame, no sustained glowing or flames and glowing extinguish within 30 s after removal of glow-wire	On plug portion	P

EN 50075 (partially)			
Clause	Requirement - Test	Result - Remark	Verdict

7	Dimensions		P
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Alternative for end of pins



The edges of the metal parts shall be either chamfered or rounded off

A = Insulating collar

B = metal pin

- 1) These dimensions shall not be exceeded within a distance of 18mm from the engagement face of the plug.
- 2) Dimension a is:
18mm to 19.2mm in the plane of the engagement face
17mm to 18mm at the ends of the pins
- 3) This dimension may be increased to 4mm within a distance of 4mm from the engagement face of the plug.

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

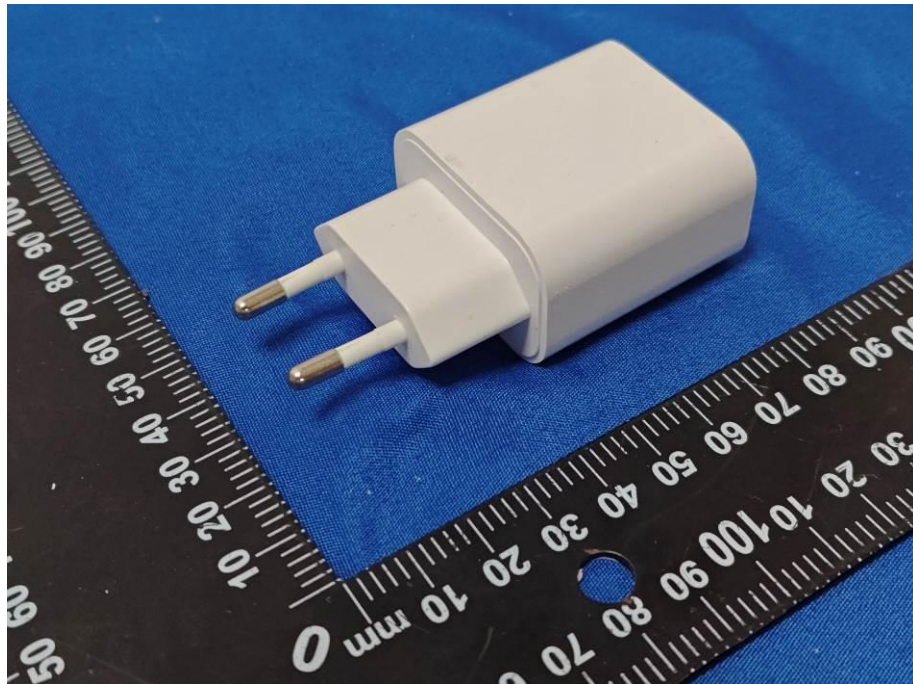


Figure 1. External view, output port: USB-A+USB-C

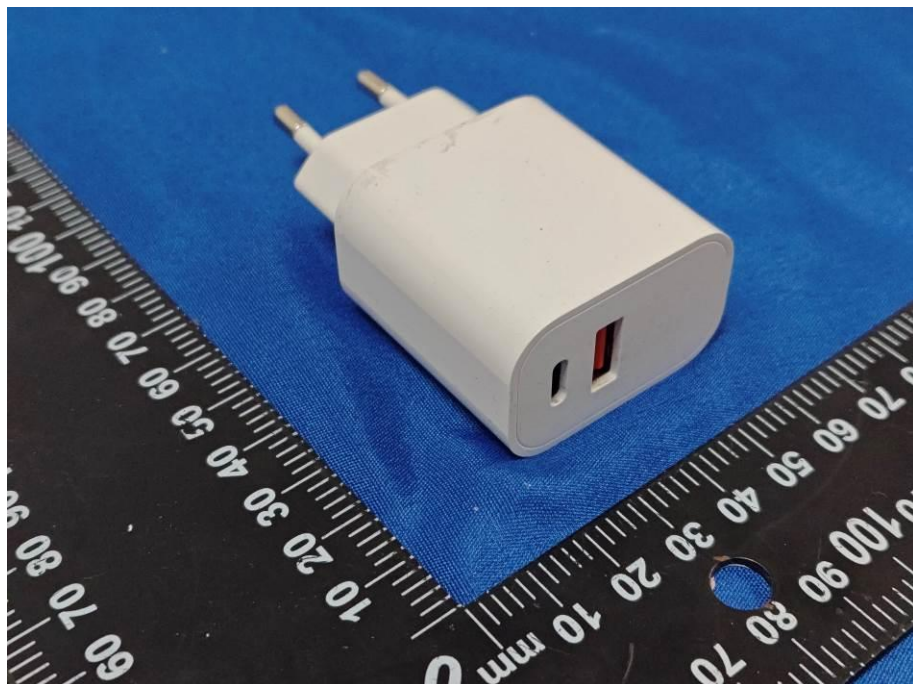


Figure 2. External view, output port: USB-A+USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

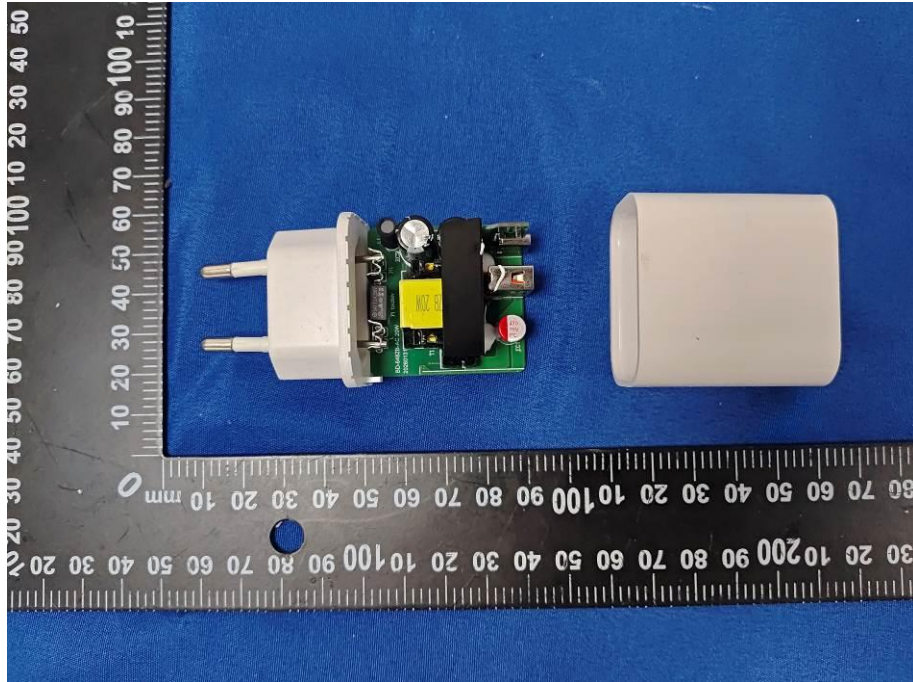


Figure 3. Internal view, output port: USB-A+USB-C

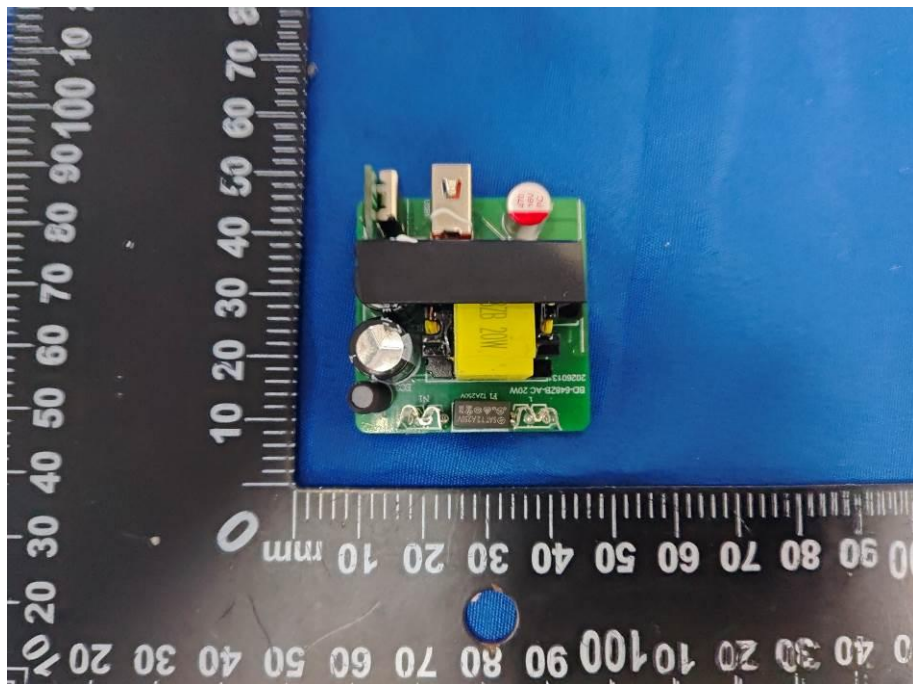


Figure 4. PCB view, output port: USB-A+USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

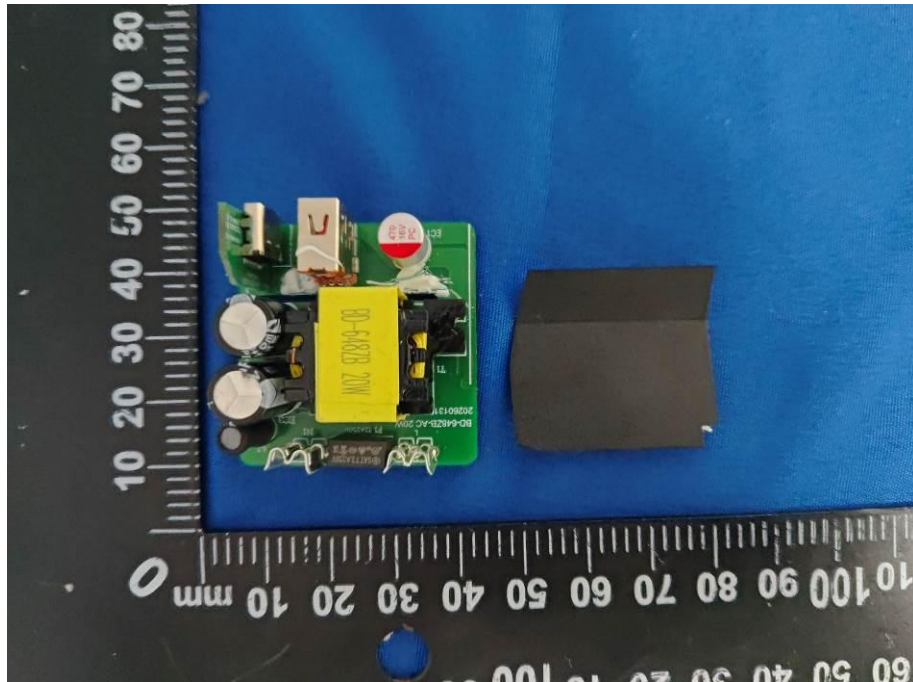


Figure 5. PCB view, output port: USB-A+USB-C

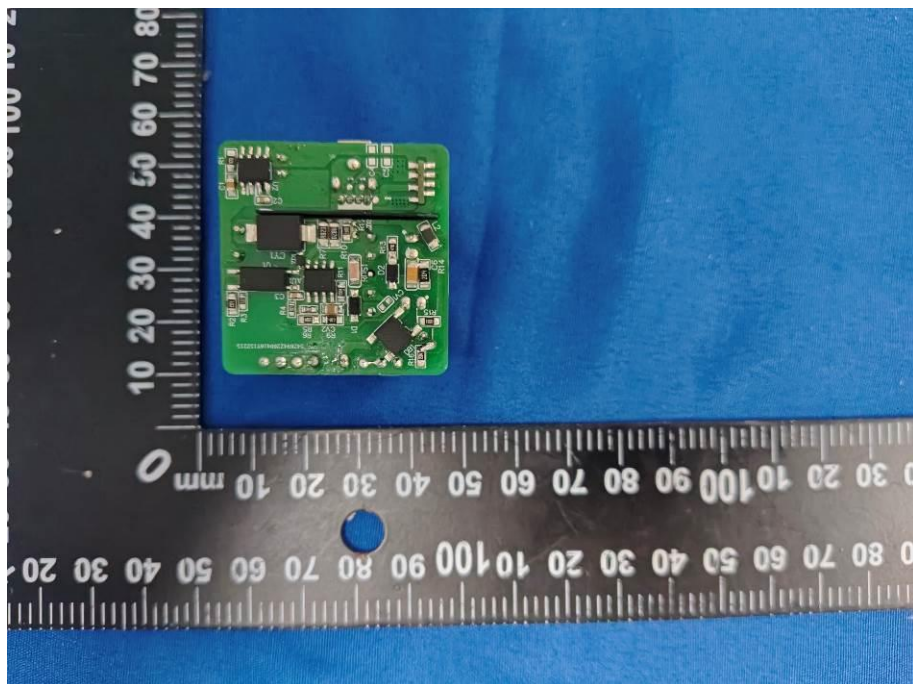


Figure 6. PCB view, output port: USB-A+USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

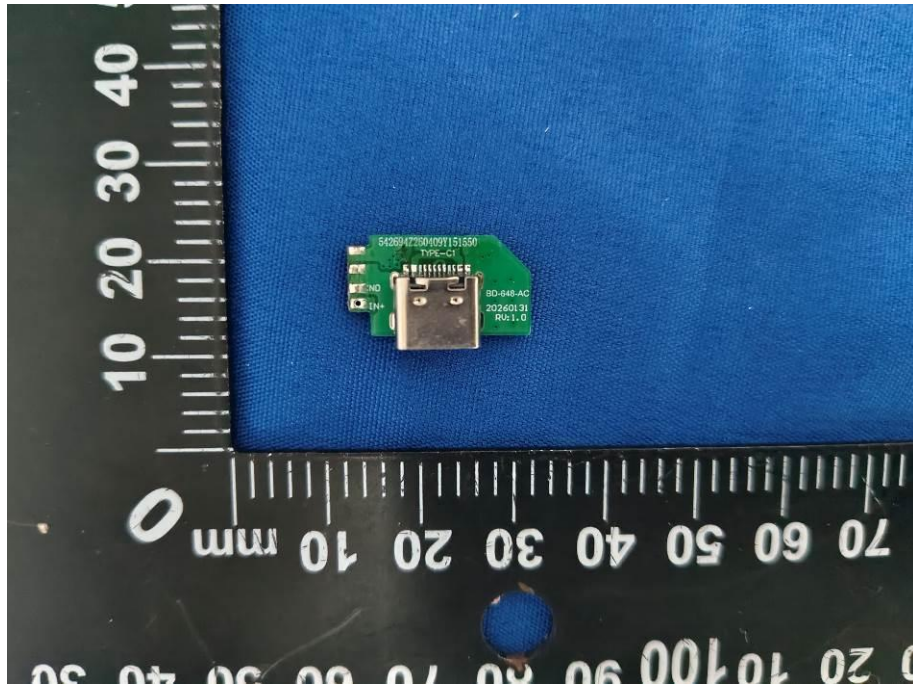


Figure 7. PCB view, output port: USB-A+USB-C

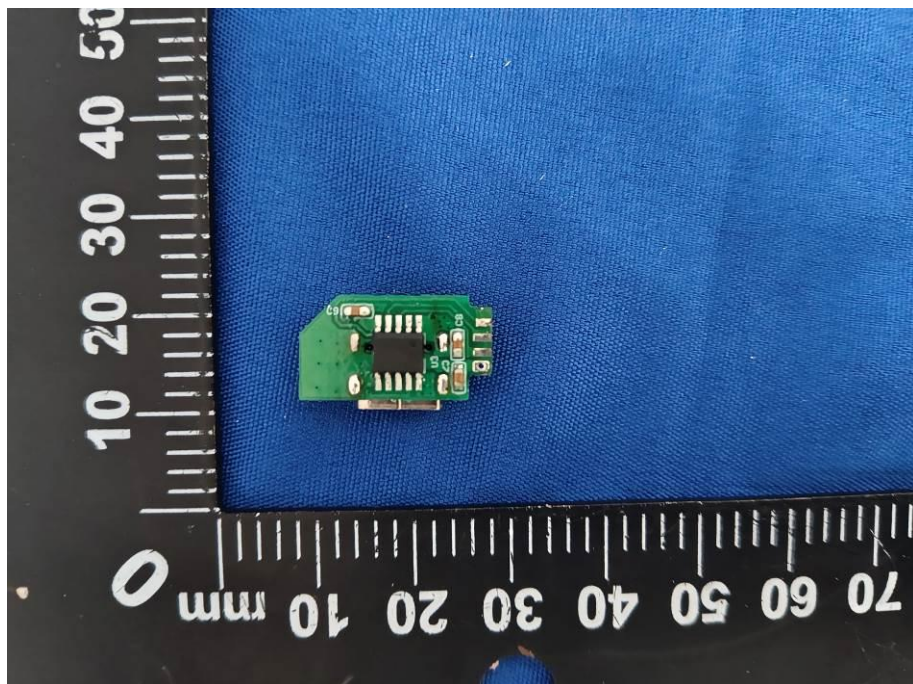


Figure 8. PCB view, output port: USB-A+USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

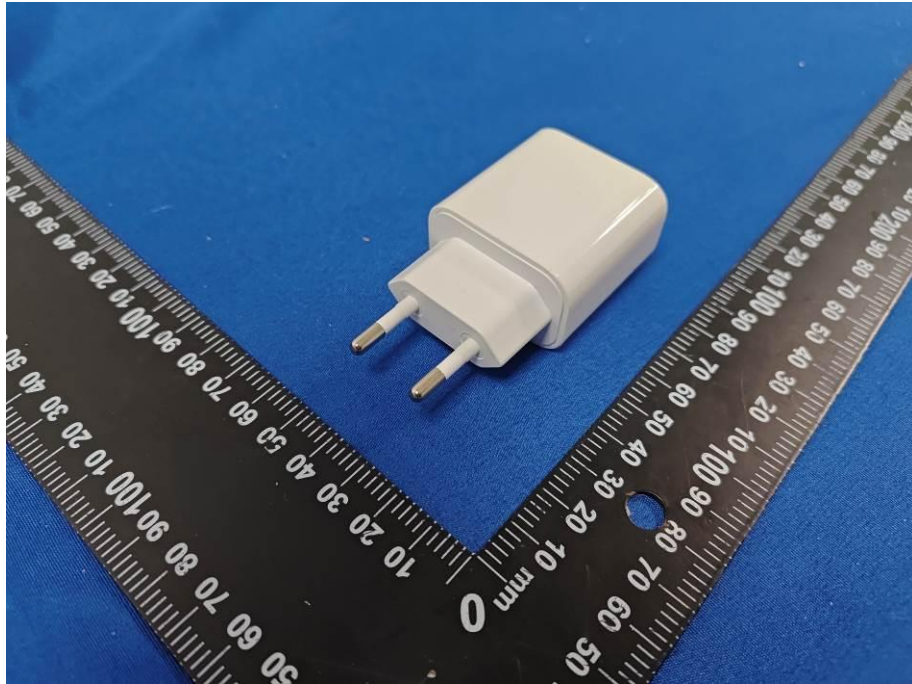


Figure 9. External view, output port: USB-C

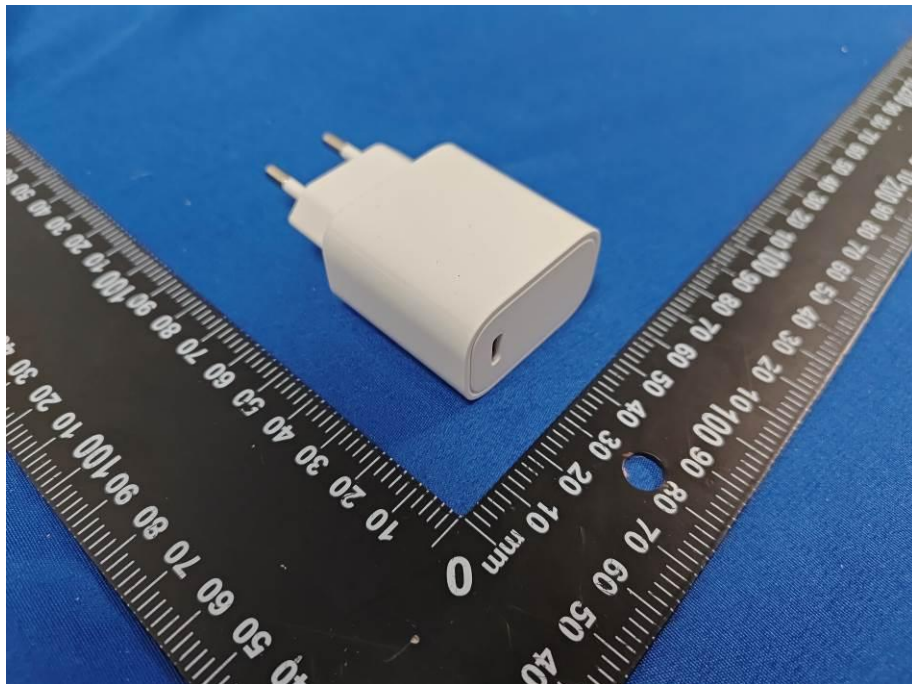


Figure 10. External view, output port: USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

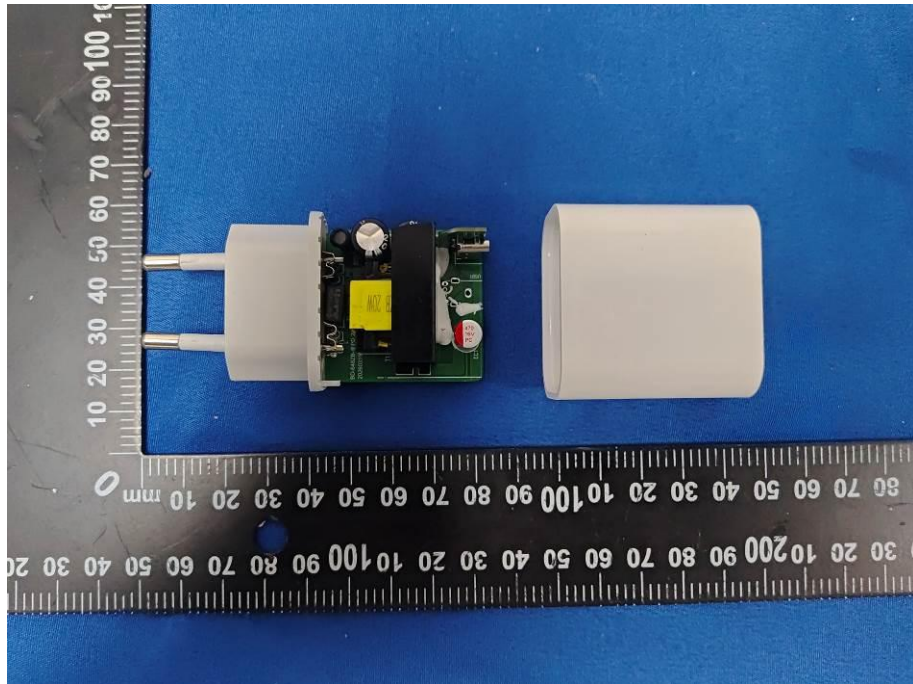


Figure 11. Internal view, output port: USB-C

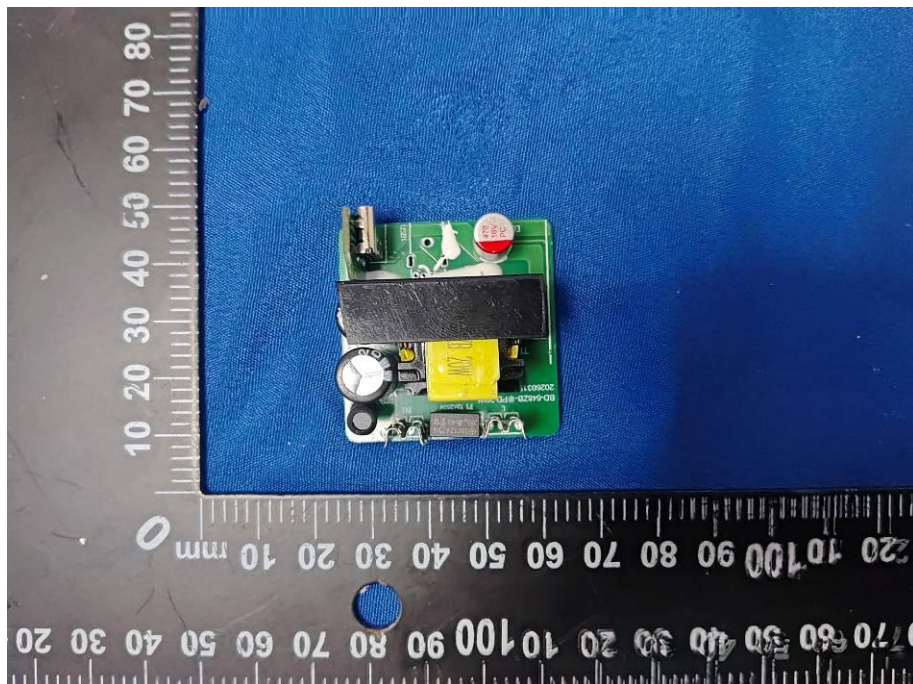


Figure 12. PCB view, output port: USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

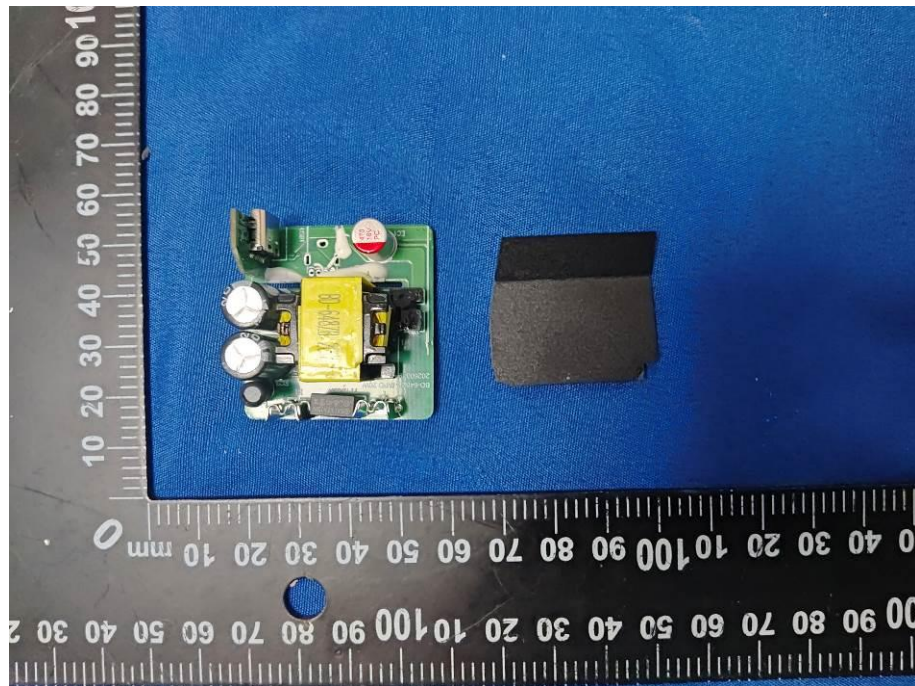


Figure 13. PCB view, output port: USB-C

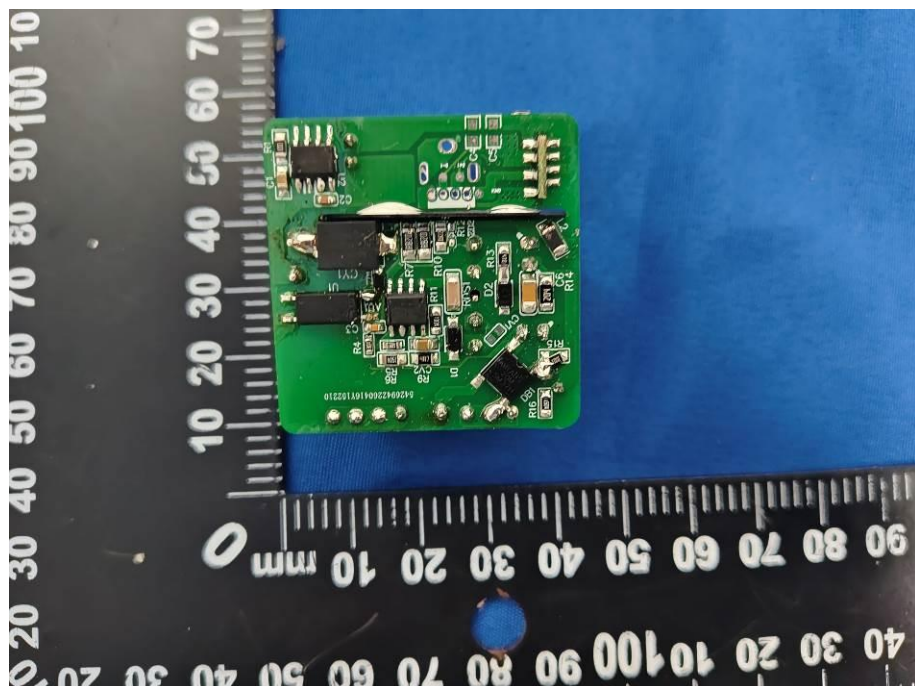


Figure 14. PCB view, output port: USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

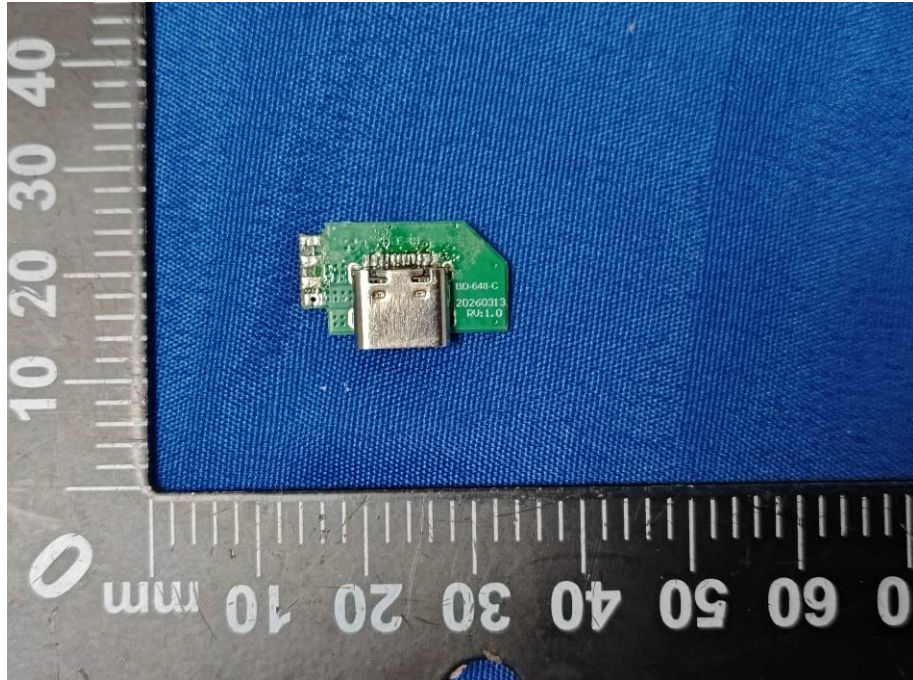


Figure 15. PCB view, output port: USB-C

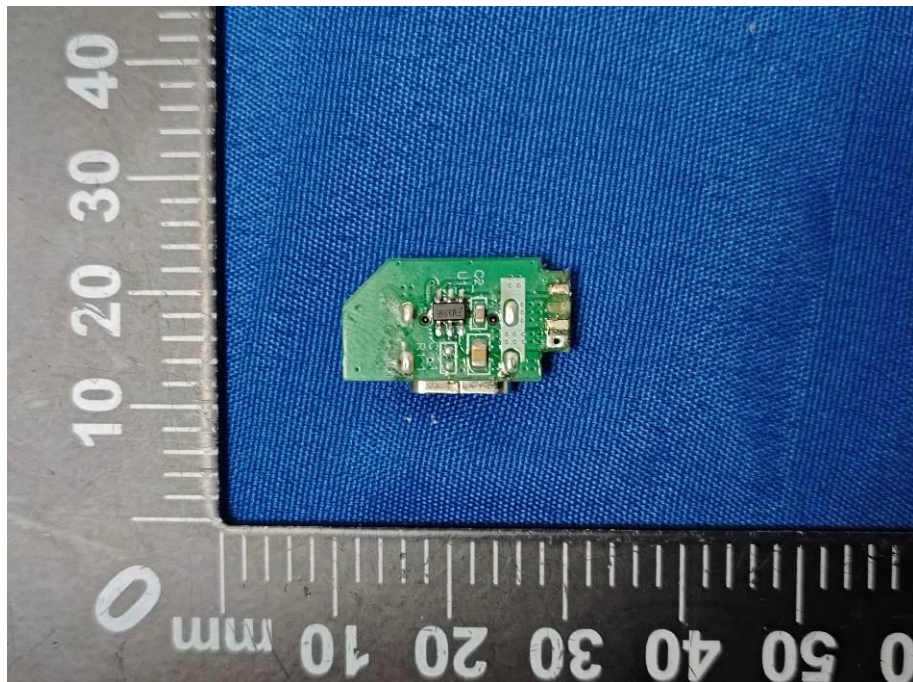


Figure 16. PCB view, output port: USB-C

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

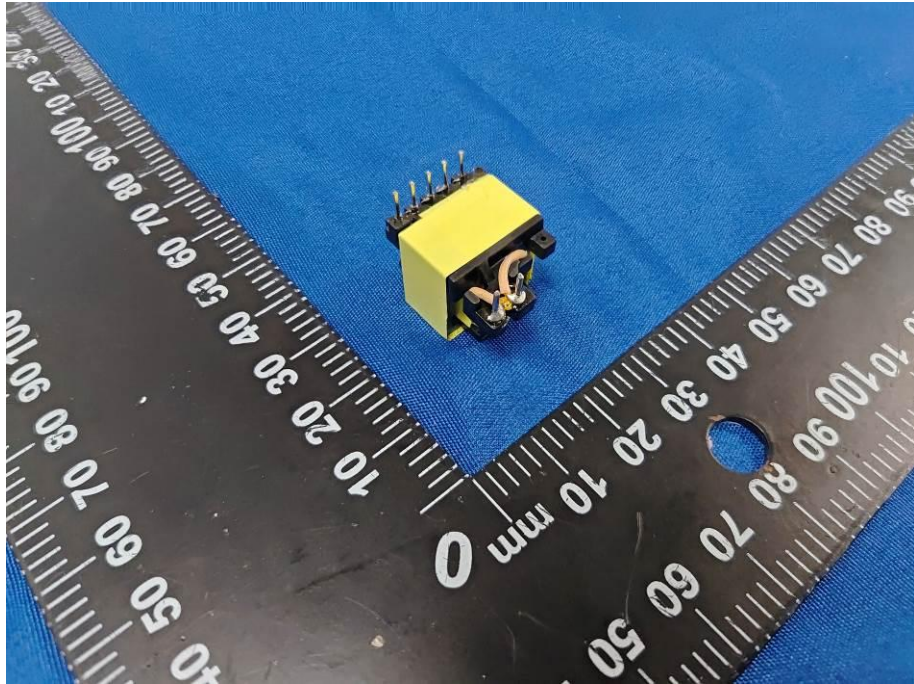


Figure 17. Transformer view

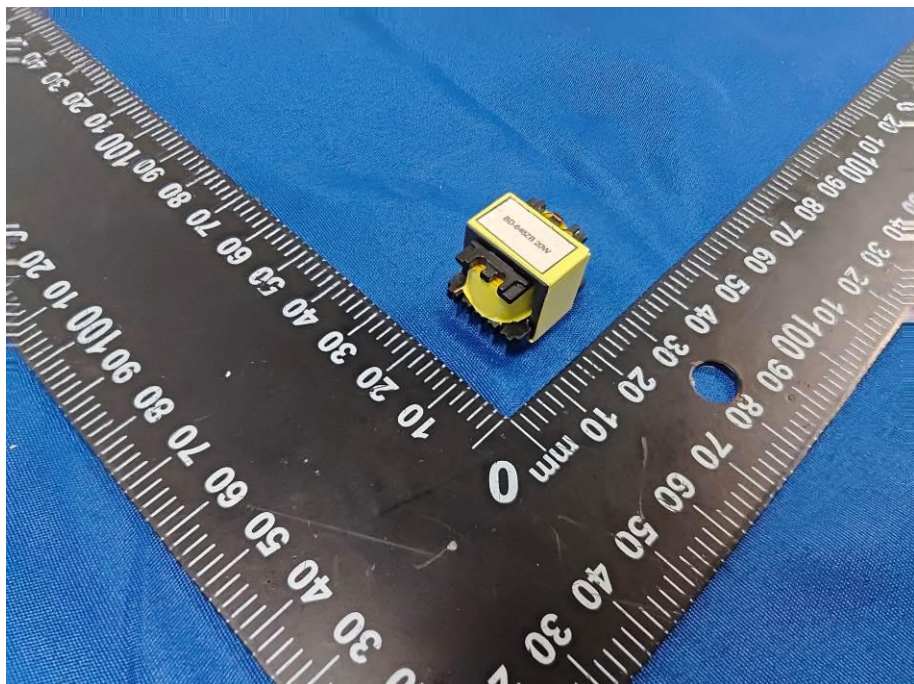


Figure 18. Transformer view

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276



Figure 19. Transformer view

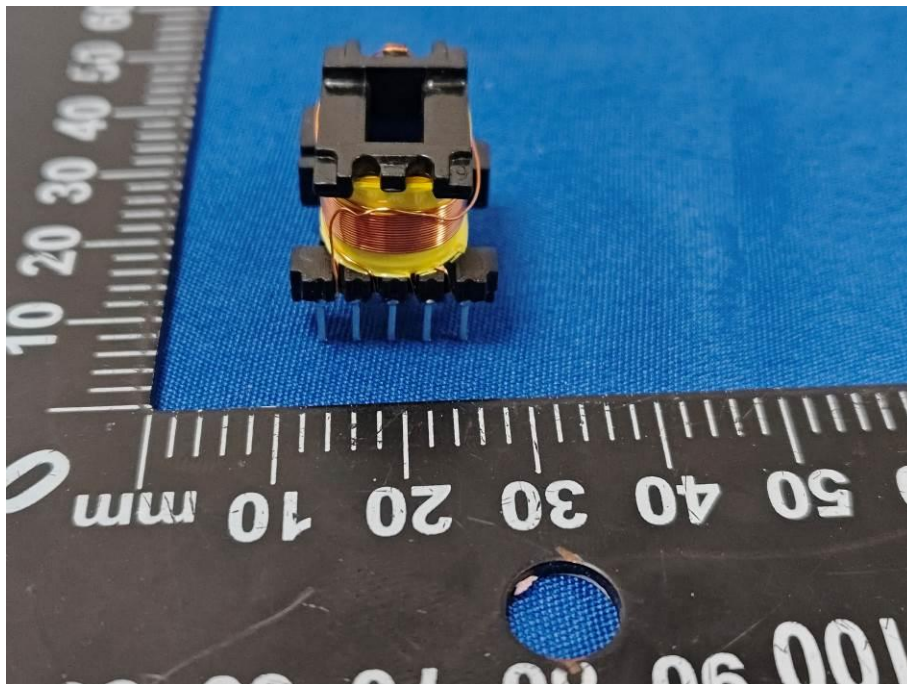


Figure 20. Transformer view

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

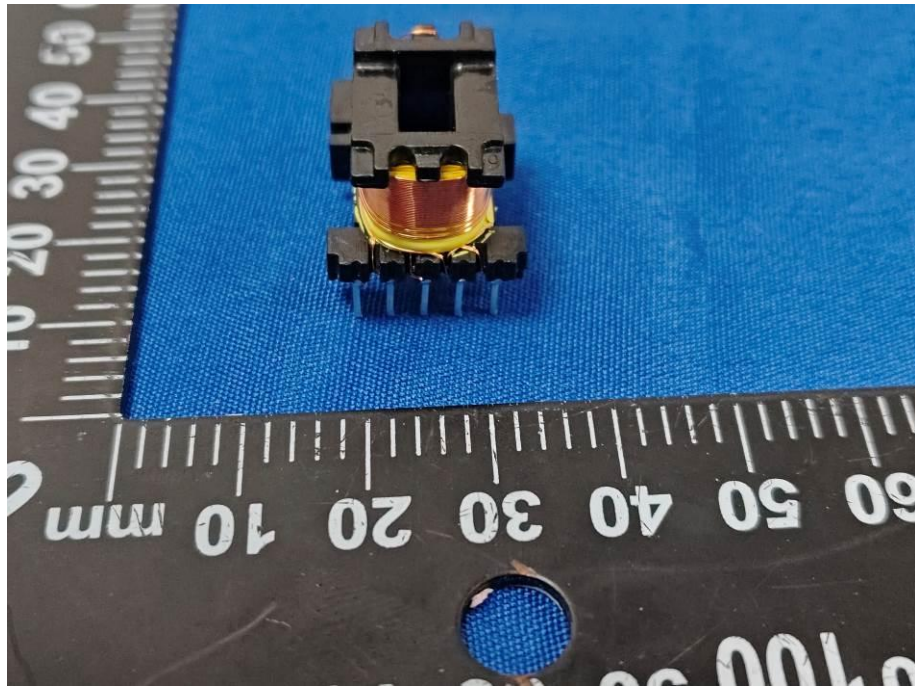


Figure 21. Transformer view

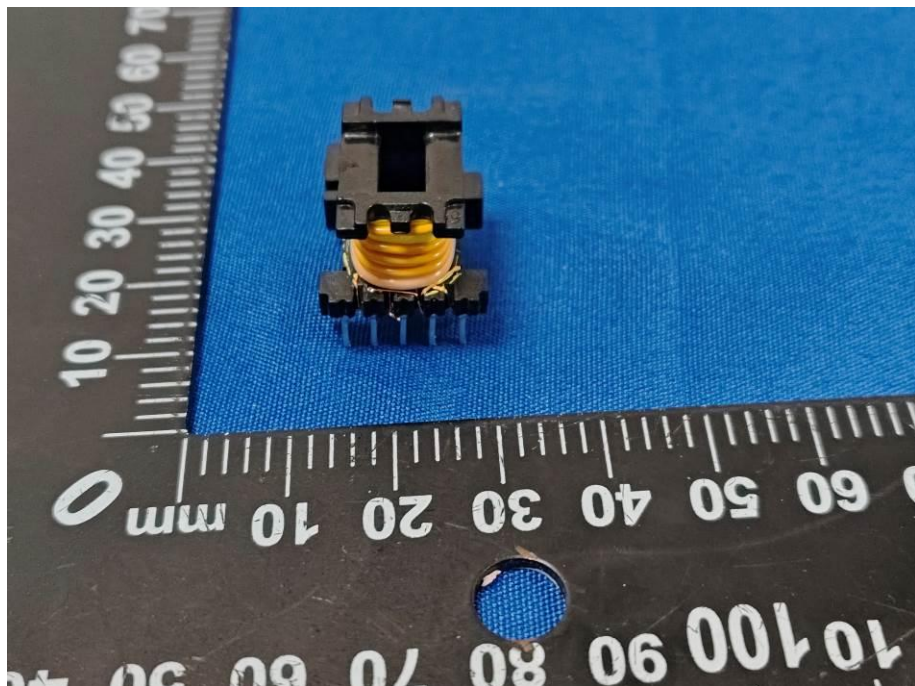


Figure 22. Transformer view

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

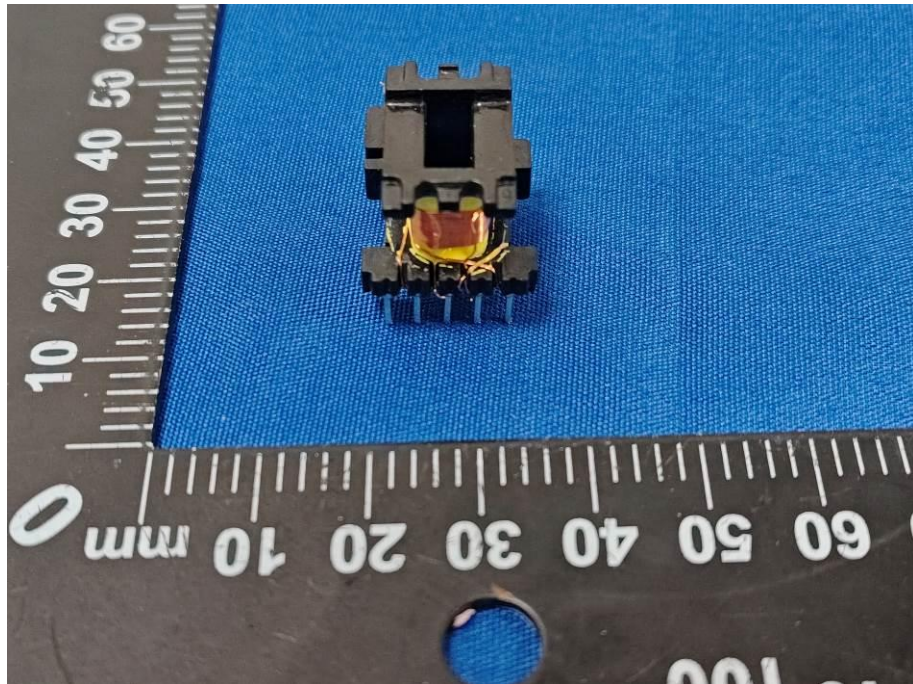


Figure 23. Transformer view

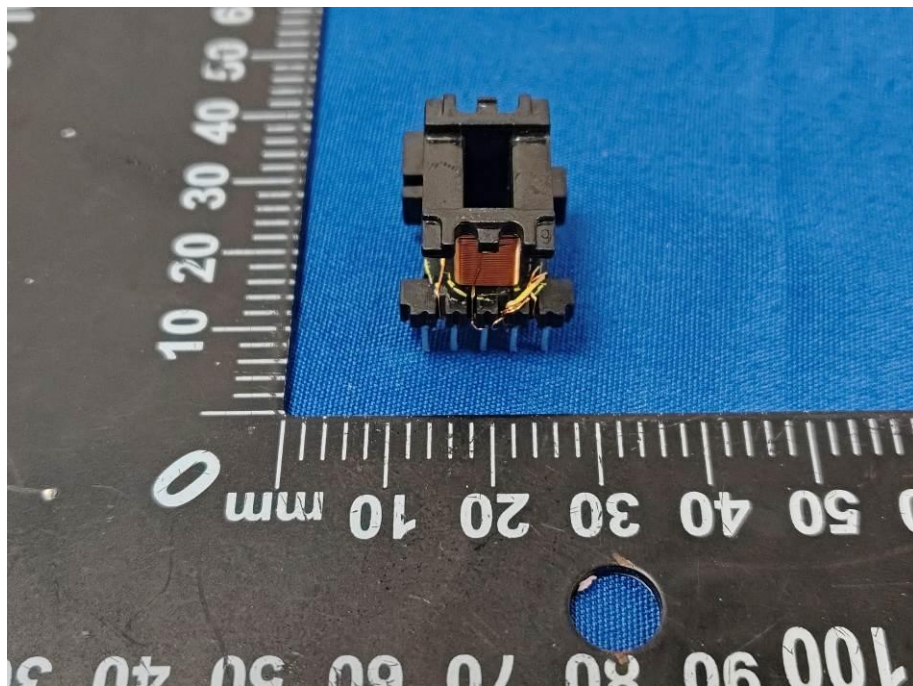


Figure 24. Transformer view

Product: PD20W FAST CHARGING

Type TC-135, TC-280, TC-282, TC-283, TC-284, TC-285, TC-286, TC-275, TC-281,
Designation: TC-279, TC-278, TC-276

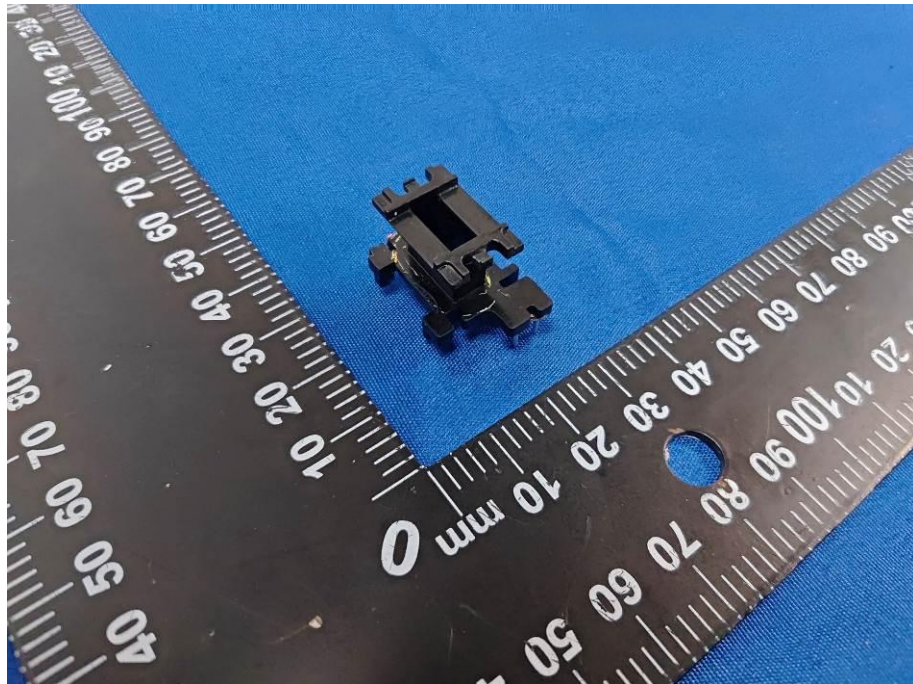


Figure 25. Transformer view

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Clause Absatz	Requirements – Tests Anforderungen - Prüfungen	Measuring results – Remarks Messergebnisse – Bemerkungen	Result Ergebnis
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**TEST REPORT
EN 62479**

Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

4	Conformity assessment methods		P
4.1	General considerations		P
	Four routes, as illustrated in Figure 1 and described as follows, can be used to demonstrate compliance with this standard:	See below.	P
	Route A: Typical usage, installation and the physical characteristics of equipment make it inherently compliant with the applicable EMF exposure levels such as those listed in the bibliography. This low-power equipment includes unintentional (or non-intentional) radiators, for example incandescent light bulbs and audio/visual (A/V) equipment, information technology equipment (ITE) and multimedia equipment (MME) that does not contain radio transmitters.	The equipment does incorporate only non-intentional radiators, it does not contain radio transmitters; the typical usage, installation and physical characteristics make the equipment inherently compliant with all applicable EMF exposure levels.	P
	Route B: The input power level to electrical or electronic components that are capable of radiating electromagnetic energy in the relevant frequency range is so low that the available antenna power and/or the average total radiated power cannot exceed the low-power exclusion level defined in 4.2.		N/A
	Route C: The available antenna power and/or the average total radiated power are limited by product standards for transmitters to levels below the low-power exclusion level defined in 4.2.		N/A
	Route D: Measurements or calculations show that the available antenna power and/or the average total radiated power are below the low-power exclusion level defined in 4.2.		N/A
	If none of these routes can be used, then the equipment is deemed to be out of the scope of this standard and EMF assessment for conformity assessment purposes shall be made according to other standards, such as IEC 62311 or other EMF product standards.		N/A
4.2	Low-power exclusion level (P _{max}) Low-power electronic and electrical equipment is deemed to comply with the provisions of this standard if it can be demonstrated using routes B, C or D that the available antenna power and/or the average total radiated power is less than or equal to the applicable low-power exclusion level P _{max} .		N/A

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Clause Absatz	Requirements – Tests Anforderungen - Prüfungen	Measuring results – Remarks Messergebnisse – Bemerkungen	Result Ergebnis
4.3	Exposure to multiple transmitting sources If an equipment under test (EUT) is equipped with multiple intentional radiators, the overall conformity assessment might require more than just the assessment of conformity of each one of the radiators separately. The effect of multiple intentional radiators should be considered in the conformity assessment process. Technical Report IEC 62630 [8] provides generic guidance on how to assess the EMFs generated by multiple intentional radiators.		N/A

End of Report/Attachment