

TEST REPORT

Test Report No.: DQ2300005241-S

Sample Name: Clothes Dryer

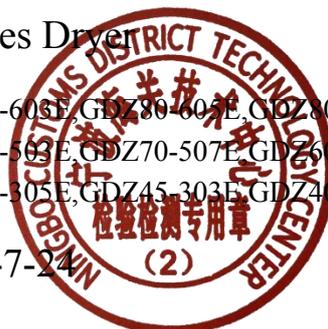
Models:

GDZ80-603E, GDZ80-607E, GDZ80-606E, GDZ80-607E,
GDZ70-503E, GDZ70-507E, GDZ60-506E, GDZ60-505E,
GDZ45-305E, GDZ45-303E, GDZ40-301E, GDZ40-302E

Date (s) of tests: 2023-7-24

Manufacturer:

Ningbo LESLI Industry Co., Ltd.



PSE TEST REPORT

| | |
|--|--|
| Product Name: Clothes Dryer | Date of Sample Delivery (Day/Month/Year): 27/6/2023 |
| Trade Mark: / | Date of Test Completion (Day/Month/Year): 24/7/2023 |
| Product Model: GDZ80-603E, GDZ80-605E, GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E, GDZ60-506E, GDZ60-505E, GDZ45-305E, GDZ45-303E, GDZ40-301E, GDZ40-302E. | Test Laboratory: Ningbo Customs District Technology Center |
| Client / Applicant: Ningbo LESLI Industry Co., Ltd. | Test Laboratory Address: No.99, Xingjian Road, Cixi, Zhejiang, China |
| Address of the Client / Applicant: No.68, DONGWU PART, YINXIAN AVENUE, YINZHOU, NINGBO, ZHEJIANG, CHINA | Test Classification: Commission Test |
| Manufacturer: Ningbo LESLI Industry Co., Ltd. | Test Items: Full safety tests |
| Address of the Manufacturer: No.68, DONGWU PART, YINXIAN AVENUE, YINZHOU, NINGBO, ZHEJIANG, CHINA | Non-standard test method(s) |
| Factory: Ningbo LESLI Industry Co., Ltd. | Tested according to: 電気用品の技術基準の解釈 別表第十二国際規格等に準拠した基準 J60335-1(H27) J60335-2-11(H29) J3000 (H 25) |
| Address of the Factory: No.68, DONGWU PART, YINXIAN AVENUE, YINZHOU, NINGBO, ZHEJIANG, CHINA | |
| Quantity of Prototype Sample: 13 | Serial Number of the Sample: / |
| Test Conclusions: All items tested comply with the requirements of the standards. Test result: Pass | |



Tested by: *Huangzhan*

Reviewed by: *Chondaguo*

Approved by: *Pan hudi*

| Sample Particular Descriptions: | | |
|---|--|--|
| Nature of supply | <input checked="" type="checkbox"/> a. c. <input type="checkbox"/> d. c. | |
| Means of connection | <input type="checkbox"/> Supply leads <input type="checkbox"/> Interconnection cord <input checked="" type="checkbox"/> Supply cord <input type="checkbox"/> Type X attachment <input checked="" type="checkbox"/> Type Y attachment <input type="checkbox"/> Type Z attachment <input type="checkbox"/> Appliance inlet <input type="checkbox"/> Direct plug-in | |
| Type of appliance | <input checked="" type="checkbox"/> Portable appliance (GDZ45-305E, GDZ45-303E, GDZ40-301E, GDZ40-302E) <input type="checkbox"/> Hand-held appliance <input checked="" type="checkbox"/> Stationary appliance (Other models) <input type="checkbox"/> Fixed appliance <input type="checkbox"/> Build-in appliance <input type="checkbox"/> Heating appliance <input type="checkbox"/> Motor-operated appliance <input checked="" type="checkbox"/> Combined appliance | |
| Description of the differences among the family models: | | |
| The tested model | The family models | Description of the differences among the family models |
| GDZ80-603E; GDZ45-305E | GDZ80-605E, GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E, GDZ60-506E, GDZ60-505E; GDZ45-303E, GDZ40-301E, GDZ40-302E, | The model of GDZ80-603E are same as models of GDZ80-605E, GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E, GDZ60-506E, GDZ60-505E ,except of the capacity ,appearance and model are differents;The model of GDZ45-305E are same as models of GDZ45-303E, GDZ40-301E, GDZ40-302E, except of the capacity ,appearance and model are differents;Between GDZ80-603E and GDZ45-305E, the motor is different from PTC, and everything else is the same. |

Possible test case verdicts

Test case does not apply to the test object.....: N/A

Test item does meet the requirement.....: P(ass)

Test item does not meet the requirement.....: F(ail)

General remarks

The appliances in this report are Tumble Dryer for household and indoor use only.

The model of GDZ80-603E are same as models of GDZ80-605E, GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E, GDZ60-506E, GDZ60-505E except of the capacity ,appearance and model are differents;he model of GDZ45-305E are same as models of GDZ45-303E, GDZ40-301E, GDZ40-302E, except of the capacity ,appearance and model are differents;Between GDZ80-603E and GDZ45-305E, the motor is different from PTC, and everything else is the same.

All clauses were performed on model GDZ80-603E,Tests of clause 7.20 were performed on models GDZ80-605E, GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E,GDZ60-506EandGDZ60-505E;Tests of clause 7. 8. 10.11.13.19. 20. 21.22.24.27.29 were carried out on the models GDZ45-305E, Clauses 7.20 was performed on model GDZ45-303E, GDZ40-301Eand GDZ40-302E;

General product information:

The appliance is Tumble Dryer for household and indoor use.

GDZ80-603E,GDZ80-605E, GDZ80-606E, GDZ80-607E Capacity:8.0kg 100V 50/60Hz 1350W IPX4;
 GDZ70-503E, GDZ70-507E Capacity:7.0kg 100V 50/60Hz 1350W IPX4;
 GDZ60-506E, GDZ60-505E Capacity:6.0kg 100V 50/60Hz 1350W IPX4;
 GDZ45-305E,GDZ45-303E Capacity:4.5kg 100V 50/60Hz 830W IPX4;
 GDZ40-301E, GDZ40-302E Capacity:4.0kg 100V 50/60Hz 830W IPX4;

Copy of marking plate:

品名:家庭用衣類乾燥機
 型番: GDZ80-607E
 定格電源:AC100V
 定格周波数: 50/60Hz
 定格消費電力:1350W
 乾燥許容容量:8.0kg
 IPX4



寧波樂士実業有限公司です
 中国製です

品名:家庭用衣類乾燥機
 型番: GDZ80-605E
 定格電源:AC100V
 定格周波数: 50/60Hz
 定格消費電力:1350W
 乾燥許容容量:8.0kg
 IPX4



寧波樂士実業有限公司です
 中国製です

品名:家庭用衣類乾燥機
 型番: GDZ80-606E
 定格電源:AC100V
 定格周波数: 50/60Hz
 定格消費電力:1350W
 乾燥許容容量:8.0kg
 IPX4



寧波樂士実業有限公司です
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品名:家庭用衣類乾燥機
 型番: GDZ80-603E
 定格電源:AC100V
 定格周波数: 50/60Hz
 定格消費電力:1350W
 乾燥許容容量:8.0kg
 IPX4



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Copy of marking plate:

品名:家庭用衣類乾燥機
型番: GDZ70-507E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:1350W
乾燥許容容量:7.0kg
IPX4



寧波樂士実業有限公司です
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品名:家庭用衣類乾燥機
型番: GDZ70-503E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:1350W
乾燥許容容量:7.0kg
IPX4



寧波樂士実業有限公司です
中国製です

品名:家庭用衣類乾燥機
型番: GDZ60-506E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:1350W
乾燥許容容量:6.0kg
IPX4



寧波樂士実業有限公司です
中国製です

品名:家庭用衣類乾燥機
型番: GDZ60-505E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:1350W
乾燥許容容量:6.0kg
IPX4



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Copy of marking plate:

品名:家庭用衣類乾燥機
型番: GDZ40-301E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:830W
乾燥許容容量:4.0kg
IPX4



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品名:家庭用衣類乾燥機
型番: GDZ40-302E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:830W
乾燥許容容量:4.0kg
IPX4



寧波樂士実業有限公司です
中国製です

品名:家庭用衣類乾燥機
型番: GDZ45-305E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:830W
乾燥許容容量:4.5kg
IPX4



寧波樂士実業有限公司です
中国製です

品名:家庭用衣類乾燥機
型番: GDZ45-303E
定格電源:AC100V
定格周波数: 50/60Hz
定格消費電力:830W
乾燥許容容量:4.5kg
IPX4



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Photos:

GDZ80-603E



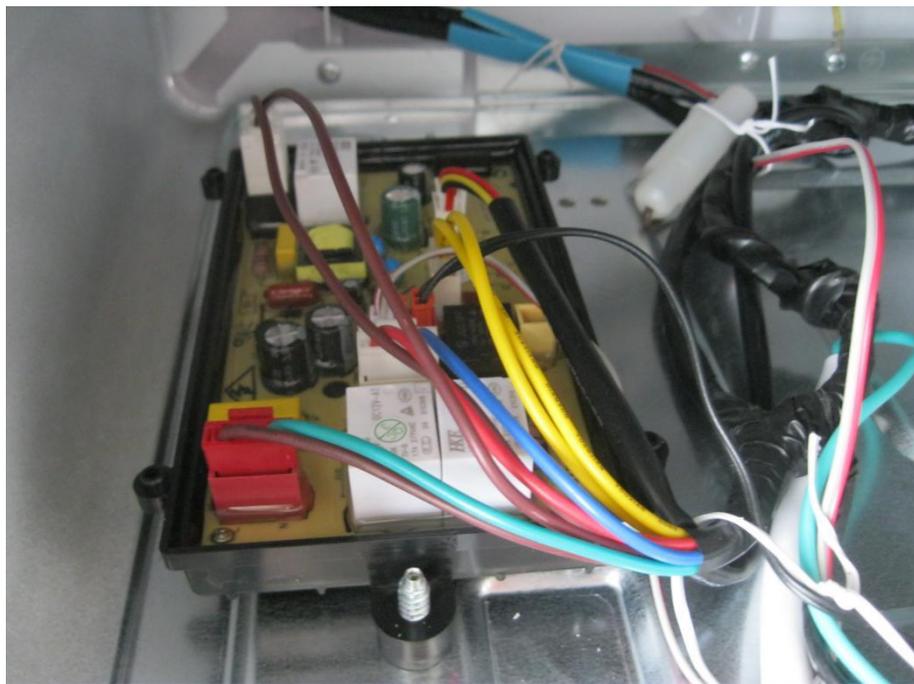




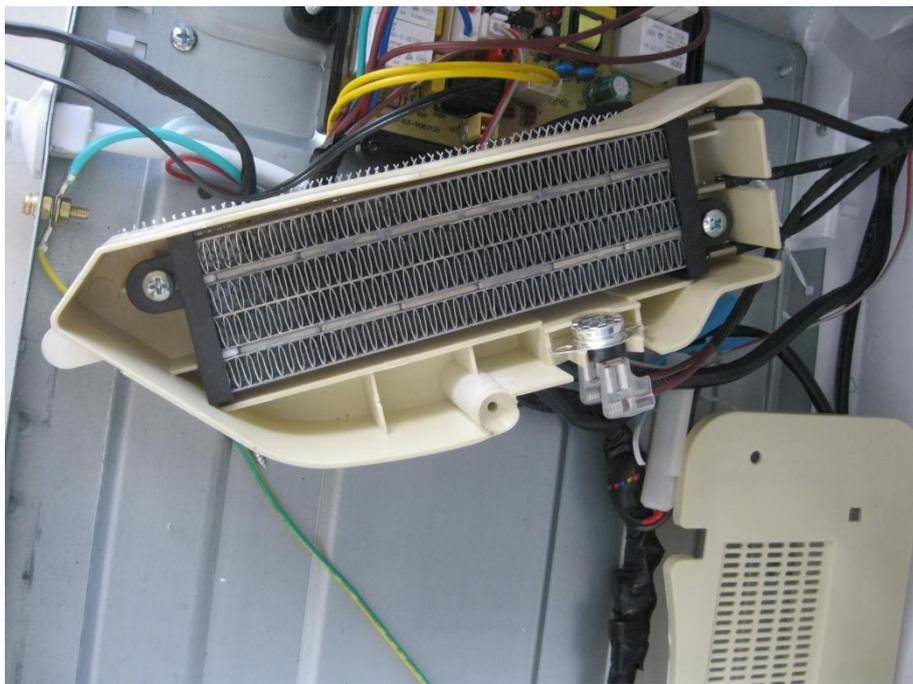




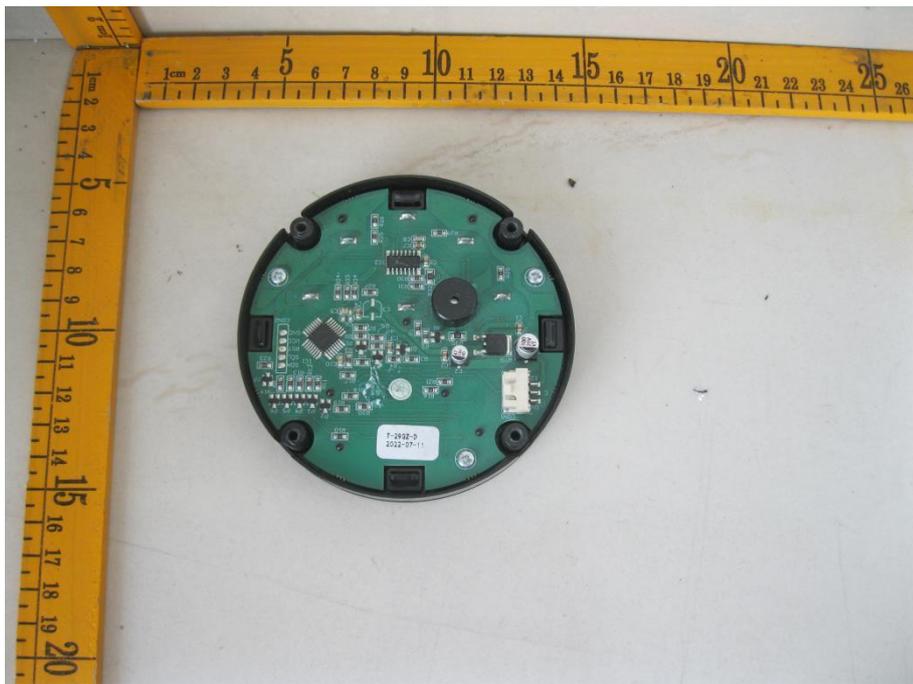


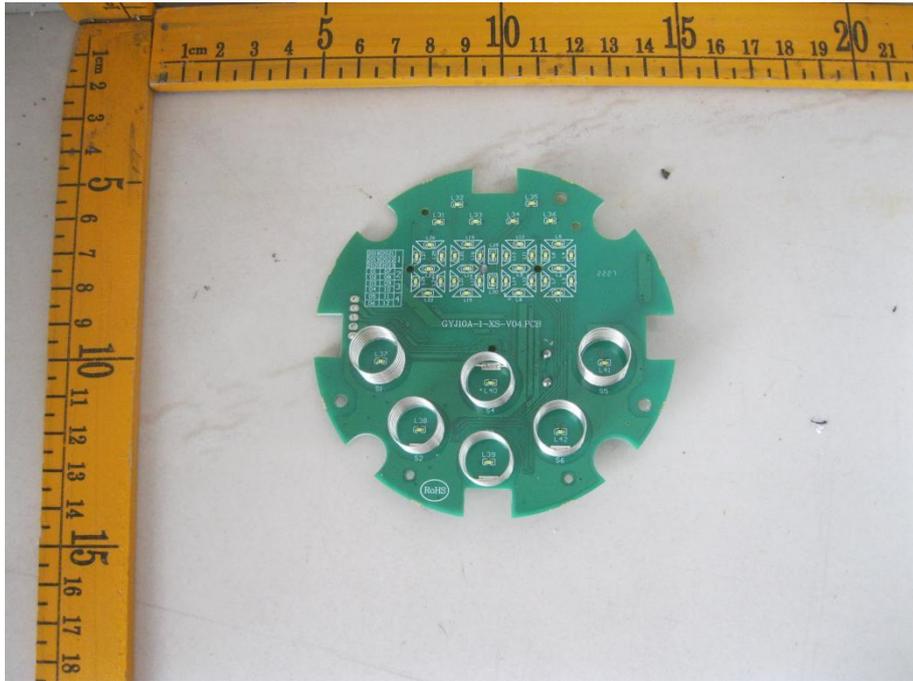












GDZ45-305E

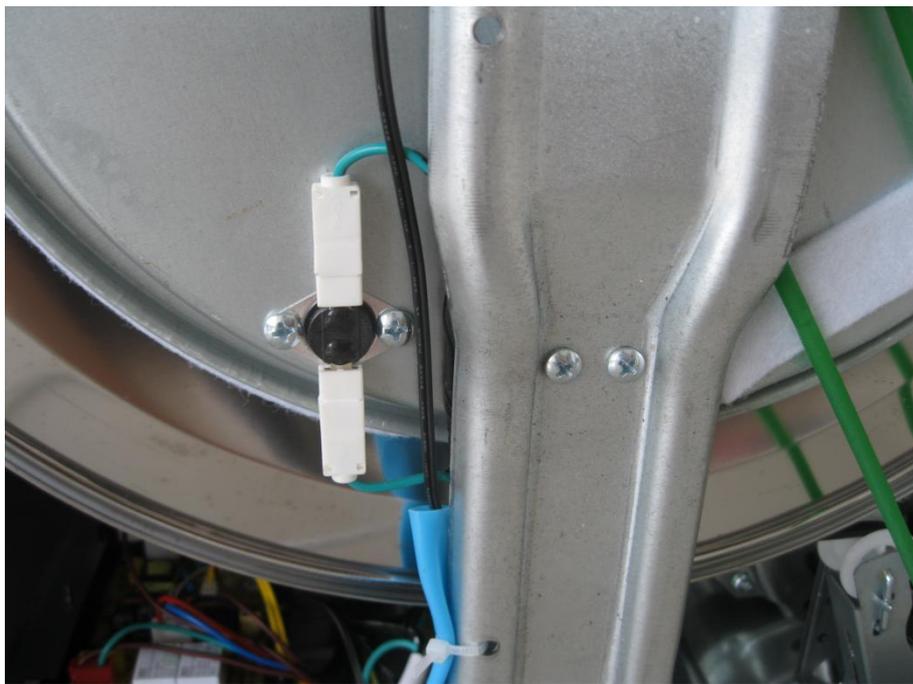


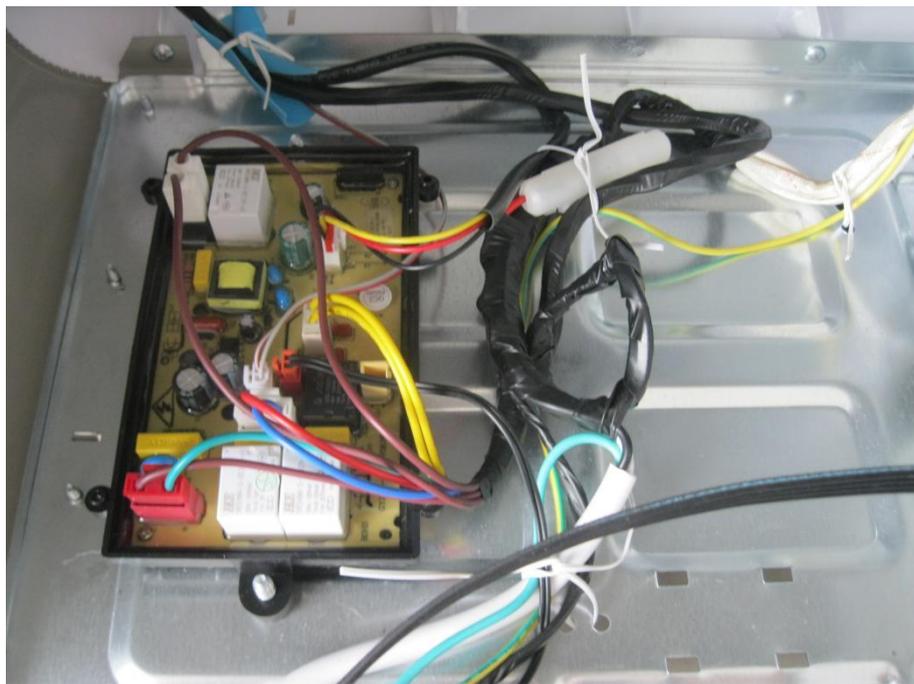


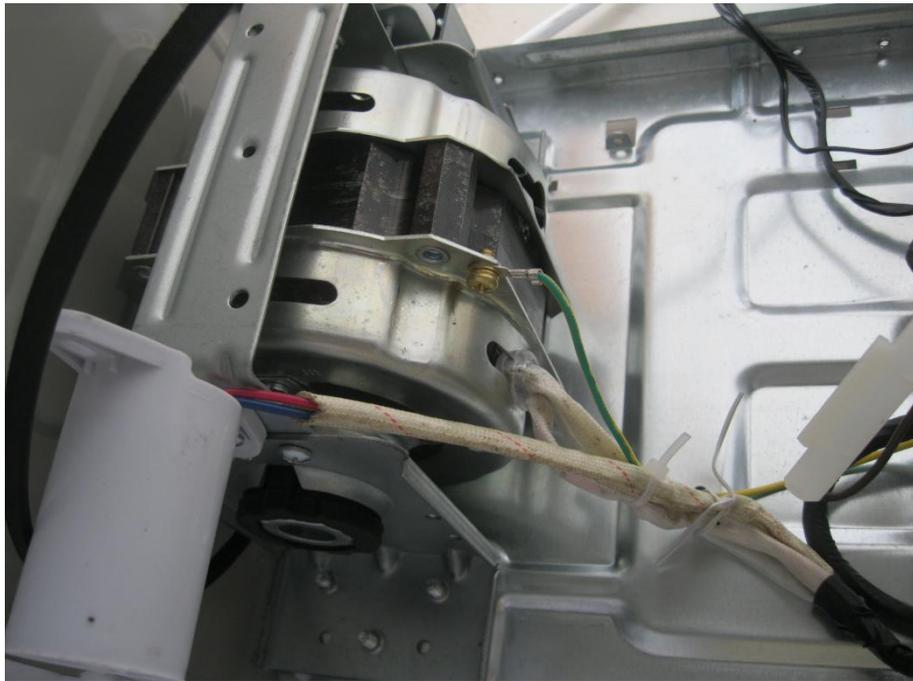
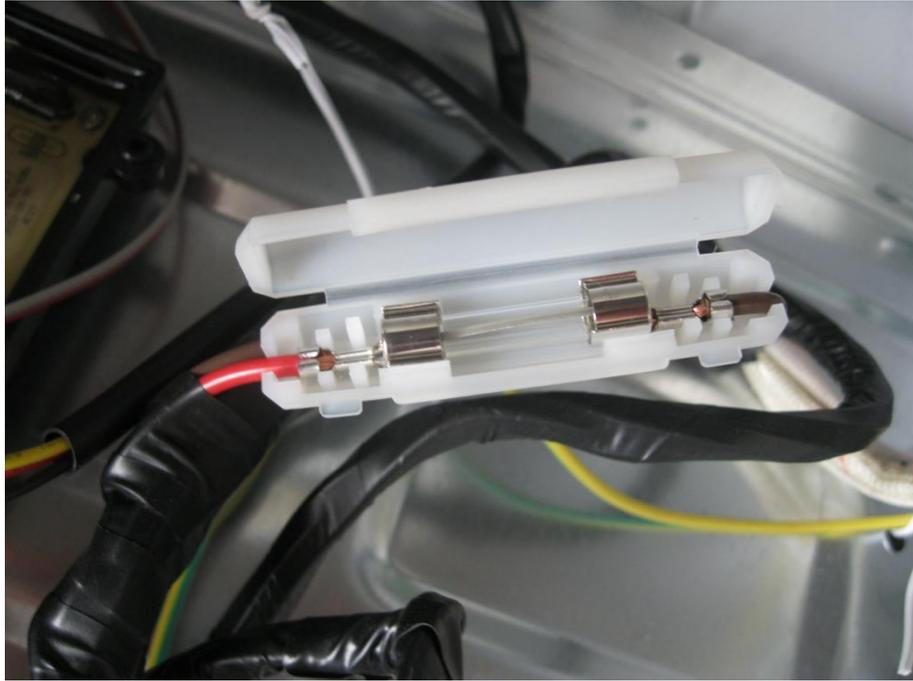




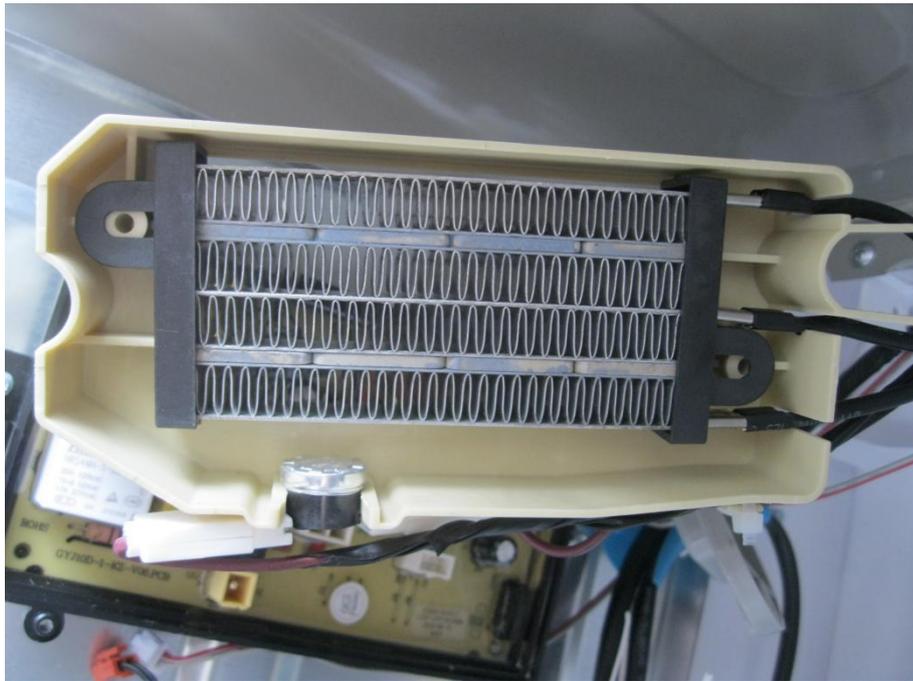




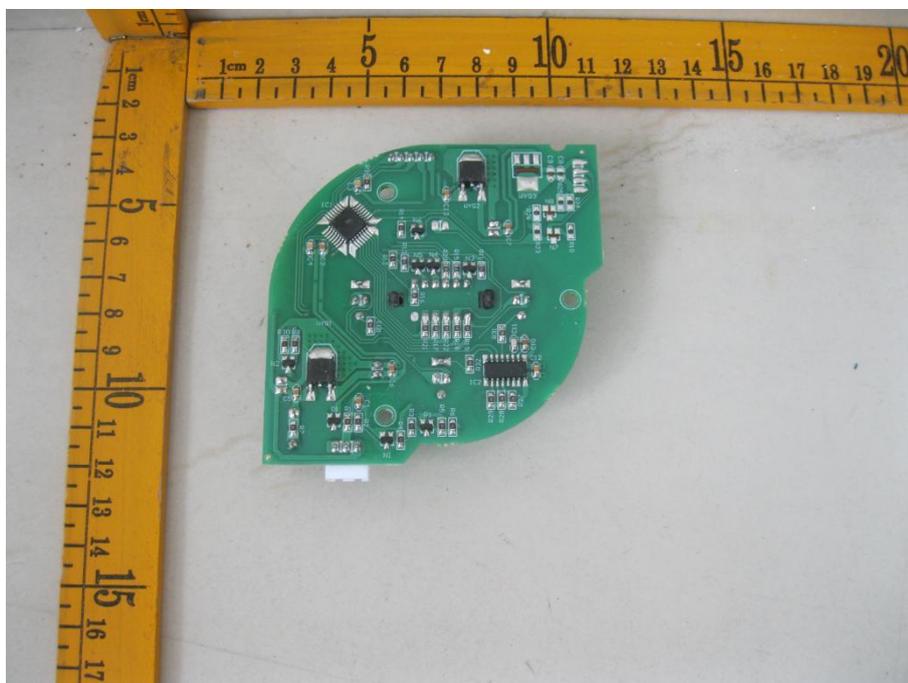
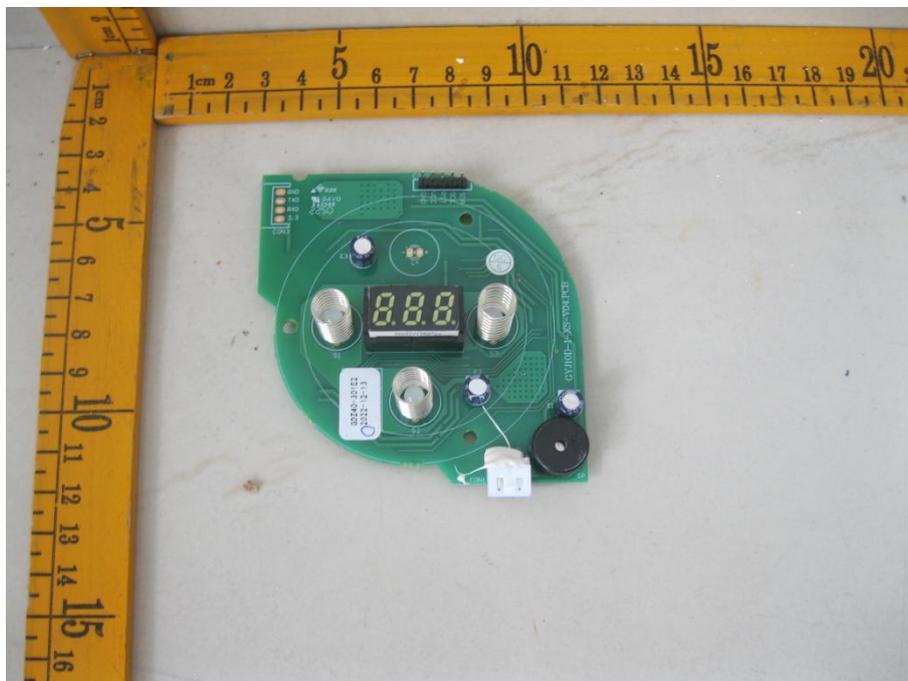


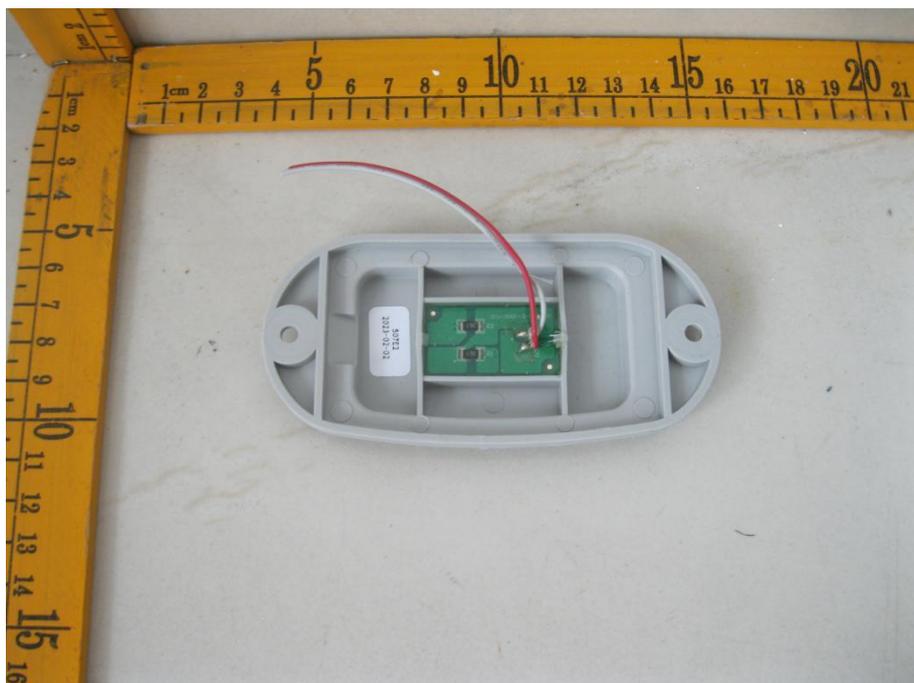




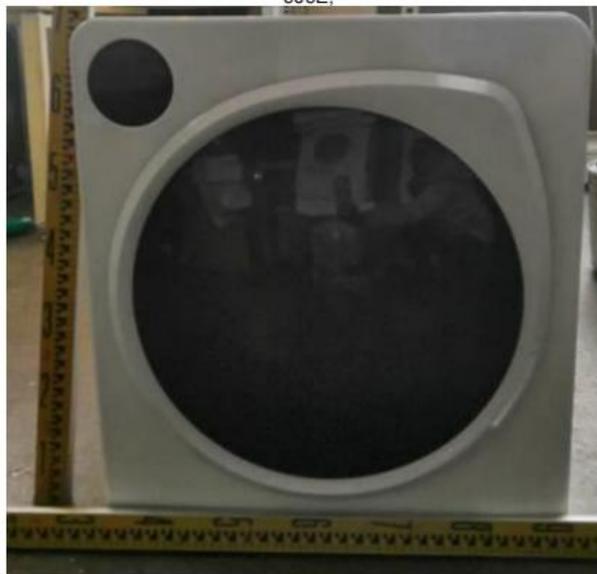








GDZ80-605E,GDZ60-505E



GDZ80-606E,GDZ60-506E



GDZ80-607E,GDZ70-507E



GDZ70-503E,



GDZ45-303E,



GDZ40-302E



GDZ40-301E



| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|---------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 5 | GENERAL CONDITIONS FOR THE TESTS | | — |
| | Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc. | | P |
| 6 | CLASSIFICATION | | — |
| 6.1 | Protection against electric shock: Class 0, 0I, I, II, III.....: | Class 0I | P |
| 6.1.101 | Class 0 appliance is accepted only for indoor type appliance of which rated voltage is less than150V | | N/A |
| 6.2 | Protection against harmful ingress of water | | P |
| | Appliances shall be at least IPX4. (J 60335-2-11(H29)) | IPX4 | P |
| 7 | MARKING AND INSTRUCTIONS | | — |
| 7.1 | Rated voltage or voltage range (V).....: | 100V | P |
| | Symbol for nature of supply, or.....: | | N/A |
| | Rated frequency (Hz).....: | 50/60Hz | P |
| | Rated power input (W), or.....: | See copy of marking plate | P |
| | Rated current (A) | | N/A |
| | Manufacturer's or responsible vendor's name, trademark or identification mark.....: | See copy of marking plate | P |
| | Model or type reference.....: | See copy of marking plate | P |
| | Symbol IEC 60417-5172, for class II appliances | | N/A |
| | IP number, other than IPX0.....: | IPX4 | P |
| | Symbol IEC 60417-5180, for class III appliances, unless | | N/A |
| | the appliance is operated by batteries only | | N/A |
| | Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage | | N/A |
| | The appliances shall be marked with the symbol ISO 7000-0790 (DB:2004-01) or with the substance of the following (J 60335-2-11(H29)) "Read the instructions" | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|---------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 7.2 | Warning for stationary appliances for multiple supply | | N/A |
| | Warning placed in vicinity of terminal cover | | N/A |
| 7.3 | Range of rated values marked with the lower and upper limits separated by a hyphen | 100V | N/A |
| | Different rated values marked with the values separated by an oblique stroke | 50/60Hz | P |
| 7.4 | Appliances adjustable for different rated voltages, the voltage setting is clearly discernible | | N/A |
| | Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram | | N/A |
| 7.5 | Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless | | N/A |
| | the power input is related to the arithmetic mean value of the rated voltage range | | N/A |
| | Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear | | N/A |
| 7.6 | Correct symbols used | | P |
| | Symbol for nature of supply placed next to rated voltage | | P |
| | Symbol for class II appliances placed unlikely to be confused with other marking | | N/A |
| | Units of physical quantities and their symbols according to international standardized system | | P |
| 7.7 | Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless | | N/A |
| | correct mode of connection is obvious | | N/A |
| 7.8 | Except for type Z attachment, terminals for connection to the supply mains indicated as follows: | | |
| | - marking of terminals exclusively for the neutral conductor (letter N) | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - marking of protective earthing terminals (symbol IEC 60417-5019) | | P |
| | - marking not placed on removable parts | | P |
| 7.9 | Marking or placing of switches which may cause a hazard | | N/A |
| 7.10 | Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means.....: | | P |
| | This applies also to switches which are part of a control | | P |
| | If figures are used, the off position indicated by the figure 0 | | N/A |
| | The figure 0 indicates only OFF position, unless no confusion with the OFF position | | N/A |
| | If the off position is only indicated by letters, the word "off" shall be used (J 60335-2-11(H29)) | | N/A |
| 7.11 | Indication for direction of adjustment of controls | | P |
| 7.12 | Instructions for safe use provided | | P |
| | Details concerning precautions during user maintenance | | P |
| | The instructions state that: | | |
| | - the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction | | P |
| | - children being supervised not to play with the appliance | | P |
| | For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided | | N/A |
| | Instructions for class III appliances state that it must only be supplied at SELV, unless | | N/A |
| | it is a battery-operated appliance, the battery being charged outside the appliance | | N/A |
| | The instructions for use shall state (J 60335-2-11(H29)): | | |
| | - maximum mass of dry textile material in kilograms to be used in the appliance | 8.0kg | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | -that the tumble dryer is not to be used if industrial chemicals have been used for cleaning; | | P |
| | - that the lint trap has to be cleaned frequently, if applicable | | P |
| | -that lint must not to be allowed to accumulate around the tumble dryer, if applicable | | P |
| | -that adequate ventilation has to be provided to avoid the back flow of gases into the room from appliances burning other fuels, including open fires. | | P |
| | If symbol ISO 7000-0790 (2004-01) is used, its meaning shall be explained.. (J 60335-2-11(H29)) | | N/A |
| | The instructions for use shall include the substance of the following (J 60335-2-11(H29)) | | |
| | -Do not dry unwashed items in the tumble dryer | | P |
| | -items that have been soiled with substances such as cooking oil, acetone, alcohol, petrol, kerosene, spot removers, turpentine, waxes and wax removers should be washed in hot water with an extra amount of detergent before being dried in the tumble dryer. | | P |
| | -items such as foam rubber (latex foam), shower caps, rubber backed articles and clothes or pillows fitted with foam rubber pads should not be dried in the tumble dryer. | | P |
| | -fabric softeners, or similar products, should be used as specified by the fabric softener instructions. | | P |
| | -the final part of a tumble dryer cycle occurs without heat (cool down cycle) to ensure that the items are left at a temperature that ensures that the items will not be damaged. | | P |
| | The instructions shall include the substance of the following warning: (J 60335-2-11(H29)) | | |
| | WARNING : Never stop a tumble dryer before the end of the drying cycle unless all items are quickly removed and spread out so that the heat is dissipated. | | P |
| | WARNING: The appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by a utility | | P |
| 7.12.1 | Sufficient details for installation supplied | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated | | N/A |
| | The installation instructions shall state (J 60335-2-11(H29)): | | |
| | -For appliances with ventilation openings in the base, instructions that a carpet must not obstruct the openings | | P |
| | -When applicable, instructions that exhaust air must not be discharged into a flue which is used for exhausting fumes from appliances burning gas or other fuels. | | P |
| | -that the appliance must not be installed behind a lockable door, a sliding door or a door with a hinge on the opposite side to that of the tumble dryer, in such a way that a full opening of the tumble dryer door is restricted. | | P |
| | If tumble dryer can be placed on the top of a washing machine, installation instructions as specified | | N/A |
| 7.12.2 | Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules | | N/A |
| 7.12.3 | Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected | | N/A |
| 7.12.4 | Instructions for built-in appliances: | | |
| | - dimensions of space | | N/A |
| | - dimensions and position of supporting and fixing | | N/A |
| | - minimum distances between parts and surrounding structure | | N/A |
| | - minimum dimensions of ventilating openings and arrangement | | N/A |
| | - connection to supply mains and interconnection of separate components | | N/A |
| | - allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless | | N/A |
| | a switch complying with 24.3 | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 7.12.5 | Replacement cord instructions, type X attachment with a specially prepared cord | | N/A |
| | Replacement cord instructions, type Y attachment | | P |
| | Replacement cord instructions, type Z attachment | | N/A |
| 7.12.6 | Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard | | N/A |
| 7.12.7 | Instructions for fixed appliances stating how the appliance is to be fixed | | N/A |
| 7.12.8 | Instructions for appliances connected to the water mains: | | |
| | - max. inlet water pressure (Pa)..... : | | N/A |
| | - min. inlet water pressure, if necessary (Pa)..... : : | | N/A |
| | Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets | | N/A |
| 7.13 | Instructions and other texts in an official language | | P |
| 7.14 | Marking clearly legible and durable, rubbing test as specified | | P |
| | The height of symbol ISO 7000-0790 (2004-01) shall be at least 15 mm. (J 60335-2-11(H29)) | | N/A |
| 7.15 | Markings on a main part | | P |
| | Marking clearly discernible from the outside, if necessary after removal of a cover | | P |
| | For portable appliances, cover can be removed or opened without a tool | | P |
| | For stationary appliances, name, trademark or identification mark and model or type reference visible after installation | | P |
| | For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading | | N/A |
| | Symbol ISO 7000-0790 (DB:2004-01), or the marking “Read the instructions”, shall be readily visible when the appliance is installed as in normal use. (J 60335-2-11(H29)) | | N/A |
| 7.16 | Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link | | N/A |
| 8 | PROTECTION AGAINST ACCESS TO LIVE PARTS | | — |
| 8.1 | Adequate protection against accidental contact with live parts | | P |
| 8.1.1 | Regarding electrical lamp holder, the following requirements shall be confirmed | | |
| | When lamp holder E14 is charged during insertion of its lamp cap, the lamp holder shall be constructed so that the live parts can not be contacted | | N/A |
| | For lamp holders E11,E12,E17,E26 and E39, when each lamp cap has been completely inserted, the lamp holder shall be constructed so that the live parts can not be touched | | N/A |
| | The verdict shall be given as follows: | | |
| | --For lamp holders E11,E12,E17,E26 and E39, the standard test finger B shown in figure 1 is applied, and according to the purpose of test, the manufacturer of lamp holders shall provide electric bulbs to meet with the testing lamp holders | | N/A |
| | -- For lamp holder E14, the gauge in line with the current version of standard sheet (7006-31) of IEC 60061-3 shall be used | | N/A |
| | Washing machine used, for example, on the issue of dryer washers designed maximum water in full of water, in which were state, more than 40 kg sueoki-gata (do I continue to performance tests will be conducted. (J 60335-2-11(H29)) | | N/A |
| 8.1.2 | The test pin 13 is applied without appreciable force through openings in Class 0 appliances, Class II appliances or Class II constructions, except for those giving access to lamp caps and the live parts of socket-outlets and connectors of cordsets | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 8.1.3 | For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements | | N/A |
| 8.1.4 | An accessible part is not considered to be live if | | N/A |
| | --the part is supplied at safety extra-low voltage, or for Class 0 appliances, power from insulating transformer conformed to withstand voltage test of reinforced insulation of 16.3 provided that: | | N/A |
| | For a.c. the peak value of the voltage does not exceed 42.4 V | | N/A |
| | For d.c. the voltage does not exceed 42.4 V | | N/A |
| 8.1.5 | Live parts protected at least by basic insulation before installation or assembly: | | |
| | - built-in appliances | | N/A |
| | - fixed appliances | | N/A |
| | - appliances delivered in separate units | | N/A |
| 8.2 | Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only | | P |
| | Only possible to touch parts separated from live parts by double or reinforced insulation | | P |
| 9 | STARTING OF MOTOR-OPERATED APPLIANCES | | — |
| | Requirements and tests are specified in part 2 when necessary | | N/A |
| 10 | POWER INPUT AND CURRENT | | — |
| 10.1 | Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..... : | (see appended table) | P |
| | Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless | | N/A |
| | the rated power input is related to the arithmetic mean value | | N/A |
| | Limit deviation tolerance of rated input for PTC device as heating element is $\pm 15\%$ regardless of its rated value | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 10.2 | Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2..... : | (see appended table) | N/A |
| | Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless | | N/A |
| | the rated current is related to the arithmetic mean value of the range | | N/A |
| 11 | HEATING | | — |
| 11.1 | No excessive temperatures in normal use | | P |
| 11.2 | The appliance is held, placed or fixed in position as described..... : | | P |
| | Lint traps are cleaned and then 50% of the area of the filter is blocked..... (J 60335-2-11(H29)) | | P |
| 11.3 | Temperature rises, other than of windings, determined by thermocouples | | P |
| | Temperature rises of windings determined by resistance method, unless | | N/A |
| | the windings are non-uniform or it is difficult to make the necessary connections | | N/A |
| | Where the accessible external surfaces are suitably flat and permit access for the test probe of Figure 101, then it may be used to measure the temperature rises of accessible external surfaces specified in Table 101. (J 60335-2-11(H29)) | | P |
| 11.4 | Heating appliances operated under normal operation at 1.15 times rated power input (W) | | N/A |
| 11.5 | Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)..... : | | N/A |
| 11.6 | Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)..... : | | P |
| 11.7 | Operation duration corresponding to the most unfavourable conditions of normal use | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Appliances incorporating a timer, a humidity sensing control or other time-limiting control (J 60335-2-11(H29)) | | |
| | cycles with max. time possible operating periods and 4min rest periods | | P |
| | Test may be ended if the temperature rise not exceed the value during the preceding cycle by more than 8 K | | P |
| | Appliances having a combined washing-drying cycle are operated with the drying program resulting in the highest temperature rise. (J 60335-2-11(H29)) | | N/A |
| | Other appliances are operated continuously until steady conditions are established. (J 60335-2-11(H29)) | | N/A |
| 11.8 | Temperatures not exceeding values in table 3.....: | (see appended table) | P |
| | If the temperature rise of a motor winding exceeds the value of table 3, or | | N/A |
| | if there is doubt with regard to classification of insulation, | | N/A |
| | tests of Annex C are carried out | | N/A |
| | Sealing compound does not flow out | | P |
| | Protective devices do not operate, except | | P |
| | components in protective electronic circuits tested for the number of cycles specified in 24.1.4 | | N/A |
| | During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3 and Table 101.: (J 60335-2-11(H29)) | | P |
| 13 | LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE | | — |
| 13.1 | Leakage current not excessive and electric strength adequate | | P |
| | Heating appliances operated at 1.15 times the rated power input (W).....: | | N/A |
| | Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V).....: | 106V | P |
| | Protective impedance and radio interference filters disconnected before carrying out the tests | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 13.2 | For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990 | | P |
| | For other appliances, a low impedance ammeter may be used | | P |
| | Leakage current measurements..... : | (see appended table) | P |
| | For stationary class I appliances, the leakage current shall not exceed 3,5 mA, or 1 mA/kW rated power input with a limit of 5 mA, whichever is higher (J 60335-2-11(H29)) | | N/A |
| 13.3 | The appliance is disconnected from the supply | | P |
| | Electric strength tests according to table 4.....: | (see appended table) | P |
| | No breakdown during the tests | | P |
| 14 | TRANSIENT OVERVOLTAGES | | — |
| | Appliances withstand the transient over-voltages to which they may be subjected | | N/A |
| | Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6.....: | (see appended table) | N/A |
| | No flashover during the test, unless | | N/A |
| | of functional insulation if the appliance complies with clause 19 with the clearance short-circuited | | N/A |
| 15 | MOISTURE RESISTANCE | | — |
| 15.1 | Enclosure provides the degree of moisture protection according to classification of the appliance | | P |
| | Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3 | | P |
| | No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29 | | P |
| 15.1.1 | Appliances, other than IPX0, subjected to tests as specified in IEC 60529.....: | IPX4 | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances | | N/A |
| 15.1.2 | Hand-held appliance turned continuously through the most unfavourable positions during the test | | N/A |
| | Built-in appliances installed according to the instructions | | N/A |
| | Appliances placed or used on the floor or table placed on a horizontal unperforated support | | P |
| | Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board | | N/A |
| | For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube | | N/A |
| | For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and | | P |
| | for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube | | P |
| | Wall-mounted appliances, take into account the distance to the floor stated in the instructions | | P |
| | Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and | | N/A |
| | for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min | | P |
| | Appliances with type X attachment fitted with a flexible cord as described | | N/A |
| | Detachable parts subjected to the relevant treatment with the main part | | P |
| | However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 15.2 | Spillage of liquid does not affect the electrical insulation | | P |
| | Appliances with type X attachment fitted with a flexible cord as described | | N/A |
| | Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable | | P |
| | Detachable parts are removed | | P |
| | Overfilling test with additional amount of water, over a period of 1 min (l)..... : | | P |
| | The appliance withstands the electric strength test of 16.3 | | P |
| | No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29 | | P |
| | Conditions specified (J 60335-2-11(H29)) | | P |
| | The drum is filled with a damp test cloth as specified in normal operation, and the test is carried out after the mass of water is set to about 1.5 times the mass of the dry test cloth. (J 60335-2-11(H29)) | | P |
| | The device connected to the tap is operated by blocking the outlet of the dehumidification circuit. The water valve should be kept open for one minute after the water begins to overflow, or for five minutes after the protection device stops inflow. The door will open, but the lock won't open. (J 60335-2-11(H29)) | | N/A |
| | All equipment with a working surface flows 0.5l of water to the top of the equipment, including sodium chloride solution with a content of approximately 1% and rinsing solution of 0.6% as specified in annex AA, with various switches set to the ON position. After that, all the switches that can be operated were operated, and the switches were repeated five minutes later. (J 60335-2-11(H29)) | | P |
| | The appliance withstands the electric strength test of 16.3 | | P |
| | No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29 | | P |
| 15.3 | Appliances proof against humid conditions | | P |
| | Checked by test Cab: Damp heat steady state in IEC 60068-2-78 | | P |
| | Detachable parts removed and subjected, if necessary, to the humidity test with the main part | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Humidity test for 48 h in a humidity cabinet | | P |
| | Reassembly of those parts that may have been removed | | N/A |
| | The appliance withstands the tests of clause 16 | | P |
| 16 | LEAKAGE CURRENT AND ELECTRIC STRENGTH | | — |
| 16.1 | Leakage current not excessive and electric strength adequate | | P |
| | Protective impedance disconnected from live parts before carrying out the tests | | P |
| | Tests carried out at room temperature and not connected to the supply | | P |
| 16.2 | The test voltage is 1,06 times rated voltage : | | P |
| | Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V).....: | | N/A |
| | Leakage current measurements.....: | (see appended table) | P |
| | Limit values doubled if: | | |
| | - all controls have an off position in all poles, or | | N/A |
| | - the appliance has no control other than a thermal cut-out, or | | N/A |
| | - all thermostats, temperature limiters and energy regulators do not have an off position, or | | N/A |
| | - the appliance has radio interference filters | | N/A |
| | With the radio interference filters disconnected, the leakage current does not exceed the limits specified.....: | (see appended table) | N/A |
| | For stationary class I combined appliances, the leakage current shall not exceed 1 mA, or 1 mA/kW rated power input with a limit of 5 mA, whichever is higher. (J 60335-2-11(H29)) | | N/A |
| 16.3 | Electric strength tests according to table 7.....: | (see appended table) | P |
| | The test voltage is 1250 V for class 0 appliances, class 01 appliances and class I appliances and 1750 V for class II appliances.....: | (see appended table) | P |
| | No breakdown during the tests | | P |
| 17 | OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS | | — |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use: | (see appended table) | P |
| | Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V).....: | | P |
| | Basic insulation is not short-circuited | | P |
| | The temperature rise of insulation of the conductors of safety extra-low voltage circuit (for Class 0 appliances, circuits separated by insulating Transformers complying with 8.1.4 are included.) shall not exceed the relevant value specified in table 3 more than 15K | | P |
| | Temperature of the winding not exceeding the value specified in table 8 | | P |
| | However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1 | | N/A |
| 18 | ENDURANCE | | — |
| | Requirements and tests are specified in part 2 when necessary | | N/A |
| 19 | ABNORMAL OPERATION | | — |
| 19.1 | The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated | | P |
| | Electronic circuits so designed and applied that a fault will not render the appliance unsafe | (see appended table) | P |
| | Appliances incorporating heating elements are subjected to the tests of 19.101 and 19.102 as applicable (J 60335-2-11(H29)) | | P |
| | Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and | | N/A |
| | if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and | | N/A |
| | if applicable, to the test of 19.5 | | N/A |
| | Appliances incorporating PTC heating elements are also subjected to the test of 19.6 | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable | | P |
| | Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable | | P |
| | Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11 | | P |
| | Appliances incorporating voltage selector switches subjected to the test of 19.15 | | N/A |
| | Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or | | N/A |
| | until steady conditions are established | | P |
| | If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample | | N/A |
| | Tests made with the water valve closed if necessary (J 60335-2-11(H29)) | | N/A |
| 19.2 | Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0.85 times rated power input (W)..... : | | N/A |
| 19.3 | Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W)..... : | | N/A |
| 19.4 | Test conditions as in cl. 11, but with dry textile material. Controls limiting the temperature during the test of Clause 11 and all self-resetting thermal cut-outs protecting heating elements short-circuited. Test terminated at the end of the maximum period allowed by a timer. (J 60335-2-11(H29)) | | P |
| | For condensation-type tumble dryers: test repeated with 75% of air outlet blocked (J 60335-2-11(H29)) | | N/A |
| 19.5 | Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath | | N/A |
| | The test repeated with reversed polarity and the other end of the heating element connected to the sheath | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4 | | N/A |
| 19.6 | Appliances with PTC heating elements tested at rated voltage, establishing steady conditions | | P |
| | The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V)..... : | | P |
| 19.7 | Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or | | N/A |
| | locking moving parts of other appliances | | P |
| | Locked rotor, capacitors open-circuited one at a time | | P |
| | Test repeated with capacitors short-circuited one at a time, unless | | P |
| | capacitor is of class P2 of IEC 60252-1 | | N/A |
| | Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed..... : | | N/A |
| | Other appliances supplied with rated voltage for a period as specified..... : | | P |
| | Winding temperatures not exceeding values specified in table 8..... : | (see appended table) | P |
| 19.8 | Multi-phase motors operated at rated voltage with one phase disconnected | | N/A |
| 19.9 | Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously | | N/A |
| | Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | The running overload test is carried out on appliances that have overload protective devices incorporating electronic circuits to protect the windings of the drum motor. However the test is not carried out if the protective device senses the winding temperature directly. (J 60335-2-11(H29)) | | N/A |
| | Winding temperatures not exceeding values as specified : | (see appended table) | N/A |
| 19.10 | Series motor operated at 1.3 times rated voltage for 1 min (V)..... : | | N/A |
| | During the test, parts not being ejected from the appliance | | N/A |
| 19.11 | Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless | | P |
| | they comply with the conditions specified in 19.11.1 | | N/A |
| | Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless | | N/A |
| | restarting does not result in a hazard | | N/A |
| | Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4 | | N/A |
| | If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out | | P |
| | During and after each test the following is checked: | | |
| | - the temperature of the windings do not exceed the values specified in table 8 | | P |
| | - the appliance complies with the conditions specified in 19.13 | | P |
| | - any current flowing through protective impedance not exceeding the limits specified in 8.1.4 | | N/A |
| | If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met: | | |
| | - the base material of the printed circuit board withstands the test of Annex E | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29 | | N/A |
| 19.11.1 | Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions: | | |
| | - the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified | | N/A |
| | - the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit | | N/A |
| 19.11.2 | Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified: | | |
| | a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29 | | P |
| | b) open circuit at the terminals of any component | | P |
| | c) short circuit of capacitors, unless | | P |
| | they comply with IEC 60384-14 | | P |
| | d) short circuit of any two terminals of an electronic component, other than integrated circuits | | P |
| | This fault condition is not applied between the two circuits of an optocoupler | | P |
| | e) failure of triacs in the diode mode | | P |
| | f) failure of microprocessors and integrated circuits | | P |
| | g) failure of an electronic power switching device | | N/A |
| | Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made | | N/A |
| 19.11.3 | If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2 | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 19.11.4 | Appliances having a device with an off position obtained by electronic disconnection, or | | N/A |
| | a device that can be placed in the stand-by mode, | | N/A |
| | subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode | | N/A |
| | Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that | | N/A |
| | appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena. | | N/A |
| | Surge protective devices disconnected, unless | | N/A |
| | They incorporate spark gaps | | N/A |
| 19.11.4.1 | The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4 | | N/A |
| 19.11.4.2 | The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3 | | N/A |
| 19.11.4.3 | The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified | | N/A |
| 19.11.4.4 | The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified | | N/A |
| | Earthed heating elements in class I appliances disconnected | | N/A |
| 19.11.4.5 | The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3 | | N/A |
| 19.11.4.6 | Appliances having a rated current not exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11 | | N/A |
| | Appliances having a rated current exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-34 | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 19.11.4.7 | The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2 | | N/A |
| 19.11.4.8 | The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate | | N/A |
| | The appliance continues to operate normally, or | | N/A |
| | requires a manual operation to restart | | N/A |
| 19.12 | If for any of the fault conditions specified in 19.11.2 , the safety of the appliances depends on the operation of a fuse complying with Appendix 3 of Ministerial Ordinance of MITI (No.85, 1962)-JIS C6575, the test is repeated but with the miniature fuse-link replaced by an ammeter..... : | | P |
| | --For quick acting fuse-links, for the relevant period or 4 min, whichever is the shorter | | N/A |
| 19.13 | During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts | | P |
| | Temperature rises not exceeding the values shown in table 9..... : | (see appended table) | P |
| | Compliance with clause 8 not impaired | | P |
| | If the appliance can still be operated it complies with 20.2 | | P |
| | Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4: | | |
| | - basic insulation (V)..... : | 1000 | P |
| | - supplementary insulation (V)..... : | 1250 | P |
| | - reinforced insulation (V)..... : | 2500 | P |
| | After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage | | P |
| | The appliance does not undergo a dangerous malfunction, and | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | no failure of protective electronic circuits, if the appliance is still operable | | N/A |
| | Appliances tested with an electronic switch in the off position, or in the stand-by mode: | | |
| | - do not become operational, or | | N/A |
| | - if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4 | | N/A |
| | If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that: | | |
| | - the lid or door does not move automatically to an open position when the interlock is released, and | | N/A |
| | - the appliance does not start after the cycle in which the interlock was released | | N/A |
| | Textile material shall not ignite and shall show no charring or glowing (J 60335-2-11(H29)) | | P |
| 19.14 | Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited | | N/A |
| | For a relay or contactor with more than one contact, all contacts are short-circuited at the same time | | N/A |
| | A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited | | P |
| | If more than one relay or contactor operates in clause 11, they are short-circuited in turn | | N/A |
| 19.15 | For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied | | N/A |
| 19.101 | Test with appliance operated under conditions of clause 11 but with dry textile material and the drum belt removed (Test duration: 90 min or timer) (J 60335-2-11(H29)) | | P |
| | Test with drum belt in position and air circulation stopped if necessary. | | P |
| | Tests combined if necessary | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 19.102 | Appliances that permit test probe C of IEC 61032 to gain access to spaces containing live parts located below holes in the drum: test under specified short circuit conditions, with appliance operated under conditions of clause 11 but with dry textile material. (J 60335-2-11(H29)) | | P |
| 19.103 | no risk of fire due to textile material coming into contact with a lamp cover : temperature rise of the cover not exceed 150K during test specified..... (J 60335-2-11(H29)) | | P |
| 20 | STABILITY AND MECHANICAL HAZARDS | | — |
| 20.1 | Appliances having adequate stability | | P |
| | Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn | | P |
| | Tests that increase the tilt Angle to 15° are not applicable (J 60335-2-11(H29)) | | N/A |
| | Possible heating test in overturned position; temperature rise does not exceed values shown in table 9 | | N/A |
| 20.2 | Moving parts adequately arranged or enclosed as to provide protection against personal injury | | P |
| | Protective enclosures, guards and similar parts are non-detachable, and | | P |
| | have adequate mechanical strength | | P |
| | Enclosures that can be opened by overriding an interlock are considered to be detachable parts | | N/A |
| | Self- resetting thermal cut- outs and overcurrent protective devices not causing a hazard by unexpected closure | | P |
| | Not possible to touch dangerous moving parts with the test probe described | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 20.101 | No opening of the door possible while the appliance is operating (J 60335-2-11(H29)) | | N/A |
| | unless an interlock is provided that disconnects the motor before the door opening exceeds 75 mm. | | P |
| | No starting of the motor possible while the door opening exceeds 75 mm. | | P |
| | No damage of locking means preventing opening of the door after 6000 times (6/min) energizing and de-energizing of component incorporating coil or similar | | P |
| 20.102 | For appliance with a door opening greater than 200mm and a drum volume greater than 60dm ³ , opening of the door from inside possible with force of 70N (J 60335-2-11(H29)) | < 100dm ³ | N/A |
| 20.103 | Tumble dryer with horizontally hinged door has adequate stability: no tilt under test with a mass of 23 kg, the appliance placed on an horizontal surface (even if it can be stacked on top of another appliance) (J 60335-2-11(H29)) | | N/A |
| | And no damage to door and hinges impairing compliance with standard | | N/A |
| | -not applicable to built-in appliances or fixed appliances (J 60335-2-11(H29)) | | N/A |
| 20.104 | For appliances having a door on a vertical surface with an opening exceeding 200 mm and a drum having a volume exceeding 60 dm ³ , it shall not be possible to start the drum motor after closing the door until a separate means which controls the movement of the drum is operated manually (J 60335-2-11(H29)) | < 100dm ³ | N/A |
| | If compliance relies on the operation of an electronic circuit , the test is repeated under the following conditions applied separately: – the fault conditions in a) to g) of 19.11.2 are applied one at a time to the electronic circuit; – the electromagnetic phenomena tests of 19.11.4.2 and 19.11.4.5 are applied to the appliance. | | N/A |
| | The drum motor shall not start. | | N/A |
| | If the electronic circuit is programmable, the software shall contain measures to control the fault/error conditions specified in Table R1 and is evaluated in accordance with the relevant requirements of Annex R. | | N/A |
| 21 | MECHANICAL STRENGTH | | — |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 21.1 | Appliance has adequate mechanical strength and is constructed as to withstand rough handling | | P |
| | Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J | (see appended table) | P |
| | The appliance shows no damage impairing compliance with this standard, and | | P |
| | compliance with 8.1, 15.1 and clause 29 not impaired | | P |
| | If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3 | | N/A |
| | If necessary, repetition of groups of three blows on a new sample | | N/A |
| 21.2 | Accessible parts of solid insulation having strength to prevent penetration by sharp implements | | P |
| | Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm | | N/A |
| | The insulation is tested as specified, and does withstand the electric strength test of 16.3 | | N/A |
| 22 | CONSTRUCTION | | — |
| 22.1 | Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled | IPX4 | N/A |
| 22.2 | Stationary appliance: means to ensure all-pole disconnection from the supply being provided: | | |
| | - a supply cord fitted with a plug, or | | N/A |
| | - a switch complying with 24.3, or | | N/A |
| | - a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or | | N/A |
| | - an appliance inlet | | N/A |
| | Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.3 | Appliance provided with pins: no undue strain on socket-outlets | | N/A |
| | Applied torque not exceeding 0.25 Nm | | N/A |
| | Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm | | N/A |
| | Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless | | N/A |
| | rotating does not impair compliance with this standard | | N/A |
| 22.4 | Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets | | N/A |
| 22.5 | No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1 μ F, the appliance being disconnected from the supply at the instant of voltage peak | | P |
| | Voltage not exceeding 34 V (V)..... : | 0V | P |
| 22.6 | Electrical insulation not affected by condensing water or leaking liquid | | P |
| | Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks | | N/A |
| | In case of doubt, test as described | | N/A |
| 22.7 | Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices | | N/A |
| 22.8 | Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use | | N/A |
| 22.9 | Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless | | P |
| | the substance has adequate insulating properties | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.10 | Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if: | | N/A |
| | - a non-self-resetting thermal cut-out is required by the standard, and | | N/A |
| | - a voltage maintained non-self-resetting thermal cut-out is used to meet it | | N/A |
| | Non-self-resetting thermal motor protectors have a trip-free action, unless | | N/A |
| | they are voltage maintained | | N/A |
| | Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely | | N/A |
| 22.11 | Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts | | P |
| | Obvious locked position of snap-in devices used for fixing such parts | | N/A |
| | No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing | | N/A |
| | Tests as described | | P |
| 22.12 | Handles, knobs etc. fixed in a reliable manner | | P |
| | Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible | | P |
| | Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied | | N/A |
| | Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied | | P |
| 22.13 | Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only | | N/A |
| 22.14 | No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance | | P |
| 22.15 | Storage hooks and the like for flexible cords smooth and well rounded | | N/A |
| 22.16 | When using flat cord without sheath, the numbers of operating a winding mechanism can be 2000 times and breaking ratio of strand of conductor can be up to 20% | | N/A |
| 22.17 | Spacers not removable from the outside by hand or by means of a screwdriver or a spanner | | N/A |
| 22.18 | Current-carrying parts and other metal parts resistant to corrosion | | P |
| 22.19 | Driving belts not relied upon to provide the required level of insulation, unless | | P |
| | constructed to prevent inappropriate replacement | | N/A |
| 22.20 | Direct contact between live parts and thermal insulation effectively prevented, unless | | N/A |
| | material used is non-corrosive, non-hygroscopic and non-combustible | | N/A |
| 22.21 | Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless | | P |
| | impregnated | | N/A |
| | This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements | | N/A |
| 22.22 | Appliances not containing asbestos | | P |
| 22.23 | Oils containing polychlorinated biphenyl (PCB) not used | | P |
| 22.24 | Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported | | N/A |
| | In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.25 | Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts | | N/A |
| 22.26 | For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation | | N/A |
| 22.27 | --Class 0 appliances shall not be subjected to this requirement | | N/A |
| 22.28 | Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation | | N/A |
| 22.29 | Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation | | N/A |
| 22.30 | Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or | | N/A |
| | so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete | | N/A |
| 22.31 | Hooking the wire into a hole in the terminal before soldering is considered to be a suitable means for keeping clearance and creepage distances over basic insulation | | N/A |
| 22.32 | Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29 | | N/A |
| | Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2 | | N/A |
| | Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation | | N/A |
| | Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature | | N/A |
| 22.33 | Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts | | N/A |
| | Electrodes not used for heating liquids | | N/A |
| | For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless | | N/A |
| | the reinforced insulation consists of at least 3 layers | | N/A |
| | For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless | | N/A |
| | the reinforced insulation consists of at least 3 layers | | N/A |
| | An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid | | N/A |
| 22.34 | Shafts of operating knobs, handles, levers etc. not live, unless | | P |
| | the shaft is not accessible when the part is removed | | N/A |
| 22.35 | For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation | | P |
| | Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal | | N/A |
| | Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation | | N/A |
| 22.36 | For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless | | N/A |
| | they are separated from live parts by double or reinforced insulation | | N/A |
| 22.37 | Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless | | N/A |
| | the capacitors comply with 22.42 | | N/A |
| 22.38 | Capacitors not connected between the contacts of a thermal cut-out | | P |
| 22.39 | Lamp holders used only for the connection of lamps | | N/A |
| 22.40 | Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible | | N/A |
| | If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible | | N/A |
| 22.41 | No components, other than lamps, containing mercury | | P |
| 22.42 | Protective impedance consisting of at least two separate components | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited | | P |
| | Resistors checked by the test of 14.1 a) in IEC 60065 | | P |
| | Capacitors checked by the tests for class Y capacitors in IEC 60384-14 | | P |
| 22.43 | Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur | | N/A |
| 22.44 | Appliances not having an enclosure that is shaped or decorated like a toy | | P |
| 22.45 | When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure | | N/A |
| 22.46 | For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1 | | N/A |
| | Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards | | N/A |
| | These requirements are not applicable to software used for functional purpose or compliance with clause 11 | | N/A |
| 22.47 | Appliances connected to the water mains withstand the water pressure expected in normal use | | N/A |
| | No leakage from any part, including any inlet water hose | | N/A |
| 22.48 | Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water | | N/A |
| 22.49 | For remote operation, the duration of operation is to be set before the appliance can be started, unless | | N/A |
| | the appliance switches off automatically or can operate continuously without hazard | | N/A |
| 22.50 | Controls incorporated in the appliance take priority over controls actuated by remote operation | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.51 | There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode | | N/A |
| | There is a visual indication showing that the appliance is adjusted for remote operation | | N/A |
| | These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard: | | |
| | - continuously, or | | N/A |
| | - automatically, or | | N/A |
| | - remotely | | N/A |
| 22.52 | Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.101 | Heating elements located or guarded so that they cannot be contacted by textile material. (J 60335-2-11(H29)) | | P |
| 22.102 | Interlocks constructed so that unexpected operation of the appliance is unlikely to occur while the door is open. (J 60335-2-11(H29)) | | P |
| | unexpected operation prevented when attempting to release interlock by means of test probe B of IEC 61032 | | P |
| 22.103 | Tumble dryer for placing on top of a washing machine: possible without tilting or falling (J 60335-2-11(H29)) | | N/A |
| | Tilting test with incline up to 5°, in the most unfavourable orientation (washing machine and tumble dryer are assembled together in accordance with the instructions.) .The empty combination is placed on a horizontal surface and a horizontal force of 150 N is applied to the upper edge of the combination with the doors closed.: no fall no tilt nor fall off the washing machine | | N/A |
| 22.104 | The operation of protective devices for the heating circuit shall not disable the cool down period, if any (J 60335-2-11(H29)) | | P |
| | Compliance is checked during the tests of Clause 19. | | P |
| 22.105 | In order to reduce the risk of spontaneous combustion of the clothes load, the drying cycle shall conclude with a cool down period to reduce the temperature of the normal clothes load to a suitable value. (J 60335-2-11(H29)) This requirement is not applicable to appliances having a drying cycle air temperature not exceeding 55 °C. | | P |
| | At end of the cool down period the air temperature shall not exceed 55 °C. | | P |
| 23 | INTERNAL WIRING | | — |
| 23.1 | Wireways smooth and free from sharp edges | | P |
| | Wires protected against contact with burrs, cooling fins etc. | | P |
| | Wire holes in metal well-rounded or provided with bushings | | N/A |
| | Wiring effectively prevented from coming into contact with moving parts | | P |
| 23.2 | Beads etc. on live wires cannot change their position, and are not resting on sharp edges | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Beads inside flexible metal conduits contained within an insulating sleeve | | N/A |
| 23.3 | Electrical connections and internal conductors movable relatively to each other not exposed to undue stress | | N/A |
| | Flexible metallic tubes not causing damage to insulation of conductors | | N/A |
| | Open-coil springs not used | | N/A |
| | Adequate insulating lining provided inside a coiled spring, the turns of which touch one another | | N/A |
| | No damage after 10 000 flexings for conductors flexed during normal use, or | | N/A |
| | 100 flexings for conductors flexed during user maintenance | | N/A |
| | Electric strength test of 16.3, 1000 V between live parts and accessible metal parts | | N/A |
| | Not more than 10% of the strands of any conductor broken, and | | N/A |
| | not more than 30% for wiring supplying circuits that consume no more than 15W | | N/A |
| 23.4 | Bare internal wiring sufficiently rigid and fixed | | N/A |
| 23.5 | Basic insulation, shall be equivalent to the insulation cords complying with “Appendix 1 of Technical requirements by Ministerial Ordinance of MITI (No.85, 1962)”, JIS C 3663)(IEC 60245) or comply with the following electric strength test | | P |
| | For Class II appliances shall be subjected to the requirements for supplementary insulation and reinforced insulation except supplementary insulation by sheath of cord complying with “Appendix 1 of Technical requirements by Ministerial Ordinance of MITI (No.85, 1962)”, JIS C 3663)(IEC 60245) | | N/A |
| 23.6 | Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or | | P |
| | be such that it can only be removed by breaking or cutting | | P |
| 23.7 | --Lead wire for functional earthing can be identified by the wire with color combination green/yellow | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 23.8 | Aluminium wires not used for internal wiring | | P |
| 23.9 | Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless | | P |
| | the contact pressure is provided by spring terminals | | N/A |
| 23.10 | The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52) | | N/A |
| 23.101 | The insulation and sheath of internal wiring for the supply of magnetic valves and similar components incorporated in external hoses at least equivalent to light polyvinyl chloride sheathed flexible cord (code designation 60227 IEC 52). (J 60335-2-11(H29)) | | N/A |
| 24 | COMPONENTS | | — |
| 24.1 | Components which are subjected to Technical requirements by Ministerial Ordinance of MITI (No. 85, 1962), shall comply with technical requirements by Ministerial Ordinance of MIT | | P |
| | List of components..... : | (see appended table) | P |
| | If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9 | | N/A |
| | For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9 | | P |
| | Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance | | P |
| | Lampholders and starterholders that have not been tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309 | | P |
| 24.1.1 | Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14 | | P |
| | If the capacitors have to be tested, they are tested according to Annex F | | N/A |
| 24.1.2 | Safety isolating transformers complying with IEC 61558-2-6 | | P |
| | If they have to be tested, they are tested according to Annex G | | N/A |
| 24.1.3 | Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000 | | P |
| | If they have to be tested, they are tested according to Annex H | | N/A |
| | If the switch operates a relay or contactor, the complete switching system is subjected to the test | | N/A |
| | If the switch only operates a motor starting relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested | | N/A |
| 24.1.4 | Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least: | | |
| | - thermostats: | | N/A |
| | | 10 000 | |
| | - temperature limiters: | 1 000 | N/A |
| | - self-resetting thermal cut-outs: | 300 | N/A |
| | - voltage maintained non-self-resetting thermal cut-outs: | 1 000 | N/A |
| | - other non-self-resetting thermal cut-outs: | 30 | N/A |
| | - timers: | 3 000 | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - energy regulators: 10 000 | | N/A |
| | -programmers (J 60335-2-11(H29)) 3 000 | | P |
| | The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited | | N/A |
| | Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D | | N/A |
| | For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7 | | N/A |
| 24.1.5 | Appliance couplers complying with IEC 60320-1 | | N/A |
| | However, for appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3 | | N/A |
| | Interconnection couplers complying with IEC 60320-2-2 | | N/A |
| 24.1.6 | Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable | | N/A |
| 24.1.7 | For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151 | | N/A |
| 24.1.8 | The relevant standard for thermal links is IEC 60691 | | N/A |
| | Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19 | | N/A |
| 24.1.9 | Contactors and relays, other than motor starting relays, tested as part of the appliance | | N/A |
| | They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance.....: | | N/A |
| 24.2 | Appliances not fitted with: | | |
| | - switches or automatic controls in flexible cords | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance | | P |
| | - thermal cut-outs that can be reset by soldering, unless | | P |
| | the solder has a melting point of at least 230 °C | | N/A |
| 24.3 | Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions | | N/A |
| 24.4 | Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1 | | N/A |
| 24.5 | Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly | | N/A |
| | Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load | | N/A |
| 24.6 | Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V | | N/A |
| | In addition, the motors comply with the requirements of Annex I | | N/A |
| 24.7 | Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770 | | N/A |
| | They are supplied with the appliance | | N/A |
| | Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set | | N/A |
| 24.8 | Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure | | N/A |
| | One or more of the following conditions are to be met: | | |
| | - the capacitors are of class P2 according to IEC 60252-1 | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - the capacitors are housed within a metallic or ceramic enclosure | | N/A |
| | - the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm | | N/A |
| | - adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E | | N/A |
| | - adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10 | | N/A |
| 24.101 | Thermal cut-outs incorporated in tumble dryers for compliance with 19.4 shall not be self-resetting (J 60335-2-11(H29)) | | P |
| 25 | SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS | | — |
| 25.1 | Appliance not intended for permanent connection to fixed wiring, means for connection to the supply: | | |
| | - supply cord fitted with a plug, | | P |
| | - an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or | | N/A |
| | - pins for insertion into socket-outlets | | N/A |
| 25.2 | Appliance not provided with more than one means of connection to the supply mains | | P |
| | Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown | | N/A |
| 25.3 | Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains: | | |
| | - a set of terminals allowing the connection of a flexible cord | | N/A |
| | - a fitted supply cord | | N/A |
| | - a set of supply leads accommodated in a suitable compartment | | N/A |
| | - a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support | | N/A |
| | For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support | | N/A |
| 25.4 | --Other than Table 10, diameter of cables and conduits meeting with Appendix 2, Supplement 1 and 5 of Technical requirements by Ministerial Ordinance of MITI (No. 85, 1962) are considered to comply with this requirement : | | N/A |
| 25.5 | Method for assembling the supply cord to the appliance: | | |
| | - type X attachment | | N/A |
| | - type Y attachment | | P |
| | - type Z attachment, if allowed in relevant part 2 | | N/A |
| | Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords | | N/A |
| | For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment | | N/A |
| 25.6 | Plugs fitted with only one flexible cord | | P |
| 25.7 | Supply cords, other than for class III appliances, being one of the following types: | | |
| | - rubber sheathed (at least 60245 IEC 53) | | P |
| | - polychloroprene sheathed (at least 60245 IEC 57) | | N/A |
| | - cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88) | | N/A |
| | - polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11 | | |
| | <ul style="list-style-type: none"> light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | <ul style="list-style-type: none"> ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances | | N/A |
| | - heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords | | |
| | <ul style="list-style-type: none"> heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg | | N/A |
| | <ul style="list-style-type: none"> heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances | | N/A |
| | Supply cords for class III appliances adequately insulated | | N/A |
| | Test with 500 V for 2 min for supply cords of class III appliances that contain live parts | | N/A |
| | --Cables complying with Appendix 2, Supplement 1 and 5 of Technical requirements by Ministerial Ordinance of MITI (No. 85, 1962), however, flat cord without sheath shall not be used for appliances except only floor type or Class 0 appliances | | N/A |
| 25.8 | However, in this case, fuse of which rated current having 500A or more rated breaking current in the plug of the cable is up to 3A shall be provided | | P |
| | If not complying with Table 11, appliances using cables in line with rules of internal cables (JEAC-8001) are considered to comply with this requirement | | P |
| 25.9 | Supply cords not in contact with sharp points or edges | | P |
| 25.10 | When Class 01 appliances attaching earthing wires, wires connected to the earthing terminal shall have green/yellow colored coatings | | P |
| 25.11 | Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless | | N/A |
| | the contact pressure is provided by spring terminals | | N/A |
| 25.12 | Insulation of the supply cord not damaged when moulding the cord to part of the enclosure | | N/A |
| 25.13 | Inlet openings so constructed as to prevent damage to the supply cord | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | If the enclosure at the inlet opening is not of insulating material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided | | N/A |
| | If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is | | N/A |
| | class 0, or | | N/A |
| | a class III appliance not containing live parts | | N/A |
| 25.14 | Supply cords moved while in operation adequately protected against excessive flexing | | N/A |
| | Flexing test, as described: | | |
| | - applied force (N).....: | | N/A |
| | - number of flexings..... : | | N/A |
| | The test does not result in: | | |
| | - short-circuit between the conductors, such that the current exceeds a value of twice the rated current | | N/A |
| | - breakage of more than 10% of the strands of any conductor | | N/A |
| | - separation of the conductor from its terminal | | N/A |
| | - loosening of any cord guard | | N/A |
| | - damage to the cord or the cord guard | | N/A |
| | - broken strands piercing the insulation and becoming accessible | | N/A |
| | Appliances provided with a supply cord, which are moved while in operation, or transportable equipments provided with flat cord without sheathe, which is not used at fixed position in general use shall be constructed so that the cord is adequately protected against excessive flexing where it enters the appliance | | N/A |
| | However, for appliances provided with flat cord without sheath, which are not moved while in operation, the numbers of bending are 2000 times and the rate of bending is 60 times per min | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 25.15 | For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage | | P |
| | The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged | | P |
| | Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....: | | P |
| | Cord not damaged and max. 2 mm displacement of the cord | | P |
| 25.16 | Cord anchorages for type X attachments constructed and located so that: | | |
| | - replacement of the cord is easily possible | | N/A |
| | - it is clear how the relief from strain and the prevention of twisting are obtained | | N/A |
| | - they are suitable for different types of supply cord | | N/A |
| | - cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless | | N/A |
| | they are separated from accessible metal parts by supplementary insulation | | N/A |
| | - the cord is not clamped by a metal screw which bears directly on the cord | | N/A |
| | - at least one part of the cord anchorage securely fixed to the appliance, unless | | N/A |
| | it is part of a specially prepared cord | | N/A |
| | - screws which have to be operated when replacing the cord do not fix any other component, unless | | N/A |
| | the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool | | N/A |
| | - if labyrinths can be bypassed the test of 25.15 is nevertheless withstood | | N/A |
| | - for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | failure of the insulation of the cord does not make accessible metal parts live | | N/A |
| | - for class II appliances they are of insulating material, or | | N/A |
| | if of metal, they are insulated from accessible metal parts by supplementary insulation | | N/A |
| | After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals | | N/A |
| 25.17 | Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance | | P |
| 25.18 | Cord anchorages only accessible with the aid of a tool, or | | N/A |
| | Constructed so that the cord can only be fitted with the aid of a tool | | N/A |
| 25.19 | Type X attachment, glands not used as cord anchorage in portable appliances | | N/A |
| | Tying the cord into a knot or tying the cord with string not used | | N/A |
| 25.20 | However, appliances provided with flat cord without sheath are not subjected to this requirement | | P |
| 25.21 | Space for supply cord for type X attachment or for connection of fixed wiring constructed: | | |
| | - to permit checking of conductors with respect to correct positioning and connection before fitting any cover | | N/A |
| | - so there is no risk of damage to the conductors or their insulation when fitting the cover | | N/A |
| | - for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts | | N/A |
| | 2 N test to the conductor for portable appliances; no contact with accessible metal parts | | N/A |
| 25.22 | Appliance inlets: | | |
| | - live parts not accessible during insertion or removal | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Requirement not applicable to appliance inlets complying with IEC 60320-1 | | N/A |
| | - connector can be inserted without difficulty | | N/A |
| | - the appliance is not supported by the connector | | N/A |
| | - not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless | | N/A |
| | the supply cord is unlikely to touch such metal parts | | N/A |
| | --Magnet type plug shall not be used if it's not allowed in Part 2 of Section 1 | | N/A |
| 25.23 | Interconnection cords comply with the requirements for the supply cord, except that: | | N/A |
| | - the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11 | | N/A |
| | - the thickness of the insulation may be reduced | | N/A |
| | If necessary, electric strength test of 16.3 | | N/A |
| 25.24 | Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected | | N/A |
| 25.25 | Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet. | | N/A |
| | Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083 | | N/A |
| 26 | TERMINALS FOR EXTERNAL CONDUCTORS | | — |
| 26.1 | Appliances provided with terminals or equally effective devices for connection of external conductors | | P |
| | Terminals only accessible after removal of a non-detachable cover, except | | P |
| | for class III appliances that do not contain live parts | | N/A |
| | Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 26.2 | Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless | | N/A |
| | the connections are soldered | | N/A |
| | Screws and nuts not used to fix any other component, except | | N/A |
| | internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors | | N/A |
| | If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless | | N/A |
| | barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint | | N/A |
| 26.3 | Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor | | N/A |
| | Terminals fixed so that when the clamping means is tightened or loosened: | | |
| | - the terminal does not become loose | | N/A |
| | - internal wiring is not subjected to stress | | N/A |
| | - neither clearances nor creepage distances are reduced below the values in clause 29 | | N/A |
| | Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm).....: | | N/A |
| | No deep or sharp indentations of the conductors | | N/A |
| 26.4 | Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and | | N/A |
| | so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened | | N/A |

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|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 26.5 | Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard | | N/A |
| | Stranded conductor test, 8 mm insulation removed | | N/A |
| | No contact between live parts and accessible metal parts and, | | N/A |
| | for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only | | N/A |
| 26.6 | Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm ²)... : | | N/A |
| | If a specially prepared cord is used, terminals need only be suitable for that cord | | N/A |
| 26.7 | Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure | | N/A |
| 26.8 | Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other | | N/A |
| 26.9 | Terminals of the pillar type constructed and located as specified | | N/A |
| 26.10 | Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless | | P |
| | conductors ends fitted with means suitable for screw terminals | | P |
| | Pull test of 5 N to the connection | | P |
| 26.11 | For type Y and Z attachment, soldered, welded, crimped or similar connections may be used | | P |
| | For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free | | N/A |
| 26.11.A | the protect earth terminal should be placed outside which is easy to access | | P |
| 27 | PROVISION FOR EARTHING | | — |
| 27.1 | Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet | | P |
| | Earthing terminals and earthing contacts not connected to the neutral terminal | | P |
| | Class 0, II and III appliances have no provision for earthing | | N/A |
| | Safety extra-low voltage circuits not earthed, unless | | N/A |
| | protective extra-low voltage circuits | | N/A |
| | However, functional earthing shall be allowed to have | | N/A |
| 27.2 | Clamping means of earthing terminals adequately secured against accidental loosening | | P |
| | Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm ² , and | | N/A |
| | do not provide earthing continuity between different parts of the appliance, and | | N/A |
| | conductors cannot be loosened without the aid of a tool | | N/A |
| 27.3 | For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part | | N/A |
| | For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage | | P |
| 27.4 | No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal | | P |

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|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion | | P |
| | If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm | | P |
| | Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure | | N/A |
| | If the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion | | N/A |
| 27.5 | Low resistance of connection between earthing terminal and earthed metal parts | | P |
| | This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance | | N/A |
| | Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω).....: | 0.046Ω | P |
| 27.6 | The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances. | | N/A |
| | They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit | | N/A |
| 28 | SCREWS AND CONNECTIONS | | — |
| 28.1 | Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses | | P |
| | Screws not of soft metal liable to creep, such as zinc or aluminium | | P |
| | Diameter of screws of insulating material min. 3 mm | | N/A |
| | Screws of insulating material not used for any electrical connections or connections providing earthing continuity | | N/A |
| | Screws used for electrical connections or connections providing earthing continuity screwed into metal | | P |

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|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation | | P |
| | For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation | | N/A |
| | For screws and nuts; torque-test as specified in table 14: | (see appended table) | P |
| 28.2 | Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless | | P |
| | there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material | | N/A |
| | This requirement does not apply to electrical connections in circuits of appliances for which: | | |
| | <ul style="list-style-type: none"> 30.2.2 is applicable and that carry a current not exceeding 0,5 A | | N/A |
| | <ul style="list-style-type: none"> 30.2.3 is applicable and that carry a current not exceeding 0,2 A | | N/A |
| 28.3 | Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together | | N/A |
| | Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread | | N/A |
| | Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer | | N/A |
| | Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection: | | |
| | - in normal use, | | N/A |
| | - during user maintenance, | | N/A |
| | - when replacing a supply cord having a type X attachment, or | | N/A |

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|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - during installation | | P |
| | At least two screws being used for each connection providing earthing continuity, unless | | P |
| | the screw forms a thread having a length of at least half the diameter of the screw | | N/A |
| 28.4 | Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity | | P |
| | This requirement does not apply to screws in the earthing circuit if at least two screws are used, or | | N/A |
| | if an alternative earthing circuit is provided | | N/A |
| | Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion | | N/A |
| 29 | CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION | | — |
| | Clearances, creepage distances and solid insulation withstand electrical stress | | P |
| | For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies..... : | | N/A |
| | The microenvironment is pollution degree 1 under type 1 protection | | N/A |
| | For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3 | | N/A |
| | These values apply to functional, basic, supplementary and reinforced insulation..... : | | N/A |
| 29.1 | Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless..... : | (see appended table) | P |
| | for basic insulation and functional insulation they comply with the impulse voltage test of clause 14 | | N/A |

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|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable | | N/A |
| | Impulse voltage test is not applicable: | | |
| | - when the microenvironment is pollution degree 3, or | | P |
| | - for basic insulation of class 0 and class 01 appliances | | P |
| | Appliances are in overvoltage category II | | P |
| | A force of 2 N is applied to bare conductors, other than heating elements | | P |
| | A force of 30 N is applied to accessible surfaces | | P |
| 29.1.1 | Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage | | P |
| | The values of table 16 or the impulse voltage test of clause 14 are applicable..... : | (see appended table) | P |
| | Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1 | | N/A |
| | Lacquered conductors of windings considered to be bare conductors | | P |
| 29.1.2 | Clearances of supplementary insulation not less than those specified for basic insulation in table 16..... : | (see appended table) | N/A |
| 29.1.3 | Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage..... : | (see appended table) | N/A |
| | For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation | | N/A |
| 29.1.4 | Clearances for functional insulation are the largest values determined from: | | |
| | - table 16 based on the rated impulse voltage..... : | (see appended table) | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - table F.7a in IEC 60664-1, frequency not exceeding 30 kHz | | N/A |
| | - clause 4 of IEC 60664-4, frequency exceeding 30 kHz | | N/A |
| | If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless | | N/A |
| | the microenvironment is pollution degree 3, or | | P |
| | the distances can be affected by wear, distortion, movement of the parts or during assembly | | N/A |
| | However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited | | N/A |
| | Lacquered conductors of windings considered to be bare conductors | | P |
| | However, clearances at crossover points are not measured | | N/A |
| | Clearance between surfaces of PTC heating elements may be reduced to 1mm | | P |
| 29.1.5 | Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from: | | |
| | - table 16 based on the rated impulse voltage.....: | | N/A |
| | - table F.7a in IEC 60664-1, frequency not exceeding 30 kHz | | N/A |
| | - clause 4 of IEC 60664-4, frequency exceeding 30 kHz | | N/A |
| | If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation | | N/A |
| | If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation | | N/A |
| | If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage | | N/A |
| | Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15 | | N/A |
| 29.2 | Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree.....: | (see appended table) | P |
| | Pollution degree 2 applies, unless | | N/A |
| | - precautions taken to protect the insulation; pollution degree 1 | | N/A |
| | - insulation subjected to conductive pollution; pollution degree 3 | | P |
| | A force of 2 N is applied to bare conductors, other than heating elements | | P |
| | A force of 30 N is applied to accessible surfaces | | P |
| | In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system | | P |
| | Insulation: CTI of not less than 250, unless enclosed or located so that it is unlikely to be exposed to pollution due to condensation produced in normal use (J 60335-2-11(H29)) | | P |
| | The requirement for a minimum CTI value of 250 is not applicable to functional insulation if the working voltage does not exceed 50 V. (J 60335-2-11(H29)) | | N/A |
| 29.2.1 | Creepage distances of basic insulation not less than specified in table 17.....: | (see appended table) | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17.....: | | N/A |
| | Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14.....: | | N/A |
| 29.2.2 | Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or.: | (see appended table) | N/A |
| | Table 2 of IEC 60664-4, as applicable.....: | | N/A |
| 29.2.3 | Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or.: | (see appended table) | N/A |
| | Table 2 of IEC 60664-4, as applicable.....: | | N/A |
| 29.2.4 | Creepage distances of functional insulation not less than specified in table 18.....: | (see appended table) | P |
| | However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....: | | N/A |
| | Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited | | N/A |
| 29.3 | Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses | | N/A |
| | Compliance checked: | | |
| | - by measurement, in accordance with 29.3.1, or | | N/A |
| | - by an electric strength test in accordance with 29.3.2, or | | N/A |
| | - by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and | | N/A |
| | for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|---------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz | | N/A |
| 29.3.1 | Supplementary insulation has a thickness of at least 1 mm | | N/A |
| | Reinforced insulation has a thickness of at least 2 mm | | N/A |
| 29.3.2 | Each layer of material withstands the electric strength test of 16.3 for supplementary insulation | | N/A |
| | Supplementary insulation consists of at least 2 layers | | N/A |
| | Reinforced insulation consists of at least 3 layers | | N/A |
| 29.3.3 | The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by | | N/A |
| | the electric strength test of 16.3 | | N/A |
| | If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out | | N/A |
| 29.3.4 | Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19..... : | | N/A |
| 30 | RESISTANCE TO HEAT AND FIRE | | — |
| 30.1 | External parts of non-metallic material, | | P |
| | parts supporting live parts, and | | P |
| | parts of thermoplastic material providing supplementary or reinforced insulation | | P |
| | sufficiently resistant to heat | | P |
| | Ball-pressure test according to IEC 60695-10-2 | | P |
| | External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C) : | (see appended table 30.1) | P |
| | Parts supporting live parts tested at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C): | (see appended table 30.1) | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|---------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C)..... : | (see appended table 30.1) | N/A |
| 30.2 | Parts of non-metallic material resistant to ignition and spread of fire | | P |
| | This requirement does not apply to: | | |
| | parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or | | P |
| | decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance | | P |
| | Compliance checked by the test of 30.2.1, and in addition: | | P |
| | - for attended appliances, 30.2.2 applies | | N/A |
| | - for unattended appliances, 30.2.3 applies | | P |
| | For appliances for remote operation, 30.2.3 applies | | N/A |
| | For base material of printed circuit boards, 30.2.4 applies | | P |
| 30.2.1 | Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C | (see appended table 30.2) | P |
| | However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or | | N/A |
| | the material is classified at least HB40 according to IEC 60695-11-10 | | N/A |
| | Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF | | N/A |
| 30.2.2 | Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and | | N/A |
| | parts of non-metallic material within a distance of 3mm of such connections, | | N/A |
| | subjected to the glow-wire test of IEC 60695-2-11 | (see appended table 30.2) | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | The test severity is: | | |
| | - 750 °C, for connections carrying a current exceeding 0,5 A during normal operation | | N/A |
| | - 650 °C, for other connections | | N/A |
| | Glow-wire applied to an interposed shielding material, if relevant | | N/A |
| | The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least: | | |
| | - 750 °C, for connections carrying a current exceeding 0,5 A during normal operation | | N/A |
| | - 650 °C, for other connections | | N/A |
| | The glow-wire test is also not carried out on small parts. These parts are to: | | |
| | - comprise material having a glow-wire flammability index of at least 750 °C, or 650 °C as appropriate, or | | N/A |
| | - comply with the needle-flame test of Annex E, or | (see appended table 30.2/30.2.4) | N/A |
| | - comprise material classified as V-0 or V-1 according to IEC 60695-11-10..... : | | N/A |
| | Glow-wire test not applicable to conditions as specified : | | N/A |
| 30.2.3 | Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2 | | P |
| | The tests are not applicable to conditions as specified : | | P |
| 30.2.3.1 | Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and | | P |
| | parts of non-metallic material, other than small parts, within a distance of 3 mm, | | P |
| | subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C | (see appended table 30.2) | P |
| | Glow-wire applied to an interposed shielding material, if relevant | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|---------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C | | N/A |
| 30.2.3.2 | Parts of non-metallic material supporting connections, and | | P |
| | parts of non-metallic material within a distance of 3mm, | | P |
| | subjected to glow-wire test of IEC 60695-2-11 | (see appended table 30.2) | P |
| | The test severity is: | | |
| | - 750 °C, for connections carrying a current exceeding 0,2 A during normal operation | | N/A |
| | - 650 °C, for other connections | | N/A |
| | Glow-wire applied to an interposed shielding material, if relevant | | N/A |
| | However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications: | | |
| | - a glow-wire ignition temperature according to IEC 60695-2-13 of at least: | | N/A |
| | <ul style="list-style-type: none"> 775 °C, for connections carrying a current exceeding 0,2 A during normal operation | | N/A |
| | <ul style="list-style-type: none"> 675 °C, for other connections | | N/A |
| | - a glow-wire flammability index according to IEC 60695-2-12 of at least: | | N/A |
| | - 750 °C, for connections carrying a current exceeding 0,2 A during normal operation | | N/A |
| | - 650 °C, for other connections | | N/A |
| | The glow-wire test is also not carried out on small parts. These parts are to: | | |
| | - comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or | | N/A |
| | - comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or | | N/A |
| | - comply with the needle-flame test of Annex E, or | | N/A |
| | - comprise material classified as V-0 or V-1 according to IEC 60695-11-10 | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|----------------------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those: | | |
| | - parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or | | N/A |
| | - parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or | | N/A |
| | - small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or | | N/A |
| | - small parts for which the needle-flame test of Annex E was applied, or | | N/A |
| | - small parts for which a material classification of V-0 or V-1 was applied | | N/A |
| | However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are: | | |
| | - parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or | | N/A |
| | - parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or | | N/A |
| | - parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10 | | N/A |
| 30.2.4 | Base material of printed circuit boards subjected to the needle-flame test of Annex E | (see appended table 30.2/30.2.4) | N/A |
| | Test not applicable to conditions as specified..... : | PCB:V-0 | P |
| 30.101 | Needle flame test applied to non-metallic surfaces located within 75mm of the heating element (J 60335-2-11(H29)) | | P |
| | Needle flame test applied to surfaces located directly below heating element | | P |
| 31 | RESISTANCE TO RUSTING | | — |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Relevant ferrous parts adequately protected against rusting | | P |
| | Tests specified in part 2 when necessary | | N/A |
| 32 | RADIATION, TOXICITY AND SIMILAR HAZARDS | | — |
| | Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use | | P |
| | Compliance is checked by the limits or tests specified in part 2, if relevant | | N/A |
| A | ANNEX A (INFORMATIVE) ROUTINE TESTS | | — |
| | Description of routine tests to be carried out by the manufacturer | | N/A |
| B | ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES | | — |
| | The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance | | N/A |
| | This annex does not apply to battery chargers | | N/A |
| 3.1.9 | Appliance operated under the following conditions: | | |
| | - the appliance, supplied by its fully charged battery, operated as specified in relevant part 2 | | N/A |
| | - the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate | | N/A |
| | -if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2 | | N/A |
| | - if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed | | N/A |
| 3.6.2 | Part to be removed in order to discard the battery is not considered to be detachable | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 5.B.101 | Appliances supplied from the supply mains tested as specified for motor-operated appliances | | N/A |
| 7.1 | Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals | | N/A |
| | The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006 | | N/A |
| 7.6 | Symbols 60417-5005 and IEC 60417-5006 | | N/A |
| 7.12 | The instructions give information regarding charging | | N/A |
| | The instructions for appliances incorporating batteries intended to be replaced by the user includes required information | | N/A |
| | Details about how to remove batteries containing materials hazardous to the environment given | | N/A |
| 7.15 | Markings placed on the part of the appliance connected to the supply mains | | N/A |
| 8.2 | Appliance having batteries which according to the instructions for use may be replaced by the user, need only have basic insulation between live parts and the inner surface to the battery compartment. If the appliance can be operated without the batteries, double insulation or reinforced insulation (basic insulation for Class 0 appliance is required | | N/A |
| 11.7 | The battery is charged for the period stated in the instructions or 24 h..... : | | N/A |
| 19.1 | Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103 | | N/A |
| 19.10 | Not applicable | | N/A |
| 19.B.101 | Appliances supplied at rated voltage for 168 h, the battery being continually charged | | N/A |
| 19.B.102 | For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged, | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 19.B.103 | Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction | | N/A |
| 21.B.101 | Appliances having pins for insertion into socket-outlets have adequate mechanical strength | | N/A |
| | Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being: | | |
| | - 100, if the mass of the part does not exceed 250 g (g) : | | N/A |
| | - 50, if the mass of the part exceeds 250 g..... : | | N/A |
| | After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met | | N/A |
| 22.3 | Appliances having pins for insertion into socket-outlets tested as fully assembled as possible | | N/A |
| 25.13 | An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts | | N/A |
| 30.2 | For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies | | N/A |
| | For other parts, 30.2.2 applies | | N/A |
| C | ANNEX C (NORMATIVE) AGEING TEST ON MOTORS | | — |
| | Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding | | N/A |
| | Test conditions as specified | | N/A |
| D | ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS | | — |
| | Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard | | N/A |
| | Test conditions as specified | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| E | ANNEX E (NORMATIVE) NEEDLE-FLAME TEST | | — |
| | Needle-flame test carried out in accordance with IEC 60695- 11-5, with the following modifications: | | N/A |
| 7 | Severities | | |
| | The duration of application of the test flame is 30 s ± 1 s | | N/A |
| 9 | Test procedure | | |
| 9.1 | The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1 | | N/A |
| 9.2 | The first paragraph does not apply | | N/A |
| | If possible, the flame is applied at least 10 mm from a corner | | N/A |
| 9.3 | The test is carried out on one specimen | | N/A |
| | If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test | | N/A |
| 11 | Evaluation of test results | | |
| | The duration of burning not exceeding 30 s | | N/A |
| | However, for printed circuit boards, the duration of burning not exceeding 15 s | | N/A |
| F | ANNEX F (NORMATIVE) CAPACITORS | | — |
| | Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications: | | |
| 1.5 | Terms and definitions | | |
| 1.5.3 | Class X capacitors tested according to subclass X2 | | N/A |
| 1.5.4 | This subclause is applicable | | N/A |
| 1.6 | Marking | | |
| | Items a) and b) are applicable | | N/A |
| 3.4 | Approval testing | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 3.4.3.2 | Table 3 is applicable as described | | N/A |
| 4.1 | Visual examination and check of dimensions | | |
| | This subclause is applicable | | N/A |
| 4.2 | Electrical tests | | |
| 4.2.1 | This subclause is applicable | | N/A |
| 4.2.5 | This subclause is applicable | | N/A |
| 4.2.5.2 | Only table 11 is applicable | | N/A |
| | Values for test A apply | | N/A |
| | However, for capacitors in heating appliances the values for test B or C apply | | N/A |
| 4.12 | Damp heat, steady state | | |
| | This subclause is applicable | | N/A |
| | Only insulation resistance and voltage proof are checked | | N/A |
| 4.13 | Impulse voltage | | |
| | This subclause is applicable | | N/A |
| 4.14 | Endurance | | |
| | Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable | | N/A |
| 4.14.7 | Only insulation resistance and voltage proof are checked | | N/A |
| | No visible damage | | N/A |
| 4.17 | Passive flammability test | | |
| | This subclause is applicable | | N/A |
| 4.18 | Active flammability test | | |
| | This subclause is applicable | | N/A |
| G | ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS | | — |
| | The following modifications to this standard are applicable for safety isolating transformers: | | |
| 7 | Marking and instructions | | N/A |
| 7.1 | Transformers for specific use marked with: | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | -name, trademark or identification mark of the manufacturer or responsible vendor..... : | | N/A |
| | -model or type reference..... : | | N/A |
| 17 | Overload protection of transformers and associated circuits | | |
| | Fail-safe transformers comply with subclause 15.5 of IEC 61558-1 | | N/A |
| 22 | Construction | | |
| | Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable | | N/A |
| 29 | Clearances, creepage distances and solid insulation | | |
| 29.1, 29.2, 29.3 | The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply | | N/A |
| | For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances | | N/A |
| | For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed | | N/A |
| | For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 | | N/A |
| H | ANNEX H (NORMATIVE) SWITCHES | | — |
| | Switches comply with the following clauses of IEC 61058-1, as modified below: | | |
| | The tests of IEC 61058-1 carried out under the conditions occurring in the appliance | | N/A |
| | Before being tested, switches are operated 20 times without load | | N/A |
| 8 | Marking and documentation | | |
| | Switches are not required to be marked | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference | | N/A |
| 13 | Mechanism | | |
| | The tests may be carried out on a separate sample | | N/A |
| 15 | Insulation resistance and dielectric strength | | |
| 15.1 | Not applicable | | N/A |
| 15.2 | Not applicable | | N/A |
| 15.3 | Applicable for full disconnection and micro-disconnection | | N/A |
| 17 | Endurance | | |
| | Compliance is checked on three separate appliances or switches | | N/A |
| | For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless | | N/A |
| | otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335.....: | | N/A |
| | Switches for operation under no load and which can be operated only by a tool, and | | N/A |
| | switches operated by hand that are interlocked so that they cannot be operated under load, | | N/A |
| | are not subjected to the tests | | N/A |
| | However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation | | N/A |
| | Subclauses 17.2.2 and 17.2.5.2 not applicable | | N/A |
| | The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1 | | N/A |
| | The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K).....: | | N/A |
| 20 | Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24 | | N/A |
| I | ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE | | — |
| | The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance: | | |
| 8 | Protection against access to live parts | | |
| 8.1 | Metal parts of the motor are considered to be bare live parts | | N/A |
| 11 | Heating | | |
| 11.3 | The temperature rise of the body of the motor is determined instead of the temperature rise of the windings | | N/A |
| 11.8 | The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material | | N/A |
| 16 | Leakage current and electric strength | | |
| 16.3 | Insulation between live parts of the motor and its other metal parts is not subjected to the test | | N/A |
| 19 | Abnormal operation | | |
| 19.1 | The tests of 19.7 to 19.9 are not carried out | | N/A |
| 19.1.101 | Appliance operated at rated voltage with each of the following fault conditions: | | |
| | - short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit | | N/A |
| | - short circuit of each diode of the rectifier | | N/A |
| | - open circuit of the supply to the motor | | N/A |
| | - open circuit of any parallel resistor, the motor being in operation | | N/A |
| | Only one fault simulated at a time, the tests carried out consecutively | | N/A |
| 22 | Construction | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 22.1.101 | For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation | | N/A |
| | Compliance checked by the tests specified for double and reinforced insulation | | N/A |
| J | ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS | | — |
| | Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications: | | |
| 5.7 | Conditioning of the test specimens | | |
| | When production samples are used, three samples of the printed circuit board are tested | | N/A |
| 5.7.1 | Cold | | |
| | The test is carried out at -25 °C | | N/A |
| 5.7.3 | Rapid change of temperature | | |
| | Severity 1 is specified | | N/A |
| 5.9 | Additional tests | | |
| | This subclause is not applicable | | N/A |
| K | ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES | | — |
| | The information on overvoltage categories is extracted from IEC 60664-1 | | P |
| | Overvoltage category is a numeral defining a transient overvoltage condition | | P |
| | Equipment of overvoltage category IV is for use at the origin of the installation | | N/A |
| | Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements | | N/A |
| | Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies | | N/A |
| | Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level | | N/A |
| L | ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES | | — |
| | Information for the determination of clearances and creepage distances | | P |
| M | ANNEX M (NORMATIVE) POLLUTION DEGREE | | — |
| | The information on pollution degrees is extracted from IEC 60664-1 | | P |
| | Pollution | | |
| | The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment | | P |
| | Means may be provided to reduce pollution at the insulation by effective enclosures or similar | | N/A |
| | Minimum clearances specified where pollution may be present in the microenvironment | | N/A |
| | Degrees of pollution in the microenvironment | | |
| | For evaluating creepage distances, the following degrees of pollution in the microenvironment are established: | | |
| | - pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence | | N/A |
| | - pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected | | N/A |
| | - pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected | | P |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | - pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow | | N/A |
| N | ANNEX N (NORMATIVE) PROOF TRACKING TEST | | — |
| | The proof tracking test is carried out in accordance with IEC 60112 with the following modifications: | | |
| 7 | Test apparatus | | |
| 7.3 | Test solutions | | |
| | Test solution A is used | | P |
| 10 | Determination of proof tracking index (PTI) | | |
| 10.1 | Procedure | | N/A |
| | The proof voltage is 100V, 175V, 400V or 600V...: | | P |
| | The test is carried out on five specimens | | P |
| | In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100 | | N/A |
| 10.2 | Report | | |
| | The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V | | P |
| O | ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30 | | — |
| | Description of tests for determination of resistance to heat and fire | | P |
| P | ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES | | — |
| | Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE | | |
| | Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WdaE, if liable to be connected to a supply mains that excludes the protective earthing conductor | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 5.7 | The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C | | N/A |
| 7.1 | The appliance marked with the letters WDaE | | N/A |
| 7.12 | The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA | | N/A |
| | The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries | | N/A |
| 11.8 | The values of Table 3 are reduced by 15 K | | N/A |
| 13.2 | The leakage current for class I appliances not exceeding 0,5 mA | | N/A |
| 15.3 | The value of t is 37 °C | | N/A |
| 16.2 | The leakage current for class I appliances not exceeding 0,5 mA (mA): | | N/A |
| 19.13 | The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3 | | N/A |
| Q | ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS | | — |
| | Description of tests for appliances incorporating electronic circuits | | N/A |
| R | ANNEX R (NORMATIVE) SOFTWARE EVALUATION | | — |
| | Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex | | N/A |
| R.1 | Programmable electronic circuits using software | | |
| | Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard | | N/A |
| R.2 | Requirements for the architecture | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| | Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software | | N/A |
| R.2.1.1 | Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures: | | |
| | - single channel with periodic self-test and monitoring | | N/A |
| | - dual channel (homogenous) with comparison | | N/A |
| | - dual channel (diverse) with comparison | | N/A |
| | Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures: | | |
| | - single channel with functional test | | N/A |
| | - single channel with periodic self-test | | N/A |
| | - dual channel without comparison | | N/A |
| R.2.2 | Measures to control faults/errors | | |
| R.2.2.1 | When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area | | N/A |
| R.2.2.2 | Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison | | N/A |
| R.2.2.3 | For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths | | N/A |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|--|--------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| R.2.2.4 | For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate | | N/A |
| R.2.2.5 | For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired | | N/A |
| R.2.2.6 | The software is referenced to relevant parts of the operating sequence and the associated hardware functions | | N/A |
| R.2.2.7 | Labels used for memory locations are unique | | N/A |
| R.2.2.8 | The software is protected from user alteration of safety-related segments and data | | N/A |
| R.2.2.9 | Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired | | N/A |
| R.3 | Measures to avoid errors | | |
| R.3.1 | General | | |
| | For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the following measures to avoid systematic fault in the software are applied | | N/A |
| | Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1 | N/A | |
| R.3.2 | Specification | | |
| R.3.2.1 | Software safety requirements: | Software Id: | N/A |
| | The specification of the software safety requirements includes the descriptions listed | | N/A |
| R.3.2.2 | Software architecture | | |

| J60335-1(H27) (J 60335-2-11(H29)) | | | |
|-----------------------------------|---|-------------------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| R.3.2.2.1 | The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data | Document ref. No: | N/A |
| R.3.2.2.2 | The architecture specification is validated against the specification of the software safety requirements by static analysis | | N/A |
| R.3.2.3 | Module design and coding | | |
| R.3.2.3.1 | Based on the architecture design, software is suitably refined into modules | | N/A |
| | Software module design and coding is implemented in a way that is traceable to the software architecture and requirements | | N/A |
| R.3.2.3.2 | Software code is structured | | N/A |
| R.3.2.3.3 | Coded software is validated against the module specification by static analysis | | N/A |
| | The module specification is validated against the architecture specification by static analysis | | N/A |
| R.3.3.3 | Software validation | | |
| | The software is validated with reference to the requirements of the software safety requirements specification | | N/A |
| | Compliance is checked by simulation of: | | |
| | - input signals present during normal operation | | N/A |
| | - anticipated occurrences | | N/A |
| | - undesired conditions requiring system action | | N/A |

| TABLE R.1 ^e – GENERAL FAULT/ERROR CONDITIONS | | | | | | |
|---|---|---|--|--|-------------------------------------|---------|
| Component ^a | Fault/error | Acceptable measures ^{b,c} | Definitions | Document reference for applied measure | Document reference for applied test | Verdict |
| 1 CPU 1.1 Registers | Stuck at | Functional test, or periodic self-test using either: - static memory test, or - word protection with single bit redundancy | H.2.16.5 H.2.16.6 H.2.19.6 H.2.19.8.2 | | | N/A |
| 1.2 VOID | | | | | | N/A |
| 1.3 Programme counter | Stuck at | Functional test, or Periodic self-test, or Independent time-slot monitoring, or Logical monitoring of the programme sequence | H.2.16.5 H.2.16.6 H.2.18.10.4 H.2.18.10.2 | | | N/A |
| 2 Interrupt handling and execution | No interrupt or too frequent interrupt | Functional test, or time-slot monitoring | H.2.16.5 H.2.18.10.4 | | | N/A |
| 3 Clock | Wrong frequency (for quartz synchronized clock: harmonics/sub-harmonics only) | Frequency monitoring, or time slot monitoring | H.2.18.10.1 H.2.18.10.4 | | | N/A |
| 4. Memory 4.1 Invariable memory | All single bit faults | Periodic modified checksum, or multiple checksum, or word protection with single bit redundancy | H.2.19.3.1 H.2.19.3.2 H.2.19.8.2 | | | N/A |

| | | | | | | |
|---|--------------------|---|---|--|--|-----|
| 4.2 Variable memory | DC fault | Periodic static memory test, or word protection with single bit redundancy | H.2.19.6 H.2.19.8.2 | | | N/A |
| 4.3 Addressing (relevant to variable and invariable memory) | Stuck at | Word protection with single bit redundancy including the address | H.2.19.8.2 | | | N/A |
| 5 Internal data path | | | | | | N/A |
| 5.1 data | Stuck at | Word protection with single bit redundancy | H.2.19.8.2 | | | N/A |
| 5.2 Addressing | Wrong address | Word protection with single bit redundancy including the address | H.2.19.8.2 | | | N/A |
| 6 External communication | | | | | | N/A |
| 6.1 Data | Hamming distance 3 | Word protection with multi-bit redundancy, or CRC – single work, or Transfer redundancy, or Protocol test | H.2.19.8.1 H.2.19.4.1 H.2.18.2.2 H.2.18.14 | | | N/A |
| 6.2 Addressing | Wrong addresses | Word protection with multi-bit redundancy, including the address, or CRC single word including the addresses, or transfer redundancy or protocol test | H.2.19.8.1 H.2.19.4.1 H.2.18.2.2 H.2.18.14 | | | N/A |

| | | | | | | |
|--|---|---|--|--|--|------------|
| <p>6.3 Timing</p> | <p>Wrong point in time</p> <p>Wrong sequence</p> | <p>Time-slot monitoring, or scheduled transmission</p> <p>Time-slot and logical monitoring, or comparison of redundant communication channels by either:</p> <ul style="list-style-type: none"> - reciprocal comparison - independent hardware comparator <p>Logical monitoring, or time-slot monitoring, or Scheduled transmission</p> | <p>H.2.18.10.4</p> <p>H.2.18.18</p> <p>H.2.18.10.3</p> <p>H.2.18.15</p> <p>H.2.18.3</p> <p>H.2.18.10.2</p> <p>H.2.18.10.4</p> <p>H.2.18.18</p> | | | <p>N/A</p> |
| <p>7 Input/output periphery</p> | <p>Fault conditions specified in 19.11.2</p> | <p>Plausibility check</p> | <p>H.2.18.13</p> | | | <p>N/A</p> |
| <p>7.1 Digital I/O</p> | <p>Fault conditions specified in 19.11.2</p> | <p>Plausibility check</p> | <p>H.2.18.13</p> | | | <p>N/A</p> |
| <p>7.2 Analog I/O</p> <p>7.2.1 A/D and D/A-converter</p> | <p>Fault conditions specified in 19.11.2</p> | <p>Plausibility check</p> | <p>H.2.18.13</p> | | | <p>N/A</p> |
| <p>7.2.2 Analog multiplexer</p> | <p>Wrong addressing</p> | <p>Plausibility check</p> | <p>H.2.18.13</p> | | | <p>N/A</p> |
| <p>8 VOID</p> | | | | | | <p>N/A</p> |
| <p>9 Custom chips^d e.g. ASIC, GAL, gate array</p> | <p>Any output outside the static and dynamic functional specification</p> | <p>Periodic self-test</p> | <p>H.2.16.6</p> | | | <p>N/A</p> |

NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.

- a) For fault/error assessment, some components are divided into their sub-functions.
 b) For each sub-function in the table, the Table R.2 measure will cover the software fault/error.
 c) Where more than one measure is given for a sub-function, these are alternatives.
 d) To be divided as necessary by the manufacturer into sub-functions.
 e) Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.

| J3000(H25) | | | |
|------------|---|--------|---------|
| Cl. | Requirement – Test | Result | Verdict |
| 1 | General requirements | | — |
| | The appliances that are AC electric appliances or portable engine generators specified in the Annex 1 No.1, No.6 to No.9 and Annex 2 No.6 to No.11 of Electrical Appliances and Materials Safety Law Implementation Act (1962, Ordinance No. 324) shall comply with the following requirements. | | N/A |
| | Appliances couplers specified in the standard JIS C 8283-1(2008), <i>Appliances couplers for household and similar general purposes-Part 1: General requirements</i> , shall not impose external force on soldered connection of appliance socket terminal when being plug and unplug. | | N/A |
| | However, if appliance socket terminal does not rely on soldering connection only, this requirement is not applicable. | | N/A |
| | Compliance is checked by inspection. | | N/A |

| | | | |
|-----|--|--|-----|
| 2 | Particular requirements | | — |
| (1) | If the heating appliance parallel with the rectifier which used to adjust power and connected to the supply mains, the appliances shall be constructed that the appliances shall not give rise to a hazard when one of rectifier diodes is open-circuited. | | N/A |
| | Compliance is checked by the following test. | | N/A |
| ① | One of the rectifier shall have the ratings which exceed the rated current of main circuit. | | N/A |

| | | | |
|-----|---|--|-----|
| | Rectifier diodes connected in parallel shall have the same parameter. | | N/A |
| ② | The heating test specified in JIS C 9335 (2003) and, when applicable, other particular requirements shall be carried out under the condition that one of parallel rectifier being open-circuited. The appliance shall comply with the requirements of the test. | | N/A |
| (2) | If the electric stoves have visibly glowing heating elements, the appliances shall comply with the following requirements: | | N/A |
| ① | Coating and adhesive material shall not be used for surface finishing on protective covers and protective guards. | | N/A |
| ② | The substance of following shall be indicated by concise and legible sentence and marked on the place indicated in (a) and (b). | | N/A |
| | (a) Prominent places on the appliances. | | N/A |
| | (b) Instructions for use and other accessory documents. | | N/A |
| | Caution: Due to the appliance may volatilize the organic compounds and carbonyl compounds at the beginning of use, this appliance must ventilate adequately. | | N/A |
| | Compliance is checked by inspection. | | N/A |

| | | | |
|-----|---|--|-----|
| 3 | Requirements for components used in appliances | | — |
| (1) | Capacitors that are used in ventilators, fans, air conditioners, washing machines, refrigerators and freezers, and involved in the scope of motor capacitors in the JIS C 4908(2007), shall comply with the following requirements: | | N/A |
| | Capacitors that are used must be which incorporate protective device, have external protective device or are of class P2 of IEC60252-1(2001). | | N/A |
| | However, these requirements are not applicable for the following: | | N/A |
| ① | the capacitors are housed within a metallic or ceramic enclosure that will prevent the emission of flame or molten material resulting from failure of the capacitor; | | N/A |

| | | | |
|-----|--|--|-----|
| | <p>However, the enclosures are allow to have openings and capacitors be connected to the motor.</p> <p>In this situation, “the capacitors are housed within a metallic or ceramic enclosure” means the capacitors could not be accessed by the test probe through the holes of the enclosure to prevent theemission of flame or molten material.</p> | | N/A |
| | <p>The non-metallic parts that housed within a metallic or ceramic box together with the capacitors not specified in JIS C4908(2007), if adjacentwithin 50 mm of the outer surface of the capacitor, are regarded as the parts prevent theemission of flame or molten material.</p> | | N/A |
| ② | <p>The distance of separation of the outer surface of the capacitor to adjacent non-metallicparts exceeds 50 mm;</p> | | N/A |
| ③ | <p>Adjacent non-metallic parts within 50 mm of the outer surface of the capacitor withstandthe needle-flame test of Annex E of JIS C 9335-1(2003)</p> | | N/A |
| ④ | <p>Adjacent non-metallic parts within 50 mm of the outer surface of the capacitor areclassified as at least V-1 according to JIS C 60695-11-10(2006), provided that the test sampleused for the classification was no thicker than the relevant part of the appliance.</p> | | N/A |
| (2) | <p>Plugs that are connected to the power suppliers which used in refrigerators and freezers, shall comply with the following requirements:</p> | | N/A |
| ① | <p>When plug contacts with outside surface of socket-outlet, the insulation materials of plug pins, other than earthing pin, shall have a PTI exceeding 400 according to JIS C 2134(2007) .</p> | | N/A |
| | <p>However, this requirement does not apply to the insulation materials of pins with CTI exceeding 400 according to JIS C 2134(2007) .</p> | | N/A |
| ② | <p>The insulation materials that ensure the clearance between pins, other than earthing pin, shall comprise materials have a glow-wire flammability index (GWFI) of at least 750°C according to JIS C 60695-2-11(2004) or subjected to the glow-wire test with a test severity of 750°C according to JIS C 60695-2-12(2004) .</p> | | N/A |

| | | | |
|--|---|--|-----|
| | <p>However, the tests are not carried out on parts of material fulfilling the following classification:</p> <p>A glow-wire ignition temperature (GWIT) according to JIS C 60695-2-13 of at least 775°C.</p> | | N/A |
|--|---|--|-----|

| 10.1 | TABLE: Power input deviation | | | | | P |
|-------------------------|------------------------------|----------------|-------|-------------|--------|---|
| Input deviation of/at: | P rated (W) | P measured (W) | dP | Required dP | Remark | |
| GDZ80-603E 100V 50Hz | 1350 | 1281.3 | -5.1% | ±15% | / | |
| GDZ80-603E 100V 60Hz | 1350 | 1291.4 | -4.3% | ±15% | / | |
| GDZ45-305E 100V 50Hz | 830 | 815.2 | -1.8% | ±15% | / | |
| GDZ45-305E 100V 60Hz | 830 | 823.2 | -0.8% | ±15% | / | |
| — | — | — | — | — | — | |

| 10.2 | TABLE: Current deviation | | | | | N/A |
|--------------------------|--------------------------|----------------|----|-------------|--------|-----|
| Current deviation of/at: | I rated (A) | I measured (A) | dI | Required dI | Remark | |
| — | — | — | — | — | — | |

| 11.8 | TABLE: Heating test, thermocouples (GDZ80-603E) | | | P |
|--------------------------------------|---|--------|--------------|---|
| | Test voltage (V).....: | | 106V | — |
| | Ambient (°C).....: | | 21.4 | — |
| Thermocouple locations | | dT (K) | Max. dT (K) | |
| Supply cord | | 21.0 | 50 | |
| Control panel | | 10.8 | 60 | |
| Internal wire | | 54.3 | 80(T105-25) | |
| X2 capacitor | | 31.2 | 50 | |
| Ambient of interlock switch | | 19.8 | 30 | |
| Ambient of self-resetting controller | | 40.5 | 110(T135-25) | |
| Knob of the door. | | 9.8 | 60 | |
| Handle surface | | 8.2 | 60 | |

| Display PCB | | 46.7 | 120 | | | |
|-----------------------------|---|-----------------------|---------------|----------------|------------------|---|
| Main PCB | | 33.8 | 120 | | | |
| relay | | 25.9 | 80 (T105-25) | | | |
| Transformer | | 30.8 | 85(class 130) | | | |
| Enclosure | | 9.9 | 60 | | | |
| Running capacitor | | 52.4 | 60 (T85-25) | | | |
| motor | | 58.2 | 85(Class B) | | | |
| PTC support | | 33.1 | For30.1 | | | |
| PCB board support | | 30.2 | For30.1 | | | |
| Fuse sleeve | | 14.2 | For30.1 | | | |
| Enclosure | | 10.5 | For30.1 | | | |
| Test corner | | 1.3 | 60 | | | |
| 11.8 | TABLE: Heating test, resistance method (GDZ80-603E) | | | | | P |
| | Test voltage (V).....: | | 106V, 60Hz | | — | |
| | Ambient, t ₁ (°C),.....: | | 20.7 | | — | |
| | Ambient, t ₂ (°C),.....: | | 21.4 | | — | |
| Temperature rise of winding | R ₁ (Ω) | R ₂ (Ω) | dT (K) | Max. dT (K) | Insulation class | |
| Main winding of motor | 15.09 | 19.92 | 77.9 | 95 | 130 | |
| Auxiliary winding of motor | 14.86 | 19.55 | 76.8 | 95 | 130 | |
| — | — | — | — | — | — | |

| | | | | | | |
|--------------------------------------|---|-----------------------|-----------------------|----------------|----------------|------------------|
| 11.8 | TABLE: Heating test, thermocouples (GDZ45-305E) | | | | | P |
| | Test voltage (V).....: | | | 106V | — | |
| | Ambient (°C).....: | | | 22.0 | — | |
| Thermocouple locations | | dT (K) | | Max. dT (K) | | |
| Supply cord | | 18.2 | | 50 | | |
| Control panel | | 9.2 | | 60 | | |
| Internal wire | | 50.1 | | 80(T105-25) | | |
| X2 capacitor | | 30.0 | | 50 | | |
| Ambient of interlock switch | | 18.8 | | 30 | | |
| Ambient of self-resetting controller | | 38.5 | | 110(T135-25) | | |
| Knob of the door. | | 9.5 | | 60 | | |
| Handle surface | | 8.0 | | 60 | | |
| Display PCB | | 45.1 | | 120 | | |
| Main PCB | | 30.2 | | 120 | | |
| relay | | 25.2 | | 80 (T105-25) | | |
| Transformer | | 28.9 | | 85(class 130) | | |
| Enclosure | | 9.8 | | 60 | | |
| Running capacitor | | 50.0 | | 60 (T85-25) | | |
| motor | | 56.7 | | 85(Class B) | | |
| PTC support | | 32.0 | | For30.1 | | |
| PCB board support | | 28.5 | | For30.1 | | |
| Fuse sleeve | | 13.5 | | For30.1 | | |
| Enclosure | | 10.1 | | For30.1 | | |
| Test corner | | 1.2 | | 60 | | |
| 11.8 | TABLE: Heating test, resistance method (GDZ45-305E) | | | | | P |
| | Test voltage (V).....: | | | 106V, 60Hz | — | |
| | Ambient, t ₁ (°C).....: | | | 22.0 | — | |
| | Ambient, t ₂ (°C).....: | | | 22.0 | — | |
| Temperature rise of winding | | R ₁ (Ω) | R ₂ (Ω) | dT (K) | Max. dT (K) | Insulation class |

| | | | | | |
|----------------------------|-------|-------|------|----|-----|
| Main winding of motor | 18.17 | 23.71 | 75.3 | 95 | 130 |
| Auxiliary winding of motor | 15.34 | 19.92 | 73.7 | 95 | 130 |
| — | — | — | — | — | — |

| | | | | |
|---|--|-----------|------------------------|---|
| 13.2 | TABLE: Leakage current (GDZ80-603E) | | | P |
| | Heating appliances: 1.15 x rated input.....: | | -- | — |
| | Motor-operated and combined appliances.....: | | 106V | — |
| | 1.06 x rated voltage.....: | | | |
| | Leakage current between | I (mA) | Max. allowed I (mA) | |
| | L, N & accessible materials | 0,011 | 0,35 Peak | |
| | L, N & accessible earthed metal | 0,033 | 1,3 | |
| Supplementary information: Tested both on 50&60Hz, only the most unfavourable results recorded. | | | | |

| | | | | |
|---|--|-----------|------------------------|---|
| 13.2 | TABLE: Leakage current (GDZ45-305E) | | | P |
| | Heating appliances: 1.15 x rated input.....: | | -- | — |
| | Motor-operated and combined appliances.....: | | 106V | — |
| | 1.06 x rated voltage.....: | | | |
| | Leakage current between | I (mA) | Max. allowed I (mA) | |
| | L, N & accessible materials | 0,010 | 0,35 Peak | |
| | L, N & accessible earthed metal | 0,031 | 0,5 | |
| Supplementary information: Tested both on 50&60Hz, only the most unfavourable results recorded. | | | | |

| | | | |
|------|---|----------------------------|-----------------------------------|
| 13.3 | TABLE: Electric strength (GDZ80-603E;GDZ45-305E) | | P |
| | Test voltage applied between: | Test potential applied (V) | Breakdown / flashover (Yes/No) |
| | live parts and accessible parts over basic insulation | 1000 | No |
| | live parts and accessible parts over supplementary insulation | 1250 | No |
| | live parts and accessible parts over reinforced insulation | 2500 | No |

| | | | | | | |
|--------------------|-------------------------------|---------------------|-----------------------------|----------------------------|-----------------------|-----|
| 14 | TABLE: Transient overvoltages | | | | | N/A |
| Clearance between: | CI (mm) | Required CI (mm) | Rated impulse voltage(V) | Impulse test voltage(V) | Flashover (Yes/No) | |
| — | — | — | — | — | — | |

| | | | | |
|---|---|-----------|------------------------|---|
| 16.2 | TABLE: Leakage current (GDZ80-603E) | | | P |
| | Test voltage (V):1.06 x rated voltage.....: | | 106V | — |
| Leakage current between | | I (mA) | Max. allowed I (mA) | |
| L, N & accessible materials | | 0,012 | 0,25 | |
| L, N & accessible earthed metal | | 0,064 | 1,3 | |
| Supplementary information: Tested both on 50&60Hz, only the most unfavourable results recorded. | | | | |

| | | | | |
|---|---|-----------|------------------------|---|
| 16.2 | TABLE: Leakage current (GDZ45-305E) | | | P |
| | Test voltage (V):1.06 x rated voltage.....: | | 106V | — |
| Leakage current between | | I (mA) | Max. allowed I (mA) | |
| L, N & accessible materials | | 0,011 | 0,25 | |
| L, N & accessible earthed metal | | 0,058 | 0,5 | |
| Supplementary information: Tested both on 50&60Hz, only the most unfavourable results recorded. | | | | |

| | | | |
|---|--|----------------------------|--------------------------------|
| 16.3 | TABLE: Electric strength (GDZ80-603E;GDZ45-305E) | | P |
| Test voltage applied between: | | Test potential applied (V) | Breakdown / flashover (Yes/No) |
| live parts and accessible parts over basic insulation | | 1250 | No |
| live parts and accessible parts over supplementary insulation | | 1250 | No |
| live parts and accessible parts over reinforced insulation | | 2500 | No |

| | | | |
|------------------------|--|--------|-------------|
| 17 | TABLE: Overload protection, temperature rise | | P |
| Thermocouple locations | | dT (K) | Max. dT (K) |
| -- | | -- | -- |

| | | | | | | |
|---|---|--------|---------|---------|-----------------|---|
| 17 | TABLE: Overload protection, resistance method () | | | | | P |
| Test voltage (V).....: | | 106V | | | — | |
| Ambient, t1 (°C).....: | | 20.2 | | | — | |
| Ambient, t2 (°C).....: | | 20.2 | | | — | |
| Temperature of winding | R1 (Ω) | R2 (Ω) | Δ T (K) | T (°C) | Max. T (°C) | |
| Transformer winding | -- | -- | -- | 104,8°C | 175°C (Class B) | |
| Supplementary information: Tested both on 50&60Hz, only the most unfavourable results recorded. | | | | | | |

| | | | | | | |
|----------------------------|---|--------------------|--------|--------|-------------|---|
| 19.7 | TABLE: Abnormal operation, locked rotor/moving parts (GDZ80-603E) | | | | | P |
| Test voltage (V).....: | | 100V | | | — | |
| Ambient,t1(°C),.....: | | 22.2 | | | — | |
| Ambient, t2 (°C),.....: | | 22.0 | | | — | |
| Temperature of winding | R ₁ (Ω) | R ₂ (Ω) | dT (K) | T (°C) | Max. T (°C) | |
| Main winding of motor | 15.25 | 22.25 | 113.7 | 135.7 | 175 | |
| Auxiliary winding of motor | 14.92 | 21.74 | 113.2 | 135.2 | 175 | |
| -- | -- | -- | -- | -- | -- | |

| | | | | | | |
|------|---|-----------------------|-----------------------|-----------|-----------|----------------|
| 19.7 | TABLE: Abnormal operation, locked rotor/moving parts (GDZ45-305E) | | | | | P |
| | Test voltage (V).....: | | | 100V | — | |
| | Ambient, t ₁ (°C).....: | | | 22.0 | — | |
| | Ambient, t ₂ (°C).....: | | | 22.0 | — | |
| | Temperature of winding | R ₁ (Ω) | R ₂ (Ω) | dT (K) | T (°C) | Max. T (°C) |
| | Main winding of motor | 18.17 | 26.51 | 113.4 | 135.4 | 175 |
| | Auxiliary winding of motor | 15.34 | 22.35 | 112.9 | 134.9 | 175 |
| | -- | -- | -- | -- | -- | -- |

| | | | | | | |
|------|---|-----------------------|-----------------------|-----------|-----------|----------------|
| 19.9 | TABLE: Abnormal operation, running overload | | | | | N/A |
| | Test voltage (V).....: | | | -- | — | |
| | Ambient, t ₁ (°C).....: | | | -- | — | |
| | Ambient, t ₂ (°C).....: | | | -- | — | |
| | Temperature of winding | R ₁ (Ω) | R ₂ (Ω) | dT (K) | T (°C) | Max. T (°C) |
| | -- | -- | -- | -- | -- | -- |

| | | | | |
|--|--|-----------|--|----------------|
| 19.13 | TABLE: Abnormal operation, temperature rises 19.4&19.6&19.7&19.101&19.102 (GDZ80-603E) | | | P |
| | Thermocouple locations | dT (K) | | Max. dT (K) |
| | PTC support | 92.2 | | 150 |
| | PCB board support | 25.2 | | 150 |
| | Fuse sleeve | 10.2 | | 150 |
| | Enclosure | 9.8 | | 150 |
| Supplementary information: The maximum temperature rise was measured during the experiment | | | | |

| 19.13 | TABLE: Abnormal operation, temperature rises19.4&19.6&19.7&19.101&19.102 (GDZ45-305E) | | P |
|--|---|----------------|---|
| Thermocouple locations | dT (K) | Max. dT (K) | |
| PTC support | 87.2 | 150 | |
| PCB board support | 24.1 | 150 | |
| Fuse sleeve | 10.0 | 150 | |
| Enclosure | 9.7 | 150 | |
| Supplementary information: The maximum temperature rise was measured during the experiment | | | |

| 21.1 | TABLE: Impact resistance | | | P |
|----------------------------|--------------------------|--------------------|----------|---|
| Impacts per surface | Surface tested | Impact energy (Nm) | Comments | |
| 3 | Enclosure | 0,5 | P | |
| Supplementary information: | | | | |

| 24.1 TABLE: Components | | | | | |
|--|---|-----------------|-------------------------------------|-------------------------------|--------------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| Power cord | Zhejiang JinTing Nuclear Cable Co., Ltd | VCTF | 3×2.0mm ² | JET | JET5812-120 09-1001 |
| Power plug | Zhejiang JinTing Nuclear Cable Co., Ltd | J3-15 | 125V 15A | JET | JET5812-430 01-1008 |
| Internal wire | CHANGZHOU HONG CHANG ELECTRONICS CO LTD | 1015 | rated 600Vac,105°C ,14-20AWG | UL | E212395 |
| Internal wire | CHANGZHOU HONG CHANG ELECTRONICS CO LTD | 3266 | rated 300Vac,125°C ,14-20AWG. | UL | E212395 |
| Internal wire | CHANGZHOU HONG CHANG ELECTRONICS CO LTD | 3321 | rated 600Vac,150°C ,14-20AWG. | UL | E212395 |
| Internal wire | YUYAO JI ANMEI ELECTRIC APPLIANCE CABLEcO LTD GUANGMING WIRE FACTORY | 1015 | rated 600Vac,105°C ,14-20AWG | UL | E317714 |
| Internal wire | YUYAO JI ANMEI ELECTRIC APPLIANCE CABLEcO LTD GUANGMING WIRE FACTORY | 3266 | rated 300Vac,125°C ,14-20AWG. | UL | E317714 |
| Internal wire | YUYAO JI ANMEI ELECTRIC APPLIANCE CABLEcO LTD GUANGMING WIRE FACTORY | 3321 | rated 600Vac,150°C ,14-20AWG. | UL | E317714 |
| Door Switch | Ningbo Jialin Electron Co.,Ltd. | KW3-0Z | 16A 125/250V | UL | E250611 |
| PTC Heater(GDZ80-603E, GDZ80-605E. | Cixi Jinyou Electron Pottery Co.,Ltd | JY | 120V~60Hz 1300W | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |

| 24.1 TABLE: Components | | | | | |
|--|---|-----------------------|------------------------------|--|--------------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| GDZ80-606E, GDZ80-607E, GDZ70-503E, GDZ70-507E, GDZ60-506E,GDZ60- 505E) | CHANGZHOU ANTAI ELECTRICAL HEATING APPLIANCES CO., LTD | MZF | 120V~60Hz 1300W | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |
| PTC Heater(GDZ45-305E, GDZ45-303E, GDZ40-301E, GDZ40-302E) | Cixi Jinyou Electron Pottery Co.,Ltd | JY | 120V~ 60Hz 700W | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |
| | CHANGZHOU ANTAI ELECTRICAL HEATING APPLIANCES CO., LTD | MZF | 120V~60Hz 700W | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |
| Thermal Cut-out | Foshan Tianpeng Thermostats Co., Ltd. | T1/11 | 250V~,16A 60°C | UL | E202192 |
| | Jiangsu Changrong Electrical Appliance Co.,Ltd. | HPC | 250V~ 15A 60°C | EN60730-1:2 016/A1:2019 | VDE4004740 9 |
| Motor | Cixi Xinhe Electrical Apparatus Factor | XDT-65 | 120V~ 50/60HZ 65W Class B | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |
| Motor | Huzhou Nanxun Xinlong Motor Co., Ltd. | XD-65 | 120V~ 50/60HZ 65W Class B | IEC 60335-1 IEC 60335-2-11 | Tested with appliance |
| Thermal protecto | Hang Zhou Fu Yang Hua Yu Controls Electrical Factory | BW; KW | 250V~ 5A 135°C | IEC 60730-1:2 013 IEC 60730-1:2 013/AMD1 :2015 IEC 60730-2-2 2:2014 | VDE4000845 2 |
| | Jiangsu Changsheng Electric Appliance Co., Ltd. | BR-A2D; BW; 17AM-D | 250V~ 135°C | UL | E214731 |
| | Changzhou City Tong Li Electronic Co.Ltd | KW | 135°C 250V~ | EN60730-1 EN60730-2 | VDE40004 418 |
| | Changzhou City Tong Li Electronic Co.Ltd | KW | 125°C 250V~ | EN60730-1 EN60730-2 | VDE40004 418 |

| 24.1 | TABLE: Components | | | | |
|-------------------|---|-----------------|--|--------------------|--------------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| Capacitor | Zhejiang Shuangfeng Electrical Co., Ltd. | CBB60 | 14uf 250V~ | UL | E220629 |
| Capacitor | Zhejiang Shuangfeng Electrical Co., Ltd. | CBB60 | 20uf 250V~ | UL | E220629 |
| Fuse | XC ELECTRONICS (SHENZHEN) CORP LTD | 6G | 20A 125V | UL | E249609 |
| Y Capacitor | JYH HSU (JEC) ELECTRONICS LTD | JD | X1/Y1, Y1: 500/ 440/400/250 V ac; 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40038642 |
| | JYH HSU (JEC) ELECTRONICS LTD | JY | X1/Y2: 500/440/ 400/300/250Vac; 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40038643 |
| | Shenzhen Weidy Industrial Development Co., Ltd | WYD | X1/Y1: 500Vac 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40051104 |
| | Shenzhen Weidy Industrial Development Co., Ltd | WYE | Y2:300Vac 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40051013 |
| | Suzhou Jiarong Electronic Technology Co., Ltd | RA | X1/Y1:500/440/ 400Vac 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40054148 |
| | Suzhou Jiarong Electronic Technology Co., Ltd | RB | Y2:300 / 250Vac 102M (1000pF) 222M (2200pF) 472M (4700pF) | IEC/EN 60384-14 | VDE 40054156 |

| 24.1 | TABLE: Components | | | | |
|-------------------|--|--------------------------------------|---|---|--------------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| X Capacitor | Shenzhen Weidy Industrial Development Co., Ltd | MKP | 0.01 μ F 0.047 μ F 0.1 μ F 0.22 μ F 0.33 μ F 0.47 μ F 310 V~ | IEC60384-14 | VDE 40041066 |
| | Qi Rong Electronic Technology Co Ltd | MKP | 0.01 μ F 0.047 μ F 0.1 μ F 0.22 μ F 0.33 μ F 0.47 μ F 310 V~ | IEC 60384-14 | VDE 40047661 |
| | Dain Electronic Co., Ltd | MPX MEX | 0.01 μ F 0.047 μ F 0.1 μ F 0.22 μ F 0.33 μ F 0.47 μ F 275 V~ | IEC 60384-14 | VDE 40018798 |
| Relay | Sanyou Corporation Limited | SRG-SH-1 12DM, SRG-S-112 DM | 17A 277VAC/250VAC ,T105 | IEC/EN 61810-1 | VDE 40037165 |
| | XIAMEN HONGFA ELECTROACOUSTIC CO.,LTD | HF7FD-T | 16A 250V T105 | IEC/EN 61810-1 | VDE 40008374 |
| | Dong Guan Churod Electronics Co., Ltd | CHW-S-11 2DA2H | 17A 250V,T105 | EN 61810-1 | TUV R50254542 |
| | Zhejiang Meishuo Electric Technology Co.,LTD | MPH-S-11 2-A-2 | 17A 277V/250V,T105 | IEC/EN 61810-1 | TUV 50342666 |
| PCB | CHANGZHOU KELONG ELECTRONICS CO LTD | JC-2 JC-3 | 94V-0 | EN 60335-1 EN 60335-2-30 | UL E248439 |
| | TAI PING CIRCUITS TECHNOLOGY LTD | O20 O31 P1 | 94V-0 | EN 60335-1 EN 60335-2-30 | UL E62500 |
| | HANGZHOU BAOLIN PRINTED CIRCUIT CO LTD | BL2 | 94V-0 | EN 60335-1 EN 60335-2-30 | UL E207143 |
| Transformer | Ningbo Yuce Electronics Co.,Ltd | YC-E16-00 2 | 100-240V~ 50/60HZ | IEC 60335-1 , IEC 60335-2-40, GB19212.1, GB19212.17 | Tested with appliance |

| 24.1 | | TABLE: Components | | | | |
|---|---|-------------------|--------------------------|---|--------------------------|--|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity | |
| Transformer | TongLing SanJia transformer Co., Ltd | WQ16EE-S L001 | 100~240 V~, 50/60 Hz, | IEC 60335-1 , IEC 60335-2-40, GB19212.1, GB19212.17 | Tested with appliance | |
| Transformer | WUXI XINCHANG ELECTRONIC CO.,LTD | BCK-543-1 6151 | 100~240 V~, 50/60 Hz, | IEC 60335-1 , IEC 60335-2-40, GB19212.1, GB19212.17 | Tested with appliance | |
| Nipple | HEAVY POWER CO LTD | CE2,CE5 | / | UL 486 | E113650 | |
| ¹⁾ An asterisk indicates a mark which assures the agreed level of surveillance | | | | | | |

| 28.1 | TABLE: Threaded part torque test | | | |
|------------------------------|----------------------------------|-------------------------------|-----------------------|--|
| Threaded part identification | Diameter of thread (mm) | Column number (I, II, or III) | Applied torque (Nm) | |
| Screw for enclosure | 4.0 | II | 1.2 | |
| Screw for earthing | 3.9 | II | 1.2 | |

| 29.1 | TABLE: Clearances | | | | | P |
|--|----------------------------|---------------------|--------------------|-----------------|-----------------|----------------|
| | Overvoltage category.....: | II | | | — | |
| | | Type of insulation: | | | | |
| Rated impulse voltage (V): | Min. CI (mm) | Basic (mm) | Supplementary (mm) | Reinforced (mm) | Functional (mm) | Verdict/Remark |
| 330 | 0,2* / 0,5 / 0,8** | | | | | N/A |
| 500 | 0,2* / 0,5 / 0,8** | | | | | N/A |
| 800 | 0,2* / 0,5 / 0,8** | | | | | N/A |
| 1 500 | 0,5 / 0,8** / 1,5**** | >2.6 | >2.6 | | >2.6 | P |
| 2 500 | 1,5 / 2,0*** | | | >4.6 | | N/A |
| 4 000 | 3,0 / 3,5*** | | | | | N/A |
| 6 000 | 5,5 / 6,0*** | | | | | N/A |
| 8 000 | 8,0 / 8,5*** | | | | | N/A |
| 10 000 | 11,0 / 11,5*** | | | | | N/A |
| Supplementary information: | | | | | | |
| *) For tracks on printed circuit boards if pollution degree 1 and 2 | | | | | | |
| **) For pollution degree 3 | | | | | | |
| ***) If the construction is affected by wear, distortion, movement of the parts or during assembly | | | | | | |
| ****) For basic insulation in class 0 appliances and the insulation in class 0I appliances, between live parts and accessible metal parts that are earthed | | | | | | |

| 29.2 | TABLE: Creepage distances, basic, supplementary and reinforced insulation | | | | | | | | | | | P |
|------------------------|---|----------------|------|-----------|----------------|------|------------|--------------------|------|-----------|---------|---|
| Working voltage (V) | Creepage distance (mm) | | | | | | | | | | | |
| | Pollution degree | | | | | | | | | | | |
| | 1 | 2 | | | 3 | | | Type of insulation | | | | |
| | | Material group | | | Material group | | | | | | | |
| | | I | II | IIIa/IIIb | I | II | IIIa/IIIb* | B** | S** | R** | Verdict | |
| ≤50 | 0,18 | 0,6 | 0,85 | 1,2 | 1,5 | 1,7 | 1,9 | | — | — | N/A | |
| ≤50 | 0,18 | 0,6 | 0,85 | 1,2 | 1,5 | 1,7 | 1,9 | — | | — | N/A | |
| ≤50 | 0,36 | 1,2 | 1,7 | 2,4 | 3,0 | 3,4 | 3,8 | — | — | | N/A | |
| 125 | 0,28 | 0,75 | 1,05 | 1,5 | 1,9 | 2,1 | 2,4 | >5.2 | — | — | P | |
| 125 | 0,28 | 0,75 | 1,05 | 1,5 | 1,9 | 2,1 | 2,4 | — | >5.2 | — | P | |
| 125 | 0,56 | 1,5 | 2,1 | 3,0 | 3,8 | 4,2 | 4,8 | — | — | >10. 4 | P | |
| 250 | 0,56 | 1,25 | 1,8 | 2,5 | 3,2 | 3,6 | 4,0 | | — | — | N/A | |
| 250 | 0,56 | 1,25 | 1,8 | 2,5 | 3,2 | 3,6 | 4,0 | — | | — | N/A | |
| 250 | 1,12 | 2,5 | 3,6 | 5,0 | 6,4 | 7,2 | 8,0 | — | — | | N/A | |
| 400 | 1,0 | 2,0 | 2,8 | 4,0 | 5,0 | 5,6 | 6,3 | | — | — | N/A | |
| 400 | 1,0 | 2,0 | 2,8 | 4,0 | 5,0 | 5,6 | 6,3 | — | | — | N/A | |
| 400 | 2,0 | 4,0 | 5,6 | 8,0 | 10,0 | 11,2 | 12,6 | — | — | | N/A | |
| 500 | 1,3 | 2,5 | 3,6 | 5,0 | 6,3 | 7,1 | 8,0 | | — | — | N/A | |
| 500 | 1,3 | 2,5 | 3,6 | 5,0 | 6,3 | 7,1 | 8,0 | — | | — | N/A | |
| 500 | 2,6 | 5,0 | 7,2 | 10,0 | 12,6 | 14,2 | 16,0 | — | — | | N/A | |
| >630 and ≤800 | 1,8 | 3,2 | 4,5 | 6,3 | 8,0 | 9,0 | 10,0 | | — | — | N/A | |
| >630 and ≤800 | 1,8 | 3,2 | 4,5 | 6,3 | 8,0 | 9,0 | 10,0 | — | | — | N/A | |
| >630 and ≤800 | 3,6 | 6,4 | 9,0 | 12,6 | 16,0 | 18,0 | 20,0 | — | — | | N/A | |
| >800 and ≤1000 | 2,4 | 4,0 | 5,6 | 8,0 | 10,0 | 11,0 | 12,5 | | — | — | N/A | |
| >800 and ≤1000 | 2,4 | 4,0 | 5,6 | 8,0 | 10,0 | 11,0 | 12,5 | — | | — | N/A | |
| >800 and ≤1000 | 4,8 | 8,0 | 11,2 | 16,0 | 20,0 | 22,0 | 25,0 | — | — | | N/A | |
| >1000 and ≤1250 | 3,2 | 5,0 | 7,1 | 10,0 | 12,5 | 14,0 | 16,0 | | — | — | N/A | |
| >1000 and ≤1250 | 3,2 | 5,0 | 7,1 | 10,0 | 12,5 | 14,0 | 16,0 | — | | — | N/A | |

| | | | | | | | | | | | |
|------------------|------|------|-------|-------|-------|-------|-------|---|---|---|-----|
| >1000 and ≤1250 | 6,4 | 10,0 | 14,2 | 20,0 | 25,0 | 28,0 | 32,0 | — | — | | N/A |
| >1250 and ≤1600 | 4,2 | 6,3 | 9,0 | 12,5 | 16,0 | 18,0 | 20,0 | | — | — | N/A |
| >1250 and ≤1600 | 4,2 | 6,3 | 9,0 | 12,5 | 16,0 | 18,0 | 20,0 | — | | — | N/A |
| >1250 and ≤1600 | 8,4 | 12,6 | 18,0 | 25,0 | 32,0 | 36,0 | 40,0 | — | — | | N/A |
| >1600 and ≤2000 | 5,6 | 8,0 | 11,0 | 16,0 | 20,0 | 22,0 | 25,0 | | — | — | N/A |
| >1600 and ≤2000 | 5,6 | 8,0 | 11,0 | 16,0 | 20,0 | 22,0 | 25,0 | — | | — | N/A |
| >1600 and ≤2000 | 11,2 | 16,0 | 22,0 | 32,0 | 40,0 | 44,0 | 50,0 | — | — | | N/A |
| >2000 and ≤2500 | 7,5 | 10,0 | 14,0 | 20,0 | 25,0 | 28,0 | 32,0 | | — | — | N/A |
| >2000 and ≤2500 | 7,5 | 10,0 | 14,0 | 20,0 | 25,0 | 28,0 | 32,0 | — | | — | N/A |
| >2000 and ≤2500 | 15,0 | 20,0 | 28,0 | 40,0 | 50,0 | 56,0 | 64,0 | — | — | | N/A |
| >2500 and ≤3200 | 10,0 | 12,5 | 18,0 | 25,0 | 32,0 | 36,0 | 40,0 | | — | — | N/A |
| >2500 and ≤3200 | 10,0 | 12,5 | 18,0 | 25,0 | 32,0 | 36,0 | 40,0 | — | | — | N/A |
| >2500 and ≤3200 | 20,0 | 25,0 | 36,0 | 50,0 | 64,0 | 72,0 | 80,0 | — | — | | N/A |
| >3200 and ≤4000 | 12,5 | 16,0 | 22,0 | 32,0 | 40,0 | 45,0 | 50,0 | | — | — | N/A |
| >3200 and ≤4000 | 12,5 | 16,0 | 22,0 | 32,0 | 40,0 | 45,0 | 50,0 | — | | — | N/A |
| >3200 and ≤4000 | 25,0 | 32,0 | 44,0 | 64,0 | 80,0 | 90,0 | 100,0 | — | — | | N/A |
| >4000 and ≤5000 | 16,0 | 20,0 | 28,0 | 40,0 | 50,0 | 56,0 | 63,0 | | — | — | N/A |
| >4000 and ≤5000 | 16,0 | 20,0 | 28,0 | 40,0 | 50,0 | 56,0 | 63,0 | — | | — | N/A |
| >4000 and ≤5000 | 32,0 | 40,0 | 56,0 | 80,0 | 100,0 | 112,0 | 126,0 | — | — | | N/A |
| >5000 and ≤6300 | 20,0 | 25,0 | 36,0 | 50,0 | 63,0 | 71,0 | 80,0 | | — | — | N/A |
| >5000 and ≤6300 | 20,0 | 25,0 | 36,0 | 50,0 | 63,0 | 71,0 | 80,0 | — | | — | N/A |
| >5000 and ≤6300 | 40,0 | 50,0 | 72,0 | 100,0 | 126,0 | 142,0 | 160,0 | — | — | | N/A |
| >6300 and ≤8000 | 25,0 | 32,0 | 45,0 | 63,0 | 80,0 | 90,0 | 100,0 | | — | — | N/A |
| >6300 and ≤8000 | 25,0 | 32,0 | 45,0 | 63,0 | 80,0 | 90,0 | 100,0 | — | | — | N/A |
| >6300 and ≤8000 | 50,0 | 64,0 | 90,0 | 126,0 | 160,0 | 180,0 | 200,0 | — | — | | N/A |
| >8000 and ≤10000 | 32,0 | 40,0 | 56,0 | 80,0 | 100,0 | 110,0 | 125,0 | | — | — | N/A |
| >8000 and ≤10000 | 32,0 | 40,0 | 56,0 | 80,0 | 100,0 | 110,0 | 125,0 | — | | — | N/A |
| >8000 and ≤10000 | 64,0 | 80,0 | 112,0 | 160,0 | 200,0 | 220,0 | 250,0 | — | — | | N/A |

| | | | | | | | | | | | |
|-------------------|------|-------|-------|-------|-------|-------|-------|---|---|---|-----|
| >10000 and ≤12500 | 40,0 | 50,0 | 71,0 | 100,0 | 125,0 | 140,0 | 160,0 | | — | — | N/A |
| >10000 and ≤12500 | 40,0 | 50,0 | 71,0 | 100,0 | 125,0 | 140,0 | 160,0 | — | | — | N/A |
| >10000 and ≤12500 | 80,0 | 100,0 | 142,0 | 200,0 | 250,0 | 280,0 | 320,0 | — | — | | N/A |

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V

**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

| 29.2 | TABLE: Creepage distances, functional insulation | | | | | | | | P |
|---------------------|--|----------------|------|-----------|----------------|------|------------|------------------|---|
| Working voltage (V) | Creepage distance (mm) | | | | | | | Verdict / Remark | |
| | Pollution degree | | | | | | | | |
| | 1 | 2 | | | 3 | | | | |
| | | Material group | | | Material group | | | | |
| | | I | II | IIIa/IIIb | I | II | IIIa/IIIb* | | |
| ≤10 | 0,08 | 0,4 | 0,4 | 0,4 | 1,0 | 1,0 | 1,0 | N/A | |
| 50 | 0,16 | 0,56 | 0,8 | 1,1 | 1,4 | 1,6 | 1,8 | N/A | |
| 125 | 0,25 | 0,71 | 1,0 | 1,4 | 1,8 | 2,0 | 2,2 | P (>4.2) | |
| 250 | 0,42 | 1,0 | 1,4 | 2,0 | 2,5 | 2,8 | 3,2 | N/A | |
| 400 | 0,75 | 1,6 | 2,2 | 3,2 | 4,0 | 4,5 | 5,0 | N/A | |
| 500 | 1,0 | 2,0 | 2,8 | 4,0 | 5,0 | 5,6 | 6,3 | N/A | |
| >630 and ≤800 | 1,8 | 3,2 | 4,5 | 6,3 | 8,0 | 9,0 | 10,0 | N/A | |
| >800 and ≤1000 | 2,4 | 4,0 | 5,6 | 8,0 | 10,0 | 11,0 | 12,5 | N/A | |
| >1000 and ≤1250 | 3,2 | 5,0 | 7,1 | 10,0 | 12,5 | 14,0 | 16,0 | N/A | |
| >1250 and ≤1600 | 4,2 | 6,3 | 9,0 | 12,5 | 16,0 | 18,0 | 20,0 | N/A | |
| >1600 and ≤2000 | 5,6 | 8,0 | 11,0 | 16,0 | 20,0 | 22,0 | 25,0 | N/A | |
| >2000 and ≤2500 | 7,5 | 10,0 | 14,0 | 20,0 | 25,0 | 28,0 | 32,0 | N/A | |
| >2500 and ≤3200 | 10,0 | 12,5 | 18,0 | 25,0 | 32,0 | 36,0 | 40,0 | N/A | |
| >3200 and ≤4000 | 12,5 | 16,0 | 22,0 | 32,0 | 40,0 | 45,0 | 50,0 | N/A | |
| >4000 and ≤5000 | 16,0 | 20,0 | 28,0 | 40,0 | 50,0 | 56,0 | 63,0 | N/A | |

| | | | | | | | | |
|---|------|------|------|-------|-------|-------|-------|-----|
| >5000 and ≤6300 | 20,0 | 25,0 | 36,0 | 50,0 | 63,0 | 71,0 | 80,0 | N/A |
| >6300 and ≤8000 | 25,0 | 32,0 | 45,0 | 63,0 | 80,0 | 90,0 | 100,0 | N/A |
| >8000 and ≤10000 | 32,0 | 40,0 | 56,0 | 80,0 | 100,0 | 110,0 | 125,0 | N/A |
| >10000 and ≤12500 | 40,0 | 50,0 | 71,0 | 100,0 | 125,0 | 140,0 | 160,0 | N/A |
| Supplementary information: *) Material group IIIb is allowed if the working voltage does not exceed 50 V | | | | | | | | |

| 30 | | | | | | | | | | | | | | | | | | | | TABLE: Resistance to heat and fire | | | | | | | | | | | | | | | | | | | |
|---------------------|----------------------------|----------------|--------------------------|--------|------------------|--------------------|-------------------------------|--------------|----|--------------|---|-----|-----|-----|---|-----|-----------------------------------|---------|-----|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Object/ part No. | Manufacturer/ trademark | Type/ model | Ball pressure test °C | | | | Glow wire test (GWT) °C | | | | Glow-wire flammability index (GWFI) °C | | | | Glow- wire ignition temp. (GWIT) °C | | Needle- flame test (NFT) | Verdict | | | | | | | | | | | | | | | | | | | | | |
| | | | 75 | 125 | cl. 11 +40 | cl. 19 +25 | 550 | 650 te ti | | 750 te ti | | 850 | 550 | 650 | 750 | 850 | | | 675 | 775 | | | | | | | | | | | | | | | | | | | |
| PTC support | Refer to table 24.1 | -- | -- | -- | -- | 118° C 1.2mm | P | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | P | | | | | | | | | | | | | | | | | | | | |
| PCB board support | Refer to table 24.1 | -- | 1.1 mm | -- | -- | -- | P | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | P | | | | | | | | | | | | | | | | | | | | |
| Fuse sleeve | Refer to table 24.1 | -- | -- | 1.3 mm | -- | -- | -- | -- | -- | P | P | -- | -- | -- | -- | P | -- | -- | P | | | | | | | | | | | | | | | | | | | | |
| Enclosure | Refer to table 24.1 | -- | 1.2 mm | -- | -- | -- | P | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | P | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|--------------|---------------------|----|----|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| PCB | Refer to table 24.1 | -- | -- | 1.0 mm | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | P | P |
| Terminal cap | Refer to table 24.1 | -- | -- | -- | -- | -- | -- | -- | P | P | -- | -- | -- | -- | P | -- | -- | -- | -- | P |

Supplementary information:

- 1) Parts of material classified at least HB40 or if relevant HBF
- 2) Parts of material classified as V-0 or V-1
- 3) Flame persisting longer than 2 s (= te – ti) need only be reported for unattended appliances
- 4) Surrounding parts subjected to the needle-flame test of annex E
- 5) Base material classified as V-0 or if relevant VTM-0
- 6) The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not applicable for attended appliances

型式の区分

電気乾燥機

| 要素 | 区分 |
|---|---|
| 定格電圧 | (1) <input checked="" type="checkbox"/> 125V以下のもの (2) 125Vを超えるもの |
| 定格消費電力（毛髪乾燥機の場合に限る。） | (1) <input checked="" type="checkbox"/> 1kW以下のもの (2) <input checked="" type="checkbox"/> 1kWを超えるもの |
| 電動機の種類 | (1) <input checked="" type="checkbox"/> 単相誘導電動機のもの (2) 整流子電動機のもの (3) 3相誘導電動機のもの その他のもの |
| 電熱装置 | (1) <input checked="" type="checkbox"/> あるもの (2) ないもの |
| 発熱部の形態 | (1) 充電部が露出した発熱線を有するもの (2) シーズ式のもの (3) スペース式のもの (4) ドータイト式のもの (5) 石英管式のもの (6) 被覆式のもの (7) ランプ式のもの (8) 半導体利用のもの (9) <input checked="" type="checkbox"/> その他のもの |
| 電源スイッチ（機器本体に取り付けられ、操作することによって機器の主機能の動作が可能となるスイッチのことをいい、自動スイッチ及び自動温度調節器を除く。） | (1) あるもの (2) <input checked="" type="checkbox"/> ないもの |
| 温度過昇防止装置 | (1) <input checked="" type="checkbox"/> あるもの (2) ないもの |
| 保温材（電気温風機及び電気乾燥機の場合に限る。） | (1) <input checked="" type="checkbox"/> あるもの (2) ないもの |
| 用途（電気乾燥機の場合に限る。） | (1) <input checked="" type="checkbox"/> 衣類用のもの (2) ふとん用のもの (3) 手洗い用のもの (4) 食器用のもの (5) その他のもの |
| 毛髪乾燥機の種類 | (1) 手持ち形のもの (2) その他のもの |
| 電源電線と器体との接続の方式 | (1) <input checked="" type="checkbox"/> 直付けのもの (2) 接続器利用のもの |
| 二重絶縁 | (1) 施してあるもの (2) <input checked="" type="checkbox"/> 施してないもの |

注 意 事 项

Important

1. 报告无检测单位公章无效。

The test report is invalid without the official stamp of the laboratory.

2. 未经本实验室书面同意，不得部分地复制本报告。

Any photocopies or part photocopies of the test report are forbidden without the written permission from the laboratory.

3. 报告无负责人、审核人签名无效。

The test report is invalid without the signatures of Author and Reviewer.

4. 报告涂改无效。

The test report is invalid if altered.

5. 对检验报告若有异议，应于收到报告之日起十五天内向检验单位提出。

Objections to the test report must be submitted to the laboratory within 15 days.

6. 以上检测结果仅对收到的样品负责。

The above test results are only responsible for the samples received.