Test Report issued under the responsibility of:

TEST REPORT
IEC 60335-2-9
Safety of household and similar electrical appliances
Part 2: Particular requirements for grills, toasters and similar cooking appliances

Report Number. ..... :	NBES180700214703-M2
Date of issue ..... :	2018-08-15, Modification No. 2: 2018-10-30
Total number of pages ..... :	35
Name of Testing Laboratory preparing the Report ..... :	SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch
Applicant's name ..... :	Yongkang Zehui Metal Products Co., Ltd.
Address ..... :	16 Beihu Road, Economic Development Zone, Yongkang, Jinhua, 321308 Zhejiang, China
Test specification:	
Standard ..... :	IEC 60335-2-9:2008, COR1:2013, AMD1: 2012, AMD2:2016 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2010, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60335_2_9O
Test Report Form(s) Originator .... :	LCIE
Master TRF ..... :	Dated 2018-06-07

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description ..... :	Roaster (Air Fryer)
Trade Mark ..... :	None
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A
Ratings ..... :	220 V – 240 V; 50 Hz / 60 Hz; Class I; GLA-601, GLA-603, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-620: 1300 W; GLA-301, GLA-302, GLA-605, GLA-606, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-612, GLA-711, GLA-712, GLA-611-D, GLA-612-D, GLA-711-D, GLA-712-D: 1400 W; GLA-615, GLA-616, GLA-615A, GLA-616A, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A: 1800 W

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch	
Testing location/ address.....:		1-5/F West No. 4 Building, Lingyun Industry Park, No. 1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang, China	
Tested by (name, function, signature).....:		Clack Gu, PE	Clack Gu
Approved by (name, function, signature)...:		Peterman Pan, Reviewer	Peterman Pan
☐	**Testing procedure: CTF Stage 1:**	N/A	
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 2:**	N/A	
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 3:**	N/A	
☐	**Testing procedure: CTF Stage 4:**	N/A	
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
Supervised by (name, function, signature) :			

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

1. Annex I - Photo documentation – attachment 5 pages
2. Annex II - Evaluation of EK1 decision – attachment 1 page

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Samples of the product have been tested according to the below standards and complied with the requirements: IEC 60335-2-9:2008 + A1:2012 + A2:2016 IEC 60335-1:2010 + A1:2013 + A2:2016 After review, tests of clause 11(except cl.11.105), 13 and 29 were peformed on model GLA-816 and GLA-718.	SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch 1-5/F West No. 4 Building, Lingyun Industry Park, No. 1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang, China

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

- EU Group Differences
- Germany (no National Differences have been published in the CB Bulletin)
- Australia and New Zealand national differences

EK decisions according to German ProdSG have been taken into account. PAH risk evaluation according to AfPS GS 2014:01 PAK: see PAH risk assessment report no. NBES180700214701/PAH. The following EK decisions were considered applicable: EK1AG2 Rev.10.2018 and EK1 601-15.

- Australia and New Zealand Deviations

The product fulfils the requirements of:

EN 60335-2-9:2003 + A1:2004 + A2:2006 + A12:2007 + A13:2010
EN 60335-1:2012 + A11:2014 + A13:2017
EN 62233:2008
AS/NZS 60335.2.9:2014 + A1:2015 + A2:2016 + A3:2017
AS/NZS 60335.1:2011 + A1:2012 + A2:2014 + A3:2015 + A4:2017

Copy of marking plate:

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

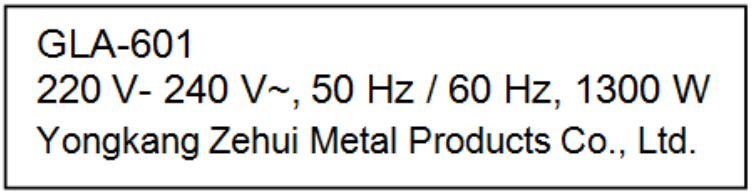
For GS and CE:

(min. dimensions: width x height = 50 mm x 30 mm).

1. As declared by the applicant, the importer's name, registered trade name or registered trade mark and the postal address were not decided at the time of application, but will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

2. Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.

For CB:



Copies of marking plates for other models were the same as above one except for model name and rating.

Test item particulars.....:	Roaster (Air Fryer)
Classification of installation and use.....:	Portable appliance
Supply Connection.....:	Type Y attachment (non-detachable cord with plug)
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2017-04-07; 2017-09-08; 2017-10-20; 2018-03-22; 2018-07-24, 2018-09-17, 2018-09-29
Date (s) of performance of tests.....:	2017-04-07 to 2017-05-27; 2017-09-08 to 2017-09-12; 2017-10-20 to 2017-12-20; 2018-03-22 to 2018-06-26; 2018-07-24 to 2018-08-15; 2018-09-17 to 2018-09-29; 2018-09-29 to 2018-10-30

General remarks:

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

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

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

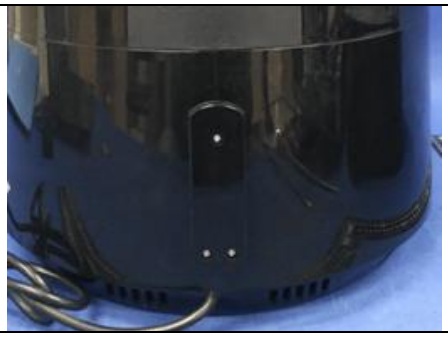
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

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

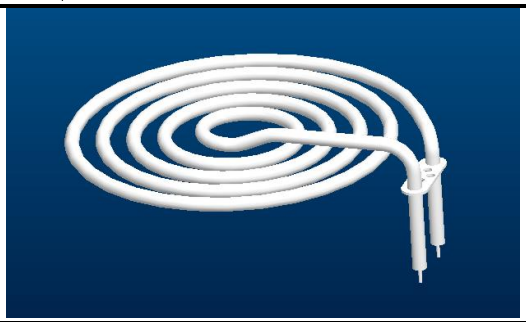
Name and address of factory (ies) ..... :	Same as applicant

General product information and other remarks:

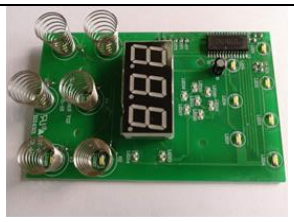
Roaster (Air Fryer) for household and indoor use only.
There are 35 models submitting the tests in this report: GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-612, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-712, GLA-715, GLA-716, GLA-611-D, GLA-612-D, GLA-711-D, GLA-712-D, GLA-815, GLA-816, GLA-816A, GLA-301, GLA-302, GLA-717, GLA-718, GLA-719, GLA-720. All models have two colors (white or black) enclosure.
(1) Model GLA-601, GLA-603, GLA-607 were same except for the appearance and the position of thermostat and timer.
(2) Model GLA-608, GLA-608A, GLA-608B were same except for the appearance and the position of thermostat and timer, GLA-620 was the same as GLA-608 except for GLA-620 was controlled by electronic circuit, while GLA-608 was controlled by thermostat and timer.
(3) Model GLA-605, GLA-609, GLA-609A, GLA-611, GLA-611-D, GLA-711, GLA-711-D were same except for the appearance and the position of thermostat and timer.
(4) Model GLA-606, GLA-610, GLA-612 and GLA-712 were same except for the appearance and display cover. GLA-612-D was the same as GLA-611 except for the position of micro switch, so does GLA-712-D and GLA-712.
(5) Model GLA-615, GLA-615A, GLA-715 were same except for the appearance and the position of thermostat and timer, GLA-616 was the same as GLA-615 except for GLA-616 was controlled by electronic circuit, while GLA-615 was controlled by thermostat and timer, GLA-616A, GLA-716 were the same as GLA-616 except for the appearance and display cover. GLA-717 shared the same ratings and construction with GLA-715 except for the upper enclosure, while GLA-718 shared the same ratings and construction with GLA-716 except for the upper enclosure and control PCB. GLA-719 shared the same ratings and construction with GLA-715 except for the appearance and the position of thermostat and timer, while GLA-720 shared the same ratings and construction with GLA-716 except for the appearance and control PCB.
(6) Model GLA-815, GLA-816, GLA-816A shared the same new electric box and heating tube for 1800 W. The heating tube shared the main heating part with the one of GLA-715 and GLA-716 except for the terminals of heating element. GLA-815 shared same construction with GLA-715 except for the appearance. GLA-816 and GLA-816A shared the same construction with GLA-716 except for the appearance and control PCB. GLA-816 and GLA-816A shared the same control PCB except for the control PCB layout. See differences in photo documents and following table:

The electric box in GLA-715, GLA-716	New electric box for the 3 new models
	

The heating element in GLA-715, GLA-716	The new heating element for the 3 new models (shared the main heating part with the old one except for the terminal of heating element)




(7) GLA-301shared the same appearance, heating element and motor with GLA-302 except for the way of temperature control, GLA-301 was controlled in mechanical way, while GLA-302 was controlled in electronic way. GLA-301 shared the same ratings and construction with GLA-611 except for the appearance, while GLA-302 shared the same ratings, main PCB and construction with GLA-612 except for the appearance and control PCB.
There were 2 kinds control PCBs for GLA-302, therefore, there were two appearances for different PCBs. see following table for details

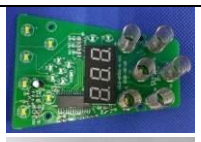
Control PCB without selection knob shared the same circuit diagram with GLA-616 except for the layout	Control PCB with selection knob, shared the same circuit diagram with GLA-816 except for the layout
	
GLA-302 without selection knob	GLA-302 with selection knob
	

(8) The operation temperature of thermal link was 172 °C or 192 °C for GLA-615, GLA-616, GLA-615A, GLA-616A, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A while 172°C for other models.
The detail difference see bellow table:

Model name	Shape of basket	Control	PCB	Motor	Heating element	Micro switch	Volume
GLA-601 GLA-603 GLA-607		Thermostat and timer	No	Same	Same heating element for	Without	Small
GLA-608						With or	Smallest

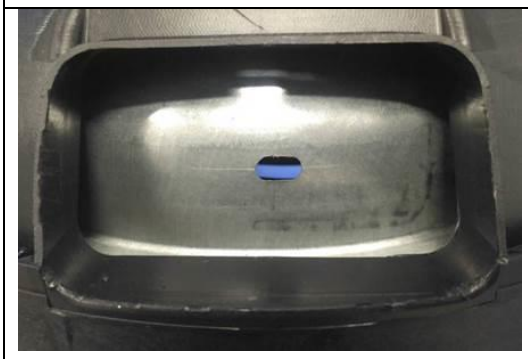
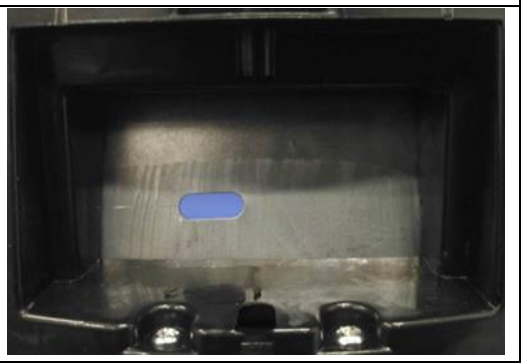
GLA-608A GLA-608B GLA-620					1300 W	without	
		Electronic circuit	Yes				
GLA-605 GLA-609 GLA-609A GLA-611 GLA-301 GLA-611-D GLA-711 GLA-711-D GLA-606 GLA-610 GLA-612 GLA-302 GLA-612-D GLA-712 GLA-712-D	 or  (Alternative basket only for GLA-611, GLA-611-D GLA-612, GLA-711, GLA-711-D, GLA-712, GLA-612-D, GLA-712-D)  (Alternative basket only for GLA-605, GLA-606, GLA-609, GLA-609A, GLA-610)	Thermostat and timer	No		Same heating element for 1400 W		Middle
		Electronic circuit	Yes				
GLA-615		Thermostat and timer	No		Same heating element for 1800 W		Large
GLA-616		Electronic circuit	Yes				
GLA-715		Thermostat and timer	No				
GLA-717		Thermostat and timer	No				
GLA-719		Thermostat and timer	No				
GLA-716		Electronic circuit	Yes				
GLA-718		Electronic circuit	Yes				
GLA-720		Electronic circuit	Yes				
GLA-615A		Thermostat and timer	No				
GLA-616A		Electronic circuit	Yes				
GLA-815		Thermostat and timer	No		Same heating element for 1800 W	With or without	Large
GLA-816		Electronic circuit	Yes				
GLA-816A		Electronic circuit	Yes				

PCB control:

Model	Main PCB	Control PCB
GLA-606 GLA-612 GLA-612-D GLA-712 GLA-712-D	 or 	 or 
GLA-620		 or 
GLA-610		 or 
GLA-616		 or 
GLA-616A		 or 
GLA-716		 or 

GLA-718		
GLA-302		 or 
GLA-816		
GLA-816A		
GLA-720		

Alternative air outlet for all models except for GLA-601, GLA-603, GLA-607, GLA-608, GLA-608A, GLA-608B which had smaller air outlet.

Big	Small
	

Model	Construction (optional)
GLA-601, GLA-603, GLA-607	With protect net and without micro switch
GLA-611, GLA-612, GLA-711, GLA-712	1. with protect net and without micro switch; 2. with protect net and with micro switch
Others	1. with protect net and without micro switch; 2. with protect net and with micro switch; 3. without protect net and with micro switch

Modification 1 Report NBES180700214702-M1:
The original test report Ref. No.: NBES180700214701 dated 2018-08-15 was modified on 2018-09-29 to include the following changes and additions, which were considered technical modifications:

Modification 2 Report NBES180700214703-M2:
The original test report Ref. No.: NBES180700214701 dated 2018-08-15, NBES180700214702-M1 dated 2018-09-29 was modified on 2018-10-30 to include the following changes and additions, which were considered technical modifications:

1. Added screen-touch tpye for model GLA-718 and GLA-816, which were same as the original one except for the control PCB and the appearance of control panel. The new control PCBs were same as the control PCB of GLA-720 except for the layout. See photo documents for details
2. Added Alternative food container for model GLA-301 and GLA-302, see photo documents for details.

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict

11	**HEATING**		—
11.1	No excessive temperatures in normal use		P
	Compliance for toasters is also checked by the test of 11. 101 (IEC 60335-2-9)		N/A
	Compliance for ovens, rotary grills and cookers is also checked by the test of 11.102. (IEC 60335-2-9)		N/A
	Compliance for contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates, is also checked by the test of 11.103. (IEC 60335-2-9)		N/A
	Compliance for breadmakers, pop-corn makers, and food dehydrators is also checked by the test of 11.104. (IEC 60335-2-9)		N/A
	Compliance for roasters is also checked by the test of 11.105. (IEC 60335-2-9)	not carried out	N/A
	For all other types of appliances, compliance is checked by submitting the appliance to the tests of the nearest mentioned relevant type of appliance. (IEC 60335-2-9)		N/A
11.2	The appliance is held, placed or fixed in position as described .....:	Placed away from walls	P
	Radiant grills and raclette grills that are loaded from the front, rotary grills, ovens, breadmakers, cookers and hotplates are placed with their backs as near as possible to one of the walls of the test corner and away from the other wall .....(IEC 60335-2-9)		N/A
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
	For flat surfaces, temperature rises are measured using the probe of Figure 105. The probe is applied with a force of 4 N ± 1 N to the surface in such a way that the best possible contact between the probe and the surface is ensured. (IEC 60335-2-9)		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) ....:	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If the temperature rise limits are exceeded in appliances incorporating motors, transformers or electronic circuits, and if the power input is lower than the rated power input, the test is repeated with the appliance supplied at 1,06 times rated voltage .....(IEC 60335-2-9)		N/A
	Breadmakers are operated as specified for combined appliances. .....(IEC 60335-2-9)		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) .....:		N/A
	Induction hot plates are also operated with vessels, as specified in Figure 104, containing water and covered with a lid. Controls are adjusted to their highest setting until the water boils and then adjusted so that the water simmers. Water is added to maintain the level during simmering. (IEC 60335-2-9)		N/A
11.7	Tests carried out in compliance with the paragraphs N° 1 to 11 (IEC 60335-2-9)		P
11.8	Temperature rises monitored continuously and not exceeding the 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		N/A
	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
	For radiant grills, rotary grills, raclette grills, hotplates and cookers, instead of 65 K, the temperature rise of the wall of the test corner shall not exceed 75 K. (IEC 60335-2-9)		N/A
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-9)		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-9)		N/A
	Cheese used in sandwich toasting attachments doesn't flow into places where it can give rise to a hazard, such as reducing clearances or creepage distances below the values specified in Clause 29 (IEC 60335-2-9).		N/A
	The temperature rise limits for touch controls also include all surfaces within 5 mm of the touch controls, regardless of their shape. (IEC 60335-2-9)		P
11.101	Toasters are placed as specified in 11.2 and are operated for three cycles at rated power under normal operation (IEC 60335-2-9).		N/A
	During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102 (IEC 60335-2-9).		N/A
11.102	Ovens, rotary grills and cookers are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation (IEC 60335-2-9)		N/A
	Appliances are operated until steady conditions are established or for 60 min, whichever is shorter. During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N/A
	Ovens having settings higher than 240 °C are also operated at the maximum setting until steady conditions are established or for 60 min, whichever is shorter. The temperature rise limits of Table 102 for top surfaces and door surfaces are increased by 10 K.		N/A
11.103	Contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9)		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Induction hotplates and induction wok hotplates are operated at rated voltage instead of rated power input.		N/A
	During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N/A
11.104	Breadmakers, pop-corn makers and food dehydrators are placed as specified in 11.2 and operated under normal operation. Pop-corn makers and food dehydrators are supplied at rated power input and breadmakers are supplied at rated voltage. (IEC 60335-2-9).		N/A
11.105	Roasters are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9) During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N/A
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) ..... :	(See appended table)	P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V) ..... :		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
	grill incorporated in oven, oven or grill operated most unfavourable (IEC 60335-2-9).		N/A
	Induction wok hotplates are operated with the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9).		N/A
13.2	The leakage current is measured by means of the circuit described in Figure 4 of IEC 60990:1999	Class II constructions	P
	For class 0I appliances and class I appliances, except parts of class II construction, C may be replaced by a low impedance ammeter	Class I appliance	P
	Leakage current measurements ..... :	(see appended table)	P
	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N/A
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4 ..... :	(see appended table)	P
	test voltage of 1000V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
	No breakdown during the tests		P
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
	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
	For appliances intended for use at altitudes exceeding 2 000 m, the clearances in Table 16 is increased according to the relevant multiplier values in Table A.2 of IEC 60664-1		N/A
	Impulse voltage test is not applicable:		—

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances		N/A
	- to appliances intended for use at altitudes exceeding 2 000 m		P
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		N/A
	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	At the end terminal of heating element	P
	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)	P
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)	P
	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		P
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
	- 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

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict

	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		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
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
	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

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
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	At the end terminals of heating element	P
	- 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
	Pollution degree 3 applies, unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-9)		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(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 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)	P
	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)	P
	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

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	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 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		P
	Compliance checked:		—
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- for insulation, other than single layer internal wiring insulation 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
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/A
	- 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
	Requirement not applied to the sheath of a visibly glowing heating element that is inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist 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

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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

IEC 60335-2-9

11.8	**TABLE: Heating test, thermocouple measurements (GLA-718 with alternative construction)**		P
	Test voltage (V)	257,4 V	—
	Ambient (°C).....	T1=22,5 °C, T2=22,6 °C	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max. temperature rise limit, dT (K)
Control panel	13,8	60

11.8	**TABLE: Heating test, thermocouple measurements (GLA-816 with alternative construction)**		P
	Test voltage (V)	256,1 V	—
	Ambient (°C).....	T1=23,1 °C, T2=22,8 °C	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max. temperature rise limit, dT (K)
Control panel	15,6	60

13.2	**TABLE: Leakage current**		P
	Heating appliances: 1.15 x rated input (W) ..... :	1,15x(240/230)^{2}x1800=2254 W	—
	Motor-operated and combined appliances: 1.06 x rated voltage (V) ..... :	—	—

Leakage current between	I (mA)	Max. allowed I (mA)
Between live part and earthed metal enclosure (GLA-718)	0,10	0,75
Between live part and accessible plastic enclosure (GLA-718)	0,01	0,35 peak
Between live part and earthed metal enclosure (GLA-816)	0,11	0,75
Between live part and accessible plastic enclosure (GLA-816)	0,01	0,35 peak

13.3	**TABLE: Electric strength** (GLA-718, GLA-816)	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Between live part and plastic enclosure	3000	No
Between live part and earthed metal enclosure	1000	No
Between internal wire and accessible plastic parts	1750	No

IEC 60335-2-9

24.1	TABLE: Components				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity**
Plug	Ningbo Qiaopu Electric Co., Ltd.	D03	250 V ~, 16 A, 2P+E	DIN VDE 0620-2-1 (2016)	VDE* (40002872)
(Alternative)	Ningbo Huashun Electronics Co., Ltd.	GH-003	250 V~, 16 A, 2P+E	DIN VDE 0620-2-1 (2013)	VDE* (40018215)
(Alternative)	Shangyu Jintao Electron Co., Ltd.	JT003	250 V ~, 16 A, 2P+E	DIN VDE 0620-2-1 (2016)	VDE* (40021286)
(Alternative) (only for Australia)	Ningbo Qiaopu Electric Co., Ltd.	D06	250 V ~, 10 A, 2P+E	AS/NZS 3112 (2012)	Queensland* (ESO170126)
(Alternative) (only for Australia)	Ningbo Qiaopu Electric Co., Ltd.	D06	250 V ~, 10 A, 2P+E	AS/NZS 3112 (2012)	SAA* (SAA-170389-EA)
(Alternative) (only for UK)	Shangyu Jintao Electron Co., Ltd.	JT006A	250 V ~, 13 A, 2P+E	BS 1363-1(2012)	Intertek* (1120)
(Alternative) (only for UK)	Yuyao Haolin Electric Co., Ltd	HL7-1	250 V ~, 13 A, 2P+E	BS 1363-1(2012)	Intertek* (1254)
Supply cord (for all models)	Ningbo Qiaopu Electric Co., Ltd.	H05VV-F 60227 IEC 53	**3x0,75 mm² (length≤2 m) 3x1,0 mm²**	EN 50525-2-11 (2011)	VDE* (40035976)
(Alternative)	Ningbo Huashun Electronics Co., Ltd.	H05VV-F 60227 IEC 53		EN 50525-2-11 (2011)	VDE* (136939)
(Alternative)	Shangyu Jintao Electron Co., Ltd.	H05VV-F 60227 IEC 53		EN 50525-2-11 (2011)	VDE* (40013419)
(Alternative) (only for Australia)	Ningbo Qiaopu Electric Co., Ltd.	H05VV-F		AS/NZS 3191 (2008)	NSW*(18298)
Internal wire	Dongguan Nistar Transmitting Technology Co., Inc.	3122	300 V~, 200 °C, 18-22 AWG	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) ANSI/UL 758	UL* (E214184) + tested with appliance
(Alternative)	Jiangsu Yida Special Cable Co., Ltd.	3122	300 V~, 18-22 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) ANSI/UL 758	UL* (E476075) + tested with appliance

IEC 60335-2-9					
(Alternative)	Cixi Shuanghong Wire Co., Ltd.	3122	300 V~, 18-22 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) ANSI/UL 758	UL* (E333296) + tested with appliance
Thermostat (for all models except for GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716, GLA-816, GLA-816A, GLA-302, GLA-718, GLA-720)	Changzhou HDV Electrical Appliance Co., Ltd.	WY300C-I	250 V ~, 16 A, 1E5, T145, Tfmax: 200°C	IEC 60730-1 EN 60730-1 (2011) IEC 60730-2-9 EN 60730-2-9 (2010)	VDE* (40033354)
(Alternative) (for all models except for GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716 GLA-816, GLA-816A, GLA-302, GLA-718, GLA-720)	Changzhou Foland Electrical Appliance Co., Ltd.	WY300Q-C	400 V~, 16 A, 1E5, T150, Tfmax: 200°C	IEC 60730-1 EN 60730-1(2011) IEC 60730-2-9 EN 60730-2-9 (2010)	VDE* (40024291)
Thermal link (except for GLA-615, GLA-616, GLA-615A, GLA-616A, GLA-715, GLA-716, GLA-815, GLA-816A, GLA-816, GLA-717, GLA-718, GLA-719, GLA-720)	Aupo Electronics Ltd.	BF172	250 V~,10 A, Tf=172 °C	IEC 60691 EN 60691(2010)	VDE* (40005418)

IEC 60335-2-9					
(Alternative) (only for GLA-615, GLA-616, GLA-615A, GLA-616A, GLA-715, GLA-716, GLA-815, GLA-816A, GLA-816, GLA-717, GLA-718, GLA-719, GLA-720)	Aupo Electronics Ltd.	BF192	250 V~,10 A, Tf=192 °C	IEC 60691 EN 60691(2010)	VDE* (40005418)
Micro switch (optional)	Yueqing Tongda Wire Electric Factory	HK-14	250 V, 16 (3) A, 5E4, T125	IEC 61058 EN 61058-1 (2008)	VDE* (40027032)
Timer (for all models except for GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716, GLA-816, GLA-816A, GLA-302, GLA-718, GLA-720)	Hangzhou Guanzuan Electrical Appliance Co., Ltd.	DKJ/1-30	250 V ~, 16 A, 1E4, 10T125	IEC 60730-1 EN 60730-1 (2011) IEC 60730-2-7 EN 60730-2-7 (2010)	VDE* (126656)
Heating element (for GLA-601, GLA-603, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-620)	Yongkang Zehui Metal Products Co., Ltd.	ASP	Marked with “230 V, 1300 W”, tested at 220V-240V, 1300 W	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Heating element (for GLA-605, GLA-606, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-612, GLA-711, GLA-712, GLA-611-D, GLA-612-D, GLA-711-D, GLA-712-D, GLA-301, GLA-302)	Yongkang Zehui Metal Products Co., Ltd.	ZH	Marked with “230 V, 1400 W”, tested at 220V-240V, 1400 W	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance

IEC 60335-2-9					
Heating element (for GLA-615, GLA-616, GLA-615A, GLA-616A, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720)	Yongkang Zehui Metal Products Co., Ltd.	ZH	Marked with “230 V, 1800 W”, tested at 220V-240V, 1800 W	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Heating element (for GLA-815, GLA-816, GLA-816A)	Yongkang Zehui Metal Products Co., Ltd.	ZH	Marked with “230 V, 1800 W”, tested at 220 V-240V, 1800 W	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Fan motor	Changzhou W&W Motor Co., Ltd.	YJF61/20	AC230 V, 50/60 Hz, 37 W, Class 180, tested at 220 V-240 V	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
-Motor winding	Jiangyin Double Feather Cable Co., Ltd.	QZY-1/180	Class 180	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 1446	UL* (E320132) + tested with appliance
-Motor bobbin	Solvay Engineering Plastics GBU	C 50H2	V-0	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	UL* (E44716) + tested with appliance
(Alternative) Fan motor	Shenzhen Zhaoli Motor Co., Ltd.	YJ62H-20	220-240 V, 50/60 Hz, 33 W, Class 180	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
-Motor winding	Jiangyin Double Feather Cable Co., Ltd.	QZY-1/180	Class 180	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 1446	UL* (E320132) + tested with appliance
-Motor bobbin	Solvay Engineering Plastics GBU	C 50H2	V-0	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	UL* (E44716) + tested with appliance
Thermal motor protector (optional)	Xiamen Set Electronics Co., Ltd.	K7	250 V~, 2 A Tf150 °C, T200	IEC 60691 EN 60691(2010)	VDE* (40017055)

IEC 60335-2-9					
Motor lead wire	Qifurui Electronics Company	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E211048) + tested with appliance
(Alternative)	Zhongshan hualan Electric Co., Ltd	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E303124) + tested with appliance
(Alternative)	Qifurui Electronics Company	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E211048) + tested with appliance
(Alternative)	Dongguan Worldful Electric Wire	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E317806) + tested with appliance
(Alternative)	Shenzhen Mysun Insulation Material Co., Ltd.	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E239698) + tested with appliance
(Alternative)	Jiangyin Haocheng Electric Appliance Wire & Cable MFG Co., Ltd.	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E227587) + tested with appliance
(Alternative)	Jiangyin City Tiancheng Electronic & Cable Co., Ltd.	3122	300 V~, 20 AWG, 200 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E332921) + tested with appliance
PCB assembly (GLA-606, GLA-612, GLA-612-D)					
-PCB	Ningbo Junchao Electronic Technology Co., Ltd.	JC	V-0, Thickness: 1,2 -1,6 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 94	UL* (E324652) + tested with appliance

IEC 60335-2-9					
-PCB lead wire	Zhejiang Xinxin Electronic Wire cord Co., Ltd.	2468	300 V, 26 AWG, 80 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL* (E225383) + tested with appliance
-Fuse	Huaian Lingjie Technology Developing Co., Ltd.	RF10	250 V, 3 A	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 1412	UL* (E249662) + tested with appliance
-Fuse	Shenzhen Lanson Electronics Co. Ltd.	FXXX250V	250 V, 3 A	IEC 60127-1 EN 60127-1 (2015) IEC 60127-3 EN 60127-3 (2015)	VDE * (40009306)
-Varistor	Lien Shun Electronics Co., Ltd.	07D471K	AC 2500 V, T85	IEC 61051-1 (2007) IEC 61051-2 (2009) IEC 61051-2-2 (1991)	VDE* (40005858)
-Varistor	Zhejiang Huang-Yan Sailing Electronics Co., Ltd.	MYG07K471	AC 2500 V, T85	IEC 61051-1 (2007) IEC 61051-2 (2009) IEC 61051-2-2 (1991)	VDE* (40011765)
-X2 capacitor	Tenta Electric Industrial Co. Ltd.	MEX	275VAC, 0,1 and 0,22 uF, 40/100/21/C	IEC 60384-14 EN 60384-14 (2013)	VDE* (119119)
-Relay	Ningbo Songle Relay Co., Ltd.	SRU-12VDC-SL-A SRD-12VDC-SL-A	250VAC, 10 A T85	IEC 61810-1 EN 61810-1 (2008)	TUV* (R 50056114) + tested with appliance
PCB assembly (GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716, GLA-816A, GLA-816, GLA-302, GLA-718, GLA-720)					
-PCB	Jiangsu Sunyuan Aerospace Material Co., Ltd.	FR-4.0	V-0, Min thickness: 1,5 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 94	UL* (E214321) + tested with appliance
(Alternative)	Wenzhou Hengxing Electronics Co., Ltd.	HX-1	V-0, Min thickness: 1,5 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 94	UL* (E254930) + tested with appliance

IEC 60335-2-9					
(Alternative)	Wenzhou Huabang Electronics Co., Ltd.	H-01	V-0, Min thickness: 1,5 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 94	UL* (E251053) + tested with appliance
-PCB lead wire	Yueqing Boyuan Electronic Wire & Cable Co., Ltd.	1569	300 V, 18-26 AWG, 105 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 758	UL * (E203561) + tested with appliance
-Fuse	XC Electronics (Shen Zhen) Corp. Ltd.	3T-serie(s)	250 V ~ 3,15 A	IEC 60127-1 EN 60127-1 (2015) IEC 60127-3 EN 60127-3 (2015)	VDE* (40019614)
-Varistor	Lien Shun Electronics Co., Ltd.	10D471K	AC 2500 V, T85	IEC 61051-1 (2007) IEC 61051-2 (2009) IEC 61051-2-2 (1991)	VDE * (40005858)
(Alternative)	Hongzhi Enterprises Ltd.	10D471K	AC 2500 V, T85	IEC 61051-1 (2007) IEC 61051-2 (2009) IEC 61051-2-2 (1991)	VDE* (40008621)
(Alternative)	Zhejiang Huang-Yan Sailing Electronics Co., Ltd.	MYG07K471	AC 2500 V, T85	IEC 61051-1 (2007) IEC 61051-2 (2009) IEC 61051-2-2 (1991)	VDE * (40011765)
-X2 capacitor	Tenta Electric Industrial Co. Ltd.	MEX	275 VAC, 0,1 uF, 40/100/21/C	IEC 60384-14 EN 60384-14 (2013)	VDE* (119119)
(Alternative)	Dain Electronics Co., Ltd.	MEX, MPX	275VAC, 0,1 uF, 40/110/21/C	IEC 60384-14 EN 60384-14 (2013)	VDE* (40018798)
-Relay	Ningbo Hui Long Cang Electronics Co., Ltd.	922-12VDC-SL-A	250 VAC,15 A, T85	IEC 61810-1 EN 61810-1 (2008)	TUV* (R 50156096) + tested with appliance
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd.	SRDI-S-112DM	250 VAC,12 A, T105	IEC 61810-1 EN 61810-1 (2008)	VDE* (40034479) + tested with appliance
(Alternative)	Ningbo Tianbo Ganglian Electronics Co., Ltd.	HJR-21FF-S-H	240 VAC,12 A, T85	IEC 61810-1 EN 61810-1 (2008)	TUV* (R 50116165)

IEC 60335-2-9					
Silicon tube	Jiangyin Zhijun Appliance Electric Cable & Wire Co., Ltd.	HST*	600 V~,200 °C	IEC/EN 60335-2-9 IEC/EN 60335-1 UL 1441	UL* (E302890) + tested with appliance
Crimped connector	Heavy Power CO., Ltd.	CE2, CE5	Category to heat and fire: 750 °C and 850 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014) UL 486A-486B	UL* (E113650) + tested with appliance
Connector	Yongkang Zehui Metal Products Co., Ltd.	Tested with appliance	Category to heat and fire: 750 °C and 850 °C	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Inner enclosure	Shanghai Fanhe Polymer Material Co., Ltd.	PBT	Min. thickness: 2,0 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Indicator cover (for all models except for GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716, GLA-816, GLA-816A, GLA-302, GLA-718, GLA-720)	Chimei Corporation	PP	Min. thickness: 1,1 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Timer knob / thermostat knob / Selection knob (for all models except for GLA-620, GLA-606, GLA-610, GLA-612, GLA-712, GLA-612-D, GLA-712-D, GLA-616, GLA-616A, GLA-716, GLA-720)	China Petroleum and Natural Gas Co., Ltd. Jilin Petrochemical Branch	PP	Min. thickness: 1,1 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Enclosure / electric box	Samsung Total Petrochemicals Co., Ltd.	PP	Min. thickness: 2,1 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance

IEC 60335-2-9

Bottom electric cover / Control panel	Samsung Total Petrochemicals Co., Ltd.	PP	Min. thickness: 1,1 mm	IEC 60335-2-9 EN 60335-2-9 (2010) IEC 60335-1 EN 60335-1 (2014)	Tested with appliance
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

29.1	**TABLE: Clearances**					P
	Overvoltage category		II			—
		Type of insulation:				
Rated impulse voltage (V):	**Min. cl (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** / 1,0***	--	--	--	--	N/A
2 500	1,5 / **2,0****	1)	2)	--	3)	P
4 000	3,0 / **3,5****	--	--	4)	--	P
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**

1) Basic insulation:
Between earthed metal parts of heating element and live parts (inside of sealing ring) (Min.): Cl.=Cr.=1,1 mm (pollution degree 1, requirement: Cl.= 1,0 mm, Cr.=0,56 mm)
Between earthed metal parts of heating element and live parts (outside of sealing ring) (Min.): Cl.=Cr.=4,1 mm
Between winding and earthed metal parts(Min.): Cl=Cr=4,1 mm;

2) Supplementary insulation:
Between internal wire and control panel Min.): Cl.=Cr.=6,4 mm

3) Functional insulation:
Between L and N terminals(Min.): Cl.=Cr.=3,3 mm

4) Reinforced insulation:
Between live parts to control panel (Min.): Cl.=Cr.=8,3 mm

29.2	**TABLE: Creepage distances, basic, supplementary and reinforced insulation**	P

IEC 60335-2-9

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		—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	**0,56**	1,25	1,8	2,5	3,2	3,6	**4,0**	1)	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	2)	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	4)	P
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

IEC 60335-2-9

>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	—	—		

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

IEC 60335-2-9

Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	Verdict / Remark
≤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	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	**3,2**	P
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**

<End of Report>

Annex I
Photo documentation
Report No.: NBES180700214703-M2
Roaster (Air Fryer)
GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A

Detail of: GLA-718 with touch panel

View:

[X] general

[ ] front

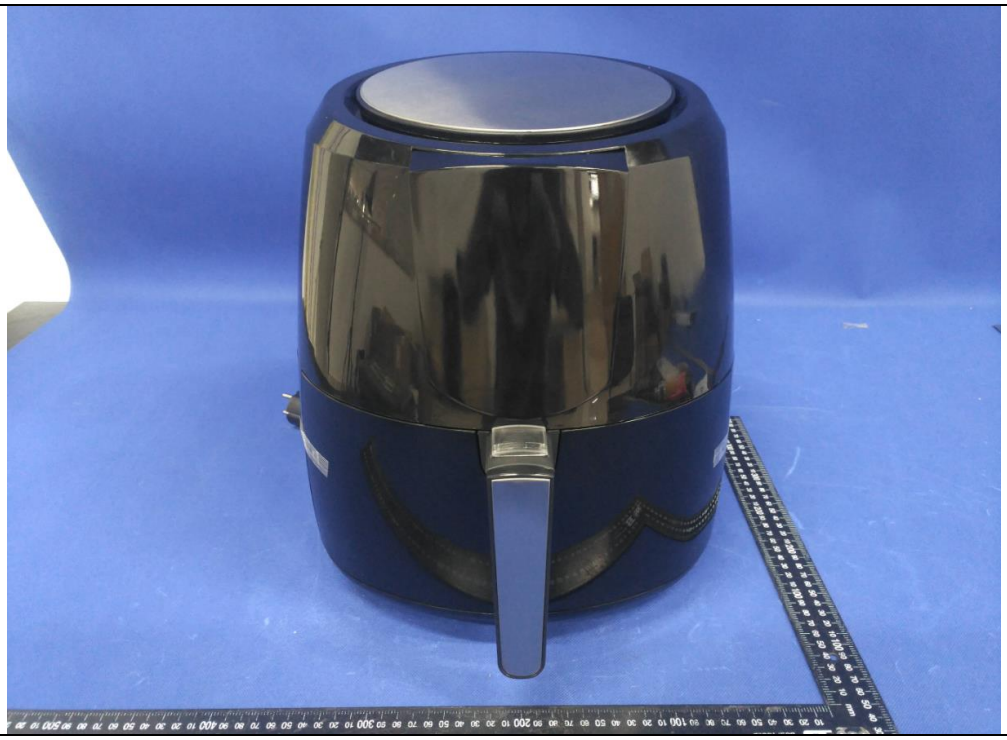
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Detail of: GLA-718 open view

View:

[ ] general

[ ] front

[ ] rear

[ ] right

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Annex I
Photo documentation
Report No.: NBES180700214703-M2
Roaster (Air Fryer)
GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A

Detail of: Display PCB for GLA-718 (touch panel type)

View:

[ ] general

[ ] front

[ ] rear

[ ] right

[ ] left

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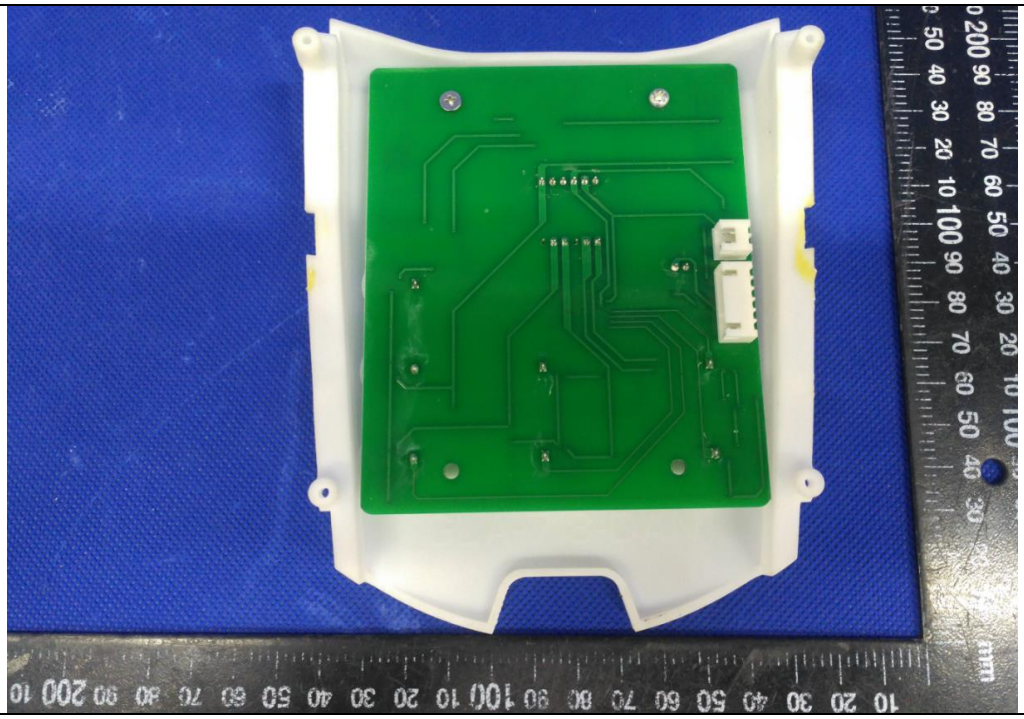
[ ] bottom



Detail of: Display PCB for GLA-718 (touch panel type)

View:

[ ] general

[ ] front

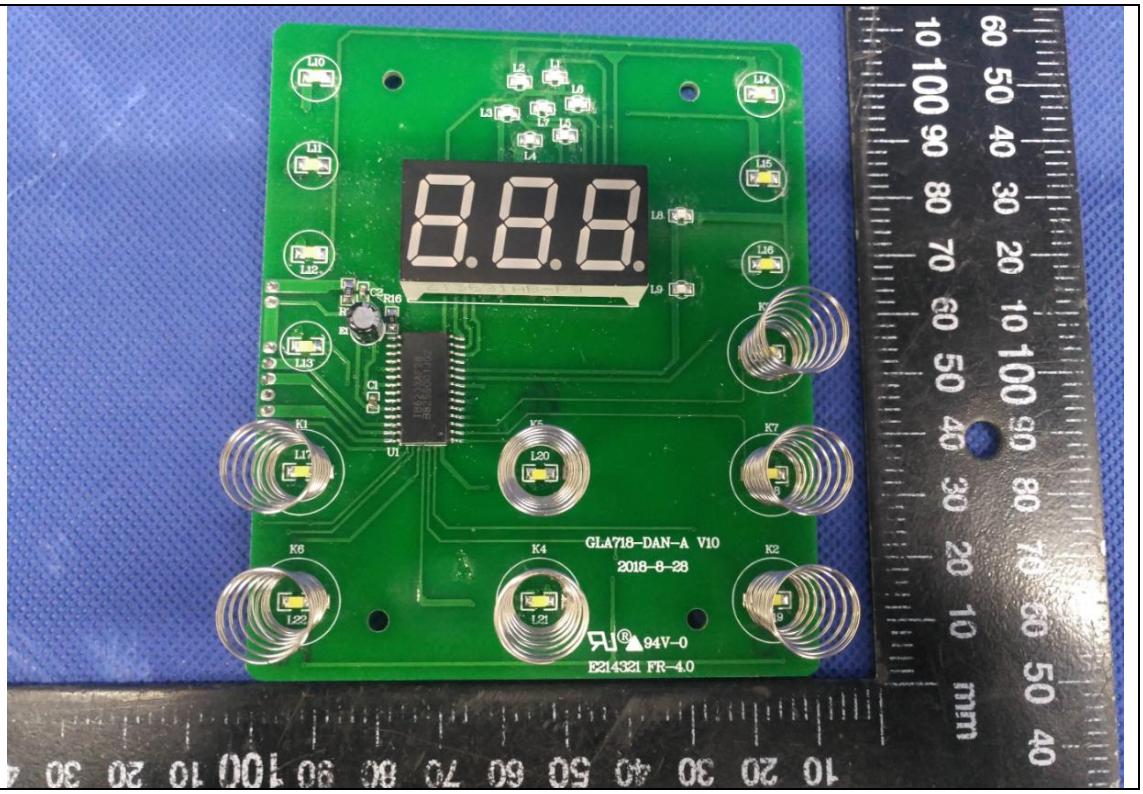
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Annex I
Photo documentation
Report No.: NBES180700214703-M2
Roaster (Air Fryer)
GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A

Detail of: GLA-816 with touch panel

View:

[X] general

[ ] front

[ ] rear

[ ] right

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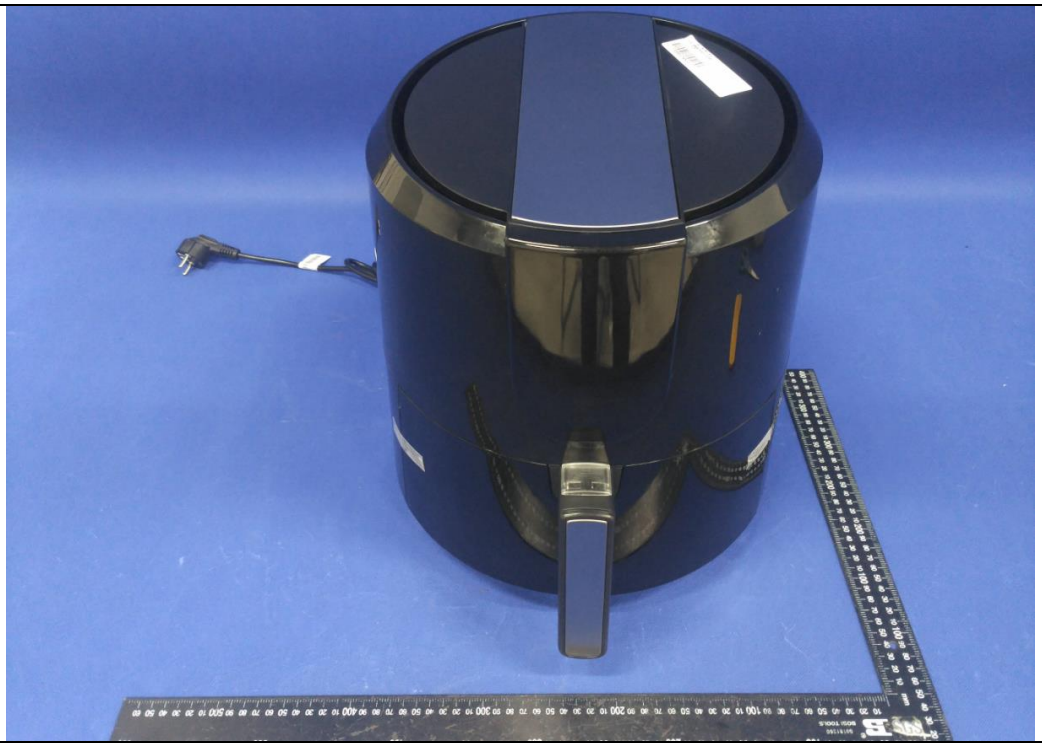
[ ] top

[ ] bottom



Detail of: GLA-816 open view

View:

[ ] general

[ ] front

[ ] rear

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Annex I
Photo documentation
Report No.: NBES180700214703-M2
Roaster (Air Fryer)
GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A

Detail of: Display PCB for GLA-816 (touch panel type)

View:

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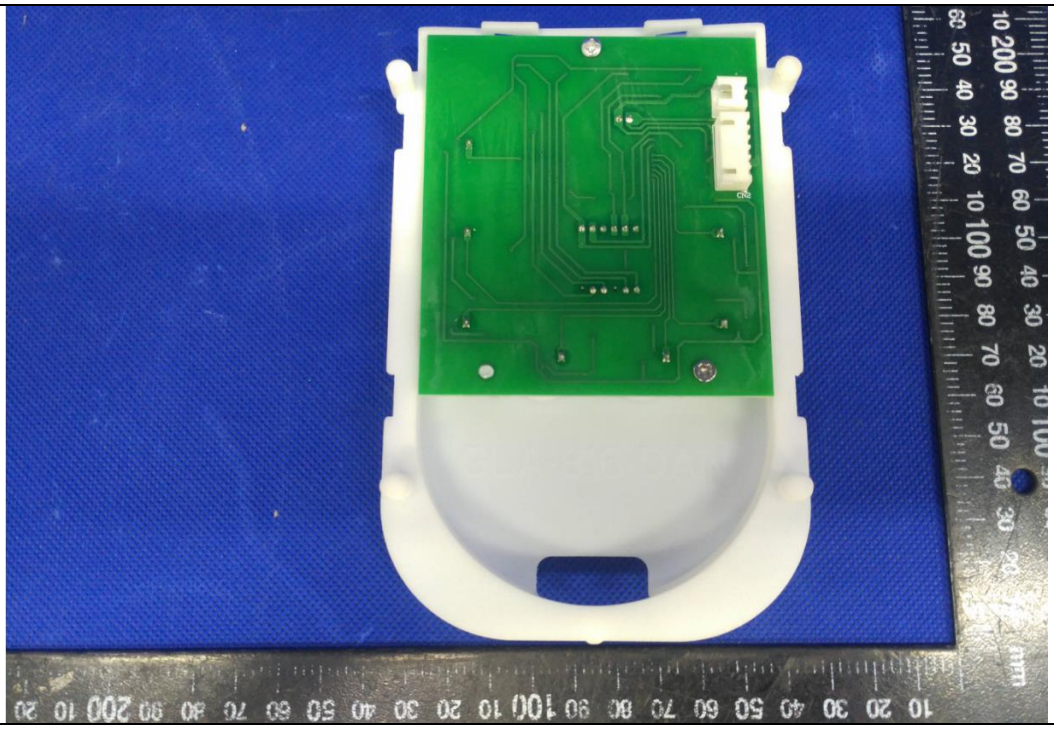
[ ] bottom



Detail of: Display PCB for GLA-816 (touch panel type)

View:

[ ] general

[ ] front

[ ] rear

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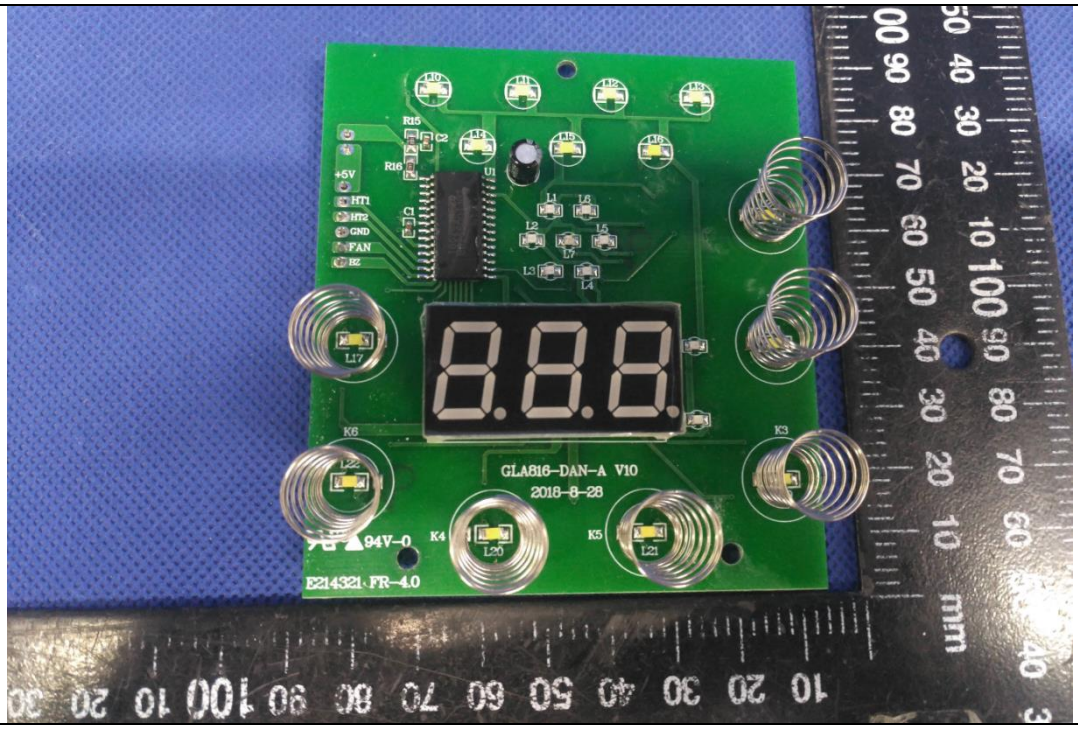

Annex I
Photo documentation
Report No.: NBES180700214703-M2
Roaster (Air Fryer)
GLA-301, GLA-302, GLA-601, GLA-603, GLA-605, GLA-606, GLA-607, GLA-608, GLA-608A, GLA-608B, GLA-609, GLA-609A, GLA-610, GLA-611, GLA-611-D, GLA-612, GLA-612-D, GLA-615, GLA-615A, GLA-616, GLA-616A, GLA-620, GLA-711, GLA-711-D, GLA-712, GLA-712-D, GLA-715, GLA-716, GLA-717, GLA-718, GLA-719, GLA-720, GLA-815, GLA-816, GLA-816A

Detail of: Alternative food contianer for GLA-301 and GLA-302

View:

[ ] general

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<End of Annex I>

Annex II: Evaluation of EK1 decision – EK1AG2 Rev.10.2018: General requirements for the evaluation of products in the scope of EN 60335-2-9

Product: Roaster (Air Fryer)

Model: GLA-718, GLA-816

Handles and operating controls shall be evaluated according to EN 60335-2-9:2003/A12:2007 clause 11.8:			
11.8	The temperature rise of handles or grips and that of operational devices such as switches, keypads and knobs that are intended to be touched in normal use is measured as follows:(EN 60335-2-9)		P
	-for operational devices and grips with a surface greater than 300 mm², over an area of 20 mm around the part normally gripped or touched to operate the appliance		P
	-for operational devices and grips with a surface less than or equal to 300 mm², over an area of 25 mm around the part normally gripped or touched to operate the appliance		N/A
	The hot part of operational devices and grips cannot be touched unintentionally		P
	-for handles, over an area of 20mm around the orthogonal projection of all points located at the clearance less than 40mm between the rear part of the handle, or at least 80mm along the handle and the hot part.	Not taken into account in this report	N/A
	The hot part of handles cannot be touched unintentionally		N/A
	-for surfaces of handles, knobs, grips and similar parts which are held for short periods, table 3 applies.	Not taken into account in this report	N/A
	Temperature rises for external surfaces shall not exceed the values specified		P

11.8-1	**TABLE: Heating test, thermocouple measurements (GLA-718)**	P
Thermocouple locations	**Max. temperature rise measured, dT (K)**	**Max. temperature rise limit, dT (K)**
Area of 20 mm around control panel	13,8	60

11.8-2	**TABLE: Heating test, thermocouple measurements (GLA-816)**	P
Thermocouple locations	**Max. temperature rise measured, dT (K)**	**Max. temperature rise limit, dT (K)**
Thermostat knob and its surrounding	15,6	60

<End of Annex II>