HEALTH TEST REPORT

For

Guangdong Well-born Electric Appliance Co., Ltd.

Electric water heater

Test Model No.: NDT20E30-4

Additional Model No.: NDT20E50-4, NDT20E80-4, NDT20E100-4, ODT20E30-1, ODT20E50-1, ODT20E80-1, ODT20E100-1, ODT20E30-2, ODT20E50-2, ODT20E80-2, ODT20E100-2, NDT20E30-5, NDT20E50-5, NDT20E80-5, NDT20E100-5

Prepared for	:	Guangdong Well-born Electric Appliance Co., Ltd.
Address	:	No. 15 HuaTian Road, South First Road, Ronggui, Shunde, Foshan, Guangdong, China
Prepared by	:	Shenzhen AOCE Electronic Technology Service Co., Ltd
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Date of receipt of test sample	:	May 7, 2025
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	May 7, 2025~May 15, 2025
Date of Report	:	May 15, 2025

HEALTH TEST REPORT
EN IEC 62311: 2020
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

Report Reference No.	**:**	**AOC250515109E**
Date of Issue.....	:	May 15, 2025
Testing Laboratory Name.....	**:**	**Shenzhen AOCE Electronic Technology Service Co., Ltd**
Address.....	:	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Testing Location/ Procedure.....	:	Full application of Harmonised standards ■ Partial application of Harmonised standards ☐ Other standard testing method ☐
Applicant's Name.....	**:**	**Guangdong Well-born Electric Appliance Co., Ltd.**
Address.....	:	No. 15 HuaTian Road, South First Road, Ronggui, Shunde, Foshan, Guangdong, China
Test Specification		
Standard.....	:	EN IEC 62311: 2020
Test Report Form No.	:	AOCEMC-1.0
TRF Originator.....	:	Shenzhen AOCE Electronic Technology Service Co., Ltd
Master TRF.....	:	Dated 2017-06

Test Item Description.....	**:**	**Electric water heater**
Trade Mark.....	:	Well-born
Model/ Type reference.....	:	NDT20E30-4
Ratings	:	AC 220-240V, 50/60Hz, Max.2000W
Result	**:**	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Johnson Wang/ File administrators	Joey Liu/ Technique principal	Murry Yu/ Manager

RADIO -- TEST REPORT

Test Report No. : AOC250515109E	May 15, 2025 Date of issue

Type / Model.....	: NDT20E30-4
EUT.....	: Electric water heater
Applicant.....	**: Guangdong Well-born Electric Appliance Co., Ltd.**
Address.....	: No. 15 HuaTian Road, South First Road, Ronggui, Shunde, Foshan, Guangdong, China
Telephone.....	: /
Fax.....	: /
Manufacturer.....	**: Guangdong Well-born Electric Appliance Co., Ltd.**
Address.....	: No. 15 HuaTian Road, South First Road, Ronggui, Shunde, Foshan, Guangdong, China
Telephone.....	: /
Fax.....	: /
Factory.....	**: Guangdong Well-born Electric Appliance Co., Ltd.**
Address.....	: No. 15 HuaTian Road, South First Road, Ronggui, Shunde, Foshan, Guangdong, China
Telephone.....	: /
Fax.....	: /

Test Result	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

This report is compiled based on the data from the original report AOC250415108E

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

EUT	:	Electric water heater
Test Model	:	NDT20E30-4
Model No. List		NDT20E30-4, NDT20E50-4, NDT20E80-4, NDT20E100-4, ODT20E30-1, ODT20E50-1, ODT20E80-1, ODT20E100-1
Hardware Version	:	V1.0
Software Version	:	V1.0

WIFI (2.4G Band)		
Frequency Range	:	2412-2472MHz for HT20 2422-2462MHz for HT40
Channel Spacing	:	5MHz
Channel Number	:	13 Channel for 802.11b,g,n(HT20) 9 Channel for 802.11n(HT40)
Modulation Type	:	802.11b: DSSS; 802.11g/n: OFDM
Antenna Type	:	PIFA Antenna, 1.5dBi

1.2. Objective

According to its specifications, the EUT must comply with the requirements of the following standards: EN IEC 62311: 2020 –Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

1.3. Related Submittal(s)/Grant(s)

No Related Submittals.

1.4. Test Methodology

All measurements contained in this report were conducted with EN 62479:2010.

1.5. Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate
/	/	/	/	/

2. HUMAN EXPOSURE TO THE ELECTROMAGNETIC FIELDS

2.1 Basic Restrictions Reference levels

Council Recommendation 1999/519/EC Annex III

Basic restrictions for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

Frequency range	Magnetic flux density (mT)	Current density (Ma/m2) (rms)	Whole body average SAR (W/kg)	Localised SAR (head and trunk) (W/kg)	Localised SAR (limbs) (W/kg)	Power density (W/m2)
0Hz	40	-	-	-	-	-
>0-1Hz	-	8	-	-	-	-
1-4Hz	-	8/f	-	-	-	-
4-1000Hz	-	2	-	-	-	-
1000Hz-100kHz	-	f/500	-	-	-	-
100kHz-10MHz	-	f/500	0.08	2	4	-
10MHz-10GHz	-	-	0.08	2	4	-
10-300GHz	-	-	-	-	-	10

Note:

1. f is the frequency in Hz.
2. The basic restriction on the current density is intended to protect against acute exposure effects on central nervous system tissues in the head and trunk of the body and includes a safety factor. The basic restrictions for ELF fields are based on established adverse effects on the central nervous system. Such acute effects are essentially instantaneous and there is no scientific justification to modify the basic restrictions for exposure of short duration. However, since the basic restriction refers to adverse effects on the central nervous system, this basic restriction may permit higher current densities in body tissues other than the central nervous system under the same exposure conditions.
3. Because of electrical inhomogeneity of the body, current densities should be averaged over a cross section of 1cm2 perpendicular to the current direction.
4. For frequencies up to 100 kHz, peak current density values can be obtained by multiplying the rms value by √2(=1.414). For pulses of duration tp the equivalent frequency to apply in the basic restrictions should be calculated as=1/(2tp)
5. For frequencies up to 100kHz and for pulsed magnetic fields, the maximum current density associated with the pulses can be calculated from the rise/fall times and the maximum rate of change of magnetic flux density. The induced current density can then be compared with the appropriate basic restriction.
6. All SAR values are to be averaged over any six-minute period.
7. Localised SAR averaging mass is any 10g of contiguous tissue; the maximum SAR so obtained should be the value used for the estimation of exposure. These 10g of tissue are intended to be a mass of contiguous tissue with nearly homogeneous electrical properties. In specifying a contiguous mass of tissue, it is recognised that this concept can be used in computational dosimetry but may present difficulties for direct physical measurements. A simple geometry such as cubic tissue mass can be used provided that the calculated dosimetric quantities have conservation values relative to the exposure guidelines.

8. For pulses of duration tp the equivalent frequency to apply in the basic restrictions should be calculated as=1/(2tp). Additionally, for pulsed exposures, in the frequency range 0,3 to 10GHz and for localised exposure of the head, in order to limit and avoid auditory effects caused by thermoelastic expansion, an additional basic restriction is recommended. This is that SA should not exceed 2mJ kg-1 averaged over 10g of tissue.

2.2 Reference Levels

Council Recommendation 1999/519/EC Annex III
Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density Seq (W/m2)
0-1Hz	-	$3,2\times10^4$	4×10^4	-
1-8Hz	1000	$3,2\times10^4/f^2$	$4\times10^4/f^2$	-
8-25Hz	1000	4000/f	5000/f	-
0.025Hz-0,8kHz	250/f	4/f	5/f6,25	-
0,8-3kHz	250/f	5	6,25	-
3-150kHz	87	5	6,25	-
0,15-1MHz	87	0.73/f	0,92/f	-
1-10MHz	$87/f^{1/2}$	0.73/f	0,92/f	-
10-400MHz	28	0.073	0,092	2
400-2000MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300GHz	61	0,16	0,20	10

Note:
1. As indicated in the frequency range column.
2. For frequencies between 100kHz and 10GHz, Seq, E2, H2 and B2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10GHz, Seq, E2, H2 and B2 are to be averaged over any 68/.1.05-minute period (.in GHz).
4. No E-field value is provided for frequencies <1Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 20kV/m. Spark discharges causing stress or annoyance should be avoided.

2.3 Test Results

Exposure evaluation $E = \dfrac{\sqrt{30 \times G \times TP}}{D}$

1. Minimum distance in meter (D) (from transmitting structure to the human body)
2. Antenna gain (G)
3. Max average output power in Watt (TP)=EIRP-Antenna gain

significant lower than the 61V/m as required in Annex III table 2 of EC Council Recommendation (1999/519/EC). This proves that the unit complies with the EN 62311 for RF exposure requirement.

----------THE END OF REPORT----------