

RF EXPOSURE REPORT

FOR

Applicant	:	KREAFUNK APS
Address	:	Klamsagervej 35 A, st.8230 Abyhoj, Denmark
Equipment under Test	:	Lamp with wireless charger and Bluetooth speaker
Model No.	:	Ellie
Trade Mark	:	N/A
FCC ID	:	2ACVC-ELLIE
Manufacturer	:	ShenZhen E-Wonderland Electronic Co.,Ltd
Address	:	Floor 3, ,XinLong Hi-Tech Industry Park, XiaWeiShui Zone, Songgang Town, Baoan District, ShenZhen, China

Issued By: Guangdong Dongdian Testing Service Co., Ltd.

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Test Report Declare

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Assess Standard Used: FCC CFR 47 part1, 1.1307(b), 1.1310;
KDB680106 D01 Wireless Power Transfer v04

We Declare:

The equipment described above is assessed by Guangdong Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Guangdong Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No.:	DDT-RE23071111-19E13		
Date of Receipt:	Sep. 12, 2023	Date of Test:	Sep. 12, 2023 ~ Nov. 07, 2023

Prepared By:

Tiger Mo

Tiger Mo /Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Nov. 07, 2023	

1. General Information

1.1. Description of equipment

EUT* Name	: Lamp with wireless charger and Bluetooth speaker
Model Number	: Ellie
EUT function description	: Please reference user manual of this device
Power Supply	: Input: DC 9V/2A From external adapter Wireless output: 10W Max
Wireless charging Operation frequency	: 111kHz-150kHz
Antenna Type	: Inductive loop coil antenna
Serial Number	: S23071111-01

Note: EUT is the abbreviation of equipment under test.

1.2. Accessories of EUT

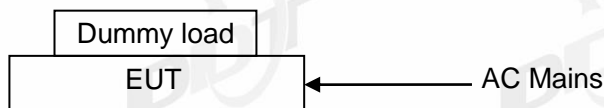
Description of Accessories	Manufacturer	Model number	Description	Remark
USB cable	N/A	N/A	N/A	Length: 100cm

1.3. Assistant equipment used for test

Description of Accessories	Manufacturer	Model number	Serial No.	Other
Dummy load	N/A	N/A	N/A	N/A
Adapter	SOLUM VINA COMPANY LIMITED	EP-TA200	Input:100-240V 50-60Hz, 0.5A Output:9V/1.67A or 5V/2A	N/A

1.4. Block diagram of EUT configuration for test

For mode 1: Tx mode(5W load, 7.5W load, 10W load):



For mode 2: Standby mode:



Note: Scan with mode 1 and mode 2, Full load, half load, and no load has been test, the worst case is mode 1 Tx mode (10W load) and recorded in this report.

1.5. Assess laboratory

Guangdong Dongdian Testing Service Co., Ltd.

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Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

1.6. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Electric field strength(V/m)	3.02 dB
Uncertainty for Magnetic field strength(A/m)	3.00 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

2. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Electric and Magnetic Field Analyzer	narda	EHP-200A	170ZX00105	Sep. 21, 2023	1 Year

3. Method of Measurement

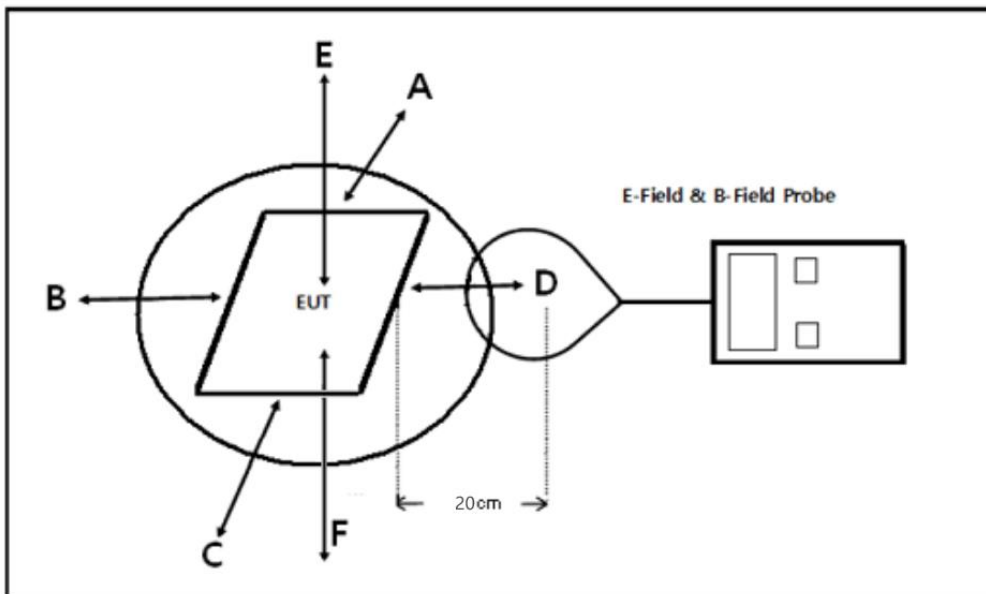
3.1. Applicable standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

According KDB 680106 D01 Wireless Power Transfer v04.

3.2. Block diagram of test setup



Note: Due to installation limitations no tests from the underside of the charging device (Test Position F) are required.

3.3. Test procedure

- The RF exposure test was performed in shielded chamber.
- The measurement probe was placed at test distance 20 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit.
- The measurement probe used to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points(A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04.

3.4. Equipment approval considerations:

The EUT does comply with section 5.2 of KDB 680106 D01 Wireless Power Transfer v04.

- (1) The power transfer frequency is below 1 MHz

Yes, the device operates in the frequency range from 111 kHz - 150 kHz

- (2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

Yes, the maximum output power of the primary coil is 10 W.

- (3) A client device providing the maximum permitted load is placed in physical contact with the transmitter(i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)

Yes. client device is placed directly in contact with the transmitter.

- (4) Only § 2.1091-Mobile exposure conditions apply (i.e, this provision does not cover § 2.1093-Portableexposure conditions).

Yes, the EUT is for Mobile exposure.

- (5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1.

Thesemeasurements shall be taken along the principal axes of the device, with one axis oriented along thedirection of the estimated maximum field strength, and for three points per axis or until a 1/d (inversedistance from the emitter structure) field strength decay is observed. Symmetry considerations may be usedor test reduction purposes. The device shall be operated in documented worst-case compliance scenariosi.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coilsor antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

Yes, the E-field and H-field strengths levels are less than 50% of MPE limit.

- (6) For systems with more than onc radiating structure, the conditions specified in (5) must be met whenthe system is fully loaded (i.e, clients absorbing maximum power available), and with all the radiatingstructures operating at maximum power at the same time, as per design conditions. If the design allows oneor more radiating structures to be powered at a higher level while other radiating structures are not powered.then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, orone coil powered at 15 W: in this case, both scenarios shall be tested.

Yes, the transfer system includes only one primary coils.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

3.5. E and H Field Strength

Test mode for wireless charger:

Dummy load: 5W, 7.5W and 10W mode

E-Filed Strength at 20 cm from the edges surrounding the EUT (V/m)

Test Position	Probe Measure Result (V/m)			Limits Test (V/m)
	5W	7.5W	10W	
A	1.7392	2.2252	2.0676	614
B	2.2011	3.0581	3.1804	614
C	0.5653	0.7045	0.8729	614
D	1.6395	2.1627	1.8059	614
E	2.8659	3.8966	2.5085	614

H-Filed Strength at 20 cm from the edges surrounding the EUT (A/m)

Test Position	Probe Measure Result(A/m)			Limits Test (A/m)
	5W	7.5W	10W	
A	0.2334	0.1544	0.2511	1.63
B	0.1005	0.1211	0.2881	1.63
C	0.1370	0.0923	0.1769	1.63
D	0.0726	0.0767	0.1220	1.63
E	0.2648	0.3799	0.2511	1.63

3.6. Simultaneous transmission MPE(worst case):

The ratio= $MPE_{BDR+EDR}/limit + MPE_{E\text{ Field Strength}}/limit + MPE_{H\text{ Field Strength}}/limit$

= $0.0005/1 + 3.8966/614 + 0.3799/1.63 = 0.24 < 1.0$