Test Report

Report No.:	MTi240830017-01E2
Date of issue:	2024-11-05
Applicant:	Shenzhen Huiying Electronics Co., Ltd.
Product:	Levitating moon lamp
Model(s):	VA1213, EKM-MFB-A1, HY2000, HY22001, XR-3-FLBA5, UVEHAS23, VA1213-1, VA1213-2, VA1213-3
FCC ID:	2BE7G-VA12132

Shenzhen Microtest Co., Ltd.

http://www.mtitest.com

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Instructions

1. This test report shall not be partially reproduced without the written consent of the laboratory.

2. The test results in this test report are only responsible for the samples submitted

3. This test report is invalid without the seal and signature of the laboratory.

4. This test report is invalid if transferred, altered, or tampered with in any form without authorization.

5. Any objection to this test report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

Contents

Test Result Certification	
Applicant:	Shenzhen Huiying Electronics Co., Ltd.
Address:	R.201, Building 1, Dadiyuan, Jinbi Road, Cuizhu Street, Luohu District, Shenzhen, China 518110
Manufacturer:	Shenzhen Huiying Electronics Co., Ltd.
Address:	R.201, Building 1, Dadiyuan, Jinbi Road, Cuizhu Street, Luohu District, Shenzhen, China 518110
Product description	
Product name:	Levitating moon lamp
Trademark:	VGAzer, exekoml, UVEHAS, DIDWI
Model name:	VA1213
Series Model:	EKM-MFB-A1, HY2000, HY22001, XR-3-FLBA5, UVEHAS23, VA1213-1, VA1213-2, VA1213-3
Standards:	FCC CFR 47 PART 1, § 1.1310 FCC CFR 47 PART 2, § 2.1091
Test method:	KDB 680106 D01 Wireless Power Transfer v04
Date of Test	
Date of test:	2024-09-20 to 2024-11-04
Test result:	Pass

Test Engineer	:	Letter. Lan.
		(Letter Lan)
Reviewed By	:	David. Lee
		(David Lee)
Approved By	:	Leon chen
		(Leon Chen)

1 General Description

1.1 Description of the EUT

Product name:	Levitating moon lamp
Model name:	VA1213
Series Model(s):	EKM-MFB-A1, HY2000, HY22001, XR-3-FLBA5, UVEHAS23, VA1213-1, VA1213-2, VA1213-3
Model difference:	All the models are the same circuit and module, except the model name, colour and appearance.
Electrical rating:	Input: DC 12V/ 150mAh Output: DC 5V/ 100mAh
Accessories:	Adaptor: Adaptor: Model: HP24L-1202000-AVU-S Input: 100-240V - 50/60Hz 0.8A Output: 12V⎓2A
Hardware version:	V-R1
Software version:	V-R1
Test sample(s) number:	MTi240830017-01S1001
RF specification:	
Operating frequency range:	115-205kHz
Modulation type:	ASK
Antenna(s) type:	Coil

1.2 Description of test modes

All the test modes were carried out with the EUT in normal operation, the final test mode of the EUT was the worst test mode for emission test, which was shown in this report and defined as:

No.	Emission test modes
Mode1	normal working
Mode2	stand by

1.3 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list			
Description	Model	Serial No.	Manufacturer
/	/	/	/
Support cable list			
Description	Length (m)	From	To
/	/	/	/

2 Measurement uncertainty

Parameter	Expanded Uncertainty
Magnetic field measurements(3kHz~10MHz)	±14.8%
Electric field measurements(3kHz~10MHz)	±17.5%

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3 Test facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573

4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due
MTI-E143	Near-field Electric and Magnetic Field Sensor System	SPEAG	MAGPy-8H3D +ED3	3101	2024/3/12	2027/3/11

No.	Equipment	Manufacturer	Model	Software version:	Cal. date	Cal. Due
MTI-E016S	MPE test software	SPEAG	MAGPY 2.4	2.4.1	/	/

5 Test result

5.1.1 Requirement

§1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

Table 1 to §1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

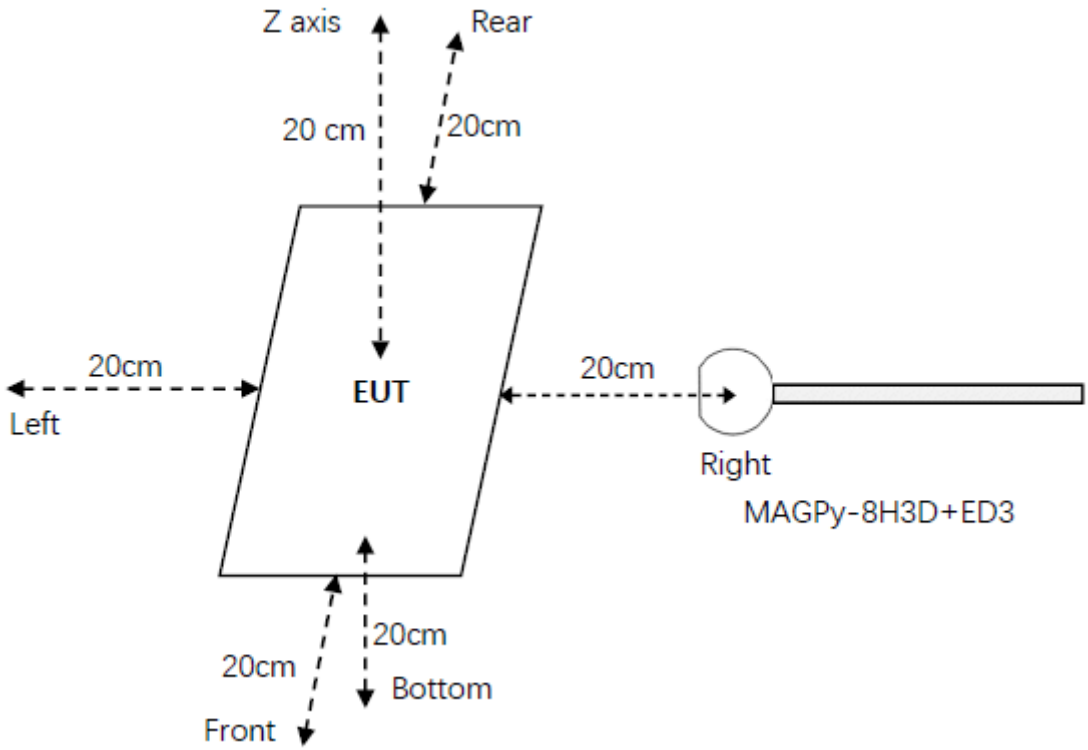
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1500			f/300	<6
1500-100000			5	<6
(ii) 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
300-1500			f/1500	<30
1500-100000			1.0	<30

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

Note 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Note 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

5.2 Test setup



5.3 Test Procedures

a. The RF exposure test was performed in anechoic chamber.

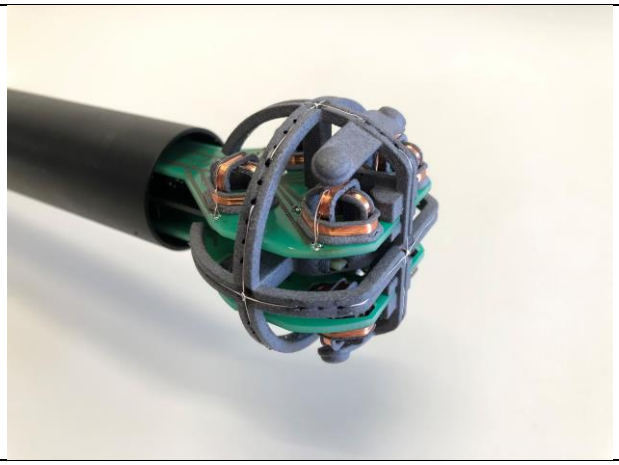
b. E and H-field measurements should be made with these devices considered to meet the § 2.1091-Mobile conditions (“generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the RF source's radiating structure(s) and [the nearest person]”).

c. The highest emission level was recorded and compared with limit.

d. The EUT was measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04.

5.4 Information of test equipment

Test equipment: MAGPy-8H3D+ED3	
Diameter	60mm
8 isotropic H-field sensors	Concentric loops of 1cm^2 arranged at the corner of a cube of 22mm side length
1 isotropic E-field sensor	Orthogonal dipole/monopple(arm length:50mm)
Measurement center	18.5mm from the probe tip
Dimensions	110*635*35mm (MAGPy-8H3D+E3D V2 & MAGPy-DAS V2)



Test probe, without the casing

Requirement	Device
1. The power transfer frequency is below 1 MHz.	Yes. The operating frequencies are: Coil1:115 kHz – 205 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 is: 4.5W
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)	No. The client device does not directly contact the transmitter.
4. Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).	Yes. Mobile exposure conditions only.
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. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/*d* (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.	Yes. See the test result in item 5.5.
6.For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or 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, or one coil powered at 15 W: in this case, both scenarios shall be tested.	Yes. The EUT has one radiating structures but only a radiating structure while working and all scenarios have been tested.

5.5 Test results

V1213:

Test condition 1: Mode 1 operating mode with client device

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	10.69	614	9.33%	0.36	1.63	86.50%
Left	55.6			1.37		
Right	57.3			1.41		
Front	32.9			0.96		
Rear	17.4			0.87		
Bottom	51.7			1.33		

V1213-1:

Test condition 1: Mode 1 operating mode with client device

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	11.85	614	8.36%	0.35	1.63	80.37%
Left	51.31			1.28		
Right	50.22			1.28		
Front	29.31			0.88		
Rear	16.22			0.79		
Bottom	49.21			1.31		

V1213-3:

Test condition 1: Mode 1 operating mode with client device

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	11.14	614	8.20%	0.37	1.63	80.37%
Left	50.36			1.31		
Right	49.21			1.21		
Front	28.33			0.82		
Rear	15.12			0.79		
Bottom	48.63			1.22		

Photographs of the Test Setup

See the Appendix - Test Setup.

Photographs of the EUT

See the Appendix - EUT Photos.

----End of Report----