MPE REPORT

Wireless charger

Model No.: YC-617W22

FCC ID: 2BDT5-YC-617W22

Report No.: NCT24005038-2

Issue Date: Feb. 02, 2024

Prepared for

STACEYM LIMITED

GB, N4 3LD, London, London, Moray Road, 29a

Prepared by

Shenzhen NCT Testing Technology Co., Ltd.

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TEST REPORT DESCRIPTION

Applicant	:	STACEYM LIMITED
Address	:	GB, N4 3LD, London, London, Moray Road, 29a
Manufacturer	:	STACEYM LIMITED
Address	:	GB, N4 3LD, London, London, Moray Road, 29a
EUT	:	Wireless charger
Model Name	:	YC-617W22
Trademark	:	Astrohue

Measurement Procedure Used:

FCC Part 1(1.1310) and Part 2(2.1091)
KDB 680106 D01 Wireless Power Transfer v04

The device described above is tested by Shenzhen NCT Testing Technology Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen NCT Testing Technology Co., Ltd. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen NCT Testing Technology Co., Ltd.

Test Engineer:

Keven Wu / Engineer

Technical Manager:

Henry Wang / Manager

1. SUMMARY OF TEST RESULT

EMISSION		
Description of Test Item	Standard & Limits	Results
MPE	FCC Part 1(1.1310) and Part 2(2.1091) KDB 680106 D01 Wireless Power Transfer v04	Pass
Note: N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Wireless Charger
Model Number	:	YC-617W22
Serise Number	:	N/A
Mode difference	:	N/A
Power Rating	:	Input: DC 9V 3A Wireless Output: Phone: 5W/7.5W/10W/15W(Max); Earbuds: 5W(Max); Watch: 3W(Max)
Operation Frequency for WPT	:	Transmitter 1(Phone): 115-205KHz Transmitter 2(Phone): 115-205KHz Transmitter 3(Earphone): 115-205KHz Transmitter 4(Watch): 300-350KHz
Modulation	:	ASK
Antenna Type:	:	Coil Antenna
Date of Received	:	Oct. 18, 2023
Date of Test	:	Oct. 18, 2023 to Jan. 02, 2024

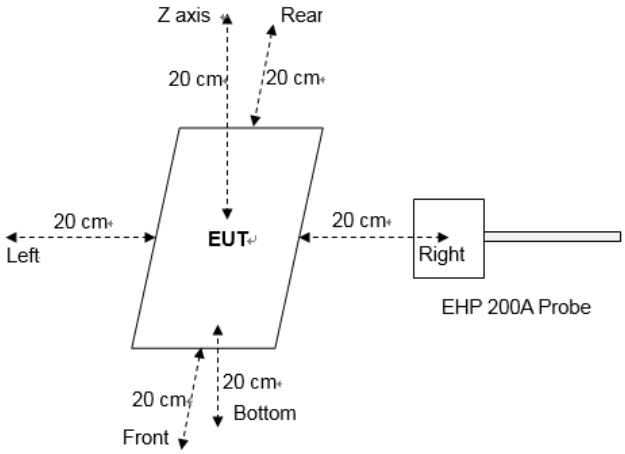
2.2. Description of Support Units

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless charger	N/A	YW08	N/A	EUT
E-2	Watch	apple	iwatch 7	N/A	Auxiliary
E-3	iPhone	Apple	iPhone 15	N/A	Auxiliary
E-4	Smartphone	SAMSUNG	S9+	N/A	Auxiliary
E-5	Airpods	Apple	Airpods 3	N/A	Auxiliary

Note: (1)The support equipment was authorized by Declaration of Confirmation.
(2)For detachable type I/O cable should be specified the length in cm in『Length』column.

2.3. Test Setup



2.4. Description of Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2022-09-27
The certificate is valid until 2028.01.07
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)
The Certificate Registration Number is L8251

Designation Number: CN1347
Test Firm Registration Number: 894804
Accredited by A2LA, June 14, 2023
The Certificate Registration Number is 6837.01

Accredited by Industry Canada, November 09, 2018
The Conformity Assessment Body Identifier is CN0150
Company Number: 30806

Name of Firm : Shenzhen NCT Testing Technology Co., Ltd.

Site Location : A101&2F B2, Fuqiao 6th Area, Xintian Community, Fuhai Street, Baoan District, Shenzhen, People's Republic of China

2.5. Measurement Uncertainty

Parameter	Uncertainty
Temperature	±1°C
Humidity	±5%
Magnetic field measurement (9kHz~30MHz)	±18.6%
Electric field measurements (9kHz~30MHz)	±18.6%

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

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For MPE Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
□	Exposure Level Tester(1Hz-400KHz)	Narda	EHP-200A	180ZX00634	2023.06.21	2024.06.20

4. RF EXPOSURE

4.1. Measuring Standard

FCC Part 1(1.1310) and Part 2(2.1091)

4.2. Requiments

Three different categories of transmitters are defined by the FCC in OET Bulletin 65. These categories are fixed installation, mobile, and portable and are defined as follows: o Fixed Installations: fixed location means that the device, including its antenna, is physically secured at a permanent location and is not able to be easily moved to another location. Additionally, distance to humans from the antenna is maintained to at least 2 meters. o Mobile Devices: a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to be generally used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structures and the body of the user or nearby persons. Transmitters designed to be used by consumers or workers that can be easily re-located, such as a wireless modem operating in a laptop computer, are considered mobile devices if they meet the 20 centimeter separation requirement. The FCC rules for evaluating mobile devices for RF compliance are found in 47 CFR §2.1091. o Portable Devices: a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user. Portable device requirements are found in Section 2.1093 of the FCC's Rules (47 CFR§2.1093). The FCC also categorizes the use of the device as based upon the user's awareness and ability to exercise control over his or her exposure. The two categories defined are Occupational/ Controlled Exposure and General Population/Uncontrolled Exposure. These two categories are defined as follows: Occupational/Controlled Exposure: In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Awareness of the potential for RF exposure in a workplace or similar environment can be provided through specific training as part of a RF safety program. If appropriate, warning signs and labels can also be used to establish such awareness by providing prominent information on the risk of potential exposure and instructions on methods to minimize such exposure risks. General Population/Uncontrolled Exposure: The general population / uncontrolled exposure limits are applicable to 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 made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

4.3. Test configuration

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

2. 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]”).

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

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

4.4. Limits

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

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

Test Mode:

No.	Emission test modes
Mode1	Wireless Output(5W(Coil 1))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode2	Wireless Output(7.5W(Coil 1))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode3	Wireless Output(10W(Coil 1))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode4	Wireless Output(15W(Coil 1))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode5	Wireless Output(5W(Coil 2))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode6	Wireless Output(7.5W(Coil 2))++Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode7	Wireless Output(10W(Coil 2))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode8	Wireless Output(15W(Coil 2))+Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode9	Wireless Output(5W(Coil 1))+Earphone(5W(Coil 3))
Mode10	Wireless Output(7.5W(Coil 1))+Earphone(5W(Coil 3))
Mode11	Wireless Output(10W(Coil 1))+Earphone(5W(Coil 3))
Mode12	Wireless Output(15W(Coil 1))+Earphone(5W(Coil 3))
Mode13	Wireless Output(5W(Coil 2))+Earphone(5W(Coil 3))
Mode14	Wireless Output(7.5W(Coil 2))+Earphone(5W(Coil 3))
Mode15	Wireless Output(10W(Coil 2))+Earphone(5W(Coil 3))
Mode16	Wireless Output(15W(Coil 2))+Earphone(5W(Coil 3))
Mode17	Wireless Output(5W(Coil 1))+Watch(3W(Coil 4))
Mode18	Wireless Output(7.5W(Coil 1)+Watch(3W(Coil 4))
Mode19	Wireless Output(10W(Coil 1)+Watch(3W(Coil 4))
Mode20	Wireless Output(15W(Coil 1)+Watch(3W(Coil 4))
Mode21	Wireless Output(5W(Coil 2))+Watch(3W(Coil 4))
Mode22	Wireless Output(7.5W(Coil 2)+Watch(3W(Coil 4))
Mode23	Wireless Output(10W(Coil 2)+Watch(3W(Coil 4))
Mode24	Wireless Output(15W(Coil 2)+Watch(3W(Coil 4))
Mode25	Wireless Output(5W(Coil 1))
Mode26	Wireless Output(7.5W(Coil 1))
Mode27	Wireless Output(10W(Coil 1))
Mode28	Wireless Output(15W(Coil 1))
Mode29	Wireless Output(5W(Coil 2))
Mode30	Wireless Output(7.5W(Coil 2))
Mode31	Wireless Output(10W(Coil 2))
Mode32	Wireless Output(15W(Coil 2))

Mode33	Earphone(5W(Coil 3))+Watch(3W(Coil 4))
Mode34	Earphone(5W(Coil 3))
Mode35	Watch(3W(Coil 4))
Mode36	Stand by
All of the listed pre-test mode were tested, only the data of the worst mode (Mode4) is recorded in the report	

4.5. Measuring Results

Test condition 1: Mode 4 operating mode with client device (1 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	3.0878	614	0.59%	0.1914	1.63	17.93%
Left	3.6517			0.2923		
Right	1.3515			0.0636		
Front	2.8151			0.2762		
Rear	2.5828			0.2421		
bottom	2.2844			0.1646		

Test condition 2: Mode 4 operating mode with client device (50 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
Z axis	3.1027	614	0.60%	0.1928	1.63	18.44%
Left	3.6684			0.3006		
Right	1.3322			0.0669		
Front	2.7964			0.2679		
Rear	2.5731			0.2331		
Bottom	2.3026			0.1741		

Test condition 3: Mode 4 operating mode with client device (99 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	3.0823	614	0.59%	0.1886	1.63	17.34%
Left	3.632			0.2826		
Right	1.3445			0.0617		
Front	2.8043			0.2668		
Rear	2.571			0.2346		
bottom	2.2695			0.1579		

Remark: The device meets the mobile RF exposure limit at a 20cm separation distance as specified in §2.1091 of the FCC Rules. The maximum leakage fields at 20 cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.

Equipment Approval Considerations

Condition Requirement	Yes / No	Description
Power transfer frequency is less than 1 MHz.	Yes	The power transfer frequency is less than 1 MHz .
Output power from each primary coil is less than or equal to 15 watts.	Yes	Output power is 15W Max.
The system may consist of more than one source primary coils, charging one or more clients. Lf more than onc primary coil is present, the coil pairs may be powered on at the same time.	Yes	It has three coils and they are can Simultaneous emission at the same time.
Client device is placed directly in contact with the transmitter.	Yes	Client device is placed directly in contact with the transmitter.
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes	Mobile exposure conditions only
The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.	Yes	Please refer to the result of Electric Field Emissions and Magnetic Field Emissions.

5. TEST PHOTOGRAPHS AND EUT PHOTOGRAPHS

Please the attachment for details.

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