FCC TEST REPORT

Test report
On Behalf of
COM2US KOREA
For
Summoners War Wireless Charger
Model No.: SWWCS001

FCC ID: 2BAUR-SWWCS001

Prepared for :	**COM2US KOREA** **131, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea**
Prepared By :	**Shenzhen Tongzhou Testing Co.,Ltd** **1th Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China**
Date of Test:	**2023/4/7 ~ 2023/4/13**
Date of Report:	**2023/4/13**
Report Number:	**TZ230404214-E2**

TEST RESULT CERTIFICATION

Applicant's name	:	COM2US KOREA
Address	:	131, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea
Manufacture's Name	:	Shenzhen hoosung technology co.,LTD
Address	:	No. 113, 1st Road Gushu, Xixiang Street, Baoan District, Shenzhen, China
Product description		
Trade Mark	:	Com2uS
Product name	:	Summoners War Wireless Charger
Model	:	SWWCS001
Standards	:	FCC Rules and Regulations Part 2.1091, ANSI C63.10: 2013

Date of Test	:	
Date (s) of performance of tests	:	2023/4/7 ~ 2023/4/13
Date of Issue	:	2023/4/13
Test Result	:	**Pass**

Testing Engineer : Nancy Li

(Nancy Li)

Technical Manager : Hugo Chen

(Hugo Chen)

Authorized Signatory : Andy Zhang

(Andy Zhang)

1. GENERAL INFORMATION

1.1 General Description of EUT

Equipment	Summoners War Wireless Charger
Model Name	SWWCS001
Model Difference	N/A
Test Model	SWWCS001
Trade Mark	Com2uS
FCC ID	2BAUR-SWWCS001
Antenna Type	Coil Antenna
Antenna Gain	0dBi
Operation frequency	110– 205 KHz
Test Frequency	175 KHz
Modulation Type	ASK
Power Rating	Input: 5V⎓2A, 9V⎓2A, 12V⎓1.5A Output: 5V⎓1A, 7.5V⎓1A, 9V⎓1.12A, 9V⎓1.67A (Wireless charger)
Test Sample ID	TZ230404214-1#

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

   The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.

2. SUMMARY OF TEST RESULTS

2.1 Test procedures according to the technical standards:
FCC KDBD01 RF Exposure Wireless Charging App v03r01

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v03r01 (3)(3)	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ±**U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	All emissions, radiated(<30M)(9KHz-30MHz)	±2.45dB
2	Temperature	±0.5°C
3	Humidity	±2%

2.3 Test Instruments

Equipment	Manufacturer	Model	Serial no.	Calibrated date	Calibrated Due
Exposure Level Tester	Narda	ELT-400	N-0713	2022-08-03	2023-08-02
B-Field Probe	Narda	ELT-400	M-1154	2022-08-03	2023-08-02

NOTE: 1. The calibration interval of the above test instruments is 12 months.

2.4 Special Accessories

No.	Equipment	Manufacturer	Model
1	Wireless charger tester	YBZ	YBZ
2	AC adapter	Xiaomi	MDY-10-EH

2.5 Operation of EUT during testing

Test Modes:		
Mode 1	AC/DC Adapter (12V/1.5A) + EUT + Wireless charger tester (Load 15W)	Record
Mode 2	AC/DC Adapter (12V/1.5A) + EUT + Wireless charger tester (Load 10W)	Pre-test
Mode 3	AC/DC Adapter (12V/1.5A) + EUT + Wireless charger tester (Load 7.5W)	Pre-test
Mode 4	AC/DC Adapter (12V/1.5A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Mode 5	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 15W)	Pre-test
Mode 6	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 10W)	Pre-test
Mode 7	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 7.5W)	Pre-test
Mode 8	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Mode 9	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 15W)	Pre-test
Mode 10	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 10W)	Pre-test
Mode 11	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 7.5W)	Pre-test
Mode 12	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Note: All test modes were pre-tested, but we only recorded the worst case in this report.		

3. MAXIMUM PERMISSIBLE EXPOSURE

Limit of Maximum Permissible Exposure

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
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	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

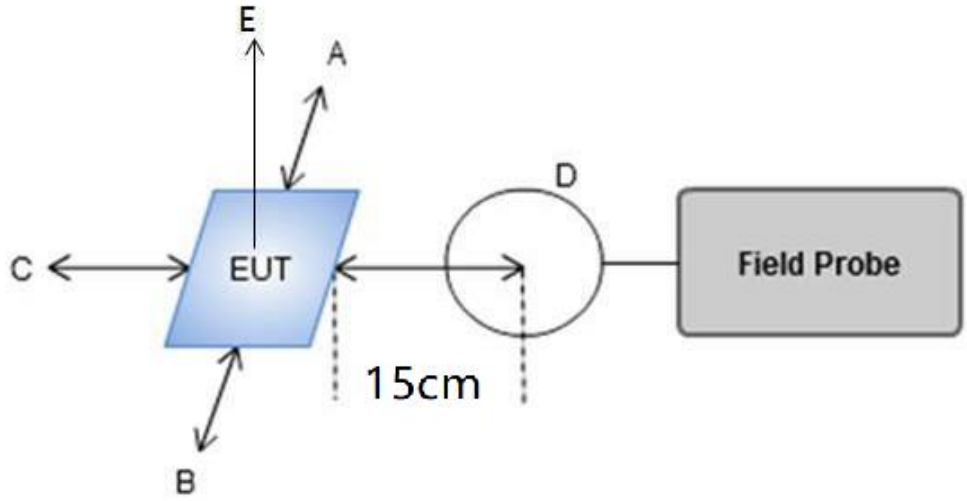
Note 2: For the applicable limit, see FCC 1.1310, D01 RF Exposure Wireless Charging App v03r01

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

4. TEST PROCEDURE

a. For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

4.1 TEST SETUP



4.2 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

Temperature	22.8℃	Humidity	55%
Test Engineer	Tony Luo	Configurations	Mode 1

E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1	15W	v/m	0.175	42.8272	43.1288	54.8912	59.4152	72.6856	307	614

Note: V/m= A/m *377

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)					FCC H-Field Strength50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1	15W	uT	0.175	0.1420	0.1430	0.1820	0.1970	0.2410	--	--
	15W	A/m	0.175	0.1136	0.1144	0.1456	0.1576	0.1928	0.815	1.63

H-Field Strength at 20cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
				Test Position E		
1	15W	uT	0.175	0.3100	--	--
	15W	A/m	0.175	0.2480	0.815	1.63

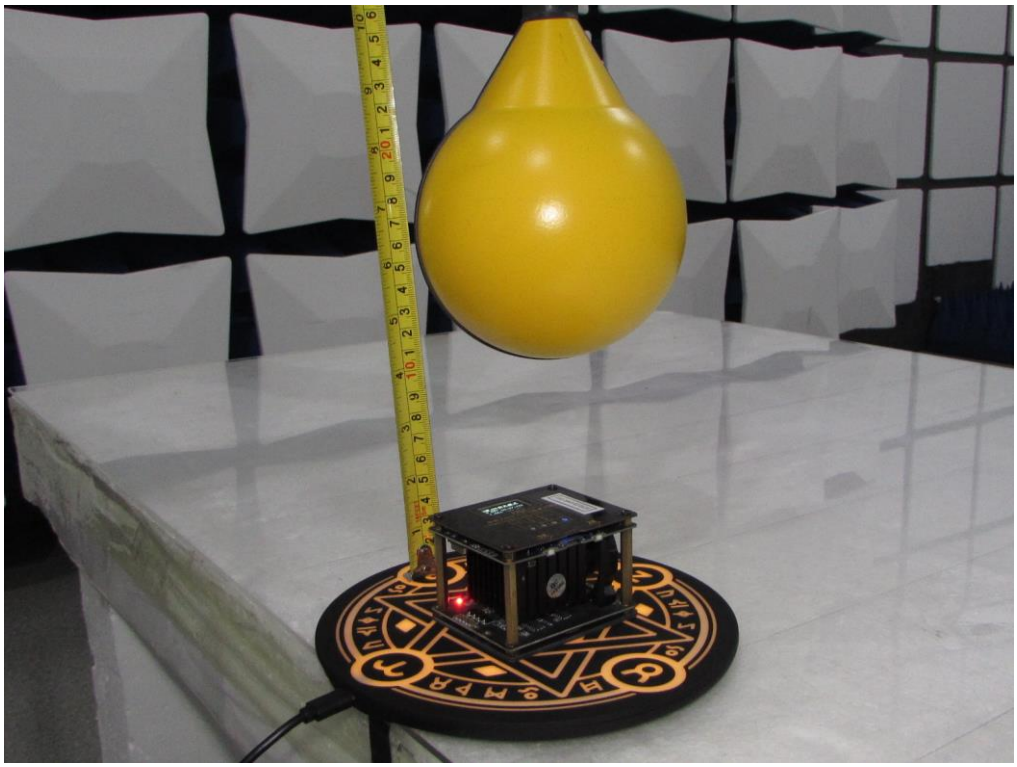
Note: A/m=uT/1.25

4.3 Equipment Approval Considerations
The EUT does comply with KDB 680106 D01 as follow table.

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 110KHz~205KHz
Output power from each primary coil is less than 15 watts	Yes	The maximum output power for each primary coil is 15W.
The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes	The transfer system includes one primary coils and are able to detect and allow coupling only between individual pairs of coils.
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 anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes	The EUT 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.

4.4 Conclusion
The detected emissions with a distance of 15cm surrounding the device and 20 cm above the top surface of the device are below the FCC E-Field Strength & H-Field Strength limits; and comply with the requirements of FCC KDB 680106 D01.

PHOTOGRAPH OF TEST



※※※※※THE END※※※※※