FCC ID: 2A48S-S2

Product Name:	Mobile Power iWatch wireless charging
Product Model No.:	S2 S1, S4, S5-S99
Transmitting mode	Keep the EUT in continuously wireless charging mode
Power supply:	Battery Capacity: 3.7V, 1200mAh, 4.44Wh IN/Type-C Cable: 5V⎓1A IN/USB Cable: 5V⎓1A OUT/Wireless charger: 2.5W
Date of Receipt:	Jul. 04, 2023
Test Date:	Jul. 04, 2023 - Jul. 12, 2023
Date of Report:	Jul. 12, 2023

Test Modes:			
Mode1.	AC charging+Wireless charging(Full load)	Mode2.	AC charging+Wireless charging(Half load)
Mode3.	AC charging+Wireless charging(No load)	Mode4.	Wireless charging(Full load)
Mode5.	Wireless charging(Half load)	Mode6.	Wireless charging(No load)
Note: 1. We have evaluated 1%, 50% and 99% battery charging mode, and the worst mode8 (99%) is showed in this report. 2. All modes have been tested, and the report only shows the results of the worst mode4).			

RF Exposure Evaluation

1 Measuring Standard

KDB 680106 RF Exposure Wireless Charging Apps v03r01

2 Requirements

According to the item 5 of KDB 680106 v03r01:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

(1) Power transfer frequency is less than 1MHz.	Yes; the device operate in the frequency range from 115 KHz to 205 KHz
(2) Output power from each primary coil is less than or equal to 15 watts.	Yes; the maximum output power of the primary coil is 2.5W.
(3) 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 only one primary coils.
(4) Client device is placed directly in contact with the transmitter.	Yes; Client device is placed directly in contact with the transmitter.
(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No, portable exposure conditions only.
(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away	No, Distance from 0 to 20cm, see test result in item 6.

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.

Remark: Meet all the above requirements.

Limits

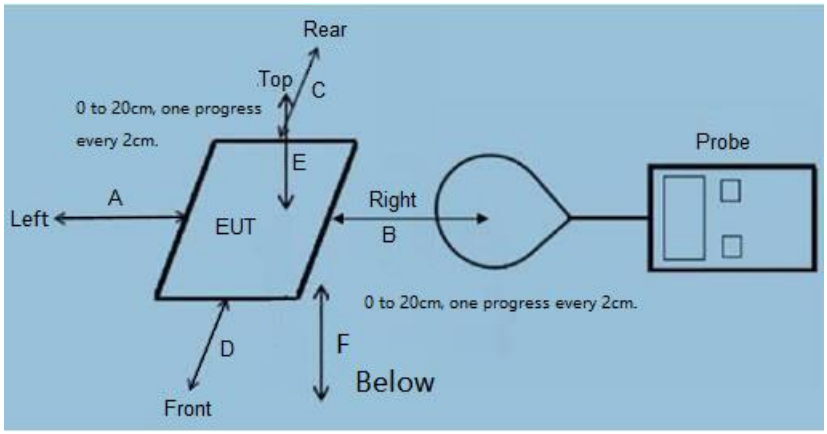
The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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 Exposures				
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
1500-100,000	/	/	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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

3 Test Setup



4 Test Procedure

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

2) The measurement probe was placed at test distance (0 cm to 20 cm from all sides) which is between the edge of the charger and the geometric center of probe.

3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.

4) The EUT was measured according to the dictates of KDB 680106 v03r01.

Remark：The EUT's test position A, B, C, D, E,F is valid for the E and H field measurements.

5 Description of Support Units

Watch (Provide by test lab): Manufacturer: Apple Model: Series 6	Adapter (Provide by test lab): Manufacturer: HAIWEI Model: HW-0501000E I/P: AC 100-240V 50/60Hz O/P: DC 5V 1A

6 Test Instruments list

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Exposure Level Tester	Narda	ELT-400	N-0231	June. 24 2023	June. 25 2024
Magnetic field probe 100cm^2	Narda	ELT probe 100cm^2	M0675	June. 24 2023	June. 25 2024
Field Probe	ETS	HI-6105	/	June. 24 2023	June. 25 2024
Laser Data Interface	ETS	HI-6113	/	June. 24 2023	June. 25 2024

7 Test Uncertainty

E-Filed Strength : ±0.08V/m

H-Filed Strength : ±0.02A/m

8 Test Result

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

Frequency Range 0.115-0.205 (MHz)

Test Position	Distance (cm)											Unit (ut)
	0	2	4	6	8	10	12	14	16	18	20	
Left A	0.92	0.95	0.95	0.93	0.96	0.94	0.84	0.83	0.84	0.86	0.83	
Right B	0.95	0.96	0.96	0.95	0.98	0.98	0.83	0.85	0.83	0.84	0.85	
Rear C	0.96	0.98	0.88	0.88	0.84	0.83	0.88	0.84	0.88	0.83	0.76	
Front D	0.94	0.94	0.94	0.84	0.86	0.85	0.85	0.83	0.84	0.84	0.78	
Top E	0.93	0.96	0.86	0.83	0.85	0.84	0.86	0.88	0.86	0.76	0.75	
Below F	0.86	0.88	0.87	0.85	0.83	0.83	0.88	0.75	0.78	0.77	0.74	

Test Position	Distance (cm)											Limits (A/m)	Result
	0	2	4	6	8	10	12	14	16	18	20		
Left A	1.24	1.12	1.12	1.16	1.13	1.15	1.05	1.05	1.05	1.02	1.02	1.63	Pass
Right B	1.23	1.24	1.14	1.13	1.15	1.13	1.03	1.06	1.04	1.05	1.05		Pass
Rear C	1.15	1.15	1.13	1.14	1.08	1.15	1.04	1.04	1.03	1.04	0.93		Pass
Front D	1.16	1.16	1.14	1.15	1.15	1.14	1.05	1.02	1.07	1.03	0.94		Pass
Top E	1.14	1.12	1.14	1.03	1.04	1.16	1.06	1.08	1.05	1.08	0.91		Pass
Below F	1.16	1.15	1.08	1.05	1.03	1.07	1.07	1.06	0.93	0.94	0.96		Pass

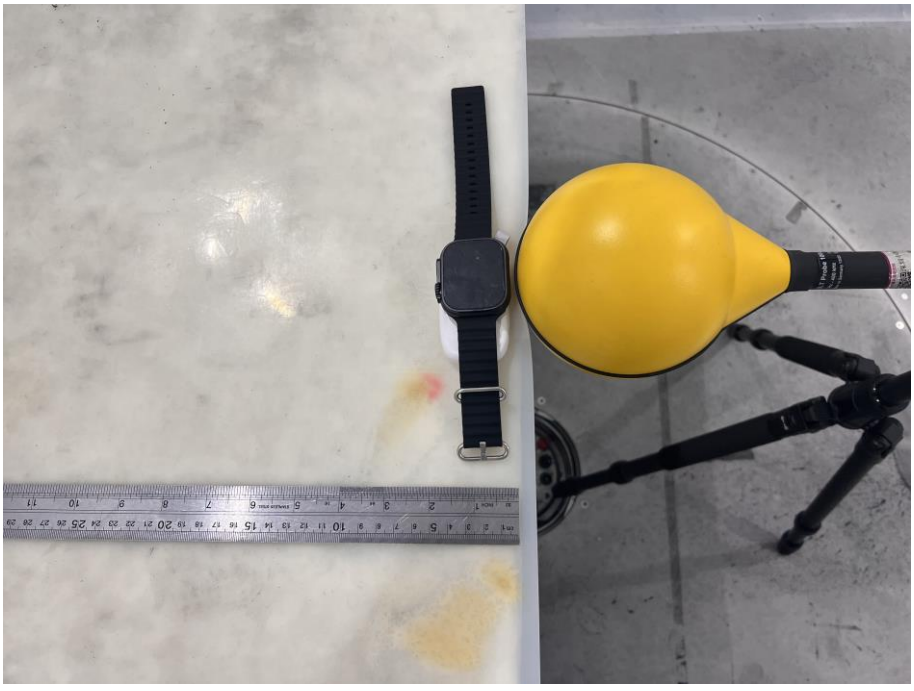
Note: 1A/m=1.26uT

9 Test Set-up Photo

0cm

Front

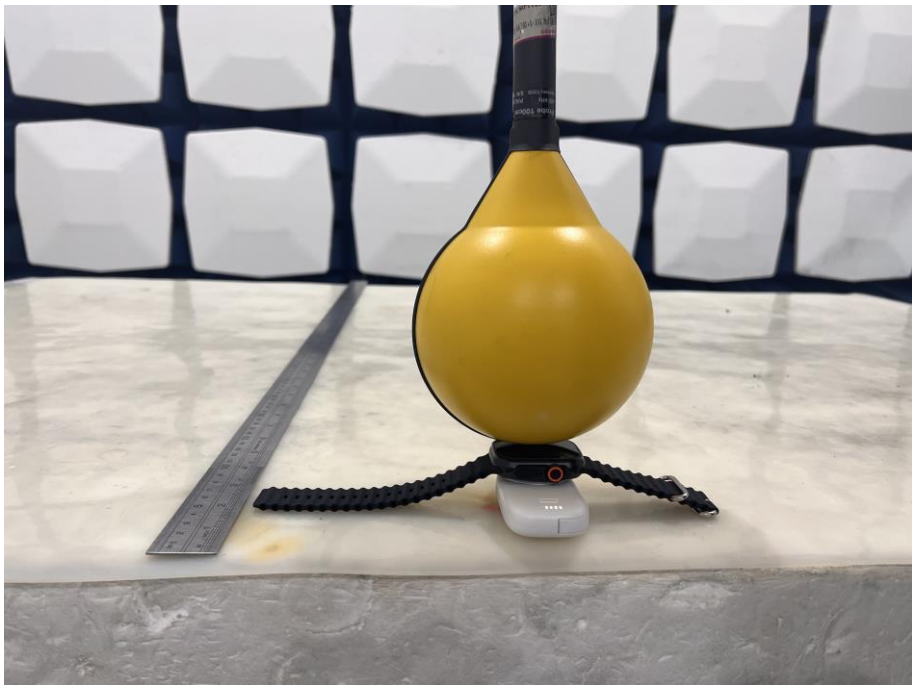
Left



Right

Rear

Top



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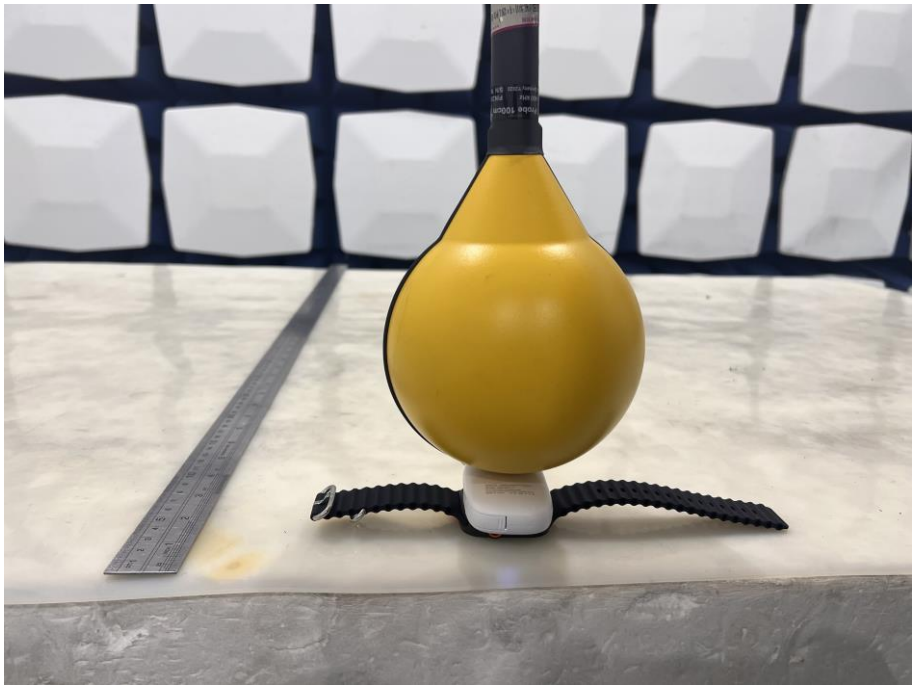
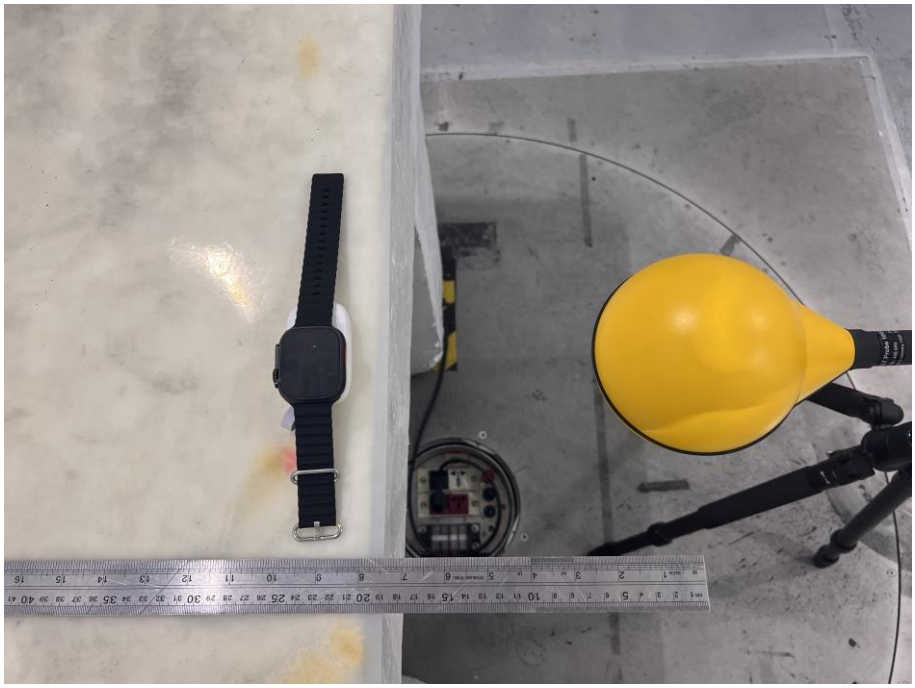
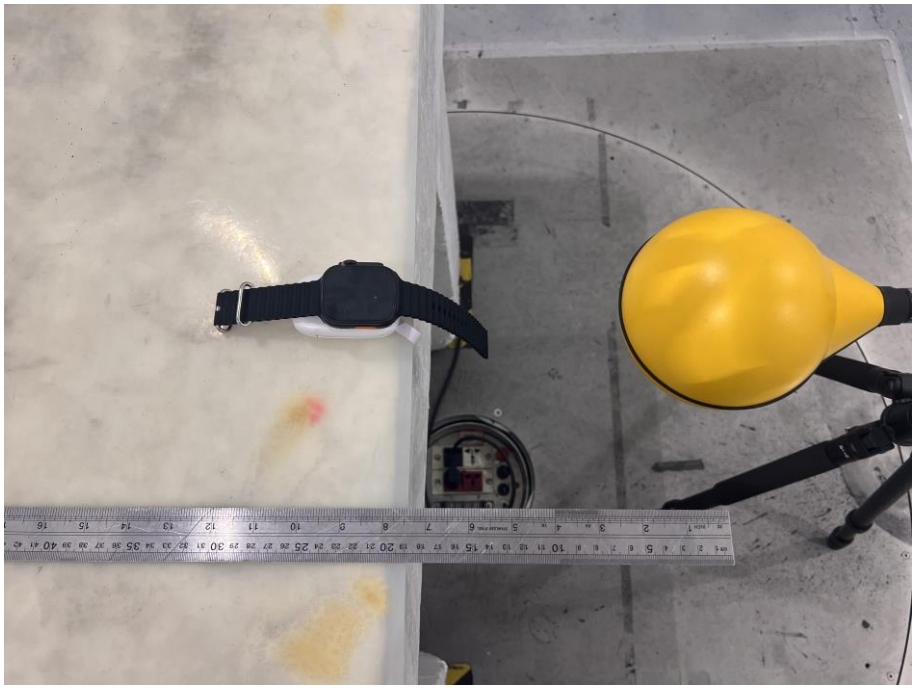


20cm

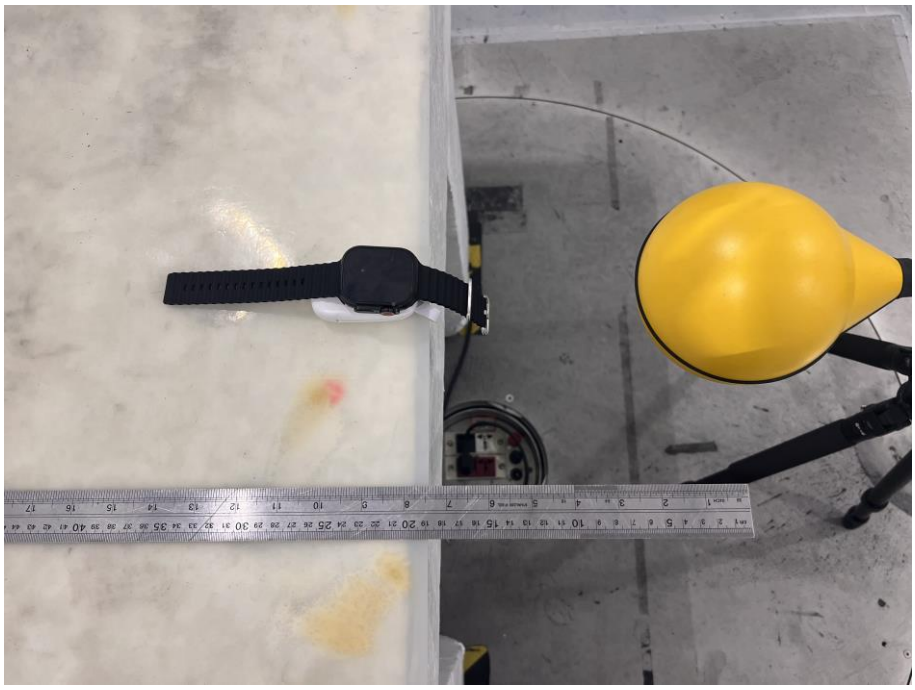
Left



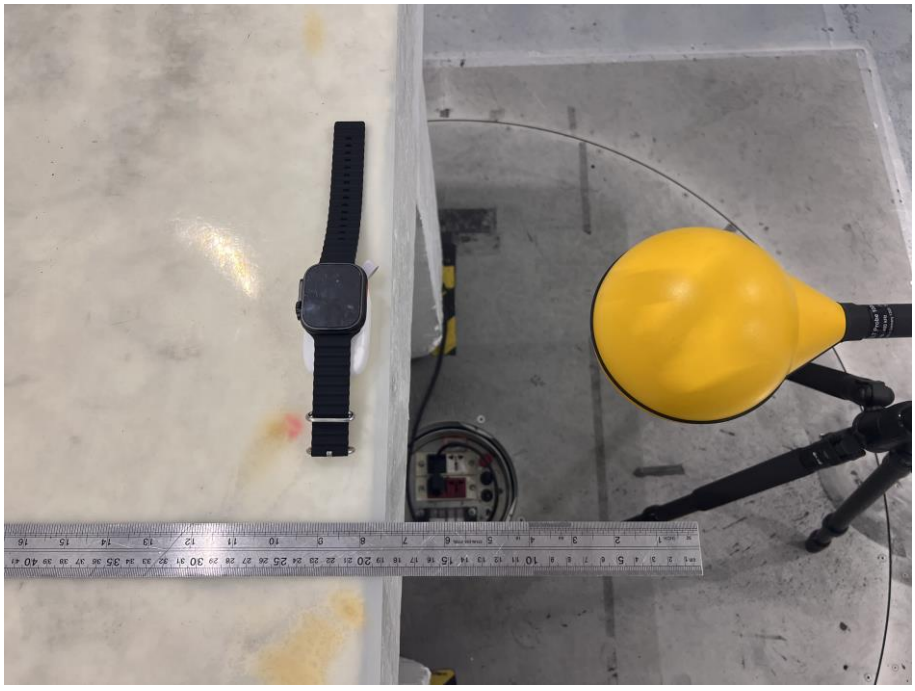
Front



Rear



Right



Top

Below