

FCC MPE TEST REPORT

FCC ID: 2A684-S18

Sample: 3 in 1 Magnetic Wireless Charger

Trade Name:  YUYI 羽翼

Main Model: S18

Additional Model: N/A

Report No.: 23080106ER-62

Prepared for

Shenzhen Yuyi Intelligent Electronics Co., Ltd.
601, BLDG. C, Weihuada IND. Park, No. 5, Lirong Road, Xinshi, Dalang,
Longhua, Shenzhen, China

Prepared by

Shenzhen ZKT Technology Co., Ltd.
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TEST RESULT CERTIFICATION

Applicant.....: Shenzhen Yuyi Intelligent Electronics Co., Ltd.
 Address.....: 601, BLDG. C, Weihuada IND. Park, No. 5, Lirong Road, Xinshi, Dalang, Longhua, Shenzhen, China

Manufacturer: Shenzhen Yuyi Intelligent Electronics Co., Ltd.
 Address.....: 601, BLDG. C, Weihuada IND. Park, No. 5, Lirong Road, Xinshi, Dalang, Longhua, Shenzhen, China

Product description

Product.....: 3 in 1 Magnetic Wireless Charger

Trade Name: **YUYI** 羽翼

Model Name.....: S18

Test Methods: FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

This device described above has been tested by Shenzhen ZKT Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements.

And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests: Aug. 01, 2023 ~ Aug. 09, 2023

Date of Issue: Aug. 10, 2023

Test Result: Pass

Tested by: Tom Zou
 Tom Zou

Reviewer: Jackson Fang
 Jackson Fang

Approved: Lake Xie
 Lake Xie

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

Test List							
ANT	Frequency (KHz)	ANT	Frequency (KHz)	ANT	Frequency (KHz)	ANT	Frequency (KHz)
Phone coil	121.8	Watch coil	133.6	Earphone coil 1	148.4	Earphone coil 2	132.5

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

1. SUMMARY OF TEST RESULTS

1.1 Test procedures according to the technical standards:

FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01 v03(3)(3)	Electric Field Strength (E) (V/m)	N/A	
	Magnetic Field Strength (H) (A/m)	PASS	

Compliant with KDB680106 D01 RF Exposure Wireless Charging Apps v03 section 5, b:

- a) Power transfer frequency is less than 1MHz.
Yes, the working frequency is 110-205kHz.
- b) Output power from each primary coil is less than or equal to 15 watts.
Yes, the maximum output power is 15 watts.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
Yes, four primary coils can work at the same time to charge three clients.
- d) Client device is placed directly in contact with the transmitter.
Yes, client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
Yes, EUT is for mobile exposure conditions only.
- f) 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, EUT h-field strengths levels are less than 50% of the MPE limit.

1.2 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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.	Note
E-1	3 in 1 Magnetic Wireless Charger	N/A	S18	EUT
E-2	Adapter	Xiaomi	MDY-11-EX	AE
E-3	Wireless Load 1 (15W/10W/7.5W/5W)	N/A	N/A	AE
E-4	Wireless Load 2 (15W/10W/7.5W/5W)	N/A	N/A	AE
E-5	Wireless Load 3(2.5W)	N/A	N/A	AE

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	Radiated Measurement (9KHz-30MHz)	± 2.50 dB
2	Temperature	± 0.5 °C
3	Humidity	± 2 %

1.4 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2024
Magnetic Field Meter	NARDA	ELT-400	1–400kHz	Jan. 01, 2024
Magnetic Probe	NARDA	HF-3061	300kHz–30MHz	Jan. 01, 2024
Magnetic Probe	NARDA	HF-0191	27–1000MHz	Jan. 01, 2024
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2024
Electric Field Meter	COMBINOVA	EFM 200	5Hz–400kHz	Jan. 01, 2024
E-Field Probe	NARDA	EF-0391	100kHz–3GHz	Jan. 01, 2024
E-Field Probe	NARDA	EF-6091	100MHz–60GHz	Jan. 01, 2024

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

2. MAXIMUM PERMISSIBLE EXPOSURE

2.1 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.

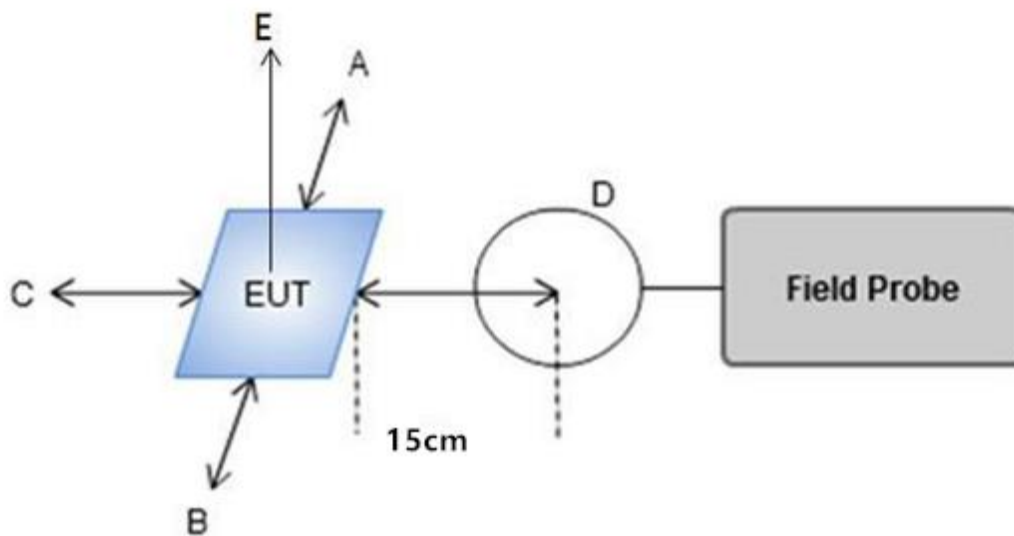
2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03.

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.

2.2 TEST PROCEDURE

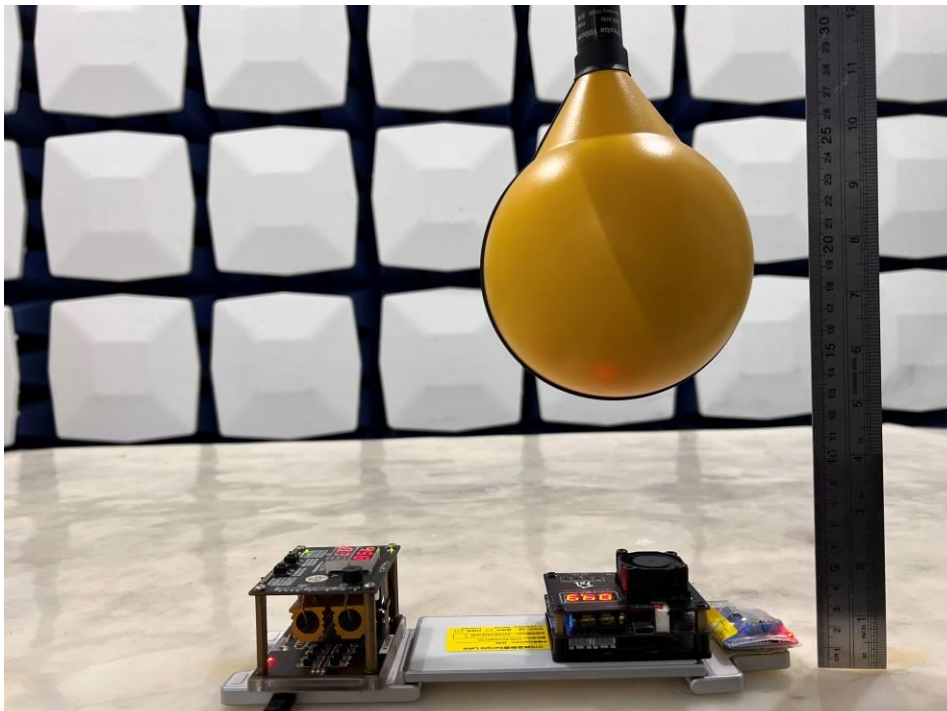
For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be at 15 cm surrounding the device and 20 cm above the top surface. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair at 15 cm surrounding the device and 20 cm above the top surface.

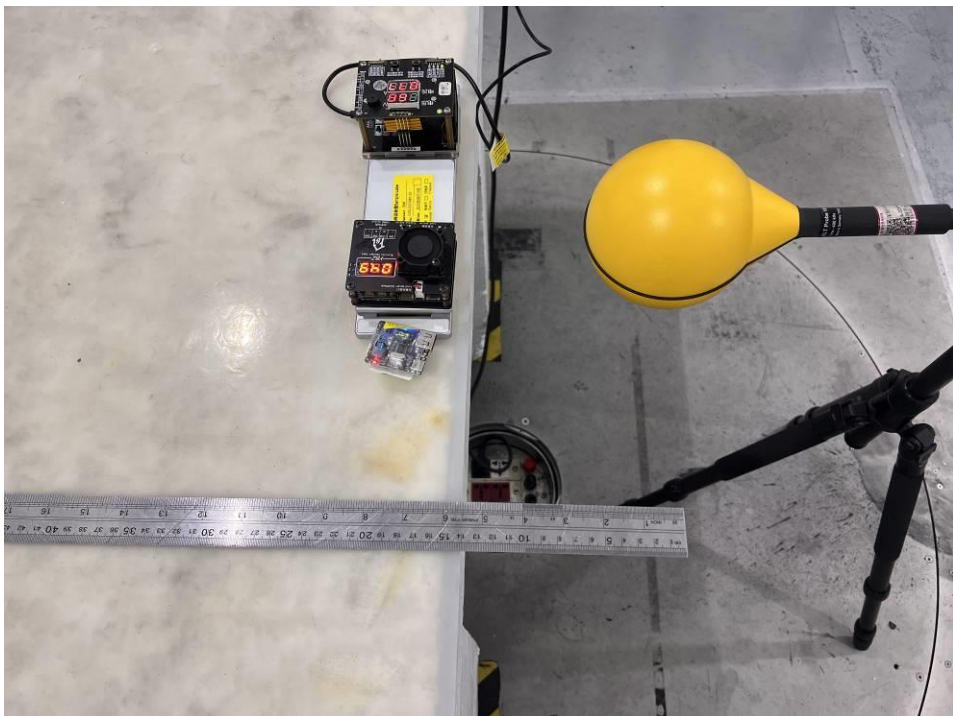
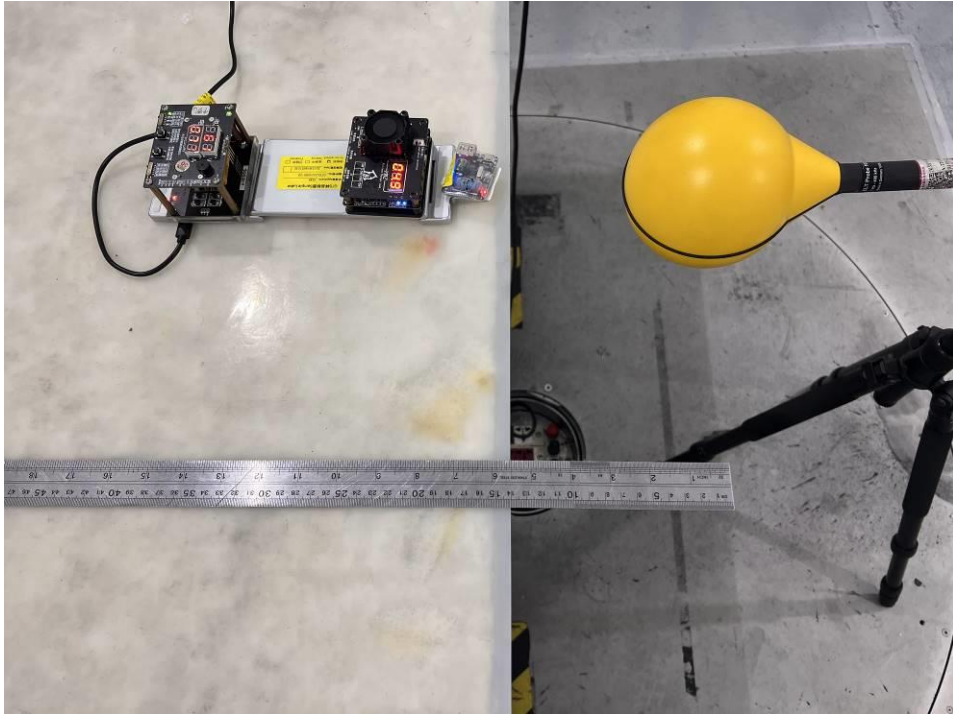
2.3 SET UP

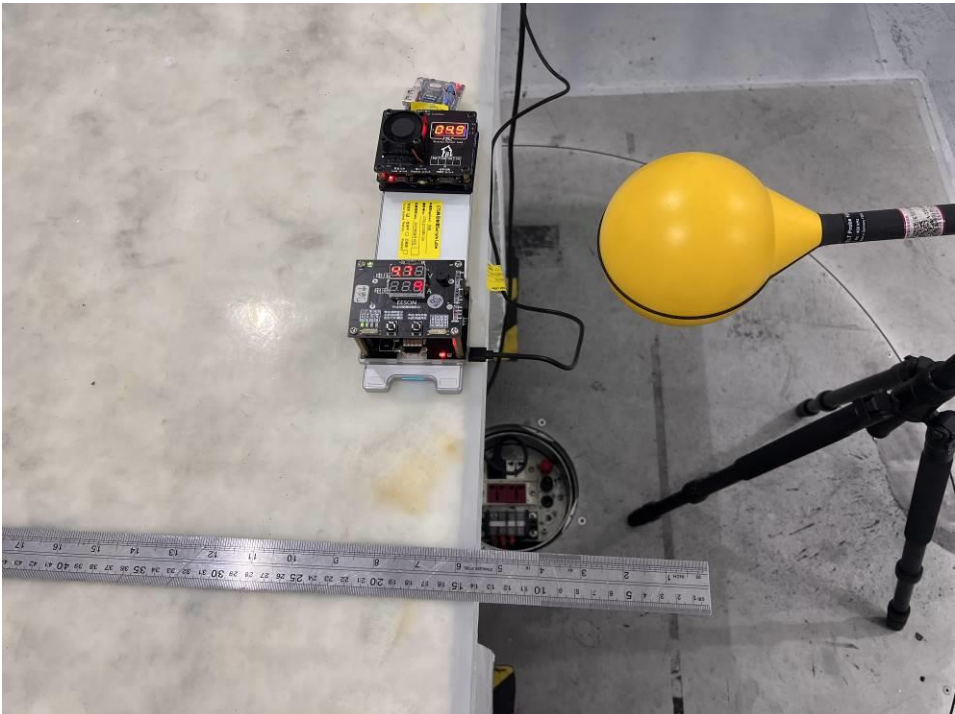
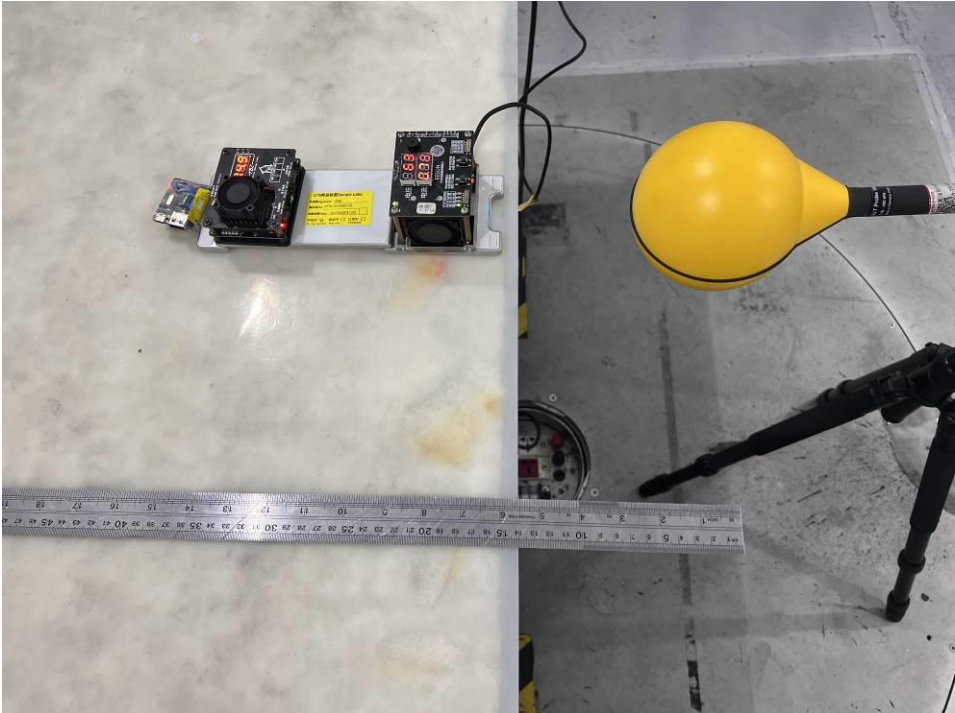


2.4 TEST PHOTO

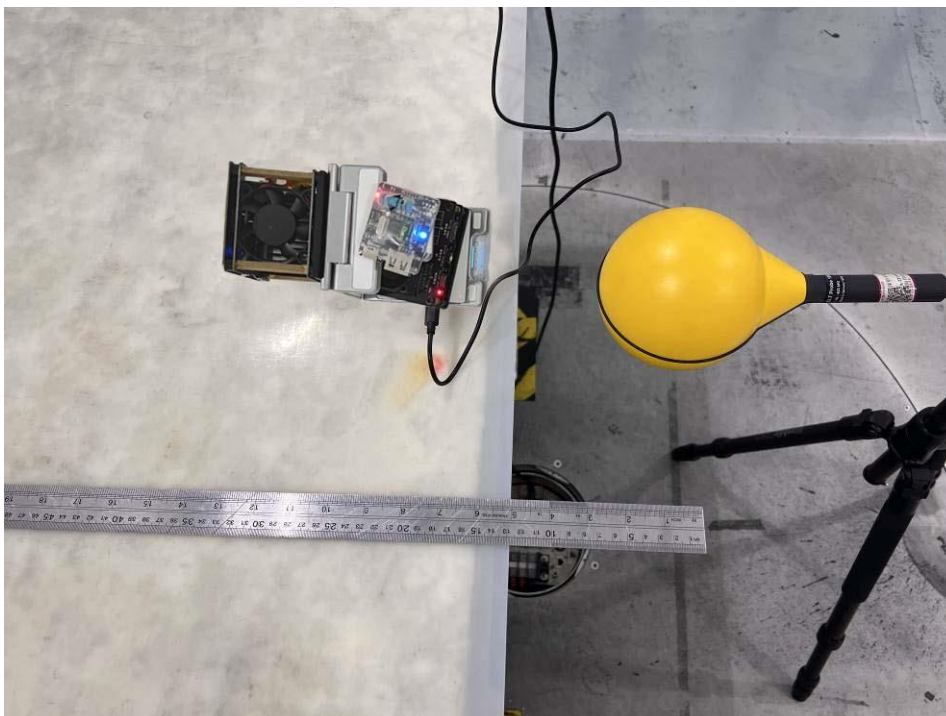
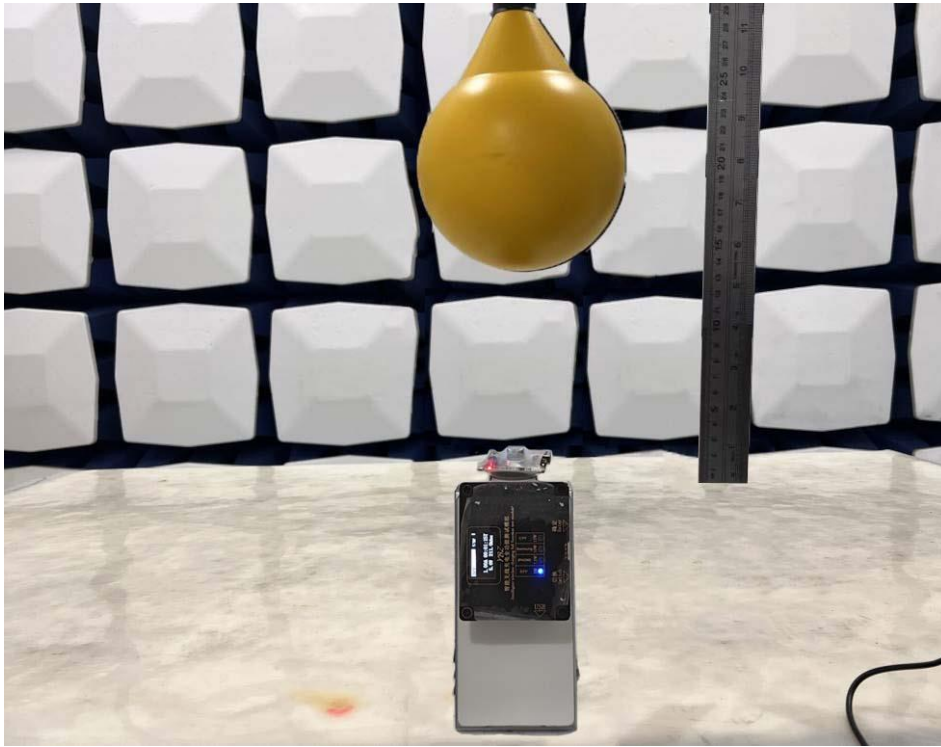
Phone coil + Earphone coil 1 + Watch coil:

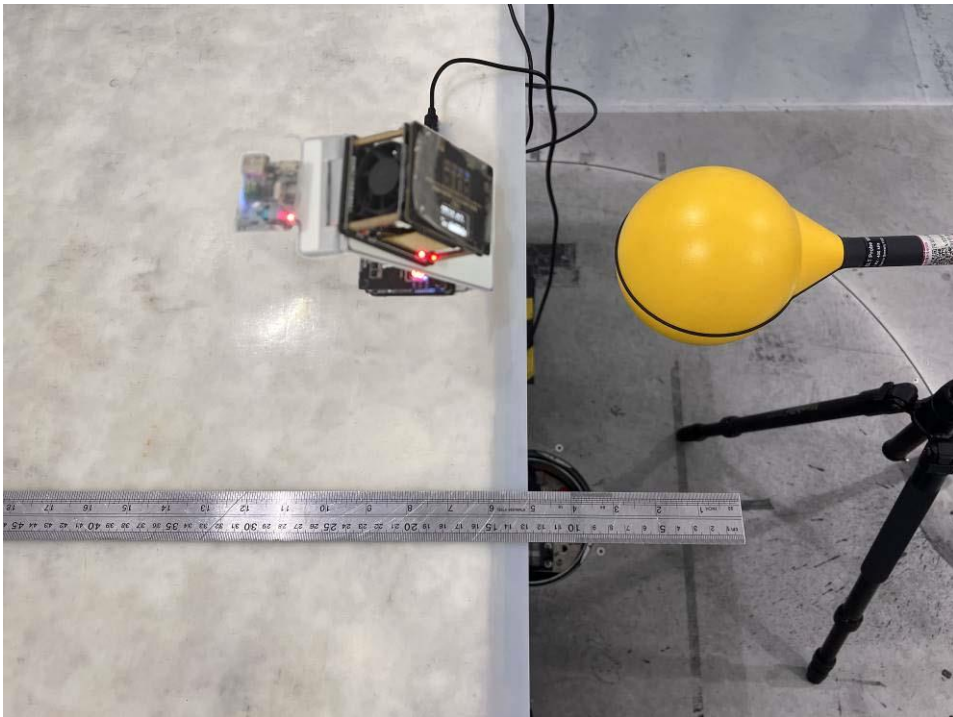
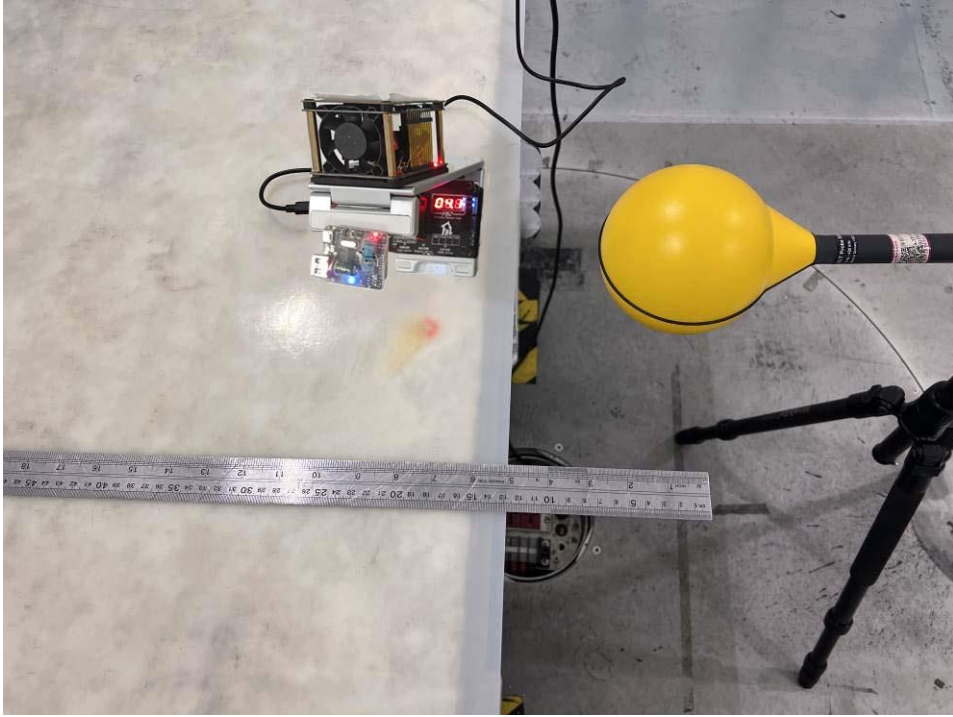


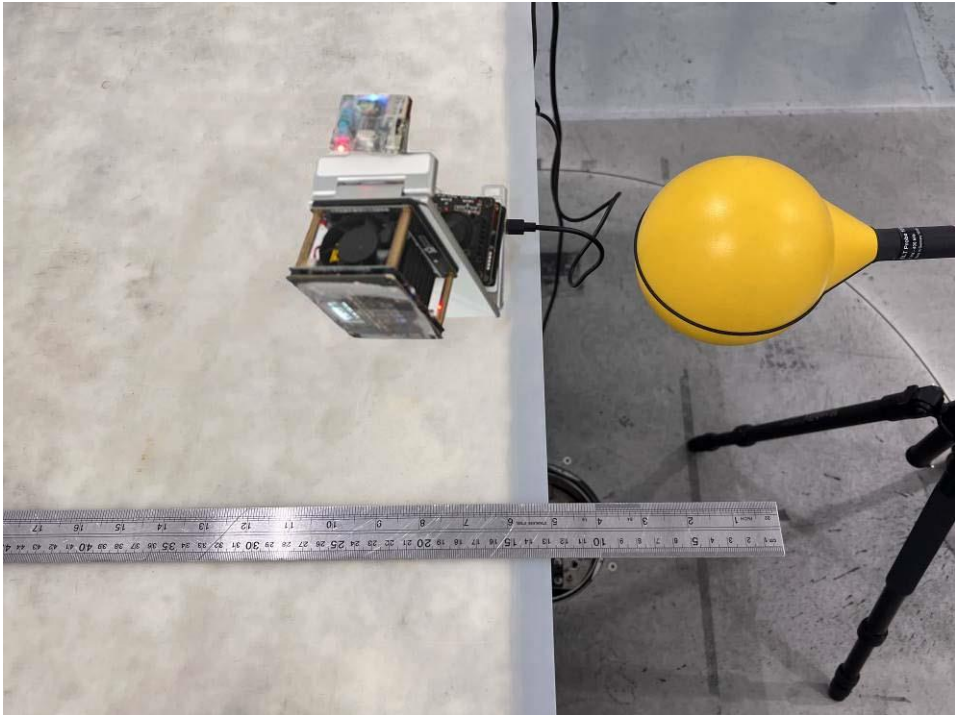




Phone coil + Earphone coil 2 + Watch coil:







3. RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

Phone coil + Earphone coil 1 + Watch coil:

For Full load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.14	0.21	0.19	0.16	0.15	/	/
A/m	0.11	0.17	0.15	0.13	0.12	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

For Half load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.17	0.15	0.18	0.14	0.13	/	/
A/m	0.14	0.12	0.14	0.11	0.10	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

For No load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.13	0.15	0.16	0.12	0.11	/	/
A/m	0.10	0.12	0.13	0.10	0.09	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

Phone coil + Earphone coil 2 + Watch coil:

For Full load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.16	0.18	0.21	0.15	0.17	/	/
A/m	0.13	0.14	0.17	0.12	0.14	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

For Half load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.15	0.13	0.17	0.16	0.12	/	/
A/m	0.12	0.10	0.14	0.13	0.10	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

For No load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.14	0.18	0.15	0.13	0.12	/	/
A/m	0.11	0.14	0.12	0.10	0.10	0.815	1.63

Note: Calculation: $A/m = uT/1.25$

*****THE END*****