

FCC MPE TEST REPORT

FCC ID: 2A684-S16

Product Name: 3 in 1 Magnetic Wireless Charger

Trade Mark: N/A

Main Model: S16

Additional Model: S17, OP-001, OP-002, OP-003

Report No.: UNIA22060114ER-62

Prepared for

Shenzhen Yuyi Intelligent Electronics Co., Ltd.

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Prepared by

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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 Name.....: 3 in 1 Magnetic Wireless Charger
Trade Mark.....: N/A
Model Name.....: S16, S17, OP-001, OP-002, OP-003

Standards: FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

This device described above has been tested by Shenzhen United Testing 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: Jun. 01, 2022 ~ Jun. 08, 2022

Date of Issue: Jun. 10, 2022

Test Result: Pass

Prepared by:

kahn.yang

Kahn yang/Supervisor

Reviewer:

kelly cheng

Kelly Cheng/Supervisor

Approved & Authorized Signer:

liuze

Liuze/Manager

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

Channel List			
Channel	Frequency(KHz)	Channel	Frequency(MHz)
01	125		

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)	PASS	
	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 125KHz.

b) Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of mobile phone Charging Port is 15 watts, others are 5 watts and 3 watts.

c) 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, three 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 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)	$\pm 2.50\text{dB}$
2	Temperature	$\pm 0.5^\circ\text{C}$
3	Humidity	$\pm 2\%$

1.3 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2023
Magnetic Field Meter	NARDA	ELT-400	1–400kHz	Jan. 01, 2023
Magnetic Probe	NARDA	HF-3061	300kHz–30MHz	Jan. 01, 2023
Magnetic Probe	NARDA	HF-0191	27–1000MHz	Jan. 01, 2023
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2023
Electric Field Meter	COMBINOVA	EFM 200	5Hz–400kHz	Jan. 01, 2023
E-Field Probe	NARDA	EF-0391	100kHz–3GHz	Jan. 01, 2023
E-Field Probe	NARDA	EF-6091	100MHz–60GHz	Jan. 01, 2023

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.

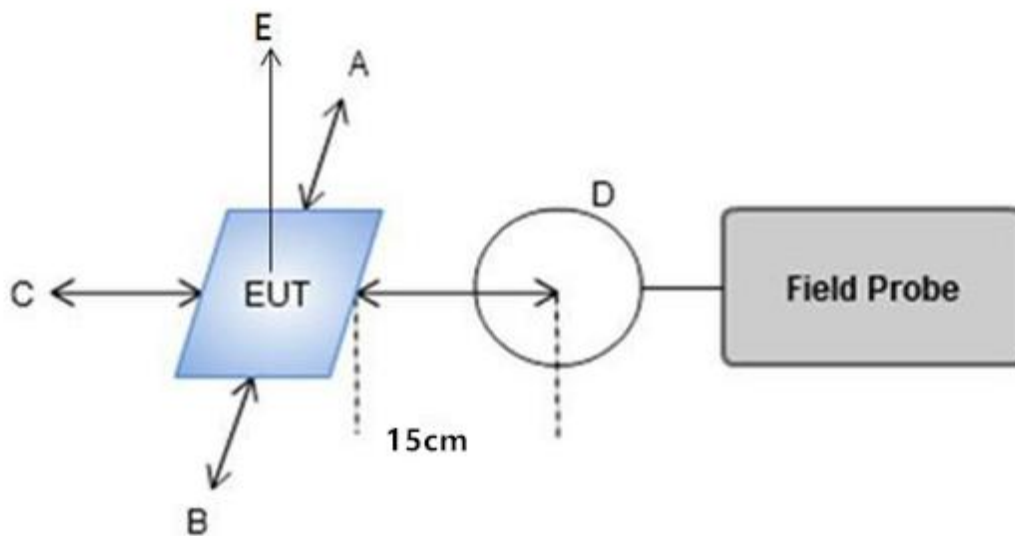
2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03.

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.

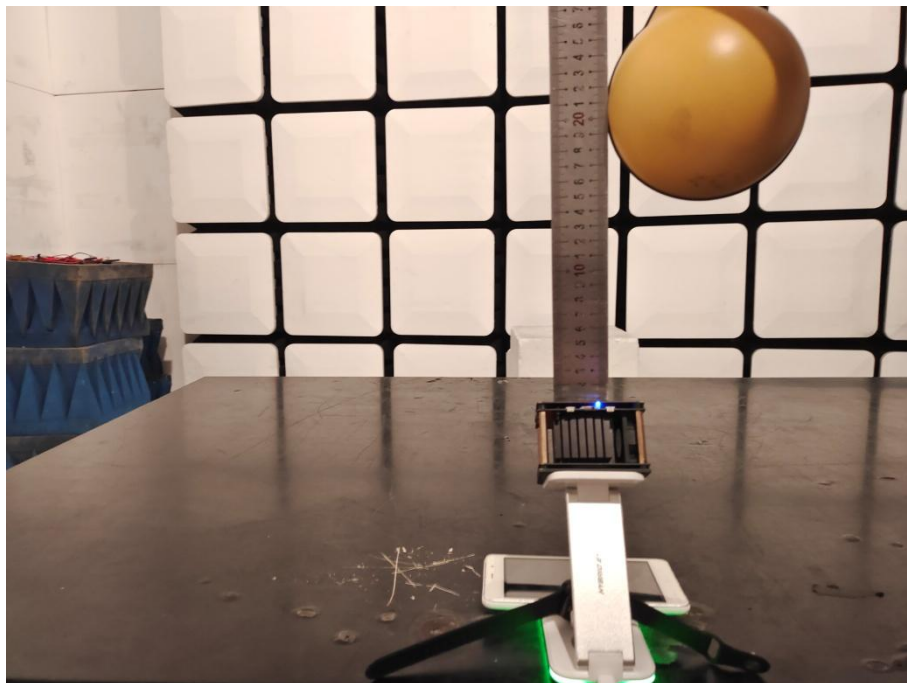
2.2 TEST PROCEDURE

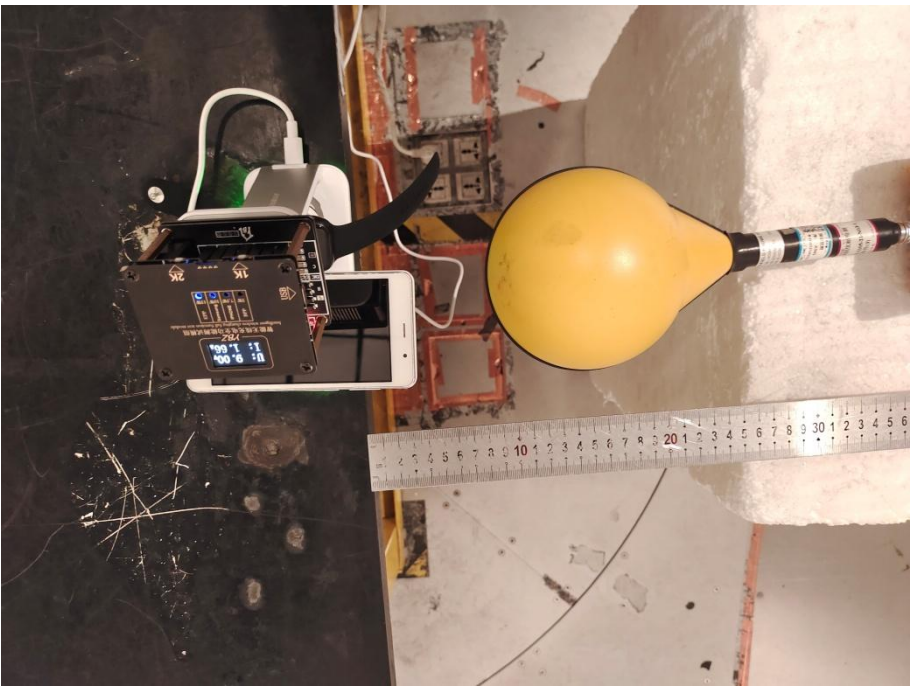
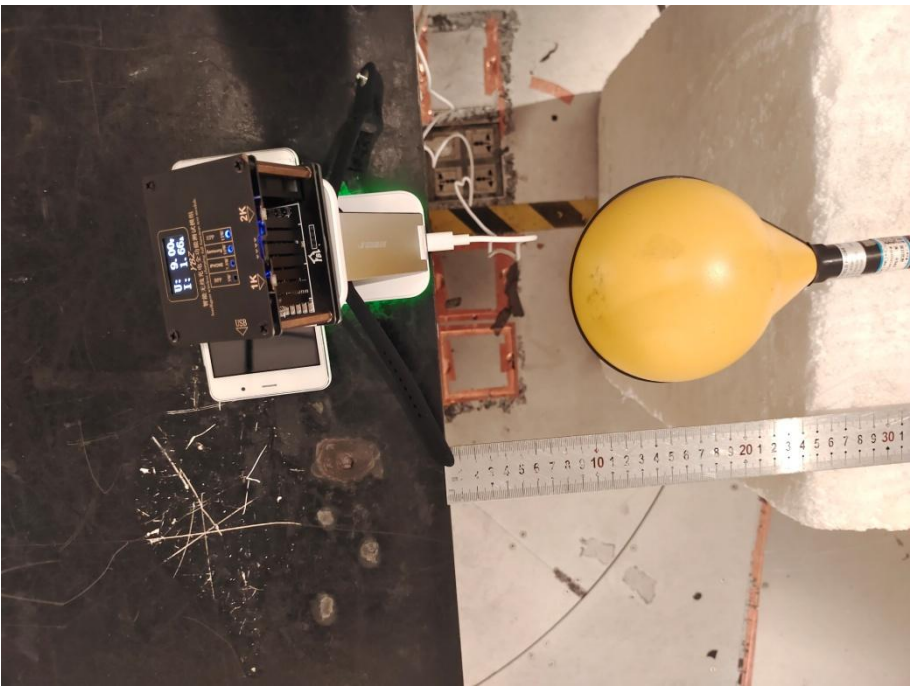
For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be at 15 cm surrounding the device and 20 cm above the top surface. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should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

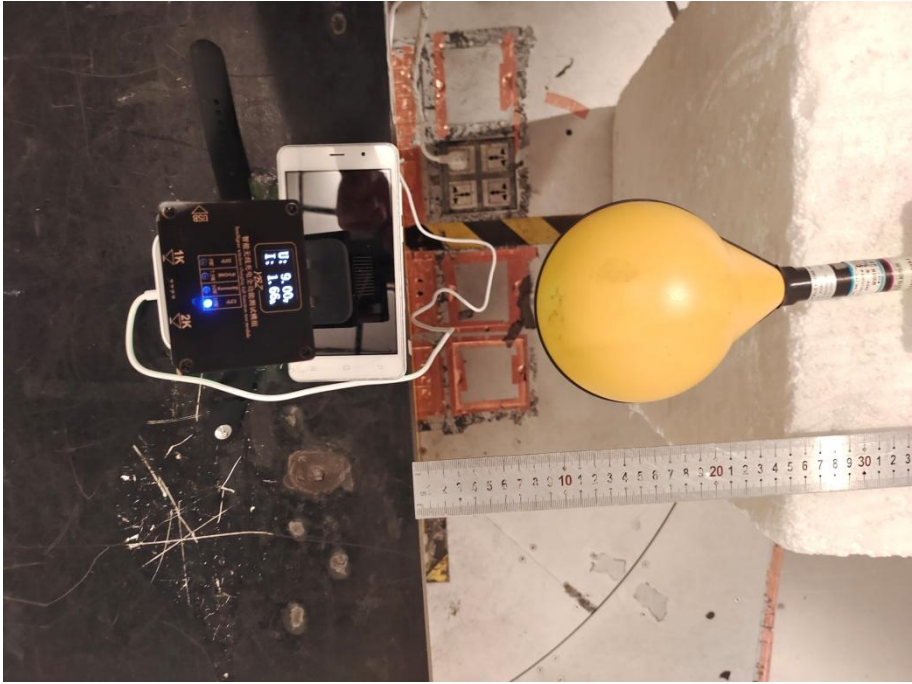
2.3 SET UP



2.4 TEST PHOTO







3. RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

For Full load mode:

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
0.125	1.12	1.10	1.12	1.18	1.18	307	614

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
0.125	0.16	0.16	0.18	0.18	0.18	0.815	1.63

For Half load mode:

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
0.125	1.16	1.17	1.17	1.18	1.16	307	614

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
0.125	0.16	0.16	0.18	0.20	0.20	0.815	1.63

For No load mode:

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
0.125	1.18	1.16	1.20	1.20	1.22	307	614

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

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
0.125	0.20	0.18	0.20	0.18	0.20	0.815	1.63

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