

FCC MPE TEST REPORT

FCC ID: 2AXKKTYH-60042

Product: Magnetic wireless power bank
Trade Name: N/A
Model Name: TYH-60042
Serial Model: N/A
Report No.: UNIA20071502ER-01

Prepared for

Shenzhen Tongyinhai Precision Electronics Co. LTD. Huizhou Branch
Plant 27 , xingwang street, lilin village, lilin town, zhongkai high tech zone,
huizhou China

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name.....: Shenzhen Tongyinhai Precision Electronics Co. LTD. Huizhou Branch

Address.....: Plant 27 , xingwang street, lilin village, lilin town, zhongkai high tech zone, huizhou China

Manufacture's Name.....: Shenzhen Tongyinhai Precision Electronics Co. LTD. Huizhou Branch

Address.....: Plant 27 , xingwang street, lilin village, lilin town, zhongkai high tech zone, huizhou China

Product description

Product name.....: Magnetic wireless power bank

Trade Mark.....: N/A

Model and/or type reference .: TYH-60042

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.....: Jul. 15, 2020 ~Sep. 16, 2020

Date of Issue.....: Sep. 16, 2020

Test Result.....: Pass

Prepared by:

Bob Liao

Bob liao/Editor

Reviewer:

Kahn Yang

Kahn yang/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.

ChannelList			
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 Appsv03

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v03(3)(3)	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

Note:1:Charging frequency is less than 1 MHz;

Yes, The working frequency of the prototype is 125KHz.

2:The output power of each primary coil is less than 15 watts;

Yes, The maximum output power of the prototype is 5 watts.

3:The energy transfer only includes the primary and secondary coils. Some charging systems contain multiple primary coils, which can detect multiple charged products. The coupling of energy is only between the paired primary and secondary coils.

Yes, the transfer system includes only single primary and secondary coils.

4:Client device is placed directly in contact with the transmitter.

Yes.

5:Mobile exposure conditions only (mobile exposure conditions are not covered by this exclusion).

Yes, the EUT is for mobile exposure conditions only.

6:The aggregate H-field strengths at 15 cmsurrounding the device and 20cm above the top surface form all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Yes, the 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	All emissions, radiated (<30M)(9KHz-30MHz)	± 2.45 dB
2	Temperature	± 0.5 °C
3	Humidity	± 2 %

1.3 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	—	Sep. 01, 2020
Magnetic Field Meter	NARDA	ELT-400	1–400kHz	Sep. 01, 2020
Magnetic Probe	NARDA	HF-3061	300kHz–30MHz	Sep. 01, 2020
Magnetic Probe	NARDA	HF-0191	27–1000MHz	Sep. 01, 2020
Broadband Field Meter	NARDA	NBM-550	—	Sep. 01, 2020
Electric Field Meter	COMBINOVA	EFM 200	5Hz–400kHz	Sep. 01, 2020
E-Field Probe	NARDA	EF-0391	100kHz–3GHz	Sep. 01, 2020
E-Field Probe	NARDA	EF-6091	100MHz–60GHz	Sep. 01, 2020

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.

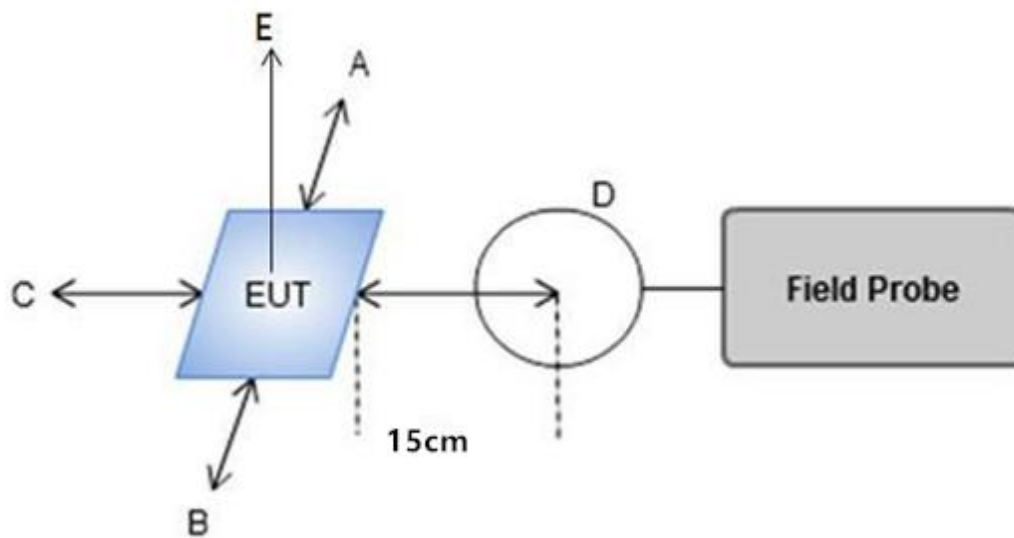
3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

3. TEST PROCEDURE

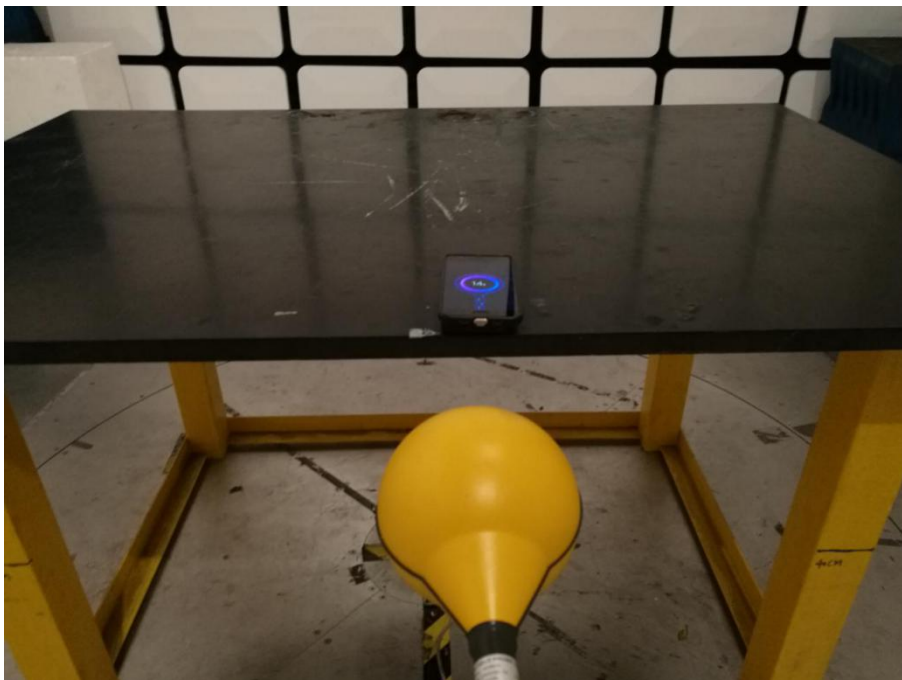
a. For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm.

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 at the 15 cm surrounding the device and 20 cm above the top surface.

4.1 TEST SETUP



4.2 TEST PHOTO



4.3 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	1.21	1.18	1.13	1.14	1.14	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	0.24	0.27	0.24	0.22	0.19	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	1.20	1.11	1.14	1.06	1.11	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	0.21	0.22	0.22	0.20	0.18	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	1.24	1.12	1.28	1.24	1.21	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	0.19	0.17	0.20	0.24	0.22	0.815	1.63

*****THEEND*****