

RF EXPOSURE REPORT

FCC ID: 2AZ92-P1P2

Report Reference No. : 22EFSS08012 07541
Date Sample(s) Received : 2022-08-15
Date of Tested : From 2022-08-15 to 2022-08-29
Date of issue : 2022-08-29

Applicant's name : ShenZhen MaiZhan Technology Co.,Ltd
Address : Room801, Building H, Chuangxin Yungu, No. 48, PaoTai
Street, LiSongLang No.1 Industrial Zone, GongMing
District, ShenZhen
Manufacturer : ShenZhen MaiZhan Technology Co.,Ltd

Equipment : WIRELESS CHARGING PENCIL-BOX
Trade Mark : N/A
Model : P1,P2,P3,P5,P6,P7,P8,P9
Ratings : I/P: DC 5V/1A
O/P: 5V/0.2A+1.5W

Testing Laboratory : DongGuan ShuoXin Electronic Technology Co., Ltd.
Address : Zone A, 1F, No. 6, XinGang Road YuanGang Street,
XinAn District, ChangAn Town, DongGuan City,
GuangDong, China
According : FCC CFR 47 part1,1.1310 KDB680106 D01v03R01

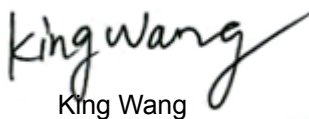
Test Engineer:


Blue Qiu

Responsible Engineer :


Smile Wang

Authorized Signatory:


King Wang

1,GENERAL DESCRIPTION OF EUT

Equipment	WIRELESS CHARGING PENCIL-BOX	
Brand Name	N/A	
Test Model	P1/P2	
Series Model	P1,P2,P3,P5,P6,P7,P8,P9	
Model Difference(s)	The P1、P3、P5、P7 is without battery, The P2、P6、P8、P9 is with battery.	
Hardware Version	V1.0	
Software Version	V1.0	
PowerSource	5V/1A	
Operation Frequency	110.5kHz-205kHz	
Modulation Technology	FSK	
Antenna Information	Antenna Type:Coil	Maximum Peak Gain: 0dBi

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1	N/A	N/A	Coil	N/A	0	

1.1, MEASUREMENT UNCERTAINTY

Test Item	Uncertainty
H-filed	$\pm 1.3\mu\text{T}$
E-filed	$\pm 12\%$

2, MAXIMUM PERMISSIBLE EXPOSURE

2.1 EQUIPMENT LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Electromagnetic field strength analyzer	Narda	ELT-400	L-0019	2022.11.23
2	Three-dimensional omnidirectional electric and magnetic field combo probe	Narda	ELT	N/A	2022.11.23

2.2 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, 680106 D01 RF Exposure Wireless Charging Apps v03

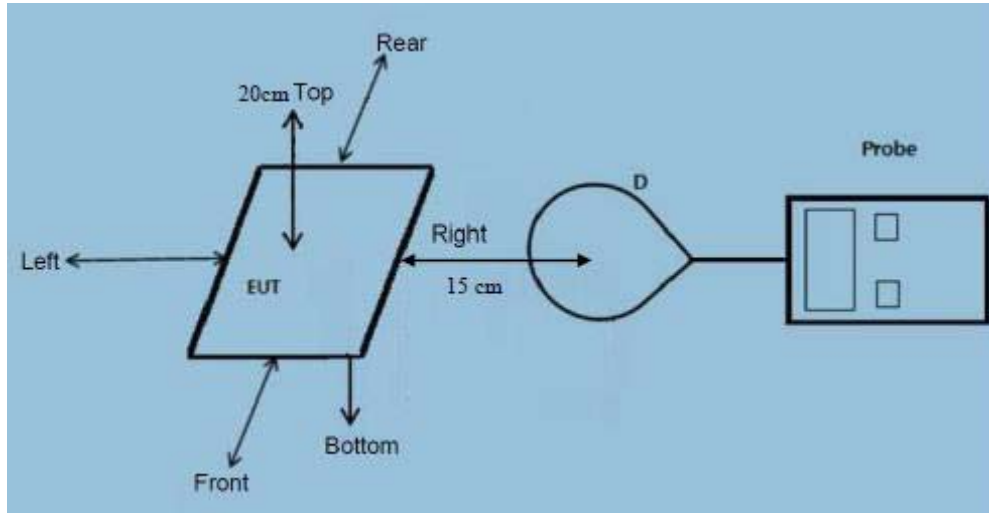
Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

Note 4: 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.

2.3 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 20 cm(Top) and 15cm(Edge). 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 20 cm(Top) and 15cm(Edge) measured from the center of the probe(s) to the edge of the device.

2.4 TEST SETUP



2.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
AE1	Pencil	Apple	/	/

2.6 TEST RESULTS

The EUT does comply with item 5 KDB680106 D01 v03.

(1) Power transfer frequency is less than 1 MHz.

(Conform)

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

(Conform)

(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.

(Conform)

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

(Conform)

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

(Conform)

(6) 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.

(Conform)

2.7 MAXIMUM PERMISSIBLE EXPOSURE

Model:P2

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
< 1% Battery	15cm	Front	2.685	0.012
< 1% Battery	15cm	Rear	2.761	0.015
< 1% Battery	15cm	Left	2.543	0.013
< 1% Battery	15cm	Right	2.639	0.011
< 1% Battery	20cm	Top	2.115	0.014
Limit			614	1.63
Margin Limit (%)			0.34	0.86

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
50% Battery	15cm	Front	2.059	0.023
50% Battery	15cm	Rear	2.176	0.015
50% Battery	15cm	Left	2.358	0.011
50% Battery	15cm	Right	2.761	0.052
50% Battery	20cm	Top	2.582	0.063
Limit			614	1.63
Margin Limit (%)			0.42	3.87

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
> 99% Battery	15cm	Front	2.554	0.016
> 99% Battery	15cm	Rear	2.637	0.011
> 99% Battery	15cm	Left	2.189	0.035
> 99% Battery	15cm	Right	2.016	0.068
> 99% Battery	20cm	Top	2.719	0.071
Limit			614	1.63
Margin Limit (%)			0.44	4.36

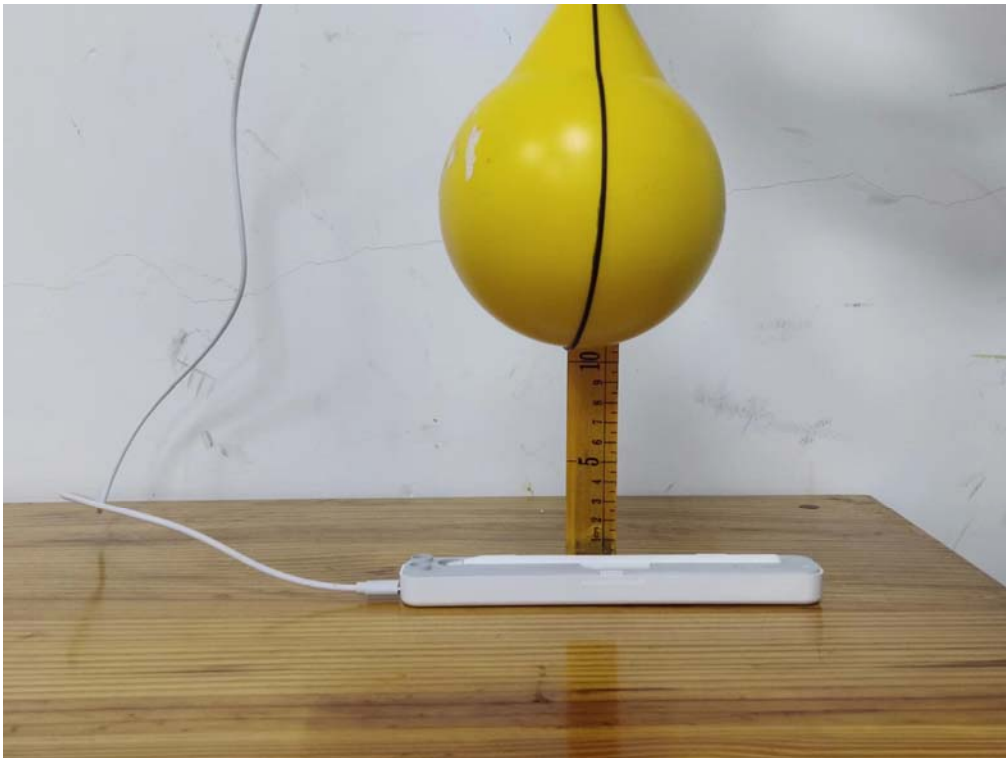
Model:P1

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
< 1% Battery	15cm	Front	1.325	0.012
< 1% Battery	15cm	Rear	1.765	0.009
< 1% Battery	15cm	Left	1.334	0.016
< 1% Battery	15cm	Right	1.446	0.014
< 1% Battery	20cm	Top	1.368	0.010
Limit			614	1.63
Margin Limit (%)			0.22	0.61

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
50% Battery	15cm	Front	1.869	0.013
50% Battery	15cm	Rear	1.564	0.012
50% Battery	15cm	Left	1.794	0.046
50% Battery	15cm	Right	1.582	0.038
50% Battery	20cm	Top	1.643	0.044
Limit			614	1.63
Margin Limit (%)			0.27	2.70

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
> 99% Battery	15cm	Front	1.526	0.023
> 99% Battery	15cm	Rear	1.239	0.011
> 99% Battery	15cm	Left	1.415	0.013
> 99% Battery	15cm	Right	1.446	0.018
> 99% Battery	20cm	Top	1.368	0.025
Limit			614	1.63
Margin Limit (%)			0.22	1.53

**MPE SETUP PHOTO
P1**



P2



END OF REPORT