RF Exposure Evaluation
FCC ID: 2AZFW-WT396

1 Measuring Standard

KDB 680106 D01 RF Exposure Wireless Charging Apps v03

2 Requirements

According to KDB680106 clause 5,b

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

--Yes, the device operated in the frequency range from 115 KHz to 205KHz

(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 15 W

(3) 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, the transfer system includes only single primary and secondary colis

(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).
--Yes

(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.
--Yes, the EUT field strength level are 50% x MPE limit.

3 Limits

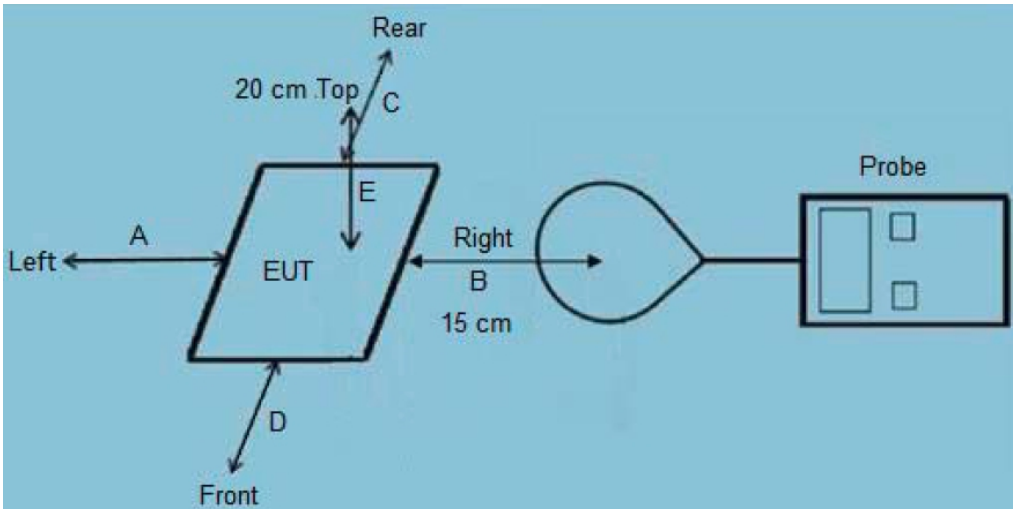
The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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).

4 Test Setup



5 Test Procedure

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

2) The measurement probe was placed at test distance (15 cm from all sides and 20 cm from the top) 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) were completed

4) The EUT was measured according to the dictates of KDB 680106 D01v03.
Remark：The EUT's test position A, B, C, D and E is valid for the E and H field measurements

6 Equipment list

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date
Exposure Level Tester	Narda	ELT-400	N03565	Mar 26,2021
Electric and Magnetic field probe 100cm2	Narda	ELT probe 100cm2	M8976	Mar 26,2021

7 Photo

8 Test Result

E-Filed Strength at 15 cm from the edges surrounding the EUT (V/m)

Battery power	Frequency Range(MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Limits (V/m)
1%	0.115-0.205	1.15	2.11	0.67	0.54	614
50%	0.115-0.205	1.17	1.24	0.44	0.67	614
95%	0.115-0.205	1.48	1.47	0.41	0.58	614
Stand-by	0.115-0.205	1.36	2.45	0.62	0.62	614

E-Filed Strength at 20 cm from the top of the EUT (V/m)

Battery power	Frequency Range(MHz)	Test Position E	Limits (V/m)
1%	0.115-0.205	1.25	614
50%	0.115-0.205	1.37	614
95%	0.115-0.205	1.39	614
Stand-by	0.115-0.205	1.41	614

H-Filed Strength at 15 cm from the edges surrounding the EUT (A/m)

Battery power	Frequency Range(MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Limits (A/m)
1%	0.115-0.205	0.61	0.57	0.71	0.53	1.63
50%	0.115-0.205	0.42	0.31	0.70	0.52	1.63
95%	0.115-0.205	0.54	0.34	0.62	0.44	1.63
Stand-by	0.115-0.205	0.36	0.52	0.63	0.57	1.63

H-Filed Strength at 20 cm from the top of the EUT (A/m)

Battery power	Frequency Range(MHz)	Test Position E	Limits (A/m)
1%	0.115-0.205	0.71	1.63
50%	0.115-0.205	0.64	1.63
95%	0.115-0.205	0.62	1.63
Stand-by	0.115-0.205	0.54	1.63

Tested by: Duke Qian Reviewed by: Kait Chen

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