

# RF Exposure Evaluation

## FCC ID: 2A2DPDC-LED1028BT

### 1. Client Information

<b>Applicant</b>	:	FOSHAN NANHAI JINGREN HARDWARE CO LTD
<b>Address</b>	:	NO.4 Shandunhu Avenue Jinsha Danzhao Nanhai Foshan Guangdong.China.
<b>Manufacturer</b>	:	FOSHAN NANHAI JINGREN HARDWARE CO LTD
<b>Address</b>	:	NO.4 Shandunhu Avenue Jinsha Danzhao Nanhai Foshan Guangdong.China.

### 2. General Description of EUT

<b>EUT Name</b>	:	Makeup mirror with bluetooth	
<b>Models No.</b>	:	DC-LED1028BTBM, DC-LED1028BTWM	
<b>Sample ID</b>	:	20210615-28-1#	
<b>Model Different</b>	:	All these models are the same in the same PCB, layout and circuit, the only difference is the model name and appearance color.	
<b>Product Description</b>	:	Operation Frequency:	113KHz-205KHz
		Modulation Type:	ASK
		Antenna:	Coil Antenna
<b>Power Supply</b>	:	Input: DC 5V Wireless Output: 5W Max 3.7V by 2000mAh Li-ion Battery.	
<b>Software Version</b>	:	V2.6.2	
<b>Hardware Version</b>	:	V3.1	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	

**Note:** More test information about the EUT please refer the RF Test Report.



## RF Exposure Considerations

### 1. Measuring Standard

KDB 680106 D01 RF Exposure Wireless Charging App v03.

### 2. Requirements

According to the item 5.2 of KDB 680106 D01v03:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation:

- (1) Power transfer frequency is less than 1 MHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (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.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (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.

#### Limits For Maximum Permissible Exposure (MPE)

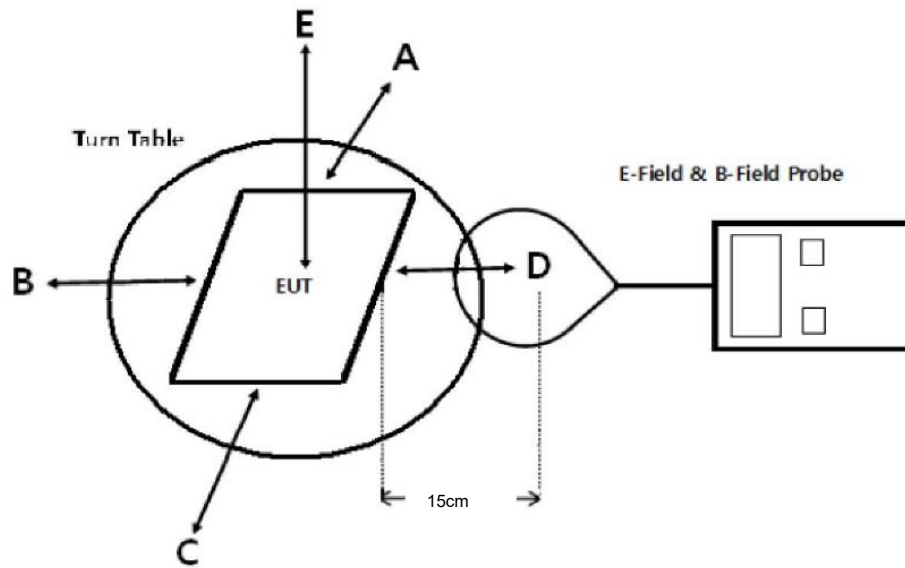
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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).

### 3. Test Setup



**Note:** The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.

### 4. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.
- 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 D01 v03.

**Remark:**

The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

### 5. Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Magnetic field meter	NARDA	ELT-400	EE030	Sep. 21, 2020	Sep. 22, 2021
Magnetic field probe	NARDA	ELT- probe 100cm <sup>2</sup>	EE034	Sep. 21, 2020	Sep. 22, 2021
Electric field probe	Narda S.T.S /PMM	EP 601	811ZX01000	Jun. 05, 2021	Jun. 04, 2021

### 6. Deviation From Test Standard

No deviation



## 7. Mode of operation during the test / Test peripherals used

Test Modes:		
TM1	AC/DC Adapter (5V/1A) + EUT + Mobile Phone (Battery Status: <1%)	Pre-tested
TM2	AC/DC Adapter (5V/1A) + EUT + Mobile Phone (Battery Status: <50%)	Pre-tested
TM3	AC/DC Adapter (5V/1A) + EUT + Mobile Phone (Battery Status: <99%)	Pre-tested
Note: All test modes were pre-tested, but we only recorded the worst case (TM1, TM2, TM3) in this report.		

## 8. Test Result

E-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

Charging Battery Level	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)					E-Field Strength 50% Limits (V/m)	E-Field Strength Limits (V/m)
		Test Position						
		A	B	C	D	E		
1%	0.118	7.585	8.978	9.697	7.732	7.371	307.0	614.0
50%	0.118	8.978	7.601	7.272	7.748	7.732	307.0	614.0
99%	0.118	7.697	8.256	7.978	8.553	7.585	307.0	614.0

H-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

Charging Battery Level	unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)					H-Field Strength 50% Limits (A/m)	H-Field Strength Limits (A/m)
			Test Position						
			A	B	C	D	E		
1%	uT	0.118	0.132	0.143	0.202	0.145	0.154	--	--
1%	A/m	0.118	0.105	0.114	0.161	0.116	0.123	0.815	1.63
50%	uT	0.118	0.143	0.142	0.170	0.155	0.146	--	--
50%	A/m	0.118	0.114	0.113	0.136	0.124	0.116	0.815	1.63
99%	uT	0.118	0.202	0.160	0.143	0.112	0.132	--	--
99%	A/m	0.118	0.161	0.128	0.114	0.089	0.105	0.815	1.63

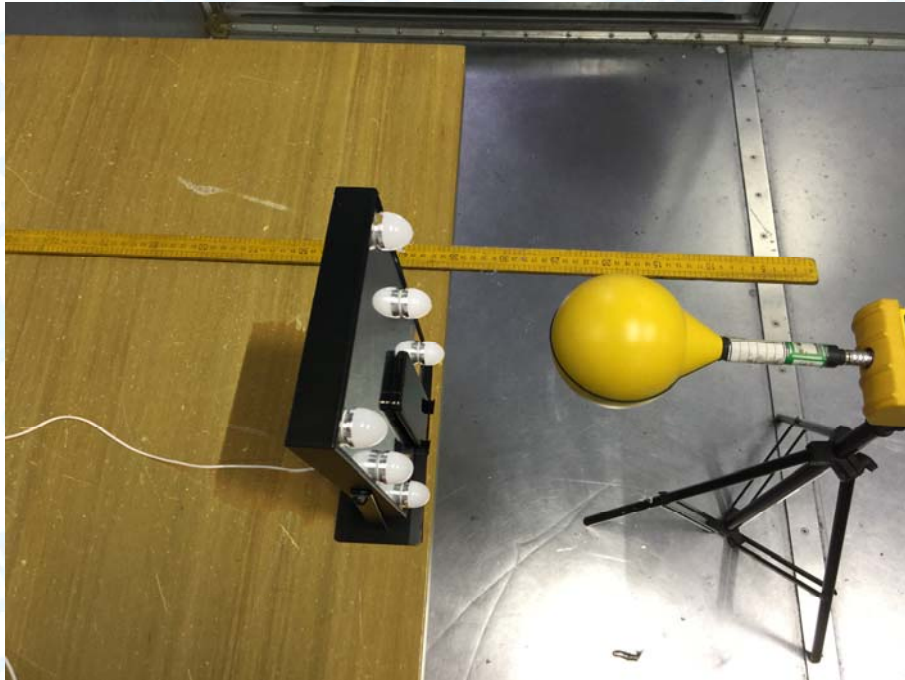
H-Field Strength at 20cm from the top surface of the EUT

Charging Battery Level	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position E		
1%	uT	0.118	0.205	--	--
1%	A/m	0.118	0.164	0.815	1.63
50%	uT	0.118	0.171	--	--
50%	A/m	0.118	0.136	0.815	1.63
99%	uT	0.118	0.203	--	--
99%	A/m	0.118	0.162	0.815	1.63

Note: A/m=uT/1.25

## 9. Test Set-up Photos

Test Set-up Photo



-----END OF REPORT-----