

RF Exposure Evaluation

FCC ID: 2A2DPDC-LED1028BT

1. Client Information

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

2. General Description of EUT

EUT Name	:	Makeup mirror with bluetooth
Model(s) No.	:	DC-LED1028BTBM, DC-LED1028BTWM
Model Different	:	All these models are the same in the same PCB, layout and circuit, the only difference is the model name and appearance color.
Product Description	Operation Frequency:	Bluetooth V5.0(BT): 2402~2480 MHz
	Number of Channel:	Bluetooth 5.0(BT): 79 channels
	RF Output Power:	1.851dBm (Max)
	Antenna Gain:	0dBi PCB Antenna
	Modulation Type:	GFSK, π /4-DQPSK
Power Rating	:	Input: DC5V 3.7V by 2000mAh Li-ion Battery.
Software Version	:	V2.6.2
Hardware Version	:	V3.1
Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

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

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance ≤ 5 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}] \leq 7.5.0$ for 10-g SAR

2. Calculation:

Test separation: 5mm						
Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.165	1±1	2	1.585	0.491	3.0
2.441	-1.734	-1±1	0	1.000	0.312	3.0
2.480	-3.347	-3±1	-2	0.631	0.199	3.0
Bluetooth Mode (π/4-DQPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.851	1±1	2	1.585	0.491	3.0
2.441	-1.097	-1±1	0	1.000	0.312	3.0
2.480	-2.772	-2±1	-1	0.794	0.250	3.0

Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

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