RF Exposure Evaluation

FCC ID: 2AOKR-ZL-2

1. Client Information

Applicant	:	Dongguan Zhanlian Plastic Manufacture Co.,Ltd.
Address	:	Building M, Dongxing Industrial Shanxia Zone, Hengli Town, Dongguan City, Guangdong Province, CN
Manufacturer	:	Dongguan Zhanlian Plastic Manufacture Co.,Ltd.
Address	:	Building M, Dongxing Industrial Shanxia Zone, Hengli Town, Dongguan City, Guangdong Province, CN

2. General Description of EUT

EUT Name	:	Multi-function Desktop Bluetooth Speaker	
Models No.	:	ZL-2	
Model Difference	:	----	
Product Description	:	Operation Frequency:	Bluetooth 5.0: 2402MHz~2480MHz
		RF Output Power:	GFSK:0.251dBm π/4-DQPSK:-1.052dBm
		Antenna Gain:	2dBi PCB Antenna
Power Supply	:	DC Voltage Supply from Adapter DC Voltage supplied by Li-ion battery.	
Power Rating	:	Input: DC 5V, 2A DC 3.7V by 1200mAh Li-ion battery	
Software Version	:	K-787_AC692x_SDK_release_V2.5.1_20190604_6928B_ZL-2_1F91456B	
Hardware Version	:	VER:1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

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

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

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:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤3.0 for 1-g SAR
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤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	0.251	0±1	1	1.995	0.618	**3.0**
2.441	0.203	0±1	1	1.995	0.618	**3.0**
2.480	-0.462	0±1	1	1.995	0.618	**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	-1.088	-1±1	0	1.585	0.491	**3.0**
2.441	-1.055	-1±1	0	1.585	0.491	**3.0**
2.480	-1.052	-1±1	0	1.585	0.491	**3.0**

Test separation: 5mm		
The worst RF Exposure Evaluation		
Worst Calculation Value Bluetooth Mode (π /4-DQPSK)	Total Calculation Value	Threshold Value
0.618	0.618	**3.0**

The worst RF Exposure Evaluation is calculated as *0.618 / cm2 < limit 3.0*, So standalone SAR measurements are not required.

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