RF Exposure Evaluation
FCC ID: 2AZPW-M4

1. Client Information

Applicant	:	SHENZHEN BOGASING TECHNOLOGY CO.,LTD.
Address	:	Enterprise Life Artificial Intelligence Yousong Garden, Longhua District, Shenzhen, China
Manufacturer	:	SHENZHEN BOGASING TECHNOLOGY CO.,LTD.
Address	:	Enterprise Life Artificial Intelligence Yousong Garden, Longhua District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Wireless Speaker	
Model(s) No.	:	M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, X, X2, X3, X4, X5, X6, X7, X8, X9, X10	
Model Different	:	All PCB boards and circuit diagrams are the same, the only difference is the color and appearance.	
Product Description	:	Operation Frequency:	Bluetooth V5.0(BT): 2402~2480 MHz
		Number of Channel:	Bluetooth 5.0(BT): 79 channels
		RF Output Power:	3.892dBm (Max)
		Antenna Gain:	0 dBi PCB Antenna
		Modulation Type:	GFSK, π/4-DQPSK
		Bit Rate of Transmitter:	1/2Mbps
Power Supply	:	Input: DC 5V/2A DC 7.4V by 6600mAh Li-ion battery	
Software Version	:	SW_V8(M4)_V2.0_20210105	
Hardware Version	:	SW-Z-XYC-V8-D-V1	
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.

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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	2.082	2±1	3.0	2.00	0.62	**3.0**
2.441	0.620	1±1	2.0	1.58	0.49	**3.0**
2.480	0.219	0±1	1.0	1.26	0.40	**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	3.892	4±1	5.0	3.16	0.98	**3.0**
2.441	2.388	2±1	3.0	2.00	0.62	**3.0**
2.480	2.084	2±1	3.0	2.00	0.63	**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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