RF Exposure Evaluation

FCC ID: 2ALAA-MBS14102

1. Client Information

Applicant : SHENZHEN JIAXINGWEI DIGITAL TECHNOLOGY CO.LTD

Address : 4F, 3Block, YuYe District, Zhoushi Road, XiXiang, BaoAn, Shenzhen, China

Manufacturer : DongGuan JiaXing Electronic&Technology Co.,Ltd

Address : No.4 Xing Sheng Road, HuangNiuPu Industri, HuangJiang, Town GongGuan, China

2. General Description of EUT

EUT Name	:	BLUETOOTH SPEAKER	
Models No.	:	MBS14102, SD-005B, SD-002	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.	
Product Description	:	Operation Frequency:	Bluetooth V2.0+EDR: 2402~2480 MHz
		Number of Channel:	Bluetooth: 79 Channels See Note 2
		Max Peak Output Power:	Bluetooth: 0.814 dBm(GFSK)
		Antenna Gain:	0.94 dBi PCB Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π/4-DQPSK(2 Mbps) 8-DPSK(3 Mbps)
Power Supply	:	DC power by USB cable. DC power by Li-ion battery.	
Power Rating	:	DC 5.0V by USB cable. DC 3.7V by 1200mAh Li-ion battery.	
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.

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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	0.814	0±1	1	1.259	0.390	**3.0**
2.441	0.590	0±1	1	1.259	0.393	**3.0**
2.480	0.112	0±1	1	1.259	0.397	**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	0.199	0±1	1	1.259	0.390	**3.0**
2.441	-0.149	0±1	1	1.259	0.393	**3.0**
2.480	-0.587	0±1	1	1.259	0.397	**3.0**
Bluetooth Mode (8-DPSK)						
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	0.105	0±1	1	1.259	0.390	**3.0**
2.441	-0.259	0±1	1	1.259	0.393	**3.0**
2.480	-0.688	0±1	1	1.259	0.397	**3.0**

So standalone SAR measurements are not required.

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