

# RF Exposure Evaluation

## FCC ID: 2AP7B-A10

### 1. Client Information

Applicant	:	Shenzhen Jiabaile Technology Co., Ltd.
Address	:	7th Floor, 5th Building, Fumin Industrial Zone, Qiaotou Community, Fuyong Street, Baoan District, Shenzhen, Guangdong, China
Manufacturer	:	Shenzhen Jiabaile Technology Co., Ltd.
Address	:	7th Floor, 5th Building, Fumin Industrial Zone, Qiaotou Community, Fuyong Street, Baoan District, Shenzhen, Guangdong, China

### 2. General Description of EUT

EUT Name	:	Bluetooth Speaker	
Models No.	:	A10	
Model Difference	:	N/A	
Product Description	:	Operation Frequency:	Bluetooth 4.2(BT): 2402MHz~2480MHz
		Number of Channel:	Bluetooth: 79 Channels
		RF Output Power:	GFSK:2.387dBm $\pi$ /4-DQPSK :2.415 dBm 8-DPSK :1.939 dBm
		Antenna Gain:	0.9dBi PCB Antenna
Power Supply	:	DC Voltage Supply from USB Port. DC Voltage supplied by Li-ion battery.	
Power Rating	:	Input: DC 5V 1A Supply from USB Port. DC Voltage supplied by 3.7V 300mAh Li-ion battery.	
Software Version	:	N/A	
Hardware Version	:	N/A	
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.



## 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  $\leq 5$  mm are determined by:

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

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

## 2. Calculation:

Test separation: 5mm						
1M 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	-0.820	-1±1	0	1.000	0.310	3.0
2.441	2.387	2±1	3	1.995	0.623	3.0
2.480	2.274	2±1	3	1.995	0.628	3.0
2M 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	-0.752	0±1	1	1.259	0.390	3.0
2.441	2.415	2±1	3	1.995	0.623	3.0
2.480	2.327	2±1	3	1.995	0.628	3.0
3M 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	-1.375	-1±1	0	1.000	0.310	3.0
2.441	1.939	1±1	2	1.585	0.495	3.0
2.480	1.701	1±1	2	1.585	0.499	3.0

Test separation: 5mm	
The worst RF Exposure Evaluation	
Worst Calculation Value	Threshold Value
0.628	3.0

The worst RF Exposure Evaluation is **0.628 / cm<sup>2</sup> < limit 3.0**, So standalone SAR measurements are not required.

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