RF Exposure Evaluation

FCC ID: 2AMVU-IPOP

1. Client Information

Applicant : Shenzhen Iotton Technologies Co., Ltd.

Address : Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, P.R. China

Manufacturer : Shenzhen Iotton Technologies Co., Ltd.

Address : Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, P.R. China

2. General Description of EUT

EUT Name	:	Portable Wireless Speaker	
Models No.	:	iPop, iPop * (* represents 2-digit characters, and each character can be anything ranging from 0 to 9, A to Z ,symbols like “- ”or “space” and different product models. And * is targeted at different sales territories, sales regions, sales methods, varied client groups, different market positioning and different product colors, and won’t affect the product safety and electromagnetic compatibility)	
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 V4.2: 2402~2480 MHz
		RF Output Power:	Bluetooth: 4.340dBm(8-DPSK)
		Antenna Gain:	1.8dBi FPC Antenna
Power Supply	:	DC Voltage supplied by USB cable DC Voltage supplied by Li-ion battery	
Power Rating	:	DC 5.0V by USB cable DC 3.7V by 4400mAh 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	2.533	2±1	3	1.995	0.618	**3.0**
2.441	2.853	2±1	3	1.995	0.623	**3.0**
2.480	2.852	2±1	3	1.995	0.628	**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	3.880	4±1	5	3.162	0.980	**3.0**
2.441	4.139	4±1	5	3.162	0.988	**3.0**
2.480	4.118	4±1	5	3.162	0.996	**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	4.044	4±1	5	3.162	0.980	**3.0**
2.441	4.340	4±1	5	3.162	0.988	**3.0**
2.480	4.315	4±1	5	3.162	0.996	**3.0**

So standalone SAR measurements are not required.

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