

RF Exposure Evaluation

FCC ID: 2AMVU-IQUTE-M3

1. Client Information

Applicant	:	Shenzhen Iotton Technologies Co.,Ltd.
Address	:	Qianhai Complex A201,Qianwan Road 1, Qianhai Shenzhen-Hongkong Coperation Zone,Shenzhen, China
Manufacturer	:	Shenzhen Iotton Technologies Co.,Ltd.
Address	:	Qianhai Complex A201,Qianwan Road 1, Qianhai Shenzhen-Hongkong Coperation Zone,Shenzhen, China

2. General Description of EUT

EUT Name	:	True wireless stereo earbuds
Models No.	:	iQute M3,iQute *
Model Difference	:	* 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. All these models are identical in the same PCB layout and electrical circuit, 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.
Product Description	Operation Frequency:	Bluetooth: 2402~2480 MHz
	RF Output Power:	Bluetooth: 0.932 dBm(Max) BLE: 2.419 dBm(Max)
	Antenna Gain:	2dBi Chip Antenna
Power Rating	:	DC 5.0V by USB. DC 3.7V by 0.185Wh 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 ≤ 5 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR}$$
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 7.5.0 \text{ for 10-g SAR}$$

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	-0.162	0±1	1	1.26	0.390	3.0
2.441	-1.985	0±1	1	1.26	0.393	3.0
2.480	0.747	0±1	1	1.26	0.397	3.0

Bluetooth Mode (Pi/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	-1.584	-1±1	0	1.00	0.310	3.0
2.441	-2.958	-2±1	-1	0.79	0.248	3.0
2.480	0.932	0±1	1	1.26	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	-1.589	-1±1	0	1.00	0.310	3.0
2.442	-2.035	-2±1	-1	0.79	0.248	3.0
2.480	0.869	0±1	1	1.26	0.397	3.0

BLE 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	2.419	2±1	3	1.995	0.618	3.0
2.442	2.266	2±1	3	1.995	0.623	3.0
2.480	1.514	2±1	3	1.995	0.628	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 / cm² < limit 3.0**, So standalone SAR measurements are not required.

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