

RF Exposure Evaluation

FCC ID: 2AMVU-QLYX

1. Client Information

Applicant : Shenzhen Iotlon Technologies Co., Ltd.
Address : Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, P.R. China
Manufacturer : Shenzhen Iotlon 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	:	QLYX	
Models No.	:	QLX_IO_1.1.5, QLX_IO_*****(** represents 1-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 V4.0(BLE): 2402~2480 MHz
		RF Output Power:	BLE: -2.106dBm
		Antenna Gain:	1.8dBi Ceramic Antenna
Power Supply	:	DC Voltage supplied by Button battery	
Power Rating	:	DC 3.0V by Button 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.

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						
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	-2.677	-2±1	-1	0.794	0.246	3.0
2.442	-2.106	-2±1	-1	0.794	0.248	3.0
2.480	-2.366	-2±1	-1	0.794	0.250	3.0

So standalone SAR measurements are not required.

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