

RF Exposure Evaluation

FCC ID: 2AILG-F18

1. Client Information

Applicant	:	NJY Science & Technology Co., Ltd
Address	:	#202 JiaDa R&D Building Lobby B, 5 Songpingshan Road, Shenzhen, China
Manufacturer	:	NJY Science & Technology Co., Ltd
Address	:	#202 JiaDa R&D Building Lobby B, 5 Songpingshan Road, Shenzhen, China

2. General Description of EUT

EUT Name	:	Smart Watch
Models No.	:	F18, F19, F20, F22, F23, F25, F26, F28, F29
Model Difference	:	All models are in the same PCB layout interior structure and electrical circuits, The only difference is appearance color.
Product Description	:	Operation Frequency: Bluetooth 4.2(BT): 2402MHz~2480MHz
	:	RF Output Power: BLE:-0.238 dBm
	:	Antenna Gain: 3.2dBi Ceramic Antenna
Power Supply	:	DC Voltage Supply from USB Line. DC Voltage supplied by Li-ion battery.
Power Rating	:	DC 5V 0.5A by USB Line DC 3.7V by 350mAh 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:

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

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

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	-0.238	-1±1	0	1.000	0.310	3.0
2.442	-0.432	-1±1	0	1.000	0.312	3.0
2.480	-1.020	-1±1	0	1.000	0.315	3.0

Test separation: 5mm		
The worst RF Exposure Evaluation		
Worst Calculation Value	Total Calculation Value	Threshold Value
Bluetooth Mode		
0.315	0.315	3.0

The worst RF Exposure Evaluation is calculated is $0.315 / cm^2 < limit 3.0$, So standalone SAR measurements are not required.

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