

RF Exposure Evaluation

FCC ID: 2A5HI-SW12

1. Client Information

Applicant	:	Shenzhen Tianpengyu Technology Co. Ltd
Address	:	Room 301, Building 16, Liangli Industrial Park, 78 Ainan Road, Longgang Community, Baolong Street, Longgang District, Shenzhen China
Manufacturer	:	Shenzhen Tianpengyu Technology Co. Ltd
Address	:	Room 301, Building 16, Liangli Industrial Park, 78 Ainan Road, Longgang Community, Baolong Street, Longgang District, Shenzhen China

2. General Description of EUT

EUT Name	:	Smart Watch
Model(s)	:	SW12, SW11, SW09, SW16, SW17, SW18, H02, H03, PR1, PR2, PR3, PR5, PR6, W7, W8, W9, S1, S2, S3
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is model name.
Product Description	Operation Frequency:	Bluetooth 4.0(BLE): 2402MHz~2480MHz
	Number of Channel:	Bluetooth 4.0(BLE): 40 channels
	Antenna Gain:	2dBi Wire Antenna
	Modulation Type:	GFSK
	Bit Rate of Transmitter:	1Mbps
Power Rating	:	Input: DC 5V DC 3.7V by 230mAh Rechargeable Li-ion battery
Software Version	:	0071.0300-1109
Hardware Version	:	V 1.4
Connecting I/O Port(S)	:	Please refer to the User's Manual
Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

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 (1Mbps)						
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	-4.112	-4 ± 1	-3	0.501	0.155	3.0
2.440	-5.1	-5 ± 1	-4	0.398	0.124	3.0
2.480	-6.12	-6 ± 1	-5	0.316	0.100	3.0

Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

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