



RF Exposure Evaluation

FCC ID: 2BB55-P1

1. Client Information

Applicant	:	Changsha Wanghou Jiangxiang Technology Co., Ltd
Address	:	Room 402-K595, Buliding 10, Fengxing Machinery and Electronics Industrial Park, No. 2 Longyuan 5th Road, Furong District, Changsha City, China
Manufacturer	:	Hunan Wuwei Intelligent Technology Co., Ltd
Address	:	711-714, Building 3, Xinkang Road (Miaosheng Incubation Port), Economic and Technological Development Zone, Chengjiao Street, Ningxiang City, Changsha City, Hunan Province,China

2. General Description of EUT

EUT Name	:	Smart watch	
Model(s) No.	:	P1, B5, B6, B7, B9, B8, B8Pro, B60, B61, B62, B63, B64, B65, B66, B67, B68, B69, P2, P3, P4, P5, P6, P7, P8, P9, D1, D2, D3, D4, D5, D6, D7, D8, D9, KM21, KM31, KM13Pro, KM20, KM15, X2C, X2C N2, X3C, X27, L1, L2, L3, L4, L5, L6, Z1, Z2, Z3, Z4, Z5, Z6	
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that appearance.	
Product Description	:	Operation Frequency:	Bluetooth 5.3: 2402MHz~2480MHz Bluetooth 5.3(BLE): 2402MHz~2480MHz
		Number of Channel:	Bluetooth 5.3: 79 channels Bluetooth 5.3(BLE):40 channels
		Antenna Gain:	-2.87dBi Wire Antenna
		Modulation Type:	GFSK, Pi/4-DQPSK Bluetooth LE:1/2Mbps
		Bit Rate of Transmitter:	1/2Mbps
Power Supply	:	Input: DC 5V/1A	
Li-ion Polymer Battery	:	DC 3.7V by 250mAh Rechargeable Li-ion battery	
Software Version	:	V1.0	
Hardware Version	:	V1.0	
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						
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	3.436	3±1	4	2.512	0.779	3.0
2.441	2.515	3±1	4	2.512	0.785	3.0
2.480	2.053	2±1	3	1.995	0.628	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	4.2	4±1	5	3.162	0.980	3.0
2.441	3.245	3±1	4	2.512	0.785	3.0
2.480	2.77	3±1	4	2.512	0.791	3.0
Bluetooth LE 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	3.436	3±1	4	2.512	0.779	3.0
2.440	2.417	2±1	3	1.995	0.623	3.0
2.480	1.925	2±1	3	1.995	0.628	3.0
Bluetooth LE Mode(2Mbps)						
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	3.535	4±1	5	3.162	0.980	3.0
2.440	2.643	3±1	4	2.512	0.785	3.0
2.480	2.171	2±1	3	1.995	0.628	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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