

RF Exposure Evaluation

FCC ID:2BMSW-LX307

1. Client Information

Applicant	:	Shenzhen Yuxiang Technology Co., Ltd
Address	:	Room 216, Building A, No. 33 Gonghe Industrial Road, Gongle Community, Xixiang Street, Bao'an District, Shenzhen, China
Manufacturer	:	Shenzhen Yuxiang Technology Co., Ltd
Address	:	Room 216, Building A, No. 33 Gonghe Industrial Road, Gongle Community, Xixiang Street, Bao'an District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Smart Watch	
Model(s) No.	:	Ix307, Y6, Y7, Y8, Y9, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19	
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that model names and appearance.	
Product Description	:	Operation Frequency:	Bluetooth V5.4: 2402MHz~2480MHz
	:	Antenna Gain:	0.17dBi Wire Antenna
Power Rating	:	Input: DC 5V	
Li-ion Polymer Battery	:	DC 3.7V 250mAh Rechargeable Li-ion battery	
Software Version	:	MOY-7PR4-2.0.0-2CD2650E	
Hardware Version	:	MOY.MA1003.03	
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:

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

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

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	-3.013	-3 ± 1	-2	0.631	0.196	3.0
2.441	-2.741	-2 ± 1	-1	0.794	0.248	3.0
2.480	-2.825	-2 ± 1	-1	0.794	0.250	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	-2.018	-2 ± 1	-1	0.794	0.246	3.0
2.441	-1.866	-2 ± 1	-1	0.794	0.248	3.0
2.480	-1.991	-2 ± 1	-1	0.794	0.250	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	-1.859	-2 ± 1	-1	0.794	0.246	3.0
2.441	-1.446	-1 ± 1	0	1.000	0.312	3.0
2.480	-1.567	-1 ± 1	0	1.000	0.315	3.0

Test separation: 5mm						
Bluetooth LE 1M						
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	-2.719	-2 ± 1	-1	0.794	0.246	3.0
2.440	-2.434	-2 ± 1	-1	0.794	0.248	3.0
2.480	-2.503	-2 ± 1	-1	0.794	0.250	3.0

Test separation: 5mm						
Bluetooth LE 2M						
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	-2.535	-2 ± 1	-1	0.794	0.246	3.0
2.440	-2.206	-2 ± 1	-1	0.794	0.248	3.0
2.480	-2.283	-2 ± 1	-1	0.794	0.250	3.0

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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