



RF Exposure Evaluation

FCC ID: 2BBRH-KE5

1. Client Information

Applicant	:	Dongguan Puleduo Technology Co., Ltd.
Address	:	Room 2104, Unit 1, Building 6, Tian 'an Digital City, No.1 Jinhuang Road, Nancheng Street, Dongguan, Guangdong, China
Manufacturer	:	Dongguan Puleduo Technology Co., Ltd.
Address	:	Room 2104, Unit 1, Building 6, Tian 'an Digital City, No.1 Jinhuang Road, Nancheng Street, Dongguan, Guangdong, China

2. General Description of EUT

EUT Name	:	Smart Watch	
Model(s) No.	:	KE5	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance.	
Product Description	:	Operation Frequency:	Bluetooth 5.2: 2402MHz~2480MHz
		Number of Channel:	79 channels for Bluetooth(BR+EDR) 40 channels for Bluetooth LE
		Antenna Gain:	-1.0dBi Wire Antenna
		Modulation Type: Bluetooth(BR+EDR)	GFSK, Pi/4-DQPSK, 8-DPSK
		Modulation Type: Bluetooth LE	GFSK
Power Supply	:	USB Input: DC 5V/150mA DC 3.8V 530mAh 2.014Wh Rechargeable Li-ion battery	
Software Version	:	4420-T5270-109	
Hardware Version	:	T5270V1.0	
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:

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

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



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	6.325	6±1	7	5.012	1.554	3.0
2.441	6.131	6±1	7	5.012	1.566	3.0
2.480	5.782	5±1	6	3.981	1.254	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	6.795	6±1	7	5.012	1.554	3.0
2.441	6.499	6±1	7	5.012	1.566	3.0
2.480	6.018	6±1	7	5.012	1.579	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	7.417	7±1	8	6.310	1.956	3.0
2.441	7.185	7±1	8	6.310	1.972	3.0
2.480	6.778	6±1	7	5.012	1.579	3.0

Test separation: 5mm						
Bluetooth LE Mode (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	4.513	4±1	5	3.162	0.980	3.0
2.440	4.212	4±1	5	3.162	0.988	3.0
2.480	3.765	3±1	4	2.512	0.791	3.0
Bluetooth LE Mode (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	4.609	4±1	5	3.162	0.980	3.0
2.440	4.348	4±1	5	3.162	0.988	3.0
2.480	3.833	3±1	4	2.512	0.791	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.

-----END OF THE REPORT-----

