RF Exposure Evaluation

FCC ID: 2BDM8-GL-8

1. Client Information

Applicant	:	Shenzhen KY Intelligent Digital Co., ltd
Address	:	B1 Building 5th floor XuJingChang Industry zoom, Fuhai road, Baoan, SZ. 518126, China
Manufacturer	:	Shenzhen KY Intelligent Digital Co., ltd
Address	:	B1 Building 5th floor XuJingChang Industry zoom, Fuhai road, Baoan, SZ. 518126, China

2. General Description of EUT

EUT Name	:	SMART WATCH	
Model(s) No.	:	GL-8, GL-1, GL-2, GL-3, GL-4, GL-5, GL-6, GL-7, GL-9, GL-10, GL-11, GL-12, GL-13, GL-14, GL-15, GL-16, GL-17, GL-18, GL-19, GL-20, GL-21, GL-22, GL-23, GL-24, GL-25, GL-26, GL-27, GL-28, GL29, GL-30, GL-31, GL-32, GL-33, GL-34, GL-35, GL-36, GL-37, GL-38, GL-39, G-40, GL-50, GL-60, GL-70, GL-80, GL-90, GL-100, X8	
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that model names.	
Sample ID	:	202311-0047-2-1# & 202311-0047-2-2#	
Product Description	:	Operation Frequency:	Bluetooth 5.4: 2402MHz~2480MHz
		Number of Channel:	BT: 79 channels BLE: 40 channels
		Antenna Gain:	0.17dBi Wire Antenna
Power Rating	:	Input: DC 5V, 0.16A	
Li-ion Polymer Battery	:	DC 3.8V by 320mAh Rechargeable Li-ion battery	
Software Version	:	MOY-VBT3-2.0.2	
Hardware Version	:	MA0006.02	
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.

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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:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤3.0 for 1-g SAR
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤7.5.0 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	2.521	3±1	4	2.512	0.779	**3.0**
2.441	2.311	2±1	3	1.995	0.623	**3.0**
2.480	1.881	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	3.296	3±1	4	2.512	0.779	**3.0**
2.441	3.045	3±1	4	2.512	0.785	**3.0**
2.480	2.658	3±1	4	2.512	0.791	**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	3.813	4±1	5	3.162	0.980	**3.0**
2.441	3.627	4±1	5	3.162	0.988	**3.0**
2.480	3.235	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	7.333	7±1	8	6.310	1.956	**3.0**
2.440	7.059	7±1	8	6.310	1.971	**3.0**
2.480	6.631	7±1	8	6.310	1.987	**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	7.704	8±1	9	7.943	2.462	**3.0**
2.440	7.416	7±1	8	6.310	1.971	**3.0**
2.480	6.866	7±1	8	6.310	1.987	**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.

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