RF Exposure Evaluation

FCC ID: 2BDM8-X8

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.	:	X8, X1, X2, X3, X5, X6, X7, X9, X10, X11, X12, X13, X15, X16, X17, X18, X19, X20, X21, X22, X23, X25, X26, X27, X28, X29, X30, X31, X32, X35, X36, X37, X38, X39, X50, X51, X52, X53, X55, X56, X57, X58, X59, X60, X61, X62, X63, X65, X66, X67, X68, X69, X70, X71, X72, X73, X75, X76, X77, X78, X79, X80, X81, X82, X83, X85, X86, X87, X88, X89, X90, X91, X92, X93, X95, X96, X97, X98, X99, X100, X90Max, X90Ultra2, X90Ultra2Max	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance color and model name.	
Product Description	:	Operation Frequency:	Bluetooth V5.4: 2402MHz~2480MHz
		Number of Channel:	79 channels for Bluetooth(BR+EDR) 40 channels for Bluetooth LE
		Antenna Gain:	0dBi Wire Antenna
		Modulation Type: Bluetooth(BR+EDR)	GFSK, Pi/4-DQPSK, 8-DPSK
		Modulation Type: Bluetooth LE	GFSK
Power Supply	:	Input: DC 5V/0.2A DC 3.8V 230mAh 0.874Wh Rechargeable Li-ion battery	
Software Version	:	MOY-VQO4-2.0.3	
Hardware Version	:	MA1006.02	
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.

1 A/F., Building.6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an, Shenzhen, Guangdong, China
Tel: +86 75526509301 Fax: +86 75526509195

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	6.219	6±1	7	5.012	1.554	**3.0**
2.441	5.873	5±1	6	3.981	1.244	**3.0**
2.480	5.718	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	6.718	6±1	7	5.012	1.554	**3.0**
2.441	6.259	6±1	7	5.012	1.566	**3.0**
2.480	6.017	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	6.961	6±1	7	5.012	1.554	**3.0**
2.441	6.441	6±1	7	5.012	1.566	**3.0**
2.480	6.189	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	6.276	6±1	7	5.012	1.554	**3.0**
2.440	5.875	5±1	6	3.981	1.244	**3.0**
2.480	5.695	5±1	6	3.981	1.254	**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	6.193	6±1	7	5.012	1.554	**3.0**
2.440	5.817	5±1	6	3.981	1.244	**3.0**
2.480	5.717	5±1	6	3.981	1.254	**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-----