

RF Exposure Evaluation

FCC ID:2A7GQ-WH7XXX

1. Client Information

Applicant	:	Wuxi Weida Intelligent Electronics Co.,Ltd.
Address	:	3/F, Building A, Sensor High-end Manufacturing Base 789 South Lake Avenue, Wuxi, Jiangsu Province, China
Manufacturer	:	Wuxi Weida Intelligent Electronics Co.,Ltd.
Address	:	3/F, Building A, Sensor High-end Manufacturing Base 789 South Lake Avenue, Wuxi, Jiangsu Province, China

2. General Description of EUT

EUT Name	:	Remote Control	
HVIN/Model(s)	:	WH-6749_BLE, WH-7XXX	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is appearance silkscreen.	
Product Description	:	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz
		Number of Channel:	Bluetooth 5.0 (BLE): 40 channels
		RF Output Power:	BLE: 3.4dBm (Max)
		Antenna Gain:	1.92 dBi PCB Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1/2Mbps
Power Supply	:	DC 3.0V by AAA battery*2	
Software Version	:	V0003	
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.

TB-RF-074-1.0

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						
BLE 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	2.67	3 ± 1	4	2.512	0.779	3.0
2.440	2.92	3 ± 1	4	2.512	0.785	3.0
2.480	3.38	3 ± 1	4	2.512	0.779	3.0
BLE 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	2.68	3 ± 1	4	2.512	0.779	3.0
2.440	2.94	3 ± 1	4	2.512	0.785	3.0
2.480	3.4	3 ± 1	4	2.512	0.791	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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