

RF Exposure Evaluation

FCC ID: 2AUCJ-1LOOP-1

1. Client Information

Applicant : Huzhou Dear Industry Co.Ltd.
Address : 26# Wuxing Technology&Creation Park, Huzhou, Zhejiang, China
Manufacturer : Huzhou Dear Industry Co.Ltd.
Address : 26# Wuxing Technology&Creation Park, Huzhou, Zhejiang, China

2. General Description of EUT

EUT Name	:	Smart Sensor	
Models No.	:	1loop-1.0,1loop-2.0,1loop-3.0,1loop-4.0,1loop-5.0,1loop-6.0	
Model Difference	:	All models are in the same PCB layout interior structure and electrical circuits, the only difference is the model.	
Product Description	:	Operation Frequency:	Bluetooth 4.0(BLE): 2402MHz~2480MHz
		Modulation Type:	BLE: GFSK
Power Supply	:	DC Voltage Supply from USB cable.. DC Voltage supplied by Li-ion battery.	
Power Rating	:	DC 3.7V by 600mAh Li-ion battery	
Software Version	:	1.0	
Hardware Version	:	1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

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:

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

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

2.

Calculation:

Test separation: 5mm						
BLE 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	-5.823	-6±1	-5	0.316	0.098	3.0
2.442	-7.714	-7±1	-6	0.251	0.078	3.0
2.480	-9.677	-9±1	-8	0.158	0.050	3.0

So standalone SAR measurements are not required.

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