

# RF Exposure Evaluation

## FCC ID: UH5- HLS008

### 1. Client Information

<b>Applicant</b>	:	National Electronics & Watch Co., Ltd
<b>Address</b>	:	15/F, Shing Dao Ind. Bldg. 232 Aberdeen Main Road Aberdeen Hong Kong
<b>Manufacturer</b>	:	National Electronics & Watch Co., Ltd
<b>Address</b>	:	15/F, Shing Dao Ind. Bldg. 232 Aberdeen Main Road Aberdeen Hong Kong

### 2. General Description of EUT

<b>EUT Name</b>	:	Smart Tracker
<b>Model(s) No.</b>	:	HLS008
<b>Model Different</b>	:	----
<b>Product Description</b>	Operation Frequency:	Bluetooth V4.0(BT): 2402~2480 MHz
	Number of Channel:	Bluetooth: 40 Channels
	Antenna Gain:	1.5 dBi Wire Antenna
	Modulation Type:	GFSK
<b>Power Rating</b>	Input: DC5V DC 3.7V by 90mAh Rechargeable Li-ion battery	
<b>Software Version</b>	:	N/A
<b>Hardware Version</b>	:	V10

**Remark:** The antenna gain and adapter provided by the applicant, the adapter and verified for the RF conduction test 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  $\leq 5$  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	-2.998	-2±1	-1	0.794	0.246	3.0
2.442	-2.344	-2±1	-1	0.794	0.248	3.0
2.480	-2.111	-2±1	-1	0.794	0.250	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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