

# RF Exposure Evaluation

## FCC ID: 2ADUC-TW310

### 1. Client Information

**Applicant** : TSKY CO., LTD  
**Address** : 21F.-2, No.8, Ziqiang S. Rd., Zhubei City, Hsinchu County 302, Taiwan  
**Manufacturer** : TSKY CO., LTD  
**Address** : 21F.-2, No.8, Ziqiang S. Rd., Zhubei City, Hsinchu County 302, Taiwan

### 2. General Description of EUT

<b>EUT Name</b>	:	TW310	
<b>Models No.</b>	:	TW310HR, TW310	
<b>Model Different</b>	:	All these models are the same PCB, layout and electrical circuit, the only different is model.	
<b>Product Description</b>	:	Operation Frequency:	Bluetooth V4.0: 2402MHz~2480MHz
	:	RF Output Power:	BLE:-4.120dBm (Max)
	:	Antenna Gain:	0dBi Ceramic Antenna
<b>Power Supply</b>	:	DC Voltage Supply from USB Cable. DC Voltage supplied by Li-ion battery.	
<b>Power Rating</b>	:	Input: DC 5V0.5A by USB Cable. DC 3.7V by 250mAh Li-ion battery.	
<b>Software Version</b>	:	V1.0	
<b>Hardware Version</b>	:	V1.0	
<b>Connecting I/O Port(S)</b>	:	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  $\leq 5$  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	-4.120	$-4 \pm 1$	-3	0.501	0.155	3.0
2.442	-4.766	$-4 \pm 1$	-3	0.501	0.157	3.0
2.480	-4.505	$-4 \pm 1$	-3	0.501	0.158	3.0

So standalone SAR measurements are not required.

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