

RF Exposure Evaluation

FCC ID: 2ADUC-TW410

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

EUT Name	:	TW410	
Models No.	:	TW410HR, TW410	
Model Different	:	All these models are the same PCB, layout and electrical circuit, the only different is model.	
Product Description	:	Operation Frequency:	Bluetooth V4.0: 2402MHz~2480MHz
	:	RF Output Power:	BLE:-4.753dBm (Max)
	:	Antenna Gain:	0dBi Ceramic Antenna
Power Supply	:	DC Voltage Supply from USB Cable. DC Voltage supplied by Li-ion battery.	
Power Rating	:	Input: DC 5V0.5A by USB Cable. DC 3.7V by 400mAh Li-ion battery.	
Software Version	:	V1.0	
Hardware Version	:	V1.0	
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:

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

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

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	-4.753	-5±1	-4	0.398	0.123	3.0
2.442	-5.011	-5±1	-4	0.398	0.124	3.0
2.480	-4.893	-5±1	-4	0.398	0.125	3.0

So standalone SAR measurements are not required.

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