

RF Exposure Evaluation

FCC ID: 2AJ4IIGK-011

1. Client Information

Applicant : Igloohome Pte Ltd
Address : #03-25, Block B, 1557 Keppel Road, Singapore, S089066
Manufacturer : Smlpretty Technology Co., Limited
Address : 4F-J Commercial Office Building Haihong industrial area West side of the Xixiang Big road, Xixiang street, Baoan District, Shenzhen City, Guangdong Province, China

2. General Description of EUT

EUT Name	: igloohome Smart Keybox	
Models No.	: IGK-01.1, IGK1-C2A4P2-xxxxx (The "xxxxx" can be 00000~99999 denote different production sequence)	
Model Difference	: All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.	
Product Description	Operation Frequency:	Bluetooth 4.1(BLE): 2402MHz~2480MHz
	Number of Channel:	Bluetooth 4.1(BLE): 40 channels see note(3)
	RF Output Power:	2.986 dBm Conducted Power
	Antenna Gain:	0dBi PCB Antenna
	Modulation Type:	GFSK
	Bit Rate of Transmitter:	1Mbps(GFSK)
Power Supply	: DC power by AAA battery.	
Power Rating	: DC 4*1.5V AAA battery.	
Connecting I/O Port(S)	: Please refer to the User's Manual	

Note:

More test information about the EUT please refer to 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 (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	2.986	3 \pm 1	4	2.512	0.779	3.0
2.442	2.310	2 \pm 1	3	1.995	0.624	3.0
2.480	1.209	1 \pm 1	2	1.585	0.499	3.0

So standalone SAR measurements are not required.

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