Shenzhen Toby Technology Co., Ltd.

RF Exposure Evaluation
FCC ID: 2APMA-SMBJ

1. Client Information

Applicant	:	ShenZhen Benjoy Technology Co., Ltd.
Address	:	503, Building B, Quansen Qichuang Garden, Bulong Road, Longhua District, Shenzhen, China
Manufacturer	:	ShenZhen Benjoy Technology Co., Ltd.
Address	:	503, Building B, Quansen Qichuang Garden, Bulong Road, Longhua District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Ambient Light	
Models No.	:	SMBJ-X3, SMBJ-X1	
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:	802.11b/g/n(HT20): 2412MHz~2462MHz
		RF Output Power:	802.11b: 9.324 dBm 802.11g: 8.389 dBm 802.11n (HT20): 8.694dBm
		Antenna Gain:	2dBi PCB Antenna
Power Supply	:	DC 3.7V by 1200mAh Rechargeable Li-ion Battery. DC 5V From DC Port.	
Software Version	:	N/A	
Hardware Version	:	N/A	
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.

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:

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

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

2.
Calculation:

Test separation: 5mm						
2.4G WiFi Mode(802.11b)						
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
2.412	9.254	9±0.5	9.5	8.913	2.768	**3.0**
2.437	9.324	9±0.5	9.5	8.913	2.783	**3.0**
2.462	9.267	9±0.5	9.5	8.913	2.797	**3.0**
2.4G WiFi Mode(802.11g)						
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
2.412	8.389	8±1	9	7.943	2.467	**3.0**
2.437	8.387	8±1	9	7.943	2.480	**3.0**
2.462	8.271	8±1	9	7.943	2.493	**3.0**
2.4G WiFi Mode(802.11n(HT20))						
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
2.412	8.236	8±1	9	7.943	2.467	**3.0**
2.437	8.564	8±1	9	7.943	2.480	**3.0**
2.462	8.694	8±1	9	7.943	2.493	**3.0**

So standalone SAR measurements are not required.

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