

## RF EXPOSURE EVALUATION

### EUT Specification

<b>EUT</b>	Smart led solar light
<b>Model Number</b>	ST0206
<b>FCC ID</b>	2A4AQST0206
<b>Antenna gain (Max)</b>	0 dBi
<b>Operation Frequency</b>	2402-2480MHz
<b>Input Rating</b>	3.7V from battery and DC 5V from adapter
<b>Max. output power</b>	4.03dBm(0.0025W)

### Test Requirement:

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

#### Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

$$11.1 \text{ Friis transmission formula: } Pd = (Pout * G) / (4 * \pi * R^2)$$

Where

Pd= Power density in mW/cm<sup>2</sup>

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE,  $1\text{mW/cm}^2$ . If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

### 11.2 Measurement Result

Antenna gain: 0 dBi

Mode	Channe l Freq. (MHz)	Measu red power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenn a Gain (Nume ric)	Evaluation result (mW/cm <sup>2</sup> )	Power density Limits (mW/cm <sup>2</sup> )
GFSK	2402	3.8	4±1	5	1	0.000756	1
GFSK	2440	3.95	4±1	4	1	0.000786	1
GFSK	2480	4.03	4±1	4	1	0.000802	1

Signature:



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