

# Maximum Permissible Exposure report

For

Shenzhen Sunricher Technology Co.,Ltd

310,Longtaili building No.30,Avenue 4th,High Tech Sience Park,Shenzhen

**FCC ID: 2ACUQ-SR-281**

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This Report Concerns: Original Report	Equipment Type: Wall mounted DMX512 Master
Test Engineer:	Lisa Chen <i>Lisa Chen</i>
Report No.:	BSL1771011Y-6
Receive EUT Date/Test Date:	July 09 / July 09 - July 28, 2014
Reviewed By:	Sky Zhang <i>Sky Zhang</i>
Prepared By:	<b>BSL Testing Co.,LTD.</b> NO. 24, ZH Park, Nantou, Shenzhen, 518000 China Tel: 86- 755-26508703 Fax: 86- 755-26508703

## **1.§ 15.247 (i) and §1.1307 (b) (1) – Maximum Permissible exposure (MPE)**

### **1.1 Standard Applicable**

According to subpart 15.247 (i) and subpart 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

<b>Frequency Range (MHz)</b>	<b>Electric Field Strength (V/m)</b>	<b>Magnetic Field Strength (A/m)</b>	<b>Power Density (mW/cm<sup>2</sup>)</b>	<b>Averaging Time (minute)</b>
<b>Limits for General Population/Uncontrolled Exposure</b>				
0.3–3.0	614	1.63	*(100)	30
3.0–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

### **1.2 Test Data**

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

S: Power density, in mW/cm<sup>2</sup>

P: Power input to the antenna, in mW

G: numeric gain of the antenna

R: distance to the center of the antenna, in cm

### 802.11b Mode

Maximum peak output power at antenna input terminal (dBm):	<u>9.59</u>
Maximum peak output power at antenna input terminal (mW):	<u>9.10</u>
Prediction distance (cm):	<u>20</u>
Prediction frequency (MHz):	<u>2412</u>
Antenna Gain, typical (dBi):	<u>0</u>
Maximum Antenna Gain (numeric):	<u>1</u>
Power density at predication frequency and distance (mW/cm <sup>2</sup> ):	<u>0.0018</u>
MPE limit for Occupational exposure at predication frequency (mW/cm <sup>2</sup> ):	<u>1.0</u>

### 802.11g Mode

Maximum peak output power at antenna input terminal (dBm):	<u>9.13</u>
Maximum peak output power at antenna input terminal (mW):	<u>8.18</u>
Prediction distance (cm):	<u>20</u>
Prediction frequency (MHz):	<u>2412</u>
Antenna Gain, typical (dBi):	<u>0</u>
Maximum Antenna Gain (numeric):	<u>1</u>
Power density at predication frequency and distance (mW/cm <sup>2</sup> ):	<u>0.0016</u>
MPE limit for Occupational exposure at predication frequency (mW/cm <sup>2</sup> ):	<u>1.0</u>

### 802.11n Mode

Maximum peak output power at antenna input terminal (dBm):	<u>9.30</u>
Maximum peak output power at antenna input terminal (mW):	<u>8.51</u>
Prediction distance (cm):	<u>20</u>
Prediction frequency (MHz):	<u>2412</u>
Antenna Gain, typical (dBi):	<u>0</u>
Maximum Antenna Gain (numeric):	<u>1</u>
Power density at predication frequency and distance (mW/cm <sup>2</sup> ):	<u>0.0017</u>
MPE limit for Occupational exposure at predication frequency (mW/cm <sup>2</sup> ):	<u>1.0</u>

## 1.3 Test Result

The device is compliant with the requirement MPE limit of General Population/Uncontrolled Exposure at predication frequency 1.0 mW/cm<sup>2</sup> .And the precaution is outlined in the user's manual to prevent to high level of RF energy.