



# SPORTON International Inc.

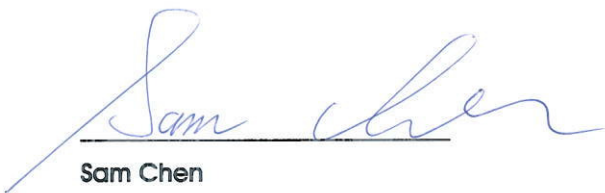
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.  
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

Project No: CB10504252

## Maximum Permissible Exposure Report

Applicant's company	LITE-ON Technology Corp.
Applicant Address	Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City, 23585 Taiwan
FCC ID	PPQ-O90N
Manufacturer's company	Lite-On Network Communication (Dongguan) Limited
Manufacturer Address	30#Keji Rd.,Yin Hu Industrial Area,Qingxi Town,DongGuan City,Guangdong,China

Product Name	Access Point
Brand Name	MOJO
Model Name	O-90-N
Ref. Standard(s)	47 CFR FCC Part 2 Subpart J, section 2.1091
Received Date	Mar. 25, 2016
Final Test Date	Apr. 20, 2016
Submission Type	Original Equipment

  
Sam Chen

SPORTON INTERNATIONAL INC.





## Table of Contents

<b>1. GENERAL DESCRIPTION.....</b>	<b>1</b>
1.1. EUT General Information .....	1
1.2. Table for AC Power Supply.....	1
1.3. Testing Location.....	1
<b>2. MAXIMUM PERMISSIBLE EXPOSURE.....</b>	<b>2</b>
2.1. Limit of Maximum Permissible Exposure .....	2
2.2. MPE Calculation Method .....	2
2.3. Calculated Result and Limit.....	3

### History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA631907	Rev. 01	Initial issue of report	May 04, 2016

## 1. GENERAL DESCRIPTION

### 1.1. EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
5GHz WLAN	5150-5250 5725-5850	5180-5240 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)

### 1.2. Table for AC Power Supply

The EUT with two kinds of AC power supply system:

AC Power Supply System	Brand Name	Model Name
AC Power Supply 1	FSP	FSP045-1P65
AC Power Supply 2	ASIAN POWER	NW-30A54

### 1.3. Testing Location

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456      FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065      FAX : 886-3-656-9085

## 2. MAXIMUM PERMISSIBLE EXPOSURE

### 2.1. Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2. MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = Peak RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

### 2.3. Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

For 2.4GHz Band:

Antenna Type : PCB Antenna

Conducted Power for IEEE 802.11b: 26.30 dBm

Distance (cm)	Test Freq. (MHz)	Uncorrelated Composite Gain (dBi)	Antenna Gain (numeric)	The maximum combined Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
20	2437	4.39	2.7479	26.3020	426.7730	0.2334	1	Complies

For 5GHz Band:

Antenna Type : PCB Antenna

Conducted Power for IEEE 802.11a: 27.88 dBm

Distance (cm)	Test Freq. (MHz)	Uncorrelated Composite Gain (dBi)	Antenna Gain (numeric)	The maximum combined Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
20	5785	7.26	5.3211	27.8838	614.3052	0.6506	1	Complies

#### Conclusion:

Both of the WLAN 2.4GHz Band and WLAN 5GHz Band can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is  $0.2334 / 1 + 0.6506 / 1 = 0.8840$ , which is less than "1". This confirmed that the device complies.