

# Ningbo Litesun Electronics Co., Ltd.

# **MPE ASSESSMENT REPORT**

## **Report Type:**

FCC MPE assessment report

#### Model:

LQ-2-W1, LQ-2-W2

#### **REPORT NUMBER:**

190101934SHA-002

#### **ISSUE DATE:**

Mar 5, 2019

### **DOCUMENT CONTROL NUMBER:**

TTRFFCCMPE-01\_V1 © 2018 Intertek





Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North) Caohejing Development Zone Shanghai 200233, China

Telephone: 86 21 6127 8200

www.intertek.com

Report no.: 190101934SHA-002

**Applicant:** Ningbo Litesun Electronics Co., Ltd.

Simen Town, Yuyao City, Zhejiang, 315472, China

Manufacturer: Ningbo Litesun Electronics Co., Ltd.

Simen Town, Yuyao City, Zhejiang, 315472, China

Manufacturing site: Ningbo Litesun Electronics Co., Ltd.

Simen Town, Yuyao City, Zhejiang, 315472, China

FCC ID: 2AMQ8-WIFI-009

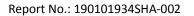
#### **SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	REVIEWED BY:		
Teddy yin	Damiel Zhav		
Project Engineer	Reviewer		
Teddy Yin	Daniel Zhao		

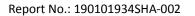
This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.





# **Revision History**

Report No.	Version	Description	Issued Date
190101934SHA-002	Rev. 01	Initial issue of report	Mar ,2019





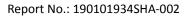
## 1 GENERAL INFORMATION

## 1.1 Description of Equipment Under Test (EUT)

Product name:	Duplex Receptacle with WIFI function		
Type/Model:	LQ-2-W1, LQ-2-W2		
Description of SUT	The EUT is a Duplex Receptacle with WIFI function, it support WIFI 2.4G band. The both models are same except that the two outlets of LQ-2-W1 are controlled by WIFI, only one outlet of LQ-2-W2 is controlled by WIFI, the other outlet is always on. LQ-2-W1 was tested as		
Description of EUT:	representative. The worst data is listed in this report.		
Rating:	125VAC, 60Hz, Resistive or general purpose, Tungsten load: 15A, 1875W		
Category of EUT:	Class B		
EUT type:	☐ Table top ☐ Floor standing		
Software Version:	/		
Hardware Version:	/		
Sample received date:	Jul 30, 2018		
Date of test:	Jul 30, 2018~Feb 20, 2019		

## 1.2 Technical Specification

Frequency Range:	2412MHz ~ 2462MHz		
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20		
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)		
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
Type of Modulation:	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)		
	IEEE 802.11b: Up to 11 Mbps		
	IEEE 802.11g: Up to 54 Mbps		
Data Rate:	IEEE 802.11n-HT20: Up to MCS7		
Channel Separation:	5 MHz		
Antenna Information:	2.5dBi, PCB antenna		

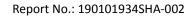




## 1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai		
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China		
Telephone:	86 21 61278200		
Telefax:	86 21 54262353		

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175
organizations.	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02





## 2 MPE Assessment

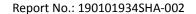
Test result: Pass

### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density  Seq (W/m²)
0-1 Hz	_	3,2 × 10 <sup>4</sup>	4 × 10 <sup>4</sup>	<b>Seq (VV/111 )</b>
1-8 Hz	10 000	$3.2 \times 10^4/f^2$	$4 \times 10^4 / f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	87/f <sup>1/2</sup>	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq$  1.0





### 2.2 Assessment Results

Power density (S) is calculated according to the formula:

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

Where  $S = power density in mW/cm^2$ 

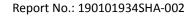
P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 190101934SHA-001: The maximum radiated power = 25.74dBm = 374.97 mW; Here R is chosen to be 20cm,

 $S = PG / (4\pi R^2) = 374.97 / (4 * 3.14 * 20 * 20) = 0.075 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$ 





## Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.