

# SUMEC YANGZHOU INTERNATIONAL CO., LTD.

# MPE ASSESSMENT REPORT

# **Report Type:**

FCC MPE assessment report

#### Model:

W2HM2001

#### **REPORT NUMBER:**

180701631SHA-002

#### **ISSUE DATE:**

September 4, 2018

#### **DOCUMENT CONTROL NUMBER:**

TTRFFCCMPE-01 V1 © 2018 Intertek





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Report no.: 180701631SHA-002

**Applicant:** SUMEC YANGZHOU INTERNATIONAL CO., LTD.

125, South Daxue Road, Yangzhou, Jiangsu, China

Manufacturer: SUMEC YANGZHOU INTERNATIONAL CO., LTD.

125, South Daxue Road, Yangzhou, Jiangsu, China

Manufacturing site: Nanjing CEC PANDA LCD Technology Co., Ltd.

NO.601, XianLin Avenue, Nanjing Economic and Technology Development

Zone

**FCC ID:** 2AQN90001

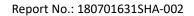
#### **SUMMARY:**

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:	
Tric li	Dul	
Project Engineer	Reviewer	
Eric Li	Daniel Zhao	

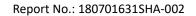
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# **Revision History**

Report No.	Version	Description	Issued Date
180701631SHA-002	Rev. 01	Initial issue of report	September 4, 2018

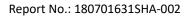




# 1 GENERAL INFORMATION

# 1.1 Description of Equipment Under Test (EUT)

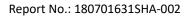
Product name:	WIFI Module	
Type/Model:	W2HM2001	
	The EUT is WIFI Module, it supports IEEE 802.11 b/g/n 2T2R, it was tested in the LED Television with models of SLD50SU4KC, RNSMU5036-B, RNSMU5536-B, PLED5538-UHDSM; SLD55SU4KC, RHOS501SM, PLED5038-UHDSM; SLD65SU4KC, RNSMU6536-B, RHOS651SM, PLED6538-UHDSM; SLD75SU4KC, RNSMU7536, PLED7538-UHDSM. The models RNSMU5036-B, RHOS501SM, PLED5038-UHDSM are same as SLD50SU4KC Except Product Trade name and color of the front bezel; The models RNSMU5536-B, PLED5538-UHDSM are same as SLD55SU4KC Except Product Trade name and color of the front bezel; The models RNSMU6536-B, RHOS651SM, PLED6538-UHDSM are same as SLD65SU4KC Except Product Trade name and color of the front bezel; The models RNSMU7536, PLED7538-UHDSM are same as SLD75SU4KC Except Product Trade name and color of the front bezel; we test the models SLD50SU4KC, SLD55SU4KC, SLD65SU4KC, SLD75SU4KC as representative and list the results in this	
Description of EUT:	report.	
Rating:	5V DC	
Category of EUT:	Class B	
EUT type:	☐ Table top ☐ Floor standing	
Software Version:	/	
Hardware Version:	/	
Sample received date:	2018.8.1	
Date of test:	2018.8.1~2018.8.8	





# 1.2 Technical Specification

Frequency Range:	2400MHz ~ 2483.5MHz	
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40	
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)	
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)	
Channel Number:	9 Channels for 802.11n(HT40)	
	IEEE 802.11b: Up to 11 Mbps	
	IEEE 802.11g: Up to 54 Mbps	
	IEEE 802.11n-HT20: Up to MCS7	
Data Rate:	IEEE 802.11n-HT40: Up to MCS7	
Channel Separation:	5 MHz	
	PIFA antenna 0 max gain is 2.00 dBi	
Antenna Information:	PIFA antenna 1 max gain is 2.00 dBi	

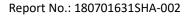




# 1.3 Description of Test Facility

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	CNAS Accreditation Lab	
recognized,	Registration No. CNAS L0139	
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175	
0.802000.0.	IC Registration Lab Registration code No.: 2042B-1	
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252	
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0	
	A2LA Accreditation Lab Certificate Number: 3309.02	





# 2 MPE Assessment

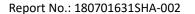
Test result: Pass

## 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	-	$3.2 \times 10^4$	4 × 10 <sup>4</sup>	- -
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





#### **TEST REPORT**

## 2.2 Assessment Results

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

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

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

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

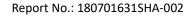
R = distance (cm)

As we can see from the test report 180701631SHA-001:

The maximum radiated power = 22.65dBm= 184.08 mW;

Here R is chosen to be 20cm,

 $S = P / (4\pi R^2) = 184.08 / (4 * 3.14 * 20 * 20) = 0.037 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$ 





# **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.