

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



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:



Project Engineer
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REVIEWED BY:



Reviewer
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
Description of EUT:	<p>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 report.</p>
Rating:	5V DC
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	2018.8.1
Date of test:	2018.8.1~2018.8.8

TEST REPORT

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
Type of Modulation:	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) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 9 Channels for 802.11n(HT40)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz
Antenna Information:	PIFA antenna 0 max gain is 2.00 dBi 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 recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	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

TEST REPORT

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 S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
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	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	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 ≤ 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/cm²

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.

***** END *****