

Date:



RF Exposure Evaluation Report

: WIFI Module **Product**

Trade mark GSD

Model/Type reference W2MM2510

Serial Number N/A

Report Number EED32L00378902

FCC ID : 2AC23-W2M Date of Issue Jan. 16, 2020

47 CFR Part 1.1307(2015) **Test Standards**

47 CFR Part 1.1310(2015)

KDB447498D01v06

Test result PASS

Prepared for:

Hui Zhou Gaoshengda Technology Co., LTD NO.75 Zhongkai Development Area, Huizhou, Guangdong, China

Prepared by:

Centre Testing International Group Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

> TEL: +86-755-3368 3668 FAX: +86-755-3368 3385

Tested By:	mark. chen.	Compiled by:	Smile zhong	(3)
	Mark Chen		Smile Zhong	
Reviewed by:	Wave Xin	Approved by:	San Cluery	
	Ware Xin	No.	Sam Chuang	

Report Seal

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Report No.: EED32L00378902

2 Version

Version No.	Date		Description	
00	Jan. 16, 2020		Original	
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4 General Information

4.1 Client Information

Applicant:	Hui Zhou Gaoshengda Technology Co., LTD			
Address of Applicant:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China	100		
Manufacturer:	Hui Zhou Gaoshengda Technology Co., LTD			
Address of Manufacturer:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China	-		
Factory:	Hui Zhou Gaoshengda Technology Co., LTD			
Address of Factory:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China			

4.2 General Description of EUT

Product Name:	WIFI Module
Model No.(EUT):	W2MM2510
Trade Mark:	GSD
EUT Supports Radios application:	IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

	and the Prince of the Control of the		The second secon						
Modulation Type:	DSSS,OFDM								
Test Power Grade:	Reference Table	Reference Table							
Test Software of EUT:	QATool_Dbg.exe	QATool_Dbg.exe							
Antenna Type:	PIFA Antenna	2-							
Antenna Specification	2.4G WIFI Antenna Gain: 2.	.00 dBi (Numer	ic gain: 1.58)						
Maximum tune up power	SISO:								
	IEEE 802.11b Mode:	19.00 dBm	(79.433 mW)						
	IEEE 802.11g Mode:	22.50 dBm	(177.828 mW)						
	IEEE 802.11n HT 20 Mode:	20.00 dBm	(100.000 mW)						
	IEEE 802.11n HT 40 Mode:	20.50 dBm	(112.202 mW)						
	MIMO								
	IEEE 802.11n HT 20 Mode:	23.50 dBm	(223.872 mW)						
	IEEE 802.11n HT 40 Mode:	24.00 dBm	(251.189 mW)						
Power Supply:	DC 5V		C3						
Sample Received Date:	Dec. 16, 2019								
Sample tested Date:	Dec. 16, 2019 to Jan. 07, 2020								
The tested sample(s) and the sample information are provided by the client.									











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4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted. FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.





























































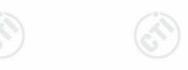












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5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given
$$E = \frac{\sqrt{30 \times P \times G}}{d} \& S = \frac{E^2}{377}$$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

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

Changing to units of mW and cm, using:

$$P(mW) = P(W) / 1000$$
 and

$$d(cm) = d(m) / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$
 Equation 1

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

 $S = Power density in mW / cm^2$





5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

 $S = Power density in mW / cm^2$

SISO

IEEE 802.11b mode:

5	Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
5	6	2437	79.433	1.58	20	0.0250	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
11	2462	177.828	1.58	20	0.0559	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)			
11	2462	100.000	1.58	20	0.0314	1			

IEEE 802.11n HT40 mode:

	Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	
	9	2452	112.202	1.58	20	0.0353	1	

MIMO

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	223.872	1.58	20	0.0704	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	251.189	1.58	20	0.0790	1



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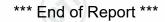




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PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00378901 for EUT external and internal photos.



The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.









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