

RF Exposure Report

FCC ID: 2AC23-W2CM2510

Product : WIFI Module

Trade Name : GSD

Model Number : W2CM2510

Series Number : W2CM2510P

Firmware Version Identification Number (FVIN): 1.1

Issued for

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MPE Calculation

1. Antenna Gain:

WIFI PIFA Antenna: 2.412~2.462 GHz: 2.94 dBi

2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

4. Test Result:

Worst Maximum MPE Result											
Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm) [P]		ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]			Power Density Limit (mW/ cm ²)	Result
			Ant 1	Ant 2			Ant 1	Ant 2	Sum		
802.11b	1	2412	17.88	17.84	2.94	20	0.0240	0.0238	---	1.000	PASS
		2437	17.85	17.79	2.94	20	0.0239	0.0235	---		
		2462	17.90	17.73	2.94	20	0.0241	0.0232	---		
802.11g	1	2412	17.64	17.59	2.94	20	0.0227	0.0225	---		
		2437	17.67	17.64	2.94	20	0.0229	0.0227	---		
		2462	17.74	17.68	2.94	20	0.0233	0.0229	---		
802.11n (HT20)	2	2412	11.39	10.57	2.94	20	0.0054	0.0045	0.0099		
		2437	11.30	10.34	2.94	20	0.0053	0.0042	0.0095		
		2462	11.26	10.28	2.94	20	0.0052	0.0042	0.0094		
802.11n (HT40)	2	2422	11.39	10.57	2.94	20	0.0054	0.0045	0.0099		
		2437	11.30	10.34	2.94	20	0.0053	0.0042	0.0095		
		2452	11.26	10.28	2.94	20	0.0052	0.0042	0.0094		

Note:

(1) N_{TX}= Number of Transmit Antennas

(2) RF Output power specifies that Maximum Conducted Peak Output Power.

5. Conclusion:**FCC and IC:**

FCC: As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),
IC: As specified in 4.2 RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For all the operating frequency band the MPE limit S: 1 mW/ cm²

The maximum MPE is calculated as $0.0241\text{mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

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