

RF Exposure Report

Report No.: MFBDAS-WTW-P21030436C

FCC ID: 2A3G3-WMX720X

Test Model: WMX7205, WMX7203, WMX7203-F

Received Date: 2023/12/14

Date of Evaluation: 2024/5/22

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Applicant: EmWicon Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration /
Designation Number: 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
MFBDAS-WTW-P21030436C	Original Release	2024/7/16

1 Certificate of Conformity

Product: WiFi 6E 5.2 M.2 2230 Module, WiFi 6E BT 5.2 Mini PCIe Module

Brand: EmWicon Corporation

Test Model: WMX7205, WMX7203, WMX7203-F

Sample Status: Engineering Sample

Applicant: EmWicon Corporation

Date of Evaluation: 2024/5/22

FCC Rule Part: FCC Part 2 (Section 2.1091)

Standards: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by :

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Date:

2024/7/16

Lena Wang / Specialist

Approved by :

Jeremy Lin

Date:

2024/7/16

Jeremy Lin / Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	f/1500	30
1500-100,000	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.
So, this device is classified as **Mobile Device**.

2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Average Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA II	1850-1910	24.5	3	20	0.112	1.00
WCDMA V	824-849	24.5	2	20	0.089	0.55
WCDMA IV	1710-1755	24.5	3	20	0.112	1.00
LTE 2	1850-1910	24	3	20	0.100	1.00
LTE 4	1710-1755	24	3	20	0.100	1.00
LTE 5	824-849	24	2	20	0.079	0.55
LTE 7	2500-2570	24.8	1.5	20	0.085	1.00
LTE 12	699-716	24	2	20	0.079	0.47
LTE 13	777-787	24	2	20	0.079	0.52
LTE 14	788-798	24	2	20	0.079	0.53
LTE 17	704-716	24	2	20	0.079	0.47
LTE 25	1850-1915	24	3	20	0.100	1.00
LTE 26	814-849	24	2	20	0.079	0.54
LTE 30	2305-2315	22.98	0.9	20	0.049	1.00
LTE 38	2572.5-2617.5	24.8	1.5	20	0.085	1.00
LTE 41 (HPUE)	2498.5-2687.5	26	1.5	20	0.112	1.00
LTE 42	3552.5-3597.5	24.8	-2.45	20	0.034	1.00
LTE 48	3552.5-3697.5	24.8	-2.45	20	0.034	1.00
LTE 66	1710.7-1779.3	24	3	20	0.100	1.00
LTE 71	665.5-695.5	24	2	20	0.079	0.44
WLAN	2412-2462	23.69	1.5	20	0.066	1.00
	5180-5250	21.48	1.65	20	0.041	1.00
	5250-5320	21.55	1.65	20	0.042	1.00
	5500-5720	21.75	1.65	20	0.044	1.00
	5745-5825	21.44	1.65	20	0.041	1.00
	5935-7115	21.63	1.52	20	0.041	1.00

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The above Antenna information refers to the manufacturer's antenna specifications, the laboratory shall not be held responsible.
3. WLAN 2.4G & WLAN 5G & WWAN technology can transmit at same time.
4. WLAN 2.4G & WLAN 6G & WWAN technology can transmit at same time.
5. The EUT contains certified WWAN module with FCC ID: N7NEM76.

Conclusion:

Both of the WLAN 2.4G & WLAN 5G & WWAN and WLAN 2.4G & WLAN 6G & WWAN can transmit simultaneously, the formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$$1. \text{WLAN 2.4GHz} + \text{WLAN 5GHz} + \text{WWAN} = 0.066/1 + 0.044/1 + 0.079/0.44 = 0.290$$

$$2. \text{WLAN 2.4GHz} + \text{WLAN 6GHz} + \text{WWAN} = 0.066/1 + 0.041/1 + 0.079/0.44 = 0.287$$

Therefore, the maximum calculations of above situations are less than the “1” limit.

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