

RF Exposure Report

Report No.: MFBHQL-WTW-P23060721

FCC ID: 2AVVV-MW09

Model No.: MW09

Received Date: 2023/6/30

Test Date: 2023/8/24 ~ 2023/9/22

Issued Date: 2023/10/6

Applicant: Meter, Inc

Address: 548 Market St San Francisco CA 94104 USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
MFBHQL-WTW-P23060721	Original release.	2023/10/6

1 Certificate of Conformity

Product: Outdoor Wireless Access Point

Brand: meter

Test Model: MW09

Sample Status: Engineering sample

Applicant: Meter, Inc

Test Date: 2023/8/24 ~ 2023/9/22

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.

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Celine Chou / Senior Specialist

Approved by : Jeremy Lin , **Date:** 2023/10/6
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				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

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

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 22cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max AV Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN, CDD Mode					
2412-2462	25.74	8.18	22	0.405	1.00
5180-5240	16.53	8.13	22	0.048	1.00
5260-5320	23.75	8.06	22	0.249	1.00
5500-5720	23.73	8.10	22	0.251	1.00
5745-5825	27.03	8.18	22	0.546	1.00
WLAN, Beamforming Mode					
2412-2462	22.38	8.18	22	0.187	1.00
5180-5240	13.50	8.13	22	0.024	1.00
5260-5320	20.74	8.06	22	0.125	1.00
5500-5720	20.72	8.10	22	0.125	1.00
5745-5825	24.02	8.18	22	0.273	1.00
BT LE					
2402-2480	2.25	4.16	22	0.001	1.00

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2412-2462 MHz: Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2] = 8.18 \text{ dBi}$.

5180-5240 MHz: Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2] = 8.13 \text{ dBi}$.

5260-5320 MHz: Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2] = 8.06 \text{ dBi}$.

5500-5720 MHz: Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2] = 8.10 \text{ dBi}$.

5745-5825 MHz: Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2] = 8.18 \text{ dBi}$.

Conclusion:

The WLAN 2.4G & WLAN 5G & BT LE can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$2.4\text{G} + 5\text{G} + \text{BT LE} = 0.405 / 1 + 0.546 / 1 + 0.001 / 1 = 0.952$

Therefore the maximum calculations of above situations are less than the "1" limit.

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