

## RF Exposure Report

**Report No.:** SABDZB-WTW-P21020455

**FCC ID:** RFHPOCIW22C001

**Test Model:** POCi-W22C-ULT5

**Received Date:** 2021/2/20

**Test Date:** 2022/3/7 ~ 2022/3/10

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### Release Control Record

Issue No.	Description	Date Issued
SABDZB-WTW-P21020455	Original release.	2022/6/13



## 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 <sup>2</sup> )	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 <sup>2</sup> )*	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

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 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**.

### 2.1 Antenna Gain

#### EUT (FCC ID: RFHPOCIW22C001)

The antenna information is listed as below.

Function	Frequency (MHz)	Antenna Peak Gain (dBi)	Antenna Type	Antenna Connector
WLAN	2400	2.3	PIFA	I-PEX
	2500	2.8	PIFA	I-PEX
	5150	4.8	PIFA	I-PEX
	5850	4.8	PIFA	I-PEX
RFID	13.56	-	PIFA	I-PEX

Note: The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

## 2.4 Calculation Result Of Maximum Conducted Power

The EUT contains WiFi module as below:

<b>Contains WIFI Module</b>
FCC ID: PD9AX200NG

### EUT (FCC ID: RFHPOCIW22C001):

Frequency Band (MHz)	Max Power (EIRP) (dBm)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
13.56	-58.35	20	0.000000002909	0.978

NOTE: Max Power: -3.12dBuV/m = -58.35dBm

### Contains WLAN module FCC ID: PD9AX200NG

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN 2400-2483.5	24.0	2.8	20	0.0952	1
WLAN 5150-5250 5250-5350 5745-5725 5725-5850	24.0	4.8	20	0.1509	1
BT EDR / BTLE 2400-2483.5	11.00	2.8	20	0.0048	1

NOTE:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- FCC ID: RFHPOCIW22C001 & FCC ID: PD9AX200NG can transmit at same time.

### Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

### EUT (FCC ID: RFHPOCIW22C001) + WLAN module (FCC ID: PD9AX200NG)

$$=0.000000002909/0.978+0.1509/1+0.0048/1=0.1557$$

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

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