

MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

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Product Name: Mochabin

FCC ID: YCJ-MOCHABIN

Standard(s): 47 CFR §1.1310, 47 CFR §2.1091,
47 CFR §15.247(i), 47 CFR §15.407(f)

Report Number: 2502T14746E-00B

Report Date: 2025/6/19

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2502T14746E-00B	Original Report	2025/6/19

1. GENERAL INFORMATION

1.1 General Description of Equipment under Test

EUT Name:	Mochabin
EUT Model:	Mochabin
Rated Input Voltage:	DC 12V from adapter or 802.3at/af 30W PoE
EUT Received Date:	2025/6/4
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
Adapter	CONGGUAN GANGQI ELECTRONIC CO LTD	GQ60-120300-AU	Input: 100-240~ 50/60Hz 1.5A MAX Output: 12.0V $\overline{=}$ 3.0A

2. RF EXPOSURE EVALUATION (MPE)

2.1 RF Exposure Evaluation

2.1.1 Applicable Standard

According to subpart 15.247(i), 15.407(f) and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
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;

According to §1.1310 and §2.1091 RF exposure is calculated.

2.1.2 Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

2.1.3 Calculated Data

Mode	Frequency Range (MHz)	Antenna Gain▲		Conducted output power including Tune-up Tolerance▲		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
BT	2402-2480	2.98	1.99	2.94	1.97	20	0.001	1.0
BLE	2402-2480	2.98	1.99	4.16	2.61	20	0.001	1.0
2.4G WIFI	2412-2462	2.98	1.99	22.68	185.35	20	0.073	1.0
5GHz WIFI	5150-5250	8.17	6.56	21.82	152.05	20	0.199	1.0
	5250-5350	8.17	6.56	21.82	152.05	20	0.199	1.0
	5470-5725	8.17	6.56	21.82	152.05	20	0.199	1.0
	5725-5850	8.17	6.56	24.14	259.42	20	0.339	1.0

Note:

1. The Conducted output power including Tune-up Tolerance provided by manufacturer (Please refer to report No.: FA132339, issued on 09/29/2021).
2. The device contains a certified Bluetooth+Wi-Fi module, FCC ID: TLZ-XM9098, certified on 10/01/2021.
3. For 5GHz WIFI, the antenna gain was the maximum directional gain (in beamforming mode), maximum directional gain=maximum antenna Gain + array gain =5.16+3.01=8.17dBi.

Simultaneous transmission:

BT/BLE and 2.4G WIFI, 5G WIFI can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$S_{BLE}/S_{limit-BLE} + S_{2.4G\ WIFI}/S_{limit-2.4G\ WIFI} + S_{5G\ WIFI}/S_{limit-5GWIFI}$$

$$=0.001+0.073+0.339$$

$$=0.413$$

$$< 1.0$$

Result: Compliant. The device compliant Simultaneous transmission at 20cm distances.

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502T14746E-EXP EUT EXTERNAL PHOTOGRAPHS and 2502T14746E-INP EUT INTERNAL PHOTOGRAPHS.

******* END OF REPORT *******