

# TEST REPORT

Applicant Name : M5Stack Technology Co.,Ltd  
Address : Block A10, Expo Bay South Coast, Fuhai Street, Bao'an District, Shenzhen, China  
Report Number : 2504U21080E-RF  
FCC ID: 2AN3WM5UNITC6L

## Test Standard (s)

47 CFR §1.1307& §2.1091

## Sample Description

Product Type: M5Unit C6L

Model No.: Unit C6L

Trade Mark:



Date Received: 2025-06-12

Report Date: 2025-08-12

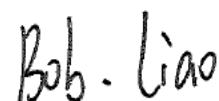
Test Result:	The EUT complied with the standards above.
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## Prepared and Checked By:



Matt Liang  
EMC Engineer

## Approved By:



Bob Liao  
EMC Engineer

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## DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504U21080E-RF	Original Report	2025-08-12

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	M5Unit C6L
Tested Model	Unit C6L
Frequency Range	BLE: 2402-2480MHz 2.4G Wi-Fi: 2412-2462MHz, 2422-2452MHz LoRa: 902.3-914.9MHz
Antenna Specification <sup>#</sup>	BLE&2.4G Wi-Fi: 2.77dBi LoRa: 1.56dBi (It is provided by the applicant.)
Voltage Range <sup>#</sup>	DC 5V from USB port
Sample Serial Number	34LW-1, 34LW-3( Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts C and Part 2-Subpart J, Radiofrequency Radiation Exposure of the Federal Communication Commission rules.

The results were performed in order to determine compliance with FCC §2.1091 rules.

### Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA). The Certificate Number is 4297.01.

## RF EXPOSURE

### Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

#### Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (Minutes)
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

### Result

#### Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

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)

Mode	Frequency (MHz)	Antenna Gain <sup>#</sup>		Tune Up Conducted Power <sup>#</sup>		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
BLE	2480	2.77	1.89	5.0	3.16	20	0.0012	1
2.4G WIFI	2462	2.77	1.89	22.5	177.83	20	0.067	1
LoRa	902.3	1.56	1.43	15.0	28.97	20	0.009	0.602

Note 1: The tune-up conducted power and antenna gain were declared by the applicant.

Note 2: The Bluetooth and WIFI can't transmission simultaneously.

Note 3: The LoRa and Bluetooth or 2.4G WIFI can transmission simultaneously.

Simultaneous transmitting consideration (worst case):

The ratio= LoRa /Limit + 2.4G WIFI /Limit = 0.009/0.602 + 0.067/1 =0.082<1.0

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

### Result: Compliance

## **EXHIBIT A-EUT PHOTOGRAPHS**

Please refer to the Attachment No.1 2504U21080E-RF EUT External Photos and Attachment No.2 2504U21080E-RF EUT Internal Photos.

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