



# **TEST REPORT**

Applicant Name: M5Stack Technology Co.,Ltd

Address: Block A10, Expo Bay South Coast, Fuhai Street, Bao'an District,

Shenzhen, Guangdong, China

Report Number: 2504S32884E-RF

FCC ID: 2AN3WM5SWITCHC6

Test Standard (s)

47 CFR §1.1307& §2.1091

**Sample Description** 

Product Type: M5SwitchC6

Model No.: SwitchC6

Trade Mark:

M5STACK

Date Received: 2025-04-21 Report Date: 2025-05-28

Test Result: The EUT complied with the standards above.

Prepared and Checked By:

Matt Liang

**EMC Engineer** 

Approved By:

**Bob Liao** 

**EMC** Engineer

Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the Federal Government. The information marked "#" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included but no need marked.

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# **DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision	
Rev.00	2504S32884E-RF	Original Report	2025-05-28	

Report No.: 2504S32884E-RF

#### **GENERAL INFORMATION**

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

Product	M5SwitchC6
Tested Model	SwitchC6
Frequency Range	BLE 1M: 2402-2480MHz 2.4G Wi-Fi: 2412-2462MHz, 2422-2452MHz
Antenna Specification#	3.96 dBi(It is provided by the applicant.)
Voltage Range <sup>#</sup>	AC 100-230V
Sample Serial Number	31OM-1 (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

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### **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.

## **MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

#### **Applicable Standard**

According to subpart 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

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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

#### 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/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)

Mode	Mode Frequency		Antenna Gain <sup>#</sup>		Tune Up Conducted Power <sup>#</sup>		Power Density	MPE Limit
	(MHz)	(dBi)	(numeric)	(dBm)	(mW)	Distance (cm)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )
BLE	2480	3.96	2.49	4	2.51	20	0.0012	1
2.4G WIFI	2462	3.96	2.49	24	251.19	20	0.1244	1

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.

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

#### **Result: Compliance**

<sup>\* =</sup> Plane-wave equivalent power density

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