



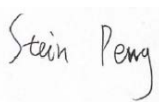

# RF EXPOSURE REPORT

For

## Fujian Wazan Technology Co., Ltd.

601, Building 1, Huajian mansion, No. 12 Science and Technology East Road, High-tech Zone, Fuzhou, Fujian, China

**FCC ID: 2AG6N-SLM927AM4MG**

<b>Report Type:</b> Original Report	<b>Product Name:</b> Smart Module
<b>Report Number:</b>	2407W89604E-RF-05
<b>Report Date:</b>	2024-09-26
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## REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2407W89604E-RF-05	R1V1	2024-09-26	Initial Release

### **Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

## MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

Limits for Maximum Permissible Exposure (MPE)

(B) 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;  
 According to §1.1310 & §2.1091 RF exposure is calculated.

### Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$  = 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);

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

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

**EUT Information**

Operation Modes	Operation Frequency (MHz)	Max Conducted output power including Tune-up Tolerance (dBm)	Maximum Antenna Gain (dBi)	Maximum ERP/EIRP (dBm)	Limit (dBm)
2.4G WLAN	2412-2462	19.0	0.84	19.84	30
BLE	2402-2480	4.0	0.84	4.84	30
BT	2402-2480	15.0	0.84	15.84	21
5.2GHz Wi-Fi	5180-5240	17.0	0.69	17.69	24
5.3GHz Wi-Fi	5260-5320	17.0	0.74	17.74	24
5.5GHz Wi-Fi	5500-5720	17.0	0.95	17.95	24
5.8GHz Wi-Fi	5745-5825	17.0	0.95	17.95	24
WCDMA B2	1850-1910	25.0	3.2	28.2	33
WCDMA B4	1710-1755	25.0	2.85	27.85	30
WCDMA B5	824-849	25.0	2.39	25.24	38.45
LTE B2	1850-1910	25.7	1.82	27.52	33
LTE B4	1710-1755	25.7	2.85	28.55	30
LTE B5	824-849	25.7	2.39	25.94	38.45
LTE B7	2500-2570	25.7	3.36	29.06	33
LTE B12	699-716	25.7	0.62	24.17	34.77
LTE B13	777-787	25.7	0.58	24.13	34.77
LTE B14	788-798	25.7	-0.34	23.21	34.77
LTE B17	704-716	25.7	0.6	24.15	34.77
LTE B25	1850-1915	25.7	1.82	27.52	33
LTE B26	814-849	25.7	2.39	25.94	38.45
LTE B41	2496-2690	25.7	3.82	29.52	33
LTE B66	1710-1780	25.7	2.85	28.55	30
LTE B71	663-698	25.7	0.96	24.51	34.77

## Note:

- The above parameters were provided by the manufacturer.
- $ERP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBd)$   
 $\text{Antenna Gain}(dBd) = \text{Antenna Gain}(dBi) - 2.15$

**Calculated Data:**

Mode	Frequency (MHz)	Antenna Gain		Tune-up Output Power		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
2.4G WLAN	2412-2462	0.84	1.21	19	79.43	20	0.0191	1.000
BLE	2402-2480	0.84	1.21	4	2.51	20	0.0006	1.000
BT	2402-2480	0.84	1.21	15	31.62	20	0.0076	1.000
5.2GHz Wi-Fi	5180-5240	0.69	1.17	17	50.12	20	0.0117	1.000
5.3GHz Wi-Fi	5260-5320	0.74	1.19	17	50.12	20	0.0119	1.000
5.5GHz Wi-Fi	5500-5720	0.95	1.24	17	50.12	20	0.0124	1.000
5.8GHz Wi-Fi	5745-5825	0.95	1.24	17	50.12	20	0.0124	1.000
WCDMA B2	1850-1910	3.2	2.09	25	316.23	20	0.1315	1.000
WCDMA B4	1710-1755	2.85	1.93	25	316.23	20	0.1214	1.000
WCDMA B5	824-849	2.39	1.73	25	316.23	20	0.1088	0.549
LTE B2	1850-1910	1.82	1.52	25.7	371.54	20	0.1124	1.000
LTE B4	1710-1755	2.85	1.93	25.7	371.54	20	0.1425	1.000
LTE B5	824-849	2.39	1.73	25.7	371.54	20	0.1281	0.549
LTE B7	2500-2570	3.36	2.17	25.7	371.54	20	0.1602	1.000
LTE B12	699-716	0.62	1.15	25.7	371.54	20	0.0852	0.466
LTE B13	777-787	0.58	1.14	25.7	371.54	20	0.0843	0.525
LTE B14	788-798	-0.34	0.92	25.7	371.54	20	0.0683	0.518
LTE B17	704-716	0.6	1.15	25.7	371.54	20	0.0849	0.469
LTE B25	1850-1915	1.82	1.52	25.7	371.54	20	0.1124	1.000
LTE B26	814-849	2.39	1.73	25.7	371.54	20	0.1281	0.543
LTE B41	2496-2690	3.82	2.41	25.7	371.54	20	0.1781	1.000
LTE B66	1710-1780	2.85	1.93	25.7	371.54	20	0.1425	1.000
LTE B71	663-698	0.96	1.25	25.7	371.54	20	0.0922	0.442

Note: 1. The Tune-up output power was declared by the Manufacturer.

**Simulatneous transmission:**

2.4G Wifi, WWAN can transmissions simultaneously:

$$\sum_j \frac{S_j}{S_{Limit,j}} \leq 1$$

$$= S_{2.4G\ Wifi}/S_{limit-2.4G\ Wifi} + S_{WWAN}/S_{limit-WWAN}$$

$$= 0.0191/1 + 0.1281/0.543$$

$$= 0.2552$$

$$< 1.0$$

**Result:** The device meets MPE at distance 20cm.

### **Declarations**

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor  $k=2$  with the 95.45% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

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