# Test Report

**Verified code:** 797680

**Report No.:** E202209268928-1-G1

| | |
|---|---|
| Customer: | SINO WEALTH ELECTRONIC LTD. |
| Address: | No. 3, Lane 767, JinZhong Road, Shanghai China 200335 |
| Sample Name: | Sino Wealth BLE Module |
| Sample Model: | SH-BLEM18 |
| Receive Sample Date: | Oct.09,2022 |
| Test Date: | Oct.10,2022 ~ Oct.18,2022 |
| Reference Document: | CFR 47, FCC Part 15 Subpart C<br>RADIO FREQUENCY DEVICES:Subpart C—Intentional Radiators |
| Test Result: | Pass |

Prepared by: Chen XiaoCong Reviewed by: Jiang Tao Approved by: Xiao Liang

GUANGZHOU GRG METROLOGY & TEST CO., LTD

Issued Date: 2022-11-04

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# Statement

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2. The sample information is provided by the client and responsible for its authenticity; The content of the report is only valid for the samples sent this time.

3. When there are reports in both Chinese and English, the Chinese version will prevail when the language problems are inconsistent.

4. If there is any objection concerning the report, please inform us within 15 days from the date of receiving the report.

5. Without the agreement of the laboratory, the client is not authorized to use the test results for unapproved propaganda.

**---------- The following blanks ----------**

# TABLE OF CONTENTS


1. TEST RESULT SUMMARY ..... 6
2. GENERAL DESCRIPTION OF EUT ..... 7
   - 2.1 APPLICANT ..... 7
   - 2.2 MANUFACTURER ..... 7
   - 2.3 FACTORY ..... 7
   - 2.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST ..... 7
   - 2.5 CHANNELLIST ..... 8
   - 2.6 TEST OPERATION MODE ..... 8
   - 2.7 LOCAL SUPPORTIVE ..... 8
   - 2.8 CONFIGURATION OF SYSTEM UNDER TEST ..... 9
   - 2.9 DUTY CYCLE ..... 10
3. LABORATORY ..... 11
4. MEASUREMENT UNCERTAINTY ..... 12
5. LIST OF USED TEST EQUIPMENT AT GRGT ..... 13
6. CONDUCTED EMISSION MEASUREMENT ..... 14
   - 6.1 LIMITS ..... 14
   - 6.2 TEST PROCEDURES ..... 14
   - 6.3 TEST SETUP ..... 15
   - 6.4 DATA SAMPLE ..... 15
   - 6.5 TEST RESULTS ..... 16
7. RADIATED SPURIOUS EMISSIONS ..... 18
   - 7.1 LIMITS ..... 18
   - 7.2 TEST PROCEDURES ..... 18
   - 7.3 TEST SETUP ..... 21
   - 7.4 DATA SAMPLE ..... 22
   - 7.5 TEST RESULTS ..... 23
8. 6dB BANDWIDTH ..... 47
   - 8.1 LIMITS ..... 47
   - 8.2 TEST PROCEDURES ..... 47
   - 8.3 TEST SETUP ..... 47
   - 8.4 TEST RESULTS ..... 47
9. MAXIMUM PEAK OUTPUT POWER ..... 51
   - 9.1 LIMITS ..... 51
   - 9.2 TEST PROCEDURES ..... 51
   - 9.3 TEST SETUP ..... 51
   - 9.4 TEST RESULTS ..... 51
10. POWER SPECTRAL DENSITY ..... 52
   - 10.1 LIMITS ..... 52
   - 10.2 TEST PROCEDURES ..... 52
   - 10.3 TEST SETUP ..... 52
   - 10.4 TEST RESULTS ..... 52

11. CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS ..... 56
11.1 LIMITS ..... 56
11.2 TEST PROCEDURES ..... 56
11.3 TEST SETUP ..... 56
11.4 TEST RESULTS ..... 57
12. RESTRICTED BANDS OF OPERATION ..... 70
12.1 LIMITS ..... 70
12.2 TEST PROCEDURES ..... 71
12.3 TEST SETUP ..... 71
12.4 TEST RESULTS ..... 72
APPENDIX A. PHOTOGRAPH OF THE TEST CONNECTION DIAGRAM ..... 81
APPENDIX B. PHOTOGRAPH OF THE EUT ..... 81

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## REPORT ISSUED HISTORY

| Report Version | Report No. | Description | Compile Date |
|---|---|---|---|
| 1.0 | E202209268928-1 | Original Issue | 2022-10-20 |
| 2.0 | E202209268928-1-G1 | Update | 2022-11-04 |

**Version 2.0:**

1. Add conduction emission project on the basis of the original report.
2. This report instead the report E202209268928-1, and from the date of issuance of this report, the report which being replaced become invalid.

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## 1. TEST RESULT SUMMARY

| **Technical Requirements** | | |
|---|---|---|
| FCC 47 CFR Part 15 Subpart C 15.247<br>ANSI C63.10-2013<br>KDB 558074 D01 15.247 measurement guidance v05r02 | | |
| **Limit / Severity** | **Item** | **Result** |
| §15.203 | Antenna Requirement | Pass |
| §15.207(a) | Conducted Emission | Pass |
| §15.247(d)&15.205& 15.209 | Radiated Spurious Emission | Pass |
| §15.247(b)(3) | Maximum Peak Output Power | Pass |
| §15.247(e) | Power Spectral Density | Pass |
| §15.247(a)(2) | 6dB bandwidth | Pass |
| §15.247(d) | Conducted band edges and Spurious Emission | Pass |
| §15.247(d)&15.205& 15.209 | Restricted bands of operation | Pass |

Note: The antenna is print antenna. The max gain of antenna is 1.2dBi.which accordance 15.203.is considered sufficient to comply with the provisions of this section.

**---------- The following blanks ----------**

## 2. GENERAL DESCRIPTION OF EUT

### 2.1 APPLICANT

| | |
|---|---|
| Name: | SINO WEALTH ELECTRONIC LTD. |
| Address: | No. 3, Lane 767, JinZhong Road, Shanghai China 200335 |

### 2.2 MANUFACTURER

| | |
|---|---|
| Name: | SINO WEALTH ELECTRONIC LTD. |
| Address: | No. 3, Lane 767, JinZhong Road, Shanghai China 200335 |

### 2.3 FACTORY

| | |
|---|---|
| Name: | SINO WEALTH ELECTRONIC LTD. |
| Address: | No. 3, Lane 767, JinZhong Road, Shanghai China 200335 |

### 2.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

| | |
|---|---|
| Equipment: | Sino Wealth BLE Module |
| Model No.: | SH-BLEM18 |
| Adding Model: | / |
| Trade Name: | / |
| FCC ID: | 2AOT2SH-BLEM18 |
| Power supply: | DC 3.3V 10mA |
| Frequency Band: | 2402-2480MHz |
| Transmit Power: | GFSK for 1Mbps:0.47dBm<br>GFSK for 2Mbps:0.46dBm |
| Modulation type: | GFSK |
| Channel space: | 2MHz |
| Antenna Specification: | Print antenna with 1.2dBi gain (Max.) |
| Temperature Range: | -40℃~+105℃ |
| Hardware Version: | V1.0 |
| Software Version: | V1.0 |
| Sample No: | E202209268928-0001,E202209268928-0002 |
| Note: | / |

## 2.5 CHANNELLIST

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|---|---|---|---|
| ***00** | **2402** | 10 | 2422 | 20 | 2442 | 30 | 2462 |
| 01 | 2404 | 11 | 2424 | 21 | 2444 | 31 | 2464 |
| 02 | 2406 | 12 | 2426 | 22 | 2446 | 32 | 2466 |
| 03 | 2408 | 13 | 2428 | 23 | 2448 | 33 | 2468 |
| 04 | 2410 | 14 | 2430 | 24 | 2450 | 34 | 2470 |
| 05 | 2412 | 15 | 2432 | 25 | 2452 | 35 | 2472 |
| 06 | 2414 | 16 | 2434 | 26 | 2454 | 36 | 2474 |
| 07 | 2416 | 17 | 2436 | 27 | 2456 | 37 | 2476 |
| 08 | 2418 | 18 | 2438 | 28 | 2458 | 38 | 2478 |
| 09 | 2420 | ***19** | **2440** | 29 | 2460 | ***39** | **2480** |

* is the test frequency

## 2.6 TEST OPERATION MODE

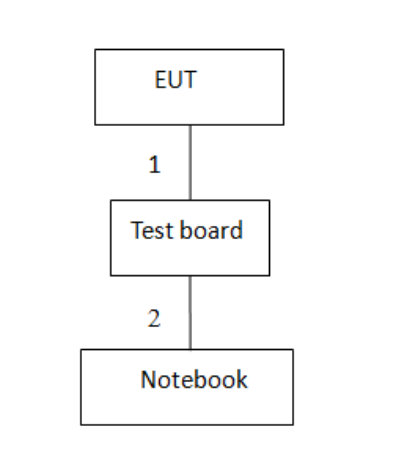
| Mode No. | Description of the modes |
|---|---|
| 1 | Bluetooth (BLE) fixed frequency transmitting |

## 2.7 LOCAL SUPPORTIVE

| Name of equipment | Manufacturer | Model | Serial number | Note |
|---|---|---|---|---|
| Notebook | DELL | Latitude3490 | 5GSXKP2 | / |
| Test board | / | / | / | / |

| No. | Cable Type | Qty. | Shielded Type | Ferrite Core(Qty.) | Length |
|---|---|---|---|---|---|
| 1 | DC cable | 1 | No | 0 | Unshielded 0.15m |
| 2 | USB extension cable | 1 | No | 0 | Unshielded 1m |

## 2.8 CONFIGURATION OF SYSTEM UNDER TEST




**Test software:**

| Software version | Test level |
|---|---|
| DOGO_VP2.1.8 | 0 |

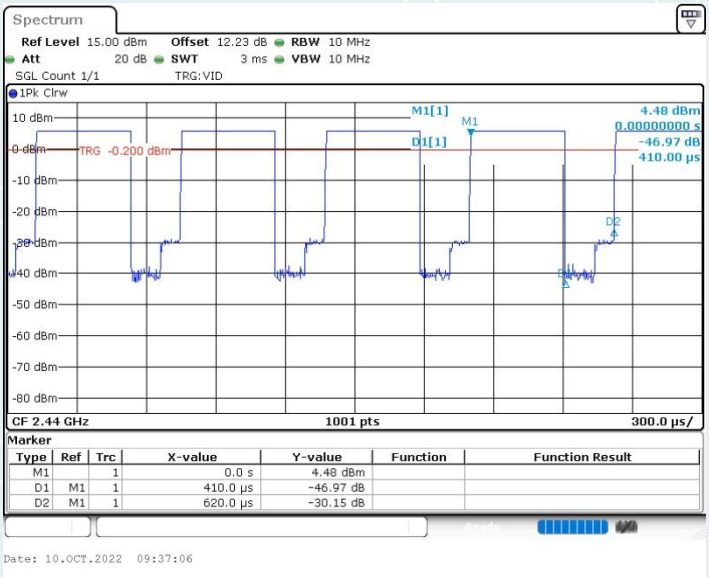
**---------- The following blanks ----------**

## 2.9 DUTY CYCLE

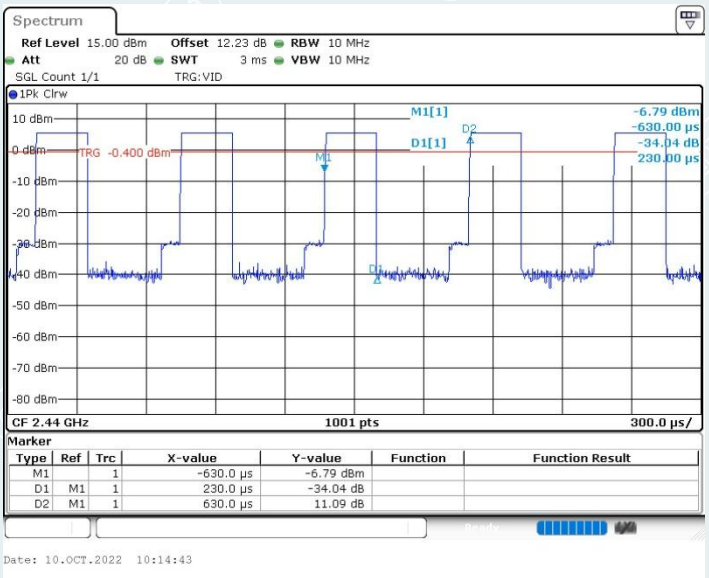
Environment: 23.1℃/52%RH/101.0kPa Voltage: DC 3.3V
Tested By: Qin Tingting Date: 2022-10-10

| Test Mode | Antenna | Frequency [MHz] | ON Time [ms] | Period [ms] | DC [%] | T [s] |
|---|---|---|---|---|---|---|
| BLE_1M | Ant1 | 2440 | 0.41 | 0.62 | 66.13 | 0.00041 |
| BLE_2M | Ant1 | 2440 | 0.23 | 0.63 | 36.51 | 0.00023 |

**BLE_1M _2440MHz**




**BLE_2M _2440MHz**



## 3. LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co., Ltd.


| | |
|---|---|
| Add.: | No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China |
| P.C.: | 518110 |
| Tel : | 0755-61180008 |
| Fax: | 0755-61180008 |


**---------- The following blanks ----------**

## 4. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement | | Frequency | Uncertainty |
|---|---|---|---|
| Radiated Emission | Horizontal | 9kHz～30MHz | 5.1dB[1)] |
| | | 30MHz～200MHz | 4.5dB[1)] |
| | | 200MHz～1000MHz | 4.4dB[1)] |
| | | 1GHz～18GHz | 5.6dB[1)] |
| | | 18GHz～26.5GHz | 3.7dB[1)] |
| | Vertical | 9kHz～30MHz | 5.1dB[1)] |
| | | 30MHz～200MHz | 4.4dB[1)] |
| | | 200MHz～1000MHz | 4.5dB[1)] |
| | | 1GHz～18GHz | 5.6dB[1)] |
| | | 18GHz～26.5GHz | 3.7dB[1)] |
| Conduction Emission | | 150kHz～30MHz | 3.4dB[1)] |

Note:
[1)] This uncertainty represents an expanded uncertainty expressed at approximately the 95%.
This uncertainty represents an expanded uncertainty factor of *k*=2.

| Measurement | Uncertainty |
|---|---|
| RF frequency | $6.0\times10^{-6}$ |
| RF power conducted | 0.8dB |
| Occupied channel bandwidth | 0.4dB |
| Unwanted emission, conducted | 0.7dB |
| Humidity | 6% |
| Temperature | 2℃ |

**---------- The following blanks ----------**

## 5. LIST OF USED TEST EQUIPMENT AT GRGT

| Name of Equipment | Manufacturer | Model | Serial Number | Calibration Due |
|---|---|---|---|---|
| **Conducted Emissions** | | | | |
| EMI TEST RECEIVER | R&S | ESCI | 100783 | 2023-08-28 |
| LISN(EUT) | R&S | ENV216 | 101543 | 2023-09-13 |
| Test S/W | EZ | CCS-3A1-CE | | |
| **Radiated Spurious Emission&Restricted bands of operation** | | | | |
| Test S/W | EZ | CCS-03A1 | | |
| Test Receiver | R&S | ESR7 | 102444 | 2023-09-02 |
| Preamplifier | EMEC | EM330 | I00426 | 2023-03-05 |
| Bi-log Antenna | Schwarzbeck | VULB9160 | VULB9160-3401 | 2022-10-27 |
| LoopAntenna | TESEQ | HLA6121 | 52599 | 2023-04-02 |
| Spectrum Analyzer | KEYSIGHT | N9010A | MY52221469 | 2023-06-29 |
| Horn Antenna | Schwarzbeck | BBHA9120D | 02143 | 2022-10-22 |
| Board-Band Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA 9170-497 | 2023-10-14 |
| Amplifier | Tonscend | TAP01018048 | AP20E8060075 | 2023-05-05 |
| Amplifier | Tonscend | TAP184050 | AP20E806071 | 2023-05-05 |
| Test S/W | Tonscend | JS36-RE/2.5.1.5 | | |
| **6dB Bandwidth&Conducted band edges and Spurious Emission&Power Spectral Density** | | | | |
| Spectrum Analyzer | R&S | FSW43 | 102072 | 2023-09-02 |
| BT/WIFI System | Tonscend | JS0806 | | |
| **Maximum Peak Output Power** | | | | |
| Pulse power sensor | Anritsu | MA2411B | 1126150 | 2023-03-01 |
| Power meter | Anritsu | ML2495A | 1204003 | 2023-02-28 |

Note: The calibration interval of the above test instruments is 12 months.

# 6. CONDUCTED EMISSION MEASUREMENT

## 6.1 LIMITS

| Frequency range | Limits (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 150kHz～0.5MHz | 66～56 | 56～46 |
| 0.5MHz～5MHz | 56 | 46 |
| 5MHz～30MHz | 60 | 50 |

**NOTE:** (1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 150kHz to 0.5MHz.

## 6.2 TEST PROCEDURES

**Procedure of Preliminary Test**

Test procedures follow ANSI C63.10:2013.

For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

– Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

– All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

– The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

– Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

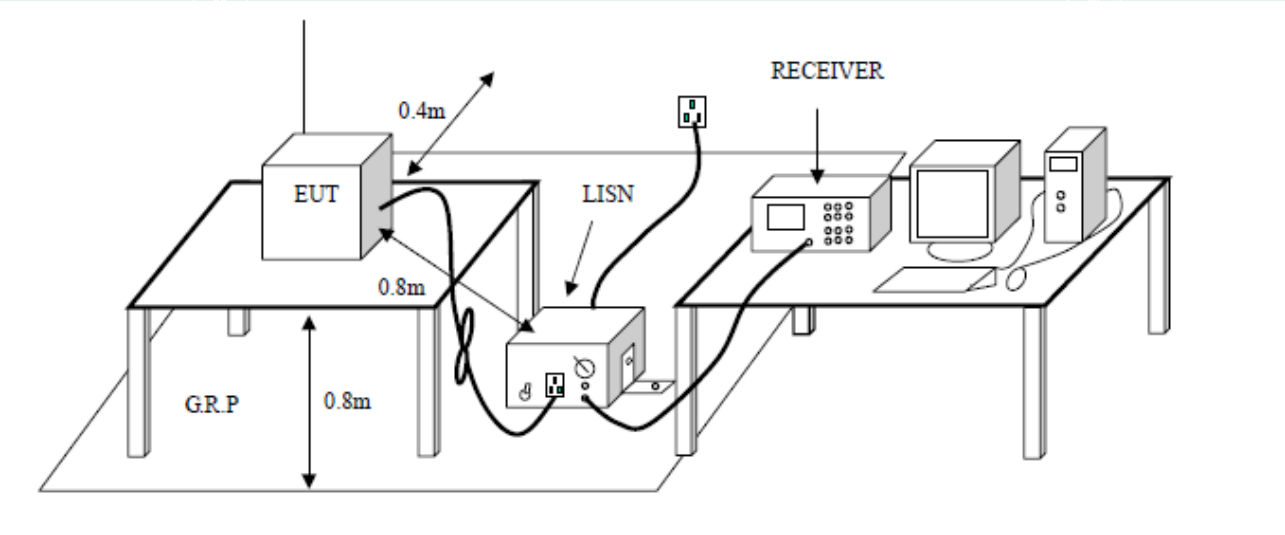
– I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

The test mode(s) described in Item 2.6 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.6 producing the highest emission level.The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

**Procedure of Final Test**

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

## 6.3 TEST SETUP




## 6.4 DATA SAMPLE

| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|---|---|---|---|---|---|---|---|---|---|---|
| X.XXXX | 32.69 | 25.65 | 11.52 | 44.21 | 37.17 | 65.78 | 55.79 | -21.57 | -18.62 | Pass |

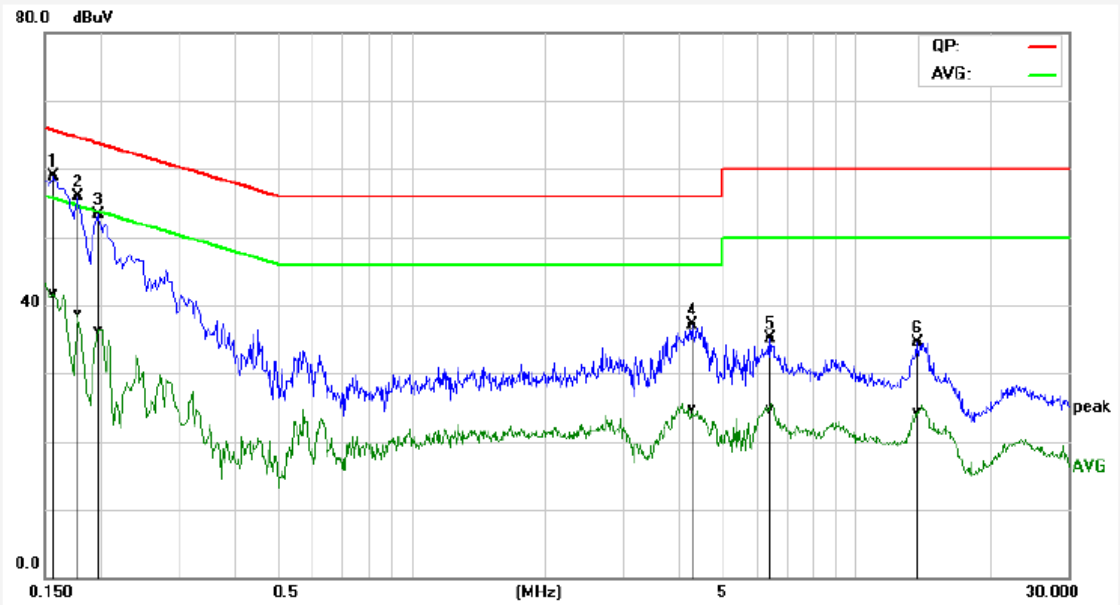
Factor = Insertion loss of LISN + Cable Loss
Result = Quasi-peak Reading/ Average Reading + Factor
Limit =Limit stated in standard
Margin = Result (dBuV) – Limit (dBuV)

**---------- The following blanks ----------**

## 6.5 TEST RESULTS

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 25.8℃/40%RH/101.0kPa | **Test Mode** | BLE 1M 2402MHz |
| **Tested By** | Tang Shenghui | **Line** | L |
| **Tested Date** | 2022-10-17 | **Test Voltage** | AC 120V/ 60Hz |

(The chart below shows the highest readings taken from the final data with notebook supply.)



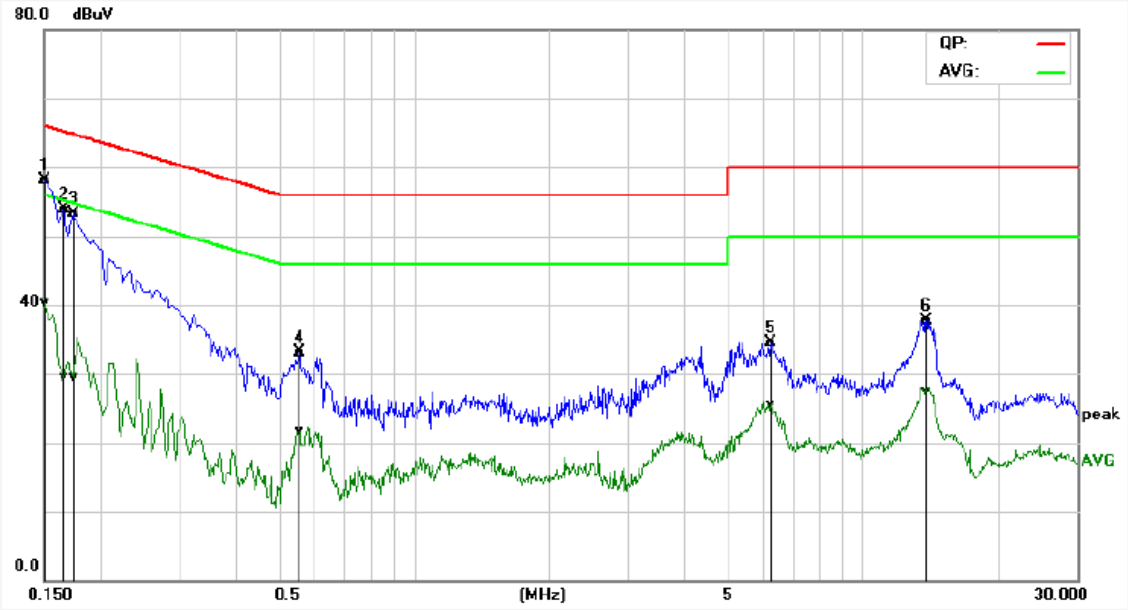

| No. | Frequency (MHz) | QuasiPeak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | QuasiPeak result (dBuV) | Average result (dBuV) | QuasiPeak limit (dBuV) | Average limit (dBuV) | QuasiPeak margin (dB) | Average margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1* | 0.1580 | 49.19 | 32.11 | 9.61 | 58.80 | 41.72 | 65.56 | 55.57 | -6.76 | -13.85 | Pass |
| 2 | 0.1780 | 46.38 | 29.02 | 9.60 | 55.98 | 38.62 | 64.57 | 54.58 | -8.59 | -15.96 | Pass |
| 3 | 0.1980 | 43.71 | 26.72 | 9.60 | 53.31 | 36.32 | 63.69 | 53.69 | -10.38 | -17.37 | Pass |
| 4 | 4.2900 | 27.44 | 15.13 | 9.66 | 37.10 | 24.79 | 56.00 | 46.00 | -18.90 | -21.21 | Pass |
| 5 | 6.4060 | 25.36 | 14.98 | 9.68 | 35.04 | 24.66 | 60.00 | 50.00 | -24.96 | -25.34 | Pass |
| 6 | 13.7580 | 24.82 | 14.64 | 9.74 | 34.56 | 24.38 | 60.00 | 50.00 | -25.44 | -25.62 | Pass |

***REMARKS:*** *L = Live Line*

*Pre-scan all mode and recorded the worst case results in this report (TX-Low Channel(1Mbps))*

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 25.8℃/40%RH/101.0kPa | **Test Mode** | BLE 1M 2402MHz |
| **Tested By** | Tang Shenghui | **Line** | N |
| **Tested Date** | 2022-10-17 | **Test Voltage** | AC 120V/ 60Hz |

(The chart below shows the highest readings taken from the final data with notebook supply.)




| No. | Frequency (MHz) | QuasiPeak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | QuasiPeak result (dBuV) | Average result (dBuV) | QuasiPeak limit (dBuV) | Average limit (dBuV) | QuasiPeak margin (dB) | Average margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1* | 0.1516 | 48.52 | 30.75 | 9.60 | 58.12 | 40.35 | 65.91 | 55.91 | -7.79 | -15.56 | Pass |
| 2 | 0.1660 | 44.37 | 19.90 | 9.60 | 53.97 | 29.50 | 65.15 | 55.16 | -11.18 | -25.66 | Pass |
| 3 | 0.1740 | 43.61 | 19.81 | 9.60 | 53.21 | 29.41 | 64.76 | 54.77 | -11.55 | -25.36 | Pass |
| 4 | 0.5580 | 23.51 | 12.16 | 9.59 | 33.10 | 21.75 | 56.00 | 46.00 | -22.90 | -24.25 | Pass |
| 5 | 6.2420 | 24.73 | 15.91 | 9.68 | 34.41 | 25.59 | 60.00 | 50.00 | -25.59 | -24.41 | Pass |
| 6 | 13.9060 | 27.97 | 17.67 | 9.80 | 37.77 | 27.47 | 60.00 | 50.00 | -22.23 | -22.53 | Pass |

***REMARKS:*** *N = Neutral Line.*

*Pre-scan all mode and recorded the worst case results in this report (TX-Low Channel(1Mbps))*

# 7. RADIATED SPURIOUS EMISSIONS

## 7.1 LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required.

| Frequency (MHz) | Quasi-peak(μV/m) | Measurement distance(m) | Quasi-peak(dBμV/m)@distance 3m |
|---|---|---|---|
| 0.009-0.490 | 2400/F(kHz) | 300 | 128.5~93.8 |
| 0.490-1.705 | 24000/F(kHz) | 30 | 73.8~63 |
| 1.705-30.0 | 30 | 30 | 69.5 |
| 30 ~ 88 | 100 | 3 | 40 |
| 88~216 | 150 | 3 | 43.5 |
| 216 ~ 960 | 200 | 3 | 46 |
| Above 960 | 500 | 3 | 54 |

**NOTE**:

(1) The emission limits for the ranges 9-90kHz and 110-490kHz are based on measurements employing a linear average detector.

(2) The lower limit shall apply at the transition frequencies.

(3) Above 18GHz test distance is 1m, so the Peak Limit=74+20*log(3/1)=83.54 (dBμV/m).
The Avg Limit=54+20*log(3/1)=63.54 (dBμV/m).

## 7.2 TEST PROCEDURES

**1) Sequence of testing 9kHz to 30MHz**

**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The turntable rotates from 0 °to 360 °.

--- The antenna height is 1.0 meter.

--- The antenna is polarized X,Y and Z.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

**Final measurement:**

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable

position (0 °to 360 °) and by rotating the elevation axes (0 °to 360 °).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

**2) Sequence of testing 30MHz to 1GHz**

**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

**Final measurement:**

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of pre measurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

**3) Sequence of testing 1GHz to 18GHz**

**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 4 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

**Final measurement:**

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of pre measurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

**4) Sequence of testing above 18GHz**
**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

**Final measurement:**

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the pre measurements with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

NOTE:
(a).The frequency from 9kHz to 150kHz, Set RBW=300Hz(for Peak & AVG), VBW=300Hz(for Peak & AVG). The frequency from 150kHz to 30MHz, Set RBW=9kHz, VBW=9kHz, (for QP Detector).
(b).The frequency from 30MHz to 1GHz, Set RBW=120kHz, VBW=300kHz, (for QP Detector).
(c).The frequency above 1GHz, for Peak detector: Set RBW=1MHz,VBW=3MHz.
(d). The frequency above 1GHz, for Avg detector: Set RBW=1MHz,if the EUT is configured to transmit with duty cycle ≥98%, set VBW≤RBW/100 (i.e.,10kHz) but not less than 10 Hz. If the EUT duty cycle is ＜98%，set VBW≥1/T, Where T is defined in section 2.9.

## 7.3 TEST SETUP

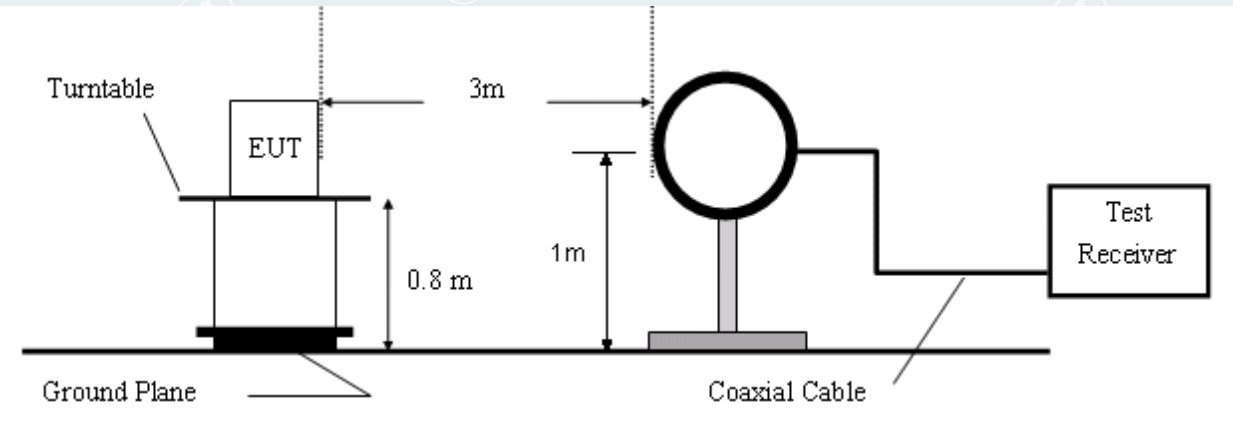



**Figure 1. 9kHz to 30MHz radiated emissions test configuration**

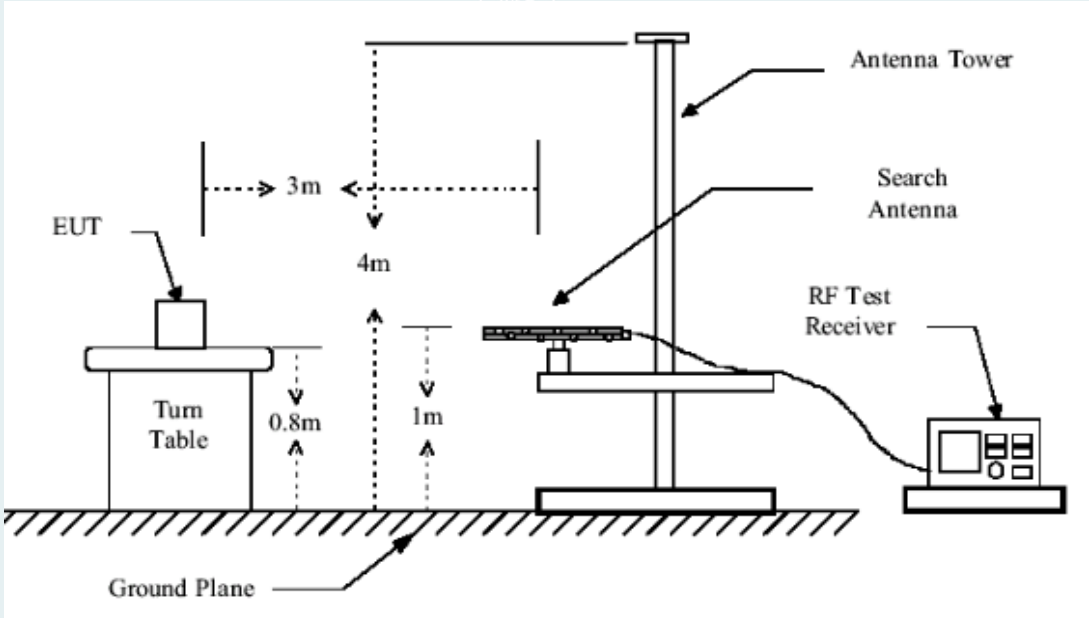



**Figure 2. 30MHz to 1GHz radiated emissions test configuration**

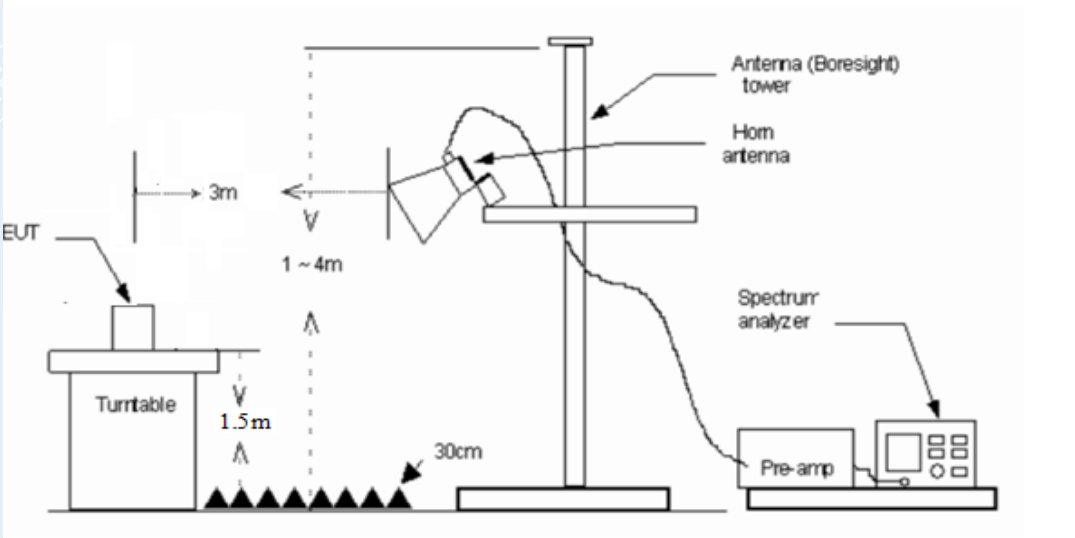



**Figure 3. 1GHz to 18GHz radiated emissions test configuration**

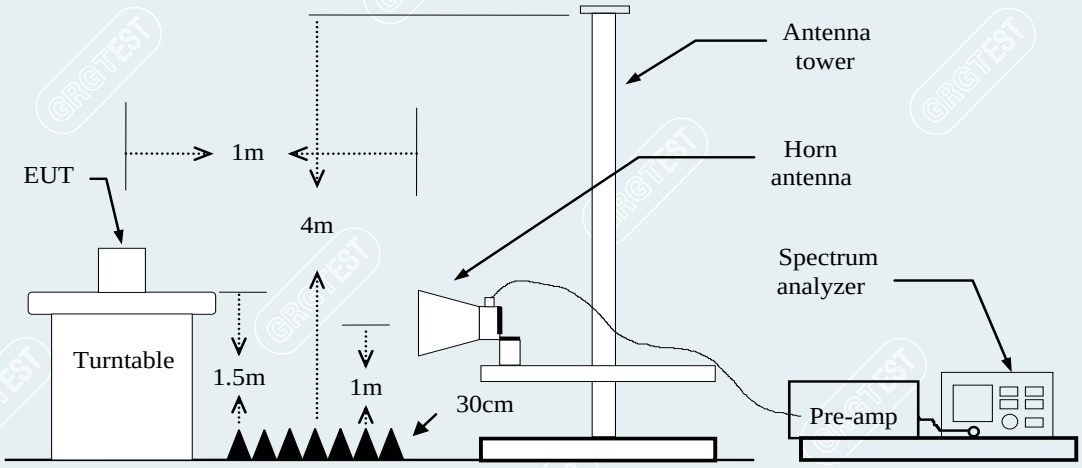



**Figure 4. 18GHz to 26.5GHz radiated emissions test configuration**

## 7.4 DATA SAMPLE

**30MHz to 1GHz**

| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Pole |
|---|---|---|---|---|---|---|---|---|
| xxx | xxx | 37.06 | -15.48 | 21.58 | 40.00 | -18.42 | QP | Vertical |

**1GHz to 18GHz**

| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Pole |
|---|---|---|---|---|---|---|---|---|
| xxx | xxx | 65.45 | -11.12 | 54.33 | 74.00 | -19.67 | Peak | Vertical |
| xxx | xxx | 63.00 | -11.12 | 51.88 | 54.00 | -2.12 | AVG | Vertical |

**Above 18GHz**

| No. | Frequency (MHz) | Reading (dBuV/m) | Factor (dB) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Pole |
|---|---|---|---|---|---|---|---|---|
| xxx | xxx | 68.86 | 57.66 | -11.20 | 83.54 | 25.88 | peak | Vertical |
| xxx | xxx | 68.89 | -11.20 | 57.69 | 63.54 | 5.85 | AVG | Vertical |

Frequency (MHz) = Emission frequency in MHz

Ant.Pol. (H/V) = Antenna polarization

Reading (dBuV) = Uncorrected Analyzer / Receiver reading

Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Remark Result (dBuV/m) – Limit (dBuV/m)

Peak = Peak Reading

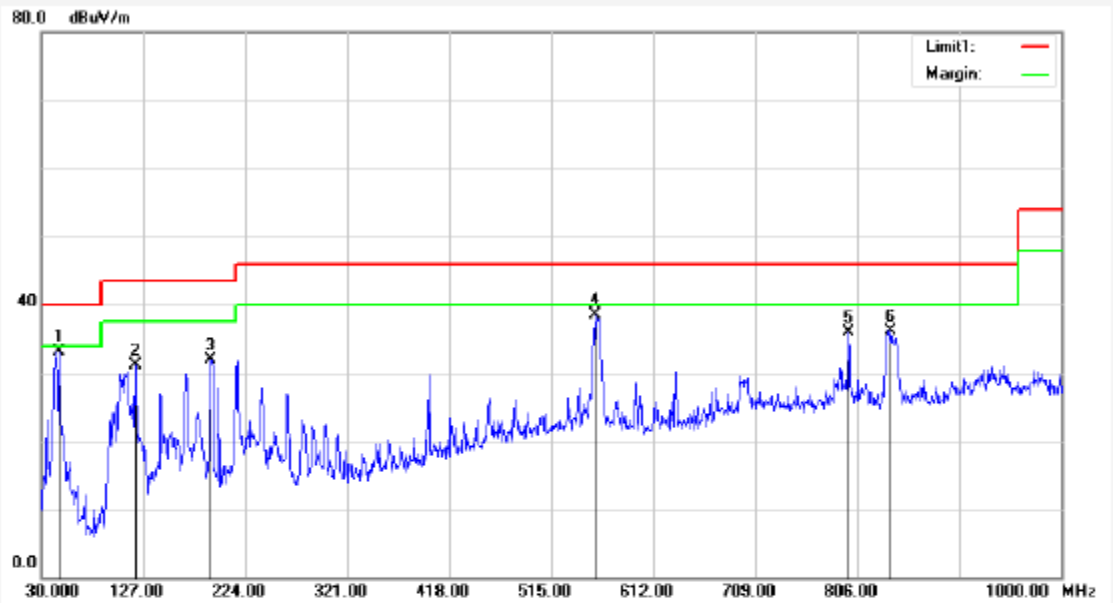
QP = Quasi-peak Reading

AVG = Average Reading

## 7.5 TEST RESULTS

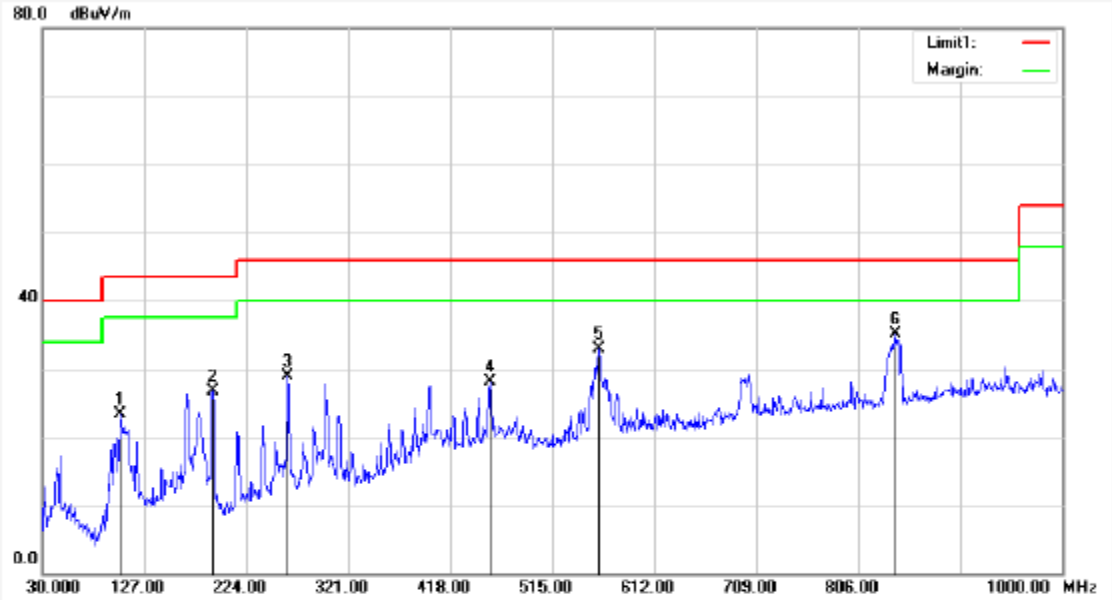
**Below 1GHz**

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2402MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



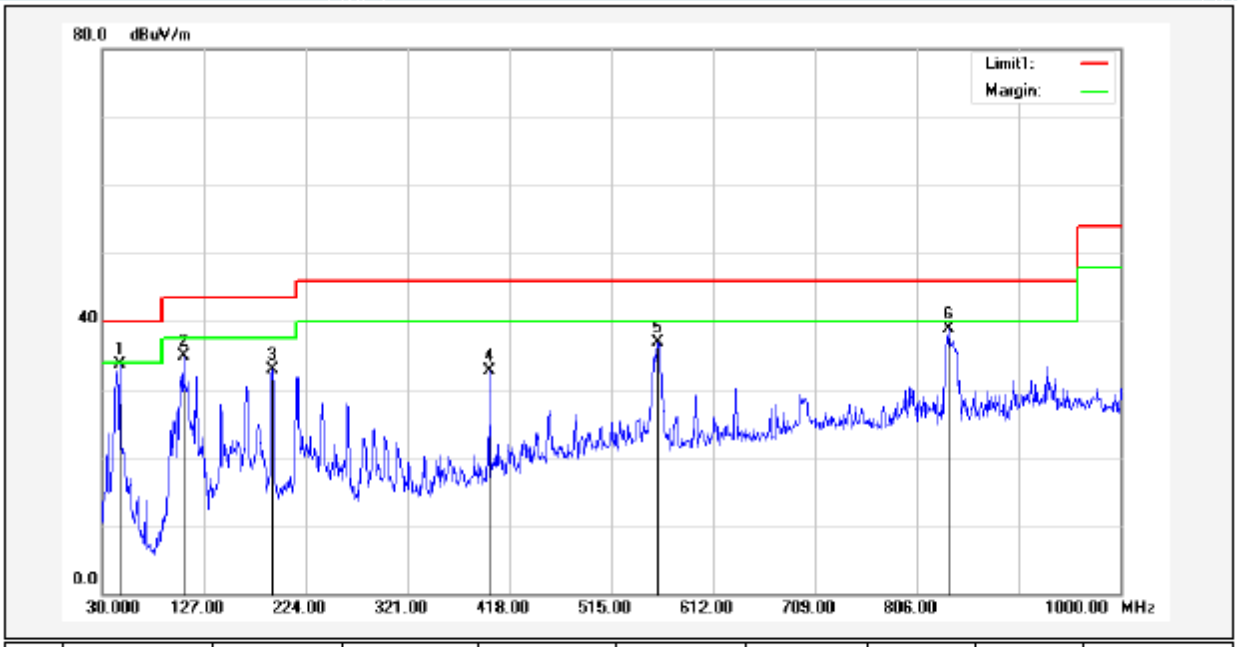

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1* | 47.4600 | 60.06 | -26.99 | 33.07 | 40.00 | -6.93 | 102 | 100 | QP |
| 2 | 119.2400 | 58.29 | -27.25 | 31.04 | 43.50 | -12.46 | 333 | 100 | QP |
| 3 | 191.0200 | 59.01 | -27.01 | 32.00 | 43.50 | -11.50 | 6 | 100 | QP |
| 4 | 556.7100 | 54.96 | -16.41 | 38.55 | 46.00 | -7.45 | 344 | 100 | QP |
| 5 | 797.2700 | 47.48 | -11.56 | 35.92 | 46.00 | -10.08 | 302 | 100 | QP |
| 6 | 838.0100 | 47.25 | -11.07 | 36.18 | 46.00 | -9.82 | 308 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2402MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



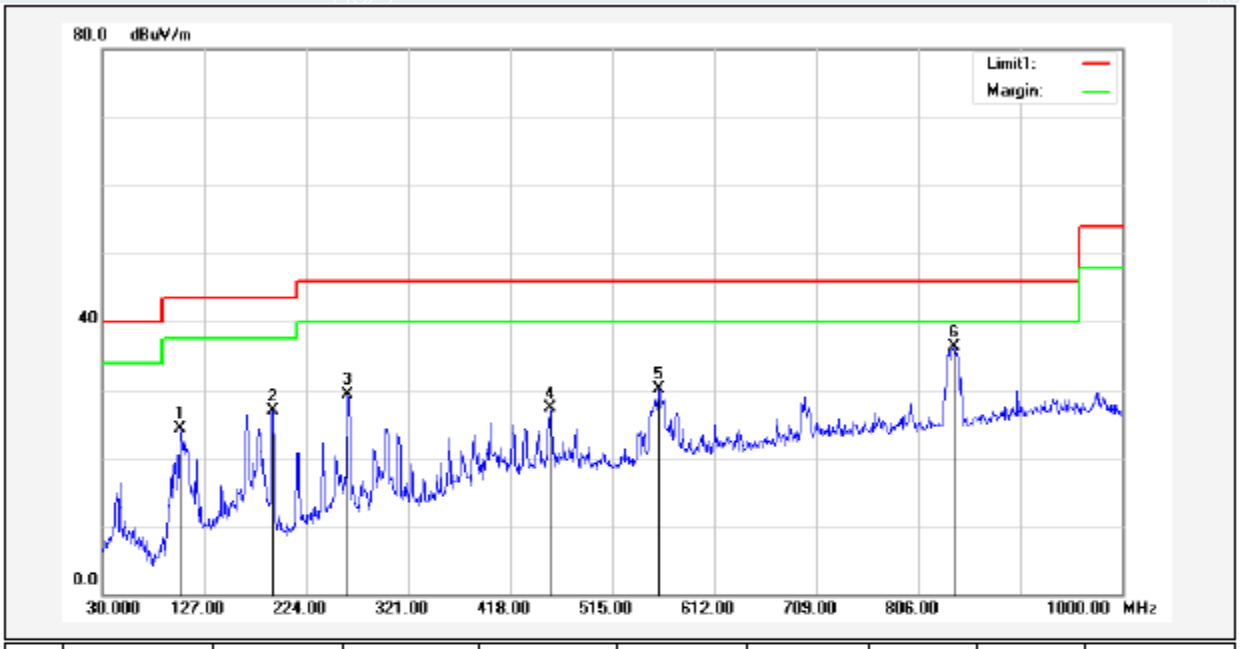

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 51.86 | -28.62 | 23.24 | 43.50 | -20.26 | 123 | 300 | QP |
| 2 | 191.9900 | 53.71 | -27.10 | 26.61 | 43.50 | -16.89 | 101 | 100 | QP |
| 3 | 263.7700 | 53.78 | -24.86 | 28.92 | 46.00 | -17.08 | 159 | 100 | QP |
| 4 | 455.8300 | 46.70 | -18.65 | 28.05 | 46.00 | -17.95 | 62 | 200 | QP |
| 5 | 559.6200 | 49.19 | -16.32 | 32.87 | 46.00 | -13.13 | 99 | 200 | QP |
| 6* | 841.8900 | 46.03 | -11.01 | 35.02 | 46.00 | -10.98 | 358 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2440MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



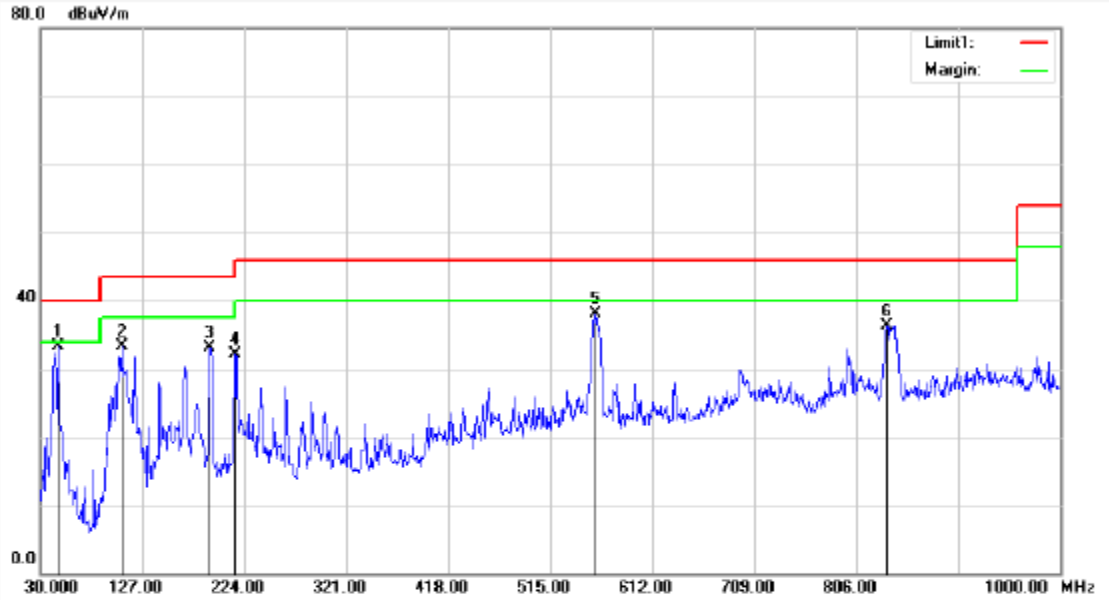

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1* | 47.4600 | 60.70 | -26.99 | 33.71 | 40.00 | -6.29 | 76 | 100 | QP |
| 2 | 107.6000 | 63.10 | -28.23 | 34.87 | 43.50 | -8.63 | 199 | 100 | QP |
| 3 | 191.9900 | 59.91 | -27.10 | 32.81 | 43.50 | -10.69 | 11 | 100 | QP |
| 4 | 399.5700 | 53.29 | -20.51 | 32.78 | 46.00 | -13.22 | 5 | 100 | QP |
| 5 | 559.6200 | 53.21 | -16.32 | 36.89 | 46.00 | -9.11 | 341 | 100 | QP |
| 6 | 836.0700 | 49.94 | -11.08 | 38.86 | 46.00 | -7.14 | 314 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2440MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



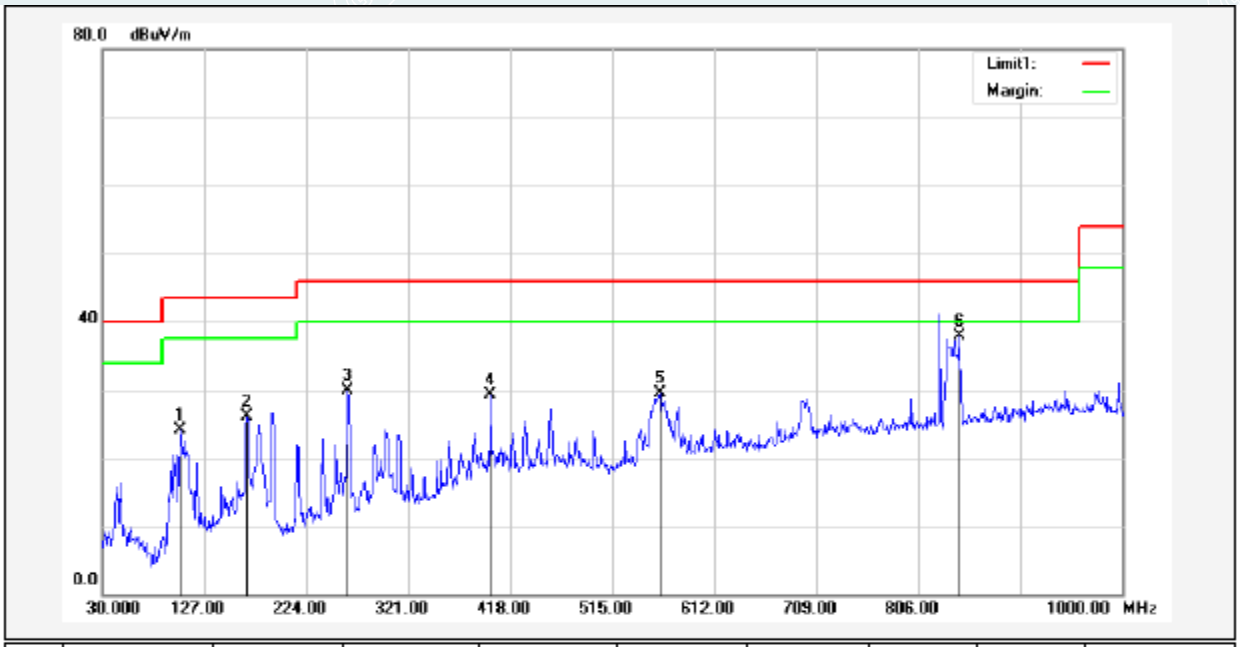

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 52.96 | -28.62 | 24.34 | 43.50 | -19.16 | 109 | 300 | QP |
| 2 | 191.9900 | 54.03 | -27.10 | 26.93 | 43.50 | -16.57 | 90 | 100 | QP |
| 3 | 262.8000 | 54.21 | -24.90 | 29.31 | 46.00 | -16.69 | 165 | 100 | QP |
| 4 | 455.8300 | 46.03 | -18.65 | 27.38 | 46.00 | -18.62 | 59 | 200 | QP |
| 5 | 559.6200 | 46.51 | -16.32 | 30.19 | 46.00 | -15.81 | 284 | 200 | QP |
| 6* | 839.9500 | 47.27 | -11.04 | 36.23 | 46.00 | -9.77 | 0 | 105 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2480MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



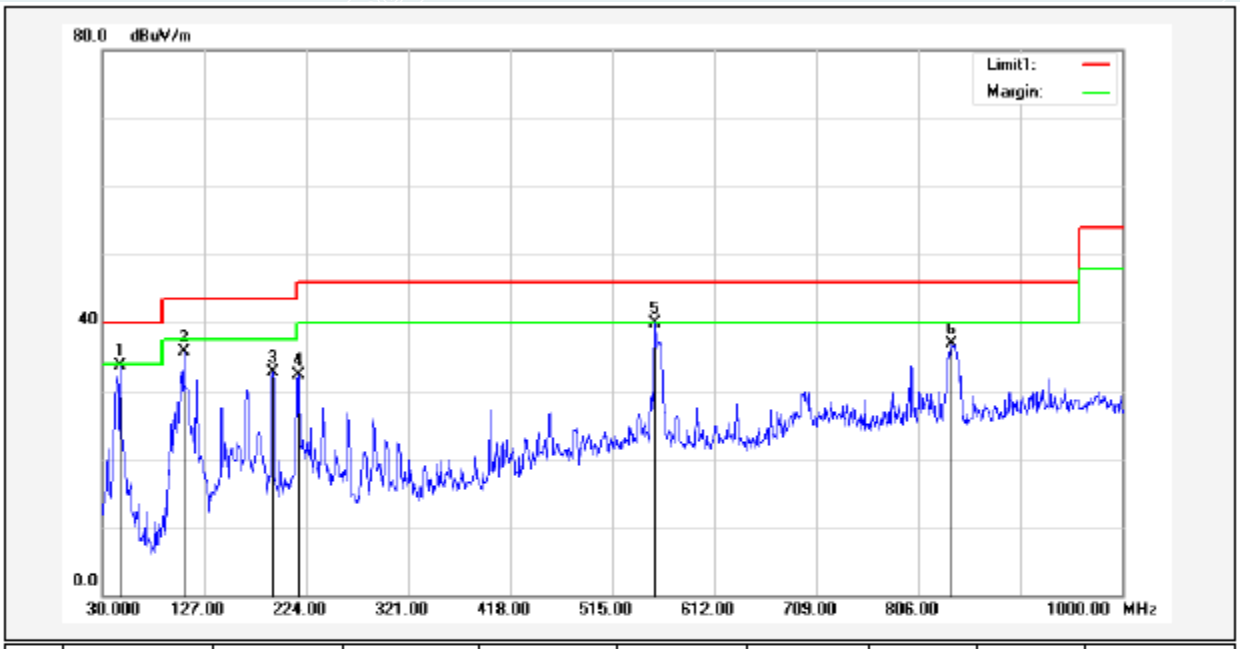

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1* | 47.4600 | 60.35 | -26.99 | 33.36 | 40.00 | -6.64 | 35 | 100 | QP |
| 2 | 107.6000 | 61.62 | -28.23 | 33.39 | 43.50 | -10.11 | 270 | 100 | QP |
| 3 | 191.0200 | 60.09 | -27.01 | 33.08 | 43.50 | -10.42 | 6 | 100 | QP |
| 4 | 215.2700 | 59.02 | -27.01 | 32.01 | 43.50 | -11.49 | 358 | 100 | QP |
| 5 | 558.6500 | 54.37 | -16.35 | 38.02 | 46.00 | -7.98 | 18 | 100 | QP |
| 6 | 835.1000 | 47.50 | -11.10 | 36.40 | 46.00 | -9.60 | 328 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_1M (2480MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



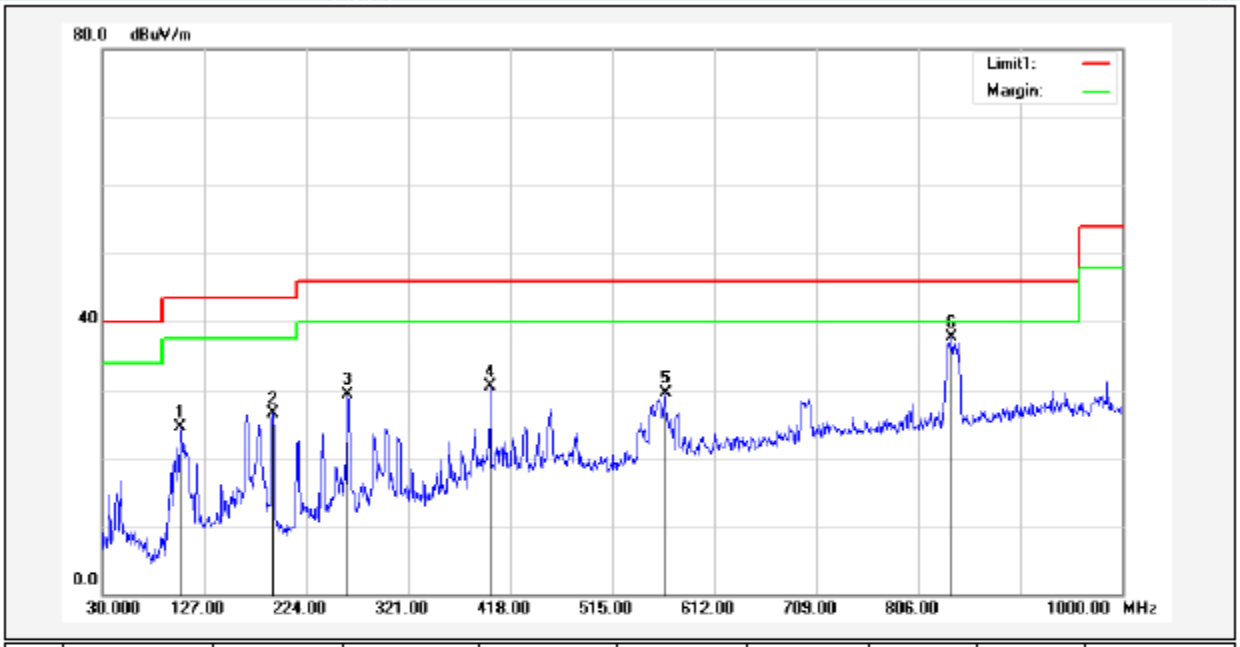

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 52.64 | -28.62 | 24.02 | 43.50 | -19.48 | 111 | 400 | QP |
| 2 | 167.7400 | 51.35 | -25.20 | 26.15 | 43.50 | -17.35 | 119 | 200 | QP |
| 3 | 263.7700 | 54.72 | -24.86 | 29.86 | 46.00 | -16.14 | 146 | 100 | QP |
| 4 | 399.5700 | 49.85 | -20.51 | 29.34 | 46.00 | -16.66 | 360 | 248 | QP |
| 5 | 560.5900 | 45.77 | -16.28 | 29.49 | 46.00 | -16.51 | 117 | 200 | QP |
| 6* | 844.8000 | 48.79 | -10.97 | 37.82 | 46.00 | -8.18 | 0 | 134 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2402MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



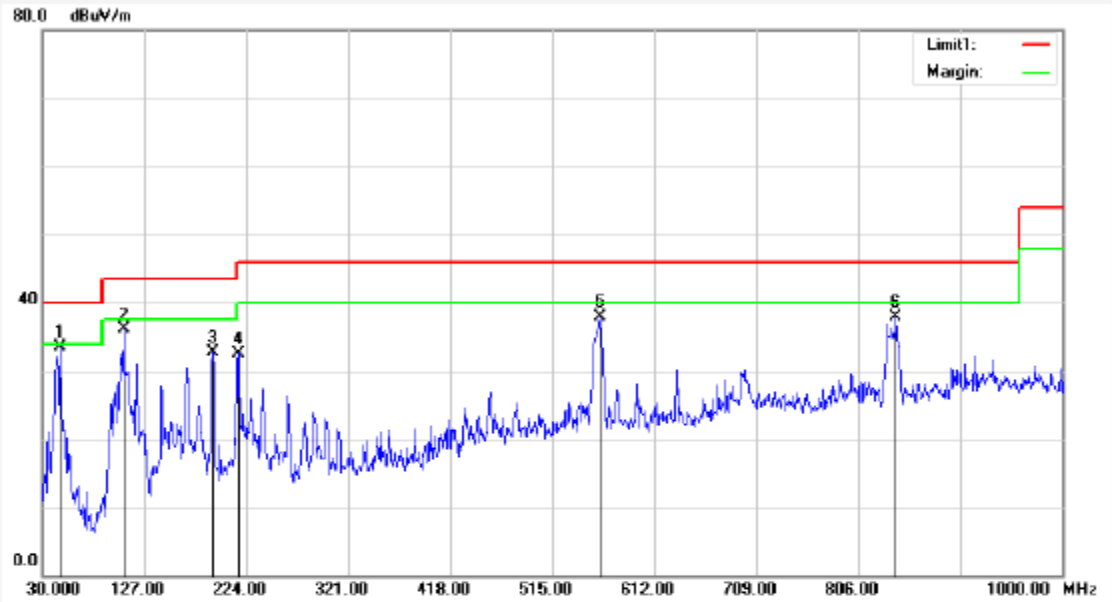

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 47.4600 | 60.68 | -26.99 | 33.69 | 40.00 | -6.31 | 82 | 100 | QP |
| 2 | 107.6000 | 63.86 | -28.23 | 35.63 | 43.50 | -7.87 | 132 | 100 | QP |
| 3 | 191.9900 | 59.81 | -27.10 | 32.71 | 43.50 | -10.79 | 15 | 100 | QP |
| 4 | 216.2400 | 59.23 | -26.96 | 32.27 | 46.00 | -13.73 | 357 | 100 | QP |
| 5* | 555.7400 | 56.42 | -16.44 | 39.98 | 46.00 | -6.02 | 360 | 103 | QP |
| 6 | 837.0400 | 48.00 | -11.07 | 36.93 | 46.00 | -9.07 | 302 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2402MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



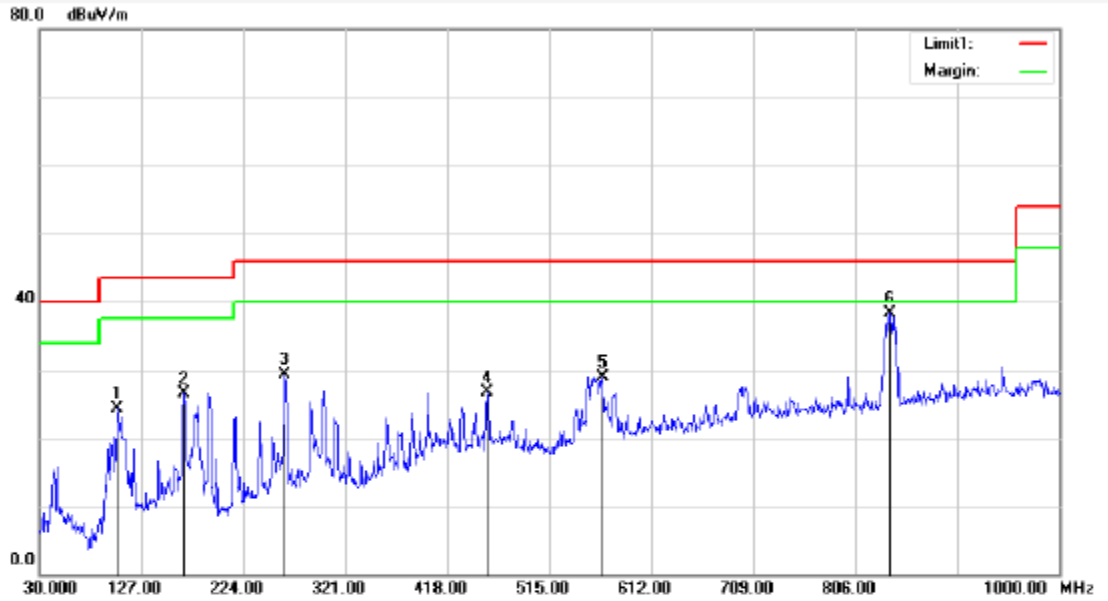

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 53.07 | -28.62 | 24.45 | 43.50 | -19.05 | 127 | 200 | QP |
| 2 | 191.9900 | 53.55 | -27.10 | 26.45 | 43.50 | -17.05 | 105 | 100 | QP |
| 3 | 263.7700 | 54.11 | -24.86 | 29.25 | 46.00 | -16.75 | 148 | 100 | QP |
| 4 | 399.5700 | 51.00 | -20.51 | 30.49 | 46.00 | -15.51 | 146 | 100 | QP |
| 5 | 565.4400 | 45.55 | -16.14 | 29.41 | 46.00 | -16.59 | 254 | 200 | QP |
| 6* | 838.0100 | 48.77 | -11.07 | 37.70 | 46.00 | -8.30 | 6 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2440MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



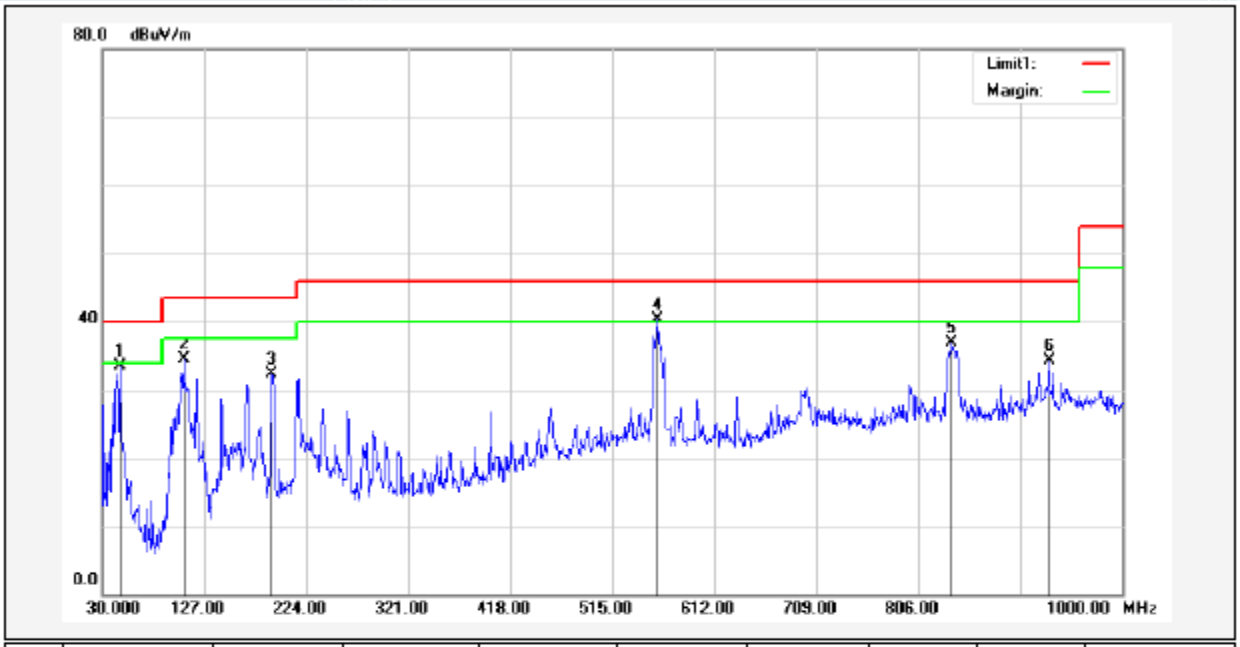

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1* | 47.4600 | 60.59 | -26.99 | 33.60 | 40.00 | -6.40 | 358 | 100 | QP |
| 2 | 107.6000 | 64.40 | -28.23 | 36.17 | 43.50 | -7.33 | 68 | 100 | QP |
| 3 | 191.9900 | 59.71 | -27.10 | 32.61 | 43.50 | -10.89 | 26 | 100 | QP |
| 4 | 216.2400 | 59.56 | -26.96 | 32.60 | 46.00 | -13.40 | 235 | 100 | QP |
| 5 | 560.5900 | 54.24 | -16.28 | 37.96 | 46.00 | -8.04 | 342 | 100 | QP |
| 6 | 841.8900 | 48.95 | -11.01 | 37.94 | 46.00 | -8.06 | 301 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2440MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |



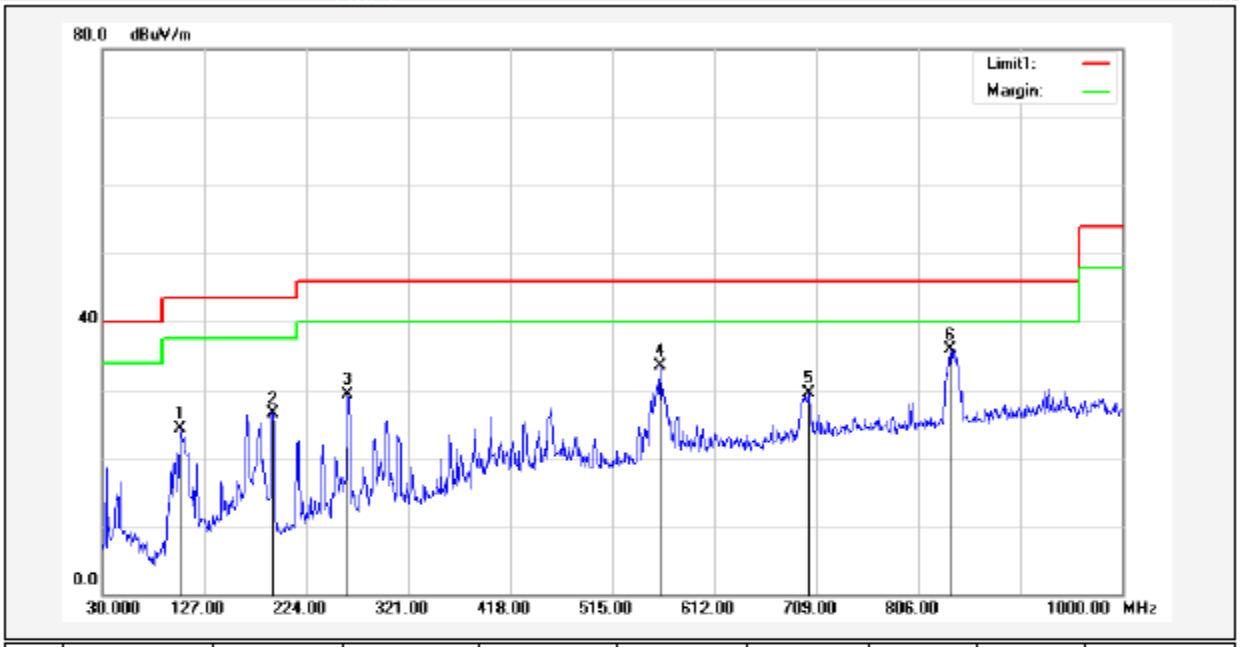

| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 53.02 | -28.62 | 24.40 | 43.50 | -19.10 | 117 | 200 | QP |
| 2 | 167.7400 | 51.69 | -25.20 | 26.49 | 43.50 | -17.01 | 128 | 200 | QP |
| 3 | 263.7700 | 54.07 | -24.86 | 29.21 | 46.00 | -16.79 | 145 | 100 | QP |
| 4 | 455.8300 | 45.34 | -18.65 | 26.69 | 46.00 | -19.31 | 69 | 200 | QP |
| 5 | 565.4400 | 45.03 | -16.14 | 28.89 | 46.00 | -17.11 | 277 | 200 | QP |
| 6* | 838.9800 | 49.42 | -11.05 | 38.37 | 46.00 | -7.63 | 360 | 143 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2480MHz) | **Polarity** | Vertical |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |




| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 47.4600 | 60.56 | -26.99 | 33.57 | 40.00 | -6.43 | 360 | 109 | QP |
| 2 | 107.6000 | 62.75 | -28.23 | 34.52 | 43.50 | -8.98 | 288 | 100 | QP |
| 3 | 191.0200 | 59.24 | -27.01 | 32.23 | 43.50 | -11.27 | 30 | 100 | QP |
| 4* | 558.6500 | 56.65 | -16.35 | 40.30 | 46.00 | -5.70 | 347 | 100 | QP |
| 5 | 838.0100 | 48.01 | -11.07 | 36.94 | 46.00 | -9.06 | 288 | 100 | QP |
| 6 | 930.1600 | 44.02 | -9.69 | 34.33 | 46.00 | -11.67 | 28 | 100 | QP |

| | | | |
|---|---|---|---|
| **EUT Name** | Sino Wealth BLE Module | **Model** | SH-BLEM18 |
| **Environmental Conditions** | 24.2℃/41%RH/101.0kPa | **Test Voltage** | DC 3.3V |
| **Test Mode** | TX/ BLE_2M (2480MHz) | **Polarity** | Horizontal |
| **Tested By** | Huang Xinlong | **Tested Date** | 2022-10-17 |




| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over (dB) | Degree (deg.) | Height (cm) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 104.6900 | 53.01 | -28.62 | 24.39 | 43.50 | -19.11 | 105 | 200 | QP |
| 2 | 191.9900 | 53.67 | -27.10 | 26.57 | 43.50 | -16.93 | 117 | 100 | QP |
| 3 | 263.7700 | 54.25 | -24.86 | 29.39 | 46.00 | -16.61 | 166 | 100 | QP |
| 4 | 560.5900 | 49.86 | -16.28 | 33.58 | 46.00 | -12.42 | 102 | 200 | QP |
| 5 | 701.2400 | 42.77 | -13.29 | 29.48 | 46.00 | -16.52 | 358 | 200 | QP |
| 6* | 836.0700 | 46.94 | -11.08 | 35.86 | 46.00 | -10.14 | 360 | 102 | QP |

**Remark:**

1 No emission found between lowest internal used/generated frequency to 30MHz.

2 Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.

3 The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.

**1GHz-18GHz:**

Mode: TX/ BLE_1M
Lowest Frequency (2402MHz)
Environment: 25.1℃/51%RH/101.0kPa/101.0kPa Voltage: DC 3.3V
Tested By:Zhang Zishan Date: 2022-10-11

| Suspected Data List | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV/m] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 1119.2 | 70.11 | 44.80 | -25.31 | 74.00 | 29.20 | 200 | 267 | Horizontal |
| 2 | 1294.4 | 63.17 | 40.51 | -22.66 | 74.00 | 33.49 | 100 | 282 | Horizontal |
| 3 | 2840.4 | 60.09 | 43.58 | -16.51 | 74.00 | 30.42 | 100 | 244 | Horizontal |
| 4 | 4795.5 | 56.57 | 44.45 | -12.12 | 74.00 | 29.55 | 100 | 97 | Horizontal |
| 5 | 5901 | 55.75 | 46.79 | -8.96 | 74.00 | 27.21 | 200 | 134 | Horizontal |
| 6 | 7206 | 53.62 | 49.69 | -3.93 | 74.00 | 24.31 | 100 | 46 | Horizontal |
| 7 | 1119.8 | 59.06 | 33.76 | -25.30 | 54.00 | 20.24 | 200 | 267 | Horizontal |
| 8 | 1275.6 | 53.51 | 31.17 | -22.34 | 54.00 | 22.83 | 100 | 282 | Horizontal |
| 9 | 2840.6 | 50.34 | 33.83 | -16.51 | 54.00 | 20.17 | 100 | 244 | Horizontal |
| 10 | 4806 | 48.46 | 36.38 | -12.08 | 54.00 | 17.62 | 100 | 97 | Horizontal |
| 11 | 5916 | 43.98 | 34.80 | -9.18 | 54.00 | 19.20 | 200 | 96 | Horizontal |
| 12 | 7207.5 | 47.05 | 43.13 | -3.92 | 54.00 | 10.87 | 100 | 46 | Horizontal |

| Suspected Data List | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV/m] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 1121 | 72.66 | 49.71 | -22.95 | 74.00 | 24.29 | 100 | 290 | Vertical |
| 2 | 1466 | 67.94 | 45.55 | -22.39 | 74.00 | 28.45 | 200 | 276 | Vertical |
| 3 | 1991 | 68.47 | 47.72 | -20.75 | 74.00 | 26.28 | 100 | 266 | Vertical |
| 4 | 2657.2 | 64.75 | 46.98 | -17.77 | 74.00 | 27.02 | 200 | 263 | Vertical |
| 5 | 4795.5 | 56.81 | 44.39 | -12.42 | 74.00 | 29.61 | 200 | 182 | Vertical |
| 6 | 7206 | 55.68 | 52.62 | -3.06 | 74.00 | 21.38 | 100 | 320 | Vertical |
| 7 | 1114.6 | 60.23 | 37.49 | -22.74 | 54.00 | 16.51 | 200 | 290 | Vertical |
| 8 | 1451.4 | 53.03 | 31.11 | -21.92 | 54.00 | 22.89 | 100 | 266 | Vertical |
| 9 | 1997.2 | 55.04 | 34.48 | -20.56 | 54.00 | 19.52 | 100 | 266 | Vertical |
| 10 | 2657 | 52.74 | 34.97 | -17.77 | 54.00 | 19.03 | 200 | 263 | Vertical |
| 11 | 4806 | 47.60 | 35.23 | -12.37 | 54.00 | 18.77 | 200 | 15 | Vertical |
| 12 | 7207.5 | 47.04 | 43.99 | -3.05 | 54.00 | 10.01 | 100 | 320 | Vertical |