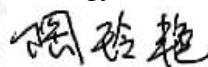


## Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

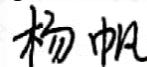
### FCC/IC 5.8G WIFI TEST REPORT

|                    |  |
|--------------------|--|
| <b>PRODUCT</b>     | Wireless data POS System                     |
| <b>BRAND</b>       | SUNMI  |
| <b>MODEL</b>       | T5820  |
| <b>FCC ID</b>      | 2AH25T5820                                   |
| <b>IC</b>          | 22621-T5820                                  |
| <b>APPLICANT</b>   | Shanghai Sunmi Technology Co.,Ltd.           |
| <b>ISSUE DATE</b>  | February 23, 2023                            |
| <b>STANDARD(S)</b> | FCC Part15, RSS-247 Issue 2, RSS-Gen Issue 5 |

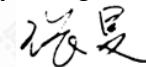
Prepared by: Tao Lingyan



Reviewed by: Yang Fan



Approved by: Zhang Min

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## 1. Summary of Test Report

### 1.1 Test Standard(s)

| No. | Test Standard(s) | Title  | Version |
|-----|------------------|--|---------|
| 1   | FCC Part15       | Title 47 of the Code of Federal Regulations; Chapter I<br>Part 15 - Radio frequency devices  | 2020    |
| 2   | RSS-247 Issue 2  | Digital Transmission Systems (DTSs), Frequency<br>Hopping Systems (FHSs) and Licence-Exempt Local<br>Area Network (LE-LAN) Devices | 2017    |
| 3   | RSS-Gen Issue 5  | General Requirements for Compliance of Radio<br>Apparatus  | 2021    |

### 1.2 Reference Documents

| No. | Reference  | Title  | Version |
|-----|------------|--|---------|
| 1   | ANSI 63.10 | Methods of Measurement of Radio-Noise Emissions<br>from Low-Voltage Electrical and Electronic<br>Equipment in the Range of 9 kHz to 40 GHz   | 2013    |
| 2   | KDB 789033 | Information Infrastructure (U-NII) Devices - Part 15,<br>Subpart E   | 2017    |
| 3   | KDB 905462 | COMPLIANCE MEASUREMENT PROCEDURES FOR<br>UNLICENSED-NATIONAL INFORMATION<br>INFRASTRUCTURE DEVICES OPERATING IN THE<br>5250-5350 MHz AND 5470-5725 MHz BANDS<br>INCORPORATING DYNAMIC FREQUENCY<br>SELECTION | 2016    |

### 1.3 Summary of Test Results

| Measurement Items                        | Sub-clause of Part15C | Sub-clause of IC                | Verdict           |
|--|-----------------------|---------------------------------|-------------------|
| Maximum Output Power                     | 15.407(a)             | RSS-247 6.2                     | Pass<br>(Note 2)  |
| Power Spectral Density                   | 15.407(a)             | RSS-247 6.2                     | Pass<br>(Note 2)  |
| 6dB Occupied Bandwidth                   | 15.407(e)             | RSS-247 6.2                     | Pass<br>(Note 2)  |
| 99% Occupied Bandwidth                   | 15.407(e)             | RSS-GEN 6.7                     | Pass<br>(Note 2)) |
| Band edge compliance                     | 15.407(b)             | RSS-247 6.2                     | Pass<br>(Note 2)  |
| Transmitter Spurious Emission-Conducted  | 15.407                | RSS-247 6.2                     | Pass<br>(Note 2)  |
| Transmitter Spurious Emission - Radiated | 15.407,15.205,15.209  | RSS-247 6.2<br>RSS-Gen 8.9,8.10 | Pass              |
| AC Powerline Conducted Emission          | 15.207                | RSS-Gen 8.8                     | Pass<br>(Note 2)  |

Note 1:

The T5820, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing.

This project is a variant project based on the original report I22I30121-SRD05-V00, original FCC ID 2AH25T5820C, IC 22621-T5820C. T5820 the detail differences description as below:

| Type of Certification     | Configuration type  | NFC function | Cradle(Pogo PIN) | AC adapter    | Panel dimension |
|---------------------------|---------------------|--------------|------------------|---------------|-----------------|
| Parent                    | High configuration  | Yes          | Yes              | input : 5V/2A | 5.0 inch        |
| Variant (Based on Parent) | Basic configuration | No           | No               | input : 5V/1A | 4.95 inch       |

The above differences do not affect the RF performance, The report data was derived from the original reported and RSE tested worst mode is placed in the report. Verify the power of the variant product, and the test results meet the limit requirements.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1.3 of this test report.

#### Note 2:

The test verdict of this item come form the original report.

- a. All the test data for each data were verified, but only the worst case was reported.
- b. The DC and low frequency voltages' measurement uncertainty is  $\pm 2\%$ .
- c. Activate simultaneous transmission in all possible configurations during the testing.

#### 1.4 Data Provided by Applicant

| No. | Item(s)             | Data     |
|-----|---------------------|----------|
| 1   | Antenna gain of EUT | 3.31 dBi |

Note: The data of 1.4 is provided by the customer may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

## 2. General Information of The Laboratory

### 2.1 Testing Laboratory

|                      |  |
|----------------------|--|
| Lab Name             | Industrial Internet Innovation Center (Shanghai) Co.,Ltd.  |
| Address              | Building 4, No. 766, Jingang Road, Pudong, Shanghai, China |
| Telephone            | 021-68866880   |
| FCC Registration No. | 958356   |
| FCC Designation No.  | CN1177   |
| IC Designation No.   | 10766A   |

### 2.2 ments

|                      |             |
|----------------------|-------------|
| Temperature          | 15°C~35°C   |
| Relative Humidity    | 25%RH~75%RH |
| Atmospheric Pressure | 101kPa      |

### 2.3 Project Information

|                 |                                      |
|-----------------|--------------------------------------|
| Project Manager | Gao Hongning                         |
| Test Date       | October 20, 2022 to January 19, 2022 |

### 3. General Information of The Customer

#### 3.1 Applicant

|           |   |
|-----------|---|
| Company   | Shanghai Sunmi Technology Co.,Ltd.                                |
| Address   | Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China |
| Telephone | 13510126210   |

#### 3.2 Manufacturer

|         |   |
|---------|---|
| Company | Shanghai Sunmi Technology Co.,Ltd.                                |
| Address | Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China |

## 4. General Information of The Product

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

|                                      |  |
|--------------------------------------|--|
| Product                              | Wireless data POS System   |
| Model                                | T5820  |
| Date of Receipt                      | S02aa:October 20,2022  |
| EUT ID*                              | S02aa  |
| SN/IMEI                              | S02aa: 860450060011182<br>860450060011190  |
| Supported Radio Technology and Bands | GSM850/GSM900/DCS1800/PCS1900<br>WCDMA Band I/II/IV/V/VIII<br>LTE Band 1/2/3/4/5/7/12/17/28/38/41<br>WLAN 802.11 b/g/n<br>WLAN 802.11 a/n/ac<br>BT5.1 BR/EDR, BLE<br>GPS/Glonass/BDS |
| HVIN                                 | T5820  |
| Hardware Version                     | V01  |
| Software Version                     | XQT530_V004_20220923   |
| FCC ID                               | 2AH25T5820   |
| IC                                   | 22621-T5820  |

NOTE: EUT ID is the internal identification code of the laboratory.

### 4.2 Internal Identification of AE used during the test

| AE ID* | Description | Model | SN/Remark |
|--------|-------------|-------|-----------|
| AE1    | RF Cable    | N/A   | N/A       |

### 4.3 Additional Information

|                            |   |
|----------------------------|---|
| WLAN Frequency             | UNII 3: 5725MHz-5850MHz   |
| Occupied Channel Bandwidth | 20 MHz for Wi-Fi (802.11 a/n/ac)<br>40 MHz for Wi-Fi (802.11 ac)<br>80 MHz for Wi-Fi(802.11 ac) |
| WLAN type of modulation    | OFDM  |

## 5. Test Configuration Information

### 5.1 Laboratory Environmental Conditions

#### 5.1.1 Permanent Facilities

|                        |                          |         |         |
|------------------------|--------------------------|---------|---------|
| Relative Humidity      | Min. = 45 %, Max. = 55 % |         |         |
| Atmospheric Pressure   | 101kPa                   |         |         |
| Temperature            | Normal                   | Minimum | Maximum |
|                        | 25 °C                    | 0 °C    | 45 °C   |
| Working Voltage of EUT | Normal                   | Minimum | Maximum |
|                        | 7.2V                     | 6.8V    | 8.4V    |

### 5.2 Test Equipments Utilized

#### 5.2.1 Conducted Test System

| No. | Name  | Model               | S/N        | Manufacturer | Cal. Date         | Cal. Interval |
|-----|---|---------------------|------------|--------------|-------------------|---------------|
| 1   | Programmable Power Supply                   | Keithley 2303       | 4039070    | Starpoint    | July 12, 2022     | 1 Year        |
| 2   | Vector Signal Generator                     | SMBV100 A           | 257904     | R&S          | February 21, 2022 | 1 Year        |
| 3   | Temperature box                             | B-TF-107C-201804107 |            | Boyi         | June 30, 2022     | 1 Year        |
| 4   | Spectrum Analyzer                           | FSQ40               | 200063     | R&S          | October 19, 2022  | 1 year        |
| 5   | USB Wideband Power Senser                   | U2021XA             | MY56410009 | Keysight     | February 21, 2022 | 1 Year        |
| 6   | Simultaneous Sampling DQA                   | U2531A              | TW56183514 | Agilent      | March 02, 2022    | 1 Year        |
| 7   | Vector Signal Generator                     | SMU200A             | 104684     | R&S          | August 23, 2022   | 1 Years       |
| 8   | Wireless communication comprehensive tester | CMW270              | 100919     | R&S          | August 22, 2022   | 1 Year        |
| 9   | Eagle Test Software                         | Eagle V3.3          | N/A        | ECIT         | N/A               | N/A           |
| 10  | Talent Microwave Band Rejection Filter      | Filter              | 191016001  | N/A          | N/A               | N/A           |

### 5.2.2 Radiated Emission Test System

| No. | Name                                 | Model          | S/N      | Manufacturer | Cal. Date         | Cal. Interval |
|-----|--------------------------------------|----------------|----------|--------------|-------------------|---------------|
| 1   | Universal Radio Communication Tester | CMU200         | 123123   | R&S          | October 17, 2022  | 1 Year        |
| 2   | Universal Radio Communication Tester | CMW500         | 104178   | R&S          | October 17, 2022  | 1 Year        |
| 3   | EMI Test Receiver                    | ESU40          | 100307   | R&S          | February 23, 2022 | 1 Year        |
| 4   | TRILOG Broadband Antenna             | VULB9163-515   |          | Schwarzbeck  | March 11, 2022    | 1 Year        |
| 5   | Double- ridged Waveguide Antenna     | ETS-3117       | 00135890 | ETS          | March 9, 2022     | 2 Years       |
| 6   | 2-Line V-Network                     | ENV216         | 101380   | R&S          | February 21, 2022 | 1 Year        |
| 7   | EMI Test Software                    | EMC32 V9.15.00 | N/A      | R&S          | N/A               | N/A           |

### 5.2.3 Radiated Emission Test System

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. = 20 %, Max. = 75 %   |
| Shielding effectiveness  | > 100 dB                   |
| Ground system resistance | < 0.5 Ω                    |
| Temperature              | Min. = 15 °C, Max. = 35 °C |

**Control room** did not exceed following limits along the EMC testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. = 30 %, Max. = 60 %   |
| Shielding effectiveness  | > 100 dB                   |
| Electrical insulation    | > 10 kΩ                    |
| Ground system resistance | < 0.5 Ω                    |

**Fully-anechoic chamber1** (9.8 meters×6.7 meters×6.7 meters) did not exceed following limits along the EMC testing:

|                         |                            |
|-------------------------|----------------------------|
| Temperature             | Min. = 15 °C, Max. = 35 °C |
| Relative humidity       | Min. = 25 %, Max. = 75 %   |
| Shielding effectiveness | > 100 dB                   |

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|                            |  |
|----------------------------|--|
| Electrical insulation      | > 10 kΩ                                |
| Ground system resistance   | < 0.5 Ω                                |
| VSWR                       | Between 0 and 6 dB, from 1GHz to 18GHz |
| Site Attenuation Deviation | Between -4 and 4 dB, 30MHz to 1GHz     |

### 5.3 Measurement Uncertainty

| Item(s)                                | Range              | Confidence Level | Calculated Uncertainty |
|--|--------------------|------------------|------------------------|
| Peak Output Power-Conducted            | 5100MHz-5875MHz    | 95%              | 1.024dB                |
| Peak Power Spectral Density            | 5100MHz-5875MHz    | 95%              | 1.024dB/MHz            |
| Conducted Emission                     | 9KHz-30MHz         | 95%              | 0.89dB                 |
| Conducted Emission                     | 30MHz-2GHz         | 95%              | 0.90dB                 |
| Conducted Emission                     | 2GHz-3.6GHz        | 95%              | 0.88dB                 |
| Conducted Emission                     | 3.6GHz-8GHz        | 95%              | 0.96dB                 |
| Conducted Emission                     | 8GHz-20GHz         | 95%              | 0.94dB                 |
| Conducted Emission                     | 20GHz-22GHz        | 95%              | 0.88dB                 |
| Conducted Emission                     | 22GHz-26GHz        | 95%              | 0.86dB                 |
| Transmitter Spurious Emission-Radiated | 9KHz-30MHz         | 95%              | 5.66dB                 |
| Transmitter Spurious Emission-Radiated | 30MHz-1000MHz      | 95%              | 4.98dB                 |
| Transmitter Spurious Emission-Radiated | 1000MHz -18000MHz  | 95%              | 5.06dB                 |
| Transmitter Spurious Emission-Radiated | 18000MHz -40000MHz | 95%              | 5.20dB                 |
| AC Power line Conducted Emission       | 0.15MHz-30MHz      | 95%              | 3.66 dB                |

## 6. Measurement Results

### 6.1 Maximum conducted output power

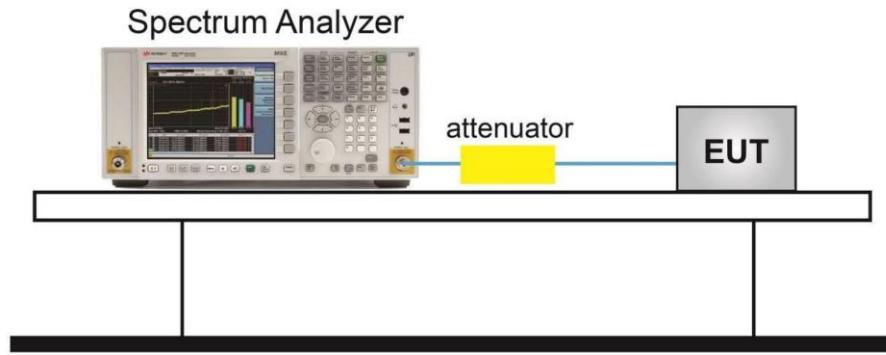
#### 6.1.1 Measurement Limit and Method

| Standard               | Limit (dBm) |
|------------------------|-------------|
| FCC CRF Part 15.407(a) | < 30        |
| RSS-247 6.2.4.1        | < 30        |

The measurement method SA-1 is made according to KDB 789033 E

1. Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
2. Set RBW=1MHz
3. Set VBW $\geq$ 3MHz
4. Number of points in sweep  $\geq 2 \times$  span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
5. Sweep time = auto.
6. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
7. If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle  $\geq$  98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode.
9. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

### 6.1.2 Test setup



### 6.1.3 Test Result Channel Power

Original Test Result Channel Power

| Test Mode  | Tx power level | Frequency [MHz] | Channel Powert [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | EIRP [dBm] |
|------------|----------------|-----------------|----------------------|----------------|-----------------|--------------|-------------|------------|
| 11A        | 19             | 5745            | 12.85                | 97.22          | 0.12            | 12.97        | ≤30.00      | 16.28      |
| 11A        | 19             | 5785            | 12.57                | 96.53          | 0.15            | 12.72        | ≤30.00      | 16.03      |
| 11A        | 19             | 5825            | 12.61                | 96.53          | 0.15            | 12.76        | ≤30.00      | 16.07      |
| 11N20SISO  | 19             | 5745            | 12.47                | 96.30          | 0.16            | 12.63        | ≤30.00      | 15.94      |
| 11N20SISO  | 19             | 5785            | 12.39                | 97.01          | 0.13            | 12.52        | ≤30.00      | 15.83      |
| 11N20SISO  | 19             | 5825            | 12.47                | 96.30          | 0.16            | 12.63        | ≤30.00      | 15.94      |
| 11N40SISO  | 19             | 5755            | 11.96                | 94.20          | 0.26            | 12.22        | ≤30.00      | 15.53      |
| 11N40SISO  | 19             | 5795            | 12.11                | 94.20          | 0.26            | 12.37        | ≤30.00      | 15.68      |
| 11AC20SISO | 19             | 5745            | 12.45                | 96.32          | 0.16            | 12.61        | ≤30.00      | 15.92      |
| 11AC20SISO | 19             | 5785            | 12.37                | 97.04          | 0.13            | 12.50        | ≤30.00      | 15.81      |
| 11AC20SISO | 19             | 5825            | 12.27                | 97.04          | 0.13            | 12.40        | ≤30.00      | 15.71      |
| 11AC40SISO | 19             | 5755            | 11.98                | 94.29          | 0.26            | 12.24        | ≤30.00      | 15.55      |
| 11AC40SISO | 19             | 5795            | 11.97                | 94.20          | 0.26            | 12.23        | ≤30.00      | 15.54      |
| 11AC80SISO | 19             | 5775            | 12.18                | 86.49          | 0.63            | 12.81        | ≤30.00      | 16.12      |

Verified Power

| Test Mode | Frequency[MHz] | Set Power | Channel Powert [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | EIRP [dBm] |
|-----------|----------------|-----------|----------------------|----------------|-----------------|--------------|-------------|------------|
| 11A       | 5745           | 19        | 11.96                | 96.53          | 0.15            | 12.11        | ≤30.00      | 15.42      |
| 11A       | 5785           | 19        | 12.42                | 96.53          | 0.15            | 12.57        | ≤30.00      | 15.88      |
| 11A       | 5825           | 19        | 12.50                | 96.53          | 0.15            | 12.65        | ≤30.00      | 15.96      |
| 11N20SISO | 5745           | 19        | 11.84                | 97.01          | 0.13            | 11.97        | ≤30.00      | 15.28      |
| 11N20SISO | 5785           | 19        | 12.24                | 96.30          | 0.16            | 12.40        | ≤30.00      | 15.71      |

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|            |      |    |       |       |      |       |              |       |
|------------|------|----|-------|-------|------|-------|--------------|-------|
| 11N20SISO  | 5825 | 19 | 11.85 | 96.30 | 0.16 | 12.01 | $\leq 30.00$ | 15.32 |
| 11N40SISO  | 5755 | 19 | 11.71 | 94.20 | 0.26 | 11.97 | $\leq 30.00$ | 15.28 |
| 11N40SISO  | 5795 | 19 | 11.80 | 94.20 | 0.26 | 12.06 | $\leq 30.00$ | 15.37 |
| 11AC20SISO | 5745 | 19 | 11.94 | 97.06 | 0.13 | 12.07 | $\leq 30.00$ | 15.38 |
| 11AC20SISO | 5785 | 19 | 12.14 | 97.06 | 0.13 | 12.27 | $\leq 30.00$ | 15.58 |
| 11AC20SISO | 5825 | 19 | 11.68 | 96.32 | 0.16 | 11.84 | $\leq 30.00$ | 15.15 |
| 11AC40SISO | 5755 | 19 | 11.66 | 94.20 | 0.26 | 11.92 | $\leq 30.00$ | 15.23 |
| 11AC40SISO | 5795 | 19 | 11.84 | 94.20 | 0.26 | 12.10 | $\leq 30.00$ | 15.41 |
| 11AC80SISO | 5775 | 19 | 12.02 | 89.19 | 0.50 | 12.52 | $\leq 30.00$ | 15.83 |

**Note 1:**

The Duty Cycle Factor is compensated in the graph.

Using the MTK platform software set by default by the customer.

**Note 2:**

The verified power is still in the tune-up power range and meets the requirements of KDB484596 D01 data reference. The power listed in the original certificate still applies to this case.

## 6.2 Transmitter Spurious Emission

### 6.2.1 Transmitter Spurious Emission - Radiated

The measurement is made according to ANSI C63.10.

| Frequency of emission (MHz) | Field strength(uV/m) | Field strength(dBuV/m) |
|-----------------------------|----------------------|------------------------|
| 0.009-0.490                 | 2400/F(kHz)          | 129-94                 |
| 0.490-1.705                 | 24000/F(kHz)         | 74-63                  |
| 1.705-30                    | 30                   | 70                     |
| 30-88                       | 100                  | 40                     |
| 88-216                      | 150                  | 43.5                   |
| 216-960                     | 200                  | 46                     |
| Above 960                   | 500                  | 54                     |

### 6.2.2 Test procedures

The measurement was applied in a semi-anechoic chamber. While testing for spurious emission higher than 1GHz, if applied, the pre-amplifier would be equipped just at the output terminal of the antenna.

Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m. For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m.

The turntable rotated 360 degrees to determine the position of the maximum emission level.

The EUT was set 3 meters away from the receiving antenna which was mounted on an antenna mast. The antenna moved up and down between from 1meter to 4 meters to find out the maximum emission level.

The EUT was tested according to KDB 789033 D02: Section G.

The radiated emission was measured using the Spectrum Analyzer with the resolutions bandwidth set as:

RBW = 300 Hz, VBW = 1 kHz (9 kHz~150 kHz);

RBW = 10 kHz, VBW = 30 kHz (150 kHz~30MHz);

RBW = 100 kHz, VBW = 300 kHz (30MHz~1GHz for PK)

RBW = 1MHz, VBW = 3MHz (>1GHz for PK);

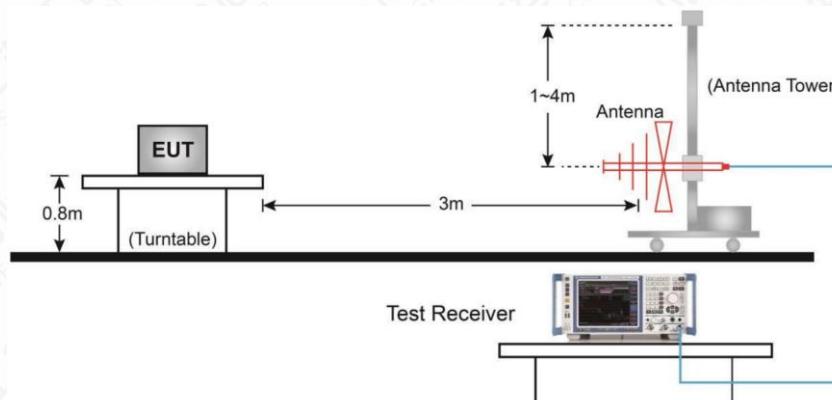
Remark:

1. Factor= Antenna Factor + Cable Loss (-Amplifier, is employed)

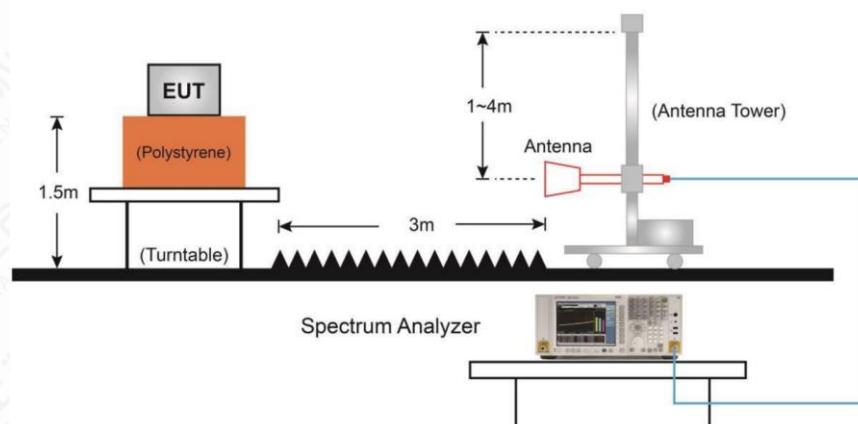
2. Measured level= Original Receiver Reading + Factor
3. Margin = Limit – Measured level
4. If the PK measured level is lower than AV limit, the AV test can be elided. Modulation type and data rate tested (Only worst case result is given below):

| Mainly Supply |           |              |
|---------------|-----------|--------------|
| Mode          | Data rate | Channel      |
| 802.11a       | 6Mbps     | 165(5825MHz) |
| 802.11n-HT20  | MCS0      | 157(5785MHz) |
| 802.11n-HT40  | MCS0      | 159(5795MHz) |
| 802.11ac-HT20 | MCS0      | 165(5825MHz) |
| 802.11ac-HT40 | MCS0      | 159(5795MHz) |
| 802.11ac-HT80 | MCS0      | 155(5775MHz) |

Below 1GHz Test Setup



Above 1GHz Test Setup



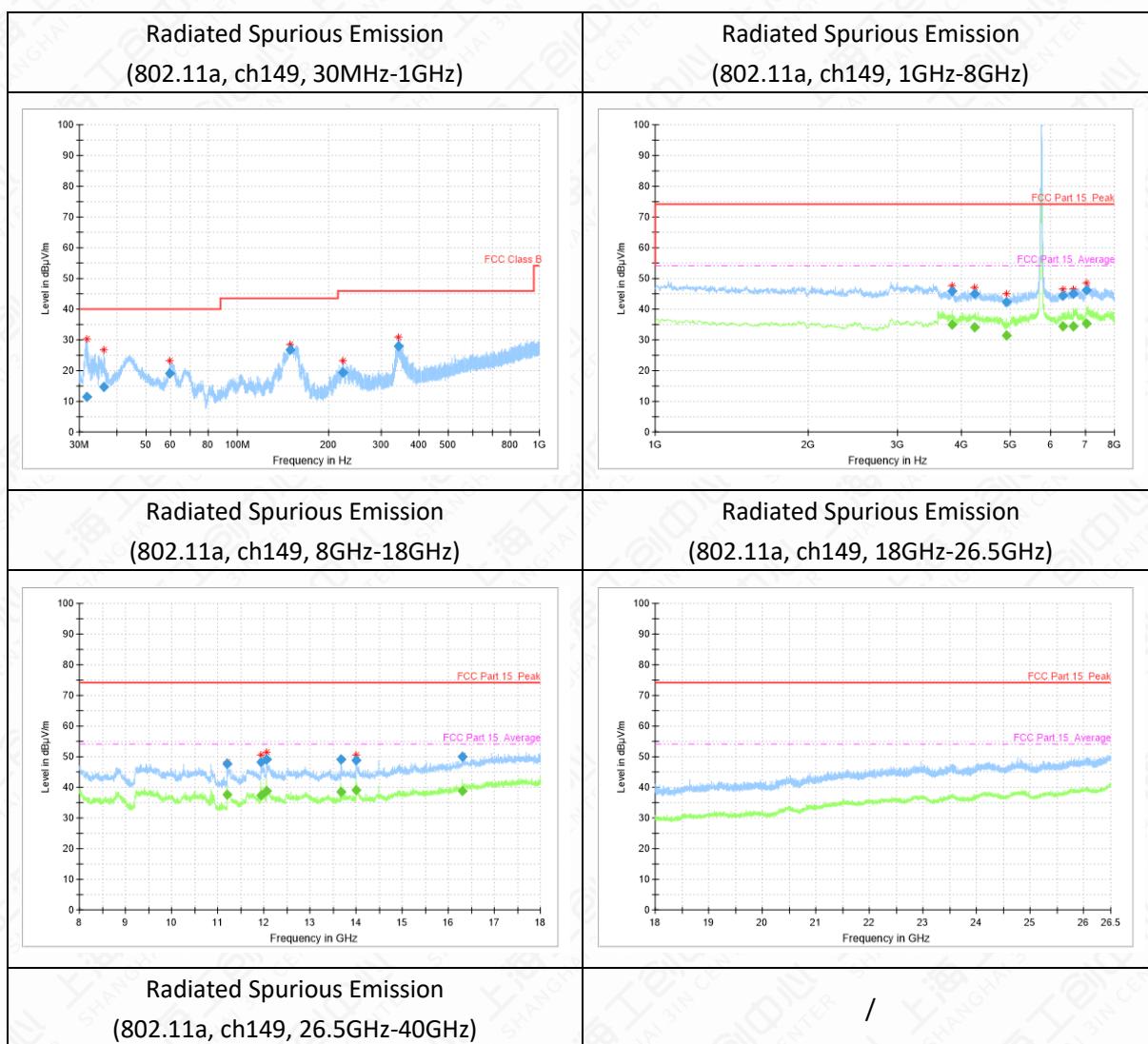
### 6.2.3 Measurement Results

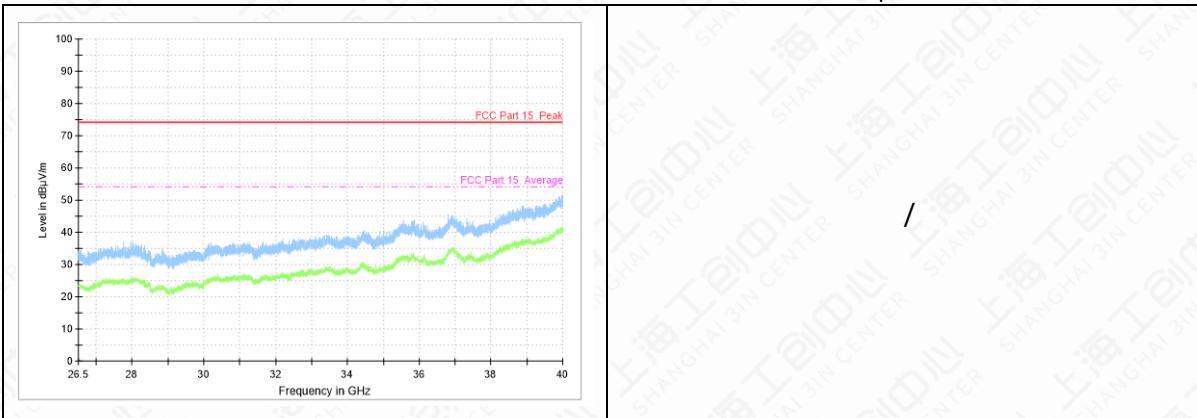
| Mode | Channel | Frequency Range | Conclusion |
|------|---------|-----------------|------------|
|      |         |                 |            |

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|         |              |                   |   |
|---------|--------------|-------------------|---|
| 802.11a | 159(5745MHz) | 9KHZ~30 MHz       | P |
|         |              | 30 MHz ~1 GHz     | P |
|         |              | 1 GHz ~ 8 GHz     | P |
|         |              | 8 GHz ~ 18 GHz    | P |
|         |              | 18 GHz ~ 26.5 GHz | P |
|         |              | 26.5 GHz~ 40 GHz  | P |

The test data below 30MHz is more than 20dB lower than the limit value, so it is not provided in the report.





Note: Only data in worst mode is provided.

#### 802.11a mode

Channel 149(30MHz ~ 1GHz )

| Frequency (MHz) | Result (dB $\mu$ V/m) | ARpl (dB) | PMea (dB $\mu$ V/m) | Polarity |
|-----------------|-----------------------|-----------|---------------------|----------|
| 31.8            | 11.33                 | -14.4     | 25.73               | V        |
| 36.2            | 14.78                 | -13.6     | 28.38               | V        |
| 59.8            | 19.01                 | -12.3     | 31.31               | V        |
| 149.4           | 26.8                  | -17.1     | 43.9                | H        |
| 223.4           | 19.48                 | -13.2     | 32.68               | V        |
| 340.0           | 27.82                 | -9.8      | 37.62               | H        |

Channel 149 (1GHz-8GHz )

| Frequency (MHz) | Result (dB $\mu$ V/m) | ARpl (dB) | PMea (dB $\mu$ V/m) | Polarity |
|-----------------|-----------------------|-----------|---------------------|----------|
| 3834.6          | 45.94                 | 2.1       | 43.84               | H        |
| 4239.0          | 45.03                 | 1.3       | 43.73               | H        |
| 4906.6          | 42.48                 | 1.8       | 40.68               | H        |
| 6335.4          | 44.52                 | 2.9       | 41.62               | H        |
| 6639.2          | 44.93                 | 3.4       | 41.53               | H        |
| 7038.2          | 46.13                 | 4.4       | 41.73               | H        |

Channel 149 (8GHz-18GHz)

| Frequency (MHz) | Result (dB $\mu$ V/m) | ARpl (dB) | PMea (dB $\mu$ V/m) | Polarity |
|-----------------|-----------------------|-----------|---------------------|----------|
| 11205.6         | 47.56                 | 8         | 39.56               | H        |
| 11935.8         | 48.1                  | 9.5       | 38.6                | V        |
| 12054.2         | 49.14                 | 10.2      | 38.94               | V        |

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|         |       |      |       |   |
|---------|-------|------|-------|---|
| 13677.8 | 49.08 | 11.6 | 37.48 | H |
| 14001.4 | 48.75 | 12.4 | 36.35 | H |
| 16303.2 | 49.95 | 16.1 | 33.85 | V |

## Annex A: Revised History

| Version | Revised Content               |
|---------|-------------------------------|
| V00     | Initial                       |
| V01     | Update 1.3 section note       |
| V02     | Update 1.3 section note       |
| V03     | Add test results of the power |

## Annex B: Accreditation Certificate

**Accredited Laboratory**

A2LA has accredited

**INDUSTRIAL INTERNET INNOVATION CENTER  
(SHANGHAI) CO., LTD.**

Shanghai, People's Republic of China

for technical competence in the field of

**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

Presented this 12<sup>th</sup> day of April 2021.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3682.01  
Valid to February 28, 2023



For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

**END OF REPORT**