



## TEST REPORT

**Application No:** ZR/2021/20040  
**Applicant:** Wingtech Group (Hongkong) Limited  
**Address of Applicant:** Flat/RM 1903 ,19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, Kowloon, Hongkong  
**Manufacturer:** Wingtech Group (Hongkong) Limited  
**Address of Manufacturer:** Flat/RM 1903 ,19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, Kowloon, Hongkong  
**EUT Description:** AIRSPEED MOBILE HOTSPOT  
**Model No.:** ASMHS01  
**Trade Mark:** AIRSPEED MOBILE HOTSPOT  
**FCC ID:** 2APXW-ASMHS01  
**Standard(s) :** 47 CFR Part 15, Subpart B  
**Date of Receipt:** 2021/3/1  
**Date of Test:** 2021/3/1 to 2021/4/14  
**Date of Issue:** 2021/4/27

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Simon Ling

Wireless Laboratory Manager



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| Revision Record |         |           |          |          |
|-----------------|---------|-----------|----------|----------|
| Version         | Chapter | Date      | Modifier | Remark   |
| 01              |         | 2021/4/27 |          | Original |
|                 |         |           |          |          |
|                 |         |           |          |          |

|                          |                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------|
| Authorized for issue by: |                                                                                                               |
| Prepared By              | <br>(Leah Chen) / Engineer  |
| Checked By               | <br>(Daniel Wang) /Reviewer |



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## Test Summary

| Emission Part                                         |                           |                 |             |        |
|-------------------------------------------------------|---------------------------|-----------------|-------------|--------|
| Item                                                  | Standard                  | Method          | Requirement | Result |
| Conducted Emissions at Mains Terminals (150kHz-30MHz) | 47 CFR Part 15, Subpart B | ANSI C63.4:2014 | Class B     | Pass   |
| Radiated Emissions (30MHz-1GHz)                       | 47 CFR Part 15, Subpart B | ANSI C63.4:2014 | Class B     | Pass   |
| Radiated Emissions (above 1GHz)                       | 47 CFR Part 15, Subpart B | ANSI C63.4:2014 | Class B     | Pass   |

| Internal Source    | Upper Frequency                                                    |
|--------------------|--------------------------------------------------------------------|
| Below 1.705MHz     | 30MHz                                                              |
| 1.705MHz to 108MHz | 1GHz                                                               |
| 108MHz to 500MHz   | 2GHz                                                               |
| 500MHz to 1GHz     | 5GHz                                                               |
| Above 1GHz         | 5th harmonic of the highest frequency or 40GHz, whichever is lower |



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## 1 General Information

|                   |                         |           |           |
|-------------------|-------------------------|-----------|-----------|
| Product Name:     | AIRSPEED MOBILE HOTSPOT |           |           |
| Model No.(EUT):   | ASMHS01                 |           |           |
| Trade Mark:       | AIRSPEED MOBILE HOTSPOT |           |           |
| Hardware Version: | DVT:89528_1_30          |           |           |
| Software Version: | Perdix_0.00.15          |           |           |
| Frequency Bands:  | Band                    | Tx (MHz)  | Rx (MHz)  |
|                   | WCDMA Band II           | 1850~1910 | 1930~1990 |
|                   | WCDMA Band V            | 824~849   | 869~894   |
|                   | LTE Band 2              | 1850~1910 | 1930~1990 |
|                   | LTE Band 4              | 1710~1755 | 2110~2155 |
|                   | LTE Band 5              | 824~849   | 869~894   |
|                   | LTE Band 7              | 2500~2570 | 2620~2690 |
|                   | LTE Band 12             | 699~716   | 729~746   |
|                   | LTE Band 13             | 777~787   | 746~756   |
|                   | LTE Band 66             | 1710~1780 | 2110~2200 |
|                   | Wi-Fi 2.4G              | 2412~2462 | 2412~2462 |
|                   | Wi-Fi 5G                | 5150~5850 | 5150~5850 |



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## Accessory:

| Adapter No. | Model No.     | Manufacturer                     |
|-------------|---------------|----------------------------------|
| 1           | PA-US5V2A-036 | HUIZHOU PUAN ELECTRONICS CO.,LTD |

| Battery No. | Model No. | Manufacturer                            |
|-------------|-----------|-----------------------------------------|
| 1           | MF01      | Jiade Energy Technology(Zhuhai)Co.,Ltd. |

| Cable No. | Model No. | Manufacturer                       |
|-----------|-----------|------------------------------------|
| 1         | HX-WT-31  | HUIZHOU WASHIN ELECTRONICS CO.,LTD |
| 2         | 8.2.77    | ShenZhen BRL Technology Co., Ltd   |



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## 1.1 Description of Support Units

| Description | Manufacturer | Model No.        | Serial No.       |
|-------------|--------------|------------------|------------------|
| Laptop      | Lenovo       | L480             | REF. No.SEA1800  |
| Mouse       | Lenovo       | 3D optical Mouse | REF. No.:SEA2400 |
| Router      | NETGEAR      | R6020            | REF. No.SEA2200  |

## 1.2 Test Location

All tests were performed at:

|                |                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------|
| Company:       | SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD.                                                                   |
| Address:       | 1/F, Unit D, Building 1, Kanghong Orange Technology Park, No.137, Keyuan 3rd Road, Fengdong New City, Xi'an, Shaanxi China |
| Post code:     | 710086                                                                                                                     |
| Test engineer: | Leah Chen, Ken Liu, Andy Yao                                                                                               |

No tests were sub-contracted.

## 1.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### • A2LA (Certificate No. 4854.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4854.01.

| Test Site No.: | SGS Xian Site No. | FCC Designation No. |
|----------------|-------------------|---------------------|
|                | CO01-XA           | 03CH01-XA           |
|                |                   | CN1271              |

## 1.4 Deviation from Standards

None

## 1.5 Abnormalities from Standard Conditions

None



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## 2 Emission Test Results

### 2.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| Test Requirement: | 47 CFR Part 15, Subpart B                                    |
| Test Method:      | ANSI C63.4:2014                                              |
| Frequency Range:  | 150kHz to 30MHz                                              |
| Limit:            |                                                              |
| 0.15M-0.5MHz      | 66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average      |
| 0.5M-5MHz         | 56dB(μV) quasi-peak, 46dB(μV) average                        |
| 5M-30MHz          | 60dB(μV) quasi-peak, 50dB(μV) average                        |
| Detector:         | Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz |

#### 2.1.1 E.U.T. Operation

Operating Environment:

Temperature: 18.9 °C Humidity: 55.1 % RH Atmospheric Pressure: 1000 mbar

Pretest these modes to find the worst case:

- a: Transfer data between the EUT and the PC+USB cable1
- b: Transfer data between the EUT and the PC+USB cable2
- c: WCDMA Band V Idle + WLAN +playing MP4 (SD card) +battery1+Cable(worst)+adapter1
- d: LTE Band 5 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)
- e: LTE Band 12 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)
- f: LTE Band 13 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)

The worst case for final test: e: LTE Band 12 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)



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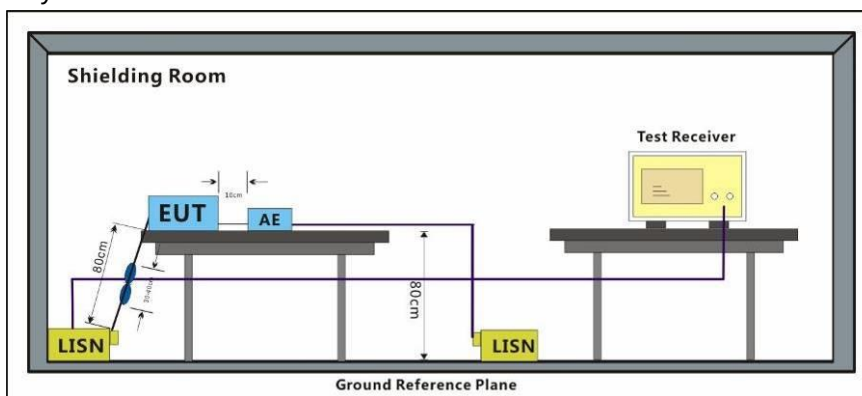
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## 2.1.2 Test Setup Procedures

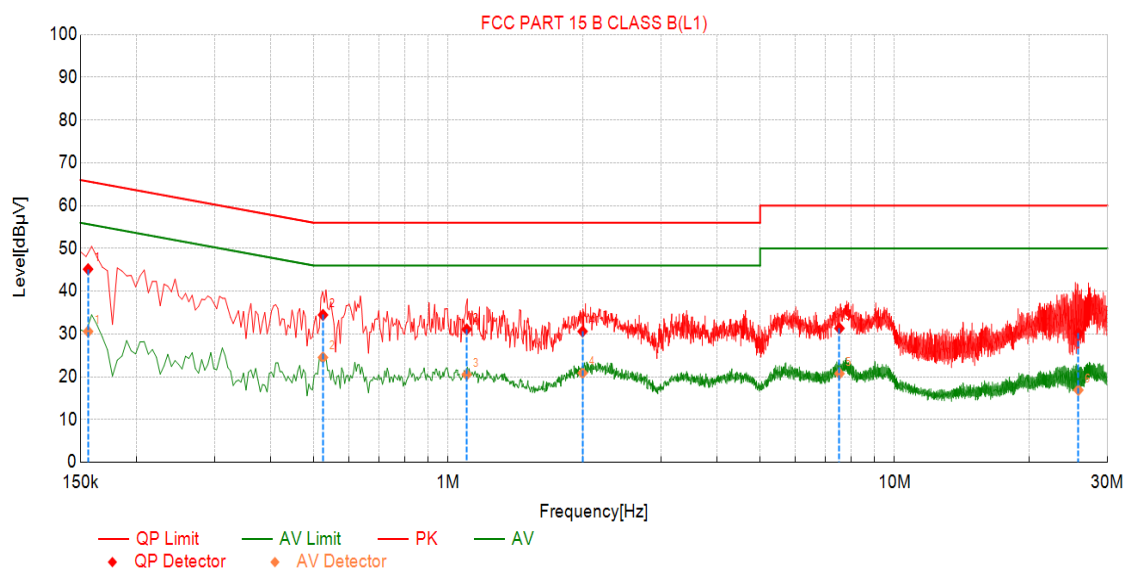
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.



## 2.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Mode:e; Line:Live Line



### Test Graph

#### Final Data List

| NO. | Freq.<br>[MHz] | QP<br>Value<br>[dBμV] | QP<br>Limit<br>[dBμV] | QP<br>Margin<br>[dB] | AV<br>Value<br>[dBμV] | AV<br>Limit<br>[dBμV] | AV<br>Margin<br>[dB] | Verdict |
|-----|----------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|---------|
| 1   | 0.1561         | 45.15                 | 65.67                 | 20.52                | 30.59                 | 55.67                 | 25.08                | PASS    |
| 2   | 0.5243         | 34.45                 | 56.00                 | 21.55                | 24.52                 | 46.00                 | 21.48                | PASS    |
| 3   | 1.1006         | 31.07                 | 56.00                 | 24.93                | 20.51                 | 46.00                 | 25.49                | PASS    |
| 4   | 2.0007         | 30.60                 | 56.00                 | 25.40                | 20.87                 | 46.00                 | 25.13                | PASS    |
| 5   | 7.5269         | 31.32                 | 60.00                 | 28.68                | 20.74                 | 50.00                 | 29.26                | PASS    |
| 6   | 25.8075        | 30.16                 | 60.00                 | 29.84                | 16.89                 | 50.00                 | 33.11                | PASS    |



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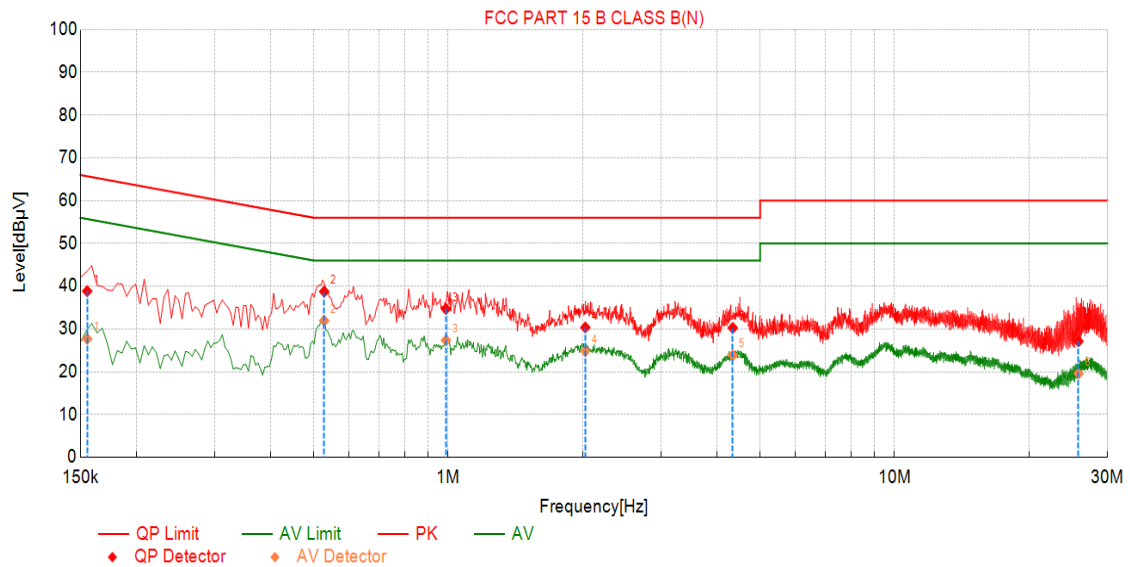


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Report No.: XZR/2021/2004001

Page: 11 of 25

Mode:e; Line:Neutral Line



## Test Graph

### Final Data List

| NO. | Freq.<br>[MHz] | QP<br>Value<br>[dBμV] | QP<br>Limit<br>[dBμV] | QP<br>Margin<br>[dB] | AV<br>Value<br>[dBμV] | AV<br>Limit<br>[dBμV] | AV<br>Margin<br>[dB] | Verdict |
|-----|----------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|---------|
| 1   | 0.1554         | 38.84                 | 65.71                 | 26.87                | 27.68                 | 55.71                 | 28.03                | PASS    |
| 2   | 0.5277         | 38.76                 | 56.00                 | 17.24                | 31.94                 | 46.00                 | 14.06                | PASS    |
| 3   | 0.9886         | 34.69                 | 56.00                 | 21.31                | 27.36                 | 46.00                 | 18.64                | PASS    |
| 4   | 2.0292         | 30.36                 | 56.00                 | 25.64                | 24.81                 | 46.00                 | 21.19                | PASS    |
| 5   | 4.3413         | 30.25                 | 56.00                 | 25.75                | 23.84                 | 46.00                 | 22.16                | PASS    |
| 6   | 25.8288        | 27.12                 | 60.00                 | 32.88                | 19.59                 | 50.00                 | 30.41                | PASS    |



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## 2.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 15, Subpart B  
Test Method: ANSI C63.4:2014  
Frequency Range: 30MHz to 1GHz  
Measurement Distance: 3m  
Limit:  
30MHz -88MHz 40.0(dBμV/m) quasi-peak  
88MHz-216MHz 43.5(dBμV/m) quasi-peak  
216MHz-960MHz 46.0(dBμV/m) quasi-peak  
960MHz-1000MHz 54.0(dBμV/m) quasi-peak  
Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

### 2.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 66.5 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case:

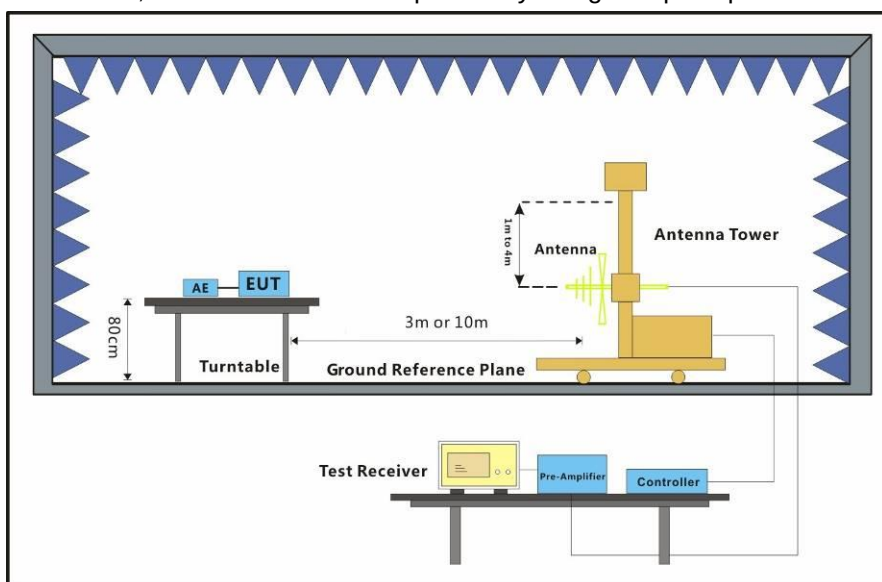
- a: Transfer data between the EUT and the PC+USB cable1
- b: Transfer data between the EUT and the PC+USB cable2
- c: WCDMA Band V Idle + WLAN +playing MP4 (SD card) +battery1+Cable(worst)+adapter1
- d: LTE Band 5 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)
- e: LTE Band 12 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)
- f: LTE Band 13 Idle + WLAN + playing MP4 (SD card) +battery(worst)+Cable(worst)+adapter(worst)

The worst case for final test: a: Transfer data between the EUT and the PC+USB cable1



## 2.2.2 Test Setup Procedures

1. The EUT was placed in a semi Anechoic Chamber as show below
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna height is adjusted between 1 to 4 meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function with specified bandwidth with Maximum Hold Mode, and the trace was allowed to stabilize.
7. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.



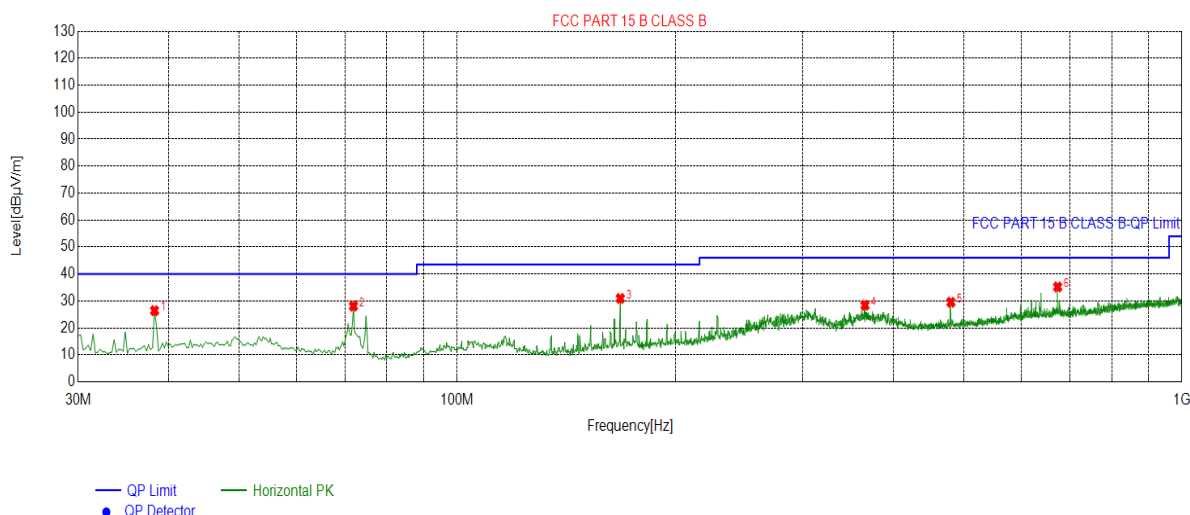
## 2.2.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The three polarities of X,Y,Z were measured by EUT, but only the worst data had been displayed.



Mode:a; Polarization:Horizontal



### Suspected List

| Suspected List |             |                |             |                |             |             |           |            |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|------------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity   |
| 1              | 38.2450     | 26.41          | -29.54      | 40.00          | 13.59       | 200         | 349       | Horizontal |
| 2              | 71.9525     | 28.09          | -32.98      | 40.00          | 11.91       | 300         | 6         | Horizontal |
| 3              | 167.982     | 30.93          | -32.13      | 43.50          | 12.57       | 200         | 358       | Horizontal |
| 4              | 365.377     | 28.40          | -24.42      | 46.00          | 17.60       | 100         | 59        | Horizontal |
| 5              | 480.080     | 29.53          | -21.50      | 46.00          | 16.47       | 200         | 328       | Horizontal |
| 6              | 673.837     | 35.20          | -17.37      | 46.00          | 10.80       | 100         | 33        | Horizontal |

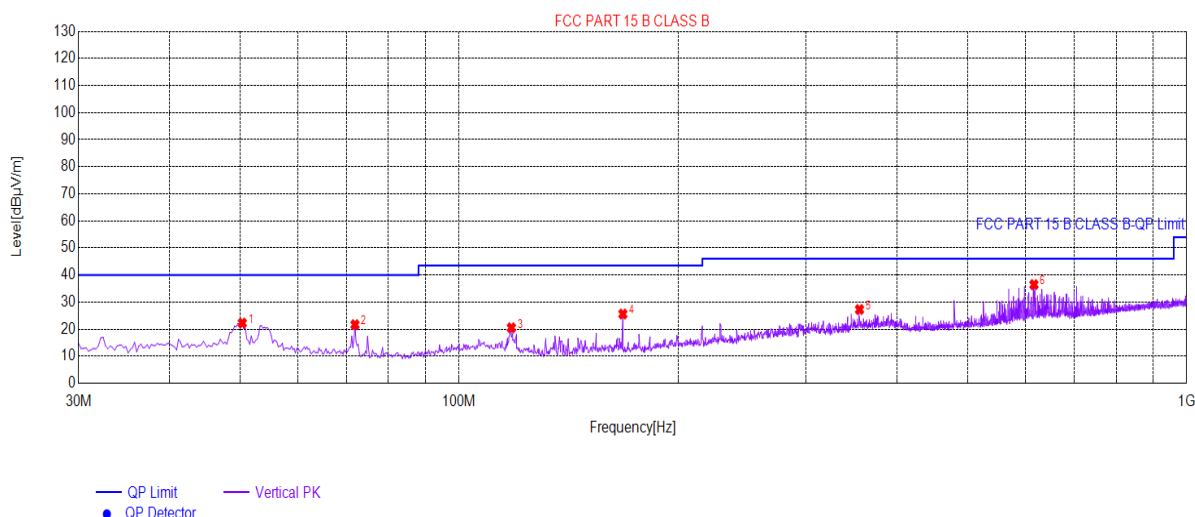


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Mode:a; Polarization:Vertical



### Suspected List

| Suspected List |             |                |             |                |             |             |           |          |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|----------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1              | 50.3700     | 22.24          | -28.38      | 40.00          | 17.76       | 100         | 317       | Vertical |
| 2              | 71.9525     | 21.65          | -32.98      | 40.00          | 18.35       | 200         | 118       | Vertical |
| 3              | 118.027     | 20.51          | -30.87      | 43.50          | 22.99       | 100         | 242       | Vertical |
| 4              | 167.982     | 25.58          | -32.13      | 43.50          | 17.92       | 100         | 47        | Vertical |
| 5              | 355.192     | 27.27          | -24.44      | 46.00          | 18.73       | 100         | 26        | Vertical |
| 6              | 616.850     | 36.46          | -18.42      | 46.00          | 9.54        | 100         | 158       | Vertical |



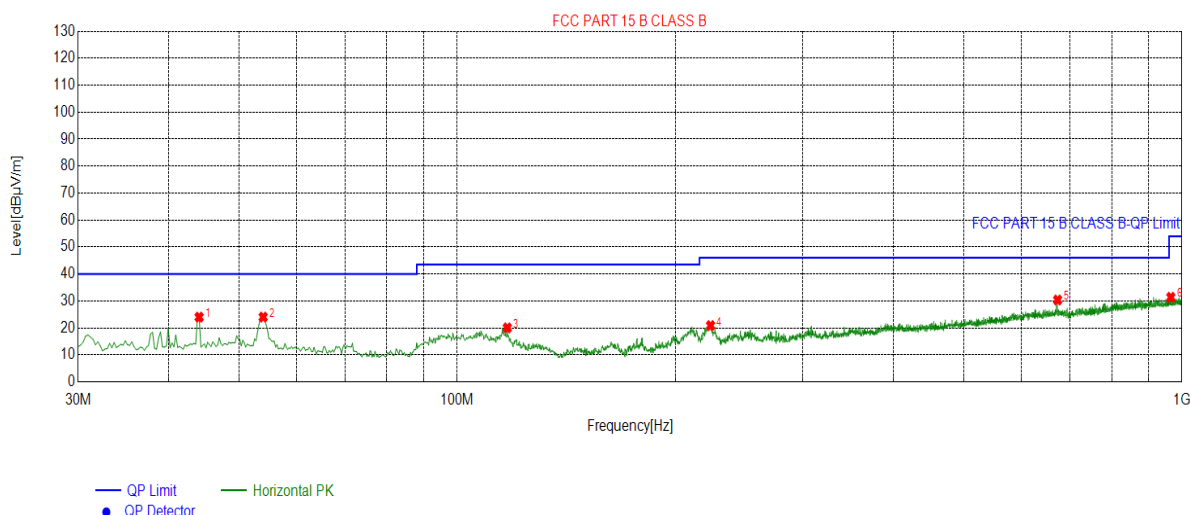
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Mode:; Polarization:Horizontal



### Suspected List

| Suspected List |             |                |             |                |             |             |           |            |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|------------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity   |
| 1              | 44.0650     | 24.00          | -28.33      | 40.00          | 16.00       | 100         | 69        | Horizontal |
| 2              | 54.0075     | 24.02          | -29.01      | 40.00          | 15.98       | 200         | 253       | Horizontal |
| 3              | 117.300     | 20.04          | -30.73      | 43.50          | 23.46       | 300         | 27        | Horizontal |
| 4              | 223.757     | 20.87          | -28.26      | 46.00          | 25.13       | 100         | 12        | Horizontal |
| 5              | 673.837     | 30.36          | -17.37      | 46.00          | 15.64       | 200         | 269       | Horizontal |
| 6              | 965.565     | 31.37          | -13.49      | 54.00          | 22.63       | 200         | 328       | Horizontal |



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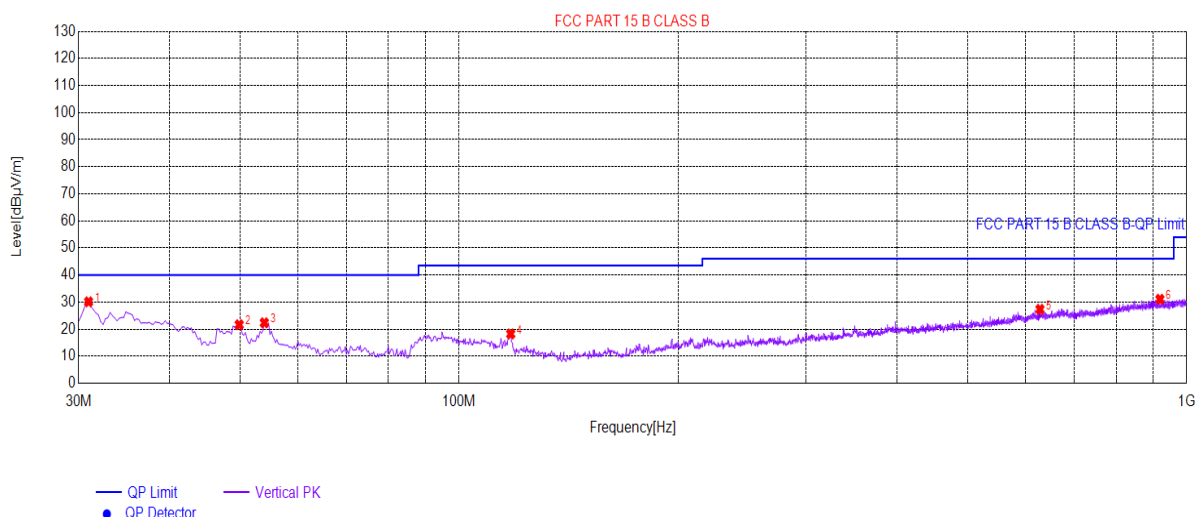
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Mode:; Polarization:Vertical



### Suspected List

| Suspected List |             |                |             |                |             |             |           |          |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|----------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1              | 30.9700     | 30.11          | -30.82      | 40.00          | 9.89        | 100         | 358       | Vertical |
| 2              | 49.8850     | 21.63          | -28.32      | 40.00          | 18.37       | 100         | 343       | Vertical |
| 3              | 54.0075     | 22.36          | -29.01      | 40.00          | 17.64       | 100         | 196       | Vertical |
| 4              | 117.785     | 18.25          | -30.82      | 43.50          | 25.25       | 100         | 301       | Vertical |
| 5              | 628.732     | 27.33          | -18.22      | 46.00          | 18.67       | 100         | 322       | Vertical |
| 6              | 919.005     | 31.05          | -14.02      | 46.00          | 14.95       | 100         | 338       | Vertical |



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## 2.3 Radiated Emissions (above 1GHz)

Test Requirement: 47 CFR Part 15, Subpart B  
Test Method: ANSI C63.4:2014  
Frequency Range: Above 1GHz  
Measurement Distance: 3m  
Limit:  
Above 1GHz 74(dBμV/m) peak, 54(dBμV/m) average  
Detector: Peak for pre-scan (1000kHz resolution bandwidth) 1000M to18000MHz

### 2.3.1 E.U.T. Operation

Operating Environment:

Temperature: 21.7 °C Humidity: 56.4 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case:

- a: Transfer data between the EUT and the PC+USB cable1
- b: Transfer data between the EUT and the PC+USB cable2
- c: WCDMA Band V Idle + WLAN +playing MP4 (SD card) +battery1+Cable(worst)+adapter1
- d: LTE Band 5 Idle + WLAN + playing MP4 (SD card) +battery(worst)+ Cable(worst)+adapter(worst)
- e: LTE Band 12 Idle + WLAN + playing MP4 (SD card) +battery(worst)+ Cable(worst)+adapter(worst)
- f: LTE Band 13 Idle + WLAN + playing MP4 (SD card) +battery(worst)+ Cable(worst)+adapter(worst)

The worst case for final test: c: WCDMA Band V Idle + WLAN +playing MP4 (SD card) +battery1+Cable(worst)+adapter1



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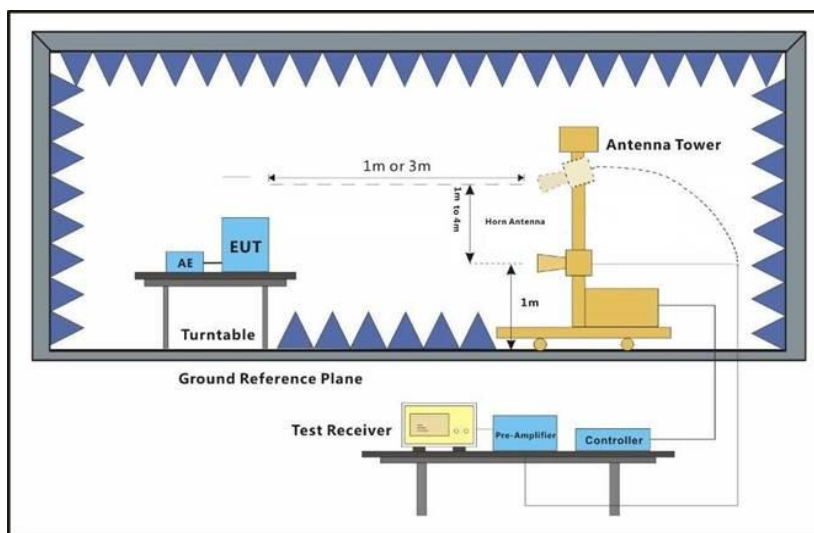
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## 2.3.2 Test Setup Procedures

1. The EUT was placed in a full Anechoic Chamber as show below
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna height is adjusted between 1 to 4 meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak and AV Detect Function with specified bandwidth with Maximum Hold Mode, and the trace was allowed to stabilize.



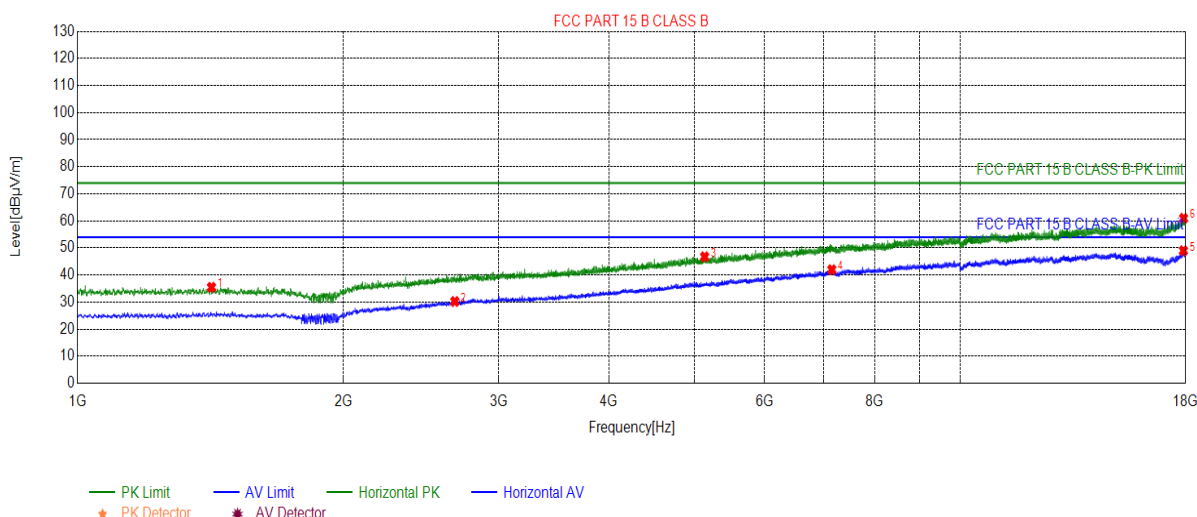
## 2.3.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

The three polarities of X,Y,Z were measured by EUT, but only the worst data had been displayed.

Scan from 1GHz to 30GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed.

Mode:c; Polarization:Horizontal



## Suspected List

| Suspected List |             |                |             |                |             |             |           |            |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|------------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity   |
| 1              | 1418.22     | 35.47          | -29.03      | 74.00          | 38.53       | 121         | 32        | Horizontal |
| 2              | 2675.43     | 30.22          | -23.97      | 54.00          | 23.78       | 121         | 280       | Horizontal |
| 3              | 5132.90     | 46.75          | -14.51      | 74.00          | 27.25       | 121         | 306       | Horizontal |
| 4              | 7153.45     | 41.95          | -8.74       | 54.00          | 12.05       | 121         | 110       | Horizontal |
| 5              | 17897.1     | 48.98          | 4.33        | 54.00          | 5.02        | 121         | 240       | Horizontal |
| 6              | 17903.9     | 60.95          | 4.35        | 74.00          | 13.05       | 121         | 77        | Horizontal |

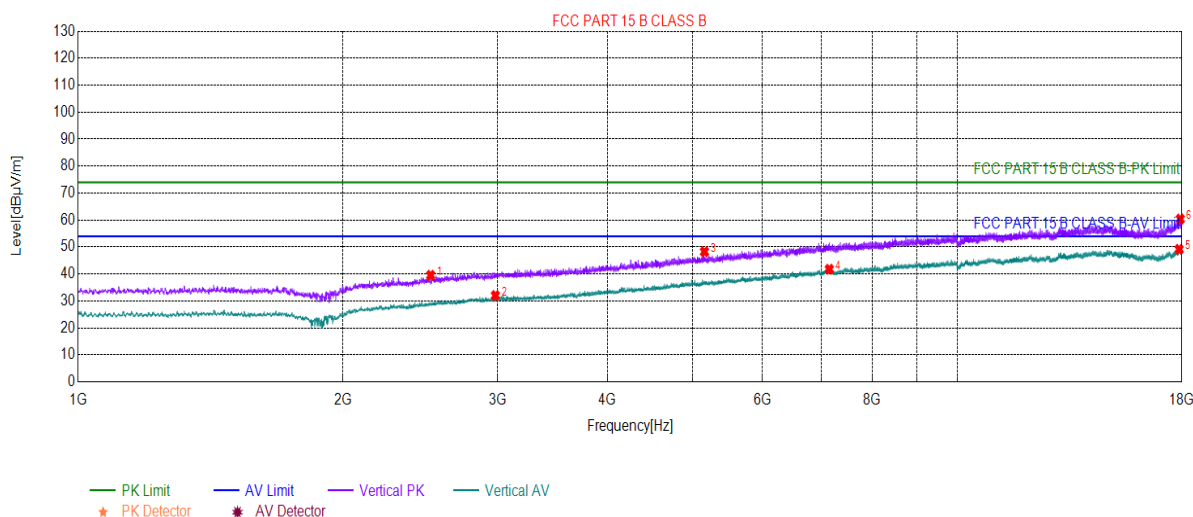


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Mode:c; Polarization:Vertical



## Suspected List

| Suspected List |             |                |             |                |             |             |           |          |
|----------------|-------------|----------------|-------------|----------------|-------------|-------------|-----------|----------|
| NO.            | Freq. [MHz] | Level [dBμV/m] | Factor [dB] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1              | 2517.32     | 39.53          | -24.80      | 74.00          | 34.47       | 301         | 214       | Vertical |
| 2              | 2982.29     | 32.01          | -22.53      | 54.00          | 21.99       | 213         | 209       | Vertical |
| 3              | 5155.85     | 48.26          | -14.34      | 74.00          | 25.74       | 301         | 155       | Vertical |
| 4              | 7150.05     | 41.77          | -8.76       | 54.00          | 12.23       | 213         | 253       | Vertical |
| 5              | 17870.7     | 49.15          | 3.50        | 54.00          | 4.85        | 301         | 312       | Vertical |
| 6              | 17924.3     | 60.38          | 4.00        | 74.00          | 13.62       | 301         | 110       | Vertical |



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### 3 Equipment List

| CE Test System                 |               |             |               |            |              |
|--------------------------------|---------------|-------------|---------------|------------|--------------|
| Equipment                      | Manufacturer  | Model No.   | Inventory No. | Cal Date   | Cal Due Date |
| Shielding Room                 | Brilliant-emc | N/A         | XAW03-35-01   | 2019-09-11 | 2022-09-10   |
| Test receiver                  | ROHDE&SCHWARZ | ESR         | XAW01-08-01   | 2020-09-11 | 2021-09-10   |
| Artificial network             | ROHDE&SCHWARZ | ENV216      | XAW01-04-01   | 2020-08-04 | 2021-08-03   |
| 5G UXM                         | Keysight      | E7515B      | XAW01-19-02   | 2020-09-11 | 2021-09-10   |
| Temperature and humidity meter | MingGao       | TH101B      | XAW01-01-01   | 2020-11-06 | 2021-11-05   |
| Measurement Software           | Tonscend      | TS+ CE V2.5 | XAW02-05-02   | NCR        | NCR          |



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| RE Test System                      |                |                 |               |            |              |
|-------------------------------------|----------------|-----------------|---------------|------------|--------------|
| Equipment                           | Manufacturer   | Model No.       | Inventory No. | Cal Date   | Cal Due Date |
| Semi-Anechoic Chamber               | Brilliant-emc  | N/A             | XAW03-35-01   | 2019-09-11 | 2022-09-10   |
| MXA signal analyzer                 | Keysight       | N9020A          | XAW01-06-01   | 2020-04-02 | 2021-04-01   |
|                                     |                |                 |               | 2021-04-01 | 2022-03-31   |
| Spectrum Analyzer                   | Keysight       | N9020B          | XAW01-11-03   | 2020-04-15 | 2021-04-14   |
| Radio communication analyzer        | ROHDE&SCHWARZ  | CMW 500         | XAW01-03-02   | 2021-04-01 | 2022-03-31   |
|                                     |                |                 |               | 2020-04-02 | 2021-04-01   |
| Test receiver                       | ROHDE&SCHWARZ  | ESR             | XAW01-08-01   | 2020-09-11 | 2021-09-10   |
| Receiving antenna (30MHz-3GHz)      | Schwarzbeck    | VULB 9163       | XAW01-09-01   | 2019-10-13 | 2021-10-12   |
| Receiving antenna (1GHz~18GHz)      | Schwarzbeck    | BBHA 9120D      | XAW01-09-02   | 2019-10-13 | 2021-10-12   |
| Receiving antenna (15GHz~40GHz)     | Schwarzbeck    | BBHA 9170       | XAW01-09-03   | 2019-10-13 | 2021-10-12   |
| Directional antenna rack controller | Max-Full       | MF-7802BS       | XAW03-03-01   | NCR        | NCR          |
| High-speed antenna rack controller  | Max-Full       | MF-7802         | XAW03-04-01   | NCR        | NCR          |
| Amplifier                           | Tonscend       | TAP00903040     | XAW01-41-01   | 2020-10-26 | 2021-10-25   |
| Amplifier                           | Tonscend       | TAP01018048     | XAW01-41-02   | 2020-10-26 | 2021-10-25   |
| Amplifier                           | Tonscend       | TAP18040048     | XAW01-41-03   | 2020-10-27 | 2021-10-26   |
| Amplifier                           | Shanghai Steed | YX28980930      | XAW01-41-06   | 2020-10-26 | 2021-10-25   |
| 5G UXM                              | Keysight       | E7515B          | XAW01-04-01   | 2020-09-11 | 2021-09-10   |
| Temperature and humidity meter      | MingGao        | TH101B          | XAW01-01-01   | 2020-11-06 | 2021-11-05   |
| Measurement Software                | Tonscend       | TS+ RE V3.0.0.2 | XAW02-05-01   | NCR        | NCR          |



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## 4 Measurement Uncertainty

| No. | Item                | Measurement Uncertainty              |
|-----|---------------------|--------------------------------------|
| 1   | Conduction Emission | $\pm 3.0\text{dB}$ (150kHz to 30MHz) |
| 2   | Radiated Emission   | $\pm 4.8\text{dB}$ (Below 1GHz)      |
|     |                     | $\pm 4.8\text{dB}$ (1GHz to 6GHz)    |
|     |                     | $\pm 4.5\text{dB}$ (6GHz to 18GHz)   |
|     |                     | $\pm 5.02\text{dB}$ (Above 18GHz)    |



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## 5 Photographs

### 5.1 Test Setup

Refer to Appendix A Setup Photos.

### 5.2 EUT Constructional Details (EUT Photos)

Refer to Photographs of EUT Constructional Details

- End of the Report -



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