



Report No.: ET-24060665E

# TEST REPORT

Applicant's name: Qingdao Thunderobot Technology Co., Ltd  
Address: No.1, Haier Road, Laoshan District, Qingdao City.  
Manufacture's Name: Qingdao Thunderobot Technology Co., Ltd  
Address: No.1, Haier Road, Laoshan District, Qingdao City.  
Product name: Mini PC  
Model/Type reference: Mini2, Mini2-3545HD4, Mini2-4762H

Trademark:



FCC ID: 2BG5P-MINI2  
Standards: FCC Part 15 Subpart B  
Test methods: ANSI C63.4-2014  
Date of testing: Jun.4, 2024 – Jun .17, 2024  
Date of issue: Jun.21, 2024  
Test Result : PASS \*

Remark:

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

*The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full without prior written permission of the company.*

*The report would be invalid without specific stamp of test institute and the signatures of compiler and approver*

## Prepared By

Shenzhen ETR Standard Technology Co., Ltd.

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Project Engineer

Project Manager

Authorized Signature



| Report Revision History |             |              |
|-------------------------|-------------|--------------|
| Report No.              | Description | Issue Date   |
| ET-24060665E            | Original    | Jun.21, 2024 |
|                         |             |              |
|                         |             |              |
|                         |             |              |



## Table of Contents

|                                                   |           |
|---------------------------------------------------|-----------|
| <b>1 Summary of Test Result.....</b>              | <b>4</b>  |
| <b>2 General description.....</b>                 | <b>5</b>  |
| 2.1 Description of EUT .....                      | 5         |
| 2.2 Test mode.....                                | 5         |
| 2.3 EUT test setup.....                           | 5         |
| 2.4 Ancillary equipment .....                     | 5         |
| <b>3 Test Facilities and Accreditations .....</b> | <b>7</b>  |
| 3.1 Test laboratory .....                         | 7         |
| 3.2 Environmental conditions .....                | 7         |
| 3.3 Measurement uncertainty .....                 | 7         |
| 3.4 Test software .....                           | 7         |
| <b>4 List of test equipment .....</b>             | <b>8</b>  |
| <b>5 Test Results and test data.....</b>          | <b>9</b>  |
| 5.1 Conducted emission .....                      | 9         |
| 5.2 Radiated emission .....                       | 15        |
| <b>6 Test Setup Photo .....</b>                   | <b>25</b> |
| <b>7. EUT Constructional Details .....</b>        | <b>25</b> |

## 1 Summary of Test Result

| Item | Description of Test | Result | Test by   |
|------|---------------------|--------|-----------|
| 1    | Conducted emission  | Pass   | Carr Kang |
| 2    | Radiated emission   | Pass   | Carr Kang |

1. *Pass: The EUT complies with the essential requirements in the standard.*

2. *Compliance determination rules*

1). *The Compliance determination of test results does not take into account measurement uncertainty. Measurement results are determined based on regulatory limitations or requirements specified by the applicant/manufacturer. If measurement uncertainty is taken into account, the applicant/manufacturer will bear all possible risks of non-compliance.*

2). *The measurement uncertainty please refer to each test result in the "Measurement Uncertainty"*

## 2 General description

### 2.1 Description of EUT

|                             |                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Product name:               | Mini PC                                                                                                                                  |
| Model name:                 | Mini2, Mini2-3545HD4, Mini2-4762H                                                                                                        |
| Different of series model:  | Each model has two motherboards (Dual SSD motherboard or Single SSD motherboard), and the only difference between models is their naming |
| Test model:                 | Mini2(Two motherboards)                                                                                                                  |
| Power supply:               | DC 19V From Adapter                                                                                                                      |
| Power supply of test:       | AC 120V 60Hz                                                                                                                             |
| Adapter specification       | AC input: 100-240V 50/60Hz 1.6A<br>DC output: 19V-5.26A                                                                                  |
| Battery:                    | N/A                                                                                                                                      |
| EUT Highest Frequency       | Above 108MHz                                                                                                                             |
| Classification of equipment | Class B                                                                                                                                  |

### 2.2 Test mode

| Pretest mode                            | Description                              |
|-----------------------------------------|------------------------------------------|
| Mode 1                                  | System full load(Dual SSD motherboard)   |
| Mode 2                                  | System full load(Single SSD motherboard) |
| <b>For conducted emission(AC port)1</b> |                                          |
| Final test mode                         | Mode 1-2                                 |
| <b>For Radiated emission</b>            |                                          |
| Final test mode                         | Mode 1-2                                 |

Note: The test modes were carried out for all operation modes. The final test mode of the EUT was the worst test mode for EMI, and its test data is showed.

### 2.3 EUT test setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

### 2.4 Ancillary equipment

| Equipment | Model | S/N | Manufacturer |
|-----------|-------|-----|--------------|
| display   | 28U1  | /   | SKYWORTH     |
| Mouse     | V12-M | /   | DELL         |
| Keyboard  | V12-K | /   | DELL         |



|            |      |   |        |
|------------|------|---|--------|
| headphones | EQ11 | / | XIAOMI |
|------------|------|---|--------|

### 3 Test Facilities and Accreditations

#### 3.1 Test laboratory

|                        |                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Test laboratory:       | Shenzhen ETR Standard Technology Co., Ltd.                                                                                |
| Laboratory location:   | No.103, No.10, Phase I, Zone 3, Xinxing Industrial Park, Xinhe, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |
| CNAS Registration No.: | L11864                                                                                                                    |
| Telephone:             | +86 755 85259392                                                                                                          |

#### 3.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

|                      |              |
|----------------------|--------------|
| Temperature:         | 15°C~35°C    |
| Humidity             | 20%~75%      |
| Atmospheric pressure | 98kPa~101kPa |

#### 3.3 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %,  $U=2 \times U_c(y)$

|                                  |                |
|----------------------------------|----------------|
| Conducted emission(150kHz~30MHz) | $\pm 2.64$ dB  |
| Radiated emission(30MHz~1GHz)    | $\pm 4.32$ dB  |
| Radiated emission (above 1GHz)   | $\pm 4.56$ dB  |
| Temperature                      | $\pm 1$ degree |
| Humidity                         | $\pm 5$ %      |

#### 3.4 Test software

| Software name           | Manufacturer | Model  | Version           |
|-------------------------|--------------|--------|-------------------|
| Conducted test software | Farad        | EZ-EMC | Ver.EMC-CON 3A1.1 |
| Radiated test software  | Farad        | EZ-EMC | Ver.FA-03A2 RE    |



#### 4 List of test equipment

| Item | Equipment name           | Manufacturer   | Model           | Serial No.   | Calibration date | Due date  |
|------|--------------------------|----------------|-----------------|--------------|------------------|-----------|
| 1    | EMI Test Receiver        | Rohde&schwarz  | ESCI7           | 101214       | 2024.3.12        | 2025.3.11 |
| 2    | EMI Test Receiver        | Rohde&schwarz  | ESCI3           | 102696       | 2024.3.12        | 2025.3.11 |
| 3    | Loop Antenna             | schwarabeck    | FMZB 1519 B     | 128          | 2024.3.22        | 2026.3.21 |
| 4    | Broadband antenna        | schwarabeck    | VULB9168        | 1064         | 2024.3.26        | 2026.3.25 |
| 5    | Horn antenna             | schwarabeck    | BBHA9120D       | 2288         | 2024.3.22        | 2026.3.21 |
| 6    | amplifier                | EMtrace        | RP01A           | 50117        | 2024.3.12        | 2025.3.11 |
| 7    | Artificial power network | schwarabeck    | NSLK8127        | 8127483      | 2024.3.12        | 2025.3.11 |
| 8    | Artificial power network | ETS            | 3186/2NM        | 1132         | 2024.3.12        | 2025.3.11 |
| 9    | 10dB attenuator          | HUBER+SUHNER   | 10dB            | /            | 2024.3.12        | 2025.3.11 |
| 10   | amplifier                | Space-Dtronics | EWLAN0118 G-P40 | 19113001     | 2024.3.12        | 2025.3.11 |
| 12   | Spectrum analyzer        | KEYSIGHT       | N9020A          | MY55370280   | 2024.3.12        | 2025.3.11 |
| 13   | Spectrum analyzer        | Rohde&schwarz  | FSV40           | 102137       | 2024.3.12        | 2025.3.11 |
| 14   | Amplifier                | SKET           | LNPA_1840-50    | SK2019040302 | 2024.3.12        | 2025.3.11 |
| 15   | Horn antenna             | schwarabeck    | BBHA 9170       | 946          | 2024.3.12        | 2025.3.11 |

*Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

## 5 Test Results and test data

### 5.1 Conducted emission

|                       |                                      |
|-----------------------|--------------------------------------|
| Test Requirement:     | FCC Part15 B Section 15.107          |
| Test Method:          | ANSI C63.4-2014                      |
| Test Frequency Range: | 150KHz to 30MHz                      |
| Receiver setup:       | RBW=9KHz, VBW=30KHz, Sweep time=auto |

#### 5.1.1 Limits

| Frequency (MHz) | Class A (dBμV) |         | Class B (dBμV) |           |
|-----------------|----------------|---------|----------------|-----------|
|                 | Quasi-peak     | Average | Quasi-peak     | Average   |
| 0.15 -0.5       | 79             | 66      | 66 - 56 *      | 56 - 46 * |
| 0.5 -5          | 73             | 60      | 56             | 46        |
| 5 -30           | 73             | 60      | 60             | 50        |

Note 1: the tighter limit applies at the band edges.

Note 2: the limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### 5.1.2 Test Procedures

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

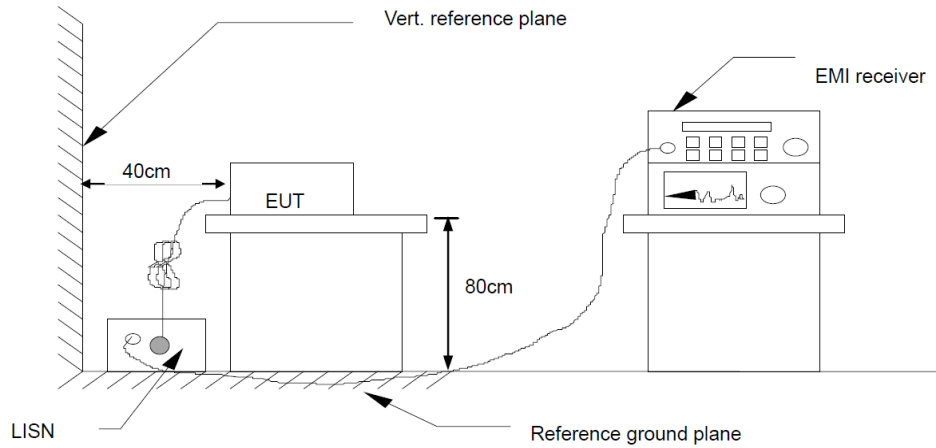
Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

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

LISN is at least 80 cm from nearest part of EUT chassis.

For the actual test configuration, please refer to the related Item – photographs of the test setup.

### 5.1.3 Test Setup



### 5.1.4 EUT OPERATING CONDITIONS

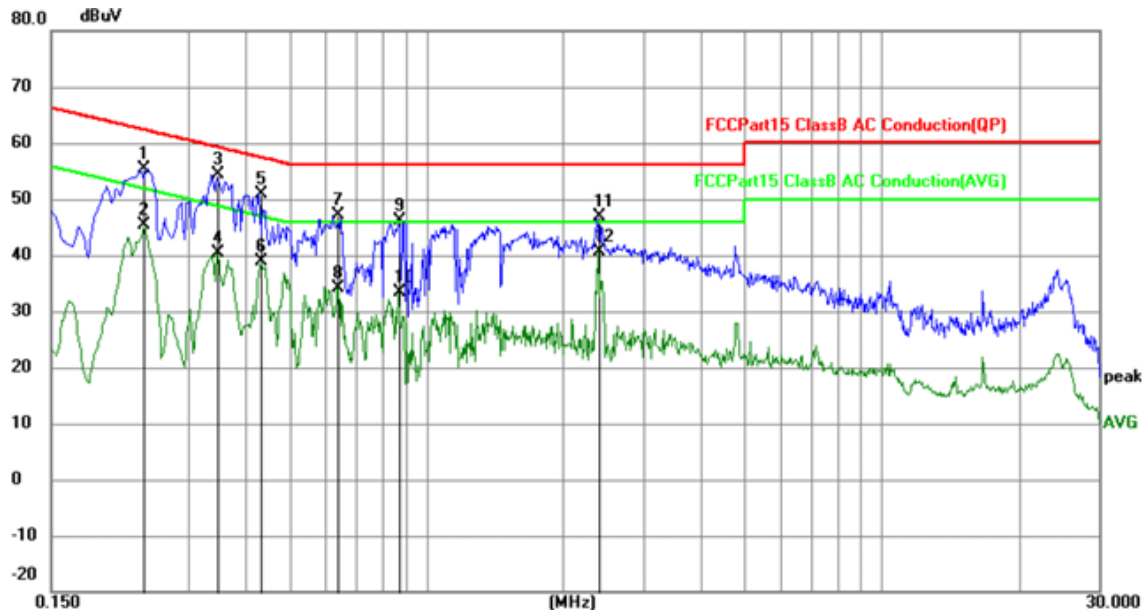
The EUT was configured for testing in a typical fashion (as a customer would normally use it). Test mode Refer to section 2.2 for details and only show the worst case.

### 5.1.5 Test Result

Level = Reading+ Factor

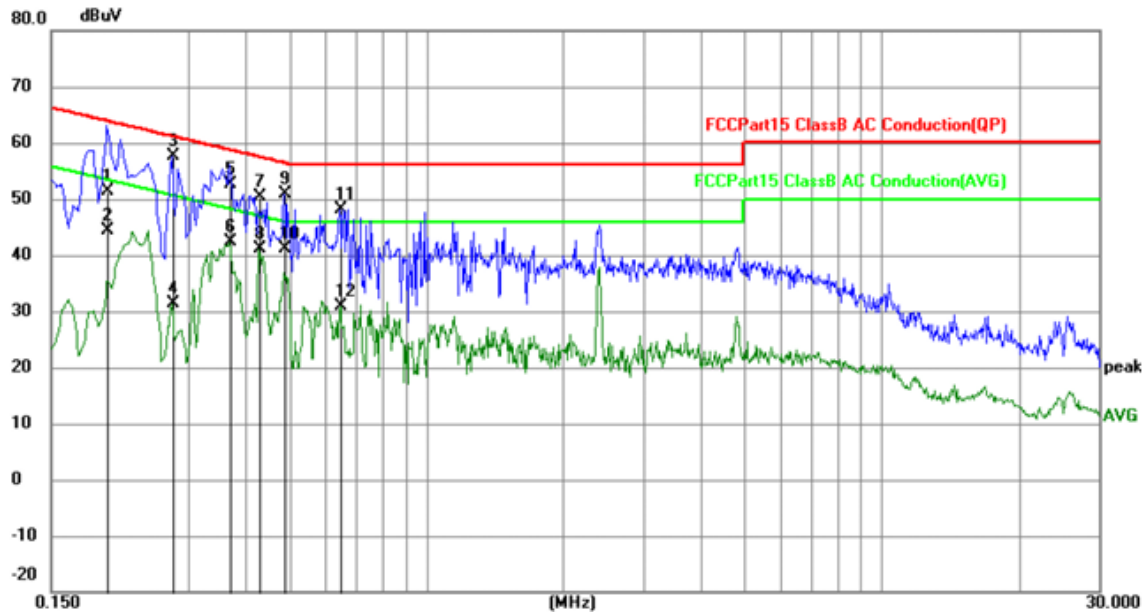
Factor= LISN Factor + Cable Loss+ Attenuator Factor

|              |          |               |              |
|--------------|----------|---------------|--------------|
| Test mode:   | Mode 1   | Phase:        | L            |
| Temperature: | 25.4°C   | Humidity:     | 55%RH        |
| Pressure:    | 100.8kPa | Test voltage: | AC 120V 60Hz |



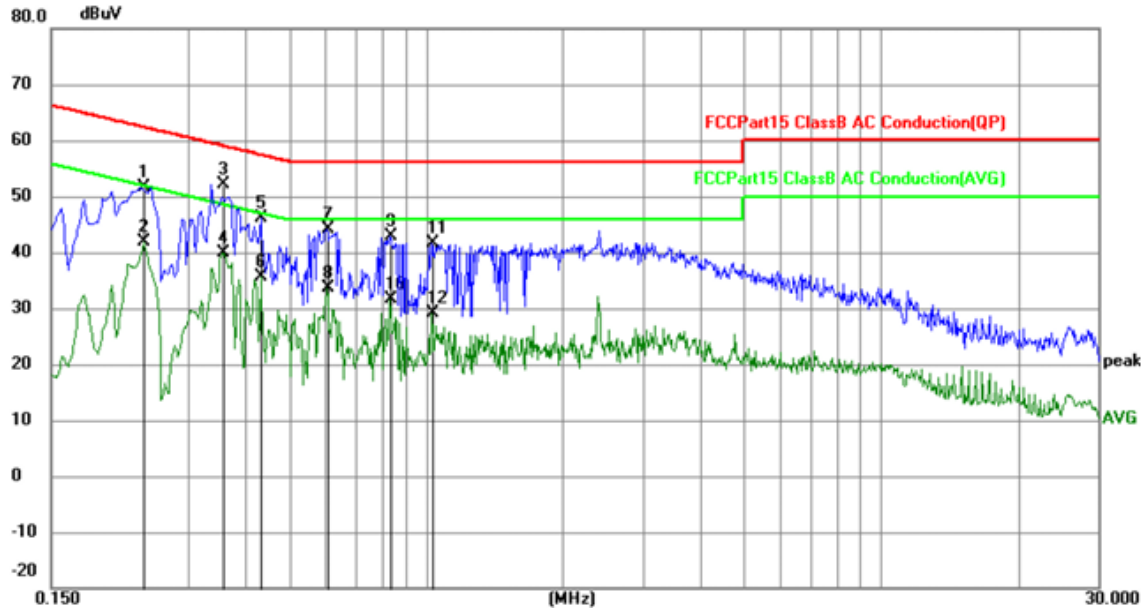
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|
| 1   | 0.2400          | 45.67          | 9.82        | 55.49        | 62.10        | -6.61       | QP       |
| 2   | 0.2400          | 35.65          | 9.82        | 45.47        | 52.10        | -6.63       | AVG      |
| 3   | 0.3480          | 44.46          | 9.88        | 54.34        | 59.01        | -4.67       | QP       |
| 4   | 0.3480          | 30.38          | 9.88        | 40.26        | 49.01        | -8.75       | AVG      |
| 5   | 0.4334          | 41.02          | 9.91        | 50.93        | 57.19        | -6.26       | QP       |
| 6   | 0.4334          | 29.03          | 9.91        | 38.94        | 47.19        | -8.25       | AVG      |
| 7   | 0.6403          | 37.31          | 9.94        | 47.25        | 56.00        | -8.75       | QP       |
| 8   | 0.6403          | 24.21          | 9.94        | 34.15        | 46.00        | -11.85      | AVG      |
| 9   | 0.8700          | 36.07          | 9.96        | 46.03        | 56.00        | -9.97       | QP       |
| 10  | 0.8700          | 23.53          | 9.96        | 33.49        | 46.00        | -12.51      | AVG      |
| 11  | 2.3909          | 36.92          | 9.85        | 46.77        | 56.00        | -9.23       | QP       |
| 12  | 2.3909          | 30.90          | 9.85        | 40.75        | 46.00        | -5.25       | AVG      |

|              |          |               |              |
|--------------|----------|---------------|--------------|
| Test mode:   | Mode 1   | Phase:        | N            |
| Temperature: | 25.4°C   | Humidity:     | 55%RH        |
| Pressure:    | 100.8kPa | Test voltage: | AC 120V 60Hz |



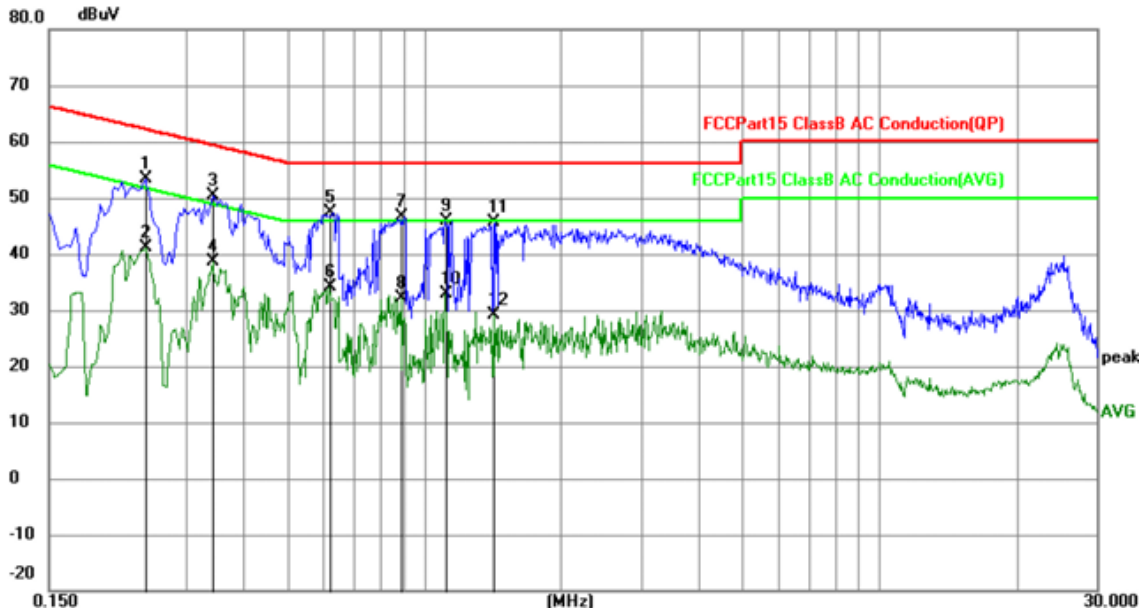
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|
| 1   | 0.1995          | 41.69          | 9.81        | 51.50        | 63.63        | -12.13      | QP       |
| 2   | 0.1995          | 34.67          | 9.81        | 44.48        | 53.63        | -9.15       | AVG      |
| 3   | 0.2760          | 47.87          | 9.84        | 57.71        | 60.94        | -3.23       | QP       |
| 4   | 0.2760          | 21.58          | 9.84        | 31.42        | 50.94        | -19.52      | AVG      |
| 5   | 0.3704          | 42.81          | 9.89        | 52.70        | 58.49        | -5.79       | QP       |
| 6   | 0.3704          | 32.43          | 9.89        | 42.32        | 48.49        | -6.17       | AVG      |
| 7   | 0.4290          | 40.44          | 9.91        | 50.35        | 57.27        | -6.92       | QP       |
| 8   | 0.4290          | 31.18          | 9.91        | 41.09        | 47.27        | -6.18       | AVG      |
| 9   | 0.4875          | 40.95          | 9.94        | 50.89        | 56.21        | -5.32       | QP       |
| 10  | 0.4875          | 31.15          | 9.94        | 41.09        | 46.21        | -5.12       | AVG      |
| 11  | 0.6493          | 38.19          | 9.94        | 48.13        | 56.00        | -7.87       | QP       |
| 12  | 0.6493          | 20.97          | 9.94        | 30.91        | 46.00        | -15.09      | AVG      |

|              |          |               |              |
|--------------|----------|---------------|--------------|
| Test mode:   | Mode 2   | Phase:        | L            |
| Temperature: | 25.4°C   | Humidity:     | 55%RH        |
| Pressure:    | 100.8kPa | Test voltage: | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|
| 1   | 0.2400          | 41.76          | 9.82        | 51.58        | 62.10        | -10.52      | QP       |
| 2   | 0.2400          | 31.97          | 9.82        | 41.79        | 52.10        | -10.31      | AVG      |
| 3   | 0.3570          | 42.15          | 9.88        | 52.03        | 58.80        | -6.77       | QP       |
| 4   | 0.3570          | 29.96          | 9.88        | 39.84        | 48.80        | -8.96       | AVG      |
| 5   | 0.4334          | 36.29          | 9.91        | 46.20        | 57.19        | -10.99      | QP       |
| 6   | 0.4334          | 25.67          | 9.91        | 35.58        | 47.19        | -11.61      | AVG      |
| 7   | 0.6044          | 34.22          | 9.94        | 44.16        | 56.00        | -11.84      | QP       |
| 8   | 0.6044          | 23.59          | 9.94        | 33.53        | 46.00        | -12.47      | AVG      |
| 9   | 0.8338          | 33.00          | 9.96        | 42.96        | 56.00        | -13.04      | QP       |
| 10  | 0.8338          | 21.79          | 9.96        | 31.75        | 46.00        | -14.25      | AVG      |
| 11  | 1.0274          | 31.73          | 9.96        | 41.69        | 56.00        | -14.31      | QP       |
| 12  | 1.0274          | 19.07          | 9.96        | 29.03        | 46.00        | -16.97      | AVG      |

|              |          |               |              |
|--------------|----------|---------------|--------------|
| Test mode:   | Mode 2   | Phase:        | N            |
| Temperature: | 25.4°C   | Humidity:     | 55%RH        |
| Pressure:    | 100.8kPa | Test voltage: | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|
| 1   | 0.2445          | 43.55          | 9.82        | 53.37        | 61.94        | -8.57       | QP       |
| 2   | 0.2445          | 31.26          | 9.82        | 41.08        | 51.94        | -10.86      | AVG      |
| 3   | 0.3435          | 40.48          | 9.88        | 50.36        | 59.12        | -8.76       | QP       |
| 4   | 0.3435          | 28.82          | 9.88        | 38.70        | 49.12        | -10.42      | AVG      |
| 5   | 0.6180          | 37.35          | 9.94        | 47.29        | 56.00        | -8.71       | QP       |
| 6   | 0.6180          | 24.07          | 9.94        | 34.01        | 46.00        | -11.99      | AVG      |
| 7   | 0.8923          | 36.78          | 9.96        | 46.74        | 56.00        | -9.26       | QP       |
| 8   | 0.8923          | 22.08          | 9.96        | 32.04        | 46.00        | -13.96      | AVG      |
| 9   | 1.1129          | 35.89          | 9.95        | 45.84        | 56.00        | -10.16      | QP       |
| 10  | 1.1129          | 22.81          | 9.95        | 32.76        | 46.00        | -13.24      | AVG      |
| 11  | 1.4233          | 35.63          | 9.91        | 45.54        | 56.00        | -10.46      | QP       |
| 12  | 1.4233          | 19.28          | 9.91        | 29.19        | 46.00        | -16.81      | AVG      |

## 5.2 Radiated emission

|                       |                                                                      |            |        |        |            |
|-----------------------|----------------------------------------------------------------------|------------|--------|--------|------------|
| Test Requirement:     | FCC Part15 B Section 15.109                                          |            |        |        |            |
| Test Method:          | ANSI C63.4-2014                                                      |            |        |        |            |
| Test Frequency Range: | 5th harmonic of the highest frequency or 40 GHz, whichever is lower. |            |        |        |            |
| Test site:            | Measurement Distance: 3m                                             |            |        |        |            |
| Receiver setup:       | Frequency                                                            | Detector   | RBW    | VBW    | Value      |
|                       | 30MHz-1GHz                                                           | Quasi-peak | 100KHz | 300KHz | Quasi-peak |
|                       | Above 1GHz                                                           | Peak       | 1MHz   | 3MHz   | Peak       |
|                       |                                                                      | Peak       | 1MHz   | 10Hz   | Average    |

### 5.2.1 Limits

Limits of radiated emission measurement

| Frequency (MHz) | Class B device (at 3m) dBμV/m | Class A device (at 3m) dBμV/m | Detector |
|-----------------|-------------------------------|-------------------------------|----------|
| 30-88           | 40                            | 49                            | QP       |
| 88-216          | 43.5                          | 53.5                          | QP       |
| 216-960         | 46                            | 56.4                          | QP       |
| 960-1000        | 54                            | 59.5                          | QP       |
| Above 1000      | 54                            | 59.5                          | AV       |
| Above 1000      | 74                            | 79.5                          | PK       |

### 5.2.2 Test Procedures

The radiated emission tests were performed in the 3 meters.

The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the test antenna shall vary between 1m to 4m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

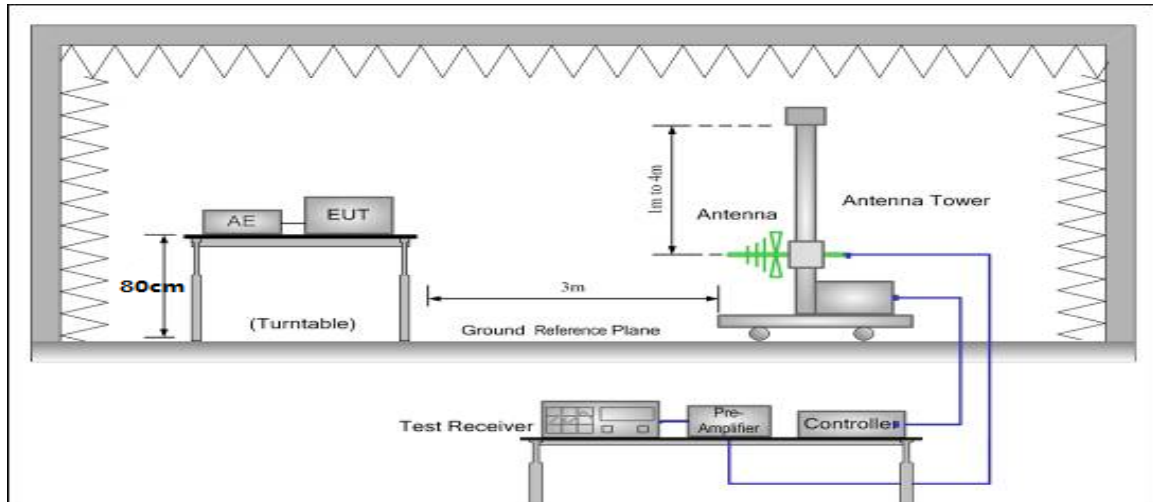
If the peak mode measured value compliance with and lower than quasi peak mode limit, the EUT shall be deemed to meet QP limits and then no additional QP mode measurement performed.

If the peak mode measured value compliance with and lower than average mode limit, the EUT shall be deemed to meet average limits and then no additional average mode measurement performed.

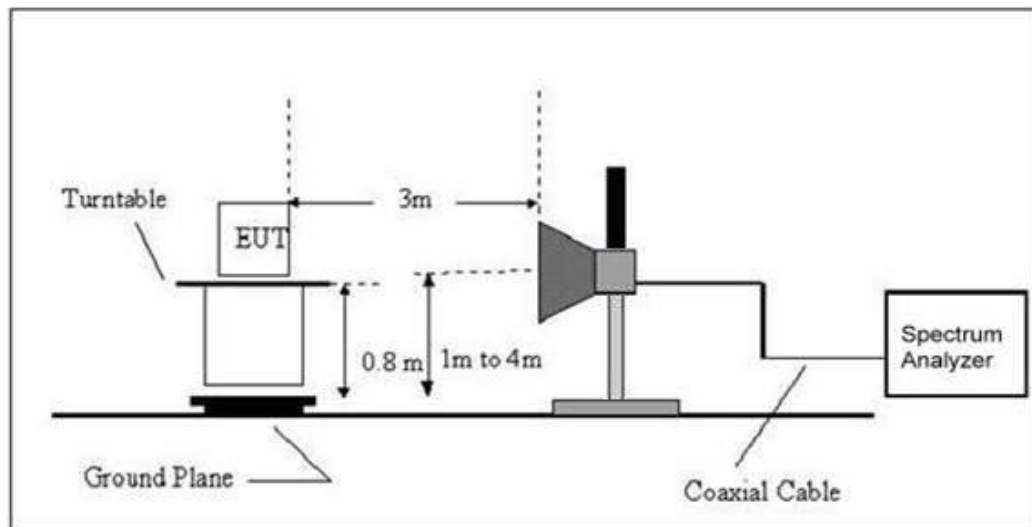
For the actual test configuration, please refer to the related item – EUT test photos.

### 5.2.3 Test Setup

Radiated emission test-up frequency for below 1GHz



Radiated emission test-up frequency for above 1GHz



### 5.2.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). Test mode Refer to section 2.2 for details and only show the worst case.

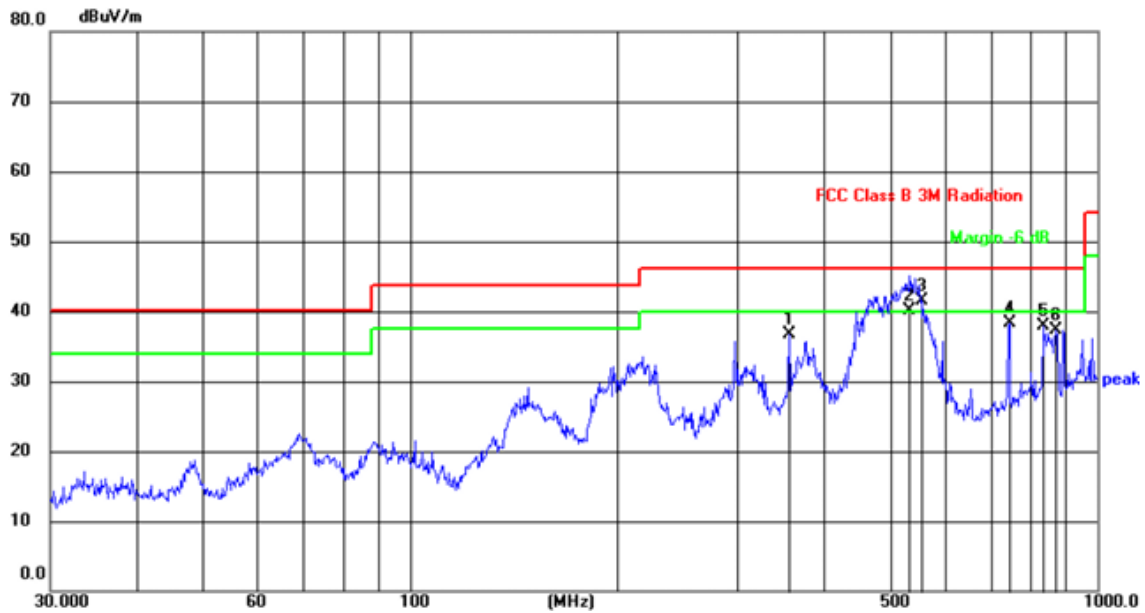
### 5.2.5 Test Result

Level = Reading + Factor

Factor= Antenna Factor + Cable Factor – Preamplifier Factor

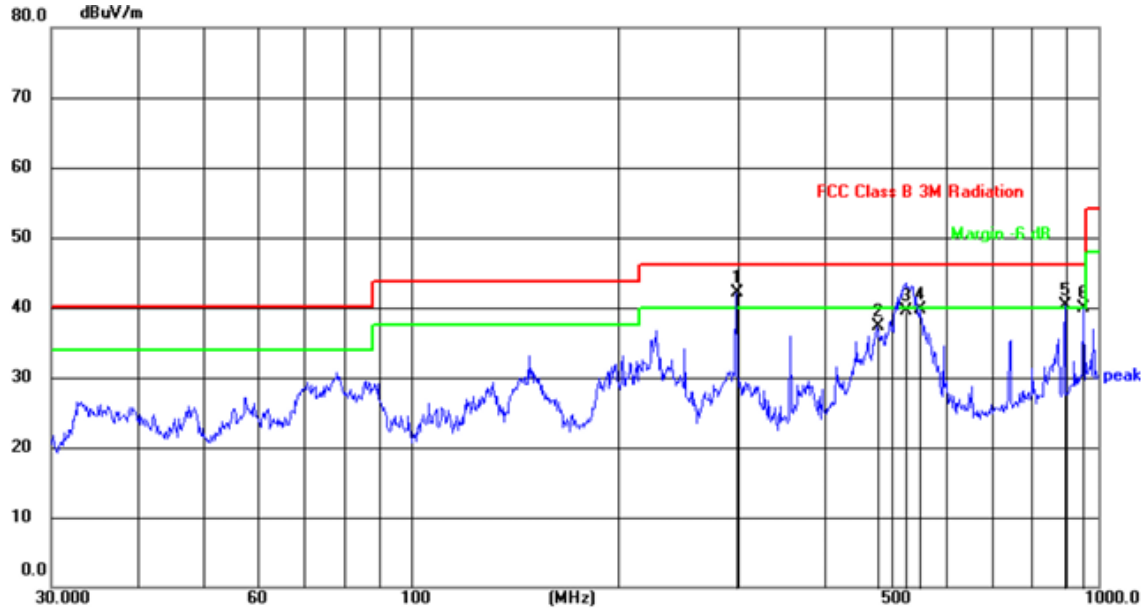
Below 1GHz

|              |          |                    |              |
|--------------|----------|--------------------|--------------|
| Test mode:   | Mode 1   | Test polarization: | Horizontal   |
| Temperature: | 23°C     | Humidity:          | 52%RH        |
| Pressure:    | 100.6kPa | Test voltage:      | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 356.6758        | 55.71          | -19.09        | 36.62          | 46.00          | -9.38       | QP       |
| 2   | 533.8321        | 53.37          | -13.27        | 40.10          | 46.00          | -5.90       | QP       |
| 3   | 554.8254        | 54.21          | -12.73        | 41.48          | 46.00          | -4.52       | QP       |
| 4   | 744.8661        | 46.56          | -8.21         | 38.35          | 46.00          | -7.65       | QP       |
| 5   | 833.3171        | 44.34          | -6.35         | 37.99          | 46.00          | -8.01       | QP       |
| 6   | 872.1832        | 43.25          | -5.91         | 37.34          | 46.00          | -8.66       | QP       |

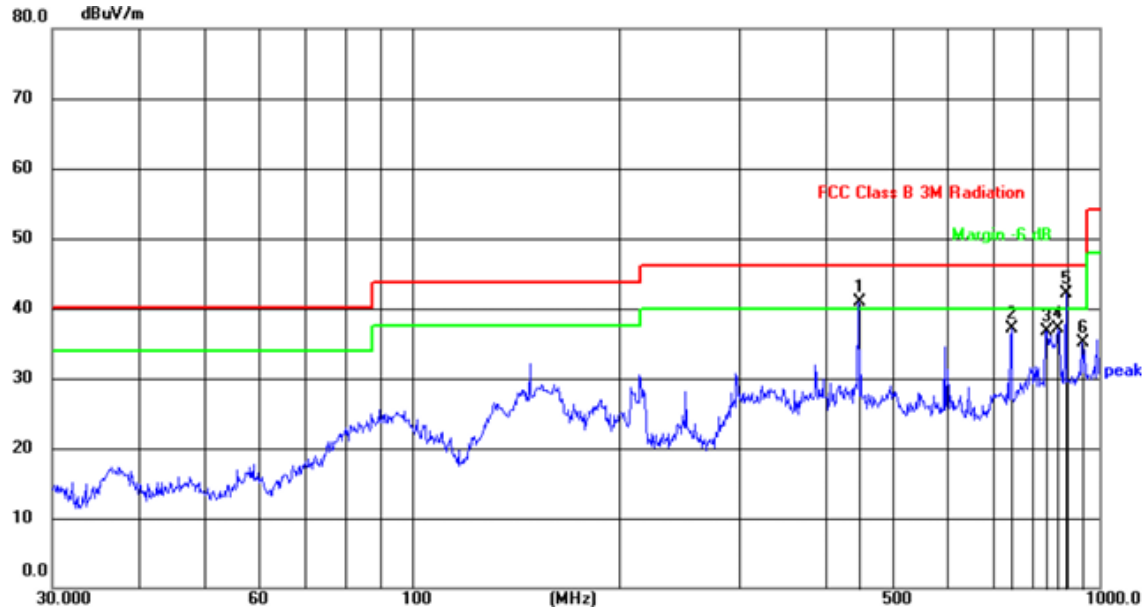
|              |          |                    |              |
|--------------|----------|--------------------|--------------|
| Test mode:   | Mode 1   | Test polarization: | Vertical     |
| Temperature: | 23°C     | Humidity:          | 52%RH        |
| Pressure:    | 100.6kPa | Test voltage:      | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 297.2241        | 62.46          | -20.40        | 42.06          | 46.00          | -3.94       | QP       |
| 2   | 477.1694        | 52.76          | -15.41        | 37.35          | 46.00          | -8.65       | QP       |
| 3   | 524.5541        | 53.13          | -13.53        | 39.60          | 46.00          | -6.40       | QP       |
| 4   | 550.9480        | 52.47          | -12.82        | 39.65          | 46.00          | -6.35       | QP       |
| 5   | 893.8567        | 45.82          | -5.54         | 40.28          | 46.00          | -5.72       | QP       |
| 6   | 952.0937        | 43.66          | -3.79         | 39.87          | 46.00          | -6.13       | QP       |

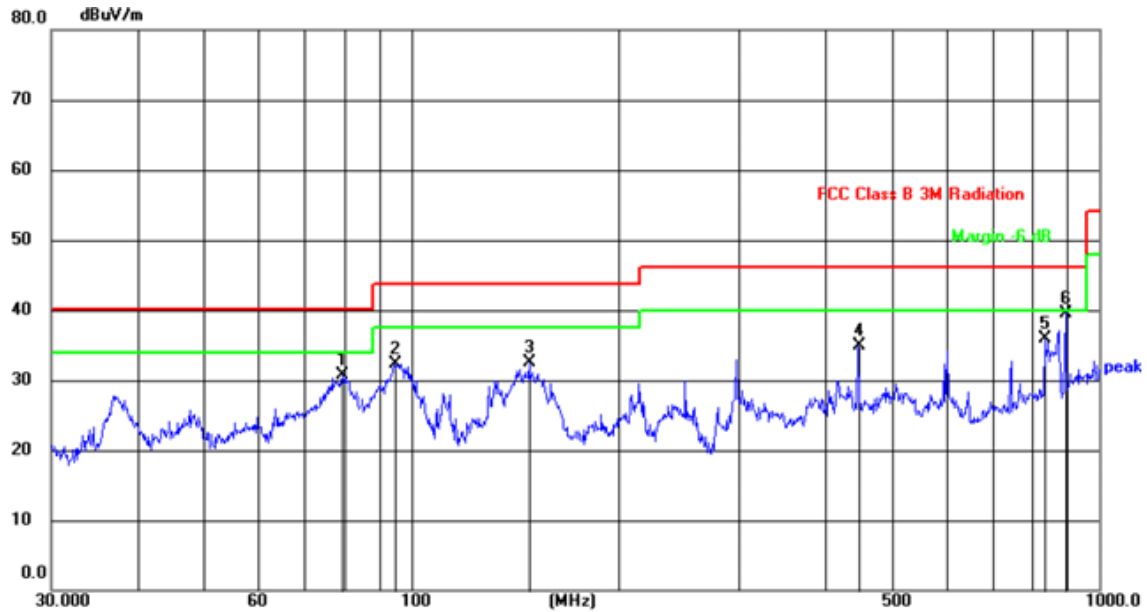


|              |          |                    |              |
|--------------|----------|--------------------|--------------|
| Test mode:   | Mode 2   | Test polarization: | Horizontal   |
| Temperature: | 23°C     | Humidity:          | 52%RH        |
| Pressure:    | 100.6kPa | Test voltage:      | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 446.4141        | 56.59          | -15.65        | 40.94          | 46.00          | -5.06       | QP       |
| 2   | 744.8661        | 45.24          | -8.21         | 37.03          | 46.00          | -8.97       | QP       |
| 3   | 839.1818        | 43.04          | -6.32         | 36.72          | 46.00          | -9.28       | QP       |
| 4   | 869.1302        | 43.02          | -5.95         | 37.07          | 46.00          | -8.93       | QP       |
| 5   | 893.8567        | 47.58          | -5.54         | 42.04          | 46.00          | -3.96       | QP       |
| 6   | 942.1305        | 39.09          | -4.07         | 35.02          | 46.00          | -10.98      | QP       |

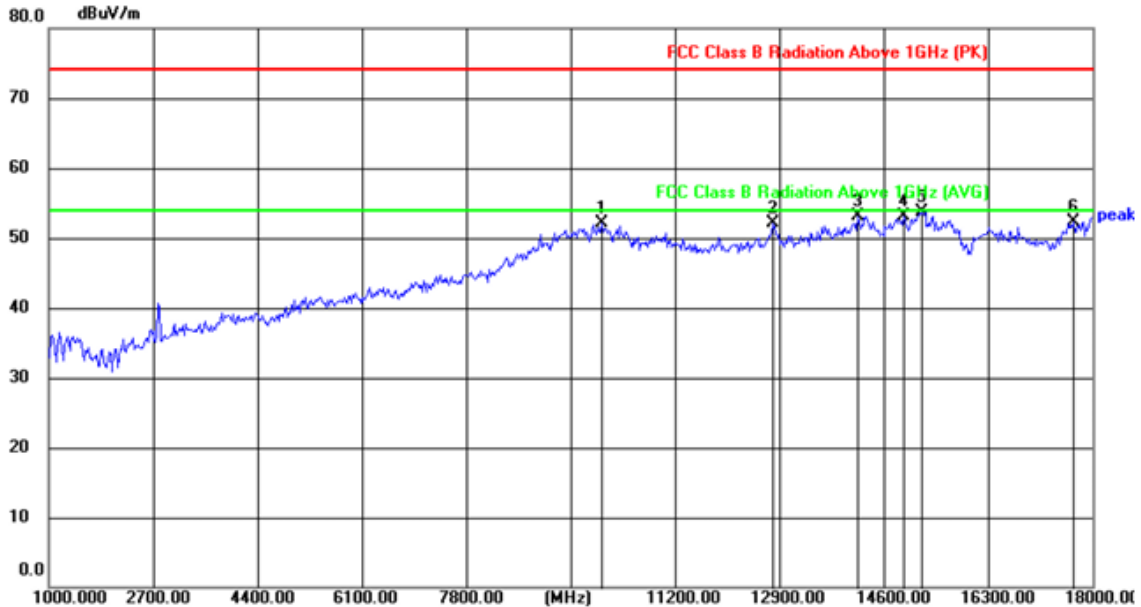
|              |          |                    |              |
|--------------|----------|--------------------|--------------|
| Test mode:   | Mode 2   | Test polarization: | Vertical     |
| Temperature: | 23°C     | Humidity:          | 52%RH        |
| Pressure:    | 100.6kPa | Test voltage:      | AC 120V 60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 79.5209         | 56.77          | -25.99        | 30.78          | 40.00          | -9.22       | QP       |
| 2   | 94.4284         | 57.72          | -25.33        | 32.39          | 43.50          | -11.11      | QP       |
| 3   | 148.4410        | 53.16          | -20.68        | 32.48          | 43.50          | -11.02      | QP       |
| 4   | 446.4141        | 50.57          | -15.65        | 34.92          | 46.00          | -11.08      | QP       |
| 5   | 833.3171        | 42.26          | -6.35         | 35.91          | 46.00          | -10.09      | QP       |
| 6   | 893.8567        | 45.14          | -5.54         | 39.60          | 46.00          | -6.40       | QP       |

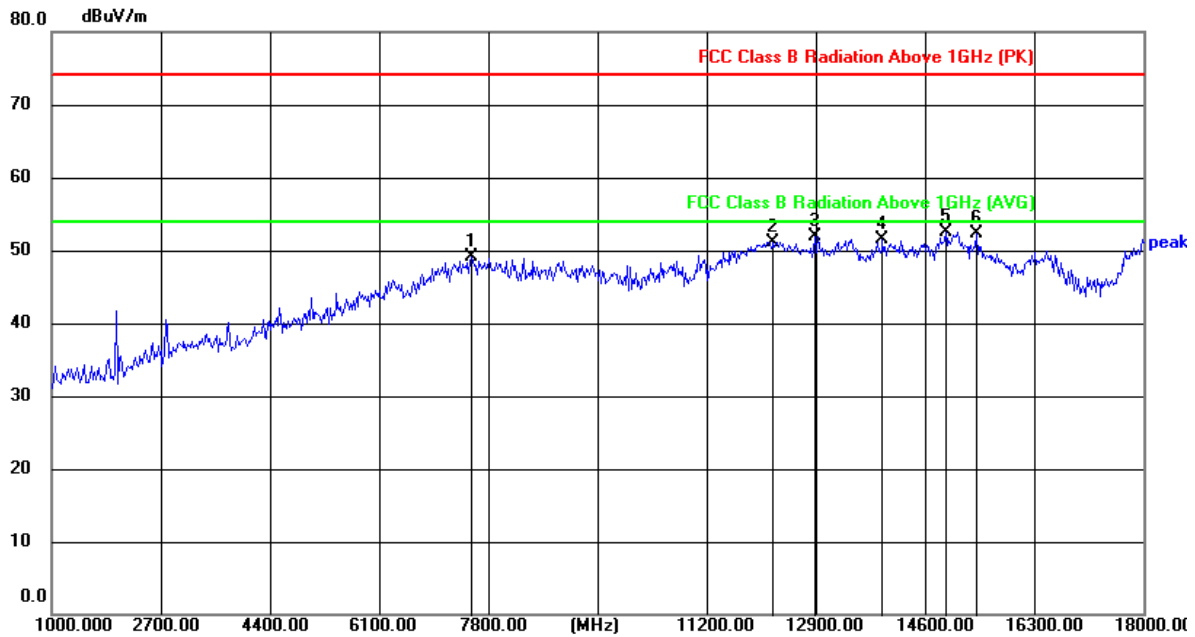
Above 1GHz

|                    |            |               |              |
|--------------------|------------|---------------|--------------|
| Test mode:         | Mode 1     |               |              |
| Temperature:       | 23°C       | Humidity:     | 52%RH        |
| Pressure:          | 100.6kPa   | Test voltage: | AC 120V 60Hz |
| Test polarization: | Horizontal | Test Result:  | PASS         |



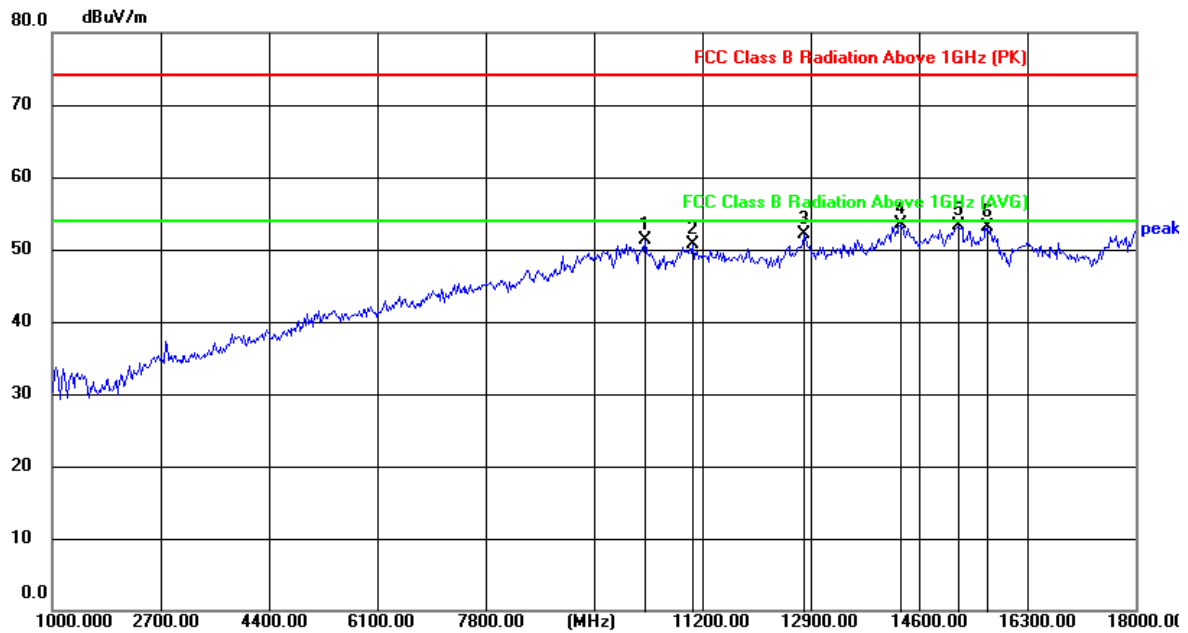
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 10010.000       | 52.88          | -0.73         | 52.15          | 74.00          | -21.85      | peak     |
| 2   | 12793.750       | 48.75          | 3.38          | 52.13          | 74.00          | -21.87      | peak     |
| 3   | 14175.000       | 47.65          | 5.37          | 53.02          | 74.00          | -20.98      | peak     |
| 4   | 14918.750       | 47.22          | 5.89          | 53.11          | 74.00          | -20.89      | peak     |
| 5   | 15216.250       | 48.02          | 5.70          | 53.72          | 74.00          | -20.28      | peak     |
| 6   | 17702.500       | 42.79          | 9.54          | 52.33          | 74.00          | -21.67      | peak     |

|                    |          |               |              |
|--------------------|----------|---------------|--------------|
| Test mode:         | Mode 1   |               |              |
| Temperature:       | 23°C     | Humidity:     | 52%RH        |
| Pressure:          | 100.6kPa | Test voltage: | AC 120V 60Hz |
| Test polarization: | Vertical | Test Result:  | PASS         |



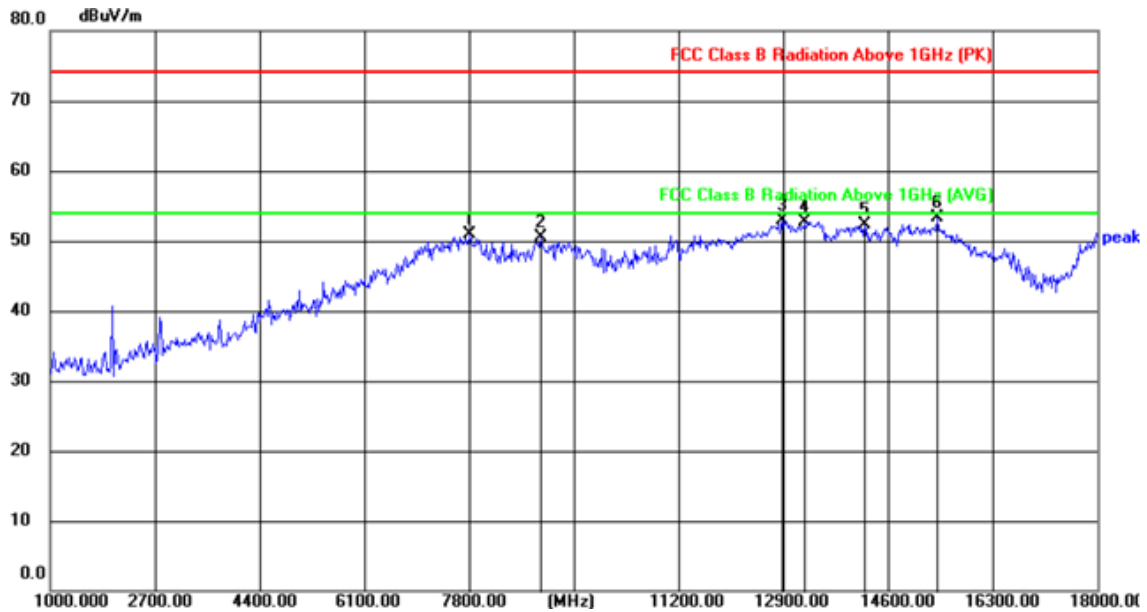
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 7545.000        | 51.18          | -2.06         | 49.12          | 74.00          | -24.88      | peak     |
| 2   | 12241.250       | 48.78          | 2.41          | 51.19          | 74.00          | -22.81      | peak     |
| 3   | 12878.750       | 48.34          | 3.53          | 51.87          | 74.00          | -22.13      | peak     |
| 4   | 13941.250       | 46.30          | 5.17          | 51.47          | 74.00          | -22.53      | peak     |
| 5   | 14918.750       | 46.62          | 5.89          | 52.51          | 74.00          | -21.49      | peak     |
| 6   | 15407.500       | 46.82          | 5.50          | 52.32          | 74.00          | -21.68      | peak     |

|                    |            |               |              |
|--------------------|------------|---------------|--------------|
| Test mode:         | Mode 2     |               |              |
| Temperature:       | 23°C       | Humidity:     | 52%RH        |
| Pressure:          | 100.6kPa   | Test voltage: | AC 120V 60Hz |
| Test polarization: | Horizontal | Test Result:  | PASS         |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 10307.500       | 51.51          | -0.25         | 51.26          | 74.00          | -22.74      | peak     |
| 2   | 11051.250       | 49.80          | 0.95          | 50.75          | 74.00          | -23.25      | peak     |
| 3   | 12793.750       | 48.75          | 3.38          | 52.13          | 74.00          | -21.87      | peak     |
| 4   | 14323.750       | 48.04          | 5.48          | 53.52          | 74.00          | -20.48      | peak     |
| 5   | 15216.250       | 47.52          | 5.70          | 53.22          | 74.00          | -20.78      | peak     |
| 6   | 15683.750       | 47.87          | 5.17          | 53.04          | 74.00          | -20.96      | peak     |

|                    |          |               |              |
|--------------------|----------|---------------|--------------|
| Test mode:         | Mode 2   |               |              |
| Temperature:       | 23°C     | Humidity:     | 52%RH        |
| Pressure:          | 100.6kPa | Test voltage: | AC 120V 60Hz |
| Test polarization: | Vertical | Test Result:  | PASS         |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 7821.250        | 52.07          | -1.26         | 50.81          | 74.00          | -23.19      | peak     |
| 2   | 8968.750        | 49.65          | 0.93          | 50.58          | 74.00          | -23.42      | peak     |
| 3   | 12878.750       | 49.34          | 3.53          | 52.87          | 74.00          | -21.13      | peak     |
| 4   | 13261.250       | 48.60          | 4.13          | 52.73          | 74.00          | -21.27      | peak     |
| 5   | 14217.500       | 46.92          | 5.39          | 52.31          | 74.00          | -21.69      | peak     |
| 6   | 15407.500       | 47.82          | 5.50          | 53.32          | 74.00          | -20.68      | peak     |

Note 1: The emission from 1GHz to 40GHz was pre-tested and found the 18GHz-40GHz test result was 20dB lower than the limit, the test report show the final test 1-18GHz data.

2: The PK value is lower than the AV limit, so the AV value meets the requirements.



## 6 Test Setup Photo

Reference to the **appendix I** for details.

## 7. EUT Constructional Details

Reference to the **appendix II** for details.