



# FCC Test Report

APPLICANT : Xiaomi Communications Co., Ltd.  
EQUIPMENT : Tablet Computer  
BRAND NAME : Xiaomi  
MODEL NAME : 24091RPADG  
FCC ID : 2AFZZ1RPADG  
STANDARD : 47 CFR Part 15 Subpart B  
CLASSIFICATION : Certification  
TEST DATE(S) : Oct. 26, 2024

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



**Sporton International Inc. (Kunshan)**

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China**



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REVISION HISTORY

| REPORT NO.  | VERSION | DESCRIPTION             | ISSUED DATE   |
|-------------|---------|-------------------------|---------------|
| FC480902-02 | Rev. 01 | Initial issue of report | Dec. 02, 2024 |
|             |         |                         |               |
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## SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description       | Limit           | Result | Remark                                                    |
|----------------|----------|-------------------|-----------------|--------|-----------------------------------------------------------|
| 3.1            | 15.109   | Radiated Emission | < 15.109 limits | PASS   | Under limit<br>4.30 dB at<br>958.29 MHz<br>for Quasi-Peak |

**Remark:** This is a variant report for 24091RPADG, the difference is to add a 2.4 GHz filter. According to the difference, only the related cases from original report (Sporton Report Number FC480902) were verified for difference.

**Conformity Assessment Condition:**

The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. Please refer to each test results in the section "Measurement Uncertainty".

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



## 1. General Description

### 1.1. Applicant

**Xiaomi Communications Co., Ltd.**

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

### 1.2. Manufacturer

**Xiaomi Communications Co., Ltd.**

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

### 1.3. Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Tablet Computer                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Brand Name                      | Xiaomi                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Model Name                      | 24091RPADG                                                                                                                                                                                                                                                                                                                                                                                                                         |
| FCC ID                          | 2AFZZ1RPADG                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EUT supports Radios application | WLAN 2.4GHz 802.11b/g/n HT20/HT40<br>WLAN 2.4GHz 802.11ax HE20/HE40<br>WLAN 2.4GHz 802.11be EHT20/EHT40<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160<br>WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160<br>WLAN 5GHz 802.11be EHT20/EHT40/EHT80/EHT160<br>WLAN 6GHz 802.11a/ax HE20/HE40/HE80/HE160<br>WLAN 6GHz 802.11be EHT20/EHT40/EHT80/EHT160/EHT320<br>Bluetooth BR/EDR/LE<br>WPT / NFC (Rx Only) |
| SN Code                         | Radiation: 9P439K000030                                                                                                                                                                                                                                                                                                                                                                                                            |
| HW Version                      | 135100O81                                                                                                                                                                                                                                                                                                                                                                                                                          |
| SW Version                      | Xiaomi HyperOS 2.0                                                                                                                                                                                                                                                                                                                                                                                                                 |
| EUT Stage                       | Identical Prototype                                                                                                                                                                                                                                                                                                                                                                                                                |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

#### 1.4. Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                     | 802.11b/g/n/ax/be: 2400 MHz ~ 2483.5 MHz<br>802.11a/n/ac/ax/be: 5150 MHz ~ 5250 MHz;<br>5250 MHz ~ 5350 MHz;<br>5470 MHz ~ 5725 MHz<br>5725 MHz ~ 5850 MHz<br><br>802.11a/ax/be: 5925 MHz ~ 7125 MHz<br>Bluetooth: 2400 MHz ~ 2483.5 MHz<br>WPT: 135 KHz ~ 148 KHz                                                                                                                                                                             |
| <b>Rx Frequency</b>                     | 802.11b/g/n/ax/be: 2400 MHz ~ 2483.5 MHz<br>802.11a/n/ac/ax/be: 5150 MHz ~ 5250 MHz;<br>5250 MHz ~ 5350 MHz;<br>5470 MHz ~ 5725 MHz<br>5725 MHz ~ 5850 MHz<br><br>802.11a/ax/be: 5925 MHz ~ 7125 MHz<br>Bluetooth: 2400 MHz ~ 2483.5 MHz<br>NFC : 13.56 MHz                                                                                                                                                                                    |
| <b>Antenna Type</b>                     | Bluetooth/WLAN_ANT0: PIFA Antenna<br>WLAN_ANT1: Resonant Cavity Antenna<br>Bluetooth/WLAN_ANT2: Resonant Cavity Antenna<br>WPT: Coil Antenna<br>NFC: FPC Antenna                                                                                                                                                                                                                                                                               |
| <b>Type of Modulation</b>               | 802.11b: DSSS (DBPSK / DQPSK / CCK)<br>802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)<br>802.11ax: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)<br>802.11be: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM / 4096QAM)<br>Bluetooth LE : GFSK<br>Bluetooth (1Mbps) : GFSK<br>Bluetooth (2Mbps) : $\pi/4$ -DQPSK<br>Bluetooth (3Mbps) : 8-DPSK<br>NFC: ASK<br>WPT: ASK |

**Note:** the device only support NFC\_Type A Card as Tag function (RX only).

### 1.5. Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6. Test Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

|                    |                                                                                                                                                |                     |                                   |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|
| Test Firm          | Sporton International Inc. (Kunshan)                                                                                                           |                     |                                   |
| Test Site Location | No. 1098, Pengxi North Road, Kunshan Economic Development Zone<br>Jiangsu Province 215300 People's Republic of China<br>TEL : +86-512-57900158 |                     |                                   |
| Test Site No.      | Sporton Site No.                                                                                                                               | FCC Designation No. | FCC Test Firm<br>Registration No. |
|                    | 03CH02-KS                                                                                                                                      | CN1257              | 314309                            |

## 1.7. Test Software

| Item | Site      | Manufacturer | Name | Version       |
|------|-----------|--------------|------|---------------|
| 1.   | 03CH02-KS | AUDIX        | E3   | 6.2009-8-24al |

## 1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 15 Subpart B
- ♦ ANSI C63.4-2014

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.



## 2. Test Configuration of Equipment Under Test

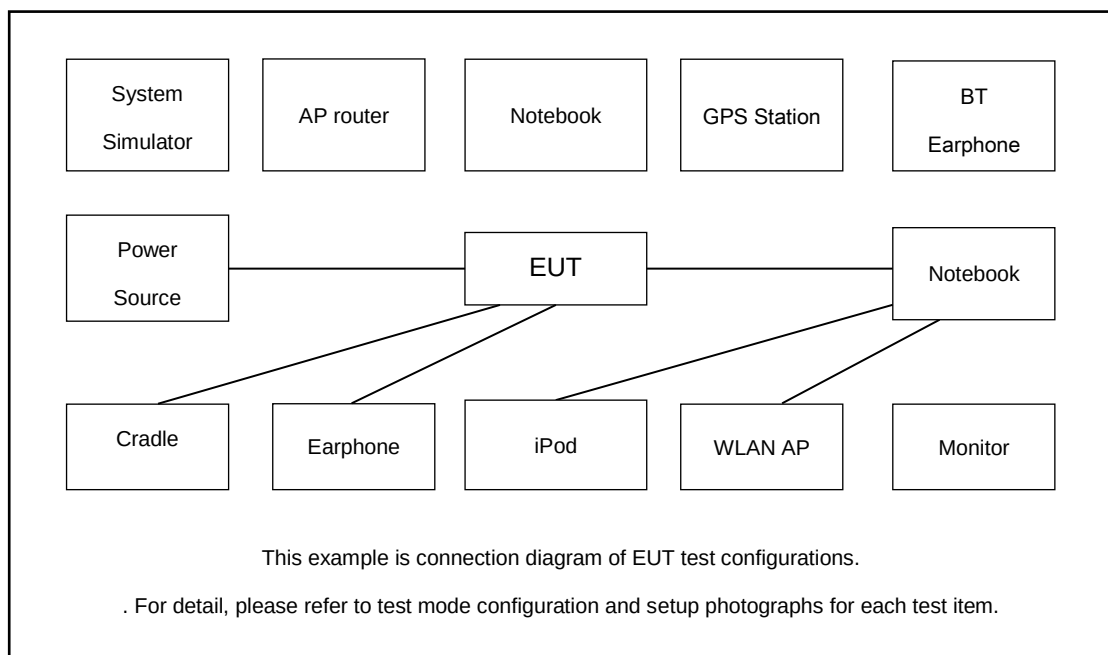
### 2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: radiation emission (30MHz to the 5th harmonic of the highest frequency or to 40 GHz, whichever is lower).

| Test Items                                                                                                                                                                                                                                      | Function Type                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Radiated Emissions                                                                                                                                                                                                                              | Mode 1: Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Battery 1 + USB Cable 1 (Charging from Adapter 1) |
|                                                                                                                                                                                                                                                 | Mode 2: Bluetooth Idle + WLAN (2.4G) Idle + DP Out With Monitor + Battery 1 + MPEG4(Run Color Bar)           |
| <b>Remark:</b> <ol style="list-style-type: none"><li>1. The worst case of RE is mode 2; only the test data of this mode is reported.</li><li>2. "DP Output" means transfer the color bar from EUT to Display monitor via Type-C port.</li></ol> |                                                                                                              |

## 2.2.Connection Diagram of Test System



The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application

## 2.3. Support Unit used in test configuration and system

| Item | Equipment          | Trade Name | Model Name       | FCC ID      | Data Cable     | Power Cord                |
|------|--------------------|------------|------------------|-------------|----------------|---------------------------|
| 1.   | HDMI Cable         | STYLE      | E301195          | N/A         | N/A            | N/A                       |
| 2.   | Monitor            | DELL       | P2715QT          | N/A         | N/A            | N/A                       |
| 3.   | WLAN AP            | ASUSTek    | RT-AC66U         | MSQ-RTAC66U | N/A            | Unshielded,2.7m with Core |
| 4.   | Monitor Adapter    | NA         | N/A              | N/A         | N/A            | N/A                       |
| 5.   | NOTE BOOK          | Lenovo     | E540             | FCC DoC     | N/A            | Unshielded, 1.2 m         |
| 6.   | Notebook           | DELL       | Inspiron 15-7570 | Fcc DoC     | N/A            | Unshielded, 1.2 m         |
| 7.   | Bluetooth Earphone | Samsung    | EO-MG900         | PYAHS-107W  | N/A            | N/A                       |
| 8.   | Earphone           | Apple      | MC690ZP/A        | N/A         | Shielded, 1.0m | N/A                       |
| 9.   | Mobile phone       | YIJIA      | A5010            | N/A         | N/A            | N/A                       |
| 10.  | iPod               | Apple      | MC525 ZP/A       | Fcc DoC     | Shielded, 1.0m | N/A                       |
| 11.  | Bluetooth Earphone | Samsung    | HS3000           | A3LHS3000   | N/A            | N/A                       |



## **2.4. EUT Operation Test Setup**

The EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Turn on camera to capture images.
2. Turn on MPEG4 function.

### 3. Test Result

#### 3.1. Test of Radiated Emission Measurement

##### 3.1.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 30 – 88            | 100                                  | 3                                |
| 88 – 216           | 150                                  | 3                                |
| 216 - 960          | 200                                  | 3                                |
| Above 960          | 500                                  | 3                                |

##### 3.1.2. Measuring Instruments

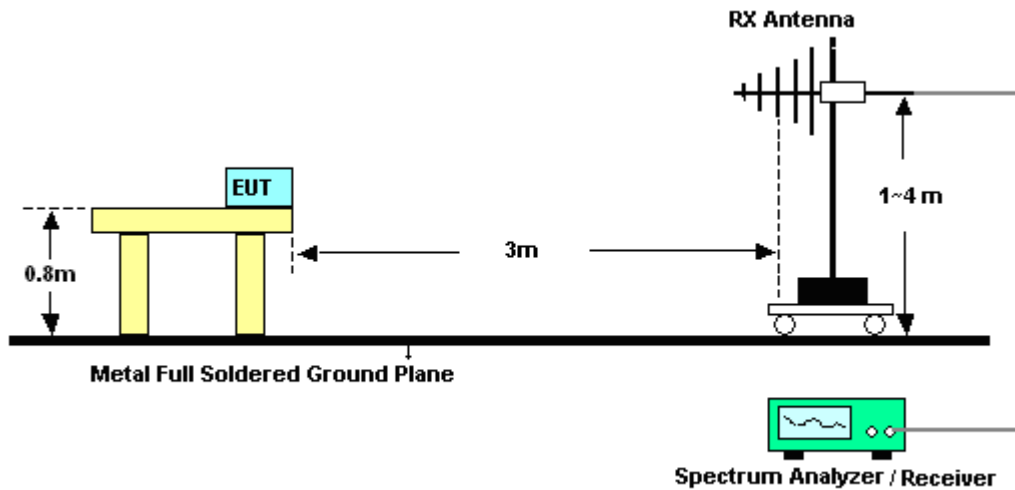
The measuring equipment is listed in the section 4 of this test report.

### 3.1.3. Test Procedures

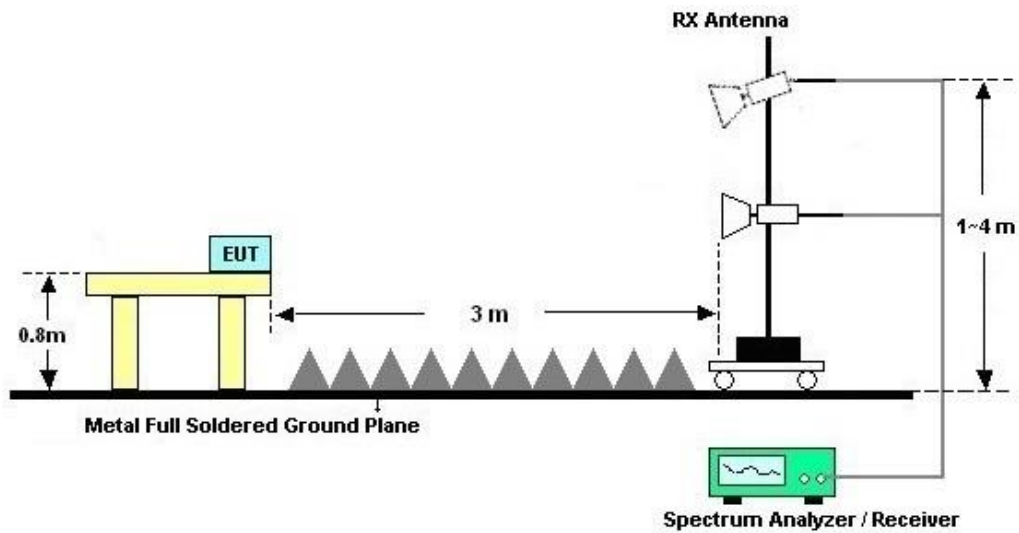
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four 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 and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 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.
8. Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
10. Exploratory radiated emissions testing of handheld and/or body-worn devices shall include rotation of the EUT through three orthogonal axes (X/Y/Z Plane) to determine the orientation (attitude) that maximizes the emissions.

### 3.1.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

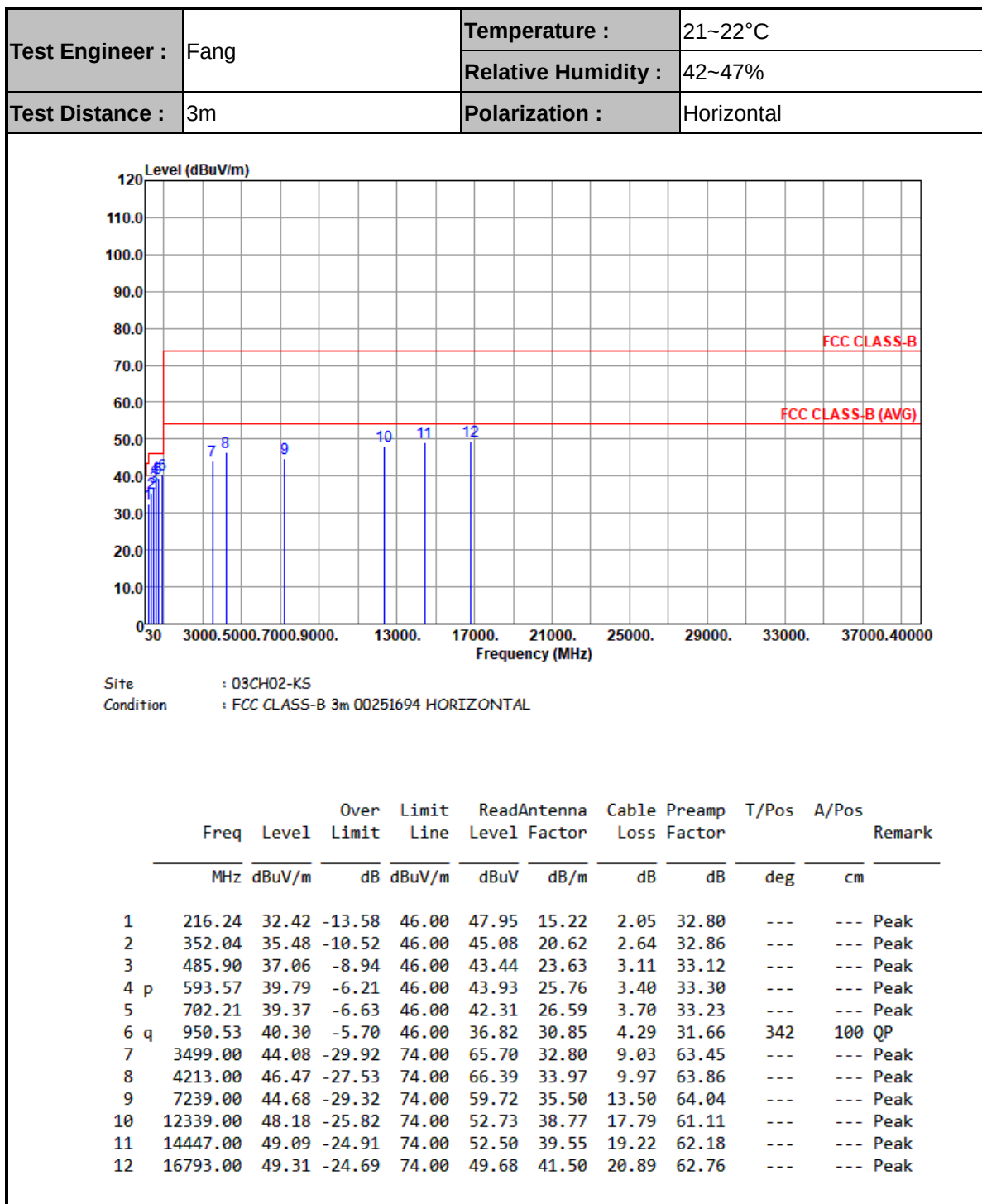


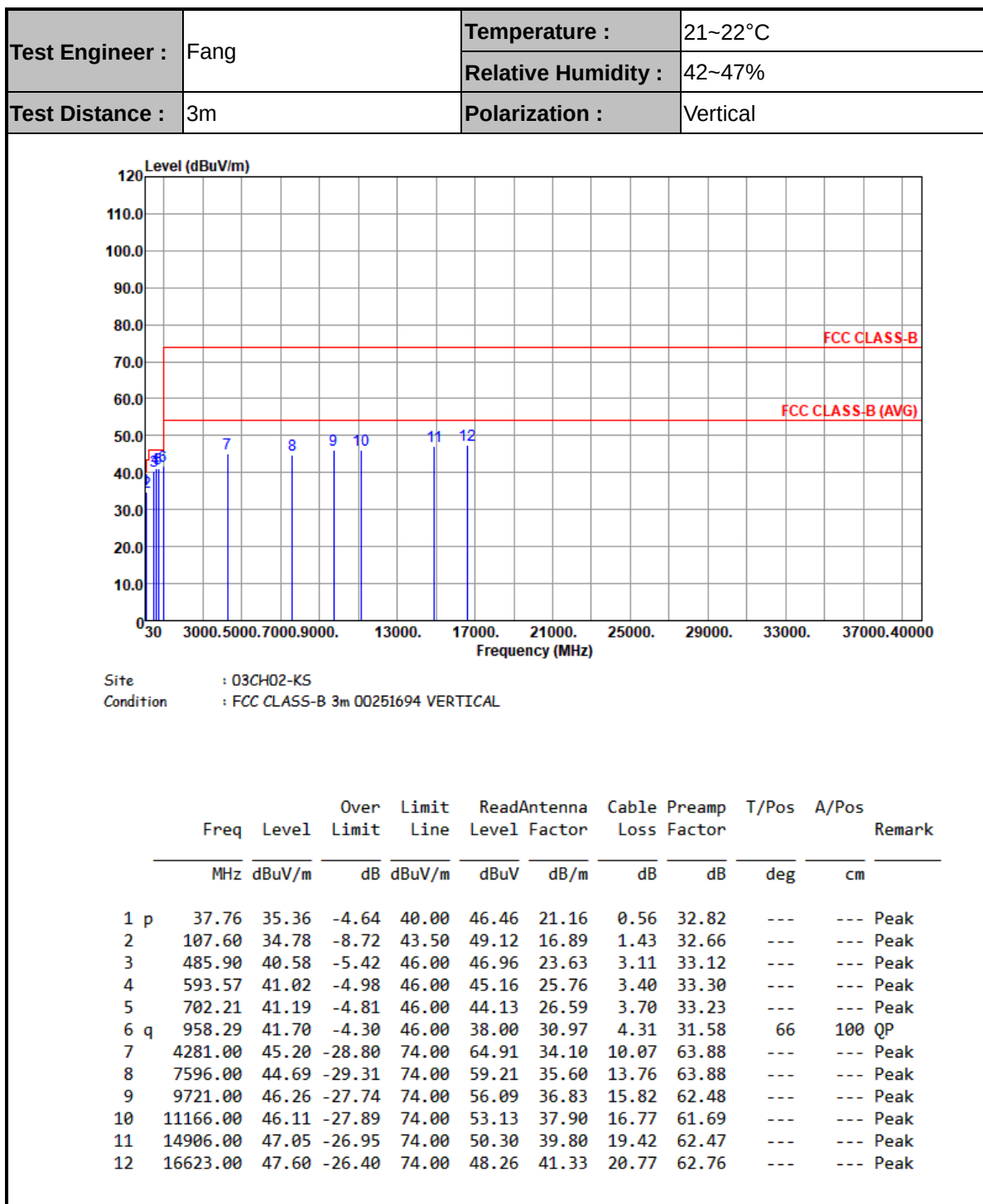
For radiated emissions above 1GHz





## 3.1.5. Test Result of Radiated Emission





Note:

- Level(dBuV/m) = Read Level(dBuV) + Antenna Factor(dB/m) + Cable Loss(dB) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBuV/m) - Limit Line(dBuV/m)



## 4. List of Measuring Equipment

| Instrument                | Manufacturer | Model No.  | Serial No.   | Characteristics     | Calibration Date | Test Date     | Due Date      | Remark                |
|---------------------------|--------------|------------|--------------|---------------------|------------------|---------------|---------------|-----------------------|
| EMI Test Receiver         | R&S          | ESR7       | 101403       | 9kHz~7GHz;Max 30dBm | Oct. 11, 2024    | Oct. 26, 2024 | Oct. 10, 2025 | Radiation (03CH02-KS) |
| EXA Spectrum Analyzer     | Keysight     | N9010A     | MY55370528   | 10Hz-44G,MAX 30dB   | Oct. 11, 2024    | Oct. 26, 2024 | Oct. 10, 2025 | Radiation (03CH02-KS) |
| Bilog Antenna             | TESEQ        | CBL 6111D  | 59915        | 30MHz-1GHz          | Aug. 18, 2024    | Oct. 26, 2024 | Aug.17, 2025  | Radiation (03CH02-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117       | 75957        | 1GHz~18GHz          | Oct. 22, 2024    | Oct. 26, 2024 | Oct. 21, 2025 | Radiation (03CH02-KS) |
| SHF-EHF Horn              | Com-power    | AH-840     | 101070       | 18GHz~40GHz         | Jan. 27, 2024    | Oct. 26, 2024 | Jan. 26, 2025 | Radiation (03CH02-KS) |
| Amplifier                 | EM           | EM18G40GGA | 060852       | 18~40GHz            | Jan. 02, 2024    | Oct. 26, 2024 | Jan. 01, 2025 | Radiation (03CH02-KS) |
| Amplifier                 | SONOMA       | 310N       | 413740       | 9KHz-1GHz           | Jan. 03, 2024    | Oct. 26, 2024 | Jan. 02, 2025 | Radiation (03CH02-KS) |
| Amplifier                 | EM           | EM01G18G   | 060806       | 1GHz~18GHz          | Oct. 10, 2024    | Oct. 26, 2024 | Oct. 09, 2025 | Radiation (03CH02-KS) |
| AC Power Source           | Chroma       | 61601      | 616010002473 | N/A                 | NCR              | Oct. 26, 2024 | NCR           | Radiation (03CH02-KS) |
| Turn Table                | MF           | MF7802     | N/A          | 0~360 degree        | NCR              | Oct. 26, 2024 | NCR           | Radiation (03CH02-KS) |
| Antenna Mast              | MF           | MF7802     | N/A          | 1 m~4 m             | NCR              | Oct. 26, 2024 | NCR           | Radiation (03CH02-KS) |

NCR: No Calibration Required



## 5. Measurement Uncertainty

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 6.04 dB |
|----------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.12 dB |
|----------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.30 dB |
|----------------------------------------------------------------------------|---------|

----- THE END -----