



FCC PART 15.249

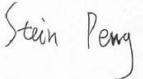
## TEST REPORT

For

**Shantou Xintuo Intelligent Technology Co., Ltd.**

Fengxiang Street, Donghu Qiaohong Road, Chenghai District, Shantou, China

**FCC ID: 2BF7B-X30**

|                                 |                                                                                                                                                                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Type:</b><br>Original | <b>Product Name:</b><br>Quadcopters                                                                                                                                                                                                                                            |
| <b>Report Number:</b>           | 2407U23892E-RF-01                                                                                                                                                                                                                                                              |
| <b>Report Date:</b>             | 2024-09-04                                                                                                                                                                                                                                                                     |
| <b>Reviewed By:</b>             | Stein Peng                                                                                                                                                                                  |
| <b>Approved By:</b>             | Miles Chen                                                                                                                                                                                  |
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REPORT REVISION HISTORY

| Number of Revisions | Report No.        | Version | Issue Date | Description     |
|---------------------|-------------------|---------|------------|-----------------|
| 0                   | 2407U23892E-RF-01 | R1V1    | 2024-09-04 | Initial Release |

## GENERAL INFORMATION

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

|                                                                                                                                                                                                                                                                                       |                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Applicant:                                                                                                                                                                                                                                                                            | Shantou Xintuo Intelligent Technology Co., Ltd. |
| Tested Model:                                                                                                                                                                                                                                                                         | X30                                             |
| Series Models:                                                                                                                                                                                                                                                                        | X33, X60, X50                                   |
| Product Name:                                                                                                                                                                                                                                                                         | Quadcopters                                     |
| Power Supply:                                                                                                                                                                                                                                                                         | DC 3.7V from battery or DC 5V from USB port     |
| RF Function:                                                                                                                                                                                                                                                                          | SRD                                             |
| Operating Band/Frequency:                                                                                                                                                                                                                                                             | 2410-2470MHz                                    |
| Channel Number:                                                                                                                                                                                                                                                                       | 3                                               |
| Modulation Type:                                                                                                                                                                                                                                                                      | GFSK                                            |
| Antenna Type:                                                                                                                                                                                                                                                                         | Wire Antenna                                    |
| ★Maximum Antenna Gain:                                                                                                                                                                                                                                                                | 0dBi                                            |
| <i>Note:</i><br>1. The maximum antenna gain is provided by the applicant.<br>2. All measurement and test data in this report was gathered from production sample serial number: 2NZZD-1 (Assigned by the BACL (Xiamen). The EUT supplied by the applicant was received on 2024-06-09) |                                                 |

### Objective

This test report is prepared for *Shantou Xintuo Intelligent Technology Co., Ltd.* in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209, 15.215 and 15.249 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

**Measurement Uncertainty**

| Item                 |                    | U <sub>lab</sub> |
|----------------------|--------------------|------------------|
| Conducted Emissions  | 150kHz-30MHz(LISN) | 2.33dB           |
| Radiated Disturbance | 9kHz~30MHz         | 2.59 dB          |
|                      | 30MHz~200MHz       | 4.38dB           |
|                      | 200MHz ~1GHz       | 4.50dB           |
|                      | 1GHz~6GHz          | 4.58dB           |
|                      | 6GHz~18GHz         | 5.43dB           |
|                      | 18GHz~26.5GHz      | 5.47dB           |
| Occupied Bandwidth   |                    | 0.10MHz          |
| Temperature          |                    | 1°C              |
| Humidity             |                    | 5%               |

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone Xiamen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, FCC Registration No.: 485720, the FCC Designation No.: CN1384.

## SYSTEM TEST CONFIGURATION

### Test Mode and Voltage

|                                                                                               |                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The system was configured for testing in a typical mode (as normally used by a typical user). |                                                                                                                                                                    |
| Test mode:                                                                                    | Test Model 1: Charging<br>Test Model 2: Transmitting                                                                                                               |
| Test voltage:                                                                                 | Test Mode 1: DC 5V from adapter( AC 120V/60Hz)<br>Test Mode 2: DC 3.7V from battery                                                                                |
| Remark:                                                                                       | During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report. |

### Justification

The system was configured in testing mode which was provided by manufacturer.

Channel List:

| Channel | Frequency (MHz) |
|---------|-----------------|
| 1       | 2410            |
| 2       | 2440            |
| 3       | 2470            |

### EUT Exercise Software

Engineering Mode was provided by manufacturer.

### Equipment Modifications

No modification was made to the EUT.

### Support Equipment List and Details

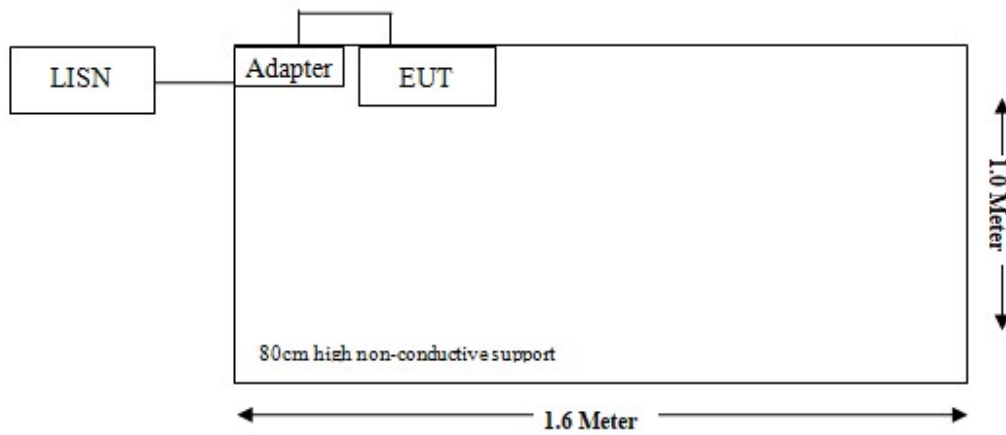
| Manufacturer        | Description | Model    | Serial Number  |
|---------------------|-------------|----------|----------------|
| CARREGADOR PORTATIL | Adapter     | S64A38BL | 222700047954T4 |

### External I/O Cable

| Cable Description | Length (m) | From Port | To Port |
|-------------------|------------|-----------|---------|
| USB cable         | 1.0        | EUT       | Adapter |

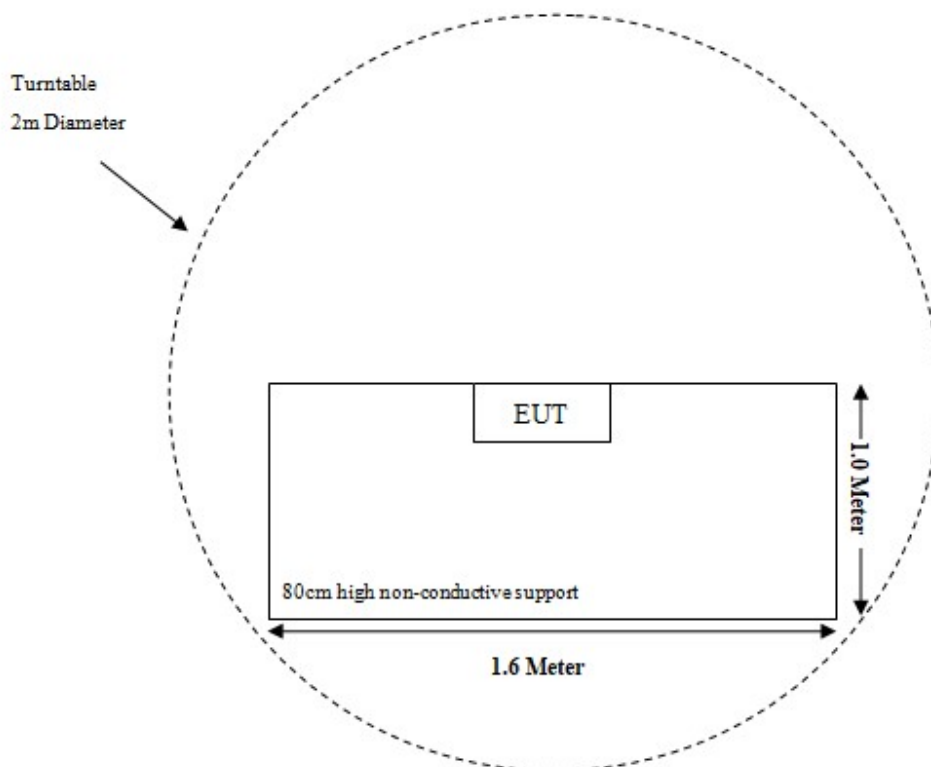
## Block Diagram of Test Setup

For Conducted Emissions:

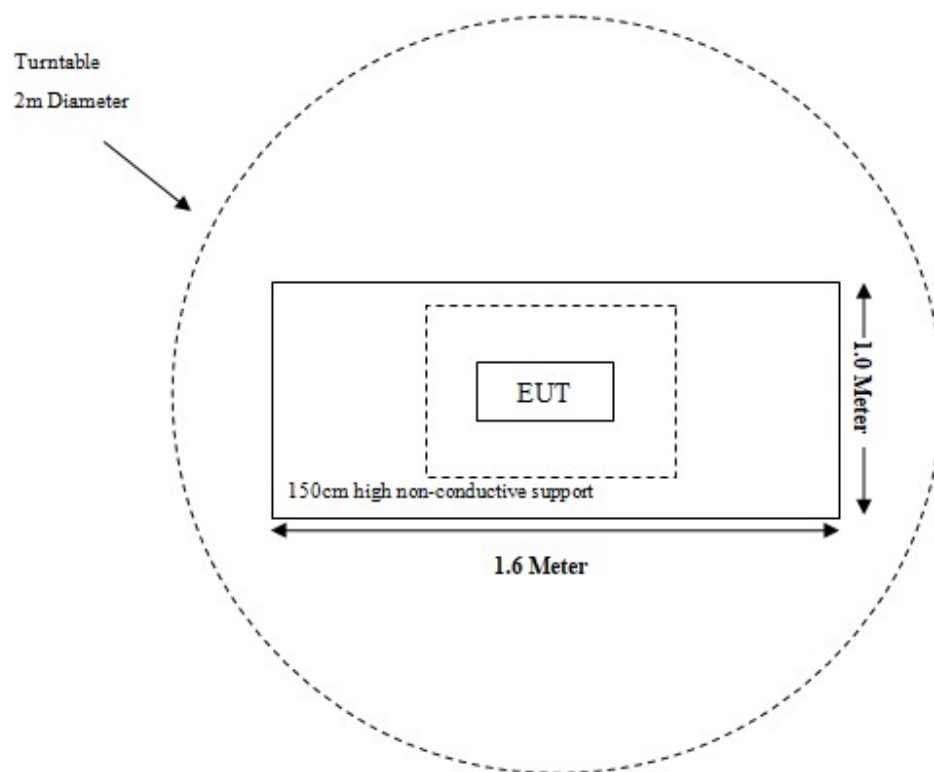


For Radiated Emissions:

Below 1GHz:



Above 1GHz



**SUMMARY OF TEST RESULTS**

| FCC Rules                 | Description of Test                                                   | Result    |
|---------------------------|-----------------------------------------------------------------------|-----------|
| §15.203                   | Antenna Requirement                                                   | Compliant |
| §15.207(a)                | Conducted Emissions                                                   | Compliant |
| §15.205, §15.209, §15.249 | Radiated Emissions & Fundamental Test &<br>Out-of-band Emissions Test | Compliant |
| §15.215 (c)               | 20 dB Bandwidth                                                       | Compliant |

Note: The applicant declares that the remote control cannot transmit while charging.

## TEST EQUIPMENT LIST

| Test Equipment                              | Manufacturer    | Model          | Serial Number | Calibration Date | Calibration Due Date |
|---------------------------------------------|-----------------|----------------|---------------|------------------|----------------------|
| <b>Radiated Emissions Below 1 GHz</b>       |                 |                |               |                  |                      |
| EMI Test Receiver                           | Rohde & Schwarz | ESR            | 103103        | 2024/03/29       | 2025/03/28           |
| Loop Antenna                                | Rohde & Schwarz | HFH2-Z2        | 830749/001    | 2023/07/27       | 2026/07/26           |
| Antenna                                     | Sunol Sciences  | JB6            | A122022-5     | 2023/07/27       | 2026/07/26           |
| Amplifier                                   | Sonoma          | 310B           | 120903        | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH400T-N-4M    | CC002         | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH460B-N-2M    | CC006         | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH460B-N-12M   | CC007         | 2024/03/29       | 2025/03/28           |
| Test Software                               | Audix           | E3             | 18621a        | N/A              | N/A                  |
| <b>Radiated Emissions Above 1 GHz</b>       |                 |                |               |                  |                      |
| Spectrum Analyzer                           | Rohde & Schwarz | FSV40-N        | 102051        | 2024/03/29       | 2025/03/28           |
| Double Ridge Guide Horn Antenna             | A.H.Systems     | SAS-571        | 1980          | 2023/07/28       | 2026/07/27           |
| Preamplifier                                | A.H.Systems     | PAM-0118P      | 489           | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH800A-N-6M    | CC003         | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH800A-N-1M    | CC005         | 2024/03/29       | 2025/03/28           |
| Horn Antenna                                | EMCO            | 3116           | 9407-2232     | 2023/07/31       | 2026/07/30           |
| Preamplifier                                | A.H.Systems     | PAM-1840       | 200           | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH360A-2.92-3M | CC008         | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH360A-2.92-1M | CC009         | 2024/03/29       | 2025/03/28           |
| Test Software                               | Audix           | E3             | 18621a        | N/A              | N/A                  |
| <b>Conducted Emissions</b>                  |                 |                |               |                  |                      |
| EMI Test Receiver                           | Rohde & Schwarz | ESR            | 103105        | 2024/03/29       | 2025/03/28           |
| LISN                                        | Rohde & Schwarz | ENV216         | 100129        | 2024/03/29       | 2025/03/28           |
| Pulse Limiter                               | Rohde & Schwarz | ESH3-Z2        | 0357.8810.54  | 2024/03/29       | 2025/03/28           |
| Coaxial Cable                               | XINHANGWEIBO    | XH400T-N-4M    | CC001         | 2024/03/29       | 2025/03/28           |
| Test Software                               | Audix           | E3             | 18621a        | N/A              | N/A                  |
| <b>RF Conducted Test (20 dB Bandwidth )</b> |                 |                |               |                  |                      |
| EMI Test Receiver                           | Rohde & Schwarz | ESR            | 103105        | 2024/03/29       | 2025/03/28           |

**Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

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## **FCC§15.203 - ANTENNA REQUIREMENT**

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### **Applicable Standard**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

### **Antenna Connected Construction**

The EUT has a Wire antenna which was permanently attached and the antenna gain is 0dBi; fulfill the requirement of this section. Please refer to EUT photos.

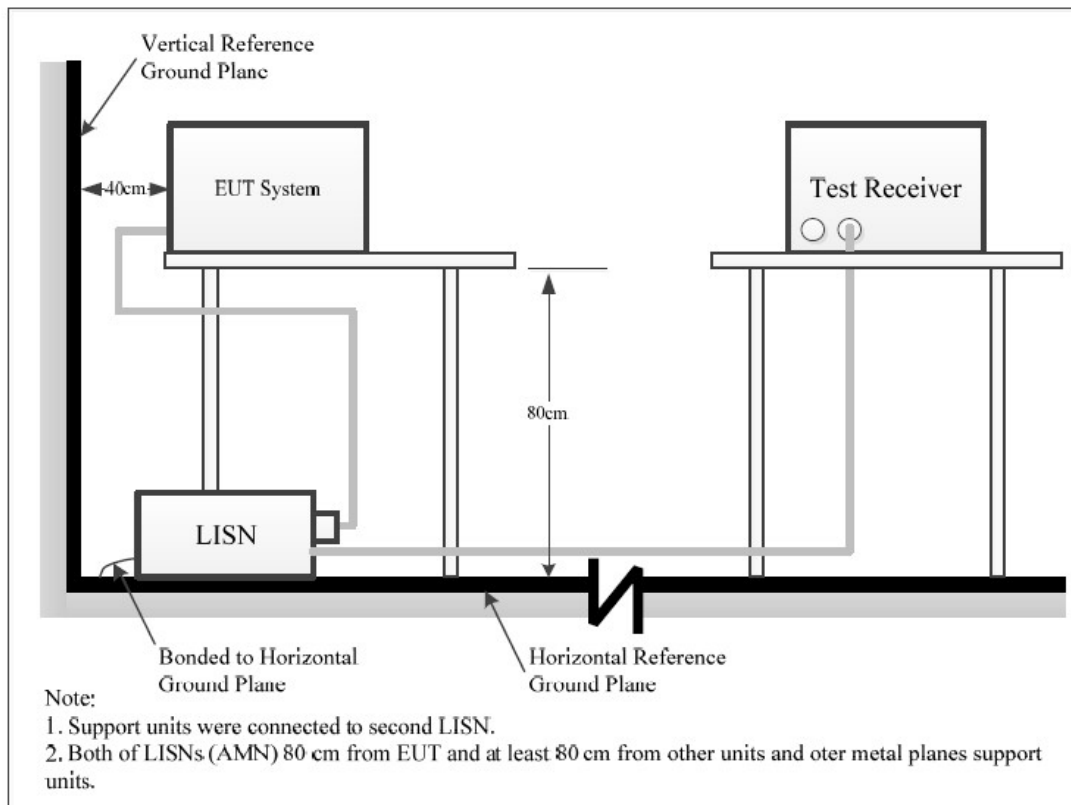
**Result:** Compliant.

## FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

### Applicable Standard

FCC §15.207(a)

### Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | RBW   | VBW    |
|------------------|-------|--------|
| 150 kHz - 30 MHz | 9 kHz | 30 kHz |

## Test Procedure

ANSI C63.10-2013 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

## Level & Margin Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

$$\begin{aligned}\text{Factor (dB)} &= \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)} \\ \text{Level (dB}\mu\text{V)} &= \text{Reading (dB}\mu\text{V)} + \text{Factor (dB)}\end{aligned}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V)} - \text{Level (dB}\mu\text{V)}$$

## Test Results Summary

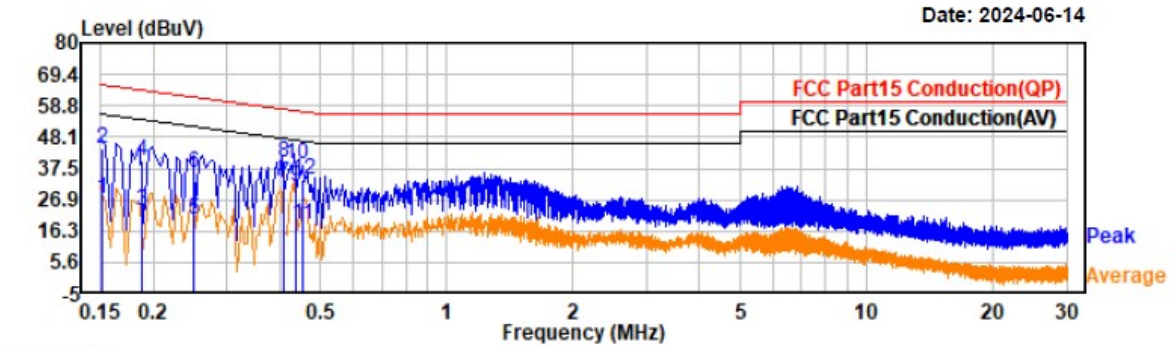
According to the recorded data in following table, the EUT complied with the FCC Title 47, FCC Part 15.207.

## Test Data

|                    |            |
|--------------------|------------|
| Temperature:       | 23.6°C     |
| Relative Humidity: | 53 %       |
| ATM Pressure:      | 99.6 kPa   |
| Test Date:         | 2024-06-14 |
| Test Engineer:     | Toby Chen  |

Project No.: 2407U23892E-RF  
Test Mode: CHARGING  
EUT Model: X30

Temp/Humi/ATM: 22.4°C/61%/101.1kPa  
Tested by: Toby Chen  
Power Source: AC 120V/60Hz



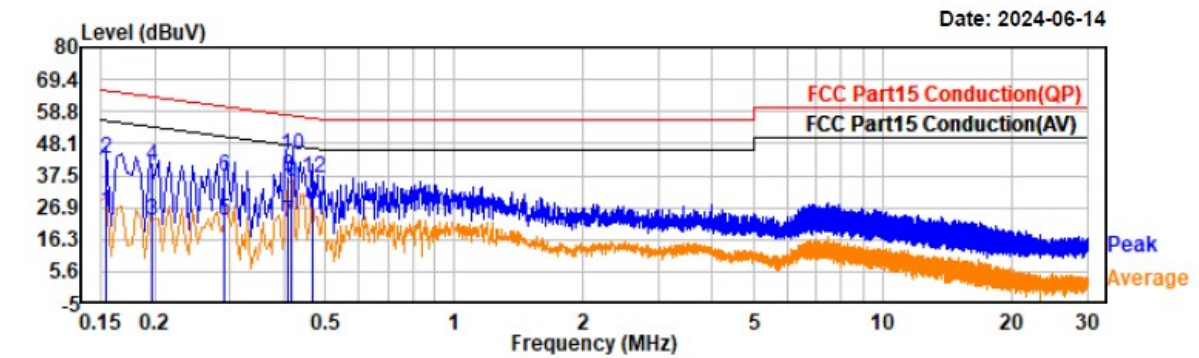
Trace: 1

| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dB | Phase | Remark  |
|-------------|-----------------|--------------|----------------|---------------|--------------|-------|---------|
| 0.15        | 7.72            | 19.49        | 27.21          | 55.93         | 28.72        | Line  | Average |
| 0.15        | 24.46           | 19.49        | 43.95          | 65.93         | 21.98        | Line  | QP      |
| 0.19        | 3.89            | 19.50        | 23.39          | 54.13         | 30.74        | Line  | Average |
| 0.19        | 20.91           | 19.50        | 40.41          | 64.13         | 23.72        | Line  | QP      |
| 0.25        | 0.87            | 19.54        | 20.41          | 51.78         | 31.37        | Line  | Average |
| 0.25        | 16.54           | 19.54        | 36.08          | 61.78         | 25.70        | Line  | QP      |
| 0.41        | 12.78           | 19.59        | 32.37          | 47.69         | 15.32        | Line  | Average |
| 0.41        | 20.06           | 19.59        | 39.65          | 57.69         | 18.04        | Line  | QP      |
| 0.44        | 11.50           | 19.60        | 31.10          | 47.11         | 16.01        | Line  | Average |
| 0.44        | 19.43           | 19.60        | 39.03          | 57.11         | 18.08        | Line  | QP      |
| 0.45        | -1.11           | 19.60        | 18.49          | 46.82         | 28.33        | Line  | Average |
| 0.45        | 14.30           | 19.60        | 33.90          | 56.82         | 22.92        | Line  | QP      |

Remarks: Factor = Voltage division factor + Cable loss

Project No.: 2407U23892E-RF  
Test Mode: CHARGING  
EUT Model: X30

Temp/Humi/ATM: 22.4°C/61%/101.1kPa  
Tested by: Toby Chen  
Power Source: AC 120V/60Hz



Trace: 1

| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dB | Phase   | Remark  |
|-------------|-----------------|--------------|----------------|---------------|--------------|---------|---------|
| 0.15        | 5.89            | 19.47        | 25.36          | 55.78         | 30.42        | Neutral | Average |
| 0.15        | 23.45           | 19.47        | 42.92          | 65.78         | 22.86        | Neutral | QP      |
| 0.20        | 3.01            | 19.48        | 22.49          | 53.76         | 31.27        | Neutral | Average |
| 0.20        | 21.52           | 19.48        | 41.00          | 63.76         | 22.76        | Neutral | QP      |
| 0.29        | 2.77            | 19.55        | 22.32          | 50.46         | 28.14        | Neutral | Average |
| 0.29        | 17.71           | 19.55        | 37.26          | 60.46         | 23.20        | Neutral | QP      |
| 0.41        | 2.29            | 19.60        | 21.89          | 47.66         | 25.77        | Neutral | Average |
| 0.41        | 17.84           | 19.60        | 37.44          | 57.66         | 20.22        | Neutral | QP      |
| 0.42        | 16.12           | 19.61        | 35.73          | 47.47         | 11.74        | Neutral | Average |
| 0.42        | 24.89           | 19.61        | 44.50          | 57.47         | 12.97        | Neutral | QP      |
| 0.47        | 5.47            | 19.62        | 25.09          | 46.53         | 21.44        | Neutral | Average |
| 0.47        | 16.96           | 19.62        | 36.58          | 56.53         | 19.95        | Neutral | QP      |

Remarks: Factor = Voltage division factor + Cable loss

## FCC §15.205, §15.209, §15.249 - RADIATED EMISSIONS & OUT OF BAND EMISSION

### Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

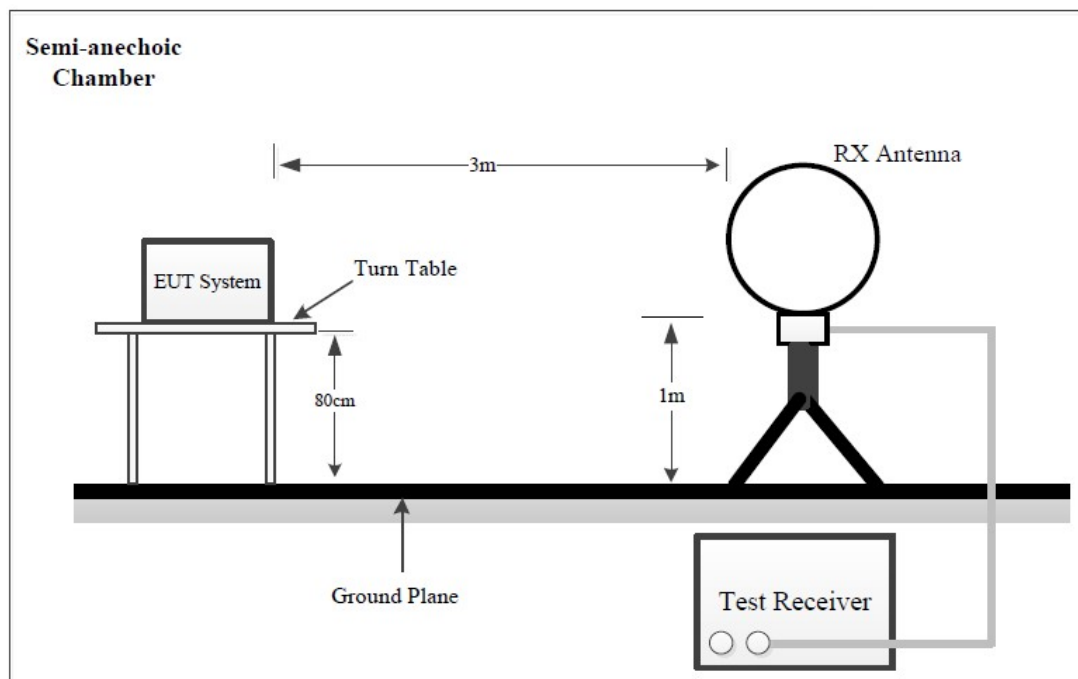
| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|-----------------------|--------------------------------------------------|------------------------------------------------|
| 902–928 MHz           | 50                                               | 500                                            |
| 2400–2483.5 MHz       | 50                                               | 500                                            |
| 5725–5875 MHz         | 50                                               | 500                                            |
| 24.0–24.25 GHz        | 250                                              | 2500                                           |

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

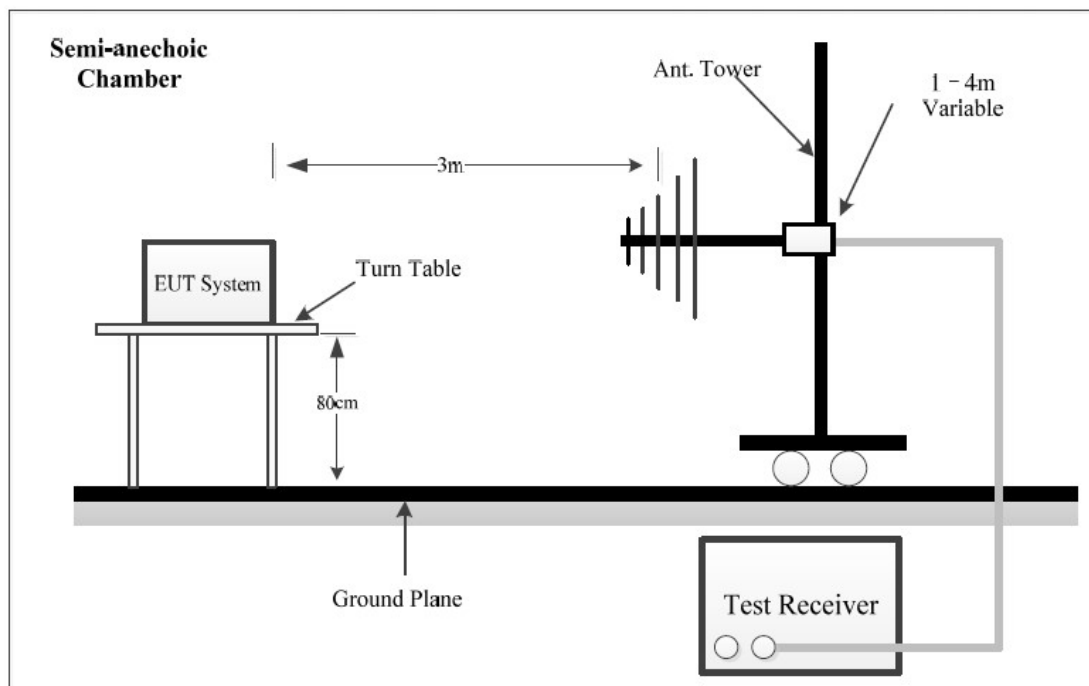
(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

### Test System Setup

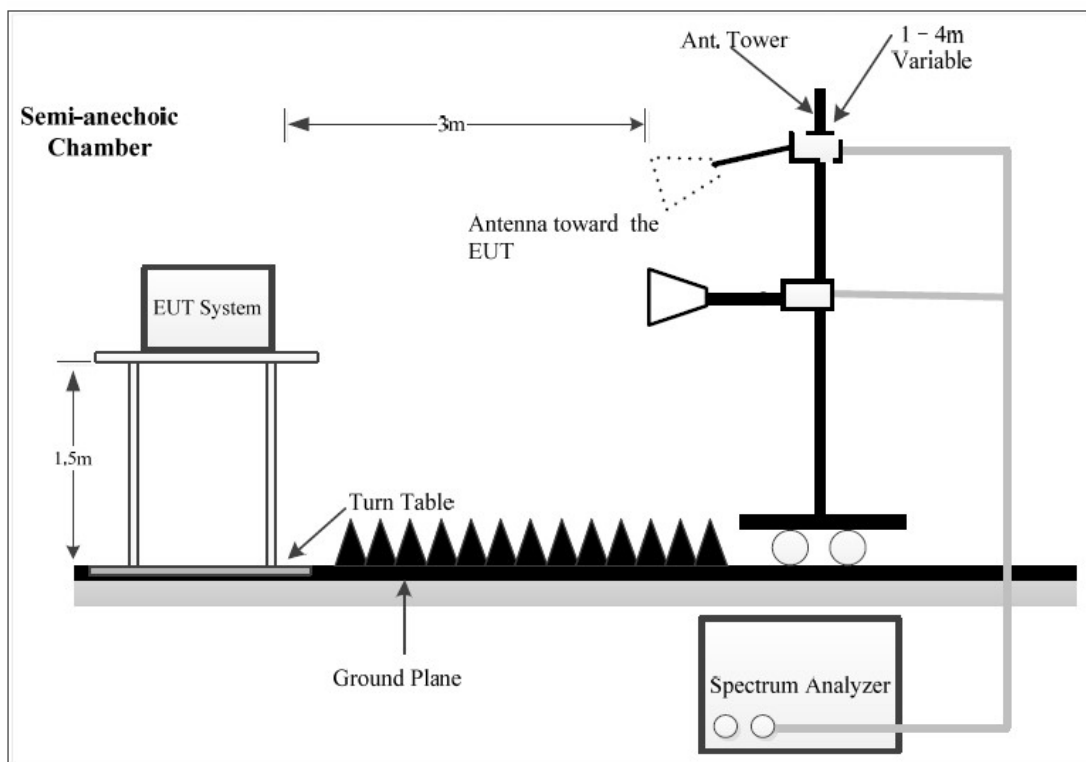
9 kHz-30MHz:



**30MHz-1GHz:**



**Above 1GHz:**



The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

### EMI Test Receiver Setup

The system was investigated from 9 kHz to 25GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

| Frequency Range   | RBW     | VBW     | Measurement |
|-------------------|---------|---------|-------------|
| 9 kHz – 150 kHz   | 200Hz   | 1 kHz   | PK          |
|                   | 200Hz   | /       | QP/AV       |
| 150 kHz – 30 MHz  | 10 kHz  | 30 kHz  | PK          |
|                   | 9kHz    | /       | QP/AV       |
| 30 MHz – 1000 MHz | 100 kHz | 300 kHz | PK          |
|                   | 120kHz  | /       | QP          |
| Above 1 GHz       | 1 MHz   | 3 MHz   | PK          |
|                   | 1 MHz   | 10Hz    | AV          |

### Test Procedure

According to section 6.3, 6.4, 6.5, 6.6 of standard ANSI C63.10-2013.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable. The report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground parallel) unless the margin is greater than 20 dB, then the following statement shall be made: “all emissions were greater than 20 dB below the limit.”

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 10 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at below the AV emission limit, there's no need to record the measured AV level of the emissions in the report.

### Level & Margin Calculation

The Level is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)  
Level (dBμV/m) = Reading (dBμV) + Factor (dB/m)

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Level (dB}\mu\text{V/m)}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 &15.205 & 15.249.

## Test Data

|                           |             |                       |                                               |
|---------------------------|-------------|-----------------------|-----------------------------------------------|
| <b>Frequency Range:</b>   | Below 1 GHz | Above 1 GHz           | Fundamental Test & Out-of-band Emissions Test |
| <b>Temperature:</b>       | 23.5°C      | 23.5°C~23.6°C         | 23.5°C                                        |
| <b>Relative Humidity:</b> | 54 %        | 52 %~54%              | 54%                                           |
| <b>ATM Pressure:</b>      | 101kPa      | 99.6 kPa~101.1 kPa    | 101.1kPa                                      |
| <b>Test Date:</b>         | 2024-07-08  | 2024-06-21~2024-07-09 | 2024-09-04                                    |
| <b>Test Engineer:</b>     | Wlif Wu     | Wlif Wu               | Wlif Wu                                       |

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case Z-axis of orientation was recorded.

### 1) 9 kHz~30MHz

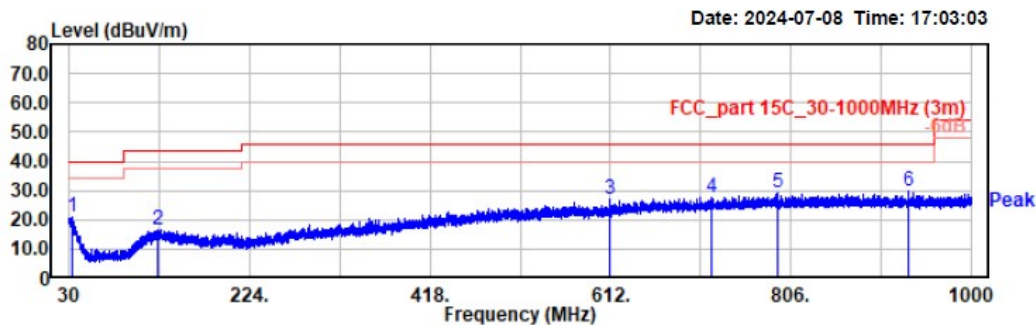
EUT Operation mode: Transmitting in middle channel (2440MHz)

Pre-scan in parallel, ground-parallel and perpendicular of orientation of loop antenna, the amplitude of spurious emissions attenuated is more than 20 dB below the permissible value, which is not required to be report.

2) 30MHz~1GHz

Project No.: 2407U23892E-RF  
Test Mode: Tx 2410  
EUT Model: X30  
Test distance: 3m

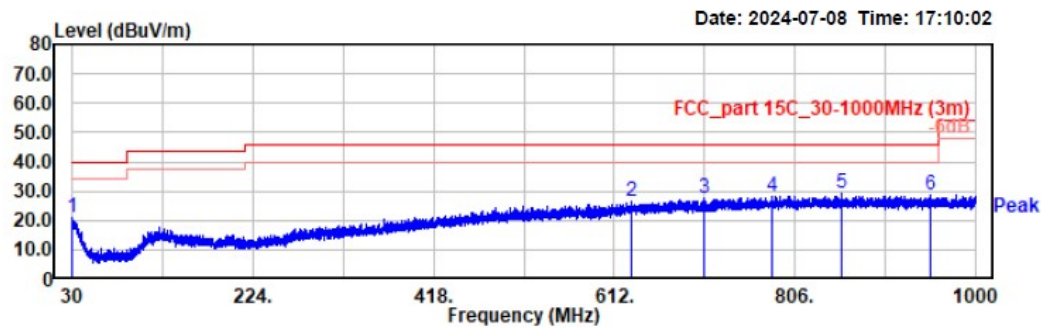
Temp/Humi: 23.5℃/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|--------|
| 32.43       | 27.36           | -6.63          | 20.73            | 40.00           | 19.27        | Horizontal | Peak   |
| 125.74      | 26.70           | -9.94          | 16.76            | 43.50           | 26.74        | Horizontal | Peak   |
| 610.74      | 29.29           | -2.02          | 27.27            | 46.00           | 18.73        | Horizontal | Peak   |
| 720.35      | 27.79           | 0.05           | 27.84            | 46.00           | 18.16        | Horizontal | Peak   |
| 791.16      | 27.90           | 1.13           | 29.03            | 46.00           | 16.97        | Horizontal | Peak   |
| 932.88      | 26.79           | 2.99           | 29.78            | 46.00           | 16.22        | Horizontal | Peak   |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2410  
EUT Model: X30  
Test distance: 3m

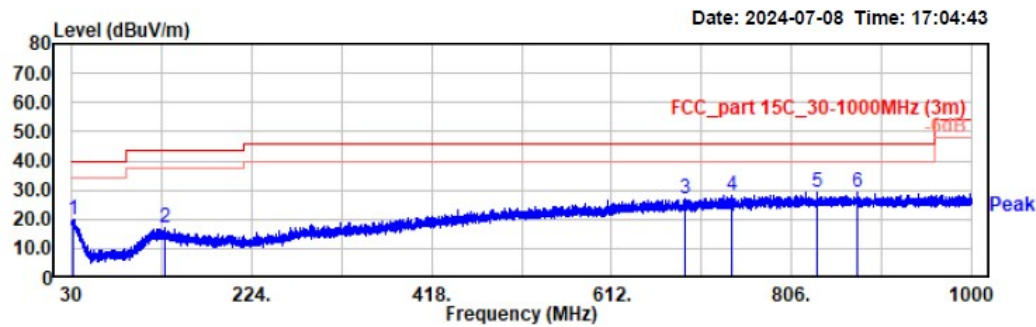
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|--------|
| 30.19       | 26.56           | -5.65          | 20.91            | 40.00           | 19.09        | Vertical | Peak   |
| 629.85      | 27.65           | -1.37          | 26.28            | 46.00           | 19.72        | Vertical | Peak   |
| 708.13      | 27.71           | -0.13          | 27.58            | 46.00           | 18.42        | Vertical | Peak   |
| 781.36      | 27.29           | 1.08           | 28.37            | 46.00           | 17.63        | Vertical | Peak   |
| 855.76      | 27.31           | 1.98           | 29.29            | 46.00           | 16.71        | Vertical | Peak   |
| 952.47      | 25.44           | 3.20           | 28.64            | 46.00           | 17.36        | Vertical | Peak   |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2440  
EUT Model: X30  
Test distance: 3m

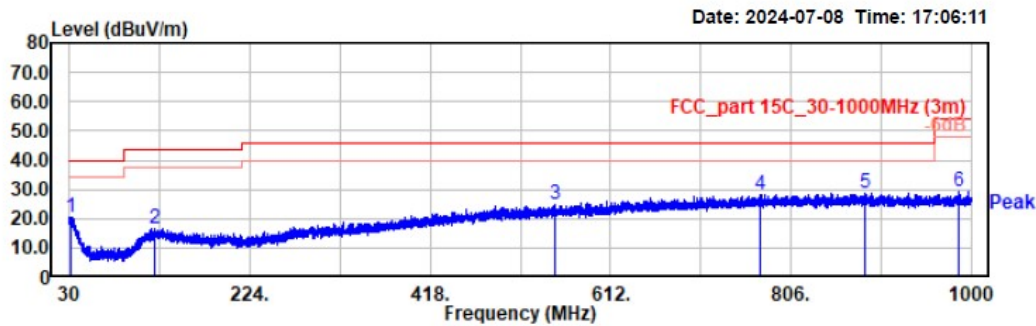
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|--------|
| 31.94       | 26.37           | -6.37          | 20.00            | 40.00           | 20.00        | Horizontal | Peak   |
| 130.69      | 27.05           | -10.17         | 16.88            | 43.50           | 26.62        | Horizontal | Peak   |
| 691.54      | 27.47           | -0.45          | 27.02            | 46.00           | 18.98        | Horizontal | Peak   |
| 741.59      | 27.81           | 0.36           | 28.17            | 46.00           | 17.83        | Horizontal | Peak   |
| 833.45      | 27.66           | 1.78           | 29.44            | 46.00           | 16.56        | Horizontal | Peak   |
| 877.20      | 26.83           | 2.29           | 29.12            | 46.00           | 16.88        | Horizontal | Peak   |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2440  
EUT Model: X30  
Test distance: 3m

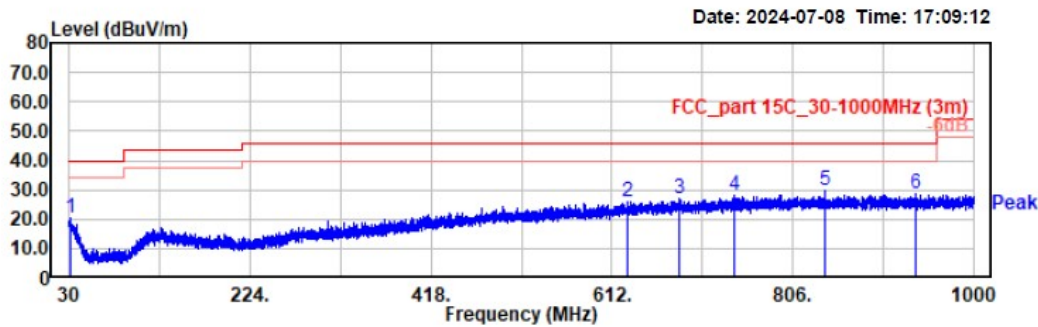
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|--------|
| 31.07       | 26.35           | -5.89          | 20.46            | 40.00           | 19.54        | Vertical | Peak   |
| 121.67      | 26.99           | -10.20         | 16.79            | 43.50           | 26.71        | Vertical | Peak   |
| 552.73      | 27.67           | -2.69          | 24.98            | 46.00           | 21.02        | Vertical | Peak   |
| 773.60      | 27.18           | 0.91           | 28.09            | 46.00           | 17.91        | Vertical | Peak   |
| 886.32      | 26.36           | 2.41           | 28.77            | 46.00           | 17.23        | Vertical | Peak   |
| 986.61      | 25.54           | 3.81           | 29.35            | 54.00           | 24.65        | Vertical | Peak   |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2470  
EUT Model: X30  
Test distance: 3m

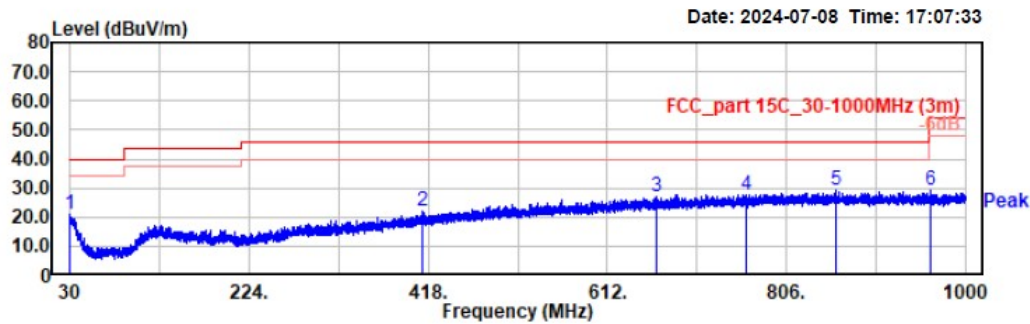
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|--------|
| 30.87       | 26.48           | -5.82          | 20.66            | 40.00           | 19.34        | Horizontal | Peak   |
| 628.01      | 27.20           | -1.38          | 25.82            | 46.00           | 20.18        | Horizontal | Peak   |
| 684.85      | 27.49           | -0.49          | 27.00            | 46.00           | 19.00        | Horizontal | Peak   |
| 744.02      | 27.81           | 0.42           | 28.23            | 46.00           | 17.77        | Horizontal | Peak   |
| 840.24      | 27.90           | 1.80           | 29.70            | 46.00           | 16.30        | Horizontal | Peak   |
| 937.14      | 25.46           | 3.04           | 28.50            | 46.00           | 17.50        | Horizontal | Peak   |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2470  
EUT Model: X30  
Test distance: 3m

Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC3.7V from battery



3) 1GHz~18 GHz

Project No.: 2407U23892E-RF

Test Mode: 2410MHz

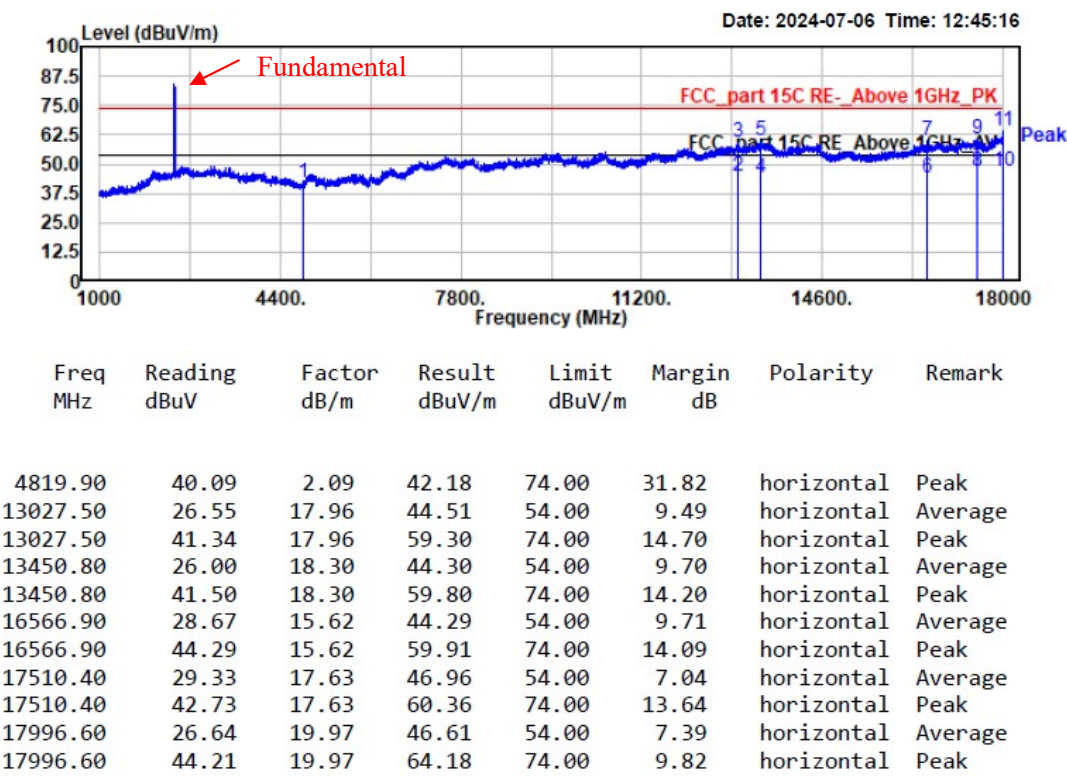
EUT Model: X30

Test distance: 3m

Temp/Humi: 23.5°C/54%

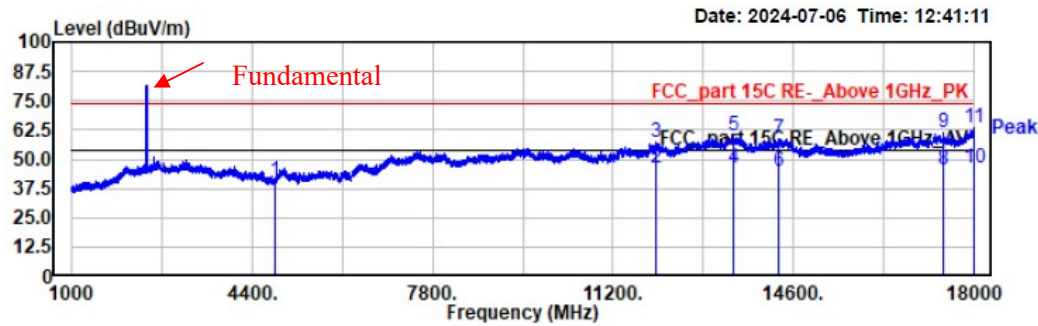
Tested by: Wlif Wu

Power Source: DC 3.7V from battery



Project No.: 2407U23892E-RF  
Test Mode: 2410MHz  
EUT Model: X30  
Test distance: 3m

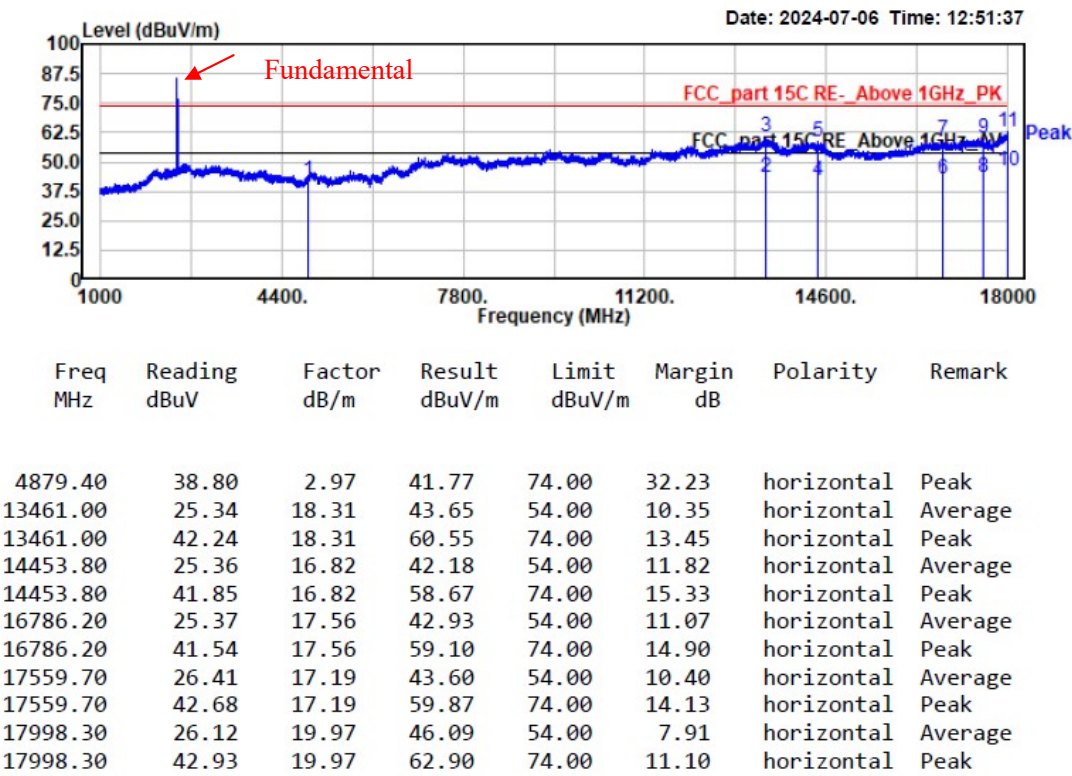
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 4819.90     | 38.76           | 2.09           | 40.85            | 74.00           | 33.15        | vertical | Peak    |
| 12016.00    | 30.04           | 15.90          | 45.94            | 54.00           | 8.06         | vertical | Average |
| 12016.00    | 41.39           | 15.90          | 57.29            | 74.00           | 16.71        | vertical | Peak    |
| 13471.20    | 27.99           | 18.32          | 46.31            | 54.00           | 7.69         | vertical | Average |
| 13471.20    | 41.44           | 18.32          | 59.76            | 74.00           | 14.24        | vertical | Peak    |
| 14324.60    | 27.36           | 17.43          | 44.79            | 54.00           | 9.21         | vertical | Average |
| 14324.60    | 40.93           | 17.43          | 58.36            | 74.00           | 15.64        | vertical | Peak    |
| 17437.30    | 27.66           | 17.80          | 45.46            | 54.00           | 8.54         | vertical | Average |
| 17437.30    | 43.50           | 17.80          | 61.30            | 74.00           | 12.70        | vertical | Peak    |
| 18000.00    | 26.01           | 19.98          | 45.99            | 54.00           | 8.01         | vertical | Average |
| 18000.00    | 43.56           | 19.98          | 63.54            | 74.00           | 10.46        | vertical | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: 2440MHz  
EUT Model: X30  
Test distance: 3m

Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



Project No.: 2407U23892E-RF

Test Mode: 2440MHz

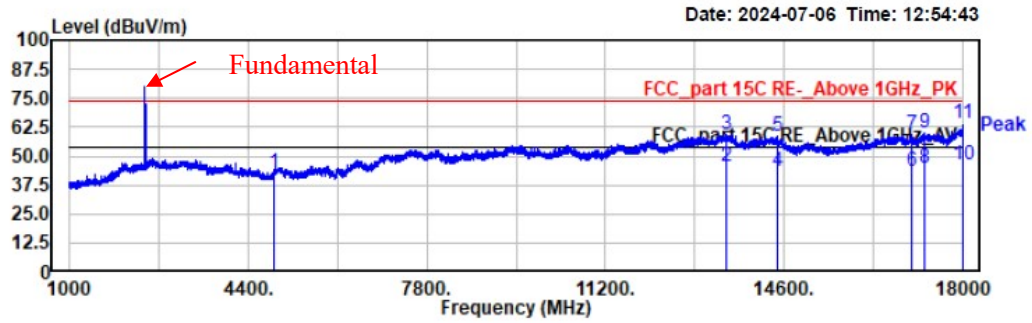
EUT Model: X30

Test distance: 3m

Temp/Humi: 23.5°C/54%

Tested by: Wlif Wu

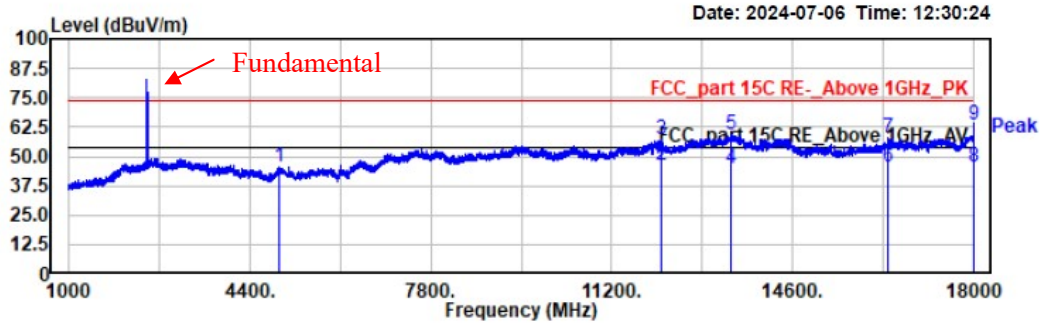
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 4879.40     | 39.79           | 2.97           | 42.76            | 74.00           | 31.24        | vertical | Peak    |
| 13493.30    | 27.26           | 18.35          | 45.61            | 54.00           | 8.39         | vertical | Average |
| 13493.30    | 41.06           | 18.35          | 59.41            | 74.00           | 14.59        | vertical | Peak    |
| 14474.20    | 26.56           | 16.78          | 43.34            | 54.00           | 10.66        | vertical | Average |
| 14474.20    | 41.71           | 16.78          | 58.49            | 74.00           | 15.51        | vertical | Peak    |
| 17019.10    | 26.36           | 17.20          | 43.56            | 54.00           | 10.44        | vertical | Average |
| 17019.10    | 42.09           | 17.20          | 59.29            | 74.00           | 14.71        | vertical | Peak    |
| 17274.10    | 26.77           | 17.80          | 44.57            | 54.00           | 9.43         | vertical | Average |
| 17274.10    | 41.86           | 17.80          | 59.66            | 74.00           | 14.34        | vertical | Peak    |
| 18000.00    | 26.34           | 19.98          | 46.32            | 54.00           | 7.68         | vertical | Average |
| 18000.00    | 44.12           | 19.98          | 64.10            | 74.00           | 9.90         | vertical | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: 2470MHz  
EUT Model: X30  
Test distance: 3m

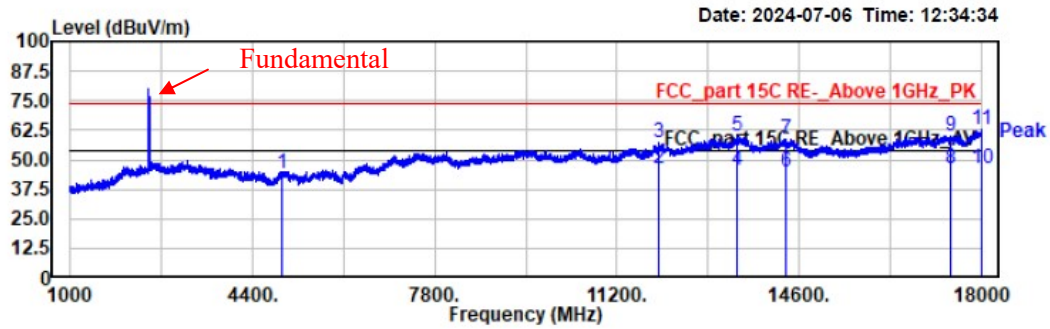
Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 4938.90     | 41.72           | 3.72           | 45.44            | 74.00           | 28.56        | horizontal | Peak    |
| 12119.70    | 30.16           | 15.77          | 45.93            | 54.00           | 8.07         | horizontal | Average |
| 12119.70    | 41.15           | 15.77          | 56.92            | 74.00           | 17.08        | horizontal | Peak    |
| 13440.60    | 26.25           | 18.29          | 44.54            | 54.00           | 9.46         | horizontal | Average |
| 13440.60    | 41.34           | 18.29          | 59.63            | 74.00           | 14.37        | horizontal | Peak    |
| 16407.10    | 30.03           | 15.66          | 45.69            | 54.00           | 8.31         | horizontal | Average |
| 16407.10    | 42.05           | 15.66          | 57.71            | 74.00           | 16.29        | horizontal | Peak    |
| 17998.30    | 25.37           | 19.97          | 45.34            | 54.00           | 8.66         | horizontal | Average |
| 17998.30    | 43.82           | 19.97          | 63.79            | 74.00           | 10.21        | horizontal | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: 2470MHz  
EUT Model: X30  
Test distance: 3m

Temp/Humi: 23.5°C/54%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 4940.60     | 40.69           | 3.72           | 44.41            | 74.00           | 29.59        | vertical | Peak    |
| 11992.20    | 30.03           | 15.88          | 45.91            | 54.00           | 8.09         | vertical | Average |
| 11992.20    | 41.68           | 15.88          | 57.56            | 74.00           | 16.44        | vertical | Peak    |
| 13455.90    | 27.36           | 18.31          | 45.67            | 54.00           | 8.33         | vertical | Average |
| 13455.90    | 41.39           | 18.31          | 59.70            | 74.00           | 14.30        | vertical | Peak    |
| 14343.30    | 27.56           | 17.29          | 44.85            | 54.00           | 9.15         | vertical | Average |
| 14343.30    | 41.59           | 17.29          | 58.88            | 74.00           | 15.12        | vertical | Peak    |
| 17427.10    | 28.35           | 17.82          | 46.17            | 54.00           | 7.83         | vertical | Average |
| 17427.10    | 42.52           | 17.82          | 60.34            | 74.00           | 13.66        | vertical | Peak    |
| 17994.90    | 26.44           | 19.96          | 46.40            | 54.00           | 7.60         | vertical | Average |
| 17994.90    | 42.58           | 19.96          | 62.54            | 74.00           | 11.46        | vertical | Peak    |

4) 18 GHz~25 GHz

Project No.: 2407U23892E-RF

Test Mode: Tx 2410MHz

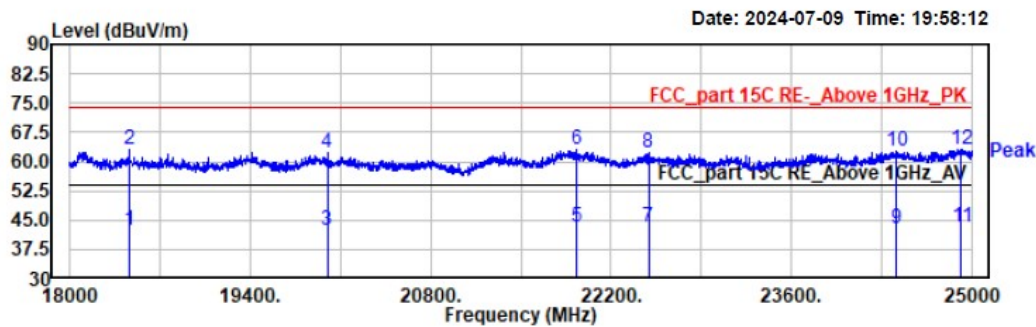
EUT Model: X30

Test distance: 3m

Temp/Humi: 23.6°C/52%

Tested by: Wlif Wu

Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 18458.40    | 18.38           | 24.16          | 42.54            | 54.00           | 11.46        | horizontal | Average |
| 18458.40    | 38.88           | 24.16          | 63.04            | 74.00           | 10.96        | horizontal | Peak    |
| 19996.80    | 18.16           | 24.36          | 42.52            | 54.00           | 11.48        | horizontal | Average |
| 19996.80    | 38.03           | 24.36          | 62.39            | 74.00           | 11.61        | horizontal | Peak    |
| 21928.80    | 17.08           | 26.01          | 43.09            | 54.00           | 10.91        | horizontal | Average |
| 21928.80    | 37.08           | 26.01          | 63.09            | 74.00           | 10.91        | horizontal | Peak    |
| 22490.40    | 17.36           | 26.00          | 43.36            | 54.00           | 10.64        | horizontal | Average |
| 22490.40    | 36.36           | 26.00          | 62.36            | 74.00           | 11.64        | horizontal | Peak    |
| 24412.80    | 15.03           | 27.99          | 43.02            | 54.00           | 10.98        | horizontal | Average |
| 24412.80    | 34.50           | 27.99          | 62.49            | 74.00           | 11.51        | horizontal | Peak    |
| 24916.80    | 15.37           | 27.96          | 43.33            | 54.00           | 10.67        | horizontal | Average |
| 24916.80    | 35.25           | 27.96          | 63.21            | 74.00           | 10.79        | horizontal | Peak    |

Project No.: 2407U23892E-RF

Test Mode: Tx 2410MHz

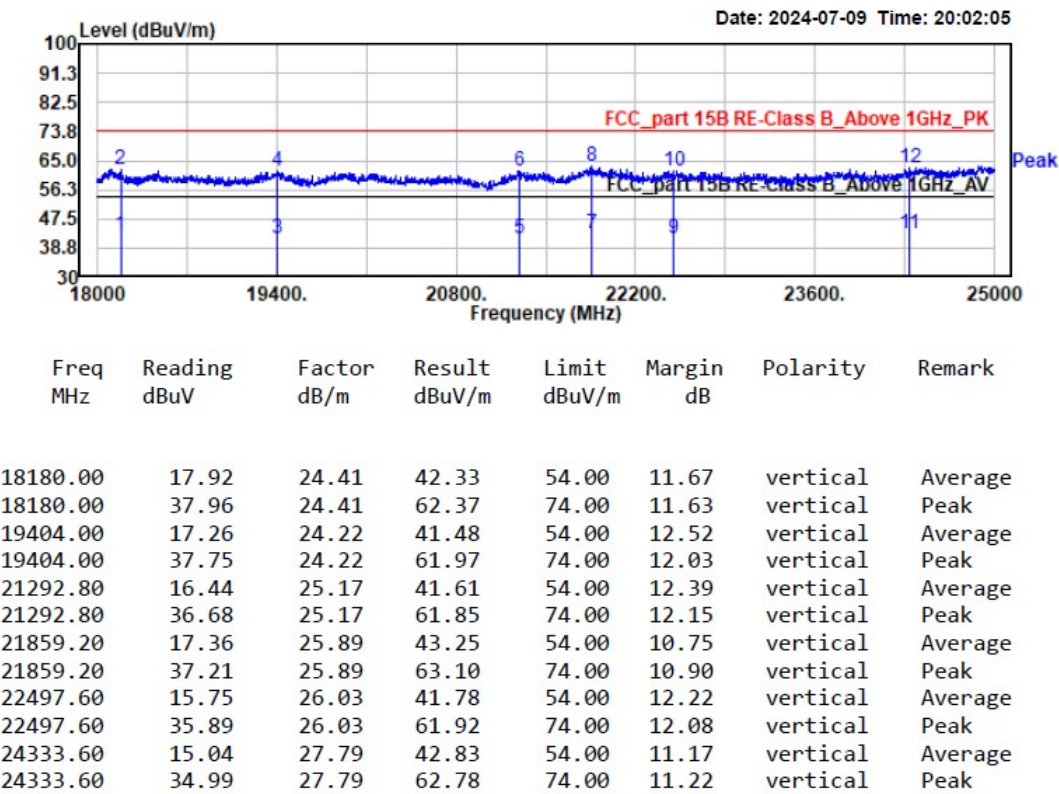
EUT Model: X30

Test distance: 3m

Temp/Humi: 23.6°C/52%

Tested by: Wlif Wu

Power Source: DC 3.7V from battery



Project No.: 2407U23892E-RF

Test Mode: Tx 2440MHz

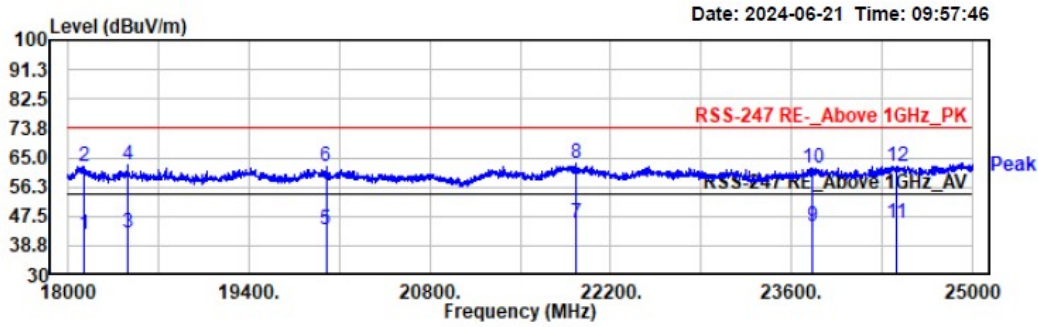
EUT Model: X30

Test distance: 3m

Temp/Humi: 23.6°C/52%

Tested by: Wlif Wu

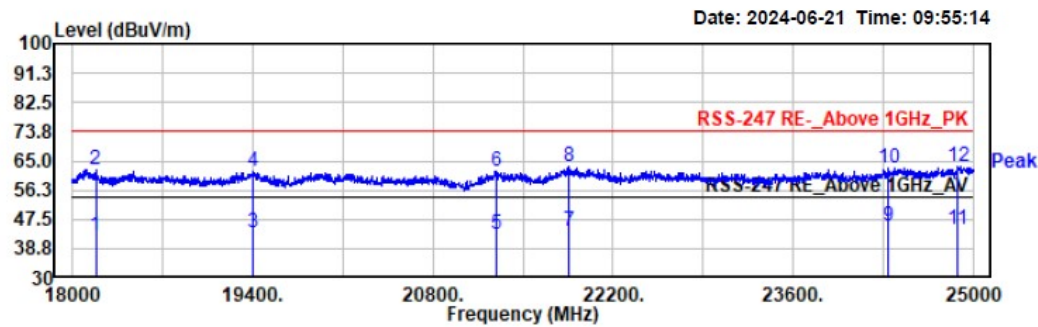
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 18127.20    | 18.09           | 24.12          | 42.21            | 54.00           | 11.79        | horizontal | Average |
| 18127.20    | 38.26           | 24.12          | 62.38            | 74.00           | 11.62        | horizontal | Peak    |
| 18458.40    | 18.45           | 24.34          | 42.79            | 54.00           | 11.21        | horizontal | Average |
| 18458.40    | 38.70           | 24.34          | 63.04            | 74.00           | 10.96        | horizontal | Peak    |
| 19996.80    | 19.04           | 24.66          | 43.70            | 54.00           | 10.30        | horizontal | Average |
| 19996.80    | 37.73           | 24.66          | 62.39            | 74.00           | 11.61        | horizontal | Peak    |
| 21928.80    | 19.26           | 26.07          | 45.33            | 54.00           | 8.67         | horizontal | Average |
| 21928.80    | 37.02           | 26.07          | 63.09            | 74.00           | 10.91        | horizontal | Peak    |
| 23762.40    | 17.32           | 27.29          | 44.61            | 54.00           | 9.39         | horizontal | Average |
| 23762.40    | 34.70           | 27.29          | 61.99            | 74.00           | 12.01        | horizontal | Peak    |
| 24412.80    | 17.05           | 28.41          | 45.46            | 54.00           | 8.54         | horizontal | Average |
| 24412.80    | 34.08           | 28.41          | 62.49            | 74.00           | 11.51        | horizontal | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2440MHz  
EUT Model: X30  
Test distance: 3m

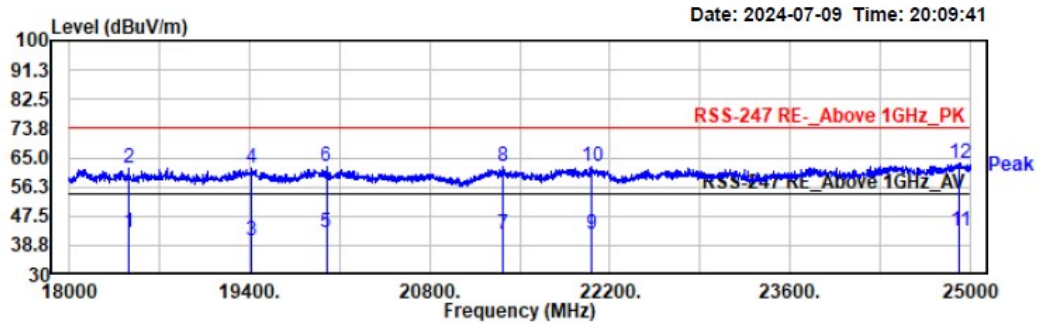
Temp/Humi: 23.6°C/52%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 18180.00    | 18.45           | 24.15          | 42.60            | 54.00           | 11.40        | vertical | Average |
| 18180.00    | 38.22           | 24.15          | 62.37            | 74.00           | 11.63        | vertical | Peak    |
| 19404.00    | 19.05           | 24.59          | 43.64            | 54.00           | 10.36        | vertical | Average |
| 19404.00    | 37.38           | 24.59          | 61.97            | 74.00           | 12.03        | vertical | Peak    |
| 21292.80    | 17.46           | 25.62          | 43.08            | 54.00           | 10.92        | vertical | Average |
| 21292.80    | 36.23           | 25.62          | 61.85            | 74.00           | 12.15        | vertical | Peak    |
| 21859.20    | 17.77           | 25.99          | 43.76            | 54.00           | 10.24        | vertical | Average |
| 21859.20    | 37.11           | 25.99          | 63.10            | 74.00           | 10.90        | vertical | Peak    |
| 24333.60    | 17.01           | 28.25          | 45.26            | 54.00           | 8.74         | vertical | Average |
| 24333.60    | 34.53           | 28.25          | 62.78            | 74.00           | 11.22        | vertical | Peak    |
| 24878.40    | 15.89           | 28.42          | 44.31            | 54.00           | 9.69         | vertical | Average |
| 24878.40    | 34.92           | 28.42          | 63.34            | 74.00           | 10.66        | vertical | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2470MHz  
EUT Model: X30  
Test distance: 3m

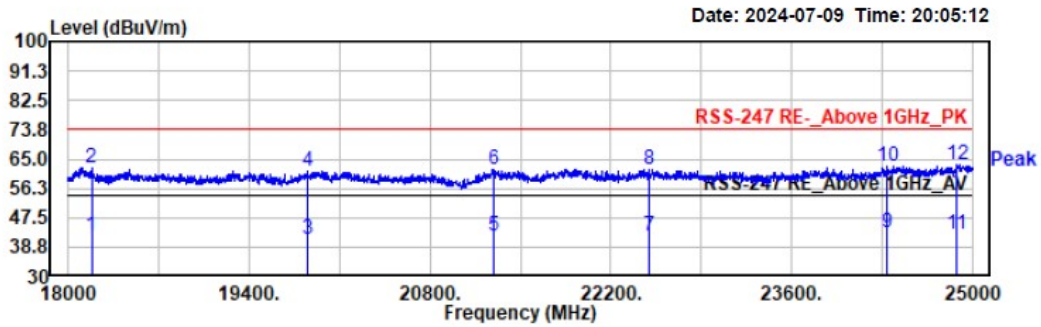
Temp/Humi: 23.6°C/52%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 18458.40    | 18.00           | 24.34          | 42.34            | 54.00           | 11.66        | horizontal | Average |
| 18458.40    | 37.70           | 24.34          | 62.04            | 74.00           | 11.96        | horizontal | Peak    |
| 19418.40    | 15.68           | 24.60          | 40.28            | 54.00           | 13.72        | horizontal | Average |
| 19418.40    | 37.50           | 24.60          | 62.10            | 74.00           | 11.90        | horizontal | Peak    |
| 19996.80    | 17.88           | 24.66          | 42.54            | 54.00           | 11.46        | horizontal | Average |
| 19996.80    | 37.73           | 24.66          | 62.39            | 74.00           | 11.61        | horizontal | Peak    |
| 21367.20    | 16.70           | 25.61          | 42.31            | 54.00           | 11.69        | horizontal | Average |
| 21367.20    | 36.61           | 25.61          | 62.22            | 74.00           | 11.78        | horizontal | Peak    |
| 22063.20    | 16.08           | 25.99          | 42.07            | 54.00           | 11.93        | horizontal | Average |
| 22063.20    | 36.24           | 25.99          | 62.23            | 74.00           | 11.77        | horizontal | Peak    |
| 24916.80    | 14.76           | 28.41          | 43.17            | 54.00           | 10.83        | horizontal | Average |
| 24916.80    | 34.80           | 28.41          | 63.21            | 74.00           | 10.79        | horizontal | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: Tx 2470MHz  
EUT Model: X30  
Test distance: 3m

Temp/Humi: 23.6°C/52%  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 18180.00    | 18.07           | 24.15          | 42.22            | 54.00           | 11.78        | vertical | Average |
| 18180.00    | 38.22           | 24.15          | 62.37            | 74.00           | 11.63        | vertical | Peak    |
| 19850.40    | 16.58           | 24.64          | 41.22            | 54.00           | 12.78        | vertical | Average |
| 19850.40    | 36.86           | 24.64          | 61.50            | 74.00           | 12.50        | vertical | Peak    |
| 21292.80    | 16.21           | 25.62          | 41.83            | 54.00           | 12.17        | vertical | Average |
| 21292.80    | 36.23           | 25.62          | 61.85            | 74.00           | 12.15        | vertical | Peak    |
| 22497.60    | 15.61           | 26.23          | 41.84            | 54.00           | 12.16        | vertical | Average |
| 22497.60    | 35.69           | 26.23          | 61.92            | 74.00           | 12.08        | vertical | Peak    |
| 24333.60    | 14.56           | 28.25          | 42.81            | 54.00           | 11.19        | vertical | Average |
| 24333.60    | 34.53           | 28.25          | 62.78            | 74.00           | 11.22        | vertical | Peak    |
| 24878.40    | 14.29           | 28.42          | 42.71            | 54.00           | 11.29        | vertical | Average |
| 24878.40    | 34.92           | 28.42          | 63.34            | 74.00           | 10.66        | vertical | Peak    |

**Fundamental Test & Out-of-band Emissions Test:**

(Pre-scan in the X, Y and Z axis of orientation, the worst case Y-axis of orientation was recorded.)

Note:

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

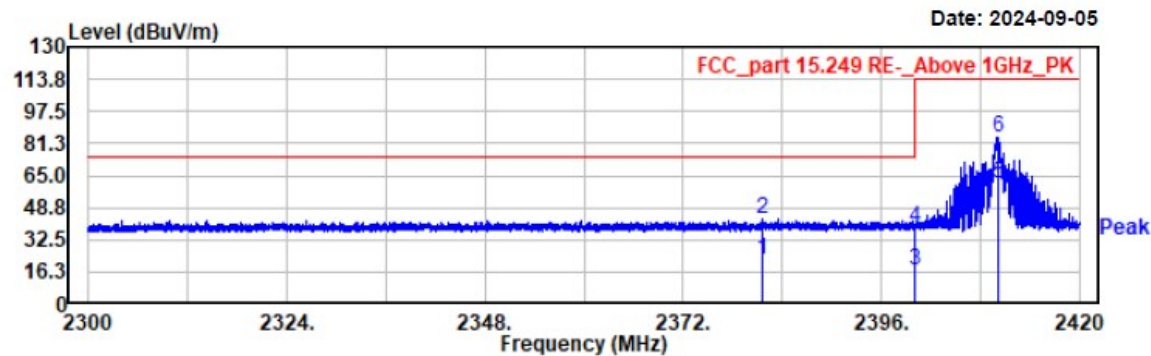
Corrected Amplitude (dBμV/m) = Reading (dBμV) + Factor (dB/m)

Margin (dB) = Limit (dBμV/m) - Corrected Amplitude (dBμV/m)

| Frequency                      | Receiver | Rx            | Factor | Corrected | Limit  | Margin | Detector |
|--------------------------------|----------|---------------|--------|-----------|--------|--------|----------|
| MHz                            | Reading  | Antenna Polar |        | Amplitude |        |        |          |
|                                | dBμV     | H/V           | dB/m   | dBμV/m    | dBμV/m | dB     |          |
| <b>Low Channel: 2410MHz</b>    |          |               |        |           |        |        |          |
| 2410.00                        | 56.33    | H             | 4.41   | 60.74     | 94.00  | 33.26  | AV       |
| 2410.00                        | 79.97    | H             | 4.41   | 84.38     | 114.00 | 29.62  | PK       |
| 2410.00                        | 49.76    | V             | 4.41   | 54.17     | 94.00  | 39.83  | AV       |
| 2410.00                        | 76.42    | V             | 4.41   | 80.83     | 114.00 | 33.17  | PK       |
| 2400.00                        | 12.80    | H             | 4.40   | 17.20     | 54.00  | 36.80  | AV       |
| 2400.00                        | 34.35    | H             | 4.40   | 38.75     | 74.00  | 35.25  | PK       |
| 2400.00                        | 13.00    | V             | 4.40   | 17.40     | 54.00  | 36.60  | AV       |
| 2400.00                        | 34.50    | V             | 4.40   | 38.90     | 74.00  | 35.10  | PK       |
| 2381.50                        | 18.27    | H             | 4.18   | 22.45     | 54.00  | 31.55  | AV       |
| 2381.50                        | 39.15    | H             | 4.18   | 43.33     | 74.00  | 30.67  | PK       |
| 2346.54                        | 19.79    | V             | 3.78   | 23.57     | 54.00  | 30.43  | AV       |
| 2346.54                        | 40.31    | V             | 3.78   | 44.09     | 74.00  | 29.91  | PK       |
| <b>Middle Channel: 2440MHz</b> |          |               |        |           |        |        |          |
| 2440.00                        | 59.14    | H             | 4.42   | 63.56     | 94.00  | 30.44  | AV       |
| 2440.00                        | 80.46    | H             | 4.42   | 84.88     | 114.00 | 29.12  | PK       |
| 2440.00                        | 54.45    | V             | 4.42   | 58.87     | 94.00  | 35.13  | AV       |
| 2440.00                        | 74.43    | V             | 4.42   | 78.85     | 114.00 | 35.15  | PK       |
| <b>High Channel: 2470MHz</b>   |          |               |        |           |        |        |          |
| 2470.00                        | 56.73    | H             | 4.78   | 61.51     | 94.00  | 32.49  | AV       |
| 2470.00                        | 78.39    | H             | 4.78   | 83.17     | 114.00 | 30.83  | PK       |
| 2470.00                        | 49.02    | V             | 4.78   | 53.80     | 94.00  | 40.20  | AV       |
| 2470.00                        | 73.11    | V             | 4.78   | 77.89     | 114.00 | 36.11  | PK       |
| 2483.50                        | 17.34    | H             | 5.03   | 22.37     | 54.00  | 31.63  | AV       |
| 2483.50                        | 35.47    | H             | 5.03   | 40.50     | 74.00  | 33.50  | PK       |
| 2483.50                        | 14.34    | V             | 5.03   | 19.37     | 54.00  | 34.63  | AV       |
| 2483.50                        | 34.23    | V             | 5.03   | 39.26     | 74.00  | 34.74  | PK       |
| 2488.26                        | 19.77    | V             | 5.12   | 24.89     | 54.00  | 29.11  | AV       |
| 2488.26                        | 38.37    | V             | 5.12   | 43.49     | 74.00  | 30.51  | PK       |
| 2497.75                        | 22.08    | V             | 5.29   | 27.37     | 54.00  | 26.63  | AV       |
| 2487.75                        | 40.26    | V             | 5.29   | 45.55     | 74.00  | 28.45  | PK       |

Project No.: 2407U23892E-RF  
Test Mode: 2410MHz  
EUT Model: X30  
Test distance: 3m

Temp/Humi/ATM: 23.6°C /55%/101.1kPa  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 2381.50     | 18.27           | 4.18           | 22.45            | 54.00           | 31.55        | horizontal | Average |
| 2381.50     | 39.15           | 4.18           | 43.33            | 74.00           | 30.67        | horizontal | Peak    |
| 2400.00     | 12.80           | 4.40           | 17.20            | 54.00           | 36.80        | horizontal | Average |
| 2400.00     | 34.35           | 4.40           | 38.75            | 74.00           | 35.25        | horizontal | Peak    |
| 2410.09     | 56.33           | 4.41           | 60.74            | 94.00           | 33.26        | horizontal | Average |
| 2410.09     | 79.97           | 4.41           | 84.38            | 114.00          | 29.62        | horizontal | Peak    |

Project No.: 2407U23892E-RF

Test Mode: 2410MHz

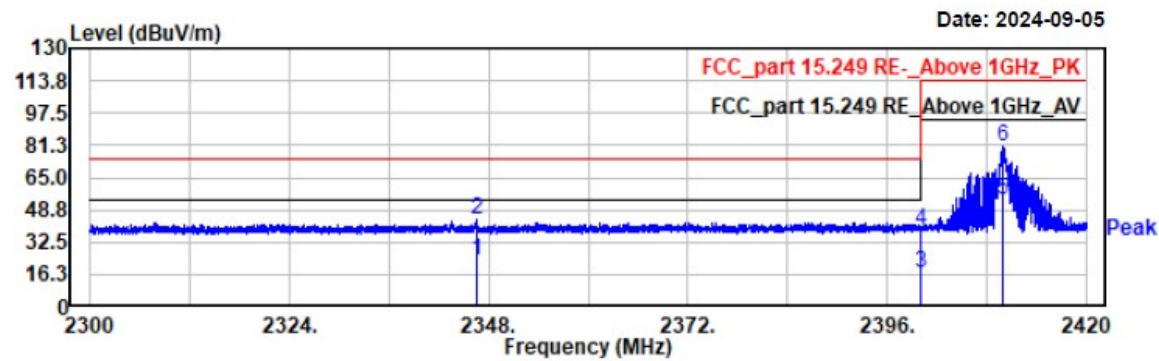
EUT Model: X30

Test distance: 3m

Temp/Humi/ATM: 23.6°C/55%/101.1kPa

Tested by: Wlif Wu

Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 2346.54     | 19.79           | 3.78           | 23.57            | 54.00           | 30.43        | vertical | Average |
| 2346.54     | 40.31           | 3.78           | 44.09            | 74.00           | 29.91        | vertical | Peak    |
| 2400.00     | 13.00           | 4.40           | 17.40            | 54.00           | 36.60        | vertical | Average |
| 2400.00     | 34.50           | 4.40           | 38.90            | 74.00           | 35.10        | vertical | Peak    |
| 2410.03     | 49.76           | 4.41           | 54.17            | 94.00           | 39.83        | vertical | Average |
| 2410.03     | 76.42           | 4.41           | 80.83            | 114.00          | 33.17        | vertical | Peak    |

Project No.: 2407U23892E-RF

Test Mode: 2440MHz

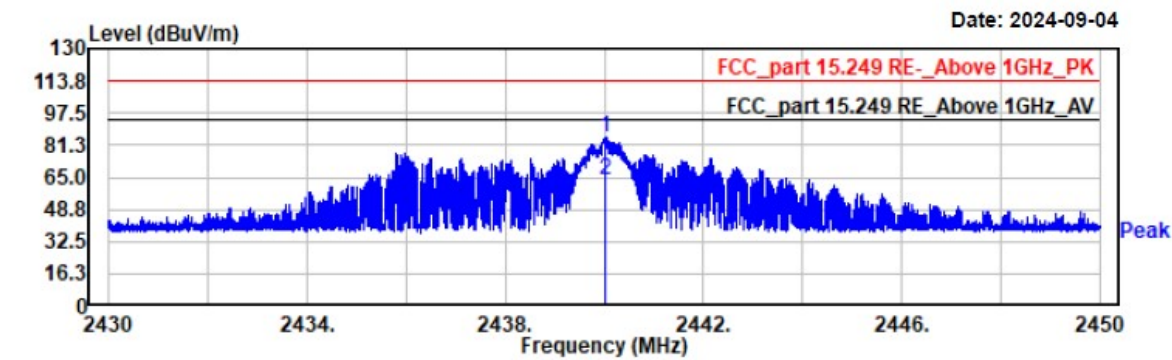
EUT Model: X30

Test distance: 3m

Temp/Humi/ATM: 23.6°C/55%/101.1kPa

Tested by: Wlif Wu

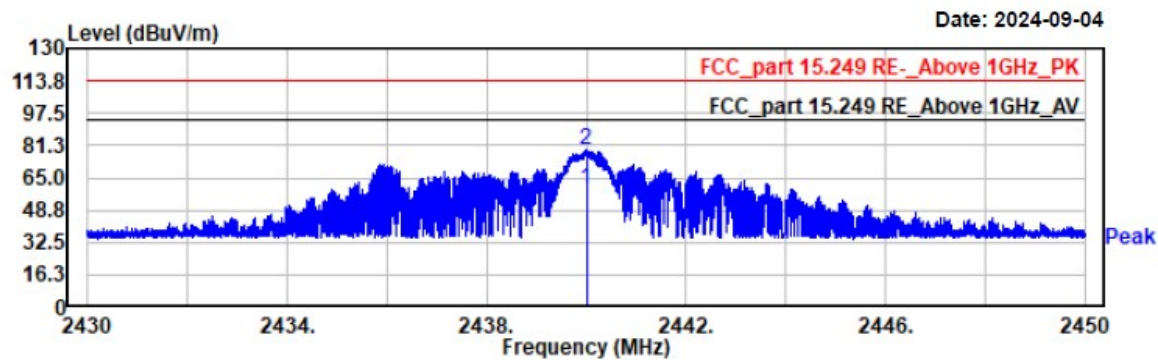
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 2440.02     | 80.46           | 4.42           | 84.88            | 114.00          | 29.12        | horizontal | Peak    |
| 2440.03     | 59.14           | 4.42           | 63.56            | 94.00           | 30.44        | horizontal | Average |

Project No.: 2407U23892E-RF  
Test Mode: 2440MHz  
EUT Model: X30  
Test distance: 3m

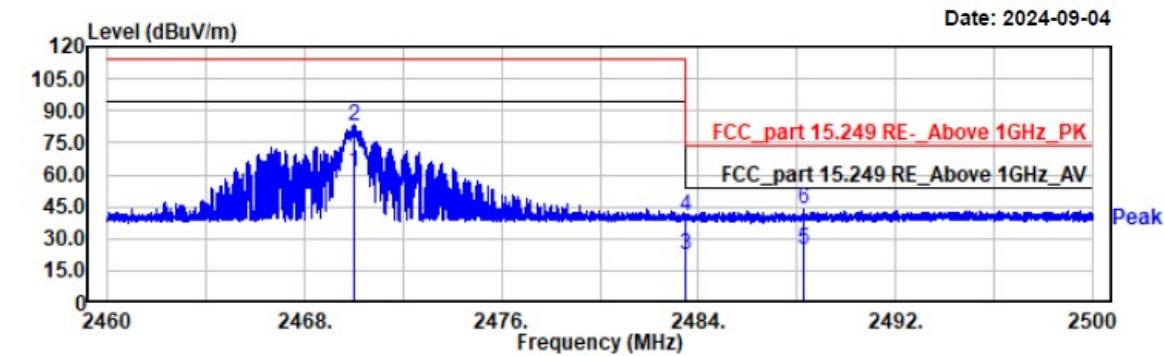
Temp/Humi/ATM: 23.6°C/55%/101.1kPa  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 2440.00     | 54.45           | 4.42           | 58.87            | 94.00           | 35.13        | vertical | Average |
| 2440.00     | 74.43           | 4.42           | 78.85            | 114.00          | 35.15        | vertical | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: 2470MHz  
EUT Model: X30  
Test distance: 3m

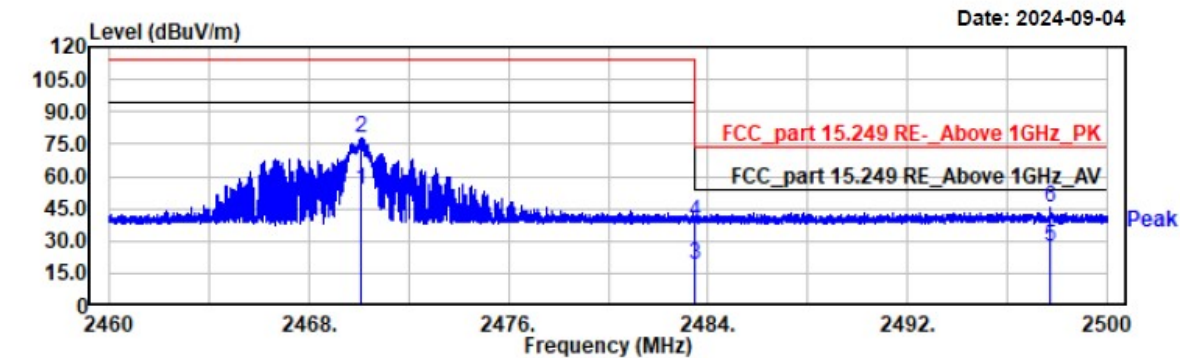
Temp/Humi/ATM: 23.6°C/55%/101.1kPa  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity   | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|------------|---------|
| 2470.02     | 56.73           | 4.78           | 61.51            | 94.00           | 32.49        | horizontal | Average |
| 2470.02     | 78.39           | 4.78           | 83.17            | 114.00          | 30.83        | horizontal | Peak    |
| 2483.50     | 17.34           | 5.03           | 22.37            | 54.00           | 31.63        | horizontal | Average |
| 2483.50     | 35.47           | 5.03           | 40.50            | 74.00           | 33.50        | horizontal | Peak    |
| 2488.26     | 19.77           | 5.12           | 24.89            | 54.00           | 29.11        | horizontal | Average |
| 2488.26     | 38.37           | 5.12           | 43.49            | 74.00           | 30.51        | horizontal | Peak    |

Project No.: 2407U23892E-RF  
Test Mode: 2470MHz  
EUT Model: X30  
Test distance: 3m

Temp/Humi/ATM: 23.6°C/55%/101.1kPa  
Tested by: Wlif Wu  
Power Source: DC 3.7V from battery



| Freq<br>MHz | Reading<br>dBuV | Factor<br>dB/m | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Polarity | Remark  |
|-------------|-----------------|----------------|------------------|-----------------|--------------|----------|---------|
| 2470.06     | 49.02           | 4.78           | 53.80            | 94.00           | 40.20        | vertical | Average |
| 2470.06     | 73.11           | 4.78           | 77.89            | 114.00          | 36.11        | vertical | Peak    |
| 2483.50     | 14.34           | 5.03           | 19.37            | 54.00           | 34.63        | vertical | Average |
| 2483.50     | 34.23           | 5.03           | 39.26            | 74.00           | 34.74        | vertical | Peak    |
| 2497.75     | 22.08           | 5.29           | 27.37            | 54.00           | 26.63        | vertical | Average |
| 2497.75     | 40.26           | 5.29           | 45.55            | 74.00           | 28.45        | vertical | Peak    |

## FCC §15.215(c) - 20dB EMISSION BANDWIDTH TESTING

### Applicable Standard

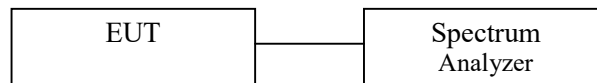
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

### Test Procedure

According to section 6.9 of standard ANSI C63.10-2013.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
3. Repeat above procedures until all frequencies measured were complete.

### Test Setup



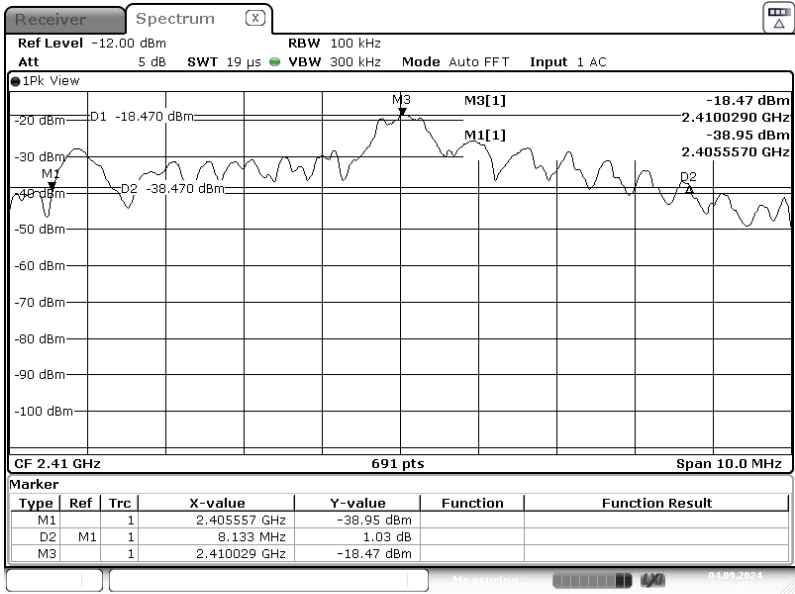
### Test Data

|                       |              |                        |                                          |
|-----------------------|--------------|------------------------|------------------------------------------|
| <b>Test Mode:</b>     | Transmitting | <b>Test Engineer:</b>  | Ash Lin                                  |
| <b>Test Date:</b>     | 2024-09-04   | <b>Test Voltage:</b>   | DC 3.7V from battery                     |
| <b>Test Distance:</b> | 3M           | <b>Test Frequency:</b> | 2410MHz, 2440MHz, 2470MHz                |
| <b>Ant. Polarity:</b> | N/A          | <b>Environment:</b>    | Temp.: 21.5°C Humi.: 56%<br>Atm:101.1kPa |

**Test Result:** Compliant.

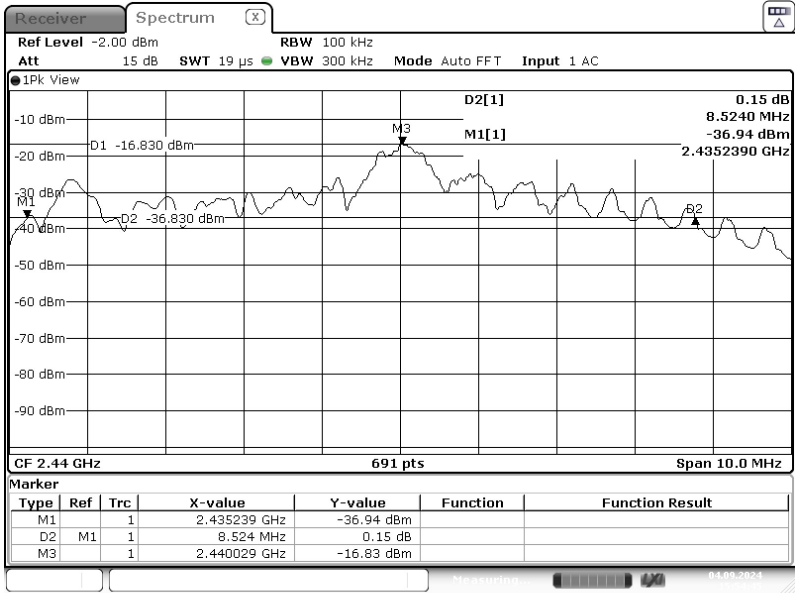
| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) |
|---------|-----------------|-----------------------|
| Low     | 2410            | 8.133                 |
| Middle  | 2440            | 8.524                 |
| High    | 2470            | 8.22                  |

Low Channel



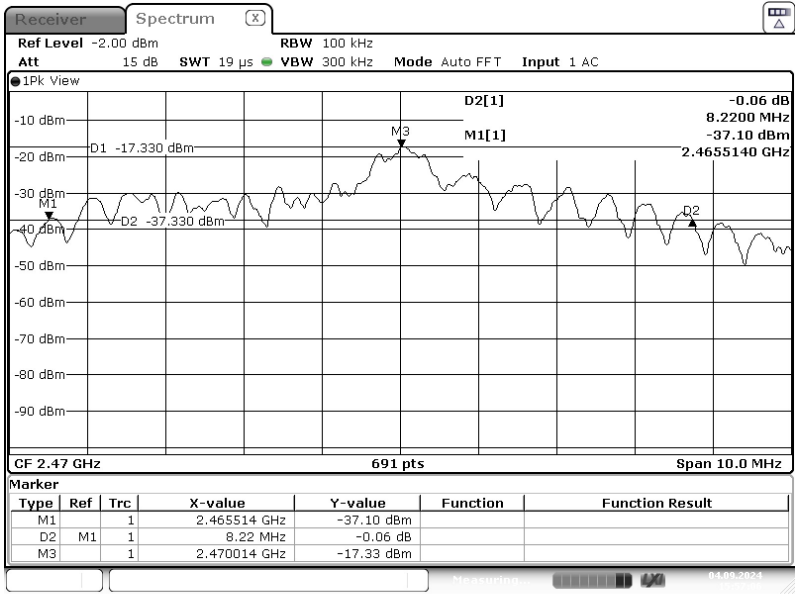
ProjectNo.:2407U23892E-RF Tester:Ash Lin  
Date: 4.SEP.2024 15:40:33

Middle Channel



ProjectNo.:2407U23892E-RF Tester:Ash Lin  
Date: 4.SEP.2024 15:54:46

High Channel



ProjectNo.:2407U23892E-RF Tester:Ash Lin  
Date: 4.SEP.2024 15:57:07

## **EUT PHOTOGRAPHS**

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Please refer to the attachment 2407U23892E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2407U23892E-RF-INP EUT INTERNAL PHOTOGRAPHS.

## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment 2407U23892E-RF-TSP TEST SETUP PHOTOGRAPHS.

### **Declarations**

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor  $k=2$  with the 95.45% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***