

## FCC PART 15.247

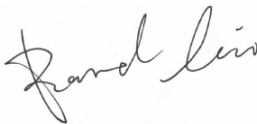
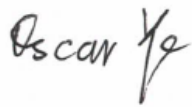
## TEST REPORT

For

### **Brightway Innovation Intelligent Technology (Suzhou) Co., Ltd.**

Building A2, Shangjinwan Headquarters Economic Park, No.2288, Wuzhong Avenue, Wuzhong  
Economic Development Zone, Suzhou Jiangsu P.R. China

**FCC ID: 2A4GZ-N65IU600**

|                                        |                                                                                                                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Type:</b><br>Original Report | <b>Product Name:</b><br>NAVEE Electric Scooter                                                                                                                                                                              |
| <b>Report Number:</b>                  | RKSA240822001-00A                                                                                                                                                                                                           |
| <b>Report Date:</b>                    | 2024-11-21                                                                                                                                                                                                                  |
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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REPORT REVISION HISTORY

| Number of Revisions | Report No.        | Version | Issue Date | Description     |
|---------------------|-------------------|---------|------------|-----------------|
| 0                   | RKSA240822001-00A | R1V1    | 2024-11-21 | Initial Release |

## GENERAL INFORMATION

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

|                           |                                                                |
|---------------------------|----------------------------------------------------------------|
| Applicant:                | Brightway Innovation Intelligent Technology (Suzhou) Co., Ltd. |
| Tested Model:             | N65i-U                                                         |
| Product Name:             | NAVEE Electric Scooter                                         |
| Power Supply:             | DC 46.8V from Battery                                          |
| RF Function:              | BLE                                                            |
| Operating Band/Frequency: | 2402-2480MHz                                                   |
| Maximum Output Power:     | BLE (1 Mbps): 5.87 dBm<br>BLE (2 Mbps): 5.99 dBm               |
| Channel Number:           | 40                                                             |
| Channel Separation:       | 2 MHz                                                          |
| Modulation Type           | GFSK                                                           |
| Antenna Type:             | PCB Antenna                                                    |
| ★Maximum Antenna Gain:    | 0.2 dBi                                                        |

#### Adapter information

Model: FY-5461500

Input: 100-240V~50/60Hz 2.5A

Output: DC 54.6V 1.5A

*Note: The maximum antenna gain was provided by the applicant.*

*All measurement and tested data in this report was gathered from production sample serial number: RKSA240822001-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2024-08-22.)*

### Objective

This report is prepared for *Brightway Innovation Intelligent Technology (Suzhou) Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communications Commission rules.

The tests were performed in order to determine Compliant with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 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 and FCC KDB 558074 D01 15.247 Meas Guidance v05r02.

**Measurement Uncertainty**

| Item                               |                | Uncertainty |
|------------------------------------|----------------|-------------|
| AC Power Lines Conducted Emissions |                | 3.19 dB     |
| RF conducted test with spectrum    |                | 0.9 dB      |
| RF Output Power with Power meter   |                | 0.5 dB      |
| Radiated emissions                 | 9 kHz~150 kHz  | 3.8 dB      |
|                                    | 150 kHz~30 MHz | 3.4 dB      |
|                                    | 30MHz~1GHz     | 6.11 dB     |
|                                    | 1GHz~6GHz      | 4.45 dB     |
|                                    | 6GHz~18GHz     | 5.23 dB     |
|                                    | 18GHz~40GHz    | 5.65 dB     |
| Occupied Bandwidth                 |                | 0.5 kHz     |
| Temperature                        |                | 1.0 °C      |
| Humidity                           |                | 6 %         |

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No.: CN5055.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

Channel List for BLE mode:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|
| 0       | 2402            | 14      | 2430            | 28      | 2458            |
| 1       | 2404            | 15      | 2432            | 29      | 2460            |
| 2       | 2406            | 16      | 2434            | 30      | 2462            |
| 3       | 2408            | 17      | 2436            | 31      | 2464            |
| 4       | 2410            | 18      | 2438            | 32      | 2466            |
| 5       | 2412            | 19      | 2440            | 33      | 2468            |
| 6       | 2414            | 20      | 2442            | 34      | 2470            |
| 7       | 2416            | 21      | 2444            | 35      | 2472            |
| 8       | 2418            | 22      | 2446            | 36      | 2474            |
| 9       | 2420            | 23      | 2448            | 37      | 2476            |
| 10      | 2422            | 24      | 2450            | 38      | 2478            |
| 11      | 2424            | 25      | 2452            | 39      | 2480            |
| 12      | 2426            | 26      | 2454            | /       | /               |
| 13      | 2428            | 27      | 2456            | /       | /               |

EUT was tested with channel 0, 19 and 39.

### EUT Exercise Software

RF Test Tool: RTL8762x\_RFTTestTool.exe

★Power level: Default

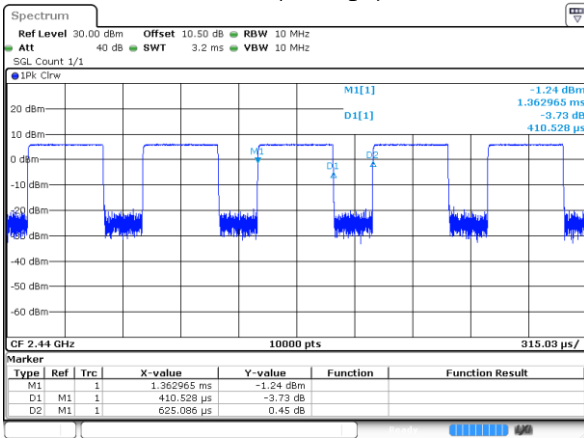
Note: The power level was declared by the applicant.

### Special Accessories

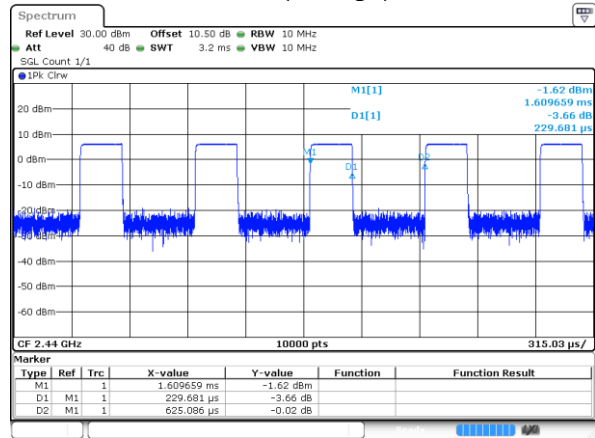
No special accessory.

### Equipment Modifications

No modification was made to the EUT tested.

**Duty Cycle:****BLE (1 Mbps)**

ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13.SEP.2024 11:45:07

**BLE (2 Mbps)**

ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13.SEP.2024 13:08:40

| Mode         | Duty Cycle (%) | T <sub>on</sub> (ms) | T <sub>on+off</sub> (ms) | 10log(1/x) |
|--------------|----------------|----------------------|--------------------------|------------|
| BLE (1 Mbps) | 65.76          | 0.411                | 0.625                    | 1.82       |
| BLE (2 Mbps) | 36.80          | 0.230                | 0.625                    | 4.34       |

**Note:** “x” means the Duty Cycle.



Support Equipment List and Details

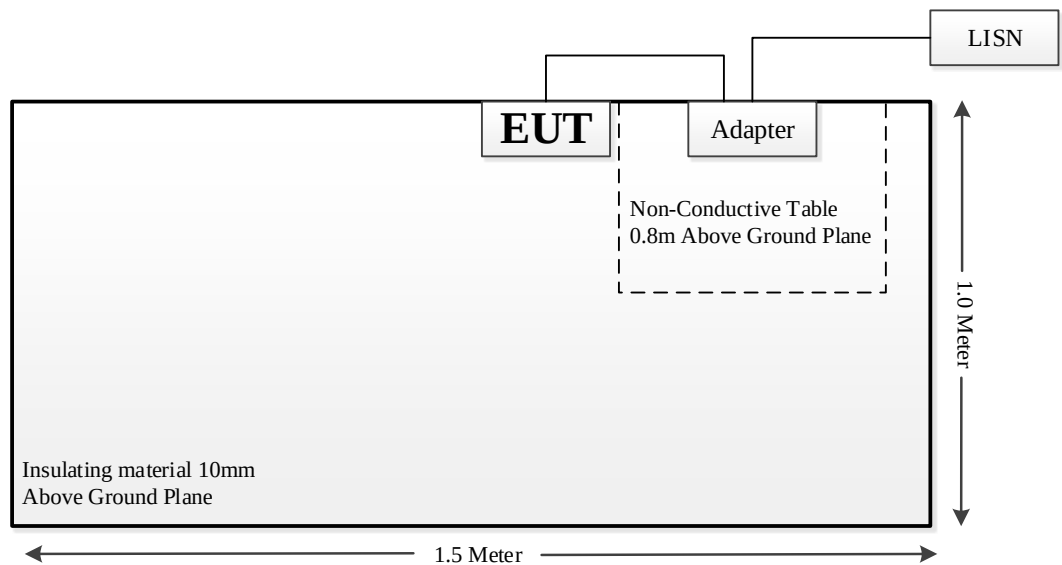
| Manufacturer | Description | Model | Serial Number |
|--------------|-------------|-------|---------------|
| /            | /           | /     | /             |

External I/O Cable

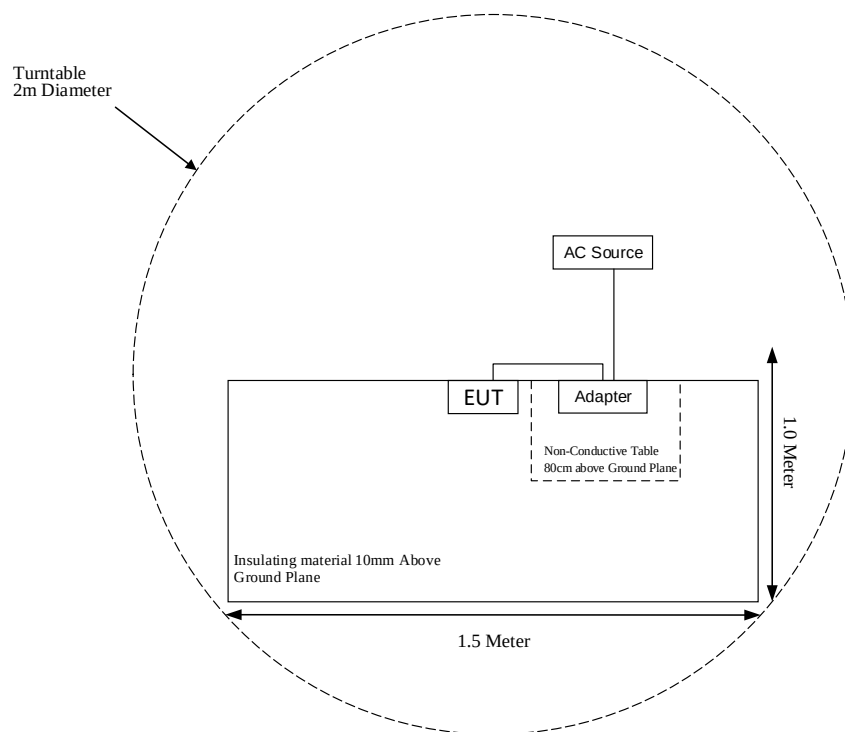
| Cable Description | Length (m) | From Port      | To Port |
|-------------------|------------|----------------|---------|
| Power Cable 1     | 1.0        | AC Source/LISN | Adapter |
| Power Cable 2     | 1.5        | Adapter        | EUT     |

Block Diagram of Test Setup

For Conducted Emissions:

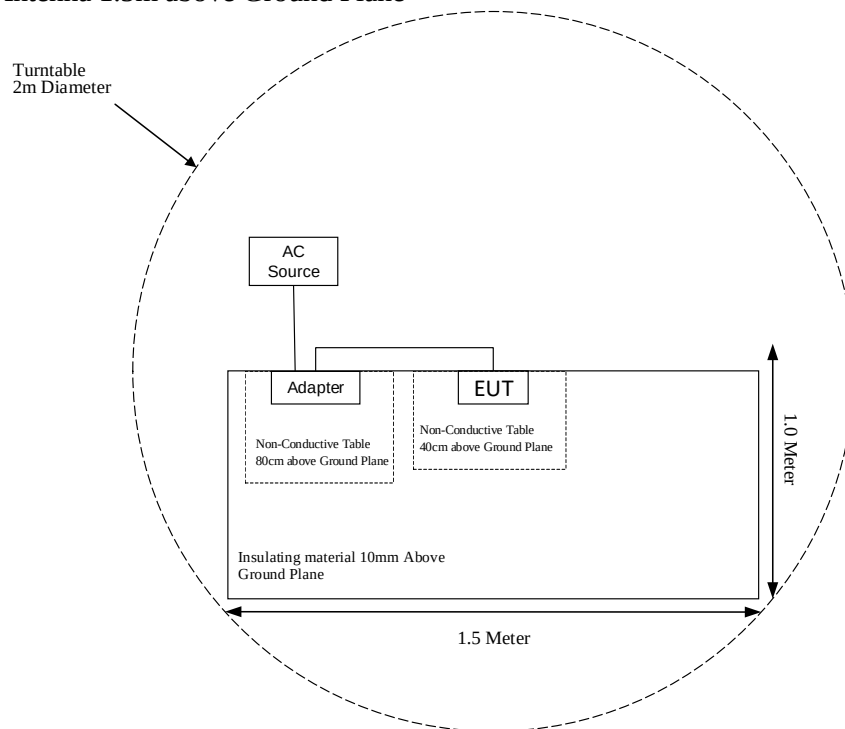


For Radiated Emissions(Below 1GHz):



For Radiated Emissions(Above 1GHz):

Note: the EUT Antenna 1.5m above Ground Plane



## TEST EQUIPMENT LIST

| Manufacturer                               | Description         | Model     | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------------------------|---------------------|-----------|---------------|------------------|----------------------|
| <b>Radiated Emission Test (Chamber #1)</b> |                     |           |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver   | ESCI      | 100195        | 2024-04-23       | 2025-04-22           |
| Sunol Sciences                             | Broadband Antenna   | JB3       | A090314-1     | 2023-11-11       | 2024-11-10           |
| ETS-LINDGREN                               | Loop Antenna        | 6512      | 108100        | 2023-11-09       | 2024-11-08           |
| Narda                                      | 6 dB Attenuator     | 773-6     | 10690812-2-1  | 2023-11-11       | 2024-11-10           |
| Sonoma Instrument                          | Pre-amplifier       | 310N      | 171205        | 2024-04-23       | 2025-04-22           |
| Rohde & Schwarz                            | Auto Test Software  | EMC32     | 100361        | N/A              | N/A                  |
| MICRO-COAX                                 | Coaxial Cable       | Cable-8   | 008           | 2024-04-23       | 2025-04-22           |
| MICRO-COAX                                 | Coaxial Cable       | Cable-9   | 009           | 2024-04-23       | 2025-04-22           |
| <b>Radiated Emission Test (Chamber #2)</b> |                     |           |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver   | ESU40     | 100207/040    | 2024-04-25       | 2025-04-24           |
| ETS-LINDGREN                               | Horn Antenna        | 3115      | 9311-4159     | 2023-12-02       | 2024-12-01           |
| ETS-LINDGREN                               | Horn Antenna        | 3116      | 2516          | 2023-12-08       | 2024-12-07           |
| A.H.Systems,inc                            | Amplifier           | PAM-0118P | 512           | 2024-04-25       | 2025-04-24           |
| MICRO-TRONICS                              | Band Reject Filter  | BRM50702  | G024          | 2024-04-23       | 2025-04-22           |
| Narda                                      | Attenuator          | 10dB      | 010           | 2024-04-23       | 2025-04-22           |
| SELECTOR                                   | Amplifier           | EM18G40G  | 60726         | 2024-04-25       | 2025-04-24           |
| Rohde & Schwarz                            | Auto test Software  | EMC32     | 100361        | N/A              | N/A                  |
| MICRO-COAX                                 | Coaxial Cable       | Cable-6   | 006           | 2024-04-25       | 2025-04-24           |
| MICRO-COAX                                 | Coaxial Cable       | Cable-11  | 011           | 2024-04-25       | 2025-04-24           |
| MICRO-COAX                                 | Coaxial Cable       | Cable-12  | 012           | 2024-04-25       | 2025-04-24           |
| <b>RF Conducted Test</b>                   |                     |           |               |                  |                      |
| Rohde & Schwarz                            | Spectrum Analyzer   | FSV40-N   | 103298        | 2024-04-24       | 2025-04-23           |
| Narda                                      | Attenuator          | 10dB      | 010           | 2024-04-23       | 2025-04-22           |
| XHFDZ                                      | RG178 Coaxial Cable | SMA-178   | XHF-1102      | Each time        | N/A                  |
| <b>Conducted Emission Test</b>             |                     |           |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver   | ESR       | 101746        | 2024-04-23       | 2025-04-22           |
| Rohde & Schwarz                            | LISN                | ENV216    | 101115        | 2024-04-23       | 2025-04-22           |
| Audix                                      | Test Software       | e3        | V9            | N/A              | N/A                  |
| Rohde & Schwarz                            | Pulse Limiter       | ESH3-Z2   | 0357.8810.54  | 2024-04-23       | 2025-04-22           |
| MICRO-COAX                                 | Coaxial Cable       | Cable-15  | 015           | 2024-04-23       | 2025-04-22           |

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

**SUMMARY OF TEST RESULTS**

| FCC Rules                    | Description of Test            | Result    |
|------------------------------|--------------------------------|-----------|
| § 1.1307 (b) (3) & §2.1093   | RF EXPOSURE                    | Compliant |
| §15.203                      | Antenna Requirement            | Compliant |
| §15.207 (a)                  | AC Line Conducted Emissions    | Compliant |
| §15.205, §15.209, §15.247(d) | Spurious Emissions             | Compliant |
| §15.247 (a)(2)               | 6 dB Emission Bandwidth        | Compliant |
| §15.247(b)(3)                | Maximum Conducted Output Power | Compliant |
| §15.247(d)                   | Band Edge                      | Compliant |
| §15.247(e)                   | Power Spectral Density         | Compliant |

## FCC §1.1307(b) & §2.1093 - RF EXPOSURE

### Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] [\sqrt{f(\text{GHz})}]$   
 $\leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

### Measurement Result

| Mode | Frequency Range (MHz) | Max Tune-up Conducted Power |      | Calculated Distance (mm) | Calculated Value | Threshold (1-g SAR) | SAR Test Exclusion |
|------|-----------------------|-----------------------------|------|--------------------------|------------------|---------------------|--------------------|
|      |                       | (dBm)                       | (mW) |                          |                  |                     |                    |
| BLE  | 2402-2480             | 6.0                         | 3.98 | 5.0                      | 1.23             | 3.0                 | Yes                |

**Result: So the standalone SAR evaluation is not necessary.**

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## **FCC §15.203 – ANTENNA REQUIREMENT**

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### **Applicable Standard**

According to FCC § 15.203, 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### **Antenna Connector Construction**

The EUT has a PCB antenna for BLE, and the antenna gain is 0.2 dBi, which is permanently attached to the unit, fulfill the requirement of this section. Please refer to the EUT photos.

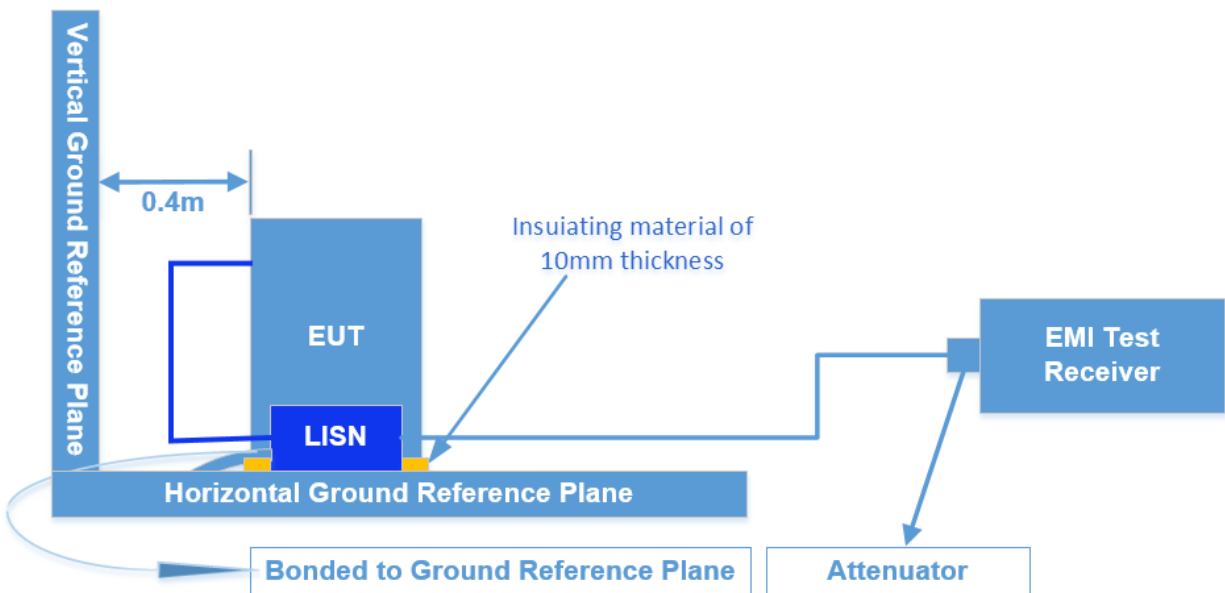
**Result:** Compliant.

## 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.

### 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 adapter 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 & Over Limit 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:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

**Test Results Summary**

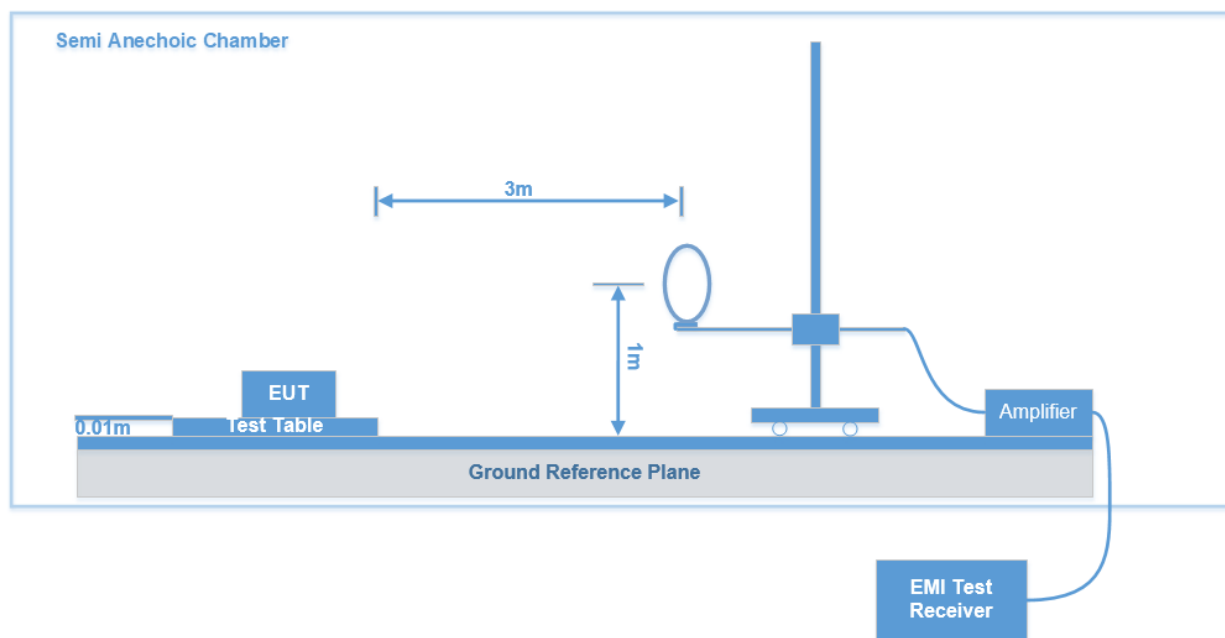
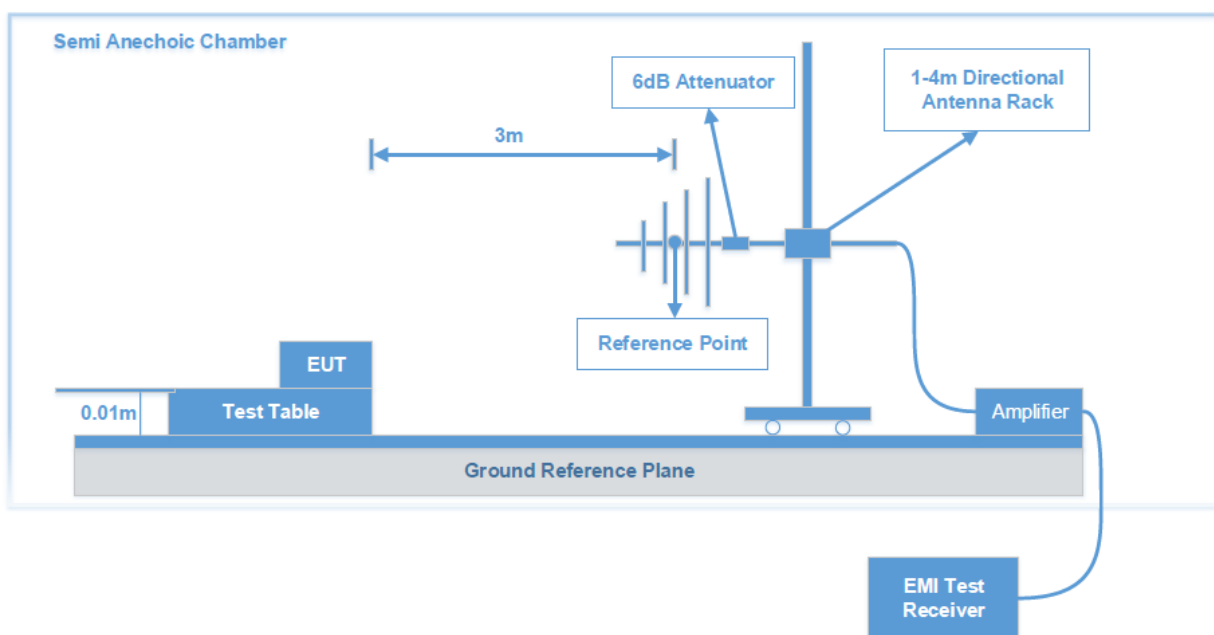
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

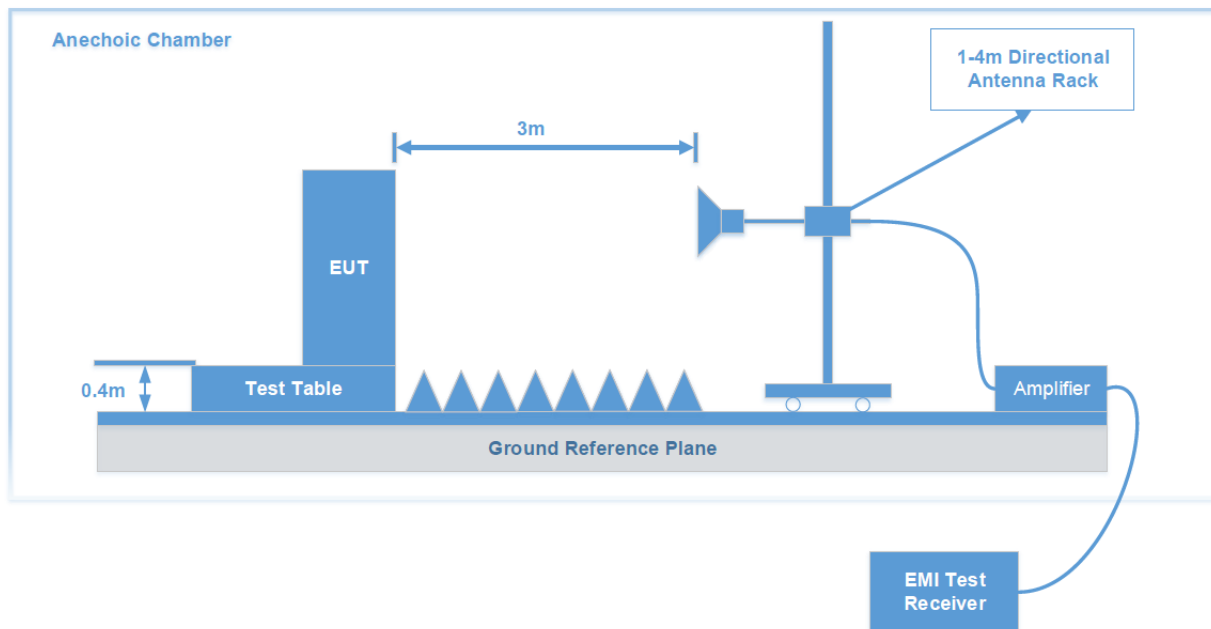
**Test Data: See Appendix**



**FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS****Applicable Standard**

FCC §15.247 (d); §15.209; §15.205;

**Test System Setup****9 kHz - 30 MHz:****30 MHz - 1 GHz:**

**Above 1 GHz:**

Note: the EUT Antenna 1.5m above Ground Plane

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

**EMI Test Receiver Setup**

The system was investigated from 9 kHz to 25 GHz.

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

| Frequency Range   | RBW     | VBW     | IF B/W  | Measurement |
|-------------------|---------|---------|---------|-------------|
| 9 kHz - 150 kHz   | 200 Hz  | 1 kHz   | 200 Hz  | QP/Average  |
| 150 kHz - 30 MHz  | 9 kHz   | 30 kHz  | 9 kHz   | QP/ Average |
| 30 MHz - 1000 MHz | 100 kHz | 300 kHz | /       | Peak        |
|                   | /       | /       | 120 kHz | QP          |
| Above 1GHz        | 1MHz    | 3 MHz   | /       | Peak        |
|                   | 1MHz    | 3 MHz   | /       | Average     |

**Test Procedure**

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

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

**Corrected Amplitude & Margin Calculation**

The Corrected Amplitude 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:

Corrected Amplitude (dB $\mu$ V/m) = Meter Reading (dB $\mu$ V) + Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

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:

Margin (dB) = Limit (dB $\mu$ V/m) – Corrected Amplitude (dB $\mu$ V/m)

Note: The QuasiPeak (dB $\mu$ V/m), MaxPeak (dB $\mu$ V/m), Average (dB $\mu$ V/m) which shown in the data table are all Corrected Amplitude.

**Test Results Summary**

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247.

**Test Data: See Appendix**

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**FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH**

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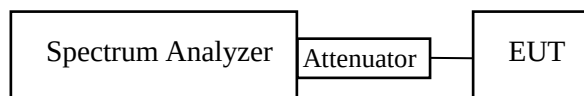
**Applicable Standard**

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

**Test Procedure**

According to ANSI C63.10-2013 sub-clause 11.8.1

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3 * \text{RBW}$ .
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



**Test Data: See Appendix**

## **FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER**

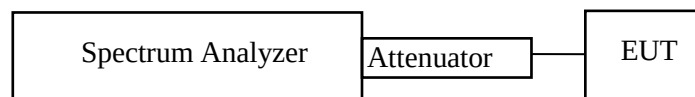
### **Applicable Standard**

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

### **Test Procedure**

According to ANSI C63.10-2013 sub-clause 11.9.1.1

1. Set the RBW  $\geq$  DTS bandwidth.
2. Set VBW  $\geq 3 * \text{RBW}$ .
3. Set span  $\geq 3 * \text{RBW}$
4. Sweep time = auto couple.
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use peak marker function to determine the peak amplitude level.



**Test Data: See Appendix**

## FCC §15.247(d) – BAND EDGE

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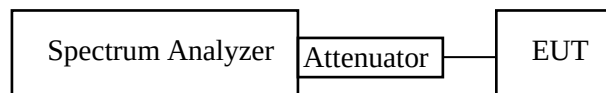
### Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### Test Procedure

According to ANSI C63.10-2013 sub-clause 6.10.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.



**Test Data: See Appendix**

## FCC §15.247(e) - POWER SPECTRAL DENSITY

### Applicable Standard

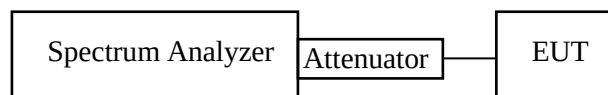
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### Test Procedure

According to ANSI C63.10-2013 sub-clause 11.10.2

The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

1. Set the RBW to:  $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
2. Set the VBW  $\geq 3 * \text{RBW}$ .
3. Set the span to 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level within the RBW.
9. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.



**Test Data: See Appendix**

## **EUT PHOTOGRAPHS**

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Please refer to the attachment EXHIBIT A-EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B\_EUT INTERNAL PHOTOGRAPHS.



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## **TEST SETUP PHOTOGRAPHS**

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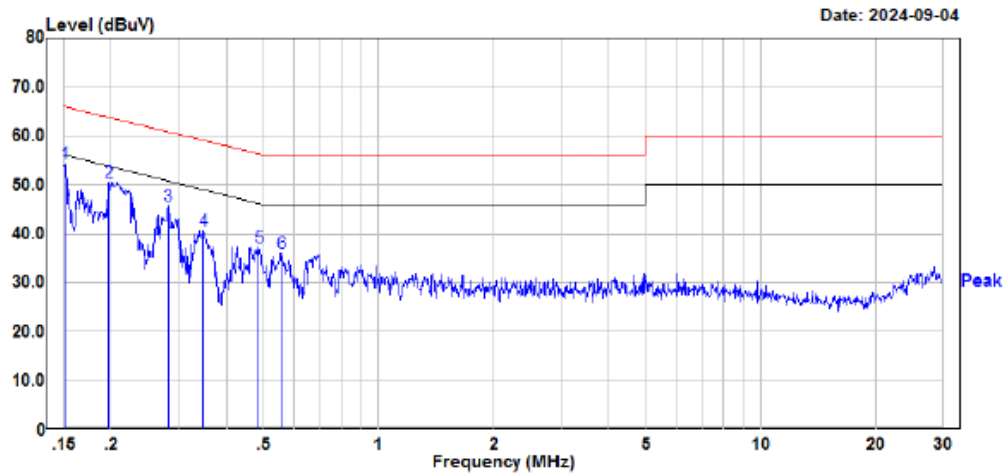
Please refer to the attachment EXHIBIT C-TEST SETUP PHOTOGRAPHS.

APPENDIX - TEST DATA

Environmental Conditions & Test Information

| Test Item:         | AC LINE<br>CONDUCTED<br>EMISSIONS | SPURIOUS EMISSIONS          |                |                 | DUTY CYCLE |
|--------------------|-----------------------------------|-----------------------------|----------------|-----------------|------------|
|                    |                                   | 9kHz - 1GHz                 | 1 GHz - 18 GHz | 18 GHz - 25 GHz |            |
| Test Date:         | 2024-09-04                        | 2024-09-07 to<br>2024-09-08 | 2024-09-08     | 2024-09-24      | 2024-09-13 |
| Temperature:       | 27.1 °C                           | 25.4 °C - 25 °C             | 25 °C          | 25.8 °C         | 24 °C      |
| Relative Humidity: | 56 %                              | 40 % - 44 %                 | 40 %           | 50 %            | 52 %       |
| ATM Pressure:      | 100.9 kPa                         | 100.9 kPa -<br>101.2 kPa    | 100.5 kPa      | 100.3 kPa       | 101.0 kPa  |
| Test Result:       | Pass                              | Pass                        | Pass           | Pass            | /          |
| Test Engineer:     | Leah Li                           | Grace Luo                   | Klein Zhu      | Hugh Wu         | Neil Zhou  |

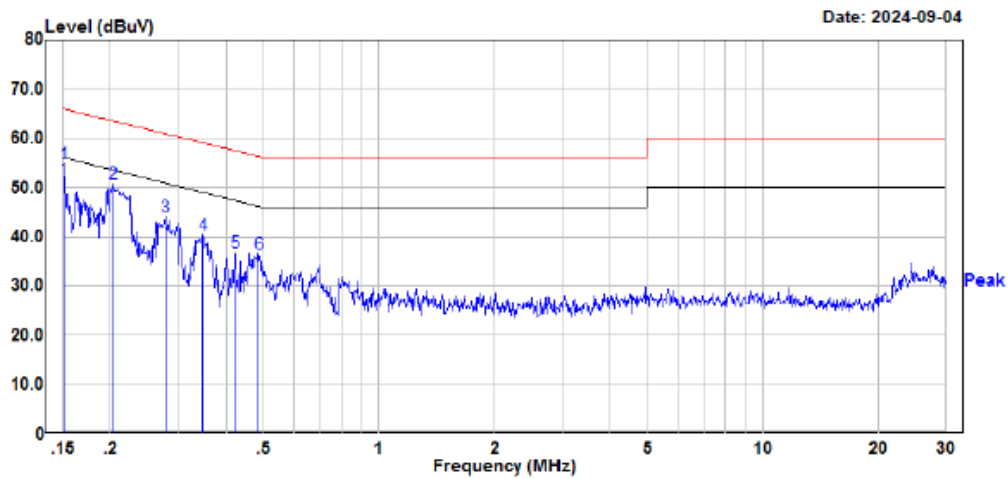
| Test Item:         | 6 DB EMISSION<br>BANDWIDTH | MAXIMUM<br>CONDUCTED<br>OUTPUT POWER | BAND EDGE                   | POWER<br>SPECTRAL<br>DENSITY |
|--------------------|----------------------------|--------------------------------------|-----------------------------|------------------------------|
| Test Date:         | 2024-09-13                 | 2024-09-13                           | 2024-09-13 to<br>2024-09-26 | 2024-09-13                   |
| Temperature:       | 25.6 °C                    | 25.6 °C                              | 23 °C - 25.6 °C             | 25.6 °C                      |
| Relative Humidity: | 49 %                       | 49 %                                 | 45 % - 49 %                 | 49 %                         |
| ATM Pressure:      | 100.6 kPa                  | 100.6 kPa                            | 100.6 kPa – 101.0kPa        | 100.6 kPa                    |
| Test Result:       | Pass                       | Pass                                 | Pass                        | Pass                         |
| Test Engineer:     | Neil Zhou                  | Neil Zhou                            | Neil Zhou                   | Neil Zhou                    |

**AC LINE CONDUCTED EMISSIONS***EUT operation mode: Transmitting in BLE (1 Mbps) high channel (maximum output power)***AC 120V/60 Hz, Line**

Site : CE  
Condition : limit\FCC PART 15.207  
: DET:Peak  
Project No. : RKSA240822001  
Model : N65i-U  
Phase : L  
Voltage : 120V/60Hz  
Mode : BLE 1M  
Test Equipment : ENV216,ESR  
Temperature : 27.1℃  
Humidity : 56%  
Atmospheric pressure: 100.9kPa  
Test Engineer : Leah Li

|   | Read  |       | Limit  | Over  |       |
|---|-------|-------|--------|-------|-------|
|   | Freq  | Level | Factor | Level | Line  |
|   | MHz   | dBuV  | dB     | dBuV  | dBuV  |
| 1 | 0.152 | 34.34 | 20.12  | 54.46 | 65.92 |
| 2 | 0.197 | 30.41 | 20.11  | 50.52 | 63.72 |
| 3 | 0.282 | 25.63 | 20.16  | 45.79 | 60.74 |
| 4 | 0.348 | 20.50 | 20.19  | 40.69 | 59.00 |
| 5 | 0.486 | 17.17 | 20.16  | 37.33 | 56.23 |
| 6 | 0.556 | 15.99 | 20.11  | 36.10 | 56.00 |

## AC 120V/60 Hz, Neutral

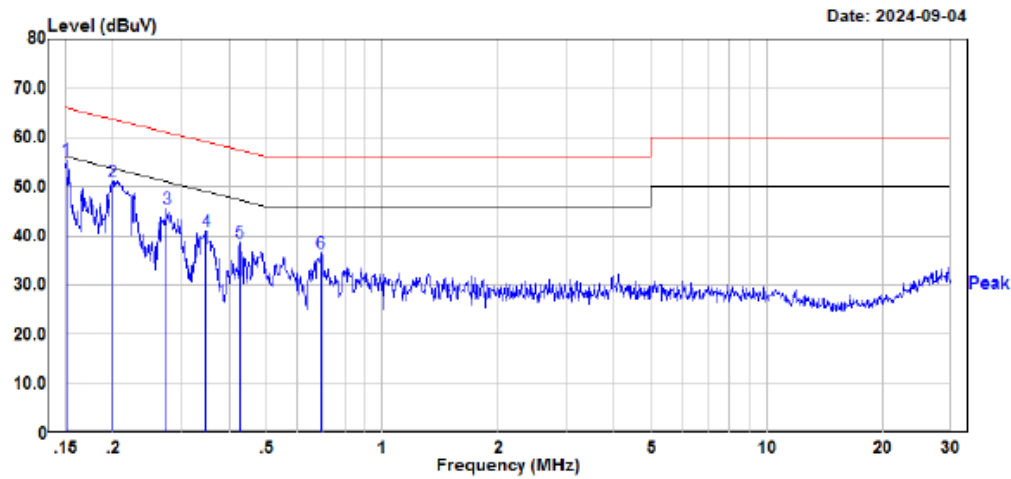


Site : CE  
Condition : limit\FCC PART 15.207  
: DET:Peak  
Project No. : RKSA240822001  
Model : N65i-U  
Phase : N  
Voltage : 120V/60Hz  
Mode : BLE 1M  
Test Equipment : ENV216,ESR  
Temperature : 27.1℃  
Humidity : 56%  
Atmospheric pressure: 100.9kPa  
Test Engineer : Leah Li

|   | Read  |       | Limit  | Over  |       |              |
|---|-------|-------|--------|-------|-------|--------------|
|   | Freq  | Level | Factor | Level | Line  | Limit Remark |
|   | MHz   | dBuV  | dB     | dBuV  | dBuV  | dB           |
| 1 | 0.152 | 34.72 | 20.12  | 54.84 | 65.92 | -11.08 Peak  |
| 2 | 0.203 | 30.63 | 20.11  | 50.74 | 63.47 | -12.73 Peak  |
| 3 | 0.278 | 23.77 | 20.15  | 43.92 | 60.87 | -16.95 Peak  |
| 4 | 0.348 | 20.21 | 20.19  | 40.40 | 59.00 | -18.60 Peak  |
| 5 | 0.423 | 16.54 | 20.21  | 36.75 | 57.39 | -20.64 Peak  |
| 6 | 0.486 | 16.37 | 20.16  | 36.53 | 56.23 | -19.70 Peak  |

EUT operation mode: Transmitting in BLE (2 Mbps) middle channel (maximum output power)

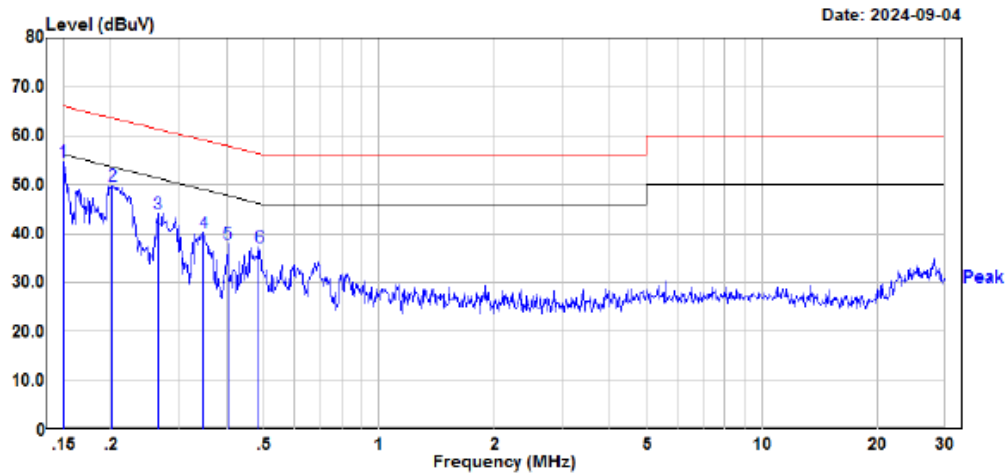
AC 120V/60 Hz, Line



Site : CE  
Condition : limit\FCC PART 15.207  
: DET:Peak  
Project No. : RKSA240822001  
Model : N65i-U  
Phase : L  
Voltage : 120V/60Hz  
Mode : BLE 2M  
Test Equipment : ENV216,ESR  
Temperature : 27.1℃  
Humidity : 56%  
Atmospheric pressure: 100.9kPa  
Test Engineer : Leah Li

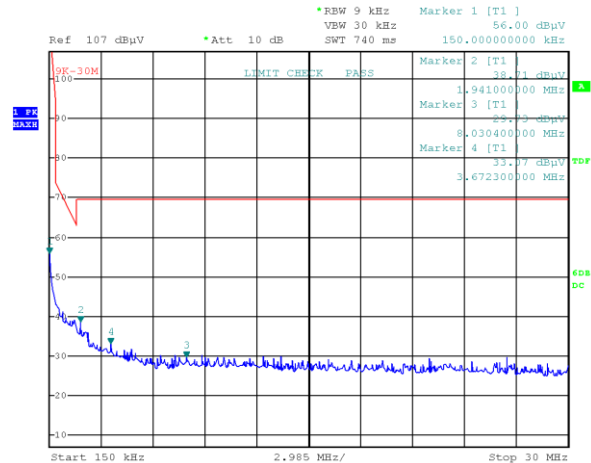
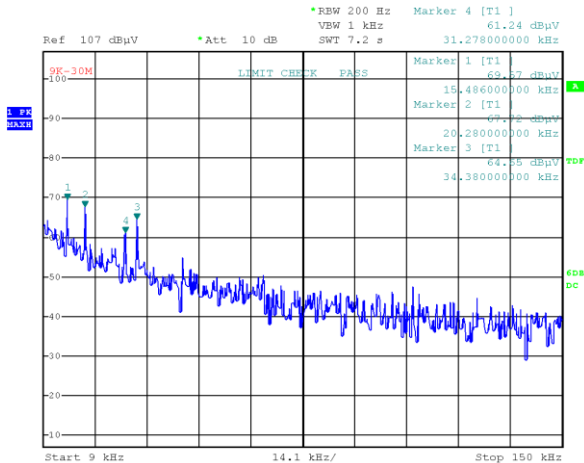
|   | Read  |       |        | Limit | Over  |              |
|---|-------|-------|--------|-------|-------|--------------|
|   | Freq  | Level | Factor | Level | Line  | Limit Remark |
|   | MHz   | dBuV  | dB     | dBuV  | dBuV  | dB           |
| 1 | 0.151 | 35.26 | 20.12  | 55.38 | 65.96 | -10.58 Peak  |
| 2 | 0.198 | 30.83 | 20.11  | 50.94 | 63.68 | -12.74 Peak  |
| 3 | 0.276 | 25.25 | 20.15  | 45.40 | 60.95 | -15.55 Peak  |
| 4 | 0.348 | 20.78 | 20.19  | 40.97 | 59.00 | -18.03 Peak  |
| 5 | 0.427 | 18.35 | 20.22  | 38.57 | 57.31 | -18.74 Peak  |
| 6 | 0.693 | 16.37 | 20.07  | 36.44 | 56.00 | -19.56 Peak  |

## AC 120V/60 Hz, Neutral



Site : CE  
Condition : limit\FCC PART 15.207  
: DET:Peak  
Project No. : RKSA240822001  
Model : N65i-U  
Phase : N  
Voltage : 120V/60Hz  
Mode : BLE 2M  
Test Equipment : ENV216,ESR  
Temperature : 27.1℃  
Humidity : 56%  
Atmospheric pressure: 100.9kPa  
Test Engineer : Leah Li

|   | Freq  | Read Level | Factor | Level | Limit Line | Over Limit | Remark |
|---|-------|------------|--------|-------|------------|------------|--------|
|   | MHz   | dBuV       | dB     | dBuV  | dBuV       | dB         |        |
| 1 | 0.150 | 34.42      | 20.12  | 54.54 | 66.00      | -11.46     | Peak   |
| 2 | 0.201 | 29.60      | 20.11  | 49.71 | 63.56      | -13.85     | Peak   |
| 3 | 0.265 | 23.96      | 20.15  | 44.11 | 61.28      | -17.17     | Peak   |
| 4 | 0.348 | 19.95      | 20.19  | 40.14 | 59.00      | -18.86     | Peak   |
| 5 | 0.402 | 17.78      | 20.20  | 37.98 | 57.80      | -19.82     | Peak   |
| 6 | 0.486 | 17.05      | 20.16  | 37.21 | 56.23      | -19.02     | Peak   |

**SPURIOUS EMISSIONS****Test Result:** Compliant.*EUT operation mode: Transmitting**After pre-scan in the X and Y axes of orientation, the worst case in the X axes of orientation is below:***9 kHz-30 MHz:** (Transmitting in maximum output power BLE (2 Mbps) middle channel)Project No. RKSA240822001  
Date: 8.SEP.2024 01:54:57

Tester: Grace Luo

Project No. RKSA240822001  
Date: 8.SEP.2024 01:12:05

Tester: Grace Luo

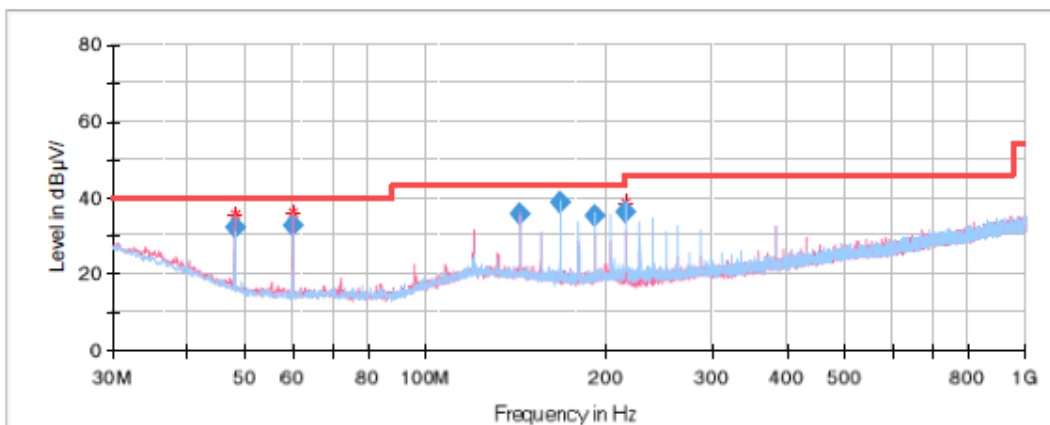
| Frequency | Corrected Amplitude | Detector   | Corrected Factor | Limit          | Limit         | Margin |
|-----------|---------------------|------------|------------------|----------------|---------------|--------|
| (MHz)     | (dBμV/m) @3m        | PK/QP/Ave. | (dB/m)           | (dBμV/m @ 30m) | (dBμV/m @ 3m) | (dB)   |
| 0.15000   | 56.00               | PK         | 50.90            | 64.08          | 104.08        | 48.08  |
| 1.94100   | 38.71               | PK         | 13.63            | 29.54          | 69.54         | 30.83  |
| 8.03040   | 29.73               | PK         | 6.39             | 29.54          | 69.54         | 39.81  |
| 3.67230   | 33.07               | PK         | 16.12            | 29.54          | 69.54         | 36.47  |

**BLE (1 Mbps)**  
**30 MHz - 1 GHz:**

**Low Channel: 2402 MHz**

### Common Information

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Project No:          | RKSA240822001                                       |
| EUT Model:           | N65i-U                                              |
| Test Mode:           | Transmitting in BLE-1M mode low channel             |
| Standard:            | FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247 |
| Test Equipment:      | ESCI, JB3, 310N                                     |
| Temperature:         | 25.4°C                                              |
| Humidity:            | 44%                                                 |
| Barometric Pressure: | 101.2kPa                                            |
| Test Engineer:       | Grace Luo                                           |
| Test Date:           | 2024/9/7                                            |



### Final Result

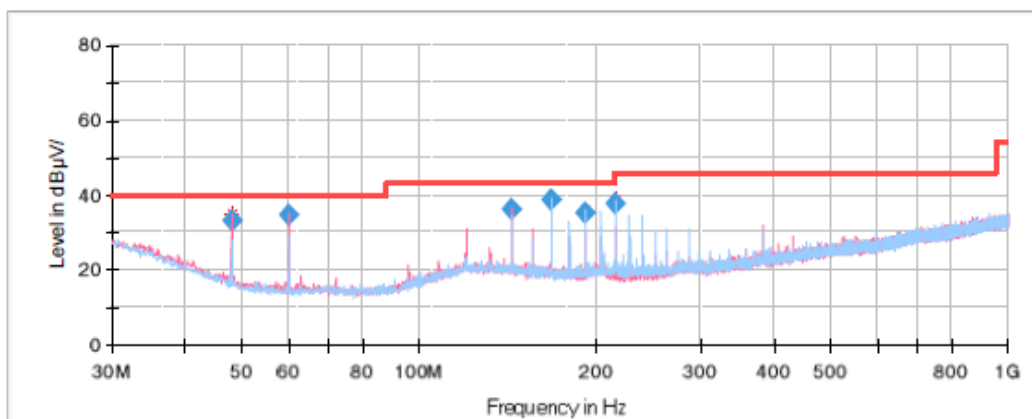
| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 47.998100       | 32.32               | 40.00           | 7.68        | V   | -15.7        |
| 60.012050       | 32.66               | 40.00           | 7.34        | V   | -17.6        |
| 143.544300      | 35.72               | 43.50           | 7.78        | V   | -11.5        |
| 167.539100      | 38.68               | 43.50           | 4.82        | H   | -12.5        |
| 191.332700      | 35.21               | 43.50           | 8.29        | H   | -12.6        |
| 215.495600      | 36.40               | 43.50           | 7.10        | H   | -13.2        |



## Middle Channel: 2440 MHz

## Common Information

Project No: RKSA240822001  
EUT Model: N65i-U  
Test Mode: Transmitting in BLE-1M mode middle channel  
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247  
Test Equipment: ESCI, JB3, 310N  
Temperature: 25.4°C  
Humidity: 44%  
Barometric Pressure: 101.2kPa  
Test Engineer: Grace Luo  
Test Date: 2024/9/7

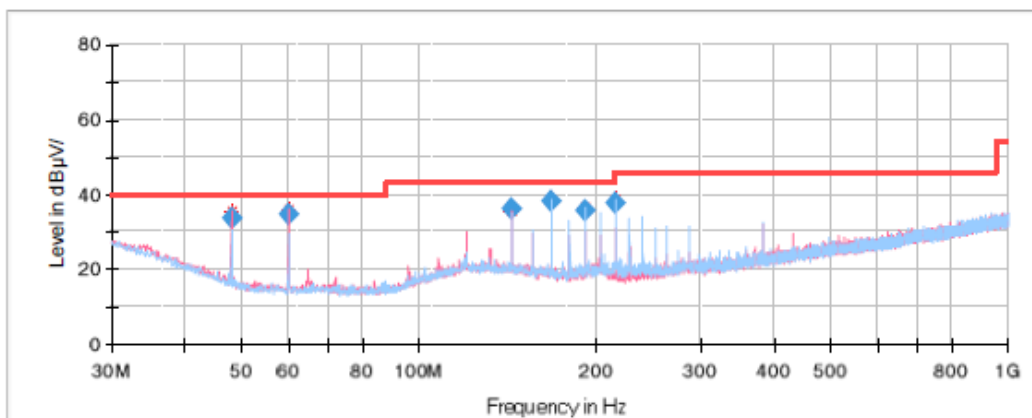


## Final Result

| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 48.005000       | 33.16               | 40.00           | 6.84        | V   | -15.7        |
| 59.991350       | 34.68               | 40.00           | 5.32        | V   | -17.6        |
| 143.513400      | 36.13               | 43.50           | 7.37        | V   | -11.5        |
| 167.467450      | 38.62               | 43.50           | 4.88        | H   | -12.5        |
| 191.347100      | 34.97               | 43.50           | 8.53        | H   | -12.6        |
| 215.396300      | 37.67               | 43.50           | 5.83        | H   | -13.2        |

**High Channel:2480 MHz****Common Information**

Project No: RKSA240822001  
EUT Model: N65i-U  
Test Mode: Transmitting in BLE-1M mode high channel  
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247  
Test Equipment: ESCI, JB3, 310N  
Temperature: 25.4°C  
Humidity: 44%  
Barometric Pressure: 101.2kPa  
Test Engineer: Grace Luo  
Test Date: 2024/9/7

**Final Result**

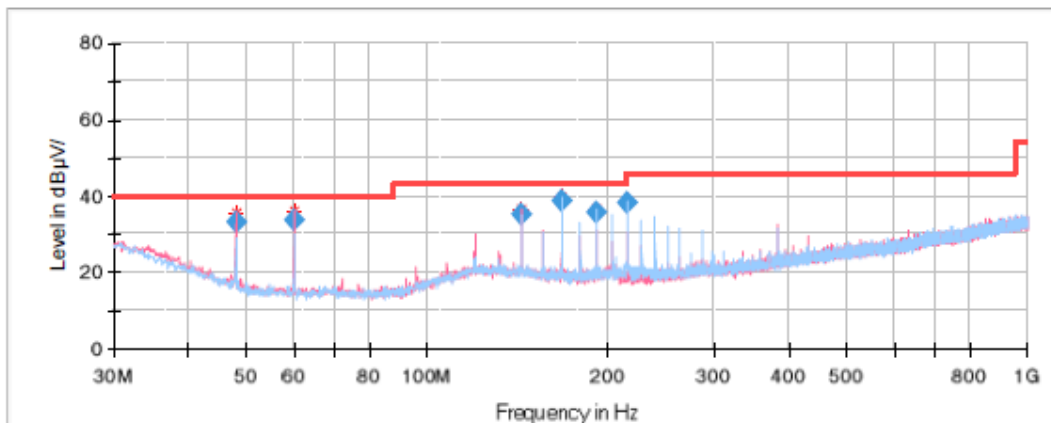
| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 48.003500       | 33.50               | 40.00           | 6.50        | V   | -15.7        |
| 59.997650       | 34.84               | 40.00           | 5.16        | V   | -17.6        |
| 143.594700      | 36.32               | 43.50           | 7.18        | V   | -11.5        |
| 167.433550      | 38.34               | 43.50           | 5.16        | H   | -12.5        |
| 191.364850      | 35.74               | 43.50           | 7.76        | H   | -12.6        |
| 215.253450      | 37.61               | 43.50           | 5.89        | H   | -13.2        |

**BLE (2 Mbps)**  
**30 MHz - 1 GHz:**

**Low Channel: 2402 MHz**

### Common Information

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Project No:          | RKSA240822001                                       |
| EUT Model:           | N65i-U                                              |
| Test Mode:           | Transmitting in BLE-2M mode low channel             |
| Standard:            | FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247 |
| Test Equipment:      | ESCI, JB3, 310N                                     |
| Temperature:         | 25.4°C                                              |
| Humidity:            | 44%                                                 |
| Barometric Pressure: | 101.2kPa                                            |
| Test Engineer:       | Grace Luo                                           |
| Test Date:           | 2024/9/7                                            |



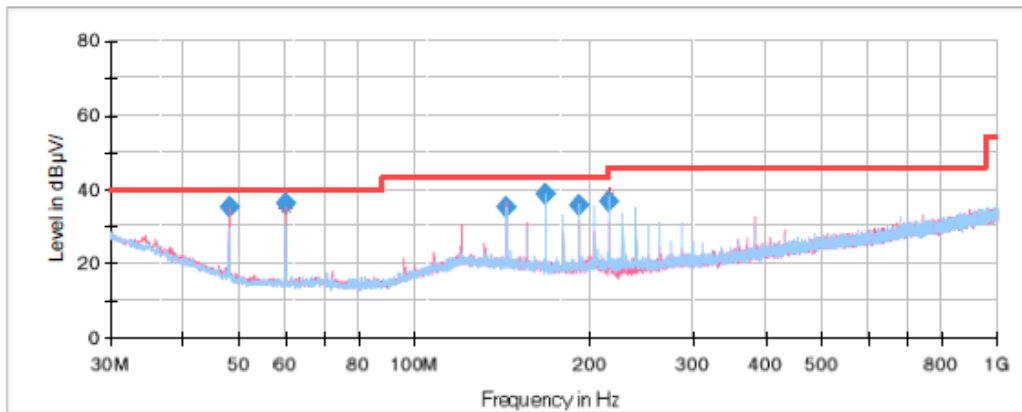
### Final Result

| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 47.998400       | 33.38               | 40.00           | 6.62        | V   | -15.7        |
| 59.992550       | 33.85               | 40.00           | 6.15        | V   | -17.6        |
| 143.472300      | 35.46               | 43.50           | 8.04        | V   | -11.5        |
| 167.434150      | 38.82               | 43.50           | 4.68        | H   | -12.5        |
| 191.368450      | 35.70               | 43.50           | 7.80        | H   | -12.6        |
| 215.260450      | 38.04               | 43.50           | 5.46        | H   | -13.2        |

## Middle Channel: 2440 MHz

## Common Information

Project No: RKSA240822001  
EUT Model: N65i-U  
Test Mode: Transmitting in BLE-2M mode middle channel  
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247  
Test Equipment: ESCI, JB3, 310N  
Temperature: 25.4°C  
Humidity: 44%  
Barometric Pressure: 101.2kPa  
Test Engineer: Grace Luo  
Test Date: 2024/9/7

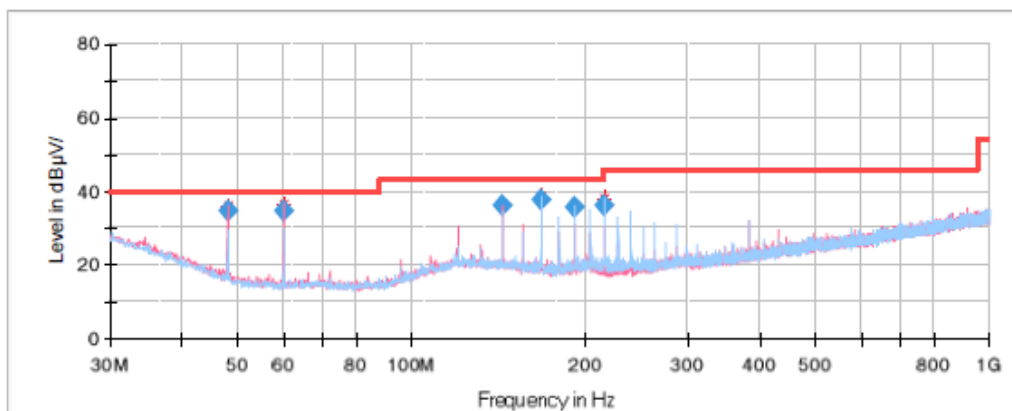


## Final Result

| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 47.995100       | 35.20               | 40.00           | 4.80        | V   | -15.7        |
| 60.012350       | 36.13               | 40.00           | 3.87        | V   | -17.6        |
| 143.583600      | 35.30               | 43.50           | 8.20        | V   | -11.5        |
| 167.440850      | 38.81               | 43.50           | 4.69        | H   | -12.5        |
| 191.390050      | 35.63               | 43.50           | 7.87        | H   | -12.6        |
| 215.335400      | 36.84               | 43.50           | 6.66        | H   | -13.2        |

**High Channel:2480 MHz****Common Information**

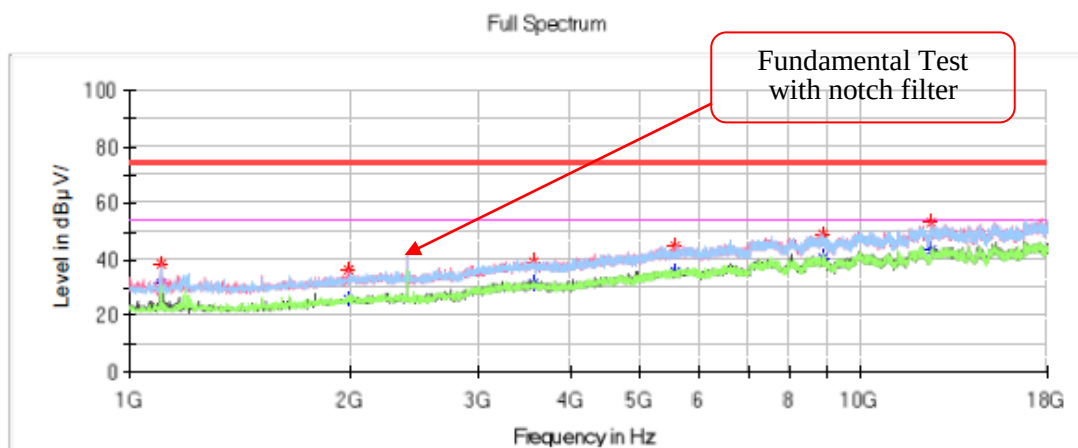
Project No: RKSA240822001  
EUT Model: N65i-U  
Test Mode: Transmitting in BLE-2M mode high channel  
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247  
Test Equipment: ESCI, JB3, 310N  
Temperature: 25.4°C  
Humidity: 44%  
Barometric Pressure: 101.2kPa  
Test Engineer: Grace Luo  
Test Date: 2024/9/7

**Final Result**

| Frequency (MHz) | QuasiPeak (dBμ V/m) | Limit (dBμ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|---------------------|-----------------|-------------|-----|--------------|
| 47.992100       | 34.89               | 40.00           | 5.11        | V   | -15.7        |
| 60.006350       | 34.64               | 40.00           | 5.36        | V   | -17.6        |
| 143.496350      | 36.37               | 43.50           | 7.13        | V   | -11.5        |
| 167.338750      | 37.87               | 43.50           | 5.63        | H   | -12.5        |
| 191.482450      | 35.54               | 43.50           | 7.96        | H   | -12.5        |
| 215.437150      | 36.30               | 43.50           | 7.20        | H   | -13.2        |

**BLE (1 Mbps)  
1 GHz-18 GHz:****Low Channel: 2402 MHz****Common Information**

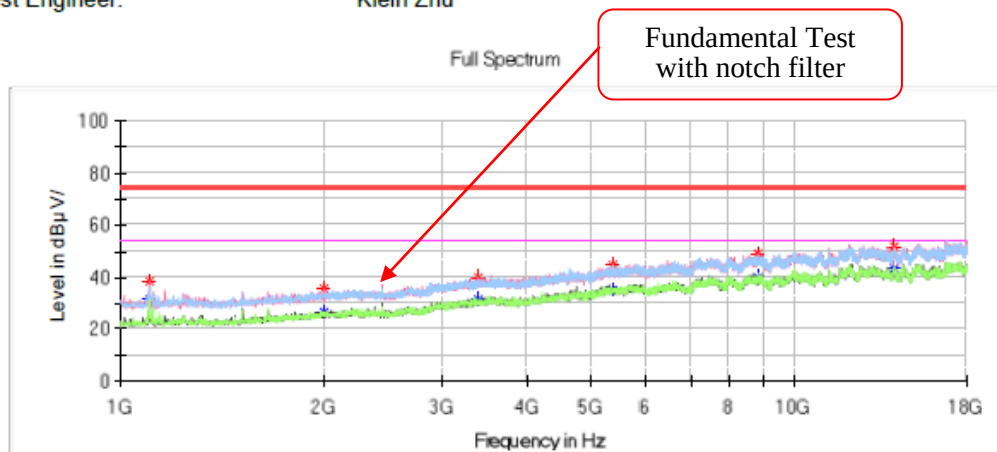
|                |                                                   |
|----------------|---------------------------------------------------|
| Project No.:   | RKSA240822001                                     |
| Test Mode:     | BLE 1M                                            |
| Standard:      | FCC Part 15.247& FCC Part 15.205& FCC Part 15.209 |
| Test Engineer: | Klein Zhu                                         |

**Critical\_Freqs**

| Frequency (MHz) | MaxPeak (dB µV/m) | Average (dB µV/m) | Limit (dB µV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|-------------------|-------------------|-----------------|-------------|-----|--------------|
| 1102.000000     | 38.22             | ---               | 74.00           | 35.78       | V   | -15.3        |
| 1102.000000     | ---               | 31.58             | 54.00           | 22.42       | V   | -15.3        |
| 1989.400000     | 36.14             | ---               | 74.00           | 37.86       | V   | -11.8        |
| 1989.400000     | ---               | 26.06             | 54.00           | 27.94       | V   | -11.8        |
| 3556.800000     | 39.49             | ---               | 74.00           | 34.51       | H   | -6.3         |
| 3556.800000     | ---               | 31.52             | 54.00           | 22.48       | H   | -6.3         |
| 5557.700000     | ---               | 35.58             | 54.00           | 18.42       | V   | -0.3         |
| 5557.700000     | 44.66             | ---               | 74.00           | 29.34       | V   | -0.3         |
| 8865.900000     | ---               | 40.21             | 54.00           | 13.79       | V   | 5.4          |
| 8865.900000     | 48.67             | ---               | 74.00           | 25.33       | V   | 5.4          |
| 12512.400000    | ---               | 43.52             | 54.00           | 10.48       | V   | 9.7          |
| 12512.400000    | 52.94             | ---               | 74.00           | 21.06       | V   | 9.7          |

**Middle Channel: 2440 MHz****Common Information**

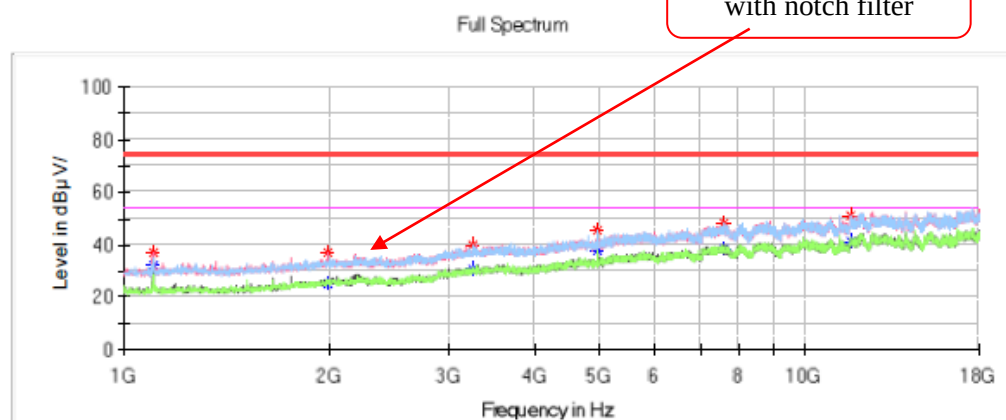
Project No.: RKSA240822001  
 Test Mode: BLE 1M  
 Standard: FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209  
 Test Engineer: Klein Zhu

**Critical Freqs**

| Frequency (MHz) | MaxPeak (dB µV/m) | Average (dB µV/m) | Limit (dB µV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|-------------------|-------------------|-----------------|-------------|-----|--------------|
| 1102.000000     | ---               | 31.15             | 54.00           | 22.85       | V   | -15.3        |
| 1102.000000     | 38.60             | ---               | 74.00           | 35.40       | V   | -15.3        |
| 2001.300000     | ---               | 26.32             | 54.00           | 27.68       | H   | -11.7        |
| 2001.300000     | 35.71             | ---               | 74.00           | 38.29       | H   | -11.7        |
| 3398.700000     | ---               | 31.13             | 54.00           | 22.87       | V   | -6.8         |
| 3398.700000     | 39.80             | ---               | 74.00           | 34.20       | V   | -6.8         |
| 5382.600000     | ---               | 35.20             | 54.00           | 18.80       | H   | -0.8         |
| 5382.600000     | 44.49             | ---               | 74.00           | 29.51       | H   | -0.8         |
| 8809.800000     | ---               | 39.71             | 54.00           | 14.29       | V   | 5.4          |
| 8809.800000     | 48.98             | ---               | 74.00           | 25.02       | V   | 5.4          |
| 14049.200000    | ---               | 43.23             | 54.00           | 10.77       | V   | 9.8          |
| 14049.200000    | 51.82             | ---               | 74.00           | 22.18       | V   | 9.8          |

**High Channel: 2480 MHz****Common Information**

Project No.: RKSA240822001  
Test Mode: BLE 1M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu

**Critical Freqs**

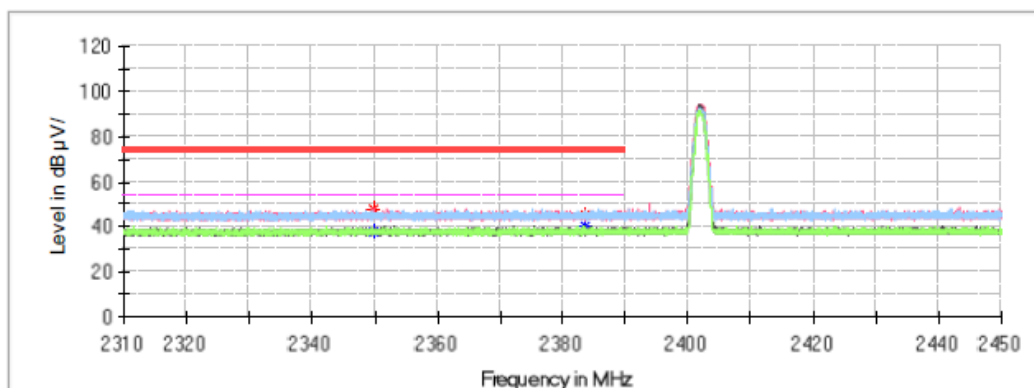
| Frequency (MHz) | MaxPeak (dB µ V/m) | Average (dB µ V/m) | Limit (dB µ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|--------------------|--------------------|------------------|-------------|-----|--------------|
| 1102.000000     | ---                | 31.89              | 54.00            | 22.11       | V   | -15.3        |
| 1102.000000     | 37.30              | ---                | 74.00            | 36.70       | V   | -15.3        |
| 1989.400000     | ---                | 25.44              | 54.00            | 28.56       | V   | -11.8        |
| 1989.400000     | 36.74              | ---                | 74.00            | 37.26       | V   | -11.8        |
| 3242.300000     | ---                | 30.43              | 54.00            | 23.57       | H   | -7.4         |
| 3242.300000     | 39.71              | ---                | 74.00            | 34.29       | H   | -7.4         |
| 4959.300000     | ---                | 37.64              | 54.00            | 16.36       | H   | -2.6         |
| 4959.300000     | 45.56              | ---                | 74.00            | 28.44       | H   | -2.6         |
| 7606.200000     | ---                | 38.24              | 54.00            | 15.76       | H   | 3.9          |
| 7606.200000     | 48.02              | ---                | 74.00            | 25.98       | H   | 3.9          |
| 11696.400000    | ---                | 41.22              | 54.00            | 12.78       | H   | 8.9          |
| 11696.400000    | 50.99              | ---                | 74.00            | 23.01       | H   | 8.9          |



**Restricted Bands Emission:****Left Side****Common Information**

Project No.: RKSA240822001  
Test Mode: BLE 1M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu

Full Spectrum

**Critical Freqs**

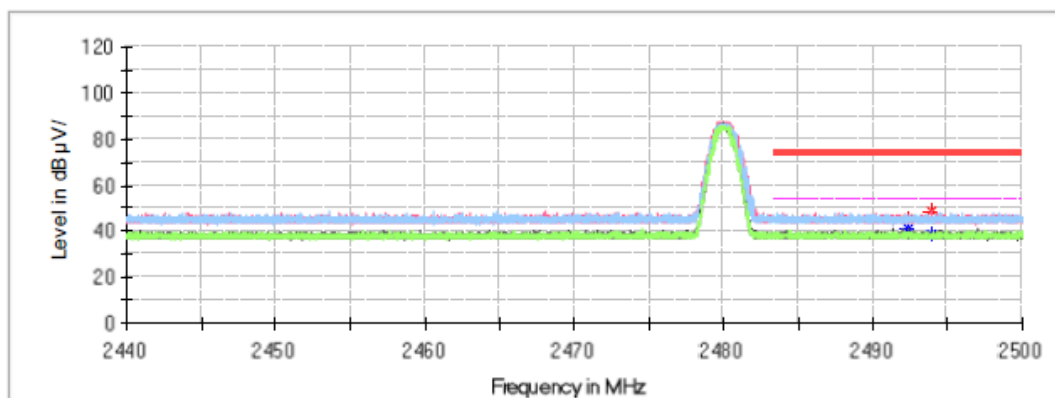
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2349.956000     | 47.89                  | ---                    | 74.00                | 26.11       | V   | -0.7         |
| 2349.956000     | ---                    | 37.52                  | 54.00                | 16.48       | V   | -0.7         |
| 2383.682000     | 45.16                  | ---                    | 74.00                | 28.84       | V   | -0.6         |
| 2383.682000     | ---                    | 40.13                  | 54.00                | 13.87       | V   | -0.6         |

## Right Side

## Common Information

Project No.: RKSA240822001  
Test Mode: BLE 1M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu

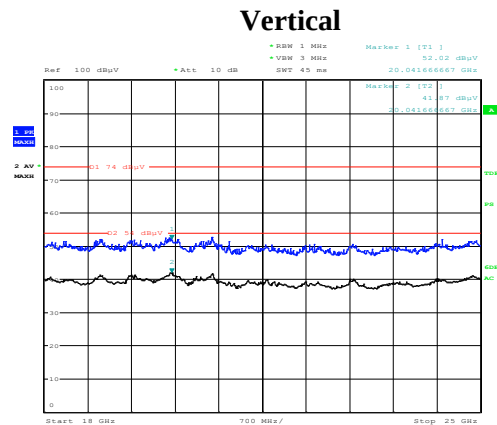
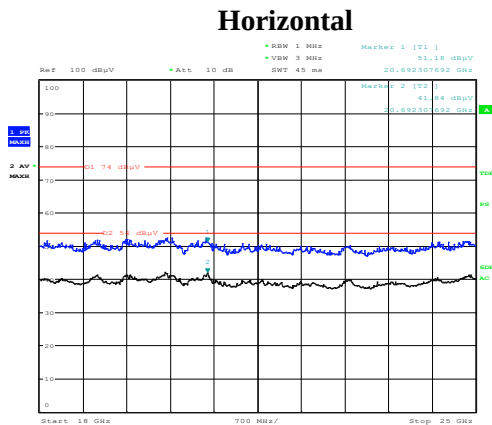
Full Spectrum



## Critical Freqs

| Frequency (MHz) | MaxPeak (dB μ V/m) | Average (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|--------------------|--------------------|------------------|-------------|-----|--------------|
| 2492.356000     | ---                | 40.96              | 54.00            | 13.04       | H   | -0.2         |
| 2492.356000     | 45.44              | ---                | 74.00            | 28.56       | H   | -0.2         |
| 2493.964000     | ---                | 38.53              | 54.00            | 15.47       | V   | -0.2         |
| 2493.964000     | 48.42              | ---                | 74.00            | 25.58       | V   | -0.2         |

**18 GHz - 25 GHz (high channel was worst):**



Project No: RKSA240822001  
Date: 24.SEP.2024 16:51:21

Tester: Hugh Wu

Project No: RKSA240822001  
Date: 24.SEP.2024 17:05:30

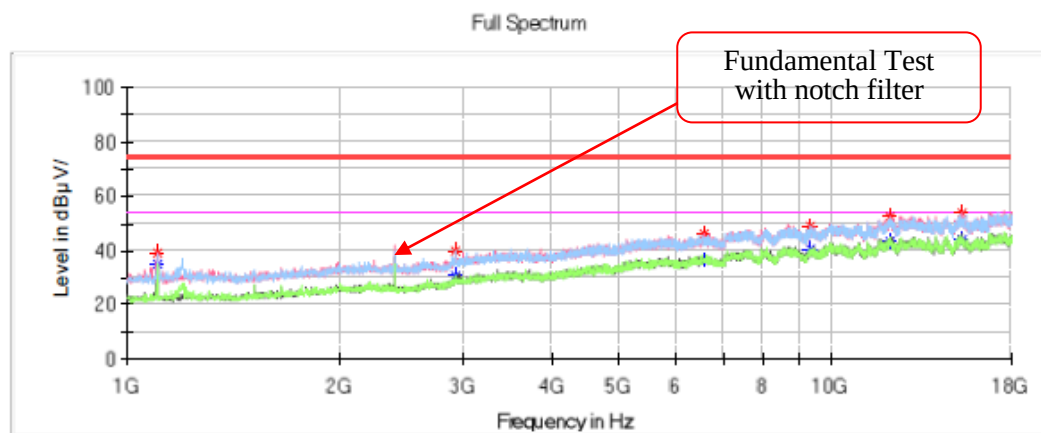
Tester: Hugh Wu

Note: The test distance is 3m. The limit is 74dBμV/m (Peak) and 54dBμV/m (Average)

**BLE (2 Mbps)****1GHz-18GHz:****Low Channel: 2402 MHz**

## Common Information

|                |                                                   |
|----------------|---------------------------------------------------|
| Project No.:   | RKSA240822001                                     |
| Test Mode:     | BLE 2M                                            |
| Standard:      | FCC Part 15.247& FCC Part 15.205& FCC Part 15.209 |
| Test Engineer: | Klein Zhu                                         |



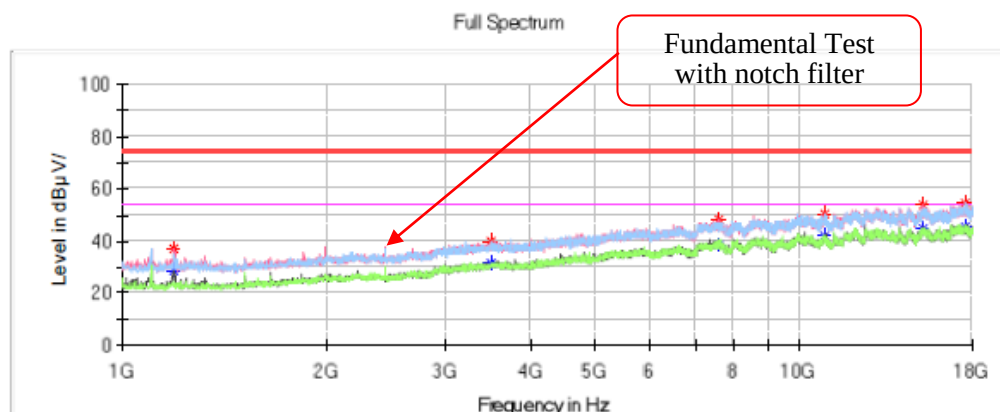
## Critical Freqs

| Frequency (MHz) | MaxPeak (dB µ V/m) | Average (dB µ V/m) | Limit (dB µ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|--------------------|--------------------|------------------|-------------|-----|--------------|
| 1102.000000     | ---                | 35.13              | 54.00            | 18.87       | V   | -15.3        |
| 1102.000000     | 38.86              | ---                | 74.00            | 35.14       | V   | -15.3        |
| 2917.600000     | ---                | 30.75              | 54.00            | 23.25       | H   | -8.7         |
| 2917.600000     | 39.86              | ---                | 74.00            | 34.14       | H   | -8.7         |
| 6570.900000     | ---                | 36.48              | 54.00            | 17.52       | V   | 0.8          |
| 6570.900000     | 45.87              | ---                | 74.00            | 28.13       | V   | 0.8          |
| 9355.500000     | ---                | 40.58              | 54.00            | 13.42       | H   | 5.4          |
| 9355.500000     | 49.18              | ---                | 74.00            | 24.82       | H   | 5.4          |
| 12121.400000    | ---                | 43.45              | 54.00            | 10.55       | V   | 9.1          |
| 12121.400000    | 52.64              | ---                | 74.00            | 21.36       | V   | 9.1          |
| 15300.400000    | ---                | 44.32              | 54.00            | 9.68        | V   | 9.6          |
| 15300.400000    | 53.70              | ---                | 74.00            | 20.30       | V   | 9.6          |

## Middle Channel: 2440 MHz

## Common Information

Project No.: RKSA240822001  
Test Mode: BLE 2M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu



## Critical Freqs

| Frequency (MHz) | MaxPeak (dB µV/m) | Average (dB µV/m) | Limit (dB µV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|-------------------|-------------------|-----------------|-------------|-----|--------------|
| 1192.100000     | ---               | 28.92             | 54.00           | 25.08       | V   | -15.2        |
| 1192.100000     | 37.15             | ---               | 74.00           | 36.85       | V   | -15.2        |
| 3507.500000     | ---               | 31.40             | 54.00           | 22.60       | H   | -6.3         |
| 3507.500000     | 39.81             | ---               | 74.00           | 34.19       | H   | -6.3         |
| 7596.000000     | ---               | 38.69             | 54.00           | 15.31       | V   | 3.9          |
| 7596.000000     | 48.04             | ---               | 74.00           | 25.96       | V   | 3.9          |
| 10900.800000    | ---               | 42.24             | 54.00           | 11.76       | H   | 7.3          |
| 10900.800000    | 50.62             | ---               | 74.00           | 23.38       | H   | 7.3          |
| 15269.800000    | ---               | 44.47             | 54.00           | 9.53        | V   | 9.6          |
| 15269.800000    | 54.02             | ---               | 74.00           | 19.98       | V   | 9.6          |
| 17600.500000    | ---               | 45.77             | 54.00           | 8.23        | H   | 11.6         |
| 17600.500000    | 54.33             | ---               | 74.00           | 19.67       | H   | 11.6         |

**High Channel: 2480 MHz****Common Information**

Project No.:

RKSA240822001

Test Mode:

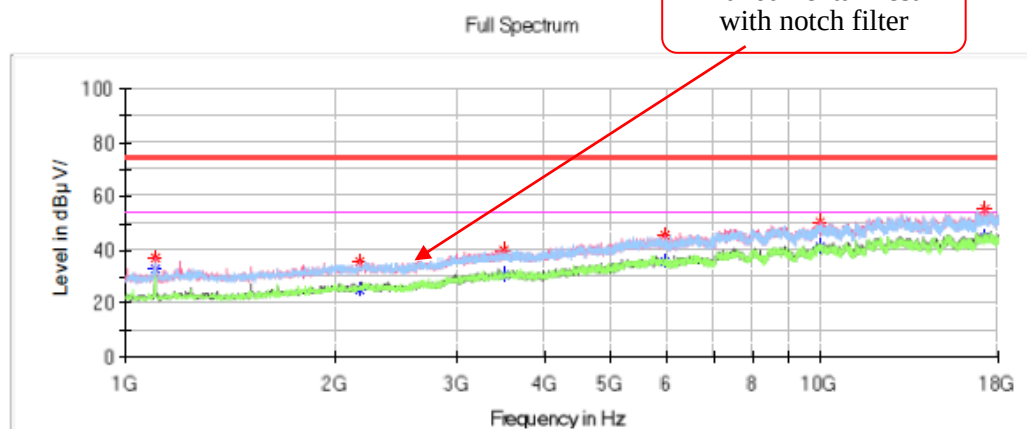
BLE 2M

Standard:

FCC Part 15.247&amp; FCC Part 15.205&amp; FCC Part 15.209

Test Engineer:

Klein Zhu

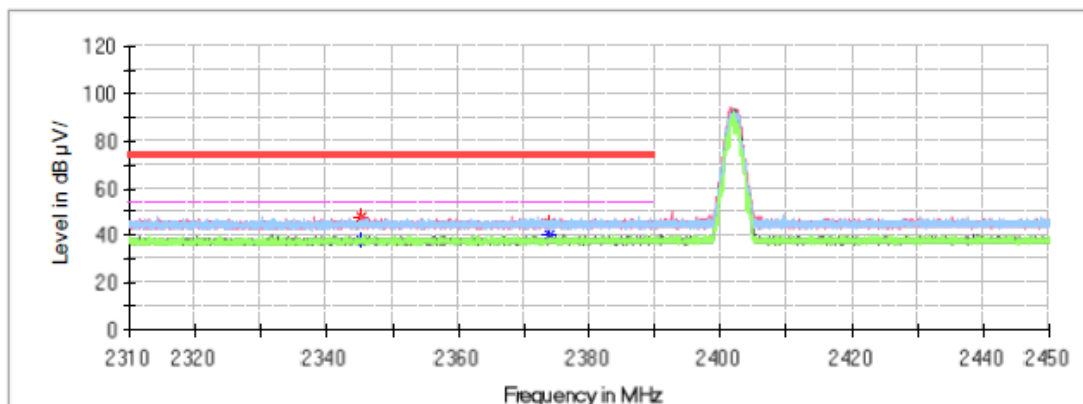
**Critical Freqs**

| Frequency (MHz) | MaxPeak (dB µV/m) | Average (dB µV/m) | Limit (dB µV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|-------------------|-------------------|-----------------|-------------|-----|--------------|
| 1103.700000     | ---               | 32.89             | 54.00           | 21.11       | V   | -15.3        |
| 1103.700000     | 37.30             | ---               | 74.00           | 36.70       | V   | -15.3        |
| 2167.900000     | ---               | 25.21             | 54.00           | 28.79       | V   | -11.2        |
| 2167.900000     | 35.32             | ---               | 74.00           | 38.68       | V   | -11.2        |
| 3493.900000     | ---               | 30.77             | 54.00           | 23.23       | H   | -6.4         |
| 3493.900000     | 40.17             | ---               | 74.00           | 33.83       | H   | -6.4         |
| 5984.400000     | ---               | 35.41             | 54.00           | 18.59       | V   | 0.0          |
| 5984.400000     | 45.34             | ---               | 74.00           | 28.66       | V   | 0.0          |
| 9981.100000     | ---               | 41.46             | 54.00           | 12.54       | H   | 7.1          |
| 9981.100000     | 50.11             | ---               | 74.00           | 23.89       | H   | 7.1          |
| 17206.100000    | ---               | 44.56             | 54.00           | 9.44        | V   | 12.0         |
| 17206.100000    | 55.01             | ---               | 74.00           | 18.99       | V   | 12.0         |

**Restricted Bands Emission:****Left Side****Common Information**

Project No.: RKSA240822001  
Test Mode: BLE 2M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu

Full Spectrum

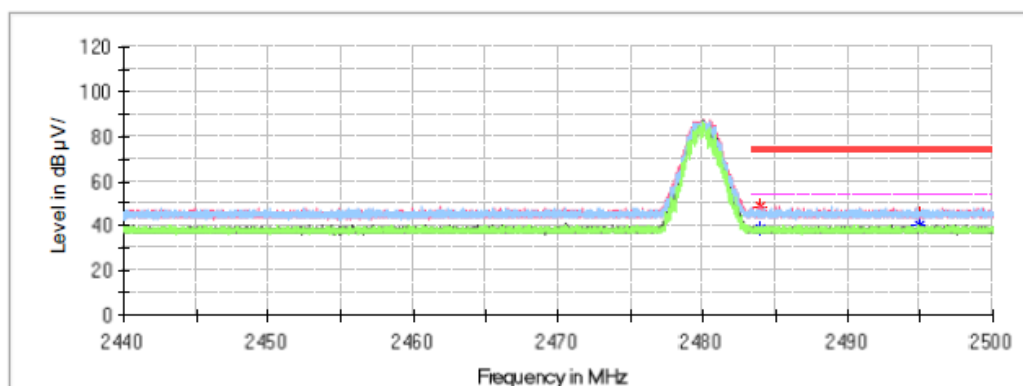
**Critical Freqs**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2345.224000     | 47.72                  | ---                    | 74.00                | 26.28       | V   | -0.7         |
| 2345.224000     | ---                    | 37.86                  | 54.00                | 16.14       | V   | -0.7         |
| 2373.840000     | 45.13                  | ---                    | 74.00                | 28.87       | V   | -0.6         |
| 2373.840000     | ---                    | 40.34                  | 54.00                | 13.66       | V   | -0.6         |

**Right Side****Common Information**

Project No.: RKSA240822001  
Test Mode: BLE 2M  
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209  
Test Engineer: Klein Zhu

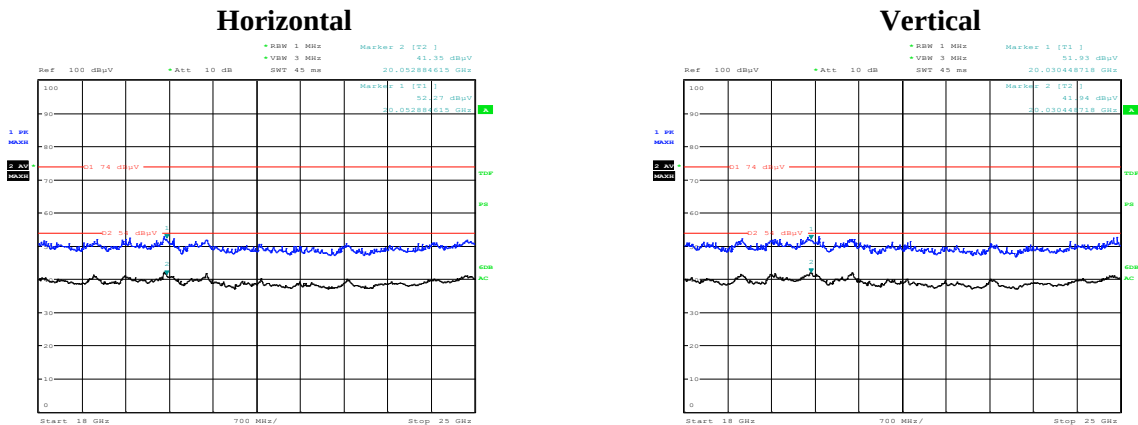
Full Spectrum

**Critical Freqs**

| Frequency (MHz) | MaxPeak (dB μ V/m) | Average (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|--------------------|--------------------|------------------|-------------|-----|--------------|
| 2483.932000     | 48.50              | ---                | 74.00            | 25.50       | V   | -0.3         |
| 2483.932000     | ---                | 38.51              | 54.00            | 15.49       | V   | -0.3         |
| 2494.984000     | 45.15              | ---                | 74.00            | 28.85       | V   | -0.2         |
| 2494.984000     | ---                | 40.41              | 54.00            | 13.59       | V   | -0.2         |



18 GHz - 25 GHz (middle channel was worst):



Project No : RKSA240822001      Tester : Hugh Wu  
Date: 24.SEP.2024 18:37:06

Project No : RKSA240822001      Tester : Hugh Wu  
Date: 24.SEP.2024 16:36:58

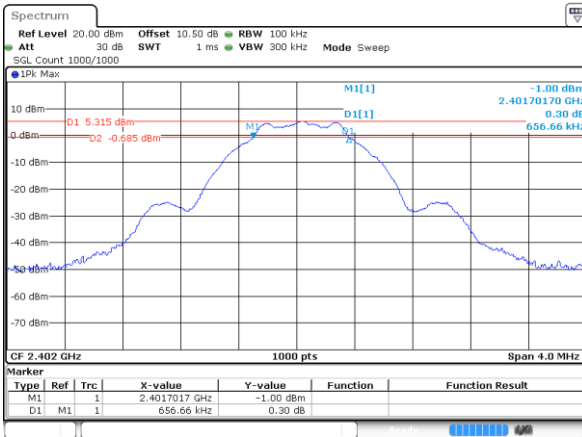
Note: The test distance is 3m. The limit is 74dBμV/m (Peak) and 54dBμV/m (Average)

**6 dB EMISSION BANDWIDTH**

| Mode         | Channel | Frequency (MHz) | 6 dB Emission Bandwidth (MHz) | Limit (MHz) |
|--------------|---------|-----------------|-------------------------------|-------------|
| BLE (1 Mbps) | Low     | 2402            | 0.657                         | $\geq 0.5$  |
|              | Middle  | 2440            | 0.693                         | $\geq 0.5$  |
|              | High    | 2480            | 0.801                         | $\geq 0.5$  |
| BLE (2 Mbps) | Low     | 2402            | 1.129                         | $\geq 0.5$  |
|              | Middle  | 2440            | 1.109                         | $\geq 0.5$  |
|              | High    | 2480            | 1.137                         | $\geq 0.5$  |

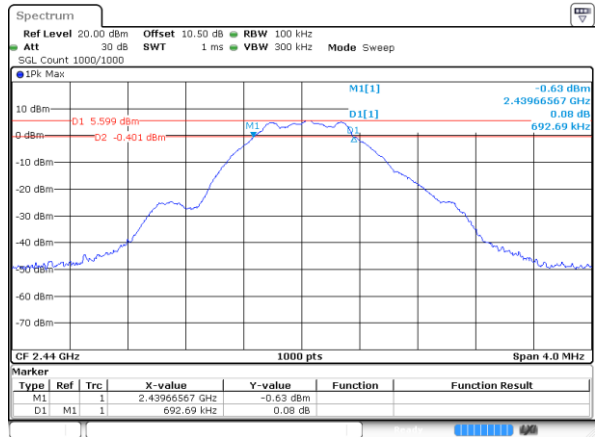
## BLE (1 Mbps)

## Low Channel



ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 11:38:42

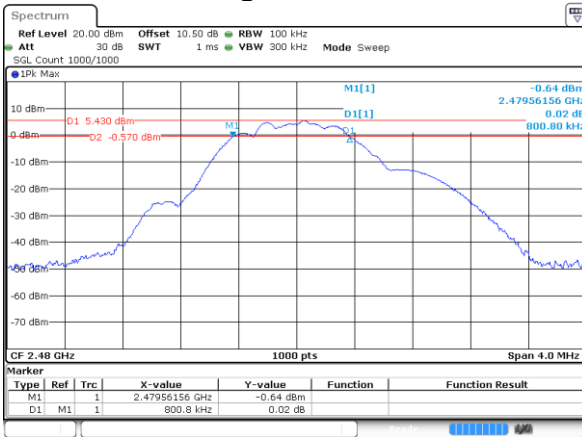
## Middle Channel



ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 11:43:36

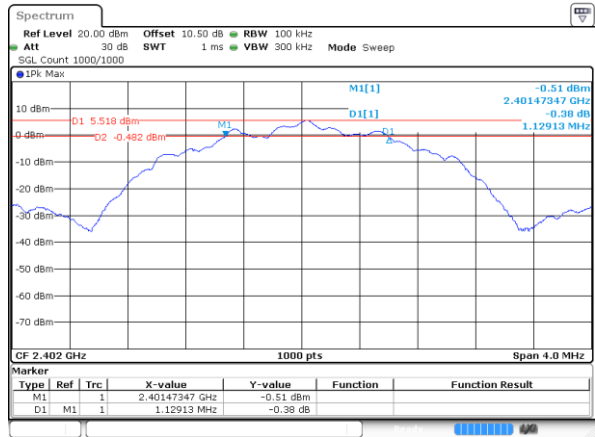
## BLE (2 Mbps)

## High Channel



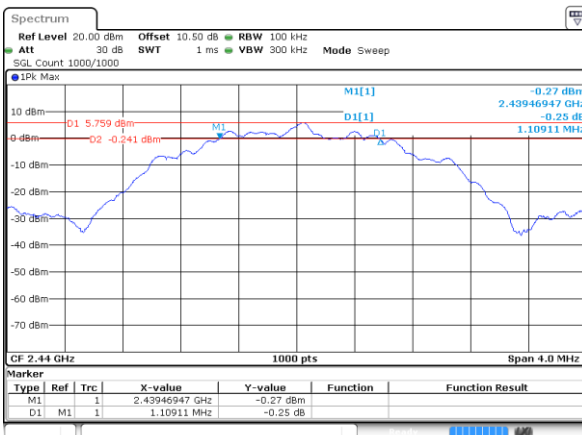
ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 11:46:32

## Low Channel



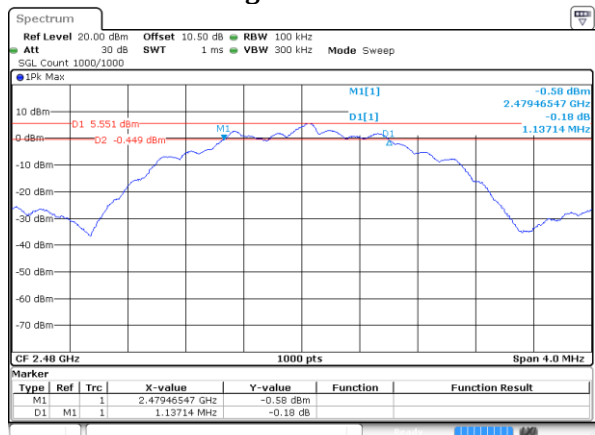
ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:04:18

## Middle Channel



ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:06:58

## High Channel



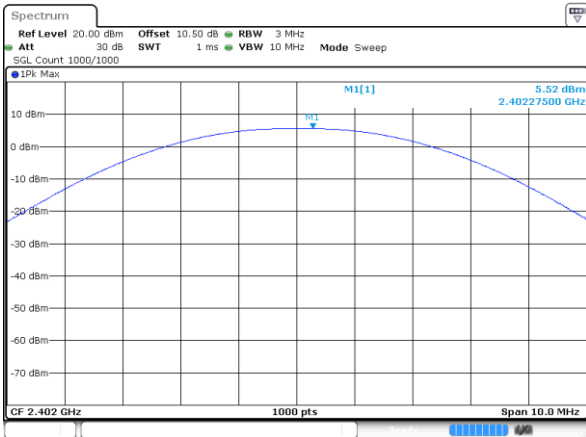
ProjectNo.: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:10:08

**MAXIMUM CONDUCTED OUTPUT POWER****Test Result:** Compliant.*EUT operation mode: Transmitting*

| Mode         | Channel | Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Limit (dBm) | Result |
|--------------|---------|-----------------|---------------------------------------|-------------|--------|
| BLE (1 Mbps) | Low     | 2402            | 5.52                                  | 30          | Pass   |
|              | Middle  | 2440            | 5.83                                  | 30          | Pass   |
|              | High    | 2480            | 5.87                                  | 30          | Pass   |
| BLE (2 Mbps) | Low     | 2402            | 5.71                                  | 30          | Pass   |
|              | Middle  | 2440            | 5.99                                  | 30          | Pass   |
|              | High    | 2480            | 5.79                                  | 30          | Pass   |

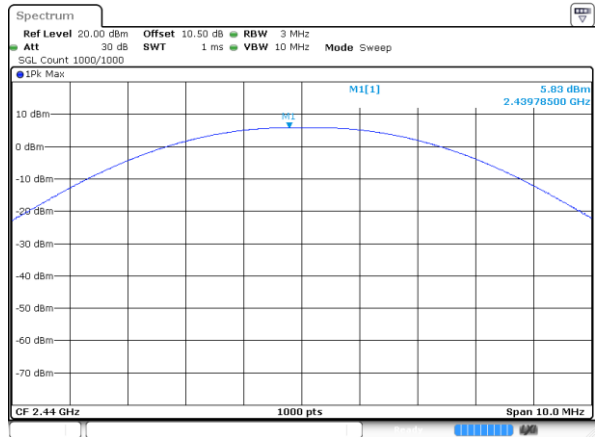
## BLE (1 Mbps)

## Low Channel



ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 11:41:59

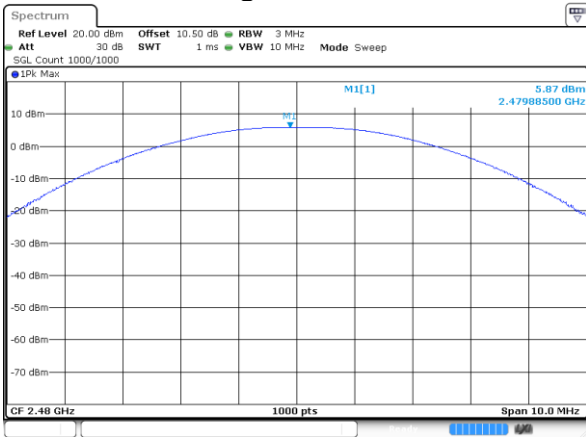
## Middle Channel



ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 11:45:19

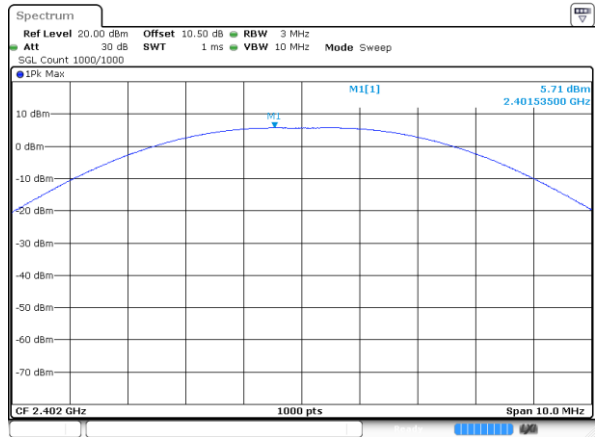
## BLE (2 Mbps)

## High Channel



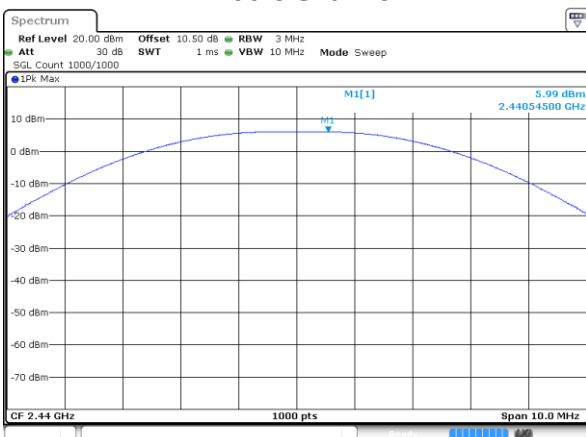
ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 13:02:30

## Low Channel



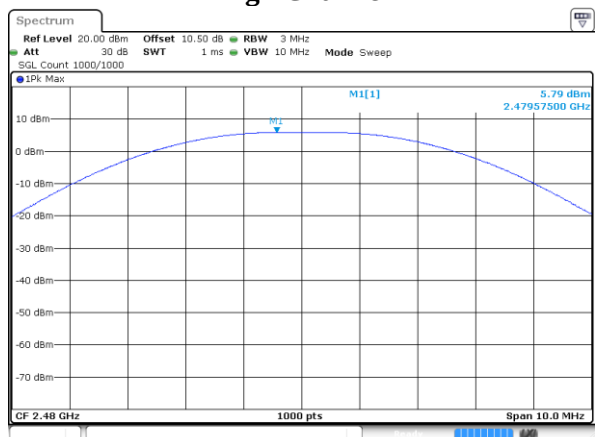
ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 13:05:50

## Middle Channel



ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 13:08:51

## High Channel



ProjectNo: RKSA240822001 Tester:Neil Zhou  
Date: 13.SEP.2024 13:18:44

BAND EDGE

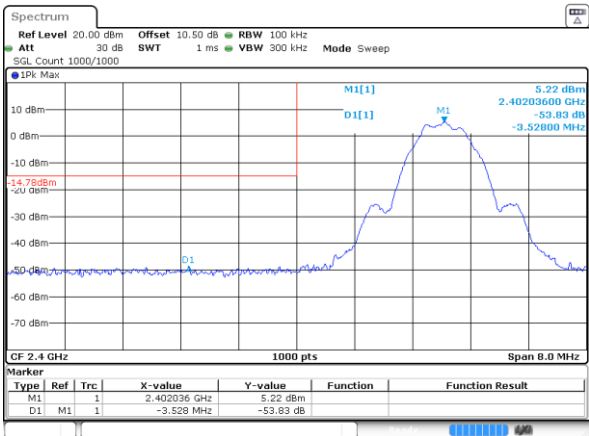
Test Result: Compliant.

EUT operation mode: Transmitting

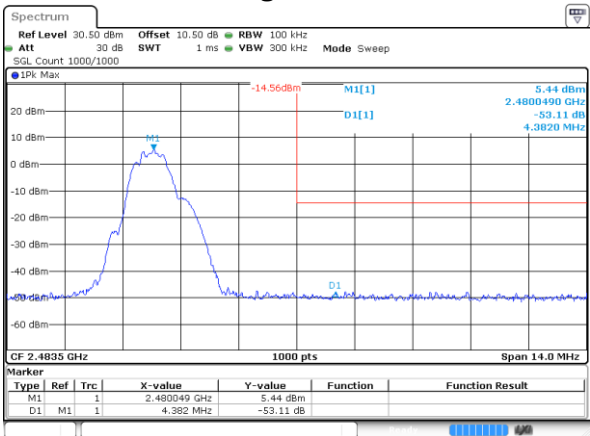
| Mode         | Channel | Frequency (MHz) | Result (dBc) | Limit (dBc) |
|--------------|---------|-----------------|--------------|-------------|
| BLE (1 Mbps) | Low     | 2402            | 53.83        | 20          |
|              | High    | 2480            | 53.11        |             |
| BLE (2 Mbps) | Low     | 2402            | 32.19        | 20          |
|              | High    | 2480            | 53.23        |             |

BLE (1 Mbps)

Left Side

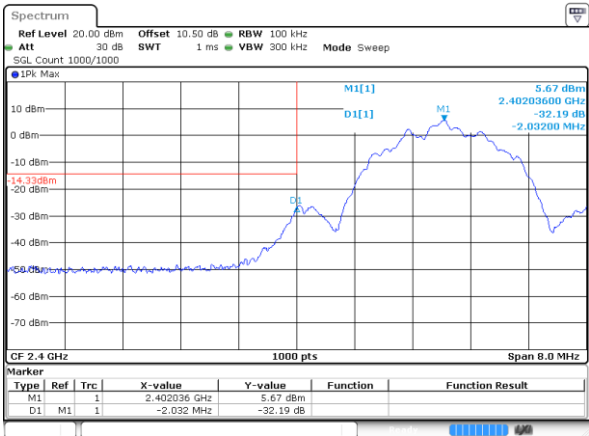


Right Side

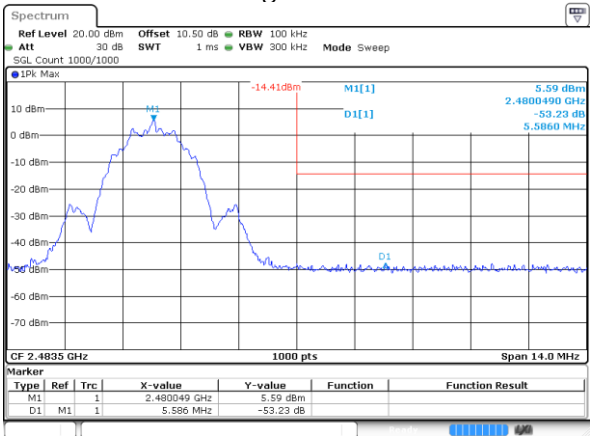


BLE (2 Mbps)

Left Side



Right Side

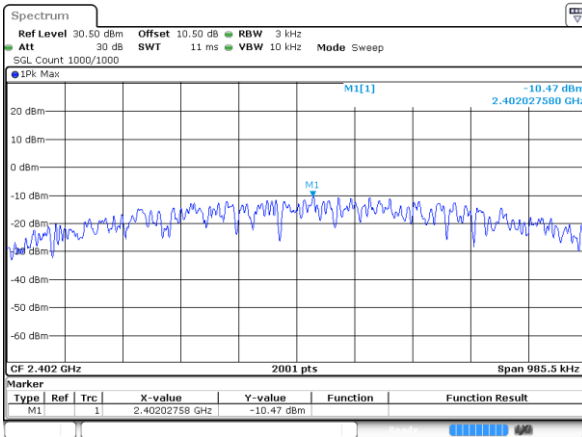


**POWER SPECTRAL DENSITY****Test Result:** Compliant.*EUT operation mode: Transmitting*

| Mode         | Channel | Frequency (MHz) | PSD (dBm/3kHz) | Limit (dBm/3kHz) |
|--------------|---------|-----------------|----------------|------------------|
| BLE (1 Mbps) | Low     | 2402            | -10.47         | ≤8               |
|              | Middle  | 2440            | -8.90          | ≤8               |
|              | High    | 2480            | -9.43          | ≤8               |
| BLE (2 Mbps) | Low     | 2402            | -11.98         | ≤8               |
|              | Middle  | 2440            | -11.62         | ≤8               |
|              | High    | 2480            | -11.47         | ≤8               |

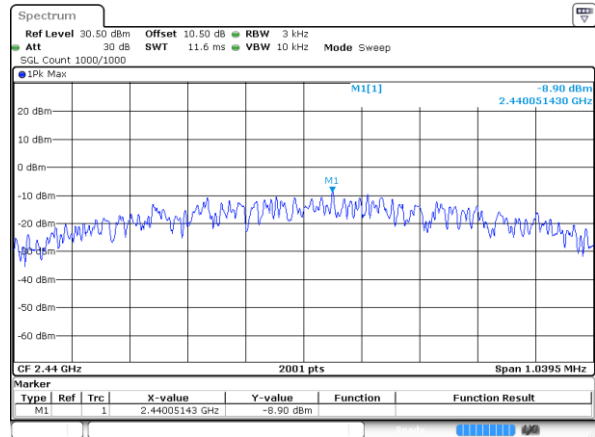
## BLE (1 Mbps)

## Low Channel



ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 11:42:21

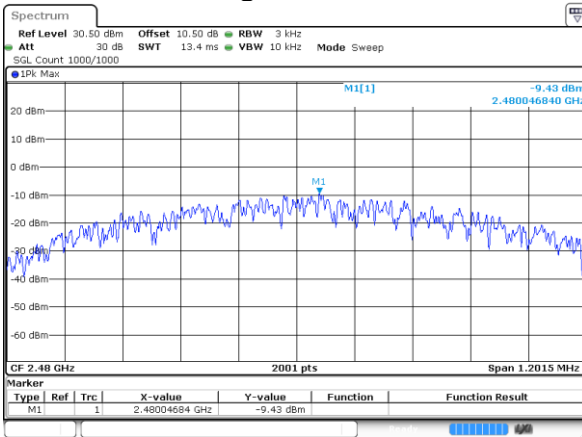
## Middle Channel



ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 11:45:43

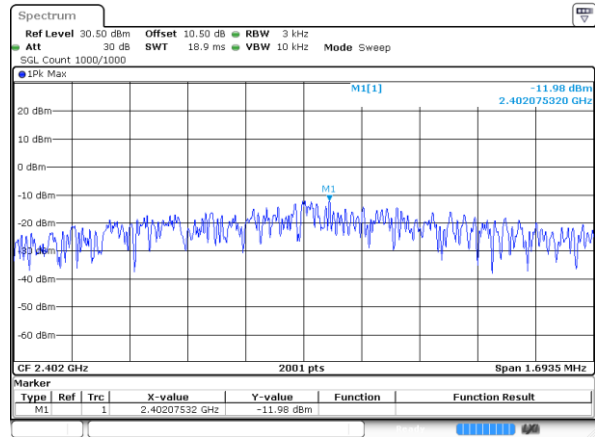
## BLE (2 Mbps)

## High Channel



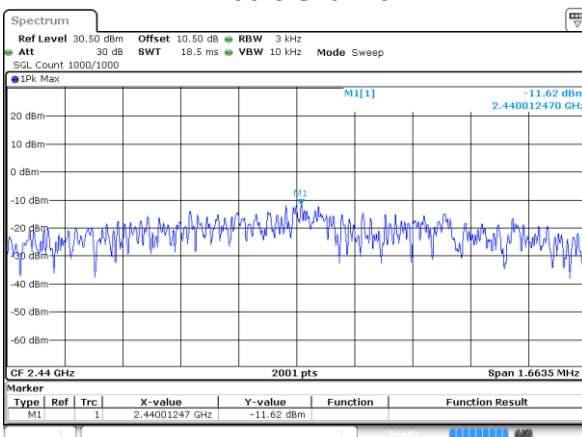
ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:03:27

## Low Channel



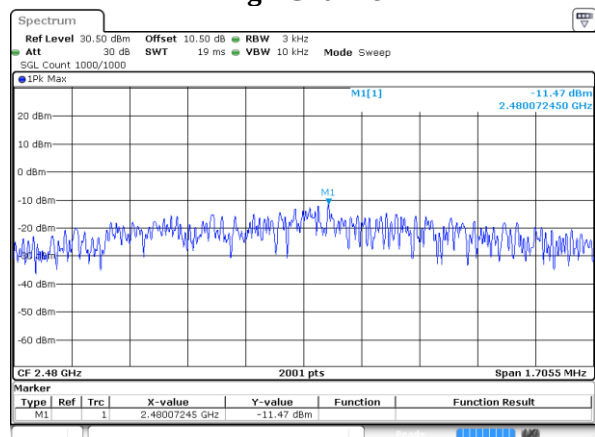
ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:06:23

## Middle Channel



ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:09:24

## High Channel



ProjectNo: RKSA240822001 Tester: Neil Zhou  
Date: 13 SEP 2024 13:19:17



### **Declarations**

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. 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.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. 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.

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