



# MEASUREMENT REPORT

## FCC PART 15C & RSS-247 Issue 2

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**FCC ID:** 2AF2B-NB

**APPLICANT:** Ninebot (Tianjin) Tech Co., Ltd.

**Application Type:** Certification

**Product:** Ninebot S, Ninebot S-PRO

**Model No.:** N3M240, N3M320, N3M260

**Brand Name:** Ninebot

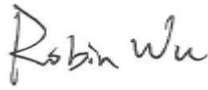
**FCC Classification:** Digital Transmission System (DTS)

**FCC Rule Part(s):** Part 15.247

**Test Procedure(s):** ANSI C63.10-2013, KDB 558074 D01v05

**Test Date:** October 23 ~ November 09, 2018

**Reviewed By:**   
( Sunny Sun )

**Approved By:**   
( Robin Wu )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

## Revision History

| Report No.    | Version | Description          | Issue Date | Note    |
|---------------|---------|----------------------|------------|---------|
| 1810RSU036-U1 | Rev. 01 | Initial Report       | 10-30-2018 | Invalid |
| 1810RSU036-U1 | Rev. 02 | Add the output power | 11-10-2018 | Valid   |

Note: This report is prepared for FCC Class II permissive change and supplement to MRT Original "1804RSU009-U1" Report updating the product name & capacitor of RF circuit and adding related data

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## §2.1033 General Information

|                                |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant:</b>              | Ninebot (Tianjin) Tech Co., Ltd.                                                                                                |
| <b>Applicant Address:</b>      | 11 Tianrui Rd., Auto Industrial Park, Wuqing Dist., Tianjin, China.                                                             |
| <b>Manufacturer:</b>           | Ninebot (Tianjin) Tech Co., Ltd.                                                                                                |
| <b>Manufacturer Address:</b>   | 11 Tianrui Rd., Auto Industrial Park, Wuqing Dist., Tianjin, China.                                                             |
| <b>Test Site:</b>              | MRT Technology (Suzhou) Co., Ltd                                                                                                |
| <b>Test Site Address:</b>      | D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China                      |
| <b>MRT Registration No.:</b>   | 893164                                                                                                                          |
| <b>Test Device Serial No.:</b> | N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering |

### Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.



## 1. INTRODUCTION

### 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

### 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



## 2. PRODUCT INFORMATION

### 2.1. Feature of Equipment under Test

|               |                           |
|---------------|---------------------------|
| Product Name: | Ninebot S, Ninebot S-PRO  |
| Model No.:    | N3M240, N3M320, N3M260    |
| Brand Name:   | Ninebot                   |
| RF Function:  | Bluetooth v4.0 (BLE Only) |

Note: There is different battery capacity between each model.

### 2.2. Product Specification Subjective to this Report

|                     |                 |
|---------------------|-----------------|
| Bluetooth Frequency | 2402~2480MHz    |
| Bluetooth Version   | v4.0 (BLE Only) |
| Data Rate           | 1Mbps(GFSK)     |
| Antenna Gain        | 5.0dBi          |

### 2.3. Working Frequencies

Channel List for BLE

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 00      | 2402 MHz  | 01      | 2404 MHz  | 02      | 2406 MHz  |
| 03      | 2408 MHz  | 04      | 2410 MHz  | 05      | 2412 MHz  |
| 06      | 2414 MHz  | 07      | 2416 MHz  | 08      | 2418 MHz  |
| 09      | 2420 MHz  | 10      | 2422 MHz  | 11      | 2424 MHz  |
| 12      | 2426 MHz  | 13      | 2428 MHz  | 14      | 2430 MHz  |
| 15      | 2432 MHz  | 16      | 2434 MHz  | 17      | 2436 MHz  |
| 18      | 2438 MHz  | 19      | 2440 MHz  | 20      | 2442 MHz  |
| 21      | 2444 MHz  | 22      | 2446 MHz  | 23      | 2448 MHz  |
| 24      | 2450 MHz  | 25      | 2452 MHz  | 26      | 2454 MHz  |
| 27      | 2456 MHz  | 28      | 2458 MHz  | 29      | 2460 MHz  |
| 30      | 2462 MHz  | 31      | 2464 MHz  | 32      | 2466 MHz  |
| 33      | 2468 MHz  | 34      | 2470 MHz  | 35      | 2472 MHz  |
| 36      | 2474 MHz  | 37      | 2476 MHz  | 38      | 2478 MHz  |
| 39      | 2480 MHz  | --      | --        | --      | --        |

## **2.4. Device Capabilities**

This device contains the following capabilities:

Bluetooth Device.

## **2.5. Test Configuration**

The device was tested per the guidance of KDB 558074 D01v05. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

## **2.6. EMI Suppression Device(s)/Modifications**

No EMI suppression device(s) were added and/or no modifications were made during testing.

## **2.7. Labeling Requirements**

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

## **2.8. Test Software**

The test utility software used during testing was “nRFgo Studio”.

### 3. DESCRIPTION OF TEST

#### 3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 558074 D01v05 were used in the measurement.

**Deviation from measurement procedure.....None**

#### 3.2. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the Antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable. For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive Antenna height using a broadband Antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn Antennas were used. For frequencies below 30MHz, a calibrated loop Antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband Antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive Antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn Antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable

containing the EUT was rotated through 360 degrees and the height of the receive Antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive Antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn Antenna, the horn Antenna should be always directed to the EUT when rising height.

## 4. ANTENNA REQUIREMENTS

### **Excerpt from §15.203 of the FCC Rules/Regulations:**

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

### **Conclusion:**

The unit complies with the requirement of §15.203.

## 5. TEST EQUIPMENT CALIBRATION DATE

Radiated Disturbance - AC1

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| PXA Signal Analyzer        | Keysight     | 9030B       | MRTSUE06395 | 1 year         | 2019/09/13     |
| Microwave System Amplifier | Agilent      | 83017A      | MRTSUE06076 | 1 year         | 2018/11/17     |
| Bilog Period Antenna       | Schwarzbeck  | VULB 9168   | MRTSUE06172 | 1 year         | 2018/11/18     |
| Broad Band Horn Antenna    | Schwarzbeck  | BBHA9120D   | MRTSUE06023 | 1 year         | 2019/10/21     |
| Loop Antenna               | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2018/11/20     |
| RF Cable                   | HUBER+SUHNER | Cable 01    | N/A         | 1 year         | 2018/12/09     |
| Thermohygrometer           | Testo        | 608-H1      | MRTSUE06403 | 1 year         | 2019/08/14     |
| Anechoic Chamber           | TDK          | Chamber-AC1 | MRTSUE06212 | 1 year         | 2019/05/02     |

| Software | Version | Function          |
|----------|---------|-------------------|
| e3       | V8.3.5  | EMI Test Software |

## 6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

|                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Radiated Emission Measurement - AC2</b>                                                                                                      |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ):<br>9kHz ~ 1GHz: $\pm 4.18\text{dB}$<br>1GHz ~ 25GHz: $\pm 4.76\text{dB}$ |
| <b>Output Power - TR3</b>                                                                                                                       |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ):<br>1.13dB                                                                |

## 7. TEST RESULT

### 7.1. Summary

Company Name: Ninebot (Tianjin) Tech Co., Ltd.

FCC ID: 2AF2B-NB

| FCC Section(s)   | Test Description                                                              | Test Limit                                                                     | Test Condition | Test Result | Reference   |
|------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------|-------------|-------------|
| 15.247(b)(3)     | Output Power                                                                  | $\leq 30\text{dBm}$                                                            | Conducted      | Pass        | Section 7.2 |
| 15.205<br>15.209 | General Field Strength Limits (Restricted Bands and Radiated Emission Limits) | Emissions in restricted bands must meet the radiated limits detailed in 15.209 | Radiated       | Pass        | Section 7.3 |

Notes: The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

## 7.2. Output Power Measurement

### 7.2.1. Test Limit

The maximum conducted output power shall be exceed 1 Watt (30dBm).

### 7.2.2. Test Procedure Used

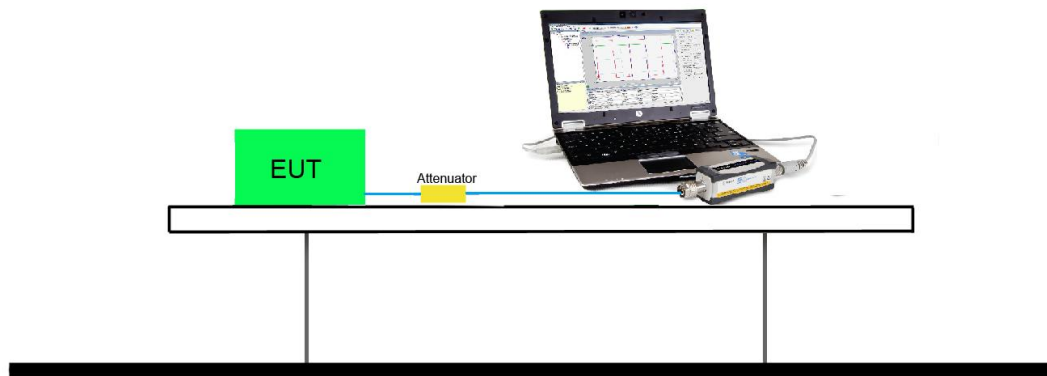
KDB 558074 D01v03r05 - Section 9.1.2 PKPM1 Peak power meter Method

### 7.2.3. Test Setting

#### **Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50MHz)**

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

### 7.2.4. Test Setup



### 7.2.5. Test Result of Output Power

| Test Mode | Data Rate<br>(Mbps) | Channel<br>No. | Frequency<br>(MHz) | Peak Power<br>(dBm) | Limit<br>(dBm) | EIRP Power<br>(dBm) | EIRP Limit<br>(dBm) | Result |
|-----------|---------------------|----------------|--------------------|---------------------|----------------|---------------------|---------------------|--------|
| BLE       | 1                   | 00             | 2402               | -0.66               | ≤ 30           | 4.34                | ≤ 36                | Pass   |
| BLE       | 1                   | 19             | 2440               | -1.03               | ≤ 30           | 3.97                | ≤ 36                | Pass   |
| BLE       | 1                   | 39             | 2480               | -1.43               | ≤ 30           | 3.57                | ≤ 36                | Pass   |

### 7.3. Radiated Spurious Emission Measurement

#### 7.3.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15 Subpart C Paragraph 15.209 |                       |                            |
|----------------------------------------|-----------------------|----------------------------|
| Frequency [MHz]                        | Field Strength [uV/m] | Measured Distance [Meters] |
| 0.009 - 0.490                          | 2400/F (kHz)          | 300                        |
| 0.490 - 1.705                          | 24000/F (kHz)         | 30                         |
| 1.705 - 30                             | 30                    | 30                         |
| 30 - 88                                | 100                   | 3                          |
| 88 - 216                               | 150                   | 3                          |
| 216 - 960                              | 200                   | 3                          |
| Above 960                              | 500                   | 3                          |

#### 7.3.2. Test Procedure Used

ANSI C63.10 - Section 6.3 (General measurements)

ANSI C63.10 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - Section 6.5 (Standard test method 30MHz to 1GHz)

ANSI C63.10 - Section 6.6 (Standard test method above 1GHz)

#### 7.3.3. Test Setting

##### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak

5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Table 1 - RBW as a function of frequency**

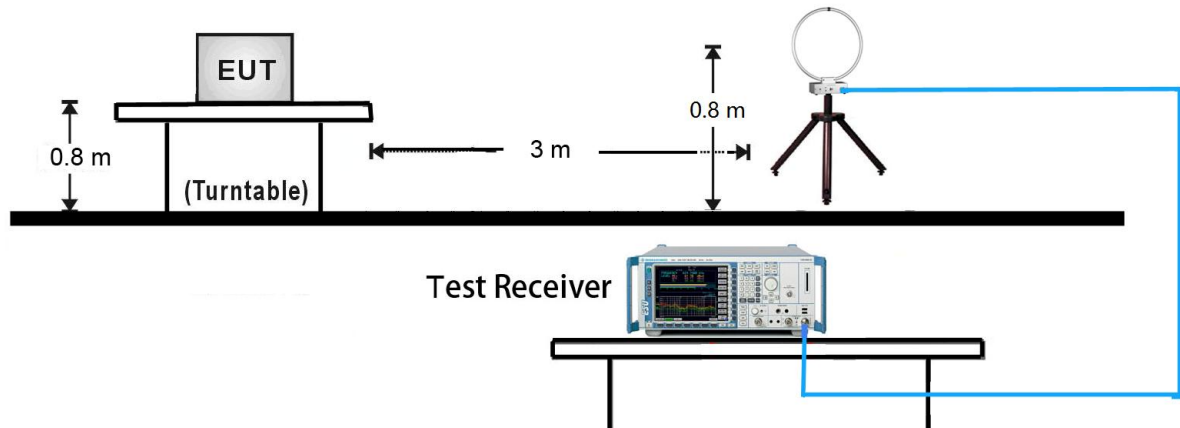
| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000 MHz    | 1 MHz         |

#### **Average Field Strength Measurements**

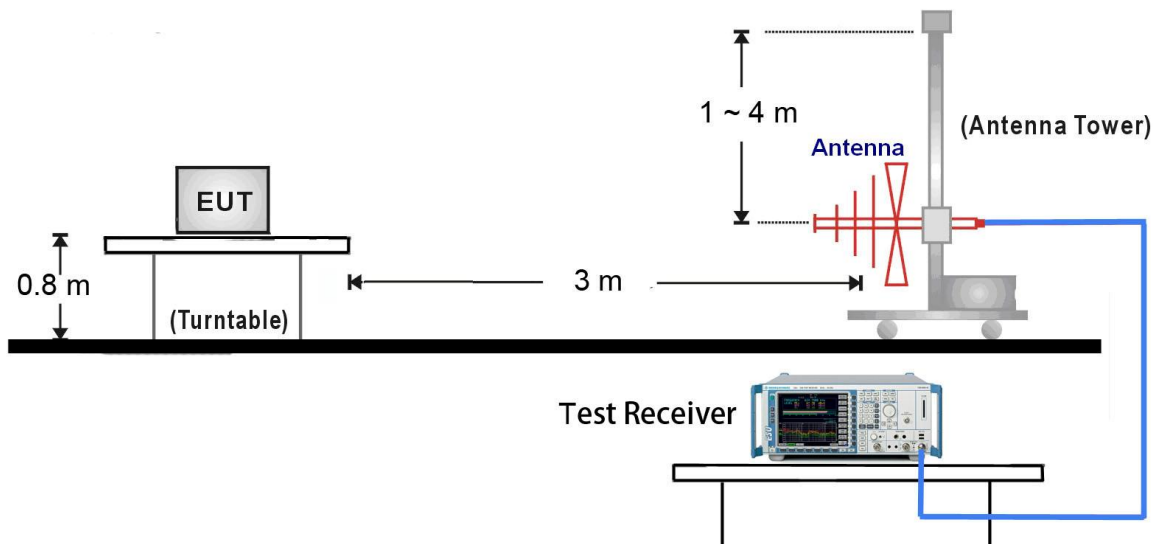
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW  $\geq$  1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

### 7.3.4. Test Setup

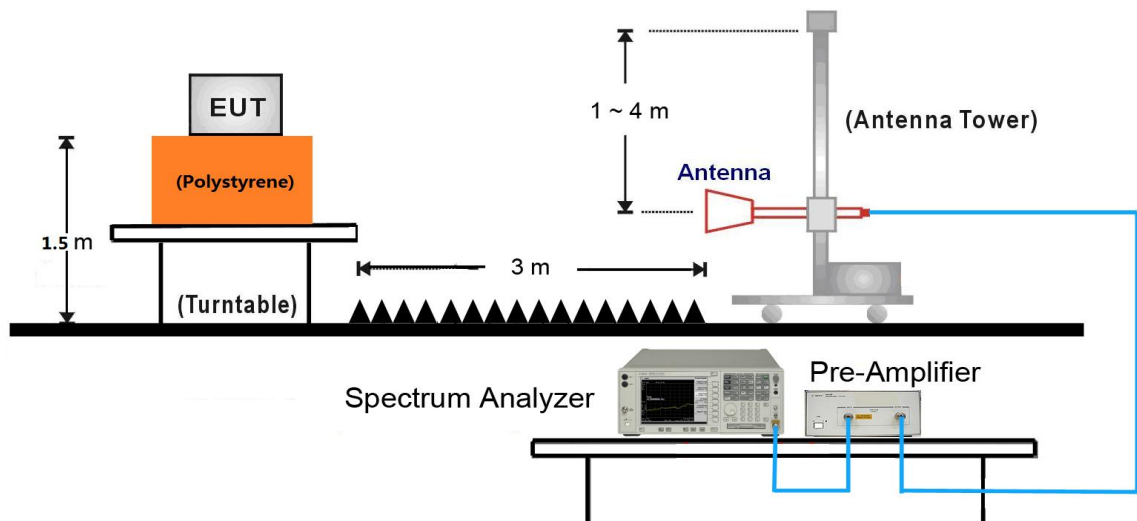
#### 9kHz ~ 30MHz Test Setup:



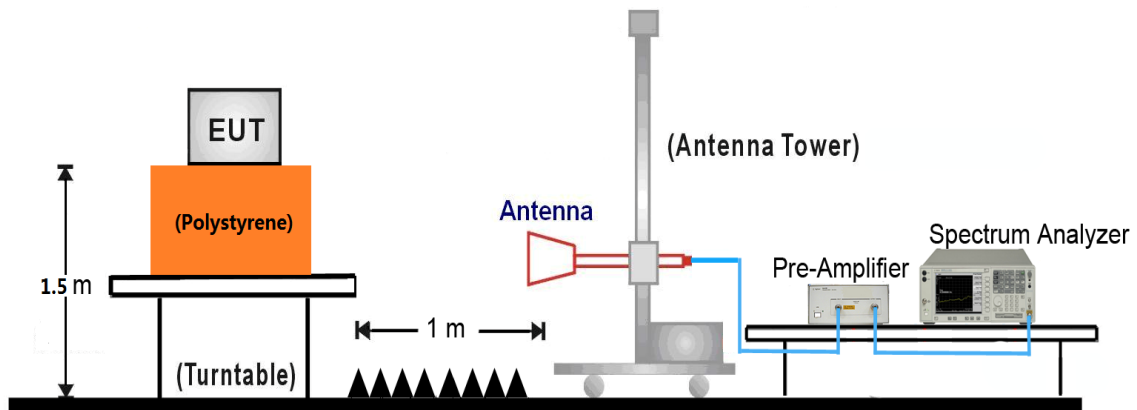
#### 30MHz ~ 1GHz Test Setup:



### 1GHz ~ 18GHz Test Setup:



### 18GHz ~25GHz Test Setup:



### 7.3.5.Test Result

|               |                                                                                                                                                                                   |                |            |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| Test Mode:    | BLE                                                                                                                                                                               | Test Site:     | AC2        |
| Test Channel: | 00                                                                                                                                                                                | Test Engineer: | Messiah Li |
| Remark:       | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. |                |            |

| Mark | Frequency (MHz) | Reading Level (dBμV) | Factor (dB) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|------|-----------------|----------------------|-------------|------------------------|----------------|-------------|----------|--------------|
|      | 4799.5          | 37.4                 | 5.5         | 42.9                   | 74.0           | -31.1       | Peak     | Horizontal   |
| *    | 7205.0          | 37.0                 | 13.9        | 50.9                   | 74.0           | -23.1       | Peak     | Horizontal   |
|      | 8386.5          | 32.3                 | 13.8        | 46.1                   | 74.0           | -27.9       | Peak     | Horizontal   |
| *    | 10222.5         | 32.7                 | 18.1        | 50.8                   | 74.0           | -23.2       | Peak     | Horizontal   |
|      | 4799.5          | 41.5                 | 5.5         | 47.0                   | 74.0           | -27.0       | Peak     | Vertical     |
| *    | 7205.0          | 39.4                 | 13.9        | 53.3                   | 74.0           | -20.7       | Peak     | Vertical     |
|      | 8386.5          | 31.4                 | 13.8        | 45.2                   | 74.0           | -28.8       | Peak     | Vertical     |
| *    | 10222.5         | 32.0                 | 18.1        | 50.1                   | 74.0           | -23.9       | Peak     | Vertical     |

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (92.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

|               |                                                                                                                                                                                   |                |            |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| Test Mode:    | BLE                                                                                                                                                                               | Test Site:     | AC2        |
| Test Channel: | 19                                                                                                                                                                                | Test Engineer: | Messiah Li |
| Remark:       | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. |                |            |

| Mark | Frequency (MHz) | Reading Level (dBμV) | Factor (dB) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|------|-----------------|----------------------|-------------|------------------------|----------------|-------------|----------|--------------|
|      | 4876.0          | 39.8                 | 5.6         | 45.4                   | 74.0           | -28.6       | Peak     | Horizontal   |
| *    | 6542.0          | 34.2                 | 10.6        | 44.8                   | 74.0           | -29.2       | Peak     | Horizontal   |
|      | 7324.0          | 38.0                 | 13.8        | 51.8                   | 74.0           | -22.2       | Peak     | Horizontal   |
| *    | 10112.0         | 33.3                 | 18.0        | 51.3                   | 74.0           | -22.7       | Peak     | Horizontal   |
|      | 4876.0          | 42.6                 | 5.6         | 48.2                   | 74.0           | -25.8       | Peak     | Vertical     |
| *    | 6533.5          | 33.6                 | 10.6        | 44.2                   | 74.0           | -29.8       | Peak     | Vertical     |
|      | 7324.0          | 38.6                 | 13.8        | 52.4                   | 74.0           | -21.6       | Peak     | Vertical     |
| *    | 10299.0         | 32.1                 | 18.4        | 50.5                   | 74.0           | -23.5       | Peak     | Vertical     |

Note 1: "\*" is not in restricted band, its limit is 20dBc of the fundamental emission level (92.4dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

|               |                                                                                                                                                                                   |                |            |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| Test Mode:    | BLE                                                                                                                                                                               | Test Site:     | AC2        |
| Test Channel: | 39                                                                                                                                                                                | Test Engineer: | Messiah Li |
| Remark:       | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. |                |            |

| Mark | Frequency (MHz) | Reading Level (dBμV) | Factor (dB) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|------|-----------------|----------------------|-------------|------------------------|----------------|-------------|----------|--------------|
|      | 4961.0          | 39.5                 | 5.7         | 45.2                   | 74.0           | -28.8       | Peak     | Horizontal   |
| *    | 6448.5          | 33.6                 | 9.9         | 43.5                   | 74.0           | -30.5       | Peak     | Horizontal   |
|      | 7443.0          | 38.0                 | 14.3        | 52.3                   | 74.0           | -21.7       | Peak     | Horizontal   |
| *    | 10460.5         | 32.4                 | 18.6        | 51.0                   | 74.0           | -23.0       | Peak     | Horizontal   |
|      | 4961.0          | 39.6                 | 5.7         | 45.3                   | 74.0           | -28.7       | Peak     | Vertical     |
| *    | 6100.0          | 35.3                 | 8.3         | 43.6                   | 74.0           | -30.4       | Peak     | Vertical     |
|      | 7443.0          | 39.4                 | 14.3        | 53.7                   | 74.0           | -20.3       | Peak     | Vertical     |
| *    | 10554.0         | 31.8                 | 19.0        | 50.8                   | 74.0           | -23.2       | Peak     | Vertical     |

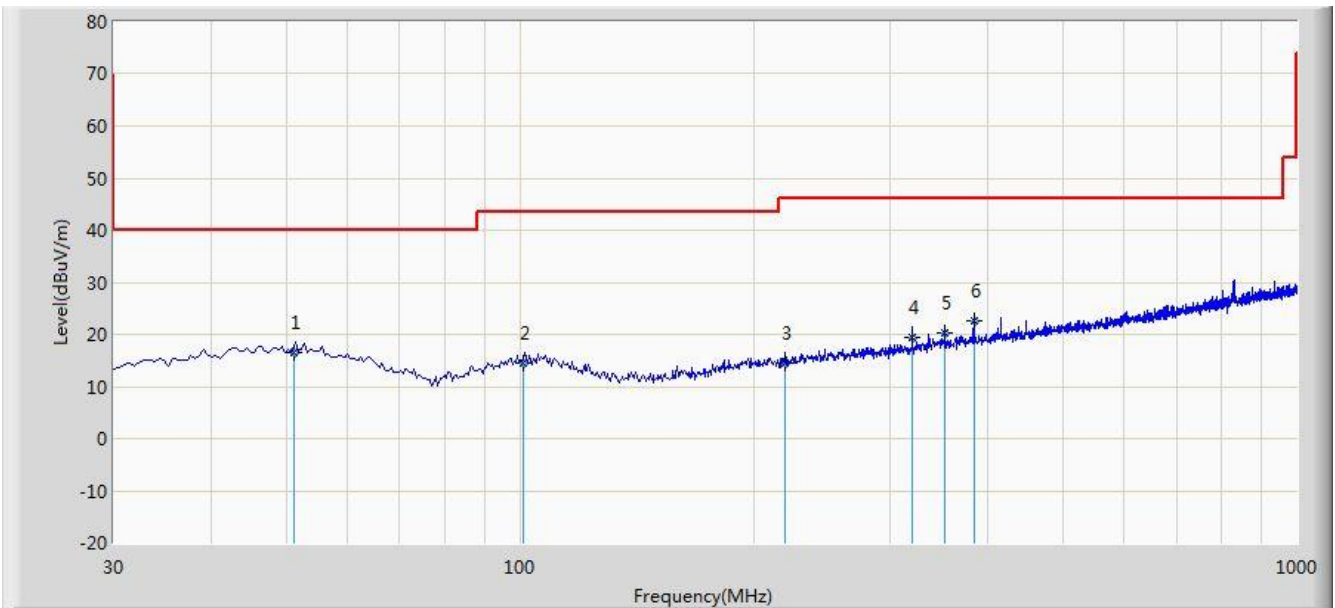
Note 1: "\*" is not in restricted band, its limit is 20dBc of the fundamental emission level (92.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

### The worst case of Radiated Emission below 1GHz:

|                                                            |                          |
|------------------------------------------------------------|--------------------------|
| Site: AC2                                                  | Time: 2018/10/24 - 15:23 |
| Limit: FCC_Part15.209_RE(3m)                               | Engineer: Messiah Li     |
| Probe: VULB9162_0.03-8GHz                                  | Polarity: Horizontal     |
| EUT: Ninebot S-PRO                                         | Power: By Battery        |
| <b>Worse Case Mode:</b> Transmit by BLE at channel 2402MHz |                          |



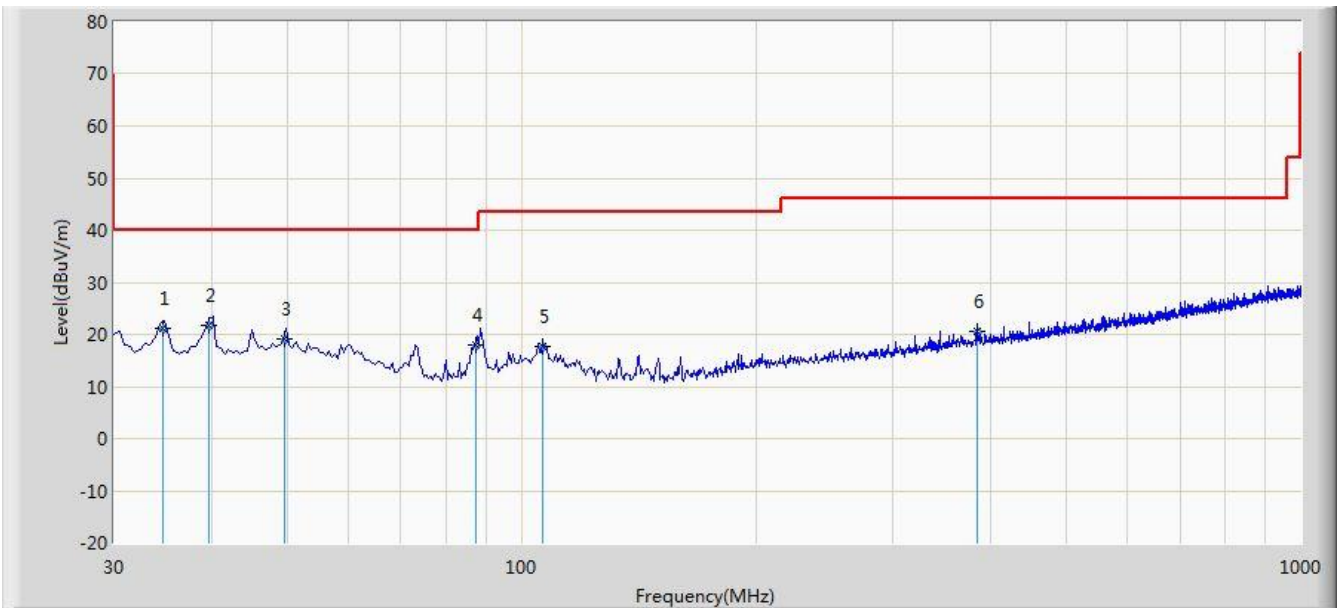
| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 51.123          | 16.488                 | 1.456                | -23.512         | 40.000         | 15.032      | QP   |
| 2  |      |      | 101.123         | 14.362                 | 1.065                | -29.138         | 43.500         | 13.297      | QP   |
| 3  |      |      | 219.215         | 14.586                 | 1.698                | -31.414         | 46.000         | 12.888      | QP   |
| 4  |      |      | 320.013         | 19.333                 | 3.965                | -26.667         | 46.000         | 15.369      | QP   |
| 5  |      |      | 352.569         | 20.250                 | 4.056                | -25.750         | 46.000         | 16.194      | QP   |
| 6  |      | *    | 384.156         | 22.656                 | 5.956                | -23.344         | 46.000         | 16.699      | QP   |

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

|                                                            |                          |
|------------------------------------------------------------|--------------------------|
| Site: AC2                                                  | Time: 2018/10/24 - 15:29 |
| Limit: FCC_Part15.209_RE(3m)                               | Engineer: Messiah Li     |
| Probe: VULB9162_0.03-8GHz                                  | Polarity: Vertical       |
| EUT: Ninebot S-PRO                                         | Power: By Battery        |
| <b>Worse Case Mode:</b> Transmit by BLE at channel 2402MHz |                          |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 34.689          | 21.200                 | 8.216                | -18.800         | 40.000         | 12.983      | QP   |
| 2  |      | *    | 39.697          | 21.877                 | 7.963                | -18.123         | 40.000         | 13.914      | QP   |
| 3  |      |      | 49.689          | 19.081                 | 4.029                | -20.919         | 40.000         | 15.052      | QP   |
| 4  |      |      | 87.369          | 18.111                 | 7.365                | -21.889         | 40.000         | 10.747      | QP   |
| 5  |      |      | 106.365         | 17.597                 | 4.359                | -25.903         | 43.500         | 13.238      | QP   |
| 6  |      |      | 384.025         | 20.664                 | 3.968                | -25.336         | 46.000         | 16.696      | QP   |

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

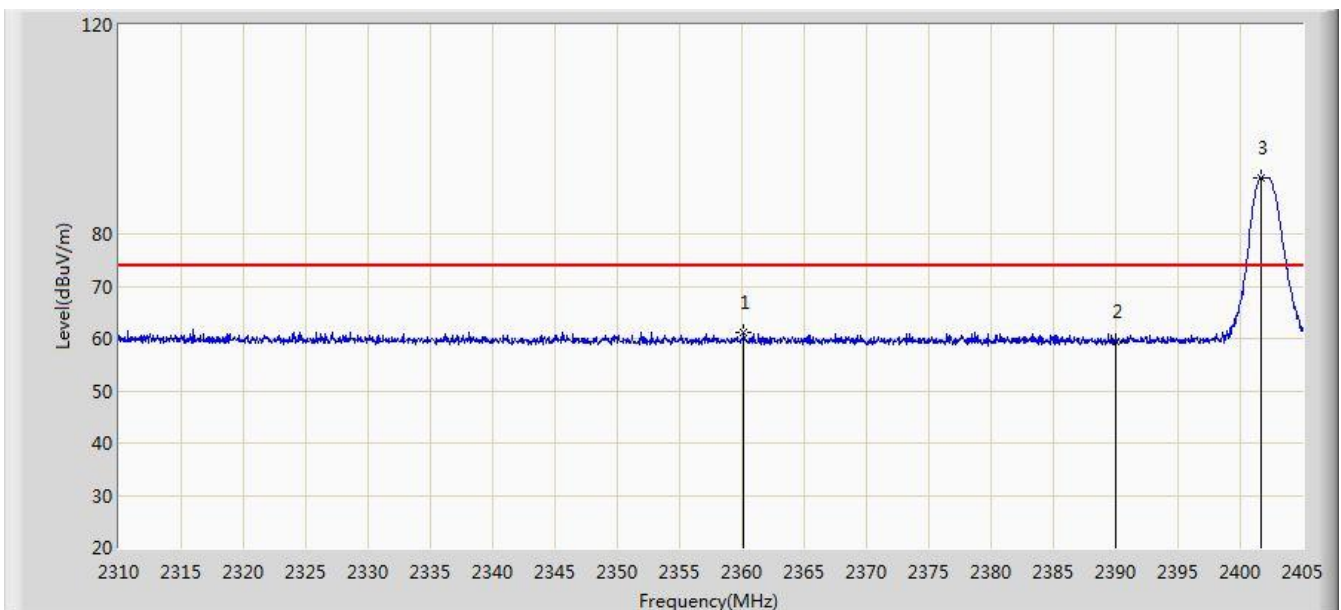
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

## 7.4. Radiated Restricted Band Edge Measurement

### 7.4.1. Test Result

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 21:56 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Horizontal     |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2402MHz |                          |

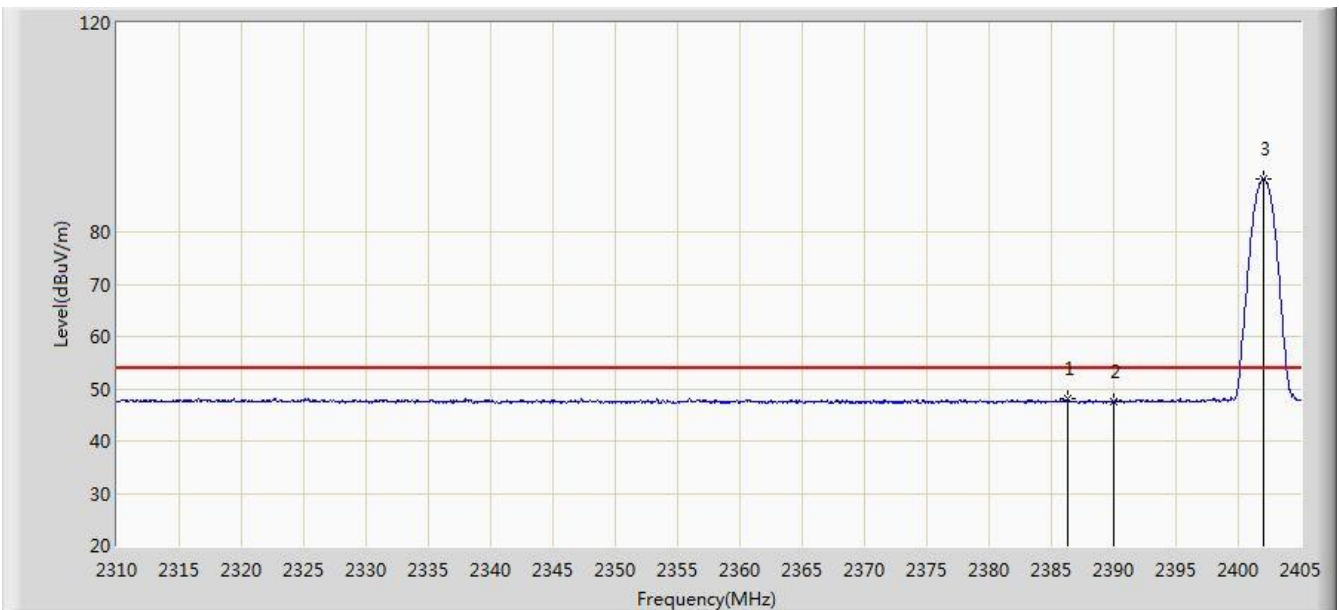


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 2360.160        | 61.299                 | 28.676               | -12.701         | 74.000         | 32.622      | PK   |
| 2  |      |      | 2390.000        | 59.465                 | 26.890               | -14.535         | 74.000         | 32.575      | PK   |
| 3  |      | *    | 2401.722        | 90.784                 | 58.225               | N/A             | N/A            | 32.559      | PK   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 21:59 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Horizontal     |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2402MHz |                          |

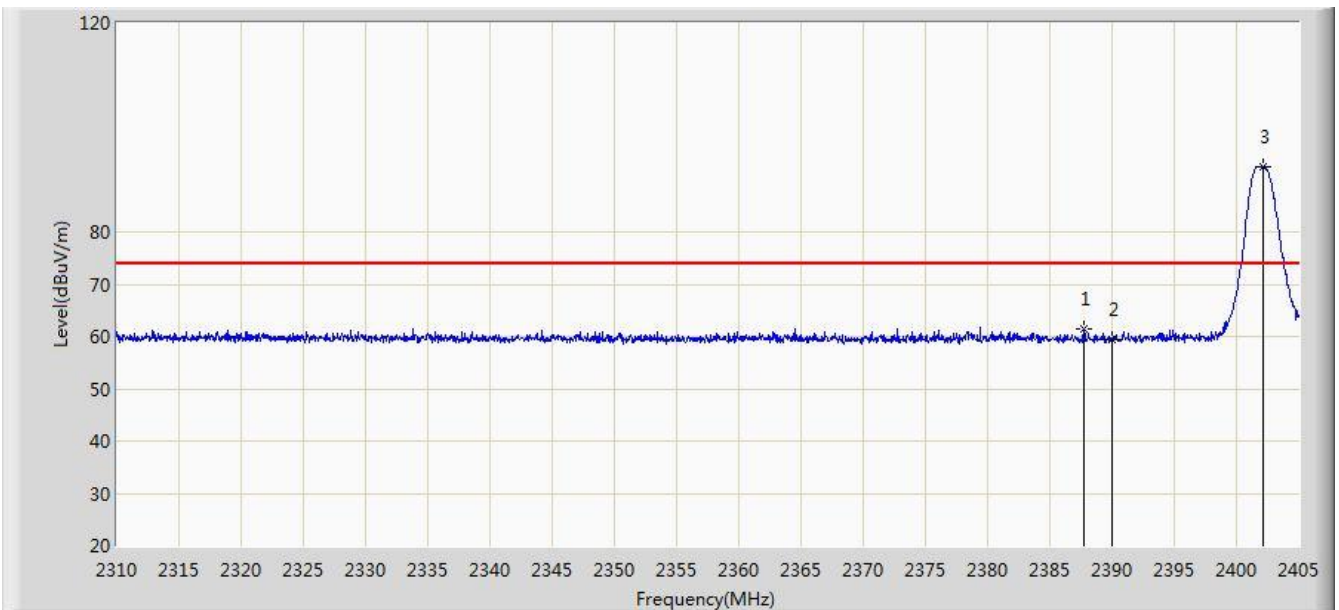


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 2386.333        | 47.976                 | 15.395               | -6.024          | 54.000         | 32.581      | AV   |
| 2  |      |      | 2390.000        | 47.407                 | 14.832               | -6.593          | 54.000         | 32.575      | AV   |
| 3  |      | *    | 2402.008        | 90.102                 | 57.543               | N/A             | N/A            | 32.559      | AV   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 22:07 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Vertical       |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2402MHz |                          |

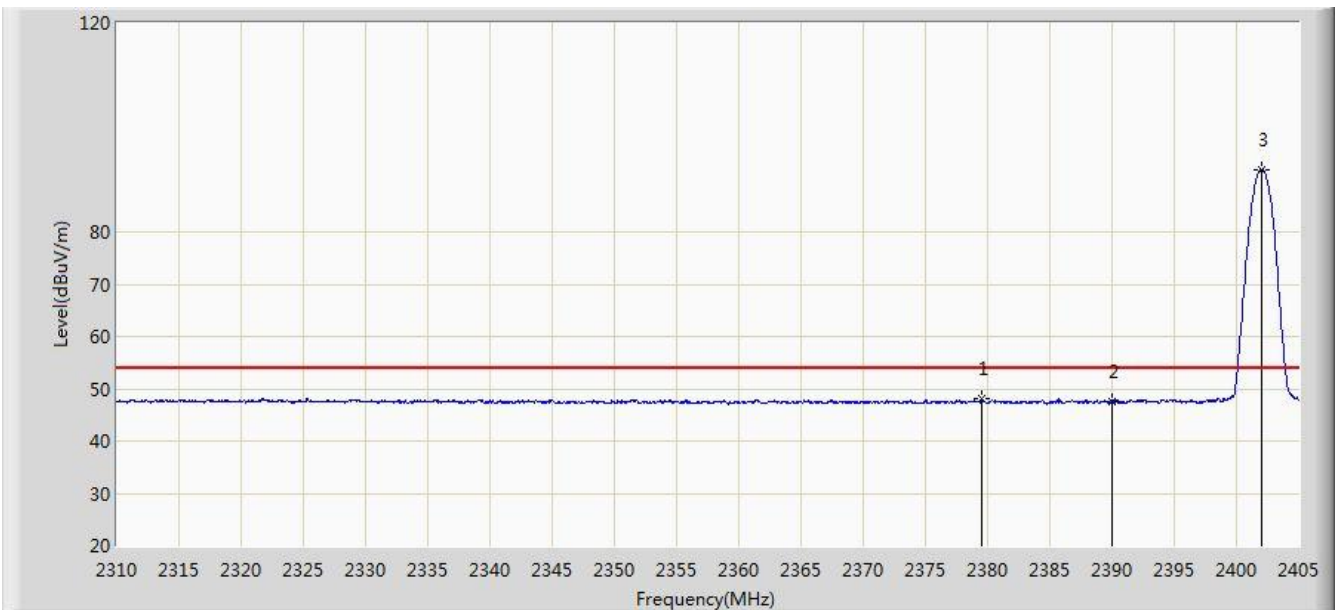


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 2387.758        | 61.334                 | 28.756               | -12.666         | 74.000         | 32.579      | PK   |
| 2  |      |      | 2390.000        | 59.401                 | 26.826               | -14.599         | 74.000         | 32.575      | PK   |
| 3  |      | *    | 2402.150        | 92.593                 | 60.034               | N/A             | N/A            | 32.559      | PK   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC1                                     | Time: 2018/10/23 - 22:10 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Vertical       |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2402MHz |                          |

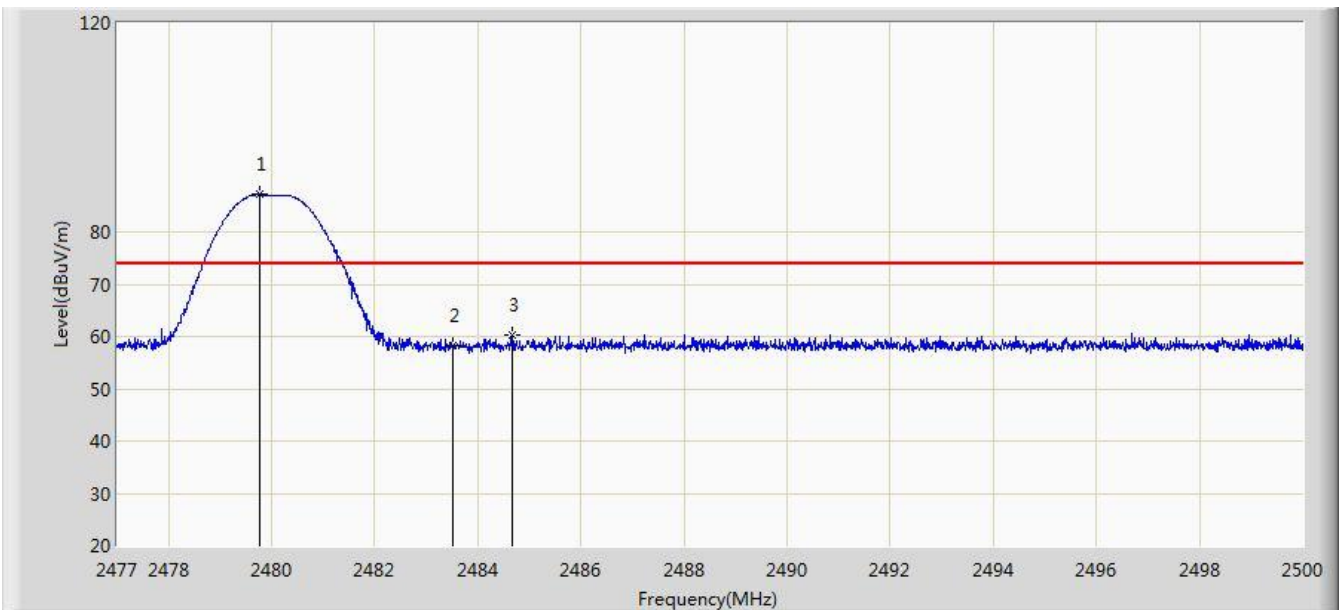


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 2379.492        | 47.988                 | 15.395               | -6.012          | 54.000         | 32.593      | AV   |
| 2  |      |      | 2390.000        | 47.462                 | 14.887               | -6.538          | 54.000         | 32.575      | AV   |
| 3  |      | *    | 2402.008        | 91.994                 | 59.435               | N/A             | N/A            | 32.559      | AV   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 22:13 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Horizontal     |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2480MHz |                          |

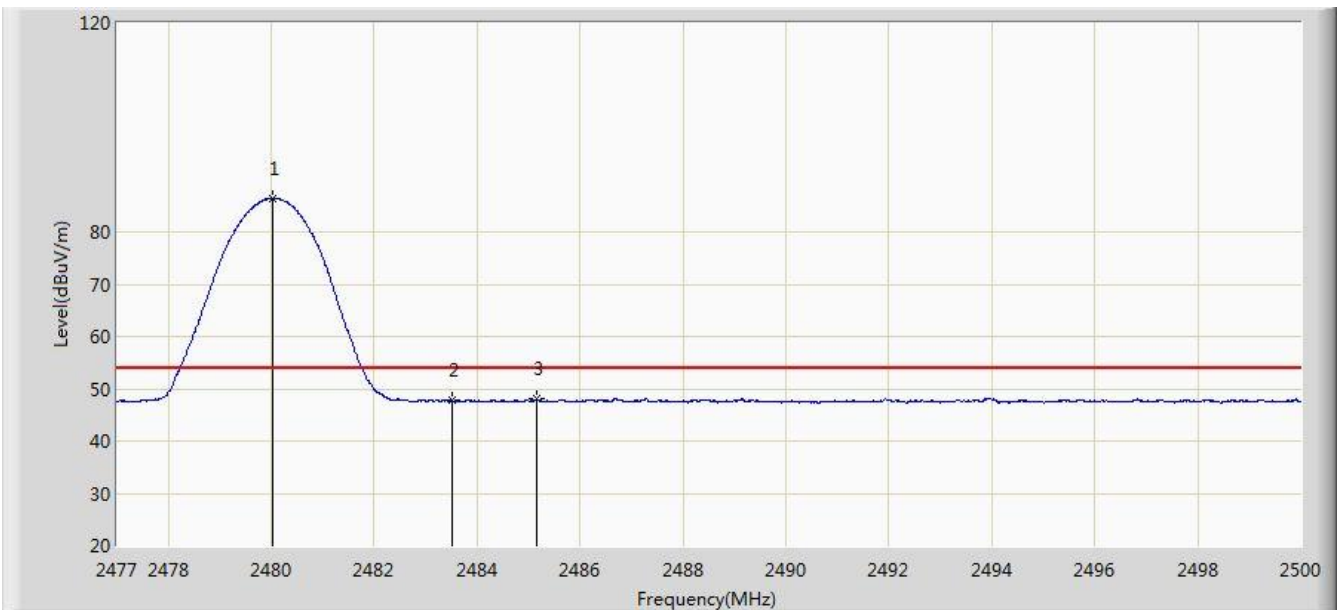


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | *    | 2479.760        | 87.103                 | 54.517               | N/A             | N/A            | 32.587      | PK   |
| 2  |      |      | 2483.500        | 58.250                 | 25.654               | -15.750         | 74.000         | 32.596      | PK   |
| 3  |      |      | 2484.670        | 60.311                 | 27.712               | -13.689         | 74.000         | 32.599      | PK   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 22:15 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Horizontal     |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2480MHz |                          |

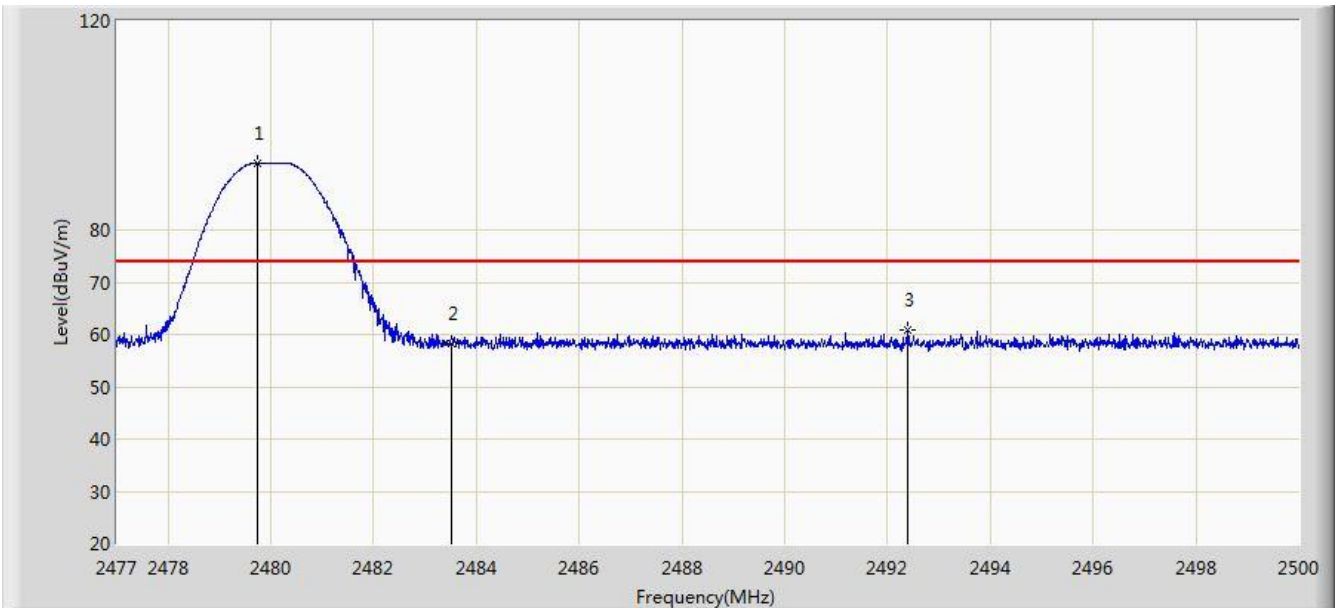


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | *    | 2480.024        | 86.407                 | 53.820               | N/A             | N/A            | 32.587      | AV   |
| 2  |      |      | 2483.500        | 47.755                 | 15.159               | -6.245          | 54.000         | 32.596      | AV   |
| 3  |      |      | 2485.165        | 48.008                 | 15.408               | -5.992          | 54.000         | 32.600      | AV   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 22:16 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Vertical       |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2480MHz |                          |

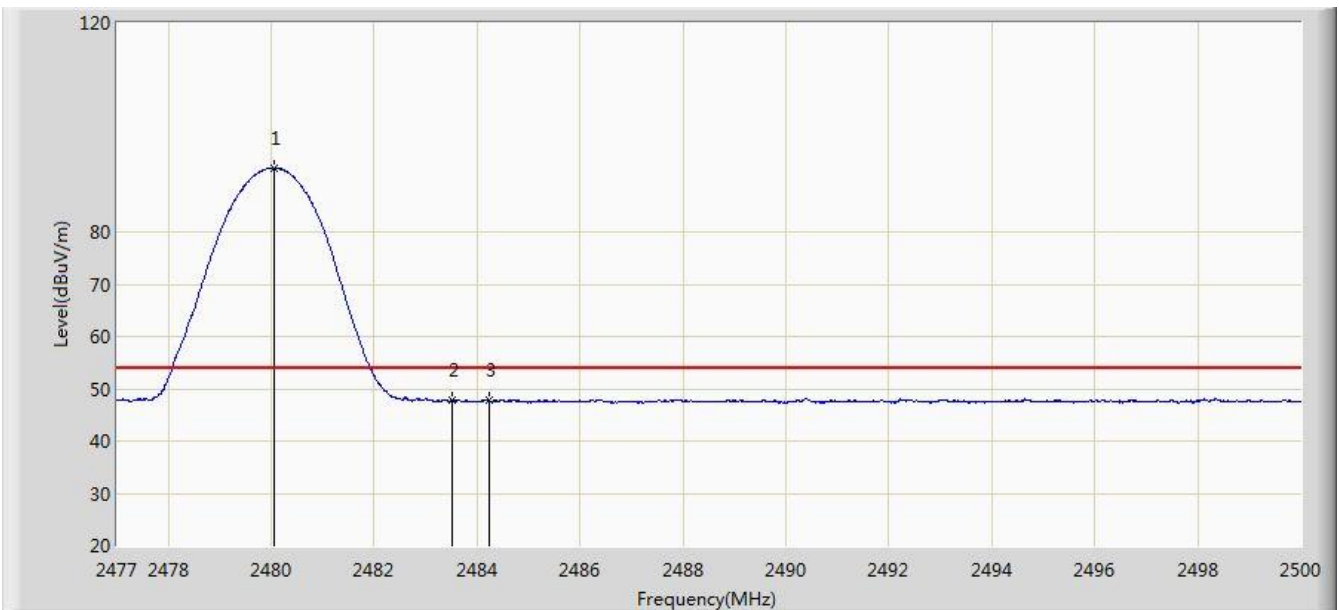


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | *    | 2479.749        | 92.827                 | 60.241               | N/A             | N/A            | 32.587      | PK   |
| 2  |      |      | 2483.500        | 58.379                 | 25.783               | -15.621         | 74.000         | 32.596      | PK   |
| 3  |      |      | 2492.398        | 60.925                 | 28.307               | -13.075         | 74.000         | 32.618      | PK   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Site: AC2                                     | Time: 2018/10/23 - 22:16 |
| Limit: FCC_Part15.209_RE(3m)                  | Engineer: Messiah Li     |
| Probe: BBHA9120D_1-18GHz                      | Polarity: Vertical       |
| EUT: Ninebot S-PRO                            | Power: By Battery        |
| Test Mode: Transmit by BLE at channel 2480MHz |                          |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | *    | 2480.059        | 92.257                 | 59.670               | N/A             | N/A            | 32.587      | AV   |
| 2  |      |      | 2483.500        | 47.770                 | 15.174               | -6.230          | 54.000         | 32.596      | AV   |
| 3  |      |      | 2484.245        | 47.905                 | 15.307               | -6.095          | 54.000         | 32.598      | AV   |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

## 8. CONCLUSION

The data collected relate only the item(s) tested and show that the **device** is in compliance with Part 15C of the FCC Rules.

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The End