

# VARIANT RADIO TEST REPORT

## (FCC Part 15 Subpart C / IC RSS-247)

|            |                                                                            |
|------------|----------------------------------------------------------------------------|
| Applicant: | Honeywell International Inc<br>Honeywell Safety and Productivity Solutions |
| Address:   | 9680 Old Bailes Road, Fort Mill, SC 29707 United States                    |

|                |                                                                            |
|----------------|----------------------------------------------------------------------------|
| Manufacturer:  | Honeywell International Inc<br>Honeywell Safety and Productivity Solutions |
| Address:       | 9680 Old Bailes Road, Fort Mill, SC 29707 United States                    |
| Product:       | Mobile Computer                                                            |
| Brand Name:    | Honeywell                                                                  |
| Model Name:    | CT45-L0N                                                                   |
| FCC ID:        | HD5-CT45L0N                                                                |
| Date of tests: | 2021-10-25 to 2022-01-18                                                   |

The tests have been carried out according to the requirements of the following standard:

☒ **Part 15 Subpart C §15. 247 / IC RSS-247 issue 2**

**CONCLUSION:** The submitted sample was found to COMPLY with the test requirement

|                                                                                                            |                                                                                                             |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Prepared by Simon Wang<br>Engineer / Mobile Department                                                     | Approved by Luke Lu<br>Manager / Mobile Department                                                          |
| <br>Date: Jan. 18, 2022 | <br>Date: Jan. 18, 2022 |

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## Report Revise Record

| ISSUE NO.              | REASON FOR CHANGE                                                        | DATE ISSUED   |
|------------------------|--------------------------------------------------------------------------|---------------|
| RFBGDJ-W7L-P21060011-5 | Original release                                                         | Jul. 14, 2021 |
| W7L-211129W004RF10     | Based on the original report RFBGDJ-W7L-P21060011-5 changing components. | Jan. 18, 2022 |

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## Summary of Test RESULT

| FCC Rule              | IC Rule           | Description                                   | Limit                                                                     | Result                        | Remark                                  |
|-----------------------|-------------------|-----------------------------------------------|---------------------------------------------------------------------------|-------------------------------|-----------------------------------------|
| 15.247(a)(2)          | RSS-247<br>5.2(a) | 6dB Bandwidth                                 | $\geq 0.5\text{MHz}$                                                      | (See Note<br>2)               | -                                       |
| -                     | RSS-Gen<br>6.7    | 99% Bandwidth                                 | -                                                                         | (See Note<br>2)               | -                                       |
| 15.247(b)(3)          | RSS-247<br>5.4(d) | Peak Output Power                             | $\leq 30\text{dBm}$                                                       | Compliance<br>(See Note<br>1) | -                                       |
| 15.247(e)             | RSS-247<br>5.2(b) | Power Spectral Density                        | $\leq 8\text{dBm}/3\text{kHz}$                                            | (See Note<br>2)               | -                                       |
| 15.247(d)             | RSS-247<br>5.5    | Conducted Band Edges<br>and Spurious Emission | $\leq 20\text{dBc}$                                                       | (See Note<br>2)               | -                                       |
| 15.247(d)             | RSS-247<br>5.5    | Radiated Band Edges and<br>Spurious Emission  | 15.209(a) &<br>15.247(d)<br>RSS-247 5.5 &<br>RSS-Gen Table<br>5 , Table 6 | (See Note<br>1)               | -                                       |
| 15.207                | RSS-GEN<br>8.8    | AC Conducted Emission                         | 15.207(a)<br>RSS-GEN<br>8.8 Table 4                                       | (See Note<br>2)               | Under limit<br>17.16 dB at<br>0.497 MHz |
| 15.203 &<br>15.247(b) | RSS-GEN 6.8       | Antenna Requirement                           | 15.203 &<br>15.247(b)<br>RSS-GEN 6.8                                      | (See Note<br>2)               | -                                       |

Note:

1. Per the change notice provide by manufactory, the difference is changing components, all the change no effect any RF parameter. Therefore only verify the power and radiated emission worse case. The report only show the verify test data. More test details please refer to the original report.
2. Please refer to original report RFBGDJ-W7L-P21060011-5

# 1. General Description

## 1.1 Applicant

**Honeywell International Inc**  
**Honeywell Safety and Productivity Solutions**  
9680 Old Bailes Road, Fort Mill, SC 29707 United States

## 1.2 Manufacturer

**Honeywell International Inc**  
**Honeywell Safety and Productivity Solutions**  
9680 Old Bailes Road, Fort Mill, SC 29707 United States

## 1.3 General Description Of EUT

|                               |                                   |
|-------------------------------|-----------------------------------|
| <b>Product</b>                | Mobile Computer                   |
| <b>Model No.</b>              | CT45-L0N                          |
| <b>Additional No.</b>         | N/A                               |
| <b>Difference Description</b> | N/A                               |
| <b>Power Supply</b>           | 3.85Vdc for EUT                   |
| <b>Modulation Technology</b>  | BLE                               |
| <b>Modulation Type</b>        | GFSK                              |
| <b>Operating Frequency</b>    | 2402MHz~2480MHz                   |
| <b>Number Of Channel</b>      | 40                                |
| <b>Max. Output Power</b>      | 6.51 dBm (0.0045 W)               |
| <b>Max. e.i.r.p.</b>          | 7.91 dBm (0.0062W)                |
| <b>Antenna Type</b>           | LDS type Antenna with 1.4dBi gain |
| <b>HW Version</b>             | V1.0                              |
| <b>SW Version</b>             | OS.11.001                         |
| <b>I/O Ports</b>              | Refer to user's manual            |

### NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

## 1.4 Modification of EUT

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

## 1.5 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ ANSI C63.10-2013
- ♦ KDB 558074 D01 15.247 Meas Guidance v05r02
- ♦ IC RSS-247 Issue 2
- ♦ IC RSS-Gen Issue 5

### Remark:

1. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B&ICES-003, recorded in a separate test report.

## 2. Test Configuration of Equipment Under Test

### 2.1 Descriptions of Test Mode

The transmitter has a maximum peak conducted output power as follows:

| Test Mode | Channel | Frequency | Bluetooth RF Output Power |
|-----------|---------|-----------|---------------------------|
| BLE_125K  | Ch00    | 2402MHz   | 4.53                      |
|           | Ch19    | 2440MHz   | 5.29                      |
|           | Ch39    | 2480MHz   | 6.24                      |
| BLE_1M    | Ch00    | 2402MHz   | 4.59                      |
|           | Ch19    | 2440MHz   | 5.27                      |
|           | Ch39    | 2480MHz   | 6.51                      |
| BLE_2M    | Ch00    | 2402MHz   | 4.49                      |
|           | Ch19    | 2440MHz   | 5.25                      |
|           | Ch39    | 2480MHz   | 6.33                      |
| BLE_500K  | Ch00    | 2402MHz   | 4.54                      |
|           | Ch19    | 2440MHz   | 5.19                      |
|           | Ch39    | 2480MHz   | 6.4                       |

- Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.
- The data rate was set in 2Mbps for all the test items due to the highest RF output power

### 2.2 Test Mode

#### 2.2.1 Antenna Port Conducted Measurement

| Summary table of Test Cases |                                                                         |
|-----------------------------|-------------------------------------------------------------------------|
| Test Item                   | Data Rate / Modulation                                                  |
|                             | Bluetooth 5.1 – LE GFSK                                                 |
|                             | 2Mbps                                                                   |
| Conducted Test Cases        | Mode 1: CH00_2402 MHz<br>Mode 2: CH19_2440 MHz<br>Mode 3: CH39_2480 MHz |

## 2.2.2 Radiated Emission Test (Below 1GHz)

| Radiated<br>Test Cases | Bluetooth 5.1 – LE GFSK<br>2Mbps |
|------------------------|----------------------------------|
|                        | Mode 1: CH00_2402 MHz            |

Note : 1. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type. Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

2. Following channel(s) was (were) selected for the final test as listed above

## 2.2.3 Radiated Emission Test (Above 1GHz)

| Radiated<br>Test Cases | Bluetooth 5.1 – LE GFSK<br>2Mbps                                        |
|------------------------|-------------------------------------------------------------------------|
|                        | Mode 1: CH00_2402 MHz<br>Mode 2: CH19_2440 MHz<br>Mode 3: CH39_2480 MHz |

Note : 1. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

2. Following channel(s) was (were) selected for the final test as listed above

3. For frequency above 18GHz, the measured value is much lower than the limit, therefore, it is not reflected in the report.

## 2.2.4 Power Line Conducted Emission Test:

| AC<br>Conducted<br>Emission | Mode 1 : BT Linking + Earphone + Adapter |
|-----------------------------|------------------------------------------|
|-----------------------------|------------------------------------------|

## 2.3 Support Equipment

| Item | Equipment | Trade Name | Model Name | FCC ID      | Data Cable | Power Cord                                                  |
|------|-----------|------------|------------|-------------|------------|-------------------------------------------------------------|
| 1.   | WLAN AP   | NETGARE    | R7800      | PY315100319 | N/A        | unshielded AC I/P cable1.2 m                                |
| 2.   | Notebook  | Lenovo     | E470C      | FCC DoC     | N/A        | shielded cable DC O/P 1.8 m<br>unshielded AC I/P cable1.2 m |
| 3.   | Earphone  | Honeywell  | PTE-300N   | FCC sDoC    | N/A        | N/A                                                         |



|    |         |           |                      |          |     |     |
|----|---------|-----------|----------------------|----------|-----|-----|
| 4. | Adapter | Honeywell | ADS-12B-06<br>05010E | FCC sDoC | N/A | N/A |
|----|---------|-----------|----------------------|----------|-----|-----|

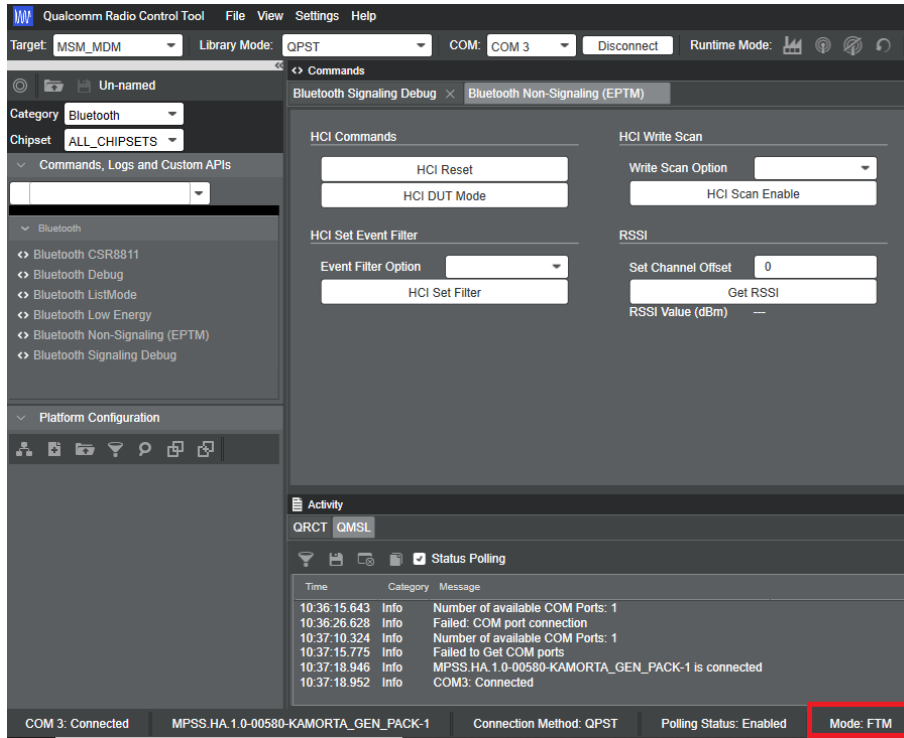
| Equipment                  | Manufacturer | Model No.                   | Serial No.                  | Last Cal.   | Next Cal.   |
|----------------------------|--------------|-----------------------------|-----------------------------|-------------|-------------|
| 3m Semi-anechoic Chamber   | ETS-LINDGREN | 9m*6m*6m                    | Euroshieldpn-CT0001143-1216 | May. 19,20  | May. 18,23  |
| Bilog Antenna              | ETS-LINDGREN | 3143B                       | 00161965                    | Mar. 05,21  | Mar. 04,22  |
| Horn Antenna               | ETS-LINDGREN | 3117                        | 00168728                    | Apr. 02,21  | Apr. 01,22  |
| Horn Antenna (18GHz-40GHz) | N/A          | QWH-SL-18-40-K-SG/QMS-00361 | 15433                       | Aug. 25, 21 | Aug. 24, 22 |
| Test Software              | E3           | V 9.160323                  | N/A                         | N/A         | N/A         |
| Test Software              | ADT          | ADT_Radiated_V7.6.15.9.2    | N/A                         | N/A         | N/A         |
| 10dB Attenuator            | JFW/USA      | 50HF-010-SMA                | 1505                        | Jun. 03,21  | Jun. 02,22  |
| MXE EMI Receiver           | KEYSIGHT     | N9038A-544                  | MY54450026                  | Apr. 22,21  | Apr. 21,22  |
| Signal Pre-Amplifier       | EMSI         | EMC 9135                    | 980249                      | Jun. 02,21  | Jun. 01,22  |
| Signal Pre-Amplifier       | EMSI         | EMC 012645B                 | 980257                      | Jun. 03,21  | Jun. 02,22  |
| Signal Pre-Amplifier       | EMSI         | EMC 184045B                 | 980259                      | Apr. 22,21  | Apr. 21,22  |
|                            |              |                             |                             |             |             |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in 3m Chamber.
  3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.
  4. The IC test Site Registration No. is 21771-1; The CAB Identifier No. is CN0007.

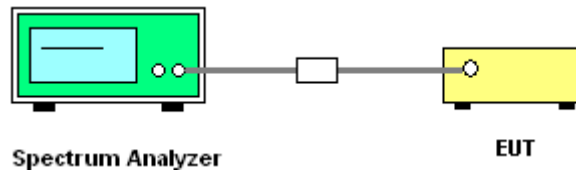
## 2.4 Test Setup

EUT was set in the Hidden menu mode to enable BT communications.

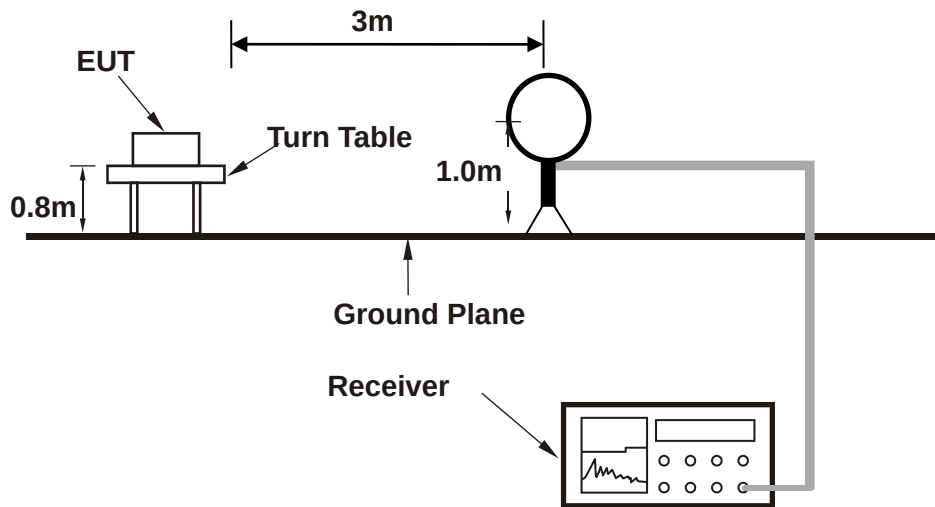
The following picture is a screenshot of the test software



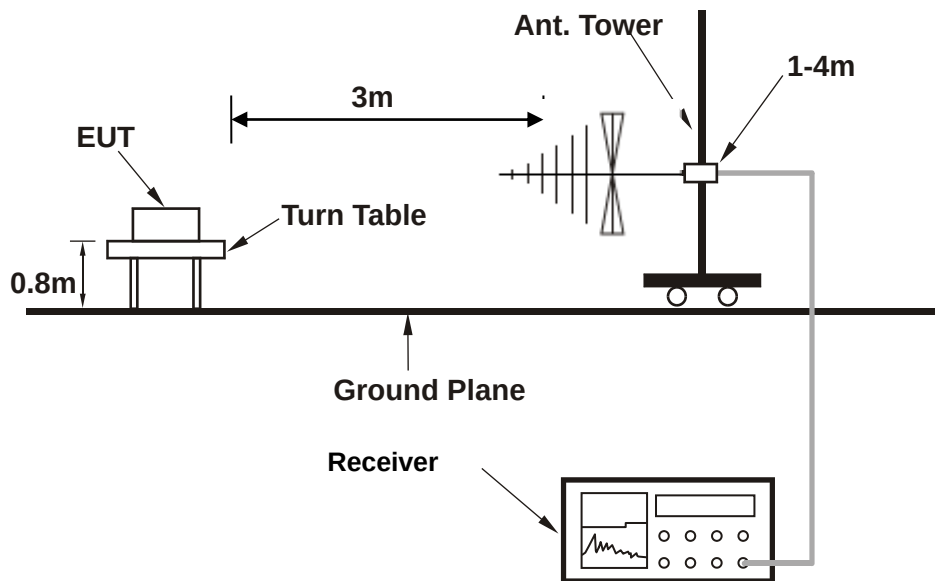
#### Setup diagram for Conducted Test



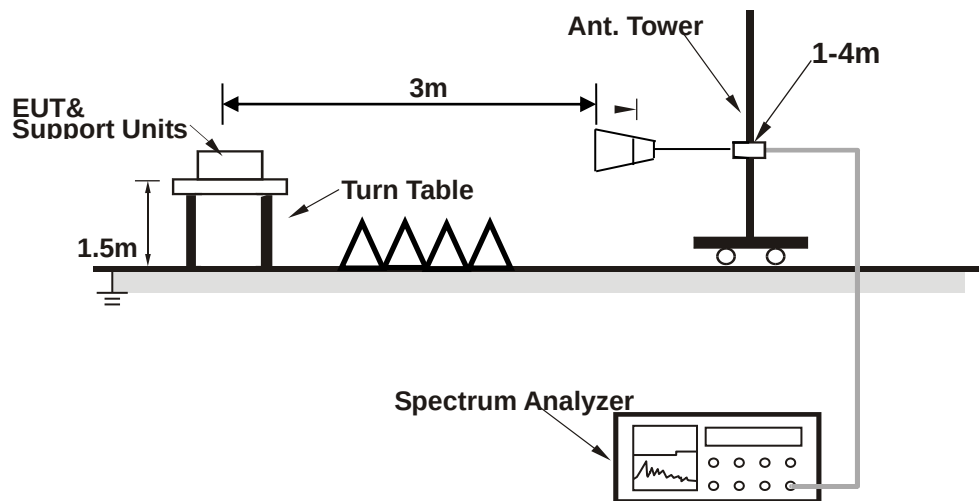
**Setup diagram for Radiation(9KHz~30MHz) Test**



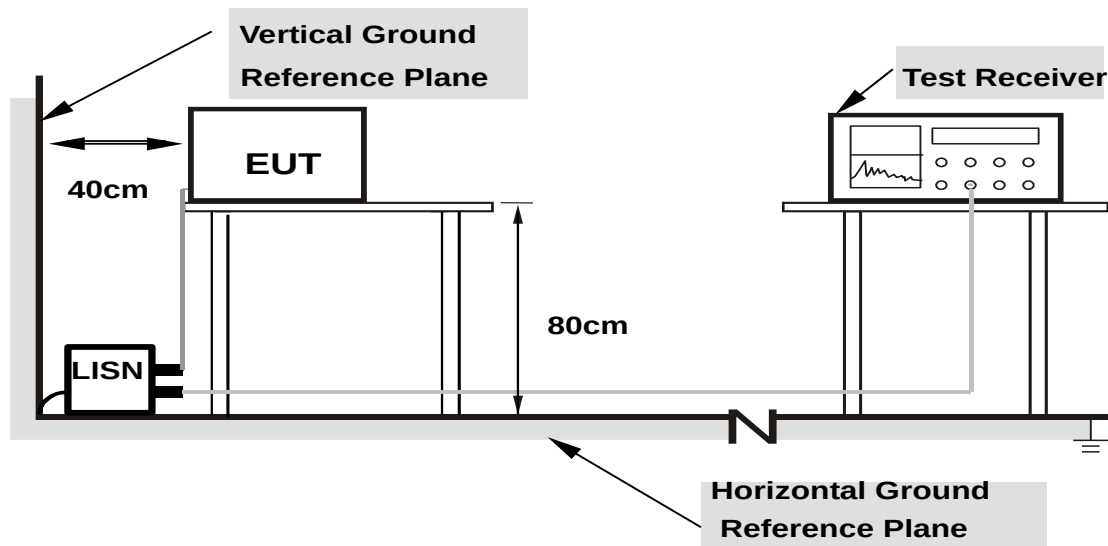
**Setup diagram for Radiation(Below 1G) Test**



**Setup diagram for Radiation (Above1G) Test**



**Setup diagram for AC Conducted Emission Test**



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

## 2.5 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5 + 10 = 15 \text{ (dB)}\end{aligned}$$

### For all radiated test items:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Over Limit (dB  $\mu$  V/m) = Level(dB  $\mu$  V/m) - Limit Level (dB  $\mu$  V/m)

## 2.6 Peak Output Power Measurement

### 2.6.1 Limit of Peak Output Power

FCC §15.247 (b)(3)

For systems using digital modulation in the 2400-2483.5 MHz bands: 30dBm.

IC RSS-247 A5.4(d)

For DTSs employing digital modulation techniques operating in the bands 902-928MHz and 2400-2483.5MHz, the maximum peak conducted output power shall not exceed 1 W.

The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e)

### 2.6.2 Test Procedures

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect it to spectrum analyzer.
3. Set to the maximum power setting and enable the EUT transmit continuously
4. Set the  $RBW \geq DTS \text{ Bandwidth}$ ,  $VBW \geq 3 * RBW$ ,  $Span \geq 1.5 * DTS \text{ Bandwidth}$ , Detector=Peak, Sweep time=auto couple, Trace mode=max hold.
5. Allow trace to fully stabilize, Use peak marker function to determine the peak amplitude level.
6. Measure the conducted output power

### 2.6.3 Test Result of Peak Output Power

Refer to Appendix A of this test report.

## 2.7 Radiated Band Edges and Spurious Emission Measurement

### 2.7.1 Limit of Radiated Band Edges and Spurious Emission

FCC §15.247 (d)

IC RSS-247 5.5

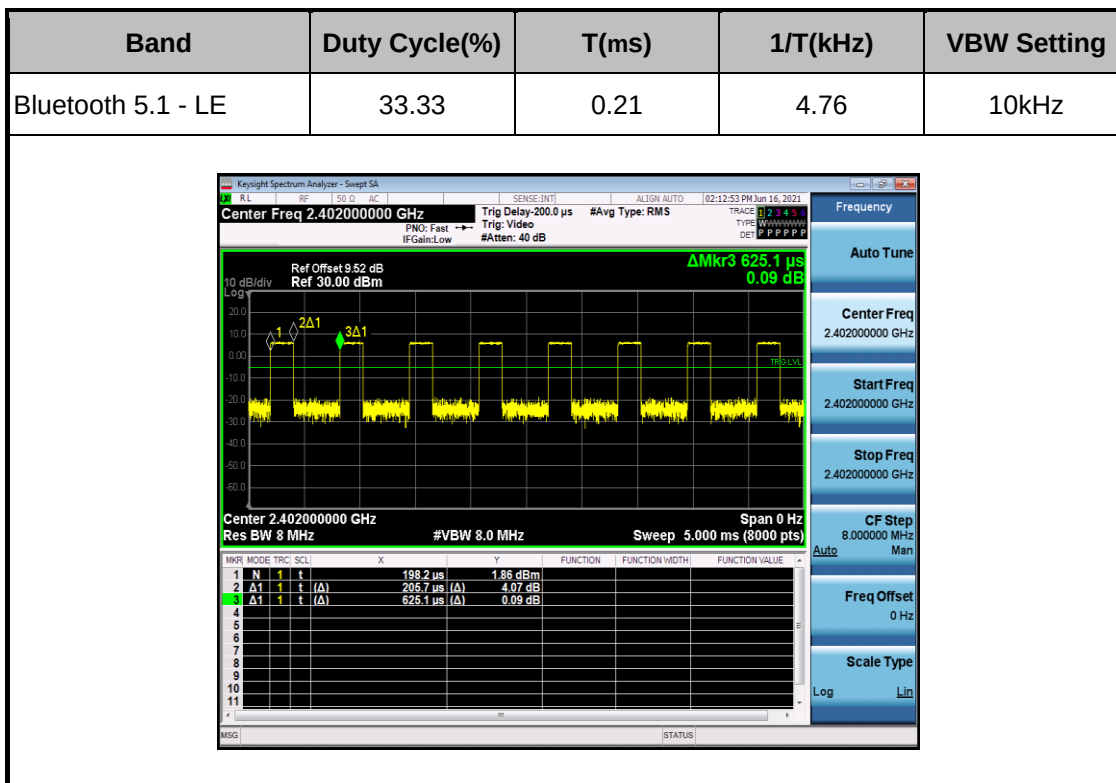
In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 0.009 – 0.490      | 2400/F(kHz)                          | 300                              |
| 0.490 – 1.705      | 24000/F(kHz)                         | 30                               |
| 1.705 – 30.0       | 30                                   | 30                               |
| 30 – 88            | 100                                  | 3                                |
| 88 – 216           | 150                                  | 3                                |
| 216 - 960          | 200                                  | 3                                |
| Above 960          | 500                                  | 3                                |

### 2.7.2 Test Procedures

7. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
8. The measurement distance is 3 meter.
9. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
10. Set to the maximum power setting and enable the EUT transmit continuously.
11. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz, RBW=1MHz for  $f > 1$ GHz ; VBW RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
  - (3) For average measurement:  
 VBW = 10 Hz, when duty cycle is no less than 98 percent.  
 VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission

duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



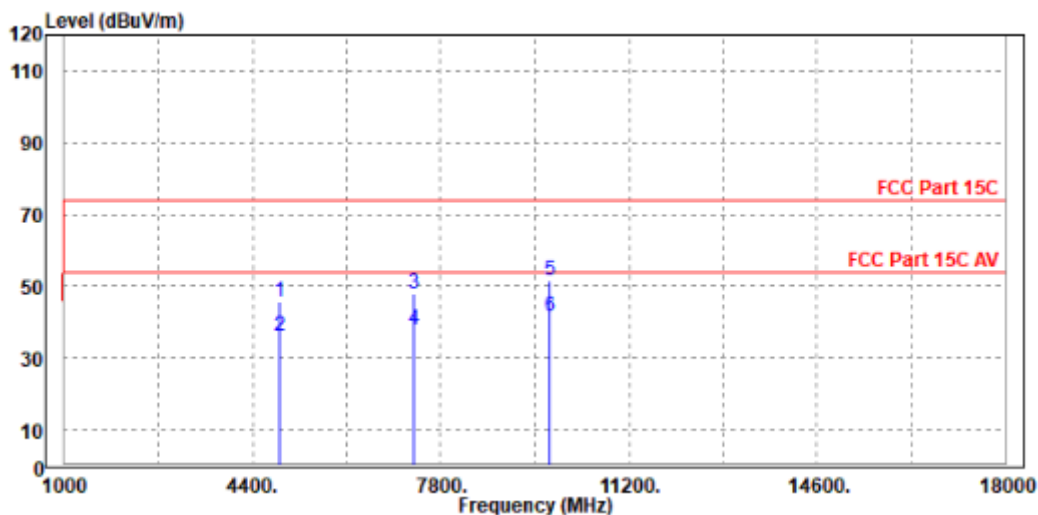
### 2.7.3 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

## 2.7.4 Test Result of Radiated Spurious Emission (1GHz ~ 10<sup>th</sup> Harmonic)

|                 |                     |                     |            |
|-----------------|---------------------|---------------------|------------|
| Test Mode :     | BLE CH19 (2440 MHz) | Temperature :       | 21~23°C    |
| Test Engineer : | Jace Hu             | Relative Humidity : | 63~65%     |
| Frequency Range | 3GHz~18GHz          | Polarization :      | Horizontal |

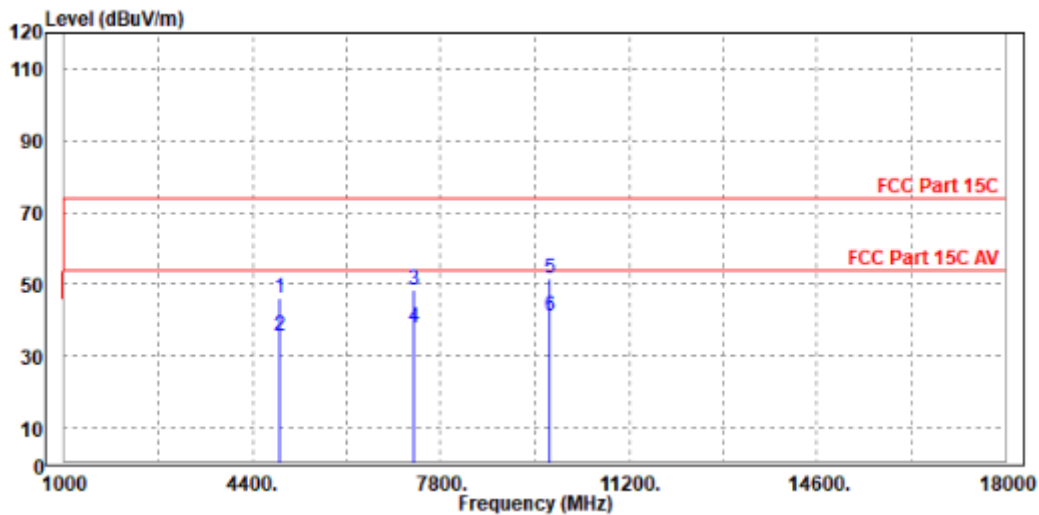
|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark  | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|---------|------------|
|      | MHz      | dBuV/m | dBuV       | dBuV/m     | dB         | dB/m   |         |            |
| 1    | 4876.000 | 45.61  | 48.78      | 74.00      | -28.39     | -3.17  | Peak    | Horizontal |
| 2    | 4876.000 | 36.12  | 39.29      | 54.00      | -17.88     | -3.17  | Average | Horizontal |
| 3    | 7320.000 | 48.05  | 45.97      | 74.00      | -25.95     | 2.08   | Peak    | Horizontal |
| 4    | 7320.000 | 37.70  | 35.62      | 54.00      | -16.30     | 2.08   | Average | Horizontal |
| 5 PK | 9760.000 | 51.67  | 46.79      | 74.00      | -22.33     | 4.88   | Peak    | Horizontal |
| 6 PP | 9760.000 | 41.61  | 36.73      | 54.00      | -12.39     | 4.88   | Average | Horizontal |



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

|                 |                     |                     |          |
|-----------------|---------------------|---------------------|----------|
| Test Mode :     | BLE CH19 (2440 MHz) | Temperature :       | 21~23℃   |
| Test Engineer : | Jace Hu             | Relative Humidity : | 63~65%   |
| Frequency Range | 3GHz~18GHz          | Polarization :      | Vertical |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark  | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|---------|-----------|
|      | MHz      | dBuV/m | dBuV       | dBuV/m     | dB         | dB/m   |         |           |
| 1    | 4876.000 | 46.18  | 49.15      | 74.00      | -27.82     | -2.97  | Peak    | Vertical  |
| 2    | 4876.000 | 35.66  | 38.63      | 54.00      | -18.34     | -2.97  | Average | Vertical  |
| 3    | 7320.000 | 48.31  | 46.16      | 74.00      | -25.69     | 2.15   | Peak    | Vertical  |
| 4    | 7320.000 | 37.97  | 35.82      | 54.00      | -16.03     | 2.15   | Average | Vertical  |
| 5 PK | 9760.000 | 51.33  | 46.10      | 74.00      | -22.67     | 5.23   | Peak    | Vertical  |
| 6 PP | 9760.000 | 41.16  | 35.93      | 54.00      | -12.84     | 5.23   | Average | Vertical  |



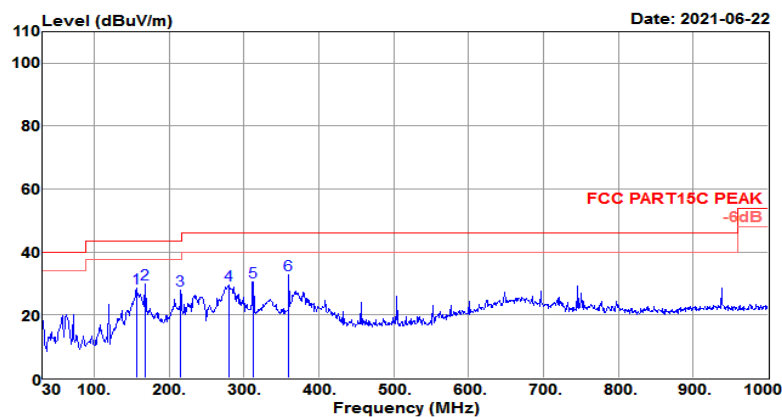
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

## 2.7.5 Test Result of Radiated Spurious Emission (30MHz ~ 1GHz)

|                 |                     |                     |            |
|-----------------|---------------------|---------------------|------------|
| Test Mode :     | BLE CH00 (2402 MHz) | Temperature :       | 21~23℃     |
| Test Engineer : | Jack Liu            | Relative Humidity : | 63~65%     |
| Frequency Range | 30MHz~1GHz          | Polarization :      | Horizontal |

|           |                     |              |              |
|-----------|---------------------|--------------|--------------|
| Test Site | : 3m Chamber        | Temp/Humi    | : 25℃/64%    |
| Tested by | : Jack              | Pol/Phase    | : HORIZONTAL |
| Test Mode | : Ble CH00(2402MHz) | Power rating | : DC 3.85W   |
| EUT       | : Mobile Computer   |              |              |
| Model No. | : CT45-L0N          |              |              |

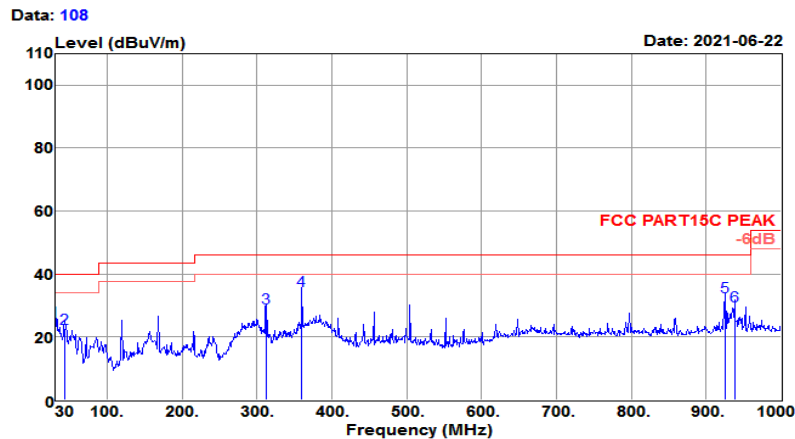
Data: 107



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV/m | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 156.100     | 44.83                    | 14.11                     | 2.14                | 32.48                  | 28.60           | 43.50                    | -14.90              | QP     |
| 167.740     | 46.69                    | 13.45                     | 2.22                | 32.48                  | 29.88           | 43.50                    | -13.62              | QP     |
| 215.270     | 48.06                    | 9.89                      | 2.55                | 32.47                  | 28.03           | 43.50                    | -15.47              | QP     |
| 280.260     | 46.53                    | 12.74                     | 2.90                | 32.49                  | 29.68           | 46.00                    | -16.32              | QP     |
| 312.270     | 46.59                    | 13.30                     | 3.10                | 32.50                  | 30.49           | 46.00                    | -15.51              | QP     |
| 359.800     | 47.88                    | 14.24                     | 3.34                | 32.53                  | 32.93           | 46.00                    | -13.07              | QP     |

|                 |                     |                     |          |
|-----------------|---------------------|---------------------|----------|
| Test Mode :     | BLE CH00 (2402 MHz) | Temperature :       | 21~23℃   |
| Test Engineer : | Jack Liu            | Relative Humidity : | 63~65%   |
| Frequency Range | 30MHz~1GHz          | Polarization :      | Vertical |

|           |                     |               |            |
|-----------|---------------------|---------------|------------|
| Test Site | : 3m Chamber        | Temp/Humi     | : 25℃/64%  |
| Tested by | : Jack              | Pol/Phase     | : VERTICAL |
| Test Mode | : Ble CH00(2402MHz) | Power rating: | DC 3.85V   |
| EUT       | : Mobile Computer   |               |            |
| Model No. | : CT45-L0N          |               |            |



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV/m | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 30.000      | 42.71                    | 13.77                     | 0.96                | 32.44                  | 25.00           | 40.00                    | -15.00              | QP     |
| 42.610      | 39.77                    | 14.51                     | 1.05                | 32.48                  | 22.85           | 40.00                    | -17.15              | QP     |
| 312.270     | 45.20                    | 13.30                     | 3.10                | 32.50                  | 29.10           | 46.00                    | -16.90              | QP     |
| 359.800     | 49.60                    | 14.24                     | 3.34                | 32.53                  | 34.65           | 46.00                    | -11.35              | QP     |
| 925.310     | 36.91                    | 22.34                     | 5.75                | 32.16                  | 32.84           | 46.00                    | -13.16              | QP     |
| 937.920     | 33.91                    | 22.41                     | 5.76                | 32.15                  | 29.93           | 46.00                    | -16.07              | QP     |

### 3 Uncertainty of Evaluation

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT         | FREQUENCY     | UNCERTAINTY |
|---------------------|---------------|-------------|
| Conducted emissions | 9kHz~30MHz    | 2.42dB      |
| Radiated emission   | 9kHz~30MHz    | 2.68dB      |
|                     | 30MHz ~ 1GMHz | 2.50dB      |
|                     | 1GHz ~ 18GHz  | 3.51dB      |
|                     | 18GHz ~ 40GHz | 3.96dB      |

| MEASUREMENT                | UNCERTAINTY |
|----------------------------|-------------|
| Occupied Channel Bandwidth | ±196.4Hz    |
| RF output power, conducted | ±2.31dB     |
| Power density, conducted   | ±2.31dB     |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## Appendix A: Maximum conducted output power & E.I.R.P.

### Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Antenna Gain(dBi) | EIRP [dBm] | EIRP Limit [dBm] | Verdict |
|----------|---------|---------|-------------|------------|-------------------|------------|------------------|---------|
| BLE_125K | Ant1    | 2402    | 4.53        | <=30       | 1.4               | 5.93       | 36.02            | PASS    |
|          |         | 2440    | 5.29        | <=30       | 1.4               | 6.69       | 36.02            | PASS    |
|          |         | 2480    | 6.24        | <=30       | 1.4               | 7.64       | 36.02            | PASS    |
| BLE_1M   | Ant1    | 2402    | 4.59        | <=30       | 1.4               | 5.99       | 36.02            | PASS    |
|          |         | 2440    | 5.27        | <=30       | 1.4               | 6.67       | 36.02            | PASS    |
|          |         | 2480    | 6.51        | <=30       | 1.4               | 7.91       | 36.02            | PASS    |
| BLE_2M   | Ant1    | 2402    | 4.49        | <=30       | 1.4               | 5.89       | 36.02            | PASS    |
|          |         | 2440    | 5.25        | <=30       | 1.4               | 6.65       | 36.02            | PASS    |
|          |         | 2480    | 6.33        | <=30       | 1.4               | 7.73       | 36.02            | PASS    |
| BLE_500K | Ant1    | 2402    | 4.54        | <=30       | 1.4               | 5.94       | 36.02            | PASS    |
|          |         | 2440    | 5.19        | <=30       | 1.4               | 6.59       | 36.02            | PASS    |
|          |         | 2480    | 6.4         | <=30       | 1.4               | 7.8        | 36.02            | PASS    |