

# TEST REPORT

Report number: DRTTEC2411-0091

Issue Date: 2024-11-13

**Applicant**

- Company Name : Bluebird Inc.

- Address : 3F, 115, Irwon-ro, Gangnam-gu, Seoul, Republic of Korea

**Equipment under test**

- Product Name : Enterprise Full Touch Handheld Computer

- Model Name : S20

Date of Test : 2024.05.16 ~ 2024.06.13

**Laboratory**

- Company Name : Dt&amp;C Co., Ltd.

- Address : 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935

Test Results : PASS

The results in this reports are applicable only to the samples tested.

This report shall not be re-produced except in full without the written approval of Dt&amp;C Co., Ltd.

Tested Engineer;

TaeHoon Kwon

Approval Person;

HyunSu Son

## 1. Summary of Test

### 1. Purpose of test

Ordinance on Technical Standards Conformity Certification of Specified Radio Equipment  
5.6GHz Band wide band low power data communication System

### 2. Standards

Certification Ordinance Article 2 Clause 1 Item19-3

#### 1) Test Methods

Test method temporarily determined by TAC

#### 2) Deviation from standards

None

### 3. List of applied test to the EUT

| -  | Classification of EUT                                           | Condition | Result |
|----|-----------------------------------------------------------------|-----------|--------|
| 1  | Voltage fluctuation                                             | Conducted | PASS   |
| 3  | Frequency Tolerance                                             | Conducted | PASS   |
| 4  | Occupied Bandwidth                                              | Conducted | PASS   |
| 5  | Unwanted (Spurious) Emission Strength                           | Conducted | PASS   |
| 6  | RF Output Power Tolerance                                       | Conducted | PASS   |
| 7  | Adjacent Channel Leakage Power<br>and Out-of-Band Leakage Power | Conducted | PASS   |
| 8  | Secondary Emitted Radio Wave Strength                           | Conducted | PASS   |
| 9  | Interference Prevention Function                                | Conducted | PASS   |
| 10 | Transmission Burst Length                                       | Conducted | PASS   |
| 11 | Transmission Power Control Function (TPC)                       | Conducted | PASS   |
| 12 | Carrier Sensing Function                                        | Conducted | PASS   |
| 14 | Dynamic Frequency Selection Function(DFS)                       | Conducted | NA     |

#### 1) Test set up

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#### 2) Modification to the EUT by laboratory

None

## 2. Test Information

### 1. Applicant

Bluebird Inc.

3F, 115, Irwon-ro, Gangnam-gu, Seoul, Republic of Korea

### 2. Product Name

Enterprise Full Touch Handheld Computer

### 3. Model Name

S20

### 4. Serial number

Identical Prototype

### 5. Terminal limitation

-20°C to 50°C

### 6. RF Specification Frequency range

**802.11a/n/ac(HT20/VHT20)** : 5500 MHz ~ 5720 MHz

**802.11n/ac(HT40/VHT40)** : 5510 MHz ~ 5710 MHz

**802.11ac(VHT80)** : 5530MHz ~ 5690 MHz

**802.11ac(VHT160)** : 5570MHz

### 7. Number of RF Channels

**20 MHz:** 12 Channels // **40 MHz:** 6 Channels // **80 MHz:** 3 Channels // **160 MHz:** 1 Channel

### 8. Modulation method & Data rate

802.11a: Orthogonal Frequency Division Multiplexing(Up to 54Mbps)

802.11n(HT20): Orthogonal Frequency Division Multiplexing(Up to 72.2Mbps)

MIMO(HT20): Orthogonal Frequency Division Multiplexing(Up to 144.4Mbps)

802.11n(HT40): Orthogonal Frequency Division Multiplexing(Up to 150Mbps)

MIMO(HT40): Orthogonal Frequency Division Multiplexing(Up to 300Mbps)

802.11ac(VHT20): Orthogonal Frequency Division Multiplexing(Up to 86.7Mbps)

MIMO(VHT20): Orthogonal Frequency Division Multiplexing(Up to 173.3Mbps)

802.11ac(VHT40): Orthogonal Frequency Division Multiplexing(Up to 200Mbps)

MIMO(VHT40): Orthogonal Frequency Division Multiplexing(Up to 400Mbps)

802.11ac(VHT80): Orthogonal Frequency Division Multiplexing(Up to 433.3Mbps)

MIMO(VHT80):: Orthogonal Frequency Division Multiplexing(Up to 866.7Mbps)

802.11ac(VHT160): Orthogonal Frequency Division Multiplexing(Up to 866.7Mbps)

MIMO(VHT160):: Orthogonal Frequency Division Multiplexing(Up to 1733.3Mbps)

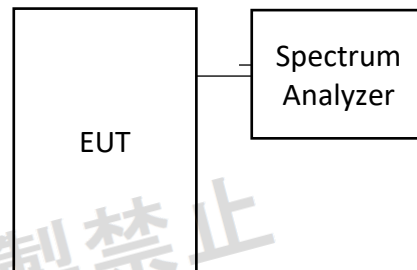
### 9. Variation of the family model(s)

-

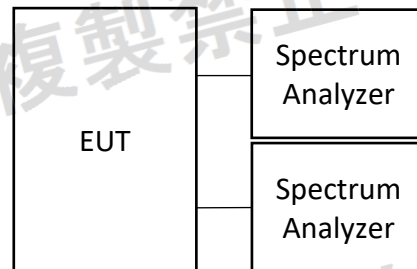
### 3. Configuration of equipment

1. Frequency tolerance, Occupied Bandwidth, RF output power tolerance,  
Unwanted(Spurious) emission strength, Secondary emitted radio wave strength

SISO



MIMO



4. List of Measuring Instruments

| USE | Equipment         | Manufacturer         | Model No. | Serial No. | Cal. by | Cal. Method | Cal. Due      | Cal. Date     |
|-----|-------------------|----------------------|-----------|------------|---------|-------------|---------------|---------------|
| X   | Spectrum analyzer | Agilent Technologies | N9020A    | MY53290984 | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Spectrum analyzer | Agilent Technologies | N9020A    | MY53309959 | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Power Supply      | Agilent Technologies | 66332A    | GB37470191 | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Signal Generator  | Rohde Schwarz        | SMBV100A  | 255571     | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Signal Generator  | Rohde Schwarz        | SMR20     | 101251     | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Signal Generator  | ANRITSU              | MG3695C   | 173501     | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Multi-meter       | FLUKE                | 17B+      | 36390701WS | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Thermohygrometer  | BODYCOM              | BJ5478    | 120612-1   | KTL     | Λ(c)        | Dec. 15, 2024 | Dec. 15, 2023 |
| X   | Power Divider     | Weinschel            | 1515-1    | TA375      | KTL     | Λ(c)        | Jun. 23, 2024 | Jun. 23, 2023 |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |
|     |                   |                      |           |            |         |             |               |               |

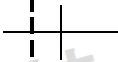
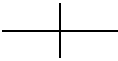
Note1: "X" は使用した測定機器です。  
"X" used equipment.

Note2: 較正期限は、較正を行った日の翌月から起算して1年以内です。  
The validity of measurement equipment is one year from the first day of the following month of the calibration

Note3: 較正方法  
Cal.Method  
関  
(TELEC, インターテックジャパン、キーサイト) が行う較正  
a) : Calibration conducted by the National Institute of Information and Communications Technology~NICT~ or a designated calibration agency under Article 102-18 paragraph (1)~ Telecom Engineering Center, Intertek Japan K.K., Keysight Technologies, Inc.~  
b) : 計量法 (平成四年法律第五十一号) 第百三十五条 又は 第百四十四条 の規定に基づく校正 (JCSS校正)  
b) : Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)~Japan Calibration Service System~  
b) : 外国において行う較正であつて、機構又は第百二条の十八第一項の指定較正機関 (TELEC, インターテックジャパン、キーサイト) が行う較正に相当するもの  
c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)~ Telecom Engineering Center, Intertek Japan K.K., Keysight Technologies, Inc.~  
c) : イ から ハまでのいずれかに掲げる較正等を受けたものを用いて行う較正等  
d) : Calibration conducted by using other equipment that listed above from a) to c)

## 5. Uncertainty

| Parameter                    | Uncertainty |
|------------------------------|-------------|
| Total RF power conducted     | 1.1 dB      |
| Spurious emissions conducted | 1.0 dB      |
| Temperature                  | 0.8 °C      |
| Humidity                     | 3.0%        |

| 判定  | 測定データにおける不確かさの判断とその範囲 |                                                                                     |                                                        |
|-----|-----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|
| 適合  | 例 A                   |    | 測定結果と不確かさは与えられた限度値内に入っています。これを『適合』と呼びます。               |
|     | 例 B                   |    | 完全には、限度値内でも限度値外でもありません。この場合の適合性については、確実な結論を出すことは出来ません。 |
| 不適合 | 例 C                   |    | 完全には、限度値内でも限度値外でもありません。この場合の適合性については、確実な結論を出すことは出来ません。 |
|     | 例 D                   |  | 測定結果も不確かさも与えられた限度値内に入っていません。これは『不適合』と呼びます。             |

## **7. Laboratory description**

### **1. Location**

- Name: Dt&C Co., Ltd.  
- Address: 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935  
- Phone: +81-031-321-2664  
- Fax: +81-031-321-2855

### **2. Accreditation and Registration**

#### 1) VLAC

Accreditation No.: N/A

#### 2) NVLAP

LAB CODE: N/A

#### 3) BSMI

Laboratory Code: TL652

#### 4) KOLAS

| Registration number | Facility       | Expiration date |
|---------------------|----------------|-----------------|
| KT393               | Dt&C Co., Ltd. | 2025-01-21      |

### **3. Test Site**

#### 1) Conducted test

Conducted Test-room

8. Test Results

Test results\_802.11a\_5.5GHz WLAN\_SISO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 1.400 | mW/MHz  |
|                          | 1.461 | dBm/MHz |
| E.I.R.P                  | 2.671 | mW/MHz  |
|                          | 4.267 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                         |                              |         |      |
|-------------------------|------------------------------|---------|------|
| Tested Circit Insertion | Tx1                          | 0.000   | dB   |
| Transmission Time       | ON TIME<br>(1sec or less)    | 1.899   | msec |
|                         | OFF TIME<br>(0.1sec or more) | 0.105   | msec |
|                         | Ratio                        | 94.760% |      |
| Packet Type (Mode)      | OFDM                         |         | mode |

|                                                                |                                                                                                                                                                            |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category :                                                | 5GHz Band Low-Power Data Communication System 802.11a                                                                                                                      |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below ± 1% as the input voltage from the external power supply to the receiver varies ± 10% (excluding power supply). |

|                                 |        |          |          |          |        |                   |
|---------------------------------|--------|----------|----------|----------|--------|-------------------|
| Measurement Channel             | Ch.    | 100      | 120      | 144      |        |                   |
| Measurement Frequency           | MHz    | 5500     | 5600     | 5720     | Result | Limit             |
| Frequency Measurements(Tx1)     | MHz    | 5499.967 | 5600.030 | 5719.972 | ----   | ----              |
| Frequency Toleranc(Tx1)         | ppm    | -6.000   | 5.357    | -4.895   | PASS   | ±20×10-6(20ppm)   |
| Occupied Bandwidth(Tx1)         | MHz    | 16.454   | 16.449   | 16.492   | PASS   | 20MHz or below    |
| RF Output Power(Tx1)            | mW/MHz | 1.353    | 1.460    | 1.378    | PASS   | 10mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | -3.340   | 4.290    | -1.543   | PASS   | +50% to -50%      |

|                                      |           |     |         |         |         |        |                 |
|--------------------------------------|-----------|-----|---------|---------|---------|--------|-----------------|
| Measurement Channel                  |           | Ch. | 100     | 120     | 144     |        |                 |
| Measurement Frequency                |           | MHz | 5500    | 5600    | 5720    | Result | Limit           |
| Adjacent Channel Leakage Power (Tx1) | cf        | dB  | 13.002  | 13.164  | 13.267  | ----   | ----            |
|                                      | cf -20MHz | dB  | -47.652 | -48.354 | -48.477 | PASS   | -25dBc or below |
|                                      | cf +20MHz | dB  | -47.772 | -47.504 | -47.877 | PASS   | -25dBc or below |
|                                      | cf -40MHz | dB  | -57.352 | -57.794 | -57.227 | PASS   | -40dBc or below |
|                                      | cf +40MHz | dB  | -57.192 | -57.154 | -56.497 | PASS   | -40dBc or below |

| Measurement Channel                                 |                    | Ch.    | 100       | 120       | 144       |        |                     |
|-----------------------------------------------------|--------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                               |                    | MHz    | 5500      | 5600      | 5720      | Result | Limit               |
| Unwanted<br>(Spurious)<br>Emission<br>Strength(Tx1) | 30MHz to 5460MHz   | uW/MHz | 0.014     | 0.008     | 0.006     | PASS   | 2.5uW/MHz or below  |
|                                                     |                    | MHz    | 5451.312  | 5279.181  | 5324.793  | ----   | ----                |
|                                                     | 5460MHz to 5470MHz | uW/MHz | 0.035     | 0.006     | 0.004     | PASS   | 12.5uW/MHz or below |
|                                                     |                    | MHz    | 5468.980  | 5469.410  | 5465.320  | ----   | ----                |
|                                                     | 5745MHz to 5765MHz | uW/MHz | 0.086     | 0.042     | 0.074     | PASS   | 12.5uW/MHz or below |
|                                                     |                    | MHz    | 5759.880  | 5758.620  | 5747.700  | ----   | ----                |
|                                                     | 5765MHz to 26GHz   | uW/MHz | 0.141     | 0.123     | 0.117     | PASS   | 2.5uW/MHz or below  |
|                                                     |                    | MHz    | 24354.900 | 24324.500 | 24298.200 | ----   | ----                |

|                                                      |                  |     |           |           |           |        |               |
|------------------------------------------------------|------------------|-----|-----------|-----------|-----------|--------|---------------|
| Measurement Channel                                  |                  | Ch. | 100       | 120       | 144       |        |               |
| Measurement Frequency                                |                  | MHz | 5500      | 5600      | 5720      | Result | Limit         |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1) | 30MHz to 1000MHz | nW  | 0.005     | 0.005     | 0.005     | PASS   | 4nW or below  |
|                                                      |                  | MHz | 933.310   | 788.930   | 752.700   | ----   | ----          |
|                                                      | 1GHz to 10GHz    | nW  | 0.129     | 0.129     | 0.120     | PASS   | 20nW or below |
|                                                      |                  | MHz | 6229.900  | 6335.200  | 5852.350  | ----   | ----          |
|                                                      | 10GHz to 26GHz   | nW  | 0.519     | 0.467     | 0.536     | PASS   | 20nW or below |
|                                                      |                  | MHz | 24216.000 | 24740.000 | 24241.600 | ----   | ----          |
| Burst Length of Transmitted Signals                  |                  |     | Good      | Good      | Good      | PASS   | 8ms or below  |
| Carrier Sensing Function                             |                  |     | Good      | Good      | Good      | PASS   | 100mV/m       |
| Transmission Power Control Function                  |                  |     | Good      | Good      | Good      | PASS   | 3dB           |
| Interference Prevention Function                     |                  |     | Good      |           |           | PASS   |               |

8. Test Results

Test results\_802.11n20\_5.5GHz WLAN\_SISO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 2.250 | mW/MHz  |
|                          | 3.522 | dBm/MHz |
| E.I.R.P                  | 4.293 | mW/MHz  |
|                          | 6.328 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                         |                              |         |      |
|-------------------------|------------------------------|---------|------|
| Tested Circit Insertion | Tx1                          | 0.000   | dB   |
| Transmission Time       | ON TIME<br>(1sec or less)    | 4.911   | msec |
|                         | OFF TIME<br>(0.1sec or more) | 0.264   | msec |
|                         | Ratio                        | 94.899% |      |
| Packet Type (Mode)      | OFDM                         |         | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category :                                                | 5GHz Band Low-Power Data Communication System 802.11n (HT20)                                                                                                                         |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                 |        |        |       |        |        |                   |
|---------------------------------|--------|--------|-------|--------|--------|-------------------|
| Measurement Channel             | Ch.    | 100    | 120   | 144    |        |                   |
| Measurement Frequency           | MHz    | 5500   | 5600  | 5720   | Result | Limit             |
| RF Output Power(Tx1)            | mW/MHz | 1.191  | 1.163 | 1.252  | PASS   | 10mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | -2.052 | 2.007 | -2.308 | PASS   | +50% to -50%      |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

8. Test Results

Test results\_802.11n20\_5.5GHz WLAN\_MIMO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 2.360 | mW/MHz  |
|                          | 3.729 | dBm/MHz |
| E.I.R.P                  | 4.503 | mW/MHz  |
|                          | 6.535 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                              |                              |         |      |
|------------------------------|------------------------------|---------|------|
| Tested Circit Insertion Loss | Tx1                          | 0.000   | dB   |
|                              | Tx2                          | 0.000   | dB   |
| Transmission Time            | ON TIME<br>(1sec or less)    | 4.911   | msec |
|                              | OFF TIME<br>(0.1sec or more) | 0.264   | msec |
|                              | Ratio                        | 94.899% |      |
| Packet Type (Mode)           |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11n (HT20)                                                                                                                         |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                   |        |          |          |          |        |                                 |
|-----------------------------------|--------|----------|----------|----------|--------|---------------------------------|
| Measurement Channel               | Ch.    | 100      | 120      | 144      |        |                                 |
| Measurement Frequency             | MHz    | 5500     | 5600     | 5720     | Result | Limit                           |
| Frequency Measurements(Tx1)       | MHz    | 5500.031 | 5600.053 | 5720.007 | ----   | ----                            |
| Frequency Toleranc(Tx1)           | ppm    | 5.635    | 9.464    | 1.224    | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)       | MHz    | 5500.012 | 5600.016 | 5720.009 | ----   | ----                            |
| Frequency Tolerance(Tx2)          | ppm    | 2.182    | 2.857    | 1.573    | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)           | MHz    | 17.614   | 17.622   | 17.639   | PASS   | 20MHz or below                  |
| Occupied Bandwidth(Tx2)           | MHz    | 17.608   | 17.605   | 17.588   | PASS   | 20MHz or below                  |
| RF Output Power(Tx1)              | mW/MHz | 1.445    | 1.296    | 1.308    | PASS   | 10mW/MHz or below               |
| RF Output Power(Tx2)              | mW/MHz | 1.013    | 1.132    | 0.946    | PASS   | 10mW/MHz or below               |
| RF Output Power (Tx1+2)           | mW/MHz | 2.458    | 2.428    | 2.254    | PASS   | 10mW/MHz or below               |
| RF Output Power Tolerance (Tx1+2) | %      | 4.148    | 2.887    | -4.488   | PASS   | +50% to -50%                    |

| Measurement Channel                   |           | Ch. | 100     | 120     | 144     |        |                 |
|---------------------------------------|-----------|-----|---------|---------|---------|--------|-----------------|
| Measurement Frequency                 |           | MHz | 5500    | 5600    | 5720    | Result | Limit           |
| Adjacent Channel Leakage Power (Tx1)  | cf        | dB  | 13.378  | 13.030  | 12.933  | ----   | ----            |
|                                       | cf -20MHz | dB  | -46.928 | -46.990 | -46.943 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -46.978 | -46.810 | -46.923 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -57.288 | -57.690 | -56.793 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -57.118 | -57.060 | -56.043 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (Tx2)  | cf        | dB  | 11.966  | 12.458  | 11.580  |        |                 |
|                                       | cf -20MHz | dB  | -46.466 | -46.508 | -46.350 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -46.246 | -46.458 | -46.700 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -56.146 | -56.038 | -55.750 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -55.666 | -55.888 | -56.130 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (MIMO) | cf -20MHz | dB  | -46.959 | -46.986 | -46.912 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -46.889 | -46.870 | -47.055 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -57.008 | -57.069 | -56.552 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -56.687 | -56.702 | -56.307 | PASS   | -40dBc or below |

| Measurement Channel                           |                    | Ch.    | 100       | 120       | 144       |        |                     |
|-----------------------------------------------|--------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                         |                    | MHz    | 5500      | 5600      | 5720      | Result | Limit               |
| Unwanted (Spurious) Emission Strength(Tx1)    | 30MHz to 5460MHz   | uW/MHz | 0.021     | 0.009     | 0.006     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 5455.656  | 5361.174  | 5236.284  | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.030     | 0.006     | 0.005     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5468.780  | 5465.500  | 5469.230  | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.089     | 0.060     | 0.124     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5760.080  | 5760.380  | 5745.080  | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.191     | 0.148     | 0.173     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 24255.200 | 24328.100 | 23786.300 | ----   | ----                |
| Unwanted (Spurious) Emission Strength(Tx2)    | 30MHz to 5460MHz   | uW/MHz | 0.016     | 0.028     | 0.007     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 5458.371  | 3593.709  | 3138.132  | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.022     | 0.006     | 0.005     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5467.050  | 5461.500  | 5464.590  | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.044     | 0.039     | 0.055     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5761.440  | 5749.660  | 5746.180  | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.088     | 0.096     | 0.127     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 25422.300 | 25530.500 | 25447.100 | ----   | ----                |
| Unwanted (Spurious) Emission Strength (Tx1+2) | 30MHz to 5460MHz   | uW/MHz | 0.038     | 0.037     | 0.014     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.052     | 0.012     | 0.009     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.133     | 0.098     | 0.179     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.280     | 0.244     | 0.300     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |

| Measurement Channel                                                                 |                    | Ch.    | 100       | 120       | 144       |        |                     |
|-------------------------------------------------------------------------------------|--------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                                                               |                    | MHz    | 5500      | 5600      | 5720      | Result | Limit               |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)                                | 30MHz to 1000MHz   | nW     | 0.004     | 0.004     | 0.004     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | 982.390   | 464.320   | 937.290   | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.103     | 0.108     | 0.136     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 5745.700  | 5780.350  | 5829.400  | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 0.586     | 0.617     | 0.609     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 24282.000 | 24268.000 | 25908.000 | ----   | ----                |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)                                | 30MHz to 1000MHz   | nW     | 0.007     | 0.009     | 0.006     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | 878.600   | 878.650   | 877.830   | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.114     | 0.122     | 0.118     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 3612.700  | 3646.000  | 2918.350  | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 0.447     | 0.422     | 0.492     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 25417.200 | 25594.000 | 25512.800 | ----   | ----                |
| Secondary Emitted<br>Radio Wave<br>Strength<br>(Rx1+2)                              | 30MHz to 1000MHz   | nW     | 0.010     | 0.013     | 0.010     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.217     | 0.230     | 0.254     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 1.032     | 1.038     | 1.102     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
| Unwanted<br>(Spurious)<br>Emission Strength<br>(Port Tx1+Tx2)<br><br>* Use Combiner | 5460MHz to 5470MHz | uW/MHz | 0.131     | ---       | ---       | PASS   | 12.5uW/MHz or below |
|                                                                                     |                    | MHz    | 5469.490  | ---       | ---       | ----   | ----                |
|                                                                                     | 5745MHz to 5765MHz | uW/MHz | ---       | ---       | 0.178     | PASS   | 12.5uW/MHz or below |
|                                                                                     |                    | MHz    | ---       | ---       | 5762.780  | ----   | ----                |
| Burst Length of Transmitted Signals                                                 |                    |        | Good      | Good      | Good      | PASS   | 8ms or below        |
| Carrier Sensing Function                                                            |                    |        | Good      | Good      | Good      | PASS   | 100mV/m             |
| Transmission Power Control Function                                                 |                    |        | Good      | Good      | Good      | PASS   | 3dB                 |
| Interference Prevention Function                                                    |                    |        | Good      |           |           | PASS   |                     |

8. Test Results

Test results\_802.11ac20\_5.5GHz WLAN\_SISO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 2.200 | mW/MHz  |
|                          | 3.424 | dBm/MHz |
| E.I.R.P                  | 4.198 | mW/MHz  |
|                          | 6.230 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                         |                              |         |      |
|-------------------------|------------------------------|---------|------|
| Tested Circit Insertion | Tx1                          | 0.000   | dB   |
| Transmission Time       | ON TIME<br>(1sec or less)    | 4.917   | msec |
|                         | OFF TIME<br>(0.1sec or more) | 0.261   | msec |
|                         | Ratio                        | 94.959% |      |
| Packet Type (Mode)      | OFDM                         |         | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category :                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT20)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                 |        |       |       |        |        |                   |
|---------------------------------|--------|-------|-------|--------|--------|-------------------|
| Measurement Channel             | Ch.    | 100   | 120   | 144    |        |                   |
| Measurement Frequency           | MHz    | 5500  | 5600  | 5720   | Result | Limit             |
| RF Output Power(Tx1)            | mW/MHz | 1.176 | 1.198 | 1.195  | PASS   | 10mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | 0.890 | 4.233 | -4.551 | PASS   | +50% to -50%      |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

8. Test Results

Test results\_802.11ac20\_5.5GHz WLAN\_MIMO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 2.300 | mW/MHz  |
|                          | 3.617 | dBm/MHz |
| E.I.R.P                  | 4.389 | mW/MHz  |
|                          | 6.423 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                              |                              |         |      |
|------------------------------|------------------------------|---------|------|
| Tested Circit Insertion Loss | Tx1                          | 0.000   | dB   |
|                              | Tx2                          | 0.000   | dB   |
| Transmission Time            | ON TIME<br>(1sec or less)    | 4.917   | msec |
|                              | OFF TIME<br>(0.1sec or more) | 0.261   | msec |
|                              | Ratio                        | 94.959% |      |
| Packet Type (Mode)           |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT20)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                   |        |          |          |          |        |                                 |
|-----------------------------------|--------|----------|----------|----------|--------|---------------------------------|
| Measurement Channel               | Ch.    | 100      | 120      | 144      |        |                                 |
| Measurement Frequency             | MHz    | 5500     | 5600     | 5720     | Result | Limit                           |
| Frequency Measurements(Tx1)       | MHz    | 5500.018 | 5599.990 | 5720.041 | ----   | ----                            |
| Frequency Toleranc(Tx1)           | ppm    | 3.273    | -1.786   | 7.168    | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)       | MHz    | 5500.019 | 5600.012 | 5720.018 | ----   | ----                            |
| Frequency Tolerance(Tx2)          | ppm    | 3.455    | 2.143    | 3.147    | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)           | MHz    | 17.620   | 17.631   | 17.615   | PASS   | 20MHz or below                  |
| Occupied Bandwidth(Tx2)           | MHz    | 17.598   | 17.616   | 17.615   | PASS   | 20MHz or below                  |
| RF Output Power(Tx1)              | mW/MHz | 1.450    | 1.317    | 1.220    | PASS   | 10mW/MHz or below               |
| RF Output Power(Tx2)              | mW/MHz | 1.043    | 1.095    | 0.905    | PASS   | 10mW/MHz or below               |
| RF Output Power (Tx1+2)           | mW/MHz | 2.494    | 2.412    | 2.125    | PASS   | 10mW/MHz or below               |
| RF Output Power Tolerance (Tx1+2) | %      | 8.423    | 4.858    | -7.613   | PASS   | +50% to -50%                    |

| Measurement Channel                   |           | Ch. | 100     | 120     | 144     |        |                 |
|---------------------------------------|-----------|-----|---------|---------|---------|--------|-----------------|
| Measurement Frequency                 |           | MHz | 5500    | 5600    | 5720    | Result | Limit           |
| Adjacent Channel Leakage Power (Tx1)  | cf        | dB  | 13.378  | 12.918  | 12.881  | ----   | ----            |
|                                       | cf -20MHz | dB  | -46.908 | -46.838 | -47.081 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -47.148 | -46.828 | -46.731 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -57.288 | -57.638 | -56.791 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -57.178 | -57.038 | -56.091 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (Tx2)  | cf        | dB  | 11.953  | 12.349  | 11.499  |        |                 |
|                                       | cf -20MHz | dB  | -46.443 | -46.369 | -46.489 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -46.373 | -46.349 | -46.479 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -56.153 | -55.999 | -55.739 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -55.643 | -55.859 | -56.089 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (MIMO) | cf -20MHz | dB  | -46.932 | -46.843 | -47.044 | PASS   | -25dBc or below |
|                                       | cf +20MHz | dB  | -47.031 | -46.829 | -46.847 | PASS   | -25dBc or below |
|                                       | cf -40MHz | dB  | -57.001 | -57.041 | -56.536 | PASS   | -40dBc or below |
|                                       | cf +40MHz | dB  | -56.693 | -56.687 | -56.315 | PASS   | -40dBc or below |

| Measurement Channel                           |                    | Ch.    | 100       | 120       | 144       |        |                     |
|-----------------------------------------------|--------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                         |                    | MHz    | 5500      | 5600      | 5720      | Result | Limit               |
| Unwanted (Spurious) Emission Strength(Tx1)    | 30MHz to 5460MHz   | uW/MHz | 0.015     | 0.008     | 0.009     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 5458.371  | 5200.989  | 5311.761  | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.033     | 0.005     | 0.004     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5467.190  | 5469.990  | 5460.710  | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.100     | 0.051     | 0.102     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5760.680  | 5756.040  | 5745.700  | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.140     | 0.147     | 0.150     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 24235.000 | 24301.300 | 24215.300 | ----   | ----                |
| Unwanted (Spurious) Emission Strength(Tx2)    | 30MHz to 5460MHz   | uW/MHz | 0.020     | 0.007     | 0.008     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 5449.140  | 2985.006  | 2886.180  | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.025     | 0.006     | 0.006     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5466.530  | 5468.950  | 5468.480  | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.040     | 0.051     | 0.056     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | 5760.320  | 5756.040  | 5745.880  | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.125     | 0.109     | 0.138     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | 25483.000 | 25500.200 | 25499.700 | ----   | ----                |
| Unwanted (Spurious) Emission Strength (Tx1+2) | 30MHz to 5460MHz   | uW/MHz | 0.035     | 0.016     | 0.017     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5460MHz to 5470MHz | uW/MHz | 0.058     | 0.011     | 0.010     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5745MHz to 5765MHz | uW/MHz | 0.139     | 0.102     | 0.158     | PASS   | 12.5uW/MHz or below |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5765MHz to 26GHz   | uW/MHz | 0.265     | 0.256     | 0.288     | PASS   | 2.5uW/MHz or below  |
|                                               |                    | MHz    | ---       | ---       | ---       | ----   | ----                |

| Measurement Channel                                                                 |                    | Ch.    | 100       | 120       | 144       |        |                     |
|-------------------------------------------------------------------------------------|--------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                                                               |                    | MHz    | 5500      | 5600      | 5720      | Result | Limit               |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)                                | 30MHz to 1000MHz   | nW     | 0.004     | 0.005     | 0.004     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | 957.900   | 961.690   | 958.730   | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.107     | 0.115     | 0.115     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 5747.050  | 5712.850  | 5827.150  | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 0.529     | 0.659     | 0.640     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 23747.200 | 24221.600 | 24239.200 | ----   | ----                |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)                                | 30MHz to 1000MHz   | nW     | 0.007     | 0.006     | 0.006     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | 876.230   | 816.090   | 970.170   | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.453     | 0.119     | 0.108     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 1927.450  | 3647.350  | 5645.800  | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 0.458     | 0.490     | 0.436     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | 25505.200 | 25446.000 | 25532.400 | ----   | ----                |
| Secondary Emitted<br>Radio Wave<br>Strength<br>(Rx1+2)                              | 30MHz to 1000MHz   | nW     | 0.010     | 0.010     | 0.010     | PASS   | 4nW or below        |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                                     | 1GHz to 10GHz      | nW     | 0.560     | 0.234     | 0.222     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                                     | 10GHz to 26GHz     | nW     | 0.987     | 1.149     | 1.076     | PASS   | 20nW or below       |
|                                                                                     |                    | MHz    | ---       | ---       | ---       | ----   | ----                |
| Unwanted<br>(Spurious)<br>Emission Strength<br>(Port Tx1+Tx2)<br><br>* Use Combiner | 5460MHz to 5470MHz | uW/MHz | 0.159     | ---       | ---       | PASS   | 12.5uW/MHz or below |
|                                                                                     |                    | MHz    | 5469.190  | ---       | ---       | ----   | ----                |
|                                                                                     | 5745MHz to 5765MHz | uW/MHz | ---       | ---       | 0.139     | PASS   | 12.5uW/MHz or below |
|                                                                                     |                    | MHz    | ---       | ---       | 5752.960  | ----   | ----                |
| Burst Length of Transmitted Signals                                                 |                    |        | Good      | Good      | Good      | PASS   | 8ms or below        |
| Carrier Sensing Function                                                            |                    |        | Good      | Good      | Good      | PASS   | 100mV/m             |
| Transmission Power Control Function                                                 |                    |        | Good      | Good      | Good      | PASS   | 3dB                 |
| Interference Prevention Function                                                    |                    |        | Good      |           |           | PASS   |                     |

## 8. Test Results

Test results\_802.11n40\_5.5GHz WLAN\_SISO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |       |                |
|--------------------------|-------|----------------|
| Peak Antenna Gain        | 2.806 | dBi            |
| Declaration Output Power | 1.140 | mW/MHz         |
|                          | 0.569 | dBm/MHz        |
| <b>E.I.R.P</b>           | 2.175 | mW/MHz         |
|                          | 3.375 | <b>dBm/MHz</b> |
| Input Power Voltage      | 3.850 | VDC            |

|                               |                              |     |         |      |
|-------------------------------|------------------------------|-----|---------|------|
| Tested Circuit Insertion Loss |                              | Tx1 | 0.000   | dB   |
| Transmission Time             | ON TIME<br>(1sec or less)    |     | 2.384   | msec |
|                               | OFF TIME<br>(0.1sec or more) |     | 0.129   | msec |
|                               | Ratio                        |     | 94.867% |      |
| Packet Type (Mode)            |                              |     | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11n (HT40)                                                                                                                         |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                 |        |        |       |       |             |                  |
|---------------------------------|--------|--------|-------|-------|-------------|------------------|
| Measurement Channel             | Ch.    | 102    | 118   | 142   |             |                  |
| Measurement Frequency           | MHz    | 5510   | 5590  | 5710  | Result      | Limit            |
| RF Output Power(Tx1)            | mW/MHz | 0.553  | 0.676 | 0.698 | <b>PASS</b> | 5mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | -7.216 | 8.041 | 5.899 | <b>PASS</b> | +50% to -50%     |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

## 8. Test Results

Test results\_802.11n40\_5.5GHz WLAN\_MIMO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |       |         |
|--------------------------|-------|---------|
| Peak Antenna Gain        | 2.806 | dBi     |
| Declaration Output Power | 1.220 | mW/MHz  |
|                          | 0.864 | dBm/MHz |
| <b>E.I.R.P</b>           | 2.328 | mW/MHz  |
|                          | 3.670 | dBm/MHz |
| Input Power Voltage      | 3.850 | VDC     |

|                               |                              |         |      |
|-------------------------------|------------------------------|---------|------|
| Tested Circuit Insertion Loss | Tx1                          | 0.000   | dB   |
|                               | Tx2                          | 0.000   | dB   |
| Transmission Time             | ON TIME<br>(1sec or less)    | 2.384   | msec |
|                               | OFF TIME<br>(0.1sec or more) | 0.129   | msec |
|                               | Ratio                        | 94.867% |      |
| Packet Type (Mode)            |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11n (HT40)                                                                                                                         |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                   |        |          |          |          |             |                                 |
|-----------------------------------|--------|----------|----------|----------|-------------|---------------------------------|
| Measurement Channel               | Ch.    | 102      | 118      | 142      |             |                                 |
| Measurement Frequency             | MHz    | 5510     | 5590     | 5710     | Result      | Limit                           |
| Frequency Measurements(Tx1)       | MHz    | 5510.080 | 5590.078 | 5710.060 | ----        | ----                            |
| Frequency Toleranc(Tx1)           | ppm    | 14.519   | 13.953   | 10.508   | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)       | MHz    | 5510.062 | 5590.068 | 5710.068 | ----        | ----                            |
| Frequency Tolerance(Tx2)          | ppm    | 11.252   | 12.165   | 11.909   | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)           | MHz    | 36.036   | 35.969   | 36.028   | <b>PASS</b> | 40MHz or below                  |
| Occupied Bandwidth(Tx2)           | MHz    | 35.989   | 36.040   | 36.012   | <b>PASS</b> | 40MHz or below                  |
| RF Output Power(Tx1)              | mW/MHz | 0.670    | 0.839    | 0.661    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power(Tx2)              | mW/MHz | 0.505    | 0.556    | 0.377    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power (Tx1+2)           | mW/MHz | 1.174    | 1.395    | 1.038    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power Tolerance (Tx1+2) | %      | -3.751   | 14.344   | -14.919  | <b>PASS</b> | +50% to -50%                    |

| Measurement Channel                   |           | Ch. | 102     | 118     | 142     |        |                 |
|---------------------------------------|-----------|-----|---------|---------|---------|--------|-----------------|
| Measurement Frequency                 |           | MHz | 5510    | 5590    | 5710    | Result | Limit           |
| Adjacent Channel Leakage Power (Tx1)  | cf        | dB  | 13.331  | 14.209  | 13.248  | ----   | ----            |
|                                       | cf -40MHz | dB  | -46.291 | -46.319 | -46.378 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -46.071 | -45.209 | -45.738 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -53.621 | -55.209 | -54.288 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -53.401 | -53.729 | -53.058 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (Tx2)  | cf        | dB  | 11.896  | 12.435  | 10.594  | ----   | ----            |
|                                       | cf -40MHz | dB  | -45.896 | -46.045 | -45.234 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -45.636 | -45.595 | -45.164 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -52.836 | -52.915 | -51.004 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -51.946 | -52.505 | -51.714 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (MIMO) | cf -40MHz | dB  | -46.346 | -46.437 | -46.155 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -46.108 | -45.588 | -45.749 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -53.495 | -54.375 | -53.022 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -52.944 | -53.428 | -52.749 | PASS   | -40dBc or below |

| Measurement Channel                           |                 | Ch.    | 102       | 118       | 142       |             |                     |
|-----------------------------------------------|-----------------|--------|-----------|-----------|-----------|-------------|---------------------|
| Measurement Frequency                         |                 | MHz    | 5510      | 5590      | 5710      | Result      | Limit               |
| Unwanted (Spurious) Emission Strength(Tx1)    | 30 to 5460MHz   | uW/MHz | 0.019     | 0.012     | 0.006     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 5385.066  | 5457.285  | 5342.712  | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.062     | 0.016     | 0.005     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | 5469.820  | 5460.620  | 5461.600  | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.158     | 0.191     | 0.132     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 23764.600 | 24303.200 | 25987.900 | ----        | ----                |
| Unwanted (Spurious) Emission Strength(Tx2)    | 30 to 5460MHz   | uW/MHz | 0.017     | 0.010     | 0.008     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 5452.941  | 5458.914  | 2968.173  | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.040     | 0.016     | 0.005     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | 5468.560  | 5465.540  | 5465.410  | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.115     | 0.091     | 0.136     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 25497.300 | 25538.300 | 25536.200 | ----        | ----                |
| Unwanted (Spurious) Emission Strength (Tx1+2) | 30 to 5460MHz   | uW/MHz | 0.036     | 0.021     | 0.015     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.102     | 0.032     | 0.010     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.273     | 0.282     | 0.268     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |

|                                                                   |                  |        |           |           |           |        |                   |
|-------------------------------------------------------------------|------------------|--------|-----------|-----------|-----------|--------|-------------------|
| Measurement Channel                                               |                  | Ch.    | 102       | 118       | 142       |        |                   |
| Measurement Frequency                                             |                  | MHz    | 5510      | 5590      | 5710      | Result | Limit             |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)              | 30MHz to 1000MHz | nW     | 0.005     | 0.004     | 0.004     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | 983.750   | 895.870   | 458.550   | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.118     | 0.133     | 0.126     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 5748.850  | 5744.350  | 6237.550  | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 0.579     | 0.579     | 0.519     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 24169.200 | 24285.600 | 24252.400 | ----   | ----              |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)              | 30MHz to 1000MHz | nW     | 0.006     | 0.011     | 0.006     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | 882.920   | 878.560   | 953.340   | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.136     | 0.164     | 0.152     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 1923.850  | 3602.800  | 6389.200  | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 0.461     | 0.439     | 0.633     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 25452.400 | 25454.000 | 25510.000 | ----   | ----              |
| Secondary Emitted<br>Radio Wave<br>Strength<br>(Rx1+2)            | 30MHz to 1000MHz | nW     | 0.011     | 0.015     | 0.010     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.255     | 0.297     | 0.278     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 1.040     | 1.018     | 1.152     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
| Unwanted<br>Emission Strength<br>(Port Tx1+Tx2)<br>* Use Combiner | 5460 to 5470MHz  | uW/MHz | 0.182     | 0.111     | 0.119     | PASS   | 50uW/MHz or below |
|                                                                   |                  | MHz    | 5469.860  | 5466.640  | 5461.680  | ----   | ----              |
|                                                                   |                  |        |           |           |           | ----   | ----              |
| Burst Length of Transmitted Signals                               |                  |        | Good      | Good      | Good      | PASS   | 8ms or below      |
| Carrier Sensing Function                                          |                  |        | Good      | Good      | Good      | PASS   | 100mV/m           |
| Transmission Power Control Function                               |                  |        | Good      | Good      | Good      | PASS   | 3dB               |
| Interference Prevention Function                                  |                  |        | Good      |           |           | PASS   |                   |

## 8. Test Results

Test results\_802.11ac40\_5.5GHz WLAN\_SISO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |              |                |
|--------------------------|--------------|----------------|
| Peak Antenna Gain        | 2.806        | dBi            |
| Declaration Output Power | 1.170        | mW/MHz         |
|                          | 0.682        | dBm/MHz        |
| <b>E.I.R.P</b>           | 2.232        | mW/MHz         |
|                          | <b>3.488</b> | <b>dBm/MHz</b> |
| Input Power Voltage      | 3.850        | VDC            |

|                               |                              |         |      |
|-------------------------------|------------------------------|---------|------|
| Tested Circuit Insertion Loss | Tx1                          | 0.000   | dB   |
| Transmission Time             | ON TIME<br>(1sec or less)    | 2.387   | msec |
|                               | OFF TIME<br>(0.1sec or more) | 0.129   | msec |
|                               | Ratio                        | 94.873% |      |
| Packet Type (Mode)            |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT40)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                 |        |        |       |        |             |                  |
|---------------------------------|--------|--------|-------|--------|-------------|------------------|
| Measurement Channel             | Ch.    | 102    | 118   | 142    |             |                  |
| Measurement Frequency           | MHz    | 5510   | 5590  | 5710   | Result      | Limit            |
| RF Output Power(Tx1)            | mW/MHz | 0.591  | 0.687 | 0.696  | <b>PASS</b> | 5mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | -6.830 | 8.212 | -7.845 | <b>PASS</b> | +50% to -50%     |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

## 8. Test Results

Test results\_802.11ac40\_5.5GHz WLAN\_MIMO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |              |                |
|--------------------------|--------------|----------------|
| Peak Antenna Gain        | 2.806        | dBi            |
| Declaration Output Power | 1.220        | mW/MHz         |
|                          | 0.864        | dBm/MHz        |
| <b>E.I.R.P</b>           | <b>2.328</b> | mW/MHz         |
|                          | <b>3.670</b> | <b>dBm/MHz</b> |
| Input Power Voltage      | 3.850        | VDC            |

|                               |                              |         |      |
|-------------------------------|------------------------------|---------|------|
| Tested Circuit Insertion Loss | Tx1                          | 0.000   | dB   |
|                               | Tx2                          | 0.000   | dB   |
| Transmission Time             | ON TIME<br>(1sec or less)    | 2.387   | msec |
|                               | OFF TIME<br>(0.1sec or more) | 0.129   | msec |
|                               | Ratio                        | 94.873% |      |
| Packet Type (Mode)            |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT40)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                   |        |          |          |          |             |                                 |
|-----------------------------------|--------|----------|----------|----------|-------------|---------------------------------|
| Measurement Channel               | Ch.    | 102      | 118      | 142      |             |                                 |
| Measurement Frequency             | MHz    | 5510     | 5590     | 5710     | Result      | Limit                           |
| Frequency Measurements(Tx1)       | MHz    | 5510.010 | 5590.080 | 5710.030 | ----        | ----                            |
| Frequency Toleranc(Tx1)           | ppm    | 1.815    | 14.311   | 5.254    | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)       | MHz    | 5510.050 | 5590.072 | 5709.982 | ----        | ----                            |
| Frequency Tolerance(Tx2)          | ppm    | 9.074    | 12.880   | -3.152   | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)           | MHz    | 36.016   | 35.991   | 35.998   | <b>PASS</b> | 40MHz or below                  |
| Occupied Bandwidth(Tx2)           | MHz    | 35.987   | 36.064   | 36.043   | <b>PASS</b> | 40MHz or below                  |
| RF Output Power(Tx1)              | mW/MHz | 0.696    | 0.792    | 0.687    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power(Tx2)              | mW/MHz | 0.499    | 0.579    | 0.372    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power (Tx1+2)           | mW/MHz | 1.195    | 1.371    | 1.059    | <b>PASS</b> | 5mW/MHz or below                |
| RF Output Power Tolerance (Tx1+2) | %      | -2.039   | 12.417   | -13.187  | <b>PASS</b> | +50% to -50%                    |

| Measurement Channel                   |           | Ch. | 102     | 118     | 142     |        |                 |
|---------------------------------------|-----------|-----|---------|---------|---------|--------|-----------------|
| Measurement Frequency                 |           | MHz | 5510    | 5590    | 5710    | Result | Limit           |
| Adjacent Channel Leakage Power (Tx1)  | cf        | dB  | 13.365  | 14.013  | 13.245  | ----   | ----            |
|                                       | cf -40MHz | dB  | -46.165 | -45.033 | -46.325 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -46.095 | -43.813 | -45.815 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -53.635 | -54.443 | -54.325 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -53.425 | -52.773 | -53.065 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (Tx2)  | cf        | dB  | 11.774  | 12.333  | 10.383  | ----   | ----            |
|                                       | cf -40MHz | dB  | -45.764 | -45.403 | -45.283 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -45.414 | -44.843 | -45.413 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -52.714 | -52.033 | -50.853 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -51.824 | -51.403 | -51.583 | PASS   | -40dBc or below |
| Adjacent Channel Leakage Power (MIMO) | cf -40MHz | dB  | -46.222 | -45.414 | -46.158 | PASS   | -25dBc or below |
|                                       | cf +40MHz | dB  | -46.026 | -44.447 | -45.898 | PASS   | -25dBc or below |
|                                       | cf -80MHz | dB  | -53.455 | -53.488 | -52.999 | PASS   | -40dBc or below |
|                                       | cf +80MHz | dB  | -52.913 | -52.370 | -52.713 | PASS   | -40dBc or below |

| Measurement Channel                           |                 | Ch.    | 102       | 118       | 142       |             |                     |
|-----------------------------------------------|-----------------|--------|-----------|-----------|-----------|-------------|---------------------|
| Measurement Frequency                         |                 | MHz    | 5510      | 5590      | 5710      | Result      | Limit               |
| Unwanted (Spurious) Emission Strength(Tx1)    | 30 to 5460MHz   | uW/MHz | 0.025     | 0.012     | 0.006     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 5420.904  | 5454.570  | 5390.496  | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.066     | 0.015     | 0.005     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | 5469.930  | 5466.090  | 5467.650  | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.156     | 0.162     | 0.139     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 25240.900 | 24302.700 | 24223.800 | ----        | ----                |
| Unwanted (Spurious) Emission Strength(Tx2)    | 30 to 5460MHz   | uW/MHz | 0.019     | 0.012     | 0.010     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 5458.371  | 5457.285  | 3507.915  | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.051     | 0.017     | 0.005     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | 5468.070  | 5469.830  | 5465.300  | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.107     | 0.103     | 0.135     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | 25535.200 | 25542.300 | 25420.900 | ----        | ----                |
| Unwanted (Spurious) Emission Strength (Tx1+2) | 30 to 5460MHz   | uW/MHz | 0.043     | 0.024     | 0.016     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |
|                                               | 5460 to 5470MHz | uW/MHz | 0.118     | 0.032     | 0.010     | <b>PASS</b> | 50uW/MHz or below   |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |
|                                               | 5770 to 26GHz   | uW/MHz | 0.263     | 0.265     | 0.274     | <b>PASS</b> | 12.5uW/MHz or below |
|                                               |                 | MHz    | ---       | ---       | ---       | ----        | ----                |

|                                                                   |                  |        |           |           |           |        |                   |
|-------------------------------------------------------------------|------------------|--------|-----------|-----------|-----------|--------|-------------------|
| Measurement Channel                                               |                  | Ch.    | 102       | 118       | 142       |        |                   |
| Measurement Frequency                                             |                  | MHz    | 5510      | 5590      | 5710      | Result | Limit             |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)              | 30MHz to 1000MHz | nW     | 0.005     | 0.004     | 0.004     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | 802.220   | 996.900   | 947.620   | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.105     | 0.120     | 0.114     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 9712.450  | 5807.350  | 5698.900  | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 0.564     | 0.564     | 0.597     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 24753.200 | 24306.000 | 23658.400 | ----   | ----              |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)              | 30MHz to 1000MHz | nW     | 0.007     | 0.007     | 0.010     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | 877.540   | 879.280   | 882.730   | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.110     | 0.117     | 0.125     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 3132.100  | 3614.950  | 5771.800  | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 0.499     | 0.483     | 0.590     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | 25452.800 | 25491.200 | 25490.000 | ----   | ----              |
| Secondary Emitted<br>Radio Wave<br>Strength<br>(Rx1+2)            | 30MHz to 1000MHz | nW     | 0.011     | 0.011     | 0.014     | PASS   | 4nW or below      |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
|                                                                   | 1GHz to 10GHz    | nW     | 0.215     | 0.237     | 0.239     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
|                                                                   | 10GHz to 26GHz   | nW     | 1.063     | 1.047     | 1.186     | PASS   | 20nW or below     |
|                                                                   |                  | MHz    | ---       | ---       | ---       | ----   | ----              |
| Unwanted<br>Emission Strength<br>(Port Tx1+Tx2)<br>* Use Combiner | 5460 to 5470MHz  | uW/MHz | 0.195     | 0.122     | 0.099     | PASS   | 50uW/MHz or below |
|                                                                   |                  | MHz    | 5467.980  | 5466.140  | 5462.910  | ----   | ----              |
|                                                                   |                  |        |           |           |           | ----   | ----              |
| Burst Length of Transmitted Signals                               |                  |        | Good      | Good      | Good      | PASS   | 8ms or below      |
| Carrier Sensing Function                                          |                  |        | Good      | Good      | Good      | PASS   | 100mV/m           |
| Transmission Power Control Function                               |                  |        | Good      | Good      | Good      | PASS   | 3dB               |
| Interference Prevention Function                                  |                  |        | Good      |           |           | PASS   |                   |

## 8. Test Results

### Test results\_802.11ac80\_5.5GHz WLAN\_SISO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |               |                |
|--------------------------|---------------|----------------|
| Peak Antenna Gain        | 2.806         | dBi            |
| Declaration Output Power | 0.515         | mW/MHz         |
|                          | -2.882        | dBm/MHz        |
| <b>E.I.R.P</b>           | <b>0.983</b>  | mW/MHz         |
|                          | <b>-0.076</b> | <b>dBm/MHz</b> |
| Input Power Voltage      | 3.850         | VDC            |

|                         |                              |         |      |
|-------------------------|------------------------------|---------|------|
| Tested Circit Insertion | Tx1                          | 0.000   | dB   |
| Transmission Time       | ON TIME<br>(1sec or less)    | 1.123   | msec |
|                         | OFF TIME<br>(0.1sec or more) | 0.063   | msec |
|                         | Ratio                        | 94.688% |      |
| Packet Type (Mode)      |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT80)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                 |        |       |       |        |             |                    |
|---------------------------------|--------|-------|-------|--------|-------------|--------------------|
| Measurement Channel             | Ch.    | 106   | 122   | 138    |             |                    |
| Measurement Frequency           | MHz    | 5530  | 5610  | 5690   | Result      | Limit              |
| RF Output Power(Tx1)            | mW/MHz | 0.292 | 0.312 | 0.324  | <b>PASS</b> | 2.5mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | 3.504 | 0.505 | -3.498 | <b>PASS</b> | +50% to -50%       |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

## 8. Test Results

Test results\_802.11ac80\_5.5GHz WLAN\_MIMO

|                          |              |                         |
|--------------------------|--------------|-------------------------|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |
|                          | Temperature  | 20 ~ 23 °C              |
|                          | Humidity     | 45 ~ 49 %               |

|                          |              |                |
|--------------------------|--------------|----------------|
| Peak Antenna Gain        | 2.806        | dBi            |
| Declaration Output Power | 0.540        | mW/MHz         |
|                          | -2.676       | dBm/MHz        |
| <b>E.I.R.P</b>           | <b>1.030</b> | mW/MHz         |
|                          | <b>0.130</b> | <b>dBm/MHz</b> |
| Input Power Voltage      | 3.850        | VDC            |

|                               |                              |         |      |
|-------------------------------|------------------------------|---------|------|
| Tested Circuit Insertion Loss | Tx1                          | 0.000   | dB   |
|                               | Tx2                          | 0.000   | dB   |
| Transmission Time             | ON TIME<br>(1sec or less)    | 1.123   | msec |
|                               | OFF TIME<br>(0.1sec or more) | 0.063   | msec |
|                               | Ratio                        | 94.688% |      |
| Packet Type (Mode)            |                              | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT80)                                                                                                                       |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                      |        |          |          |          |             |                                 |
|--------------------------------------|--------|----------|----------|----------|-------------|---------------------------------|
| Measurement Channel                  | Ch.    | 106      | 122      | 138      |             |                                 |
| Measurement Frequency                | MHz    | 5530     | 5610     | 5690     | Result      | Limit                           |
| Frequency Measurements(Tx1)          | MHz    | 5530.072 | 5610.032 | 5690.008 | ----        | ----                            |
| Frequency Toleranc(Tx1)              | ppm    | 13.020   | 5.704    | 1.406    | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)          | MHz    | 5530.028 | 5609.984 | 5690.096 | ----        | ----                            |
| Frequency Tolerance(Tx2)             | ppm    | 5.063    | -2.852   | 16.872   | <b>PASS</b> | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)              | MHz    | 75.534   | 75.365   | 75.476   | <b>PASS</b> | 80MHz or below                  |
| Occupied Bandwidth(Tx2)              | MHz    | 75.437   | 75.475   | 75.467   | <b>PASS</b> | 80MHz or below                  |
| RF Output Power(Tx1)                 | mW/MHz | 0.307    | 0.334    | 0.356    | <b>PASS</b> | 2.5mW/MHz or below              |
| RF Output Power(Tx2)                 | mW/MHz | 0.241    | 0.206    | 0.173    | <b>PASS</b> | 2.5mW/MHz or below              |
| RF Output Power<br>(Tx1+2)           | mW/MHz | 0.548    | 0.540    | 0.529    | <b>PASS</b> | 2.5mW/MHz or below              |
| RF Output Power Tolerance<br>(Tx1+2) | %      | 1.524    | -0.020   | -2.023   | <b>PASS</b> | +50% to -50%                    |

| Measurement Channel                           |                  | Ch.    | 106       | 122       | 138       |        |                     |
|-----------------------------------------------|------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                         |                  | MHz    | 5530      | 5610      | 5690      | Result | Limit               |
| Unwanted (Spurious) Emission Strength(Tx1)    | 30MHz to 5460MHz | uW/MHz | 0.048     | 0.012     | 0.008     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | 5455.113  | 5421.447  | 5452.941  | ----   | ----                |
|                                               | 5770MHz to 26GHz | uW/MHz | 0.209     | 0.166     | 0.159     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | 24226.300 | 24299.200 | 24240.000 | ----   | ----                |
| Unwanted (Spurious) Emission Strength(Tx2)    | 30MHz to 5460MHz | uW/MHz | 0.034     | 0.007     | 0.008     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | 5458.371  | 2762.376  | 3004.554  | ----   | ----                |
|                                               | 5770MHz to 26GHz | uW/MHz | 0.096     | 0.099     | 0.110     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | 25453.300 | 25113.900 | 25041.600 | ----   | ----                |
| Unwanted (Spurious) Emission Strength (Tx1+2) | 30MHz to 5460MHz | uW/MHz | 0.081     | 0.019     | 0.016     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                               | 5770MHz to 26GHz | uW/MHz | 0.305     | 0.265     | 0.269     | PASS   | 12.5uW/MHz or below |
|                                               |                  | MHz    | ---       | ---       | ---       | ----   | ----                |
| Adjacent Channel Leakage Power (Tx1)          | cf               | dB     | 12.989    | 13.152    | 13.506    | ----   | ----                |
|                                               | cf -80MHz        | dB     | -41.139   | -43.772   | -44.416   | PASS   | -25dBc or below     |
|                                               | cf +80MHz        | dB     | -40.189   | -41.352   | -43.406   | PASS   | -25dBc or below     |
| Adjacent Channel Leakage Power (Tx2)          | cf               | dB     | 11.636    | 11.094    | 10.246    | ----   | ----                |
|                                               | cf -80MHz        | dB     | -43.306   | -43.924   | -43.666   | PASS   | -25dBc or below     |
|                                               | cf +80MHz        | dB     | -42.256   | -43.134   | -43.676   | PASS   | -25dBc or below     |
| Adjacent Channel Leakage Power (MIMO)         | cf -80MHz        | dB     | -42.199   | -44.066   | -44.393   | PASS   | -25dBc or below     |
|                                               | cf +80MHz        | dB     | -41.216   | -42.186   | -43.729   | PASS   | -25dBc or below     |

|                                |                   |        |          |          |          |        |                     |
|--------------------------------|-------------------|--------|----------|----------|----------|--------|---------------------|
| Measurement Channel            |                   | Ch.    | 106      | 122      | 138      |        |                     |
| Measurement Frequency          |                   | MHz    | 5530     | 5610     | 5690     | Result | Limit               |
| Out-Band Leakage Power (Tx1)   | 5460 to 5469.5MHz | uW/MHz | 0.086    | 0.019    | 0.007    | PASS   | 50uW/MHz or below   |
|                                |                   | MHz    | 5464.532 | 5462.033 | 5463.031 | ----   | ----                |
|                                | 5469.5 to 5470MHz | uW/MHz | 0.112    | 0.046    | 0.037    | PASS   | 51.2uW/MHz or below |
|                                |                   | MHz    | 5469.609 | 5469.535 | 5469.692 | ----   | ----                |
| Out-Band Leakage Power (Tx2)   | 5460 to 5469.5MHz | uW/MHz | 0.052    | 0.008    | 0.006    | PASS   | 50uW/MHz or below   |
|                                |                   | MHz    | 5465.064 | 5461.929 | 5463.952 | ----   | ----                |
|                                | 5469.5 to 5470MHz | uW/MHz | 0.094    | 0.040    | 0.042    | PASS   | 51.2uW/MHz or below |
|                                |                   | MHz    | 5469.564 | 5469.544 | 5469.679 | ----   | ----                |
| Out-Band Leakage Power (Tx1+2) | 5460 to 5469.5MHz | uW/MHz | 0.139    | 0.026    | 0.012    | PASS   | 50uW/MHz or below   |
|                                |                   | MHz    | ---      | ---      | ---      | ----   | ----                |
|                                | 5469.5 to 5470MHz | uW/MHz | 0.205    | 0.086    | 0.079    | PASS   | 51.2uW/MHz or below |
|                                |                   | MHz    | ---      | ---      | ---      | ----   | ----                |

| Measurement Channel                                               |                   | Ch.    | 106       | 122       | 138       |        |                     |
|-------------------------------------------------------------------|-------------------|--------|-----------|-----------|-----------|--------|---------------------|
| Measurement Frequency                                             |                   | MHz    | 5530      | 5610      | 5690      | Result | Limit               |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)              | 30MHz to 1000MHz  | nW     | 0.004     | 0.004     | 0.004     | PASS   | 4nW or below        |
|                                                                   |                   | MHz    | 802.460   | 917.450   | 995.930   | ----   | ----                |
|                                                                   | 1GHz to 10GHz     | nW     | 0.111     | 0.117     | 0.121     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | 5762.800  | 5809.600  | 7093.000  | ----   | ----                |
|                                                                   | 10GHz to 26GHz    | nW     | 0.637     | 0.562     | 0.544     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | 25960.000 | 24782.800 | 24177.200 | ----   | ----                |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)              | 30MHz to 1000MHz  | nW     | 0.006     | 0.006     | 0.006     | PASS   | 4nW or below        |
|                                                                   |                   | MHz    | 977.300   | 876.620   | 955.280   | ----   | ----                |
|                                                                   | 1GHz to 10GHz     | nW     | 0.200     | 0.137     | 0.113     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | 3508.300  | 2870.650  | 5644.900  | ----   | ----                |
|                                                                   | 10GHz to 26GHz    | nW     | 0.449     | 0.453     | 0.402     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | 25556.000 | 25494.000 | 25521.200 | ----   | ----                |
| Secondary Emitted<br>Radio Wave<br>Strength<br>(Rx1+2)            | 30MHz to 1000MHz  | nW     | 0.010     | 0.010     | 0.010     | PASS   | 4nW or below        |
|                                                                   |                   | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                   | 1GHz to 10GHz     | nW     | 0.311     | 0.254     | 0.234     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | ---       | ---       | ---       | ----   | ----                |
|                                                                   | 10GHz to 26GHz    | nW     | 1.086     | 1.015     | 0.946     | PASS   | 20nW or below       |
|                                                                   |                   | MHz    | ---       | ---       | ---       | ----   | ----                |
| Out-Band<br>Leakage Power<br>(Port Tx1+Tx2)<br><br>* Use Combiner | 5460 to 5469.5MHz | uW/MHz | 0.266     | ---       | ---       | PASS   | 50uW/MHz or below   |
|                                                                   |                   | MHz    | 5469.434  | ---       | ---       | ----   | ----                |
|                                                                   | 5469.5 to 5470MHz | uW/MHz | 0.240     | ---       | ---       | PASS   | 51.2uW/MHz or below |
|                                                                   |                   | MHz    | 5469.671  | ---       | ---       | ----   | ----                |
| Burst Length of Transmitted Signals                               |                   |        | Good      | Good      | Good      | PASS   | 8ms or below        |
| Carrier Sensing Function                                          |                   |        | Good      | Good      | Good      | PASS   | 100mV/m             |
| Transmission Power Control Function                               |                   |        | Good      | Good      | Good      | PASS   | 3dB                 |
| Interference Prevention Function                                  |                   |        | Good      |           |           | PASS   |                     |

8. Test Results

Test results\_802.11ac160\_5.5GHz WLAN\_SISO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |        |         |
|--------------------------|--------|---------|
| Peak Antenna Gain        | 2.806  | dBi     |
| Declaration Output Power | 0.130  | mW/MHz  |
|                          | -8.861 | dBm/MHz |
| E.I.R.P                  | 0.248  | mW/MHz  |
|                          | -6.055 | dBm/MHz |
| Input Power Voltage      | 3.850  | VDC     |

|                              |                              |      |         |      |
|------------------------------|------------------------------|------|---------|------|
| Tested Circit Insertion Loss |                              | Tx1  | 0.000   | dB   |
| Transmission Time            | ON TIME<br>(1sec or less)    |      | 0.584   | msec |
|                              | OFF TIME<br>(0.1sec or more) |      | 0.033   | msec |
|                              | Ratio                        |      | 94.621% |      |
| Packet Type (Mode)           |                              | OFDM |         | mode |

|                                                                |                                                                                                                                                                            |  |  |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT160)                                                                                                            |  |  |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below ± 1% as the input voltage from the external power supply to the receiver varies ± 10% (excluding power supply). |  |  |

|                                 |        |       |      |      |        |                     |
|---------------------------------|--------|-------|------|------|--------|---------------------|
| Measurement Channel             | Ch.    | 114   | ---- | ---- |        |                     |
| Measurement Frequency           | MHz    | 5570  | ---- | ---- | Result | Limit               |
| RF Output Power(Tx1)            | mW/MHz | 0.131 | ---- | ---- | PASS   | 1.25mW/MHz or below |
| RF Output Power Tolerance (Tx1) | %      | 0.709 | ---- | ---- | PASS   | +50% to -50%        |

Note : The power setting per port is the same for SISO and MIMO. So, all test items except RF Output were performed in MIMO.

8. Test Results

Test results\_802.11ac160\_5.5GHz WLAN\_MIMO

|                          |              |                         |    |
|--------------------------|--------------|-------------------------|----|
| Environment of test room | Date of test | 2024.05.16 ~ 2024.06.13 |    |
|                          | Temperature  | 20 ~ 23                 | °C |
|                          | Humidity     | 45 ~ 49                 | %  |

|                          |        |         |
|--------------------------|--------|---------|
| Peak Antenna Gain        | 2.806  | dBi     |
| Declaration Output Power | 0.490  | mW/MHz  |
|                          | -3.098 | dBm/MHz |
| E.I.R.P                  | 0.935  | mW/MHz  |
|                          | -0.292 | dBm/MHz |
| Input Power Voltage      | 3.850  | VDC     |

|                              |                              |     |         |      |
|------------------------------|------------------------------|-----|---------|------|
| Tested Circit Insertion Loss |                              | Tx1 | 0.000   | dB   |
|                              |                              | Tx2 | 0.000   | dB   |
| Transmission Time            | ON TIME<br>(1sec or less)    |     | 0.584   | msec |
|                              | OFF TIME<br>(0.1sec or more) |     | 0.033   | msec |
|                              | Ratio                        |     | 94.621% |      |
| Packet Type (Mode)           |                              |     | OFDM    | mode |

|                                                                |                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test category ;                                                | 5GHz Band Low-Power Data Communication System 802.11ac (VHT160)                                                                                                                      |
| The reason why the tests are performed only at rated voltage : | When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply). |

|                                   |        |          |      |      |        |                                 |
|-----------------------------------|--------|----------|------|------|--------|---------------------------------|
| Measurement Channel               | Ch.    | 114      | ---- | ---- |        |                                 |
| Measurement Frequency             | MHz    | 5570     | ---- | ---- | Result | Limit                           |
| Frequency Measurements(Tx1)       | MHz    | 5570.096 | ---- | ---- | ----   | ----                            |
| Frequency Toleranc(Tx1)           | ppm    | 17.235   | ---- | ---- | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Frequency Measurements(Tx2)       | MHz    | 5570.096 | ---- | ---- | ----   | ----                            |
| Frequency Tolerance(Tx2)          | ppm    | 17.235   | ---- | ---- | PASS   | $\pm 20 \times 10^{-6}$ (20ppm) |
| Occupied Bandwidth(Tx1)           | MHz    | 154.500  | ---- | ---- | PASS   | 160MHz or below                 |
| Occupied Bandwidth(Tx2)           | MHz    | 154.530  | ---- | ---- | PASS   | 160MHz or below                 |
| RF Output Power(Tx1)              | mW/MHz | 0.259    | ---- | ---- | PASS   | 1.25mW/MHz or below             |
| RF Output Power(Tx2)              | mW/MHz | 0.235    | ---- | ---- | PASS   | 1.25mW/MHz or below             |
| RF Output Power (Tx1+2)           | mW/MHz | 0.494    | ---- | ---- | PASS   | 1.25mW/MHz or below             |
| RF Output Power Tolerance (Tx1+2) | %      | 0.804    | ---- | ---- | PASS   | +50% to -50%                    |

|                                                            |                     |        |           |      |      |        |                     |
|------------------------------------------------------------|---------------------|--------|-----------|------|------|--------|---------------------|
| Measurement Channel                                        |                     | Ch.    | 114       | ---- | ---- |        |                     |
| Measurement Frequency                                      |                     | MHz    | 5570      | ---- | ---- | Result | Limit               |
| Unwanted<br>(Spurious)<br>Emission<br>Strength(Tx1)        | 30MHz to 5419.6 MHz | uW/MHz | 0.083     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | 5411.000  | ---- | ---- | ----   | ----                |
|                                                            | 5725 MHz to 26 GHz  | uW/MHz | 0.164     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | 5727.000  | ---- | ---- | ----   | ----                |
| Unwanted<br>(Spurious)<br>Emission<br>Strength(Tx2)        | 30MHz to 5419.6 MHz | uW/MHz | 0.067     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | 5410.400  | ---- | ---- | ----   | ----                |
|                                                            | 5725 MHz to 26 GHz  | uW/MHz | 0.157     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | 25491.600 | ---- | ---- | ----   | ----                |
| Unwanted<br>(Spurious)<br>Emission Strength<br><br>(Tx1+2) | 30MHz to 5419.6 MHz | uW/MHz | 0.150     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | ----      | ---- | ---- | ----   | ----                |
|                                                            | 5725 MHz to 26 GHz  | uW/MHz | 0.321     | ---- | ---- | PASS   | 12.5uW/MHz or below |
|                                                            |                     | MHz    | ----      | ---- | ---- | ----   | ----                |

|                                |                      |        |          |      |      |        |                   |
|--------------------------------|----------------------|--------|----------|------|------|--------|-------------------|
| Measurement Channel            |                      | Ch.    | 114      | ---- | ---- |        |                   |
| Measurement Frequency          |                      | MHz    | 5570     | ---- | ---- | Result | Limit             |
| Out-Band Leakage Power (Tx1)   | 5419.6MHz to 5470MHz | uW/MHz | 0.221    | ---- | ---- | PASS   | 50uW/MHz or below |
|                                |                      | MHz    | 5465.817 | ---- | ---- | ----   | ----              |
| Out-Band Leakage Power (Tx2)   | 5419.6MHz to 5470MHz | uW/MHz | 0.161    | ---- | ---- | PASS   | 50uW/MHz or below |
|                                |                      | MHz    | 5437.038 | ---- | ---- | ----   | ----              |
| Out-Band Leakage Power (Tx1+2) | 5419.6MHz to 5470MHz | uW/MHz | 0.381    | ---- | ---- | PASS   | 50uW/MHz or below |
|                                |                      | MHz    | ----     | ---- | ---- | ----   | ----              |

|                                                                                 |                      |        |           |      |        |                   |
|---------------------------------------------------------------------------------|----------------------|--------|-----------|------|--------|-------------------|
| Measurement Channel                                                             | Ch.                  | 114    | ----      | ---- |        |                   |
| Measurement Frequency                                                           | MHz                  | 5570   | ----      | ---- | Result | Limit             |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx1)                            | 30MHz to 1000MHz     | nW     | 0.055     | ---- | PASS   | 4nW or below      |
|                                                                                 |                      | MHz    | 882.870   | ---- | ----   | ----              |
|                                                                                 | 1GHz to 10GHz        | nW     | 0.837     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | 1826.650  | ---- | ----   | ----              |
|                                                                                 | 10GHz to 26GHz       | nW     | 0.738     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | 24373.200 | ---- | ----   | ----              |
| Secondary<br>Emitted Radio<br>Wave Strength<br>(Rx2)                            | 30MHz to 1000MHz     | nW     | 0.011     | ---- | PASS   | 4nW or below      |
|                                                                                 |                      | MHz    | 874.340   | ---- | ----   | ----              |
|                                                                                 | 1GHz to 10GHz        | nW     | 2.583     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | 2426.950  | ---- | ----   | ----              |
|                                                                                 | 10GHz to 26GHz       | nW     | 0.893     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | 25470.800 | ---- | ----   | ----              |
| Secondary Emitted<br>Radio Wave<br>Strength (Rx1+2)                             | 30MHz to 1000MHz     | nW     | 0.065     | ---- | PASS   | 4nW or below      |
|                                                                                 |                      | MHz    | ----      | ---- | ----   | ----              |
|                                                                                 | 1GHz to 10GHz        | nW     | 3.420     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | ----      | ---- | ----   | ----              |
|                                                                                 | 10GHz to 26GHz       | nW     | 1.631     | ---- | PASS   | 20nW or below     |
|                                                                                 |                      | MHz    | ----      | ---- | ----   | ----              |
| Unwanted<br>(Spurious)<br>Emission Strength<br>(Port Tx1+Tx2)<br>* Use Combiner | 5419.6MHz to 5470MHz | uW/MHz | 0.462     | ---- | PASS   | 50uW/MHz or below |
|                                                                                 |                      | ----   | ----      | ---- | ----   | ----              |
|                                                                                 |                      | MHz    | 5433.914  | ---- | ----   | ----              |
|                                                                                 |                      | ----   | ----      | ---- | ----   | ----              |
| Burst Length of Transmitted Signals                                             |                      | Good   | ----      | ---- | PASS   | 8ms or below      |
| Carrier Sensing Function                                                        |                      | Good   | ----      | ---- | PASS   | 100mV/m           |
| Transmission Power Control Function                                             |                      | Good   | ----      | ---- | PASS   | 3dB               |
| Interference Prevention Function                                                |                      | Good   |           |      | PASS   |                   |