

Project No.: TM-2506000042P  
Report No.: TMWK2506002193KR FCC ID: 2AQ68T99H55330

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# RADIO TEST REPORT

## FCC 47 CFR PART 15 SUBPART E

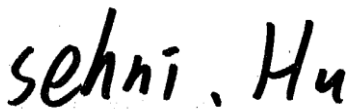
|                          |                                                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Standard            | FCC Part 15.407                                                                                                                                     |
| Product name             | IVI_ECU_US                                                                                                                                          |
| Brand Name               | Cloud Network Technology Singapore Pte. Ltd.                                                                                                        |
| Model No.                | T99H553.30                                                                                                                                          |
| Test Result              | Pass                                                                                                                                                |
| Statements of Conformity | Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty. |

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10-2020 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.(Wugu Laboratory)

Approved by:



Sehni Hu  
Supervisor

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

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## **Revision History**

| Rev. | Issue Date         | Revisions                        | Effect Page | Revised By |
|------|--------------------|----------------------------------|-------------|------------|
| 00   | September 17, 2025 | Initial Issue                    | ALL         | Peggy Tsai |
| 01   | October 3, 2025    | See the following Note Rev. (01) | P.1         | Peggy Tsai |

### **Rev. (01)**

1. Modify FCC ID.



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## 1. GENERAL INFORMATION

### 1.1 EUT INFORMATION

|                          |                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>         | HON LIN Technology Co., Ltd.<br>11F., NO.32, JIHU RD., NEIHU DIST., TAIPEI CITY 11492, TAIWAN (R.O.C.)               |
| <b>Manufacturer</b>      | Cloud Network Technology Singapore Pte. Ltd.<br>54 Genting Lane #03-05 Ruby Land Complex Singapore, 349562 Singapore |
| <b>Equipment</b>         | IVI_ECU_US                                                                                                           |
| <b>Model No.</b>         | T99H553.30                                                                                                           |
| <b>Model Discrepancy</b> | N/A                                                                                                                  |
| <b>Trade Name</b>        | Cloud Network Technology Singapore Pte. Ltd.                                                                         |
| <b>Received Date</b>     | June 4, 2025                                                                                                         |
| <b>Date of Test</b>      | August 14 ~ 28, 2025                                                                                                 |
| <b>Power Operation</b>   | Powered from Power Supply (DC 12V)                                                                                   |
| <b>HW Version</b>        | 0.0.6                                                                                                                |
| <b>FW Version</b>        | r0.33t1 + m0.16                                                                                                      |

**Remark:**

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. This device is a client device



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## 1.2 EUT CHANNEL INFORMATION

|                 |                                                                                                                                                                                                                                          |                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Frequency Range | UNII-1                                                                                                                                                                                                                                   |                 |
|                 | IEEE 802.11a                                                                                                                                                                                                                             | 5180 ~ 5240 MHz |
|                 | IEEE 802.11n HT20                                                                                                                                                                                                                        | 5180 ~ 5240 MHz |
|                 | IEEE 802.11ac VHT20                                                                                                                                                                                                                      | 5180 ~ 5240 MHz |
|                 | IEEE 802.11n HT40                                                                                                                                                                                                                        | 5190 ~ 5230 MHz |
|                 | IEEE 802.11ac VHT40                                                                                                                                                                                                                      | 5190 ~ 5230 MHz |
|                 | IEEE 802.11ac VHT80                                                                                                                                                                                                                      | 5210 MHz        |
| Modulation Type | 1. IEEE 802.11a mode: OFDM<br>2. IEEE 802.11n HT 20 MHz mode: OFDM<br>3. IEEE 802.11n HT 40 MHz mode: OFDM<br>4. IEEE 802.11ac VHT 20 MHz mode: OFDM<br>5. IEEE 802.11ac VHT 40 MHz mode: OFDM<br>5. IEEE 802.11ac VHT 80 MHz mode: OFDM |                 |

**Remark:**

1. Refer as ANSI C63.10-2020 for test channels

| Number of frequencies to be tested                   |                       |                                              |
|------------------------------------------------------|-----------------------|----------------------------------------------|
| Frequency range in which device operates             | Number of frequencies | Location in frequency range of operation     |
| <input type="checkbox"/> 1 MHz or less               | 1                     | Middle                                       |
| <input type="checkbox"/> 1 MHz to 10 MHz             | 2                     | 1 near top and 1 near bottom                 |
| <input checked="" type="checkbox"/> More than 10 MHz | 3                     | 1 near top, 1 near middle, and 1 near bottom |

### 1.3 ANTENNA INFORMATION

|                       |                                                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Type          | <input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils |
| Antenna Brand / Model | Antenna 1: INPAQ / WA-M-LB-02-297-B<br>Antenna 2: INPAQ / WA-M-LB-02-307-B                                                           |
| Antenna Connector     | Fakra I Code                                                                                                                         |

**Note:**

1. The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

2. Antenna Directional Gain:

For CDD Mode: Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

Directional Gain = GANT + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ .

GANT is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

$N_{SS}$  = the number of independent spatial streams of data;

$N_{ANT}$  = the total number of antennas

$g_{j,k} = 10^{G_k/20}$  if the  $k$ th antenna is being fed by spatial stream  $j$ , or zero if it is not;  
 $G_k$  is the gain in dBi of the  $k$ th antenna.

As minimum  $N_{SS}=1$  is supported by EUT, the formula can be simplified as:

Directional gain =  $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$

dBi Where  $G_1, G_2, \dots, G_N$  denote single antenna gain.



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The directional gain "DG" is calculated as following table.

| Frequency                           | Antenna 1<br>Gain<br><br>(dBi) | Antenna 2<br>Gain<br><br>(dBi) | DG    | DG    | Power     | PSD       |
|-------------------------------------|--------------------------------|--------------------------------|-------|-------|-----------|-----------|
|                                     |                                |                                | for   | for   | Limit     | Limit     |
|                                     |                                |                                | Power | PSD   | Reduction | Reduction |
|                                     |                                |                                | (dBi) | (dBi) | (dBi)     | (dBi)     |
| Band I<br>(U-NII 1)<br>5150-5250MHz | 4.76                           | 4.89                           | 4.89  | 7.84  | 0.00      | 1.84      |

Calculation example:

If a device has two antenna, GANT1= 4.76dBi ; GANT2=4.89dBi

Directional gain of power measurement = max(4.76, 4.89) + 0 = 4.89 dBi

Directional gain of PSD derived from formula which is

$10 \times \log \{ \{ [ 10^{\frac{4.76}{10}} + 10^{\frac{4.89}{10}} ]^2 \} / 2 \} = 7.84 \text{ dBi}$

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)



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## 1.4 MEASUREMENT UNCERTAINTY

| PARAMETER                       | UNCERTAINTY    |
|---------------------------------|----------------|
| AC Powerline Conducted Emission | $\pm 2.21$ dB  |
| Channel Bandwidth               | $\pm 2.79$ dB  |
| RF output power (Spectrum)      | $\pm 2.74$ dB  |
| Power Spectral density          | $\pm 2.74$ dB  |
| Radiated Emission_9kHz-30MHz    | $\pm 3.492$ dB |
| Radiated Emission_30MHz-200MHz  | $\pm 3.62$ dB  |
| Radiated Emission_200MHz-1GHz   | $\pm 3.899$ dB |
| Radiated Emission_1GHz-6GHz     | $\pm 5.063$ dB |
| Radiated Emission_6GHz-18GHz    | $\pm 5.122$ dB |
| Radiated Emission_18GHz-26GHz   | $\pm 3.032$ dB |
| Radiated Emission_26GHz-40GHz   | $\pm 3.271$ dB |

**Remark:**

- 1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

## 1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

CAB identifier: TW1309

| Test site          | Test Engineer       | Remark                                                            |
|--------------------|---------------------|-------------------------------------------------------------------|
| AC Conduction Room | -                   | Not applicable, because EUT not connect to AC Main Source direct. |
| Radiation          | Ben Yang, Tony Chao | -                                                                 |
| RF Conducted       | Jerry Chang         | -                                                                 |

**Remark:** The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309



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## 1.6 INSTRUMENT CALIBRATION

| Conducted FCC/IC/NCC (All) |                             |            |               |                  |                 |
|----------------------------|-----------------------------|------------|---------------|------------------|-----------------|
| Name of Equipment          | Manufacturer                | Model      | Serial Number | Calibration Date | Calibration Due |
| Cable                      | Woken                       | WC12       | SS01          | 2025-06-26       | 2026-06-25      |
| Cable                      | Woken                       | WC12       | SS02          | 2025-06-26       | 2026-06-25      |
| PXA Signal Analyzer        | Keysight                    | N9030B     | MY62291089    | 2024-10-04       | 2025-10-03      |
| Power Sensor               | Anritsu                     | MA2411B    | 1911387       | 2024-08-30       | 2025-08-29      |
| Power Sensor               | Anritsu                     | MA2411B    | 1911386       | 2025-07-07       | 2026-07-06      |
| Power Meter                | Anritsu                     | ML2496A    | 2136002       | 2025-07-07       | 2026-07-06      |
| DC Blocks                  | Marvelous Microwave         | MVE6411    | MVE-001       | 2025-08-06       | 2026-08-05      |
| Attenuator                 | Marvelous Microwave Inc     | MVE2213-10 | 08            | 2024-11-07       | 2025-11-06      |
| DC Power Source            | GWINSTEK                    | GPC-3030D  | 8070184       | 2024-09-20       | 2025-09-19      |
| Software                   | Radio Test Software Ver. 21 |            |               |                  |                 |

### Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.



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| 966A_Radiated       |                 |                        |                          |                  |                 |
|---------------------|-----------------|------------------------|--------------------------|------------------|-----------------|
| Name of Equipment   | Manufacturer    | Model                  | Serial Number            | Calibration Date | Calibration Due |
| Signal Analyzer     | KEYSIGHT        | N9010A                 | MY52220817               | 2025-03-05       | 2026-03-04      |
| Active Loop Antenna | COM-POWER       | AL-130                 | 121051                   | 2025-02-18       | 2026-02-17      |
| Thermo-Hygro Meter  | HTC             | HTC-1                  | HTC-D06                  | 2025-05-26       | 2026-05-25      |
| Bi-Log Antenna      | Sunol Sciences  | JB3                    | A030105&532              | 2025-06-26       | 2026-06-25      |
| Preamplifier        | EMEC            | EM330                  | 060609                   | 2025-02-20       | 2026-02-19      |
| Cable               | Huber+Suhner    | 104PEA                 | 20995+21000+1<br>82330   | 2025-08-06       | 2026-08-05      |
| Horn Antenna        | ETC             | MCTD 1209              | DRH13M02003              | 2024-12-20       | 2025-12-19      |
| Preamplifier        | HP              | 8449B                  | 3008A00965               | 2024-12-18       | 2025-12-17      |
| Cable               | EMCI            | EMC101G                | 221012+230205<br>+250412 | 2025-04-24       | 2026-04-23      |
| Attenuator          | Mini-Circuits   | BW-S9W5                | BWS9W5-09-<br>966A-01    | 2025-02-06       | 2026-02-05      |
| High Pass Filters   | Titan Microwave | T04H700026000<br>50S01 | 22011402-6               | 2025-01-22       | 2026-01-21      |
| Pre-Amplifier       | EMCI            | EMC184045SE            | 980860                   | 2024-12-02       | 2025-12-01      |
| Horn Antenna        | SCHWARZBEC<br>K | BBHA9170               | 1047                     | 2024-12-06       | 2025-12-05      |
| Turn Table          | CCS             | CC-T-1F                | N/A                      | N.C.R            | N.C.R           |
| Controller          | CCS             | CC-C-1F                | N/A                      | N.C.R            | N.C.R           |
| Antenna Tower       | CCS             | CC-A-1F                | N/A                      | N.C.R            | N.C.R           |
| Software            | e3 V9-210616c   |                        |                          |                  |                 |

**Remark:**

1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Required.



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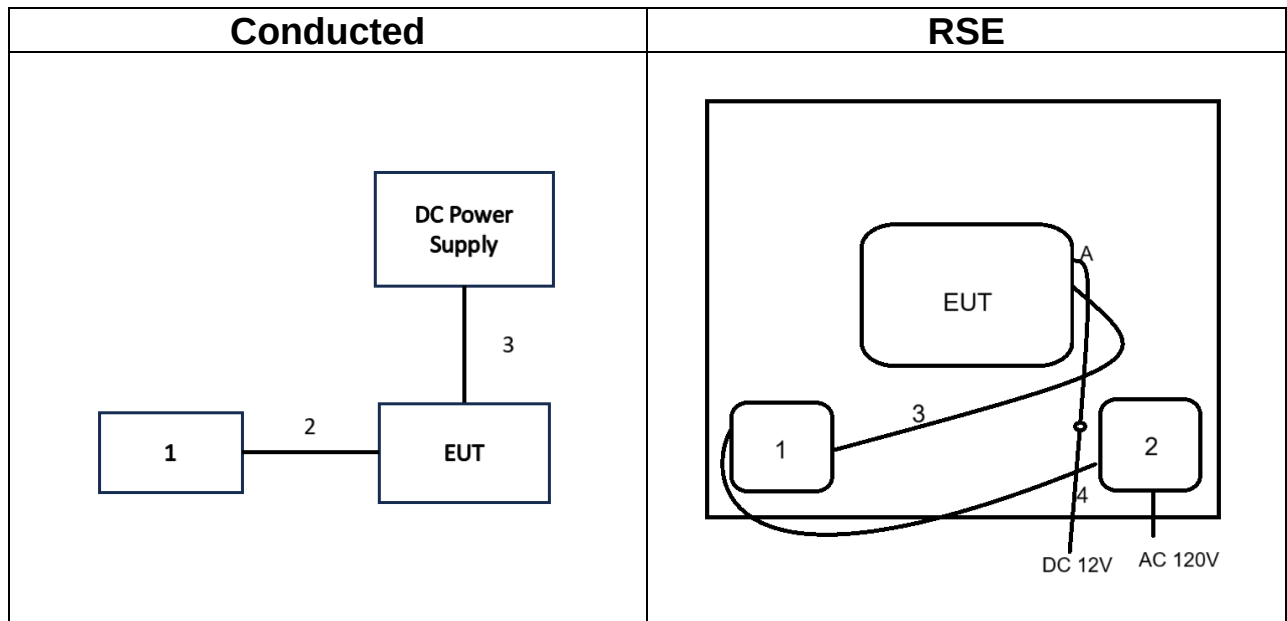
## 1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

| EUT Accessories Equipment |           |       |       |            |        |    |
|---------------------------|-----------|-------|-------|------------|--------|----|
| No.                       | Equipment | Brand | Model | Series No. | FCC ID | IC |
|                           | N/A       |       |       |            |        |    |

| Support Equipment (Conducted) |                |        |          |            |        |
|-------------------------------|----------------|--------|----------|------------|--------|
| No.                           | Equipment      | Brand  | Model    | Series No. | FCC ID |
| 1                             | NB(B)          | Lenovo | T470     | N/A        | N/A    |
| 2                             | Type C Cable   | Xiaomi | SJX10ZM  | N/A        | N/A    |
| 3                             | DC Power Cable | MISUMI | MCR3S-RE | N/A        | N/A    |

| Support Equipment (RSE) |                |        |               |            |        |
|-------------------------|----------------|--------|---------------|------------|--------|
| No.                     | Equipment      | Brand  | Model         | Series No. | FCC ID |
| 1                       | NB(D)          | Lenovo | ThinkPad X260 | N/A        | N/A    |
| 2                       | Adapter        | Lenovo | ADLX45DLC3A   | N/A        | N/A    |
| 3                       | Type C Cable   | Xiaomi | SJX10ZM       | N/A        | N/A    |
| 4                       | DC Power Cable | MISUMI | MCR3S-RE      | N/A        | N/A    |
| A                       | Power Cable    | N/A    | N/A           | N/A        | N/A    |

## 1.8 TEST SET UP DIAGRAM



## 1.9 TEST PROGRAM

The EUT connection corresponds to the surrounding fixture control board.  
This EUT uses "adb" software and setup command to set the frequency, modulation, and power to allow the sample to continuously transmit.

## 1.10 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10-2020, FCC Part 2, FCC Part 15.407, KDB 789033 D02 v02r01.



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## 2. TEST SUMMARY

| FCC Standard Sec. | Chapter | Test Item                   | Result |
|-------------------|---------|-----------------------------|--------|
| 15.203            | 1.3     | Antenna Requirement         | Pass   |
| 15.207            | 4.1     | AC Conducted Emission       | N/A    |
| 15.407(a)         | 4.2     | 26dB Bandwidth              | Pass   |
| 2.1049            | 4.2     | Occupied Bandwidth (99%)    | Pass   |
| 15.407(a)         | 4.3     | Output Power Measurement    | Pass   |
| 15.407(a)         | 4.4     | Power Spectral Density      | Pass   |
| 15.407(b)         | 4.5     | Radiation Band Edge         | Pass   |
| 15.407(b)         | 4.5     | Radiation Spurious Emission | Pass   |
| 15.407(h)         | -       | Dynamic Frequency Selection | N/A    |

### 3. DESCRIPTION OF TEST MODES

#### 3.1 THE WORST MODE OF OPERATING CONDITION

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                       |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|-----------------------|---------|--------------|------------------|-------------------|------------------|-------------------|------------|---------------------|------------------|---------------------|------------|---------------------|------|--|--|
| Operation mode        | 1. IEEE 802.11a mode: 6Mbps<br>2. IEEE 802.11n HT20 mode: MCS0<br>3. IEEE 802.11n HT40 mode: MCS0<br>4. IEEE 802.11ac VHT20 mode: MCS0<br>5. IEEE 802.11ac VHT40 mode: MCS0<br>6. IEEE 802.11ac VHT80 mode: MCS0                                                                                                                                                                                                                                          |                       |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
| Operating Frequency   | <table><tr><td></td><td>Mode</td><td>Frequency Range (MHz)</td></tr><tr><td rowspan="6">U-NII-1</td><td>IEEE 802.11a</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT20</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT40</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ac VHT20</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11ac VHT40</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ac VHT80</td><td>5210</td></tr></table> |                       | Mode | Frequency Range (MHz) | U-NII-1 | IEEE 802.11a | 5180, 5220, 5240 | IEEE 802.11n HT20 | 5180, 5220, 5240 | IEEE 802.11n HT40 | 5190, 5230 | IEEE 802.11ac VHT20 | 5180, 5220, 5240 | IEEE 802.11ac VHT40 | 5190, 5230 | IEEE 802.11ac VHT80 | 5210 |  |  |
|                       | Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Frequency Range (MHz) |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
| U-NII-1               | IEEE 802.11a                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5180, 5220, 5240      |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|                       | IEEE 802.11n HT20                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5180, 5220, 5240      |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|                       | IEEE 802.11n HT40                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5190, 5230            |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|                       | IEEE 802.11ac VHT20                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5180, 5220, 5240      |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|                       | IEEE 802.11ac VHT40                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5190, 5230            |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
|                       | IEEE 802.11ac VHT80                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5210                  |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |
| Operation Transmitter | 1. IEEE 802.11a mode: 1T1R(SISO)<br>2. IEEE 802.11n HT20 mode: 2T2R(MIMO)<br>3. IEEE 802.11n HT40 mode: 2T2R(MIMO)<br>4. IEEE 802.11ac VHT20 mode: 2T2R(MIMO)<br>5. IEEE 802.11ac VHT40 mode: 2T2R(MIMO)<br>6. IEEE 802.11ac VHT80 mode: 2T2R(MIMO)                                                                                                                                                                                                       |                       |      |                       |         |              |                  |                   |                  |                   |            |                     |                  |                     |            |                     |      |  |  |

**Remark:**

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. Based on FCC Part 15.31(m), the laboratory conducts a comprehensive evaluation of ch low, ch middle, and ch high. Other additional channels only evaluate the radiated restricted bands of operation and powers.

### 3.2 THE WORST MODE OF MEASUREMENT

| Radiated Emission Measurement Above 1G |                                                                                                                                                                                                                                                                                               |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                         | Radiated Emission Above 1G                                                                                                                                                                                                                                                                    |
| Power supply Mode                      | Mode 1: EUT power by Power Supply(DC12V)                                                                                                                                                                                                                                                      |
| Worst Mode                             | <input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4                                                                                                                                                    |
| Worst Position                         | <input type="checkbox"/> Placed in fixed position.<br><input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane)<br><input checked="" type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane)<br><input type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane) |

| Radiated Emission Measurement Below 1G |                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                         | Radiated Emission Below 1G                                                                                                                 |
| Power supply Mode                      | Mode 1: EUT power by Power Supply(DC12V)                                                                                                   |
| Worst Mode                             | <input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4 |

**Remark:**

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement.  
The worst case(Y-Plane) were recorded in this report
3. Since the modulation and bandwidth of 802.11n mode are similar to those of 802.11ac, manufacturers control the power of 802.11ac mode to be at the same or lower level as 802.11n mode, and represent the worst-case level in the test report.
4. This device supports both SISO and MIMO modes. Using the same output power level, MIMO mode outputs greater power than SISO mode, making MIMO the worst case. For the output port of SISO Mode, select a larger power as other non-power test items.



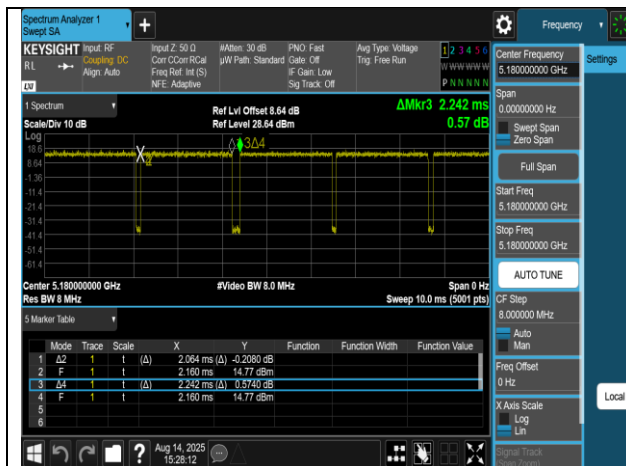
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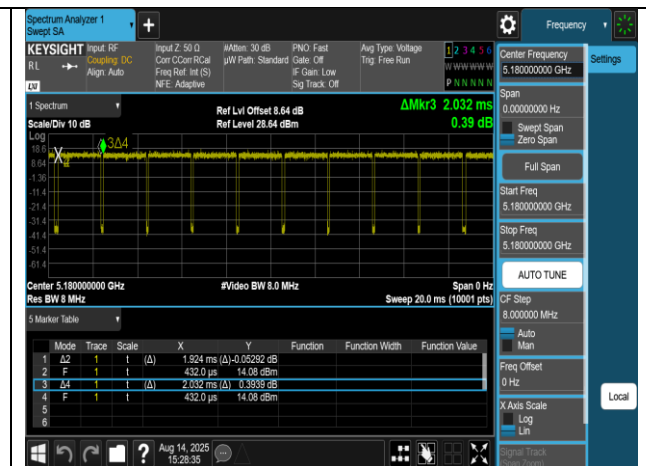
### 3.3 EUT DUTY CYCLE

Temperature: 21.8 ~ 24.2°C      Test date: August 14 ~ 28, 2025  
Humidity: 54 ~ 61% RH      Tested by: Jerry Chang

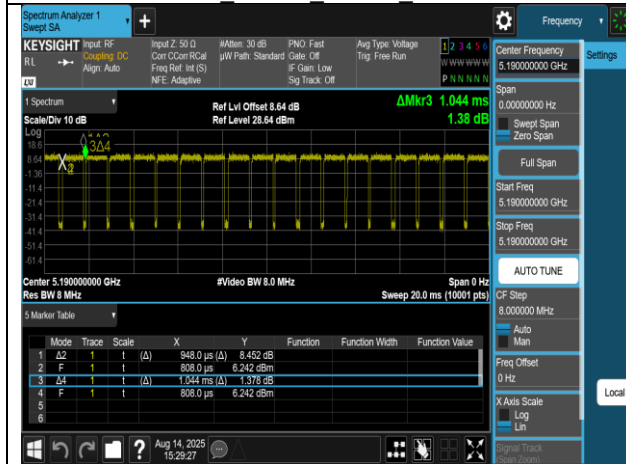
| Mode        | Duty Cycle (%)<br>=Ton / (Ton+Toff) | Duty Factor (dB)<br>=10*log ( 1/Duty Cycle ) | 1/T (kHz) | VBW<br>setting<br>(kHz) |
|-------------|-------------------------------------|----------------------------------------------|-----------|-------------------------|
| 802.11a     | 92.06                               | 0.36                                         | 0.48      | 1.00                    |
| 802.11n_20  | 94.69                               | 0.24                                         | 0.52      | 1.00                    |
| 802.11ac_20 | 91.01                               | 0.41                                         | 1.01      | 2.00                    |
| 802.11n_40  | 90.80                               | 0.42                                         | 1.05      | 2.00                    |
| 802.11ac_40 | 82.51                               | 0.83                                         | 2.00      | 2.00                    |
| 802.11ac_80 | 63.24                               | 1.99                                         | 3.88      | 4.00                    |



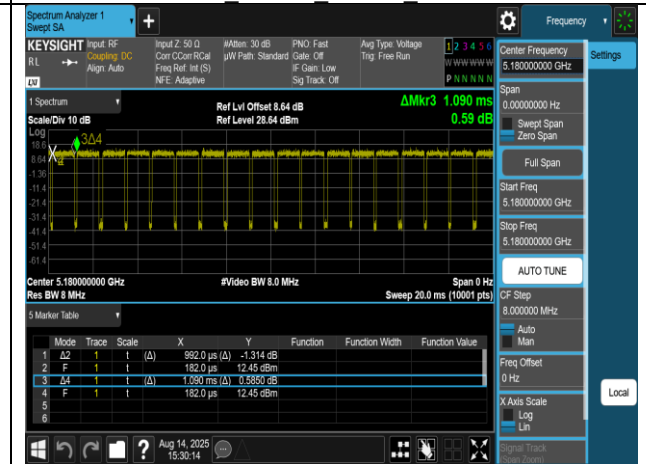
802.11a 20MHz Chain0 5180MHz



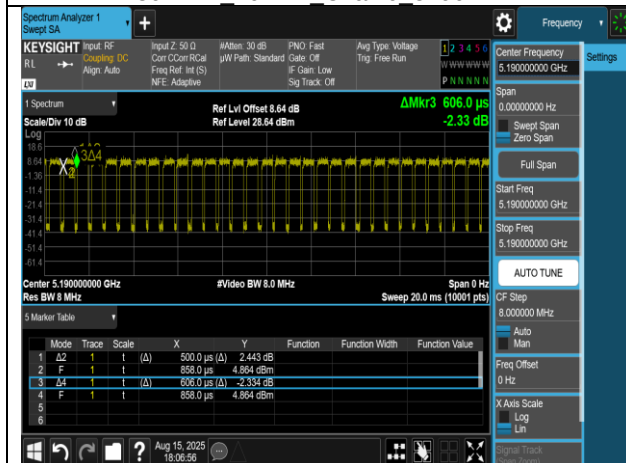
802.11n 20MHz Chain0 5180MHz



802.11n 40MHz Chain0 5190MHz



802.11ac 20MHz Chain0 5180MHz



802.11ac 40MHz Chain0 5190MHz



802.11ac 80MHz Chain0 5210MHz

## 4. TEST RESULT

### 4.1 AC POWER LINE CONDUCTED EMISSION

#### 4.1.1 Test Limit

According to §15.207(a),

| Frequency Range<br>(MHz) | Limits(dBμV) |           |
|--------------------------|--------------|-----------|
|                          | Quasi-peak   | Average   |
| 0.15 to 0.50             | 66 to 56*    | 56 to 46* |
| 0.50 to 5                | 56           | 46        |
| 5 to 30                  | 60           | 50        |

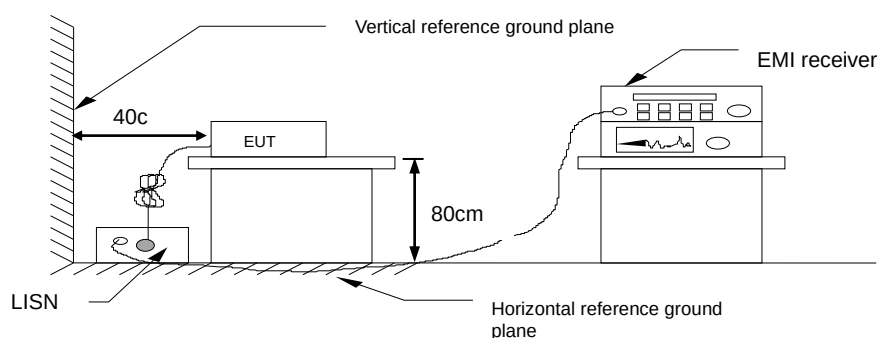
\* Decreases with the logarithm of the frequency.

#### 4.1.2 Test Procedure

Test method Refer as ANSI C63.10-2020,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

#### 4.1.3 Test Setup



#### 4.1.4 Test Result

Not applicable, because EUT not connect to AC Main Source direct.



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## 4.2 26dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

### 4.2.1 Test Limit

**26 dB Bandwidth** : For reporting purposes only.

**Occupied Bandwidth(99%)** : For reporting purposes only.

### 4.2.2 Test Procedure

#### 26dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW: approximately 1% of the emission bandwidth.
3. Set the VBW>RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26dB down from the peak of the emission. Compare this with the RBW setting of the analyser. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

#### 99%

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set center frequency to the nominal EUT channel center frequency.
3. Set span = 1.5 times to 5.0 times the OBW.
4. Set RBW = 1 % to 5% of the OBW.
5. Set VBW  $\geq$  3 xRBW

### 4.2.3 Test Setup

Refer to section 1.8.



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#### 4.2.4 Test Result

Temperature: 21.8 ~ 24.2°C  
Humidity: 54 ~ 61% RH

Test date: August 14 ~ 28, 2025  
Tested by: Jerry Chang

#### Occupied Bandwidth(99%)

802.11a\_Ch0

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5180               | 31.084             | 14.930             |
| 5220               | 19.381             | 12.870             |
| 5240               | 18.327             | 12.630             |

802.11n\_HT20\_Ch0

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5180               | 17.446             | 12.420             |
| 5200               | 30.045             | 14.780             |
| 5220               | 28.776             | 14.590             |
| 5240               | 17.614             | 12.460             |

802.11n\_HT20\_Ch1

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5180               | 17.404             | 12.410             |
| 5200               | 17.582             | 12.450             |
| 5220               | 28.492             | 14.550             |
| 5240               | 17.472             | 12.420             |

#### 802.11n\_HT40\_Ch0

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5190               | 35.812             | 15.540             |
| 5230               | 36.364             | 15.610             |

#### 802.11n\_HT40\_Ch1

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5190               | 35.725             | 15.530             |
| 5230               | 35.808             | 15.540             |

#### 802.11ac\_VHT80\_Ch0

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5210               | 74.912             | 18.750             |

#### 802.11ac\_VHT80\_Ch1

| Frequency<br>(MHz) | 99%<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|--------------------|--------------------|--------------------|
| 5210               | 75.112             | 18.760             |

## 26 dB Bandwidth

**802.11a\_Ch0**

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5180           | 45.52               | 16.580             |
| 5220           | 36.07               | 15.570             |
| 5240           | 35.80               | 15.540             |

**802.11a\_Ch0**

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5240           | 5249.951591                | < 5250         |

**802.11n\_HT20\_Ch0**

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5180           | 20.89               | 13.200             |
| 5200           | 44.38               | 16.470             |
| 5220           | 45.03               | 16.540             |
| 5240           | 29.38               | 14.680             |

**802.11n\_HT20\_Ch1**

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5180           | 19.64               | 12.930             |
| 5200           | 26.95               | 14.310             |
| 5220           | 43.09               | 16.340             |
| 5240           | 20.35               | 13.090             |

**802.11n\_HT20\_Ch0**

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5240           | 5248.834701                | < 5250         |

**802.11n\_HT20\_Ch1**

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5240           | 5248.724786                | < 5250         |



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802.11n\_HT40\_Ch0

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5190           | 40.21               | 16.040             |
| 5230           | 59.93               | 17.780             |

802.11n\_HT40\_Ch1

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5190           | 41.78               | 16.210             |
| 5230           | 41.61               | 16.190             |

802.11n\_HT40\_Ch0

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5230           | 5248.346748                | < 5250         |

802.11n\_HT40\_Ch1

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5230           | 5247.880074                | < 5250         |

802.11ac\_VHT80\_Ch0

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5210           | 82.73               | 19.180             |

802.11ac\_VHT80\_Ch1

| Freq.<br>(MHz) | 26dB<br>BW<br>(MHz) | 10 Log (B)<br>(dB) |
|----------------|---------------------|--------------------|
| 5210           | 82.37               | 19.160             |

802.11ac\_VHT80\_Ch0

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5210           | 5247.488530                | < 5250         |

802.11ac\_VHT80\_Ch1

| Freq.<br>(MHz) | Measured<br>Freq.<br>(MHz) | Limit<br>(MHz) |
|----------------|----------------------------|----------------|
| 5210           | 5247.488499                | < 5250         |

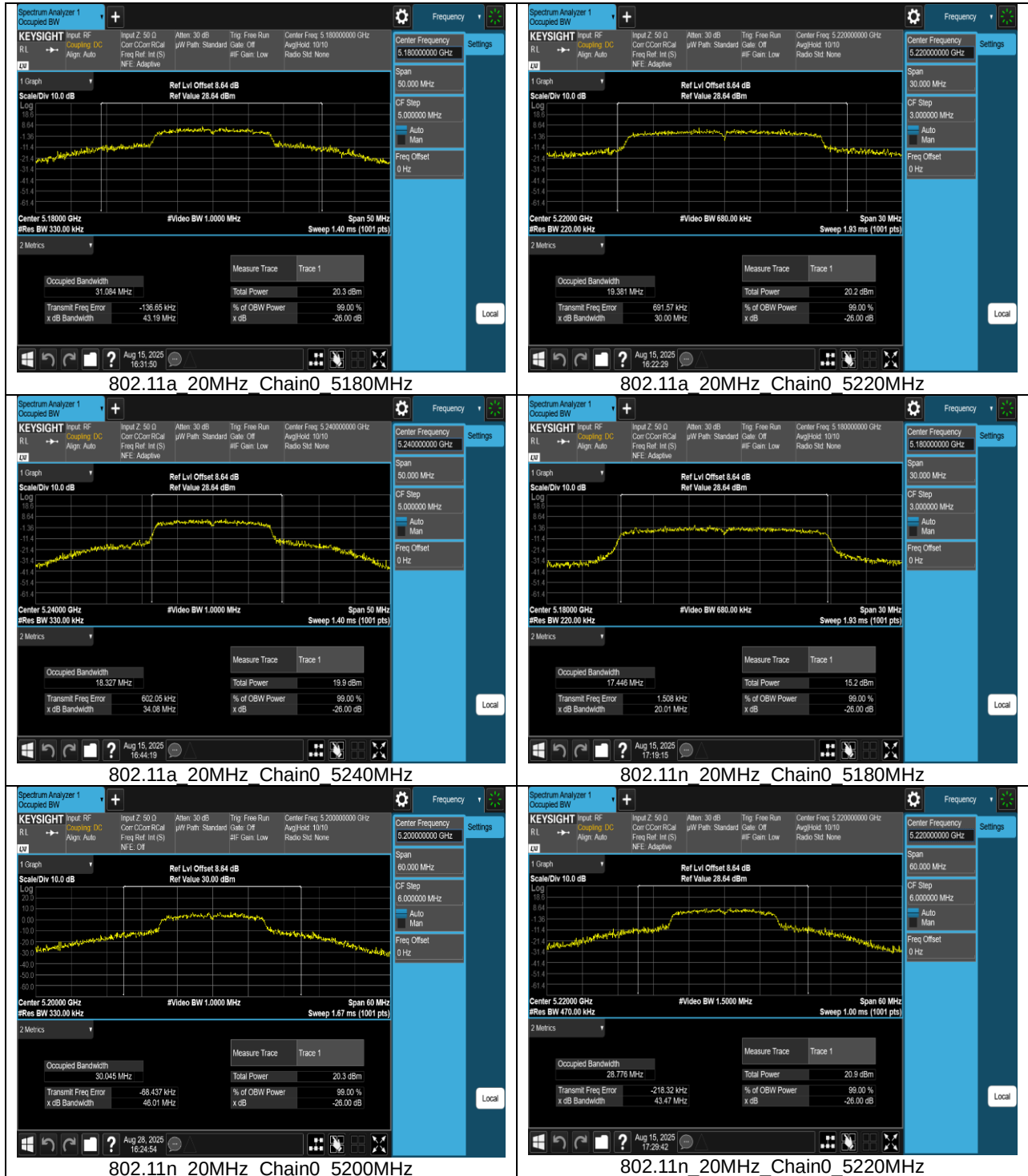


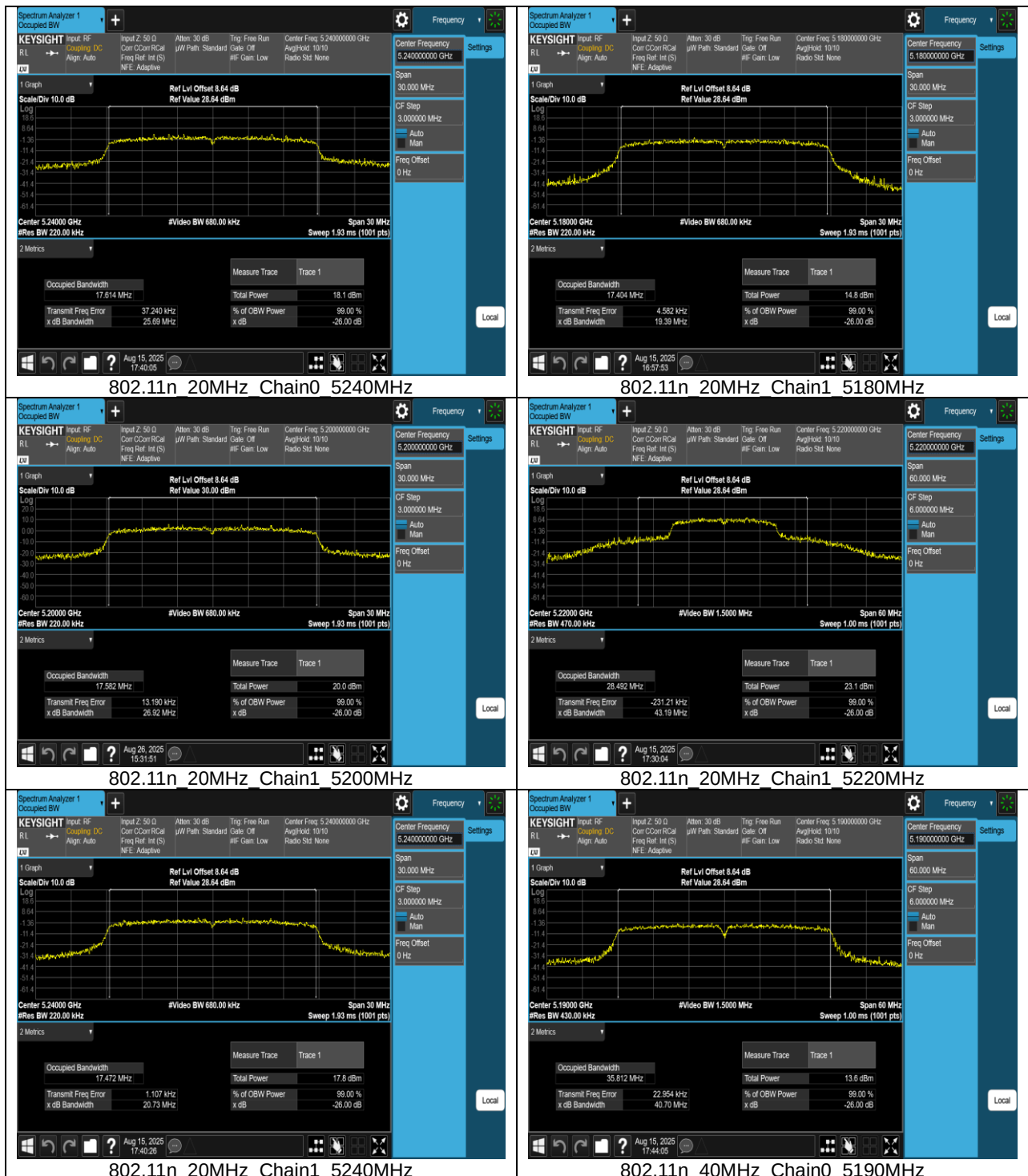
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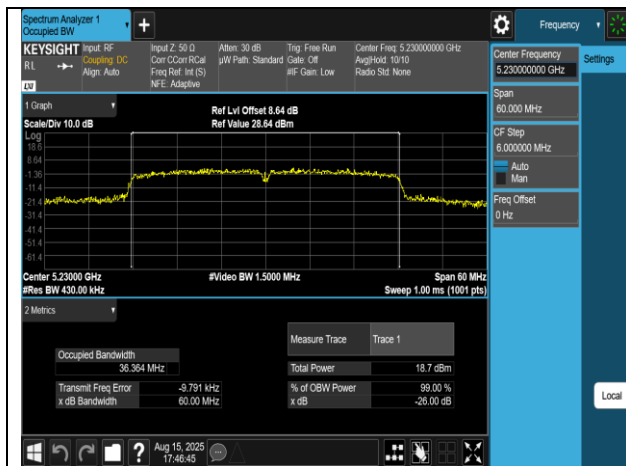
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## Test Data

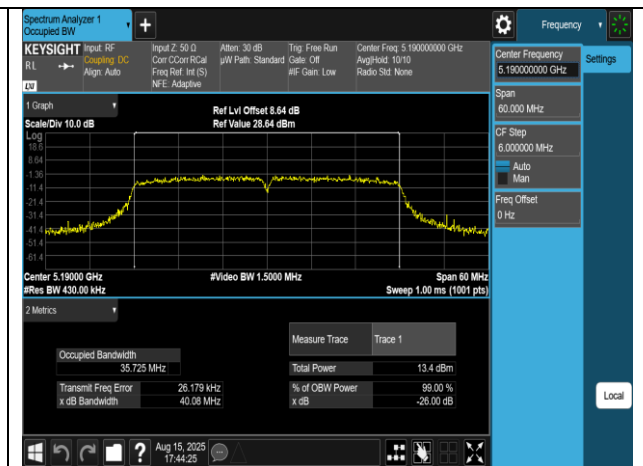
### Occupied Bandwidth(99%)



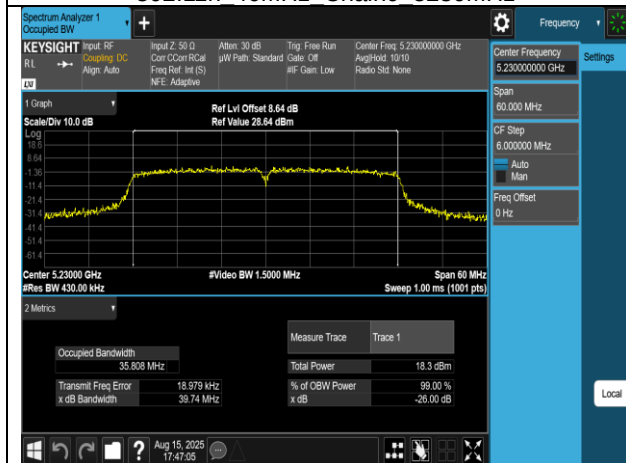




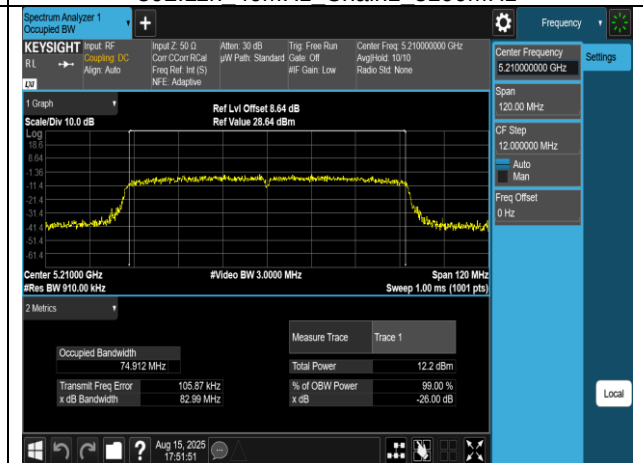
802.11n 40MHz Chain0 5230MHz



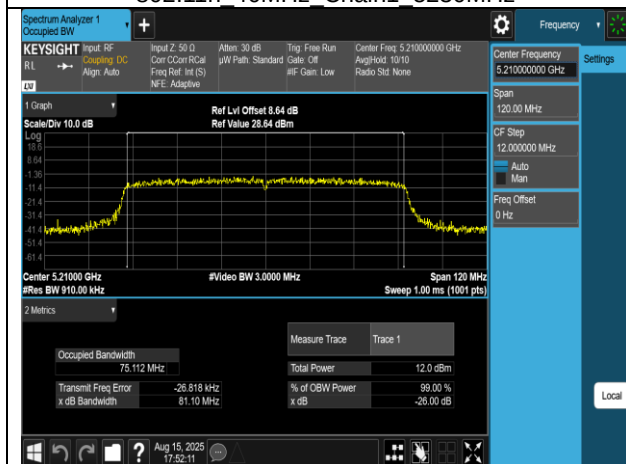
802.11n 40MHz Chain1 5190MHz



802.11n 40MHz Chain1 5230MHz

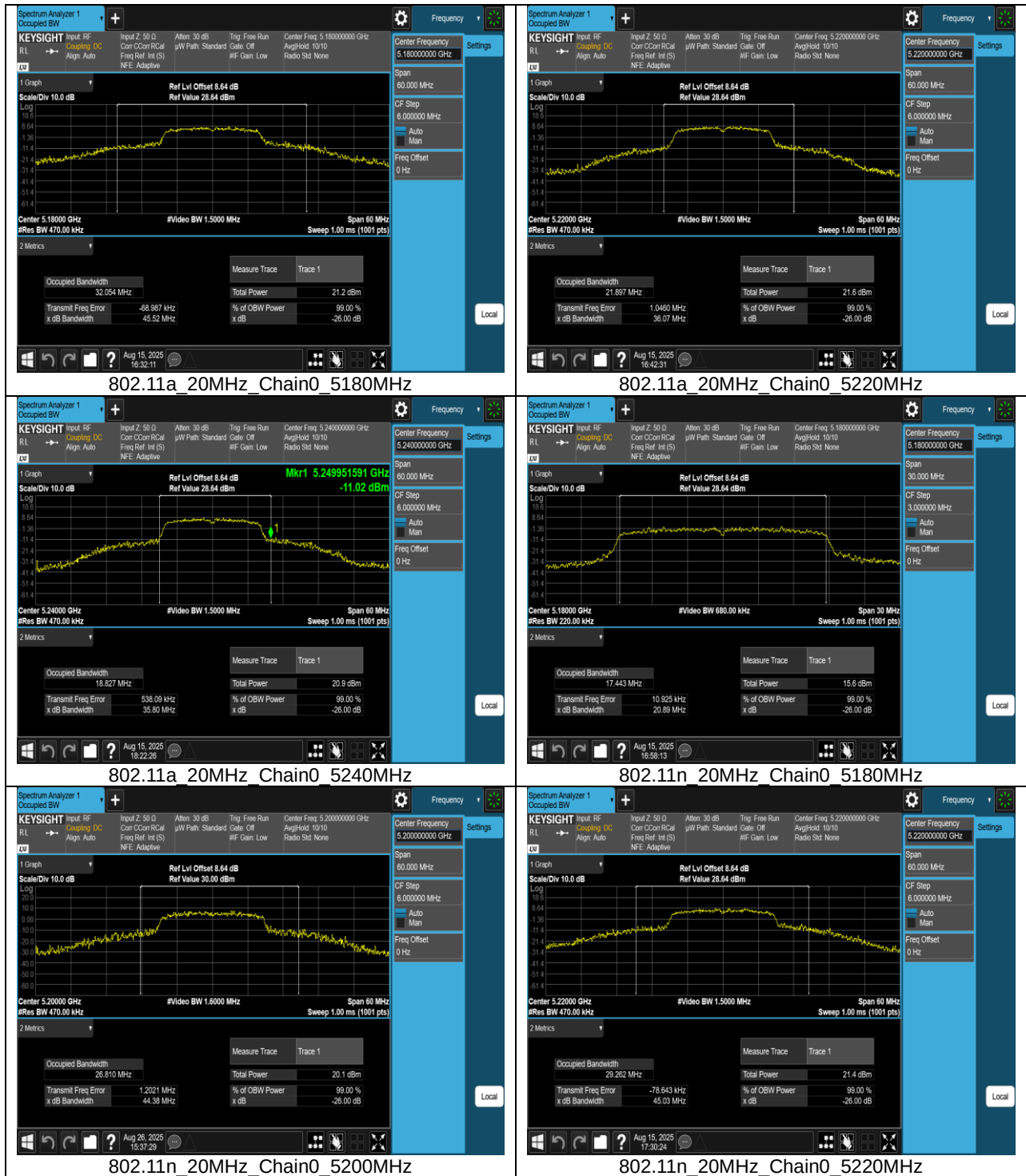


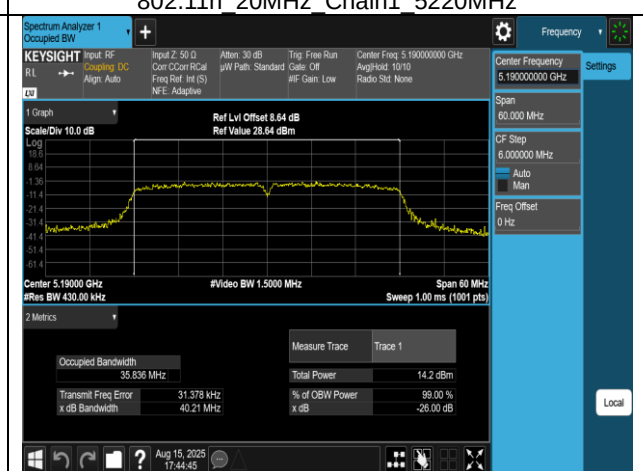
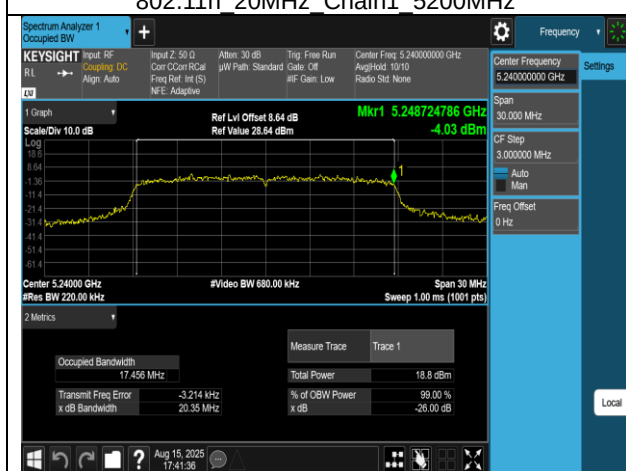
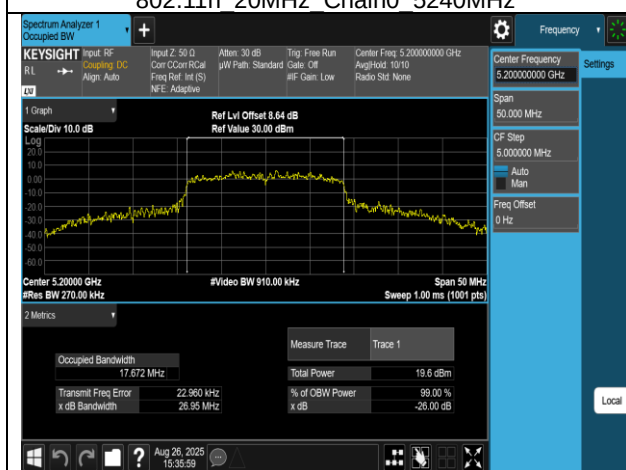
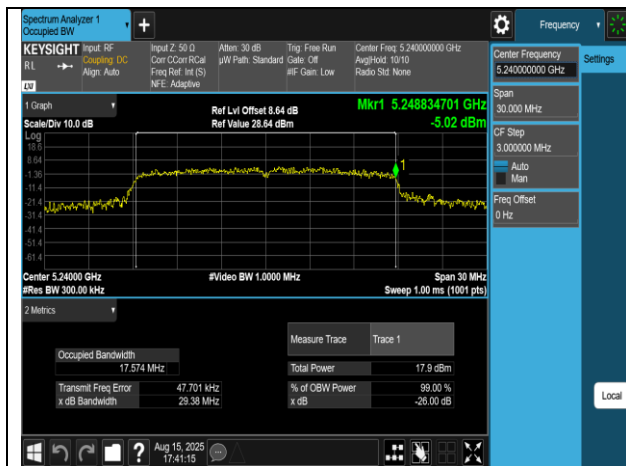
802.11ac 80MHz Chain0 5210MHz

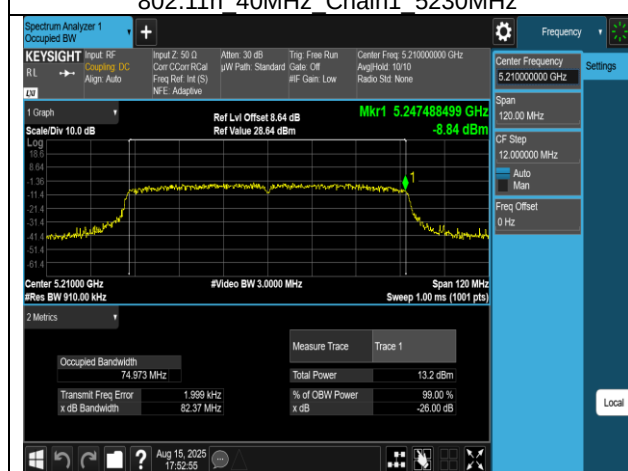
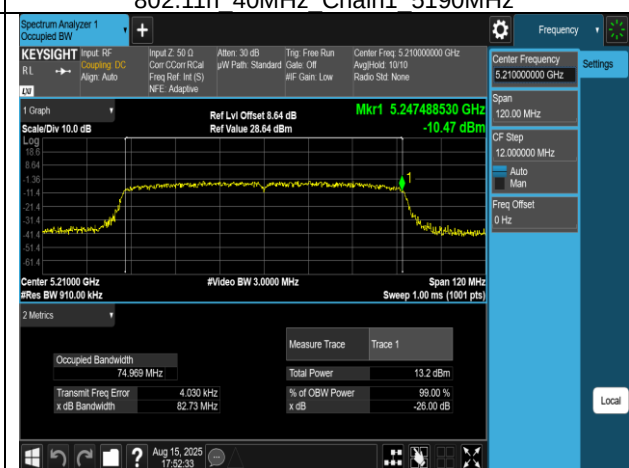
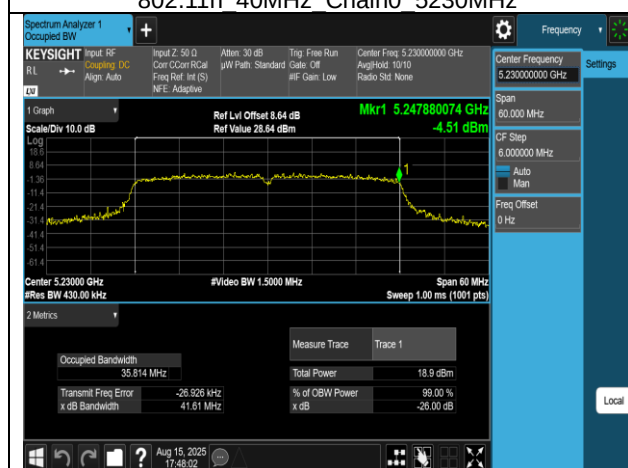
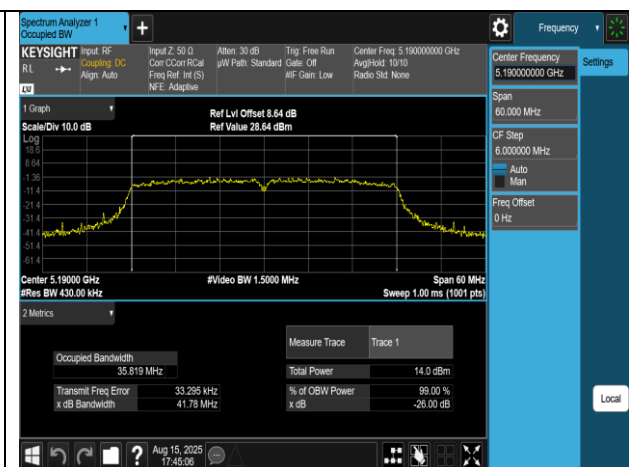
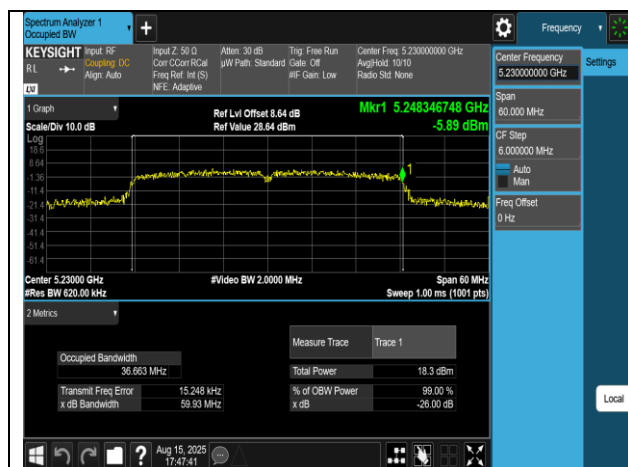


802.11ac 80MHz Chain1 5210MHz

## 26 dB Bandwidth







## 4.3 OUTPUT POWER MEASUREMENT

### 4.3.1 Test Limit

According to §15.407 (a)(1),

#### UNII-1 :

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

|              |                                                                                                                                                                  |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UNII-1 Limit | <input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 24dBm<br><input type="checkbox"/> Antenna with DG greater than 6 dBi :<br>[Limit = 24 – (DG – 6)] |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

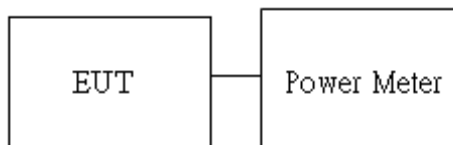
### 4.3.2 Test Procedure

Test method Refer as KDB 789033 D02, Section E.3.b for BW 20MHz, 40MHz, E.2.b for BW 80MHz.

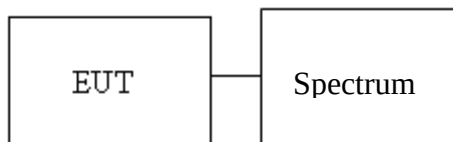
1. The EUT RF output connected to the power meter or spectrum by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Average output power. in the test report.

### 4.3.3 Test Setup

For BW 20MHz and 40MHz



For BW 80MHz





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#### 4.3.4 Test Result

Temperature: 21.8 ~ 24.2°C  
Humidity: 54 ~ 61% RH

Test date: August 14 ~ 28, 2025  
Tested by: Jerry Chang

##### Conducted output power :

802.11a\_Ch0

| CH | Frequency (MHz) | Data Rate | Power Setting | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------------------|----------------------|--------|
| 36 | 5180            | 6         | 8.5           | 8.127            | 9.10              | 23.98                | PASS   |
| 44 | 5220            | 6         | 14.5          | 33.414           | 15.24             | 23.98                | PASS   |
| 48 | 5240            | 6         | 13.5          | 27.035           | 14.32             | 23.98                | PASS   |

802.11a\_Ch1

| CH | Frequency (MHz) | Data Rate | Power Setting | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------------------|----------------------|--------|
| 36 | 5180            | 6         | 8.5           | 7.779            | 8.91              | 23.98                | PASS   |
| 44 | 5220            | 6         | 14.5          | 31.400           | 14.97             | 23.98                | PASS   |
| 48 | 5240            | 6         | 14            | 26.726           | 14.27             | 23.98                | PASS   |

802.11n\_HT20\_2TX

| CH | Frequency (MHz) | Data Rate | Power Setting | Avg. POWER (dBm) |       | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------|------------------|-------------------|----------------------|--------|
|    |                 |           |               | Ch0              | Ch1   |                  |                   |                      |        |
| 36 | 5180            | MCS0      | 9.5           | 10.22            | 10.32 | 21.269           | 13.28             | 23.98                | PASS   |
| 40 | 5200            | MCS0      | 15            | 14.88            | 14.15 | 56.723           | 17.54             | 23.98                | PASS   |
| 44 | 5220            | MCS0      | 17            | 15.17            | 16.92 | 82.032           | 19.14             | 23.98                | PASS   |
| 48 | 5240            | MCS0      | 12.5          | 13.13            | 13.12 | 41.042           | 16.13             | 23.98                | PASS   |

802.11n\_HT40\_2TX

| CH | Frequency (MHz) | Data Rate | Power Setting | Avg. POWER (dBm) |       | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------|------------------|-------------------|----------------------|--------|
|    |                 |           |               | Ch0              | Ch1   |                  |                   |                      |        |
| 38 | 5190            | MCS0      | 5             | 6.44             | 6.31  | 8.679            | 9.38              | 23.98                | PASS   |
| 46 | 5230            | MCS0      | 11.5          | 12.61            | 12.12 | 34.525           | 15.38             | 23.98                | PASS   |



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802.11ac\_VHT20\_2TX

| CH | Frequency (MHz) | Data Rate | Power Setting | Avg. POWER (dBm) |       | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------|------------------|-------------------|----------------------|--------|
|    |                 |           |               | Ch0              | Ch1   |                  |                   |                      |        |
| 36 | 5180            | MCS0      | 9.5           | 10.28            | 10.17 | 21.061           | 13.23             | 23.98                | PASS   |
| 40 | 5200            | MCS0      | 15            | 14.86            | 14.13 | 56.490           | 17.52             | 23.98                | PASS   |
| 44 | 5220            | MCS0      | 17            | 15.22            | 16.76 | 80.674           | 19.07             | 23.98                | PASS   |
| 48 | 5240            | MCS0      | 12.5          | 13.10            | 13.04 | 40.546           | 16.08             | 23.98                | PASS   |

802.11ac\_VHT40\_2TX

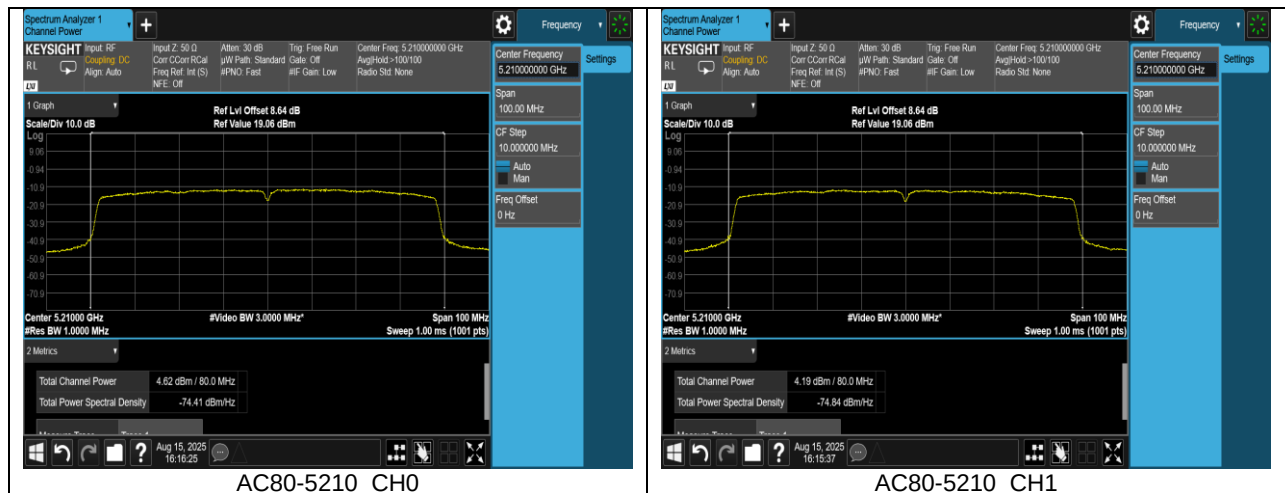
| CH | Frequency (MHz) | Data Rate | Power Setting | Avg. POWER (dBm) |       | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|-------|------------------|-------------------|----------------------|--------|
|    |                 |           |               | Ch0              | Ch1   |                  |                   |                      |        |
| 38 | 5190            | MCS0      | 5             | 6.44             | 6.25  | 8.632            | 9.36              | 23.98                | PASS   |
| 46 | 5230            | MCS0      | 11            | 12.45            | 11.96 | 33.321           | 15.23             | 23.98                | PASS   |

802.11ac\_VHT80\_2TX

| CH | Frequency (MHz) | Data Rate | Power Setting | Avg. POWER (dBm) |      | TOTAL POWER (mW) | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) | RESULT |
|----|-----------------|-----------|---------------|------------------|------|------------------|-------------------|----------------------|--------|
|    |                 |           |               | Ch0              | Ch1  |                  |                   |                      |        |
| 42 | 5210            | MCS0      | 5             | 6.61             | 6.18 | 8.731            | 9.41              | 23.98                | PASS   |

Note: Measurement result = measurement value + duty factor

## Test Data





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## 4.4 POWER SPECTRAL DENSITY

### 4.4.1 Test Limit

According to §15.407 (a)(1),

#### UNII-1 :

**FCC:** The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **FCC:**

|              |                                                                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UNII-1 Limit | <input type="checkbox"/> Antenna not exceed 6 dBi : 11 dBm/MHz<br><input checked="" type="checkbox"/> Antenna with DG greater than 6 dBi :<br>[Limit = 11 – (DG – 6) dBm/MHz] |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 4.4.2 Test Procedure

Test method Refer as KDB 789033 D02

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. UNII-1, SA set RBW = 1MHz, VBW = 3MHz and Detector = RMS, to measurement Power Density.
4. The path loss and Duty Factor were compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

### 4.4.3 Test Setup

Refer to section 1.8.



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#### 4.4.4 Test Result

Temperature: 21.8 ~ 24.2°C

Test date: August 14 ~ 28, 2025

Humidity: 54 ~ 61% RH

Tested by: Jerry Chang

| POWER DENSITY 802.11a MODE |                        |                  |                            |               |             |
|----------------------------|------------------------|------------------|----------------------------|---------------|-------------|
| Frequency (MHz)            | Ch0 meas PSD (dBm/MHz) | Duty Factor (dB) | Maxmum Corr'd PSD(dBm/MHz) | Limit         | Margin (dB) |
| 5180                       | -0.858                 | 0.36             | 0.36                       | 11.00 dBm/MHz | -10.64      |
| 5220                       | 5.071                  | 0.36             | 5.43                       | 11.00 dBm/MHz | -5.57       |
| 5240                       | 4.412                  | 0.36             | 4.77                       | 11.00 dBm/MHz | -6.23       |

| POWER DENSITY 802.11n HT20 MODE |                        |                        |                  |                            |              |             |
|---------------------------------|------------------------|------------------------|------------------|----------------------------|--------------|-------------|
| Frequency (MHz)                 | Ch0 meas PSD (dBm/MHz) | Ch1 meas PSD (dBm/MHz) | Duty Factor (dB) | Maxmum Corr'd PSD(dBm/MHz) | Limit        | Margin (dB) |
| 5180                            | -0.778                 | -0.878                 | 0.24             | 2.42                       | 9.16 dBm/MHz | -6.74       |
| 5200                            | 3.905                  | 4.378                  | 0.24             | 7.40                       | 9.16 dBm/MHz | -1.76       |
| 5220                            | 4.626                  | 5.954                  | 0.24             | 8.59                       | 9.16 dBm/MHz | -0.57       |
| 5240                            | 2.390                  | 2.511                  | 0.24             | 5.70                       | 9.16 dBm/MHz | -3.46       |

| POWER DENSITY 802.11n HT40 MODE |                        |                        |                  |                            |              |             |
|---------------------------------|------------------------|------------------------|------------------|----------------------------|--------------|-------------|
| Frequency (MHz)                 | Ch0 meas PSD (dBm/MHz) | Ch1 meas PSD (dBm/MHz) | Duty Factor (dB) | Maxmum Corr'd PSD(dBm/MHz) | Limit        | Margin (dB) |
| 5190                            | -7.815                 | -8.371                 | 0.42             | -4.65                      | 9.16 dBm/MHz | -13.81      |
| 5230                            | -0.745                 | -1.162                 | 0.42             | 2.48                       | 9.16 dBm/MHz | -6.68       |

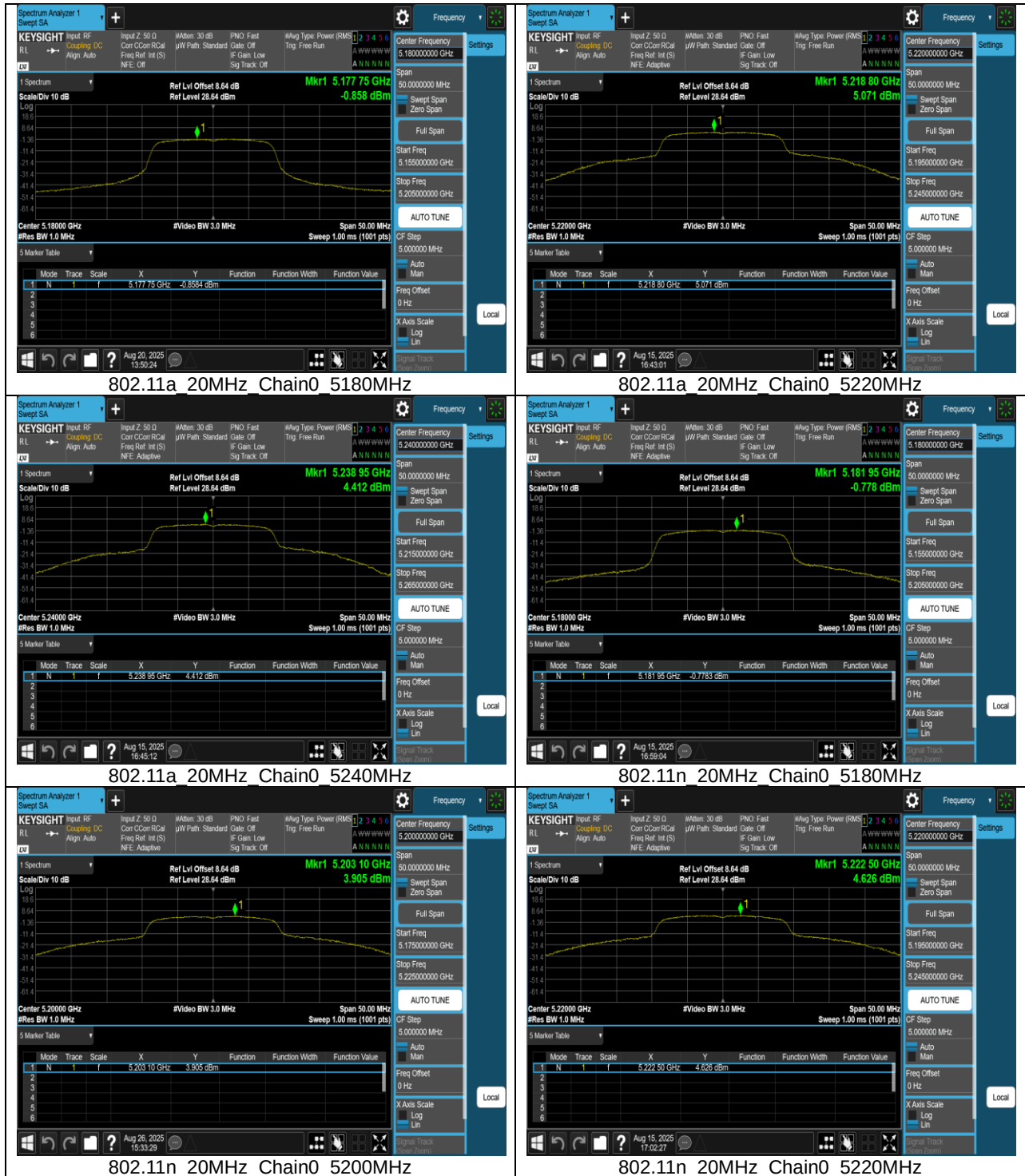
| POWER DENSITY 802.11ac VHT80 MODE |                        |                        |                  |                            |              |             |
|-----------------------------------|------------------------|------------------------|------------------|----------------------------|--------------|-------------|
| Frequency (MHz)                   | Ch0 meas PSD (dBm/MHz) | Ch1 meas PSD (dBm/MHz) | Duty Factor (dB) | Maxmum Corr'd PSD(dBm/MHz) | Limit        | Margin (dB) |
| 5210                              | -11.791                | -12.113                | 1.99             | -6.95                      | 9.16 dBm/MHz | -16.11      |

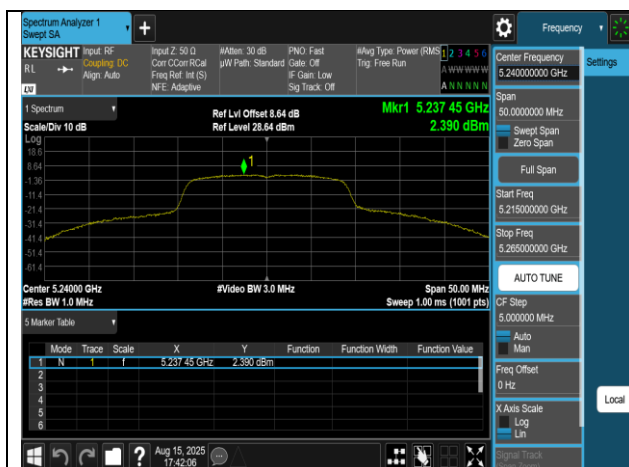


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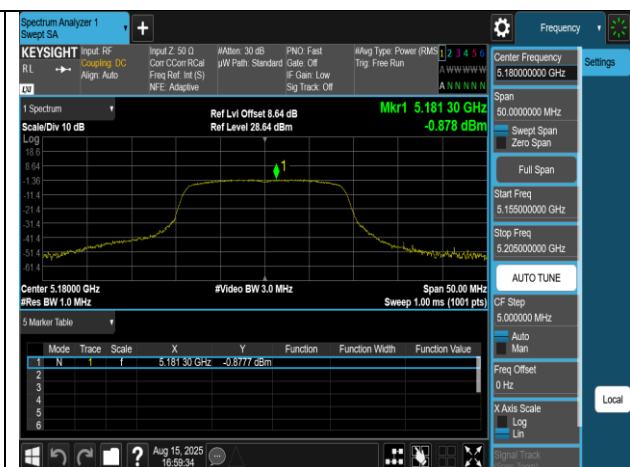
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## Test Data





802.11n 20MHz Chain0 5240MHz



802.11n 20MHz Chain1 5180MHz



802.11n 20MHz Chain1 5200MHz



802.11n 20MHz Chain1 5220MHz



802.11n 20MHz Chain1 5240MHz



802.11n 40MHz Chain0 5190MHz



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## 4.5 RADIATION BANDEDGE AND SPURIOUS EMISSION

### 4.5.1 Test Limit

FCC according to §15.407, §15.209 and §15.205,

#### Below 30 MHz

| Frequency     | Field Strength<br>(microvolts/m) | Magnetic<br>H-Field<br>(microamperes/m) | Measurement<br>Distance<br>(metres) |
|---------------|----------------------------------|-----------------------------------------|-------------------------------------|
| 9-490 kHz     | 2,400/F (F in kHz)               | 2,400/F (F in kHz)                      | 300                                 |
| 490-1,705 kHz | 24,000/F (F in kHz)              | 24,000/F (F in kHz)                     | 30                                  |
| 1.705-30 MHz  | 30                               | N/A                                     | 30                                  |

#### Above 30 MHz

| Frequency<br>(MHz) | Field Strength<br>microvolts/m at 3 metres (watts, e.i.r.p.) |              |
|--------------------|--------------------------------------------------------------|--------------|
|                    | Transmitters                                                 | Receivers    |
| 30-88              | 100 (3 nW)                                                   | 100 (3 nW)   |
| 88-216             | 150 (6.8 nW)                                                 | 150 (6.8 nW) |
| 216-960            | 200 (12 nW)                                                  | 200 (12 nW)  |
| Above 960          | 500 (75 nW)                                                  | 500 (75 nW)  |

#### UNII-1 :

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

## 4.5.2 Test Procedure

Test method Refer as KDB 789033 D02.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10-2020, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 40GHz set to the low, Mid and High channels with the EUT transmit.
4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

Radiated emission below 30MHz is measured in a 9m\*6m\*6m semi-ane choic chamber, the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

5. The SA setting following :

(1) Below 30MHz :

(1.1) 9KHz-490KHz : RBW=200Hz / VBW=1kHz / Sweep=AUTO

(1.2) 490KHz-30MHz : RBW=10kHz / VBW=30kHz / Sweep=AUTO

(2) 30MHz to 1GHz : RBW = 100kHz, VBW  $\geq 3 \times$  RBW, Sweep = Auto,  
Detector = Peak, Trace = Max hold.

(3) Above 1GHz :

(3.1) For Peak measurement : RBW = 1MHz, VBW  $\geq 3 \times$  RBW, Sweep = Auto,  
Detector = Peak, Trace = Max hold.

(3.2) For Average measurement : RBW = 1MHz, VBW

·If Duty Cycle  $\geq 98\%$ , VBW=10Hz.

·If Duty Cycle  $< 98\%$ , VBW=1/T.

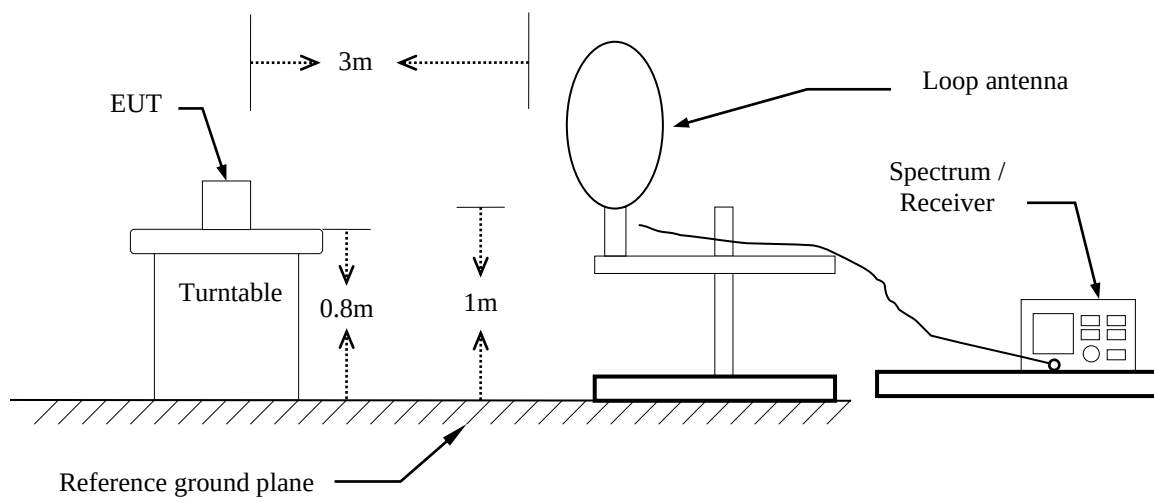
6. Data result :

Actual FS=Spectrum Reading Level + Factor

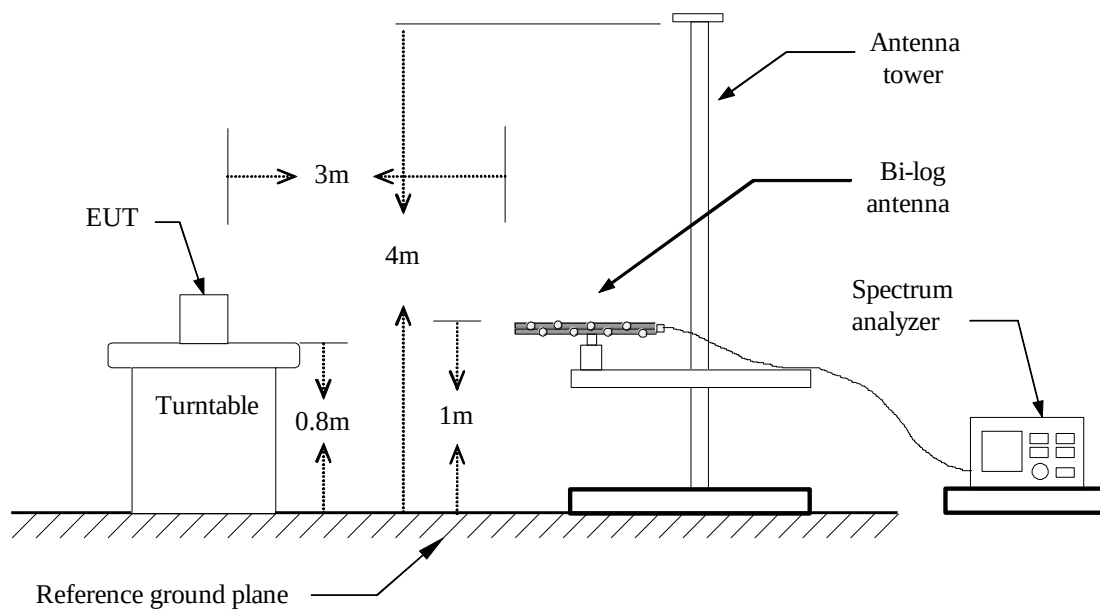
Margin=Actual FS- Limit

### 4.5.3 Test Setup

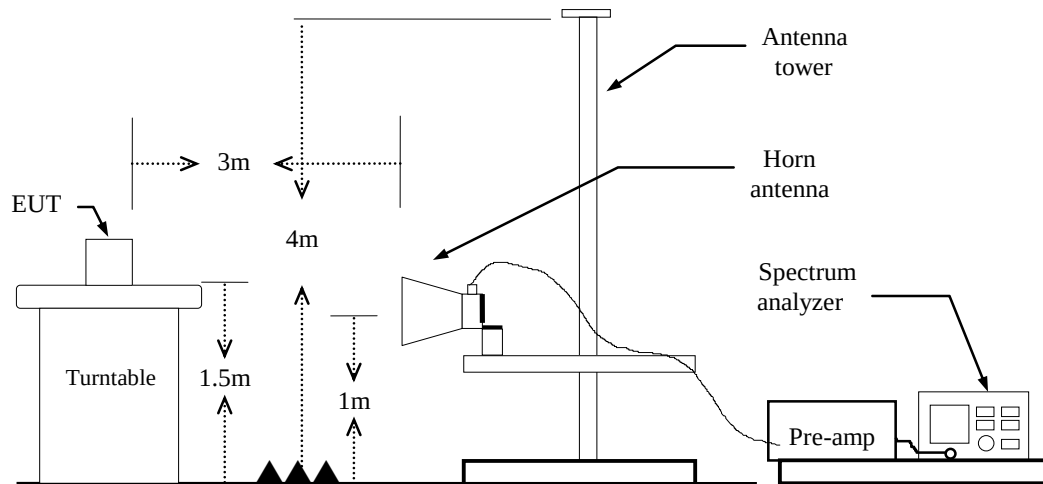
#### 9kHz ~ 30MHz



#### 30MHz ~ 1GHz



## Above 1 GHz

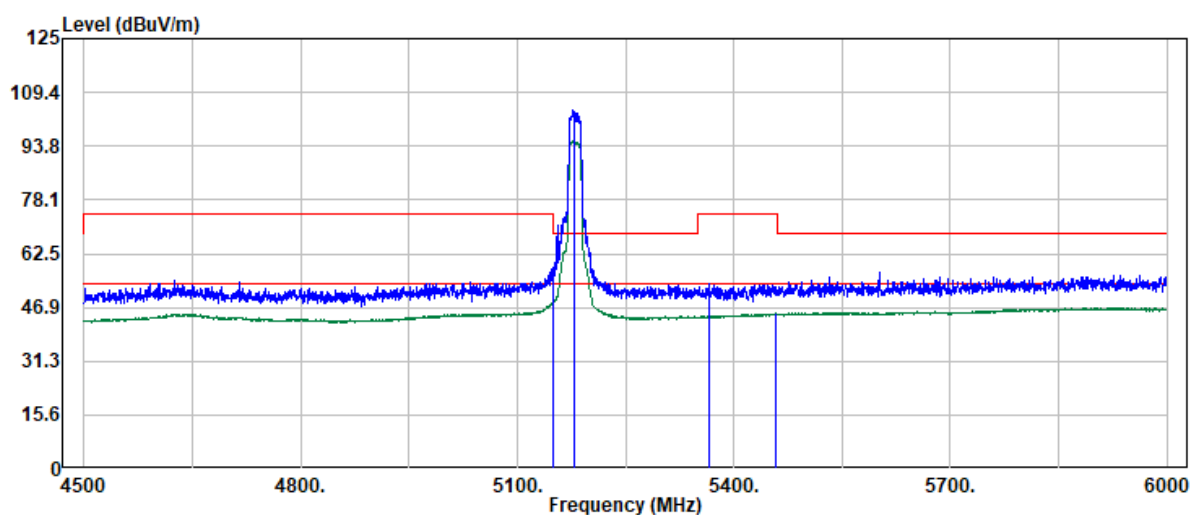


## 4.5.4 Test Result

### Band Edge

Project No : TM-2506000042P  
Operation Band : A\_CH0\_Band1  
Frequency : 5180 MHz  
Operation Mode : Bandedge  
EUT Pol : E1  
Setting : 8.5

Test Date : 2025-08-18  
Temp./Humi. : 25.2/55  
Antenna Pol. : Vertical  
Engineer : Tony.Chao  
Test Chamber : 966A



Trace: 1

| Freq    | Read Level | Factor | Actual FS | Limit @3m | Margin | Detector Mode |
|---------|------------|--------|-----------|-----------|--------|---------------|
| -----   | -----      | -----  | -----     | -----     | -----  | -----         |
| MHz     | dBuV       | dB     | dBuV/m    | dBuV/m    | dB     | PK/QP/AV      |
| 5149.78 | 44.48      | 13.78  | 58.26     | 74.00     | -15.74 | Peak          |
| 5149.78 | 35.04      | 13.78  | 48.82     | 54.00     | -5.18  | Average       |
| 5180.00 | 90.41      | 13.93  | 104.34    | --        | --     | Peak          |
| 5180.00 | 81.42      | 13.93  | 95.35     | --        | --     | Average       |
| 5365.71 | 39.53      | 14.16  | 53.69     | 74.00     | -20.31 | Peak          |
| 5458.18 | 30.56      | 14.49  | 45.05     | 54.00     | -8.95  | Average       |

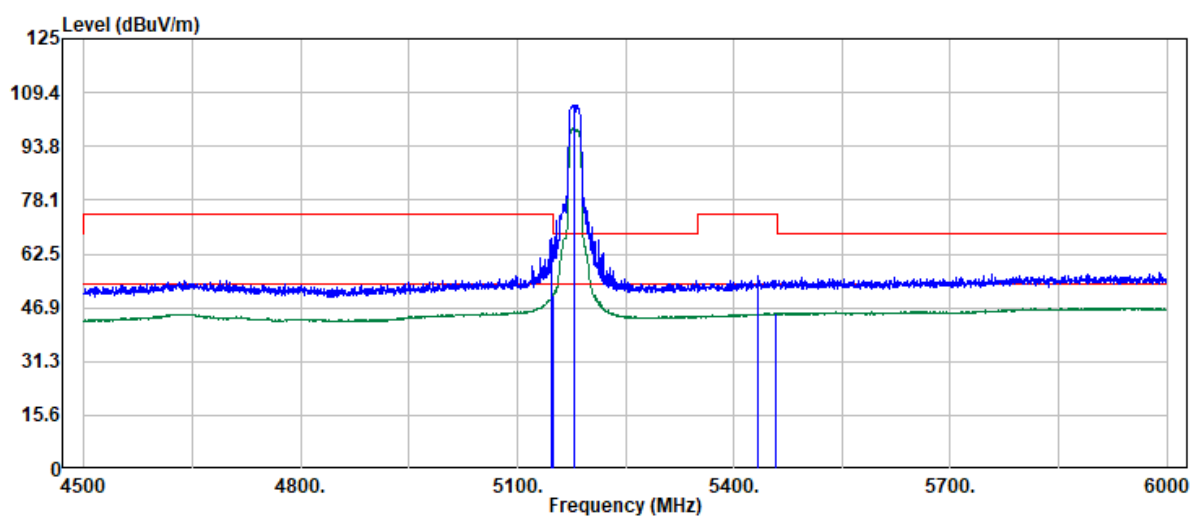


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Project No : TM-2506000042P  
Operation Band : A\_CH0\_Band1  
Frequency : 5180 MHz  
Operation Mode : Bandedge  
EUT Pol : E1  
Setting : 8.5

Test Date : 2025-08-18  
Temp./Humi. : 25.2/55  
Antenna Pol. : HORIZONTAL  
Engineer : Tony.Chao  
Test Chamber : 966A



Trace: 1

| Freq    | Read Level | Factor | Actual FS | Limit @3m | Margin | Detector Mode |
|---------|------------|--------|-----------|-----------|--------|---------------|
| -----   | -----      | -----  | -----     | -----     | -----  | -----         |
| MHz     | dBuV       | dB     | dBuV/m    | dBuV/m    | dB     | PK/QP/AV      |
| 5147.28 | 52.97      | 13.78  | 66.75     | 74.00     | -7.25  | Peak          |
| 5149.78 | 36.61      | 13.78  | 50.39     | 54.00     | -3.61  | Average       |
| 5180.00 | 91.84      | 13.93  | 105.77    | --        | --     | Peak          |
| 5180.00 | 85.04      | 13.93  | 98.97     | --        | --     | Average       |
| 5433.69 | 41.64      | 14.38  | 56.02     | 74.00     | -17.98 | Peak          |
| 5459.18 | 30.86      | 14.49  | 45.35     | 54.00     | -8.65  | Average       |

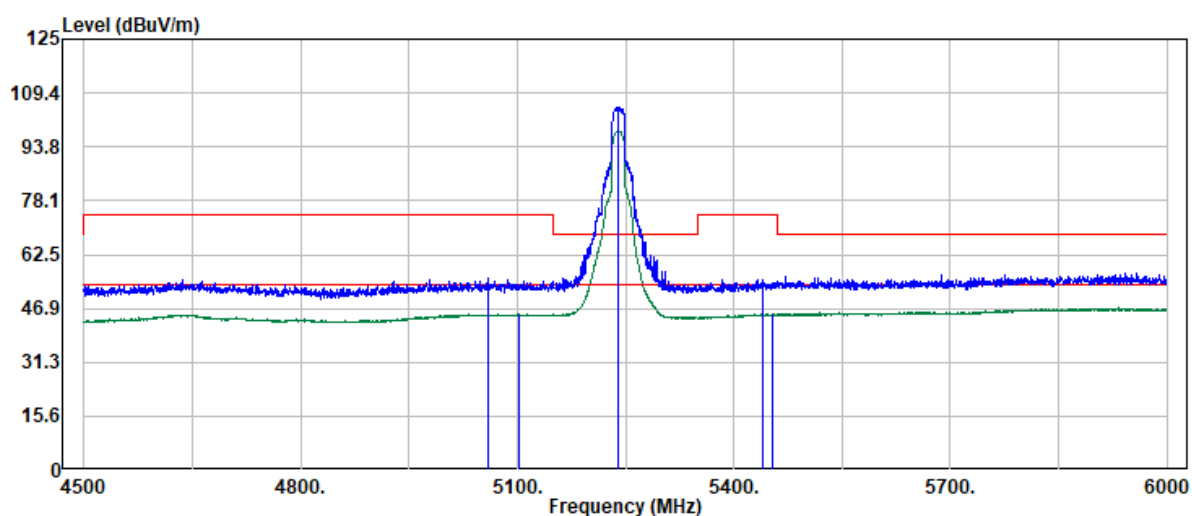


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Project No : TM-2506000042P  
Operation Band : A\_CH0\_Band1  
Frequency : 5240 MHz  
Operation Mode : Bandedge  
EUT Pol : E1  
Setting : 13.5

Test Date : 2025-08-18  
Temp./Humi. : 25.2/55  
Antenna Pol. : VERTICAL  
Engineer : Tony.Chao  
Test Chamber : 966A



| Trace: 1 |       |        |        |        |        |          |
|----------|-------|--------|--------|--------|--------|----------|
| Freq     | Read  |        | Actual | Limit  |        | Detector |
| -----    | Level | Factor | FS     | @3m    | Margin | Mode     |
| -----    | ----- | -----  | -----  | -----  | -----  | -----    |
| MHz      | dBuV  | dB     | dBuV/m | dBuV/m | dB     | PK/QP/AV |
| 5060.31  | 42.14 | 13.58  | 55.72  | 74.00  | -18.28 | Peak     |
| 5102.80  | 31.37 | 13.74  | 45.11  | 54.00  | -8.89  | Average  |
| 5240.00  | 91.47 | 13.91  | 105.38 | --     | --     | Peak     |
| 5240.00  | 84.21 | 13.91  | 98.12  | --     | --     | Average  |
| 5440.69  | 40.66 | 14.43  | 55.09  | 74.00  | -18.91 | Peak     |
| 5453.18  | 30.72 | 14.48  | 45.20  | 54.00  | -8.80  | Average  |