

Project No.: TM-2207000268P  
Report No.: TMWK2207002920KR

FCC ID: 2AX7S-LN313B

Page: 1 / 264  
Rev.: 01

# RADIO TEST REPORT

## FCC 47 CFR PART 15 SUBPART E

|                                 |                                                                                                                                                            |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Standard</b>            | <b>FCC Part 15.407</b>                                                                                                                                     |
| <b>Product name</b>             | <b>E-note device</b>                                                                                                                                       |
| <b>Brand Name</b>               | <b>ITOCHU</b>                                                                                                                                              |
| <b>Model No.</b>                | <b>USMUK4</b>                                                                                                                                              |
| <b>Test Result</b>              | <b>Pass</b>                                                                                                                                                |
| <b>Statements of Conformity</b> | <b>Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.</b> |

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: 2013 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:



Shawn Wu  
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.

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**Revision History**

| Rev. | Issue Date         | Revisions                       | Effect Page                    | Revised By   |
|------|--------------------|---------------------------------|--------------------------------|--------------|
| 00   | September 2, 2022  | Initial Issue                   | ALL                            | Allison Chen |
| 01   | September 27, 2022 | See the following Note Rev.(01) | P.12, 24-27,<br>82, 86-89, 117 | Allison Chen |

**Note:****Rev.(01)**

1. Modify output power and power density in section 4.3, 4.4.
2. Added remark description.

## Table of contents

|            |                                                                        |            |
|------------|------------------------------------------------------------------------|------------|
| <b>1.</b>  | <b>GENERAL INFORMATION.....</b>                                        | <b>4</b>   |
| <b>1.1</b> | <b>EUT INFORMATION.....</b>                                            | <b>4</b>   |
| <b>1.2</b> | <b>EUT CHANNEL INFORMATION.....</b>                                    | <b>5</b>   |
| <b>1.3</b> | <b>ANTENNA INFORMATION.....</b>                                        | <b>6</b>   |
| <b>1.4</b> | <b>MEASUREMENT UNCERTAINTY .....</b>                                   | <b>6</b>   |
| <b>1.5</b> | <b>FACILITIES AND TEST LOCATION.....</b>                               | <b>7</b>   |
| <b>1.6</b> | <b>INSTRUMENT CALIBRATION .....</b>                                    | <b>7</b>   |
| <b>1.7</b> | <b>SUPPORT AND EUT ACCESSORIES EQUIPMENT .....</b>                     | <b>10</b>  |
| <b>1.8</b> | <b>TEST METHODOLOGY AND APPLIED STANDARDS.....</b>                     | <b>10</b>  |
| <b>2.</b>  | <b>TEST SUMMARY.....</b>                                               | <b>11</b>  |
| <b>3.</b>  | <b>DESCRIPTION OF TEST MODES.....</b>                                  | <b>12</b>  |
| <b>3.1</b> | <b>THE EUT CHANNEL NUMBER OF OPERATING CONDITION .....</b>             | <b>12</b>  |
| <b>3.2</b> | <b>THE WORST MODE OF MEASUREMENT.....</b>                              | <b>13</b>  |
| <b>3.3</b> | <b>EUT DUTY CYCLE .....</b>                                            | <b>14</b>  |
| <b>4.</b>  | <b>TEST RESULT .....</b>                                               | <b>15</b>  |
| <b>4.1</b> | <b>AC POWER LINE CONDUCTED EMISSION.....</b>                           | <b>15</b>  |
| <b>4.2</b> | <b>26DB BANDWIDTH, 6DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%) .....</b> | <b>22</b>  |
| <b>4.3</b> | <b>OUTPUT POWER MEASUREMENT .....</b>                                  | <b>80</b>  |
| <b>4.4</b> | <b>POWER SPECTRAL DENSITY .....</b>                                    | <b>84</b>  |
| <b>4.5</b> | <b>RADIATION BANDEDGE AND SPURIOUS EMISSION.....</b>                   | <b>116</b> |
| <b>4.6</b> | <b>DYNAMIC FREQUENCY SELECTION.....</b>                                | <b>248</b> |
|            | <b>APPENDIX-A TEST PHOTO .....</b>                                     | <b>A-1</b> |
|            | <b>APPENDIX 1 - PHOTOGRAPHS OF EUT</b>                                 |            |

## 1. GENERAL INFORMATION

### 1.1 EUT INFORMATION

|                          |                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>         | AIMobile Co., Ltd.<br>6F., No. 166, Sec.4, Chengde Rd., Shilin Dist., Taipei City<br>11167, Taiwan                               |
| <b>Manufacturer</b>      | AIMobile Co., Ltd.<br>6F., No. 166, Sec.4, Chengde Rd., Shilin Dist., Taipei City<br>11167, Taiwan                               |
| <b>Equipment</b>         | E-note device                                                                                                                    |
| <b>Model No.</b>         | USMUK4                                                                                                                           |
| <b>Model Discrepancy</b> | N/A                                                                                                                              |
| <b>Trade Name</b>        | ITOCHU                                                                                                                           |
| <b>Received Date</b>     | July 19, 2022                                                                                                                    |
| <b>Date of Test</b>      | July 26 ~ August 11, 2022                                                                                                        |
| <b>Power Operation</b>   | 1. Power from Host System.<br>Rechargeable Li-Polymer Battery / LIS1633RDPCA<br>Rating: 2000mAh, 7.4Wh<br>2. Power from Adapter. |

**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.

## 1.2 EUT CHANNEL INFORMATION

|                 |                                                                                                                                                                                                                 |                 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Frequency Range | <b>UNII-1</b>                                                                                                                                                                                                   |                 |
|                 | IEEE 802.11a                                                                                                                                                                                                    | 5180 ~ 5240 MHz |
|                 | IEEE 802.11n HT20                                                                                                                                                                                               | 5180 ~ 5240 MHz |
|                 | IEEE 802.11n HT40                                                                                                                                                                                               | 5190 ~ 5230 MHz |
|                 | IEEE 802.11ac VHT20                                                                                                                                                                                             | 5180 ~ 5240 MHz |
|                 | IEEE 802.11ac VHT40                                                                                                                                                                                             | 5190 ~ 5230 MHz |
|                 | IEEE 802.11ac VHT80                                                                                                                                                                                             | 5210 MHz        |
|                 | <b>UNII-2a</b>                                                                                                                                                                                                  |                 |
|                 | IEEE 802.11a                                                                                                                                                                                                    | 5260 ~ 5320 MHz |
|                 | IEEE 802.11n HT20                                                                                                                                                                                               | 5260 ~ 5320 MHz |
|                 | IEEE 802.11n HT40                                                                                                                                                                                               | 5270 ~ 5310 MHz |
|                 | IEEE 802.11ac VHT20                                                                                                                                                                                             | 5260 ~ 5320 MHz |
|                 | IEEE 802.11ac VHT40                                                                                                                                                                                             | 5270 ~ 5310 MHz |
|                 | IEEE 802.11ac VHT80                                                                                                                                                                                             | 5290 MHz        |
|                 | <b>UNII-2c</b>                                                                                                                                                                                                  |                 |
|                 | IEEE 802.11a                                                                                                                                                                                                    | 5500 ~ 5700 MHz |
|                 | IEEE 802.11n HT20                                                                                                                                                                                               | 5500 ~ 5700 MHz |
|                 | IEEE 802.11n HT40                                                                                                                                                                                               | 5510 ~ 5670 MHz |
|                 | IEEE 802.11ac VHT20                                                                                                                                                                                             | 5500 ~ 5700 MHz |
|                 | IEEE 802.11ac VHT40                                                                                                                                                                                             | 5510 ~ 5670 MHz |
|                 | IEEE 802.11ac VHT80                                                                                                                                                                                             | 5530 ~ 5610 MHz |
|                 | <b>UNII-3</b>                                                                                                                                                                                                   |                 |
|                 | IEEE 802.11a                                                                                                                                                                                                    | 5745 ~ 5825 MHz |
|                 | IEEE 802.11n HT20                                                                                                                                                                                               | 5745 ~ 5825 MHz |
|                 | IEEE 802.11n HT40                                                                                                                                                                                               | 5755 ~ 5795 MHz |
|                 | IEEE 802.11ac VHT20                                                                                                                                                                                             | 5745 ~ 5825 MHz |
|                 | IEEE 802.11ac VHT40                                                                                                                                                                                             | 5755 ~ 5795 MHz |
|                 | IEEE 802.11ac VHT80                                                                                                                                                                                             | 5775 MHz        |
| Modulation Type | 1. IEEE 802.11a mode: OFDM<br>2. IEEE 802.11n HT20 mode: OFDM<br>3. IEEE 802.11n HT40 mode: OFDM<br>4. IEEE 802.11ac VHT20 mode: OFDM<br>5. IEEE 802.11ac VHT40 mode: OFDM<br>6. IEEE 802.11ac VHT80 mode: OFDM |                 |

**Remark:**

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 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 Specification | <input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils                                                                                                                                                                                                                                                                |              |              |                               |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
| Antenna Gain          | <table><tr><td>Band</td><td>Chain0 (dBi)</td><td>Chain1 (dBi)</td><td>Power Directional Gain: (dBi)</td></tr><tr><td>5G_U-NII 1</td><td>3.93</td><td>2.69</td><td>6.34</td></tr><tr><td>5G_U-NII 2a</td><td>3.93</td><td>2.69</td><td>6.34</td></tr><tr><td>5G_U-NII 2c</td><td>3.93</td><td>2.69</td><td>6.34</td></tr><tr><td>5G_U-NII 3</td><td>3.93</td><td>2.69</td><td>6.34</td></tr></table> |              |              |                               | Band | Chain0 (dBi) | Chain1 (dBi) | Power Directional Gain: (dBi) | 5G_U-NII 1 | 3.93 | 2.69 | 6.34 | 5G_U-NII 2a | 3.93 | 2.69 | 6.34 | 5G_U-NII 2c | 3.93 | 2.69 | 6.34 | 5G_U-NII 3 | 3.93 | 2.69 | 6.34 |
|                       | Band                                                                                                                                                                                                                                                                                                                                                                                                | Chain0 (dBi) | Chain1 (dBi) | Power Directional Gain: (dBi) |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
|                       | 5G_U-NII 1                                                                                                                                                                                                                                                                                                                                                                                          | 3.93         | 2.69         | 6.34                          |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
|                       | 5G_U-NII 2a                                                                                                                                                                                                                                                                                                                                                                                         | 3.93         | 2.69         | 6.34                          |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
|                       | 5G_U-NII 2c                                                                                                                                                                                                                                                                                                                                                                                         | 3.93         | 2.69         | 6.34                          |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
| 5G_U-NII 3            | 3.93                                                                                                                                                                                                                                                                                                                                                                                                | 2.69         | 6.34         |                               |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
| Brand / Model         | Chain 0: YAGEO / LN313 (ANTA0ZV1421124553)<br>Chain 1: YAGEO / LN313 (ANTA0ZV1421124554)                                                                                                                                                                                                                                                                                                            |              |              |                               |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |
| Antenna connector     | IPEX                                                                                                                                                                                                                                                                                                                                                                                                |              |              |                               |      |              |              |                               |            |      |      |      |             |      |      |      |             |      |      |      |            |      |      |      |

**Notes:**

1. Power Directional Gain =  $10 \cdot \log \{ [ 10^{(Ant1/20)} + 10^{(Ant2/20)} + \dots + 10^{(Ant N / 20)} ]^2 / N \text{ ANT} \}$  dBi
2. 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.

### 1.4 MEASUREMENT UNCERTAINTY

| PARAMETER                                    | UNCERTAINTY |
|----------------------------------------------|-------------|
| AC Powerline Conducted Emission              | ± 2.1183    |
| Channel Bandwidth                            | ± 2.1863    |
| RF output power (Power Meter + Power sensor) | ± 1.2688    |
| Power Spectral density                       | ± 2.1855    |
| Conducted Bandedge                           | ± 2.1866    |
| Conducted Spurious Emission                  | ± 2.1859    |
| Radiated Emission_9kHz-30MHz                 | ± 3.814     |
| Radiated Emission_30MHz-200MHz               | ± 4.272     |
| Radiated Emission_200MHz-1GHz                | ± 4.619     |
| Radiated Emission_1GHz-6GHz                  | ± 5.522     |
| Radiated Emission_6GHz-18GHz                 | ± 5.228     |
| Radiated Emission_18GHz-26GHz                | ± 4.089     |
| Radiated Emission_26GHz-40GHz                | ± 4.019     |

**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. (R.O.C.)  
CAB identifier: TW1309

| Test site          | Test Engineer     | Remark |
|--------------------|-------------------|--------|
| AC Conduction Room | Tony Chao         | -      |
| Radiation          | Ray Li, Tony Chao | -      |
| RF Conducted       | Marco Chan        | -      |

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

## 1.6 INSTRUMENT CALIBRATION

| AC line Conduction Test Room |                         |           |               |                  |                 |
|------------------------------|-------------------------|-----------|---------------|------------------|-----------------|
| Name of Equipment            | Manufacturer            | Model     | Serial Number | Calibration Date | Calibration Due |
| CABLE                        | EMCI                    | CFD300-NL | CERF          | 06/27/2022       | 06/26/2023      |
| EMI Test Receiver            | R&S                     | ESCI      | 100064        | 06/17/2022       | 06/16/2023      |
| LISN                         | SCHAFFNER               | NNB 41    | 03/10013      | 02/15/2022       | 02/14/2023      |
| Software                     | EZ-EMC(CCS-3A1-CE-wugu) |           |               |                  |                 |

| RF Conducted Test Site |                             |         |               |                  |                 |
|------------------------|-----------------------------|---------|---------------|------------------|-----------------|
| Name of Equipment      | Manufacturer                | Model   | Serial Number | Calibration Date | Calibration Due |
| EXA Signal Analyzer    | KEYSIGHT                    | N9010B  | MY55460167    | 09/07/2021       | 09/06/2022      |
| Power Meter            | Anritsu                     | ML2496A | 2136002       | 12/06/2021       | 12/05/2022      |
| Power Seneor           | Anritsu                     | MA2411B | 1911386       | 08/19/2021       | 08/18/2022      |
| Power Seneor           | Anritsu                     | MA2411B | 1911387       | 08/19/2021       | 08/18/2022      |
| Software               | Radio Test Software Ver. 21 |         |               |                  |                 |

**Remark:**

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

| 3M 966A Chamber              |                |                 |               |                  |                 |
|------------------------------|----------------|-----------------|---------------|------------------|-----------------|
| Name of Equipment            | Manufacturer   | Model           | Serial Number | Calibration Date | Calibration Due |
| Band Reject Filters          | MICRO TRONICS  | BRM 50702       | 112           | 11/23/2021       | 11/22/2022      |
| Bilog Antenna                | Sunol Sciences | JB3             | A030105       | 08/03/2022       | 08/02/2023      |
| Coaxial Cable                | HUBER SUHNER   | SUCOFLEX 104PEA | 20995         | 02/23/2022       | 02/22/2023      |
| Coaxial Cable                | Woken          | J-1099          | 201709090004  | 12/23/2021       | 12/22/2022      |
| Coaxial Cable                | EMCI           | EMC105          | 190914+33953  | 06/15/2022       | 06/14/2023      |
| Digital Thermo-Hygro Meter   | WISEWIND       | 1206            | D07           | 12/28/2021       | 12/27/2022      |
| Horn Antenna                 | ETS LINDGREN   | 3116            | 00026370      | 11/30/2021       | 11/29/2022      |
| Horn Antenna                 | MCTD           | 1209            | DRH13M02003   | 01/25/2022       | 01/24/2023      |
| K Type Cable                 | Huber+Suhner   | SUCOFLEX 102    | 29406/2       | 12/05/2021       | 12/04/2022      |
| Pre-Amplifier                | EMEC           | EM330           | 060609        | 02/23/2022       | 02/22/2023      |
| Pre-Amplifier                | HP             | 8449B           | 3008A00965    | 12/24/2021       | 12/23/2022      |
| PSA Series Spectrum Analyzer | Agilent        | E4446A          | MY46180323    | 12/06/2021       | 12/05/2022      |
| Antenna Tower                | CCS            | CC-A-1F         | N/A           | N.C.R            | N.C.R           |
| Controller                   | CCS            | CC-C-1F         | N/A           | N.C.R            | N.C.R           |
| Turn Table                   | CCS            | CC-T-1F         | N/A           | N.C.R            | N.C.R           |
| Software                     | e3 210616      |                 |               |                  |                 |

**Remark:**

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

| DFS Test                |                                                   |                  |                           |                  |                 |
|-------------------------|---------------------------------------------------|------------------|---------------------------|------------------|-----------------|
| Name of Equipment       | Manufacturer                                      | Model            | Serial Number             | Calibration Date | Calibration Due |
| Attenuator              | E-INSTRUMENT                                      | EPA-600H         | EC1400050                 | 06/28/2022       | 06/27/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 1                         | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 4                         | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 6                         | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 9                         | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 10                        | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 12                        | 03/02/2022       | 03/01/2023      |
| Coaxial Cable           | Woken                                             | SUMITOMO         | 13                        | 03/02/2022       | 03/01/2023      |
| Power Divider           | Marvelous Microwave                               | MVE8586          | 16011201                  | 06/29/2022       | 06/28/2023      |
| Power Divider           | Marvelous Microwave                               | MVE8586          | 16011202                  | 06/29/2022       | 06/28/2023      |
| Power Divider           | Marvelous Microwave                               | MVE8586          | 160112206                 | 07/20/2022       | 07/29/2023      |
| Power Divider           | Solvang Technology                                | STI08-0015       | 008                       | 07/26/2021       | 07/25/2022      |
| Spectrum Analyzer       | R&S                                               | FSU 26           | 100258                    | 06/06/2022       | 06/05/2023      |
| Vector Signal Generator | KEYSIGHT                                          | N5182B/N5182BX07 | MY61252828/<br>MY59362552 | 02/22/2022       | 02/22/2023      |
| Software                | GPIBShot,DFS-Aggregate-Time FSU,DFS Test Softwaer |                  |                           |                  |                 |

**Remark:**

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

## 1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

| Support Equipment |           |       |       |            |        |
|-------------------|-----------|-------|-------|------------|--------|
| No.               | Equipment | Brand | Model | Series No. | FCC ID |
|                   | N/A       |       |       |            |        |

| Support Equipment |           |         |               |            |               |
|-------------------|-----------|---------|---------------|------------|---------------|
| No.               | Equipment | Brand   | Model         | Series No. | FCC ID        |
| 1                 | Adapter   | Alcatel | UC13US        | N/A        | N/A           |
| 2                 | NB(G)     | Lenovo  | IBM 1951      | N/A        | N/A           |
| 3                 | NB(J)     | TOSHIBA | PT345T-00L002 | N/A        | PD97260H      |
| 4                 | NB        | Lenovo  | 20175         | N/A        | TX2-RTL8723AS |
| 5                 | AP        | ASUS    | RT-AX88U      | N/A        | MSQ-RTAXHP00  |

## 1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, KDB 789033 D02 and KDB 905462 D02.

## 2. TEST SUMMARY

| FCC Standard Sec. | Chapter | Test Item                   | Result |
|-------------------|---------|-----------------------------|--------|
| 15.203            | 1.3     | Antenna Requirement         | Pass   |
| 15.207            | 4.1     | AC Conducted Emission       | Pass   |
| 15.403(i)         | 4.2     | 26dB Bandwidth              | Pass   |
| 15.407(e)         | 4.2     | 6dB 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)         | 4.6     | Dynamic Frequency Selection | Pass   |

### 3. DESCRIPTION OF TEST MODES

#### 3.1 THE EUT CHANNEL NUMBER 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 VHT80 mode: MCS0 |                     |                  |
| Operating Frequency | 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 VHT80 | 5210             |
|                     | U-NII-2a                                                                                                                               | IEEE 802.11a        | 5260, 5300, 5320 |
|                     |                                                                                                                                        | IEEE 802.11n HT20   | 5260, 5300, 5320 |
|                     |                                                                                                                                        | IEEE 802.11n HT40   | 5270, 5310       |
|                     |                                                                                                                                        | IEEE 802.11ac VHT80 | 5290             |
|                     | U-NII-2c                                                                                                                               | IEEE 802.11a        | 5500, 5580, 5700 |
|                     |                                                                                                                                        | IEEE 802.11n HT20   | 5500, 5580, 5700 |
|                     |                                                                                                                                        | IEEE 802.11n HT40   | 5510, 5550, 5670 |
|                     |                                                                                                                                        | IEEE 802.11ac VHT80 | 5530, 5610       |
|                     | U-NII-3                                                                                                                                | IEEE 802.11a        | 5745, 5785, 5825 |
|                     |                                                                                                                                        | IEEE 802.11n HT20   | 5745, 5785, 5825 |
|                     |                                                                                                                                        | IEEE 802.11n HT40   | 5755, 5795       |
|                     |                                                                                                                                        | IEEE 802.11ac VHT80 | 5775             |

**Remark:**

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The system support 802.11a/n ht20/n ht40/ac vht20/40/80/ax hew 20/40/80, the vht20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40.
3. For IEEE 802.11 a function, it supports SISO mode only.

### 3.2 THE WORST MODE OF MEASUREMENT

| AC Power Line Conducted Emission |                                                                                                                                            |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                   | AC Power line conducted emission for line and neutral                                                                                      |
| Power supply Mode                | Mode 1: EUT power by Adapter<br>Mode 2: EUT power by Notebook                                                                              |
| 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. AC power line conducted emission and for below 1G radiation emission were performed the EUT transmit at the highest output power channel as

| Radiated Emission Measurement Above 1G |                                                                                                                                                                                                                                                                                               |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                         | Radiated Emission Above 1G                                                                                                                                                                                                                                                                    |
| Power supply Mode                      | Mode 1: EUT power by Host System                                                                                                                                                                                                                                                              |
| 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 checked="" type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane)<br><input 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 Host System                                                                                                           |
| 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(X-Plane) were recorded in this report

### 3.3 EUT DUTY CYCLE

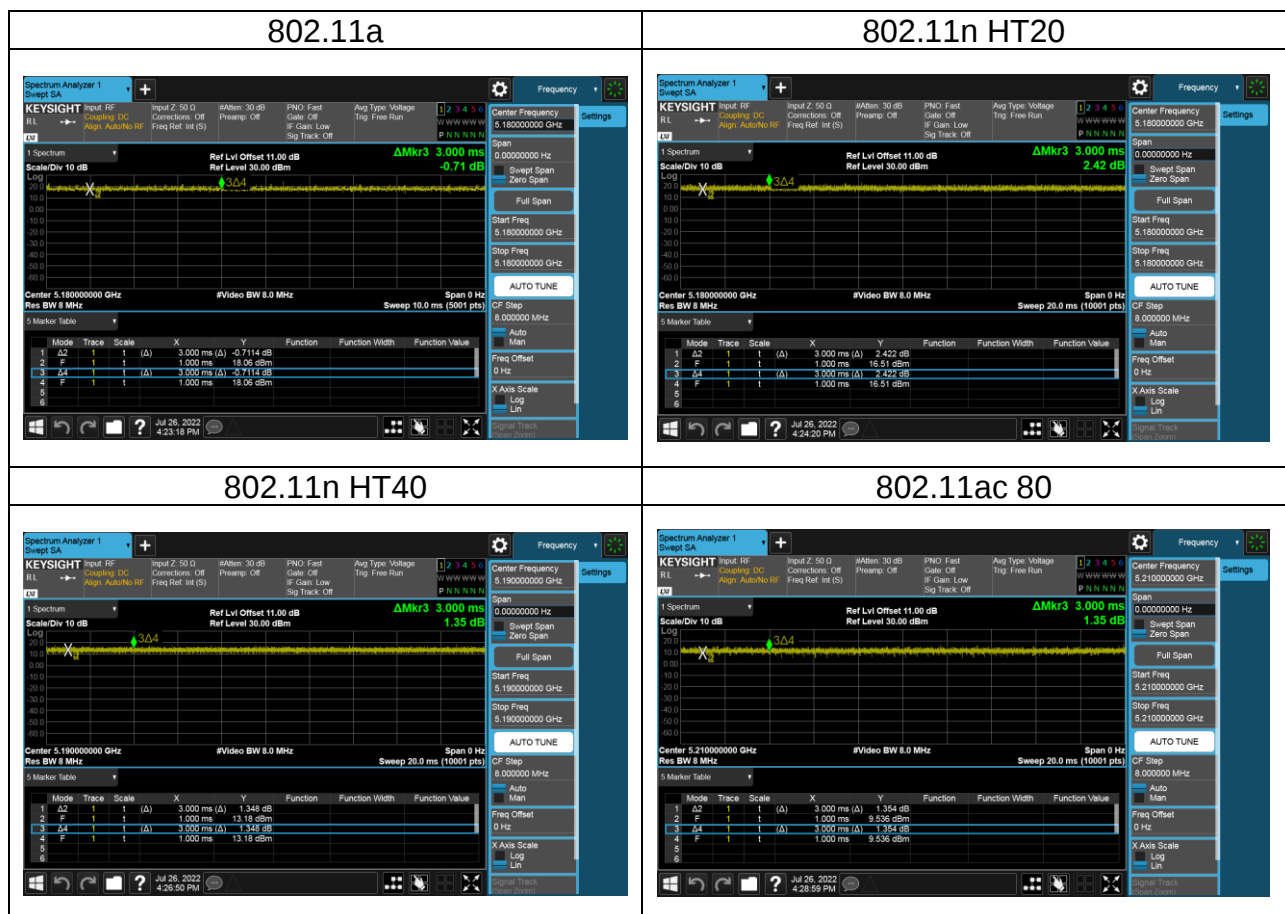
Temperature: 25.6~26.6°C

Test date: July 26~29, 2022

Humidity: 50~53% RH

Tested by: Marco Chan

| Duty Cycle    |                |                                                           |           |                   |
|---------------|----------------|-----------------------------------------------------------|-----------|-------------------|
| Configuration | Duty Cycle (%) | Duty Factor (dB)<br>$=10 \cdot \log(1/\text{Duty Cycle})$ | 1/T (kHz) | VBW setting (kHz) |
| 802.11a       | 100.00         | 0.00                                                      | 0.00      | 0.01              |
| 802.11n_20    | 100.00         | 0.00                                                      | 0.00      | 0.01              |
| 802.11n_40    | 100.00         | 0.00                                                      | 0.00      | 0.01              |
| 802.11ac_80   | 100.00         | 0.00                                                      | 0.00      | 0.01              |



## 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        |

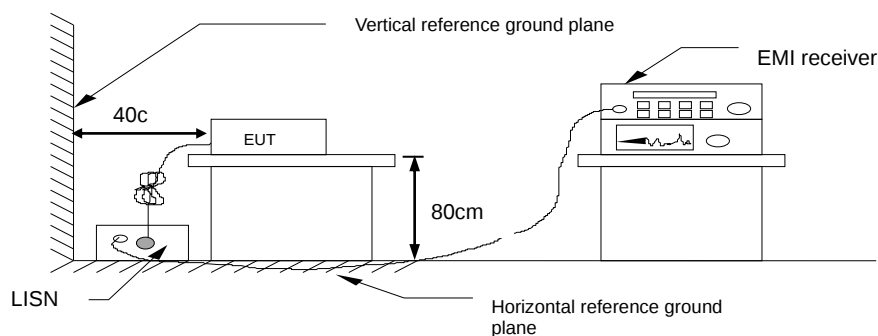
\* Decreases with the logarithm of the frequency.

#### 4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

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

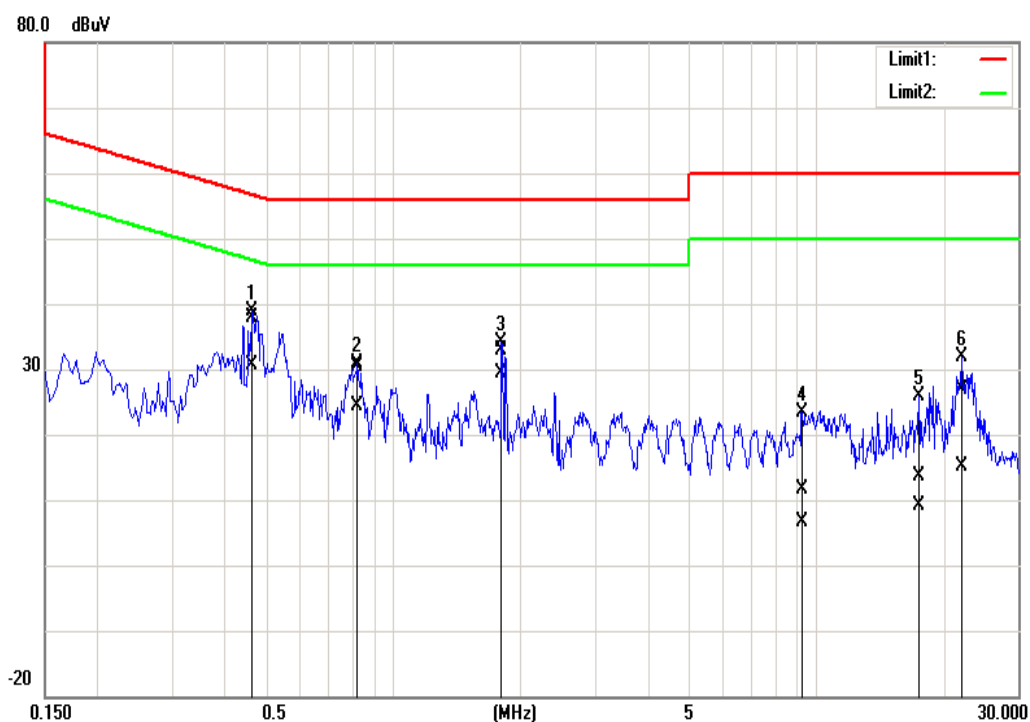


#### 4.1.4 Test Result

Pass.

## Test Data

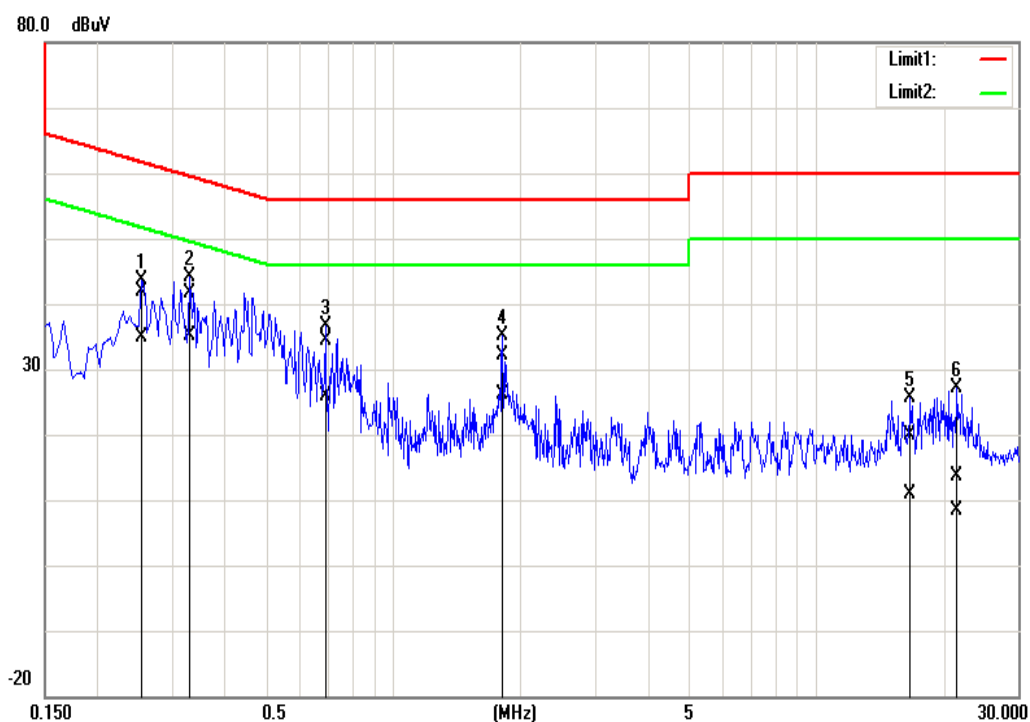
|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-1%    | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Line         | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4660          | 27.77                     | 20.39                  | 10.19                  | 37.96                    | 30.58                 | 56.58                   | 46.58                | -18.62                 | -16.00              | Pass   |
| 0.8220          | 20.26                     | 14.26                  | 10.21                  | 30.47                    | 24.47                 | 56.00                   | 46.00                | -25.53                 | -21.53              | Pass   |
| 1.8060          | 22.66                     | 19.21                  | 10.25                  | 32.91                    | 29.46                 | 56.00                   | 46.00                | -23.09                 | -16.54              | Pass   |
| 9.2860          | 1.35                      | -3.68                  | 10.36                  | 11.71                    | 6.68                  | 60.00                   | 50.00                | -48.29                 | -43.32              | Pass   |
| 17.5140         | 3.36                      | -1.28                  | 10.36                  | 13.72                    | 9.08                  | 60.00                   | 50.00                | -46.28                 | -40.92              | Pass   |
| 22.1260         | 16.68                     | 4.86                   | 10.30                  | 26.98                    | 15.16                 | 60.00                   | 50.00                | -33.02                 | -34.84              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

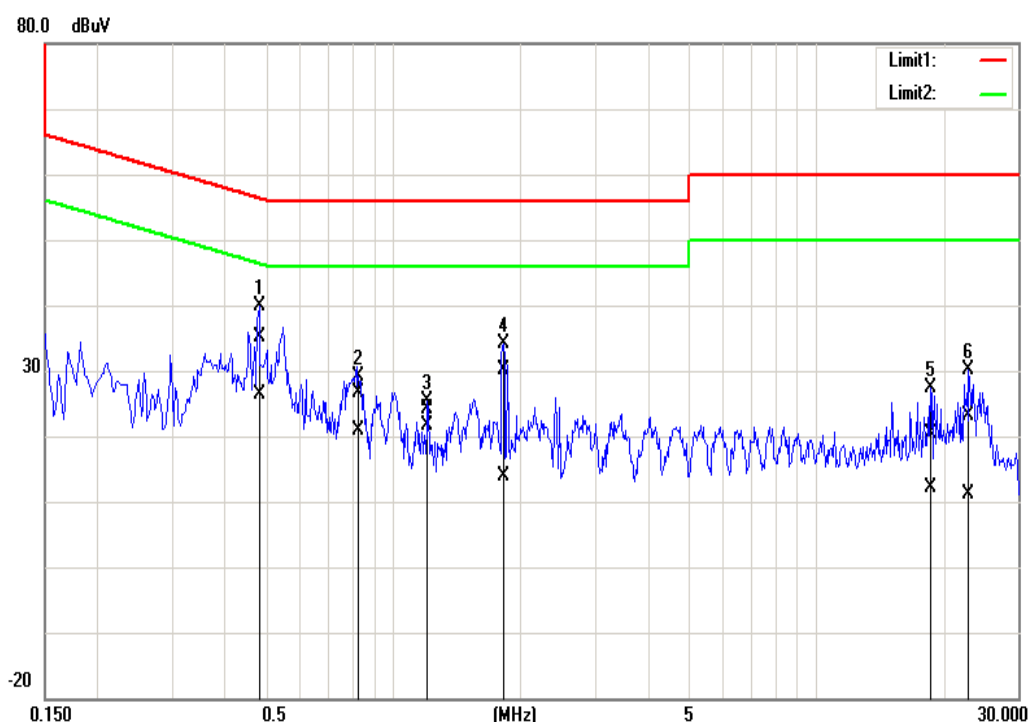
|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-1%    | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Neutral      | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.2540          | 31.71                     | 24.62                  | 10.17                  | 41.88                    | 34.79                 | 61.63                   | 51.63                | -19.75                 | -16.84              | Pass   |
| 0.3300          | 31.46                     | 24.86                  | 10.18                  | 41.64                    | 35.04                 | 59.45                   | 49.45                | -17.81                 | -14.41              | Pass   |
| 0.6900          | 24.23                     | 15.75                  | 10.18                  | 34.41                    | 25.93                 | 56.00                   | 46.00                | -21.59                 | -20.07              | Pass   |
| 1.8140          | 21.82                     | 15.91                  | 10.23                  | 32.05                    | 26.14                 | 56.00                   | 46.00                | -23.95                 | -19.86              | Pass   |
| 16.7460         | 9.60                      | 0.49                   | 10.39                  | 19.99                    | 10.88                 | 60.00                   | 50.00                | -40.01                 | -39.12              | Pass   |
| 21.5380         | 3.21                      | -2.17                  | 10.44                  | 13.65                    | 8.27                  | 60.00                   | 50.00                | -46.35                 | -41.73              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

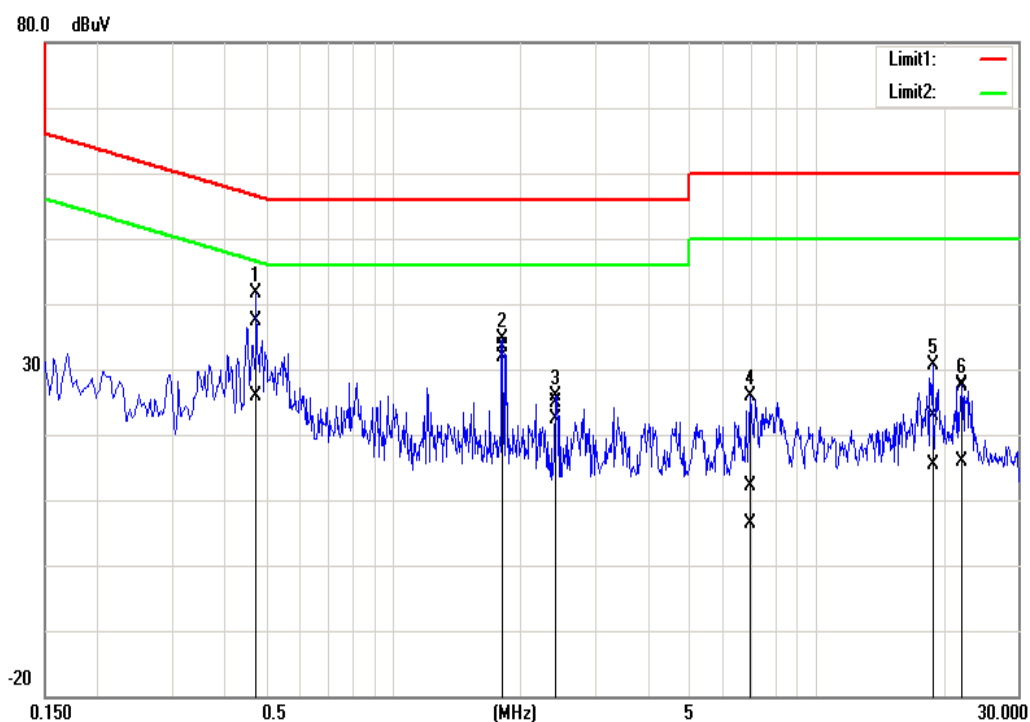
|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-50%   | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Line         | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4820          | 24.82                     | 16.09                  | 10.19                  | 35.01                    | 26.28                 | 56.30                   | 46.30                | -21.29                 | -20.02              | Pass   |
| 0.8300          | 16.54                     | 10.64                  | 10.21                  | 26.75                    | 20.85                 | 56.00                   | 46.00                | -29.25                 | -25.15              | Pass   |
| 1.2060          | 13.85                     | 11.37                  | 10.22                  | 24.07                    | 21.59                 | 56.00                   | 46.00                | -31.93                 | -24.41              | Pass   |
| 1.8220          | 19.81                     | 3.70                   | 10.25                  | 30.06                    | 13.95                 | 56.00                   | 46.00                | -25.94                 | -32.05              | Pass   |
| 18.7100         | 10.10                     | 1.64                   | 10.37                  | 20.47                    | 12.01                 | 60.00                   | 50.00                | -39.53                 | -37.99              | Pass   |
| 22.9940         | 12.96                     | 0.90                   | 10.28                  | 23.24                    | 11.18                 | 60.00                   | 50.00                | -36.76                 | -38.82              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

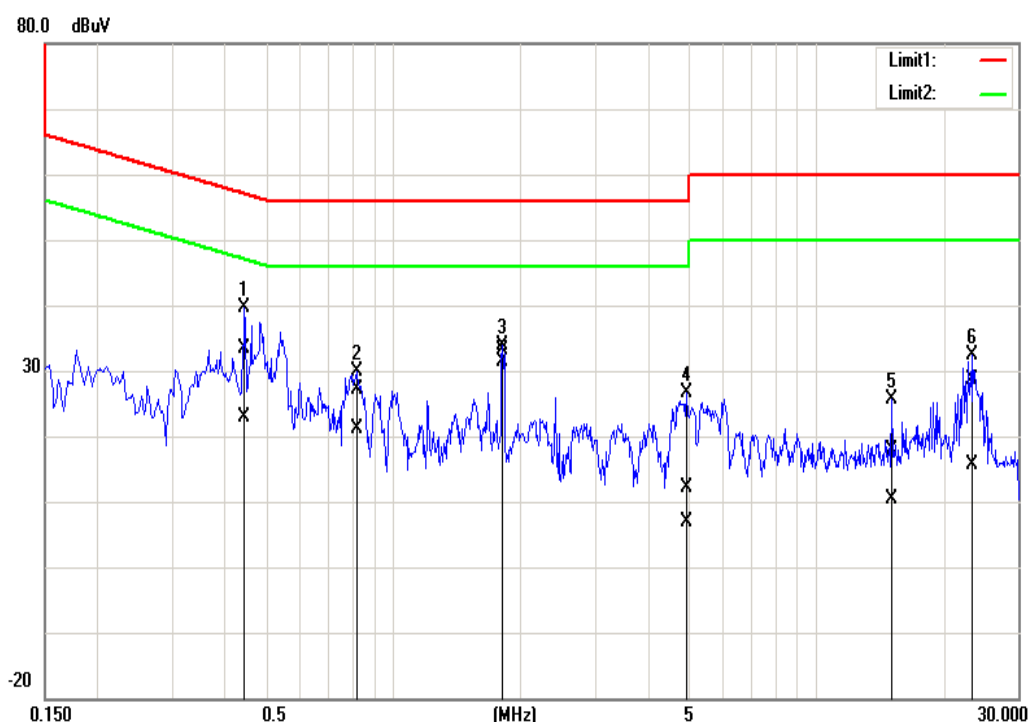
|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-50%   | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Neutral      | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4740          | 27.09                     | 15.59                  | 10.18                  | 37.27                    | 25.77                 | 56.44                   | 46.44                | -19.17                 | -20.67              | Pass   |
| 1.8100          | 23.22                     | 21.58                  | 10.23                  | 33.45                    | 31.81                 | 56.00                   | 46.00                | -22.55                 | -14.19              | Pass   |
| 2.4140          | 14.62                     | 12.16                  | 10.24                  | 24.86                    | 22.40                 | 56.00                   | 46.00                | -31.14                 | -23.60              | Pass   |
| 7.0180          | 1.86                      | -4.00                  | 10.32                  | 12.18                    | 6.32                  | 60.00                   | 50.00                | -47.82                 | -43.68              | Pass   |
| 18.8860         | 12.56                     | 4.95                   | 10.40                  | 22.96                    | 15.35                 | 60.00                   | 50.00                | -37.04                 | -34.65              | Pass   |
| 22.1300         | 17.03                     | 5.34                   | 10.45                  | 27.48                    | 15.79                 | 60.00                   | 50.00                | -32.52                 | -34.21              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

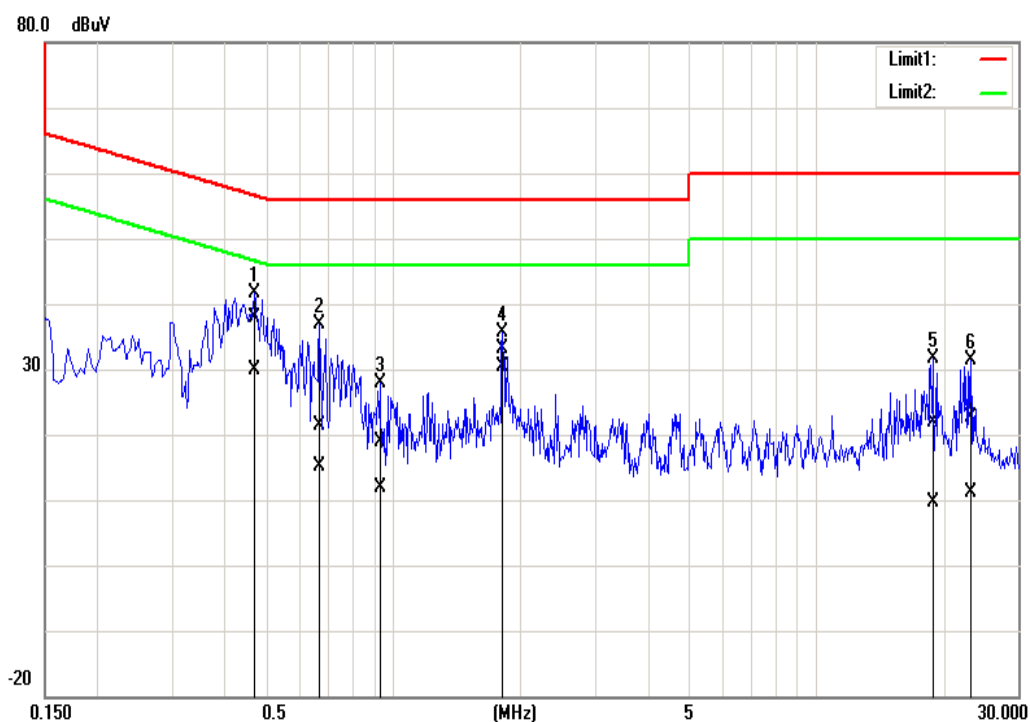
|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-99%   | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Line         | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4460          | 23.29                     | 12.61                  | 10.19                  | 33.48                    | 22.80                 | 56.95                   | 46.95                | -23.47                 | -24.15              | Pass   |
| 0.8180          | 17.01                     | 10.99                  | 10.21                  | 27.22                    | 21.20                 | 56.00                   | 46.00                | -28.78                 | -24.80              | Pass   |
| 1.8100          | 22.98                     | 21.20                  | 10.25                  | 33.23                    | 31.45                 | 56.00                   | 46.00                | -22.77                 | -14.55              | Pass   |
| 4.9260          | 1.80                      | -3.35                  | 10.30                  | 12.10                    | 6.95                  | 56.00                   | 46.00                | -43.90                 | -39.05              | Pass   |
| 15.0980         | 7.39                      | -0.08                  | 10.37                  | 17.76                    | 10.29                 | 60.00                   | 50.00                | -42.24                 | -39.71              | Pass   |
| 23.5020         | 18.43                     | 5.33                   | 10.27                  | 28.70                    | 15.60                 | 60.00                   | 50.00                | -31.30                 | -34.40              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

|               |              |               |                 |
|---------------|--------------|---------------|-----------------|
| Test Mode:    | Mode 1-99%   | Temp/Hum      | 25.9(°C)/ 50%RH |
| Phase:        | Neutral      | Test Date     | August 11, 2022 |
| Test Voltage: | 120Vac, 60Hz | Test Engineer | Tony Chao       |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4700          | 27.65                     | 19.77                  | 10.18                  | 37.83                    | 29.95                 | 56.51                   | 46.51                | -18.68                 | -16.56              | Pass   |
| 0.6700          | 11.12                     | 5.01                   | 10.18                  | 21.30                    | 15.19                 | 56.00                   | 46.00                | -34.70                 | -30.81              | Pass   |
| 0.9300          | 8.62                      | 1.60                   | 10.20                  | 18.82                    | 11.80                 | 56.00                   | 46.00                | -37.18                 | -34.20              | Pass   |
| 1.8140          | 22.87                     | 20.16                  | 10.23                  | 33.10                    | 30.39                 | 56.00                   | 46.00                | -22.90                 | -15.61              | Pass   |
| 18.8860         | 11.44                     | -0.83                  | 10.40                  | 21.84                    | 9.57                  | 60.00                   | 50.00                | -38.16                 | -40.43              | Pass   |
| 23.1620         | 12.16                     | 0.58                   | 10.47                  | 22.63                    | 11.05                 | 60.00                   | 50.00                | -37.37                 | -38.95              | Pass   |

Note: Correction factor = LISN loss + Cable loss.

## 4.2 26dB BANDWIDTH, 6dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

### 4.2.1 Test Limit

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

**6 dB Bandwidth** : Least 500kHz.

**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%.

#### 6dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

**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**

## 4.2.4 Test Result

Temperature: 25.6~26.6°C

Test date: July 26~29, 2022

Humidity: 50~53% RH

Tested by: Marco Chan

### UNII-1 5150-5250 MHz

#### Test mode: IEEE 802.11a mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5180            | 16.583                       | 16.592                       | 19.76                       | 19.39                       |
| Mid     | 5220            | 16.631                       | 16.578                       | 19.79                       | 19.55                       |
| High    | 5240            | 16.625                       | 16.586                       | 19.64                       | 19.50                       |

#### Remark:

1. For IEEE 802.11 a function, it supports SISO mode only.

#### Test mode: IEEE 802.11n HT20 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5180            | 17.651                       | 17.641                       | 19.92                       | 19.86                       |
| Mid     | 5220            | 17.668                       | 17.656                       | 19.87                       | 19.66                       |
| High    | 5240            | 17.649                       | 17.644                       | 20.08                       | 19.91                       |

#### Test mode: IEEE 802.11n HT40 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5190            | 36.097                       | 36.135                       | 40.08                       | 39.61                       |
| High    | 5230            | 36.110                       | 36.135                       | 39.83                       | 39.14                       |

#### Test mode: IEEE 802.11ac VHT80 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5210            | 76.028                       | 75.820                       | 81.82                       | 80.47                       |

## UNII-2a 5250-5350 MHz

### Test mode: IEEE 802.11a mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5260            | 16.601                       | 16.578                       | 19.66                       | 19.49                       |
| Mid     | 5300            | 16.590                       | 16.572                       | 19.58                       | 19.47                       |
| High    | 5320            | 16.602                       | 16.583                       | 19.47                       | 19.58                       |

#### Remark:

1. For IEEE 802.11 a function, it supports SISO mode only.

### Test mode: IEEE 802.11n HT20 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5260            | 17.669                       | 17.626                       | 20.00                       | 19.97                       |
| Mid     | 5300            | 17.650                       | 17.631                       | 19.82                       | 19.92                       |
| High    | 5320            | 17.659                       | 17.639                       | 19.99                       | 19.85                       |

### Test mode: IEEE 802.11n HT40 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5270            | 36.126                       | 36.143                       | 40.14                       | 39.83                       |
| High    | 5310            | 36.122                       | 36.141                       | 39.87                       | 39.73                       |

### Test mode: IEEE 802.11ac VHT80 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5290            | 76.029                       | 75.718                       | 81.15                       | 80.70                       |

## UNII-2c 5470-5725 MHz

### Test mode: IEEE 802.11a mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5500            | 16.633                       | 16.585                       | 19.59                       | 19.59                       |
| Mid     | 5580            | 16.605                       | 16.598                       | 19.50                       | 19.58                       |
| High    | 5700            | 16.604                       | 16.615                       | 19.78                       | 19.65                       |

#### Remark:

1. For IEEE 802.11 a function, it supports SISO mode only.

### Test mode: IEEE 802.11n HT20 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5500            | 17.656                       | 17.645                       | 19.67                       | 19.56                       |
| Mid     | 5580            | 17.631                       | 17.634                       | 19.74                       | 19.86                       |
| High    | 5700            | 17.664                       | 17.659                       | 19.96                       | 19.72                       |

### Test mode: IEEE 802.11n HT40 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5510            | 36.118                       | 36.134                       | 40.02                       | 39.42                       |
| Mid     | 5550            | 36.137                       | 36.106                       | <b>39.88</b>                | <b>39.38</b>                |
| High    | 5670            | 36.109                       | 36.171                       | 40.40                       | 39.97                       |

### Test mode: IEEE 802.11ac VHT80 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>26dB BW<br>(MHz) | Chain 1<br>26dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Low     | 5530            | 76.002                       | 75.701                       | 81.36                       | 80.77                       |
| High    | 5610            | 75.959                       | 75.850                       | 81.44                       | 80.68                       |

## UNII-3 5725-5850 MHz

### Test mode: IEEE 802.11a mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>6dB BW<br>(MHz) | Chain 1<br>6dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|----------------------------|----------------------------|
| Low     | 5745            | 16.596                       | 16.564                       | 16.58                      | 16.57                      |
| Mid     | 5785            | 16.594                       | 16.564                       | 16.60                      | 16.57                      |
| High    | 5825            | 16.594                       | 16.582                       | 16.55                      | 16.59                      |

#### Remark:

1. For IEEE 802.11 a function, it supports SISO mode only.

### Test mode: IEEE 802.11n HT20 mode

| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>6dB BW<br>(MHz) | Chain 1<br>6dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|----------------------------|----------------------------|
| Low     | 5745            | 17.649                       | 17.621                       | 17.78                      | 17.70                      |
| Mid     | 5785            | 17.649                       | 17.644                       | 17.69                      | 17.69                      |
| High    | 5825            | 17.669                       | 17.635                       | 17.78                      | 17.73                      |

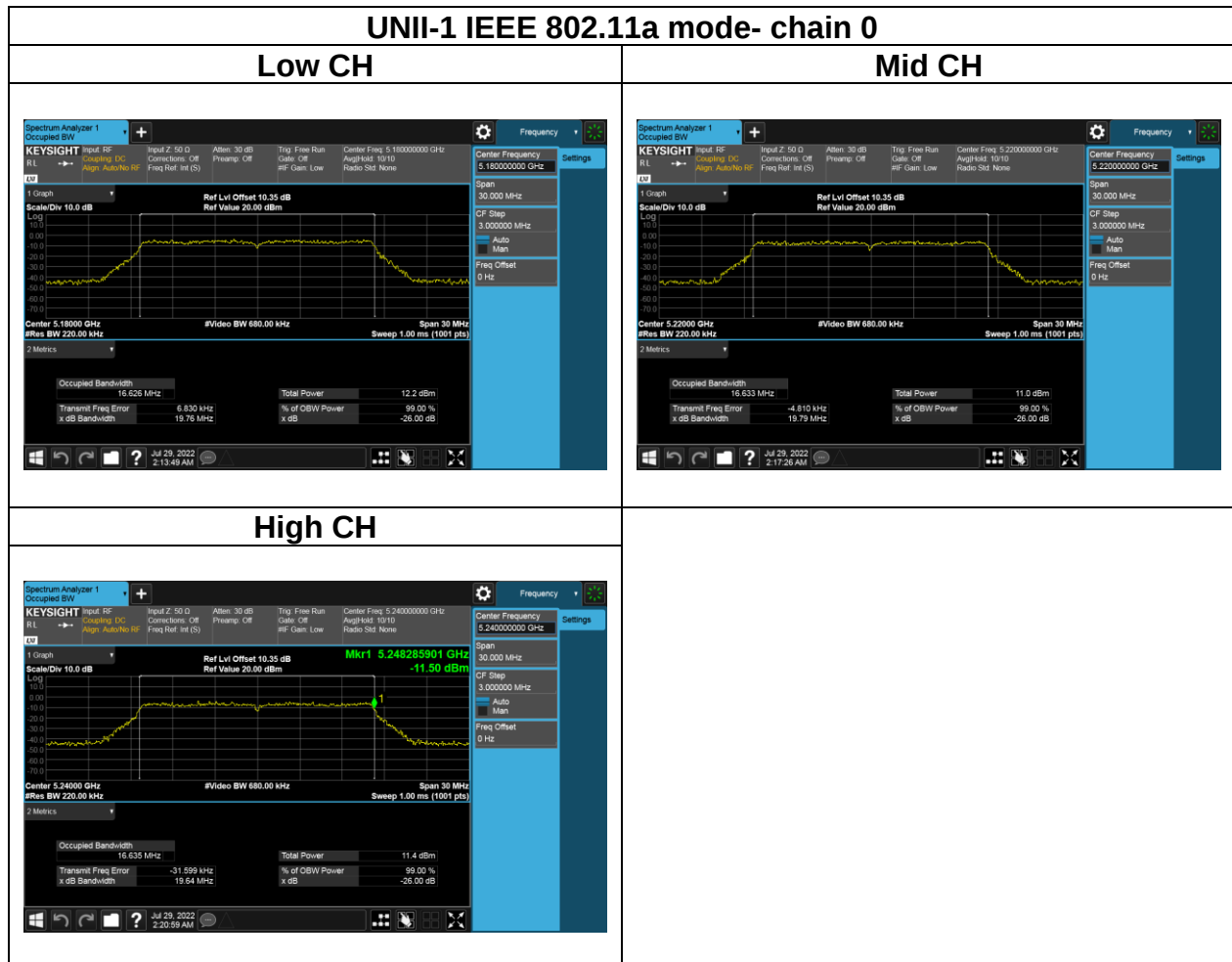
### Test mode: IEEE 802.11n HT40 mode

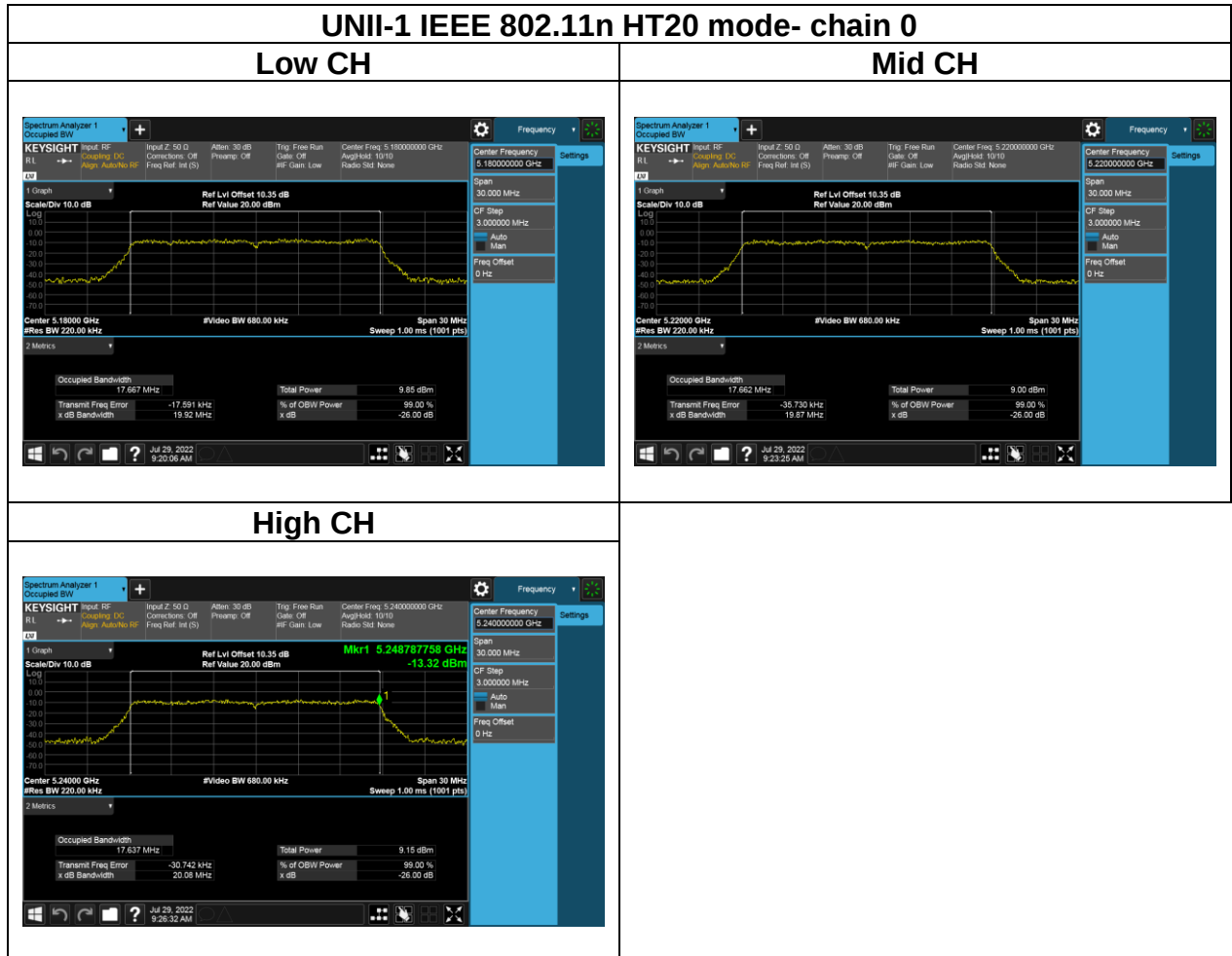
| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>6dB BW<br>(MHz) | Chain 1<br>6dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|----------------------------|----------------------------|
| Low     | 5755            | 36.139                       | 36.108                       | 36.43                      | 36.36                      |
| High    | 5795            | 36.112                       | 36.089                       | 36.45                      | 36.44                      |

### Test mode: IEEE 802.11ac VHT80 mode

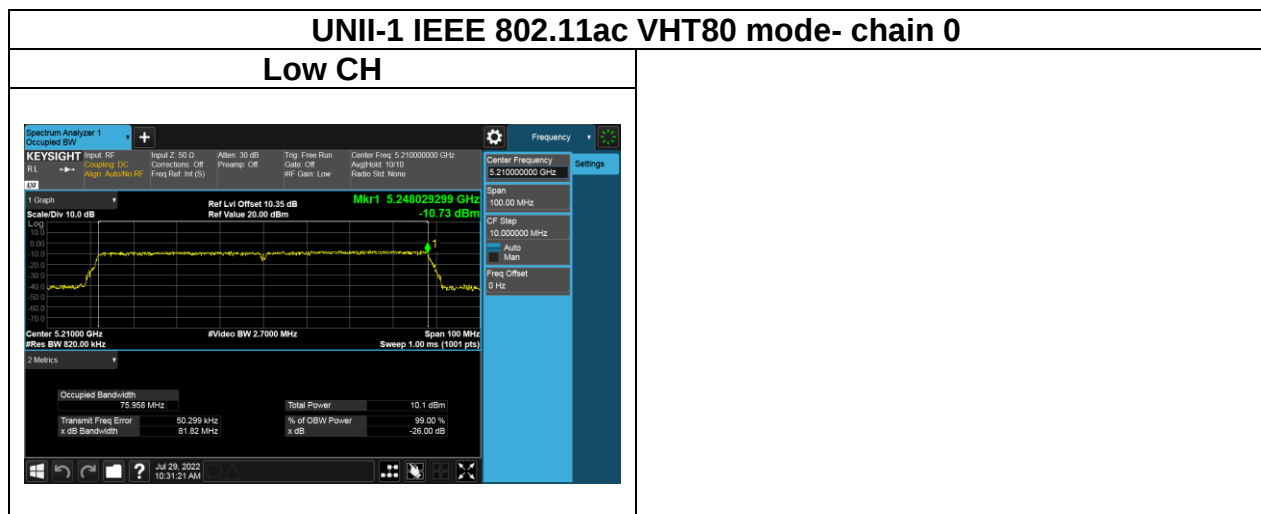
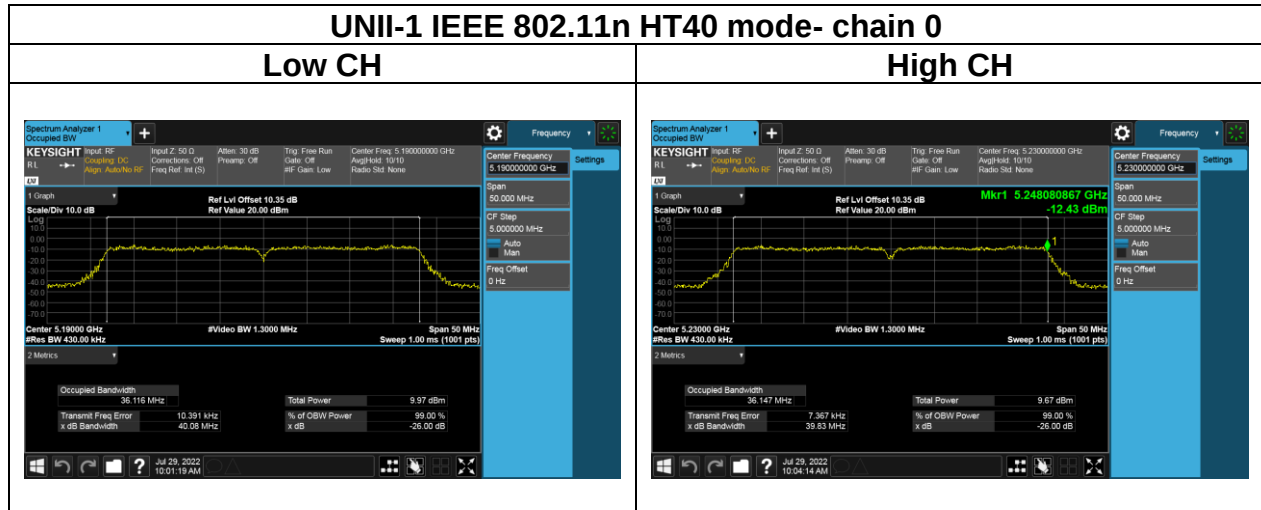
| Channel | Frequency (MHz) | Chain 0<br>OBW(99%)<br>(MHz) | Chain 1<br>OBW(99%)<br>(MHz) | Chain 0<br>6dB BW<br>(MHz) | Chain 1<br>6dB BW<br>(MHz) |
|---------|-----------------|------------------------------|------------------------------|----------------------------|----------------------------|
| Low     | 5775            | 75.960                       | 75.891                       | 76.57                      | 76.54                      |

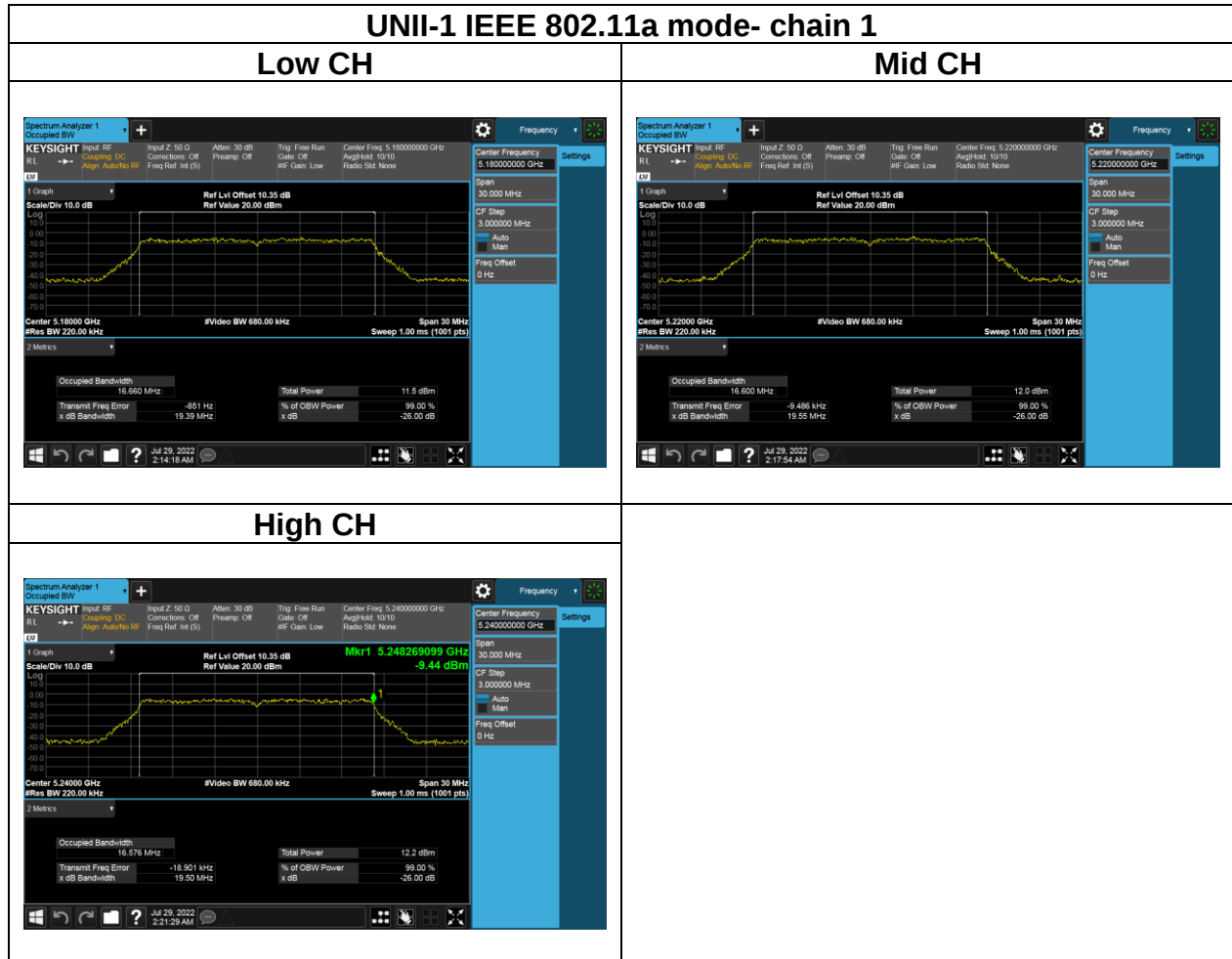
## Test Plots (26dB BANDWIDTH)

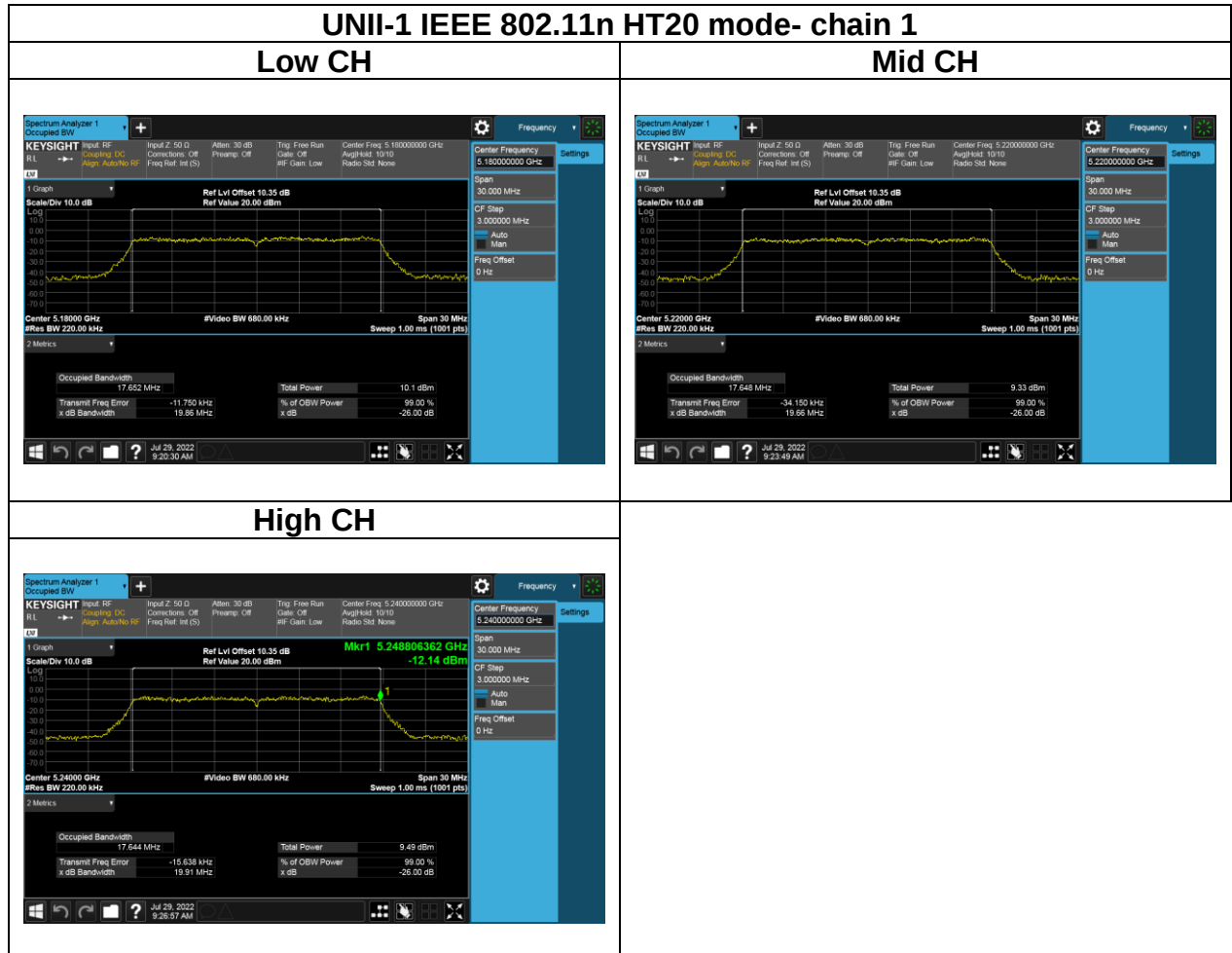


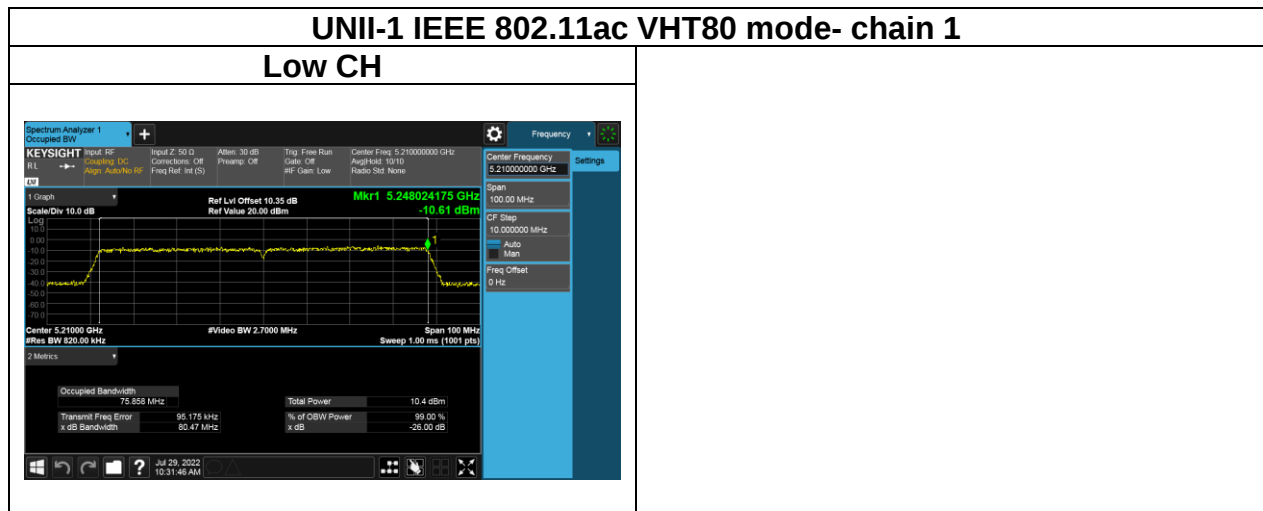
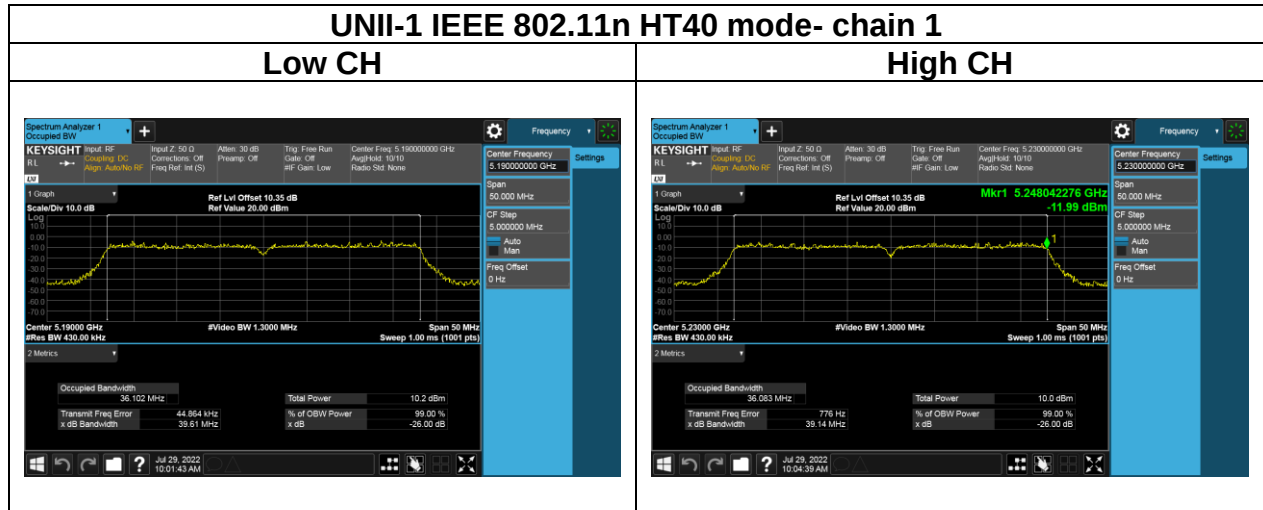


Report No.: TMWK2207002920KR









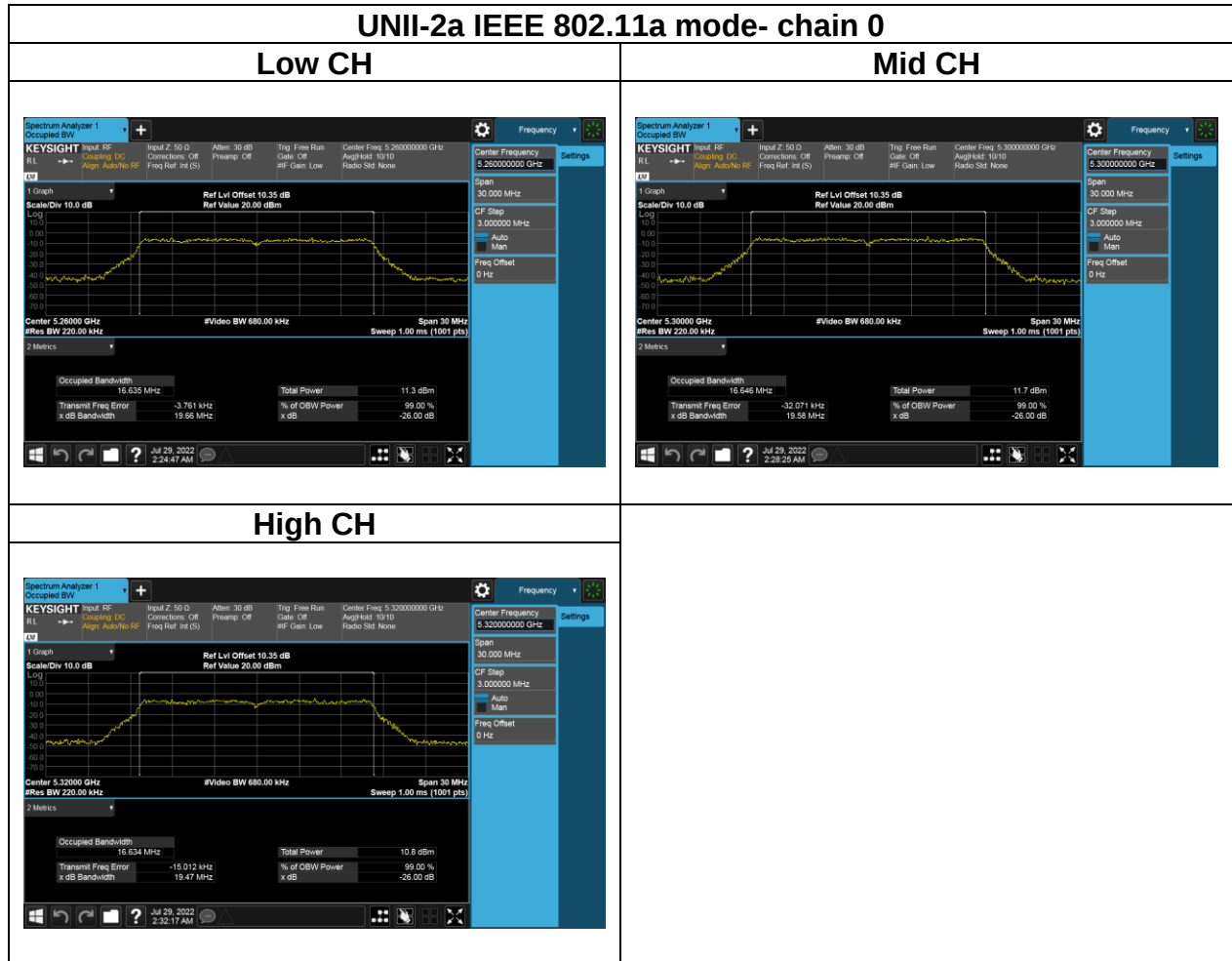


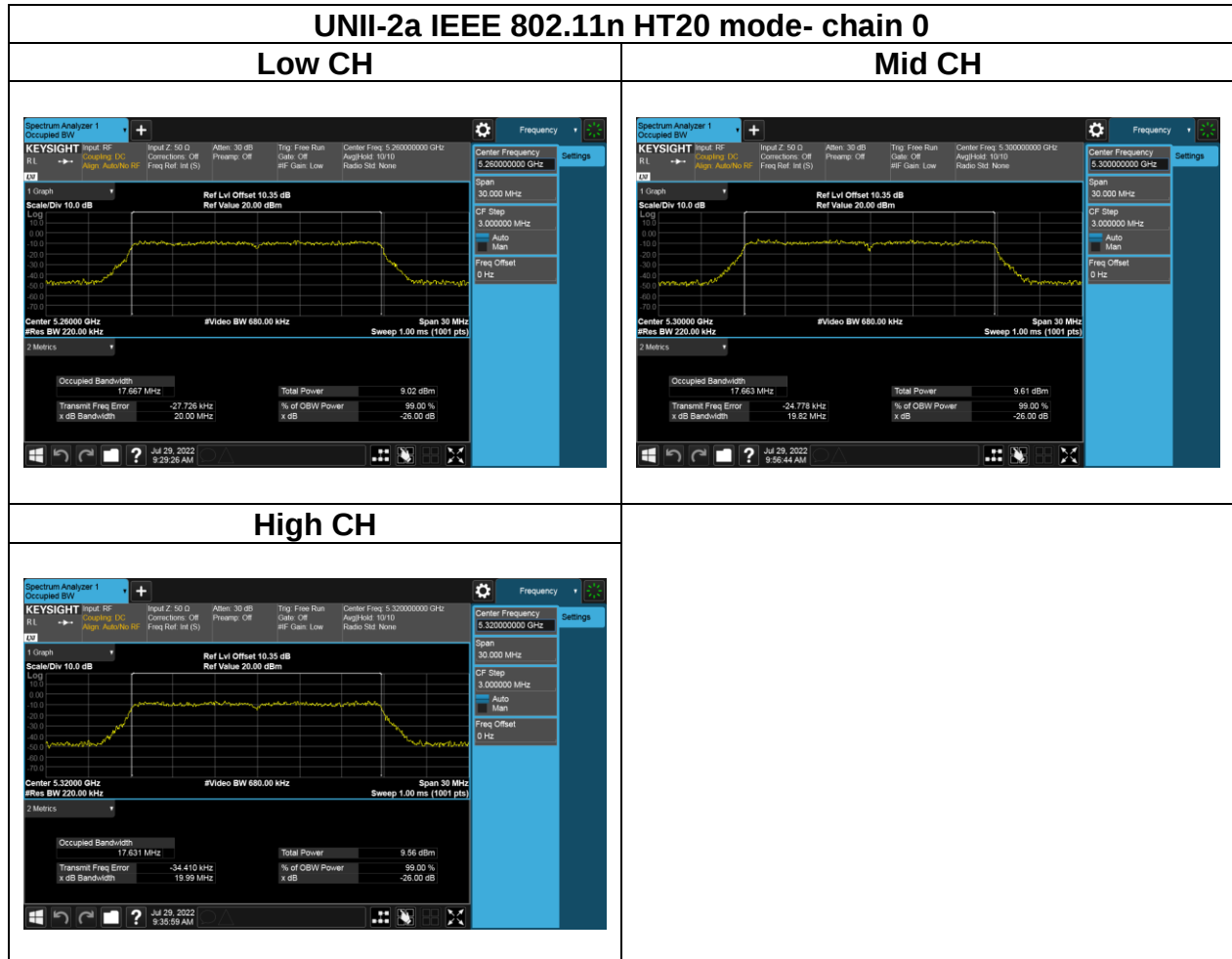
Report No.: TMWK2207002920KR

Page: 34 / 264

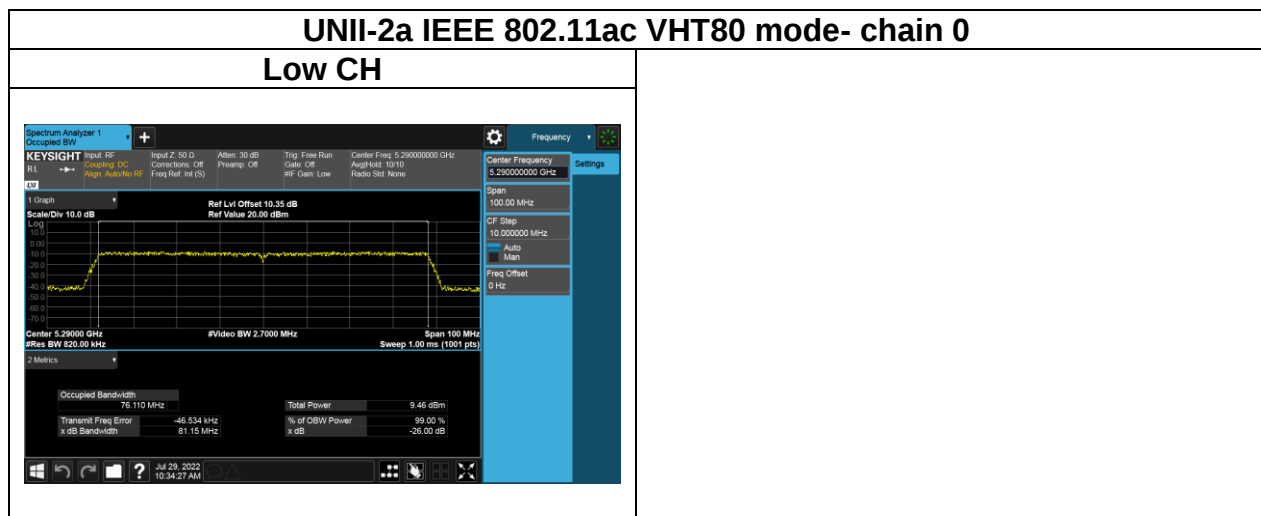
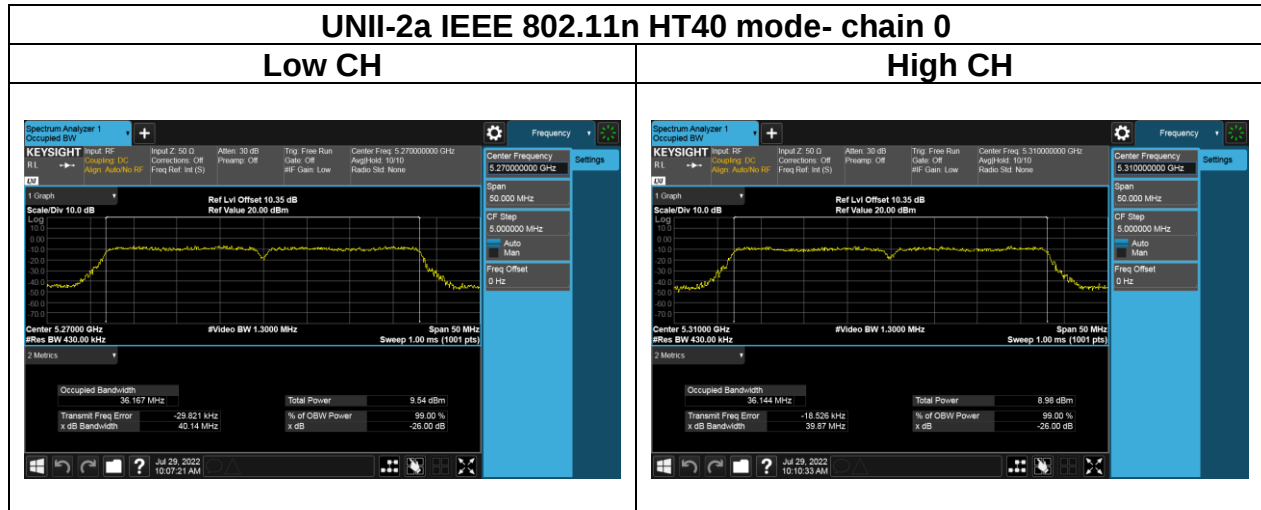
Rev.: 01

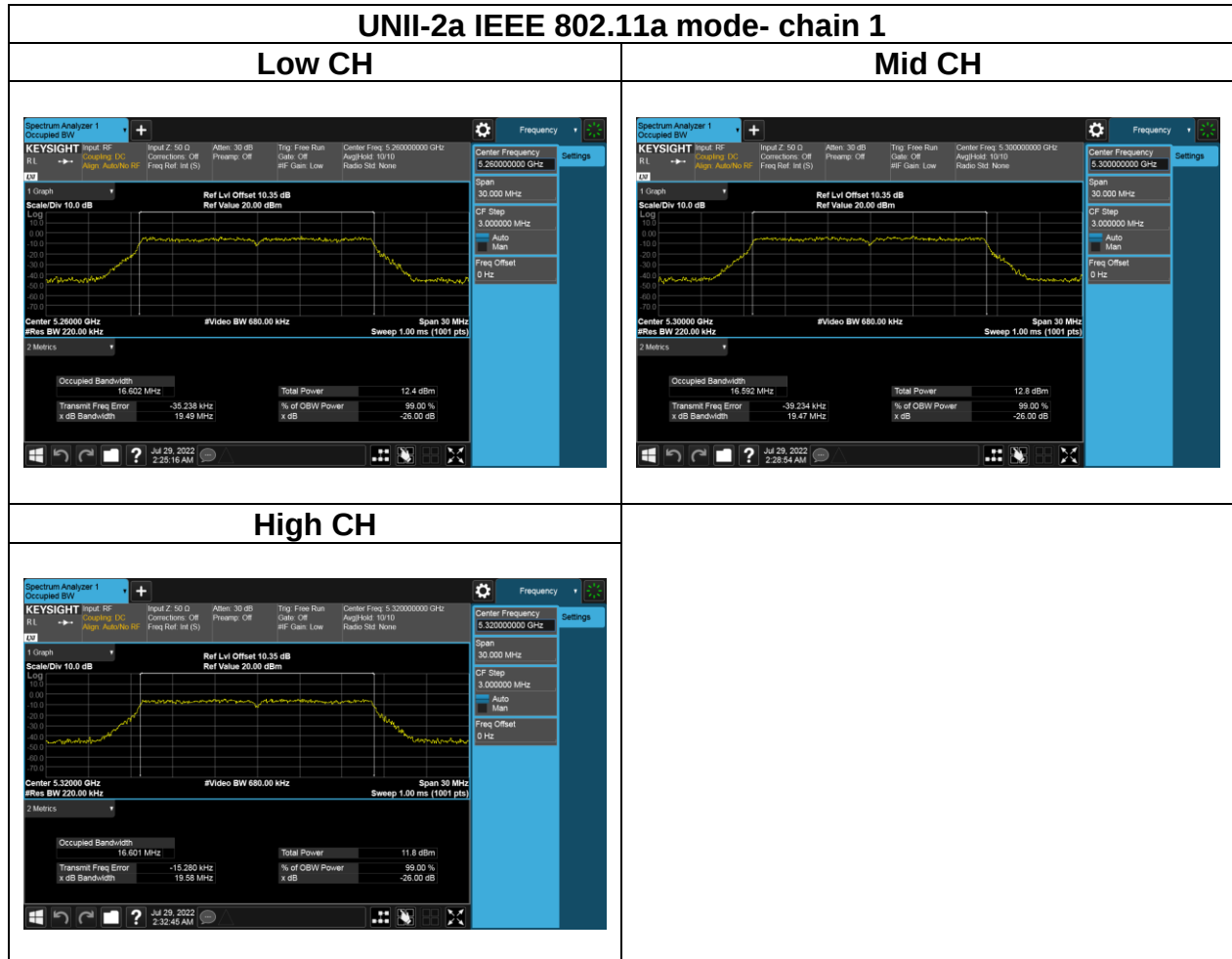
## Test Plots (26dB BANDWIDTH)

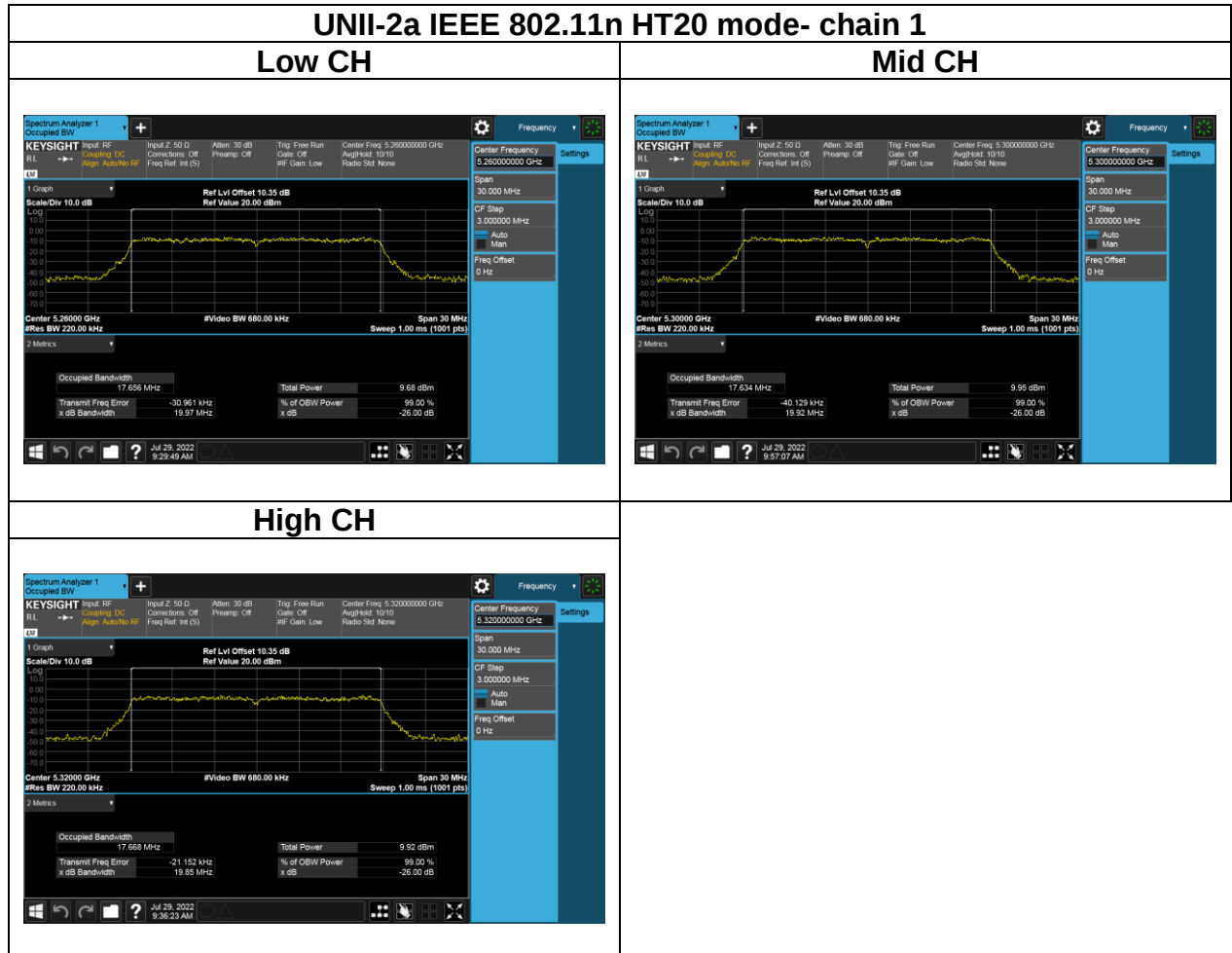


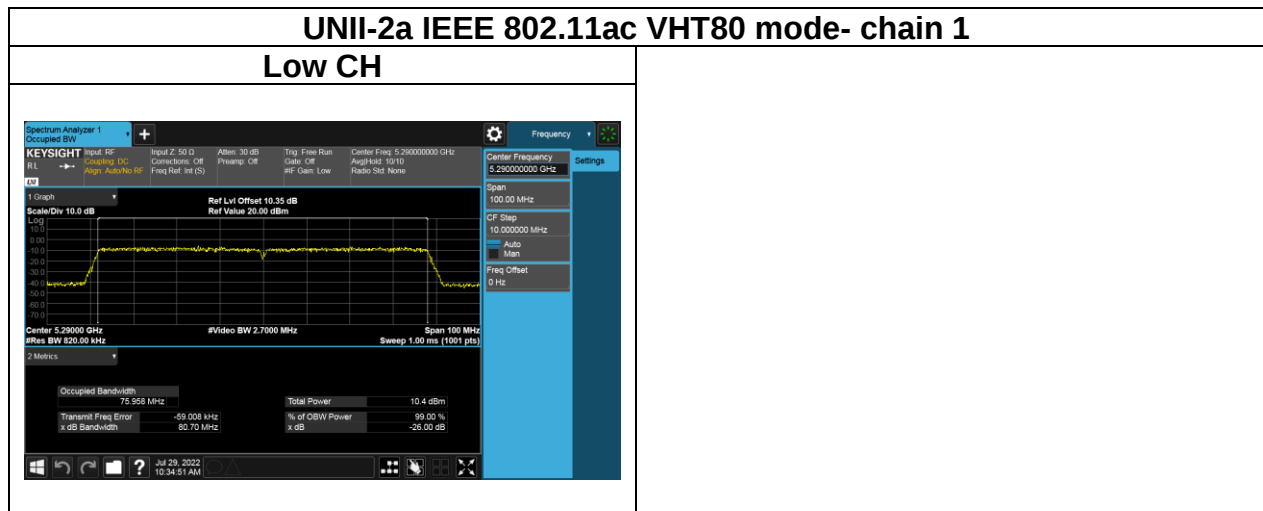
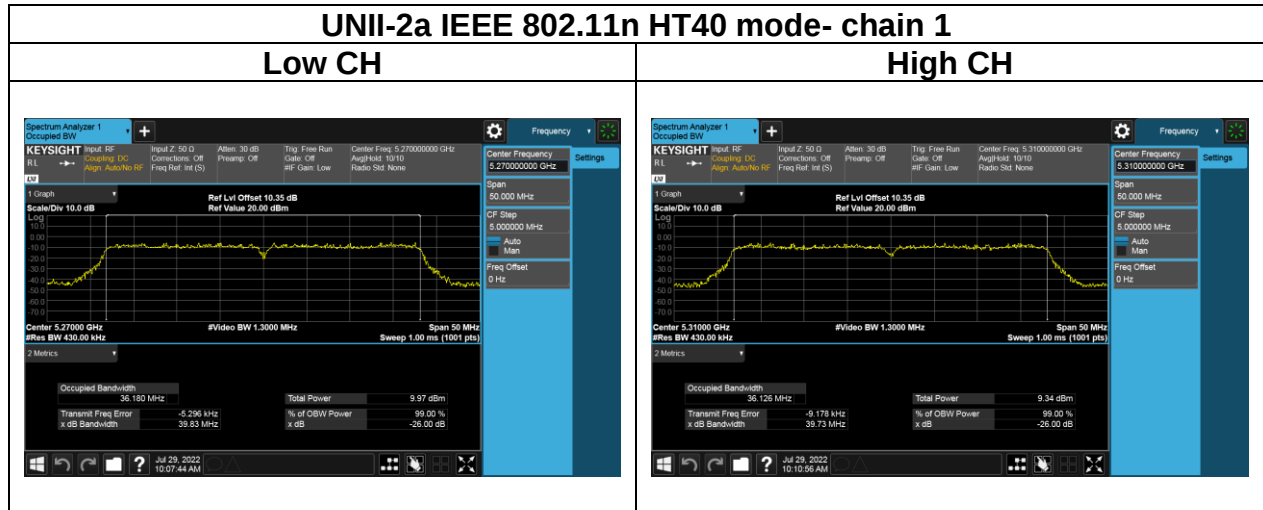


Report No.: TMWK2207002920KR

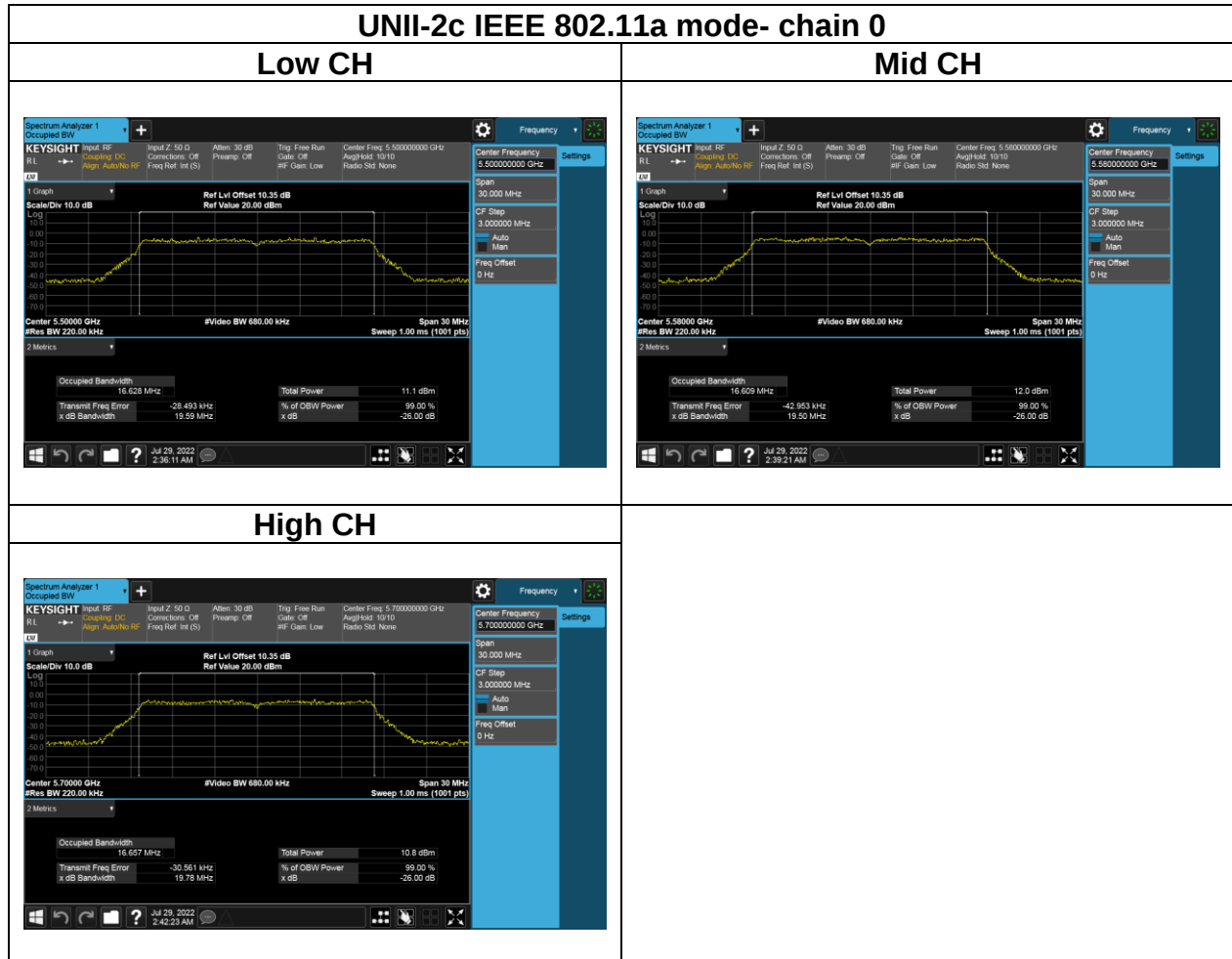


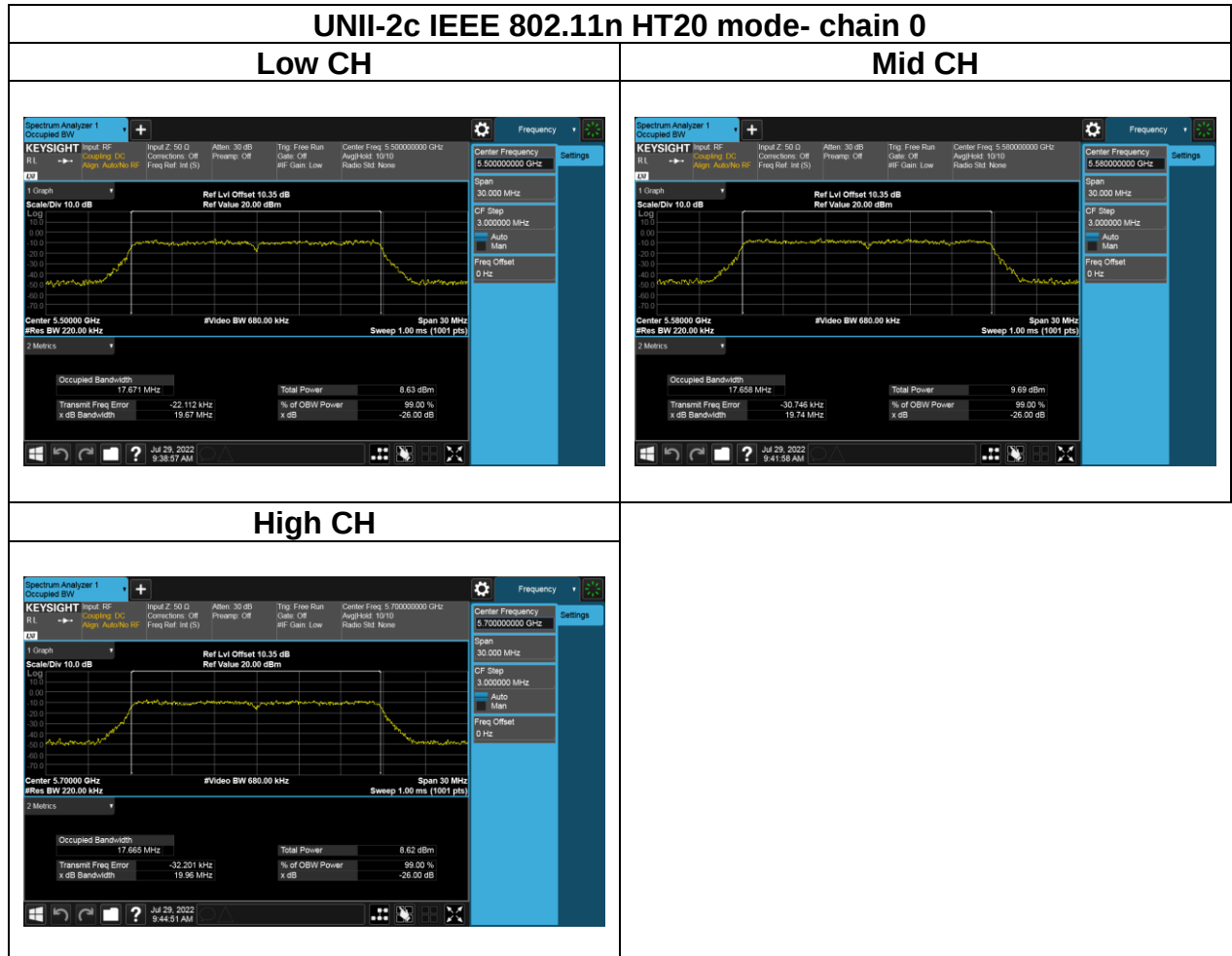


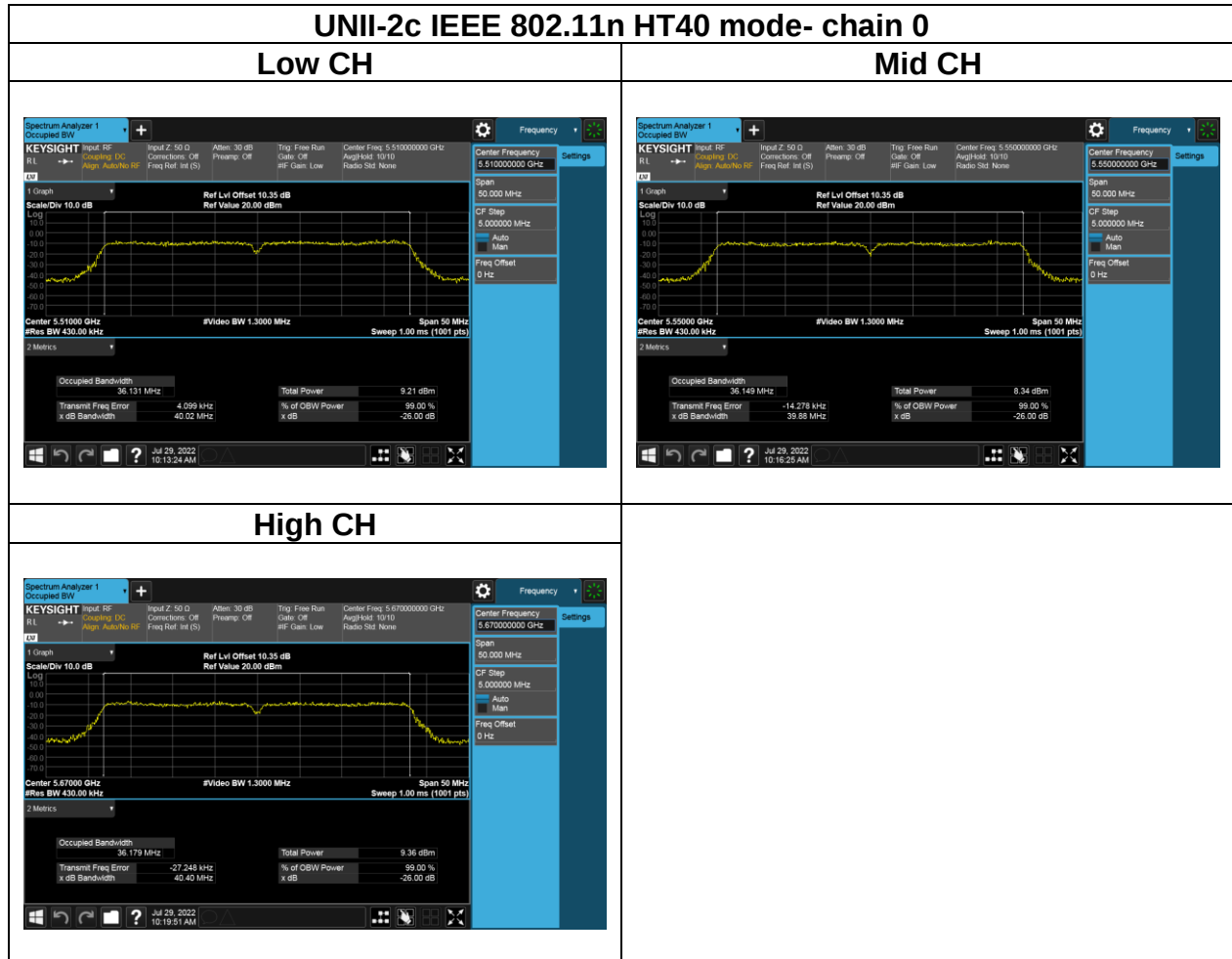


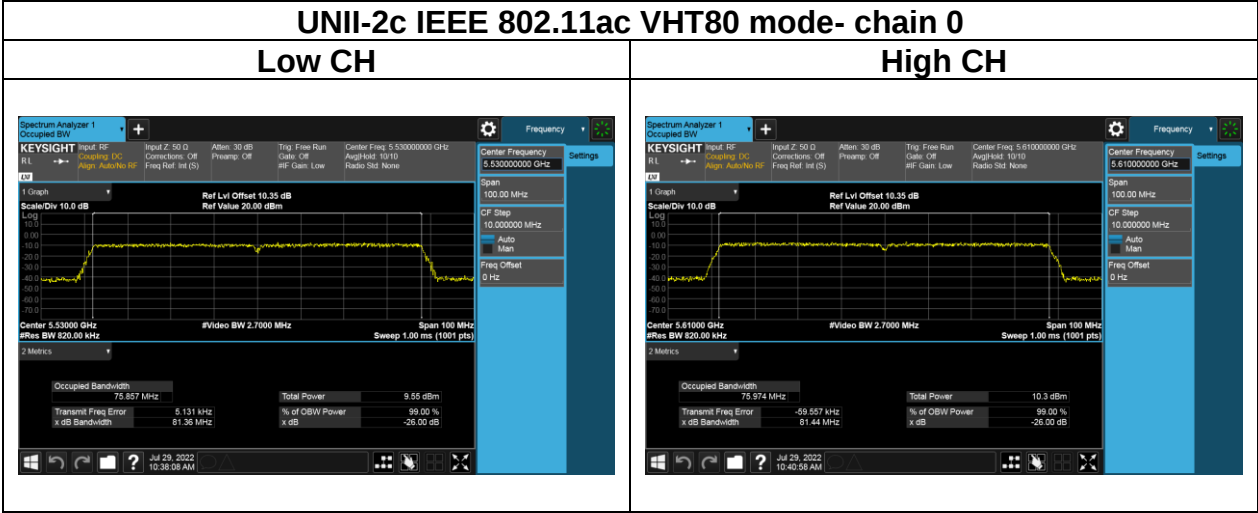


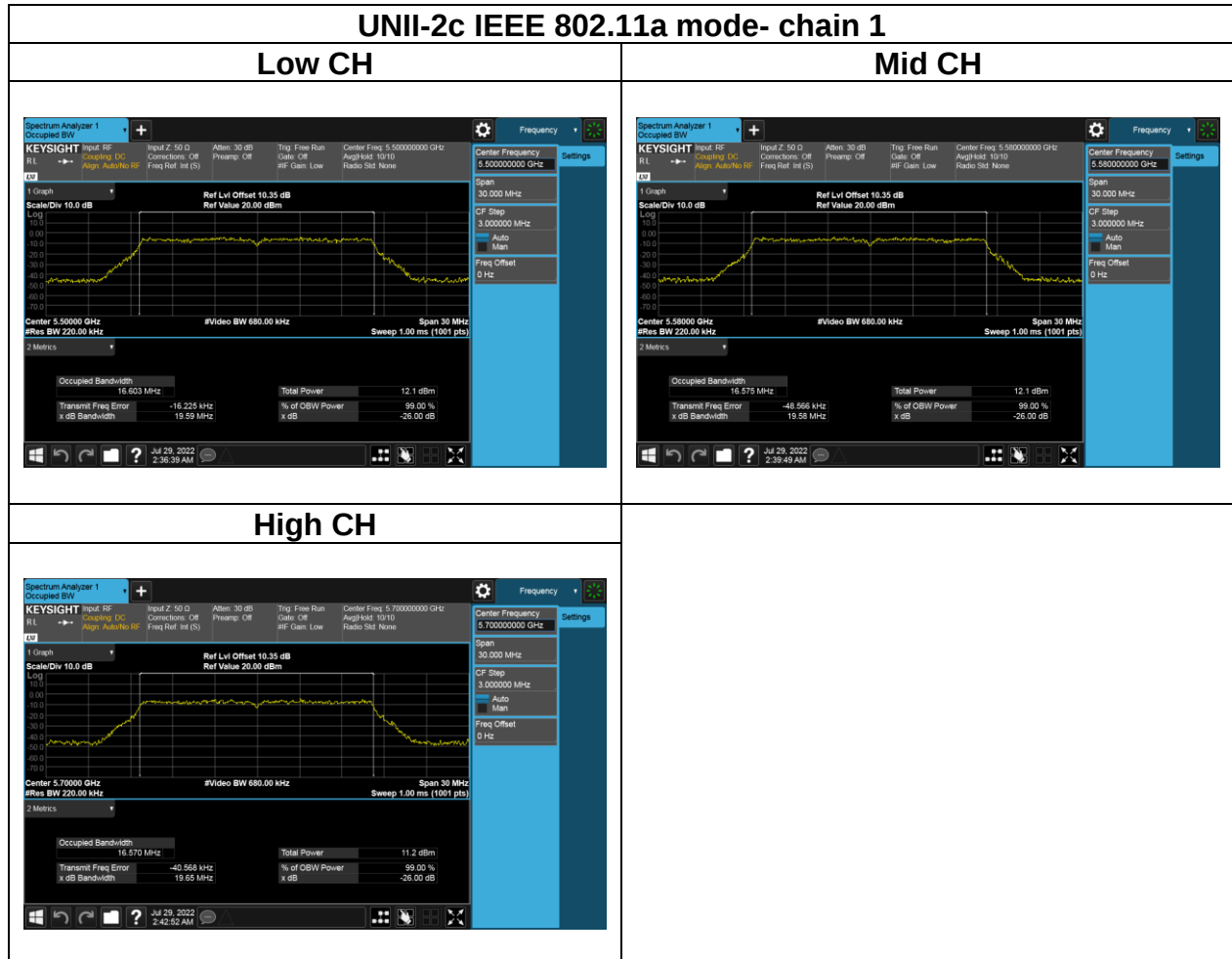
## Test Plots (26dB BANDWIDTH)

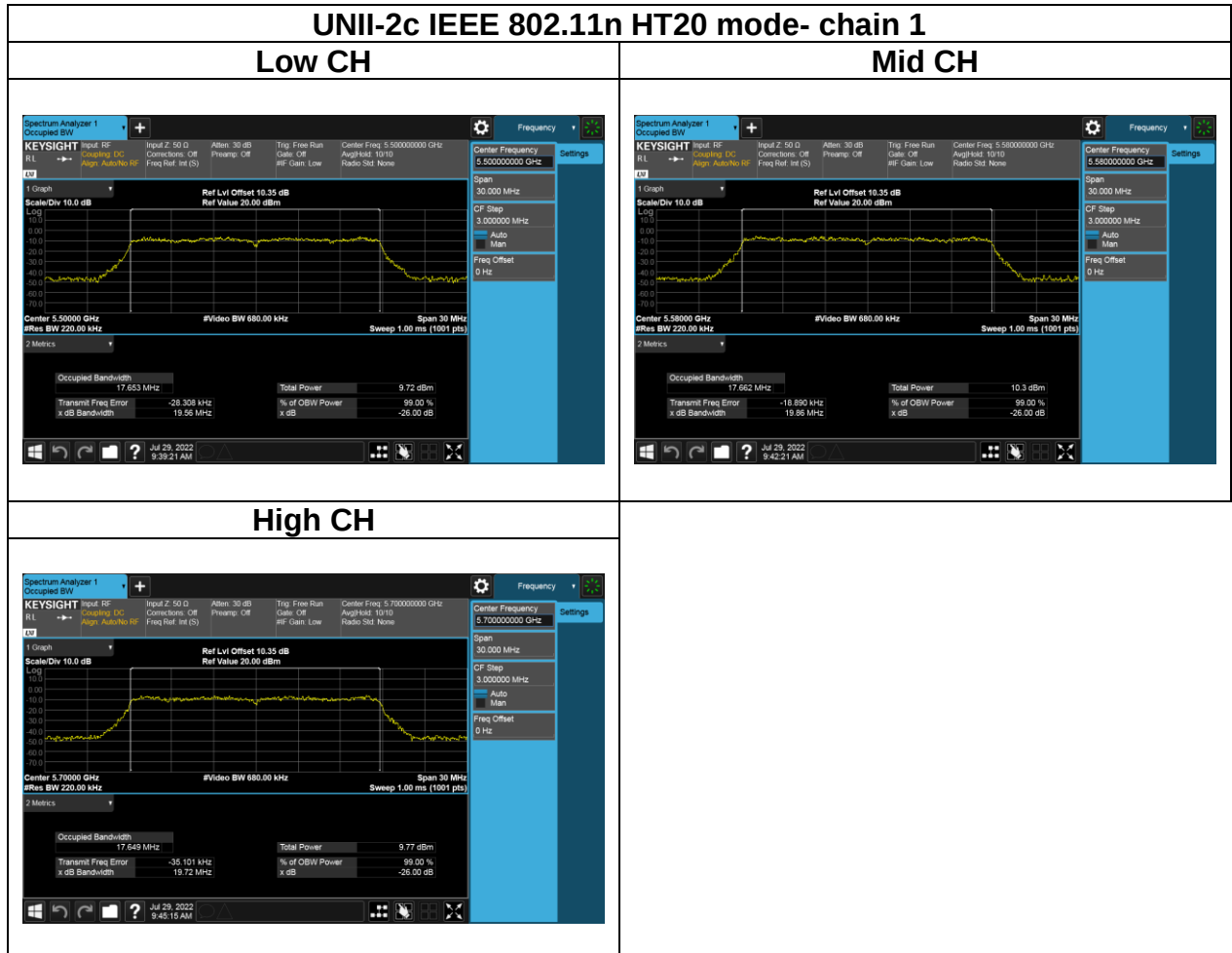


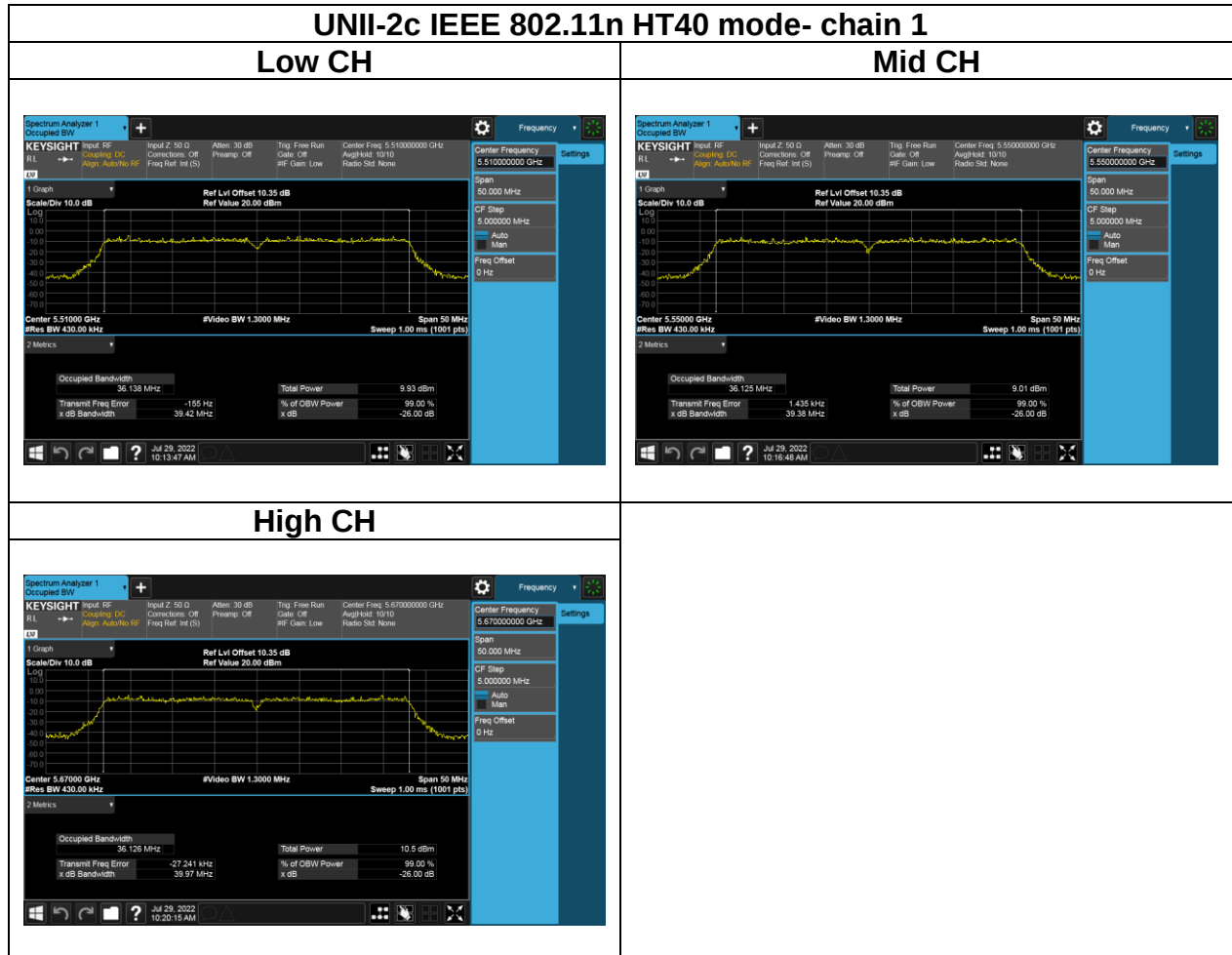


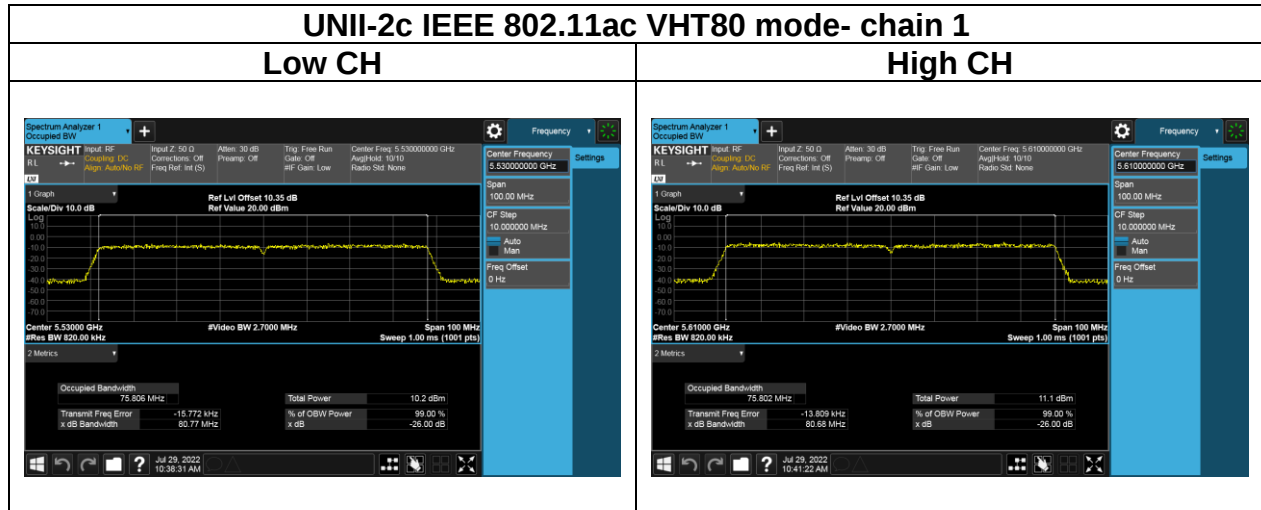














Report No.: TMWK2207002920KR

Page: 48 / 264

Rev.: 01

## Test Plots (6dB BANDWIDTH)

