

FCC Test Report

Report No.: RFBEQF-WTW-P22010504

FCC ID: BEJNT-14T90Q

Test Model: 14T90Q

Series Model: 14TD90Q, 14TG90Q, 14TB90Q (refer to item 3.1 for more details)

Received Date: Jan. 14, 2022

Test Date: Feb. 11 ~ Mar. 02, 2022

Issued Date: Mar. 25, 2022

Applicant: LG Electronics USA

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003
Designation Number(1):
FCC Registration / 281270 / TW0032
Designation Number(2):



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Release Control Record


| Issue No. | Description | Date Issued |
|----------------------|-------------------|---------------|
| RFBEQF-WTW-P22010504 | Original release. | Mar. 25, 2022 |

1 Certificate of Conformity

Product: Notebook Computer
Brand: LG
Test Model: 14T90Q
Series Model: 14TD90Q, 14TG90Q, 14TB90Q (refer to item 3.1 for more details)
Sample Status: Engineering sample
Applicant: LG Electronics USA
Test Date: Feb. 11 ~ Mar. 02, 2022
Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : , **Date:** Mar. 25, 2022
Polly Chien / Specialist

Approved by : , **Date:** Mar. 25, 2022
Jeremy Lin / Project Engineer

2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.247) | | | |
|--|--|--------|---|
| FCC Clause | Test Item | Result | Remarks |
| 15.207 | AC Power Conducted Emission | Pass | Meet the requirement of limit. Minimum passing margin is -23.46dB at 13.35016MHz. |
| 15.205 / 15.209 / 15.247(d) | Radiated Emissions and Band Edge Measurement | Pass | Meet the requirement of limit. Minimum passing margin is -0.41dB at 2390.000MHz. |
| 15.247(d) | Antenna Port Emission | Pass | Meet the requirement of limit. |
| 15.247(a)(2) | 6dB bandwidth | Pass | Meet the requirement of limit. |
| 15.247(b) | Conducted power | Pass | Meet the requirement of limit. |
| 15.247(e) | Power Spectral Density | Pass | Meet the requirement of limit. |
| 15.203 | Antenna Requirement | Pass | Antenna connector is I-PEX not a standard connector. |

Note:

- For 2.4G band compliance with rule 15.247(d) of the band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

| Measurement | Frequency | Expanded Uncertainty (k=2) (\pm) |
|------------------------------------|------------------|--------------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz | 2.79 dB |
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 3.00 dB |
| | 30MHz ~ 200MHz | 2.91 dB |
| | 200MHz ~ 1000MHz | 2.92 dB |
| Radiated Emissions above 1 GHz | 1GHz ~ 18GHz | 1.76 dB |
| | 18GHz ~ 40GHz | 1.77 dB |

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

| | |
|-----------------------|--|
| Product | Notebook Computer |
| Brand | LG |
| Test Model | 14T90Q |
| Series Model | 14TD90Q, 14TG90Q, 14TB90Q |
| Model Difference | For marketing purpose |
| Sample Status | Engineering sample |
| Power Supply Rating | 7.7 Vdc (Battery) 5 Vdc / 15Vdc / 9Vdc / 20Vdc (Adapter) |
| Modulation Type | CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA |
| Modulation Technology | DSSS, OFDM, OFDMA |
| Transfer Rate | 802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ax: up to 573.5Mbps |
| Operating Frequency | 2412~2472MHz |
| Number of Channel | 802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20): 13 802.11n (HT40), 802.11ax (HE40): 9 |
| Output Power | 1TX: 206.063mW 2TX: 466.533mW |
| Antenna Type | Refer to Note |
| Antenna Connector | Refer to Note |
| Accessory Device | Refer to Note |
| Cable Supplied | Refer to Note |

Note:

1. The EUT contains following accessory devices.

| Product | Brand | Model | Description |
|---------|-------|-----------------|--|
| Battery | LG | LBS1224E | 7.7Vdc, 72Wh or Typ. 9450mAh or Min 9130 mAh |
| Adapter | LG | ADT-65DSU-D03-2 | I/P: 100-240Vac, 50-60Hz, 1.6A O/P: 20Vdc, 3.25A, 65W (USB-PD) 5.0Vdc, 3.0A, 15.0W or 9.0Vdc, 3.0A, 27.0 W or 15.0Vdc, 3.0A, 45.0W Power cord: 1.5m 1.47m |
| Module | Intel | AX211D2W | |

2. The antenna used in this EUT is listed as below table:

NB:

| Ant. Type | Brand | Ant. | Model | Antenna Peak Gain (dBi) | | | | | Connector |
|-----------|----------|------|-------------------------------------|-------------------------|--------------|--------------|--------------|--------------|-----------|
| | | | | 2400-2483.5MHz | 5150-5250MHz | 5250-5350MHz | 5470-5725MHz | 5725-5850MHz | |
| PIFA | CHILISIN | Main | DQ600111501 (BTEA00111525GC1A02) | 2.45 | 2.14 | 0.94 | 1.80 | 1.72 | I-PEX |
| | | Aux. | DQ600111501 (BTEA00111525GC1A02) | 1.39 | 2.12 | 2.64 | 2.40 | 0.90 | |
| | Pulse | Main | DQ602118000 (TZ21180) | 3.14 | 2.18 | 1.01 | 2.19 | 2.29 | I-PEX |
| | | Aux. | DQ602118000 (TZ21180) | 2.96 | 2.21 | 3.89 | 3.34 | 1.29 | |

Tablet:

| Ant. Type | Brand | Ant. | Model | Antenna Peak Gain (dBi) | | | | | Connector |
|-----------|----------|------|-------------------------------------|-------------------------|--------------|--------------|--------------|--------------|-----------|
| | | | | 2400-2483.5MHz | 5150-5250MHz | 5250-5350MHz | 5470-5725MHz | 5725-5850MHz | |
| PIFA | CHILISIN | Main | DQ600111501 (BTEA00111525GC1A02) | -0.50 | 1.37 | 0.75 | 1.30 | -0.42 | I-PEX |
| | | Aux. | DQ600111501 (BTEA00111525GC1A02) | 1.48 | 1.02 | 0.86 | 1.40 | 1.29 | |
| | Pulse | Main | DQ602118000 (TZ21180) | 0.03 | 1.65 | 1.05 | 1.36 | 0.58 | I-PEX |
| | | Aux. | DQ602118000 (TZ21180) | 1.91 | 1.25 | 0.98 | 1.91 | 1.57 | |

* The NB mode has the largest antenna and was chosen for final test.

3. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
4. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

| Modulation Mode | TX Function |
|-----------------|-------------|
| 802.11b | 1TX |
| 802.11g | 1TX |
| 802.11n (HT20) | 2TX |
| 802.11n (HT40) | 2TX |
| 802.11ax (HE20) | 2TX |
| 802.11ax (HE40) | 2TX |

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and HE20/HE40 on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

13 channels are provided for 802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 1 | 2412MHz | 8 | 2447MHz |
| 2 | 2417MHz | 9 | 2452MHz |
| 3 | 2422MHz | 10 | 2457MHz |
| 4 | 2427MHz | 11 | 2462MHz |
| 5 | 2432MHz | 12 | 2467MHz |
| 6 | 2437MHz | 13 | 2472MHz |
| 7 | 2442MHz | | |

9 channels are provided for 802.11n (HT40), 802.11ax (HE40):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 3 | 2422MHz | 8 | 2447MHz |
| 4 | 2427MHz | 9 | 2452MHz |
| 5 | 2432MHz | 10 | 2457MHz |
| 6 | 2437MHz | 11 | 2462MHz |
| 7 | 2442MHz | | |

3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT Configure Mode | Applicable to | | | | Description |
|--------------------|---------------|-----------|-----|------|-------------|
| | RE \geq 1G | RE $<$ 1G | PLC | APCM | |
| - | √ | √ | √ | √ | - |

Where RE \geq 1G: Radiated Emission above 1GHz & Bandedge Measurement
 RE $<$ 1G: Radiated Emission below 1GHz
 PLC: Power Line Conducted Emission
 APCM: Antenna Port Conducted Measurement

Note:

1. Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power channel for final testing.
- 2.

Radiated Emission Test (Above 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) | Remark |
|--------------------|--------------------|-------------------|------------------|-----------------------|-----------------|------------------|--------|
| - | 802.11b | 1 to 13 | 1, 6, 11, 12, 13 | DSSS | DBPSK | 1.0 | - |
| - | 802.11g | 1 to 13 | 1, 6, 11, 12, 13 | OFDM | BPSK | 6.0 | - |
| - | 802.11ax (HE20) | 1 to 13 | 1, 6, 11, 12, 13 | OFDMA | BPSK | MCS0 | - |
| - | 802.11ax (HE40) | 3 to 11 | 3, 6, 9, 10, 11 | OFDMA | BPSK | MCS0 | - |
| - | 802.11ax (HE20) RU | 1 to 13 | 1, 13 | OFDMA | BPSK | MCS0 | - |
| - | 802.11ax (HE40) RU | 3 to 11 | 3, 11 | OFDMA | BPSK | MCS0 | - |

Radiated Emission Test (Below 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) | Remark |
|--------------------|-----------------|-------------------|----------------|-----------------------|-----------------|------------------|--------|
| - | 802.11ax (HE20) | 1 to 13 | 6 | OFDMA | BPSK | MCS0 | - |

Power Line Conducted Emission Test:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) | Remark |
|--------------------|-----------------|-------------------|----------------|-----------------------|-----------------|------------------|--------|
| - | 802.11ax (HE20) | 1 to 13 | 6 | OFDMA | BPSK | MCS0 | - |

Conducted Emission Measurement:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) |
|--------------------|-----------------------|-------------------|------------------|-----------------------|-----------------|------------------|
| - | 802.11b | 1 to 13 | 1, 6, 11, 12, 13 | DSSS | DBPSK | 1.0 |
| - | 802.11g | 1 to 13 | 1, 6, 11, 12, 13 | OFDM | BPSK | 6.0 |
| - | 802.11n (HT20) | 1 to 13 | 1, 6, 11, 12, 13 | OFDM | BPSK | MCS0 |
| - | 802.11n (HT40) | 3 to 11 | 3, 6, 9, 10, 11 | OFDM | BPSK | MCS0 |
| - | 802.11ax (HE20) | 1 to 13 | 1, 6, 11, 12, 13 | OFDMA | BPSK | MCS0 |
| - | 802.11ax (HE40) | 3 to 11 | 3, 6, 9, 10, 11 | OFDMA | BPSK | MCS0 |
| - | 802.11ax (HE20) RU | 1 to 13 | 1, 13 | OFDMA | BPSK | MCS0 |
| - | 802.11ax (HE40) RU | 3 to 11 | 3, 11 | OFDMA | BPSK | MCS0 |

Power Spectral Density, Bandwidth and Conducted Out of Band Emission Measurement:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) |
|--------------------|-----------------|-------------------|------------------|-----------------------|-----------------|------------------|
| - | 802.11b | 1 to 13 | 1, 6, 11, 12, 13 | DSSS | DBPSK | 1.0 |
| - | 802.11g | 1 to 13 | 1, 6, 11, 12, 13 | OFDM | BPSK | 6.0 |
| - | 802.11ax (HE20) | 1 to 13 | 1, 6, 11, 12, 13 | OFDMA | BPSK | MCS0 |
| - | 802.11ax (HE40) | 3 to 11 | 3, 6, 9, 10, 11 | OFDMA | BPSK | MCS0 |

Test Condition:

| Applicable to | Environmental Conditions | Input Power | Tested by |
|---------------|--|--------------|-------------------------|
| RE≥1G | 22 deg. C, 69% RH 23 deg. C, 66% RH | 120Vac, 60Hz | Wade Huang, Randy Wu |
| RE<1G | 23 deg. C, 66% RH | 120Vac, 60Hz | Adair Peng |
| PLC | 25 deg. C, 75% RH | 120Vac, 60Hz | Randy Wu |
| APCM | 25 deg. C, 60% RH | 120Vac, 60Hz | Chris Lin |

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is > 98 %, duty factor is not required.

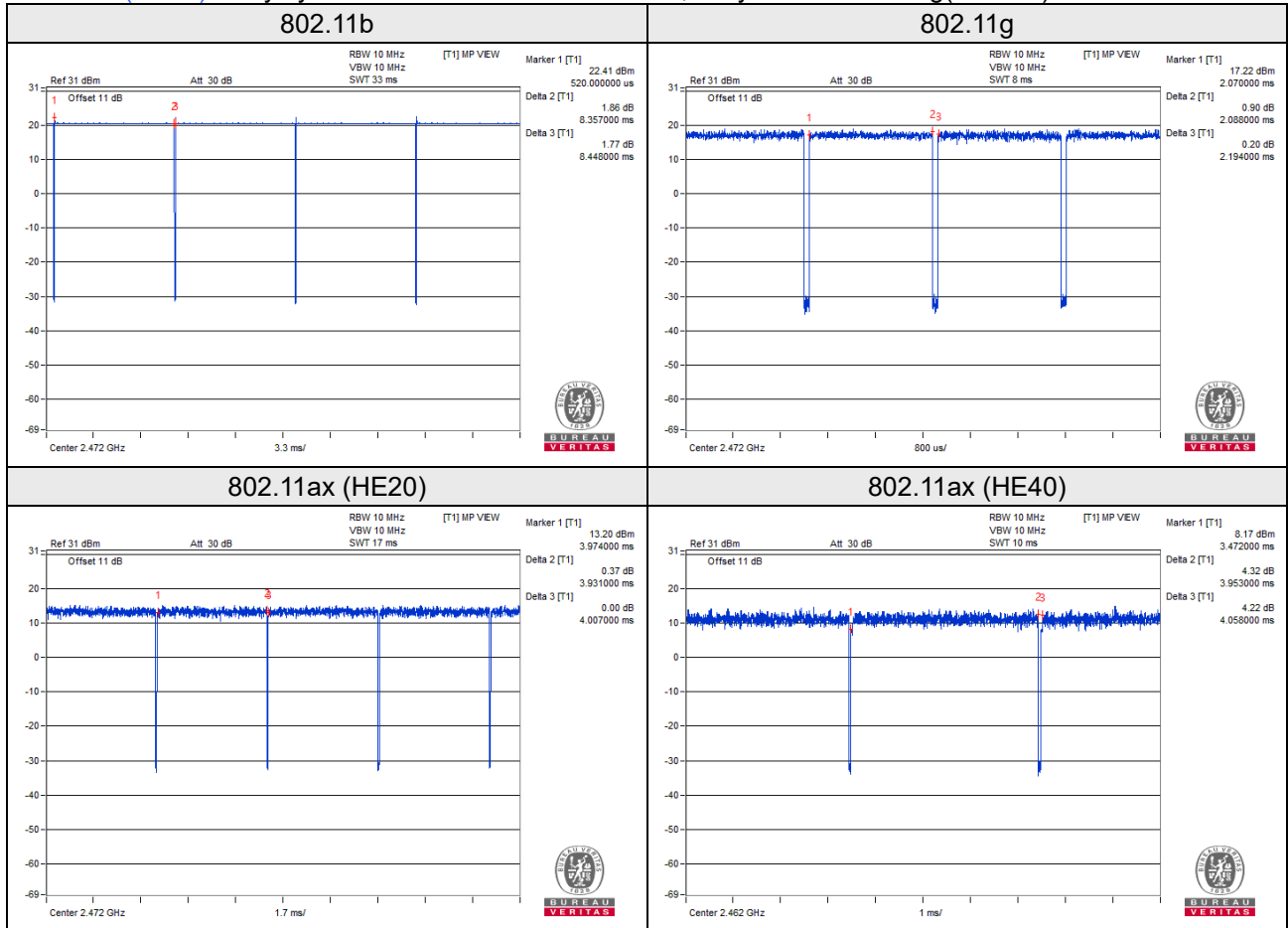
Duty cycle of test signal is < 98 %, duty factor is required.

802.11b: Duty cycle = 8.357ms/8.448ms = 0.989

802.11g: Duty cycle = 2.088ms/2.194ms = 0.952, Duty factor = $10 * \log(1/0.952) = 0.22$

802.11ax (HE20): Duty cycle = 3.931ms/4.007ms = 0.981

802.11ax (HE40): Duty cycle = 3.953ms/4.058ms = 0.974, Duty factor = $10 * \log(1/0.974) = 0.11$

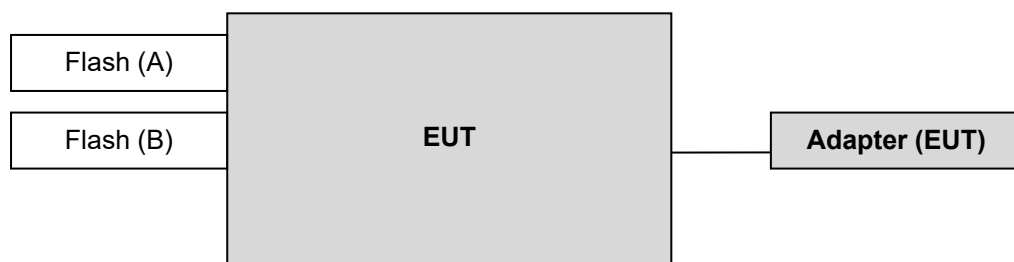


3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|----|---------|---------|-------------|------------|--------|---------|
| A. | Flash | SanDisk | SDDDC3-032G | 05 | NA | Type-C |
| B. | Flash | HP | v250W | 03 | NA | Type-A |

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test standard:

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|------------------------------------|------------------------------------|--------------------------|---------------|---------------|
| Test Receiver Rohde & Schwarz | ESR3 | 102579 | Jul. 05, 2021 | Jul. 04, 2022 |
| Spectrum Analyzer KEYSIGHT | N9020B | MY60110462 | Dec. 21, 2021 | Dec. 20, 2022 |
| BILOG Antenna SCHWARZBECK | VULB9168 | 995 | Oct. 28, 2021 | Oct. 27, 2022 |
| HORN Antenna F SPIN | DRH18-E | 210104A18E | Nov. 14, 2021 | Nov. 13, 2022 |
| Loop Antenna TESEQ | HLA 6121 | 45745 | Jul. 21, 2021 | Jul. 20, 2022 |
| Preamplifier EMCI | EMC330N | 980783 | Jan. 17, 2022 | Jan. 16, 2023 |
| Preamplifier EMCI | EMC184045SE | 980787 | Jan. 17, 2022 | Jan. 16, 2023 |
| RF signal cable EMCI | EMC104-SM-SM-(9 000+2000+1000) | 201230+ 201242+ 210101 | Jan. 17, 2022 | Jan. 16, 2023 |
| RF signal cable EMCI | EMCCFD400-NM-N M-(9000+300+500) | 201252+ 201250+ 201245 | Jan. 17, 2022 | Jan. 16, 2023 |
| RF signal cable EMCI | EMC101G-KM-KM- (5000+3000+2000) | 201261+201258+ 201249 | Jan. 17, 2022 | Jan. 16, 2023 |
| Software BV CPS | ADT_Radiated_V7. 6.15.9.5 | NA | NA | NA |
| Turn Table Max-Full | MFT-151SS-0.5T | NA | NA | NA |
| Turn Table Controller Max-Full | MF-7802BS | MF780208675 | NA | NA |
| Antenna Tower KaiTuo | NA | NA | NA | NA |
| Antenna Tower Controller KaiTuo | KT-2000 | NA | NA | NA |
| Peak Power Analyzer KEYSIGHT | 8990B | MY51000485 | Jan. 18, 2022 | Jan. 17, 2023 |
| Wideband Power Sensor KEYSIGHT | N1923A | MY58020002 | Jan. 17, 2022 | Jan. 16, 2023 |
| PXA Signal Analyzer KEYSIGHT | N9030B | MY57140938 | Mar. 09, 2021 | Mar. 08, 2022 |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in WM Chamber 7.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

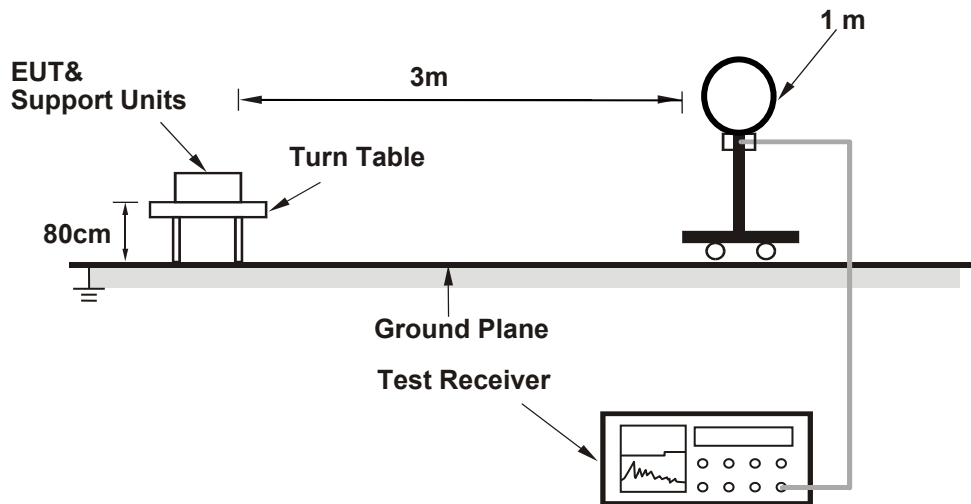
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
(802.11b: RBW = 1MHz, VBW = 10Hz; 802.11g: RBW = 1MHz, VBW = 1kHz;
802.11ax (HE20): RBW = 1MHz, VBW = 10Hz; 802.11ax (HE40): RBW = 1MHz, VBW = 1kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

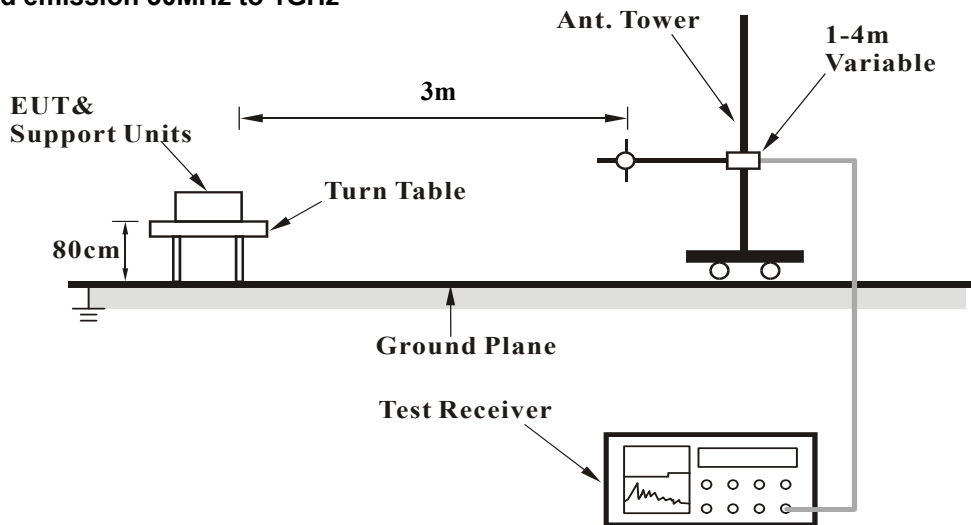
No deviation.

4.1.5 Test Setup

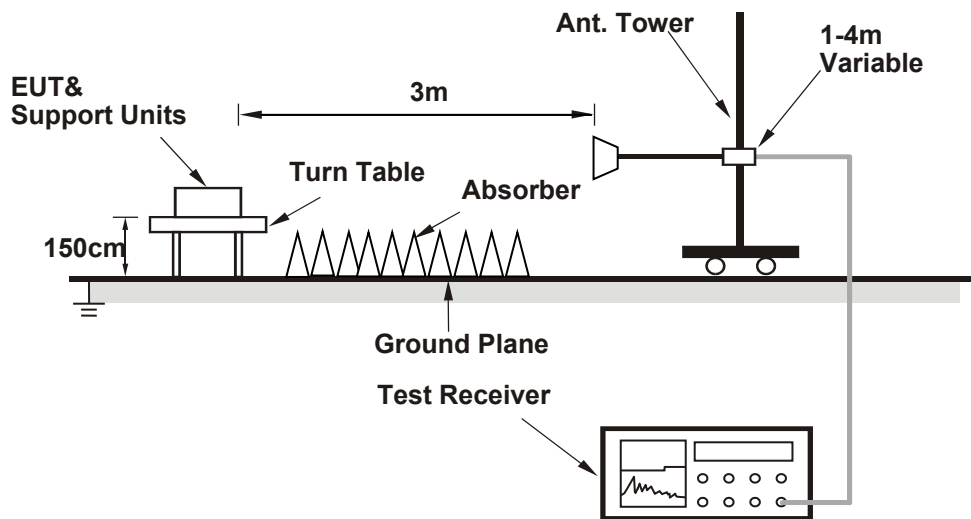
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

- Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz worst-Case data:

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11b | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 2383.00 | 57.34 PK | 74.00 | -16.66 | 1.45 H | 81 | 25.41 | 31.93 |
| 2 | 2383.00 | 42.24 AV | 54.00 | -11.76 | 1.45 H | 81 | 10.31 | 31.93 |
| 3 | *2412.00 | 105.22 PK | | | 1.45 H | 81 | 73.33 | 31.89 |
| 4 | *2412.00 | 99.87 AV | | | 1.45 H | 81 | 67.98 | 31.89 |
| 5 | 4824.00 | 47.92 PK | 74.00 | -26.08 | 3.31 H | 273 | 45.83 | 2.09 |
| 6 | 4824.00 | 39.58 AV | 54.00 | -14.42 | 3.31 H | 273 | 37.49 | 2.09 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 2383.00 | 58.81 PK | 74.00 | -15.19 | 3.43 V | 7 | 26.88 | 31.93 |
| 2 | 2383.00 | 47.31 AV | 54.00 | -6.69 | 3.43 V | 7 | 15.38 | 31.93 |
| 3 | *2412.00 | 111.84 PK | | | 3.43 V | 7 | 79.95 | 31.89 |
| 4 | *2412.00 | 106.53 AV | | | 3.43 V | 7 | 74.64 | 31.89 |
| 5 | 4824.00 | 50.78 PK | 74.00 | -23.22 | 2.95 V | 25 | 48.69 | 2.09 |
| 6 | 4824.00 | 43.75 AV | 54.00 | -10.25 | 2.95 V | 25 | 41.66 | 2.09 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11b | Channel | CH 6 : 2437 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 103.88 PK | | | 2.63 H | 139 | 72.05 | 31.83 |
| 2 | *2437.00 | 99.72 AV | | | 2.63 H | 139 | 67.89 | 31.83 |
| 3 | 4874.00 | 47.61 PK | 74.00 | -26.39 | 3.22 H | 275 | 45.49 | 2.12 |
| 4 | 4874.00 | 38.99 AV | 54.00 | -15.01 | 3.22 H | 275 | 36.87 | 2.12 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 109.97 PK | | | 3.69 V | 4 | 78.14 | 31.83 |
| 2 | *2437.00 | 105.97 AV | | | 3.69 V | 4 | 74.14 | 31.83 |
| 3 | 4874.00 | 48.12 PK | 74.00 | -25.88 | 1.00 V | 41 | 46.00 | 2.12 |
| 4 | 4874.00 | 43.53 AV | 54.00 | -10.47 | 1.00 V | 41 | 41.41 | 2.12 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11b | Channel | CH 11 : 2462 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 103.24 PK | | | 2.59 H | 139 | 71.41 | 31.83 |
| 2 | *2462.00 | 99.43 AV | | | 2.59 H | 139 | 67.60 | 31.83 |
| 3 | 2488.50 | 59.72 PK | 74.00 | -14.28 | 2.59 H | 139 | 27.84 | 31.88 |
| 4 | 2488.50 | 45.64 AV | 54.00 | -8.36 | 2.59 H | 139 | 13.76 | 31.88 |
| 5 | 4924.00 | 46.28 PK | 74.00 | -27.72 | 1.67 H | 255 | 44.10 | 2.18 |
| 6 | 4924.00 | 34.35 AV | 54.00 | -19.65 | 1.67 H | 255 | 32.17 | 2.18 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 109.57 PK | | | 3.66 V | 7 | 77.74 | 31.83 |
| 2 | *2462.00 | 105.49 AV | | | 3.66 V | 7 | 73.66 | 31.83 |
| 3 | 2488.50 | 58.12 PK | 74.00 | -15.88 | 3.66 V | 7 | 26.24 | 31.88 |
| 4 | 2488.50 | 44.59 AV | 54.00 | -9.41 | 3.66 V | 7 | 12.71 | 31.88 |
| 5 | 4924.00 | 46.63 PK | 74.00 | -27.37 | 2.09 V | 41 | 44.45 | 2.18 |
| 6 | 4924.00 | 38.01 AV | 54.00 | -15.99 | 2.09 V | 41 | 35.83 | 2.18 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11b | Channel | CH 12 : 2467 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 102.32 PK | | | 1.66 H | 102 | 70.48 | 31.84 |
| 2 | *2467.00 | 98.21 AV | | | 1.66 H | 102 | 66.37 | 31.84 |
| 3 | 2484.00 | 59.88 PK | 74.00 | -14.12 | 1.66 H | 102 | 28.01 | 31.87 |
| 4 | 2484.00 | 47.53 AV | 54.00 | -6.47 | 1.66 H | 102 | 15.66 | 31.87 |
| 5 | 4934.00 | 45.76 PK | 74.00 | -28.24 | 1.66 H | 214 | 43.56 | 2.20 |
| 6 | 4934.00 | 33.95 AV | 54.00 | -20.05 | 1.66 H | 214 | 31.75 | 2.20 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 109.94 PK | | | 3.31 V | 2 | 78.10 | 31.84 |
| 2 | *2467.00 | 105.82 AV | | | 3.31 V | 2 | 73.98 | 31.84 |
| 3 | 2484.00 | 60.22 PK | 74.00 | -13.78 | 3.31 V | 2 | 28.35 | 31.87 |
| 4 | 2484.00 | 50.70 AV | 54.00 | -3.30 | 3.31 V | 2 | 18.83 | 31.87 |
| 5 | 4934.00 | 46.63 PK | 74.00 | -27.37 | 1.69 V | 312 | 44.43 | 2.20 |
| 6 | 4934.00 | 36.26 AV | 54.00 | -17.74 | 1.69 V | 312 | 34.06 | 2.20 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11b | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 100.90 PK | | | 1.55 H | 100 | 69.05 | 31.85 |
| 2 | *2472.00 | 97.06 AV | | | 1.55 H | 100 | 65.21 | 31.85 |
| 3 | 2483.50 | 62.94 PK | 74.00 | -11.06 | 1.55 H | 100 | 31.07 | 31.87 |
| 4 | 2483.50 | 52.07 AV | 54.00 | -1.93 | 1.55 H | 100 | 20.20 | 31.87 |
| 5 | 4924.00 | 45.62 PK | 74.00 | -28.38 | 1.45 H | 282 | 43.44 | 2.18 |
| 6 | 4924.00 | 33.90 AV | 54.00 | -20.10 | 1.45 H | 282 | 31.72 | 2.18 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 109.17 PK | | | 3.29 V | 6 | 77.32 | 31.85 |
| 2 | *2472.00 | 105.08 AV | | | 3.29 V | 6 | 73.23 | 31.85 |
| 3 | 2483.50 | 67.92 PK | 74.00 | -6.08 | 3.29 V | 6 | 36.05 | 31.87 |
| 4 | 2483.50 | 53.39 AV | 54.00 | -0.61 | 3.29 V | 6 | 21.52 | 31.87 |
| 5 | 4944.00 | 46.39 PK | 74.00 | -27.61 | 3.25 V | 10 | 44.16 | 2.23 |
| 6 | 4944.00 | 33.97 AV | 54.00 | -20.03 | 3.25 V | 10 | 31.74 | 2.23 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11g | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 58.74 PK | 74.00 | -15.26 | 1.43 H | 80 | 26.81 | 31.93 |
| 2 | 2390.00 | 45.24 AV | 54.00 | -8.76 | 1.43 H | 80 | 13.31 | 31.93 |
| 3 | *2412.00 | 105.10 PK | | | 1.43 H | 80 | 73.21 | 31.89 |
| 4 | *2412.00 | 95.20 AV | | | 1.43 H | 80 | 63.31 | 31.89 |
| 5 | 4824.00 | 46.74 PK | 74.00 | -27.26 | 3.15 H | 125 | 44.65 | 2.09 |
| 6 | 4824.00 | 33.98 AV | 54.00 | -20.02 | 3.15 H | 125 | 31.89 | 2.09 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 59.71 PK | 74.00 | -14.29 | 2.93 V | 9 | 27.78 | 31.93 |
| 2 | 2390.00 | 45.88 AV | 54.00 | -8.12 | 2.93 V | 9 | 13.95 | 31.93 |
| 3 | *2412.00 | 111.27 PK | | | 3.29 V | 9 | 79.38 | 31.89 |
| 4 | *2412.00 | 101.54 AV | | | 3.29 V | 9 | 69.65 | 31.89 |
| 5 | 4824.00 | 46.46 PK | 74.00 | -27.54 | 2.93 V | 27 | 44.37 | 2.09 |
| 6 | 4824.00 | 34.27 AV | 54.00 | -19.73 | 2.93 V | 27 | 32.18 | 2.09 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 105.21 PK | | | 1.73 H | 140 | 73.38 | 31.83 |
| 2 | *2437.00 | 95.19 AV | | | 1.73 H | 140 | 63.36 | 31.83 |
| 3 | 4874.00 | 45.63 PK | 74.00 | -28.37 | 1.66 H | 258 | 43.51 | 2.12 |
| 4 | 4874.00 | 34.19 AV | 54.00 | -19.81 | 1.66 H | 258 | 32.07 | 2.12 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 112.03 PK | | | 3.24 V | 7 | 80.20 | 31.83 |
| 2 | *2437.00 | 101.96 AV | | | 3.24 V | 7 | 70.13 | 31.83 |
| 3 | 4874.00 | 47.41 PK | 74.00 | -26.59 | 1.20 V | 35 | 45.29 | 2.12 |
| 4 | 4874.00 | 35.62 AV | 54.00 | -18.38 | 1.20 V | 35 | 33.50 | 2.12 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11g | Channel | CH 11 : 2462 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 104.34 PK | | | 1.68 H | 141 | 72.51 | 31.83 |
| 2 | *2462.00 | 94.21 AV | | | 1.68 H | 141 | 62.38 | 31.83 |
| 3 | 2483.50 | 60.73 PK | 74.00 | -13.27 | 1.68 H | 141 | 28.86 | 31.87 |
| 4 | 2483.50 | 45.75 AV | 54.00 | -8.25 | 1.68 H | 141 | 13.88 | 31.87 |
| 5 | 4924.00 | 45.43 PK | 74.00 | -28.57 | 1.63 H | 241 | 43.25 | 2.18 |
| 6 | 4924.00 | 34.22 AV | 54.00 | -19.78 | 1.63 H | 241 | 32.04 | 2.18 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 110.98 PK | | | 3.37 V | 7 | 79.15 | 31.83 |
| 2 | *2462.00 | 101.46 AV | | | 3.37 V | 7 | 69.63 | 31.83 |
| 3 | 2483.50 | 68.09 PK | 74.00 | -5.91 | 3.37 V | 7 | 36.22 | 31.87 |
| 4 | 2483.50 | 51.12 AV | 54.00 | -2.88 | 3.37 V | 7 | 19.25 | 31.87 |
| 5 | 4924.00 | 45.85 PK | 74.00 | -28.15 | 3.41 V | 18 | 43.67 | 2.18 |
| 6 | 4924.00 | 34.40 AV | 54.00 | -19.60 | 3.41 V | 18 | 32.22 | 2.18 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11g | Channel | CH 12 : 2467 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 101.68 PK | | | 1.44 H | 99 | 69.84 | 31.84 |
| 2 | *2467.00 | 91.82 AV | | | 1.44 H | 99 | 59.98 | 31.84 |
| 3 | 2483.50 | 61.08 PK | 74.00 | -12.92 | 1.44 H | 99 | 29.21 | 31.87 |
| 4 | 2483.50 | 46.73 AV | 54.00 | -7.27 | 1.44 H | 99 | 14.86 | 31.87 |
| 5 | 4934.00 | 45.34 PK | 74.00 | -28.66 | 2.41 H | 255 | 43.14 | 2.20 |
| 6 | 4934.00 | 34.15 AV | 54.00 | -19.85 | 2.41 H | 255 | 31.95 | 2.20 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 110.13 PK | | | 3.32 V | 4 | 78.29 | 31.84 |
| 2 | *2467.00 | 99.89 AV | | | 3.32 V | 4 | 68.05 | 31.84 |
| 3 | 2483.50 | 70.34 PK | 74.00 | -3.66 | 3.32 V | 4 | 38.47 | 31.87 |
| 4 | 2483.50 | 53.07 AV | 54.00 | -0.93 | 3.32 V | 4 | 21.20 | 31.87 |
| 5 | 4934.00 | 45.87 PK | 74.00 | -28.13 | 1.33 V | 214 | 43.67 | 2.20 |
| 6 | 4934.00 | 34.22 AV | 54.00 | -19.78 | 1.33 V | 214 | 32.02 | 2.20 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------|-------------------|---------------------------|
| RF Mode | TX 802.11g | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 98.50 PK | | | 1.46 H | 97 | 66.65 | 31.85 |
| 2 | *2472.00 | 88.34 AV | | | 1.46 H | 97 | 56.49 | 31.85 |
| 3 | 2483.50 | 64.99 PK | 74.00 | -9.01 | 1.46 H | 97 | 33.12 | 31.87 |
| 4 | 2483.50 | 46.86 AV | 54.00 | -7.14 | 1.46 H | 97 | 14.99 | 31.87 |
| 5 | 4944.00 | 45.51 PK | 74.00 | -28.49 | 2.44 H | 156 | 43.28 | 2.23 |
| 6 | 4944.00 | 33.51 AV | 54.00 | -20.49 | 2.44 H | 156 | 31.28 | 2.23 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 107.34 PK | | | 3.29 V | 7 | 75.49 | 31.85 |
| 2 | *2472.00 | 96.20 AV | | | 3.29 V | 7 | 64.35 | 31.85 |
| 3 | 2483.50 | 72.06 PK | 74.00 | -1.94 | 3.29 V | 7 | 40.19 | 31.87 |
| 4 | 2483.50 | 52.87 AV | 54.00 | -1.13 | 3.29 V | 7 | 21.00 | 31.87 |
| 5 | 4944.00 | 45.86 PK | 74.00 | -28.14 | 3.00 V | 15 | 43.63 | 2.23 |
| 6 | 4944.00 | 33.91 AV | 54.00 | -20.09 | 3.00 V | 15 | 31.68 | 2.23 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Full RU

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 67.31 PK | 74.00 | -6.69 | 1.49 H | 300 | 35.38 | 31.93 |
| 2 | 2390.00 | 53.22 AV | 54.00 | -0.78 | 1.49 H | 300 | 21.29 | 31.93 |
| 3 | *2412.00 | 108.85 PK | | | 1.49 H | 300 | 76.96 | 31.89 |
| 4 | *2412.00 | 96.17 AV | | | 1.49 H | 300 | 64.28 | 31.89 |
| 5 | 4824.00 | 45.63 PK | 74.00 | -28.37 | 2.41 H | 286 | 44.31 | 1.32 |
| 6 | 4824.00 | 34.40 AV | 54.00 | -19.60 | 2.41 H | 286 | 33.08 | 1.32 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 66.33 PK | 74.00 | -7.67 | 3.86 V | 2 | 34.40 | 31.93 |
| 2 | 2390.00 | 51.40 AV | 54.00 | -2.60 | 3.86 V | 2 | 19.47 | 31.93 |
| 3 | *2412.00 | 113.56 PK | | | 3.86 V | 2 | 81.67 | 31.89 |
| 4 | *2412.00 | 101.45 AV | | | 3.86 V | 2 | 69.56 | 31.89 |
| 5 | 4824.00 | 47.75 PK | 74.00 | -26.25 | 1.83 V | 39 | 46.43 | 1.32 |
| 6 | 4824.00 | 36.18 AV | 54.00 | -17.82 | 1.83 V | 39 | 34.86 | 1.32 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) | Channel | CH 6 : 2437 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 109.28 PK | | | 1.43 H | 301 | 77.45 | 31.83 |
| 2 | *2437.00 | 97.66 AV | | | 1.43 H | 301 | 65.83 | 31.83 |
| 3 | 4874.00 | 46.47 PK | 74.00 | -27.53 | 2.25 H | 308 | 45.12 | 1.35 |
| 4 | 4874.00 | 34.36 AV | 54.00 | -19.64 | 2.25 H | 308 | 33.01 | 1.35 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 113.99 PK | | | 2.91 V | 7 | 82.16 | 31.83 |
| 2 | *2437.00 | 102.19 AV | | | 2.91 V | 7 | 70.36 | 31.83 |
| 3 | 4874.00 | 47.31 PK | 74.00 | -26.69 | 1.72 V | 42 | 45.96 | 1.35 |
| 4 | 4874.00 | 36.61 AV | 54.00 | -17.39 | 1.72 V | 42 | 35.26 | 1.35 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) | Channel | CH 11 : 2462 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 106.15 PK | | | 1.38 H | 300 | 74.32 | 31.83 |
| 2 | *2462.00 | 93.91 AV | | | 1.38 H | 300 | 62.08 | 31.83 |
| 3 | 2483.50 | 61.17 PK | 74.00 | -12.83 | 1.38 H | 300 | 29.30 | 31.87 |
| 4 | 2483.50 | 48.94 AV | 54.00 | -5.06 | 1.38 H | 300 | 17.07 | 31.87 |
| 5 | 4924.00 | 46.07 PK | 74.00 | -27.93 | 2.16 H | 302 | 44.66 | 1.41 |
| 6 | 4924.00 | 33.50 AV | 54.00 | -20.50 | 2.16 H | 302 | 32.09 | 1.41 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 112.65 PK | | | 3.20 V | 5 | 80.82 | 31.83 |
| 2 | *2462.00 | 99.33 AV | | | 3.20 V | 5 | 67.50 | 31.83 |
| 3 | 2483.50 | 69.91 PK | 74.00 | -4.09 | 3.20 V | 5 | 38.04 | 31.87 |
| 4 | 2483.50 | 53.24 AV | 54.00 | -0.76 | 3.20 V | 5 | 21.37 | 31.87 |
| 5 | 4924.00 | 46.68 PK | 74.00 | -27.32 | 1.83 V | 39 | 45.27 | 1.41 |
| 6 | 4924.00 | 34.50 AV | 54.00 | -19.50 | 1.83 V | 39 | 33.09 | 1.41 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) | Channel | CH 12 : 2467 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 102.75 PK | | | 1.46 H | 300 | 70.91 | 31.84 |
| 2 | *2467.00 | 91.01 AV | | | 1.46 H | 300 | 59.17 | 31.84 |
| 3 | 2483.50 | 58.07 PK | 74.00 | -15.93 | 1.46 H | 300 | 26.20 | 31.87 |
| 4 | 2483.50 | 47.16 AV | 54.00 | -6.84 | 1.46 H | 300 | 15.29 | 31.87 |
| 5 | 4934.00 | 45.49 PK | 74.00 | -28.51 | 2.20 H | 298 | 44.06 | 1.43 |
| 6 | 4934.00 | 33.47 AV | 54.00 | -20.53 | 2.20 H | 298 | 32.04 | 1.43 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2467.00 | 109.45 PK | | | 3.32 V | 3 | 77.61 | 31.84 |
| 2 | *2467.00 | 96.51 AV | | | 3.32 V | 3 | 64.67 | 31.84 |
| 3 | 2483.50 | 63.12 PK | 74.00 | -10.88 | 3.32 V | 3 | 31.25 | 31.87 |
| 4 | 2483.50 | 49.56 AV | 54.00 | -4.44 | 3.32 V | 3 | 17.69 | 31.87 |
| 5 | 4934.00 | 44.57 PK | 74.00 | -29.43 | 1.54 V | 50 | 43.14 | 1.43 |
| 6 | 4934.00 | 33.55 AV | 54.00 | -20.45 | 1.54 V | 50 | 32.12 | 1.43 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 98.67 PK | | | 1.48 H | 303 | 66.82 | 31.85 |
| 2 | *2472.00 | 86.51 AV | | | 1.48 H | 303 | 54.66 | 31.85 |
| 3 | 2483.50 | 58.40 PK | 74.00 | -15.60 | 1.48 H | 303 | 26.53 | 31.87 |
| 4 | 2483.50 | 46.83 AV | 54.00 | -7.17 | 1.48 H | 303 | 14.96 | 31.87 |
| 5 | 4944.00 | 44.50 PK | 74.00 | -29.50 | 2.45 H | 282 | 43.04 | 1.46 |
| 6 | 4944.00 | 33.64 AV | 54.00 | -20.36 | 2.45 H | 282 | 32.18 | 1.46 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 105.07 PK | | | 3.23 V | 5 | 73.22 | 31.85 |
| 2 | *2472.00 | 92.28 AV | | | 3.23 V | 5 | 60.43 | 31.85 |
| 3 | 2483.50 | 67.85 PK | 74.00 | -6.15 | 3.23 V | 5 | 35.98 | 31.87 |
| 4 | 2483.50 | 49.90 AV | 54.00 | -4.10 | 3.23 V | 5 | 18.03 | 31.87 |
| 5 | 4944.00 | 45.06 PK | 74.00 | -28.94 | 1.67 V | 46 | 43.60 | 1.46 |
| 6 | 4944.00 | 33.45 AV | 54.00 | -20.55 | 1.67 V | 46 | 31.99 | 1.46 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) | Channel | CH 3 : 2422 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 63.12 PK | 74.00 | -10.88 | 1.46 H | 300 | 31.19 | 31.93 |
| 2 | 2390.00 | 50.53 AV | 54.00 | -3.47 | 1.46 H | 300 | 18.60 | 31.93 |
| 3 | *2422.00 | 103.37 PK | | | 1.46 H | 300 | 71.49 | 31.88 |
| 4 | *2422.00 | 91.18 AV | | | 1.46 H | 300 | 59.30 | 31.88 |
| 5 | 4844.00 | 46.70 PK | 74.00 | -27.30 | 2.26 H | 266 | 44.60 | 2.10 |
| 6 | 4844.00 | 35.12 AV | 54.00 | -18.88 | 2.26 H | 266 | 33.02 | 2.10 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----------|-----------------|-------------------------|----------------|--------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 69.54 PK | 74.00 | -4.46 | 3.87 V | 3 | 37.61 | 31.93 |
| 2 | 2390.00 | 53.59 AV | 54.00 | -0.41 | 3.87 V | 3 | 21.66 | 31.93 |
| 3 | *2422.00 | 109.28 PK | | | 3.87 V | 3 | 77.40 | 31.88 |
| 4 | *2422.00 | 95.81 AV | | | 3.87 V | 3 | 63.93 | 31.88 |
| 5 | 4844.00 | 47.28 PK | 74.00 | -26.72 | 1.95 V | 40 | 45.18 | 2.10 |
| 6 | 4844.00 | 35.56 AV | 54.00 | -18.44 | 1.95 V | 40 | 33.46 | 2.10 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) | Channel | CH 6 : 2437 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 105.57 PK | | | 1.43 H | 302 | 73.74 | 31.83 |
| 2 | *2437.00 | 93.28 AV | | | 1.43 H | 302 | 61.45 | 31.83 |
| 3 | 2483.50 | 65.51 PK | 74.00 | -8.49 | 1.43 H | 302 | 33.64 | 31.87 |
| 4 | 2483.50 | 51.46 AV | 54.00 | -2.54 | 1.43 H | 302 | 19.59 | 31.87 |
| 5 | 4874.00 | 47.25 PK | 74.00 | -26.75 | 1.79 H | 43 | 45.13 | 2.12 |
| 6 | 4874.00 | 34.74 AV | 54.00 | -19.26 | 1.79 H | 43 | 32.62 | 2.12 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2437.00 | 110.54 PK | | | 3.84 V | 36 | 78.71 | 31.83 |
| 2 | *2437.00 | 98.11 AV | | | 3.84 V | 36 | 66.28 | 31.83 |
| 3 | 2483.50 | 66.04 PK | 74.00 | -7.96 | 3.84 V | 36 | 34.17 | 31.87 |
| 4 | 2483.50 | 53.10 AV | 54.00 | -0.90 | 3.84 V | 36 | 21.23 | 31.87 |
| 5 | 4874.00 | 47.43 PK | 74.00 | -26.57 | 1.87 V | 51 | 45.31 | 2.12 |
| 6 | 4874.00 | 35.79 AV | 54.00 | -18.21 | 1.87 V | 51 | 33.67 | 2.12 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) | Channel | CH 9 : 2452 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2452.00 | 102.61 PK | | | 1.41 H | 303 | 70.80 | 31.81 |
| 2 | *2452.00 | 89.36 AV | | | 1.41 H | 303 | 57.55 | 31.81 |
| 3 | 2483.50 | 62.58 PK | 74.00 | -11.42 | 1.41 H | 303 | 30.71 | 31.87 |
| 4 | 2483.50 | 48.56 AV | 54.00 | -5.44 | 1.41 H | 303 | 16.69 | 31.87 |
| 5 | 4904.00 | 46.36 PK | 74.00 | -27.64 | 1.83 H | 56 | 44.21 | 2.15 |
| 6 | 4904.00 | 34.40 AV | 54.00 | -19.60 | 1.83 H | 56 | 32.25 | 2.15 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2452.00 | 107.96 PK | | | 3.71 V | 6 | 76.15 | 31.81 |
| 2 | *2452.00 | 95.43 AV | | | 3.71 V | 6 | 63.62 | 31.81 |
| 3 | 2483.50 | 68.44 PK | 74.00 | -5.56 | 3.71 V | 6 | 36.57 | 31.87 |
| 4 | 2483.50 | 53.17 AV | 54.00 | -0.83 | 3.71 V | 6 | 21.30 | 31.87 |
| 5 | 4904.00 | 47.66 PK | 74.00 | -26.34 | 1.99 V | 44 | 45.51 | 2.15 |
| 6 | 4904.00 | 34.41 AV | 54.00 | -19.59 | 1.99 V | 44 | 32.26 | 2.15 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) | Channel | CH 10 : 2457 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2457.00 | 100.03 PK | | | 1.31 H | 297 | 68.21 | 31.82 |
| 2 | *2457.00 | 87.06 AV | | | 1.31 H | 297 | 55.24 | 31.82 |
| 3 | 2483.50 | 60.11 PK | 74.00 | -13.89 | 1.31 H | 297 | 28.24 | 31.87 |
| 4 | 2483.50 | 48.63 AV | 54.00 | -5.37 | 1.31 H | 297 | 16.76 | 31.87 |
| 5 | 4914.00 | 45.67 PK | 74.00 | -28.33 | 1.91 H | 47 | 43.50 | 2.17 |
| 6 | 4914.00 | 33.96 AV | 54.00 | -20.04 | 1.91 H | 47 | 31.79 | 2.17 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2457.00 | 105.42 PK | | | 3.65 V | 5 | 73.60 | 31.82 |
| 2 | *2457.00 | 92.05 AV | | | 3.65 V | 5 | 60.23 | 31.82 |
| 3 | 2483.50 | 66.77 PK | 74.00 | -7.23 | 3.65 V | 5 | 34.90 | 31.87 |
| 4 | 2483.50 | 53.08 AV | 54.00 | -0.92 | 3.65 V | 5 | 21.21 | 31.87 |
| 5 | 4914.00 | 46.24 PK | 74.00 | -27.76 | 1.82 V | 36 | 44.07 | 2.17 |
| 6 | 4914.00 | 34.29 AV | 54.00 | -19.71 | 1.82 V | 36 | 32.12 | 2.17 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|--------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) | Channel | CH 11 : 2462 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 96.50 PK | | | 1.30 H | 298 | 64.67 | 31.83 |
| 2 | *2462.00 | 84.23 AV | | | 1.30 H | 298 | 52.40 | 31.83 |
| 3 | 2483.50 | 58.27 PK | 74.00 | -15.73 | 1.30 H | 298 | 26.40 | 31.87 |
| 4 | 2483.50 | 47.16 AV | 54.00 | -6.84 | 1.30 H | 298 | 15.29 | 31.87 |
| 5 | 4924.00 | 46.64 PK | 74.00 | -27.36 | 1.85 H | 56 | 44.46 | 2.18 |
| 6 | 4924.00 | 34.07 AV | 54.00 | -19.93 | 1.85 H | 56 | 31.89 | 2.18 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 102.08 PK | | | 3.33 V | 7 | 70.25 | 31.83 |
| 2 | *2462.00 | 89.35 AV | | | 3.33 V | 7 | 57.52 | 31.83 |
| 3 | 2483.50 | 67.18 PK | 74.00 | -6.82 | 3.33 V | 7 | 35.31 | 31.87 |
| 4 | 2483.50 | 51.74 AV | 54.00 | -2.26 | 3.33 V | 7 | 19.87 | 31.87 |
| 5 | 4924.00 | 46.49 PK | 74.00 | -27.51 | 1.93 V | 48 | 44.31 | 2.18 |
| 6 | 4924.00 | 34.09 AV | 54.00 | -19.91 | 1.93 V | 48 | 31.91 | 2.18 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Partial RU

| | | | |
|-----------------|------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU26) | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 67.41 PK | 74.00 | -6.59 | 1.51 H | 81 | 35.48 | 31.93 |
| 2 | 2390.00 | 47.19 AV | 54.00 | -6.81 | 1.51 H | 81 | 15.26 | 31.93 |
| 3 | *2412.00 | 114.99 PK | | | 1.51 H | 81 | 83.10 | 31.89 |
| 4 | *2412.00 | 105.87 AV | | | 1.51 H | 81 | 73.98 | 31.89 |
| 5 | 4824.00 | 45.98 PK | 74.00 | -28.02 | 2.16 H | 189 | 43.89 | 2.09 |
| 6 | 4824.00 | 34.27 AV | 54.00 | -19.73 | 2.16 H | 189 | 32.18 | 2.09 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 66.56 PK | 74.00 | -7.44 | 3.85 V | 4 | 34.63 | 31.93 |
| 2 | 2390.00 | 47.01 AV | 54.00 | -6.99 | 3.85 V | 4 | 15.08 | 31.93 |
| 3 | *2412.00 | 118.21 PK | | | 3.85 V | 4 | 86.32 | 31.89 |
| 4 | *2412.00 | 109.77 AV | | | 3.85 V | 4 | 77.88 | 31.89 |
| 5 | 4824.00 | 46.88 PK | 74.00 | -27.12 | 1.79 V | 65 | 44.79 | 2.09 |
| 6 | 4824.00 | 34.84 AV | 54.00 | -19.16 | 1.79 V | 65 | 32.75 | 2.09 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU26) | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 105.35 PK | | | 1.59 H | 72 | 73.50 | 31.85 |
| 2 | *2472.00 | 93.69 AV | | | 1.59 H | 72 | 61.84 | 31.85 |
| 3 | 2483.50 | 64.85 PK | 74.00 | -9.15 | 1.59 H | 72 | 32.98 | 31.87 |
| 4 | 2483.50 | 45.29 AV | 54.00 | -8.71 | 1.59 H | 72 | 13.42 | 31.87 |
| 5 | 4944.00 | 46.10 PK | 74.00 | -27.90 | 2.20 H | 185 | 43.87 | 2.23 |
| 6 | 4944.00 | 35.02 AV | 54.00 | -18.98 | 2.20 H | 185 | 32.79 | 2.23 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 109.75 PK | | | 3.63 V | 2 | 77.90 | 31.85 |
| 2 | *2472.00 | 98.96 AV | | | 3.63 V | 2 | 67.11 | 31.85 |
| 3 | 2483.50 | 70.87 PK | 74.00 | -3.13 | 3.63 V | 2 | 39.00 | 31.87 |
| 4 | 2483.50 | 46.60 AV | 54.00 | -7.40 | 3.63 V | 2 | 14.73 | 31.87 |
| 5 | 4944.00 | 45.94 PK | 74.00 | -28.06 | 1.57 V | 167 | 43.71 | 2.23 |
| 6 | 4944.00 | 34.14 AV | 54.00 | -19.86 | 1.57 V | 167 | 31.91 | 2.23 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU52) | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 63.98 PK | 74.00 | -10.02 | 1.51 H | 79 | 32.05 | 31.93 |
| 2 | 2390.00 | 46.55 AV | 54.00 | -7.45 | 1.51 H | 79 | 14.62 | 31.93 |
| 3 | *2412.00 | 114.35 PK | | | 1.51 H | 79 | 82.46 | 31.89 |
| 4 | *2412.00 | 103.08 AV | | | 1.51 H | 79 | 71.19 | 31.89 |
| 5 | 4824.00 | 45.85 PK | 74.00 | -28.15 | 2.27 H | 177 | 43.76 | 2.09 |
| 6 | 4824.00 | 34.51 AV | 54.00 | -19.49 | 2.27 H | 177 | 32.42 | 2.09 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 67.42 PK | 74.00 | -6.58 | 3.86 V | 3 | 35.49 | 31.93 |
| 2 | 2390.00 | 46.69 AV | 54.00 | -7.31 | 3.86 V | 3 | 14.76 | 31.93 |
| 3 | *2412.00 | 118.08 PK | | | 3.86 V | 3 | 86.19 | 31.89 |
| 4 | *2412.00 | 106.80 AV | | | 3.86 V | 3 | 74.91 | 31.89 |
| 5 | 4824.00 | 46.31 PK | 74.00 | -27.69 | 1.83 V | 97 | 44.22 | 2.09 |
| 6 | 4824.00 | 34.30 AV | 54.00 | -19.70 | 1.83 V | 97 | 32.21 | 2.09 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.

| | | | |
|-----------------|------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU52) | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 103.35 PK | | | 1.61 H | 76 | 71.50 | 31.85 |
| 2 | *2472.00 | 91.47 AV | | | 1.61 H | 76 | 59.62 | 31.85 |
| 3 | 2483.50 | 66.36 PK | 74.00 | -7.64 | 1.61 H | 76 | 34.49 | 31.87 |
| 4 | 2483.50 | 45.52 AV | 54.00 | -8.48 | 1.61 H | 76 | 13.65 | 31.87 |
| 5 | 4944.00 | 46.15 PK | 74.00 | -27.85 | 2.03 H | 177 | 43.92 | 2.23 |
| 6 | 4944.00 | 35.04 AV | 54.00 | -18.96 | 2.03 H | 177 | 32.81 | 2.23 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 109.17 PK | | | 3.60 V | 4 | 77.32 | 31.85 |
| 2 | *2472.00 | 96.95 AV | | | 3.60 V | 4 | 65.10 | 31.85 |
| 3 | 2483.50 | 72.08 PK | 74.00 | -1.92 | 3.60 V | 4 | 40.21 | 31.87 |
| 4 | 2483.50 | 46.61 AV | 54.00 | -7.39 | 3.60 V | 4 | 14.74 | 31.87 |
| 5 | 4944.00 | 45.89 PK | 74.00 | -28.11 | 1.69 V | 181 | 43.66 | 2.23 |
| 6 | 4944.00 | 34.10 AV | 54.00 | -19.90 | 1.69 V | 181 | 31.87 | 2.23 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|-------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU106) | Channel | CH 1 : 2412 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 64.40 PK | 74.00 | -9.60 | 1.50 H | 77 | 32.47 | 31.93 |
| 2 | 2390.00 | 47.95 AV | 54.00 | -6.05 | 1.50 H | 77 | 16.02 | 31.93 |
| 3 | *2412.00 | 111.90 PK | | | 1.50 H | 77 | 80.01 | 31.89 |
| 4 | *2412.00 | 100.15 AV | | | 1.50 H | 77 | 68.26 | 31.89 |
| 5 | 4824.00 | 45.65 PK | 74.00 | -28.35 | 2.12 H | 199 | 43.56 | 2.09 |
| 6 | 4824.00 | 34.72 AV | 54.00 | -19.28 | 2.12 H | 199 | 32.63 | 2.09 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 67.35 PK | 74.00 | -6.65 | 3.84 V | 3 | 35.42 | 31.93 |
| 2 | 2390.00 | 48.09 AV | 54.00 | -5.91 | 3.84 V | 3 | 16.16 | 31.93 |
| 3 | *2412.00 | 115.55 PK | | | 3.84 V | 3 | 83.66 | 31.89 |
| 4 | *2412.00 | 104.05 AV | | | 3.84 V | 3 | 72.16 | 31.89 |
| 5 | 4824.00 | 47.06 PK | 74.00 | -26.94 | 1.47 V | 153 | 44.97 | 2.09 |
| 6 | 4824.00 | 36.37 AV | 54.00 | -17.63 | 1.47 V | 153 | 34.28 | 2.09 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.

| | | | |
|-----------------|-------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE20) (RU106) | Channel | CH 13 : 2472 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 101.04 PK | | | 1.69 H | 70 | 69.19 | 31.85 |
| 2 | *2472.00 | 88.61 AV | | | 1.69 H | 70 | 56.76 | 31.85 |
| 3 | 2483.50 | 68.01 PK | 74.00 | -5.99 | 1.69 H | 70 | 36.14 | 31.87 |
| 4 | 2483.50 | 45.10 AV | 54.00 | -8.90 | 1.69 H | 70 | 13.23 | 31.87 |
| 5 | 4944.00 | 46.22 PK | 74.00 | -27.78 | 1.98 H | 164 | 43.99 | 2.23 |
| 6 | 4944.00 | 35.16 AV | 54.00 | -18.84 | 1.98 H | 164 | 32.93 | 2.23 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2472.00 | 107.83 PK | | | 3.69 V | 3 | 75.98 | 31.85 |
| 2 | *2472.00 | 93.99 AV | | | 3.69 V | 3 | 62.14 | 31.85 |
| 3 | 2483.50 | 71.93 PK | 74.00 | -2.07 | 3.69 V | 3 | 40.06 | 31.87 |
| 4 | 2483.50 | 45.74 AV | 54.00 | -8.26 | 3.69 V | 3 | 13.87 | 31.87 |
| 5 | 4944.00 | 46.11 PK | 74.00 | -27.89 | 1.78 V | 153 | 43.88 | 2.23 |
| 6 | 4944.00 | 34.13 AV | 54.00 | -19.87 | 1.78 V | 153 | 31.90 | 2.23 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| | | | |
|-----------------|-------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) (RU242) | Channel | CH 3 : 2422 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 63.61 PK | 74.00 | -10.39 | 1.76 H | 74 | 31.68 | 31.93 |
| 2 | 2390.00 | 51.38 AV | 54.00 | -2.62 | 1.76 H | 74 | 19.45 | 31.93 |
| 3 | *2422.00 | 109.24 PK | | | 1.76 H | 74 | 77.36 | 31.88 |
| 4 | *2422.00 | 97.41 AV | | | 1.76 H | 74 | 65.53 | 31.88 |
| 5 | 4844.00 | 46.41 PK | 74.00 | -27.59 | 1.84 H | 155 | 44.31 | 2.10 |
| 6 | 4844.00 | 34.75 AV | 54.00 | -19.25 | 1.84 H | 155 | 32.65 | 2.10 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 2390.00 | 68.01 PK | 74.00 | -5.99 | 3.89 V | 4 | 36.08 | 31.93 |
| 2 | 2390.00 | 53.50 AV | 54.00 | -0.50 | 3.89 V | 4 | 21.57 | 31.93 |
| 3 | *2422.00 | 113.53 PK | | | 3.87 V | 4 | 81.65 | 31.88 |
| 4 | *2422.00 | 101.16 AV | | | 3.87 V | 4 | 69.28 | 31.88 |
| 5 | 4844.00 | 48.31 PK | 74.00 | -25.69 | 1.43 V | 34 | 46.21 | 2.10 |
| 6 | 4844.00 | 36.64 AV | 54.00 | -17.36 | 1.43 V | 34 | 34.54 | 2.10 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.

| | | | |
|-----------------|-------------------------------|-------------------|---------------------------|
| RF Mode | TX 802.11ax (HE40) (RU242) | Channel | CH 11 : 2462 MHz |
| Frequency Range | 1GHz ~ 25GHz | Detector Function | Peak (PK) Average (AV) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 96.82 PK | | | 1.71 H | 72 | 64.99 | 31.83 |
| 2 | *2462.00 | 85.02 AV | | | 1.71 H | 72 | 53.19 | 31.83 |
| 3 | 2483.50 | 67.55 PK | 74.00 | -6.45 | 1.71 H | 72 | 35.68 | 31.87 |
| 4 | 2483.50 | 45.40 AV | 54.00 | -8.60 | 1.71 H | 72 | 13.53 | 31.87 |
| 5 | 4924.00 | 46.74 PK | 74.00 | -27.26 | 1.93 H | 164 | 44.56 | 2.18 |
| 6 | 4924.00 | 34.93 AV | 54.00 | -19.07 | 1.93 H | 164 | 32.75 | 2.18 |

Antenna Polarity & Test Distance : Vertical at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | *2462.00 | 103.81 PK | | | 3.66 V | 2 | 71.98 | 31.83 |
| 2 | *2462.00 | 90.91 AV | | | 3.66 V | 2 | 59.08 | 31.83 |
| 3 | 2483.50 | 73.11 PK | 74.00 | -0.89 | 3.66 V | 2 | 41.24 | 31.87 |
| 4 | 2483.50 | 47.10 AV | 54.00 | -6.90 | 3.66 V | 2 | 15.23 | 31.87 |
| 5 | 4924.00 | 46.16 PK | 74.00 | -27.84 | 1.56 V | 57 | 43.98 | 2.18 |
| 6 | 4924.00 | 34.23 AV | 54.00 | -19.77 | 1.56 V | 57 | 32.05 | 2.18 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Below 1GHz worst-case data:

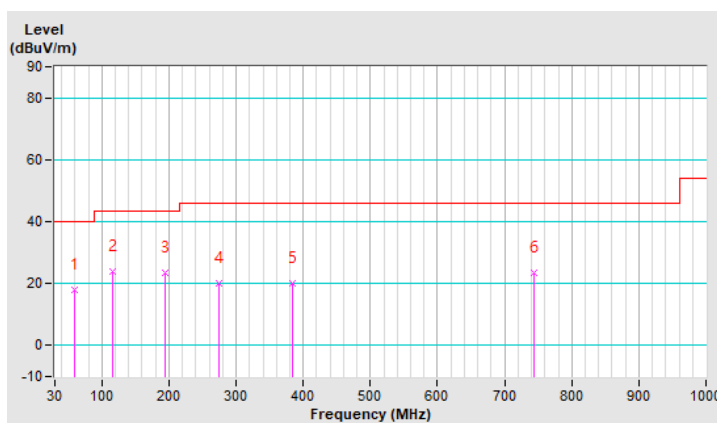
802.11ax (HE20)

| | | | |
|-----------------|--------------|-------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 60.07 | 18.05 QP | 40.00 | -21.95 | 2.00 H | 160 | 36.99 | -18.94 |
| 2 | 116.33 | 23.96 QP | 43.50 | -19.54 | 2.00 H | 128 | 44.68 | -20.72 |
| 3 | 194.90 | 23.68 QP | 43.50 | -19.82 | 1.51 H | 2 | 45.15 | -21.47 |
| 4 | 275.41 | 19.91 QP | 46.00 | -26.09 | 1.01 H | 252 | 38.13 | -18.22 |
| 5 | 384.05 | 20.27 QP | 46.00 | -25.73 | 2.00 H | 5 | 35.78 | -15.51 |
| 6 | 742.95 | 23.56 QP | 46.00 | -22.44 | 2.00 H | 125 | 31.76 | -8.20 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

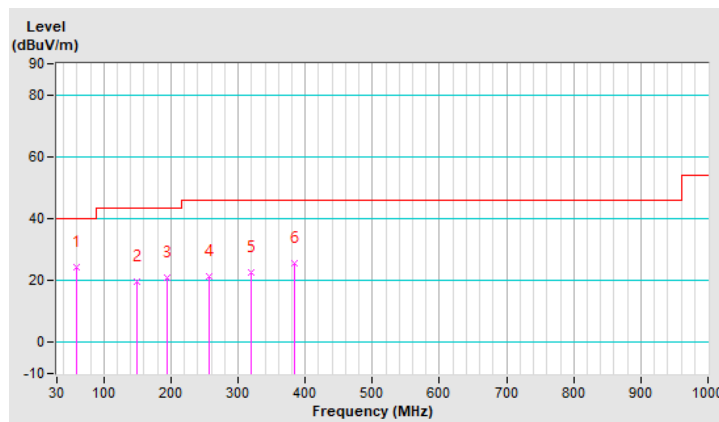


| | | | |
|-----------------|--------------|-------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 60.07 | 24.25 QP | 40.00 | -15.75 | 1.00 V | 250 | 43.19 | -18.94 |
| 2 | 148.34 | 19.65 QP | 43.50 | -23.85 | 1.00 V | 252 | 37.79 | -18.14 |
| 3 | 194.90 | 20.95 QP | 43.50 | -22.55 | 1.00 V | 192 | 42.42 | -21.47 |
| 4 | 256.01 | 21.46 QP | 46.00 | -24.54 | 1.00 V | 326 | 40.70 | -19.24 |
| 5 | 320.03 | 22.66 QP | 46.00 | -23.34 | 1.49 V | 54 | 39.67 | -17.01 |
| 6 | 384.05 | 25.41 QP | 46.00 | -20.59 | 1.00 V | 324 | 40.92 | -15.51 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) | |
|-----------------|------------------------|---------|
| | Quasi-peak | Average |
| 0.15 - 0.5 | 66 - 56 | 56 - 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

- Note:** 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|--------------------------|----------------|---------------|---------------|
| Test Receiver ROHDE & SCHWARZ | ESR3 | 102783 | Dec. 20, 2021 | Dec. 19, 2022 |
| RF signal cable (with 10dB PAD) Woken | 5D-FB | Cable-cond2-01 | Sep. 04, 2021 | Sep. 03, 2022 |
| V-LISN/AMN SCHWARZBECK (EUT) | NNBL 8226-2 | 8226-142 | Aug. 20, 2021 | Aug. 19, 2022 |
| LISN/AMN ROHDE & SCHWARZ (Peripheral) | ENV216 | 101196 | Apr. 26, 2021 | Apr. 25, 2022 |
| Software ADT | BV ADT_Cond_ V7.3.7.4 | NA | NA | NA |

- Note:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
 3. The VCCI Site Registration No. is C-12047.
 4. Tested date: Feb. 16, 2022

4.2.3 Test Procedures

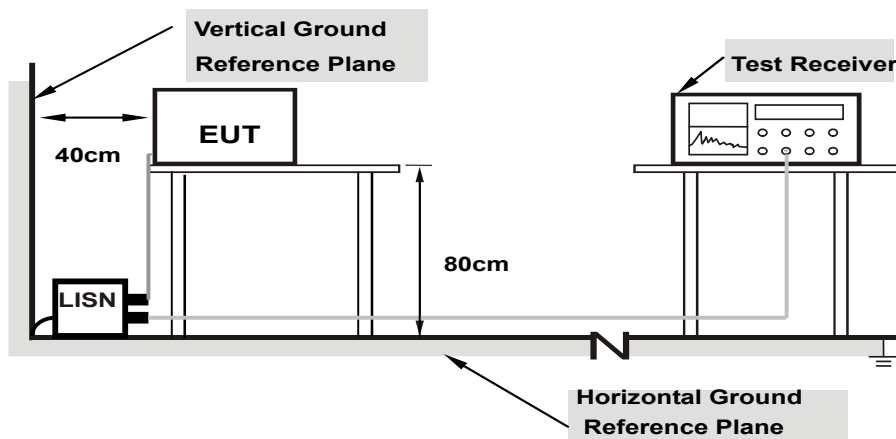
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

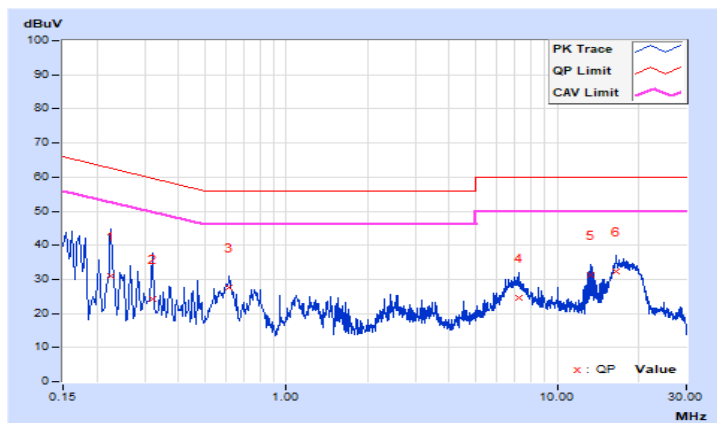
Worst-case data: 802.11ax (HE20)

| Phase | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|-------|----------|-------------------|--------------------------------|
|-------|----------|-------------------|--------------------------------|

| No | Freq. [MHz] | Corr. Factor (dB) | Reading Value [dB (uV)] | | Emission Level [dB (uV)] | | Limit [dB (uV)] | | Margin (dB) | |
|----------|-----------------|----------------------|----------------------------|--------------|-----------------------------|--------------|--------------------|--------------|----------------|---------------|
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| | | | 1 | 0.22429 | 10.13 | 20.76 | 0.64 | 30.89 | 10.77 | 62.66 |
| 2 | 0.32204 | 10.14 | 14.10 | 1.64 | 24.24 | 11.78 | 59.65 | 49.65 | -35.41 | -37.87 |
| 3 | 0.61529 | 10.15 | 17.46 | 11.07 | 27.61 | 21.22 | 56.00 | 46.00 | -28.39 | -24.78 |
| 4 | 7.23883 | 10.29 | 14.36 | 8.66 | 24.65 | 18.95 | 60.00 | 50.00 | -35.35 | -31.05 |
| 5 | 13.35016 | 10.37 | 21.02 | 16.17 | 31.39 | 26.54 | 60.00 | 50.00 | -28.61 | -23.46 |
| 6 | 16.47034 | 10.42 | 21.88 | 15.93 | 32.30 | 26.35 | 60.00 | 50.00 | -27.70 | -23.65 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

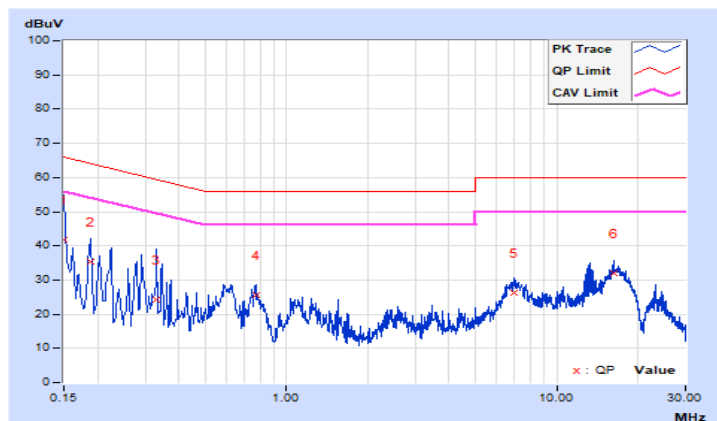


| | | | |
|-------|-------------|-------------------|--------------------------------|
| Phase | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|-------|-------------|-------------------|--------------------------------|

| No | Freq. [MHz] | Corr. Factor (dB) | Reading Value [dB (uV)] | | Emission Level [dB (uV)] | | Limit [dB (uV)] | | Margin (dB) | |
|----|----------------|-------------------------|----------------------------|---------|-----------------------------|-------|--------------------|-------|----------------|--------|
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| | | | 1 | 0.15000 | 10.12 | 31.76 | 17.36 | 41.88 | 27.48 | 66.00 |
| 2 | 0.18903 | 10.13 | 25.16 | 2.66 | 35.29 | 12.79 | 64.08 | 54.08 | -28.79 | -41.29 |
| 3 | 0.32986 | 10.14 | 14.05 | 2.22 | 24.19 | 12.36 | 59.45 | 49.45 | -35.26 | -37.09 |
| 4 | 0.76778 | 10.17 | 15.37 | 7.00 | 25.54 | 17.17 | 56.00 | 46.00 | -30.46 | -28.83 |
| 5 | 6.97295 | 10.35 | 15.95 | 10.18 | 26.30 | 20.53 | 60.00 | 50.00 | -33.70 | -29.47 |
| 6 | 16.22792 | 10.57 | 21.41 | 15.48 | 31.98 | 26.05 | 60.00 | 50.00 | -28.02 | -23.95 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

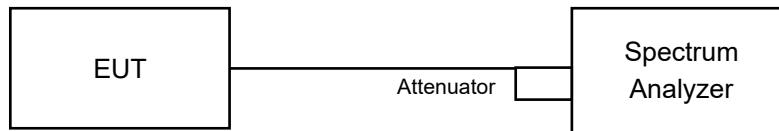


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

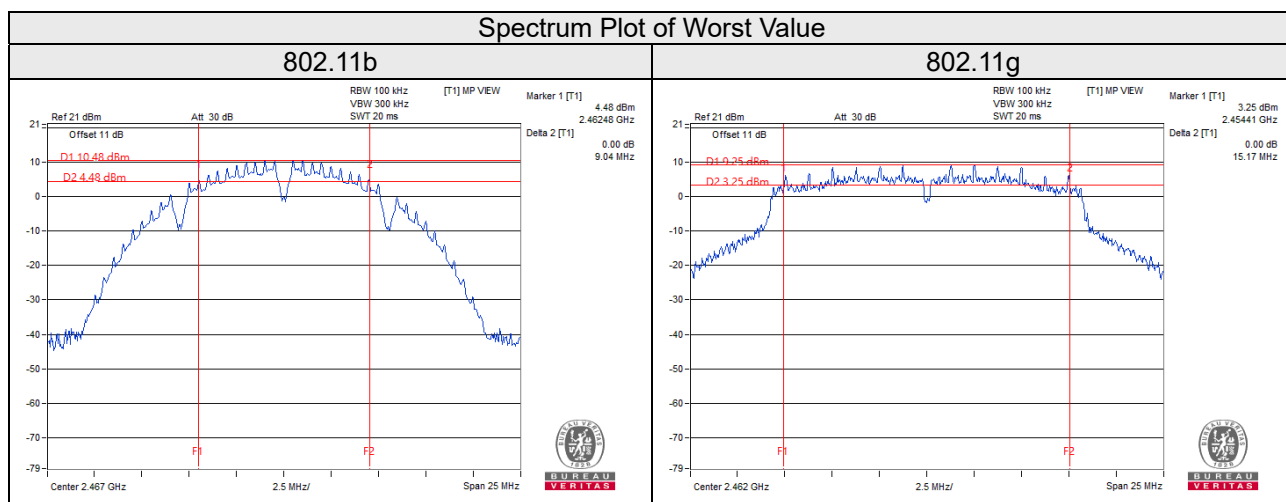
1TX: Chain 0

802.11b

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------------|-------------|
| 1 | 2412 | 9.06 | 0.5 | Pass |
| 6 | 2437 | 9.08 | 0.5 | Pass |
| 11 | 2462 | 9.09 | 0.5 | Pass |
| 12 | 2467 | 9.04 | 0.5 | Pass |
| 13 | 2472 | 9.08 | 0.5 | Pass |

802.11g

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------------|-------------|
| 1 | 2412 | 15.20 | 0.5 | Pass |
| 6 | 2437 | 15.18 | 0.5 | Pass |
| 11 | 2462 | 15.17 | 0.5 | Pass |
| 12 | 2467 | 15.18 | 0.5 | Pass |
| 13 | 2472 | 16.39 | 0.5 | Pass |



1TX: Chain 1

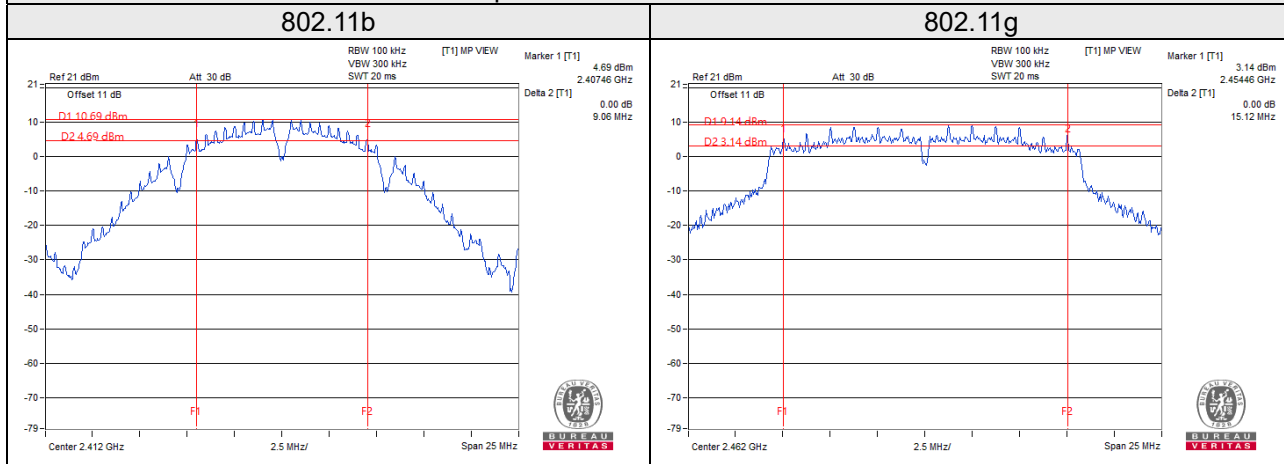
802.11b

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------------|-------------|
| 1 | 2412 | 9.06 | 0.5 | Pass |
| 6 | 2437 | 9.07 | 0.5 | Pass |
| 11 | 2462 | 9.08 | 0.5 | Pass |
| 12 | 2467 | 9.07 | 0.5 | Pass |
| 13 | 2472 | 9.08 | 0.5 | Pass |

802.11g

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------------|-------------|
| 1 | 2412 | 15.19 | 0.5 | Pass |
| 6 | 2437 | 15.17 | 0.5 | Pass |
| 11 | 2462 | 15.12 | 0.5 | Pass |
| 12 | 2467 | 15.19 | 0.5 | Pass |
| 13 | 2472 | 16.38 | 0.5 | Pass |

Spectrum Plot of Worst Value



2TX
Full RU

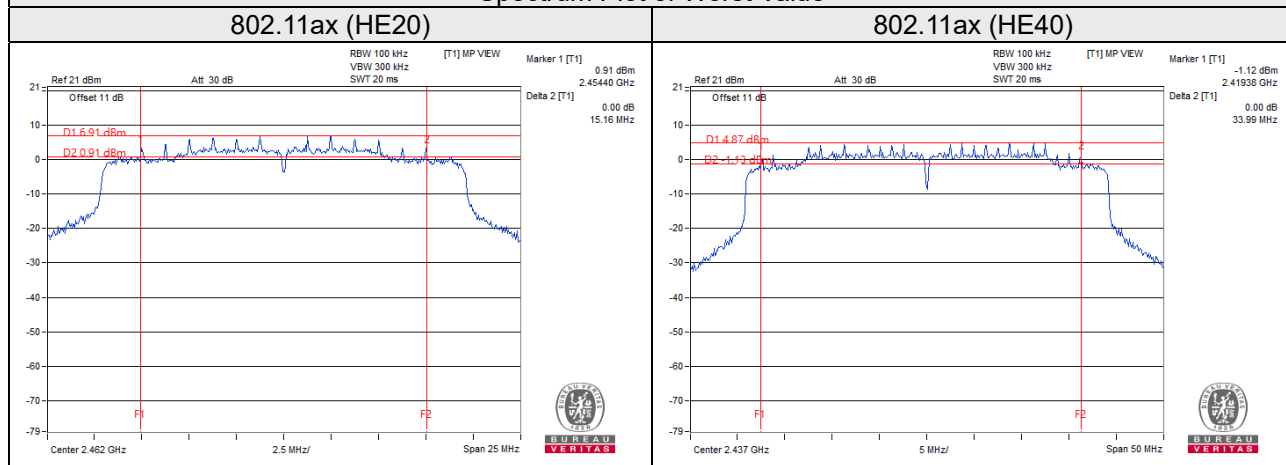
802.11ax (HE20)

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 15.18 | 16.26 | 0.5 | Pass |
| 6 | 2437 | 15.34 | 17.66 | 0.5 | Pass |
| 11 | 2462 | 15.16 | 17.74 | 0.5 | Pass |
| 12 | 2467 | 15.18 | 16.09 | 0.5 | Pass |
| 13 | 2472 | 17.87 | 18.27 | 0.5 | Pass |

802.11ax (HE40)

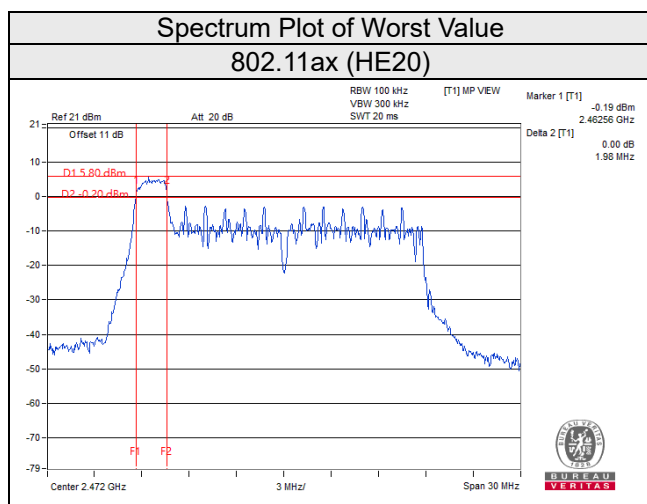
| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 3 | 2422 | 34.19 | 35.69 | 0.5 | Pass |
| 6 | 2437 | 33.99 | 36.38 | 0.5 | Pass |
| 9 | 2452 | 35.23 | 35.63 | 0.5 | Pass |
| 10 | 2457 | 35.22 | 35.93 | 0.5 | Pass |
| 11 | 2462 | 37.45 | 37.27 | 0.5 | Pass |

Spectrum Plot of Worst Value



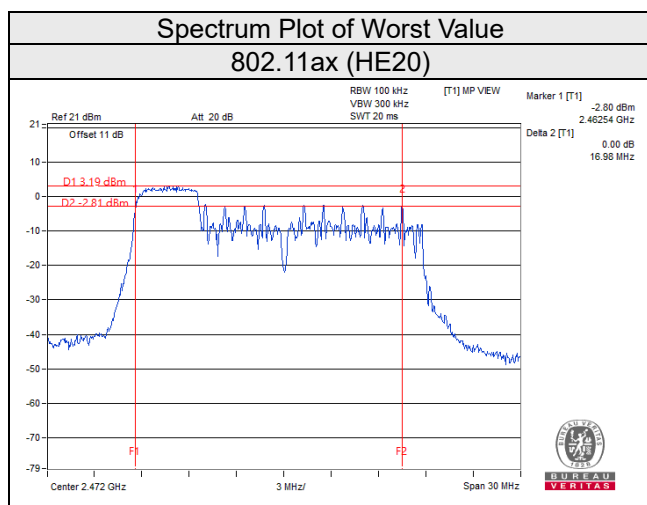
Partial RU
2TX
RU26
802.11ax (HE20)

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 2.10 | 2.09 | 0.5 | Pass |
| 13 | 2472 | 1.98 | 1.98 | 0.5 | Pass |



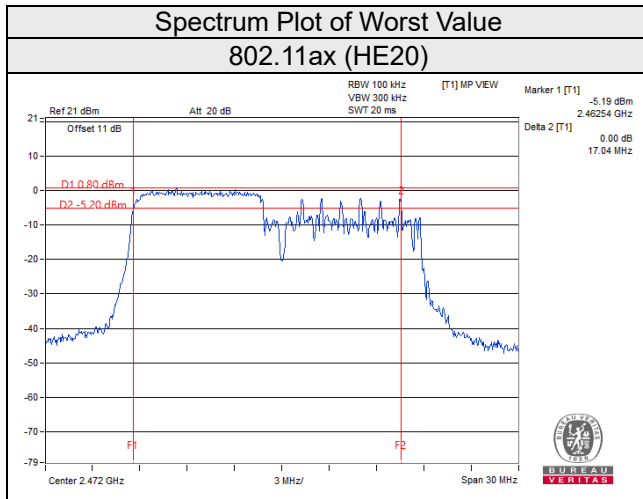
RU52
802.11ax (HE20)

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 17.02 | 17.07 | 0.5 | Pass |
| 13 | 2472 | 16.98 | 16.98 | 0.5 | Pass |



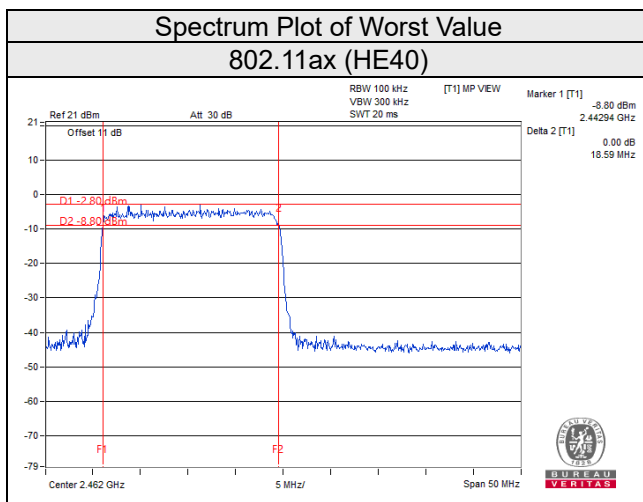
RU106
802.11ax (HE20)

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 17.15 | 17.19 | 0.5 | Pass |
| 13 | 2472 | 17.10 | 17.04 | 0.5 | Pass |



RU242
802.11ax (HE40)

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
| | | Chain 0 | Chain 1 | | |
| 3 | 2422 | 16.82 | 17.15 | 0.5 | Pass |
| 11 | 2462 | 18.50 | 18.59 | 0.5 | Pass |



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (20dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

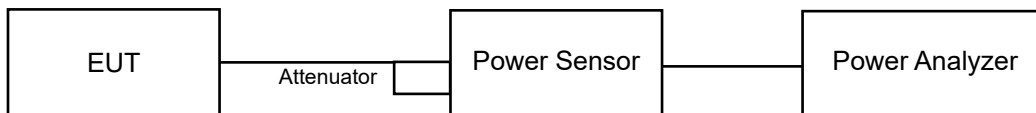
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

For Peak Power

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

For Average Power

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as item 4.3.6.

4.4.7 Test Results

1TX: Chain 0

For Peak Power

802.11b

| Channel | Frequency (MHz) | Peak Power (mW) | Peak Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|-----------------|------------------|-------------|-------------|
| 1 | 2412 | 134.276 | 21.28 | 30.00 | Pass |
| 6 | 2437 | 130.017 | 21.14 | 30.00 | Pass |
| 11 | 2462 | 123.310 | 20.91 | 30.00 | Pass |
| 12 | 2467 | 123.880 | 20.93 | 30.00 | Pass |
| 13 | 2472 | 120.504 | 20.81 | 30.00 | Pass |

802.11g

| Channel | Frequency (MHz) | Peak Power (mW) | Peak Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|-----------------|------------------|-------------|-------------|
| 1 | 2412 | 189.671 | 22.78 | 30.00 | Pass |
| 6 | 2437 | 195.434 | 22.91 | 30.00 | Pass |
| 11 | 2462 | 197.697 | 22.96 | 30.00 | Pass |
| 12 | 2467 | 135.519 | 21.32 | 30.00 | Pass |
| 13 | 2472 | 88.920 | 19.49 | 30.00 | Pass |

For Average Power

802.11b

| Channel | Frequency (MHz) | Average Power (mW) | Average Power (dBm) |
|---------|-----------------|--------------------|---------------------|
| 1 | 2412 | 78.705 | 18.96 |
| 6 | 2437 | 74.302 | 18.71 |
| 11 | 2462 | 76.208 | 18.82 |
| 12 | 2467 | 77.625 | 18.90 |
| 13 | 2472 | 78.343 | 18.94 |

802.11g

| Channel | Frequency (MHz) | Average Power (mW) | Average Power (dBm) |
|---------|-----------------|--------------------|---------------------|
| 1 | 2412 | 72.946 | 18.63 |
| 6 | 2437 | 75.858 | 18.80 |
| 11 | 2462 | 77.268 | 18.88 |
| 12 | 2467 | 52.723 | 17.22 |
| 13 | 2472 | 27.227 | 14.35 |

1TX: Chain 1

For Peak Power

802.11b

| Channel | Frequency (MHz) | Peak Power (mW) | Peak Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|-----------------|------------------|-------------|-------------|
| 1 | 2412 | 135.831 | 21.33 | 30.00 | Pass |
| 6 | 2437 | 138.676 | 21.42 | 30.00 | Pass |
| 11 | 2462 | 126.474 | 21.02 | 30.00 | Pass |
| 12 | 2467 | 125.893 | 21.00 | 30.00 | Pass |
| 13 | 2472 | 113.240 | 20.54 | 30.00 | Pass |

802.11g

| Channel | Frequency (MHz) | Peak Power (mW) | Peak Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|-----------------|------------------|-------------|-------------|
| 1 | 2412 | 199.526 | 23.00 | 30.00 | Pass |
| 6 | 2437 | 205.589 | 23.13 | 30.00 | Pass |
| 11 | 2462 | 206.063 | 23.14 | 30.00 | Pass |
| 12 | 2467 | 138.038 | 21.40 | 30.00 | Pass |
| 13 | 2472 | 85.901 | 19.34 | 30.00 | Pass |

For Average Power

802.11b

| Channel | Frequency (MHz) | Average Power (mW) | Average Power (dBm) |
|---------|-----------------|--------------------|---------------------|
| 1 | 2412 | 78.705 | 18.96 |
| 6 | 2437 | 77.446 | 18.89 |
| 11 | 2462 | 78.343 | 18.94 |
| 12 | 2467 | 78.886 | 18.97 |
| 13 | 2472 | 69.343 | 18.41 |

802.11g

| Channel | Frequency (MHz) | Average Power (mW) | Average Power (dBm) |
|---------|-----------------|--------------------|---------------------|
| 1 | 2412 | 78.886 | 18.97 |
| 6 | 2437 | 79.068 | 18.98 |
| 11 | 2462 | 78.705 | 18.96 |
| 12 | 2467 | 53.827 | 17.31 |
| 13 | 2472 | 27.925 | 14.46 |

2TX

For Peak Power

802.11n (HT20)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 1 | 2412 | 22.08 | 22.16 | 325.873 | 25.13 | 30 | Pass |
| 6 | 2437 | 22.79 | 23.23 | 400.486 | 26.03 | 30 | Pass |
| 11 | 2462 | 20.21 | 20.30 | 212.106 | 23.27 | 30 | Pass |
| 12 | 2467 | 18.15 | 18.01 | 128.554 | 21.09 | 30 | Pass |
| 13 | 2472 | 16.21 | 15.41 | 76.537 | 18.84 | 30 | Pass |

802.11n (HT40)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 3 | 2422 | 19.82 | 19.89 | 193.439 | 22.87 | 30 | Pass |
| 6 | 2437 | 23.23 | 23.55 | 436.842 | 26.40 | 30 | Pass |
| 9 | 2452 | 19.93 | 20.14 | 201.677 | 23.05 | 30 | Pass |
| 10 | 2457 | 17.41 | 17.75 | 114.647 | 20.59 | 30 | Pass |
| 11 | 2462 | 17.14 | 17.11 | 103.165 | 20.14 | 30 | Pass |

Full RU

802.11ax (HE20)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 1 | 2412 | 22.17 | 22.22 | 331.541 | 25.21 | 30 | Pass |
| 6 | 2437 | 23.03 | 23.46 | 422.729 | 26.26 | 30 | Pass |
| 11 | 2462 | 20.36 | 20.41 | 218.543 | 23.40 | 30 | Pass |
| 12 | 2467 | 18.22 | 18.09 | 130.791 | 21.17 | 30 | Pass |
| 13 | 2472 | 16.34 | 15.64 | 79.696 | 19.01 | 30 | Pass |

802.11ax (HE40)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 3 | 2422 | 19.97 | 19.98 | 198.852 | 22.99 | 30 | Pass |
| 6 | 2437 | 23.50 | 23.85 | 466.533 | 26.69 | 30 | Pass |
| 9 | 2452 | 20.02 | 20.19 | 204.934 | 23.12 | 30 | Pass |
| 10 | 2457 | 17.58 | 17.83 | 117.953 | 20.72 | 30 | Pass |
| 11 | 2462 | 16.68 | 17.09 | 97.727 | 19.90 | 30 | Pass |

For Average Power

802.11n (HT20)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 18.07 | 18.15 | 129.434 | 21.12 |
| 6 | 2437 | 18.68 | 18.92 | 151.773 | 21.81 |
| 11 | 2462 | 16.70 | 16.72 | 93.763 | 19.72 |
| 12 | 2467 | 13.68 | 13.87 | 47.713 | 16.79 |
| 13 | 2472 | 10.31 | 10.33 | 21.529 | 13.33 |

802.11n (HT40)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 3 | 2422 | 15.20 | 15.27 | 66.764 | 18.25 |
| 6 | 2437 | 17.60 | 18.12 | 122.407 | 20.88 |
| 9 | 2452 | 15.36 | 15.52 | 70.001 | 18.45 |
| 10 | 2457 | 12.28 | 12.43 | 34.403 | 15.37 |
| 11 | 2462 | 11.22 | 11.24 | 26.548 | 14.24 |

Full RU

802.11ax (HE20)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 18.10 | 18.21 | 130.787 | 21.17 |
| 6 | 2437 | 18.84 | 19.00 | 155.992 | 21.93 |
| 11 | 2462 | 16.82 | 16.89 | 96.949 | 19.87 |
| 12 | 2467 | 13.75 | 13.92 | 48.374 | 16.85 |
| 13 | 2472 | 10.51 | 10.52 | 22.518 | 13.53 |

802.11ax (HE40)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 3 | 2422 | 15.31 | 15.38 | 68.477 | 18.36 |
| 6 | 2437 | 18.16 | 18.54 | 136.913 | 21.36 |
| 9 | 2452 | 15.45 | 15.66 | 71.888 | 18.57 |
| 10 | 2457 | 12.36 | 12.52 | 35.084 | 15.45 |
| 11 | 2462 | 10.93 | 10.95 | 24.833 | 13.95 |

Partial RU

2TX

RU26

For Peak Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 1 | 2412 | 22.14 | 22.16 | 328.119 | 25.16 | 30 | Pass |
| 13 | 2472 | 16.19 | 16.18 | 83.086 | 19.20 | 30 | Pass |

For Average Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 18.06 | 18.19 | 129.891 | 21.14 |
| 13 | 2472 | 8.99 | 9.01 | 15.887 | 12.01 |

RU52

For Peak Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 1 | 2412 | 22.16 | 22.20 | 330.396 | 25.19 | 30 | Pass |
| 13 | 2472 | 17.13 | 17.22 | 104.365 | 20.19 | 30 | Pass |

For Average Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 18.08 | 18.19 | 130.186 | 21.15 |
| 13 | 2472 | 9.65 | 9.78 | 18.732 | 12.73 |

RU106

For Peak Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 1 | 2412 | 22.10 | 22.15 | 326.240 | 25.14 | 30 | Pass |
| 13 | 2472 | 17.00 | 17.09 | 101.287 | 20.06 | 30 | Pass |

For Average Power

802.11ax (HE20)

| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 1 | 2412 | 18.06 | 18.18 | 129.739 | 21.13 |
| 13 | 2472 | 9.63 | 9.78 | 18.689 | 12.72 |

RU242

For Peak Power

802.11ax (HE40)

| Channel | Frequency (MHz) | Peak Power (dBm) | | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------|---------|------------------|-------------------|-------------|-------------|
| | | Chain 0 | Chain 1 | | | | |
| 3 | 2422 | 19.93 | 19.96 | 197.484 | 22.96 | 30 | Pass |
| 11 | 2462 | 16.22 | 16.28 | 84.341 | 19.26 | 30 | Pass |

For Average Power

802.11ax (HE40)

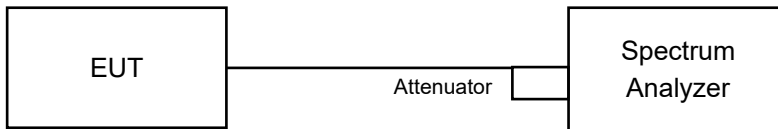
| Channel | Frequency (MHz) | Average Power (dBm) | | Total Power (mW) | Total Power (dBm) |
|---------|-----------------|---------------------|---------|------------------|-------------------|
| | | Chain 0 | Chain 1 | | |
| 3 | 2422 | 15.28 | 15.36 | 68.085 | 18.33 |
| 11 | 2462 | 9.10 | 9.15 | 16.351 | 12.14 |

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz band during any time interval of continuous transmission.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

- a. Set analyzer center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d. Set the VBW $\geq 3 \times \text{RBW}$.
- e. Detector = peak.
- f. Sweep time = auto couple.
- g. Trace mode = max hold.
- h. Allow trace to fully stabilize.
- i. Use the peak marker function to determine the maximum amplitude level within the RBW.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as item 4.3.6.

4.5.7 Test Results

1TX: Chain 0

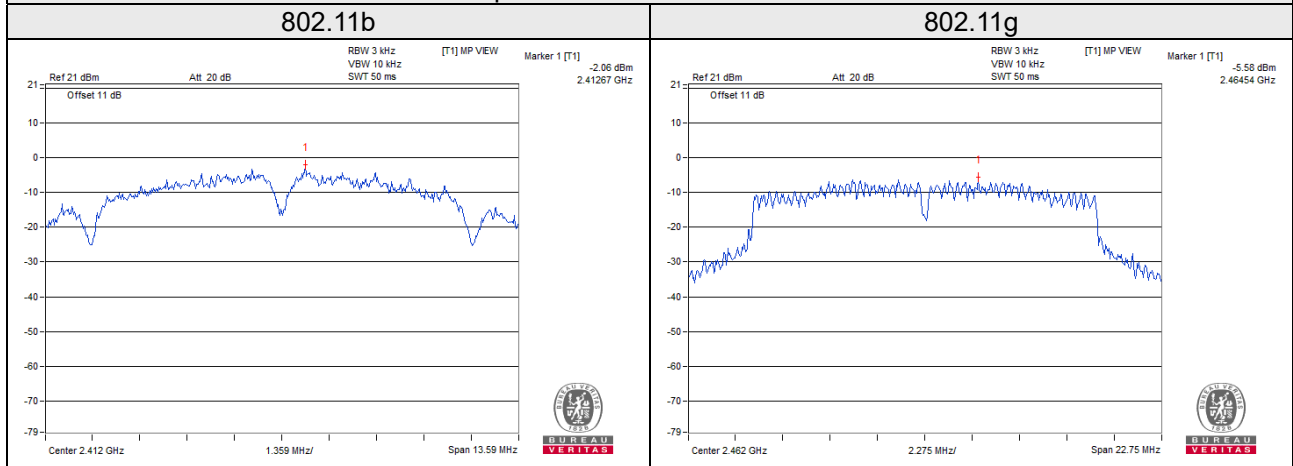
802.11b

| Channel | Frequency (MHz) | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|---------|-----------------|----------------|------------------|-------------|
| 1 | 2412 | -2.06 | 8.00 | Pass |
| 6 | 2437 | -2.20 | 8.00 | Pass |
| 11 | 2462 | -3.77 | 8.00 | Pass |
| 12 | 2467 | -3.26 | 8.00 | Pass |
| 13 | 2472 | -2.20 | 8.00 | Pass |

802.11g

| Channel | Frequency (MHz) | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|---------|-----------------|----------------|------------------|-------------|
| 1 | 2412 | -6.09 | 8.00 | Pass |
| 6 | 2437 | -5.74 | 8.00 | Pass |
| 11 | 2462 | -5.58 | 8.00 | Pass |
| 12 | 2467 | -7.61 | 8.00 | Pass |
| 13 | 2472 | -9.63 | 8.00 | Pass |

Spectrum Plot of Worst Value



1TX: Chain 1

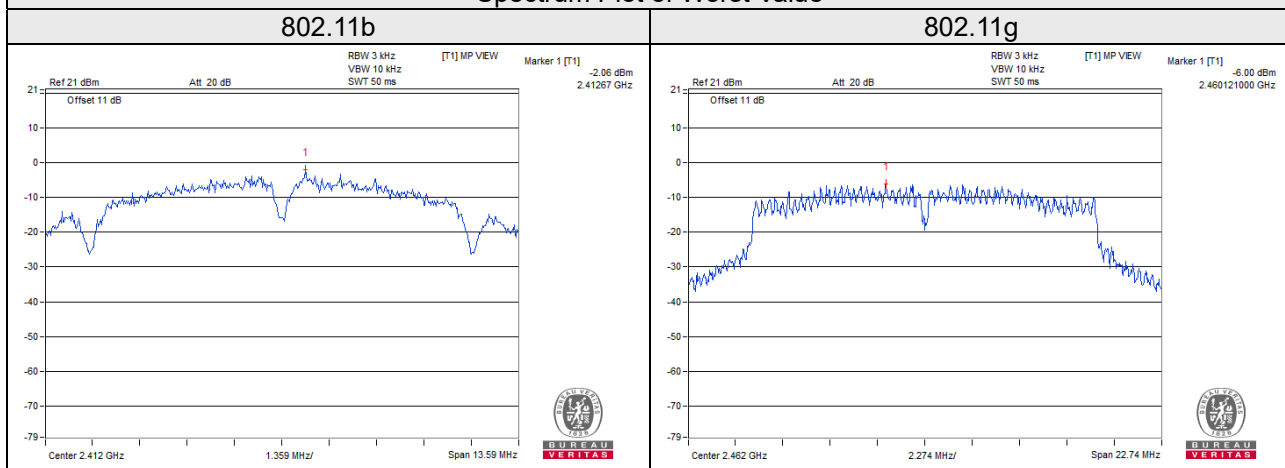
802.11b

| Channel | Frequency (MHz) | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|---------|-----------------|----------------|------------------|-------------|
| 1 | 2412 | -2.06 | 8.00 | Pass |
| 6 | 2437 | -2.09 | 8.00 | Pass |
| 11 | 2462 | -2.66 | 8.00 | Pass |
| 12 | 2467 | -2.23 | 8.00 | Pass |
| 13 | 2472 | -3.33 | 8.00 | Pass |

802.11g

| Channel | Frequency (MHz) | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|---------|-----------------|----------------|------------------|-------------|
| 1 | 2412 | -6.44 | 8.00 | Pass |
| 6 | 2437 | -6.23 | 8.00 | Pass |
| 11 | 2462 | -6.00 | 8.00 | Pass |
| 12 | 2467 | -7.13 | 8.00 | Pass |
| 13 | 2472 | -9.78 | 8.00 | Pass |

Spectrum Plot of Worst Value



Full RU
2TX

802.11ax (HE20)

| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 1 | 2412 | -8.02 | 3.01 | -5.01 | 7.94 | Pass |
| | 6 | 2437 | -6.42 | 3.01 | -3.41 | 7.94 | Pass |
| | 11 | 2462 | -9.69 | 3.01 | -6.68 | 7.94 | Pass |
| | 12 | 2467 | -11.56 | 3.01 | -8.55 | 7.94 | Pass |
| | 13 | 2472 | -14.03 | 3.01 | -11.02 | 7.94 | Pass |
| 1 | 1 | 2412 | -8.05 | 3.01 | -5.04 | 7.94 | Pass |
| | 6 | 2437 | -6.03 | 3.01 | -3.02 | 7.94 | Pass |
| | 11 | 2462 | -9.99 | 3.01 | -6.98 | 7.94 | Pass |
| | 12 | 2467 | -12.05 | 3.01 | -9.04 | 7.94 | Pass |
| | 13 | 2472 | -14.35 | 3.01 | -11.34 | 7.94 | Pass |

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add $10 \log (N_{ANT})$ dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.

802.11ax (HE40)

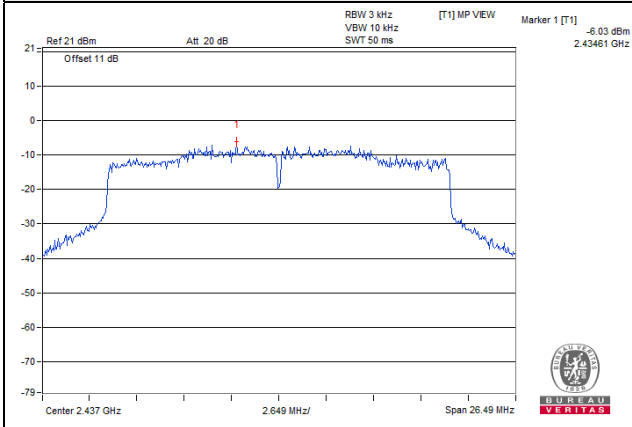
| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 3 | 2422 | -13.93 | 3.01 | -10.92 | 7.94 | Pass |
| | 6 | 2437 | -11.24 | 3.01 | -8.23 | 7.94 | Pass |
| | 9 | 2452 | -12.38 | 3.01 | -9.37 | 7.94 | Pass |
| | 10 | 2457 | -16.38 | 3.01 | -13.37 | 7.94 | Pass |
| | 11 | 2462 | -18.96 | 3.01 | -15.95 | 7.94 | Pass |
| 1 | 3 | 2422 | -13.85 | 3.01 | -10.84 | 7.94 | Pass |
| | 6 | 2437 | -10.50 | 3.01 | -7.49 | 7.94 | Pass |
| | 9 | 2452 | -13.40 | 3.01 | -10.39 | 7.94 | Pass |
| | 10 | 2457 | -16.54 | 3.01 | -13.53 | 7.94 | Pass |
| | 11 | 2462 | -18.93 | 3.01 | -15.92 | 7.94 | Pass |

Note:

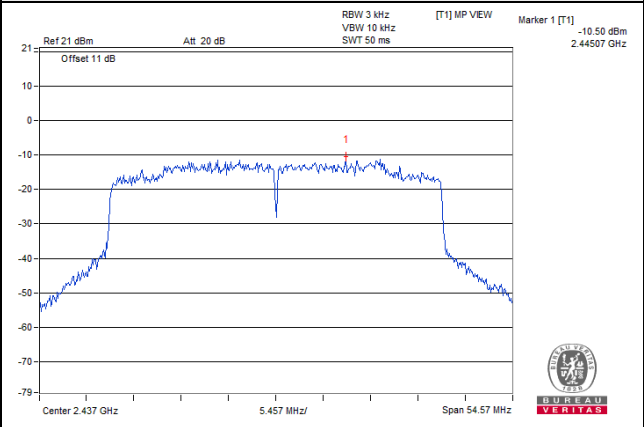
- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add $10 \log (N_{ANT})$ dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.

Spectrum Plot of Worst Value

802.11ax (HE20)



802.11ax (HE40)

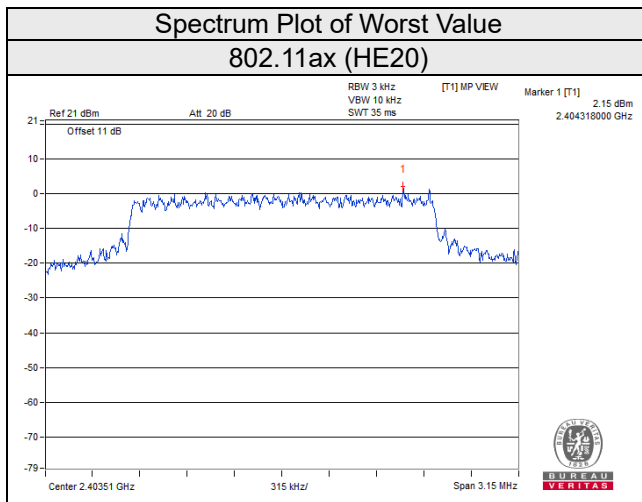


Partial RU
2TX
RU26
802.11ax (HE20)

| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 1 | 2412 | 2.15 | 3.01 | 5.16 | 7.94 | Pass |
| | 11 | 2462 | -6.81 | 3.01 | -3.80 | 7.94 | Pass |
| 1 | 1 | 2412 | 2.69 | 3.01 | 5.70 | 7.94 | Pass |
| | 11 | 2462 | -6.85 | 3.01 | -3.84 | 7.94 | Pass |

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.



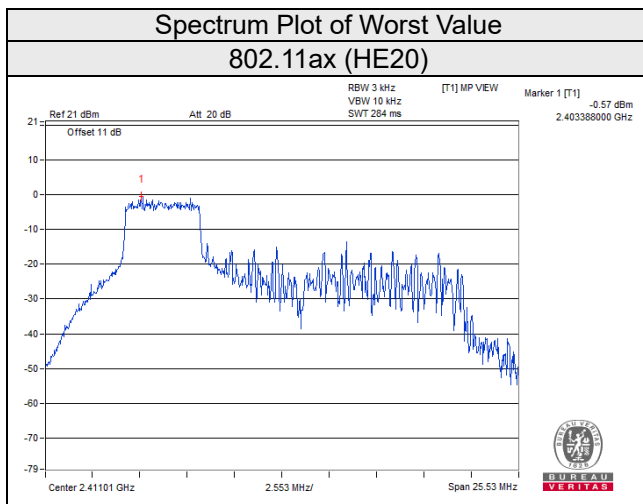
RU52

802.11ax (HE20)

| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 1 | 2412 | -0.57 | 3.01 | 2.44 | 7.94 | Pass |
| | 11 | 2462 | -9.29 | 3.01 | -6.28 | 7.94 | Pass |
| 1 | 1 | 2412 | -1.04 | 3.01 | 1.97 | 7.94 | Pass |
| | 11 | 2462 | -9.24 | 3.01 | -6.23 | 7.94 | Pass |

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.



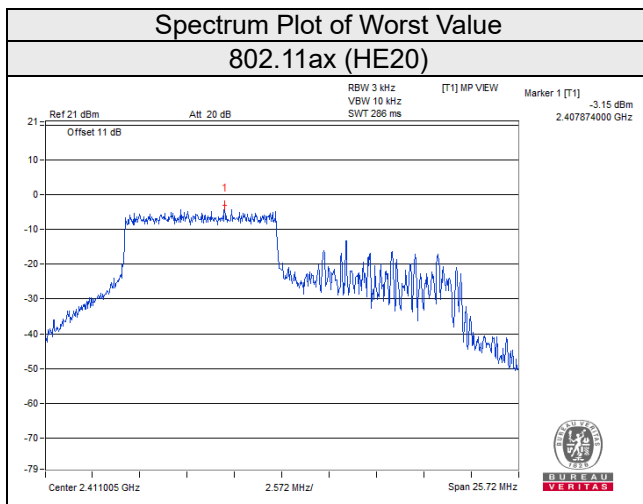
RU106

802.11ax (HE20)

| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 1 | 2412 | -3.15 | 3.01 | -0.14 | 7.94 | Pass |
| | 11 | 2462 | -12.34 | 3.01 | -9.33 | 7.94 | Pass |
| 1 | 1 | 2412 | -3.55 | 3.01 | -0.54 | 7.94 | Pass |
| | 11 | 2462 | -12.60 | 3.01 | -9.59 | 7.94 | Pass |

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.



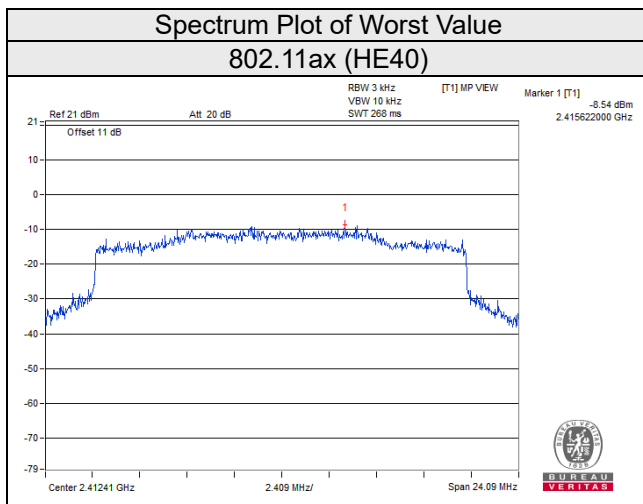
RU242

802.11ax (HE40)

| TX chain | Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass / Fail |
|----------|---------|-----------------|--------------------------------|-----------------|----------------------|------------------|-------------|
| 0 | 3 | 2422 | -8.54 | 3.01 | -5.53 | 7.94 | Pass |
| | 11 | 2462 | -15.98 | 3.01 | -12.97 | 7.94 | Pass |
| 1 | 3 | 2422 | -8.79 | 3.01 | -5.78 | 7.94 | Pass |
| | 11 | 2462 | -16.25 | 3.01 | -13.24 | 7.94 | Pass |

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.06\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94\text{dBm}$.

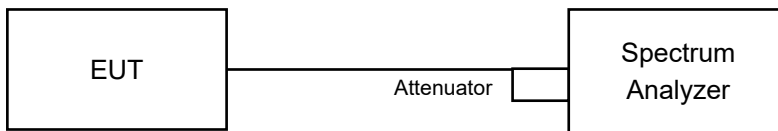


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Same as item 4.3.6.

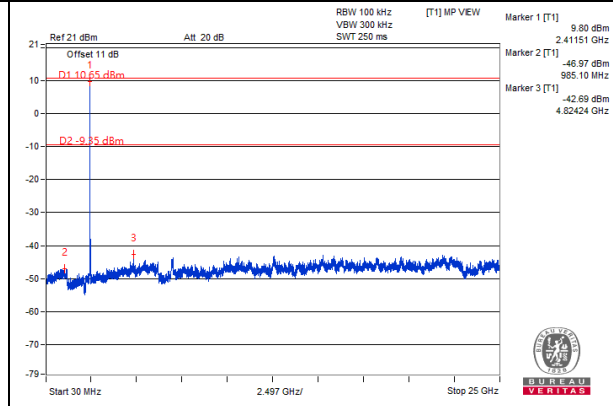
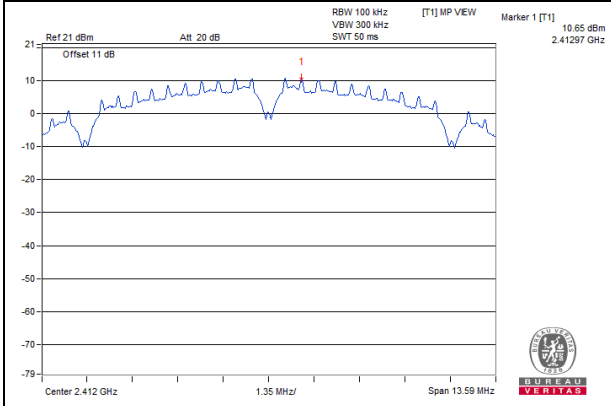
4.6.7 Test Results

The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit.

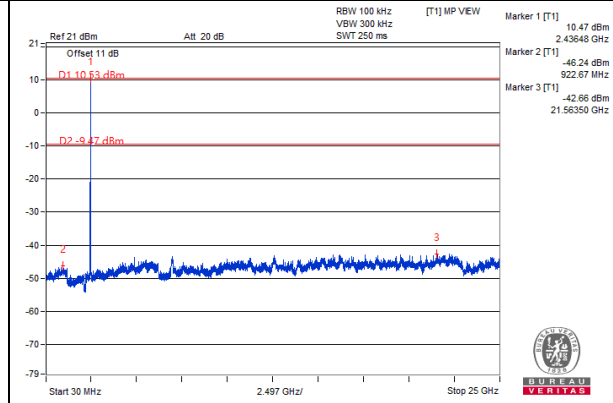
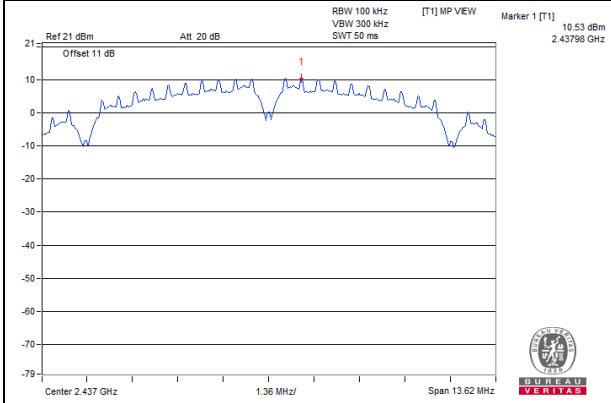
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

1TX
802.11b_Chain 0

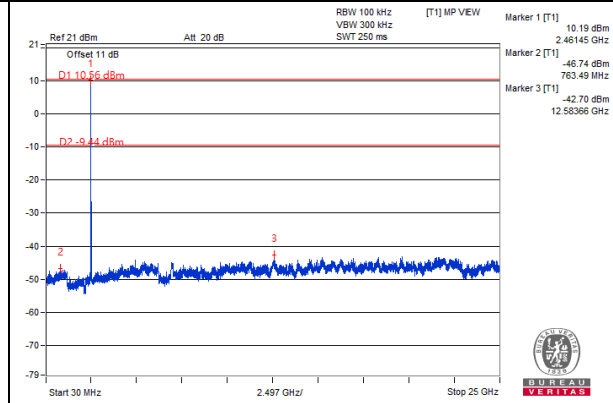
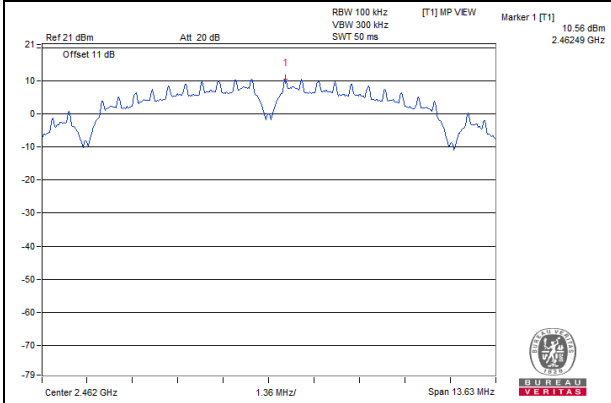
CH 1



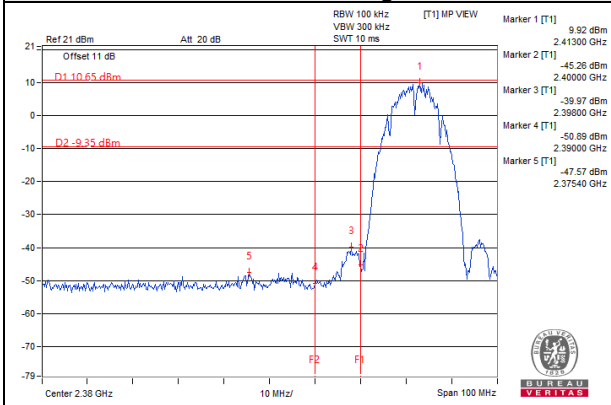
CH 6



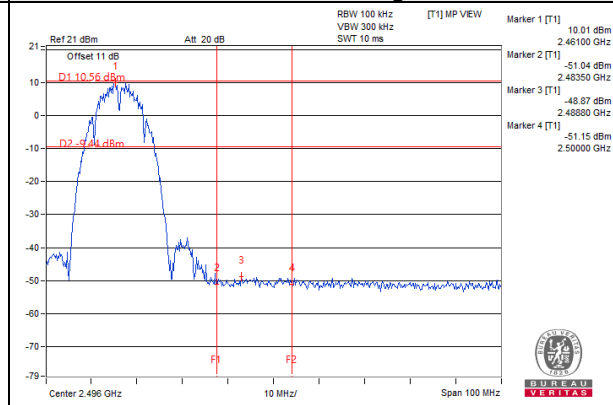
CH 11



CH 1 Band edge



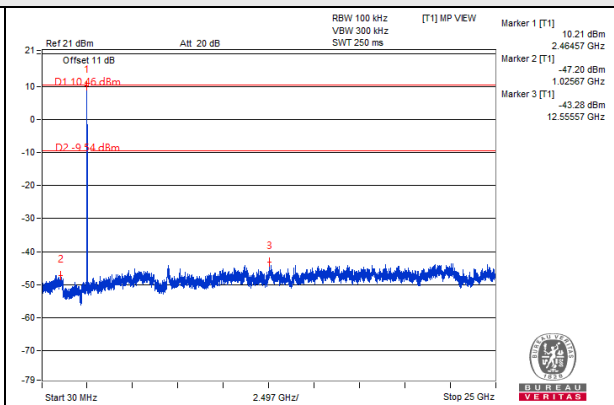
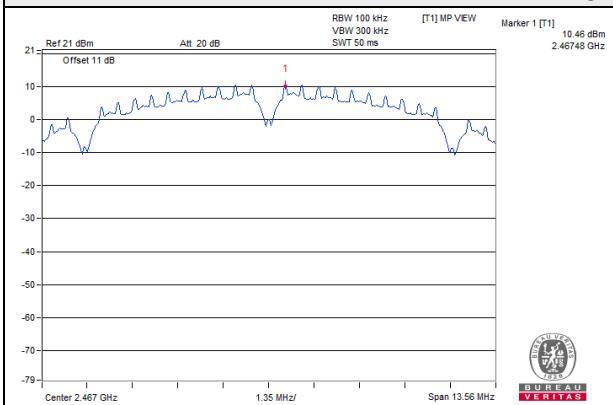
CH 11 Band edge



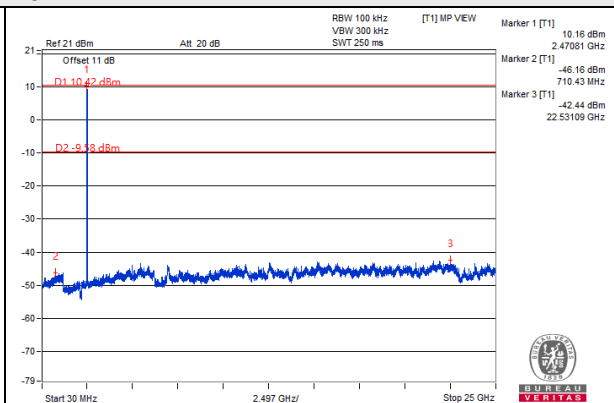
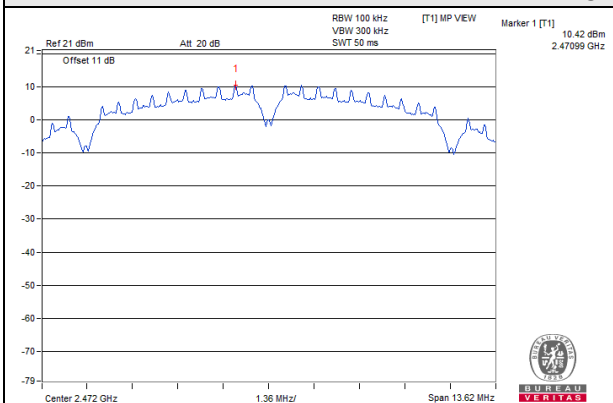


BUREAU VERITAS

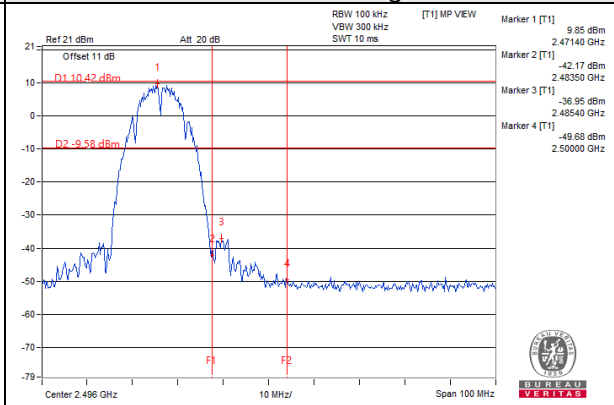
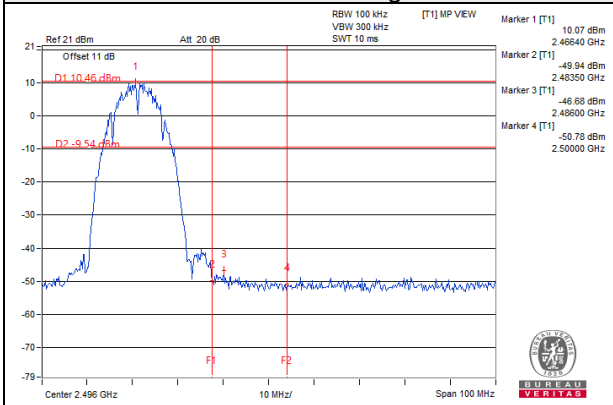
CH 12



CH 13

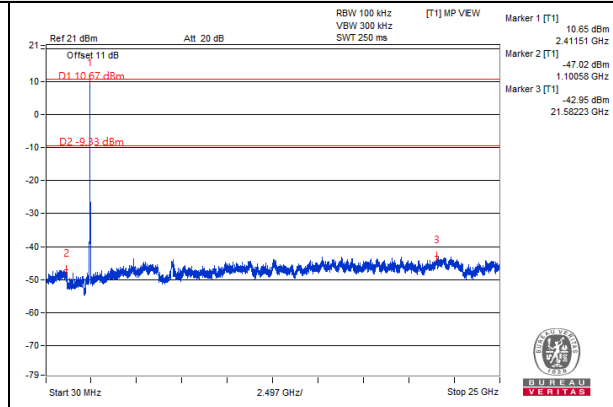
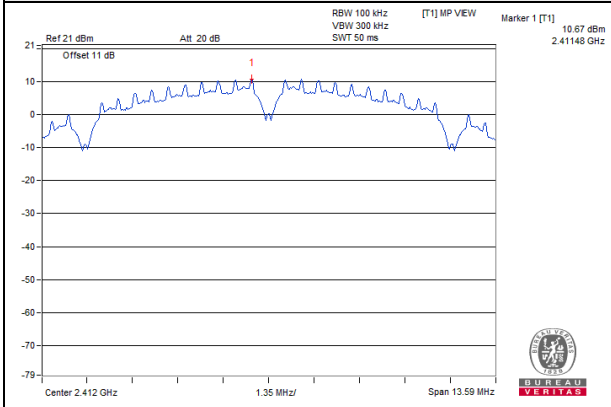


CH 12 Band edge

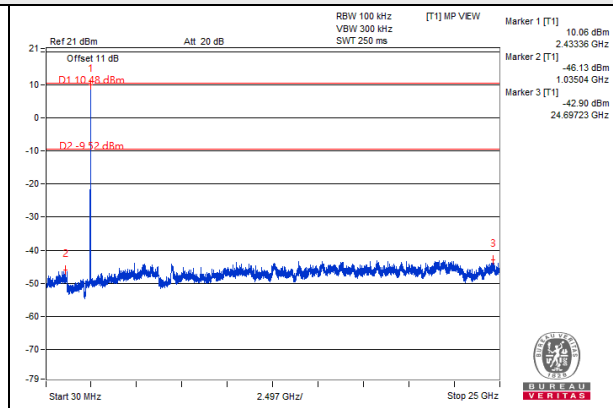
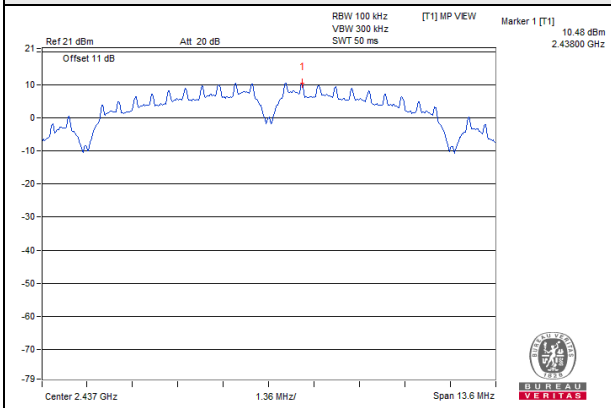


802.11b_Chain 1

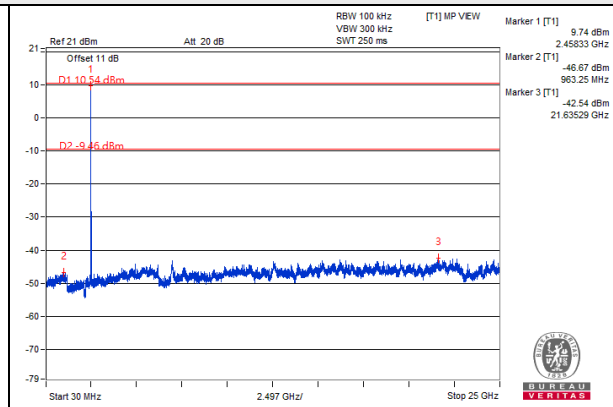
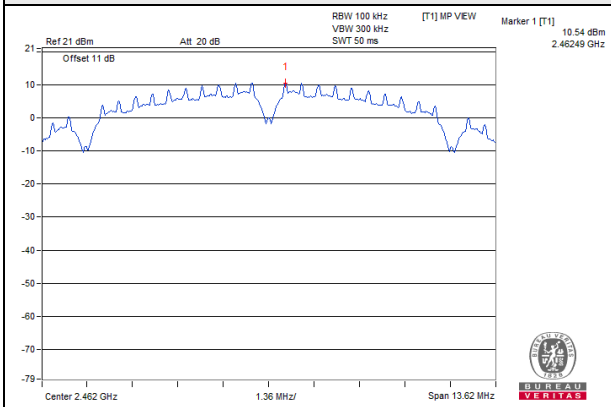
CH 1



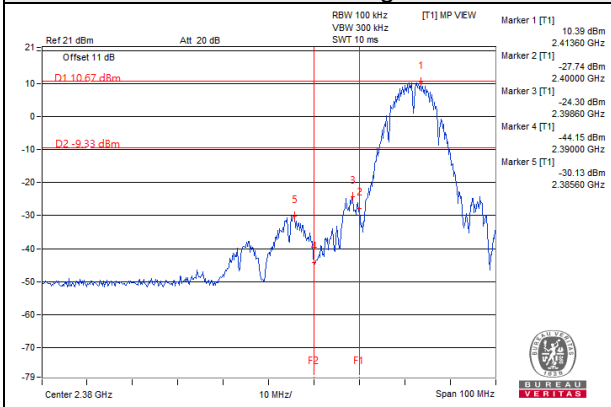
CH 6



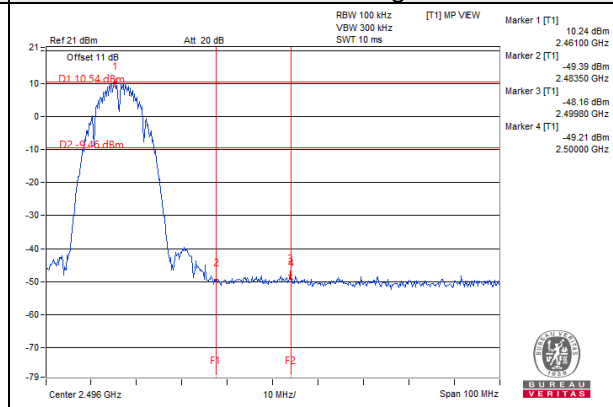
CH 11



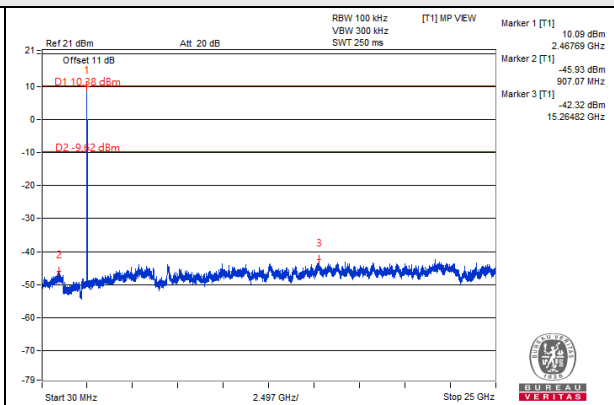
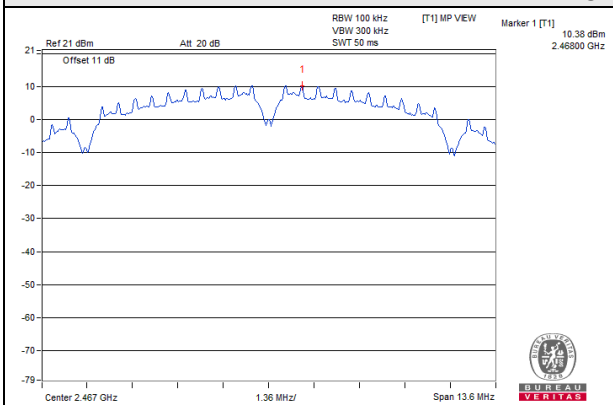
CH 1 Band edge



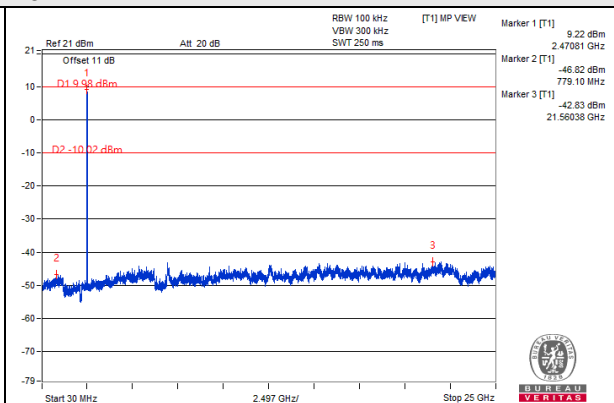
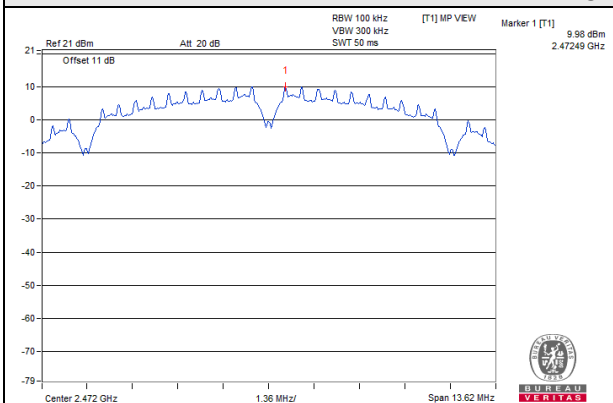
CH 11 Band edge



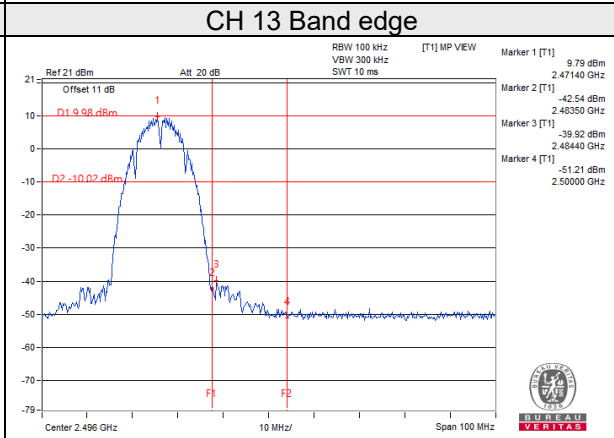
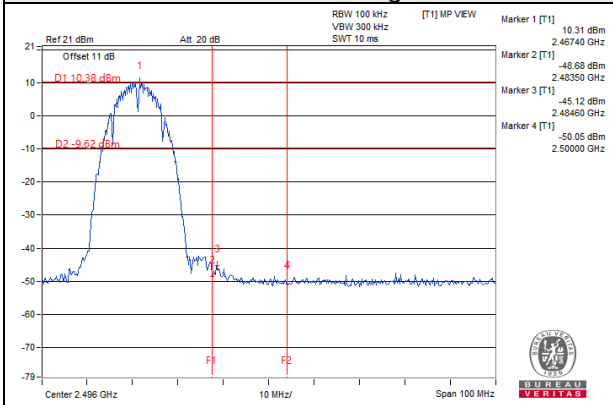
CH 12



CH 13

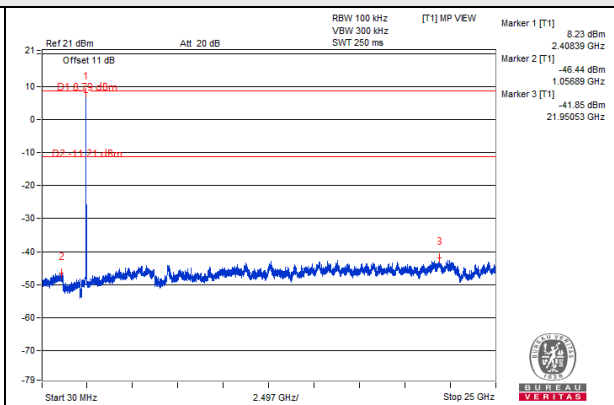
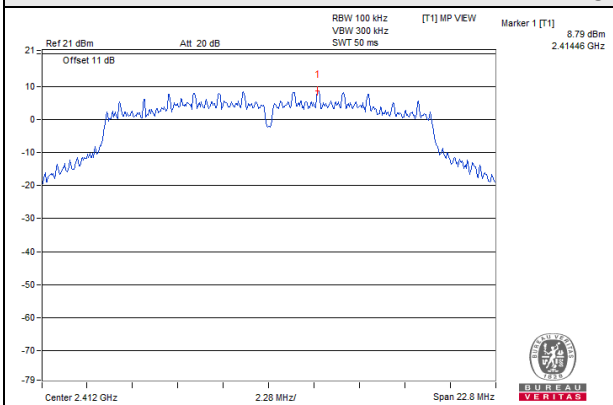


CH 12 Band edge

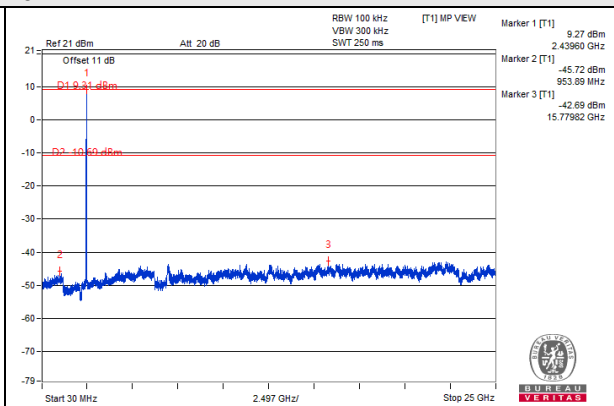
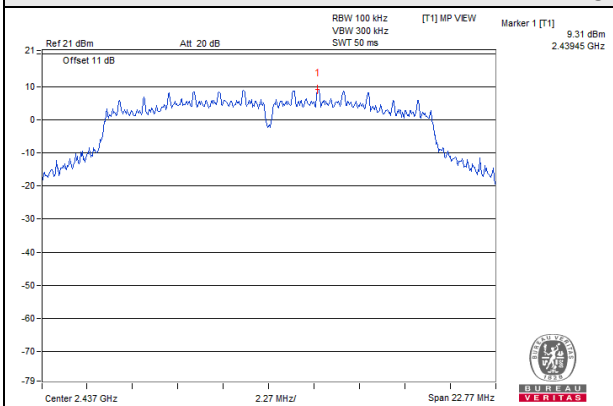


802.11g_Chain 0

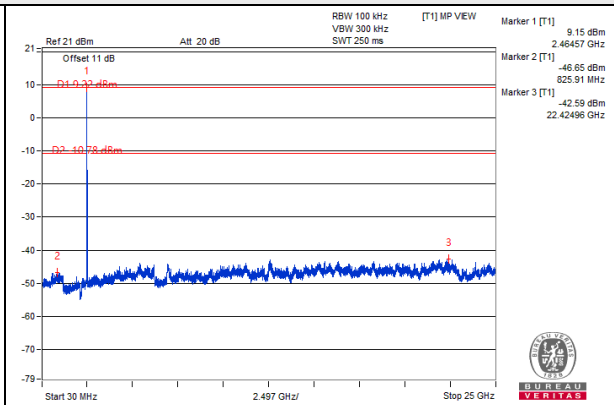
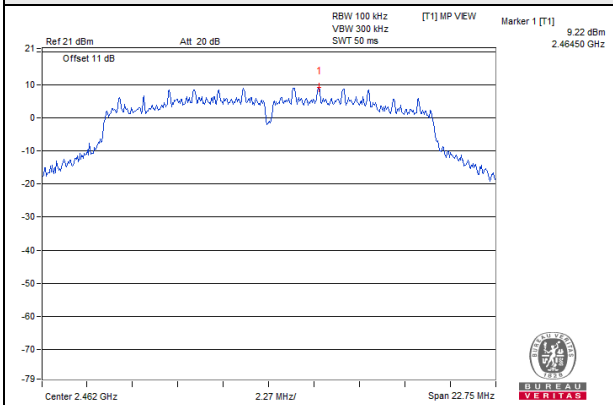
CH 1



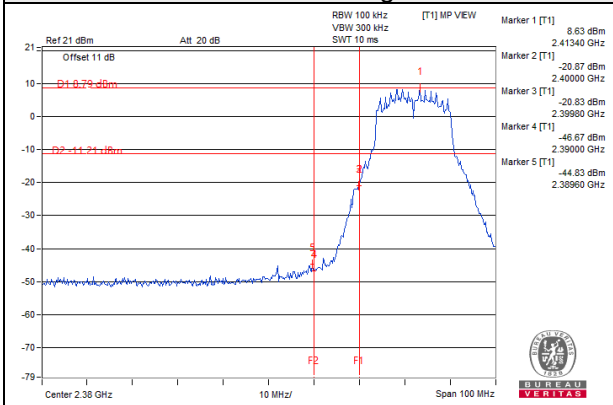
CH 6



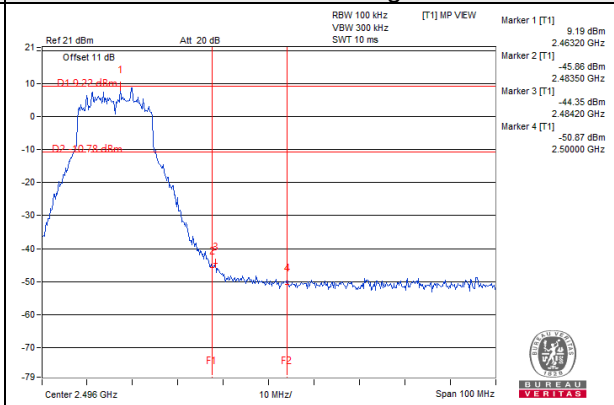
CH 11



CH 1 Band edge



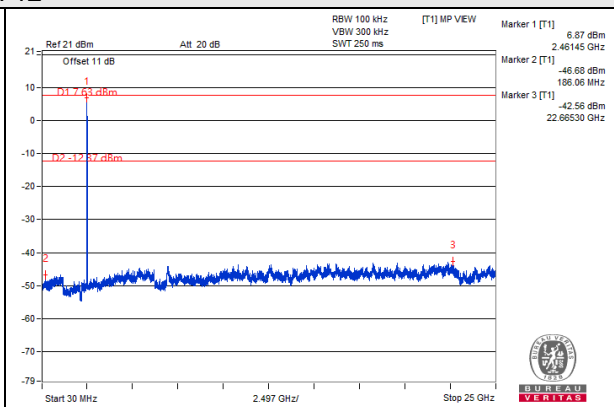
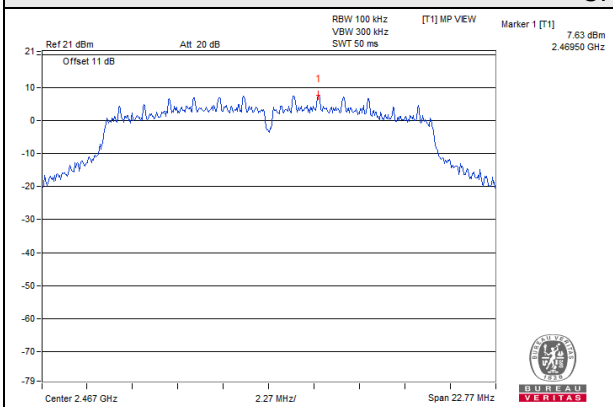
CH 11 Band edge



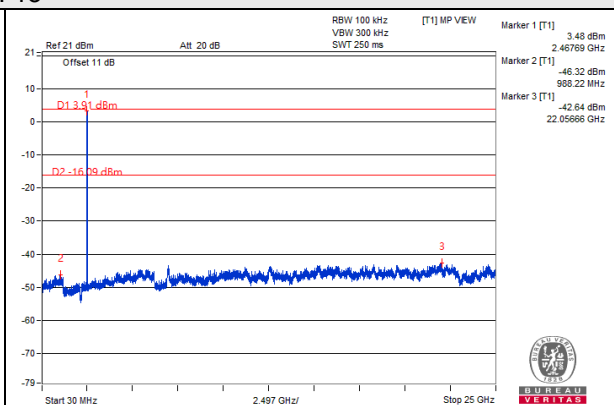
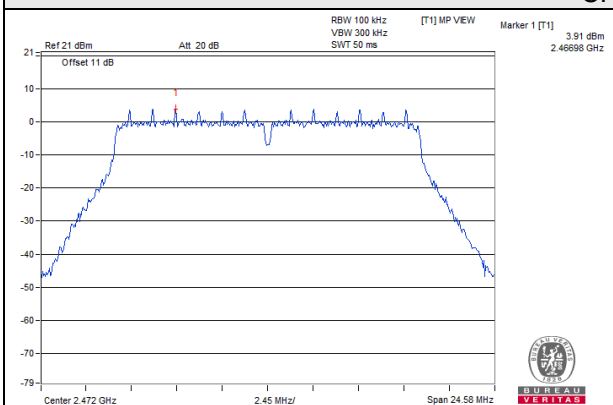


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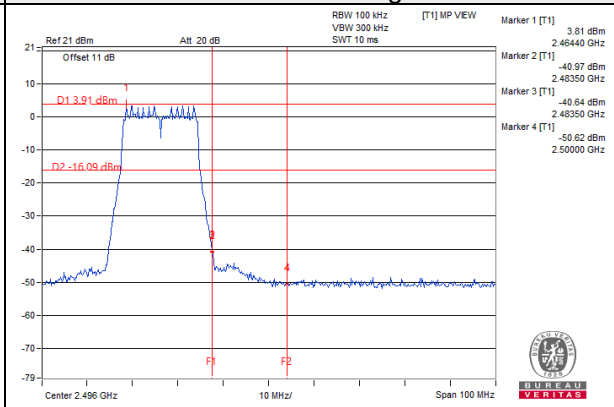
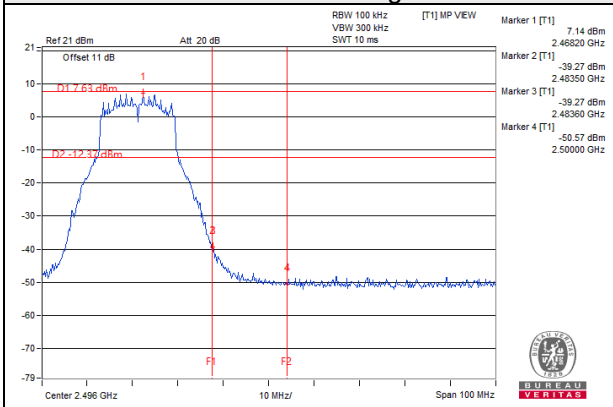
CH 12



CH 13

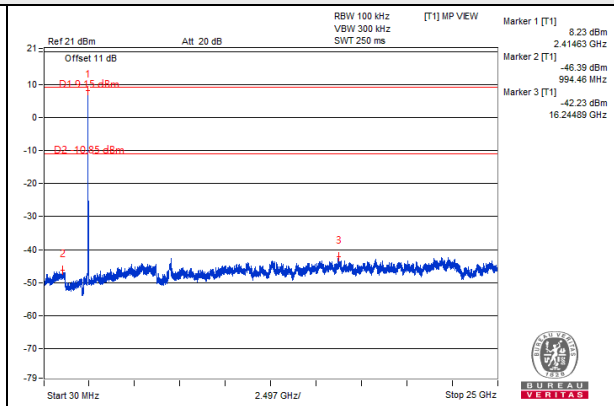
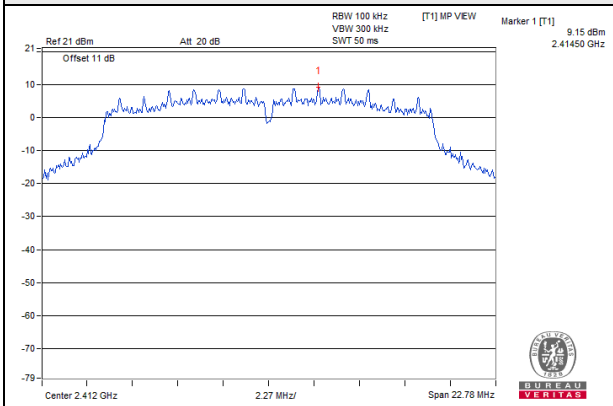


CH 12 Band edge

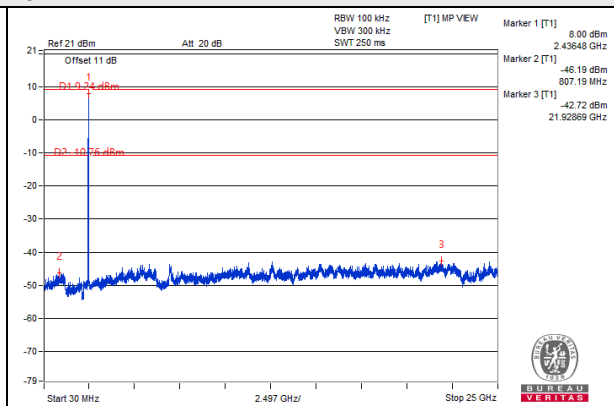
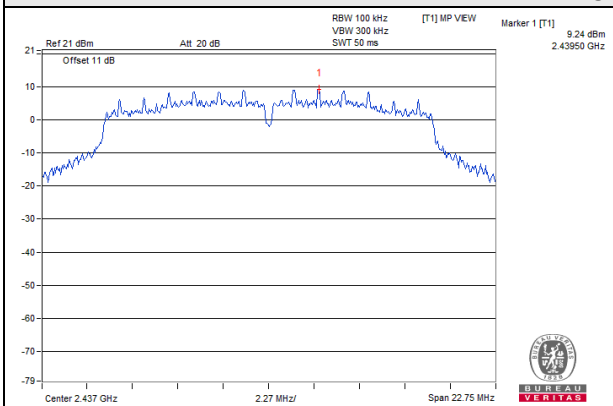


802.11g_Chain 1

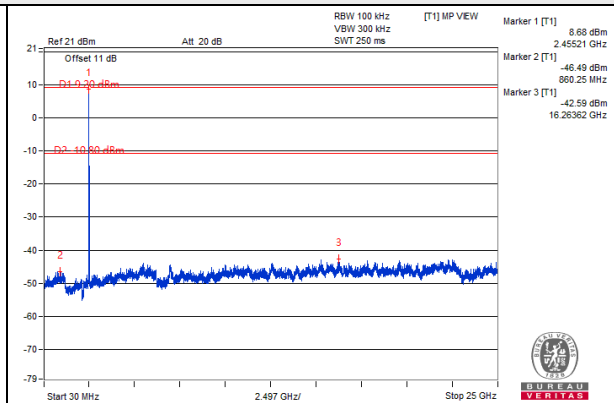
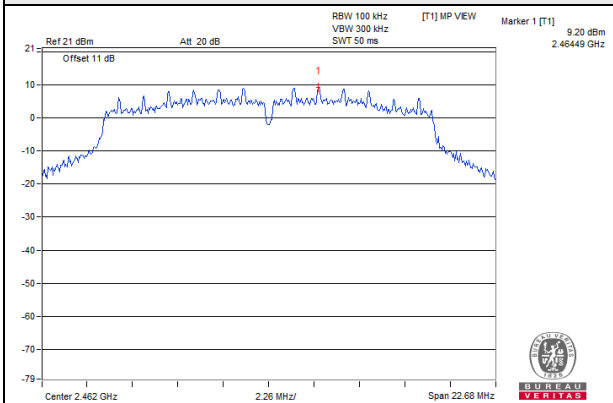
CH 1



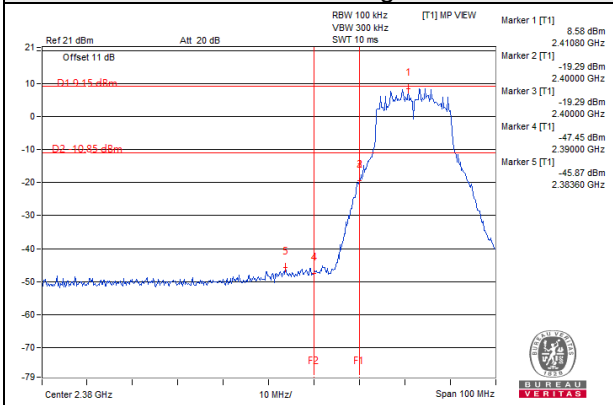
CH 6



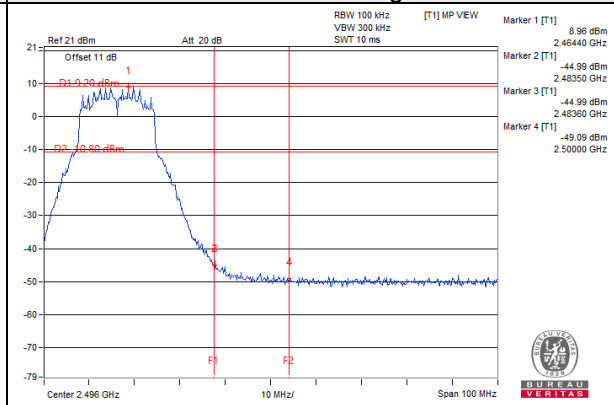
CH 11



CH 1 Band edge

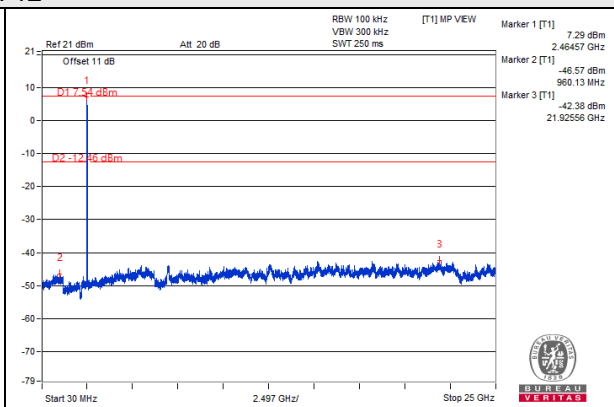
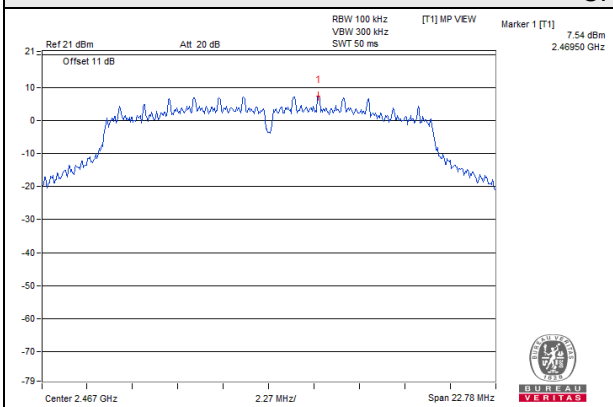


CH 11 Band edge

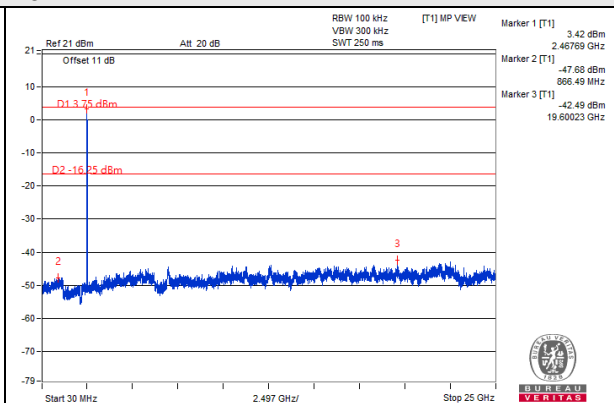
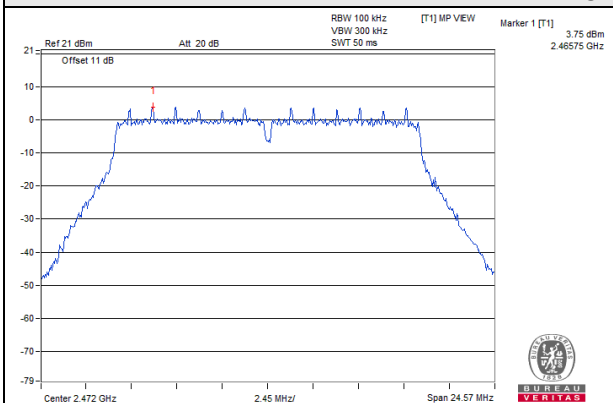




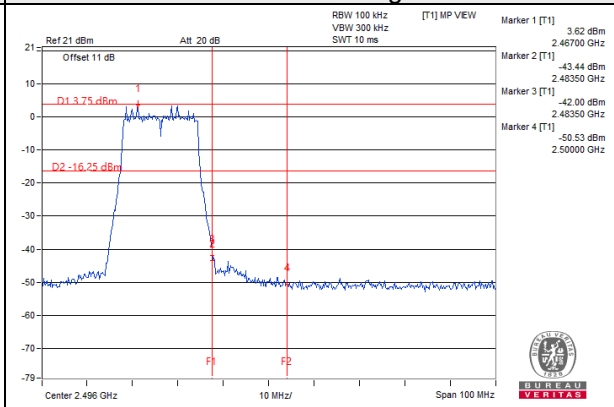
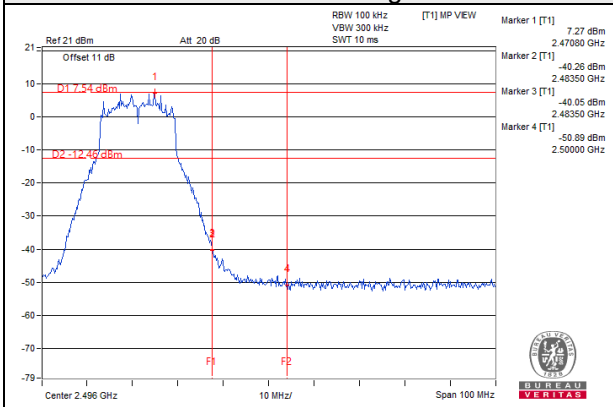
CH 12



CH 13

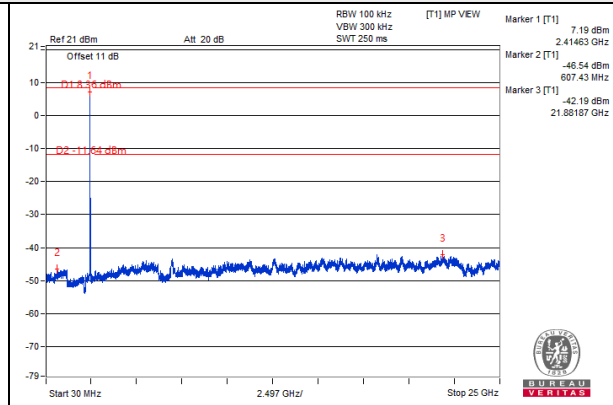
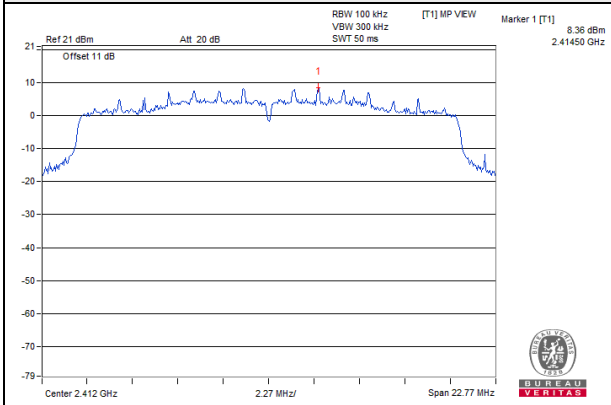


CH 12 Band edge

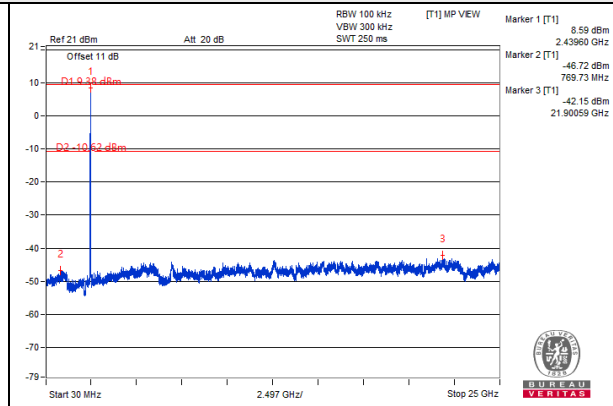
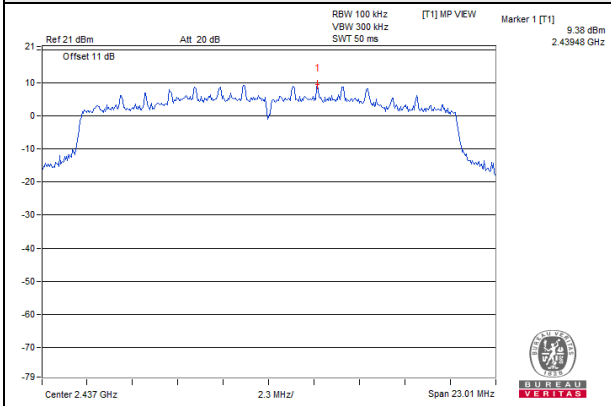


2TX
802.11ax (HE20)_Chain 0

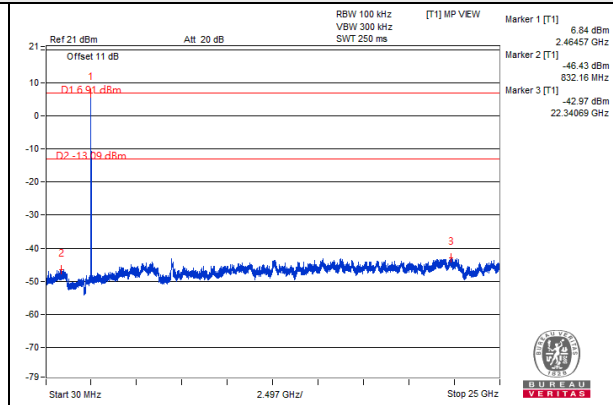
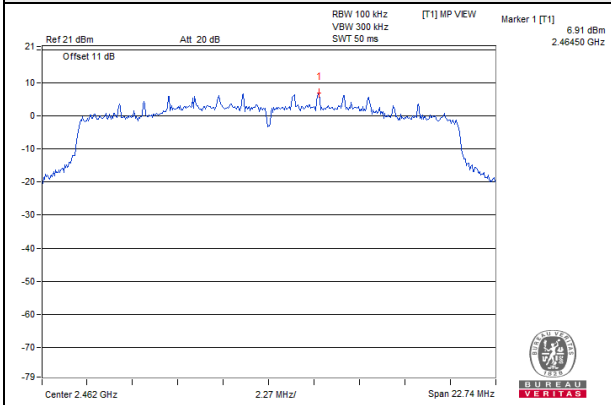
CH 1



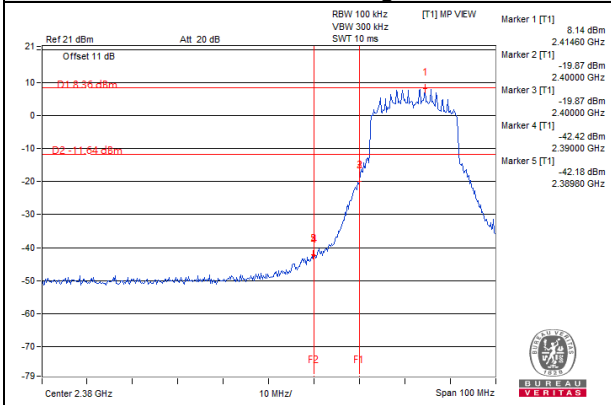
CH 6



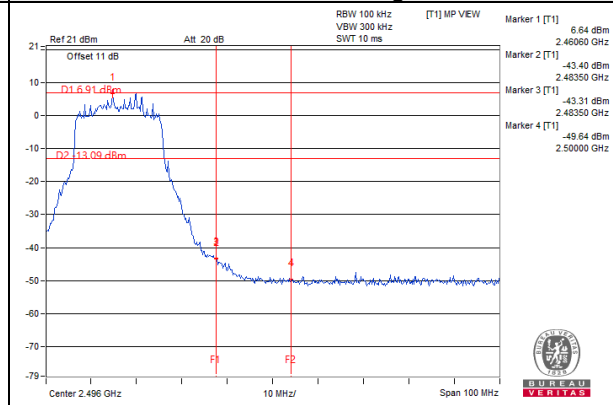
CH 11



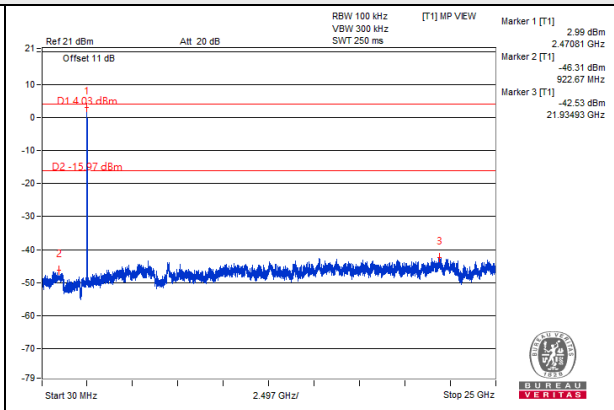
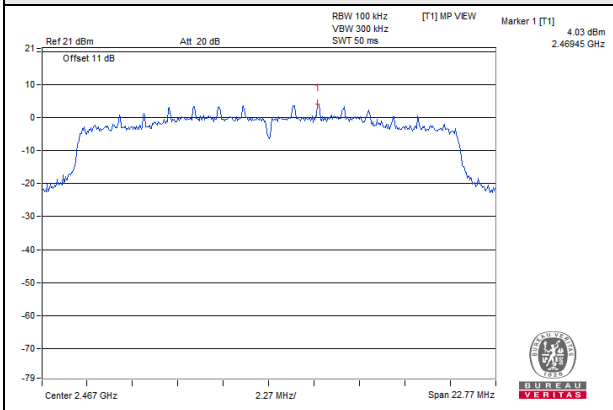
CH 1 Band edge



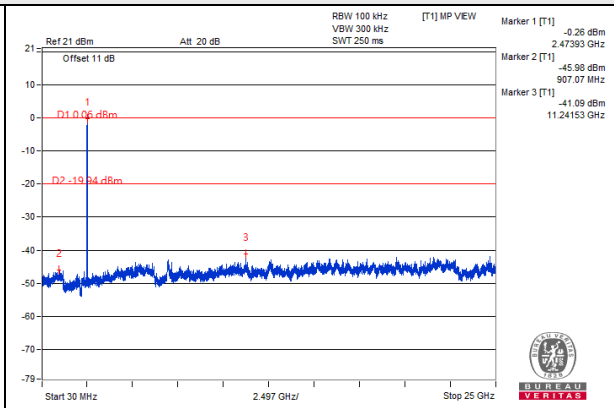
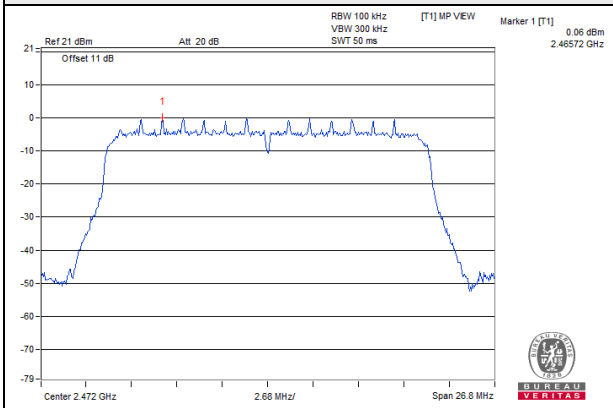
CH 11 Band edge



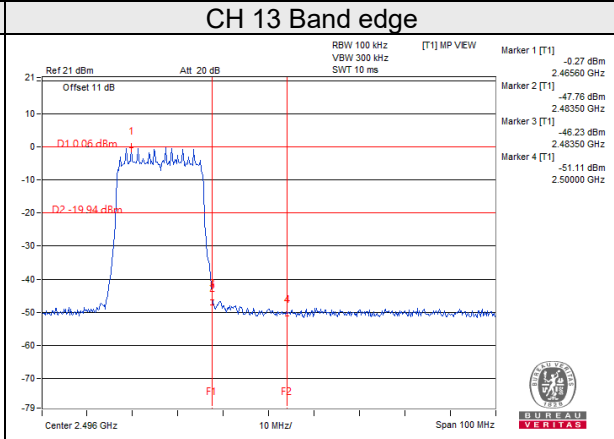
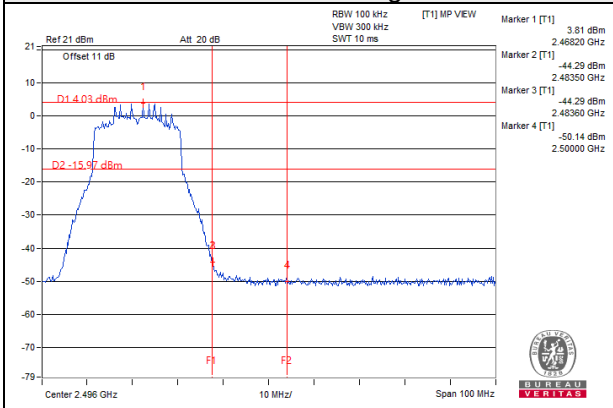
CH 12



CH 13

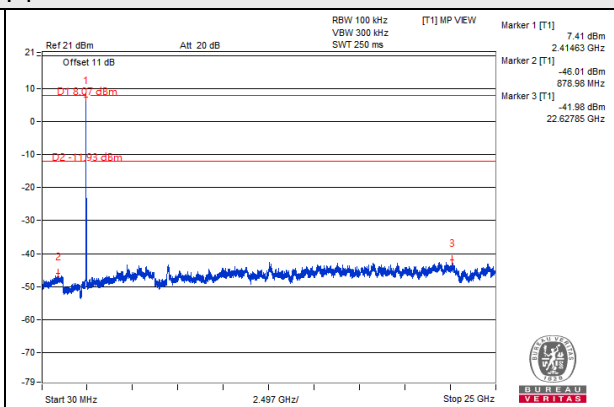
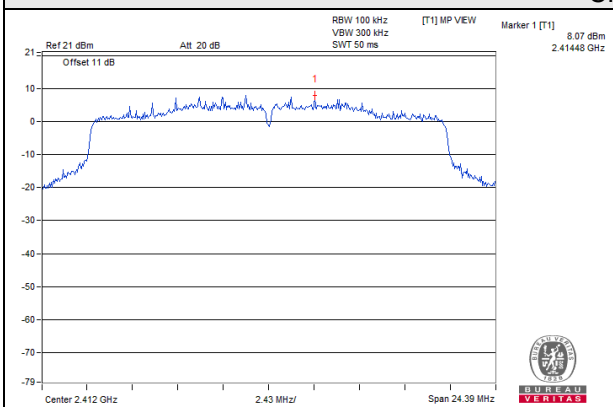


CH 12 Band edge

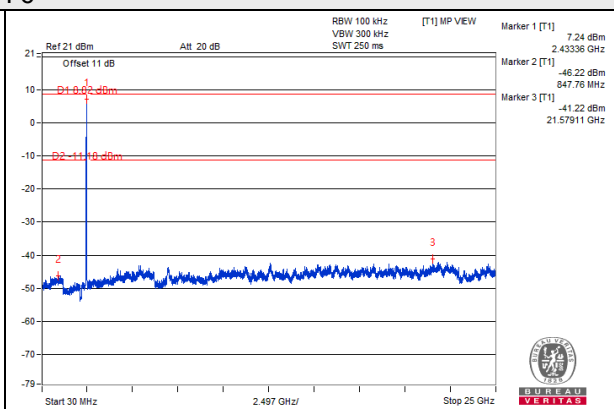
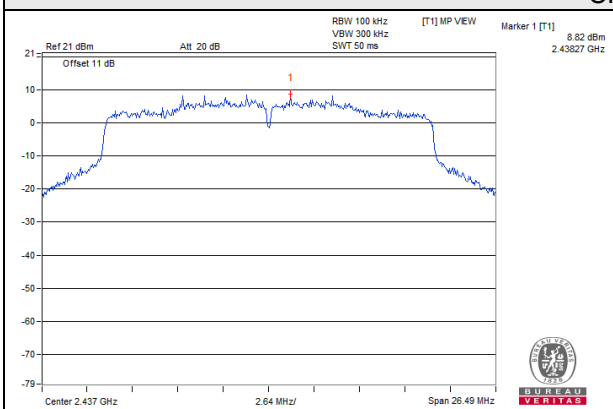


802.11ax (HE20)_Chain 1

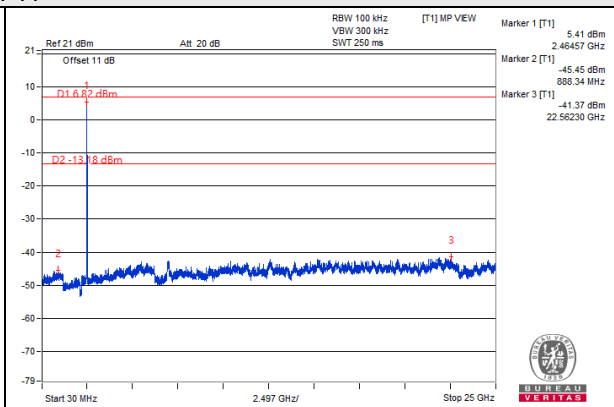
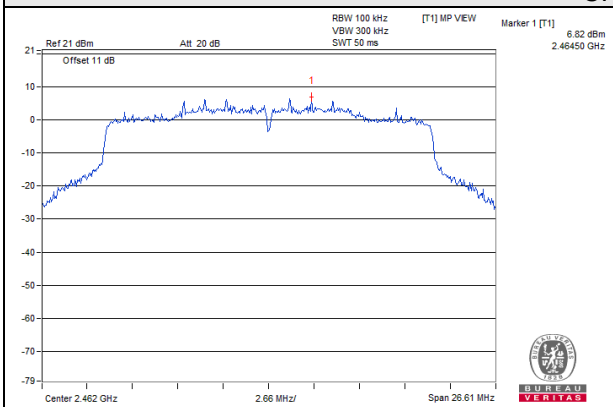
CH 1



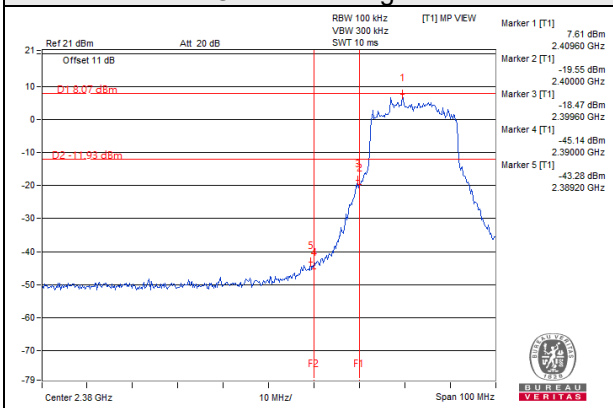
CH 6



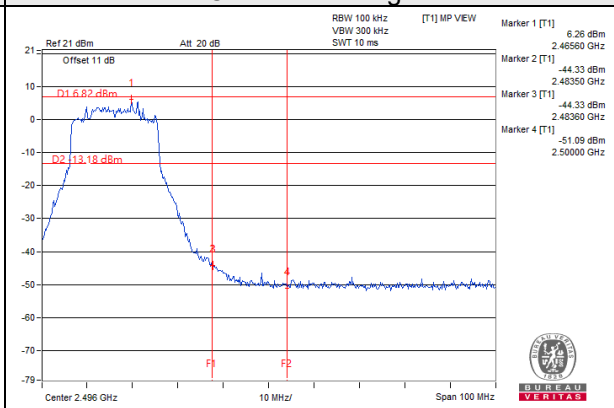
CH 11



CH 1 Band edge



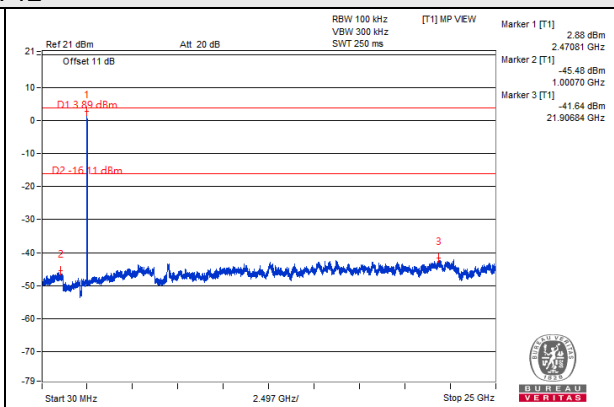
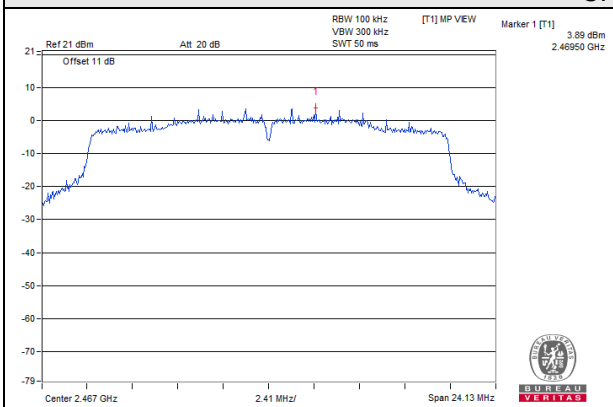
CH 11 Band edge



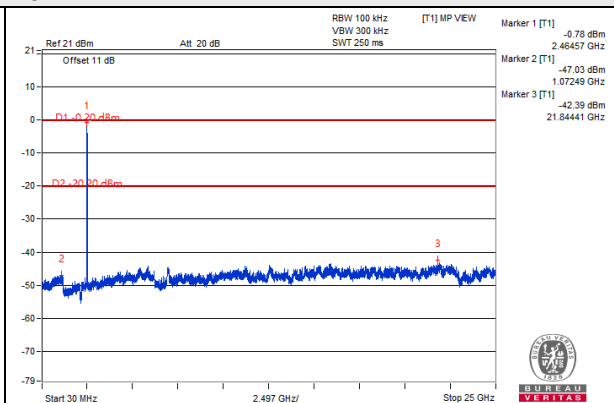
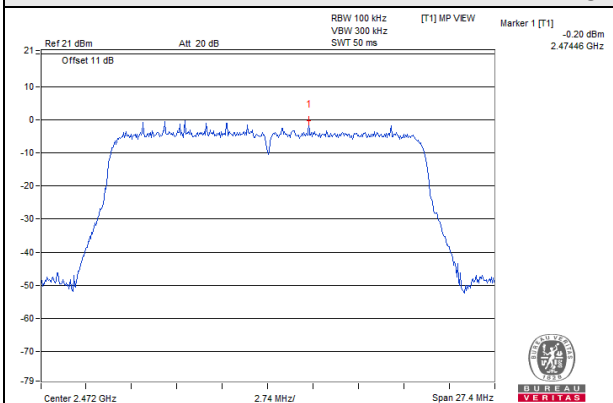


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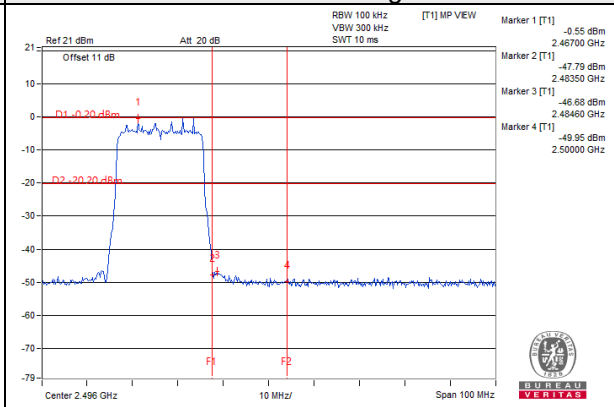
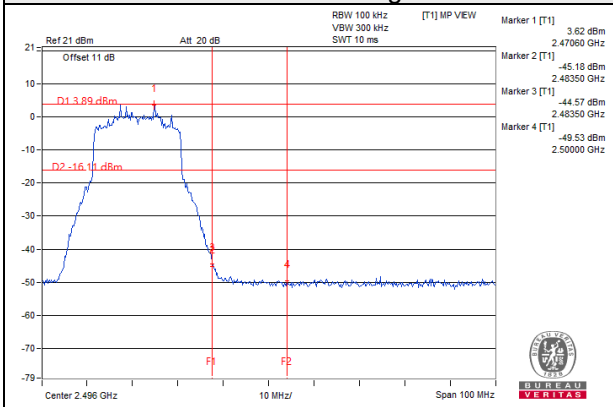
CH 12



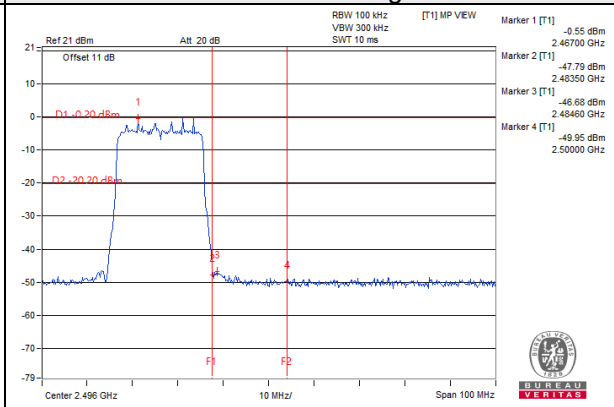
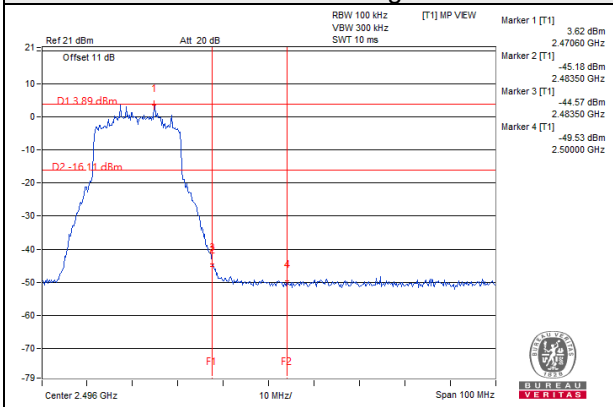
CH 13



CH 12 Band edge



CH 13 Band edge

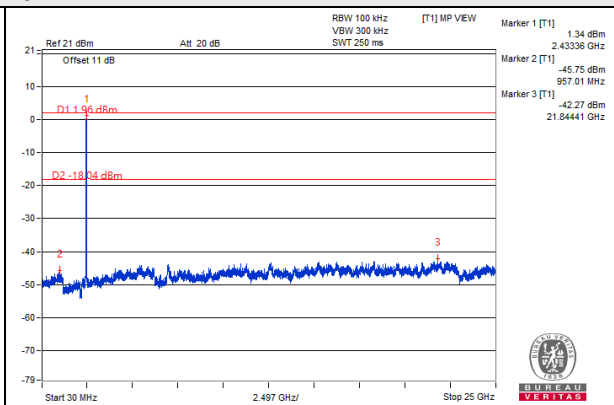
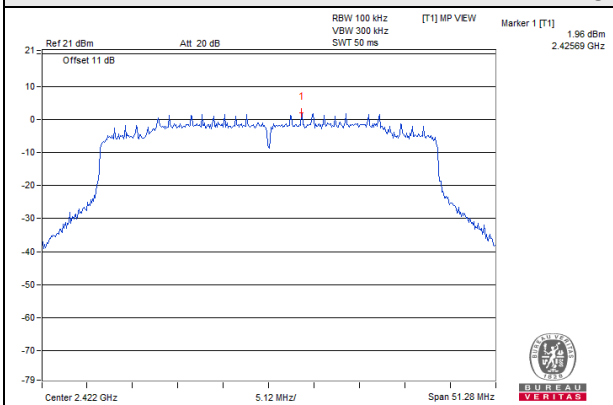




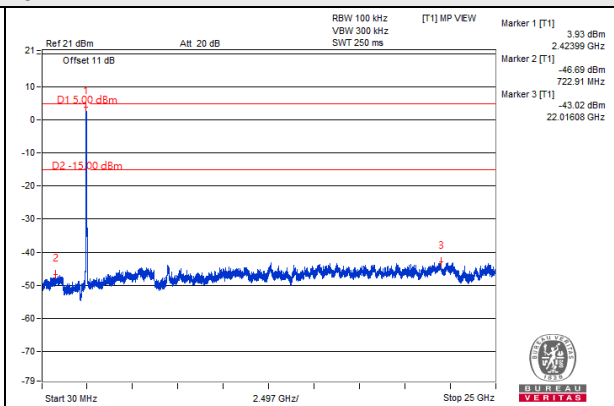
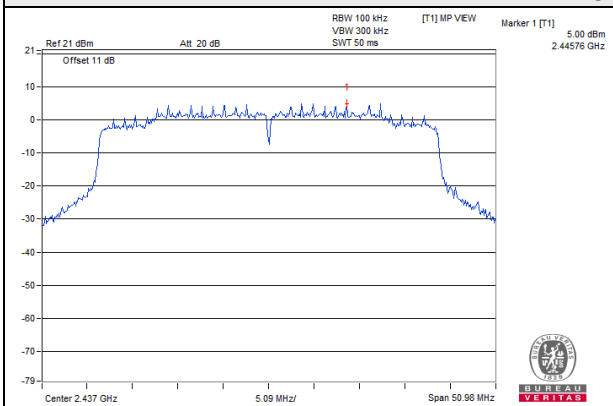
BUREAU VERITAS

802.11ax (HE40)_Chain 0

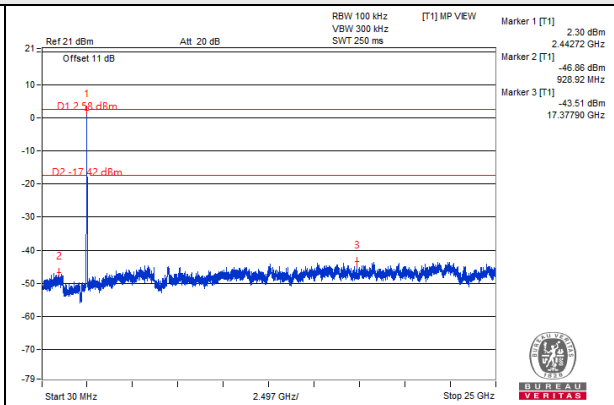
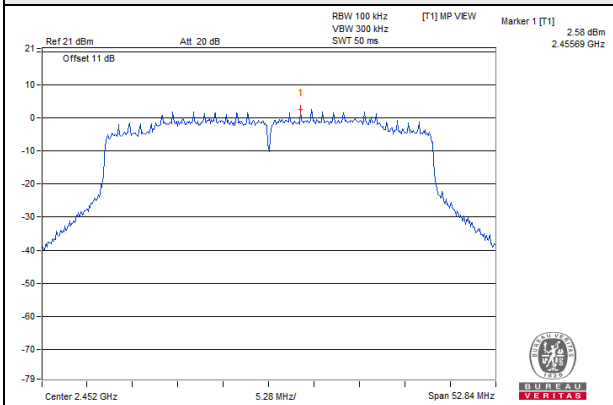
CH 3



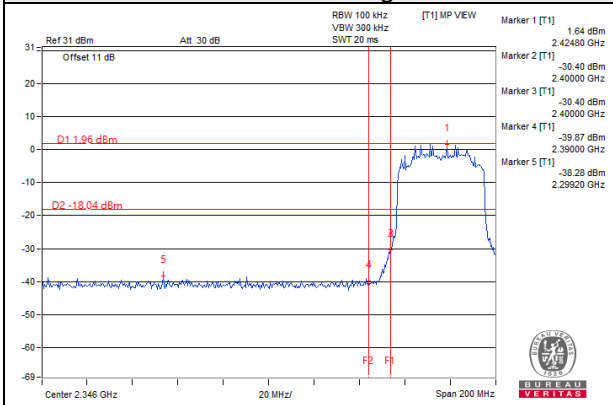
CH 6



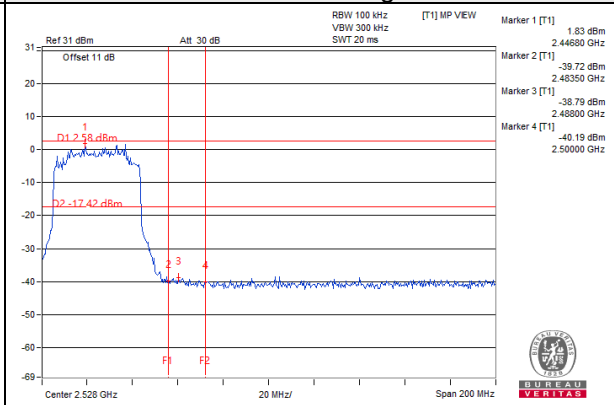
CH 9



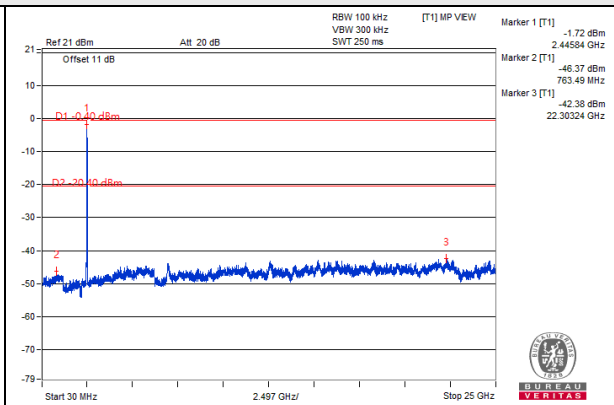
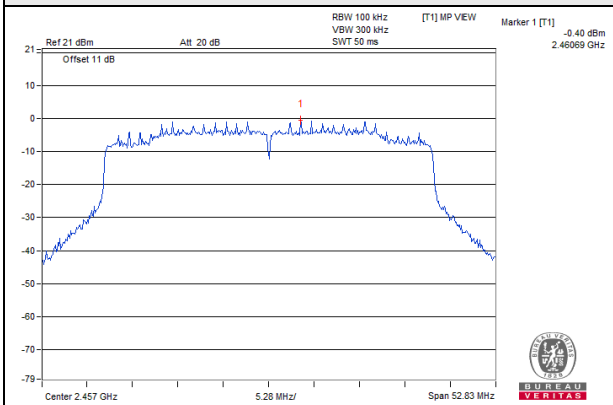
CH 3 Band edge



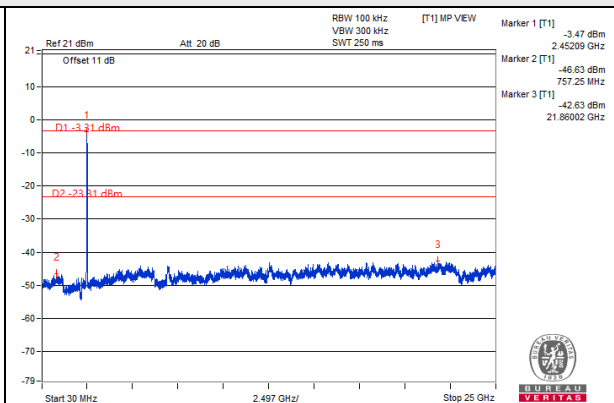
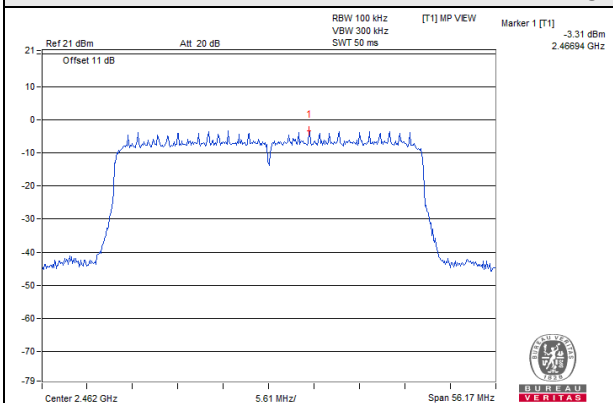
CH 9 Band edge



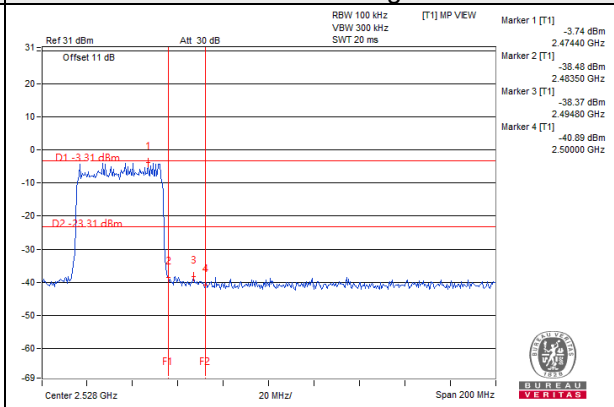
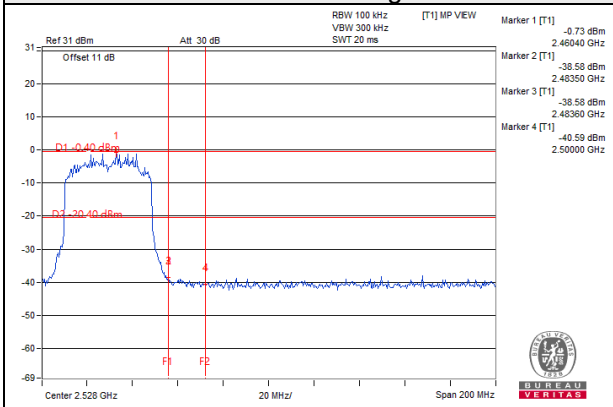
CH 10



CH 11



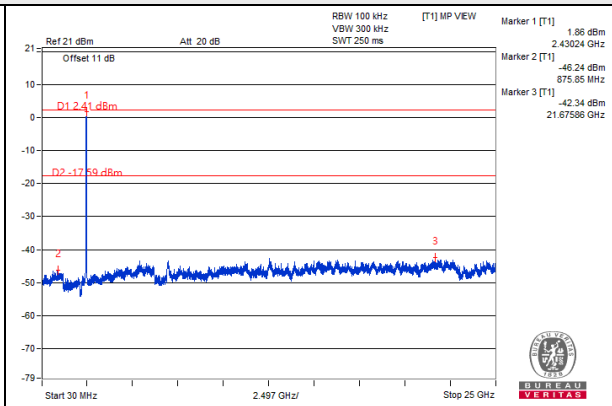
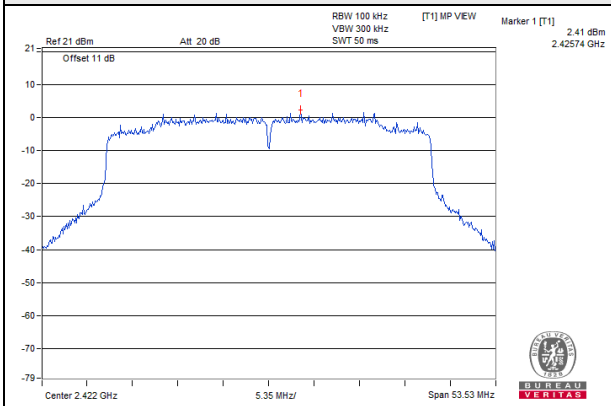
CH 10 Band edge



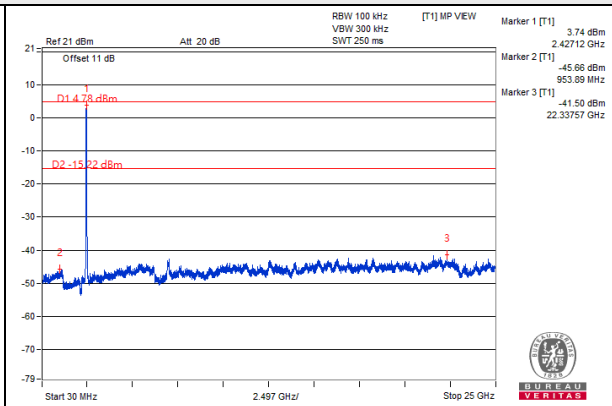
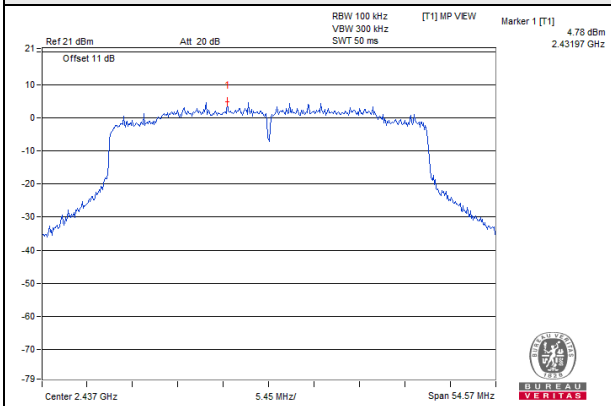
CH 11 Band edge

802.11ax (HE40)_Chain 1

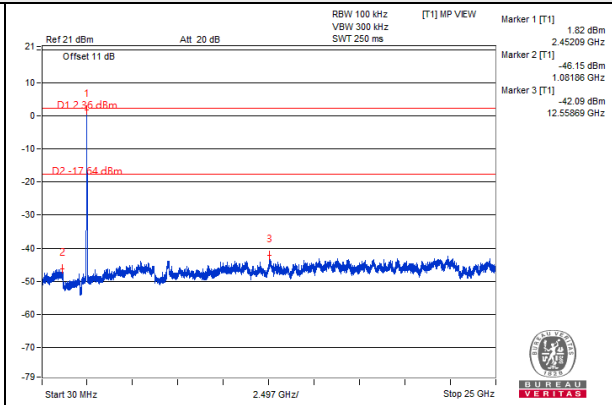
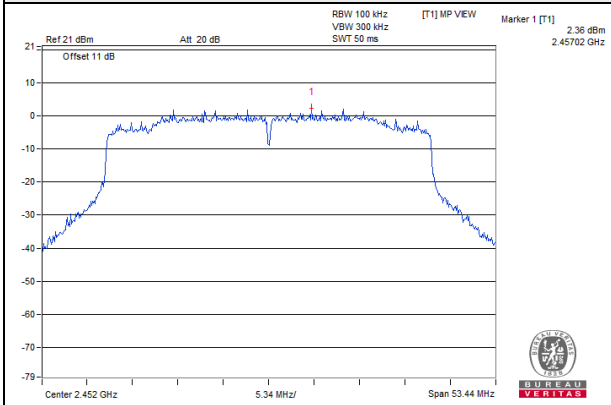
CH 3



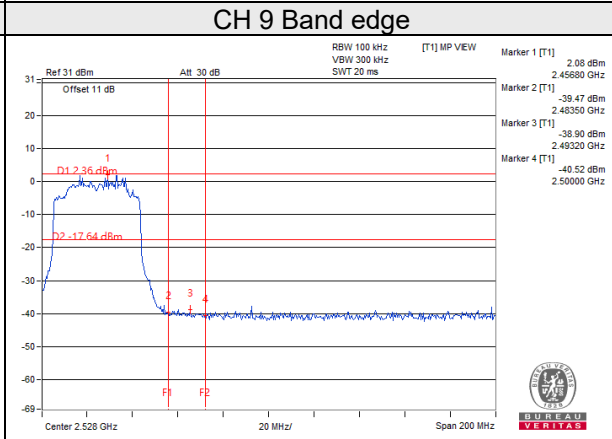
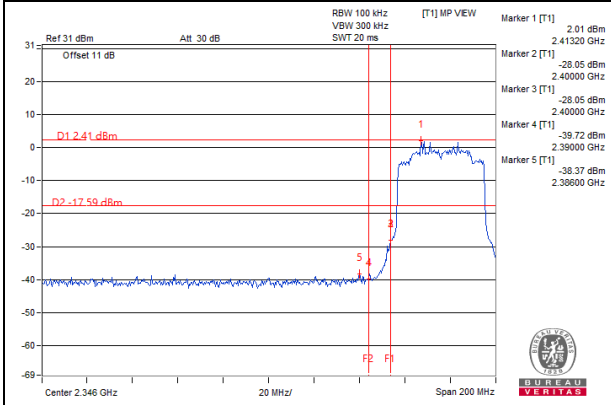
CH 6



CH 9

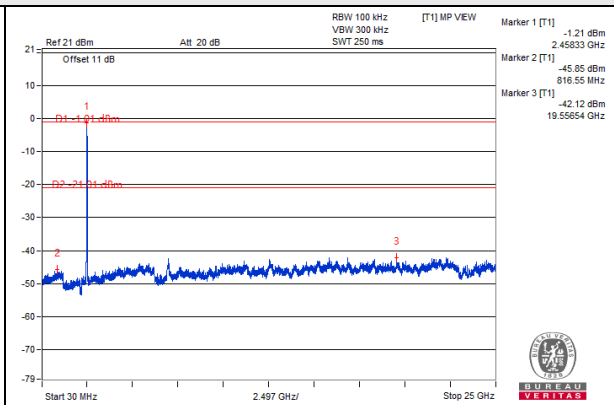
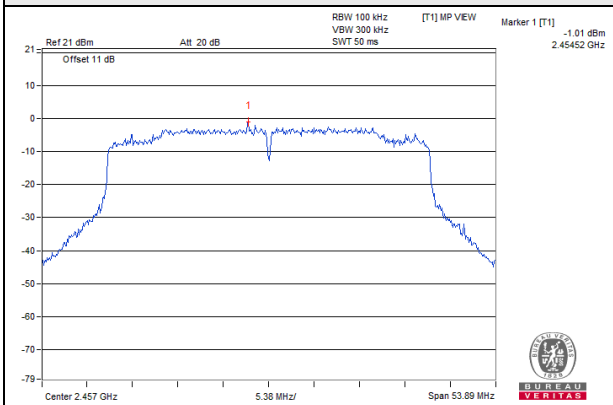


CH 3 Band edge

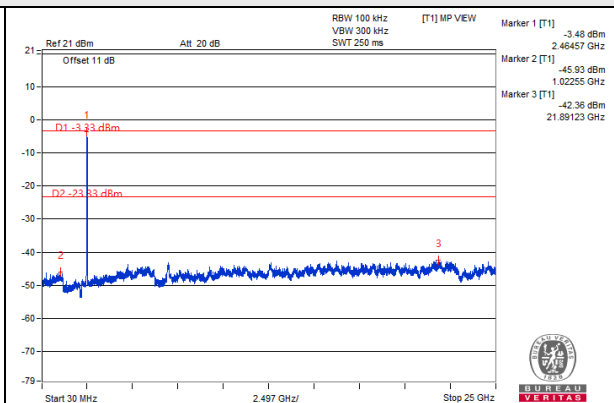
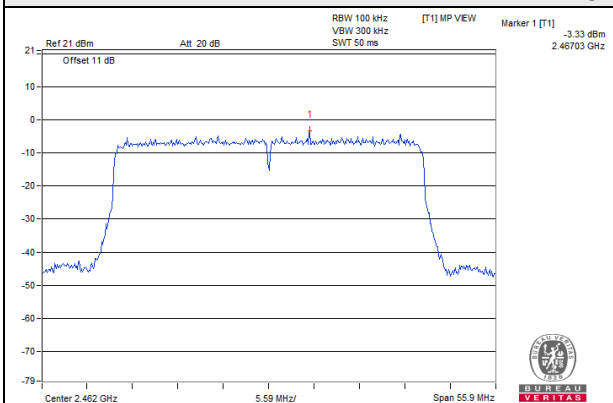




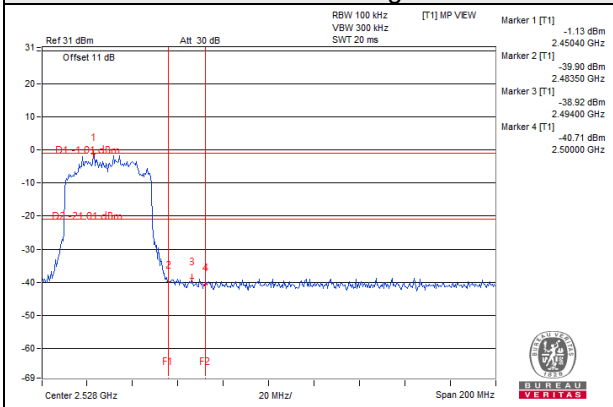
CH 10



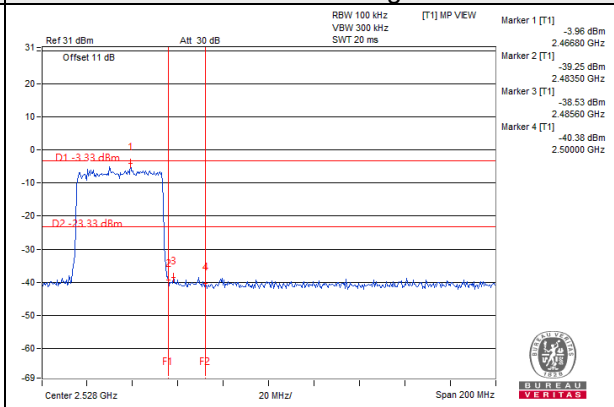
CH 11



CH 10 Band edge



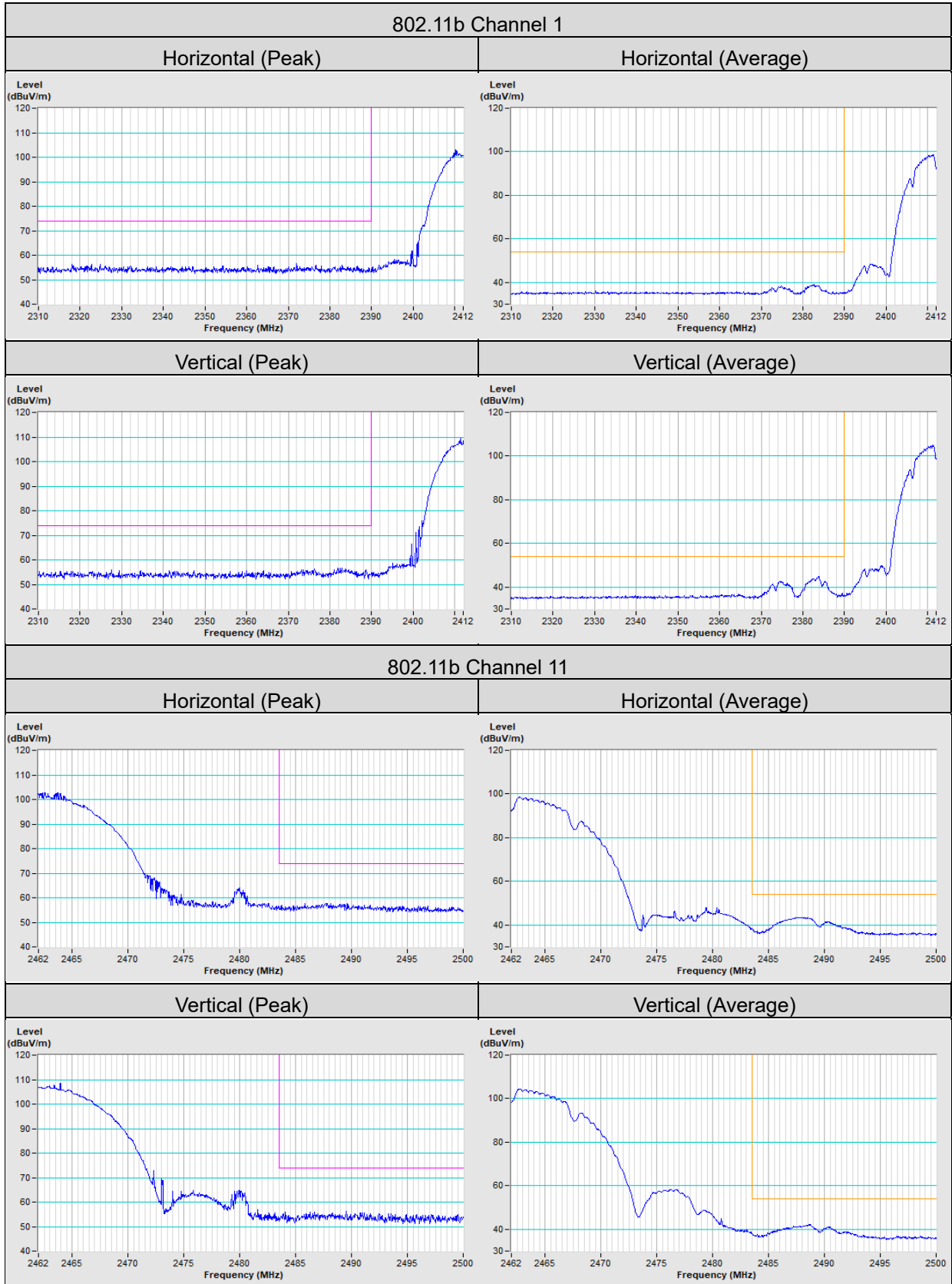
CH 11 Band edge



5 Pictures of Test Arrangements

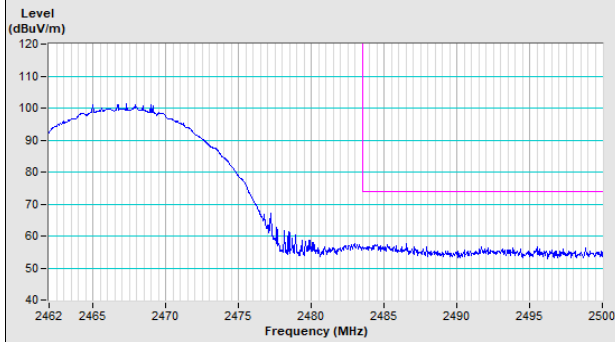
Please refer to the attached file (Test Setup Photo).

Annex A- Band Edge Measurement

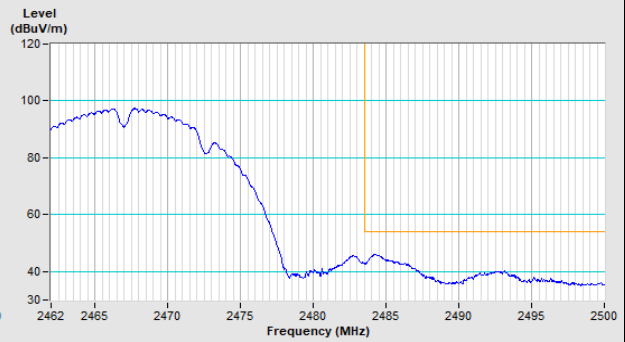


802.11b Channel 12

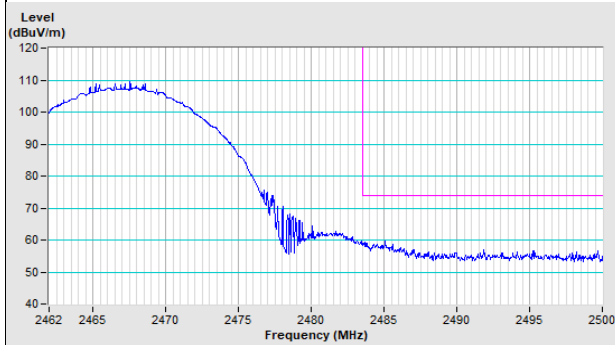
Horizontal (Peak)



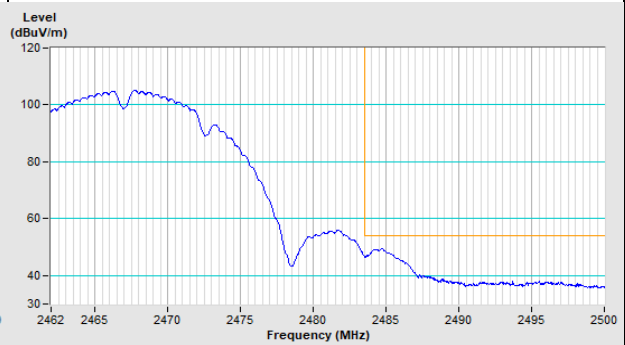
Horizontal (Average)



Vertical (Peak)

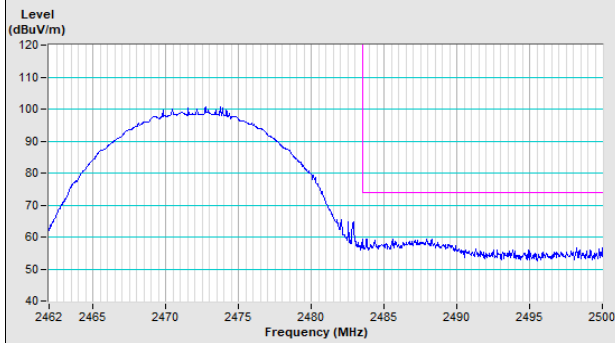


Vertical (Average)

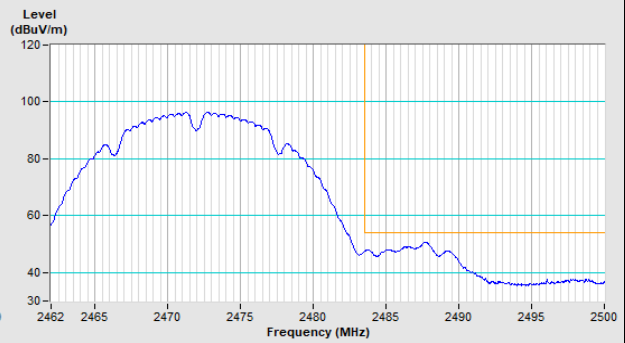


802.11b Channel 13

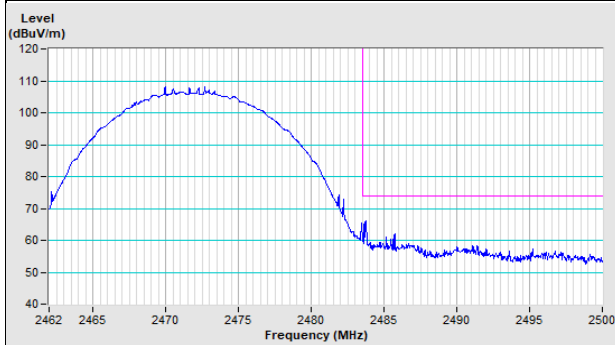
Horizontal (Peak)



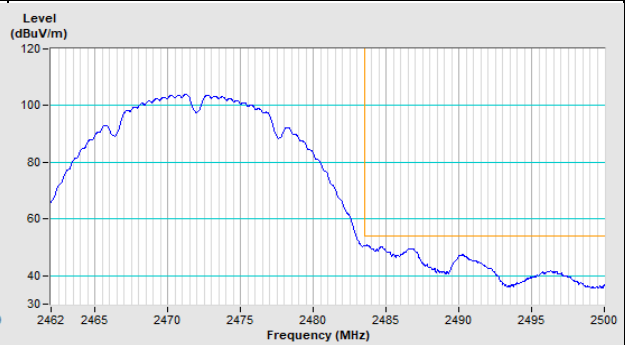
Horizontal (Average)



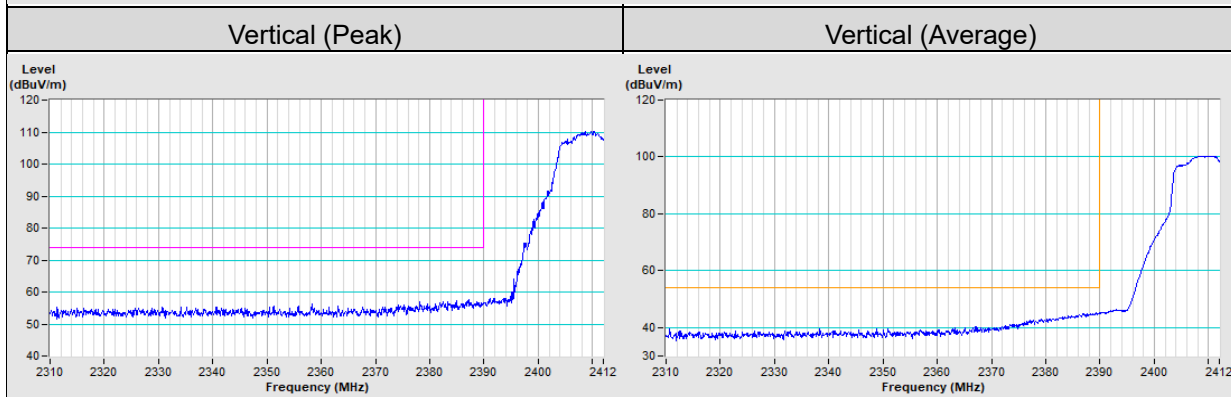
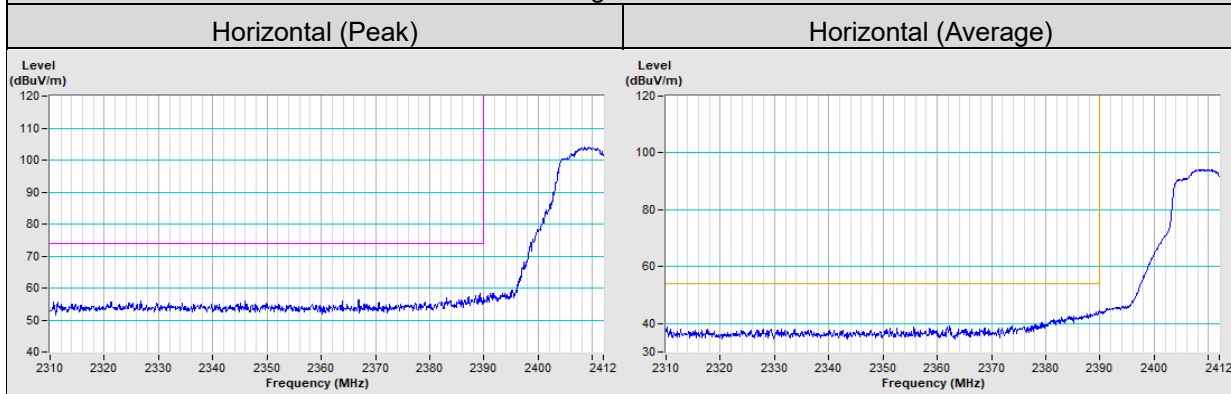
Vertical (Peak)



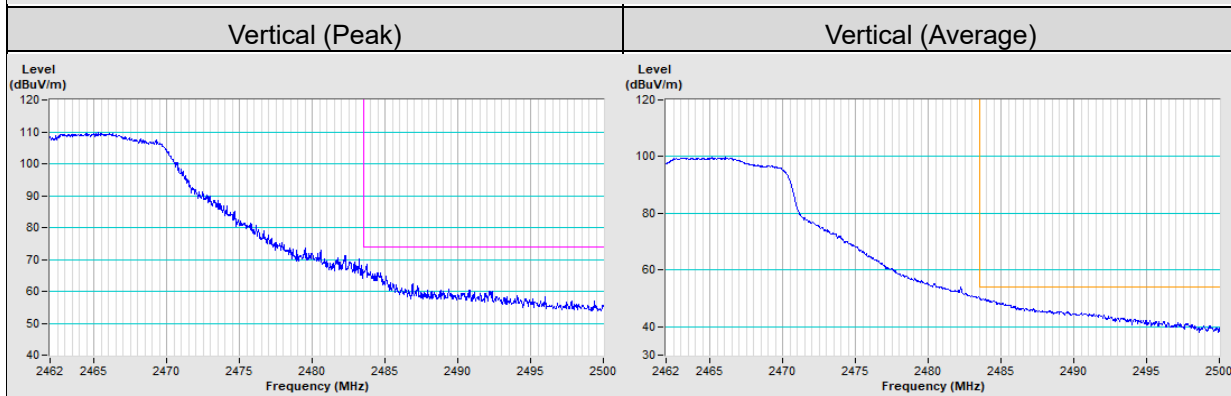
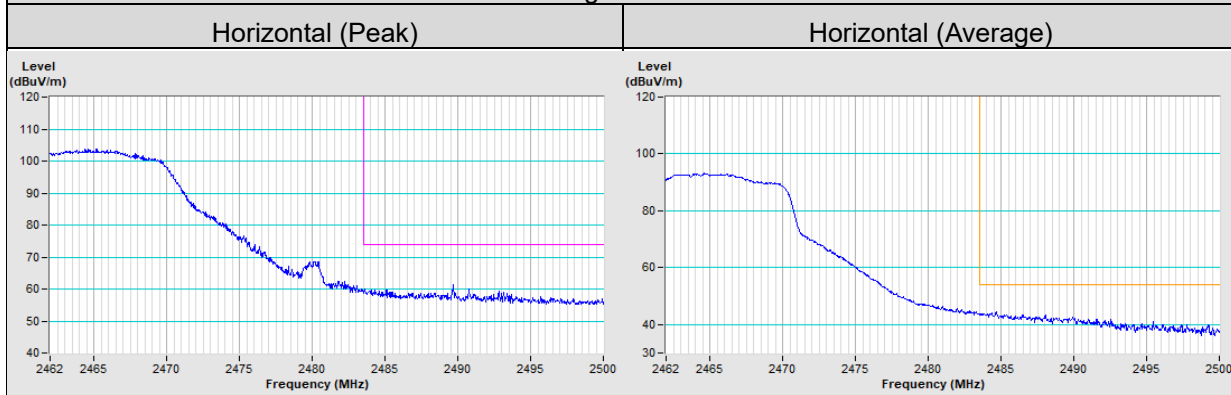
Vertical (Average)



802.11g Channel 1

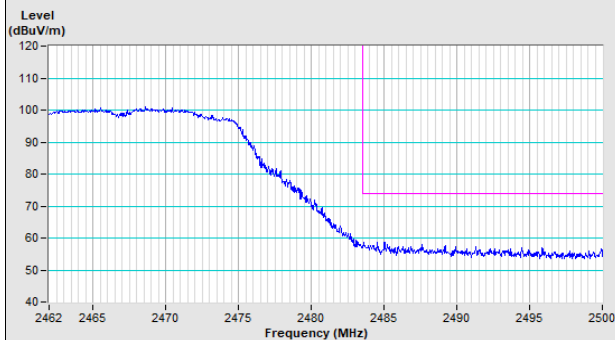


802.11g Channel 11

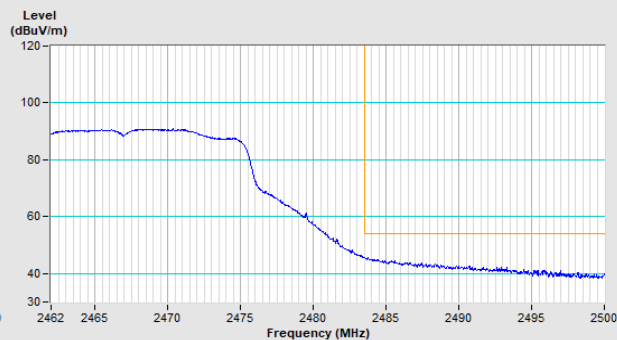


802.11g Channel 12

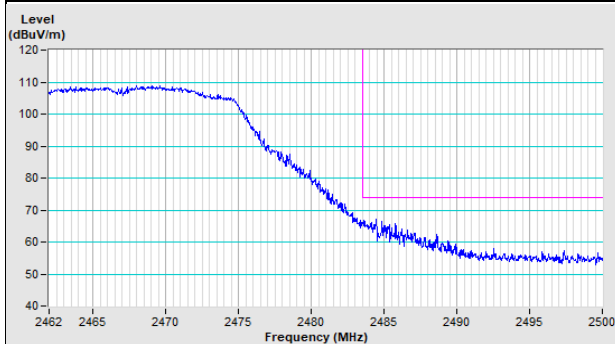
Horizontal (Peak)



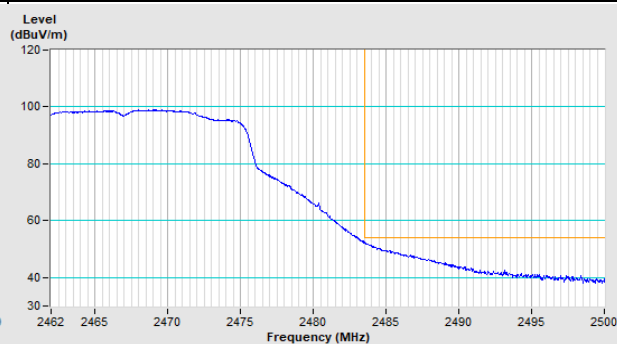
Horizontal (Average)



Vertical (Peak)

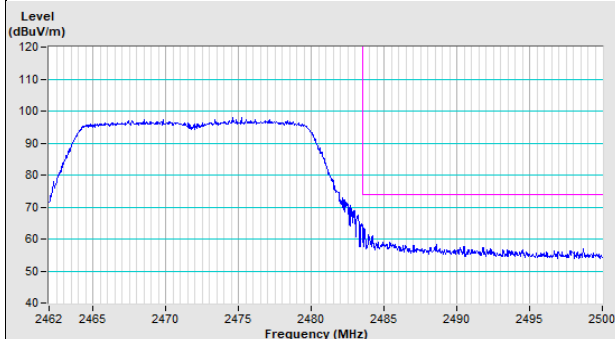


Vertical (Average)

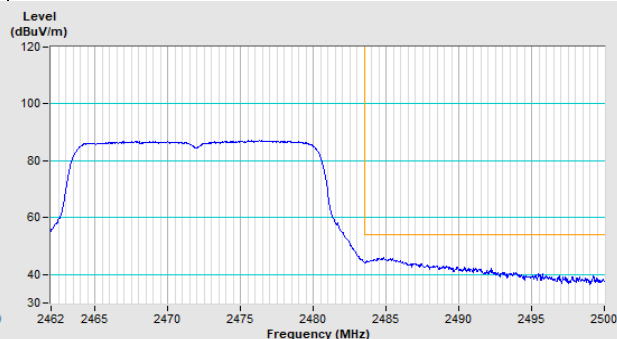


802.11g Channel 13

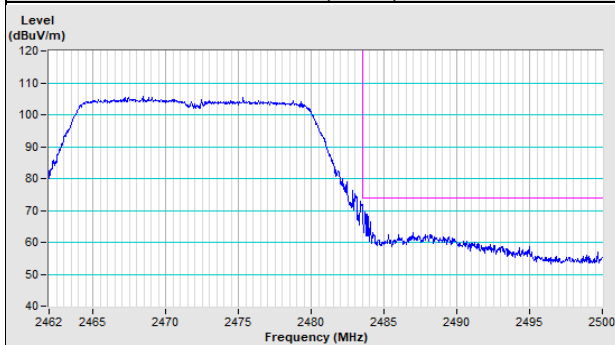
Horizontal (Peak)



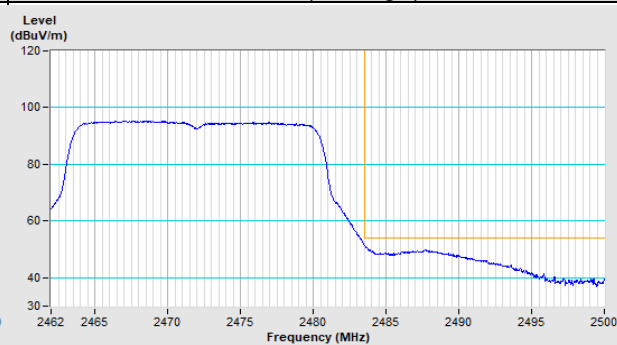
Horizontal (Average)



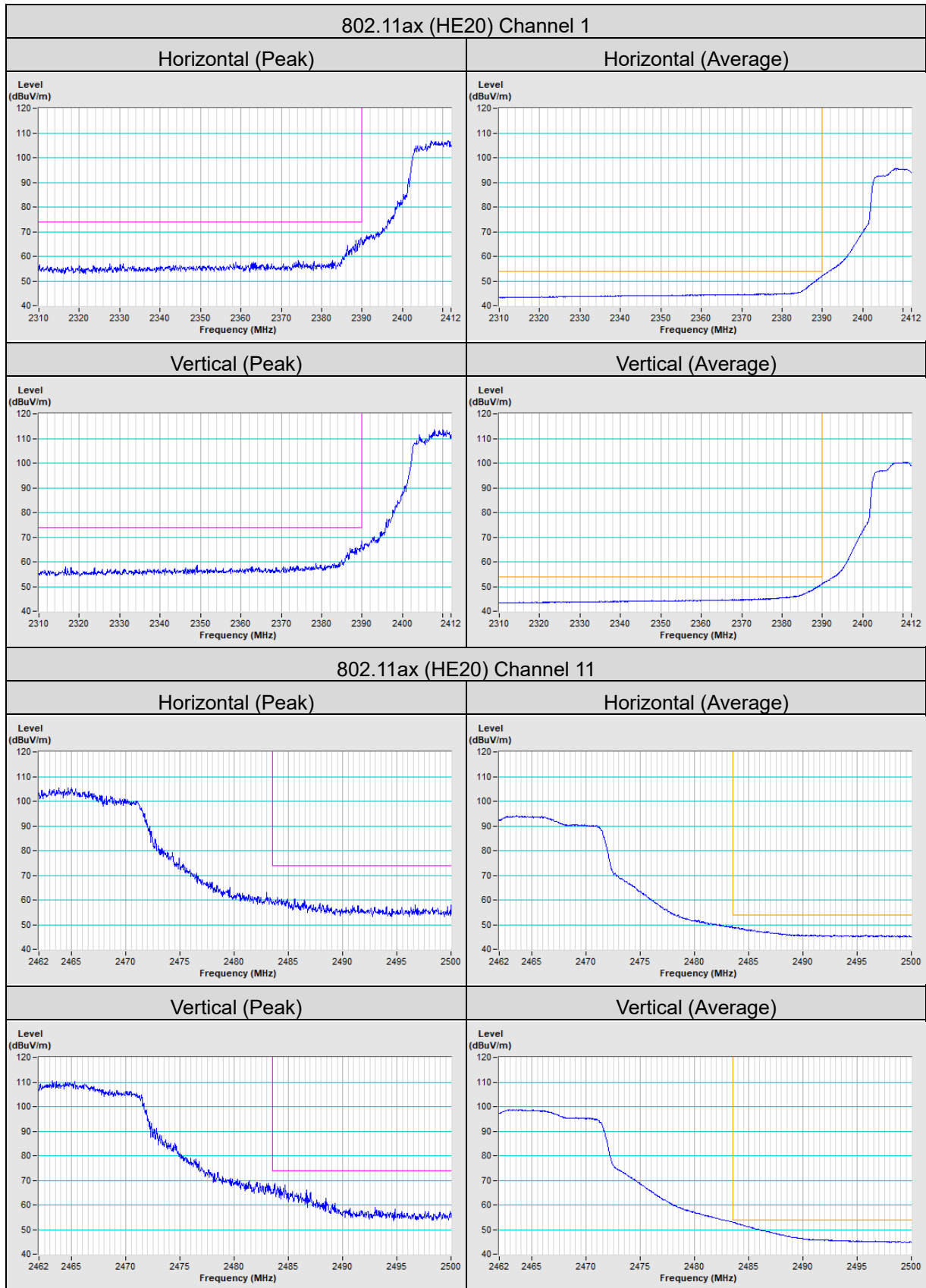
Vertical (Peak)



Vertical (Average)

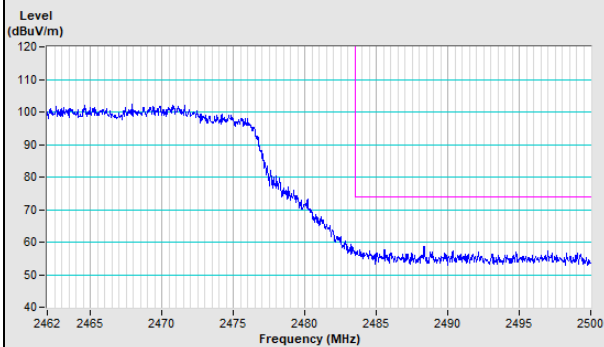


Full RU

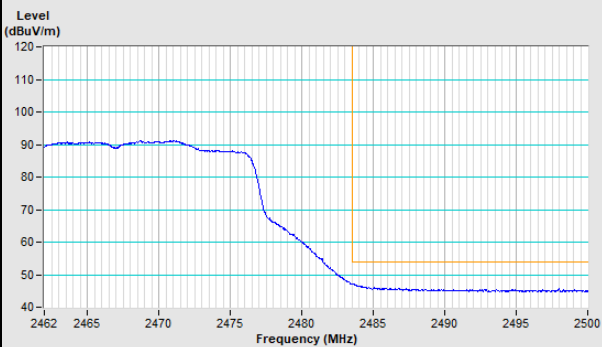


802.11ax (HE20) Channel 12

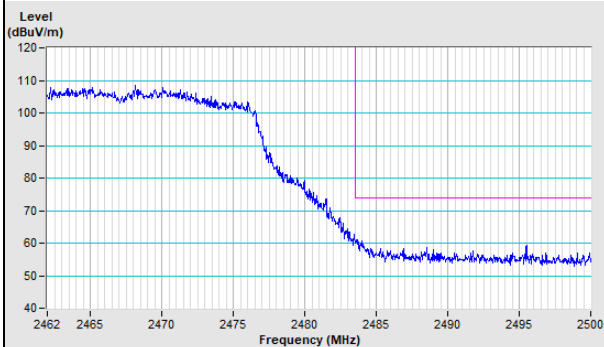
Horizontal (Peak)



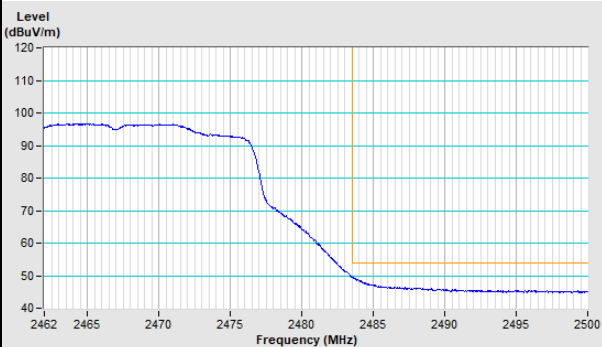
Horizontal (Average)



Vertical (Peak)

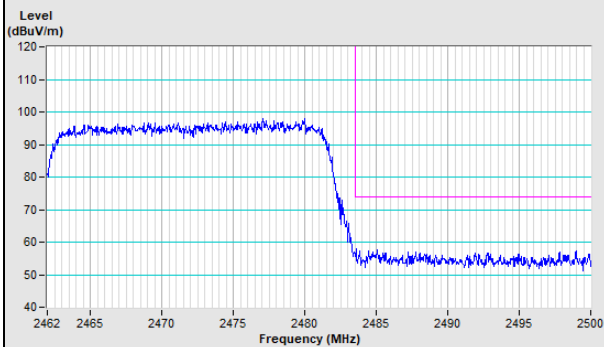


Vertical (Average)

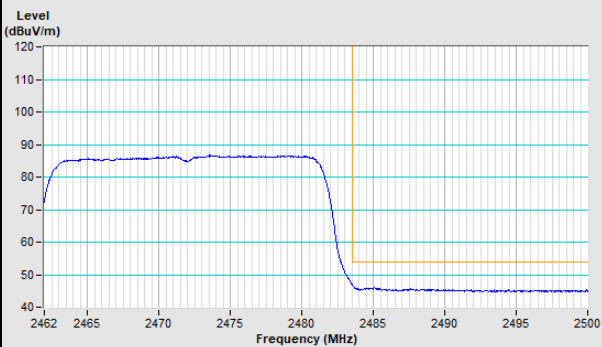


802.11ax (HE20) Channel 13

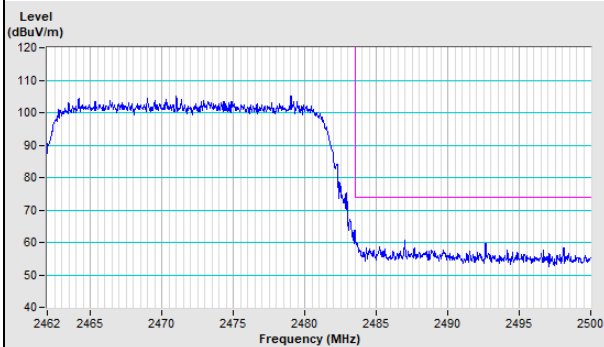
Horizontal (Peak)



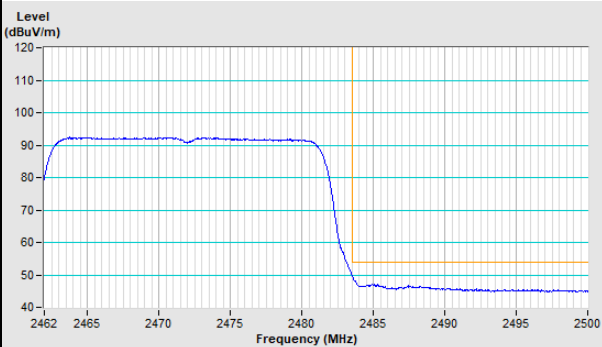
Horizontal (Average)

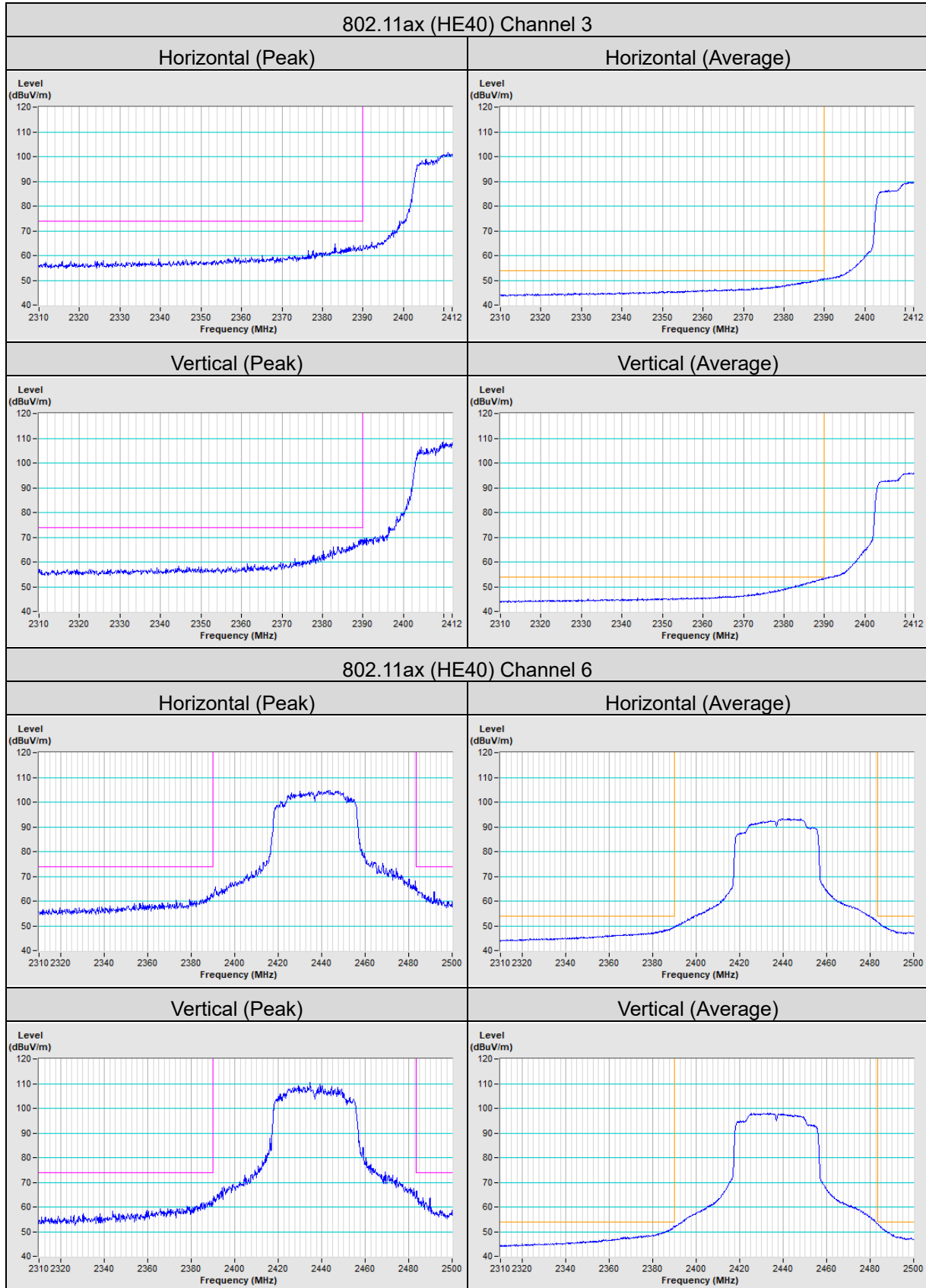


Vertical (Peak)



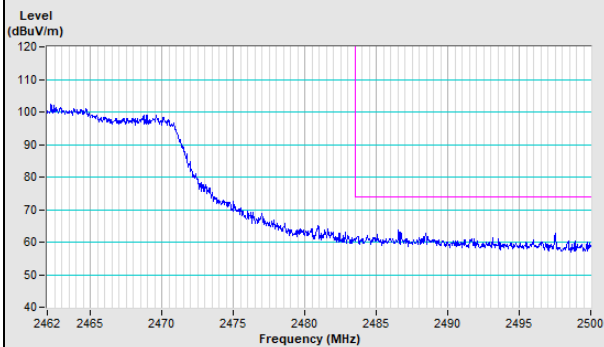
Vertical (Average)



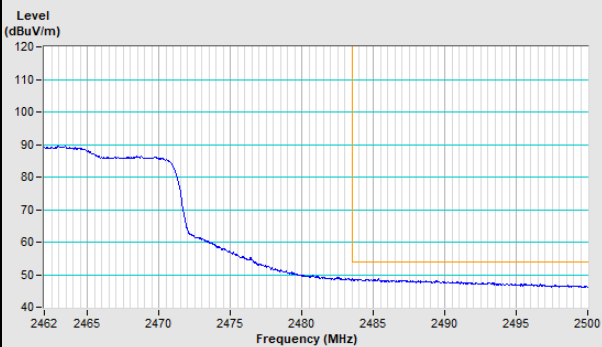


802.11ax (HE40) Channel 9

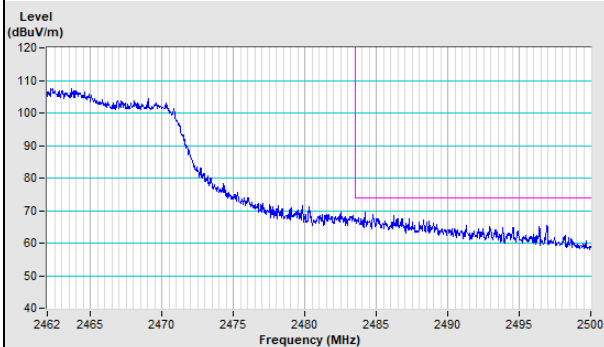
Horizontal (Peak)



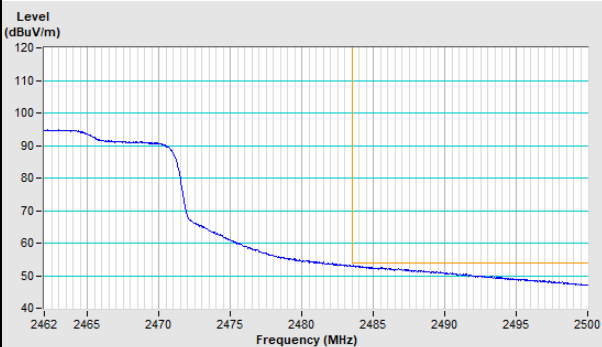
Horizontal (Average)



Vertical (Peak)

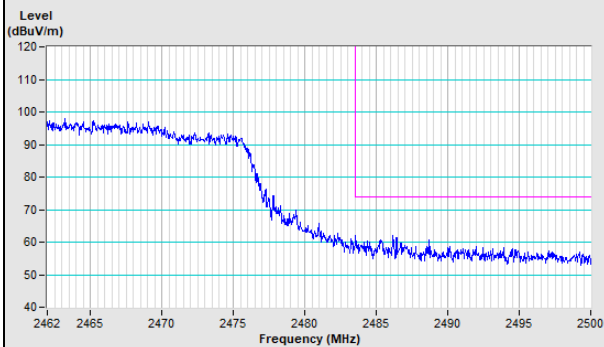


Vertical (Average)

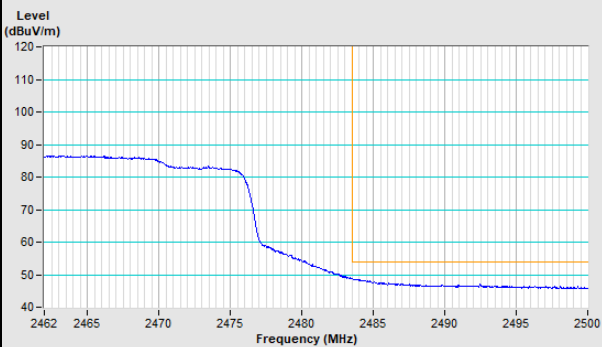


802.11ax (HE40) Channel 10

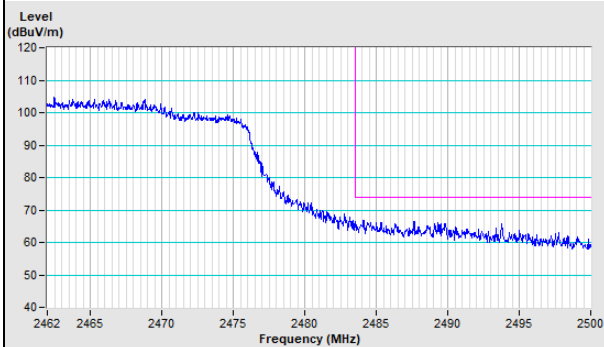
Horizontal (Peak)



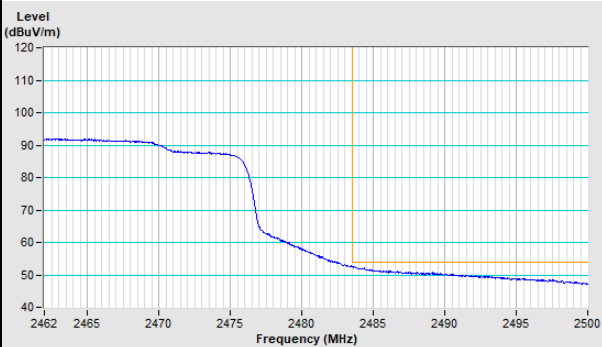
Horizontal (Average)



Vertical (Peak)

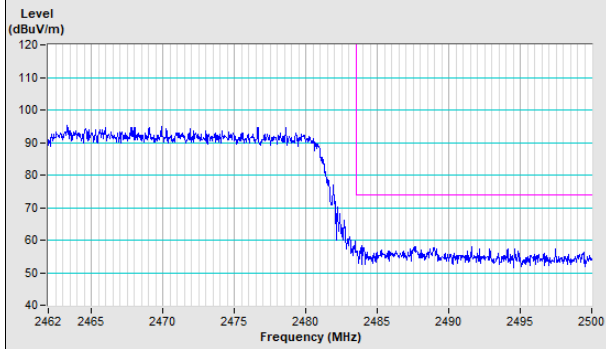


Vertical (Average)

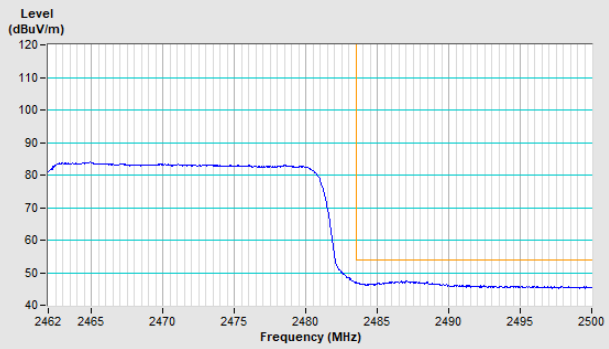


802.11ax (HE40) Channel 11

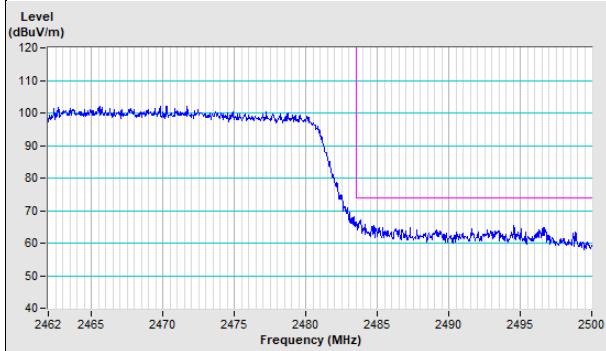
Horizontal (Peak)



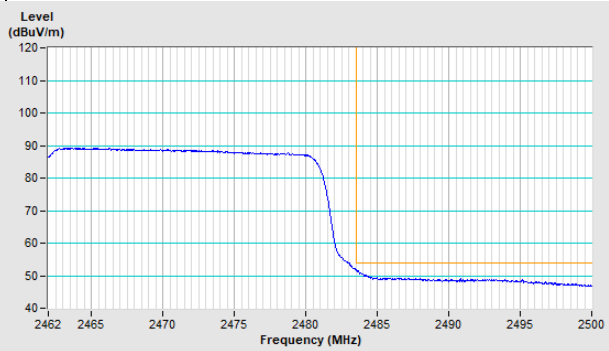
Horizontal (Average)



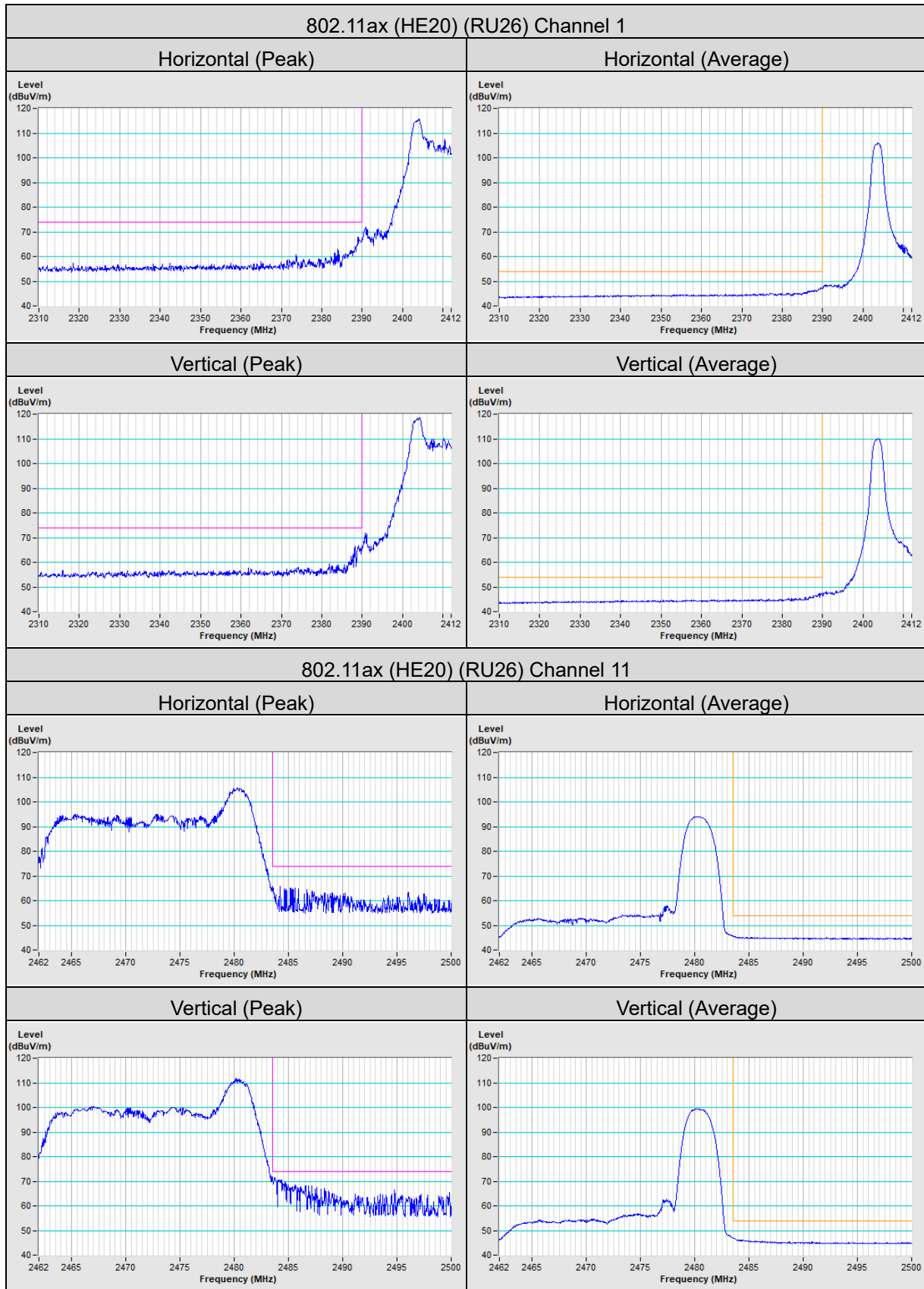
Vertical (Peak)



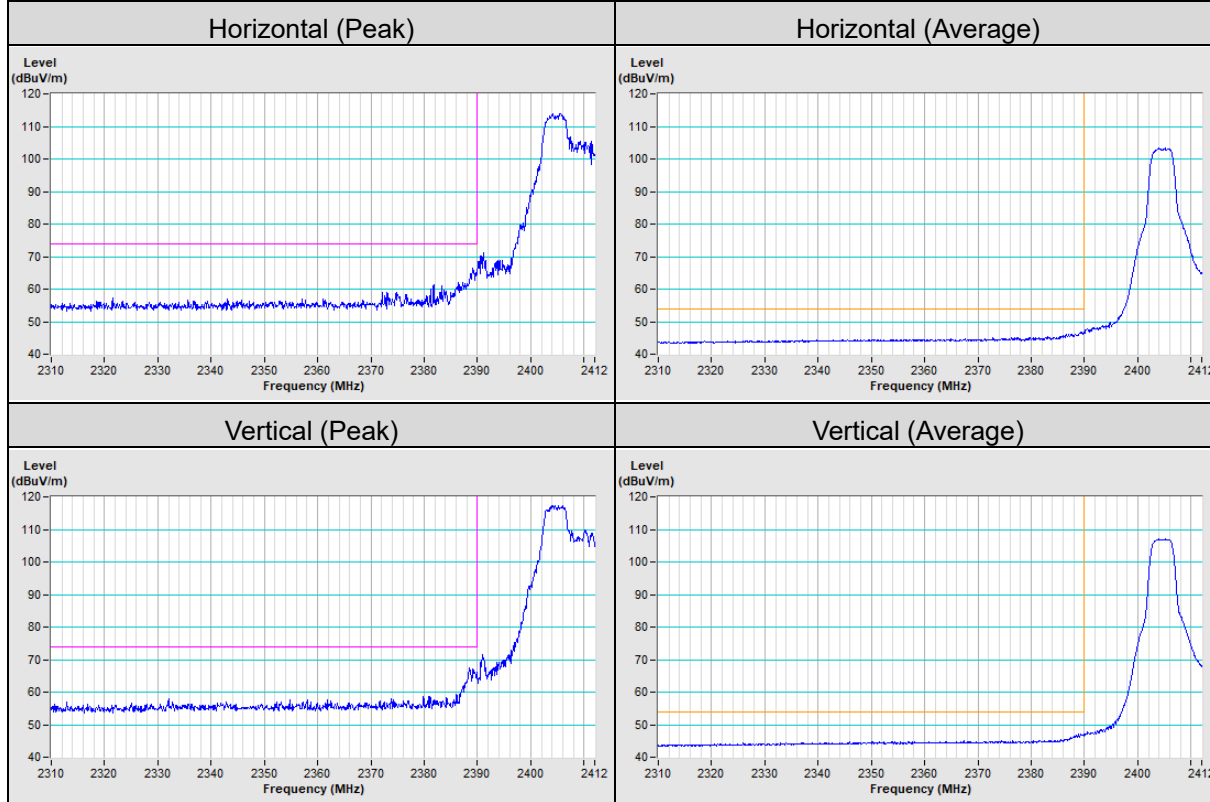
Vertical (Average)



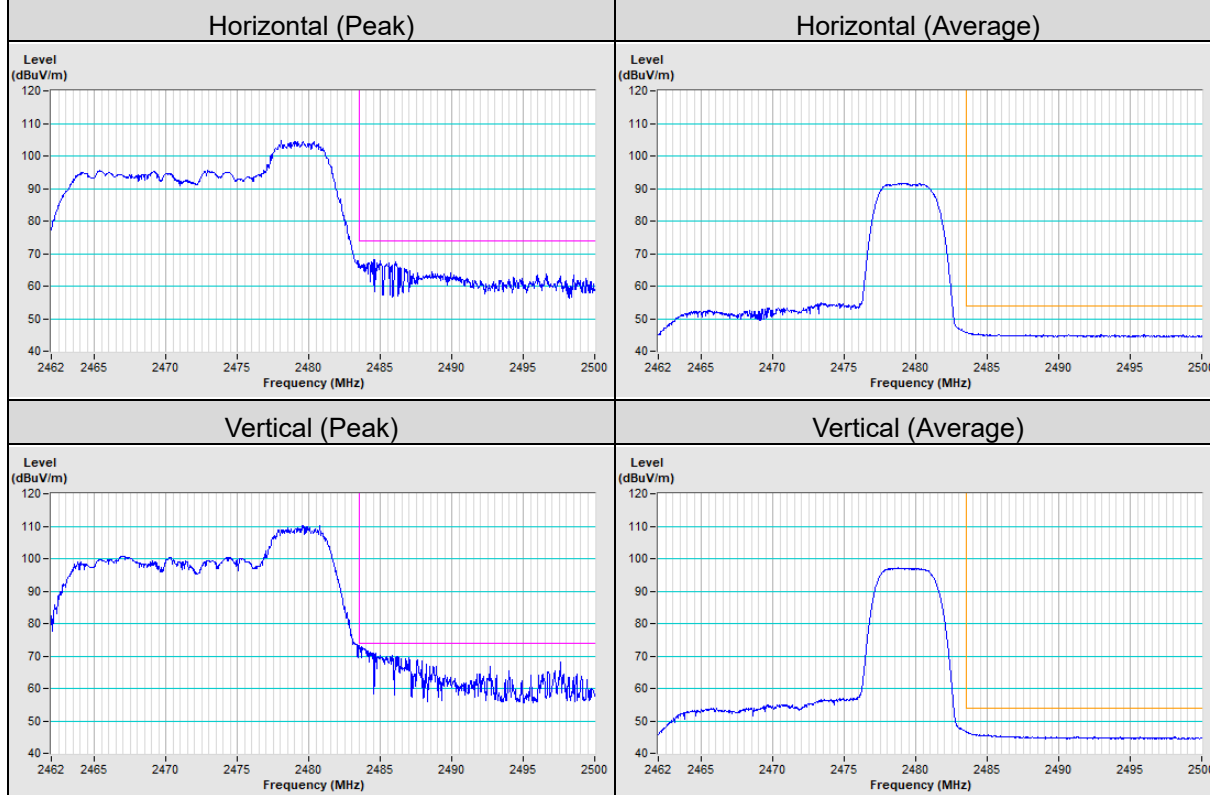
Partial RU



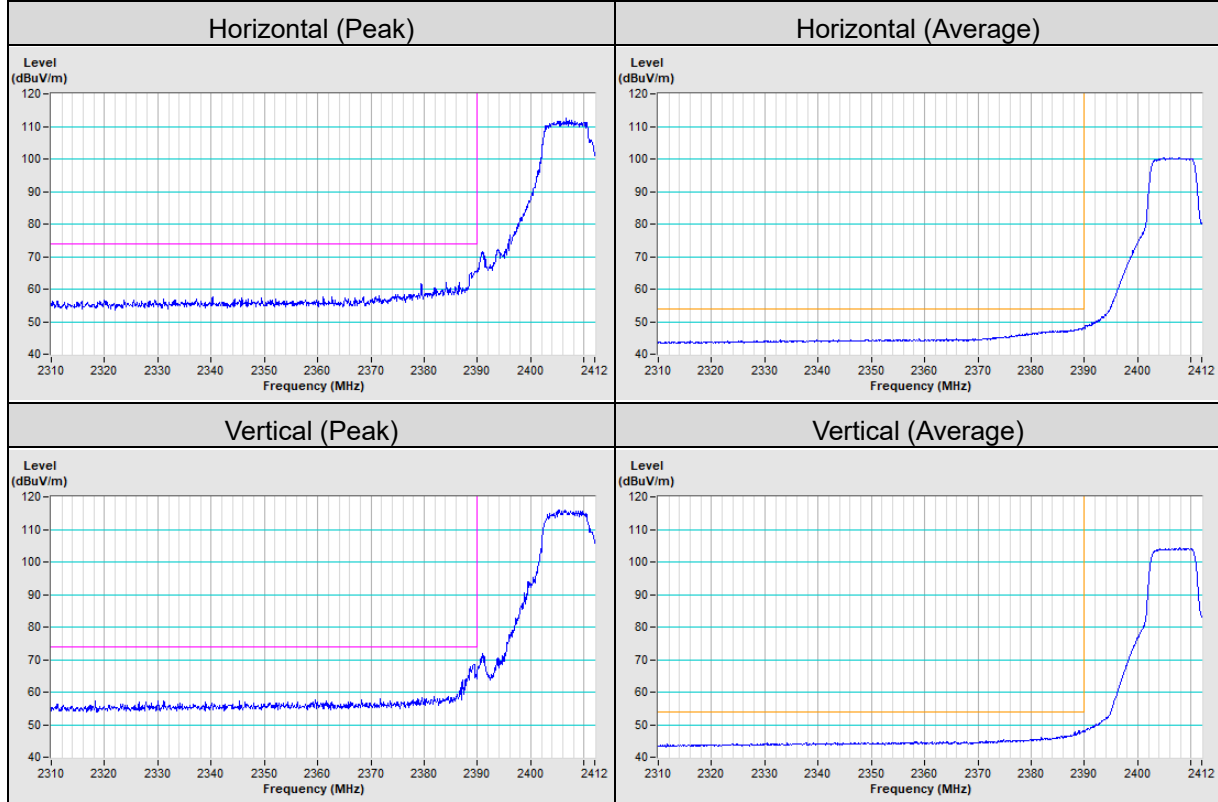
802.11ax (HE20) (RU52) Channel 1



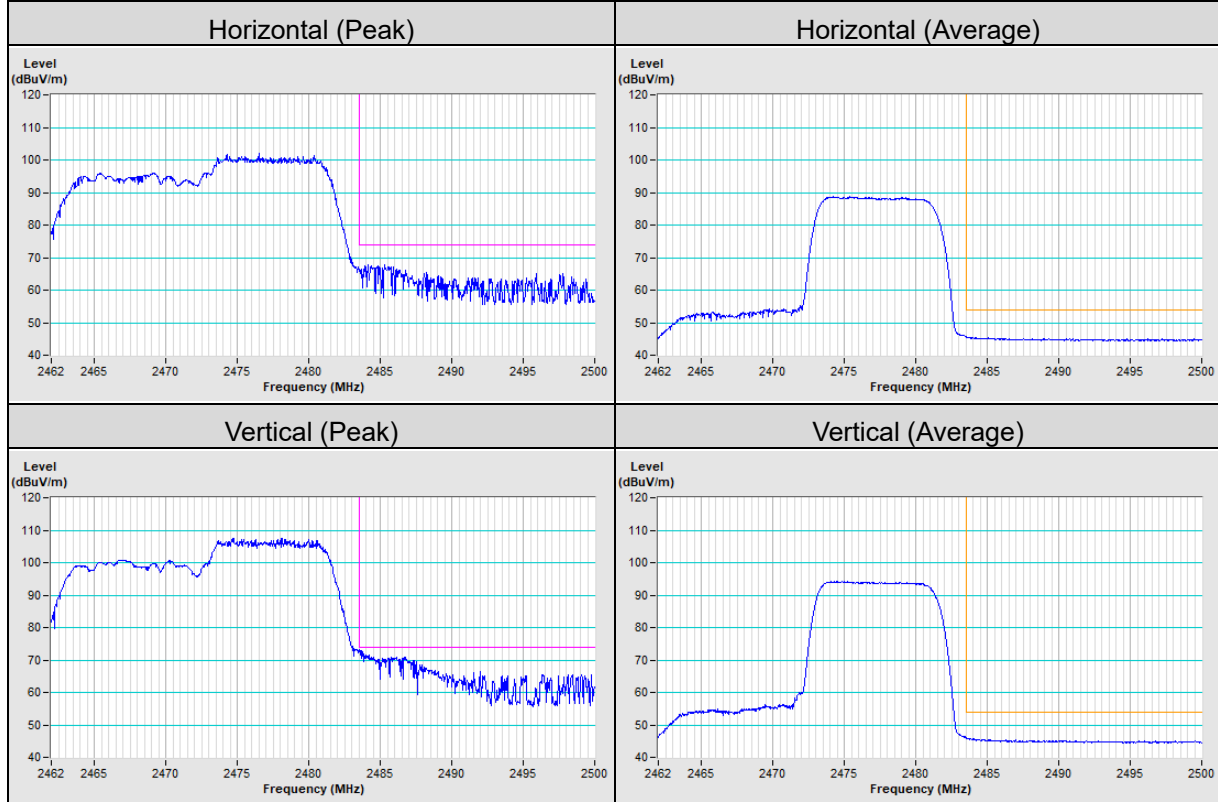
802.11ax (HE20) (RU52) Channel 13



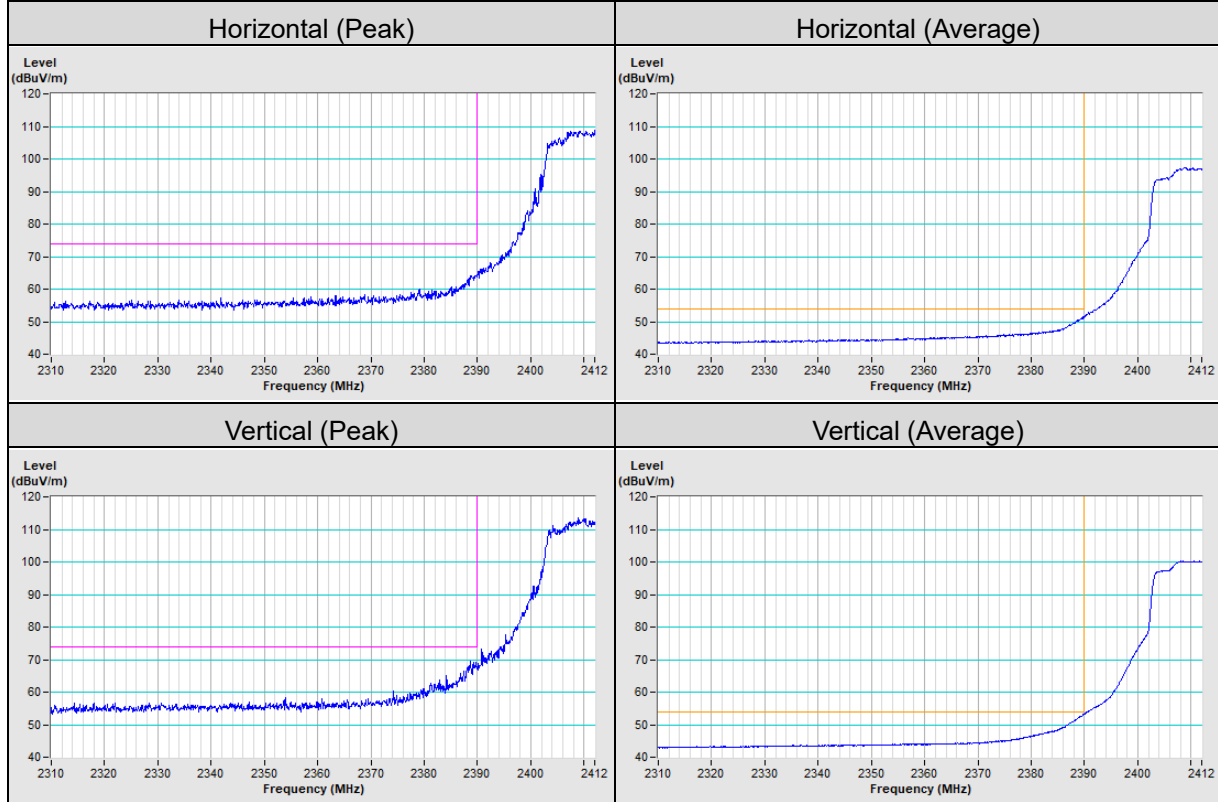
802.11ax (HE20) (RU106) Channel 1



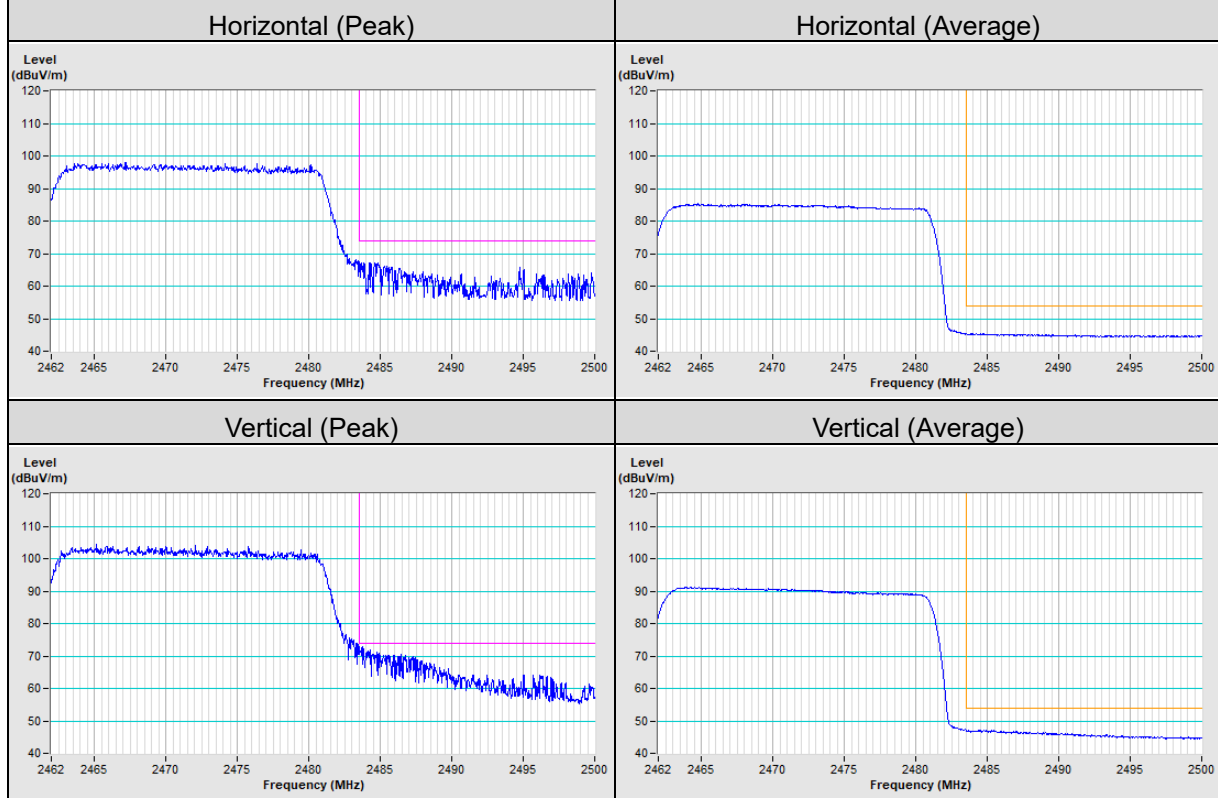
802.11ax (HE20) (RU106) Channel 13



802.11ax (HE40) (RU242) Channel 3



802.11ax (HE40) (RU242) Channel 11



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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