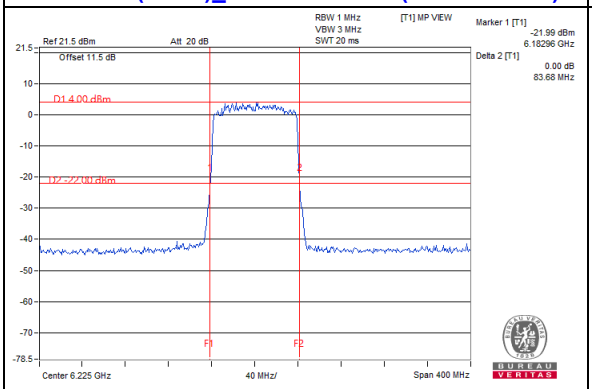
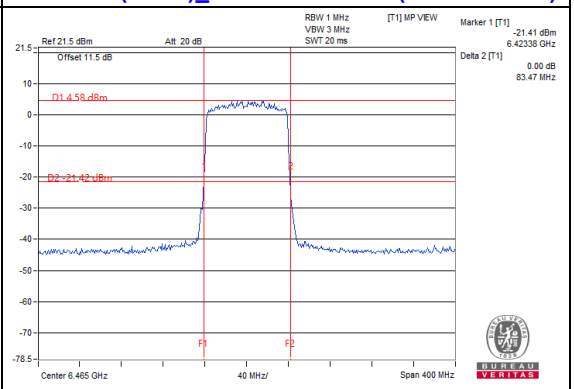
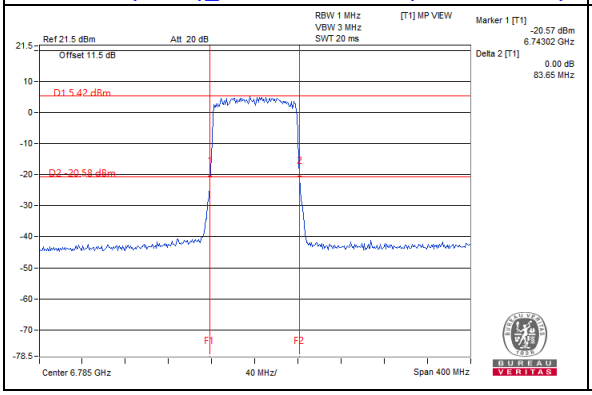
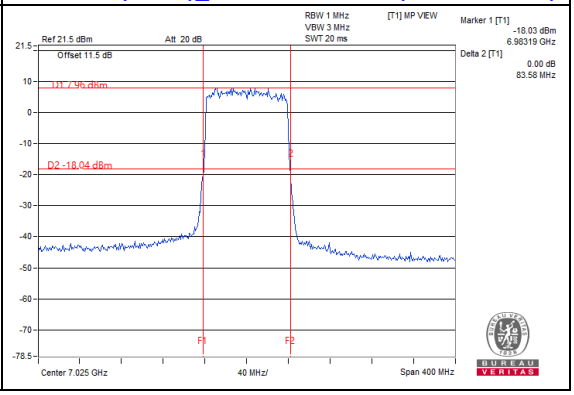
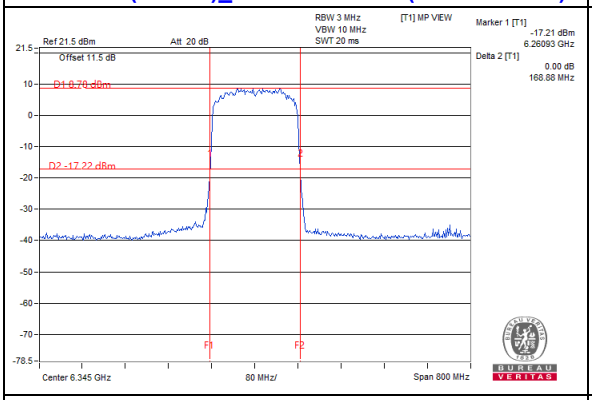
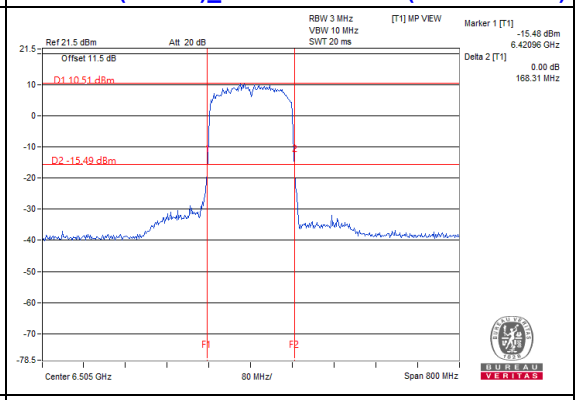
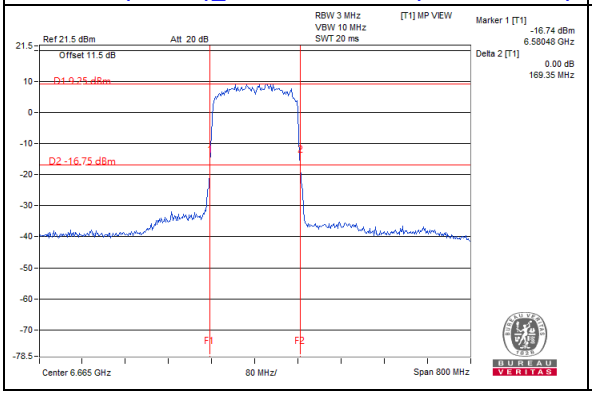
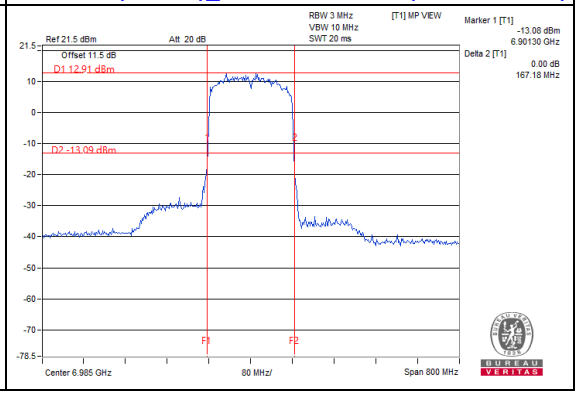
| Spectrum Plot of Max. Value | |
|---|---|
| **802.11ax (HE80)_Chain 0 / CH55 (U-NII-5 Band)** | **802.11ax (HE80)_Chain 1 / CH103 (U-NII-6 Band)** |
|  |  |
| **802.11ax (HE80)_Chain 2 / CH167 (U-NII-7 Band)** | **802.11ax (HE80)_Chain 1 / CH215 (U-NII-8 Band)** |
|  |  |

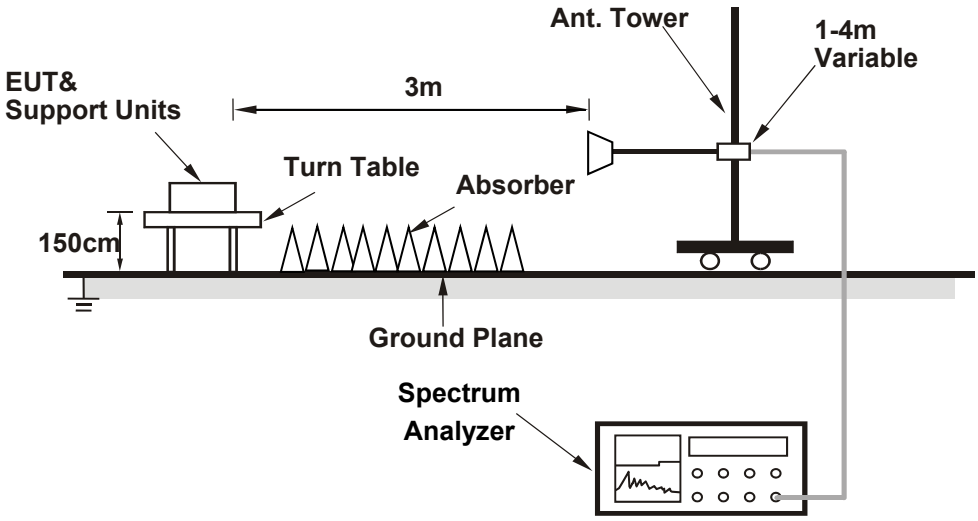
| Spectrum Plot of Max. Value | |
|---|---|
| **802.11ax (HE160)_Chain 1 / CH79 (U-NII-5 Band)** | **802.11ax (HE160)_Chain 2 / CH111 (U-NII-6 Band)** |
|  |  |
| **802.11ax (HE160)_Chain 2 / CH143 (U-NII-7 Band)** | **802.11ax (HE160)_Chain 3 / CH207 (U-NII-8 Band)** |
|  |  |

## 4.6 Peak Power Spectral Density Measurement

### 4.6.1 Limits of Peak Power Spectral Density Measurement

| Operation Band | EUT Category | Limit |
|---|---|---|
| | | Peak Power Density (EIRP) |
| U-NII-5<br>U-NII-6<br>U-NII-7<br>U-NII-8 | Indoor AP / Subordinate Device | 5 dBm/MHz |

### 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

a. The EUT was placed on the top of a rotating table 1.5 meters 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. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP level.

e. Follow ANSI 63.10 and KDB 412172 D01 v01r01, EIRP Value (dBm) = Field Strength Value (dBμV/m) + Correction Factor @ 3m.

f. Correction Factor (dB) @ 3m = 20log(D) − 104.7; where D is the measurement distance @3m=-95.15dB

Note: Spectrum analyzer setting as below:

**Method SA-1**

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3. Sweep time = auto, trigger set to “free run” (duty cycle ≥ 98 percent) ; Set video trigger (duty cycle < 98 percent).
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value

4.6.5 EUT Operating Condition

Same as Item 4.3.6.

4.6.6 Test Results

**802.11ax (HE20)**

| Chan. | Chan. Freq. (MHz) | Field Strength (dBuV/m) | Correction Factor (dB) | EIRP PSD (dBm/MHz) | EIRP PSD Limit (dBm/MHz) | Pass / Fail |
|---|---|---|---|---|---|---|
| 33 | 6115 | 100.10 | -95.15 | 4.95 | 5.00 | Pass |
| 61 | 6255 | 100.09 | -95.15 | 4.94 | 5.00 | Pass |
| 93 | 6415 | 100.09 | -95.15 | 4.94 | 5.00 | Pass |
| 97 | 6435 | 100.07 | -95.15 | 4.92 | 5.00 | Pass |
| 105 | 6475 | 100.09 | -95.15 | 4.94 | 5.00 | Pass |
| 113 | 6515 | 100.08 | -95.15 | 4.93 | 5.00 | Pass |
| 117 | 6535 | 100.07 | -95.15 | 4.92 | 5.00 | Pass |
| 153 | 6715 | 100.11 | -95.15 | 4.96 | 5.00 | Pass |
| 181 | 6855 | 100.06 | -95.15 | 4.91 | 5.00 | Pass |
| 185 | 6875 | 100.12 | -95.15 | 4.97 | 5.00 | Pass |
| 213 | 7015 | 100.14 | -95.15 | 4.99 | 5.00 | Pass |
| 229 | 7095 | 100.14 | -95.15 | 4.99 | 5.00 | Pass |

**802.11ax (HE40)**

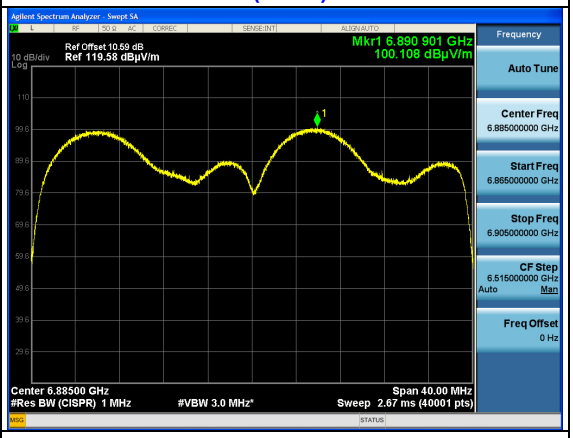
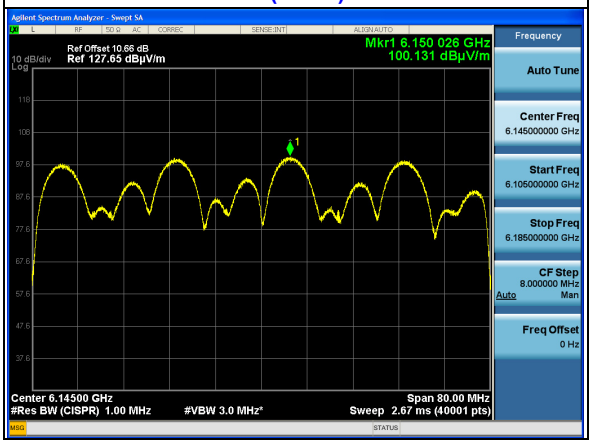
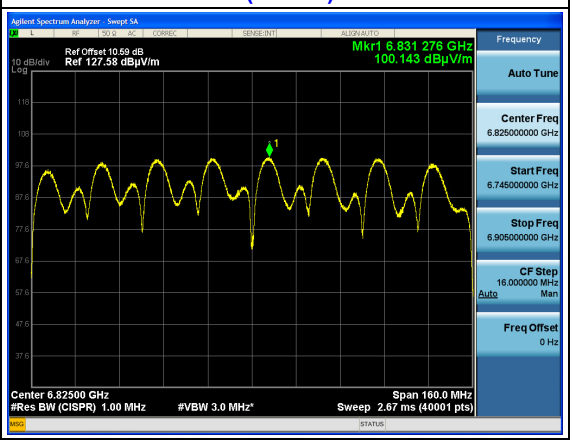
| Chan. | Chan. Freq. (MHz) | Field Strength (dBuV/m) | Correction Factor (dB) | EIRP PSD (dBm/MHz) | EIRP PSD Limit (dBm/MHz) | Pass / Fail |
|---|---|---|---|---|---|---|
| 35 | 6125 | 100.00 | -95.15 | 4.85 | 5.00 | Pass |
| 59 | 6165 | 100.01 | -95.15 | 4.86 | 5.00 | Pass |
| 91 | 6405 | 100.05 | -95.15 | 4.90 | 5.00 | Pass |
| 99 | 6445 | 100.05 | -95.15 | 4.90 | 5.00 | Pass |
| 107 | 6485 | 100.05 | -95.15 | 4.90 | 5.00 | Pass |
| 115 | 6525 | 100.06 | -95.15 | 4.91 | 5.00 | Pass |
| 123 | 6565 | 100.03 | -95.15 | 4.88 | 5.00 | Pass |
| 155 | 6725 | 100.05 | -95.15 | 4.90 | 5.00 | Pass |
| 179 | 6845 | 100.03 | -95.15 | 4.88 | 5.00 | Pass |
| 187 | 6885 | 100.11 | -95.15 | 4.96 | 5.00 | Pass |
| 211 | 7005 | 100.06 | -95.15 | 4.91 | 5.00 | Pass |
| 227 | 7085 | 100.03 | -95.15 | 4.88 | 5.00 | Pass |

### 802.11ax (HE80)

| Chan. | Chan. Freq. (MHz) | Field Strength (dBuV/m) | Correction Factor (dB) | EIRP PSD (dBm/MHz) | EIRP PSD Limit (dBm/MHz) | Pass / Fail |
|---|---|---|---|---|---|---|
| 39 | 6145 | 100.13 | -95.15 | 4.98 | 5.00 | Pass |
| 55 | 6225 | 100.08 | -95.15 | 4.93 | 5.00 | Pass |
| 87 | 6385 | 100.08 | -95.15 | 4.93 | 5.00 | Pass |
| 103 | 6465 | 100.08 | -95.15 | 4.93 | 5.00 | Pass |
| 119 | 6545 | 100.11 | -95.15 | 4.96 | 5.00 | Pass |
| 135 | 6625 | 100.10 | -95.15 | 4.95 | 5.00 | Pass |
| 151 | 6705 | 100.04 | -95.15 | 4.89 | 5.00 | Pass |
| 167 | 6785 | 100.13 | -95.15 | 4.98 | 5.00 | Pass |
| 183 | 6865 | 100.13 | -95.15 | 4.98 | 5.00 | Pass |
| 199 | 6945 | 100.08 | -95.15 | 4.93 | 5.00 | Pass |
| 215 | 7025 | 100.12 | -95.15 | 4.97 | 5.00 | Pass |

### 802.11ax (HE160)

| Chan. | Chan. Freq. (MHz) | Field Strength (dBuV/m) | Correction Factor (dB) | EIRP PSD (dBm/MHz) | EIRP PSD Limit (dBm/MHz) | Pass / Fail |
|---|---|---|---|---|---|---|
| 47 | 6185 | 100.12 | -95.15 | 4.97 | 5.00 | Pass |
| 79 | 6345 | 100.10 | -95.15 | 4.95 | 5.00 | Pass |
| 111 | 6505 | 100.05 | -95.15 | 4.90 | 5.00 | Pass |
| 143 | 6665 | 100.11 | -95.15 | 4.96 | 5.00 | Pass |
| 175 | 6825 | 100.14 | -95.15 | 4.99 | 5.00 | Pass |
| 207 | 6985 | 100.10 | -95.15 | 4.95 | 5.00 | Pass |

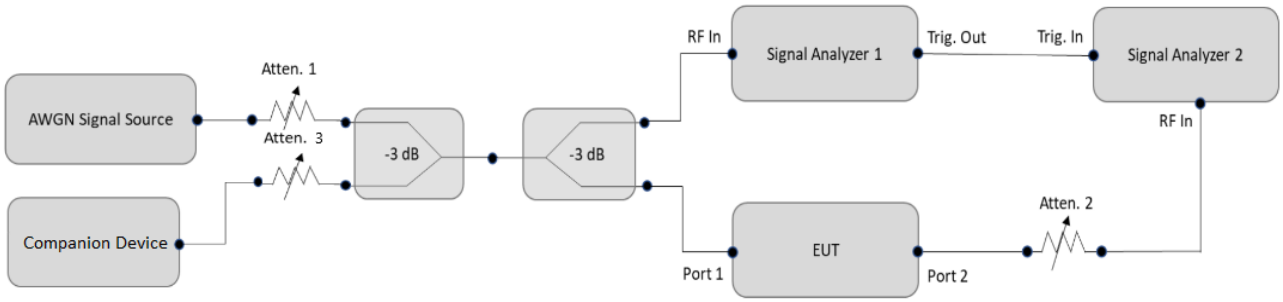
| Spectrum Plot of Worst Value | |
|---|---|
| **802.11ax (HE20) / CH213** | **802.11ax (HE40) / CH187** |
|  |  |
| **802.11ax (HE80) / CH39** | **802.11ax (HE160) / CH175** |
|  |  |

## 4.7 Contention Based Protocol Measurement

### 4.7.1 Limits of Contention Based Protocol Measurement

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm (The threshold is referenced to a 0 dBi antenna gain.) or lower. Additionally, indoor low-power devices must detect co-channel energy with 90% or greater certainty.

### 4.7.2 Test Setup




### 4.7.3 Test Instruments

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| N9030B - PXA Signal Analyzer | N9030B | MY60070562 | 2021/1/6 | 2022/1/5 |
| N9030B - PXA Signal Analyzer | N9030B | MY57140938 | 2021/5/9 | 2022/5/8 |
| MXG -X Vector Signal Generator | N5182B | MY57301272 | 2021/1/22 | 2022/1/21 |
| N5182BU | N5182BU | MY59360189 | NA | NA |
| Splitters/Combiners | WDIV-4R40291 | NA | 2021/1/13 | 2022/1/12 |

**NOTE:** 1. The test was performed in Femtocell room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: 2021/10/18

4.7.4 Test Procedure

a. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
b. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters (set as following section 4.7.5 EUT operating condition).

c. Determine number of times detection threshold test as following table,

| If | Number of Tests | Placement of Incumbent Transmission |
|---|---|---|
| $BW_{EUT} \leqq BW_{Inc}$ | Once | Same as EUT transmission |
| $BW_{Inc} < BW_{EUT} \leqq 2xBW_{Inc}$ | Once | Contained within $BW_{EUT}$ |
| $2xBW_{Inc} < BW_{EUT} \leqq 4xBW_{Inc}$ | Twice.<br>(Incumbent transmission is contained within $BW_{EUT}$) | Closely to the lower edge and upper edge of the EUT Channel |
| $BW_{EUT} > 4xBW_{Inc}$ | Three times | Closely to the lower edge ,in the middle and upper edge of the EUT Channel |

d. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use step c table to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
e. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT.
f. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
g. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
h. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
i. Refer to step c table to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step d, choose a different center frequency for the AWGN signal and repeat the process.

4.7.5 EUT Operating Condition

Set the EUT to transmit with a constant duty cycle and relative operating parameters which including power level, operating frequency,modulation and bandwidth.

## 4.7.6 Test Results

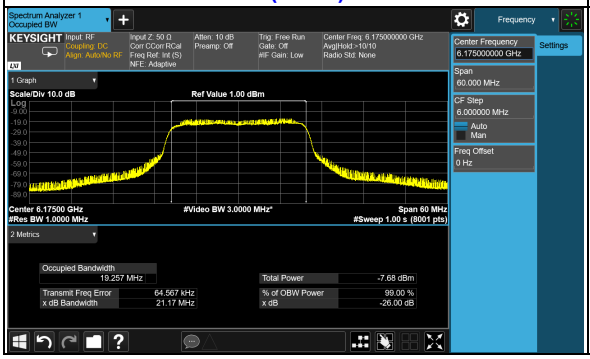
**For U-NII-5 band**

| Contention Based Protocol Measurement | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Mode：** | | Conducted measurement | | **Antenna Gain(dBi) :** | | 0 | at the antenna connector | | | |
| **Device Type：** | | Indoor AP /Suboardinate mode | | | | | | | | |
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Number of Times** | **Number of Detected** | **Detection Rate** | **Minimum Limit** | **Incumbent Signal Level (dBm)** | **Pass/Fail** |
| 802.11ax | 20 | 45 | 6175 | 6175 | 10 | 10 | 100% | 90% | -64 | Pass |
| | 160 | 47 | 6185 | 6110 | 10 | 10 | 100% | 90% | -64 | Pass |
| | | | | 6185 | 10 | 10 | 100% | 90% | -62 | Pass |
| | | | | 6260 | 10 | 10 | 100% | 90% | -65 | Pass |
| **Result** | Complied | | | | | | | | | |

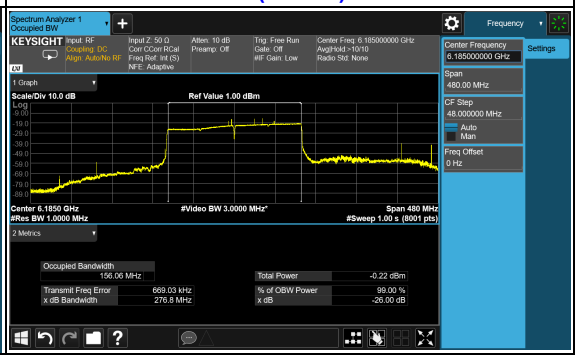
| Lowest Interference(AWGN) Level Check | | | | | | |
|---|---|---|---|---|---|---|
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Threshold Level (dBm)** | **EUT Status** |
| 802.11ax | 20 | 45 | 6175 | 6175 | -65 | Detect signal but not stop transmitting |
| | 160 | 47 | 6185 | 6110 | -65 | Detect signal but not stop transmitting |
| | | | | 6185 | -63 | Detect signal but not stop transmitting |
| | | | | 6260 | -66 | Detect signal but not stop transmitting |

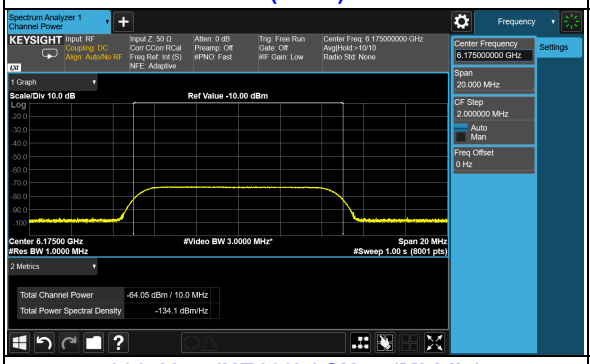
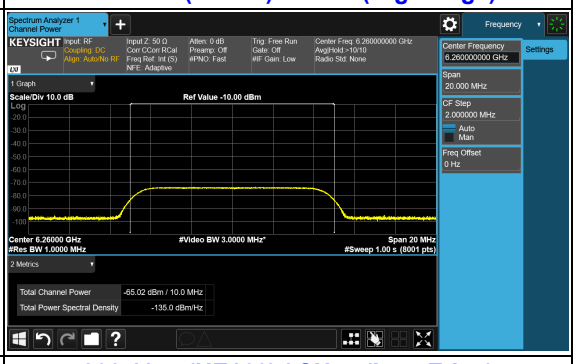
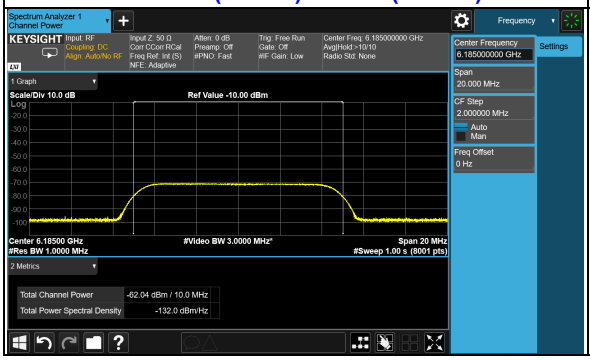
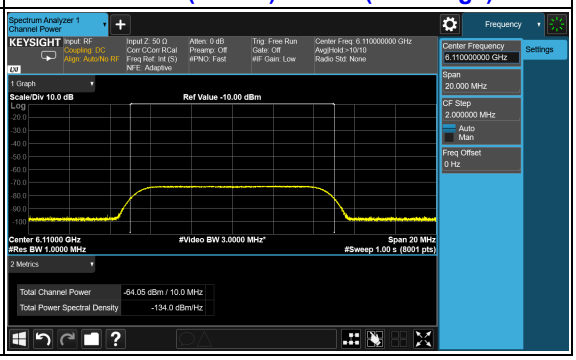
Plots of EUT transmissioin conditions

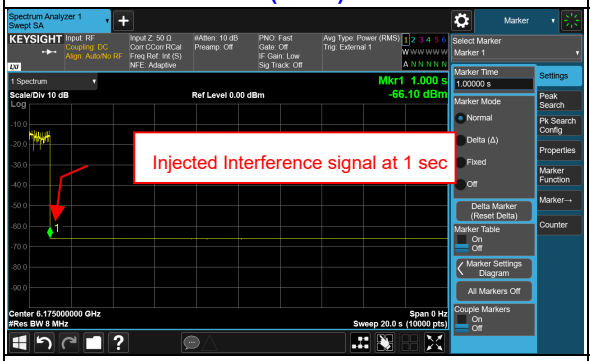
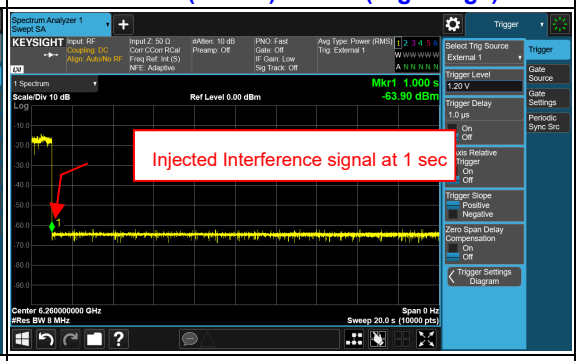
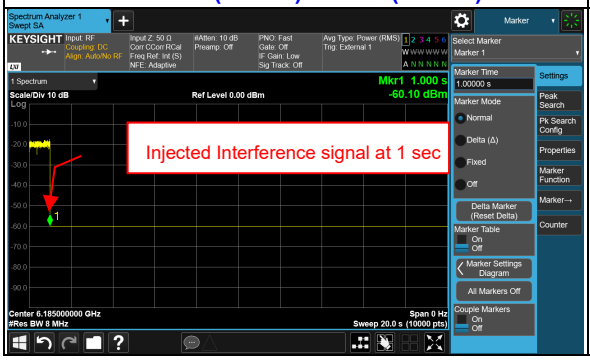
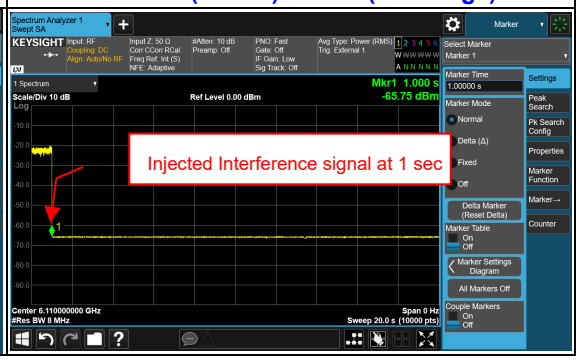
**802.11ax (HE20) / CH45**




**802.11ax (HE160) / CH47**



| Plots of Incumbent signal (AWGN) level | |
|---|---|
| **802.11ax (HE20) / CH45** | **802.11ax (HE160) / CH47 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH47 (Middle)** | **802.11ax (HE160) / CH47 (Low Edge)** |
|  |  |

| Plots of EUT ceased transmission in the time domain | |
|---|---|
| **802.11ax (HE20) / CH45** | **802.11ax (HE160) / CH47 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH47 (Middle)** | **802.11ax (HE160) / CH47 (Low Edge)** |
|  |  |

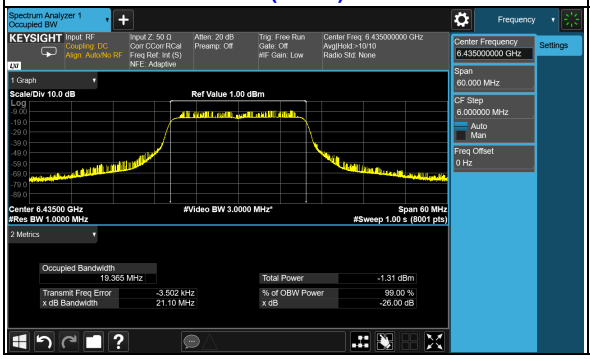
## For U-NII-6 band

| Contention Based Protocol Measurement | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Mode：** | | Conducted measurement | | | **Antenna Gain(dBi) :** | | 0 | at the antenna connector | | |
| **Device Type：** | | Indoor AP /Suboardinate mode | | | | | | | | |
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Number of Times** | **Number of Detected** | **Detection Rate** | **Minimum Limit** | **Incumbent Signal Level (dBm)** | **Pass/Fail** |
| 802.11ax | 20 | 97 | 6435 | 6435 | 10 | 10 | 100% | 90% | -64 | Pass |
| | 160 | 111 | 6505 | 6430 | 10 | 10 | 100% | 90% | -65 | Pass |
| | | | | 6505 | 10 | 10 | 100% | 90% | -64 | Pass |
| | | | | 6580 | 10 | 10 | 100% | 90% | -62 | Pass |
| **Result** | Complied | | | | | | | | | |

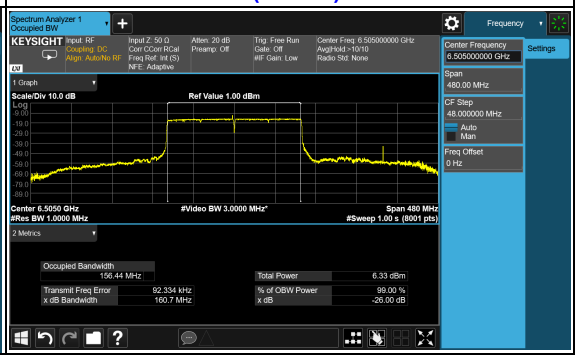
| Lowest Interference(AWGN) Level Check | | | | | | |
|---|---|---|---|---|---|---|
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Threshold Level (dBm)** | **EUT Status** |
| 802.11ax | 20 | 97 | 6435 | 6435 | -65 | Detect signal but not stop transmitting |
| | 160 | 111 | 6505 | 6430 | -66 | Detect signal but not stop transmitting |
| | | | | 6505 | -65 | Detect signal but not stop transmitting |
| | | | | 6580 | -63 | Detect signal but not stop transmitting |

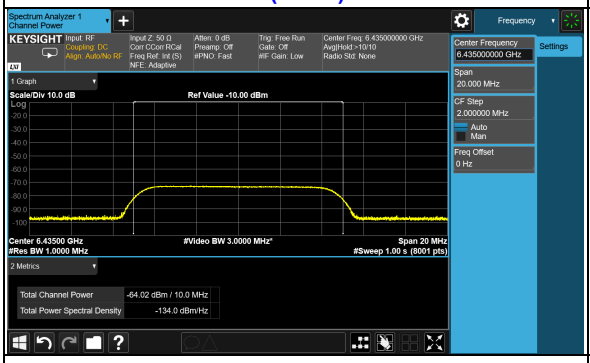
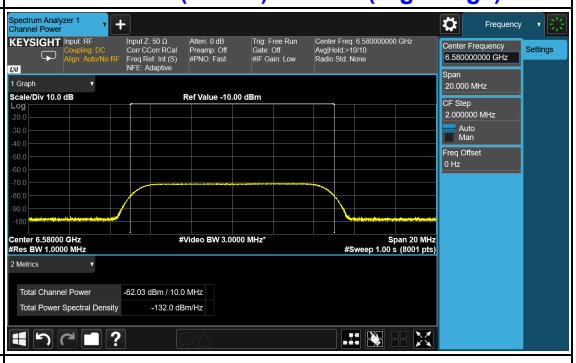
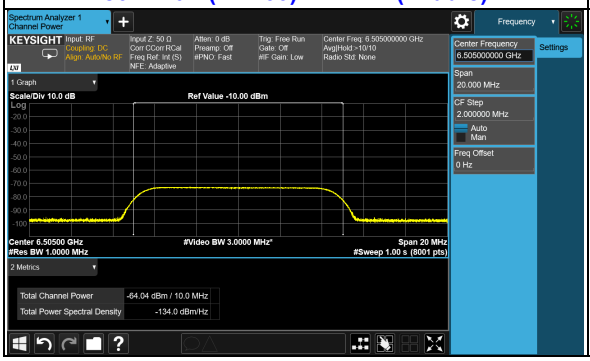
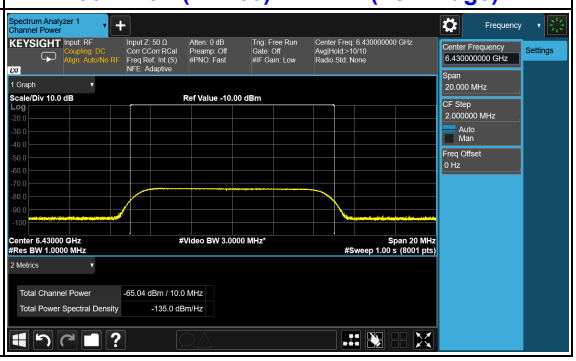
Plots of EUT transmissioin conditions

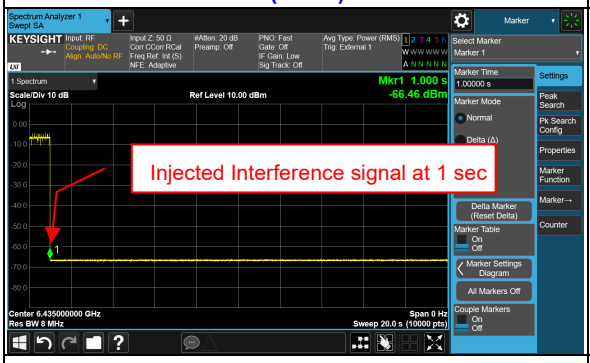
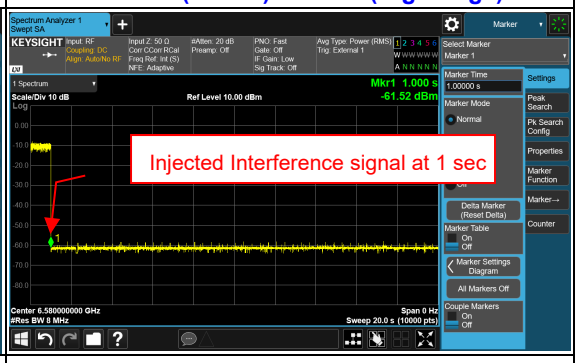
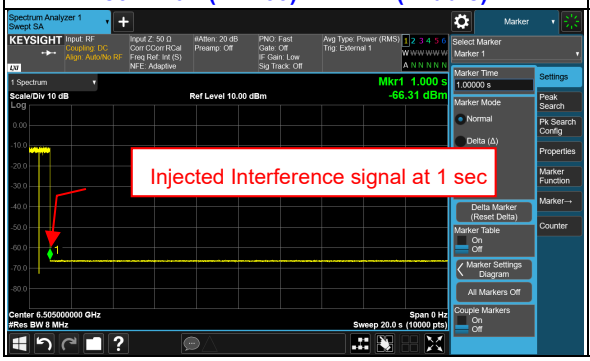
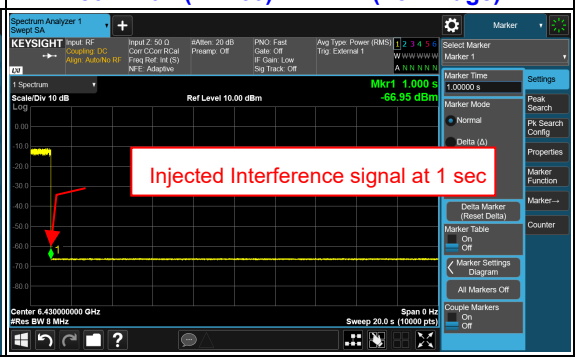
**802.11ax (HE20) / CH97**




**802.11ax (HE160) / CH111**



| Plots of Incumbent signal (AWGN) level | |
|---|---|
| **802.11ax (HE20) / CH97** | **802.11ax (HE160) / CH111 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH111 (Middle)** | **802.11ax (HE160) / CH111 (Low Edge)** |
|  |  |

| Plots of EUT ceased transmission in the time domain | |
|---|---|
| **802.11ax (HE20) / CH97** | **802.11ax (HE160) / CH111 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH111 (Middle)** | **802.11ax (HE160) / CH111 (Low Edge)** |
|  |  |

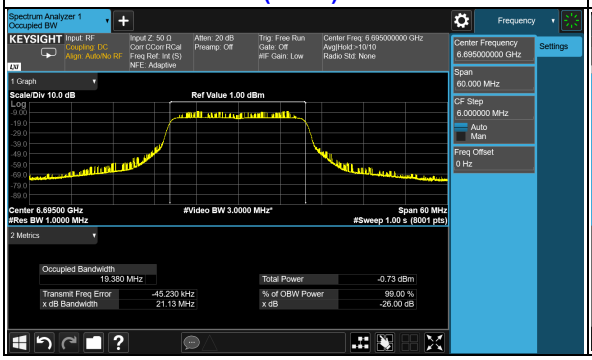
## For U-NII-7 band

| Contention Based Protocol Measurement | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Mode：** | | Conducted measurement | | | **Antenna Gain(dBi) :** | | 0 | at the antenna connector | | |
| **Device Type：** | | Indoor AP /Suboardinate mode | | | | | | | | |
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Number of Times** | **Number of Detected** | **Detection Rate** | **Minimum Limit** | **Incumbent Signal Level (dBm)** | **Pass/Fail** |
| 802.11ax | 20 | 149 | 6695 | 6695 | 10 | 10 | 100% | 90% | -64 | Pass |
| | 160 | 143 | 6665 | 6590 | 10 | 10 | 100% | 90% | -66 | Pass |
| | | | | 6665 | 10 | 10 | 100% | 90% | -62 | Pass |
| | | | | 6740 | 10 | 10 | 100% | 90% | -66 | Pass |
| **Result** | Complied | | | | | | | | | |

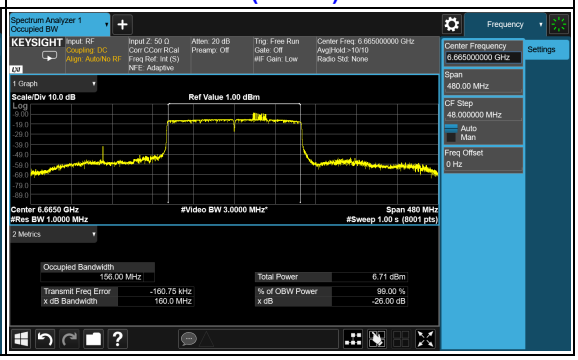
| Lowest Interference(AWGN) Level Check | | | | | | |
|---|---|---|---|---|---|---|
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Threshold Level (dBm)** | **EUT Status** |
| 802.11ax | 20 | 149 | 6695 | 6695 | -65 | Detect signal but not stop transmitting |
| | 160 | 143 | 6665 | 6590 | -67 | Detect signal but not stop transmitting |
| | | | | 6665 | -63 | Detect signal but not stop transmitting |
| | | | | 6740 | -67 | Detect signal but not stop transmitting |

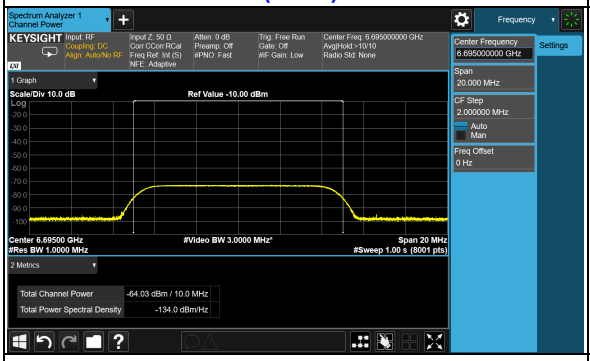
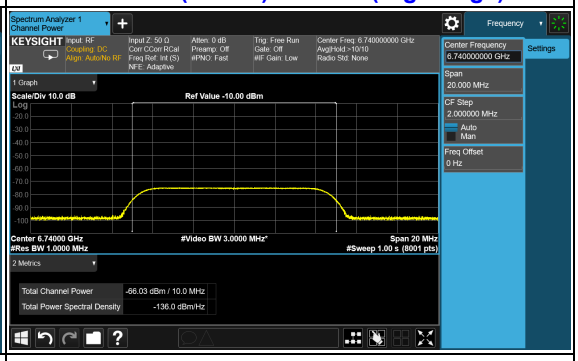
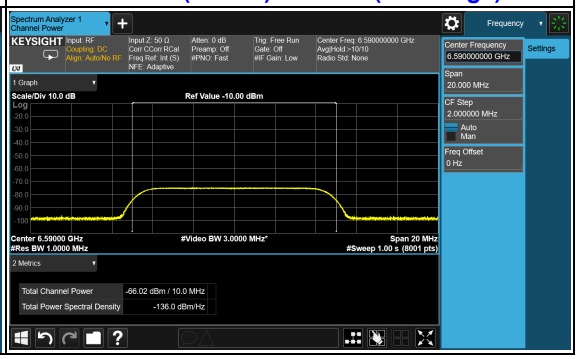
Plots of EUT transmissioin conditions

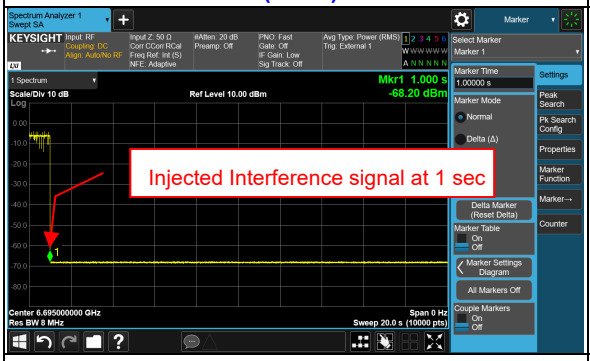
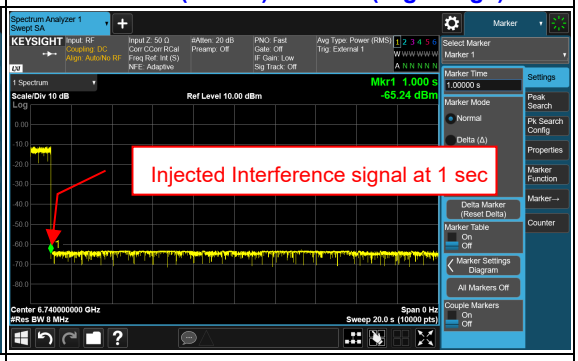
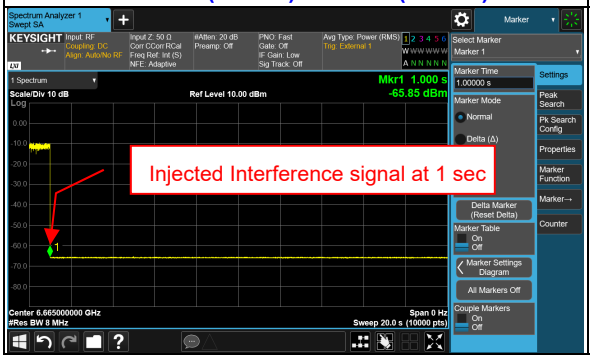
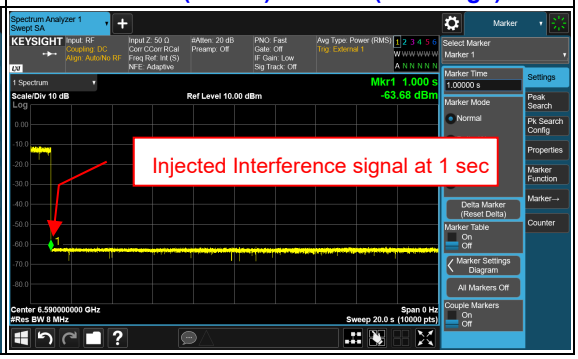
**802.11ax (HE20) / CH149**




**802.11ax (HE160) / CH143**



| Plots of Incumbent signal (AWGN) level | |
|---|---|
| **802.11ax (HE20) / CH149** | **802.11ax (HE160) / CH143 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH143 (Middle)** | **802.11ax (HE160) / CH143 (Low Edge)** |
|  |  |

| Plots of EUT ceased transmission in the time domain | |
|---|---|
| **802.11ax (HE20) / CH149** | **802.11ax (HE160) / CH143 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH143 (Middle)** | **802.11ax (HE160) / CH143 (Low Edge)** |
|  |  |

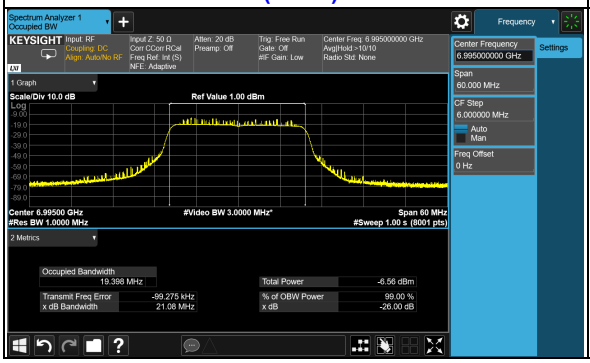
## For U-NII-8 band

| Contention Based Protocol Measurement | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Mode :** | | Conducted measurement | | | **Antenna Gain(dBi) :** | | 0 | at the antenna connector | | |
| **Device Type :** | | Indoor AP /Suboardinate mode | | | | | | | | |
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Number of Times** | **Number of Detected** | **Detection Rate** | **Minimum Limit** | **Incumbent Signal Level (dBm)** | **Pass/Fail** |
| 802.11ax | 20 | 209 | 6995 | 6995 | 10 | 10 | 100% | 90% | -66 | Pass |
| | 160 | 207 | 6985 | 6910 | 10 | 10 | 100% | 90% | -66 | Pass |
| | | | | 6985 | 10 | 10 | 100% | 90% | -62 | Pass |
| | | | | 7060 | 10 | 10 | 100% | 90% | -66 | Pass |
| **Result** | Complied | | | | | | | | | |

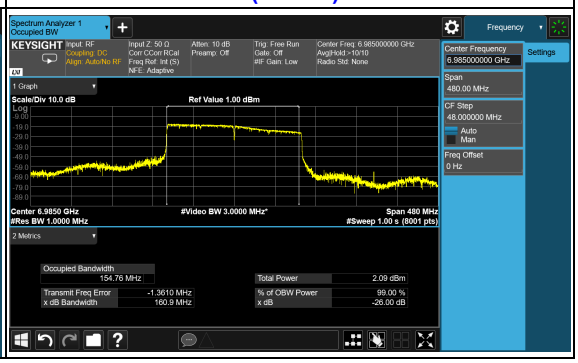
| Lowest Interference(AWGN) Level Check | | | | | | |
|---|---|---|---|---|---|---|
| **Operation Mode** | **Channel Bandwidth (MHz)** | **Channel Number** | **Channel Frequency (MHz)** | **AWGN Signal Frequency (MHz)** | **Threshold Level (dBm)** | **EUT Status** |
| 802.11ax | 20 | 209 | 6995 | 6995 | -67 | Detect signal but not stop transmitting |
| | 160 | 207 | 6985 | 6910 | -67 | Detect signal but not stop transmitting |
| | | | | 6985 | -63 | Detect signal but not stop transmitting |
| | | | | 7060 | -67 | Detect signal but not stop transmitting |

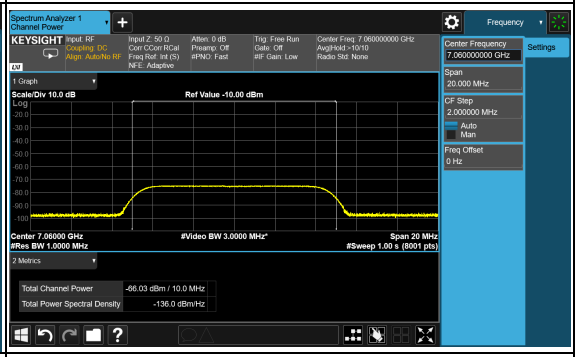
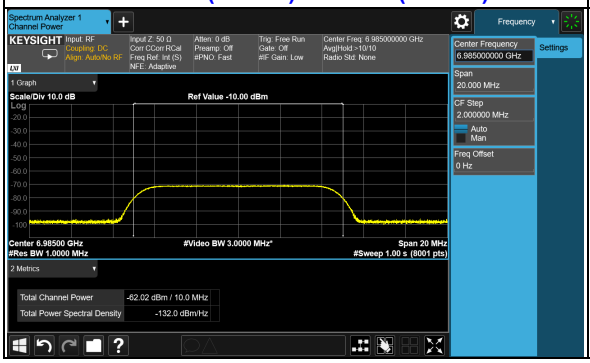
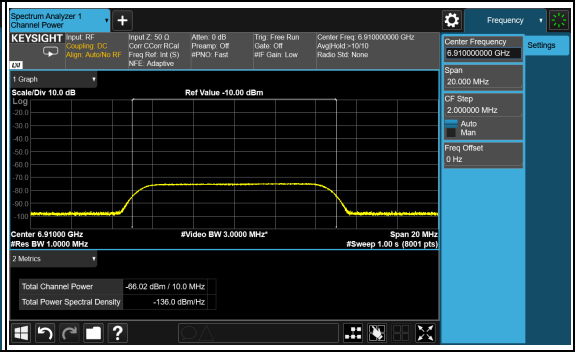
Plots of EUT transmissioin conditions

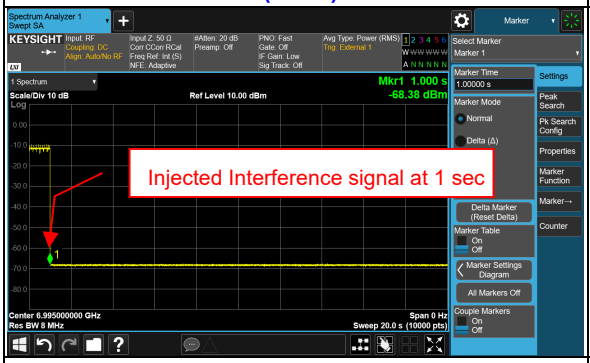
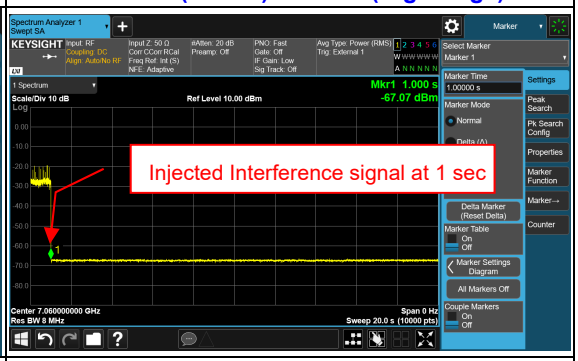
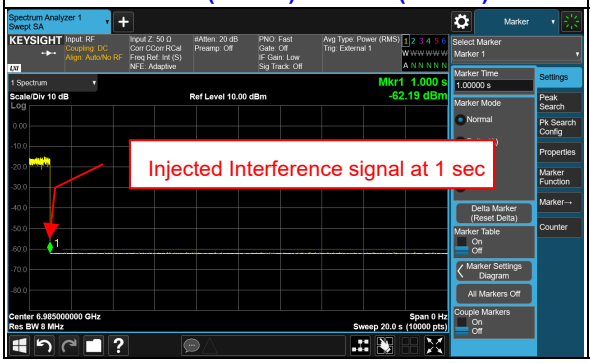
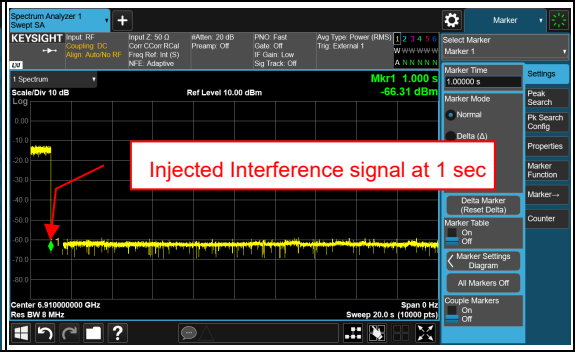
**802.11ax (HE20) / CH209**




**802.11ax (HE160) / CH207**



| Plots of Incumbent signal (AWGN) level | |
|---|---|
| **802.11ax (HE20) / CH209** | **802.11ax (HE160) / CH207 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH207 (Middle)** | **802.11ax (HE160) / CH207 (Low Edge)** |
|  |  |

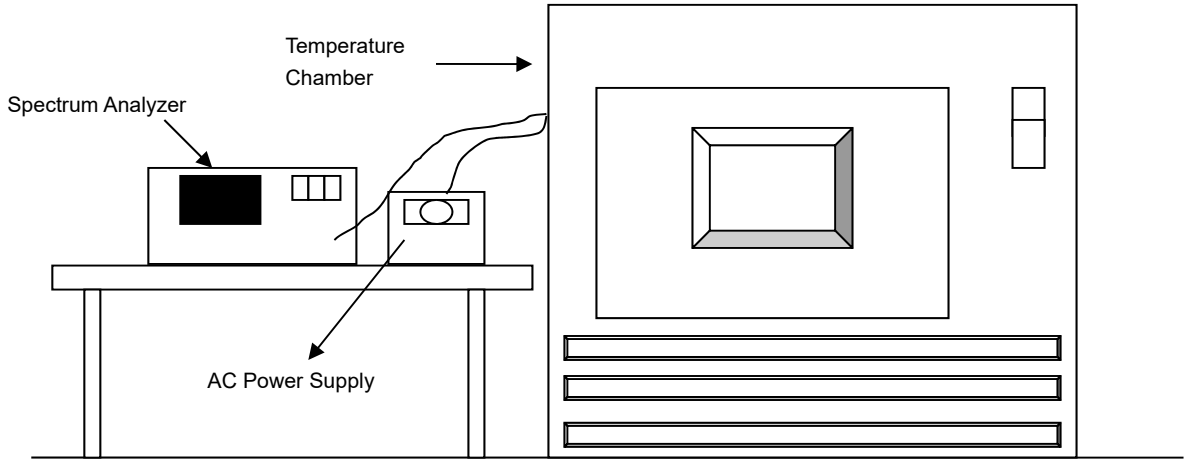
| Plots of EUT ceased transmission in the time domain | |
|---|---|
| **802.11ax (HE20) / CH209** | **802.11ax (HE160) / CH207 (High Edge)** |
|  |  |
| **802.11ax (HE160) / CH207 (Middle)** | **802.11ax (HE160) / CH207 (Low Edge)** |
|  |  |

## 4.8 Frequency Stability Measurement

### 4.8.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

### 4.8.2 Test Setup




### 4.8.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.8.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed..
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

.

### 4.8.5 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.8.6 Test Results

**802.11ax (HE20)**

| Frequency Stability Versus Temp. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Operating Frequency: 6115MHz | | | | | | | | | |
| TEMP. (℃) | Power Supply (Vac) | 0 Minute | | 2 Minutes | | 5 Minutes | | 10 Minutes | |
| | | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail |
| 40 | 120 | 6114.9767 | Pass | 6114.9723 | Pass | 6114.9762 | Pass | 6114.9721 | Pass |
| 30 | 120 | 6114.9864 | Pass | 6114.9861 | Pass | 6114.9833 | Pass | 6114.9836 | Pass |
| 20 | 120 | 6114.9805 | Pass | 6114.9806 | Pass | 6114.9857 | Pass | 6114.9857 | Pass |
| 10 | 120 | 6115.0272 | Pass | 6115.0249 | Pass | 6115.0231 | Pass | 6115.027 | Pass |
| 0 | 120 | 6114.9998 | Pass | 6114.9975 | Pass | 6114.9985 | Pass | 6114.9993 | Pass |

| Frequency Stability Versus Voltage | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Operating Frequency: 6115MHz | | | | | | | | | |
| TEMP. (℃) | Power Supply (Vac) | 0 Minute | | 2 Minutes | | 5 Minutes | | 10 Minutes | |
| | | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail |
| 20 | 138 | 6114.9807 | Pass | 6114.9806 | Pass | 6114.9865 | Pass | 6114.9851 | Pass |
| | 120 | 6114.9805 | Pass | 6114.9806 | Pass | 6114.9857 | Pass | 6114.9857 | Pass |
| | 102 | 6114.9803 | Pass | 6114.9795 | Pass | 6114.9851 | Pass | 6114.9847 | Pass |

## 4.9 Operational Restrictions for 6GHz U-NII Devices

4.9.1 Limits of Operational Restrictions for 6 GHz U-NII Devices

(1) Operation of indoor access points in the 5.925-7.125 GHz band is prohibited on oil platforms, cars, trains, boats, and aircraft, except that indoor access points are permitted to operate in the 5.925-6.425 GHz bands in large aircraft while flying above 10,000 feet.

(2) Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

(3) Transmitters operating under the provisions of paragraphs (a)(5), (a)(6), and (a)(8) of this section are limited to indoor locations.

(4) In the 5.925-7.125 GHz band, indoor access points must bear the following statement in a conspicuous location on the device and in the user's manual: FCC regulations restrict operation of this device to indoor use only. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.

(5) In the 5.925-7.125 GHz band, Access points and subordinate devices may connect to other access points or subordinate devices.

(6) Indoor access points, operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

4.9.2 Test Setup

N/A

4.9.3 Test Instruments

N/A

4.9.4 Test Procedure

N/A.

4.9.5 Test Results

Device is an indoor access point, / subordinate modes all restrictions are meet the §15.407 (d) requirements. Please refer to the Attestation letter exhibit supplied within this application.

## 5 Pictures of Test Arrangements

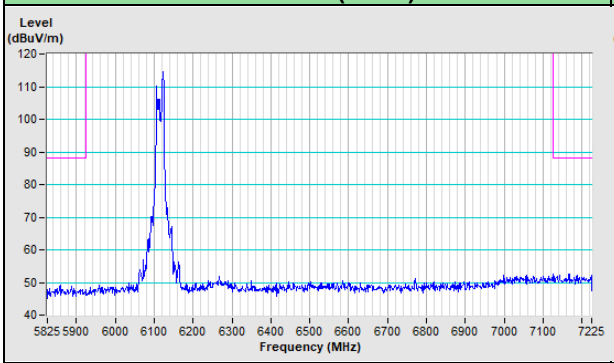
Please refer to the attached file (Test Setup Photo).

## Annex A - Band-Edge Measurement

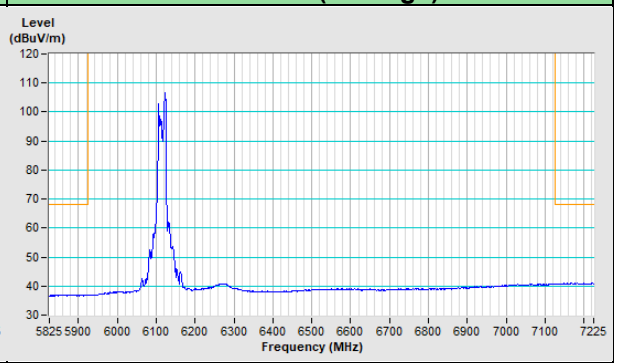
### CDD Mode

**802.11ax (HE20) Channel 33**

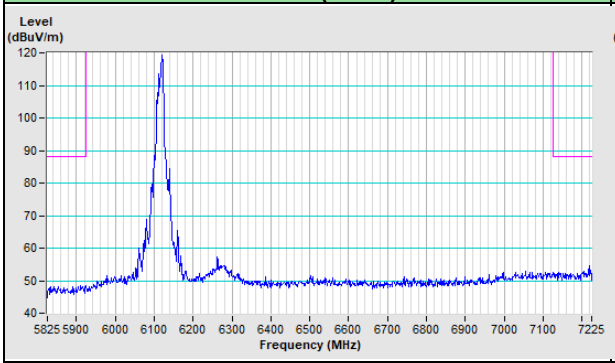
**Horizontal (Peak)**



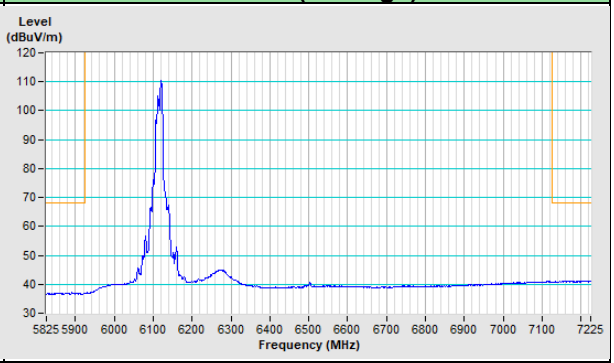

**Horizontal (Average)**




**Vertical (Peak)**

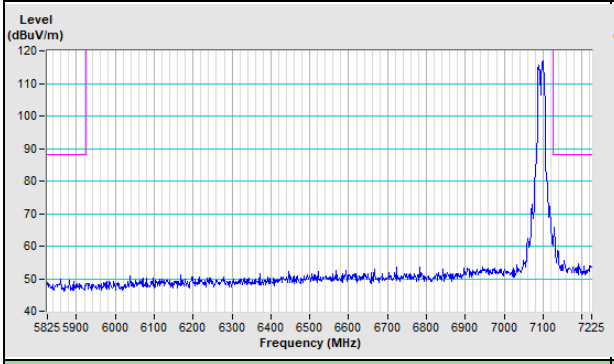



**Vertical (Average)**

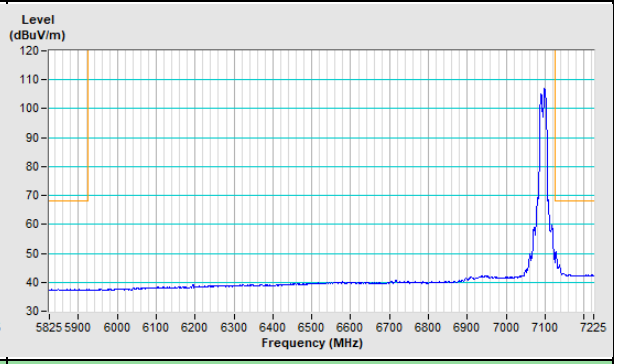



**802.11ax (HE20) Channel 229**

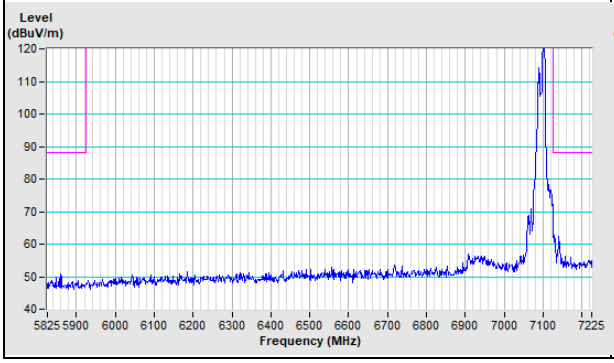
**Horizontal (Peak)**



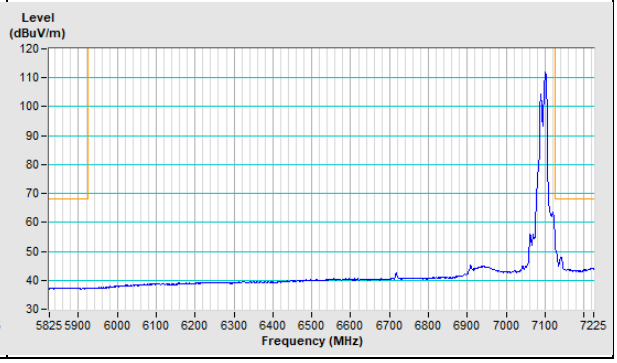

**Horizontal (Average)**




**Vertical (Peak)**

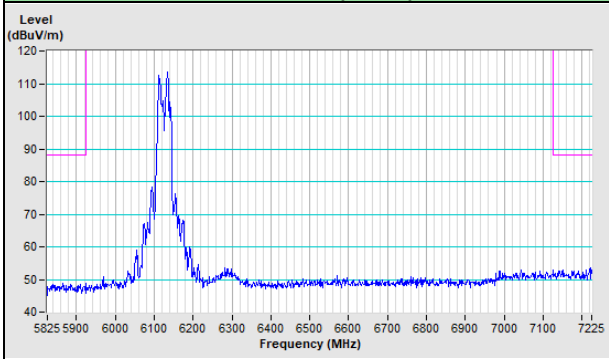



**Vertical (Average)**

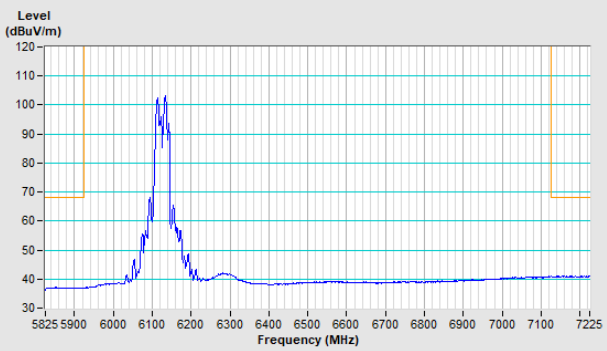


## 802.11ax (HE40) Channel 35

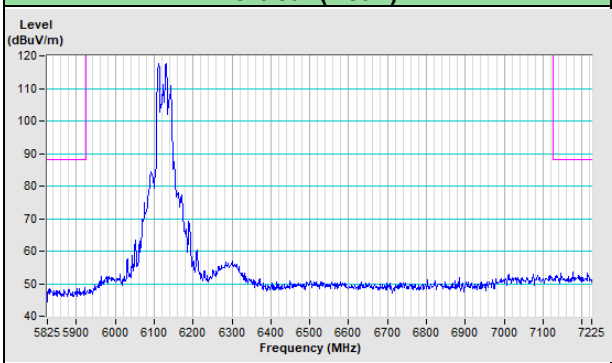
### Horizontal (Peak)



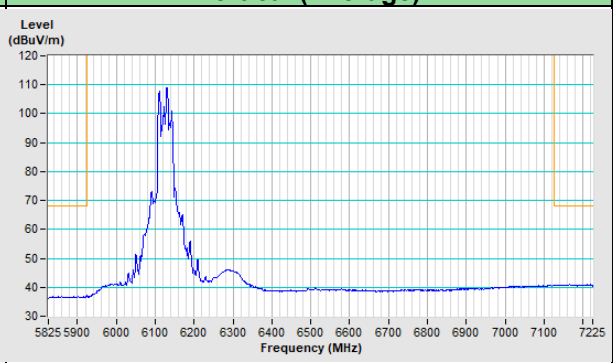

### Horizontal (Average)




### Vertical (Peak)

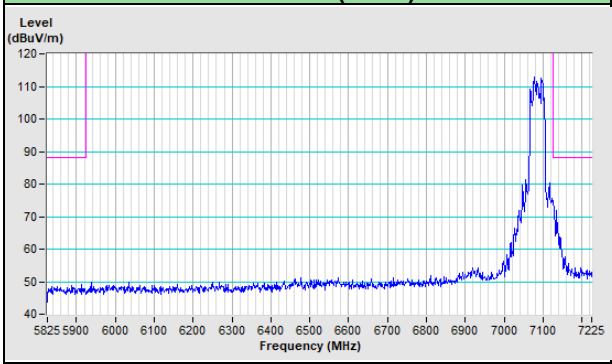



### Vertical (Average)

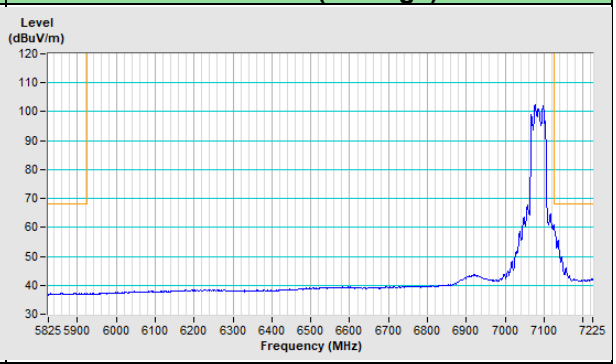



## 802.11ax (HE40) Channel 227

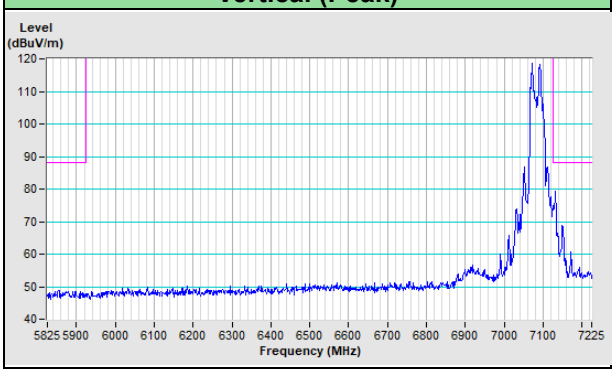
### Horizontal (Peak)



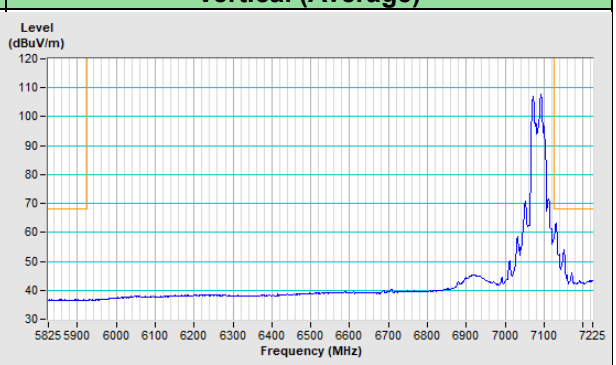

### Horizontal (Average)




### Vertical (Peak)

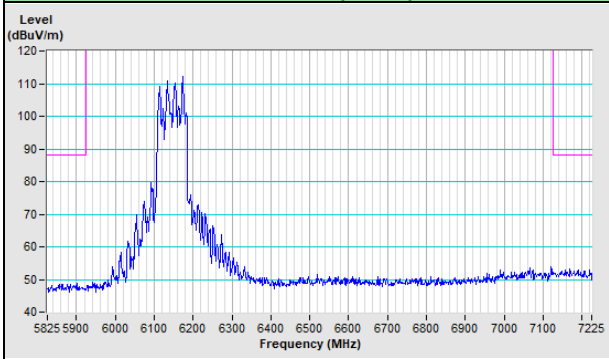



### Vertical (Average)

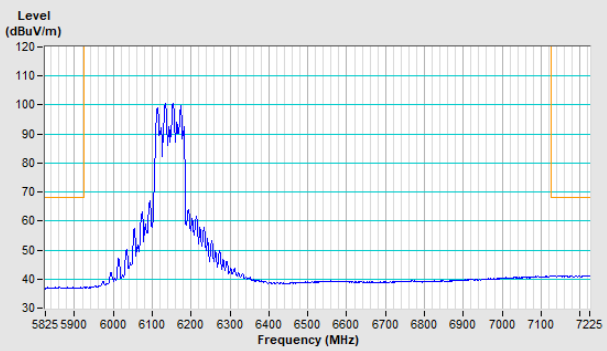


## 802.11ax (HE80) Channel 39

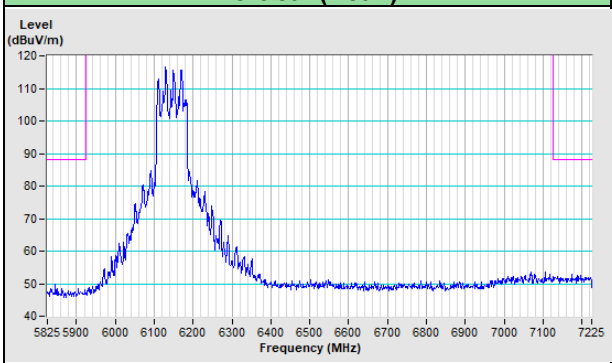
### Horizontal (Peak)



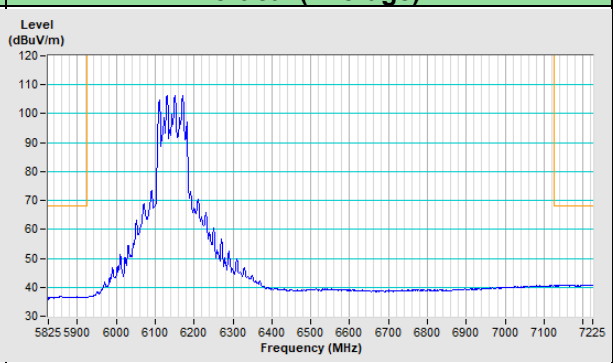

### Horizontal (Average)




### Vertical (Peak)

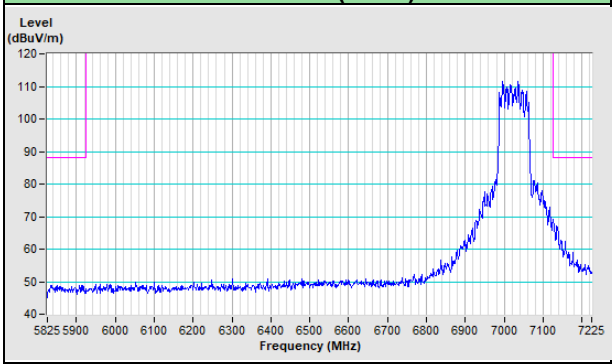



### Vertical (Average)

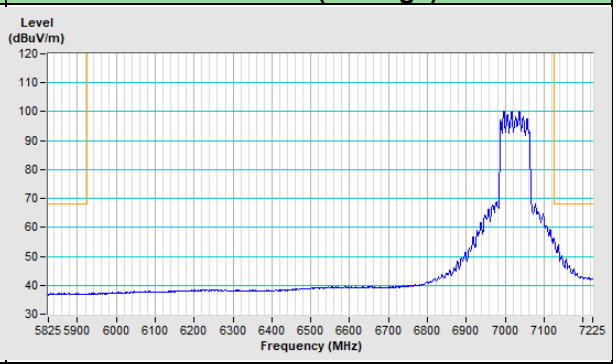



## 802.11ax (HE80) Channel 215

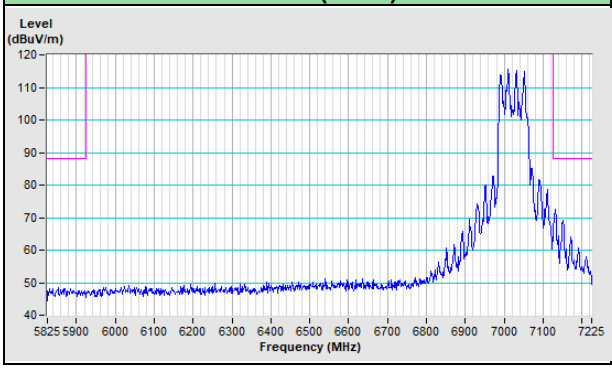
### Horizontal (Peak)



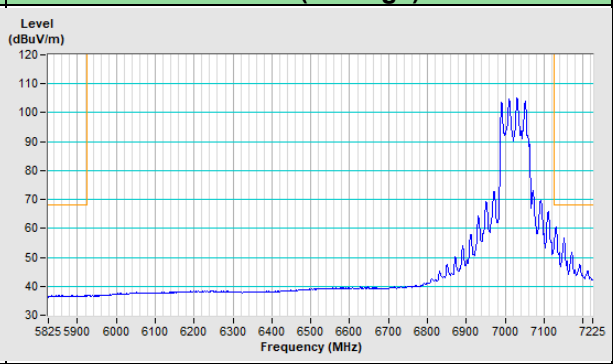

### Horizontal (Average)




### Vertical (Peak)

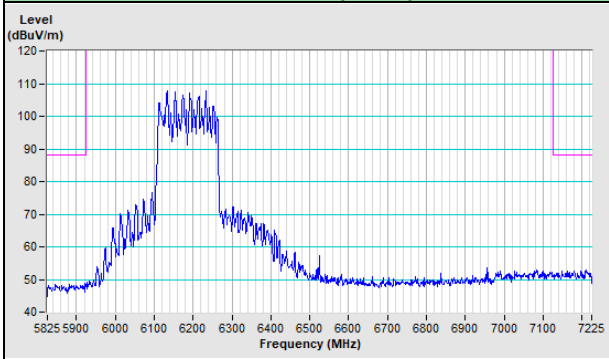



### Vertical (Average)

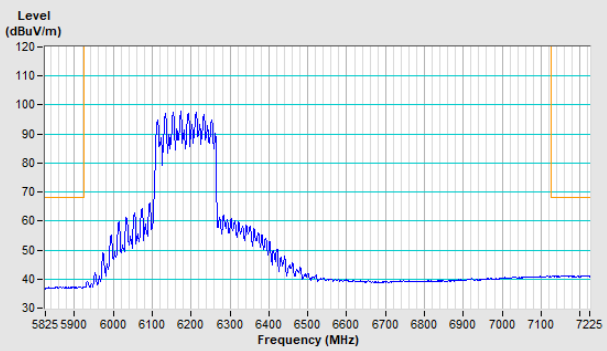


## 802.11ax (HE160) Channel 47

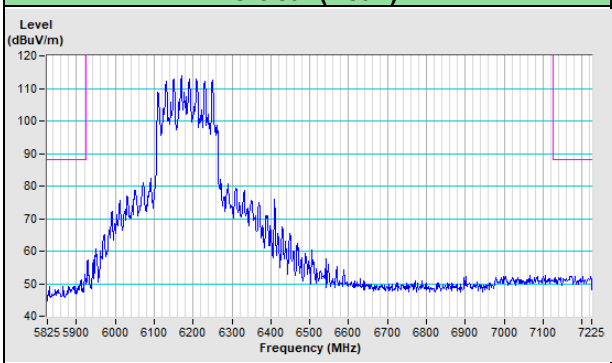
### Horizontal (Peak)



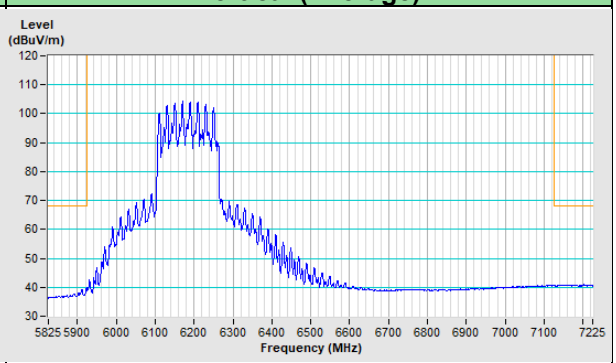

### Horizontal (Average)




### Vertical (Peak)

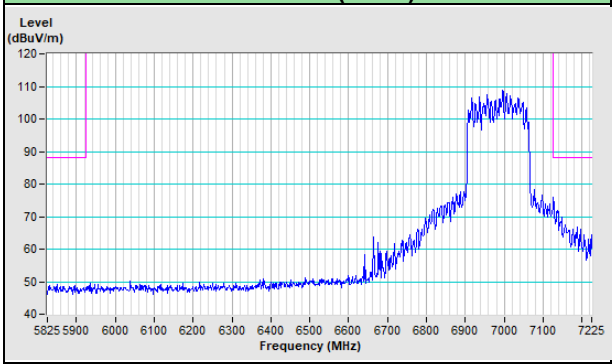



### Vertical (Average)

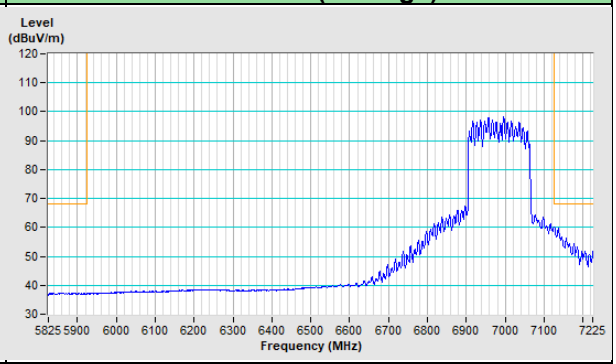



## 802.11ax (HE160) Channel 207

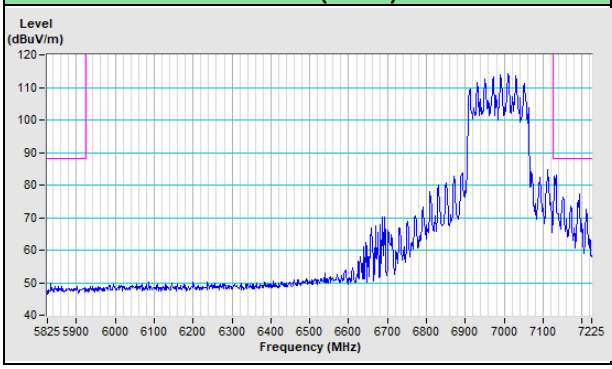
### Horizontal (Peak)



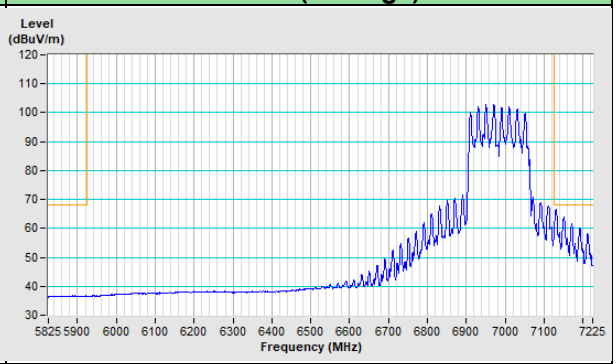

### Horizontal (Average)




### Vertical (Peak)




### Vertical (Average)



**Appendix A– 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 according to ISO/IEC 17025.

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

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