

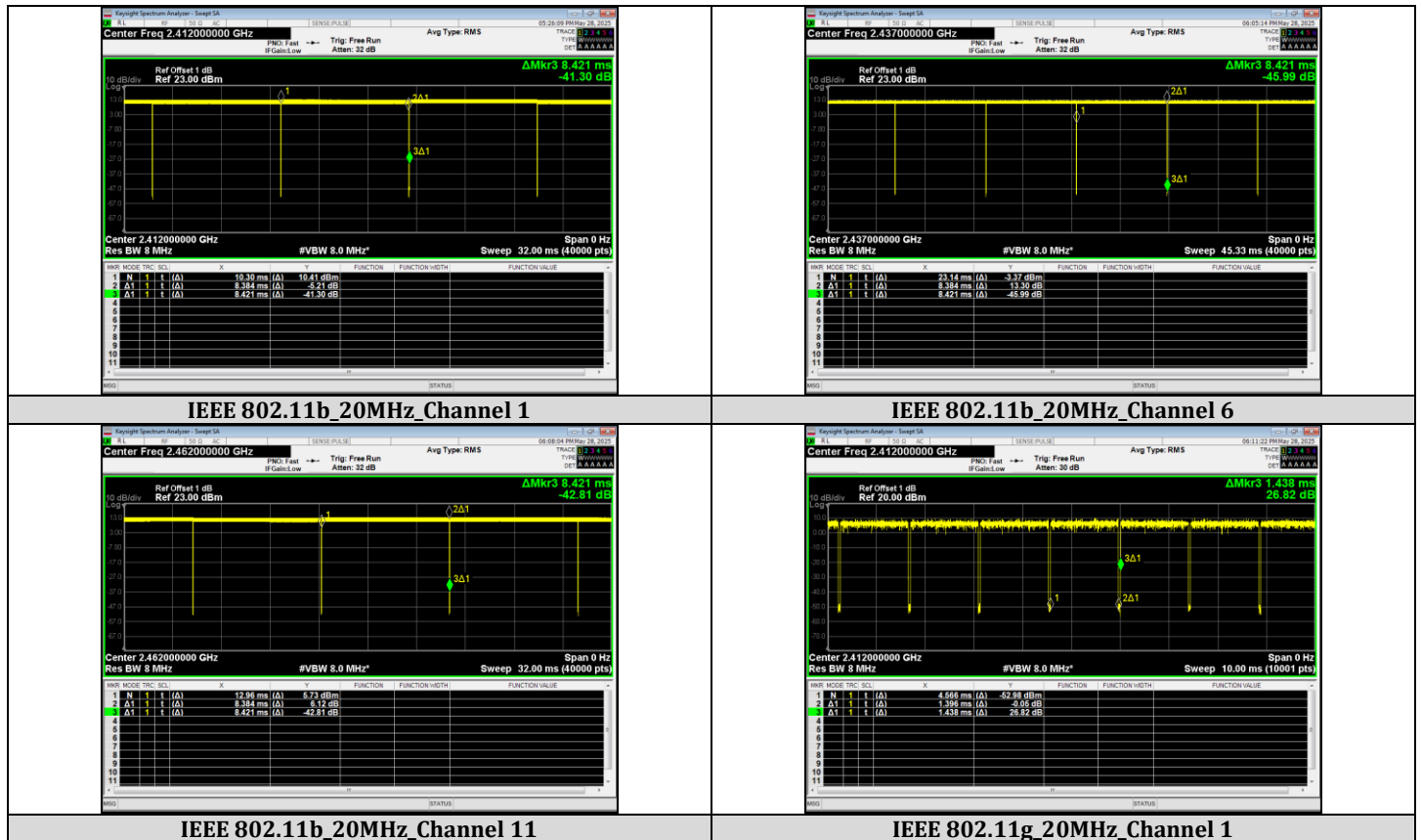


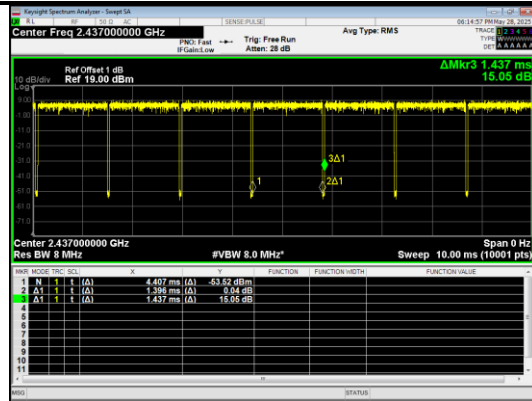
## Duty Cycle

### Test Result

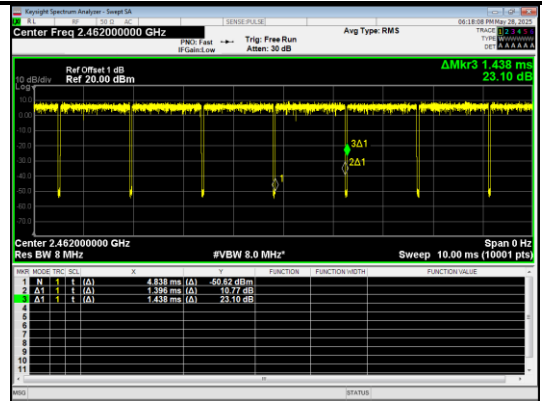
| Mode            | Data rates | Channel | Antenna | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T    |
|-----------------|------------|---------|---------|--------------|-------------|----------------|---------------------|------------------------|--------|
| IEEE 802.11b    | 1          | 1       | 1       | 8.384        | 8.421       | 99.56          | 0.9956              | 0.0192                 | 0.1193 |
|                 |            | 6       |         | 8.384        | 8.421       | 99.57          | 0.9957              | 0.0187                 | 0.1193 |
|                 |            | 11      |         | 8.384        | 8.421       | 99.56          | 0.9956              | 0.0192                 | 0.1193 |
| IEEE 802.11g    |            | 1       |         | 1.396        | 1.438       | 97.08          | 0.9708              | 0.1287                 | 0.7163 |
|                 |            | 6       |         | 1.396        | 1.437       | 97.15          | 0.9715              | 0.1256                 | 0.7163 |
|                 |            | 11      |         | 1.396        | 1.438       | 97.08          | 0.9708              | 0.1287                 | 0.7163 |
| IEEE 802.11n_20 | MCS 0      | 1       |         | 1.303        | 1.345       | 96.89          | 0.9689              | 0.1372                 | 0.7675 |
|                 |            | 6       |         | 1.304        | 1.345       | 96.95          | 0.9695              | 0.1345                 | 0.7669 |
|                 |            | 11      |         | 1.303        | 1.346       | 96.84          | 0.9684              | 0.1395                 | 0.7675 |
| IEEE 802.11n_40 |            | 3       |         | 1.305        | 1.345       | 97.03          | 0.9703              | 0.1309                 | 0.7663 |
|                 |            | 6       |         | 1.304        | 1.346       | 96.88          | 0.9688              | 0.1377                 | 0.7669 |
|                 |            | 9       |         | 1.303        | 1.345       | 96.89          | 0.9689              | 0.1372                 | 0.7675 |

### Test Graphs

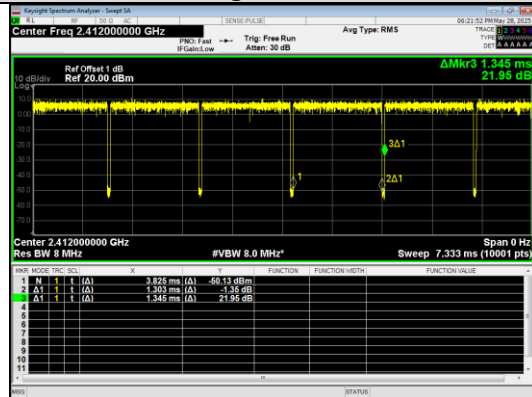




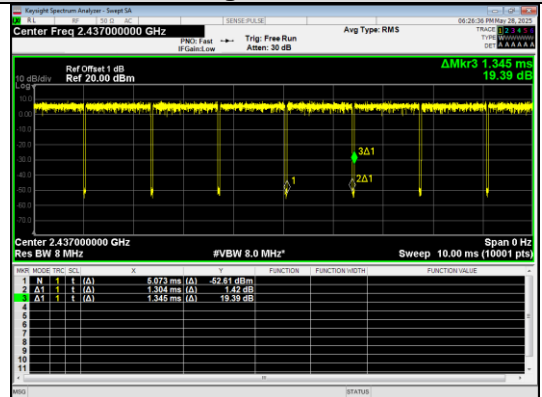
IEEE 802.11g\_20MHz\_Channel 6



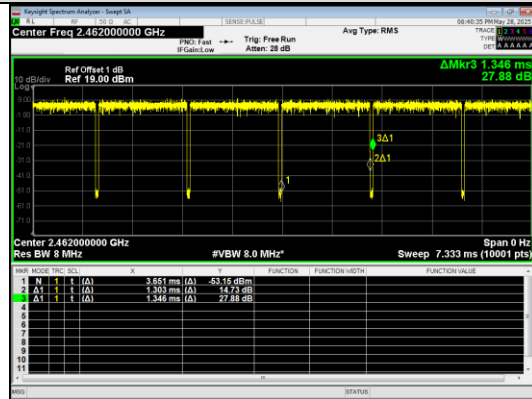
IEEE 802.11g\_20MHz\_Channel 11



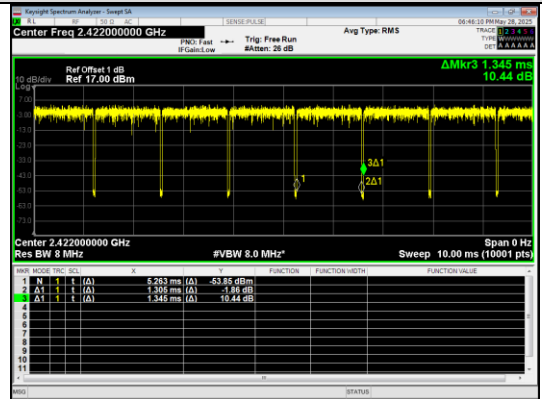
## IEEE 802.11n\_20MHz\_Channel 1



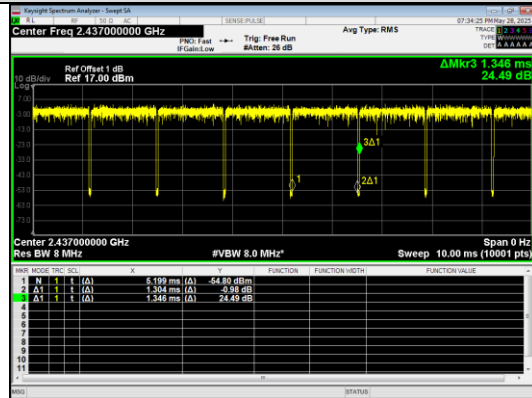
IEEE 802.11n\_20MHz\_Channel 6



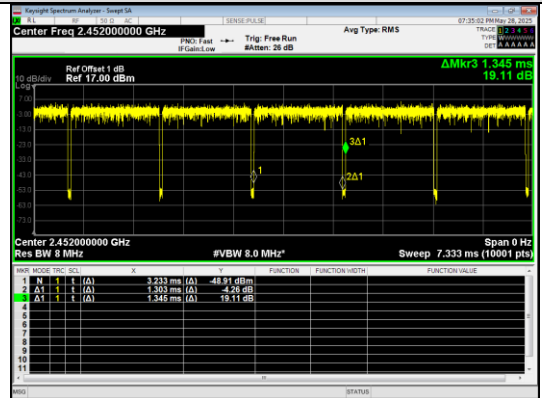
IEEE 802.11n\_20MHz\_Channel 11



IEEE 802.11n\_40MHz\_Channel 3



IEEE 802.11n\_40MHz\_Channel 6



IEEE 802.11n\_40MHz\_Channel 9

**Conducted Output Power****Test Result**

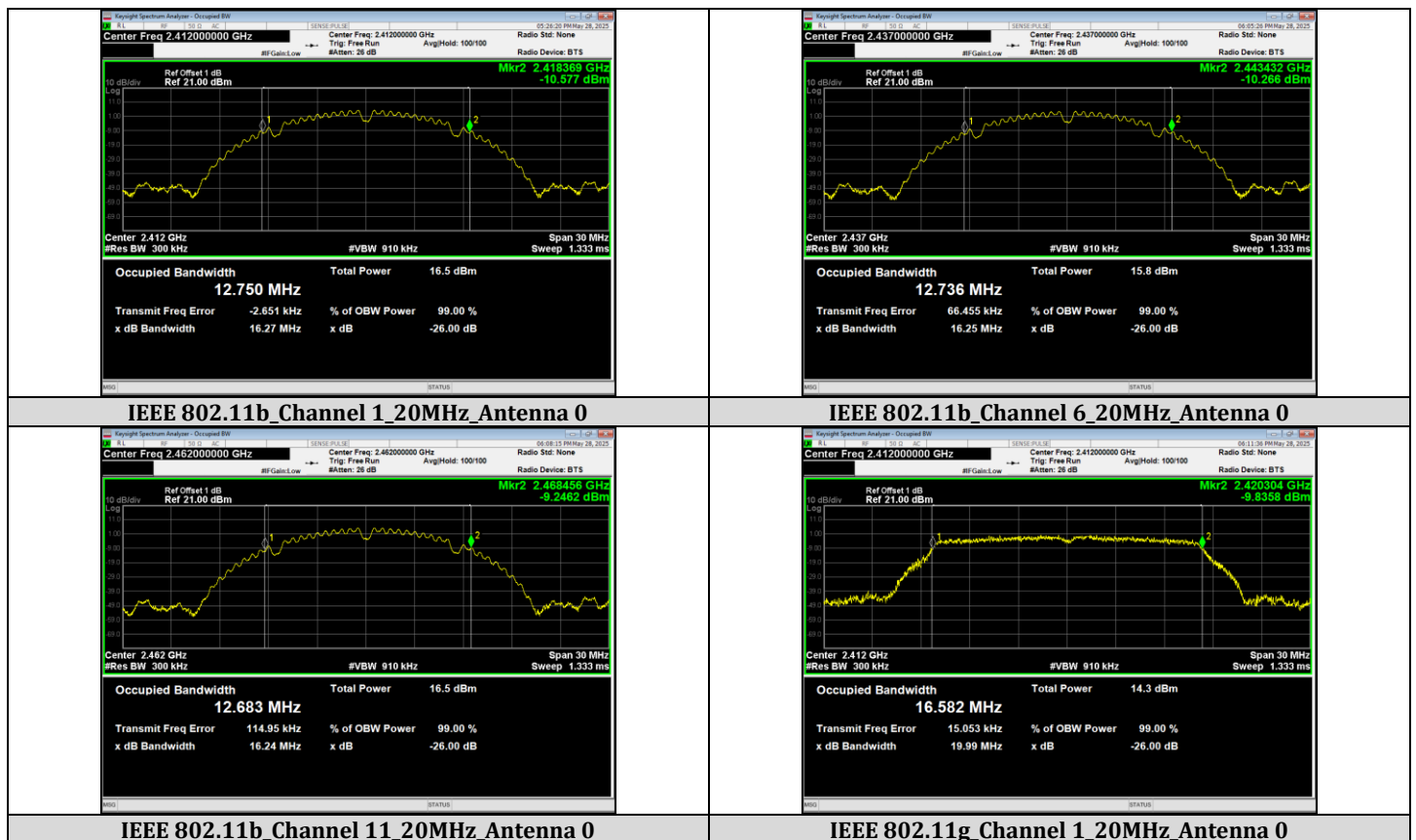
## Conducted Output Power

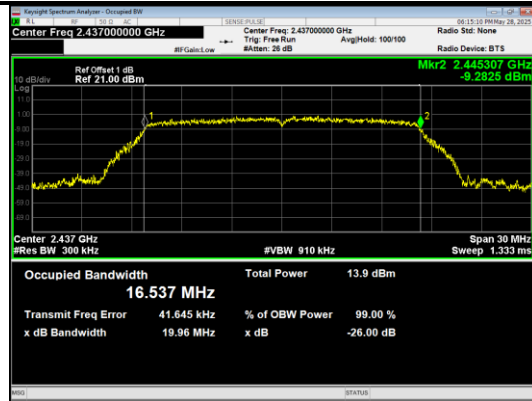
| Mode            | Channel | Ant. 0<br>(dBm) | Limit<br>(dBm) | Result |
|-----------------|---------|-----------------|----------------|--------|
| IEEE 802.11b    | 1       | 15.46           | ≤30            | PASS   |
|                 | 6       | 14.60           | ≤30            | PASS   |
|                 | 11      | 14.95           | ≤30            | PASS   |
| IEEE 802.11g    | 1       | 15.86           | ≤30            | PASS   |
|                 | 6       | 15.40           | ≤30            | PASS   |
|                 | 11      | 15.62           | ≤30            | PASS   |
| IEEE 802.11n_20 | 1       | 15.52           | ≤30            | PASS   |
|                 | 6       | 15.03           | ≤30            | PASS   |
|                 | 11      | 15.27           | ≤30            | PASS   |
| IEEE 802.11n_40 | 3       | 14.41           | ≤30            | PASS   |
|                 | 6       | 17.46           | ≤30            | PASS   |
|                 | 9       | 14.79           | ≤30            | PASS   |

## 99% Bandwidth Test Result

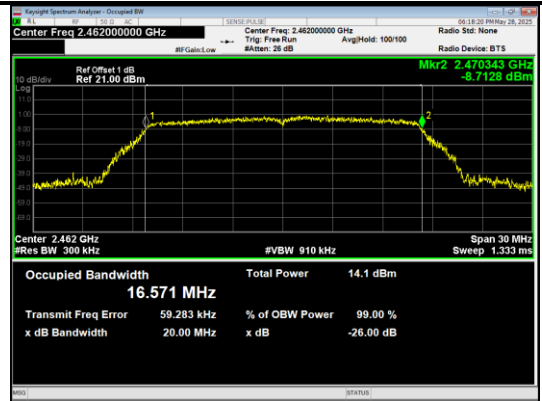
| Mode            | Channel | Ant. | Center Frequency (MHz) | 99% BW (MHz) |
|-----------------|---------|------|------------------------|--------------|
| IEEE 802.11b    | 1       | 0    | 2412                   | 12.750       |
|                 | 6       |      | 2437                   | 12.736       |
|                 | 11      |      | 2462                   | 12.683       |
| IEEE 802.11g    | 1       |      | 2412                   | 16.582       |
|                 | 6       |      | 2437                   | 16.537       |
|                 | 11      |      | 2462                   | 16.571       |
| IEEE 802.11n_20 | 1       |      | 2412                   | 17.651       |
|                 | 6       |      | 2437                   | 17.667       |
|                 | 11      |      | 2462                   | 17.645       |
| IEEE 802.11n_40 | 3       |      | 2422                   | 36.133       |
|                 | 6       |      | 2437                   | 36.229       |
|                 | 9       |      | 2452                   | 36.154       |

## Test Graphs

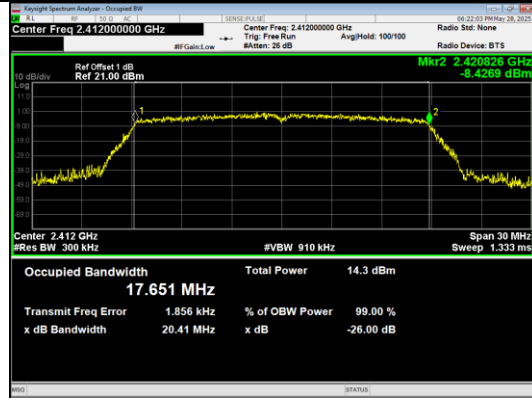




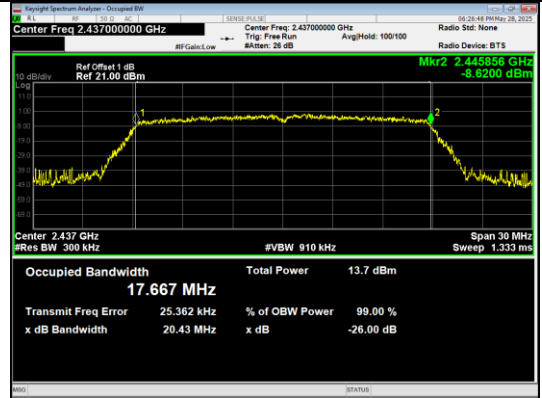
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



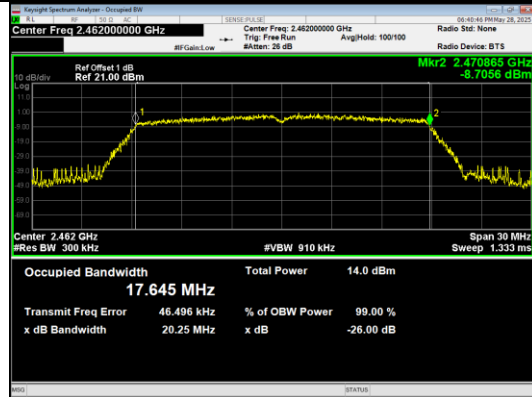
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



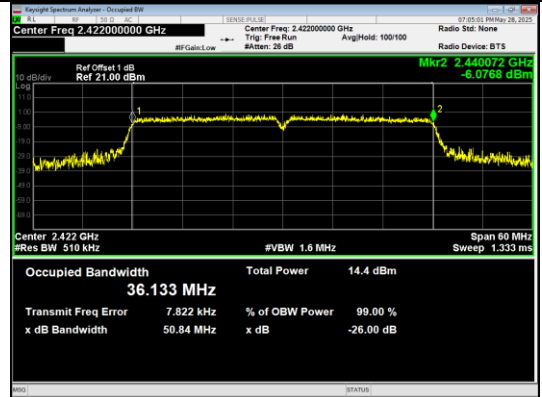
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



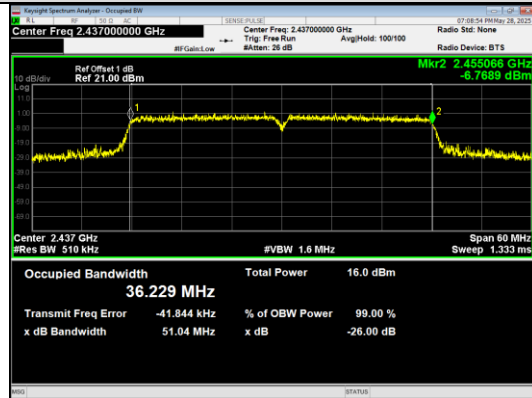
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



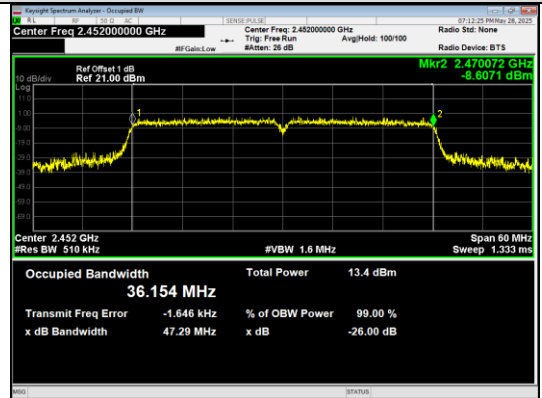
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



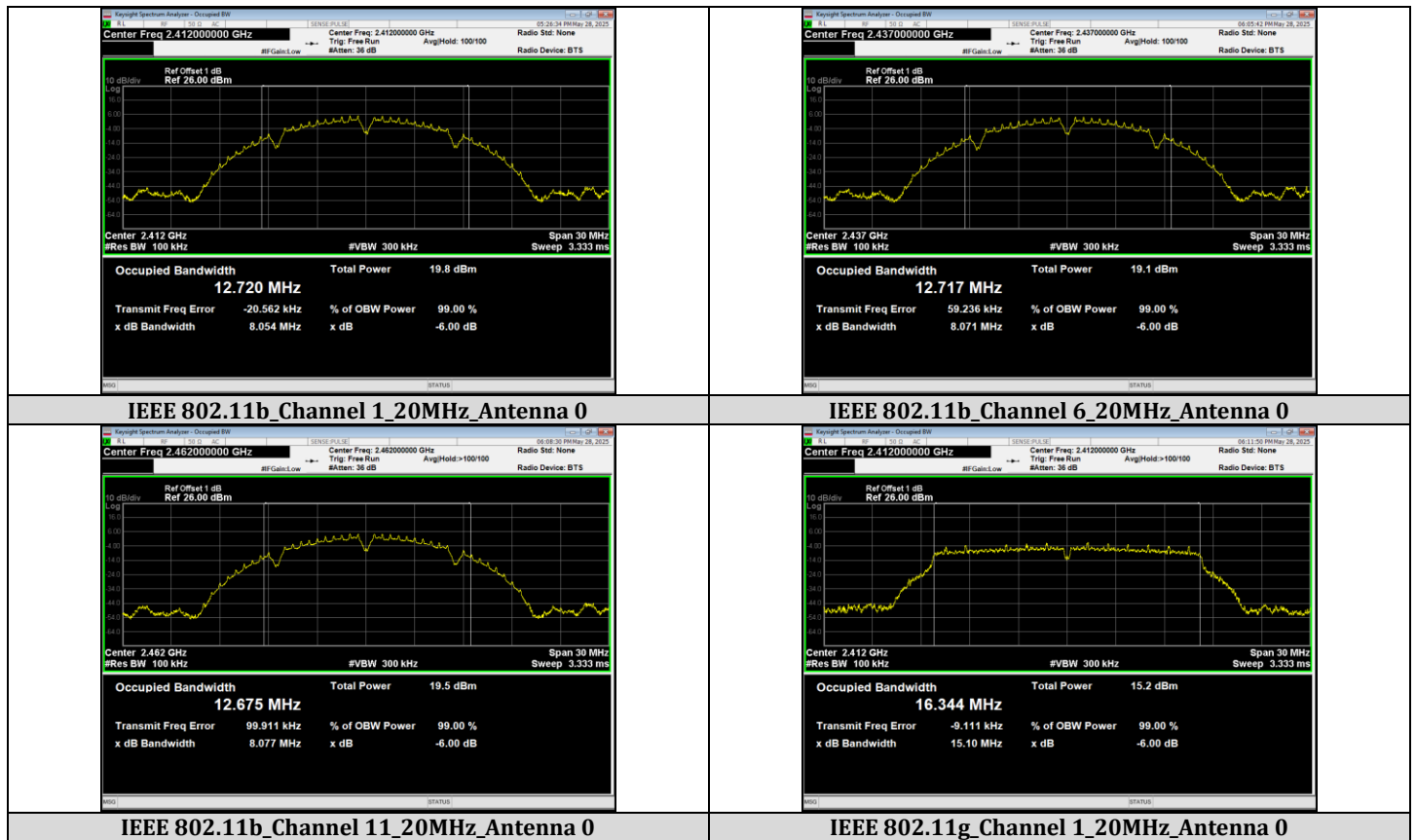
IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0

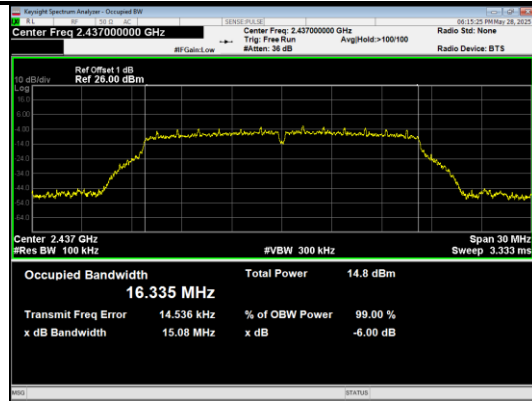


IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

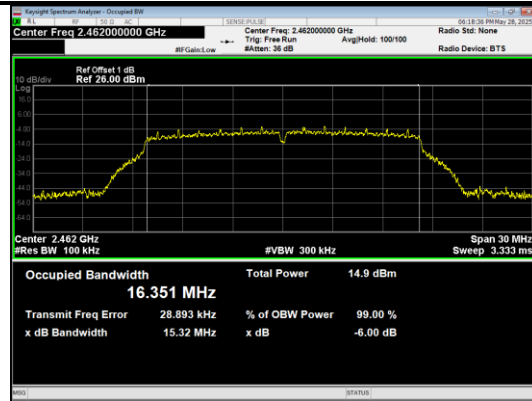
**6dB Bandwidth****Test Result**

| Mode            | Channel | Ant. | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|-----------------|---------|------|------------------------|----------------------|-------------|--------|
| IEEE 802.11b    | 1       | 0    | 2412                   | 8.054                | ≥0.5        | PASS   |
|                 | 6       |      | 2437                   | 8.071                |             | PASS   |
|                 | 11      |      | 2462                   | 8.077                |             | PASS   |
| IEEE 802.11g    | 1       |      | 2412                   | 15.10                |             | PASS   |
|                 | 6       |      | 2437                   | 15.08                |             | PASS   |
|                 | 11      |      | 2462                   | 15.32                |             | PASS   |
| IEEE 802.11n_20 | 1       |      | 2412                   | 15.12                |             | PASS   |
|                 | 6       |      | 2437                   | 15.13                |             | PASS   |
|                 | 11      |      | 2462                   | 15.11                |             | PASS   |
| IEEE 802.11n_40 | 3       |      | 2422                   | 35.86                |             | PASS   |
|                 | 6       |      | 2437                   | 35.24                |             | PASS   |
|                 | 9       |      | 2452                   | 35.71                |             | PASS   |

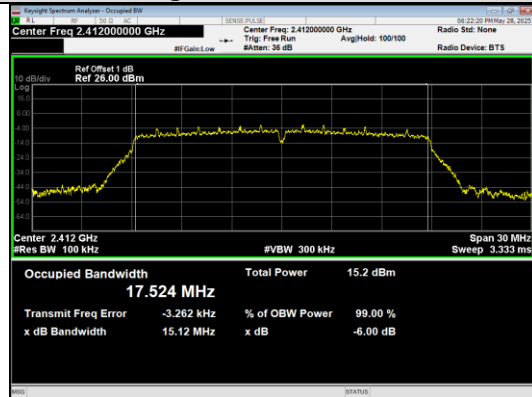
**Test Graphs**



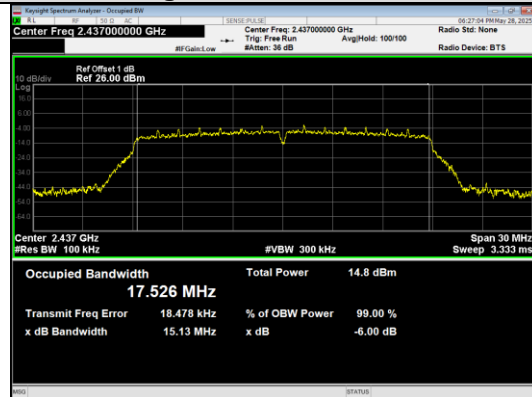
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



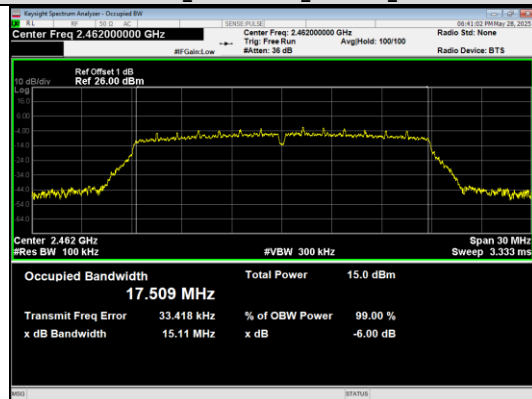
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



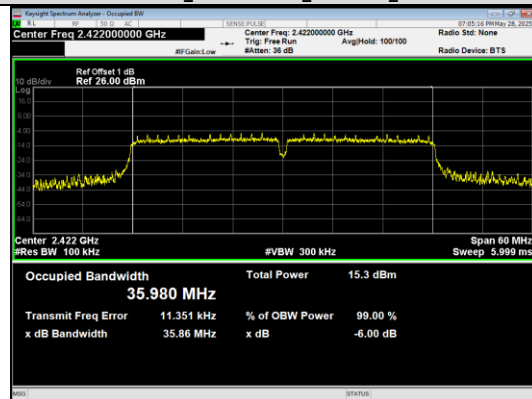
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



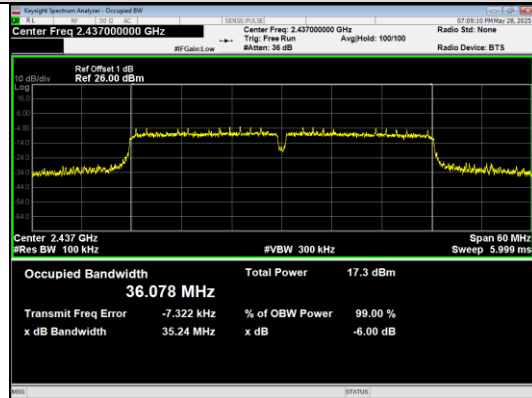
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



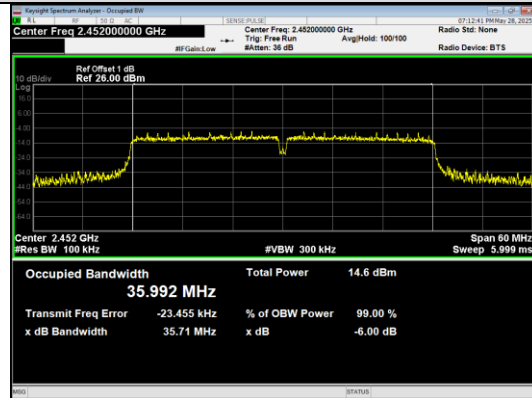
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0



IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

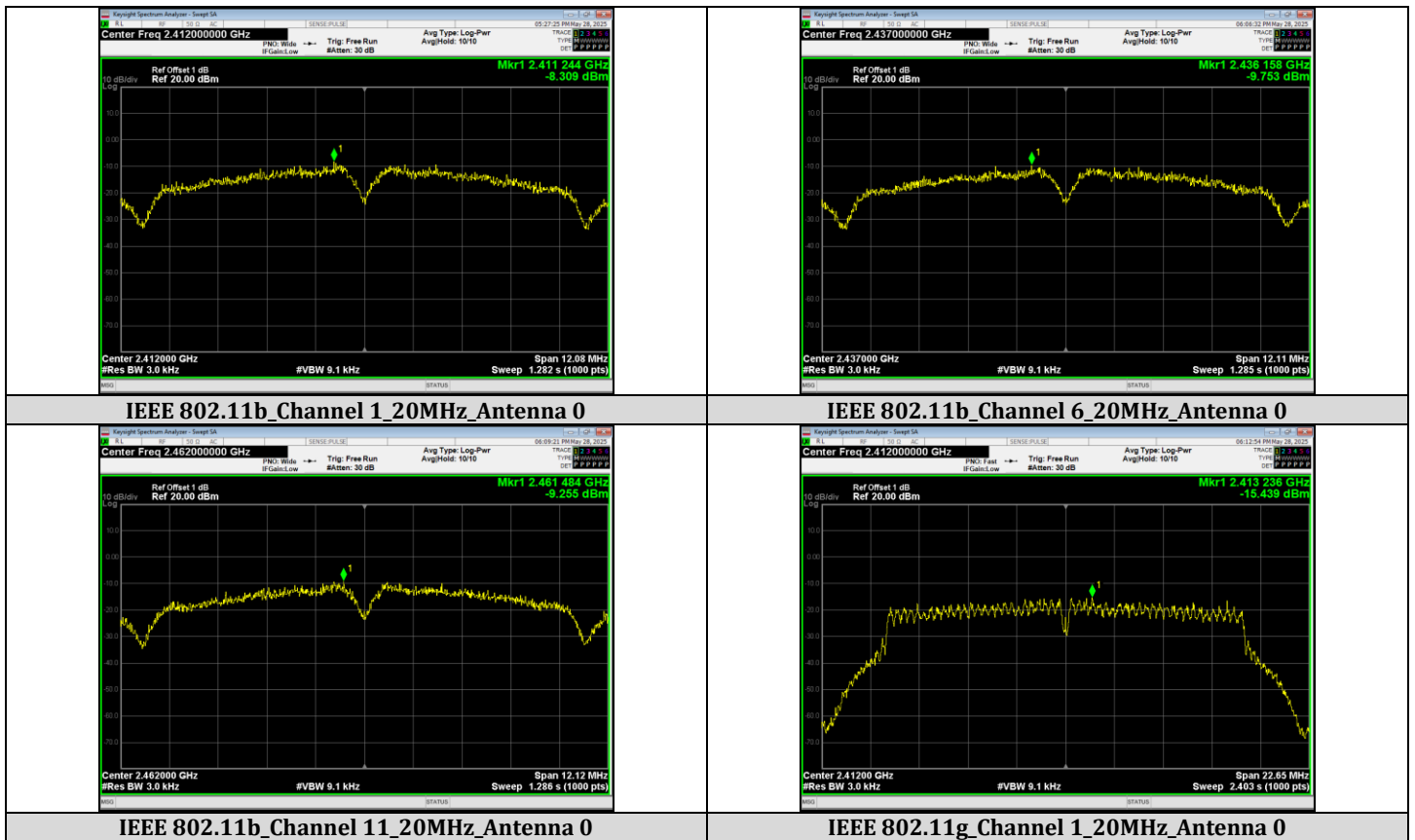


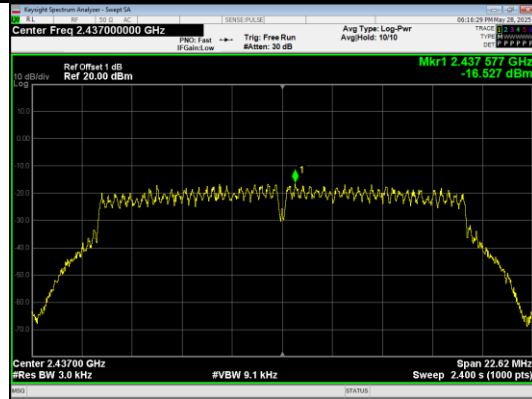
## Power Spectral Density

### Test Result

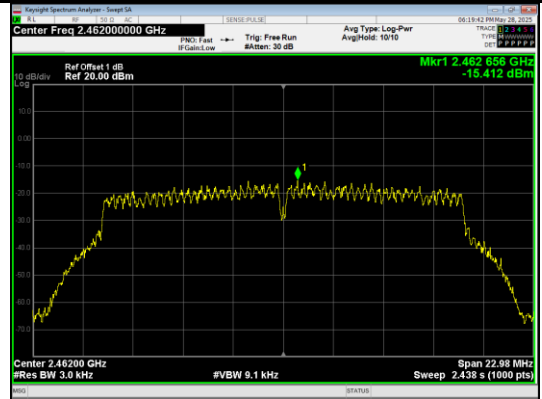
| Mode            | Channel | PSD<br>(dBm/3kHz)<br>Ant. 0 | Limit<br>(dBm/3kHz) | Result |
|-----------------|---------|-----------------------------|---------------------|--------|
| IEEE 802.11b    | 1       | -8.309                      | ≤8                  | PASS   |
|                 | 6       | -9.753                      |                     | PASS   |
|                 | 11      | -9.255                      |                     | PASS   |
| IEEE 802.11g    | 1       | -15.439                     |                     | PASS   |
|                 | 6       | -16.527                     |                     | PASS   |
|                 | 11      | -15.412                     |                     | PASS   |
| IEEE 802.11n_20 | 1       | -14.600                     |                     | PASS   |
|                 | 6       | -16.641                     |                     | PASS   |
|                 | 11      | -16.215                     |                     | PASS   |
| IEEE 802.11n_40 | 3       | -21.513                     |                     | PASS   |
|                 | 6       | -18.459                     |                     | PASS   |
|                 | 9       | -20.499                     |                     | PASS   |

### Test Graphs

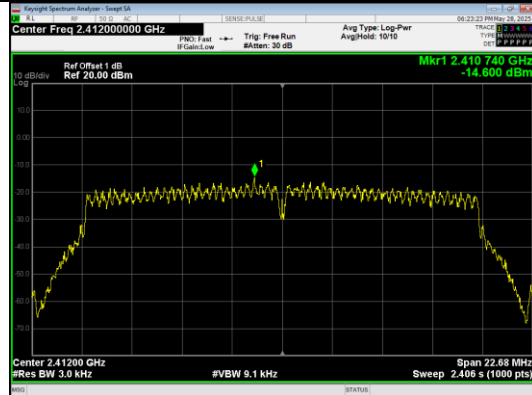




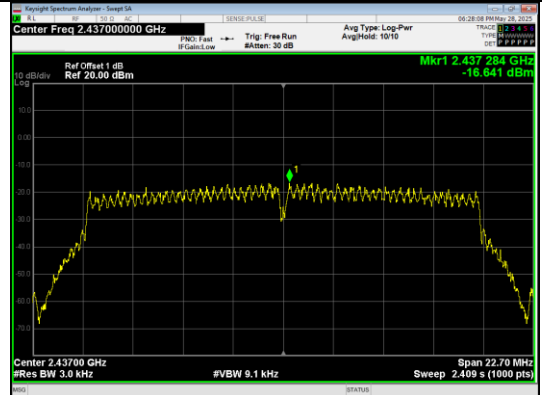
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



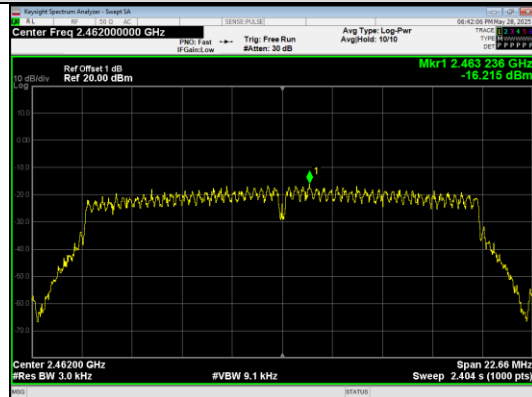
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



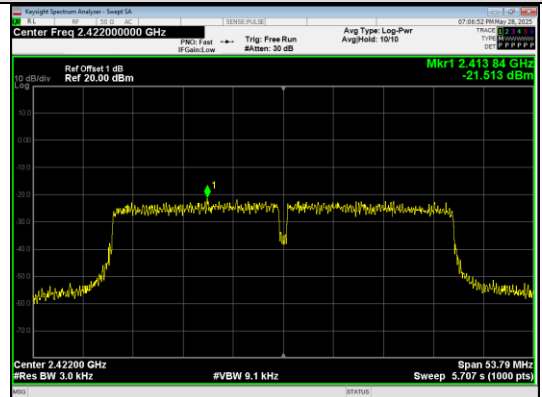
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



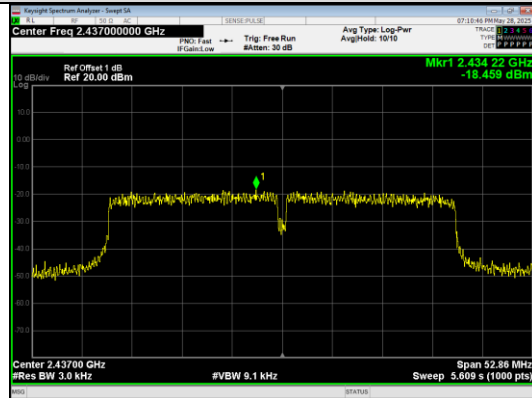
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



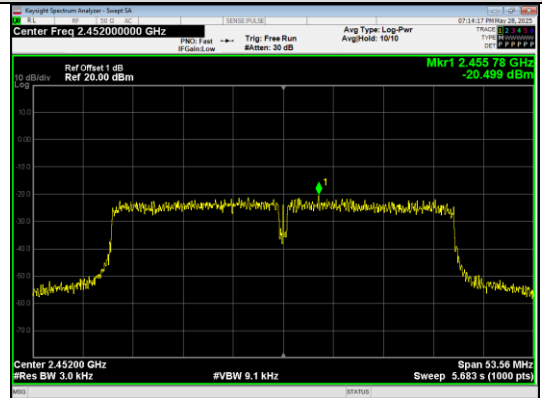
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0



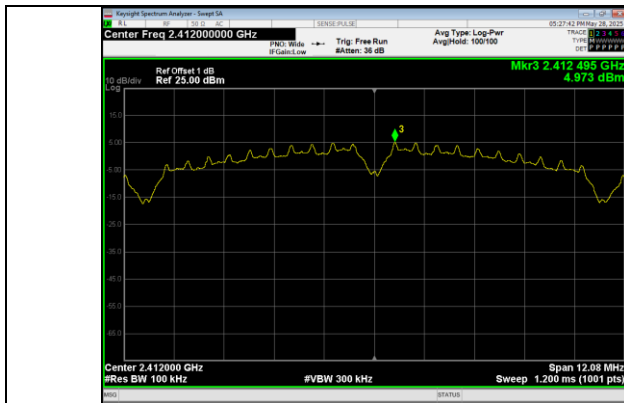
IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

## Conducted Out Of Band Emission

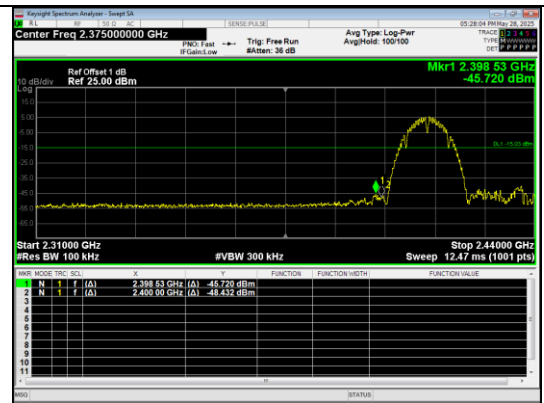
### Test Result

| Mode               | Channel | Ant. | OOB<br>Emission<br>Frequency<br>(MHz) | OOB<br>Emission<br>Level<br>(dBm) | Limit<br>(dBm) | Over Limit<br>(dB) | Result |
|--------------------|---------|------|---------------------------------------|-----------------------------------|----------------|--------------------|--------|
| IEEE 802.11b       | 1       | 0    | 2398.53                               | -45.720                           | -15.03         | -30.690            | PASS   |
|                    |         |      | 2400.00                               | -48.432                           | -15.03         | -33.402            | PASS   |
|                    | 6       |      | 24964.4                               | -40.387                           | -15.03         | -25.357            | PASS   |
|                    |         |      | 25000.0                               | -39.788                           | -15.77         | -24.018            | PASS   |
|                    | 11      |      | 2483.50                               | -50.818                           | -15.24         | -35.578            | PASS   |
|                    |         |      | 24921.3                               | -39.928                           | -15.24         | -24.688            | PASS   |
| IEEE 802.11g       | 1       |      | 924.57                                | -36.945                           | -21.77         | -15.175            | PASS   |
|                    |         |      | 2400.00                               | -42.144                           | -21.77         | -20.374            | PASS   |
|                    | 6       |      | 24873.9                               | -39.218                           | -21.79         | -17.428            | PASS   |
|                    |         |      | 2483.50                               | -51.624                           | -21.42         | -30.204            | PASS   |
|                    | 11      |      | 24940.1                               | -39.841                           | -21.42         | -18.421            | PASS   |
|                    |         |      | 2398.92                               | -44.259                           | -21.3          | -22.959            | PASS   |
| IEEE<br>802.11n_20 | 1       |      | 2400.00                               | -44.611                           | -21.3          | -23.311            | PASS   |
|                    |         |      | 24987.5                               | -39.880                           | -21.3          | -18.580            | PASS   |
|                    | 6       |      | 24990.6                               | -39.712                           | -21.62         | -18.092            | PASS   |
|                    |         |      | 2483.50                               | -52.604                           | -21.37         | -31.234            | PASS   |
|                    | 11      |      | 24371.4                               | -40.179                           | -21.37         | -18.809            | PASS   |
|                    |         |      | 1763.00                               | -32.229                           | -25.87         | -6.359             | PASS   |
| IEEE<br>802.11n_40 | 3       |      | 2398.27                               | -34.046                           | -25.87         | -8.176             | PASS   |
|                    |         |      | 2400.00                               | -34.930                           | -25.87         | -9.060             | PASS   |
|                    | 6       |      | 4866.19                               | -29.290                           | -22.88         | -6.410             | PASS   |
|                    |         |      | 2483.50                               | -38.448                           | -25.45         | -12.998            | PASS   |
|                    | 9       |      | 4905.51                               | -33.169                           | -25.45         | -7.719             | PASS   |
|                    |         |      |                                       |                                   |                |                    |        |

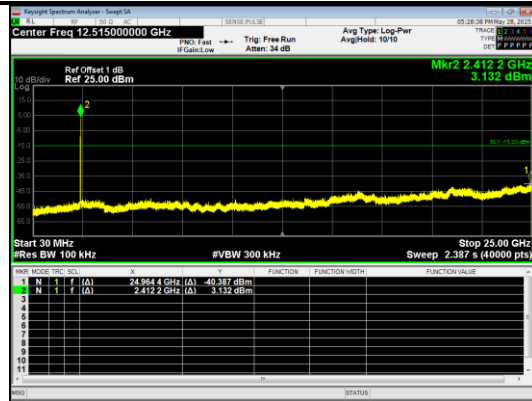
### Test Graphs



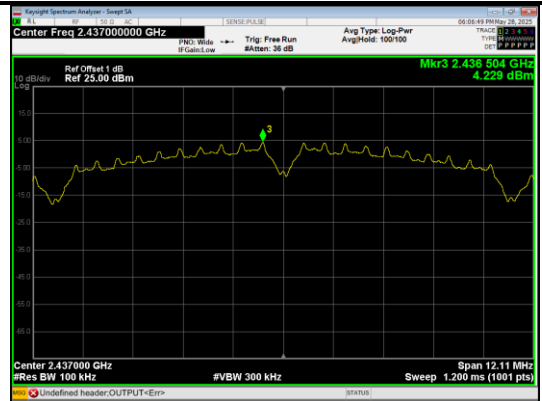
**In-Band Reference Level**  
IEEE 802.11b\_Channel 1\_20MHz\_Antenna 0



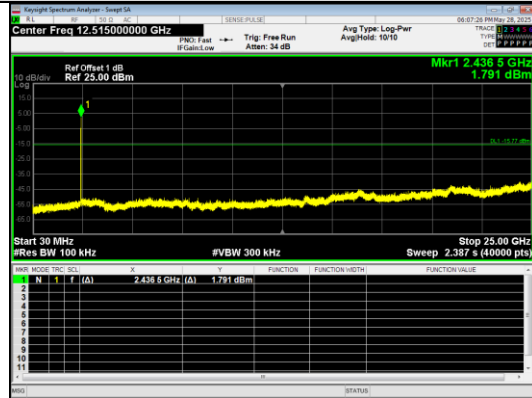
**Out Of Band Emission**  
IEEE 802.11b\_Channel 1\_20MHz\_Antenna 0



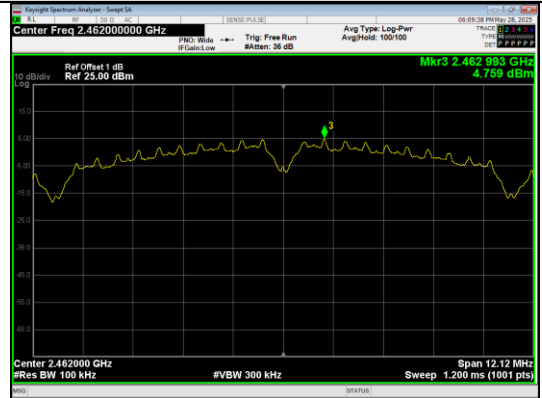
30.0 MHz - 25000.0 MHz  
IEEE 802.11b\_Channel 1\_20MHz\_Antenna 0



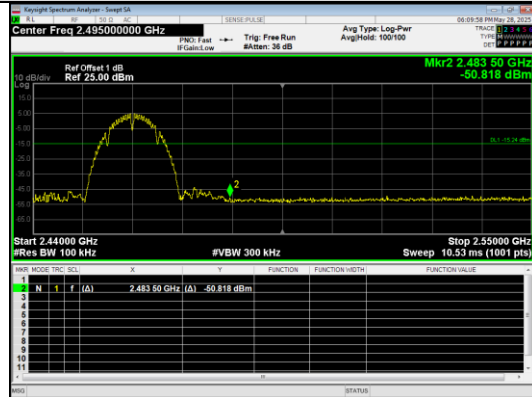
In-Band Reference Level  
IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0



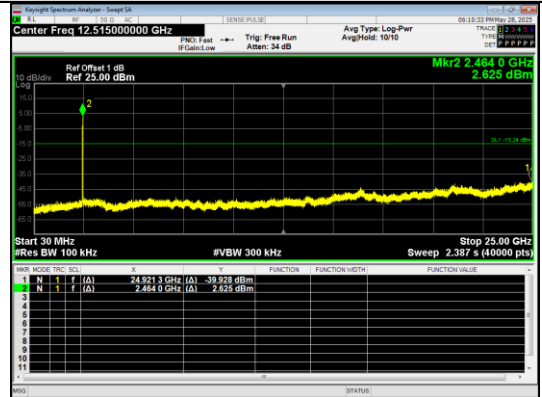
30.0 MHz - 25000.0 MHz  
IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0



In-Band Reference Level  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



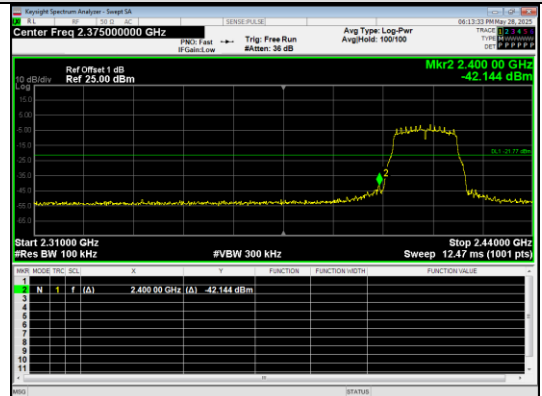
Out Of Band Emission  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



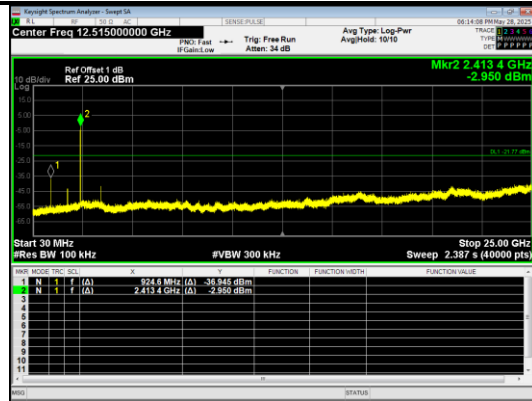
30.0 MHz - 25000.0 MHz  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



In-Band Reference Level  
IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0

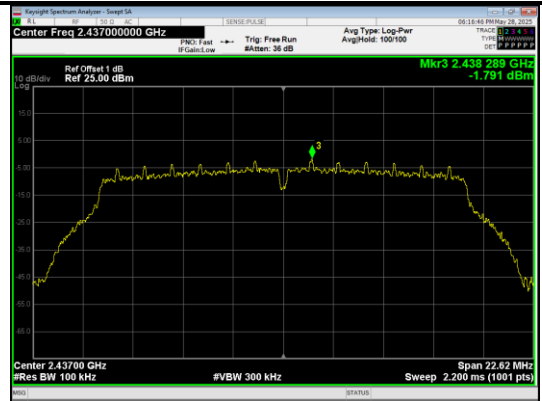


Out Of Band Emission  
IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



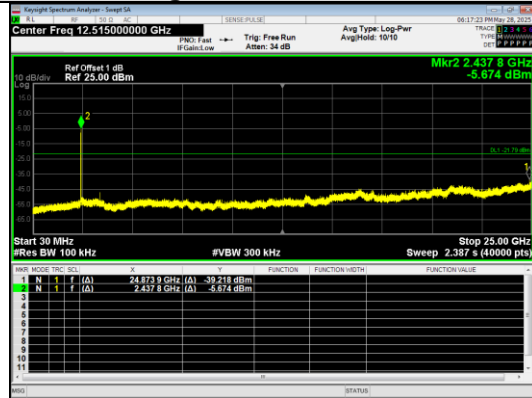
30.0 MHz - 25000.0 MHz

IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



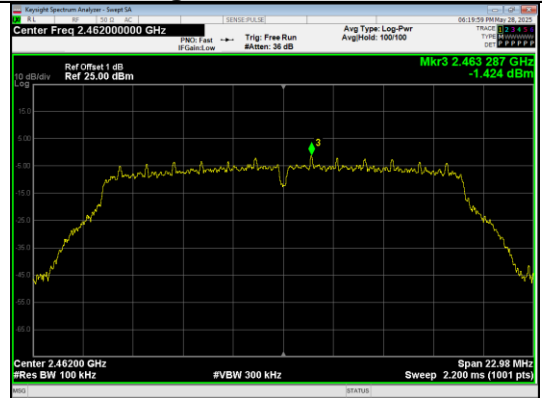
In-Band Reference Level

IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



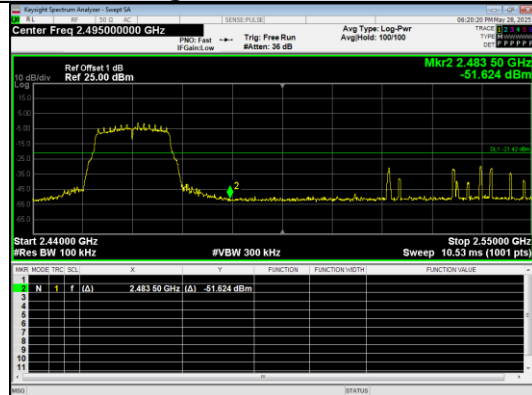
30.0 MHz - 25000.0 MHz

IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



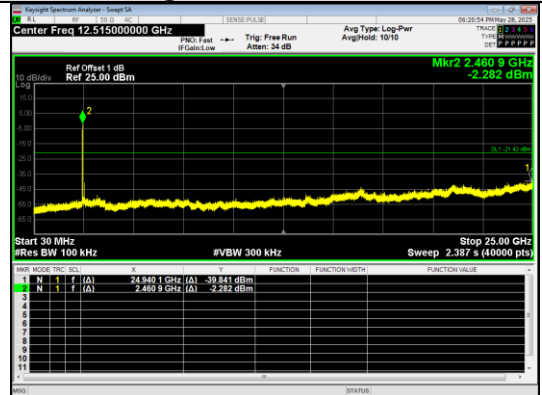
In-Band Reference Level

IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



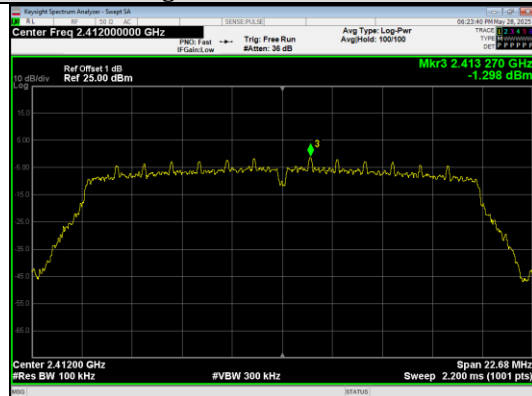
Out Of Band Emission

IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



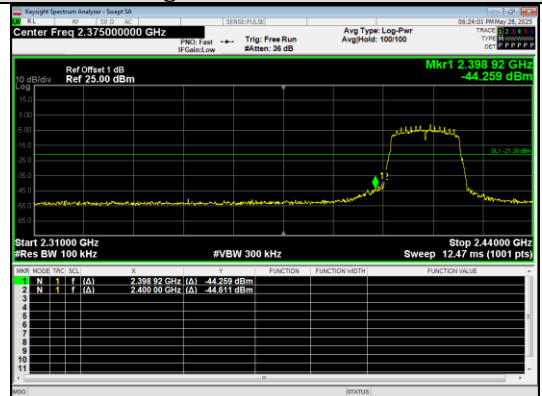
30.0 MHz - 25000.0 MHz

IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



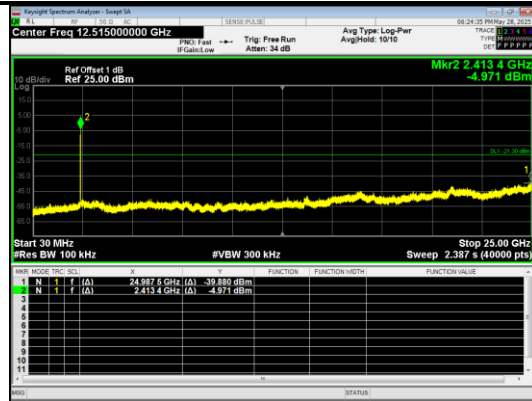
In-Band Reference Level

IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0

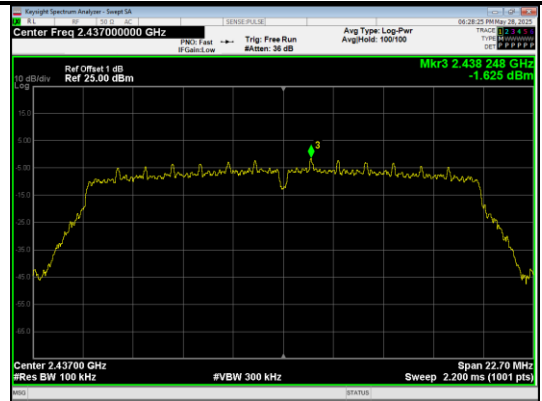


Out Of Band Emission

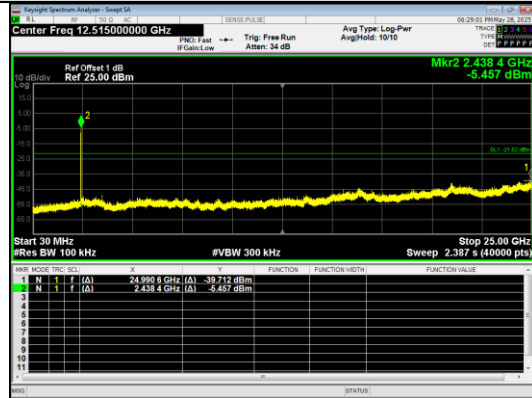
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



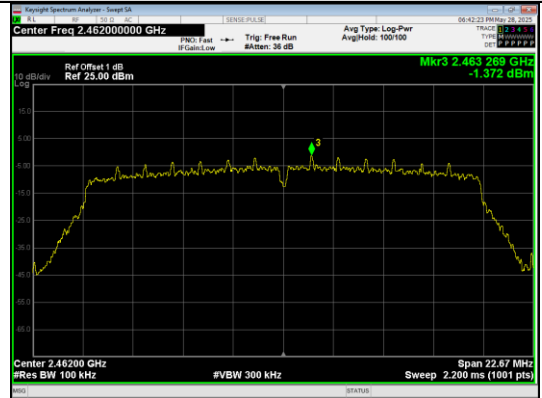
30.0 MHz - 25000.0 MHz  
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



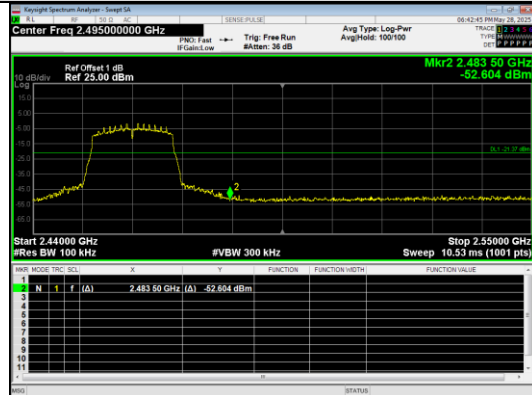
In-Band Reference Level  
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



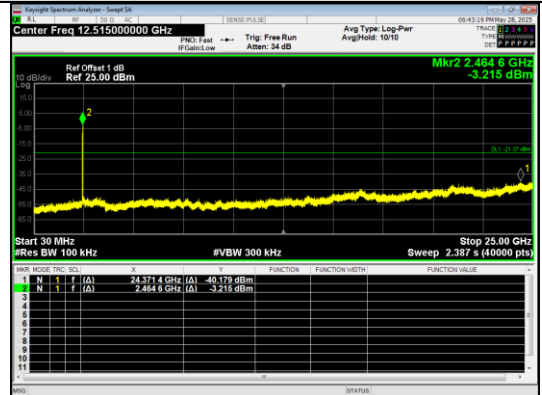
30.0 MHz - 25000.0 MHz  
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



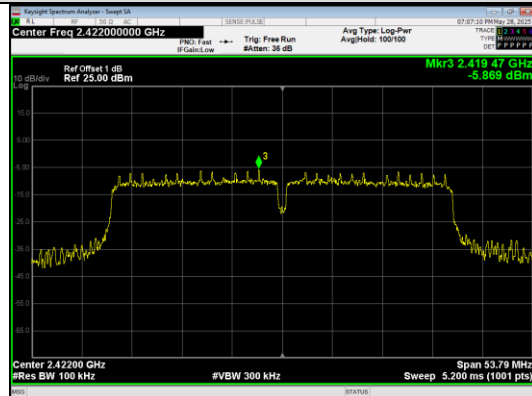
In-Band Reference Level  
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



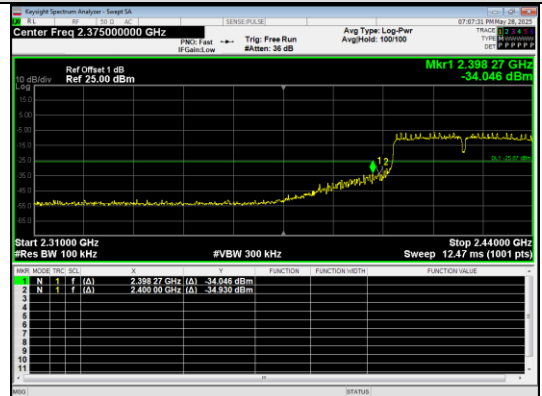
Out Of Band Emission  
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



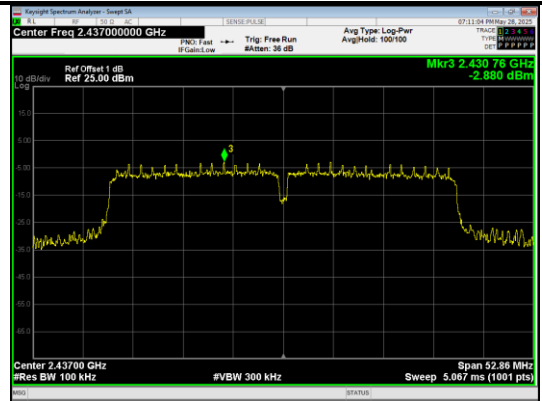
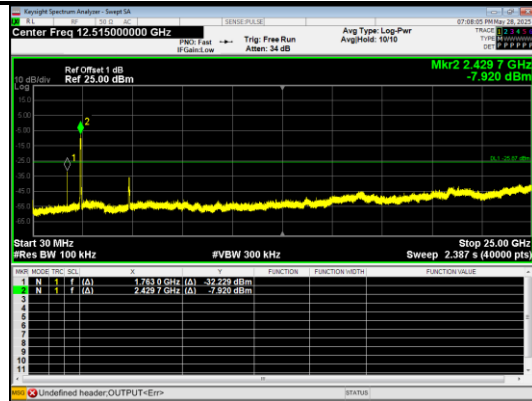
30.0 MHz - 25000.0 MHz  
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



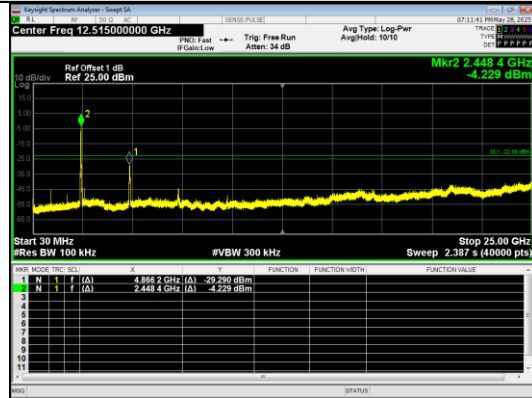
In-Band Reference Level  
IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



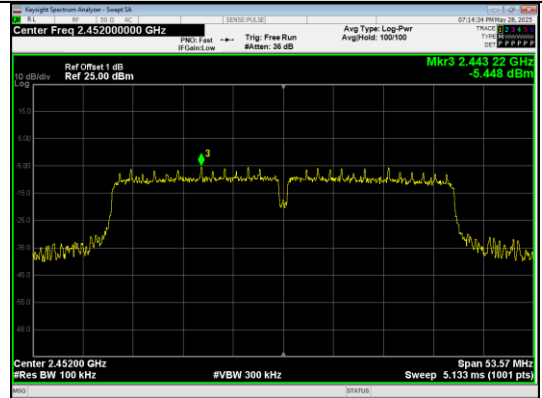
Out Of Band Emission  
IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



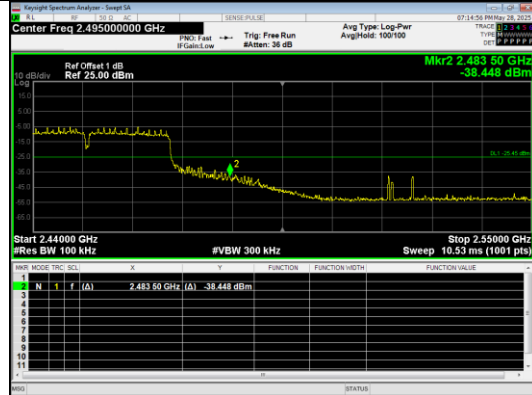
### 30.0 MHz - 25000.0 MHz IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



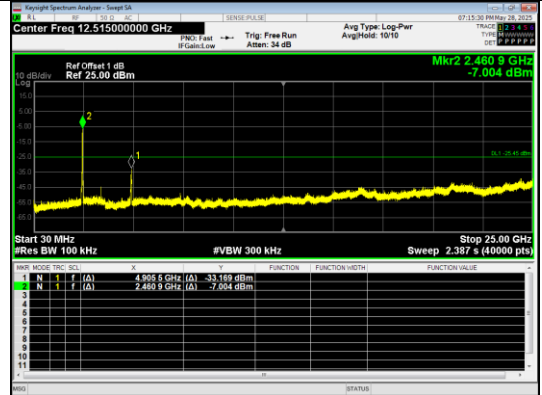
### In-Band Reference Level IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0



### 30.0 MHz - 25000.0 MHz IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0



### In-Band Reference Level IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0



### Out Of Band Emission IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

### 30.0 MHz - 25000.0 MHz IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

\*\*\*\*\* End of Report \*\*\*\*\*