

# Appendix Report

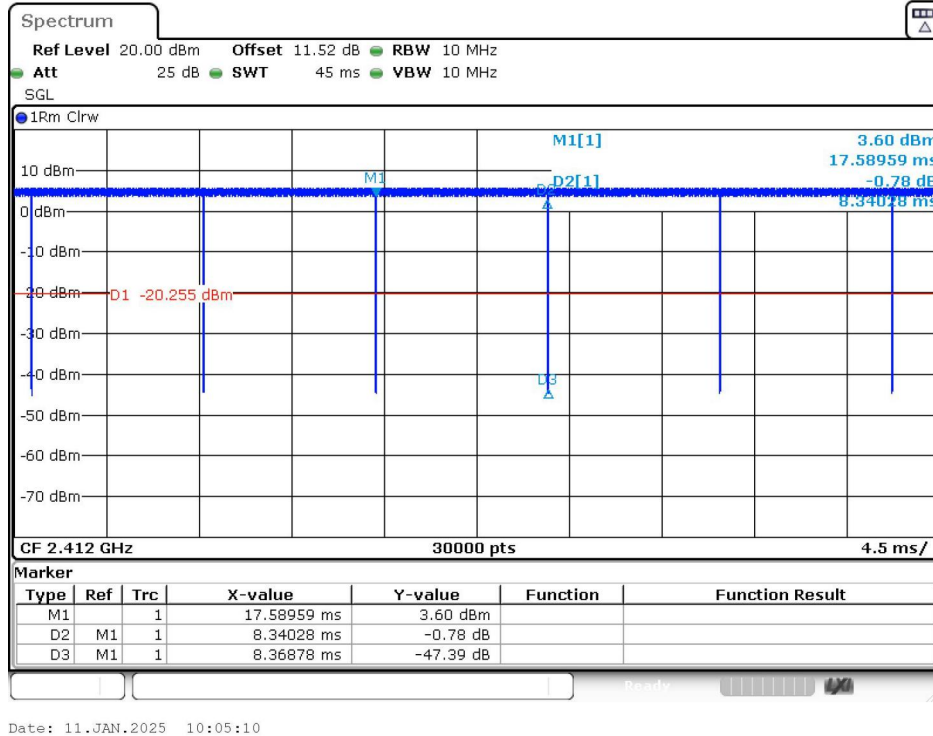
|                |                  |
|----------------|------------------|
| Report No.:    | CISRR25010703504 |
| Test Engineer: | Mark Fu          |
| Supervised by: | Rory Huang       |

## Duty Cycle

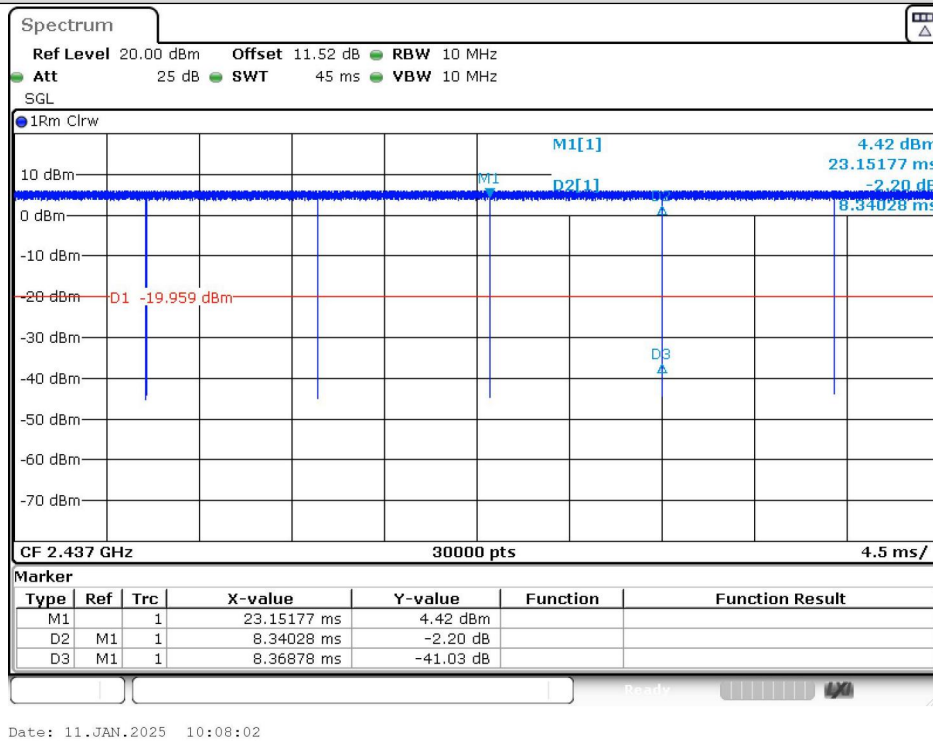
### Test Result

| 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       | 8.340        | 8.369       | 99.66          | 0.9966              | 0.0148                 | 0.1199 |
|                 |            | 6       |         | 8.340        | 8.369       | 99.66          | 0.9966              | 0.0148                 | 0.1199 |
|                 |            | 11      |         | 8.319        | 8.347       | 99.66          | 0.9966              | 0.0148                 | 0.1202 |
| IEEE 802.11g    |            | 1       |         | 1.396        | 1.429       | 97.69          | 0.9769              | 0.1015                 | 0.7163 |
|                 |            | 6       |         | 1.396        | 1.429       | 97.69          | 0.9769              | 0.1015                 | 0.7163 |
|                 |            | 11      |         | 1.395        | 1.429       | 97.62          | 0.9762              | 0.1046                 | 0.7168 |
| IEEE 802.11n_20 | 1          | 1.304   |         | 1.337        | 97.53       | 0.9753         | 0.1086              | 0.7669                 |        |
|                 | 6          | 1.293   |         | 1.327        | 97.44       | 0.9744         | 0.1126              | 0.7734                 |        |
|                 | 11         | 1.293   |         | 1.327        | 97.44       | 0.9744         | 0.1126              | 0.7734                 |        |
| IEEE 802.11n_40 | MCS 0      | 3       |         | 0.650        | 0.684       | 95.00          | 0.9500              | 0.2228                 | 1.5385 |
|                 |            | 6       |         | 0.650        | 0.684       | 94.94          | 0.9494              | 0.2255                 | 1.5385 |
|                 |            | 9       |         | 0.650        | 0.684       | 95.00          | 0.9500              | 0.2228                 | 1.5385 |

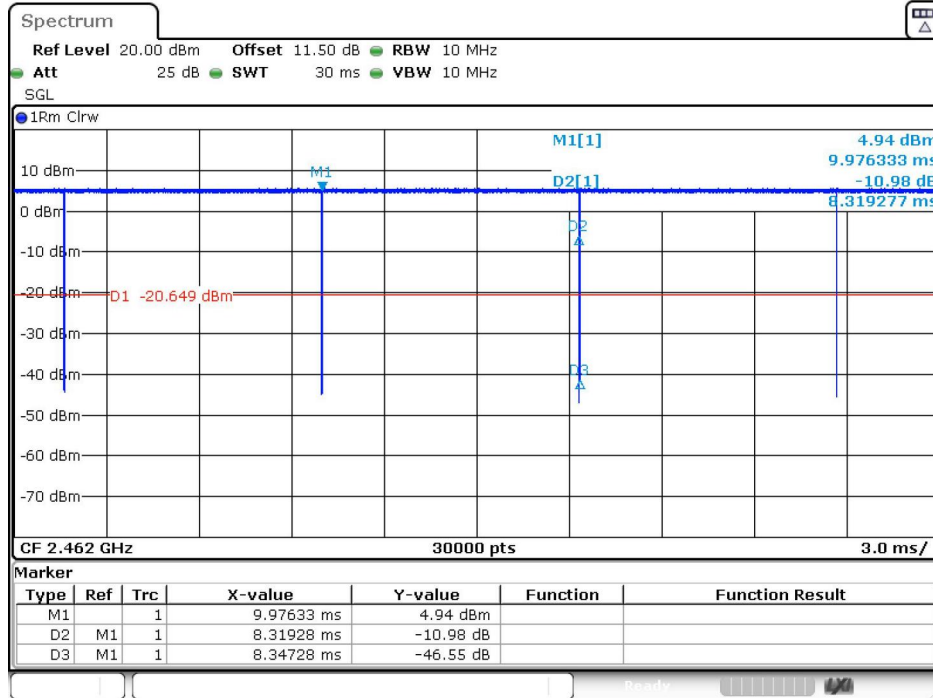
### Test Graphs



IEEE 802.11b\_20MHz\_Channel 1

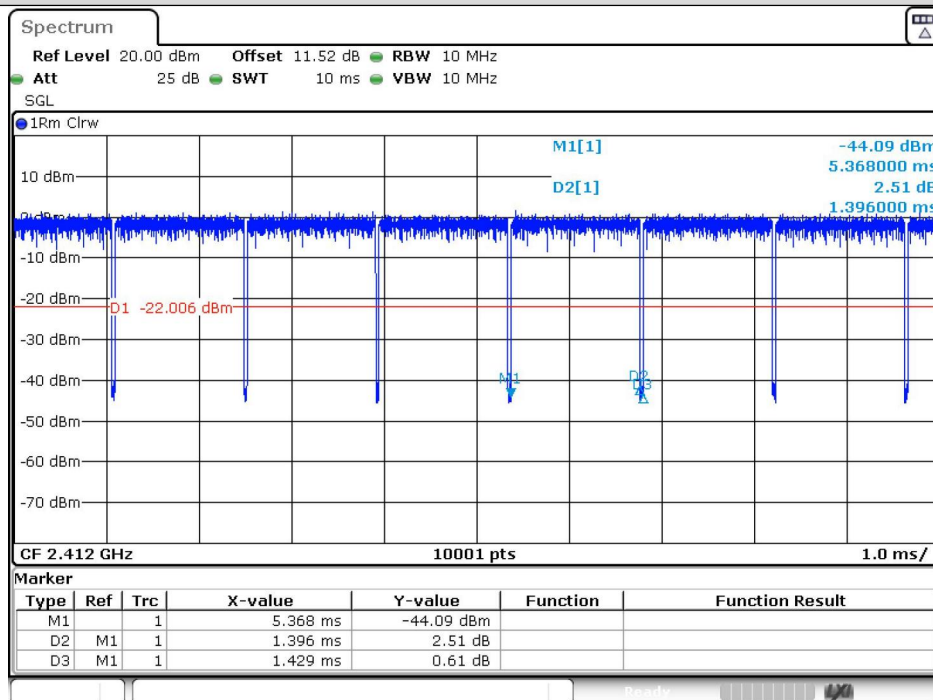


IEEE 802.11b\_20MHz\_Channel 6



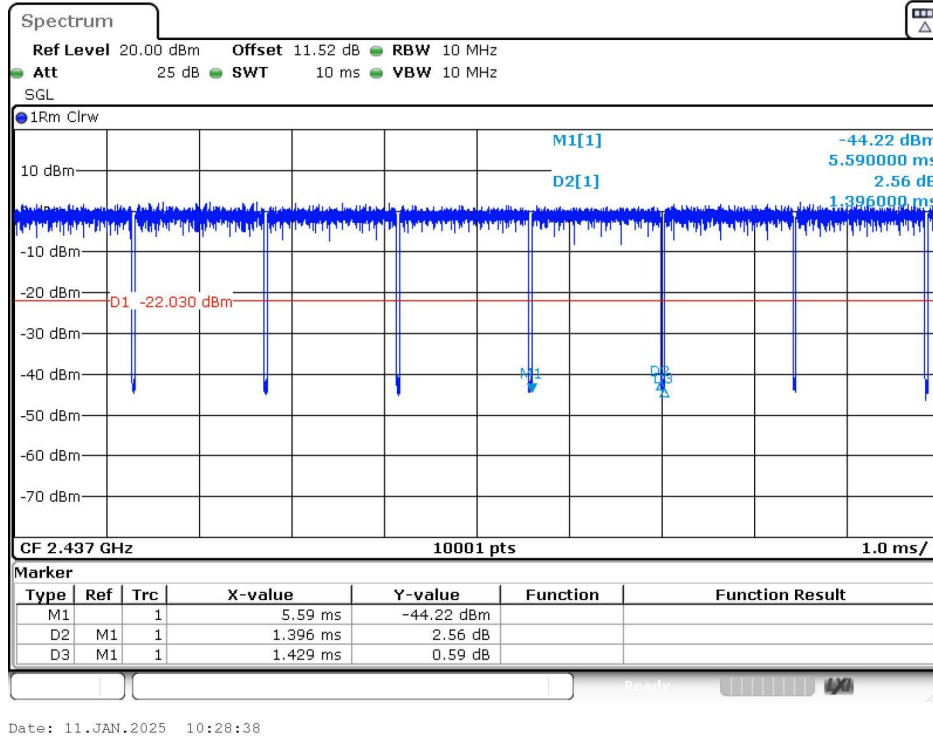
Date: 11.JAN.2025 10:11:17

### IEEE 802.11b\_20MHz\_Channel 11

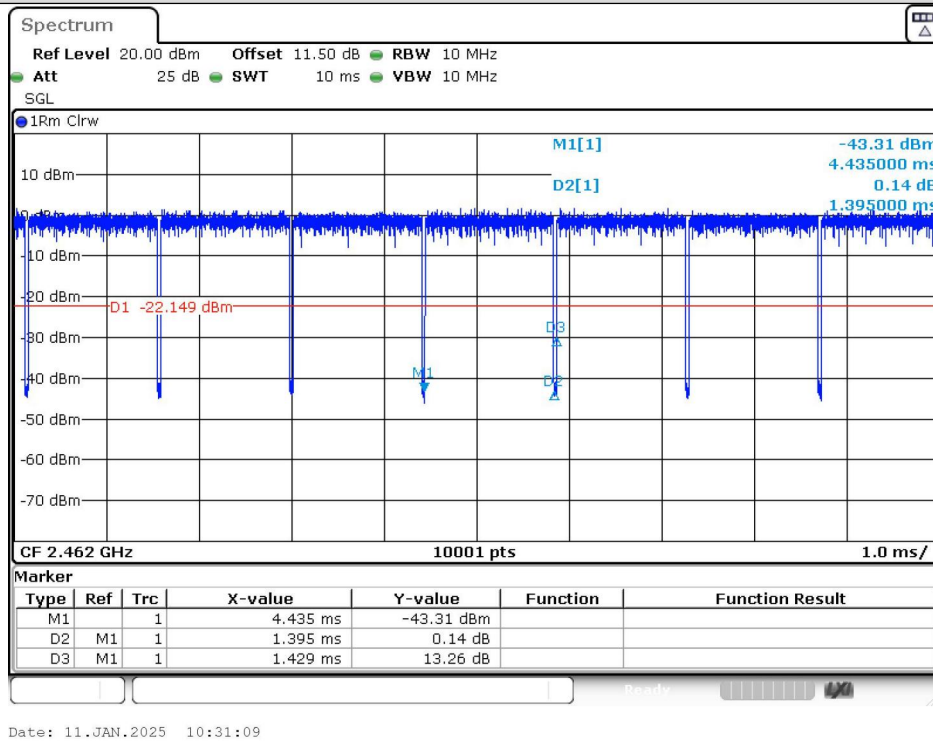


Date: 11.JAN.2025 10:17:25

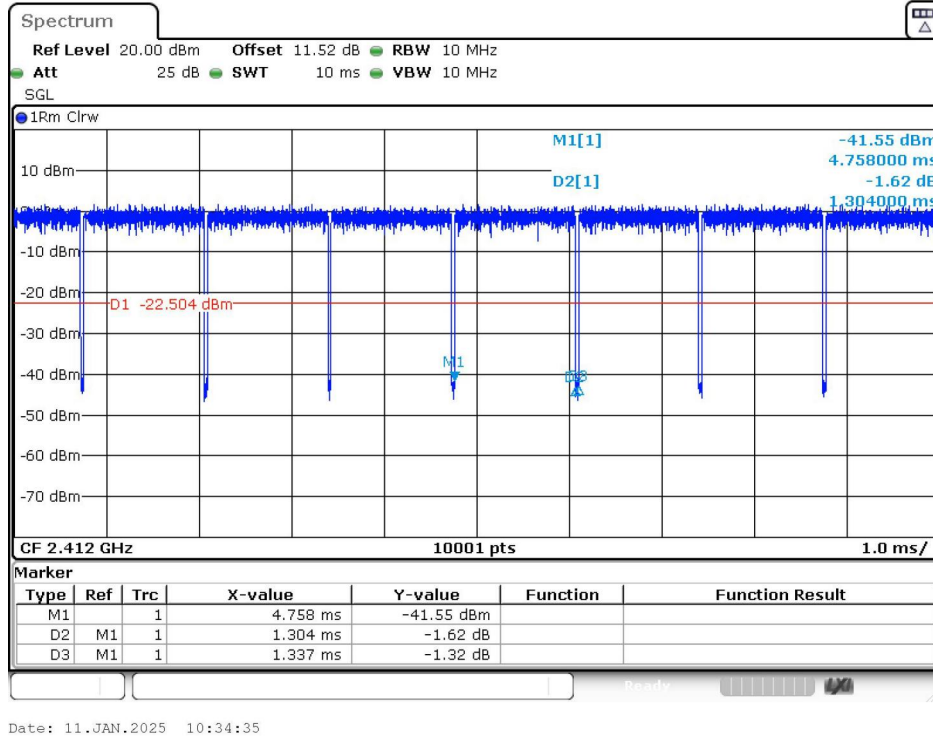
### IEEE 802.11g\_20MHz\_Channel 1



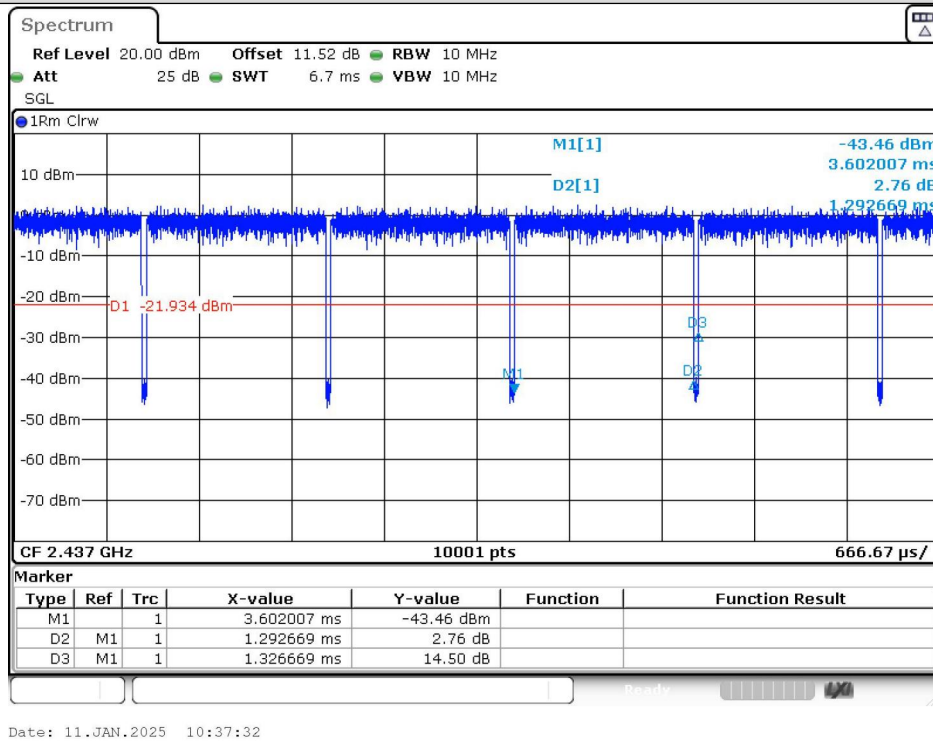
### IEEE 802.11g\_20MHz\_Channel 6



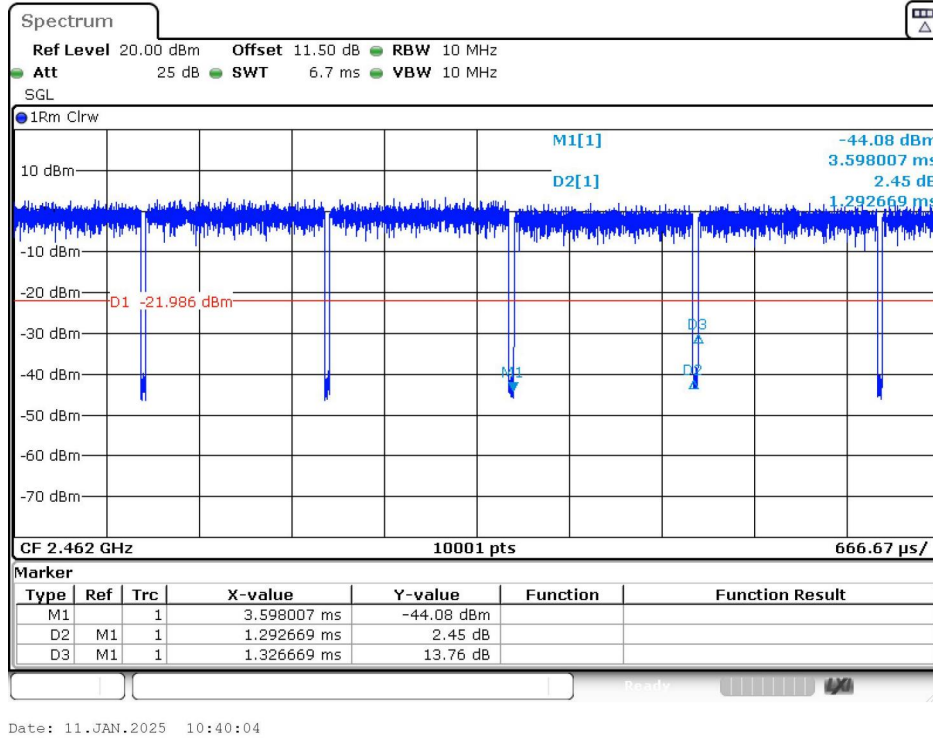
### IEEE 802.11g\_20MHz\_Channel 11



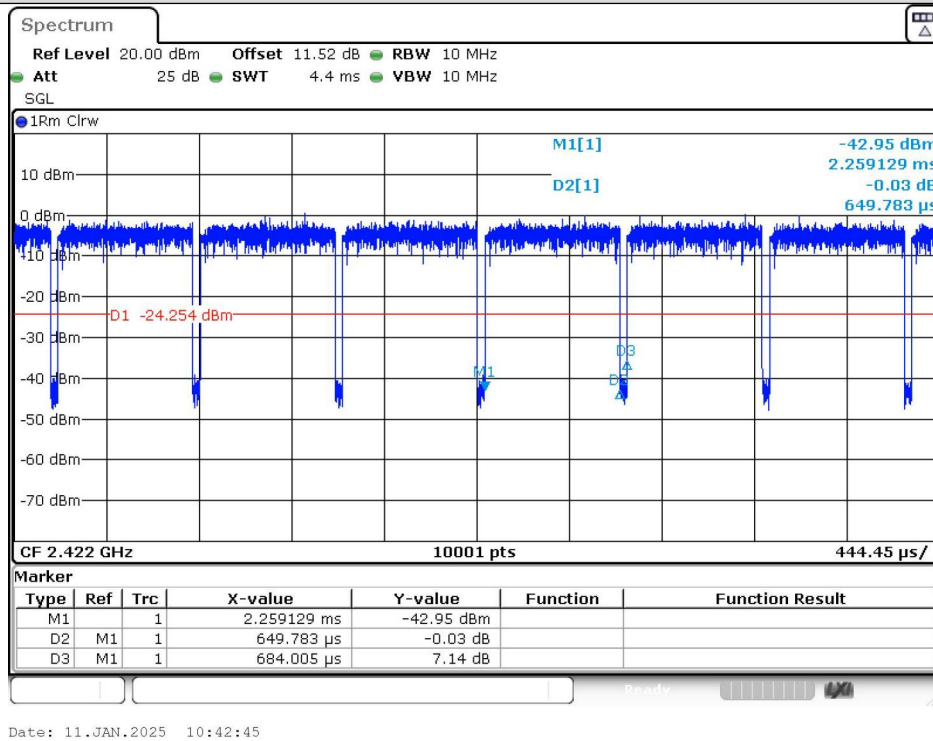
### IEEE 802.11n\_20MHz\_Channel 1



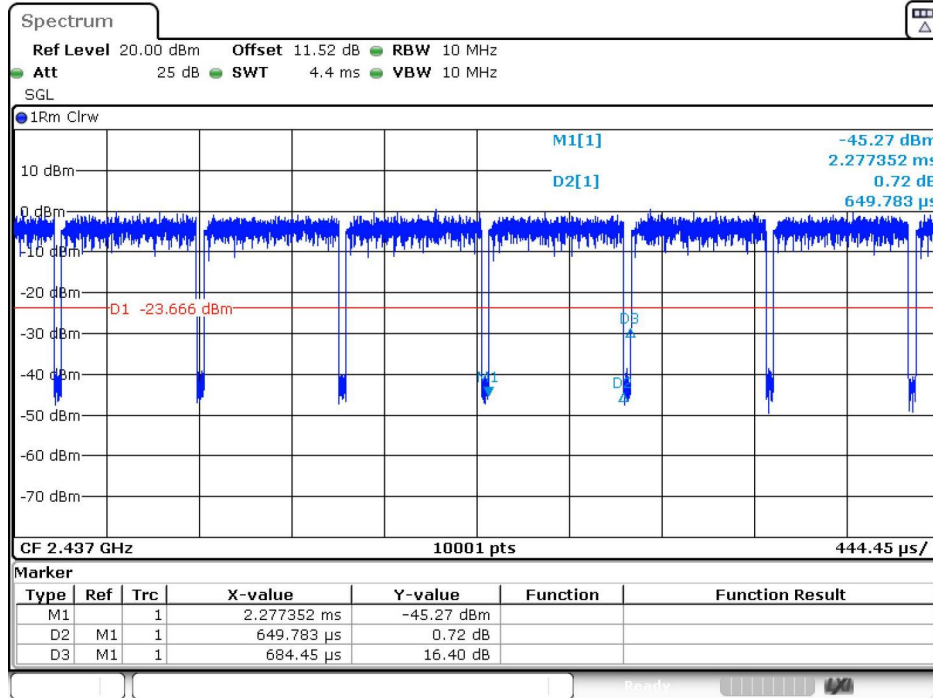
### IEEE 802.11n\_20MHz\_Channel 6



### IEEE 802.11n\_20MHz\_Channel 11

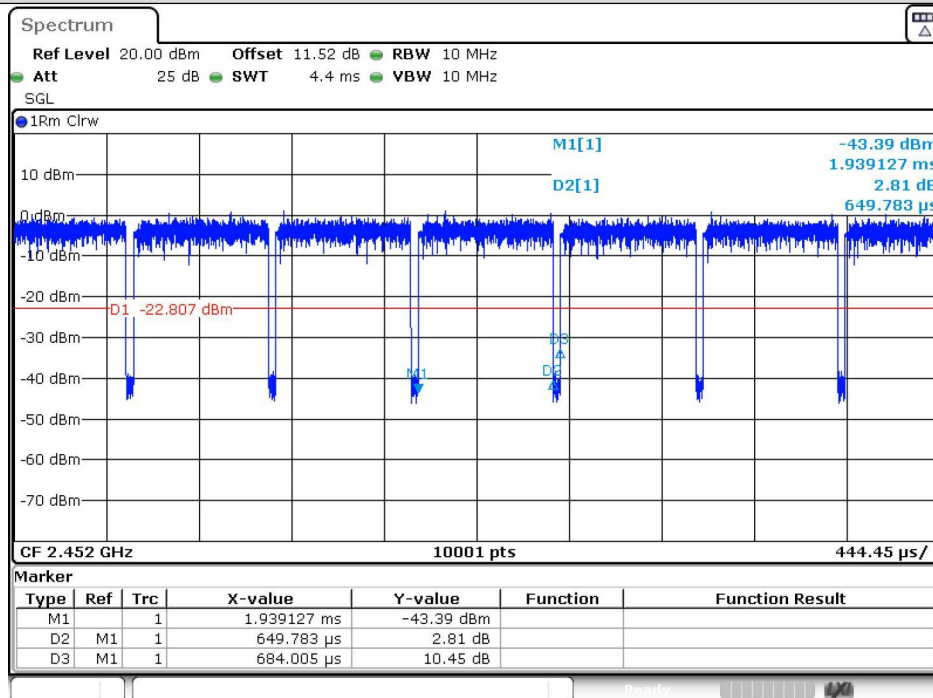


### IEEE 802.11n\_40MHz\_Channel 3



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### IEEE 802.11n\_40MHz\_Channel 6



Date: 11.JAN.2025 10:48:37

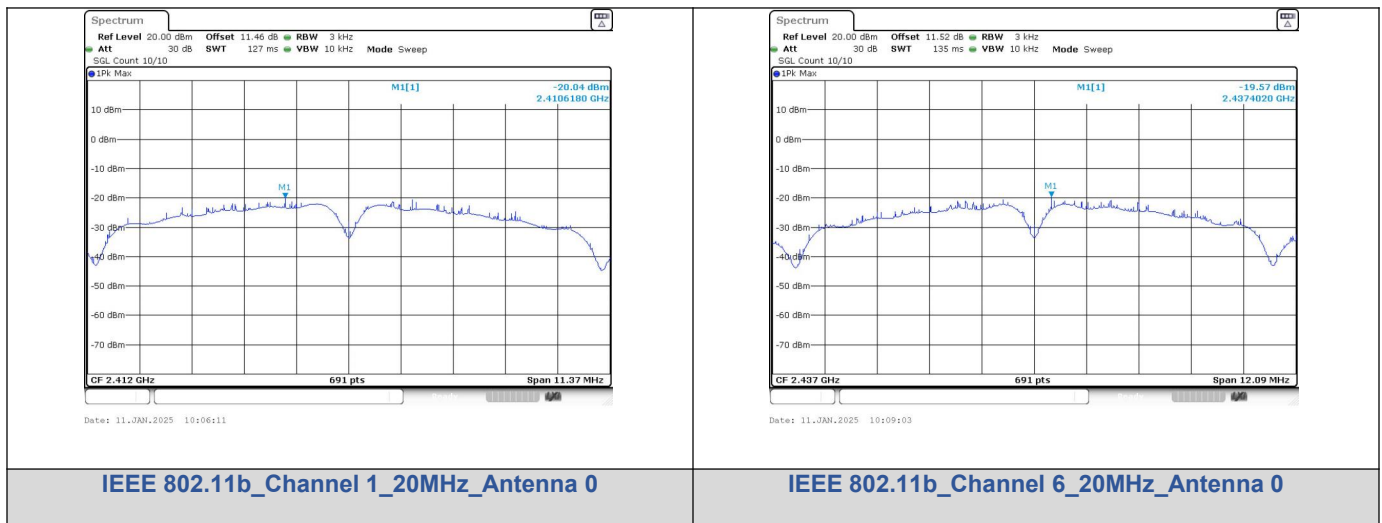
### IEEE 802.11n\_40MHz\_Channel 9

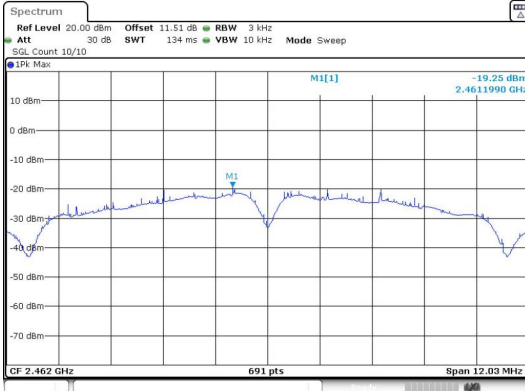
## Power Spectral Density

### Test Result

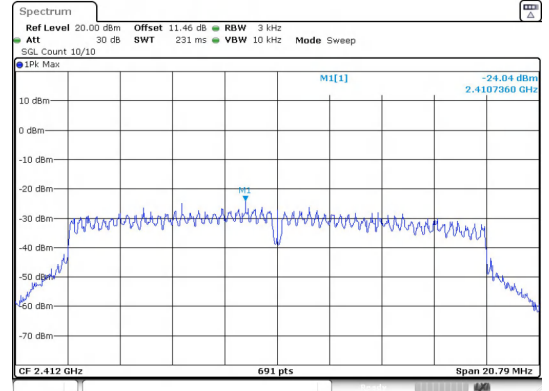
| Mode            | Channel | PSD<br>(dBm/3kHz)<br>Ant. 0 | Limit<br>(dBm/3kHz) | Result |
|-----------------|---------|-----------------------------|---------------------|--------|
| IEEE 802.11b    | 1       | -20.040                     | ≤8                  | PASS   |
|                 | 6       | -19.570                     |                     | PASS   |
|                 | 11      | -19.250                     |                     | PASS   |
| IEEE 802.11g    | 1       | -24.040                     |                     | PASS   |
|                 | 6       | -25.940                     |                     | PASS   |
|                 | 11      | -25.110                     |                     | PASS   |
| IEEE 802.11n_20 | 1       | -26.470                     |                     | PASS   |
|                 | 6       | -26.220                     |                     | PASS   |
|                 | 11      | -25.200                     |                     | PASS   |
| IEEE 802.11n_40 | 3       | -28.360                     |                     | PASS   |
|                 | 6       | -28.270                     |                     | PASS   |
|                 | 9       | -27.070                     |                     | PASS   |

### Test Graphs

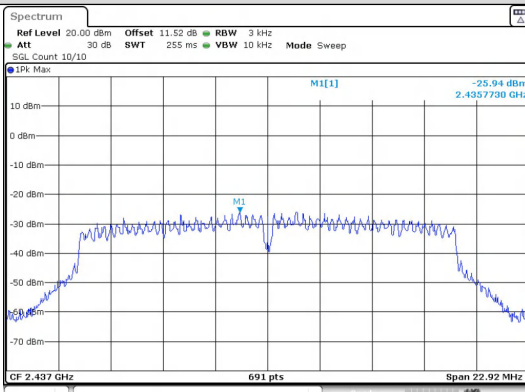




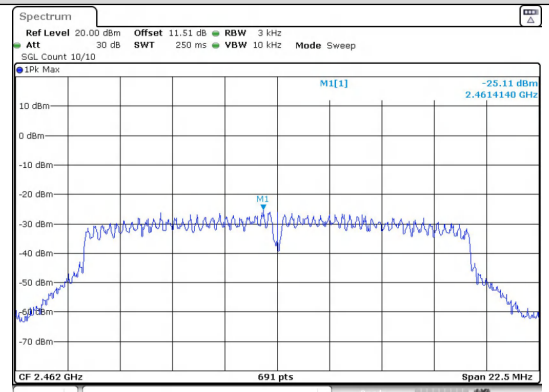
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



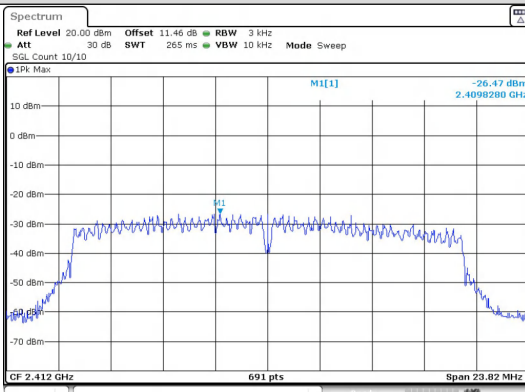
IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



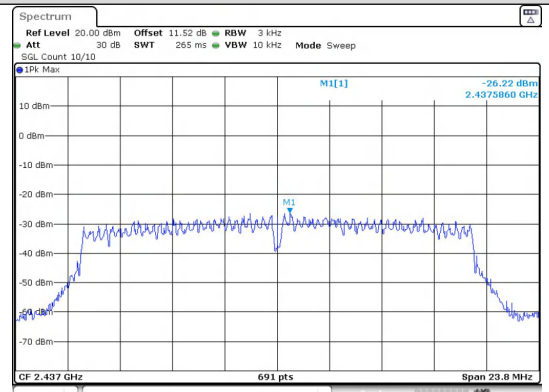
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



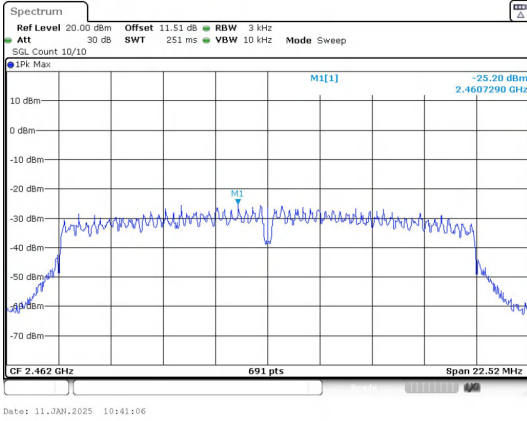
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



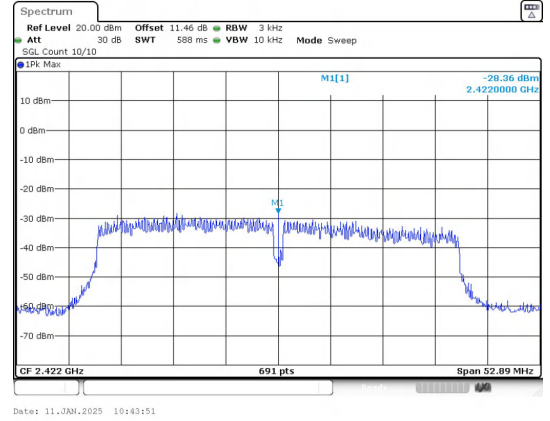
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



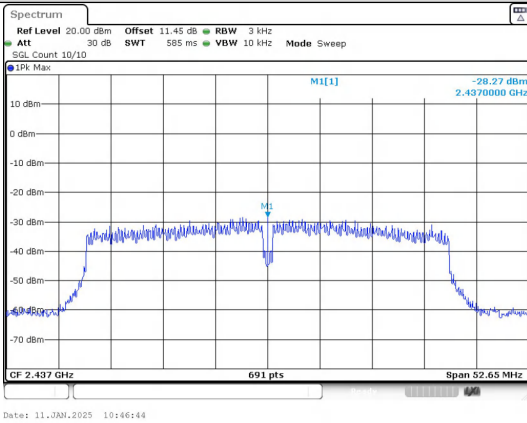
IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



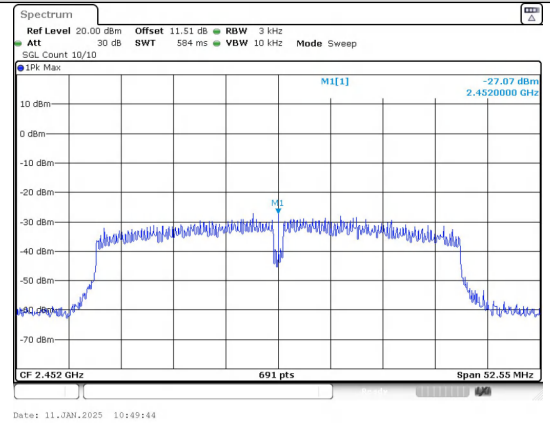
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



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 Output Power

### Test Result

#### Conducted Output Power

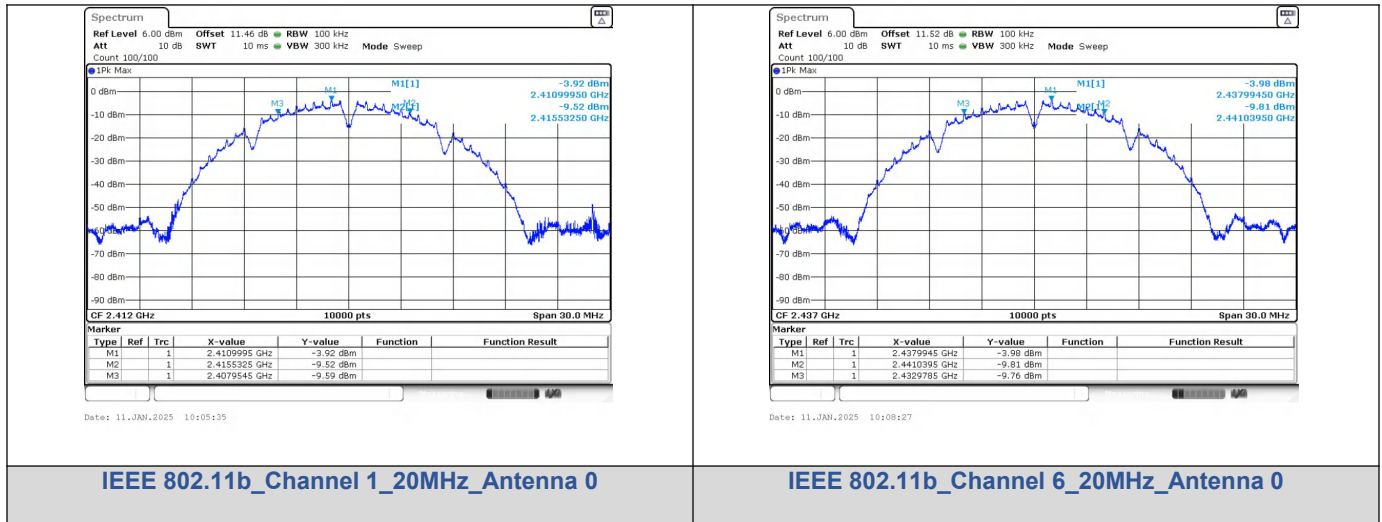
| Mode            | Channel | Ant. 0<br>(dBm) | Limit<br>(dBm) | Result |
|-----------------|---------|-----------------|----------------|--------|
| IEEE 802.11b    | 1       | 8.06            | ≤30            | PASS   |
|                 | 6       | 8.37            | ≤30            | PASS   |
|                 | 11      | 8.22            | ≤30            | PASS   |
| IEEE 802.11g    | 1       | 8.01            | ≤30            | PASS   |
|                 | 6       | 8.40            | ≤30            | PASS   |
|                 | 11      | 8.97            | ≤30            | PASS   |
| IEEE 802.11n_20 | 1       | 8.54            | ≤30            | PASS   |
|                 | 6       | 8.54            | ≤30            | PASS   |
|                 | 11      | 8.84            | ≤30            | PASS   |
| IEEE 802.11n_40 | 3       | 8.18            | ≤30            | PASS   |
|                 | 6       | 8.52            | ≤30            | PASS   |
|                 | 9       | 8.70            | ≤30            | PASS   |

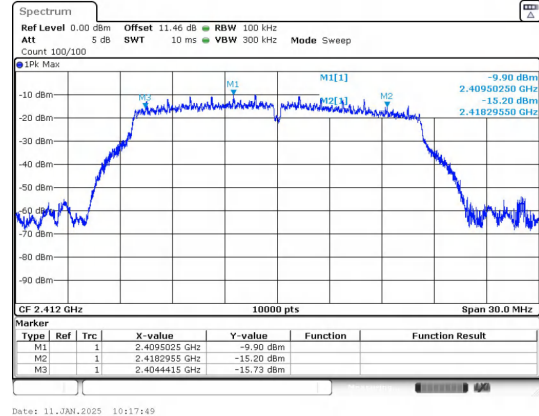
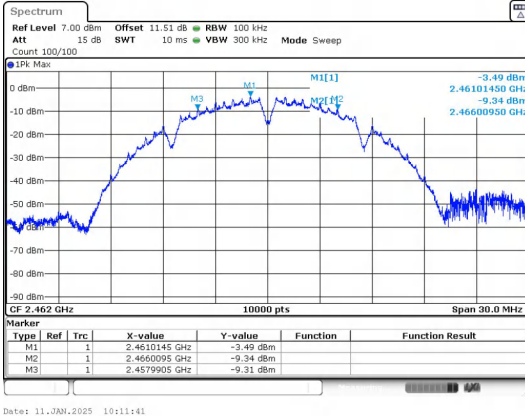
## 6dB Bandwidth

### Test Result

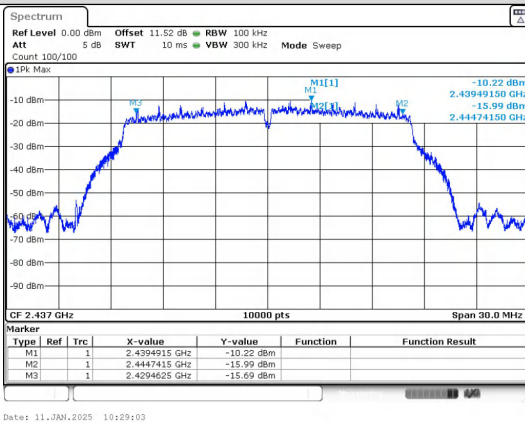
| Mode            | Channel | Ant. | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|-----------------|---------|------|------------------------|----------------------|-------------|--------|
| IEEE 802.11b    | 1       | 0    | 2412                   | 7.580                | ≥0.5        | PASS   |
|                 | 6       |      | 2437                   | 8.060                |             | PASS   |
|                 | 11      |      | 2462                   | 8.020                |             | PASS   |
| IEEE 802.11g    | 1       |      | 2412                   | 13.86                |             | PASS   |
|                 | 6       |      | 2437                   | 15.28                |             | PASS   |
|                 | 11      |      | 2462                   | 15.00                |             | PASS   |
| IEEE 802.11n_20 | 1       |      | 2412                   | 15.88                |             | PASS   |
|                 | 6       |      | 2437                   | 15.87                |             | PASS   |
|                 | 11      |      | 2462                   | 15.01                |             | PASS   |
| IEEE 802.11n_40 | 3       |      | 2422                   | 35.26                |             | PASS   |
|                 | 6       |      | 2437                   | 35.10                |             | PASS   |
|                 | 9       |      | 2452                   | 35.03                |             | PASS   |

### Test Graphs

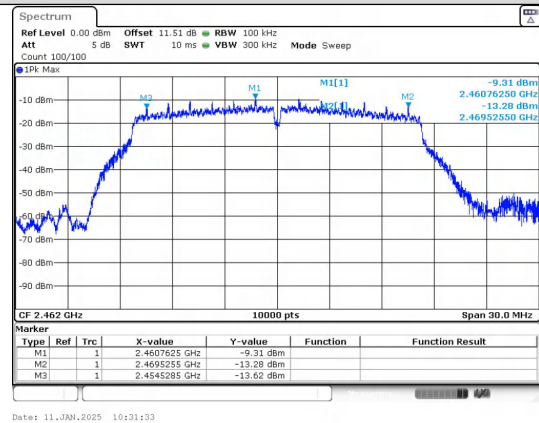




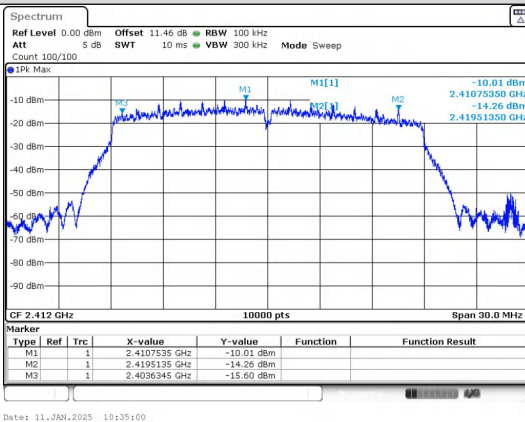
### IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



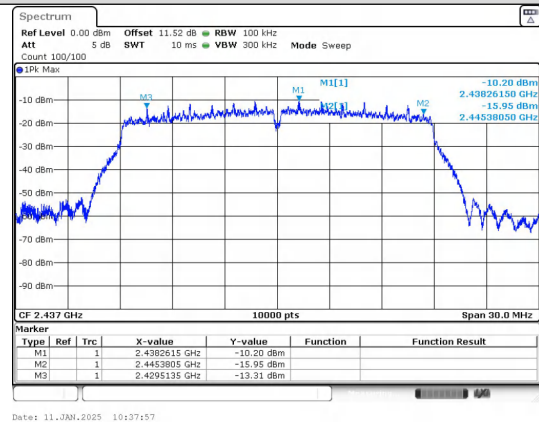
### IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



### IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0

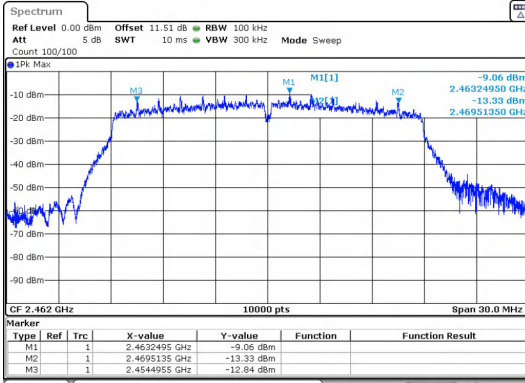


### IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0

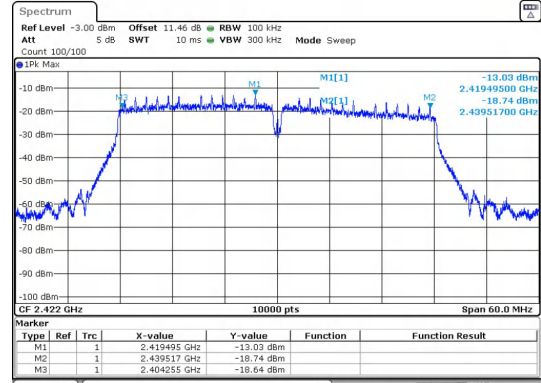


### IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0

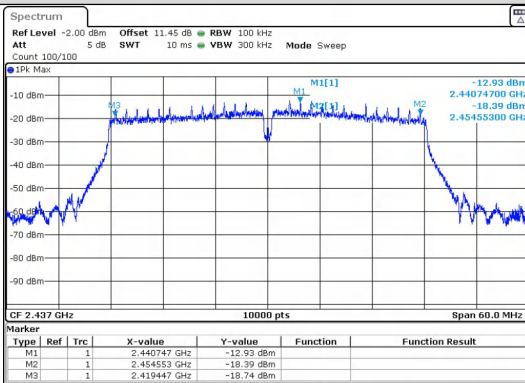
### IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



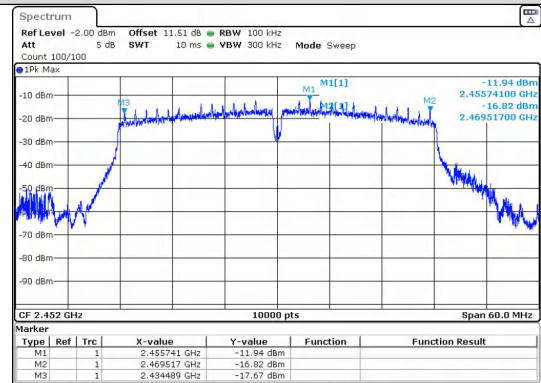
IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0



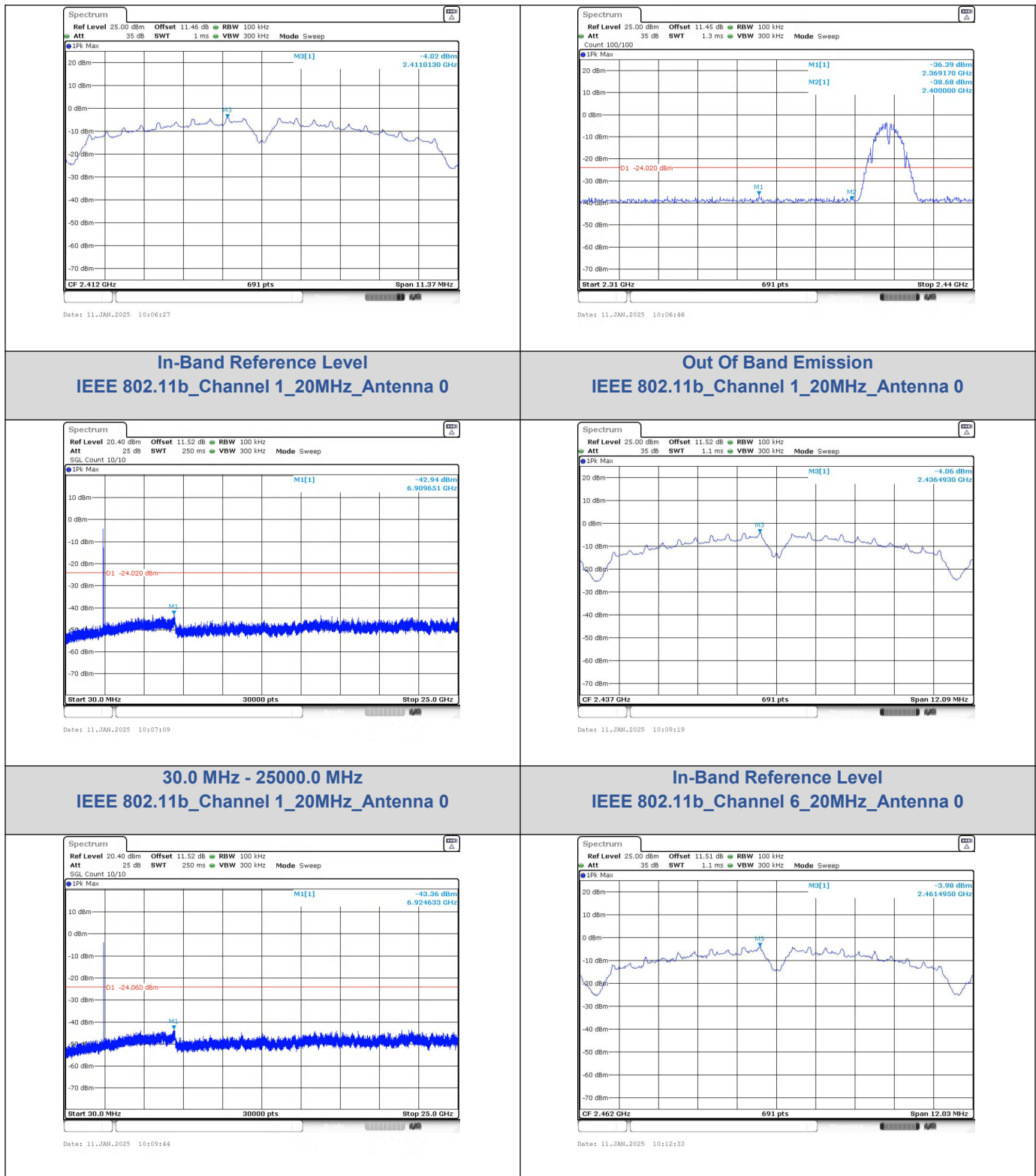
IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0

## Conducted Out Of Band Emission

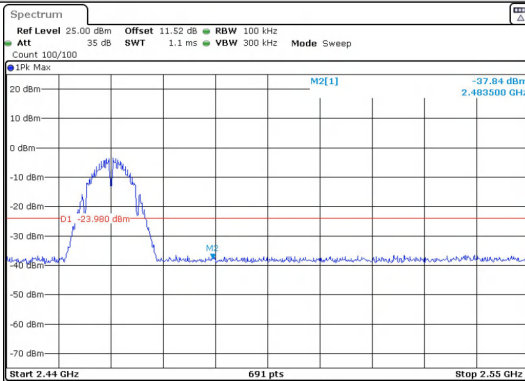
### Test Result

| 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<br>802.11b    | 1       | 0    | 2369.17                               | -36.392                           | -24.02         | -12.372            | PASS   |
|                    |         |      | 2400.00                               | -38.680                           | -24.02         | -14.660            | PASS   |
|                    |         |      | 6909.70                               | -42.941                           | -24.02         | -18.921            | PASS   |
|                    | 6       |      | 6924.63                               | -43.362                           | -24.06         | -19.302            | PASS   |
|                    | 11      |      | 2483.50                               | -37.840                           | -23.98         | -13.860            | PASS   |
|                    |         |      | 6890.51                               | -42.167                           | -23.98         | -18.187            | PASS   |
| IEEE<br>802.11g    | 1       |      | 2350.73                               | -36.548                           | -29.57         | -6.978             | PASS   |
|                    |         |      | 2400.00                               | -38.250                           | -29.57         | -8.680             | PASS   |
|                    |         |      | 6958.80                               | -42.363                           | -29.57         | -12.793            | PASS   |
|                    | 6       |      | 6904.66                               | -43.448                           | -30.34         | -13.108            | PASS   |
|                    | 11      |      | 2483.50                               | -38.930                           | -29.23         | -9.700             | PASS   |
|                    |         |      | 22114.7                               | -43.541                           | -29.23         | -14.311            | PASS   |
| IEEE<br>802.11n_20 | 1       |      | 2356.75                               | -36.723                           | -29.83         | -6.893             | PASS   |
|                    |         |      | 2400.00                               | -38.410                           | -29.83         | -8.580             | PASS   |
|                    |         |      | 6947.10                               | -42.544                           | -29.83         | -12.714            | PASS   |
|                    | 6       |      | 6955.43                               | -43.063                           | -30.09         | -12.973            | PASS   |
|                    | 11      |      | 2483.50                               | -38.630                           | -29.68         | -8.950             | PASS   |
|                    |         |      | 6846.39                               | -42.148                           | -29.68         | -12.468            | PASS   |
| IEEE<br>802.11n_40 | 3       |      | 2359.38                               | -36.246                           | -32.88         | -3.366             | PASS   |
|                    |         |      | 2400.00                               | -38.750                           | -32.88         | -5.870             | PASS   |
|                    |         |      | 20314.4                               | -43.795                           | -32.88         | -10.915            | PASS   |
|                    | 6       |      | 19945.7                               | -43.489                           | -31.74         | -11.749            | PASS   |
|                    | 9       |      | 2483.50                               | -38.550                           | -31.96         | -6.590             | PASS   |
|                    |         |      | 6932.96                               | -43.159                           | -31.96         | -11.199            | PASS   |

## Test Graphs

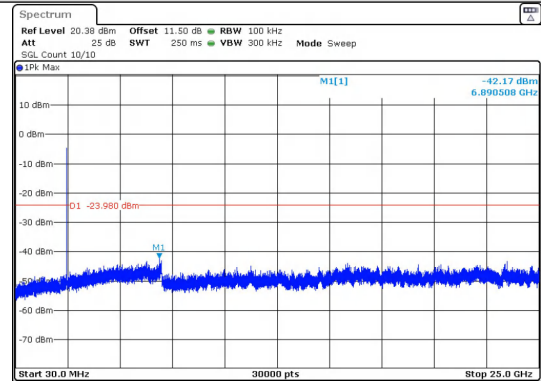


**30.0 MHz - 25000.0 MHz**  
**IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0**



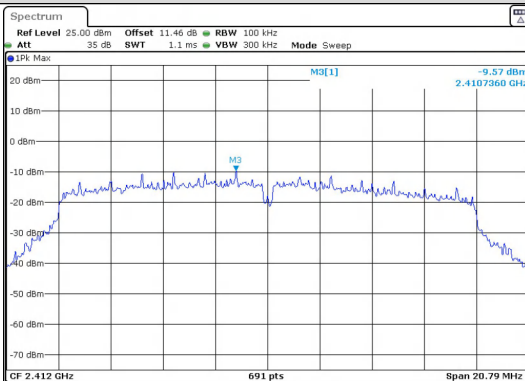
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**In-Band Reference Level**  
**IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0**



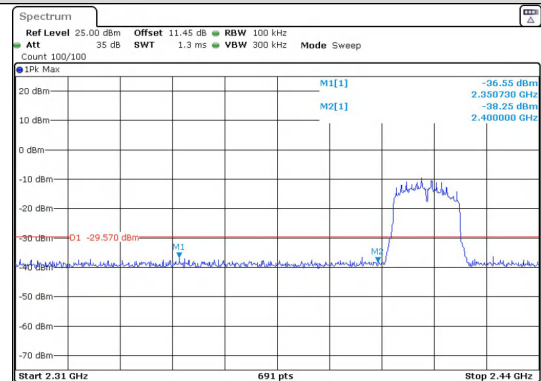
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**Out Of Band Emission**  
**IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0**



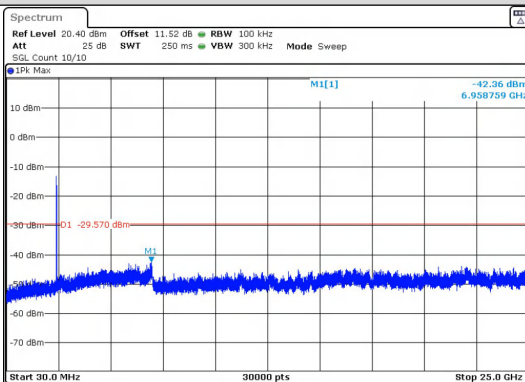
Date: 11.JAN.2025 10:18:43

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



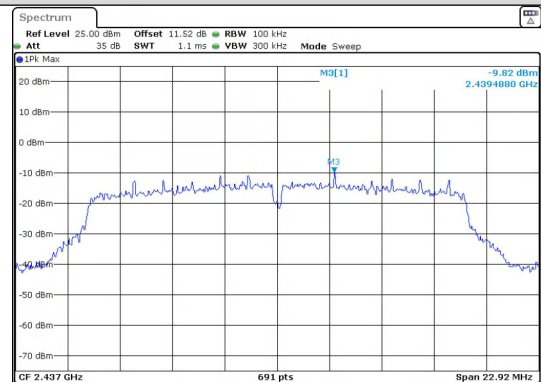
Date: 11.JAN.2025 10:19:02

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



Date: 11.JAN.2025 10:19:25

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

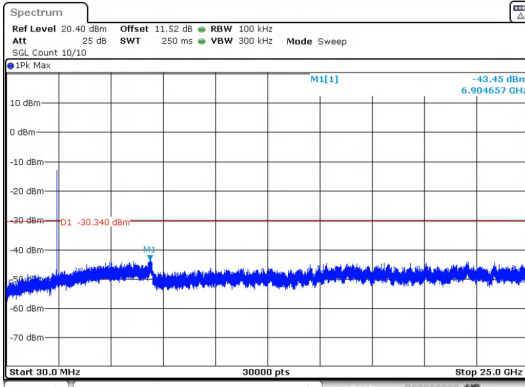


Date: 11.JAN.2025 10:29:57

**30.0 MHz - 25000.0 MHz**

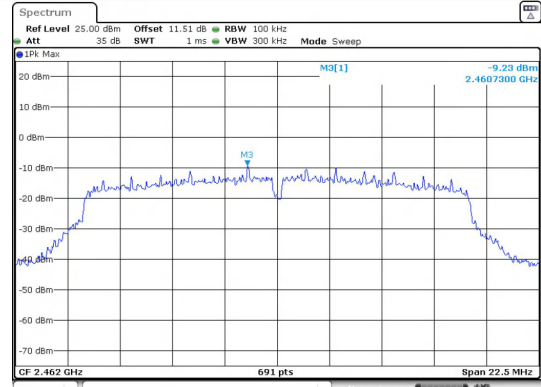
**In-Band Reference Level**

### IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



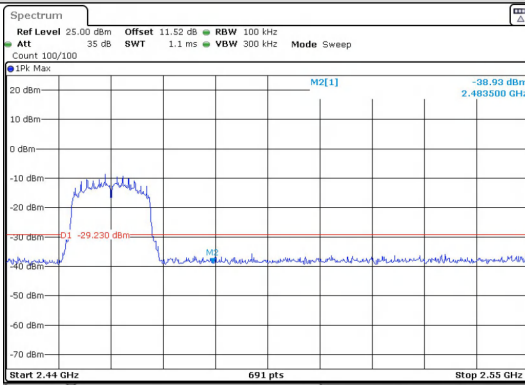
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### IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



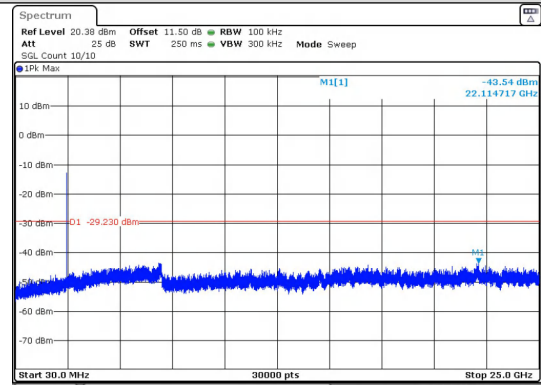
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### 30.0 MHz - 25000.0 MHz IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



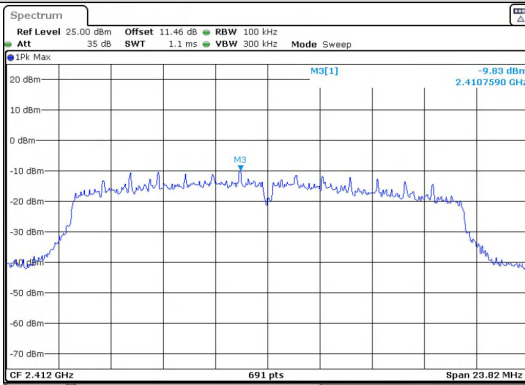
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### In-Band Reference Level IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



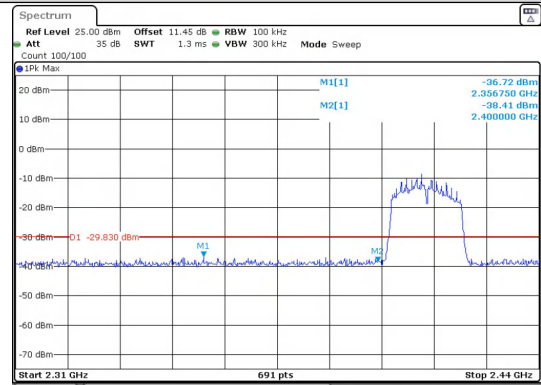
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### Out Of Band Emission IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



Date: 11.JAN.2025 10:35:54

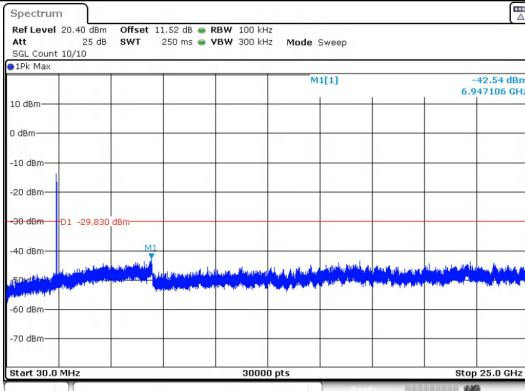
### 30.0 MHz - 25000.0 MHz IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



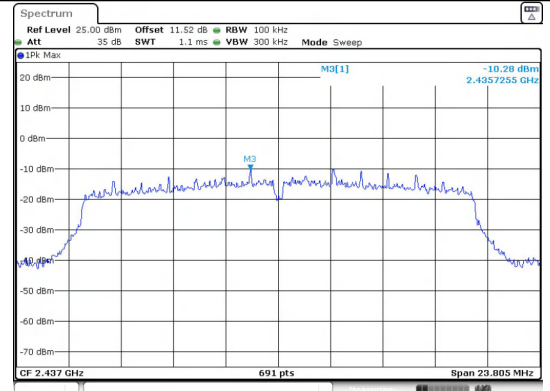
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### In-Band Reference Level IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0

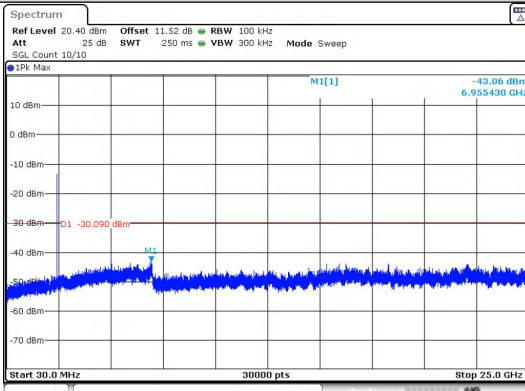
### Out Of Band Emission IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0



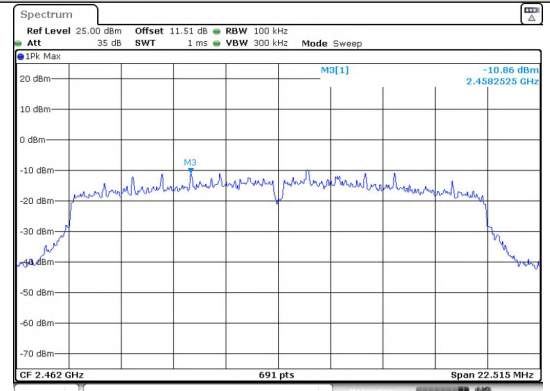
**30.0 MHz - 25000.0 MHz**  
**IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0**



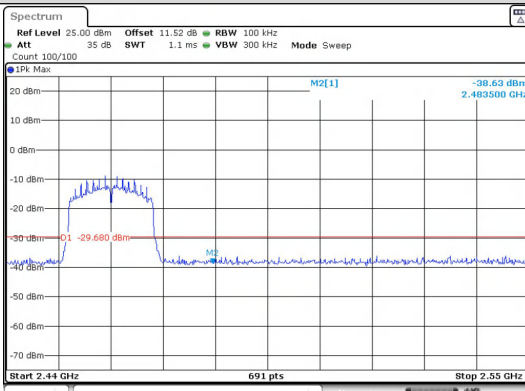
**In-Band Reference Level**  
**IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0**



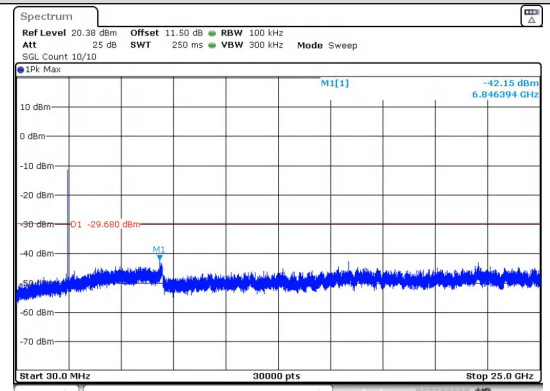
**30.0 MHz - 25000.0 MHz**  
**IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0**



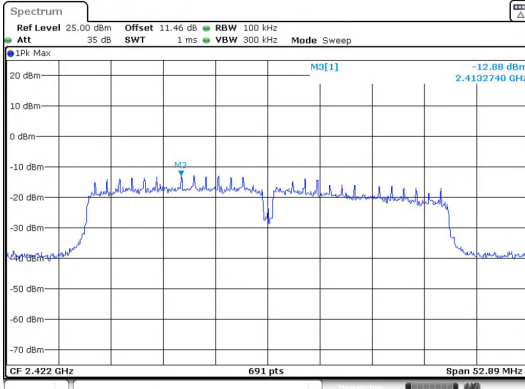
**In-Band Reference Level**  
**IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0**



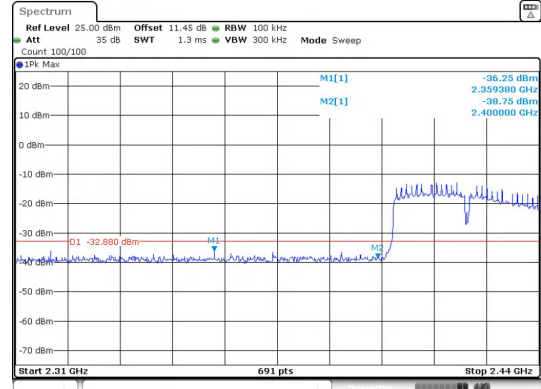
**Out Of Band Emission**  
**IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0**



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



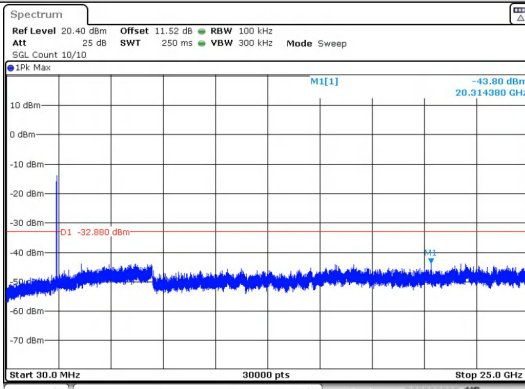
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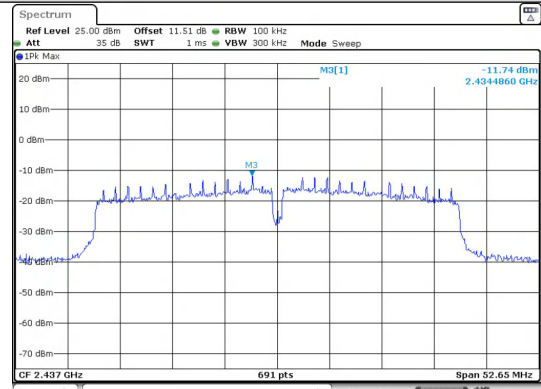
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**In-Band Reference Level  
IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0**

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



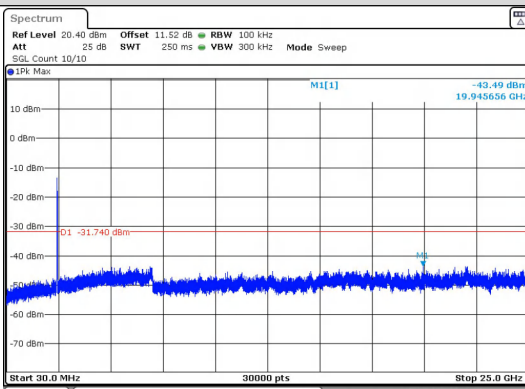
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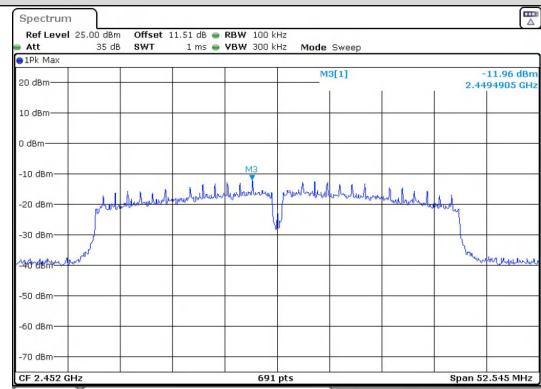
Date: 11.JAN.2025 10:47:05

**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**



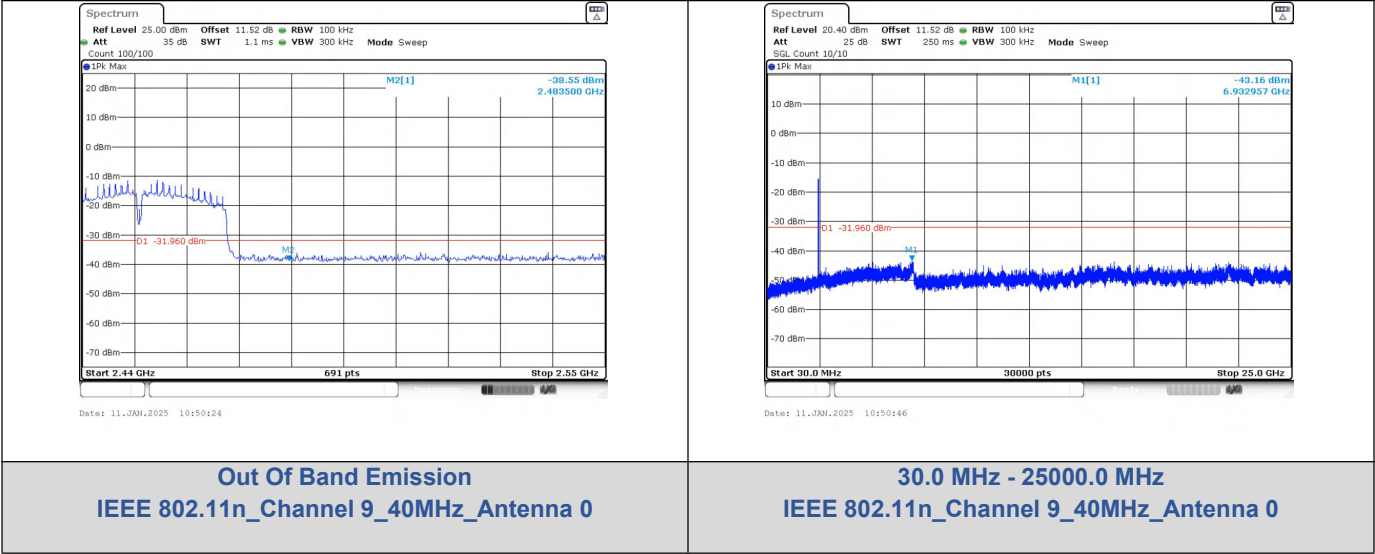
Date: 11.JAN.2025 10:47:29



Date: 11.JAN.2025 10:50:04

**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**



-----End of the report-----