

# Appendix Report

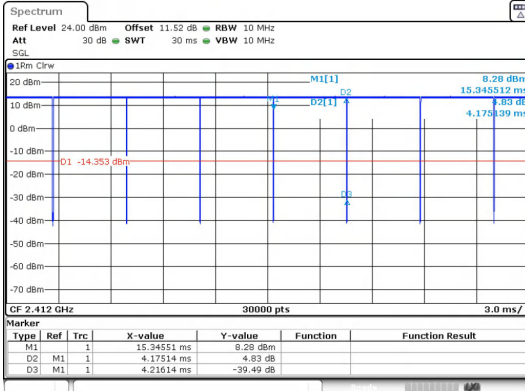
|                |               |
|----------------|---------------|
| Project No.:   | CISR250320170 |
| Test Engineer: | James Wang    |
| Supervised by: | Rory Huang    |

## Duty Cycle

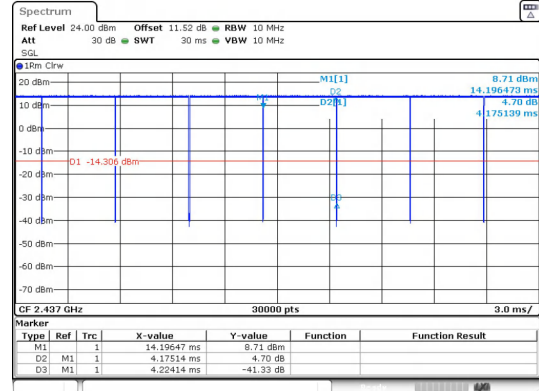
### Test Result

| Mode             | Data rates | Channel | RU & Index | Antenna | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T    |
|------------------|------------|---------|------------|---------|--------------|-------------|----------------|---------------------|------------------------|--------|
| IEEE 802.11b     | 1          | 1       | N/A        | 1       | 4.175        | 4.216       | 99.03          | 0.9903              | 0.0423                 | 0.2395 |
|                  |            | 6       |            |         | 4.175        | 4.224       | 98.84          | 0.9884              | 0.0507                 | 0.2395 |
|                  |            | 11      |            |         | 4.176        | 4.230       | 98.72          | 0.9872              | 0.0559                 | 0.2395 |
| 1                |            | 1.400   |            |         | 1.468        | 95.37       | 0.9537         | 0.2059              | 0.7143                 |        |
| 6                |            | 1.400   |            |         | 1.468        | 95.37       | 0.9537         | 0.2059              | 0.7143                 |        |
| 11               |            | 1.400   |            |         | 1.476        | 94.85       | 0.9485         | 0.2296              | 0.7143                 |        |
| IEEE 802.11n_20  | MCS 0      | 1       |            |         | 1.312        | 1.362       | 96.33          | 0.9633              | 0.1624                 | 0.7622 |
|                  |            | 6       |            |         | 1.312        | 1.357       | 96.68          | 0.9668              | 0.1466                 | 0.7622 |
|                  |            | 11      |            |         | 1.312        | 1.384       | 94.80          | 0.9480              | 0.2319                 | 0.7622 |
| 3                |            | 0.650   |            |         | 0.695        | 93.48       | 0.9348         | 0.2928              | 1.5385                 |        |
| 6                |            | 0.650   |            |         | 0.723        | 89.86       | 0.8986         | 0.4643              | 1.5385                 |        |
| 9                |            | 0.650   |            |         | 0.696        | 93.42       | 0.9342         | 0.2956              | 1.5385                 |        |
| IEEE 802.11ax_20 |            | SU      | 1          |         | 4.213        | 4.258       | 98.94          | 0.9894              | 0.0463                 | 0.2374 |
|                  |            |         | 6          |         | 4.216        | 4.253       | 99.15          | 0.9915              | 0.0371                 | 0.2372 |
|                  |            |         | 11         |         | 4.213        | 4.246       | 99.22          | 0.9922              | 0.034                  | 0.2374 |

### Test Graphs



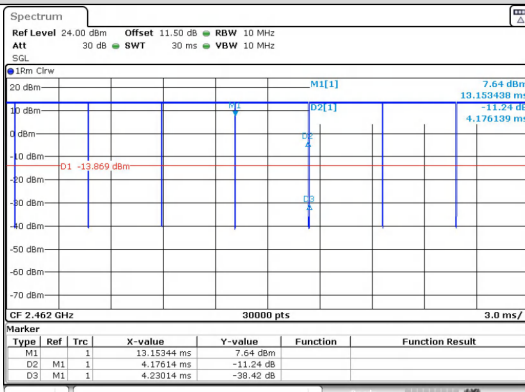
Date: 31.MAR.2025 16:01:51



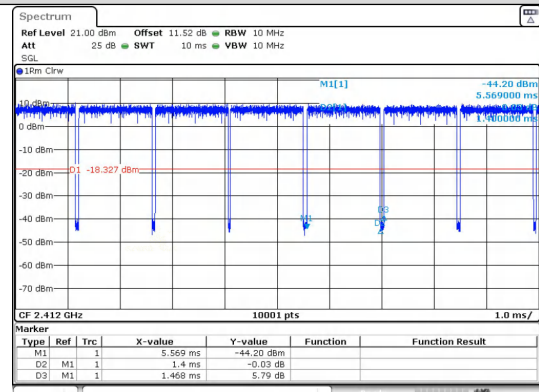
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### IEEE 802.11b\_20MHz\_Channel 1

### IEEE 802.11b\_20MHz\_Channel 6



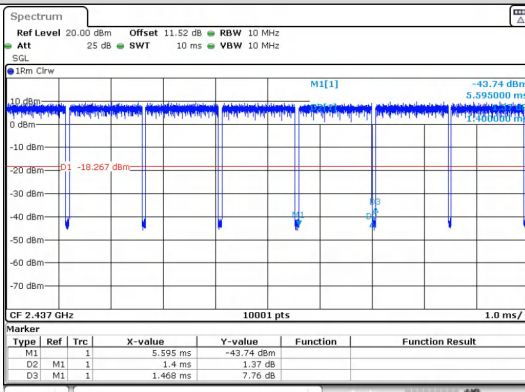
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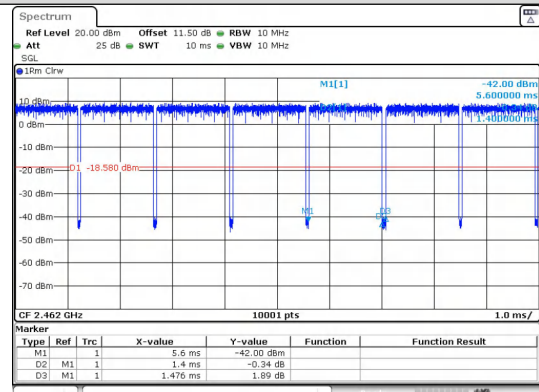
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### IEEE 802.11b\_20MHz\_Channel 11

### IEEE 802.11g\_20MHz\_Channel 1



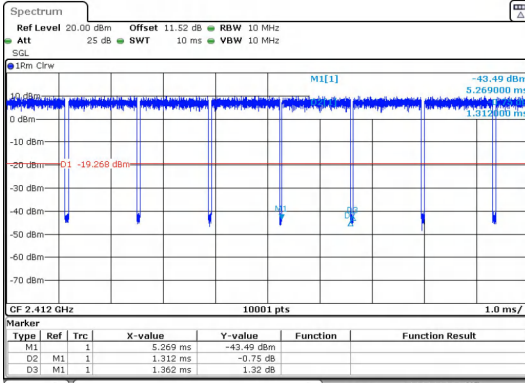
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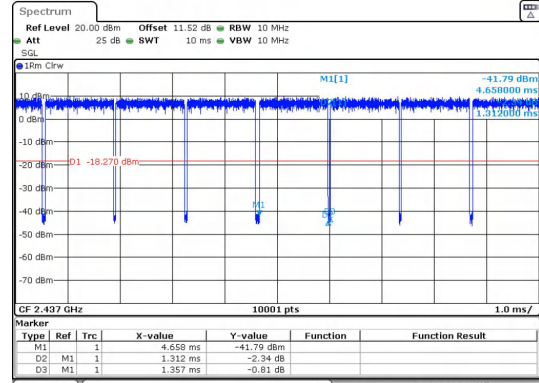
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### IEEE 802.11g\_20MHz\_Channel 6

### IEEE 802.11g\_20MHz\_Channel 11



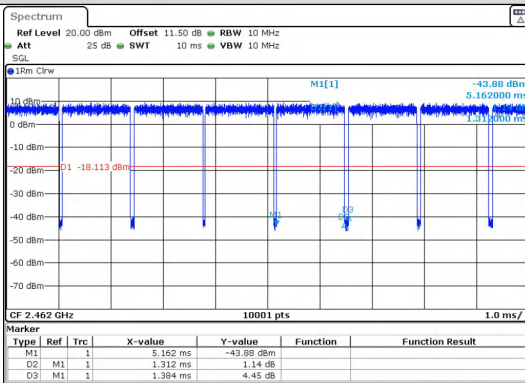
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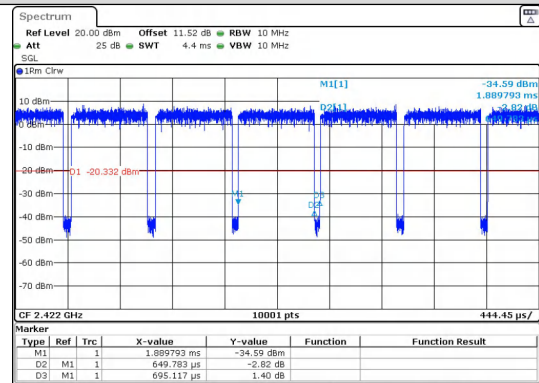
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### IEEE 802.11n\_20MHz\_Channel 1

### IEEE 802.11n\_20MHz\_Channel 6



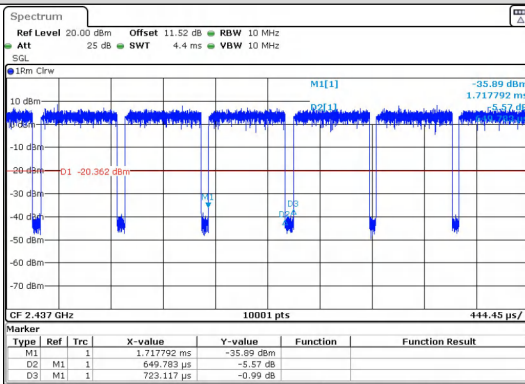
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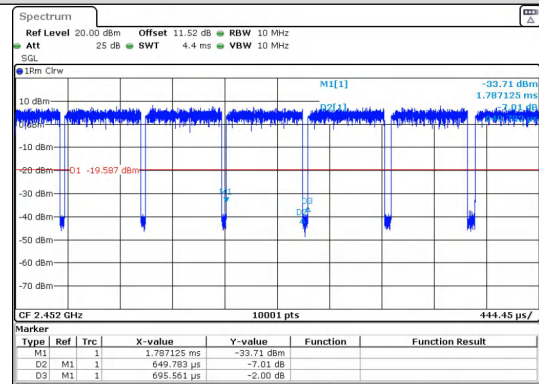
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### IEEE 802.11n\_20MHz\_Channel 11

### IEEE 802.11n\_40MHz\_Channel 3



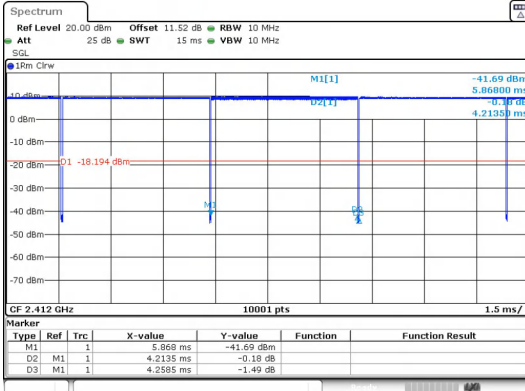
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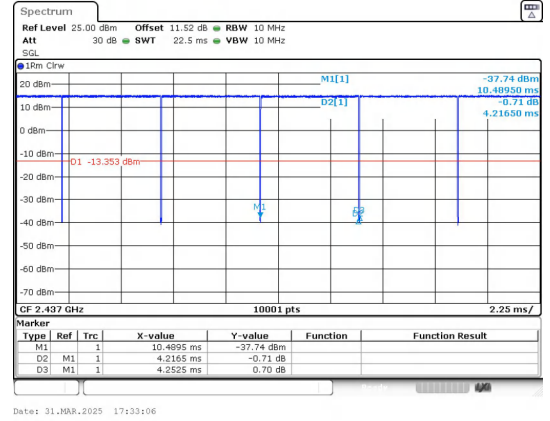
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### IEEE 802.11n\_40MHz\_Channel 6

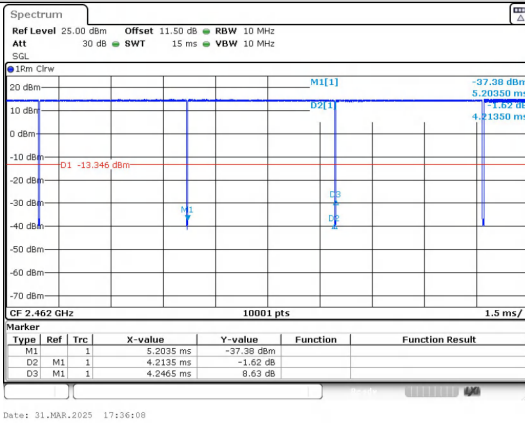
### IEEE 802.11n\_40MHz\_Channel 9



IEEE 802.11ax\_20MHz\_Channel 1



IEEE 802.11ax\_20MHz\_Channel 6



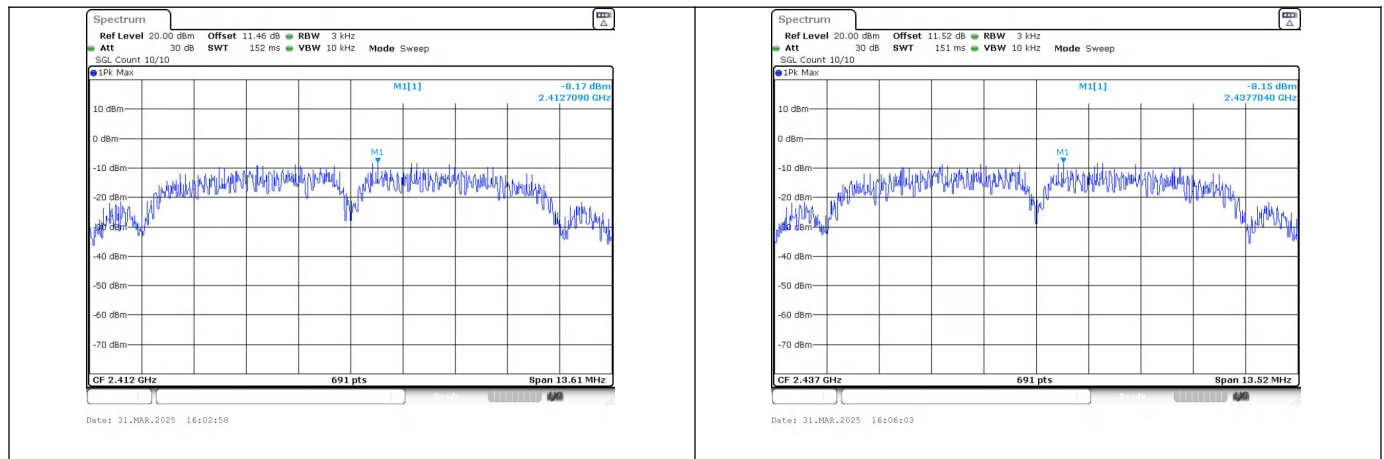
IEEE 802.11ax\_20MHz\_Channel 11

## Power Spectral Density

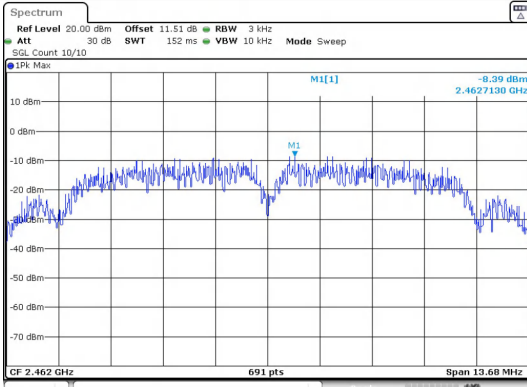
### Test Result

| Mode             | Channel | RU & Index | PSD<br>(dBm/3kHz)<br>Ant. 0 | Limit<br>(dBm/3kHz) | Result |
|------------------|---------|------------|-----------------------------|---------------------|--------|
| IEEE 802.11b     | 1       | N/A        | -8.170                      | ≤8                  | PASS   |
|                  | 6       |            | -8.150                      |                     | PASS   |
|                  | 11      |            | -8.390                      |                     | PASS   |
| IEEE 802.11g     | 1       |            | -17.200                     |                     | PASS   |
|                  | 6       |            | -18.250                     |                     | PASS   |
|                  | 11      |            | -18.590                     |                     | PASS   |
| IEEE 802.11n_20  | 1       |            | -17.130                     |                     | PASS   |
|                  | 6       |            | -18.090                     |                     | PASS   |
|                  | 11      |            | -18.220                     |                     | PASS   |
| IEEE 802.11n_40  | 3       |            | -20.040                     |                     | PASS   |
|                  | 6       |            | -19.180                     |                     | PASS   |
|                  | 9       |            | -21.010                     |                     | PASS   |
| IEEE 802.11ax_20 | 1       | SU         | -12.450                     |                     | PASS   |
|                  | 6       |            | -7.010                      |                     | PASS   |
|                  | 11      |            | -6.460                      |                     | PASS   |

### Test Graphs

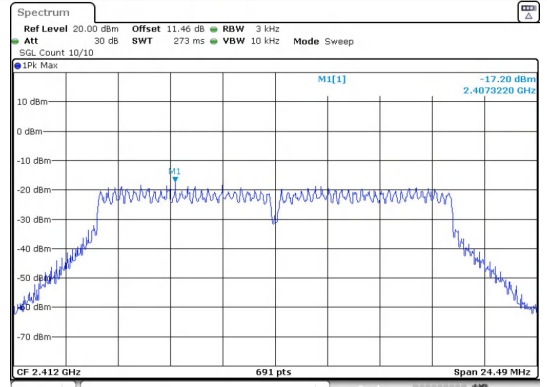


IEEE 802.11b\_Channel 1\_20MHz\_Antenna 0



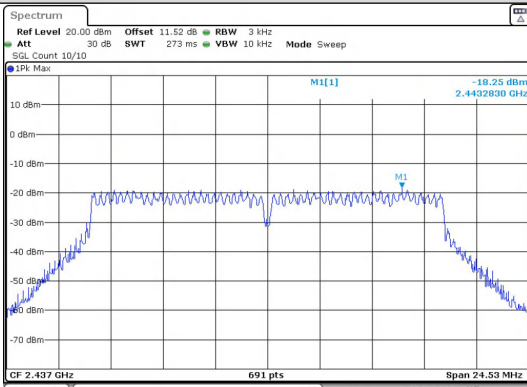
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IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0



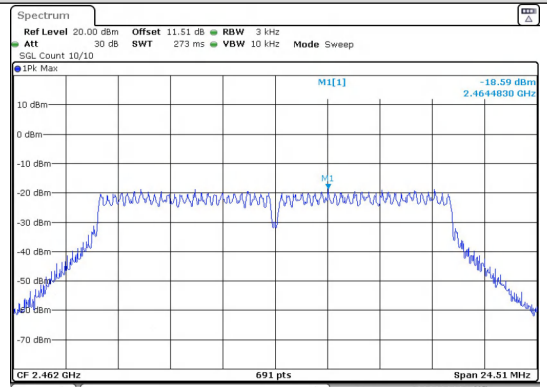
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IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



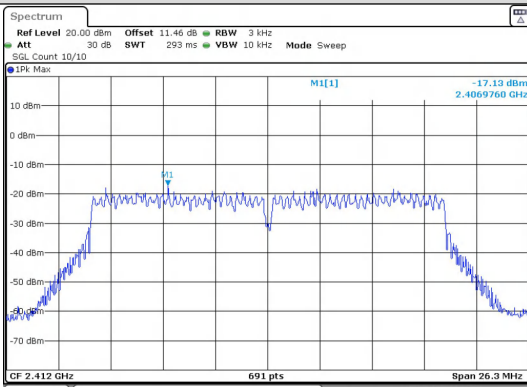
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IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



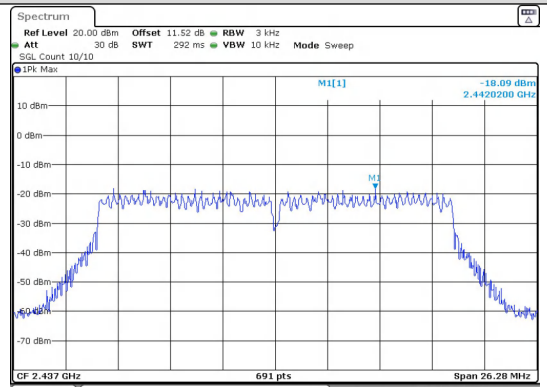
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IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



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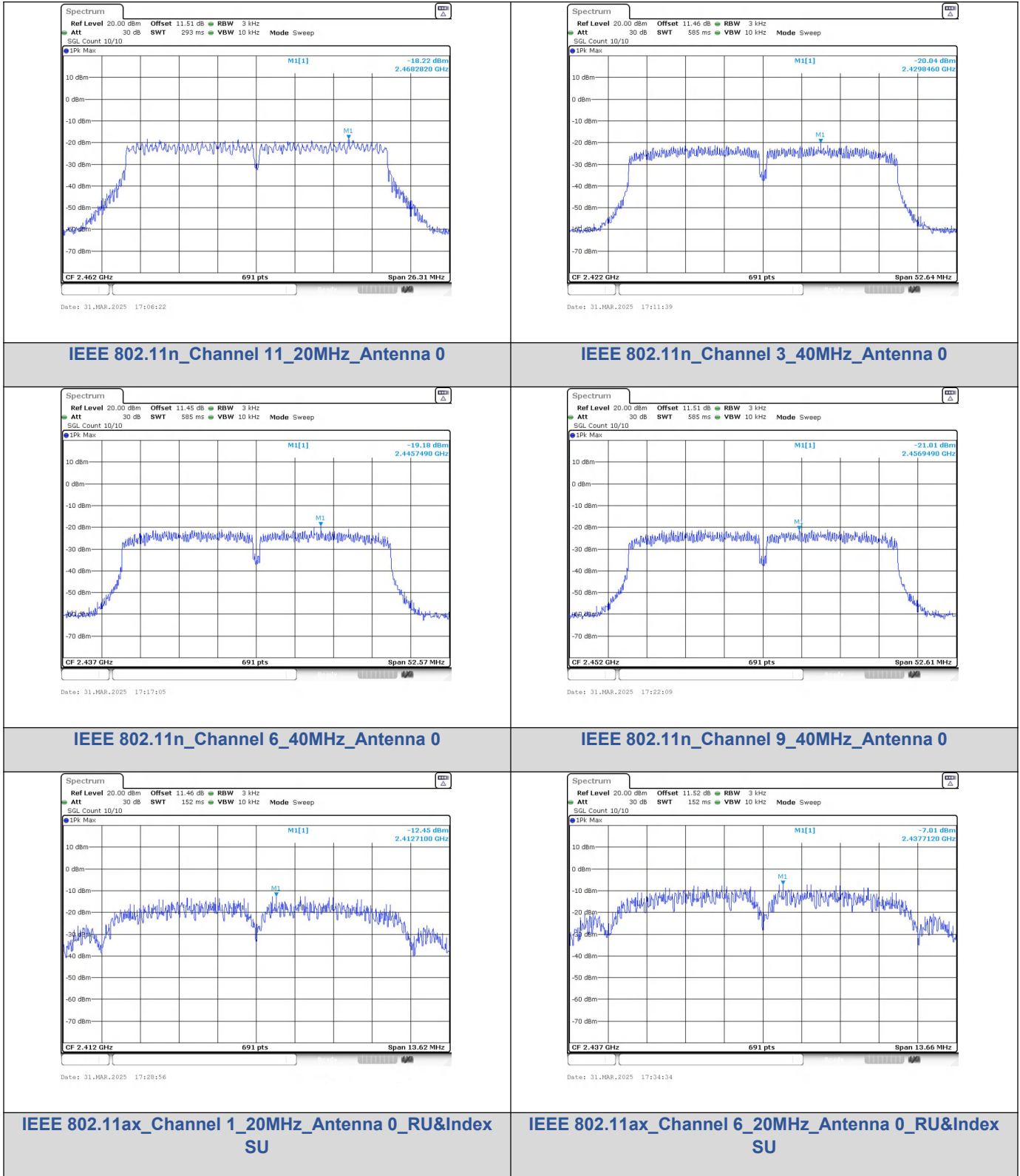
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0

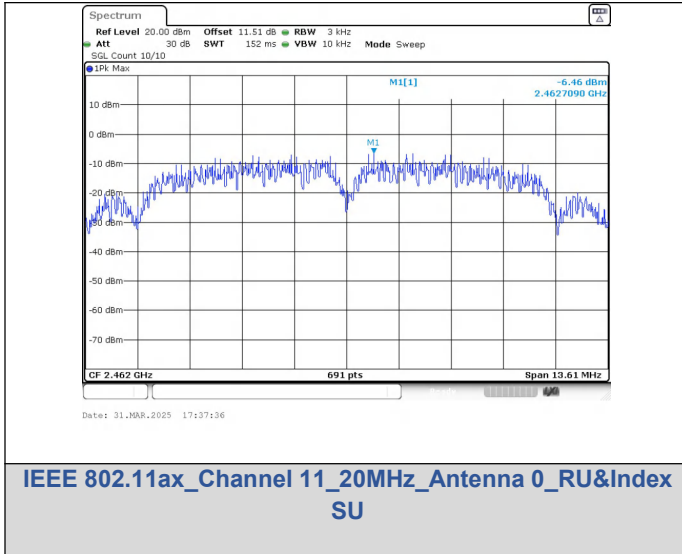


Date: 31.MAR.2025 16:35:40

IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0

IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0





## Conducted Output Power

### Test Result

#### Conducted Output Power

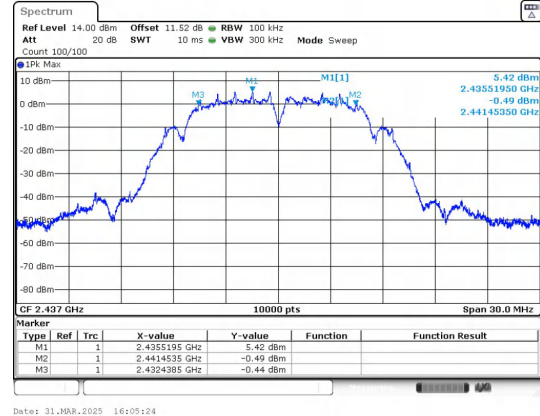
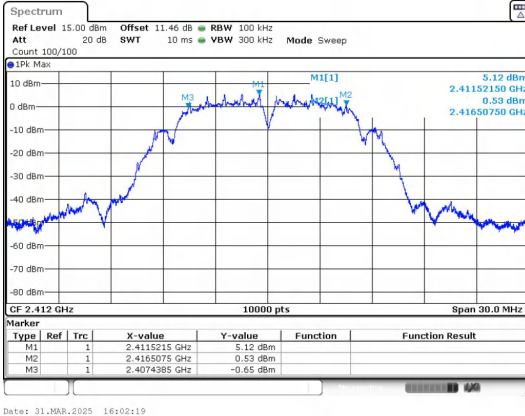
| Mode             | Channel | Ant. 0 (dBm) | Limit (dBm) | Result |
|------------------|---------|--------------|-------------|--------|
| IEEE 802.11b     | 1       | 18.46        | ≤30         | PASS   |
|                  | 6       | 18.46        | ≤30         | PASS   |
|                  | 11      | 18.11        | ≤30         | PASS   |
| IEEE 802.11g     | 1       | 17.03        | ≤30         | PASS   |
|                  | 6       | 16.65        | ≤30         | PASS   |
|                  | 11      | 17.18        | ≤30         | PASS   |
| IEEE 802.11n_20  | 1       | 17.29        | ≤30         | PASS   |
|                  | 6       | 16.95        | ≤30         | PASS   |
|                  | 11      | 17.01        | ≤30         | PASS   |
| IEEE 802.11n_40  | 3       | 16.99        | ≤30         | PASS   |
|                  | 6       | 16.91        | ≤30         | PASS   |
|                  | 9       | 16.98        | ≤30         | PASS   |
| IEEE 802.11ax_20 | 1       | 18.43        | ≤30         | PASS   |
|                  | 6       | 18.48        | ≤30         | PASS   |
|                  | 11      | 18.87        | ≤30         | PASS   |

## 6dB Bandwidth

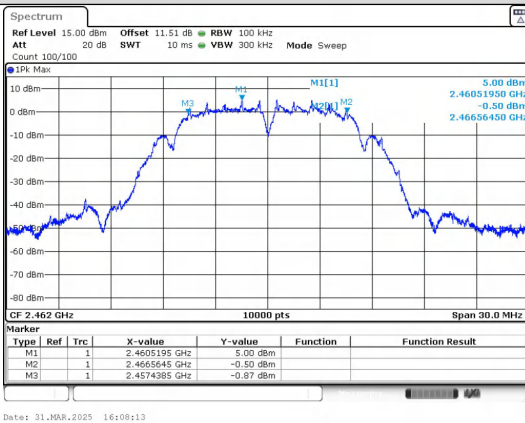
### Test Result

| Mode             | Channel | RU & Index | Ant. | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|------------------|---------|------------|------|------------------------|----------------------|-------------|--------|
| IEEE 802.11b     | 1       | N/A        | 0    | 2412                   | 9.070                | ≥0.5        | PASS   |
|                  | 6       |            |      | 2437                   | 9.010                |             | PASS   |
|                  | 11      |            |      | 2462                   | 9.120                |             | PASS   |
| IEEE 802.11g     | 1       |            |      | 2412                   | 16.33                |             | PASS   |
|                  | 6       |            |      | 2437                   | 16.35                |             | PASS   |
|                  | 11      |            |      | 2462                   | 16.34                |             | PASS   |
| IEEE 802.11n_20  | 1       |            |      | 2412                   | 17.53                |             | PASS   |
|                  | 6       |            |      | 2437                   | 17.52                |             | PASS   |
|                  | 11      |            |      | 2462                   | 17.54                |             | PASS   |
| IEEE 802.11n_40  | 3       |            |      | 2422                   | 35.09                |             | PASS   |
|                  | 6       |            |      | 2437                   | 35.05                |             | PASS   |
|                  | 9       |            |      | 2452                   | 35.07                |             | PASS   |
| IEEE 802.11ax_20 | 1       | SU         |      | 2412                   | 9.080                |             | PASS   |
|                  | 6       |            |      | 2437                   | 9.110                |             | PASS   |
|                  | 11      |            |      | 2462                   | 9.070                |             | PASS   |

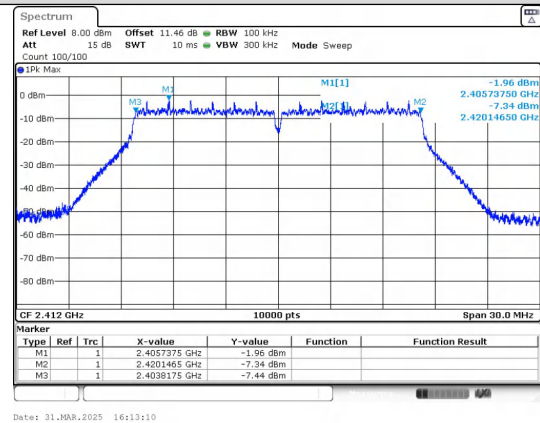
### Test Graphs



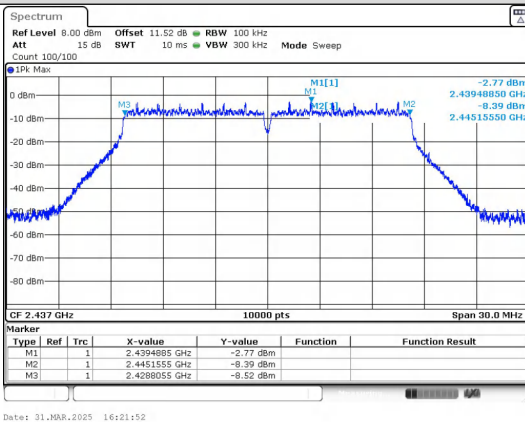
### IEEE 802.11b\_Channel 1\_20MHz\_Antenna 0



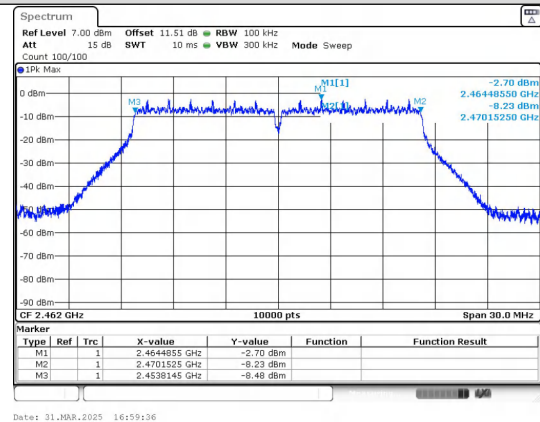
### IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0



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

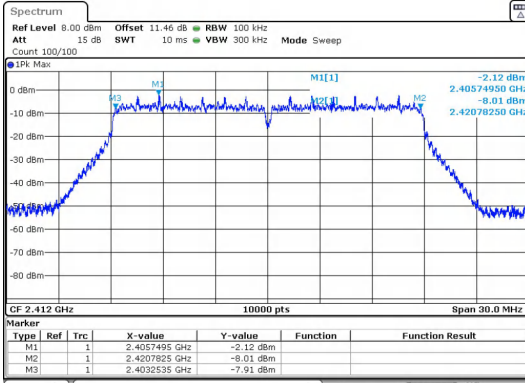


### IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0

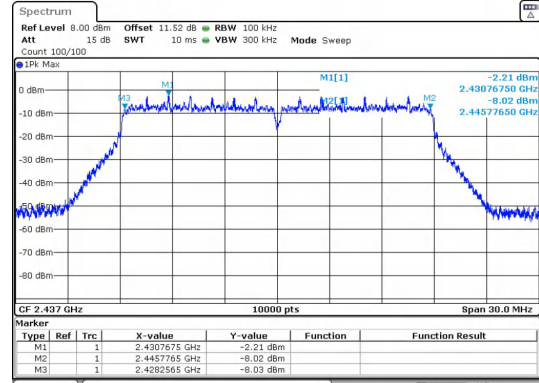


### IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0

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

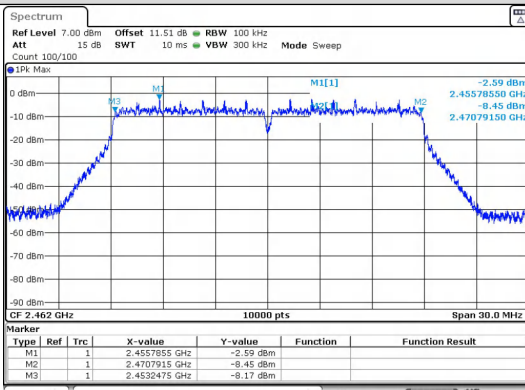


Date: 31.MAR.2025 16:29:57



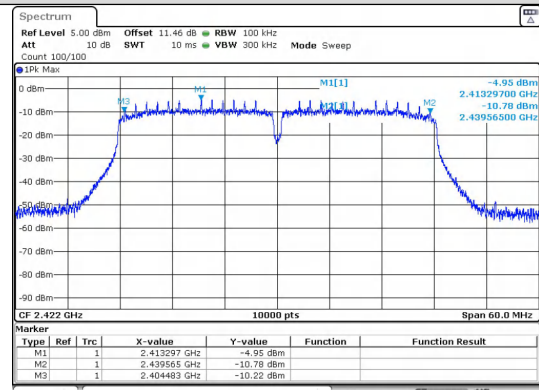
Date: 31.MAR.2025 16:34:58

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



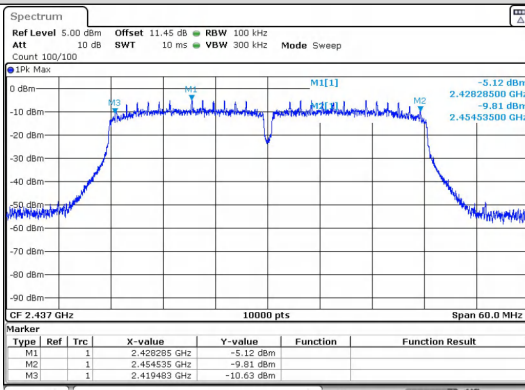
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### IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0



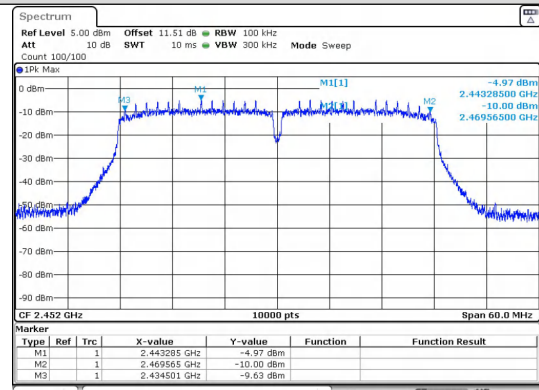
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### IEEE 802.11n\_Channel 11\_20MHz\_Antenna 0



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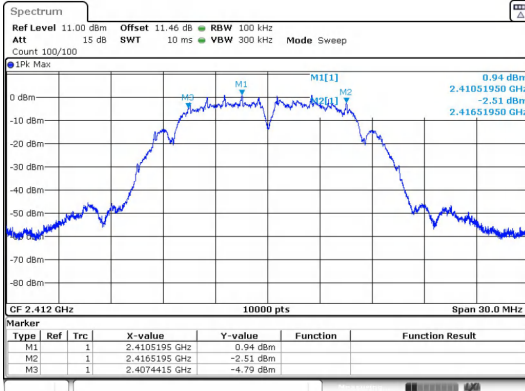
### IEEE 802.11n\_Channel 3\_40MHz\_Antenna 0



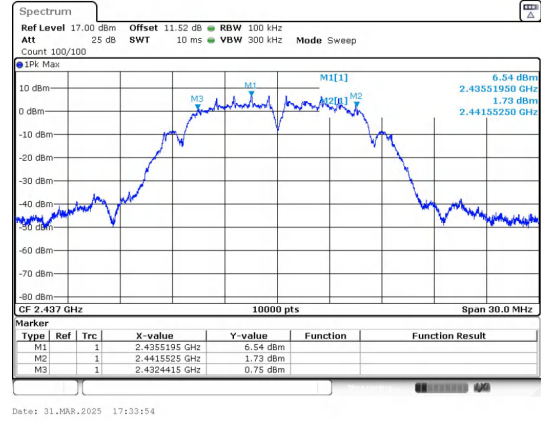
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### IEEE 802.11n\_Channel 6\_40MHz\_Antenna 0

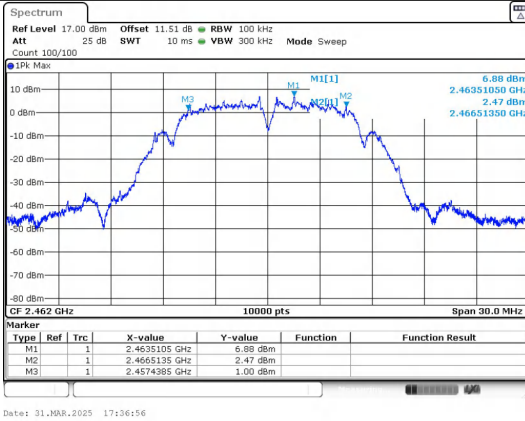
### IEEE 802.11n\_Channel 9\_40MHz\_Antenna 0



IEEE 802.11ax\_Channel 1\_20MHz\_Antenna 0\_RU&Index  
SU



IEEE 802.11ax\_Channel 6\_20MHz\_Antenna 0\_RU&Index  
SU



IEEE 802.11ax\_Channel 11\_20MHz\_Antenna 0\_RU&Index  
SU

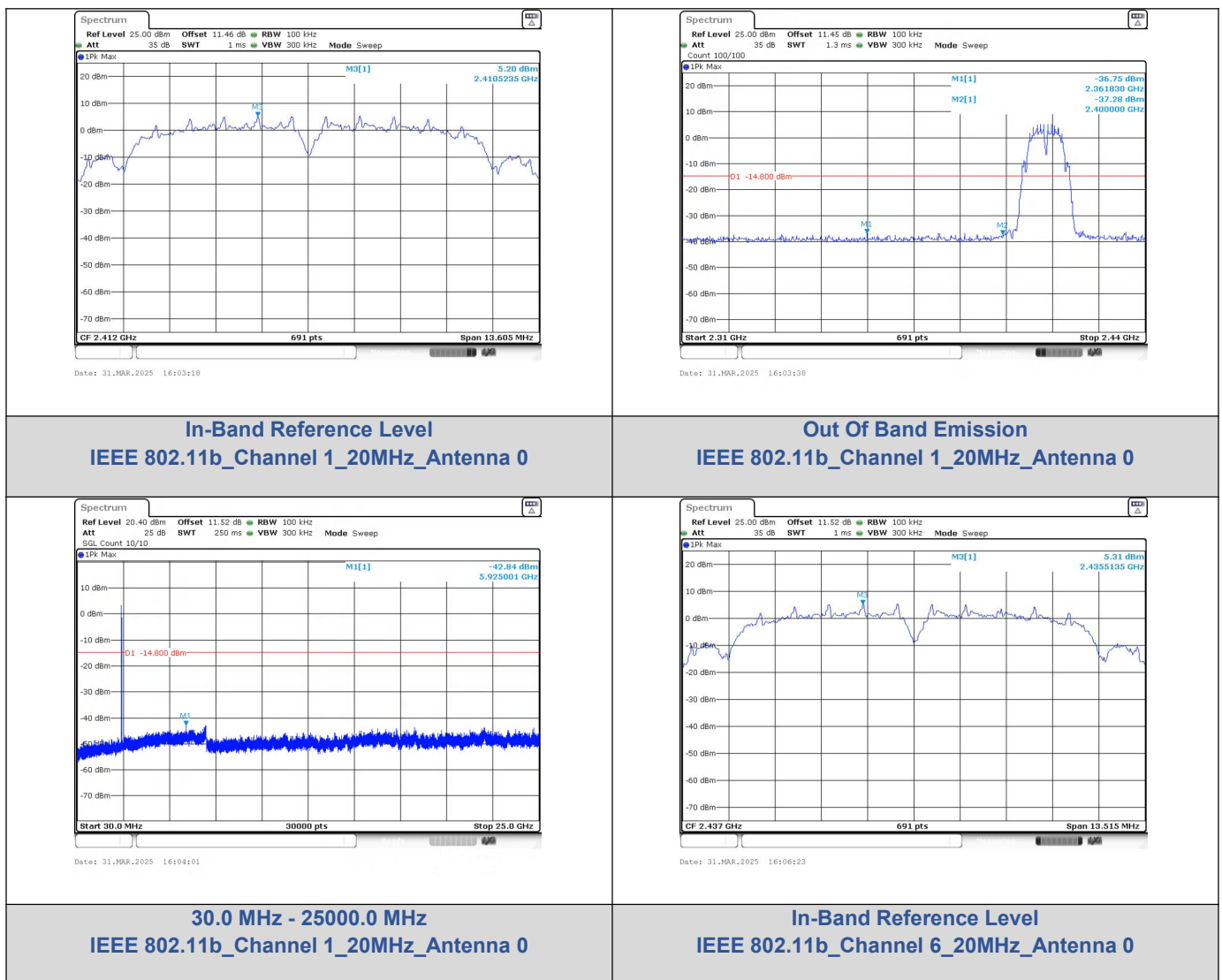
## Conducted Out Of Band Emission

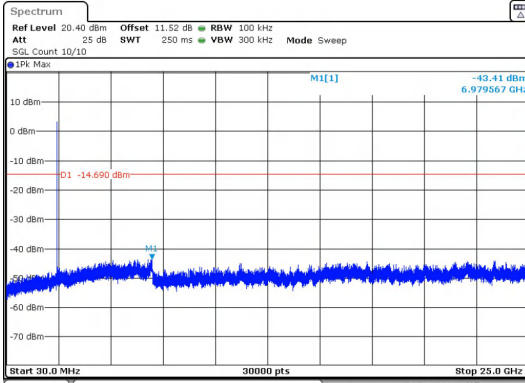
### Test Result

| Mode            | Channel | RU & Index | Ant. | OOB Emission Frequency (MHz) | OOB Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result  |      |
|-----------------|---------|------------|------|------------------------------|--------------------------|-------------|-----------------|---------|------|
| IEEE 802.11b    | 1       | N/A        | 0    | 2361.83                      | -36.749                  | -14.8       | -21.949         | PASS    |      |
|                 |         |            |      | 2400.00                      | -37.280                  | -14.8       | -22.480         | PASS    |      |
|                 |         |            |      | 5925.00                      | -42.839                  | -14.8       | -28.039         | PASS    |      |
|                 | 6       |            |      | 6979.57                      | -43.407                  | -14.69      | -28.717         | PASS    |      |
|                 |         |            |      | 11                           | 2483.50                  | -38.760     | -14.98          | -23.780 | PASS |
|                 |         |            |      |                              | 6902.16                  | -42.805     | -14.98          | -27.825 | PASS |
| IEEE 802.11g    | 1       |            |      |                              | 2319.50                  | -36.912     | -21.85          | -15.062 | PASS |
|                 |         |            |      | 2400.00                      | -39.610                  | -21.85      | -17.760         | PASS    |      |
|                 |         |            |      | 15277.1                      | -42.933                  | -21.85      | -21.083         | PASS    |      |
|                 | 6       |            |      | 6962.92                      | -42.545                  | -21.84      | -20.705         | PASS    |      |
|                 |         |            |      | 11                           | 2483.50                  | -38.330     | -21.82          | -16.510 | PASS |
|                 |         |            |      |                              | 6749.84                  | -42.789     | -21.82          | -20.969 | PASS |
| IEEE 802.11n_20 | 1       |            |      |                              | 2369.73                  | -36.706     | -22.31          | -14.396 | PASS |
|                 |         |            |      | 2400.00                      | -38.470                  | -22.31      | -16.160         | PASS    |      |
|                 |         |            |      | 6963.80                      | -42.612                  | -22.31      | -20.302         | PASS    |      |
|                 | 6       |            |      | 6893.00                      | -42.764                  | -22.59      | -20.174         | PASS    |      |
|                 |         |            |      | 11                           | 2483.50                  | -38.210     | -22.42          | -15.790 | PASS |
|                 |         |            |      |                              | 22070.6                  | -43.160     | -22.42          | -20.740 | PASS |
| IEEE 802.11n_40 | 3       |            |      |                              | 2377.63                  | -36.942     | -24.88          | -12.062 | PASS |
|                 |         |            |      | 2400.00                      | -38.410                  | -24.88      | -13.530         | PASS    |      |
|                 |         |            |      | 6943.80                      | -42.132                  | -24.88      | -17.252         | PASS    |      |
|                 | 6       |            |      | 6947.94                      | -42.435                  | -24.7       | -17.735         | PASS    |      |
|                 |         |            |      | 9                            | 2483.50                  | -37.030     | -25.05          | -11.980 | PASS |
|                 |         |            |      |                              | 6924.63                  | -42.919     | -25.05          | -17.869 | PASS |

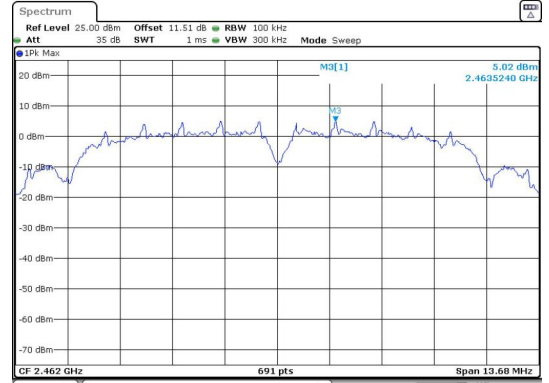
|                     |    |    |  |         |         |        |         |      |
|---------------------|----|----|--|---------|---------|--------|---------|------|
| IEEE<br>802.11ax_20 | 1  | SU |  | 2351.67 | -36.675 | -19.0  | -17.675 | PASS |
|                     |    |    |  | 2400.00 | -37.580 | -19.0  | -18.580 | PASS |
|                     |    |    |  | 6910.50 | -43.255 | -19.0  | -24.255 | PASS |
|                     | 6  |    |  | 6989.56 | -42.992 | -13.62 | -29.372 | PASS |
|                     | 11 |    |  | 2483.50 | -37.600 | -13.14 | -24.460 | PASS |
|                     |    |    |  | 6189.68 | -43.356 | -13.14 | -30.216 | PASS |

## Test Graphs

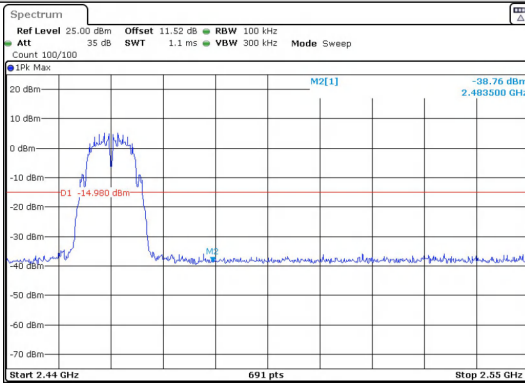




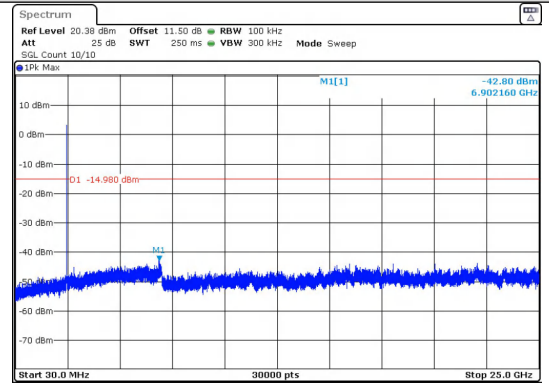
30.0 MHz - 25000.0 MHz  
IEEE 802.11b\_Channel 6\_20MHz\_Antenna 0



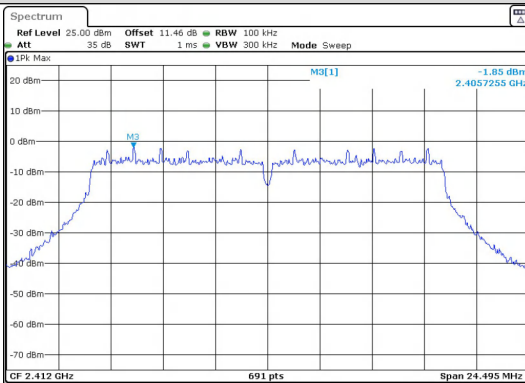
In-Band Reference Level  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



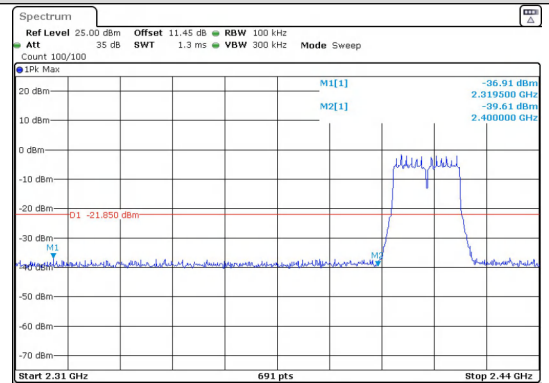
Out Of Band Emission  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



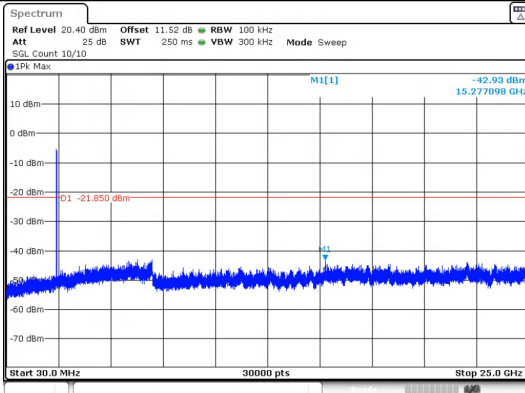
30.0 MHz - 25000.0 MHz  
IEEE 802.11b\_Channel 11\_20MHz\_Antenna 0



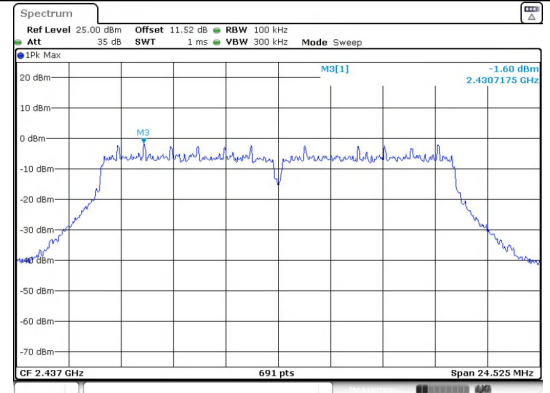
In-Band Reference Level  
IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



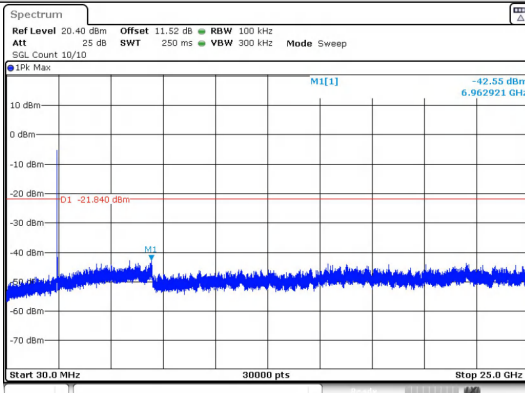
Out Of Band Emission  
IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



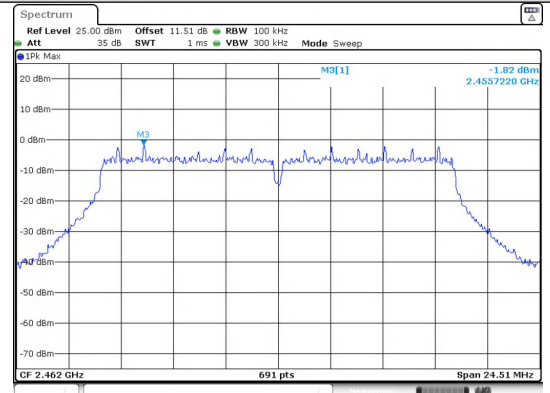
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IEEE 802.11g\_Channel 1\_20MHz\_Antenna 0



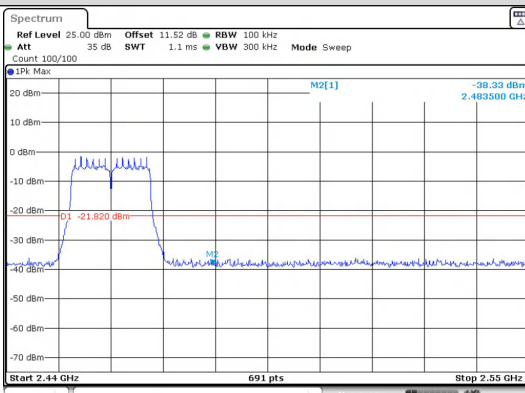
In-Band Reference Level  
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



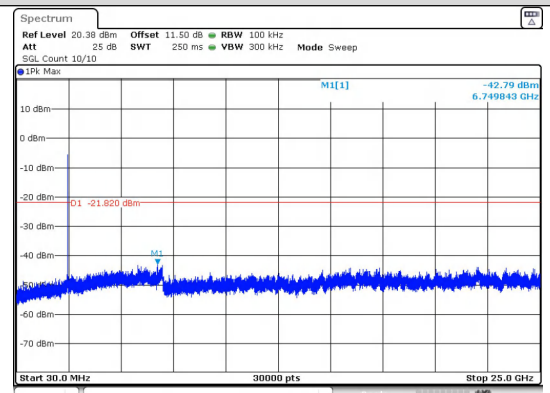
30.0 MHz - 25000.0 MHz  
IEEE 802.11g\_Channel 6\_20MHz\_Antenna 0



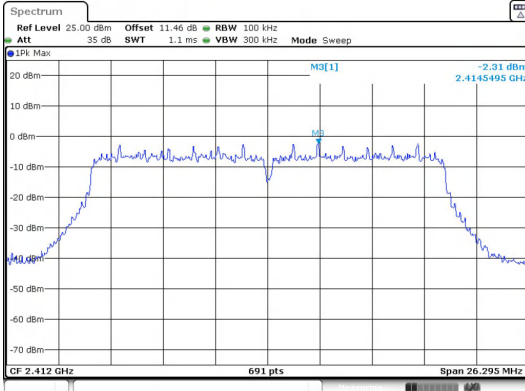
In-Band Reference Level  
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



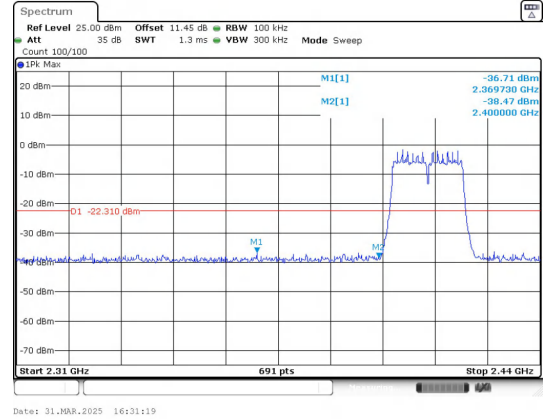
Out Of Band Emission  
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



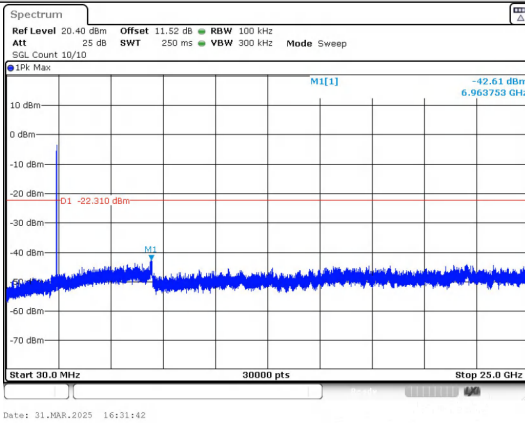
30.0 MHz - 25000.0 MHz  
IEEE 802.11g\_Channel 11\_20MHz\_Antenna 0



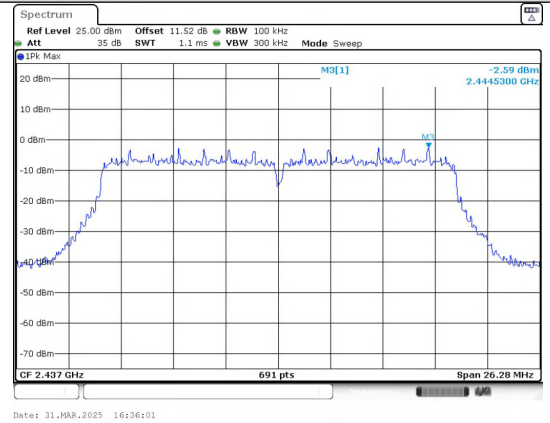
**In-Band Reference Level**  
**IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0**



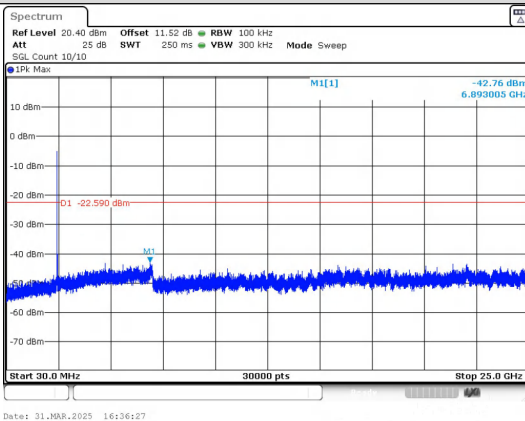
**Out Of Band Emission**  
**IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0**



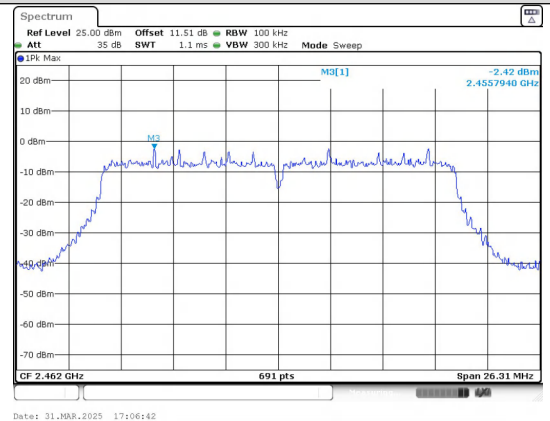
**30.0 MHz - 25000.0 MHz**  
**IEEE 802.11n\_Channel 1\_20MHz\_Antenna 0**



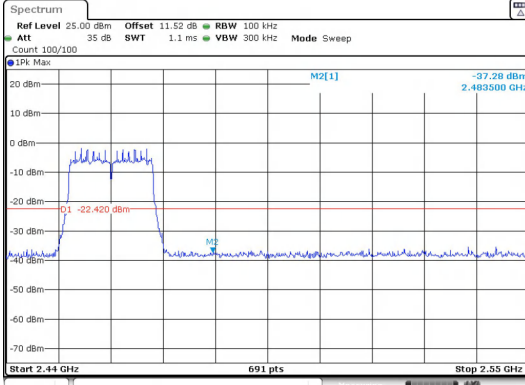
**In-Band Reference Level**  
**IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0**



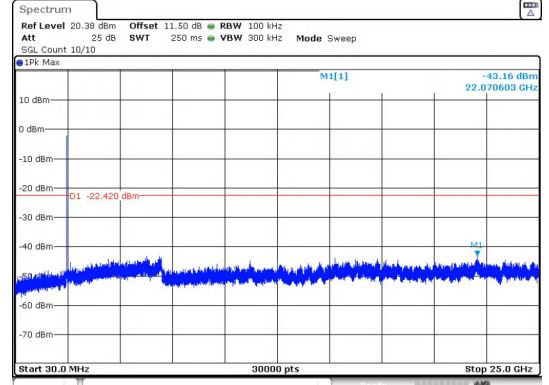
**30.0 MHz - 25000.0 MHz**  
**IEEE 802.11n\_Channel 6\_20MHz\_Antenna 0**



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



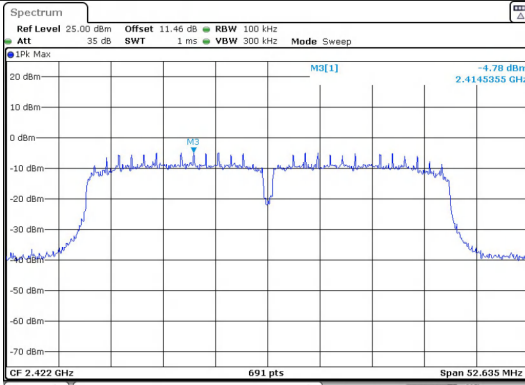
Date: 31.MAR.2025 17:07:03



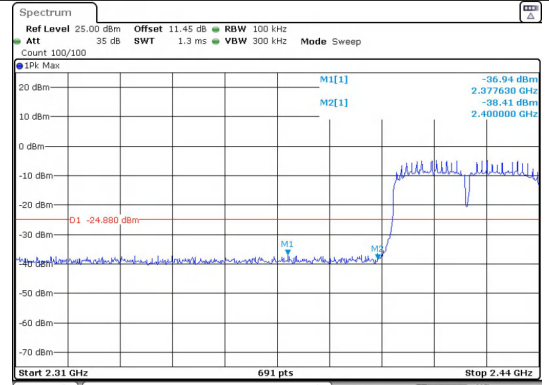
Date: 31.MAR.2025 17:07:25

### 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



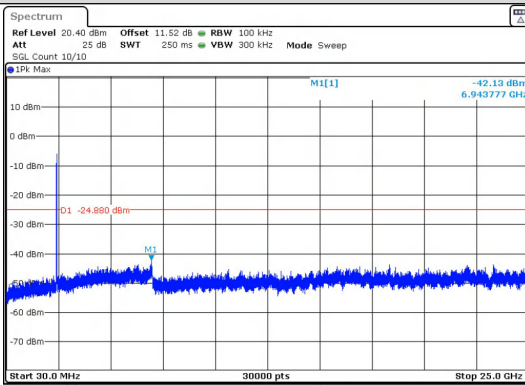
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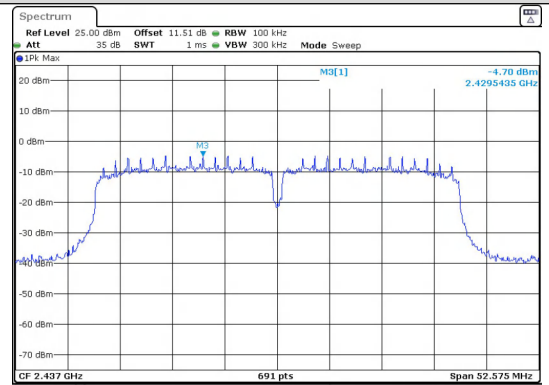
Date: 31.MAR.2025 17:12:20

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

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



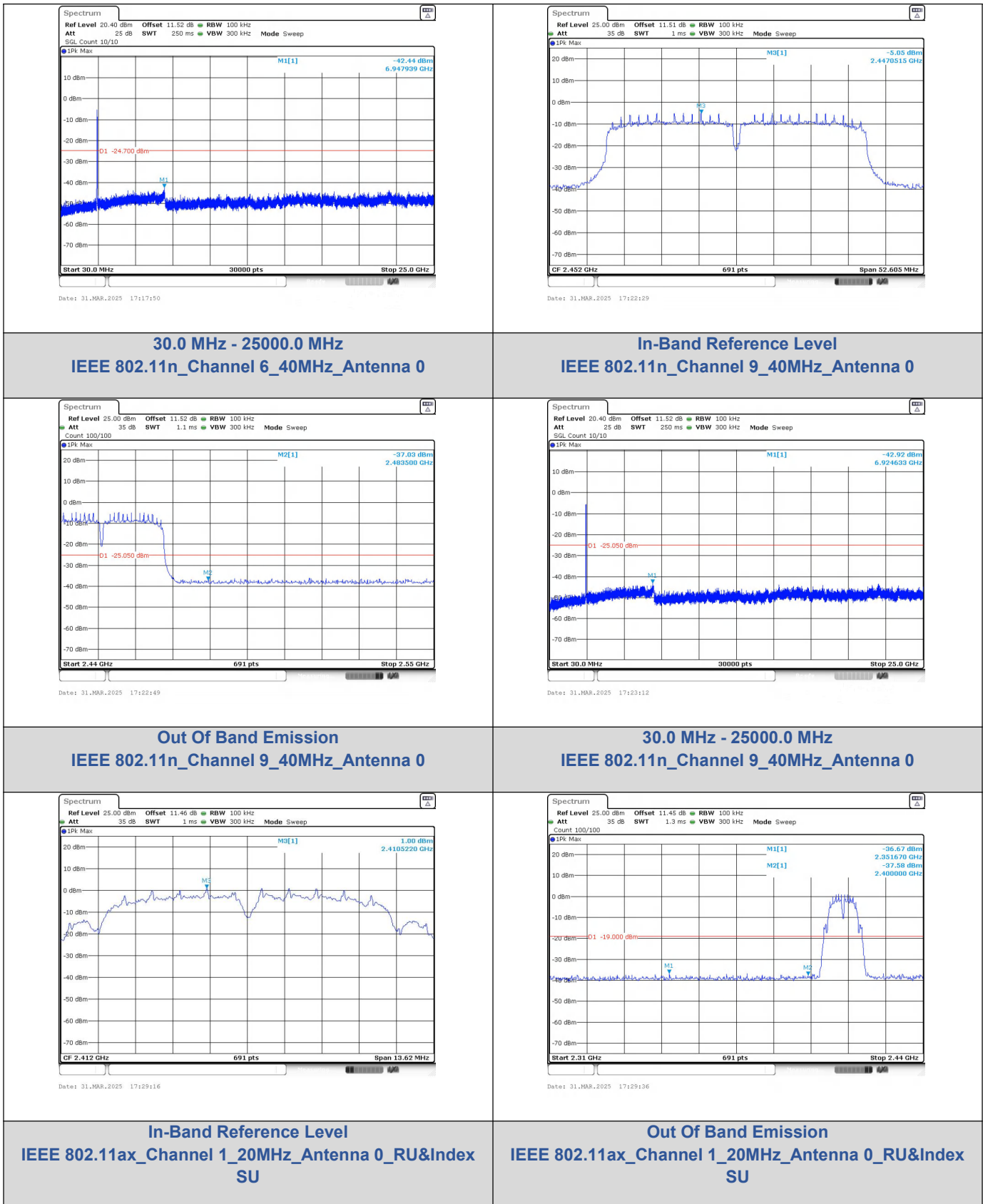
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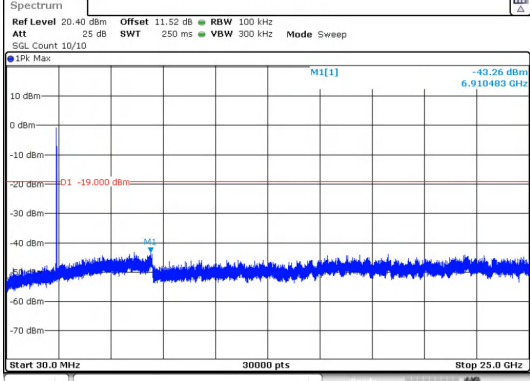
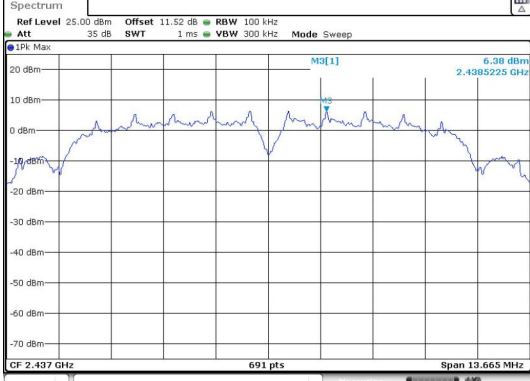
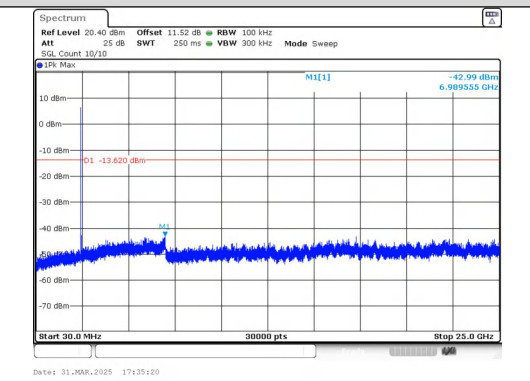
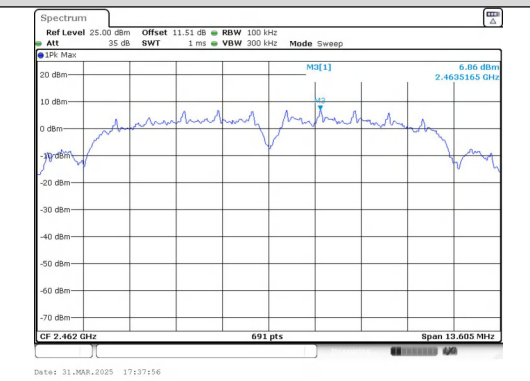
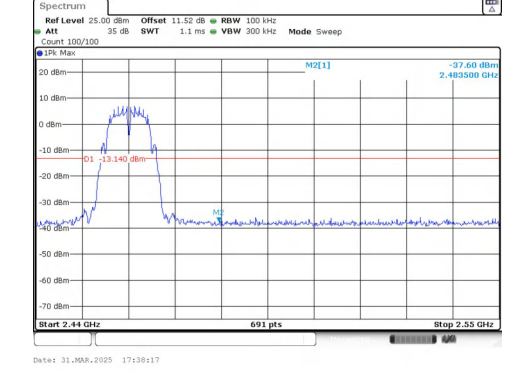
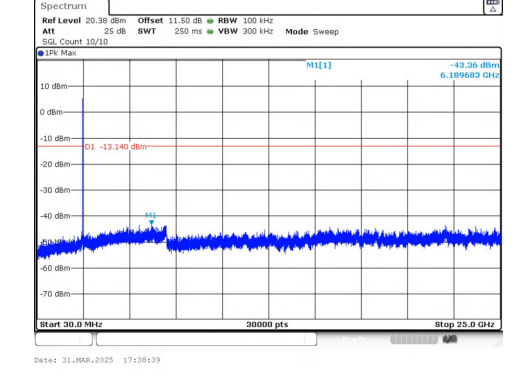


Date: 31.MAR.2025 17:17:25

### 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



|                                                                                                                                                                                  |                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>30.0 MHz - 25000.0 MHz<br/>IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&amp;Index<br/>SU</p>  |  <p>In-Band Reference Level<br/>IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&amp;Index<br/>SU</p>   |
|  <p>30.0 MHz - 25000.0 MHz<br/>IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&amp;Index<br/>SU</p> |  <p>In-Band Reference Level<br/>IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&amp;Index<br/>SU</p> |
|  <p>Out Of Band Emission<br/>IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&amp;Index<br/>SU</p> |  <p>30.0 MHz - 25000.0 MHz<br/>IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&amp;Index<br/>SU</p> |

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