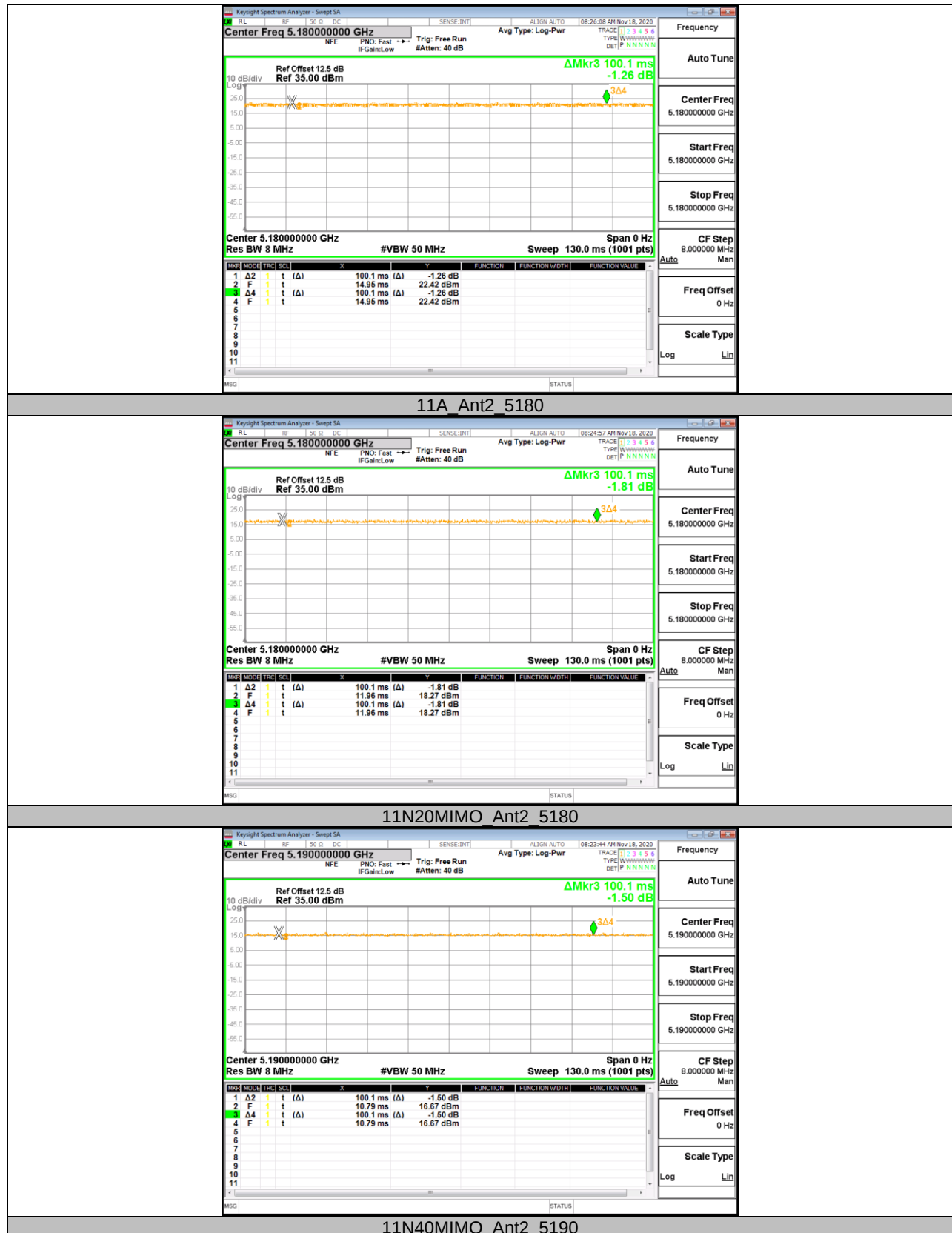
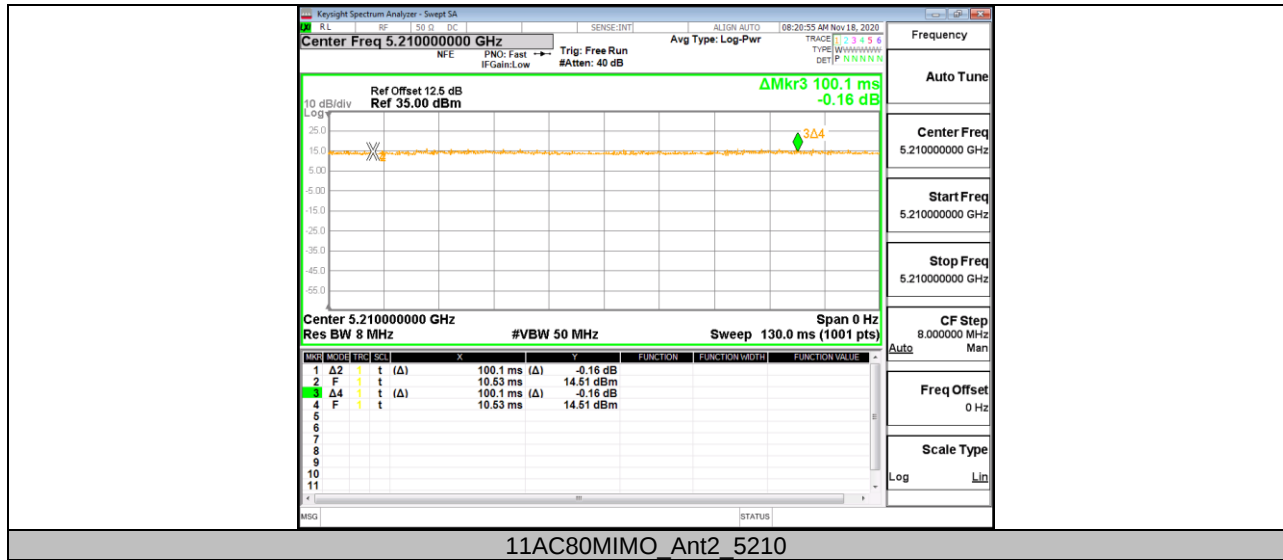




## Test Graphs





**Appendix E FREQUENCY STABILITY****Test Result**

| Frequency Error vs. Voltage     |                |                  |                 |                  |                 |                  |                 |                  |                 |
|---------------------------------|----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a:5200MHz                 |                |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt.          | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |                | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| T <sub>N</sub>                  | V <sub>L</sub> | 5200.0041        | 0.79            | 5199.9788        | -4.07           | 5200.0179        | 3.44            | 5200.0008        | 0.15            |
| T <sub>N</sub>                  | V <sub>N</sub> | 5200.0059        | 1.14            | 5200.0232        | 4.45            | 5199.9856        | -2.78           | 5199.9896        | -2.00           |
| T <sub>N</sub>                  | V <sub>H</sub> | 5200.0057        | 1.10            | 5199.9907        | -1.79           | 5199.9976        | -0.46           | 5200.0012        | 0.23            |
| Frequency Error vs. Temperature |                |                  |                 |                  |                 |                  |                 |                  |                 |
| 802.11a: 5200 MHz               |                |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt.          | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |                | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 40                              | V <sub>N</sub> | 5200.0176        | 3.39            | 5200.0009        | 0.17            | 5200.0186        | 3.58            | 5200.0203        | 3.91            |
| 30                              | V <sub>N</sub> | 5200.0202        | 3.88            | 5199.9979        | -0.40           | 5199.9903        | -1.86           | 5199.9882        | -2.28           |
| 20                              | V <sub>N</sub> | 5200.0073        | 1.41            | 5200.0242        | 4.65            | 5199.9788        | -4.07           | 5199.9775        | -4.33           |
| 10                              | V <sub>N</sub> | 5200.0054        | 1.04            | 5199.9789        | -4.07           | 5199.9922        | -1.50           | 5200.0176        | 3.39            |
| 0                               | V <sub>N</sub> | 5199.9971        | -0.56           | 5199.9841        | -3.06           | 5200.0002        | 0.04            | 5200.0108        | 2.08            |

| Frequency Error vs. Voltage     |                |                  |                 |                  |                 |                  |                 |                  |                 |
|---------------------------------|----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a: 5825 MHz               |                |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt.          | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |                | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| T <sub>N</sub>                  | V <sub>L</sub> | 5824.9793        | -3.55           | 5825.0228        | 3.92            | 5824.9920        | -1.38           | 5824.9841        | -2.72           |
| T <sub>N</sub>                  | V <sub>N</sub> | 5825.0151        | 2.59            | 5825.0239        | 4.11            | 5824.9862        | -2.37           | 5824.9791        | -3.58           |
| T <sub>N</sub>                  | V <sub>H</sub> | 5824.9766        | -4.01           | 5825.0048        | 0.83            | 5824.9787        | -3.66           | 5825.0234        | 4.02            |
| Frequency Error vs. Temperature |                |                  |                 |                  |                 |                  |                 |                  |                 |
| 802.11a:5825MHz                 |                |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt.          | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |                | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 40                              | V <sub>N</sub> | 5825.0093        | 1.60            | 5824.9969        | -0.53           | 5825.0100        | 1.71            | 5825.0001        | 0.01            |
| 30                              | V <sub>N</sub> | 5825.0184        | 3.16            | 5824.9835        | -2.84           | 5824.9888        | -1.93           | 5824.9872        | -2.20           |
| 20                              | V <sub>N</sub> | 5825.0055        | 0.94            | 5825.0202        | 3.47            | 5824.9885        | -1.98           | 5825.0210        | 3.60            |
| 10                              | V <sub>N</sub> | 5825.0127        | 2.18            | 5824.9797        | -3.49           | 5825.0181        | 3.11            | 5824.9958        | -0.72           |
| 0                               | V <sub>N</sub> | 5824.9984        | -0.28           | 5825.0027        | 0.46            | 5825.0077        | 1.33            | 5824.9883        | -2.01           |

Note: All the modes have been tested, only the worst data was recorded in the report.

## Appendix F DYNAMIC FREQUENCY SELECTION

### Summary

| Test                      | Frequency (MHz) | Nominal Power (dBm) | Nominal Bandwidth (MHz) | Result |
|---------------------------|-----------------|---------------------|-------------------------|--------|
| DFS In-Service Monitoring | 5530.000        | 18.0                | 80.000000               | PASS   |

### DFS In-Service Monitoring (5530 MHz; 22.000 dBm; 80 MHz)

Test according to FCC title 47 part 15 §15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

### Measurement Summary

| DUT Frequency (MHz) | Radar Type No. | Type of Measurement value         | Overall Result |
|---------------------|----------------|-----------------------------------|----------------|
| 5530.000000         | 0              | First of all Transmitt Test       | ---            |
| 5530.000000         | 0              | Channel Move Time                 | PASS           |
| 5530.000000         | 0              | Channel Closing Transmission Time | PASS           |
| 5530.000000         | 0              | Non-occupancy period              | PASS           |

(continuation of the "Measurement Summary" table from column 4 ...)

| DUT Frequency (MHz) | Overall Comment              |
|---------------------|------------------------------|
| 5530.000000         | not performed / not finished |
| 5530.000000         |                              |
| 5530.000000         |                              |
| 5530.000000         |                              |

### Channel Move Time Detailed Results

| DUT Frequency (MHz) | Radar Type No. | CMT Tx Time (s) | CMT Limit (s) | CMT Result |
|---------------------|----------------|-----------------|---------------|------------|
| 5530.000000         | 0              | 0.487           | 10.000        | PASS       |

(continuation of the "Channel Move Time Detailed Results" table from column 5 ...)

| DUT Frequency (MHz) | CMT Comment                                                         |
|---------------------|---------------------------------------------------------------------|
| 5530.000000         | Tx Time value is last trailing edge found within sweep. See Note 1. |

### Channel Closing Transmission Time Detailed Results

| DUT Frequency (MHz) | Radar Type No. | CCTT Type of Value              | CCTT No. of Pulses found | CCTT Tx Time (ms) |
|---------------------|----------------|---------------------------------|--------------------------|-------------------|
| 5530.000000         | 0              | first 200 ms                    | 3                        | 1.028             |
| 5530.000000         | 0              | remaining 10.0 second(s) period | 3                        | 1.464             |

(continuation of the "Channel Closing Transmission Time Detailed Results" table from column 5 ...)

| DUT Frequency (MHz) | CCTT Tx Time Limit (ms) | CCTT Result | CCTT Comment |
|---------------------|-------------------------|-------------|--------------|
| 5530.000000         | 200.000                 | PASS        | See Note 1.  |
| 5530.000000         | 60.000                  | PASS        | See Note 1.  |

## Non-occupancy period Detailed Results

| DUT Frequency (MHz) | Radar Type No. | NOP No. of Pulses found | NOP No. of Pulses Limit | NOP Tx Time (s) | NOP Tx Time Limit (s) |
|---------------------|----------------|-------------------------|-------------------------|-----------------|-----------------------|
| 5530.000000         | 0              | 0                       | 0                       | 0.000           | 0.000                 |

(continuation of the "Non-occupancy period Detailed Results" table from column 6 ...)

| DUT Frequency (MHz) | NOP Result | NOP Comment                                                                                |
|---------------------|------------|--------------------------------------------------------------------------------------------|
| 5530.000000         | PASS       | not performed because of Channel Closing Transmission Time / Channel Move Time Test failed |

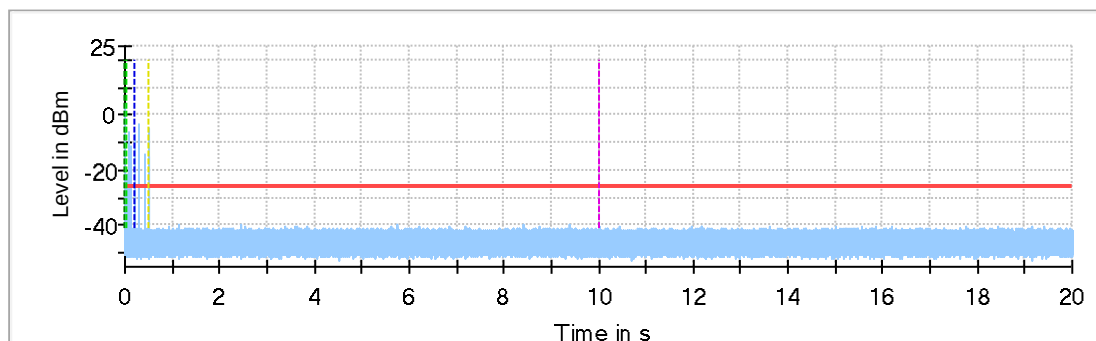
## Transmitting Test Detailed Results

| DUT Frequency (MHz) | Tx-Test Result | Tx-Test Comment              |
|---------------------|----------------|------------------------------|
| 5530.000000         | ---            | not performed / not finished |

## Additional Information

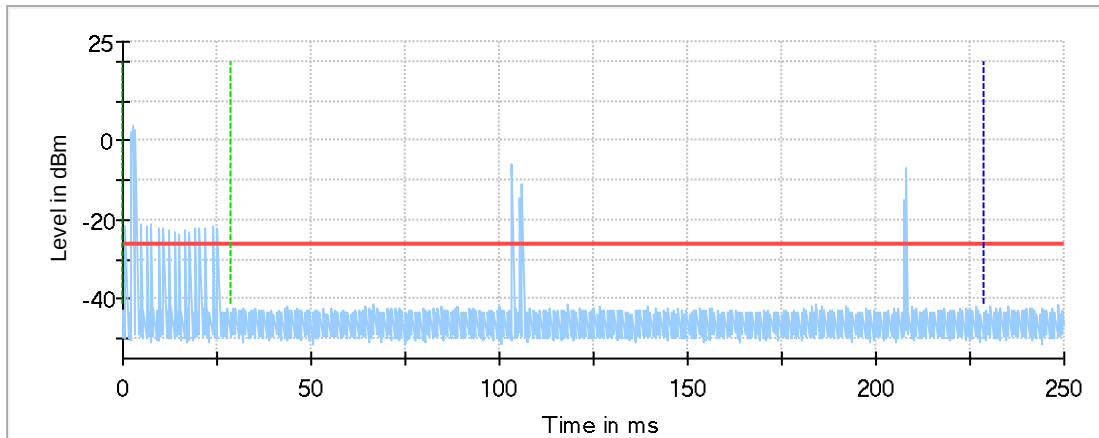
| Note    | Description                                                                                                                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note 1: | Because of the radar pulse event at the beginning, the investigation of the trace begins with an offset of 28.7 ms conforming to the end of the Radar burst.                                                    |
| Note 2: | Channel move time (CMT) / channel closing transmission time (CCTT) measurement was made with hi resolution video sweep using OSP DAQ channel                                                                    |
| Note 3: | Because of the substantially higher sampling rate of the video signal the results for CCTT and CMT are more accurate than in the graphics visible. Reached timing accuracy of the video trace: approx 4 $\mu$ s |
| Note 4: | The Non-Occupancy Period trace starts at the end of the Channel move time trace (20.000 secs.)<br>Labeling of the x-axis (time) is relative to its beginning (0 secs.)                                          |

Channel Move Time



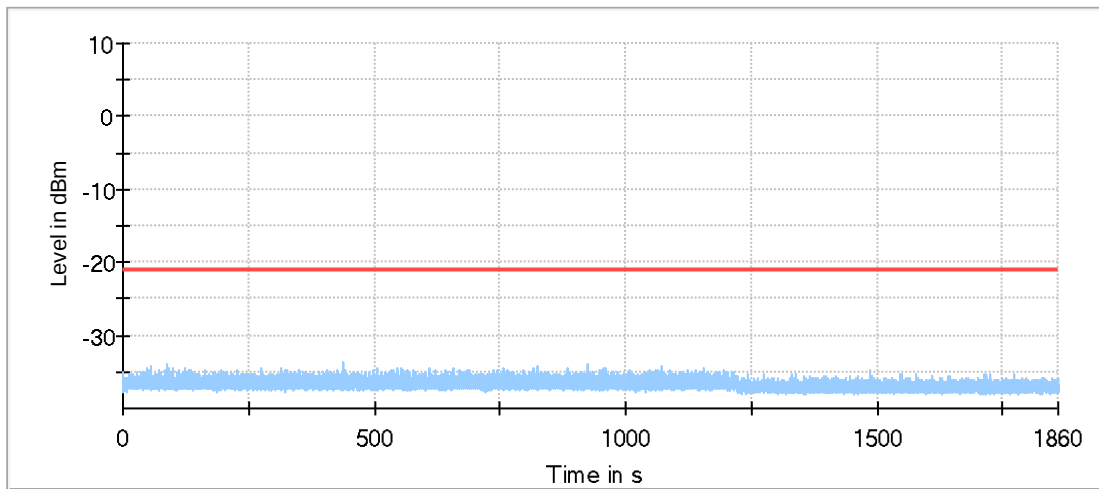
- Channel Move Time
- Threshold
- Start of Radar
- Trigger at end of Radar
- First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



— Channel Move Time first 200ms      — Threshold  
- - - Start of Radar      - - - Tripper at end of Radar  
- - - First 200ms of Channel Closing Tx Time

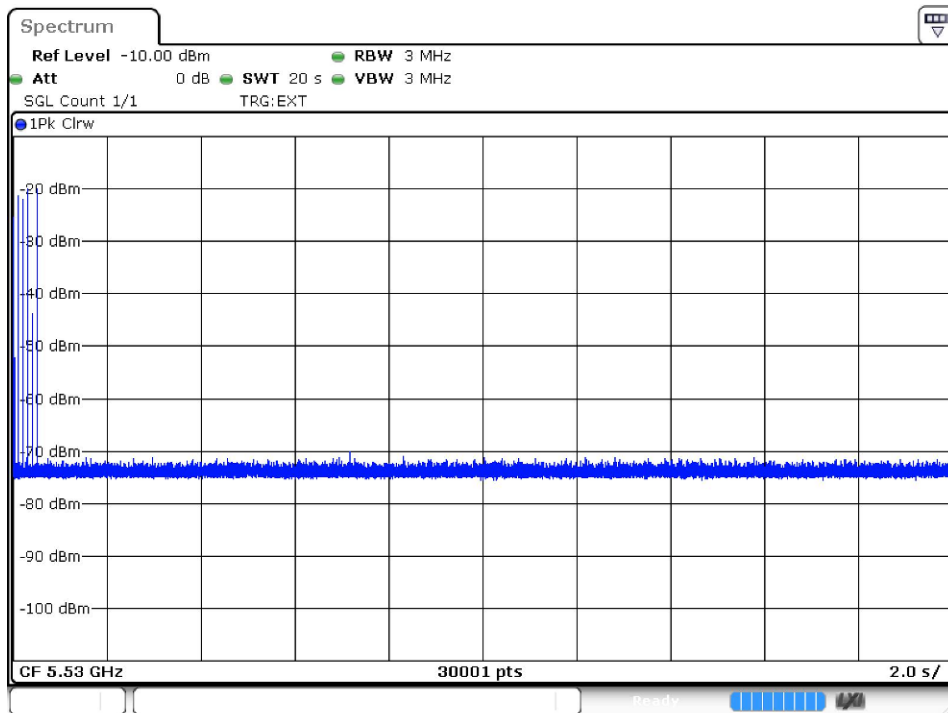
Non-occupancy period



— Non-occupancy period      — Threshold

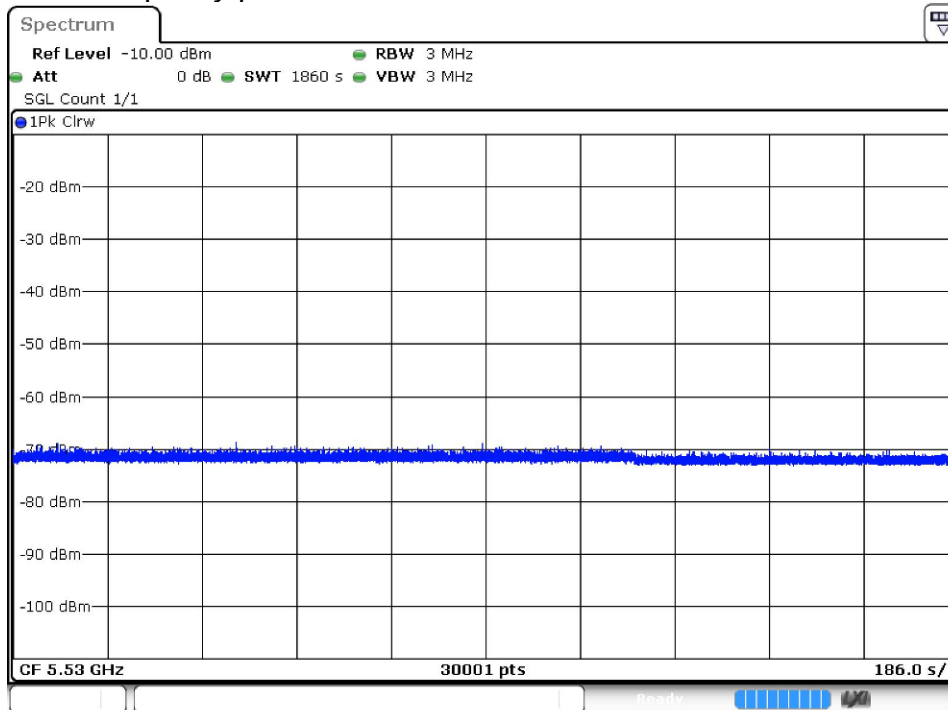


### Channel Move Time



Date: 25.NOV.2020 04:51:05

### Non-occupancy period



Date: 25.NOV.2020 05:22:13

**END OF REPORT**