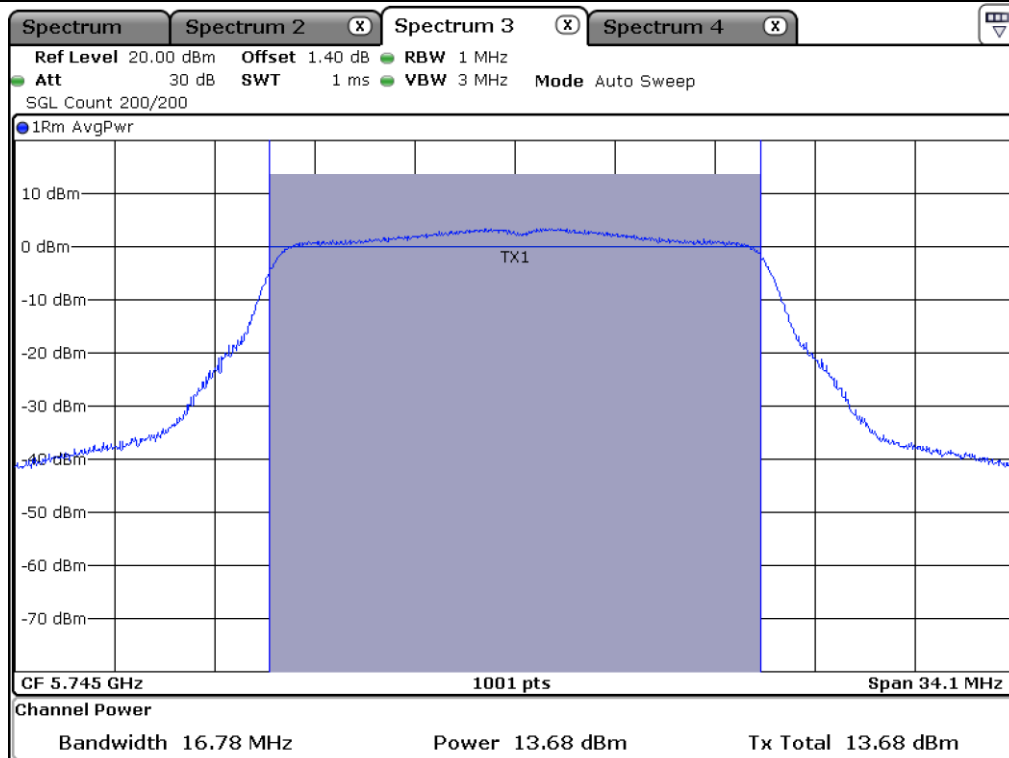
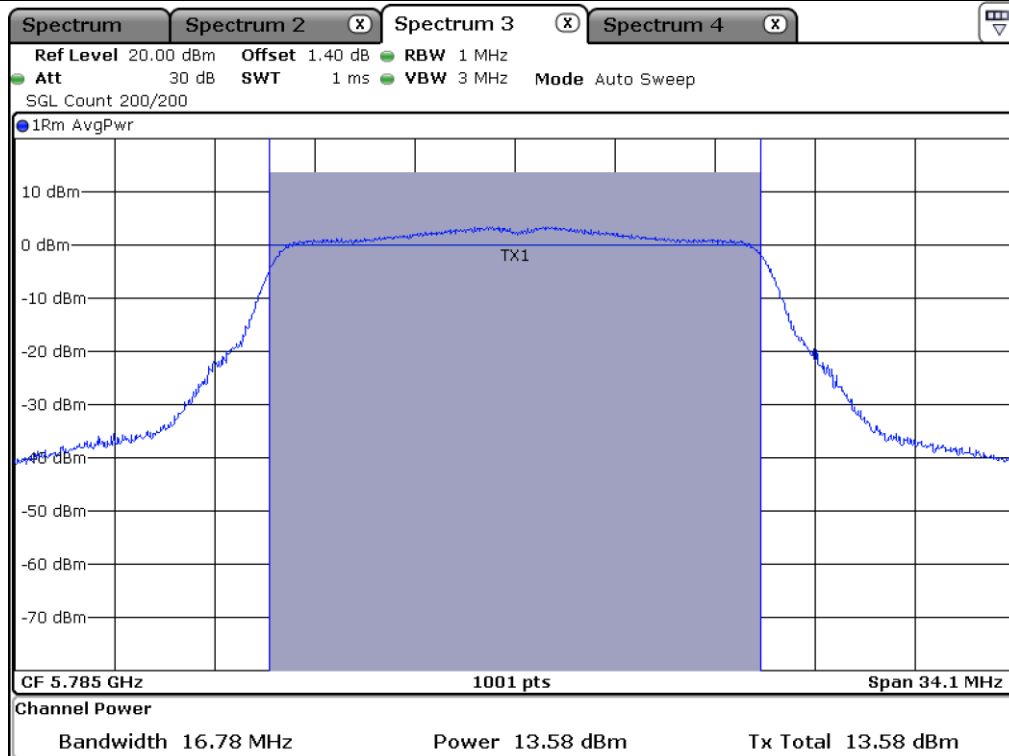
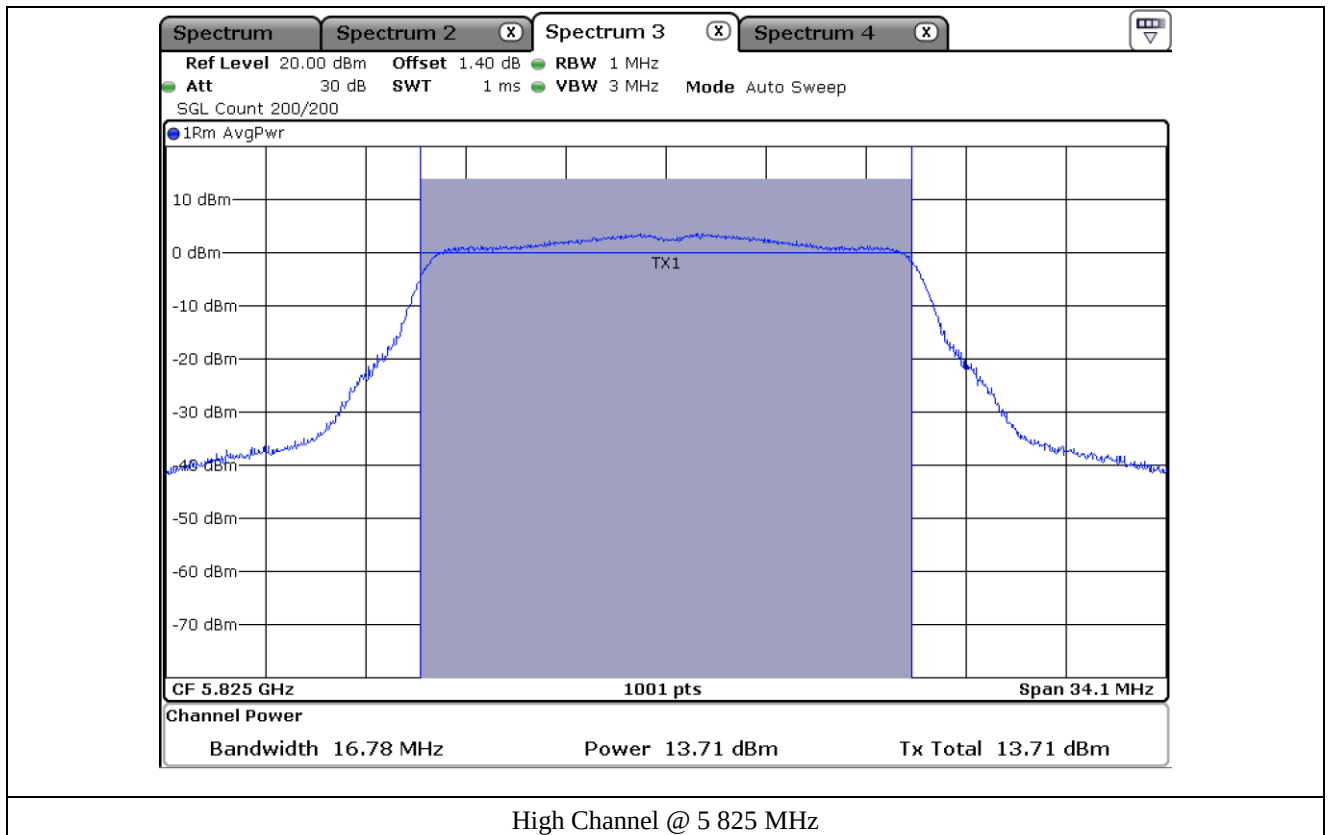




Low Channel @ 5 745 MHz



Middle Channel @ 5 785 MHz



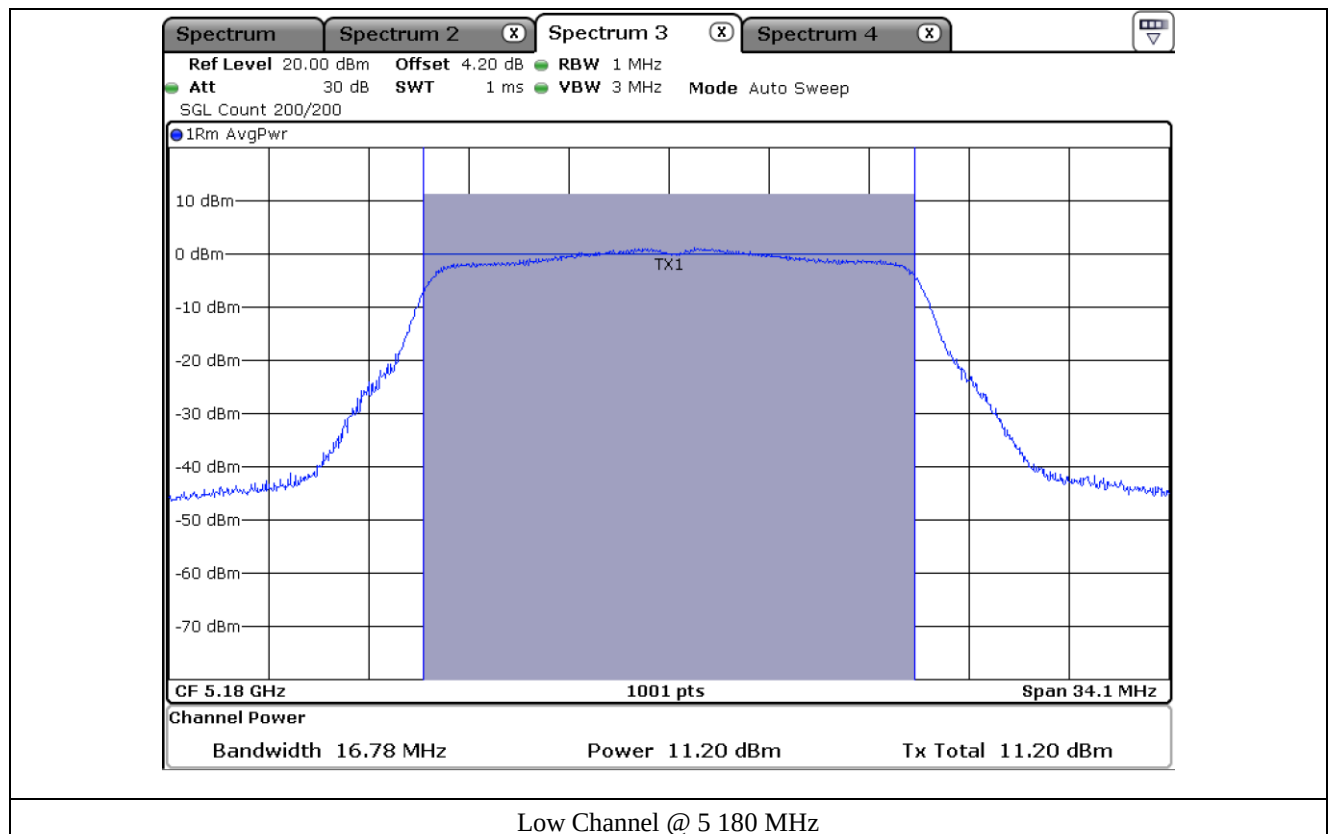
### 9.4.2 Test data for External Antenna

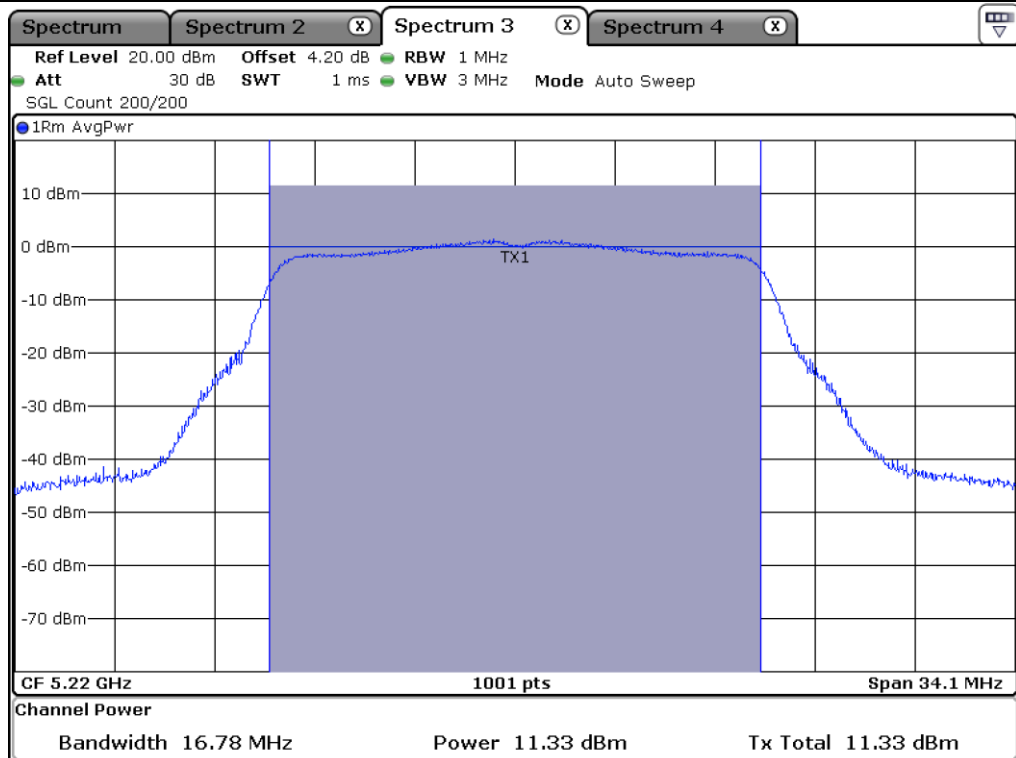
-. Test Result : Pass

-. Duty Cycle : 94.92 % (UNII 1), 94.93 % (UNII 3)

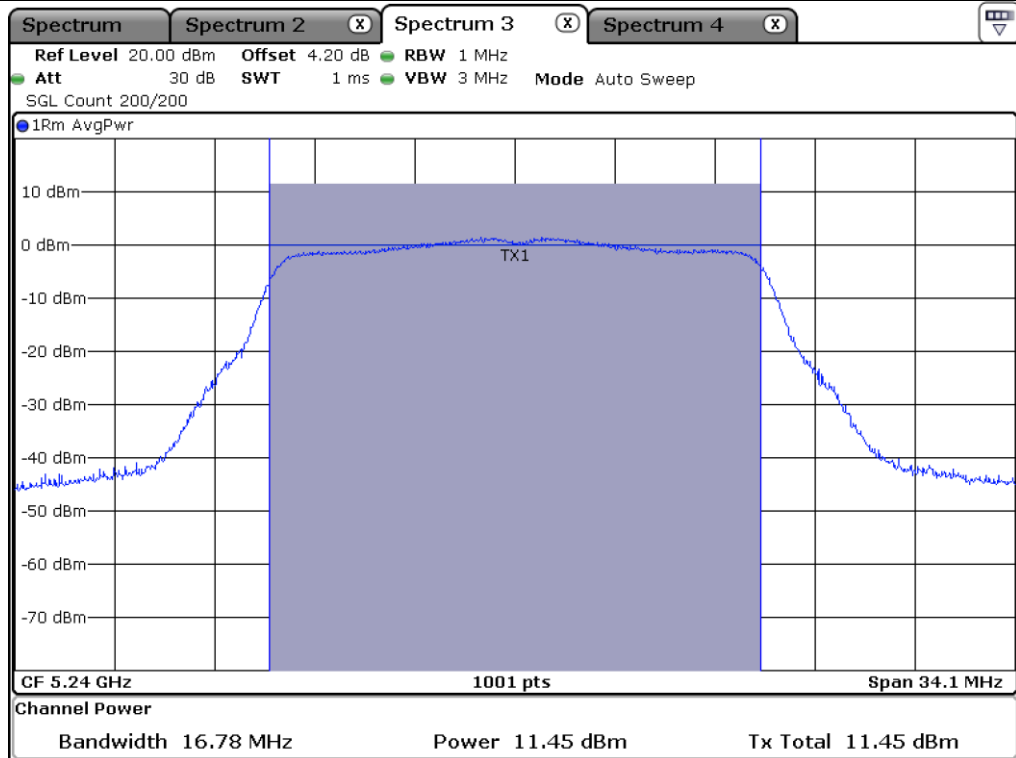
| FREQUENCY RANGE (MHz) | CHANNEL | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|---------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | Low     | 5 180.00        | 11.20                | 0.23      | 11.43        | 24.00       | 12.80       |
|                       | Middle  | 5 220.00        | 11.33                | 0.23      | 11.56        | 24.00       | 12.67       |
|                       | High    | 5 240.00        | 11.45                | 0.23      | 11.68        | 24.00       | 12.55       |
| 5 725 ~ 5 850         | Low     | 5 745.00        | 10.69                | 0.23      | 10.92        | 30.00       | 19.31       |
|                       | Middle  | 5 785.00        | 10.75                | 0.23      | 10.98        | 30.00       | 19.25       |
|                       | High    | 5 825.00        | 10.80                | 0.23      | 11.03        | 30.00       | 19.20       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

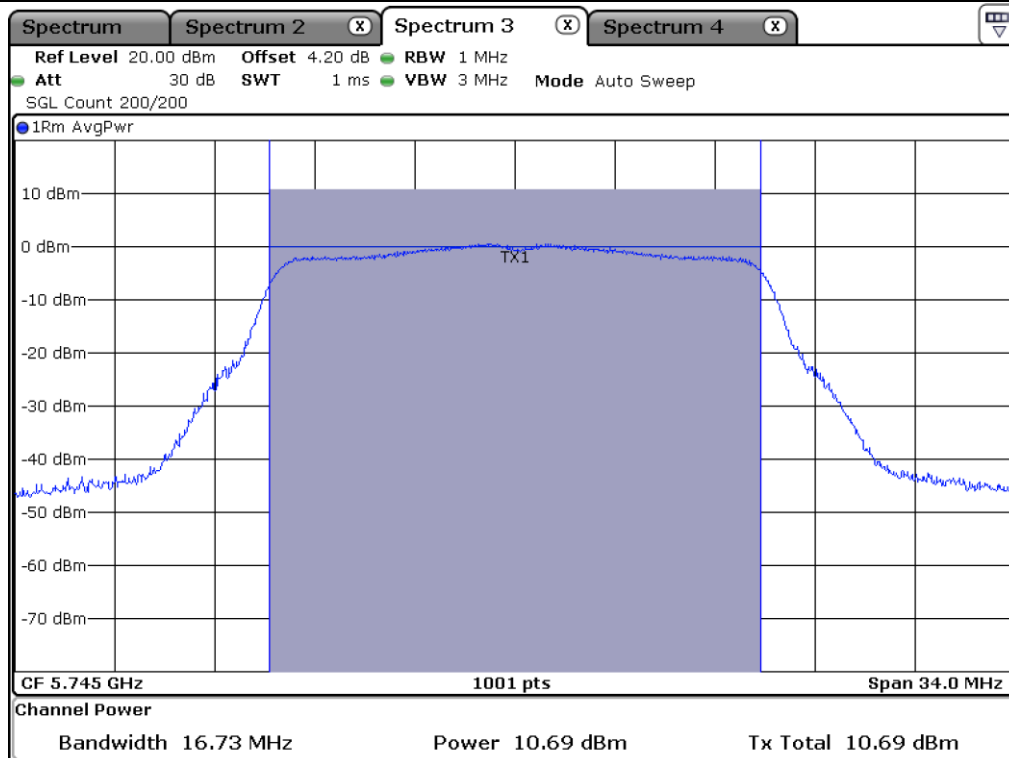




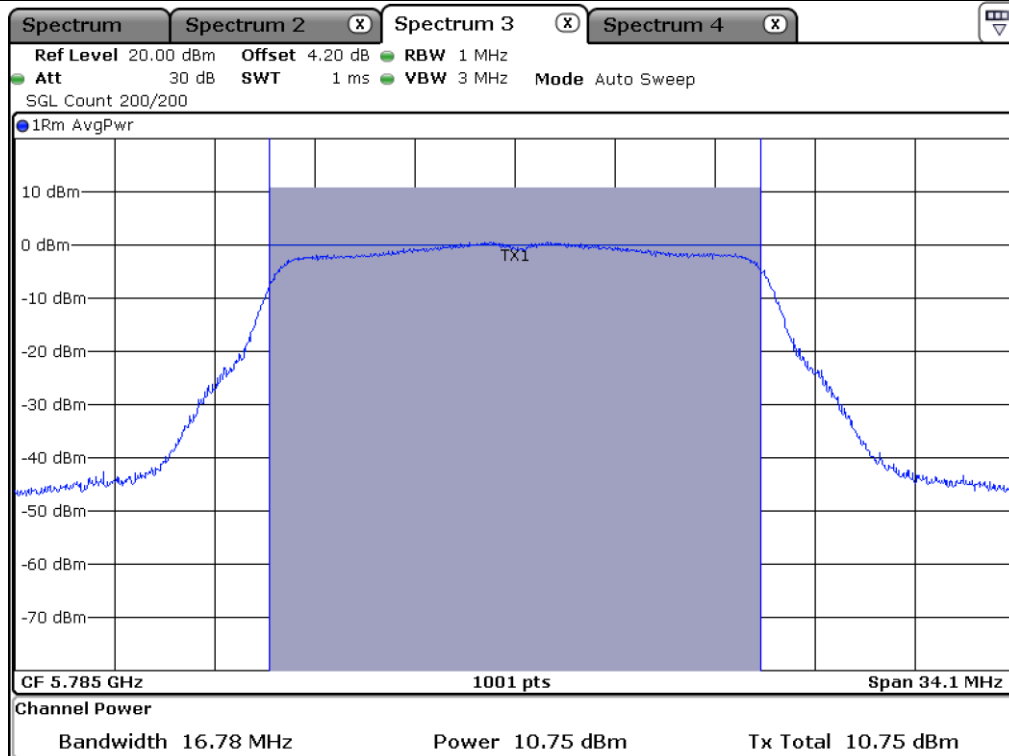
Middle Channel @ 5 220 MHz



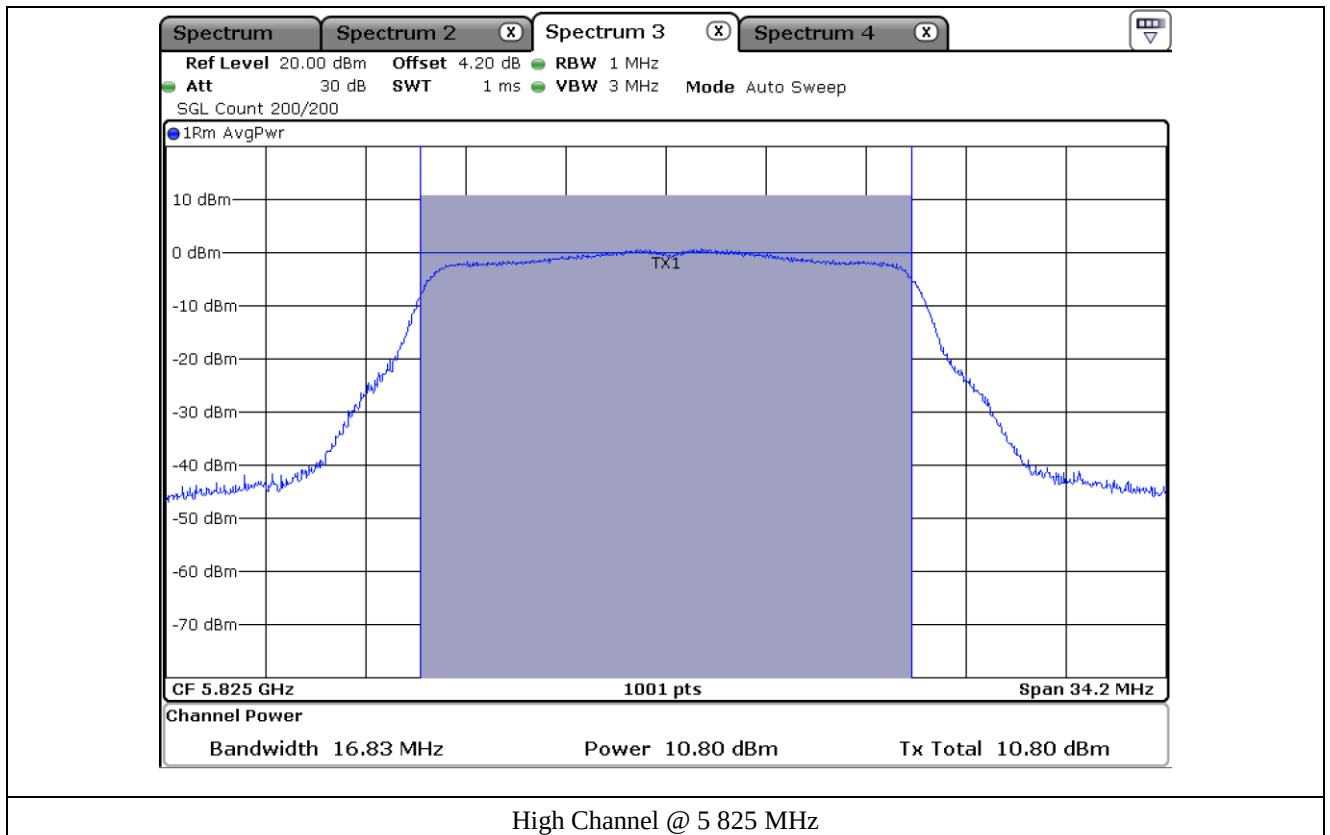
High Channel @ 5 240 MHz



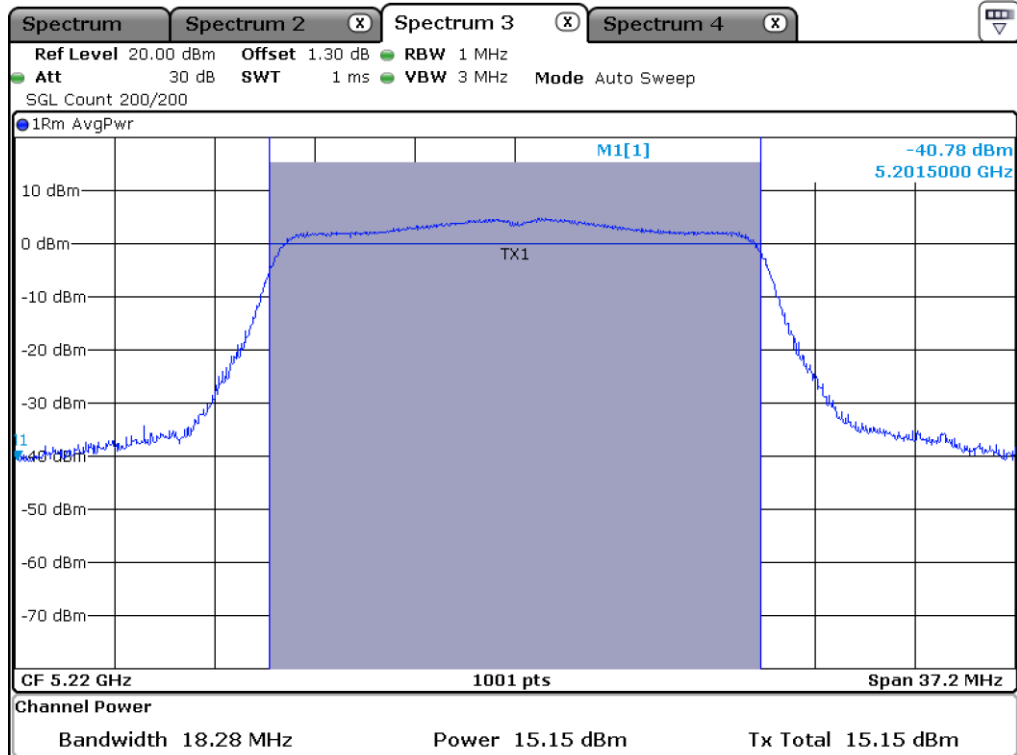
Low Channel @ 5.745 MHz



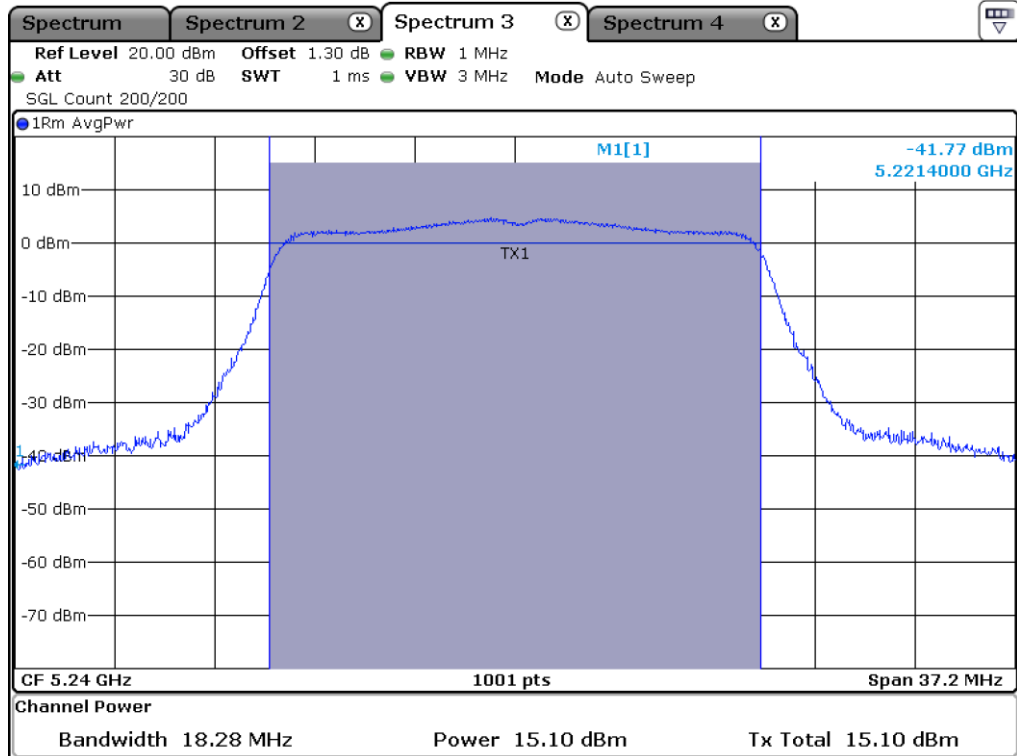
Middle Channel @ 5.785 MHz





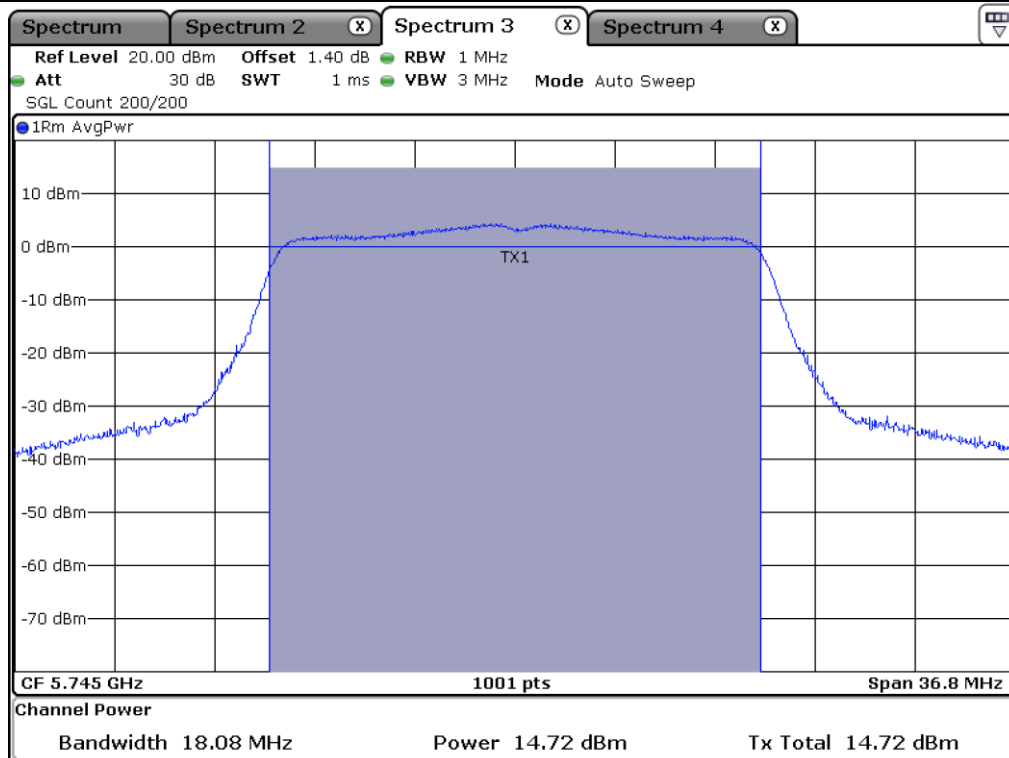


Middle Channel @ 5 220 MHz

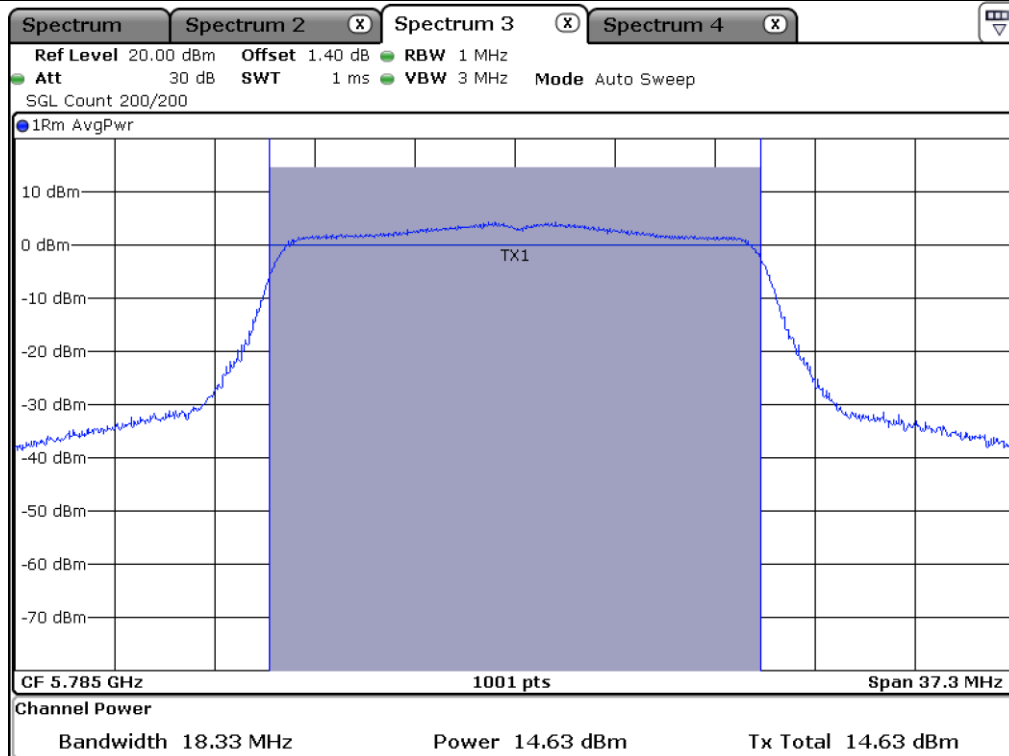


High Channel @ 5 240 MHz

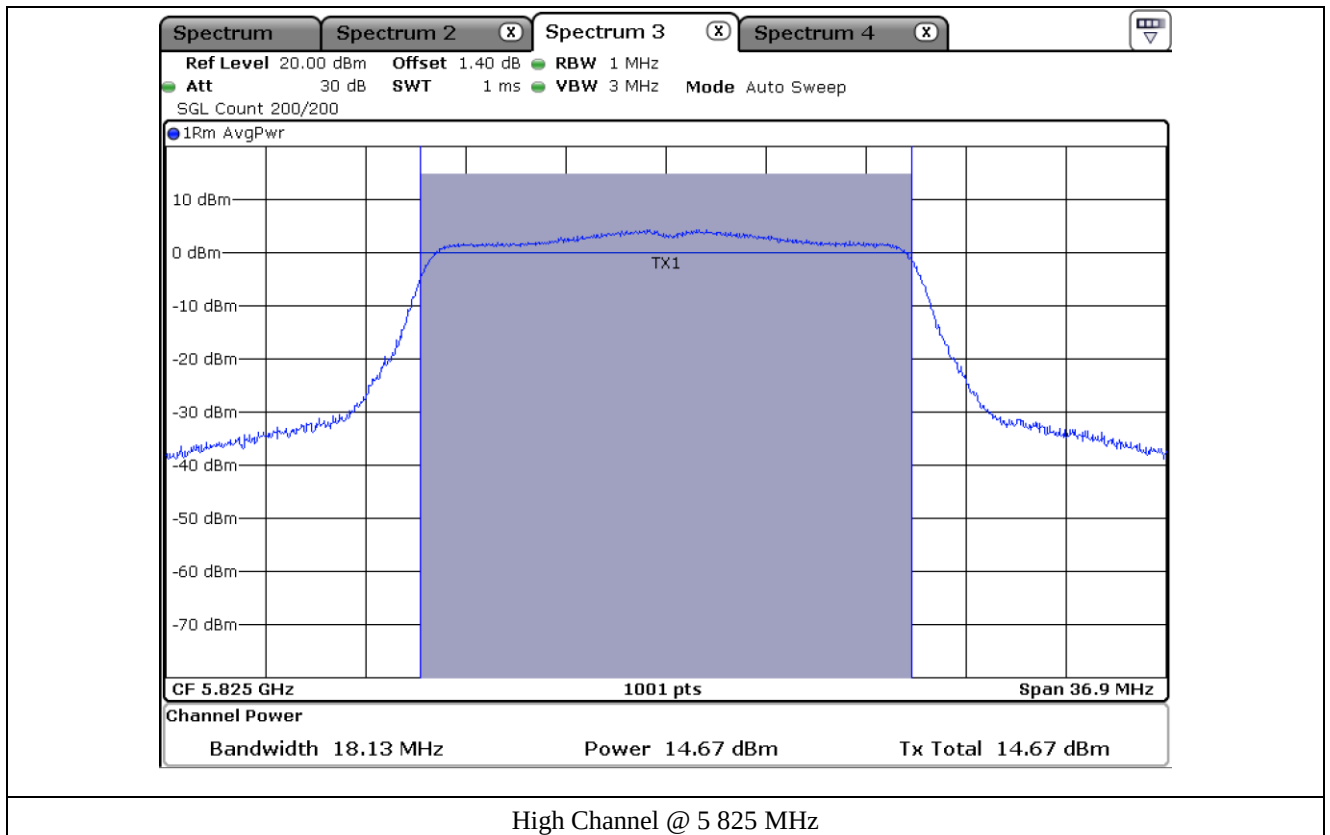




Low Channel @ 5 745 MHz



Middle Channel @ 5 785 MHz



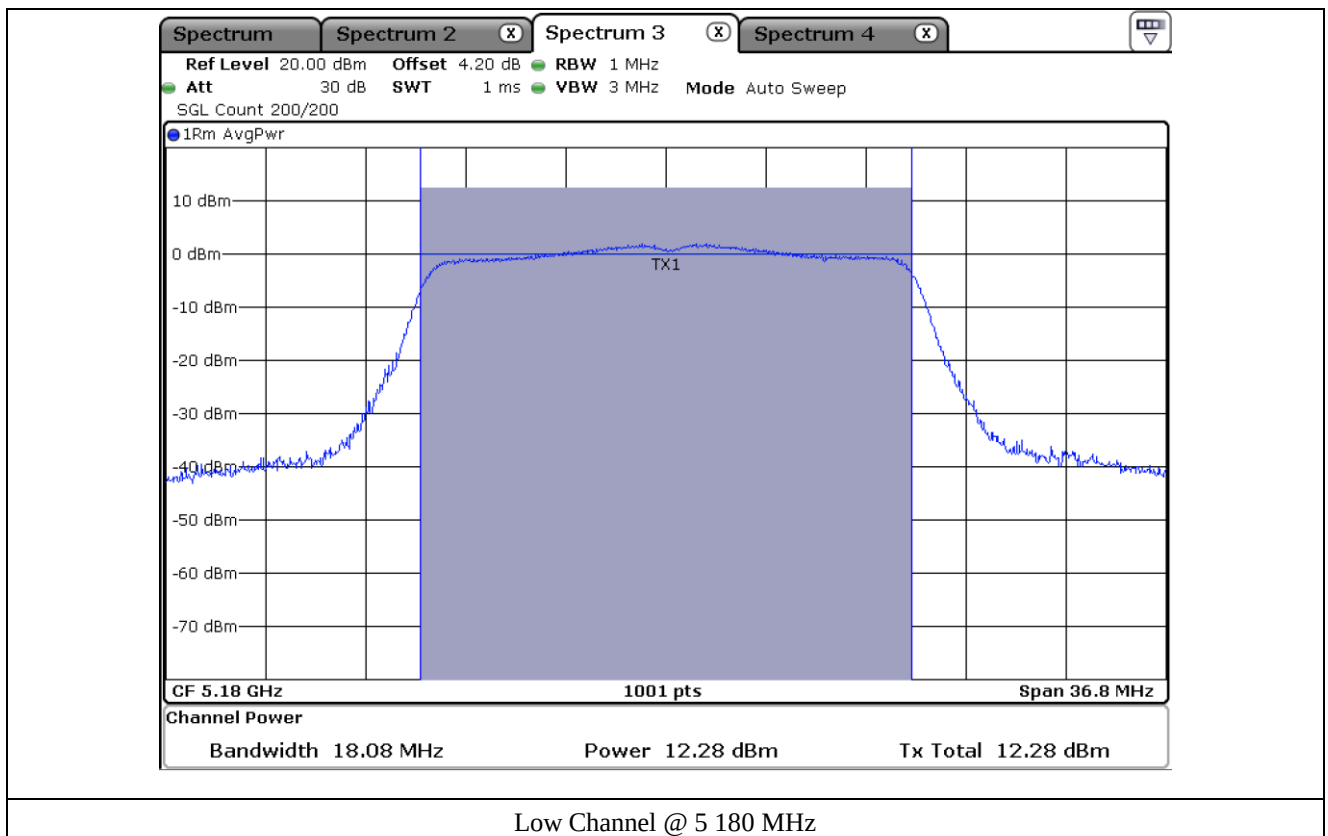
### 9.5.2 Test data for External Antenna

-. Test Result : Pass

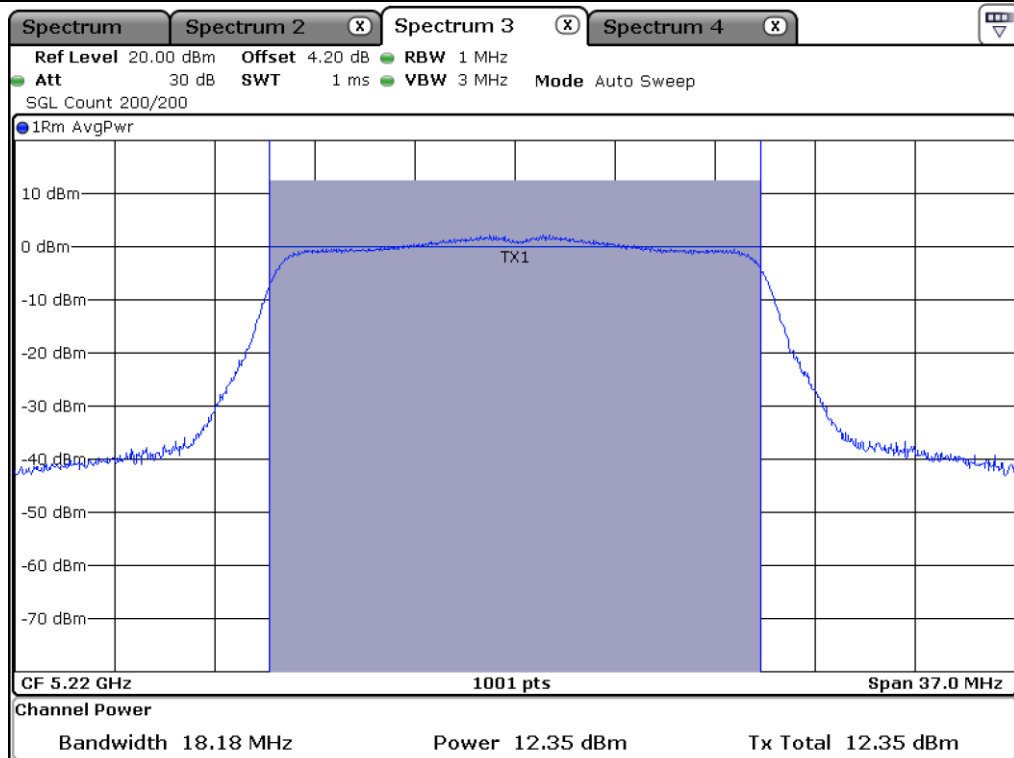
-. Duty Cycle : 94.46 % (UNII 1), 94.63 % (UNII 3)

| FREQUENCY RANGE (MHz) | CHANNEL | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|---------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | Low     | 5 180.00        | 12.28                | 0.25      | 12.53        | 24.00       | 11.47       |
|                       | Middle  | 5 220.00        | 12.35                | 0.25      | 12.60        | 24.00       | 11.40       |
|                       | High    | 5 240.00        | 12.40                | 0.25      | 12.65        | 24.00       | 11.35       |
| 5 725 ~ 5 850         | Low     | 5 745.00        | 11.62                | 0.24      | 11.86        | 30.00       | 18.14       |
|                       | Middle  | 5 785.00        | 11.62                | 0.24      | 11.86        | 30.00       | 18.14       |
|                       | High    | 5 825.00        | 11.65                | 0.24      | 11.89        | 30.00       | 18.11       |

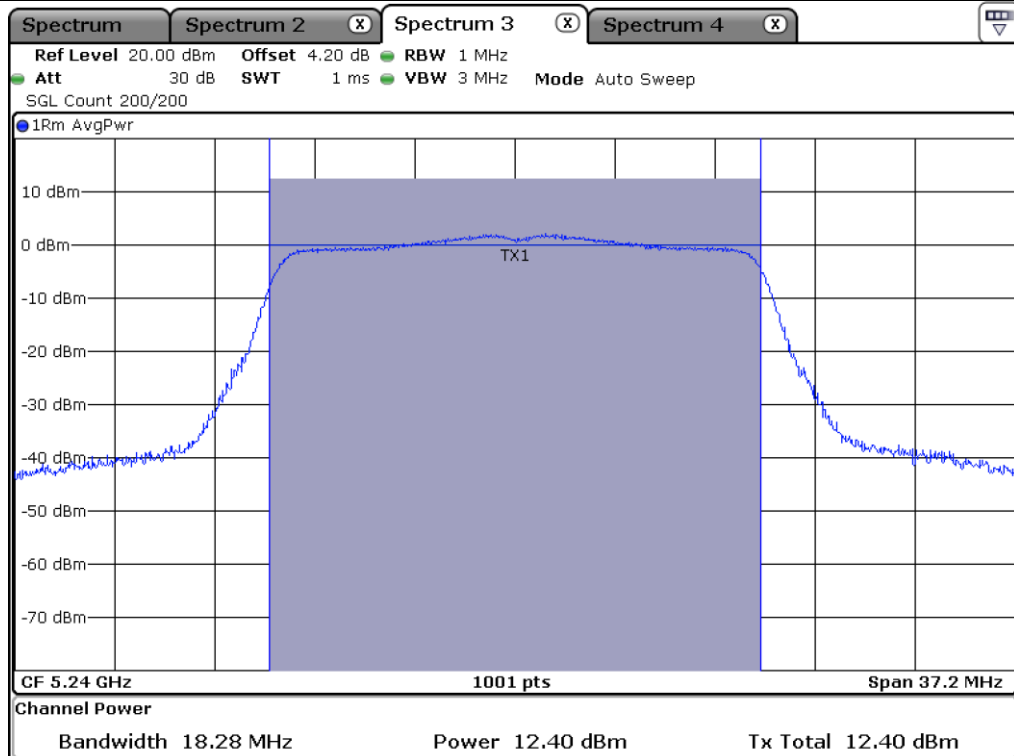
Remark. Margin = Limit – Result (=Measured Value + C.F.)



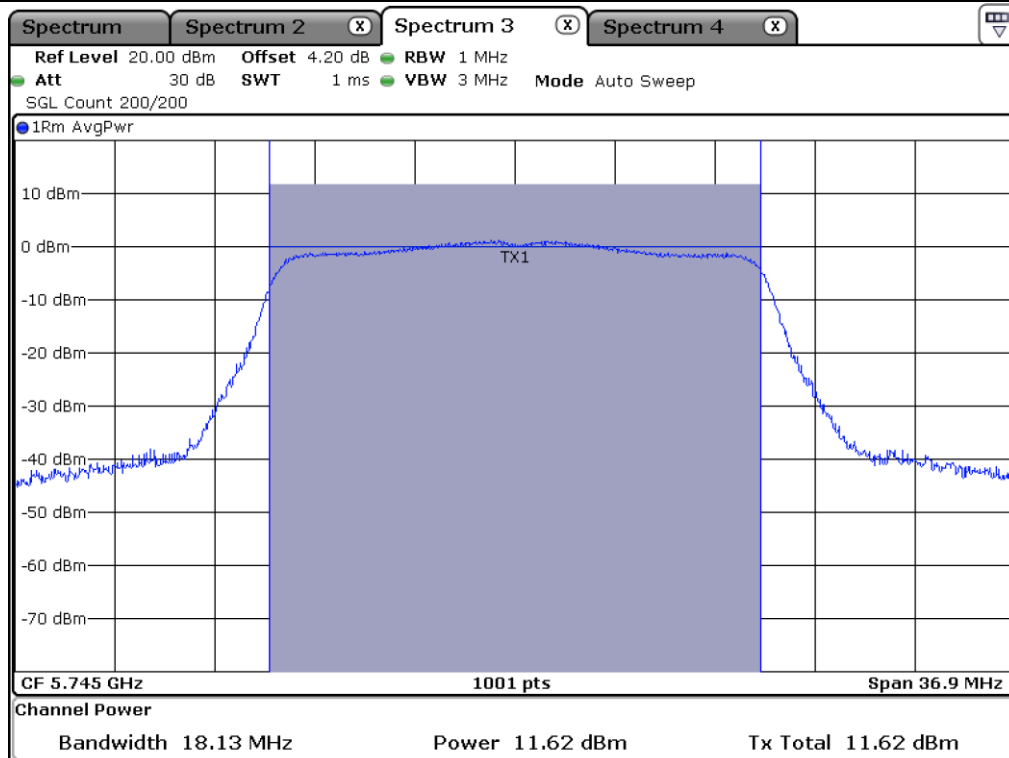
Low Channel @ 5 180 MHz



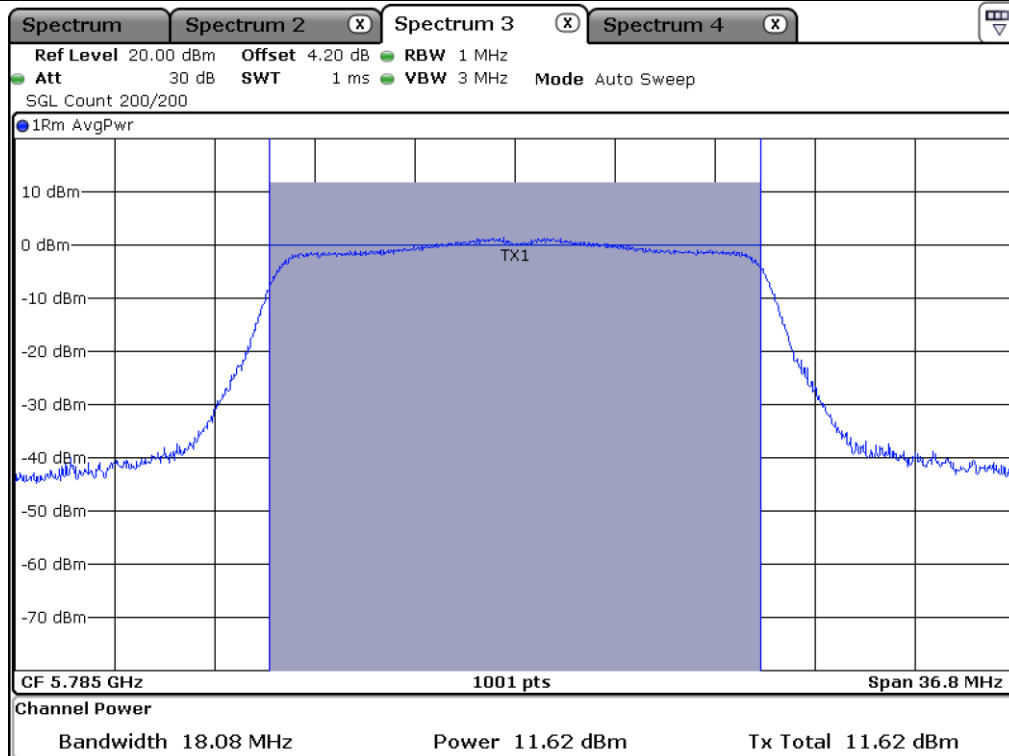
Middle Channel @ 5 220 MHz



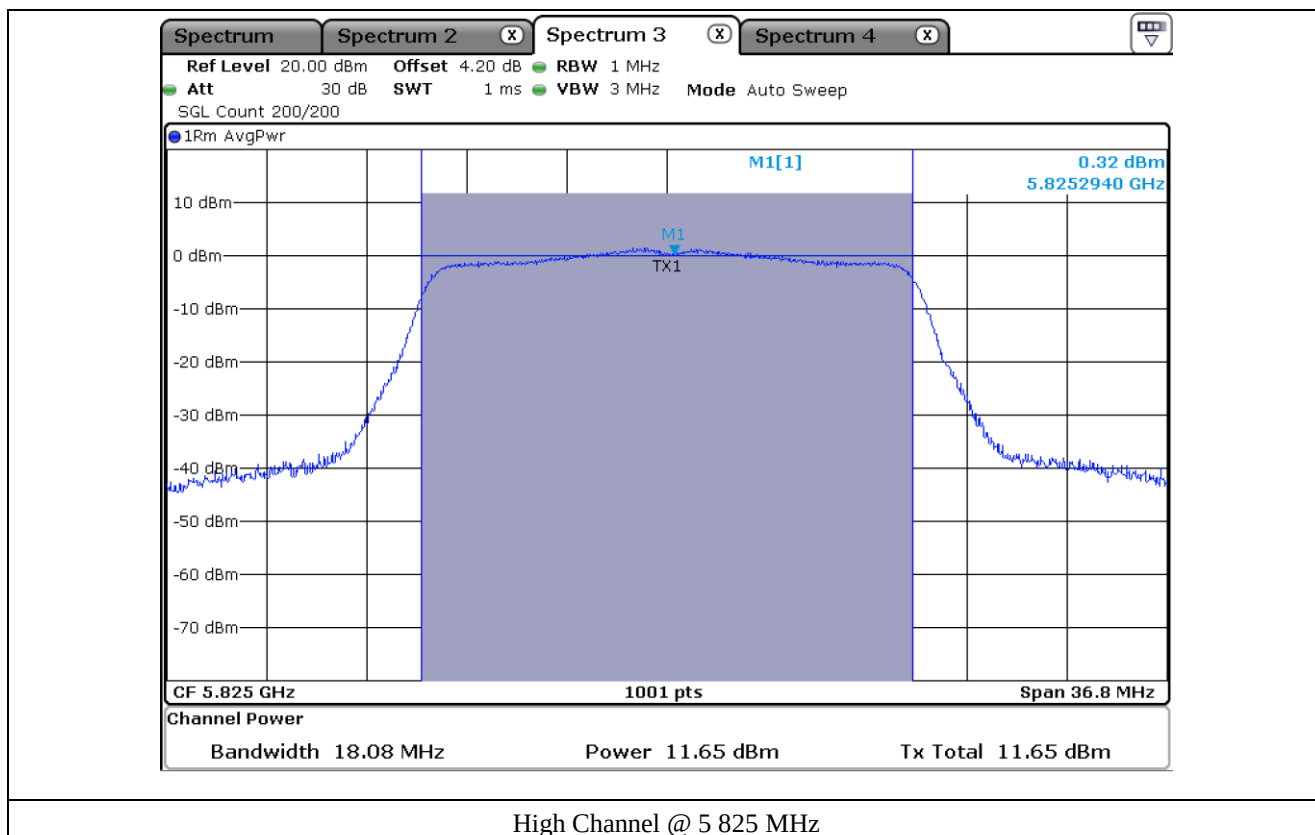
High Channel @ 5 240 MHz



Low Channel @ 5 745 MHz



Middle Channel @ 5 785 MHz



## 9.6 Test data for 802.11n\_HT40 RLAN Mode

### 9.6.1 Test data for Internal Antenna

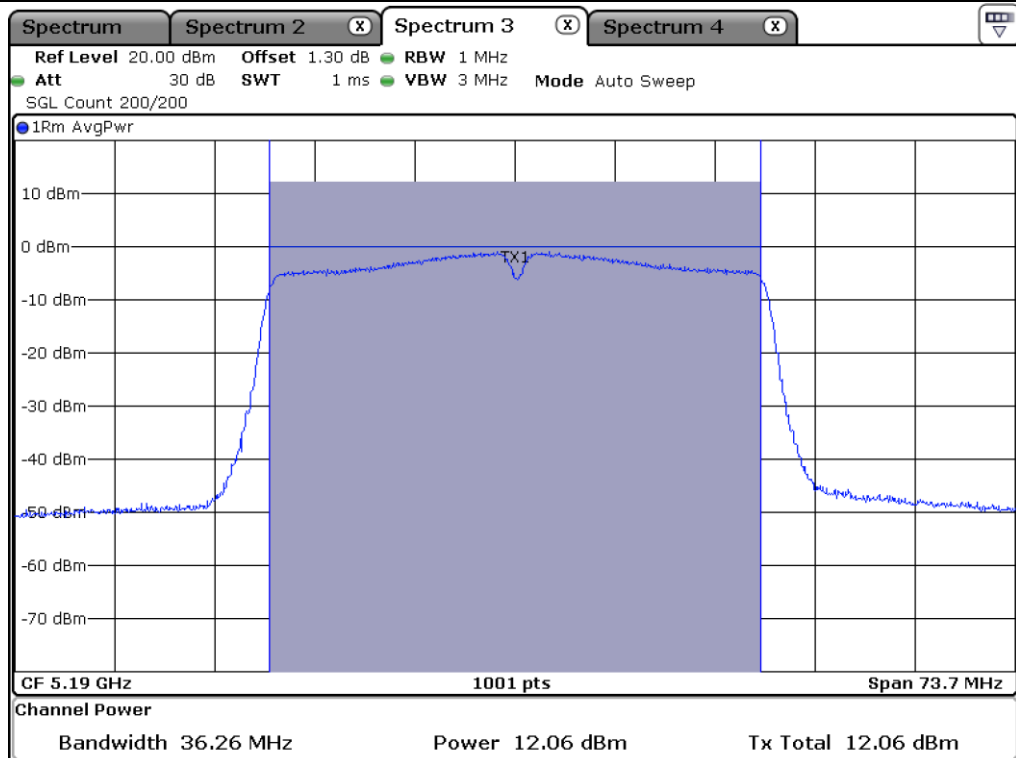
-. Test Result : Pass

-. Duty Cycle : 90.37 % (UNII 1), 90.41 % (UNII 3)

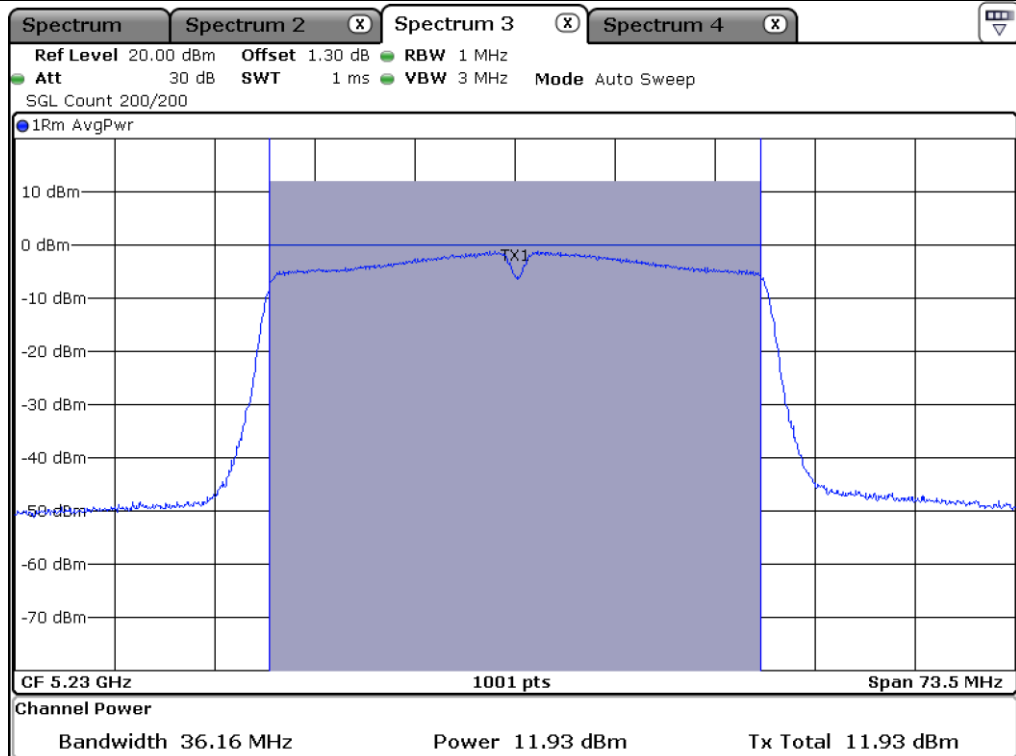
| FREQUENCY RANGE (MHz) | CHANNEL | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|---------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | Low     | 5 190.00        | 12.06                | 0.44      | 12.50        | 24.00       | 11.50       |
|                       | High    | 5 230.00        | 11.93                | 0.44      | 12.37        | 24.00       | 11.63       |
| 5 725 ~ 5 850         | Low     | 5 755.00        | 13.45                | 0.44      | 13.89        | 30.00       | 16.11       |
|                       | High    | 5 795.00        | 13.38                | 0.44      | 13.82        | 30.00       | 16.18       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

Remark: See next page for measurement data.

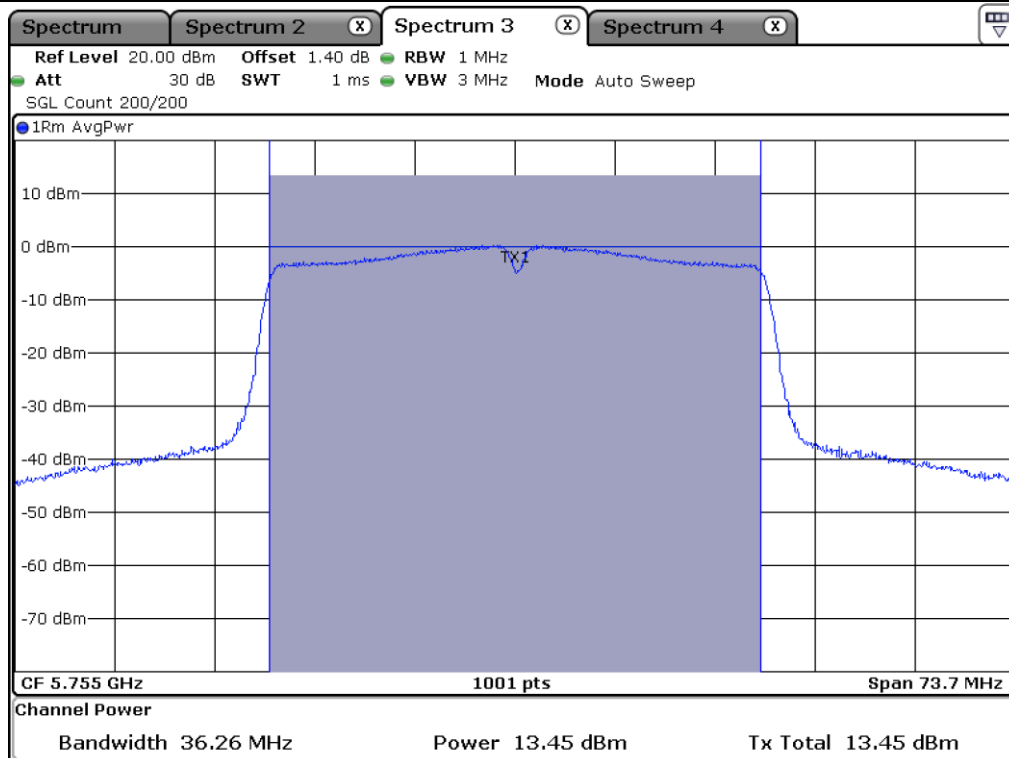


Low Channel @ 5 190 MHz

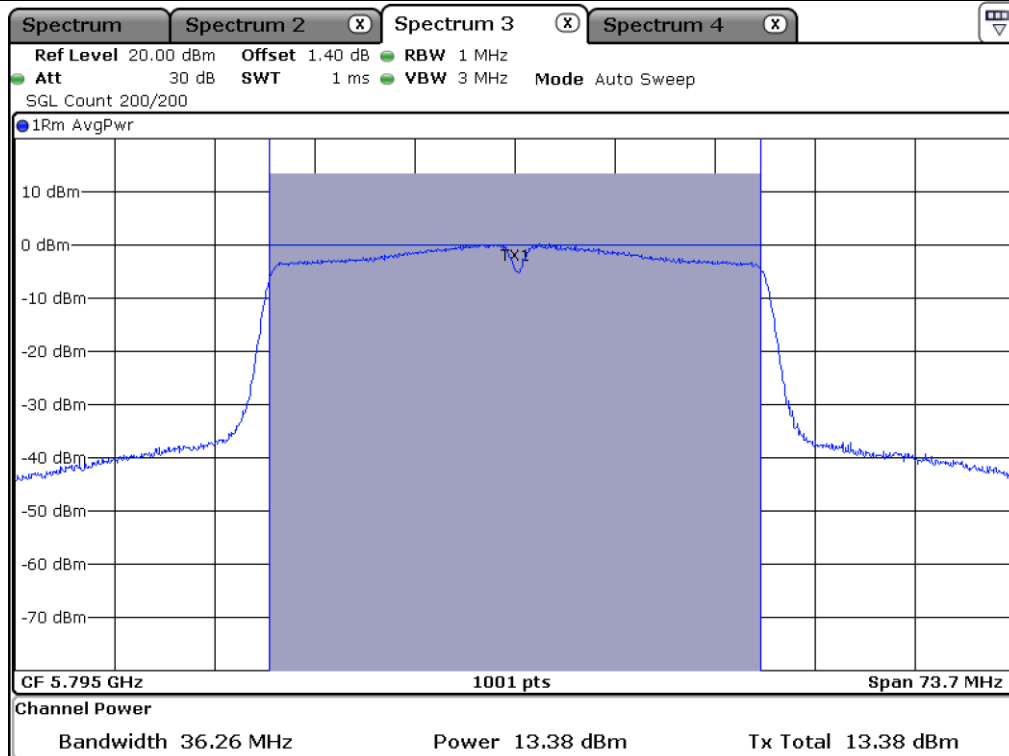


High Channel @ 5 230 MHz





Low Channel @ 5 755 MHz



High Channel @ 5 795 MHz

### 9.6.2 Test data for External Antenna

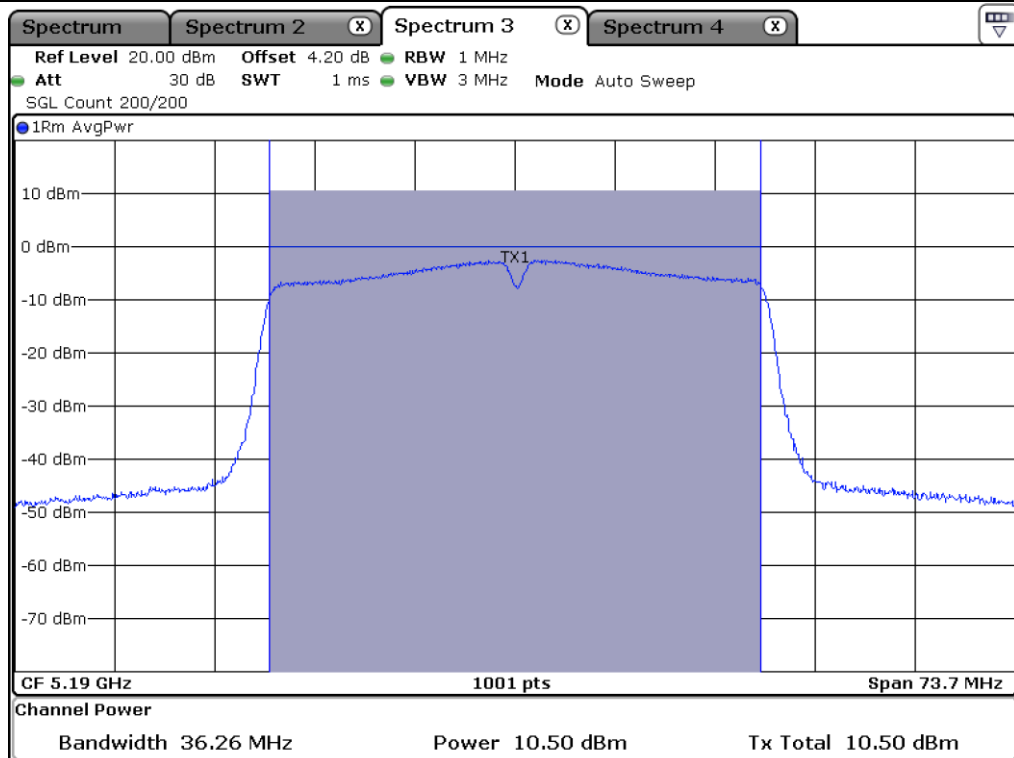
-. Test Result : Pass

-. Duty Cycle : 89.33 % (UNII 1), 90.37 % (UNII 3)

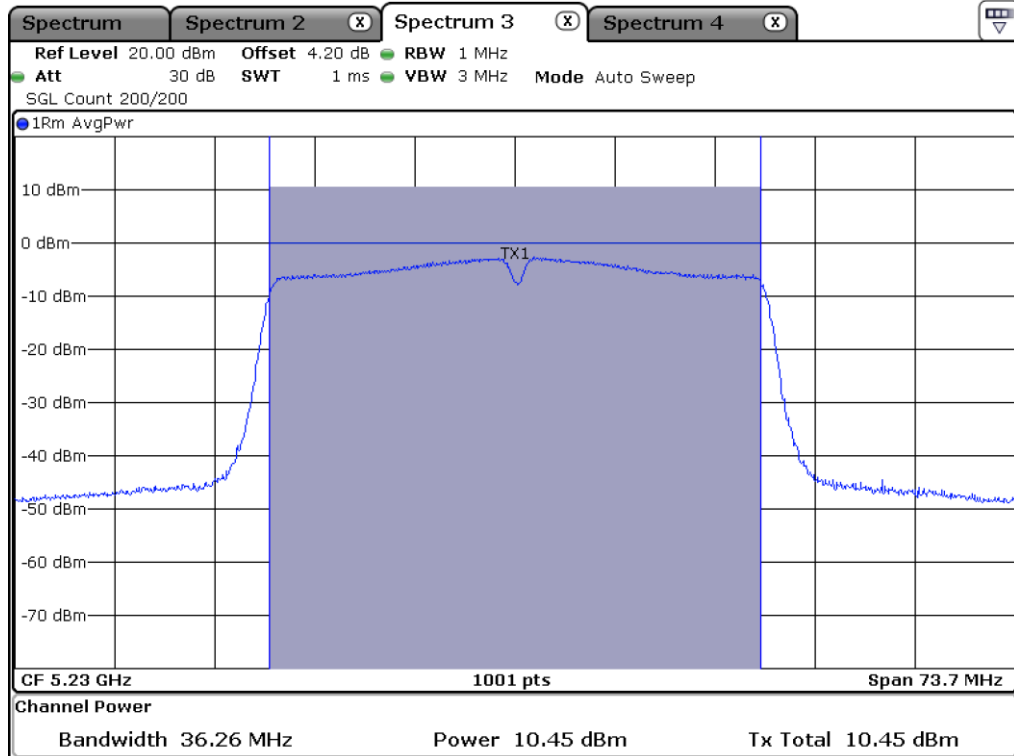
| FREQUENCY RANGE (MHz) | CHANNEL | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|---------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | Low     | 5 190.00        | 10.50                | 0.49      | 10.99        | 24.00       | 13.01       |
|                       | High    | 5 230.00        | 10.45                | 0.49      | 10.94        | 24.00       | 13.06       |
| 5 725 ~ 5 850         | Low     | 5 755.00        | 9.94                 | 0.44      | 10.38        | 30.00       | 19.62       |
|                       | High    | 5 795.00        | 10.05                | 0.44      | 10.49        | 30.00       | 19.51       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

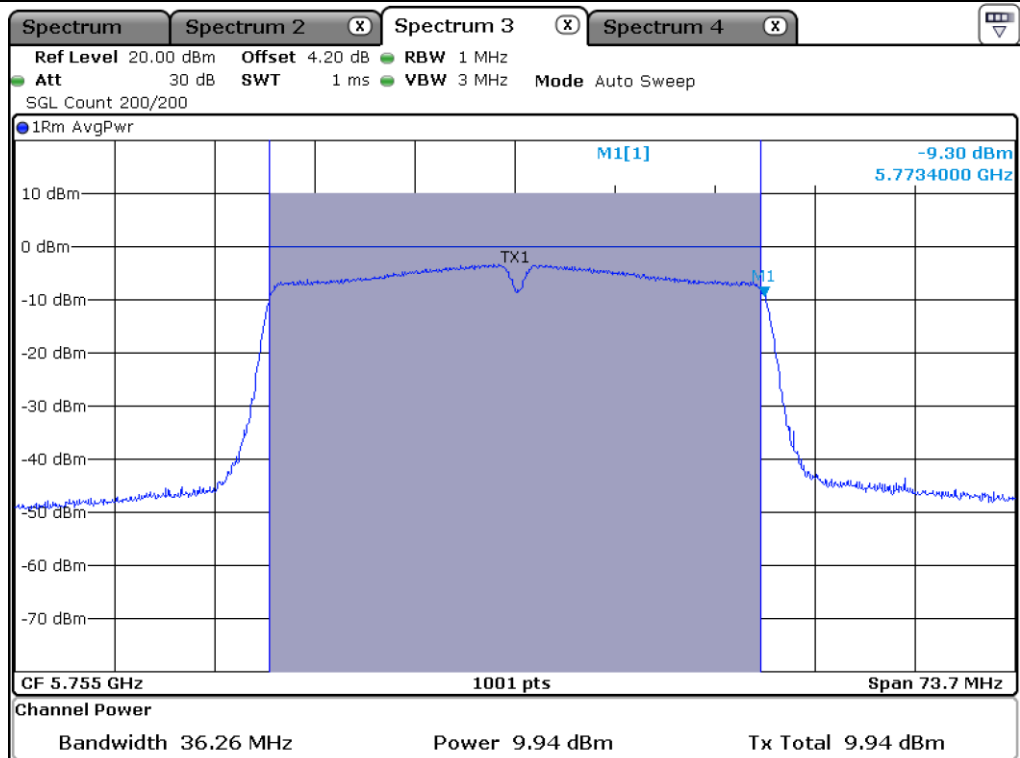
Remark: See next page for measurement data.



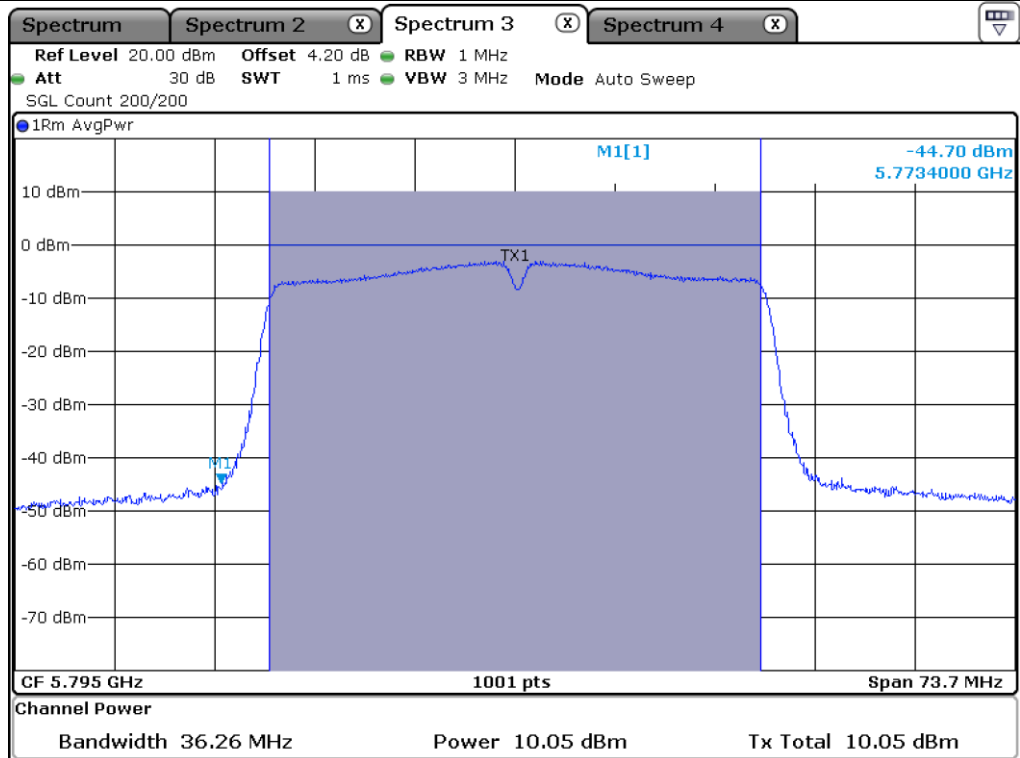
Low Channel @ 5 190 MHz



High Channel @ 5 230 MHz



Low Channel @ 5 755 MHz



High Channel @ 5 795 MHz

## 9.7 Test data for 802.11ac\_HT80 RLAN Mode

### 9.7.1 Test data for Internal Antenna

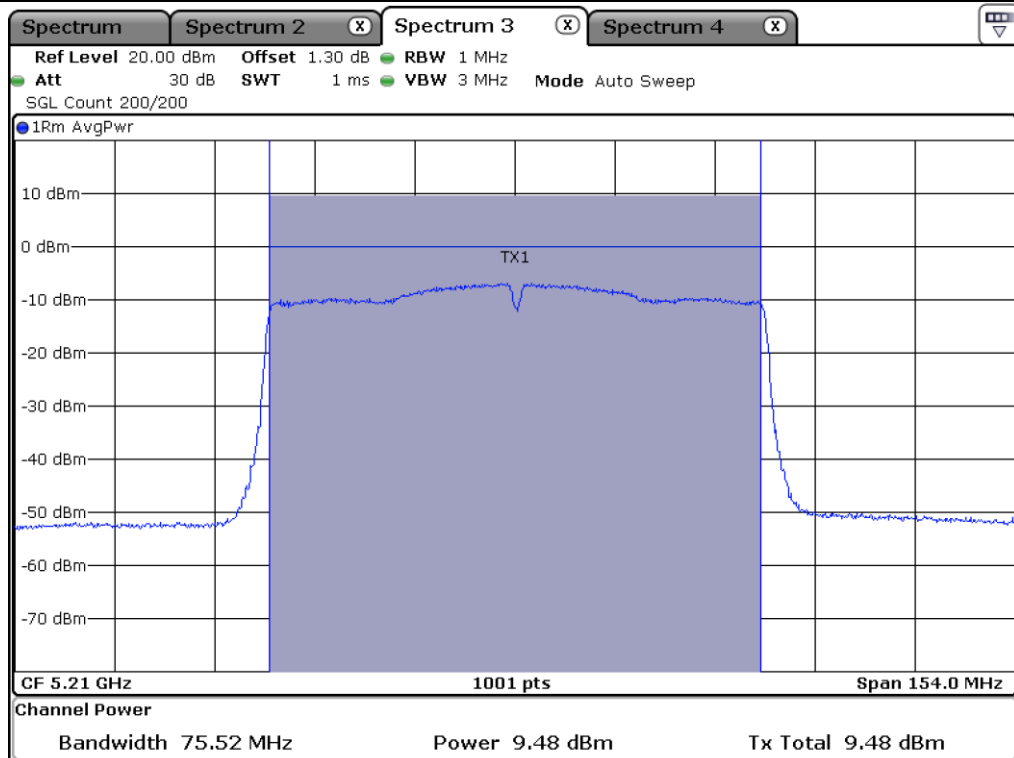
-. Test Result : Pass

-. Duty Cycle : 81.61 % (UNII 1), 81.49 % (UNII 3)

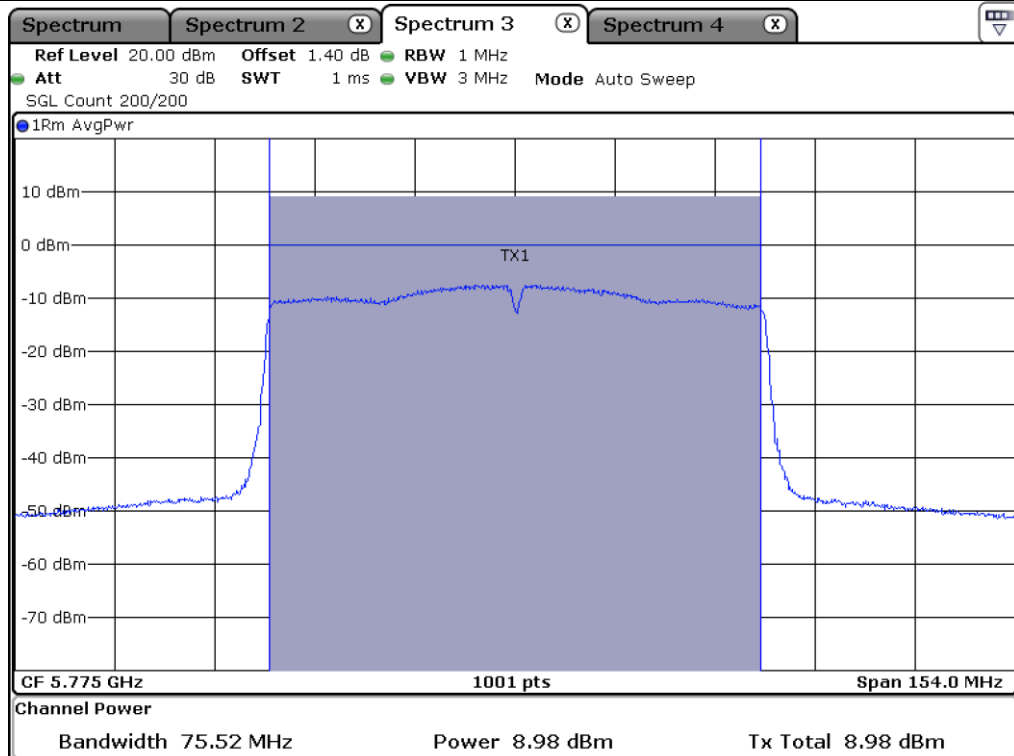
| FREQUENCY<br>RANGE (MHz) | CHANNEL | FREQUENCY<br>(MHz) | MEASURED<br>VALUE (dBm) | C.F<br>(dB) | RESULT<br>(dBm) | LIMIT<br>(dBm) | MARGIN<br>(dB) |
|--------------------------|---------|--------------------|-------------------------|-------------|-----------------|----------------|----------------|
| 5 150 ~ 5 250            | Middle  | 5 210.00           | 9.48                    | 0.88        | 10.36           | 24.00          | 13.64          |
| 5 725 ~ 5 850            | Middle  | 5 775.00           | 8.98                    | 0.89        | 9.87            | 30.00          | 20.13          |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

Remark: See next page for measurement data.



Middle Channel @ 5 210 MHz



Middle Channel @ 5 775 MHz

### 9.7.2 Test data for External Antenna

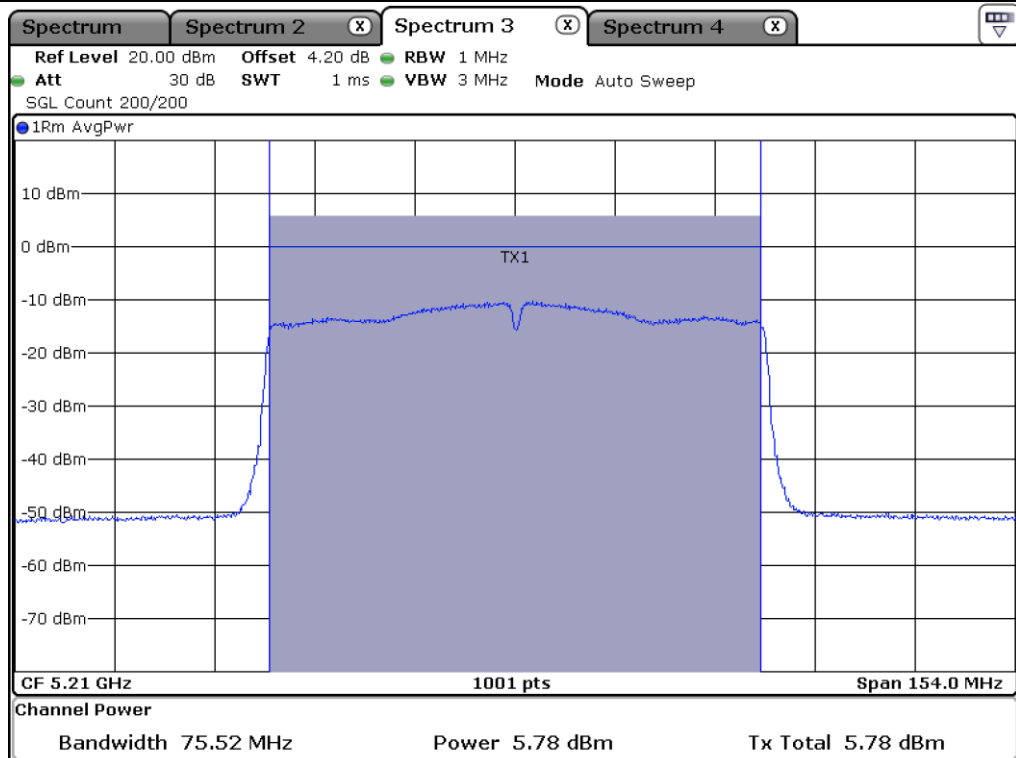
-. Test Result : Pass

-. Duty Cycle : 82.39 % (UNII 1), 82.01 % (UNII 3)

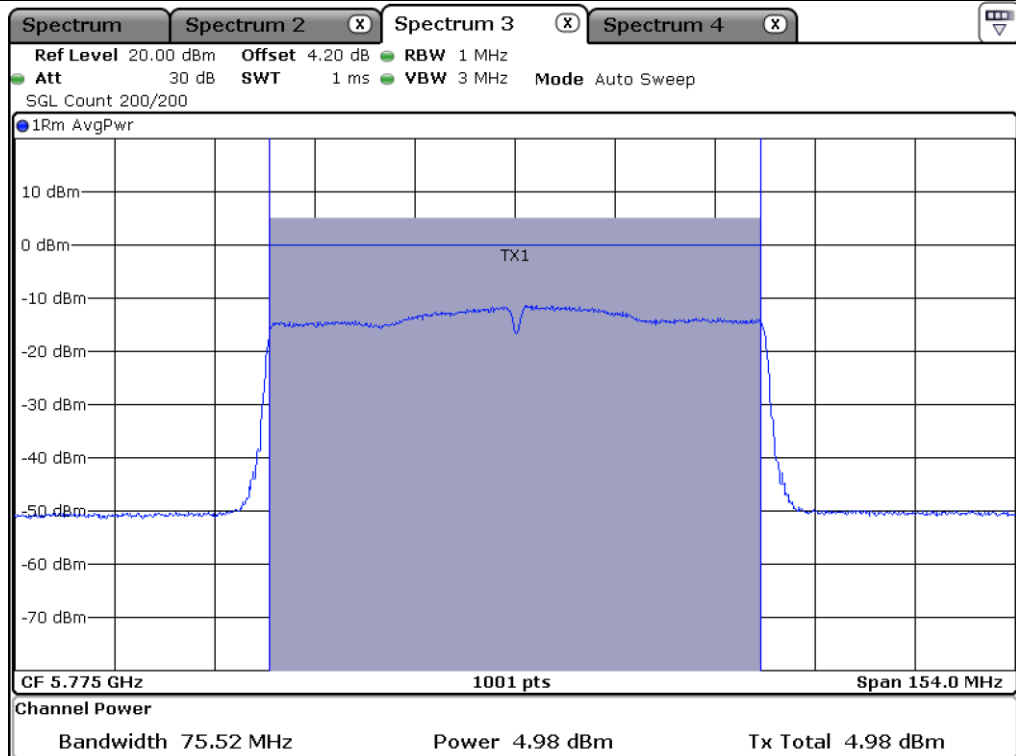
| FREQUENCY<br>RANGE (MHz) | CHANNEL | FREQUENCY<br>(MHz) | MEASURED<br>VALUE (dBm) | C.F<br>(dB) | RESULT<br>(dBm) | LIMIT<br>(dBm) | MARGIN<br>(dB) |
|--------------------------|---------|--------------------|-------------------------|-------------|-----------------|----------------|----------------|
| 5 150 ~ 5 250            | Middle  | 5 210.00           | 5.78                    | 0.84        | 6.62            | 24.00          | 17.38          |
| 5 725 ~ 5 850            | Middle  | 5 775.00           | 4.98                    | 0.86        | 5.84            | 30.00          | 24.16          |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

Remark: See next page for measurement data.



Middle Channel @ 5 210 MHz



Middle Channel @ 5 775 MHz



## 10. PEAK POWER SPECTRAL DENSITY

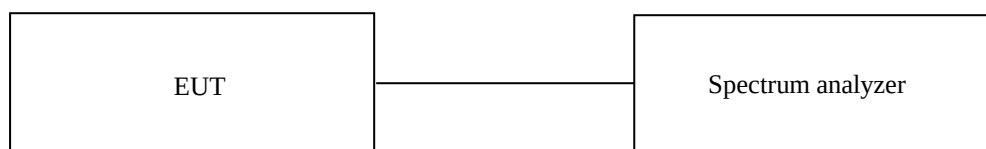
### 10.1 Operating environment

Temperature : 23 °C

Relative humidity : 41 % R.H.

### 10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz(500 kHz for frequency range 5 725 MHz ~ 5 850 MHz), the video bandwidth is set to 3 times the resolution bandwidth. The maximum level from the EUT in 1 MHz bandwidth was measured with above condition.



### 10.3 Test Date

November 25, 2021 ~ January 18, 2022

## 10.4 Test data for 802.11a RLAN Mode

### 10.4.1 Test data for Internal Antenna

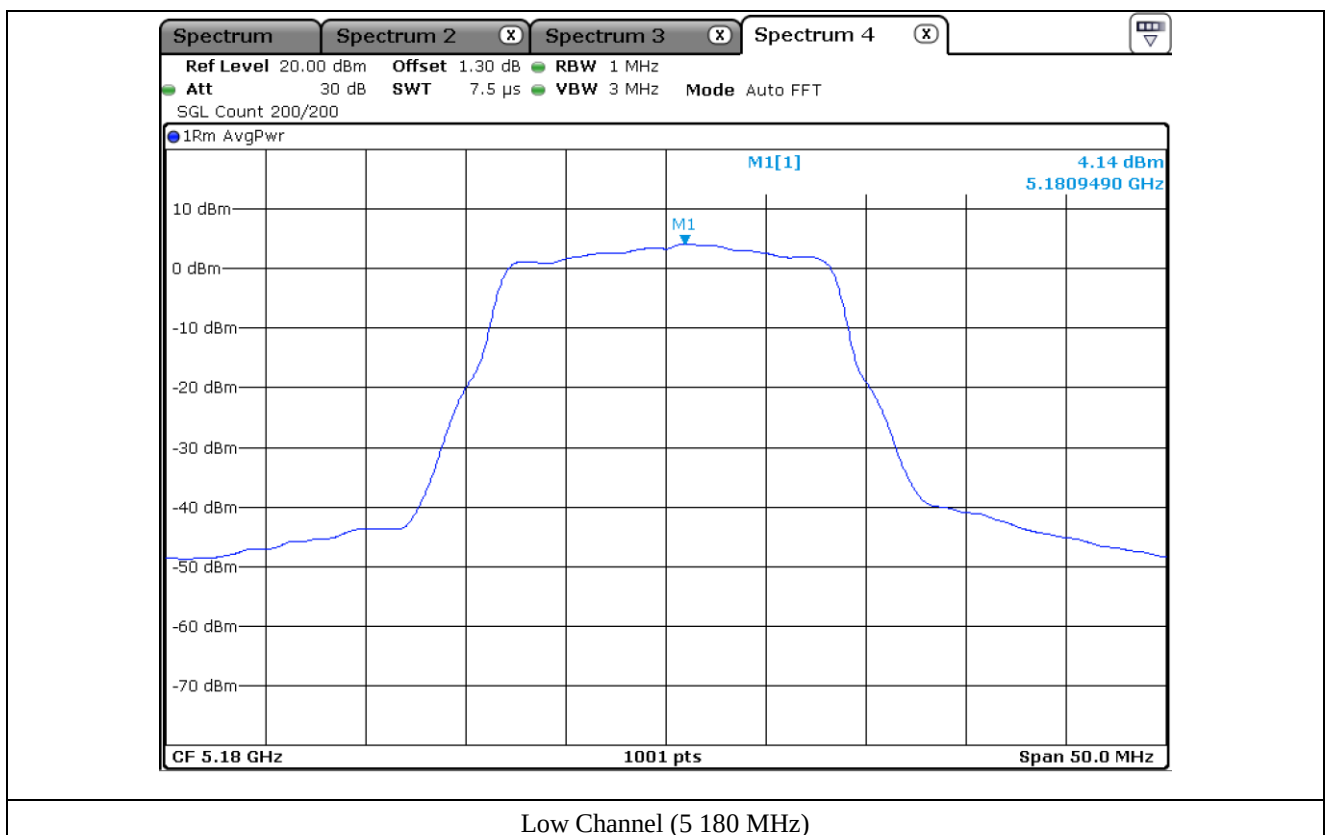
-. Operating condition : Highest Output Power Transmitting Mode

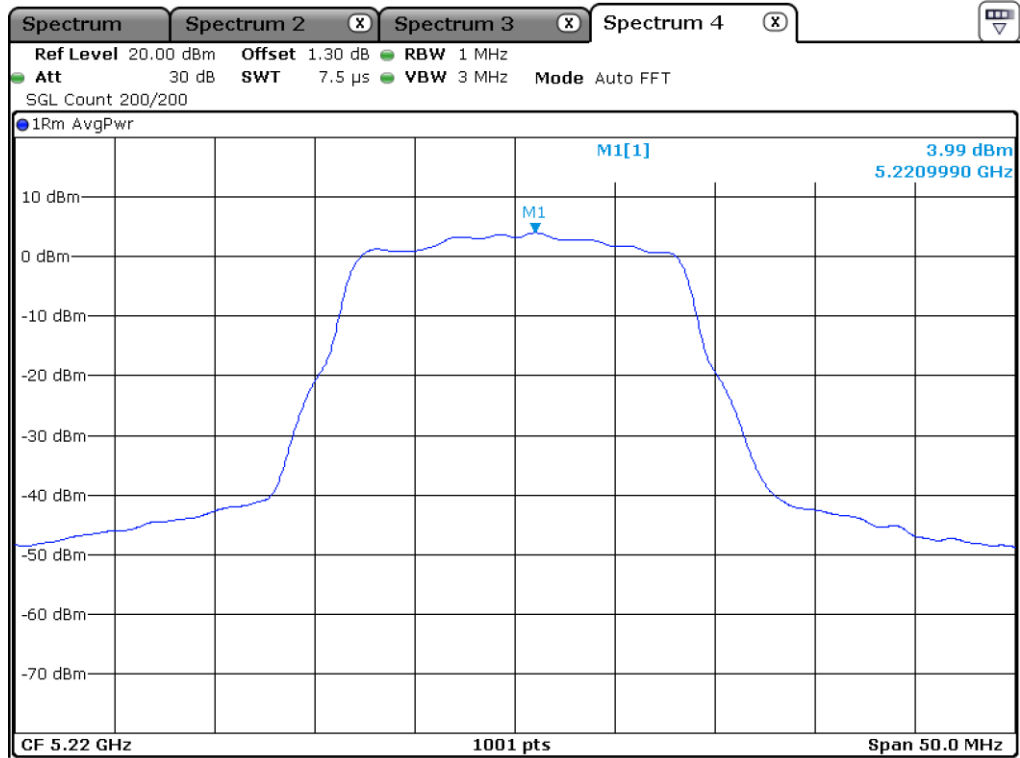
-. Duty Cycle : 94.93 % (UNII 1), 94.91 % (UNII 3)

-. Test Result : Pass

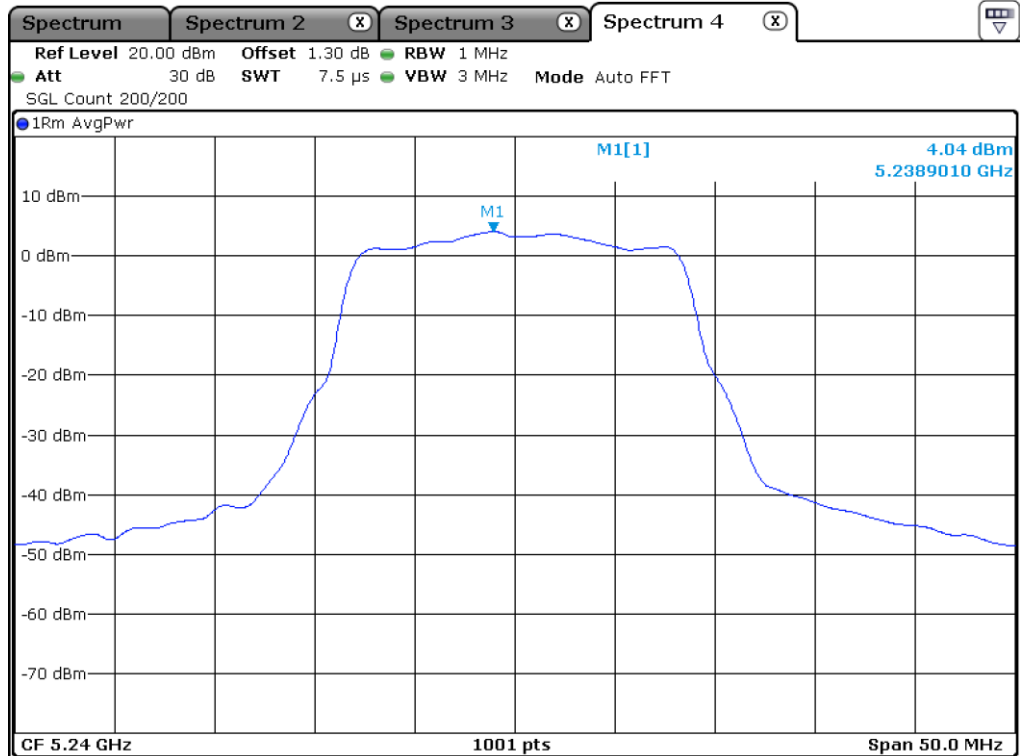
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 180.00        | 4.14                 | 0.23      | 4.37         | 11.00       | 6.63        |
|                       | 5 220.00        | 3.99                 | 0.23      | 4.22         | 11.00       | 6.78        |
|                       | 5 240.00        | 4.04                 | 0.23      | 4.27         | 11.00       | 6.73        |
| 5 725 ~ 5 850         | 5 745.00        | 0.70                 | 0.23      | 0.93         | 30.00       | 29.07       |
|                       | 5 785.00        | 0.63                 | 0.23      | 0.86         | 30.00       | 29.14       |
|                       | 5 825.00        | 0.78                 | 0.23      | 1.01         | 30.00       | 28.99       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

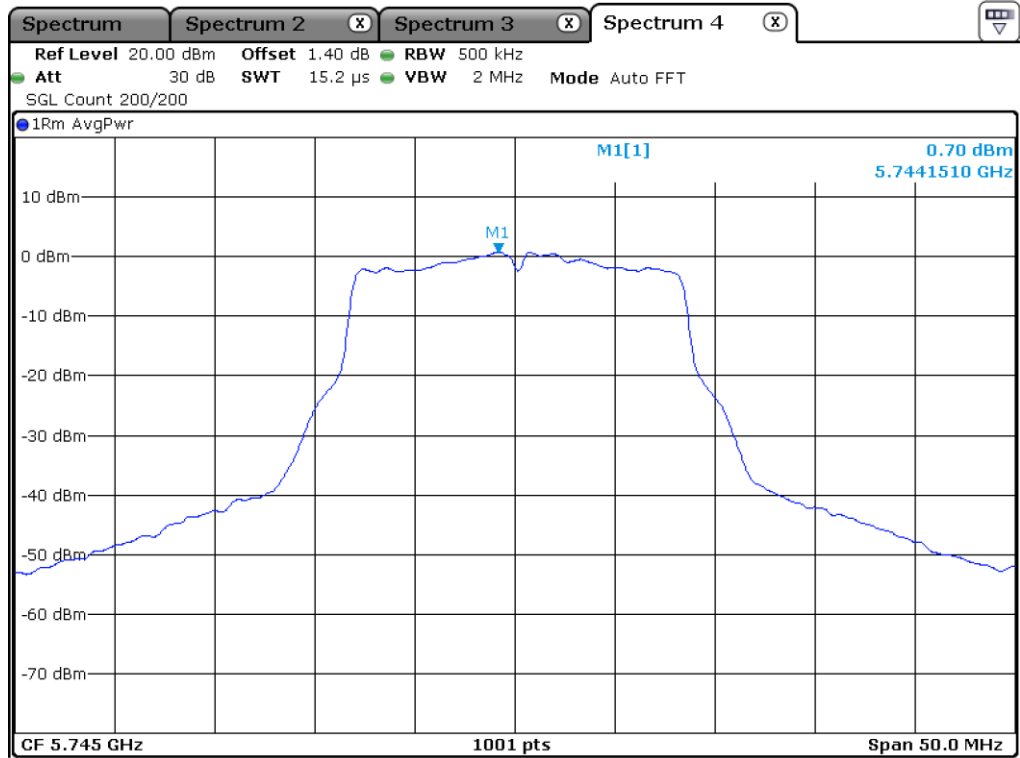




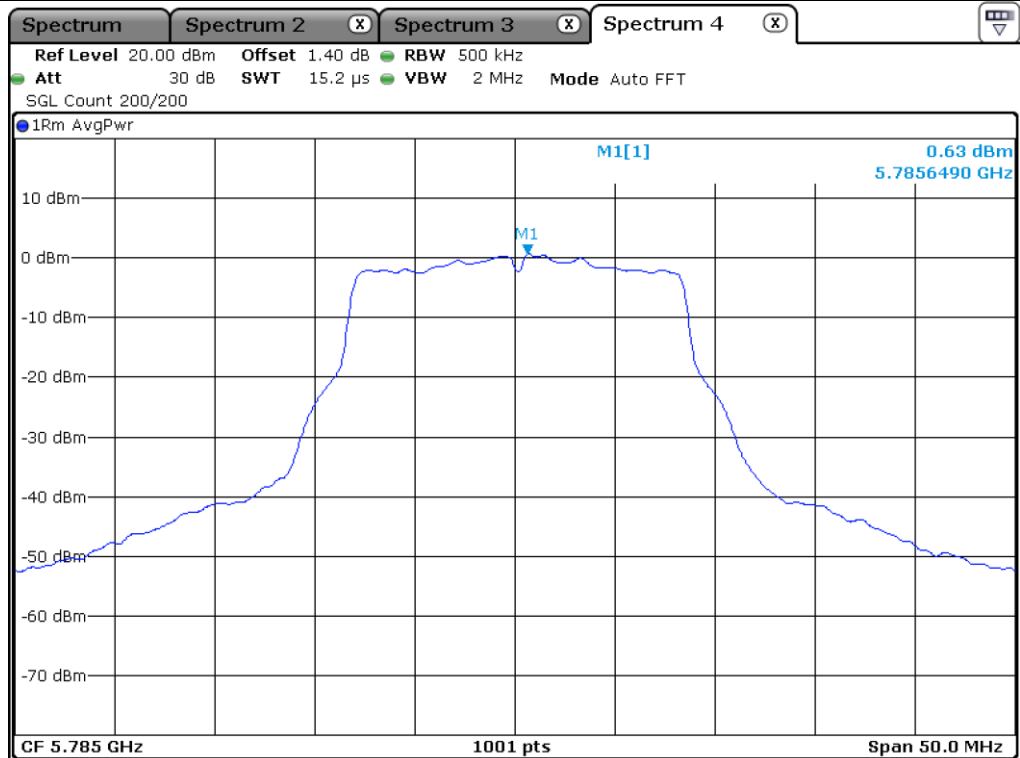
Middle Channel (5 220 MHz)



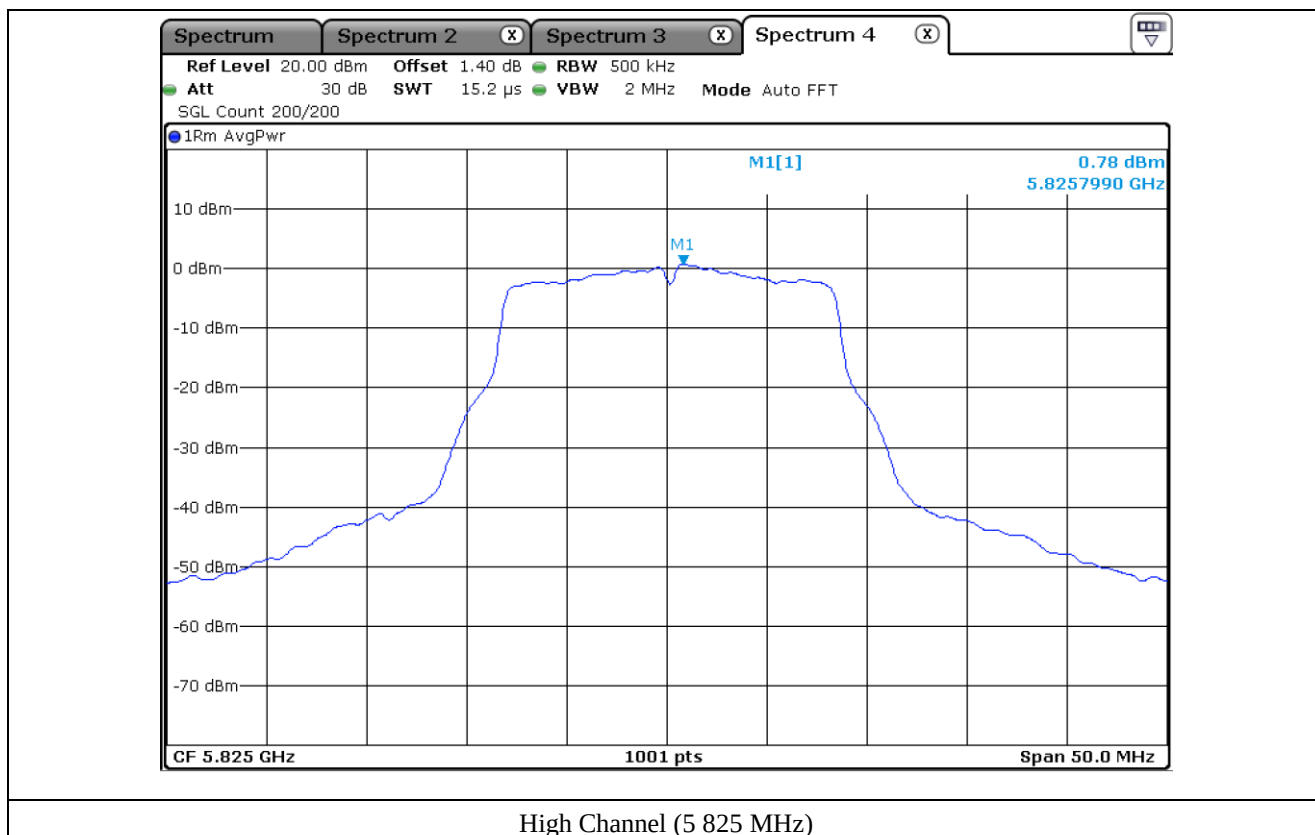
High Channel (5 240 MHz)



Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)



### 10.4.2 Test data for External Antenna

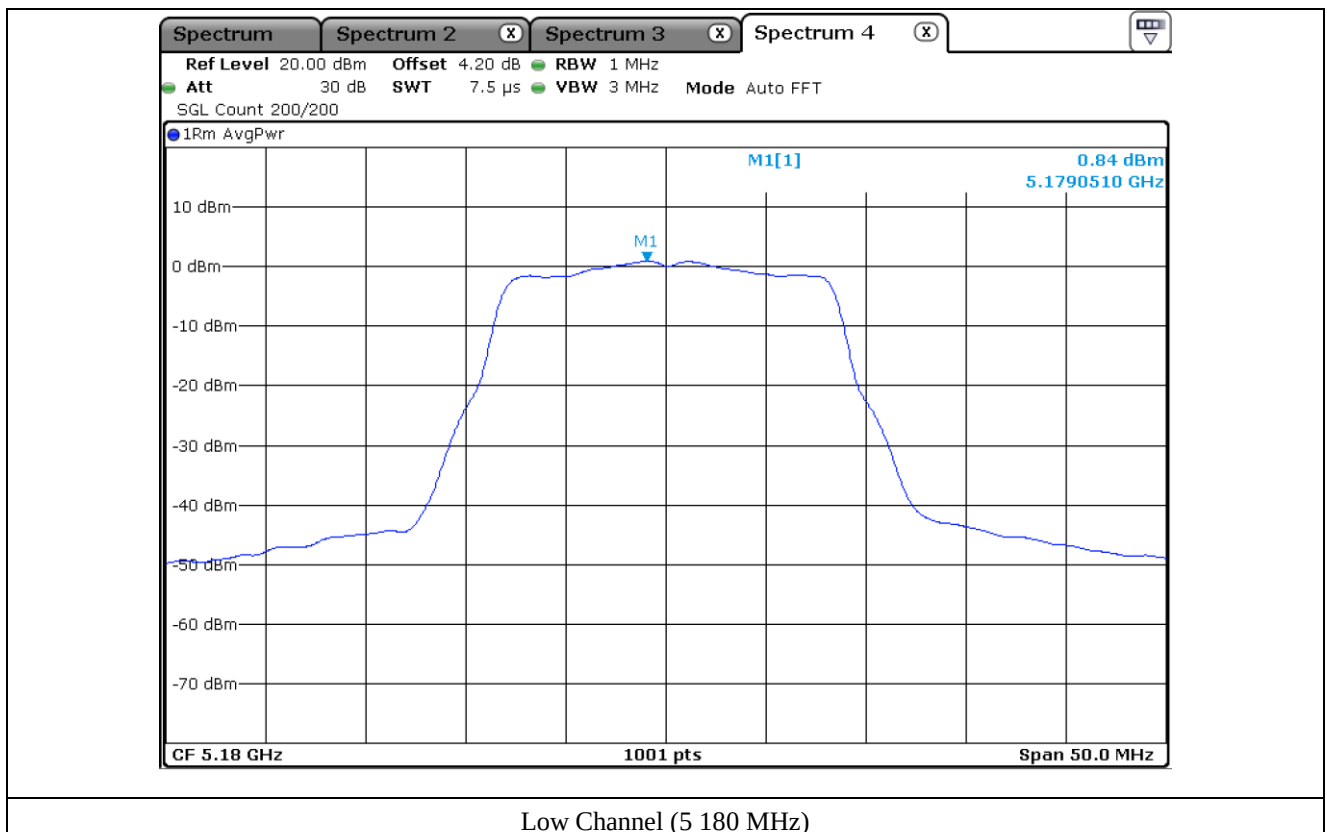
-. Operating condition : Highest Output Power Transmitting Mode

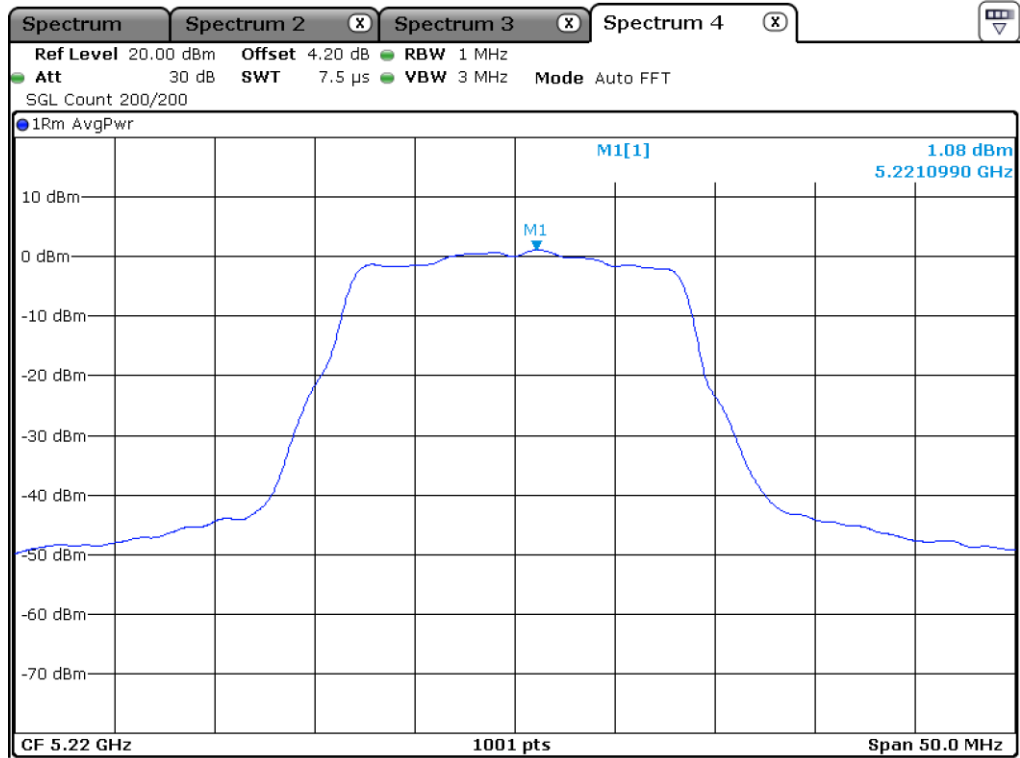
-. Duty Cycle : 94.92 % (UNII 1), 94.93 % (UNII 3)

-. Test Result : Pass

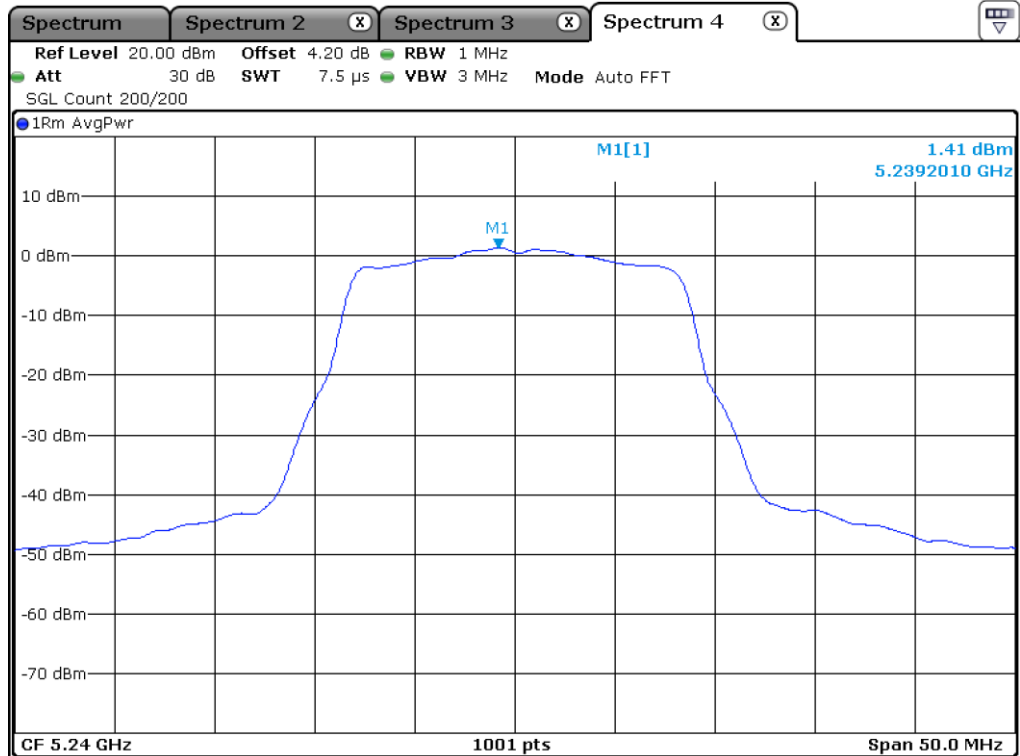
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 180.00        | 0.84                 | 0.23      | 1.07         | 11.00       | 9.93        |
|                       | 5 220.00        | 1.08                 | 0.23      | 1.31         | 11.00       | 9.69        |
|                       | 5 240.00        | 1.41                 | 0.23      | 1.64         | 11.00       | 9.36        |
| 5 725 ~ 5 850         | 5 745.00        | -2.26                | 0.23      | -2.03        | 30.00       | 32.03       |
|                       | 5 785.00        | -2.21                | 0.23      | -1.98        | 30.00       | 31.98       |
|                       | 5 825.00        | -2.14                | 0.23      | -1.91        | 30.00       | 31.91       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

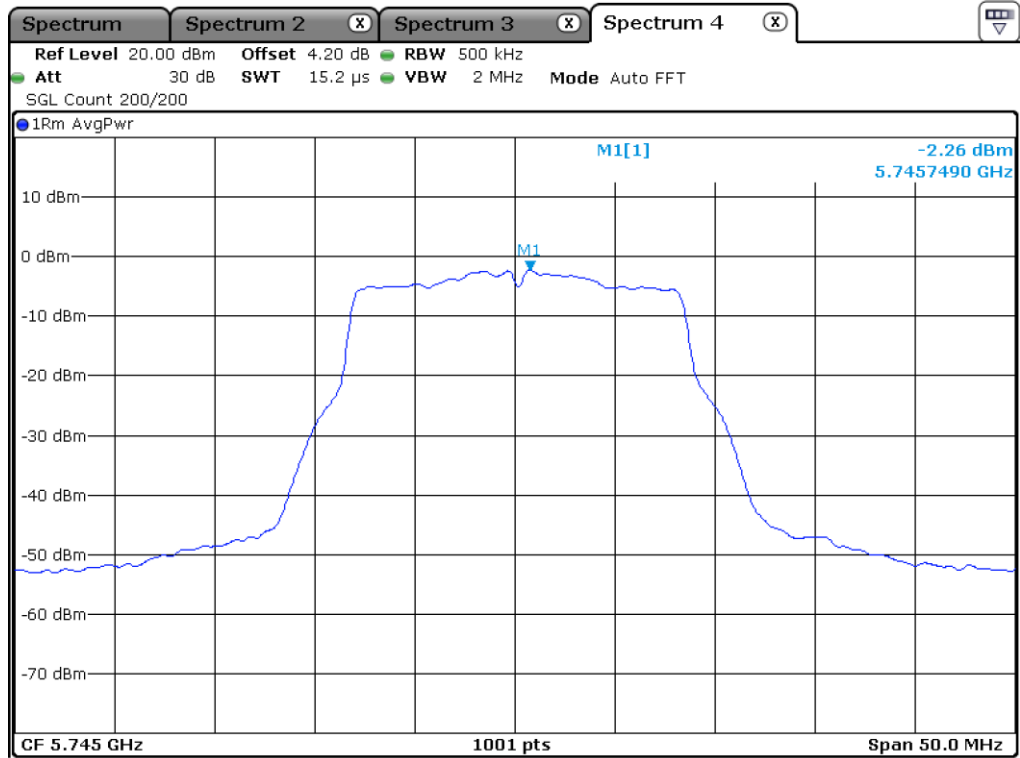




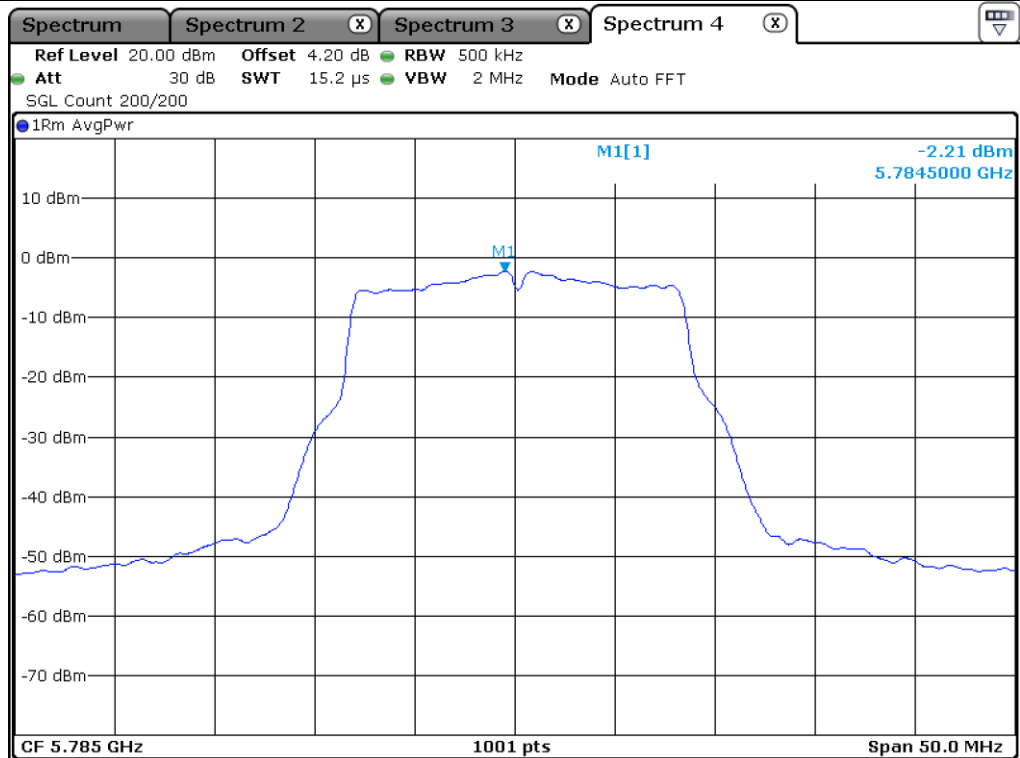
Middle Channel (5 220 MHz)



High Channel (5 240 MHz)

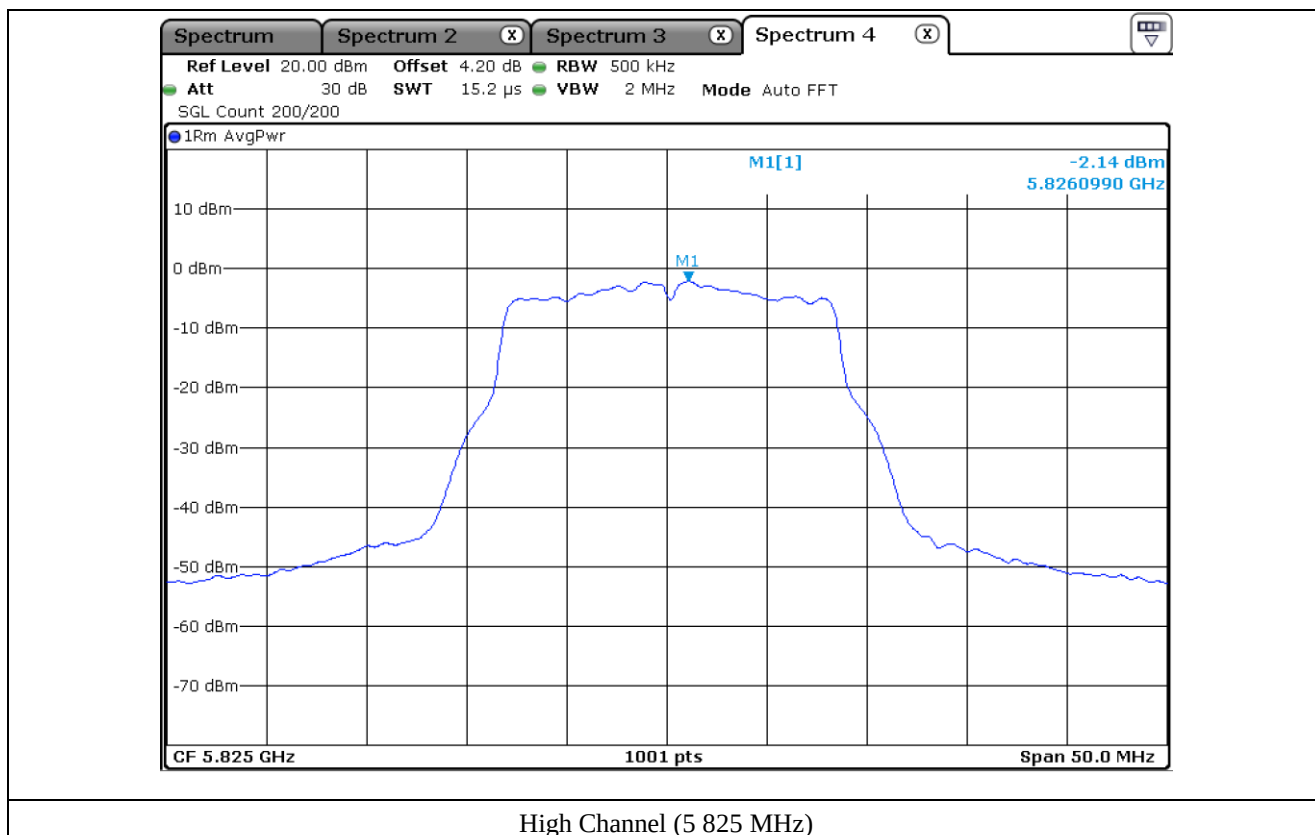


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)





## 10.5 Test data for 802.11n\_HT20 RLAN Mode

### 10.5.1 Test data for Internal Antenna

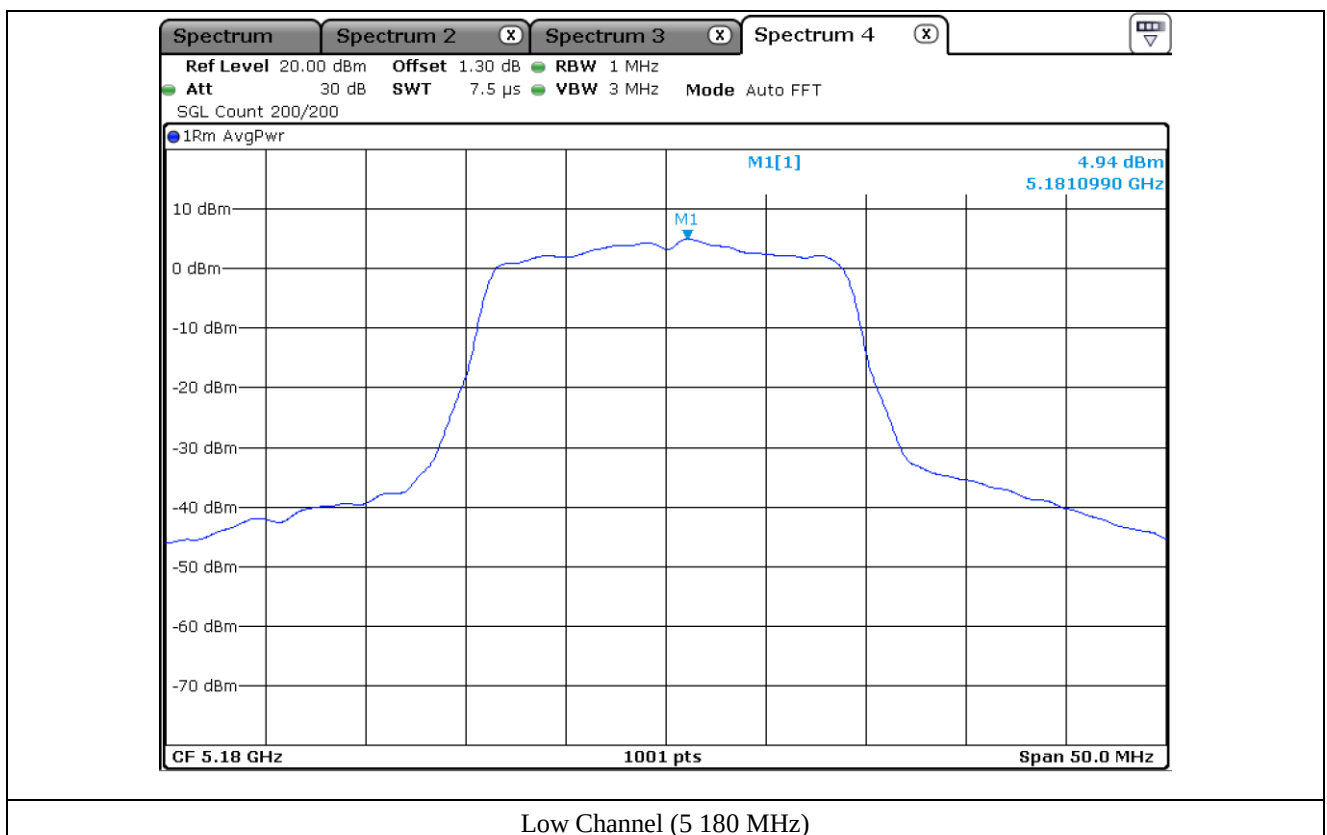
-. Operating condition : Highest Output Power Transmitting Mode

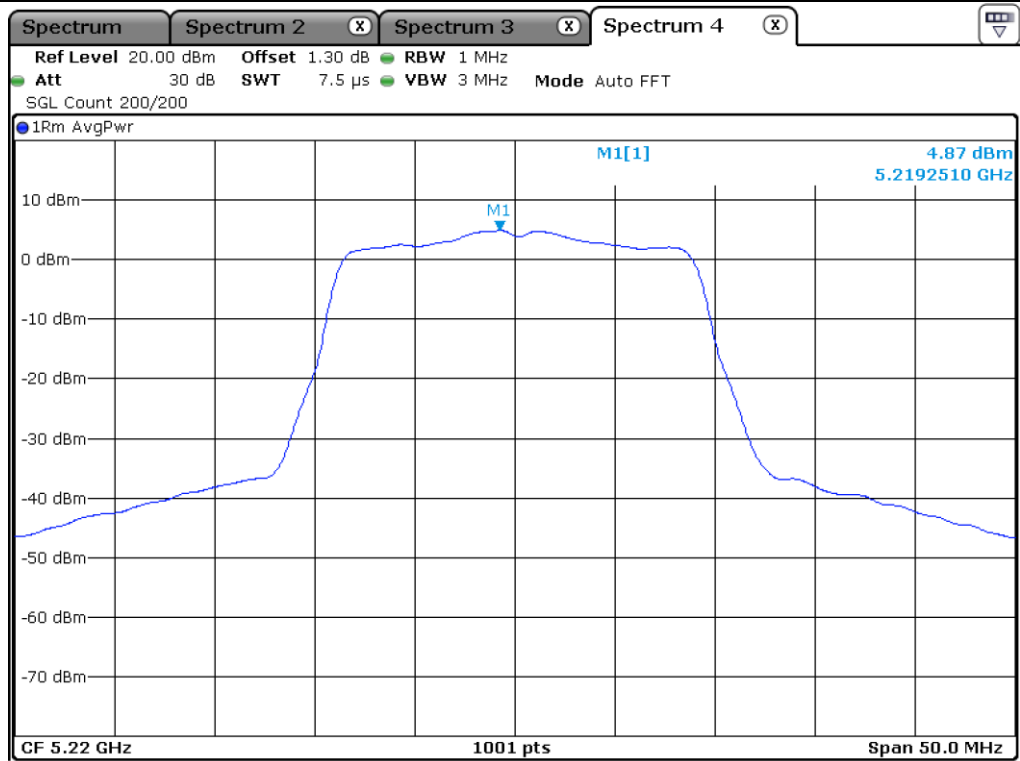
-. Duty Cycle : 94.58 % (UNII 1), 94.51 % (UNII 3)

-. Test Result : Pass

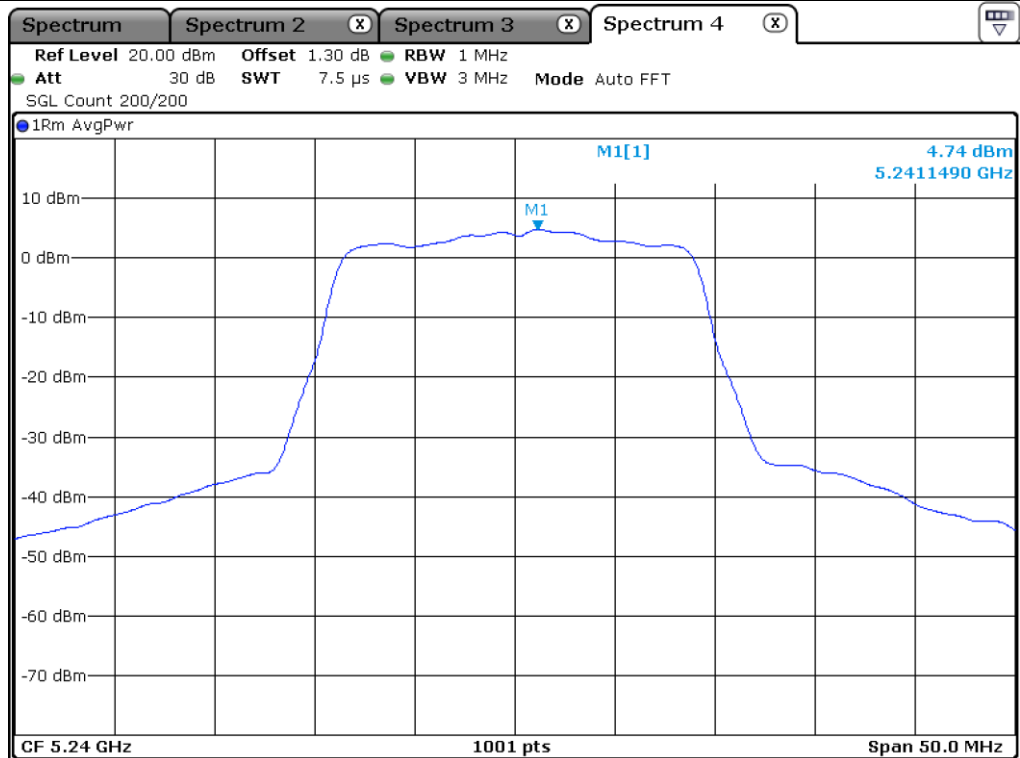
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 180.00        | 4.94                 | 0.24      | 5.18         | 11.00       | 5.82        |
|                       | 5 220.00        | 4.87                 | 0.24      | 5.11         | 11.00       | 5.89        |
|                       | 5 240.00        | 4.74                 | 0.24      | 4.98         | 11.00       | 6.02        |
| 5 725 ~ 5 850         | 5 745.00        | 1.65                 | 0.25      | 1.90         | 30.00       | 28.10       |
|                       | 5 785.00        | 1.43                 | 0.25      | 1.68         | 30.00       | 28.32       |
|                       | 5 825.00        | 1.53                 | 0.25      | 1.78         | 30.00       | 28.22       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

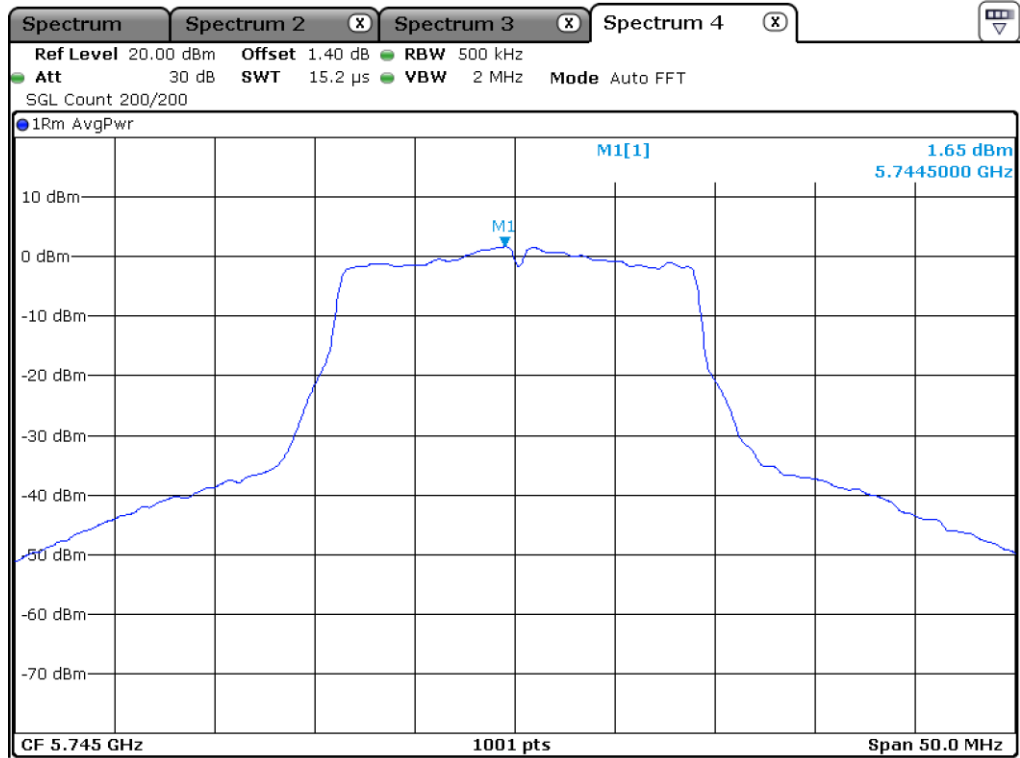




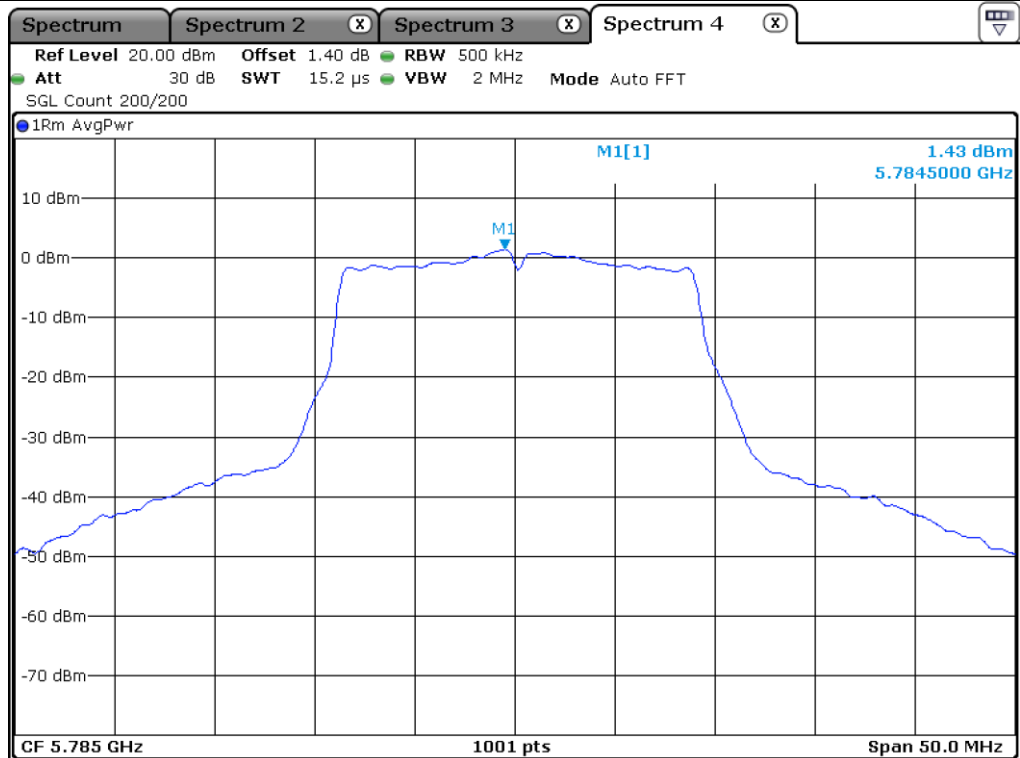
Middle Channel (5 220 MHz)



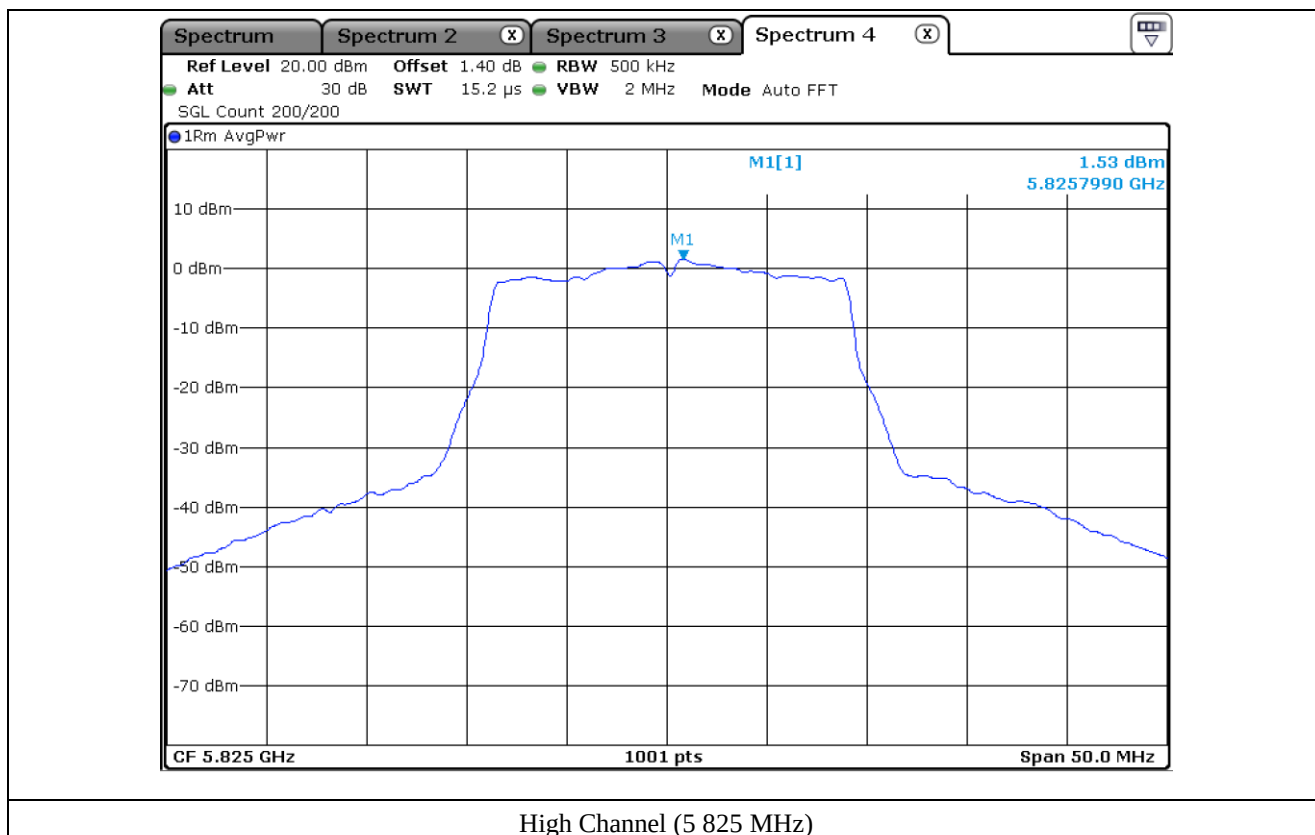
High Channel (5 240 MHz)



Low Channel (5.745 MHz)



Middle Channel (5.785 MHz)



### 10.5.2 Test data for External Antenna

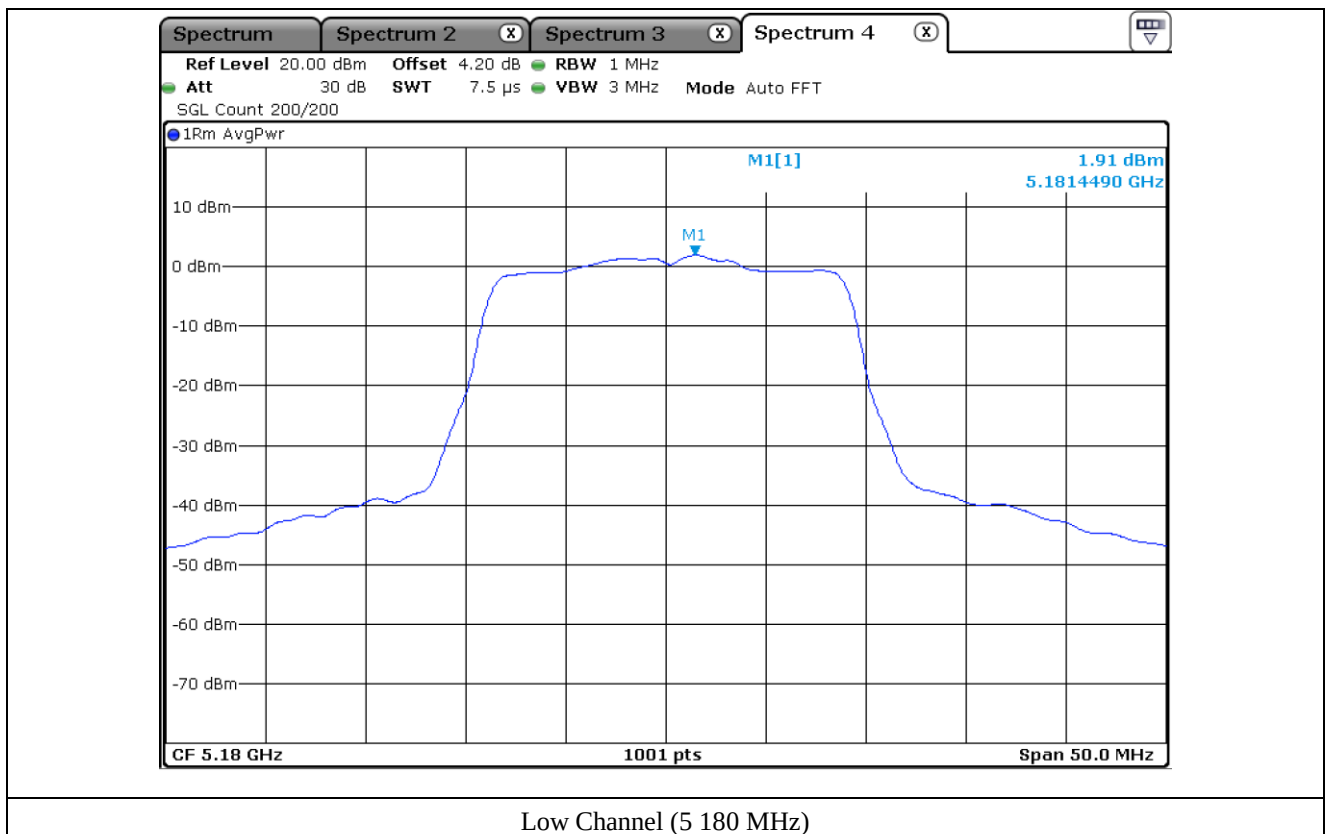
-. Operating condition : Highest Output Power Transmitting Mode

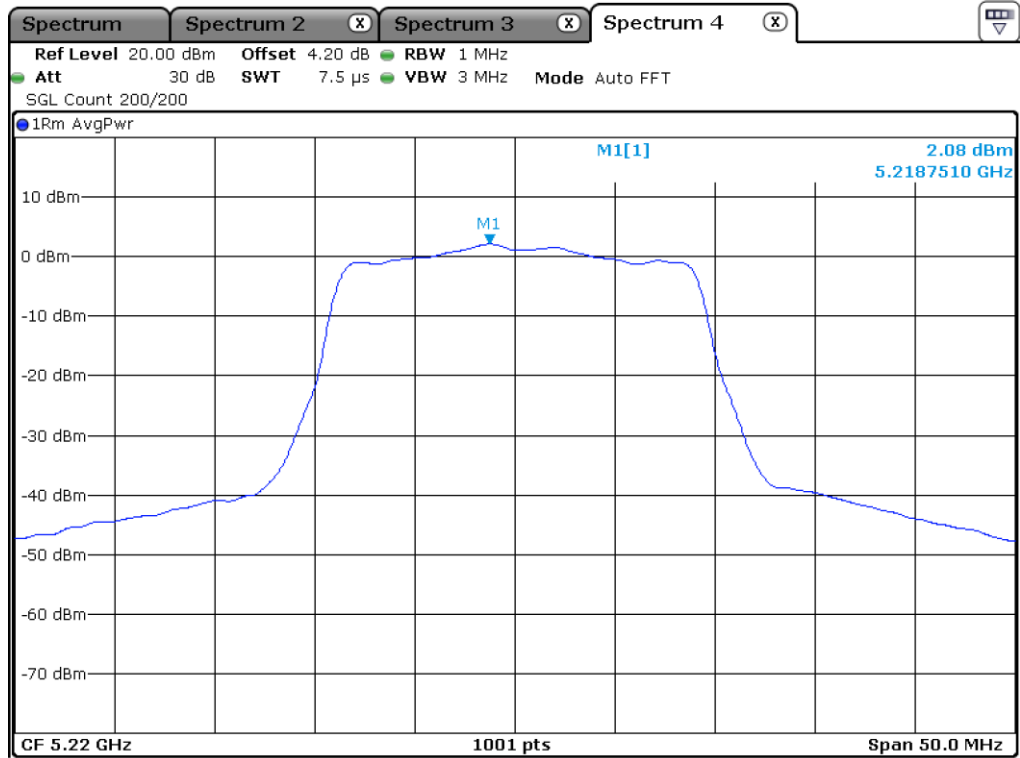
-. Duty Cycle : 94.46 % (UNII 1), 94.63 % (UNII 3)

-. Test Result : Pass

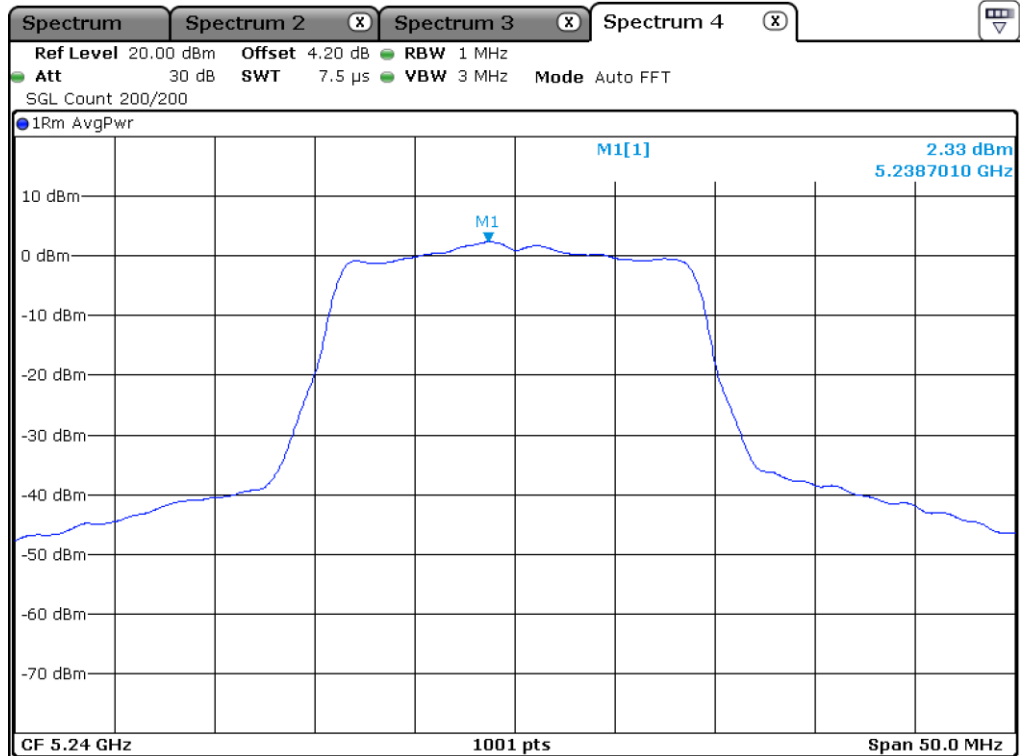
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F. (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|-----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 180.00        | 1.91                 | 0.25      | 2.16         | 11.00       | 8.84        |
|                       | 5 220.00        | 2.08                 | 0.25      | 2.33         | 11.00       | 8.67        |
|                       | 5 240.00        | 2.33                 | 0.25      | 2.58         | 11.00       | 8.42        |
| 5 725 ~ 5 850         | 5 745.00        | -1.88                | 0.24      | -1.64        | 30.00       | 31.64       |
|                       | 5 785.00        | -1.84                | 0.24      | -1.60        | 30.00       | 31.60       |
|                       | 5 825.00        | -1.74                | 0.24      | -1.50        | 30.00       | 31.50       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

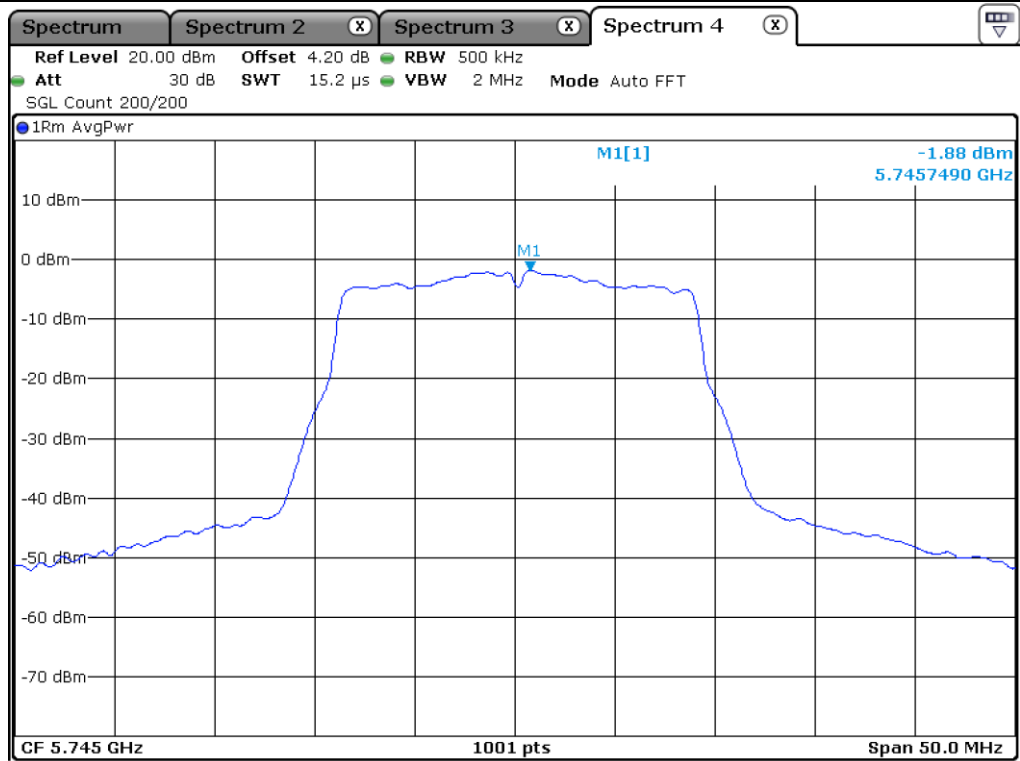




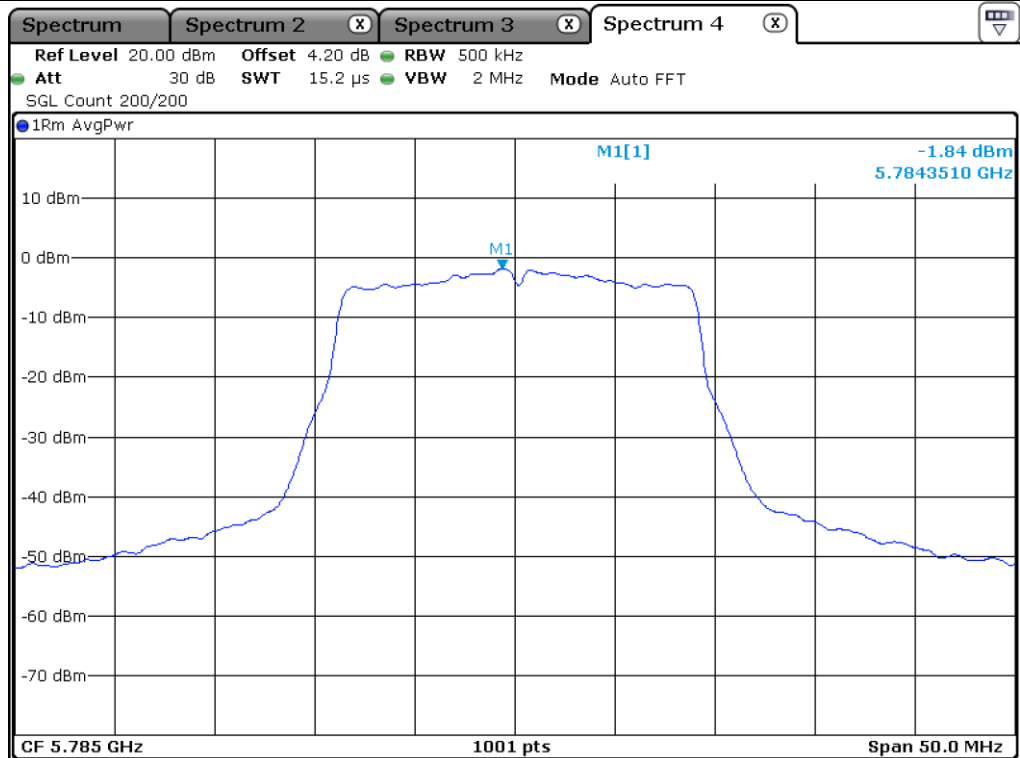
Middle Channel (5 220 MHz)



High Channel (5 240 MHz)

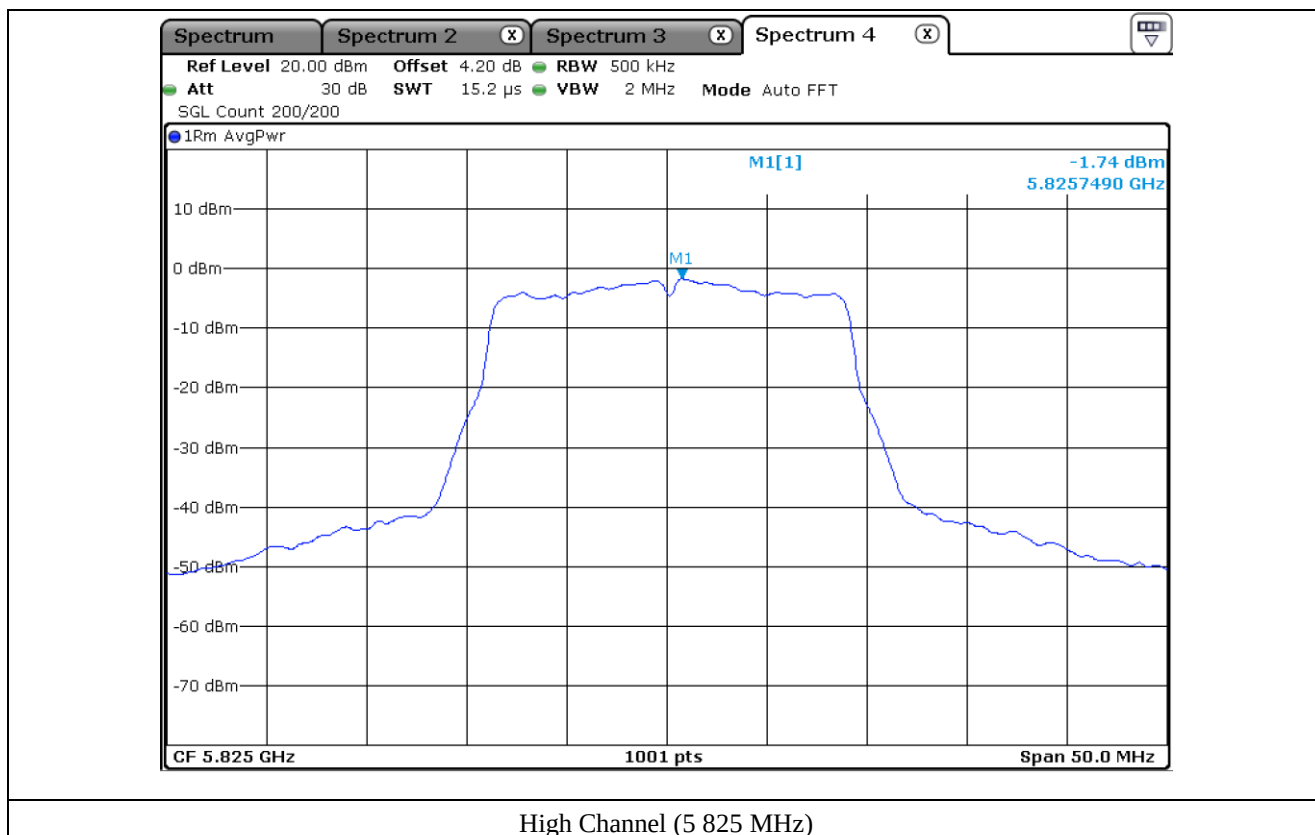


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)





## 10.6 Test data for 802.11n\_HT40 RLAN Mode

### 10.6.1 Test data for Internal Antenna

-. Operating condition : Highest Output Power Transmitting Mode

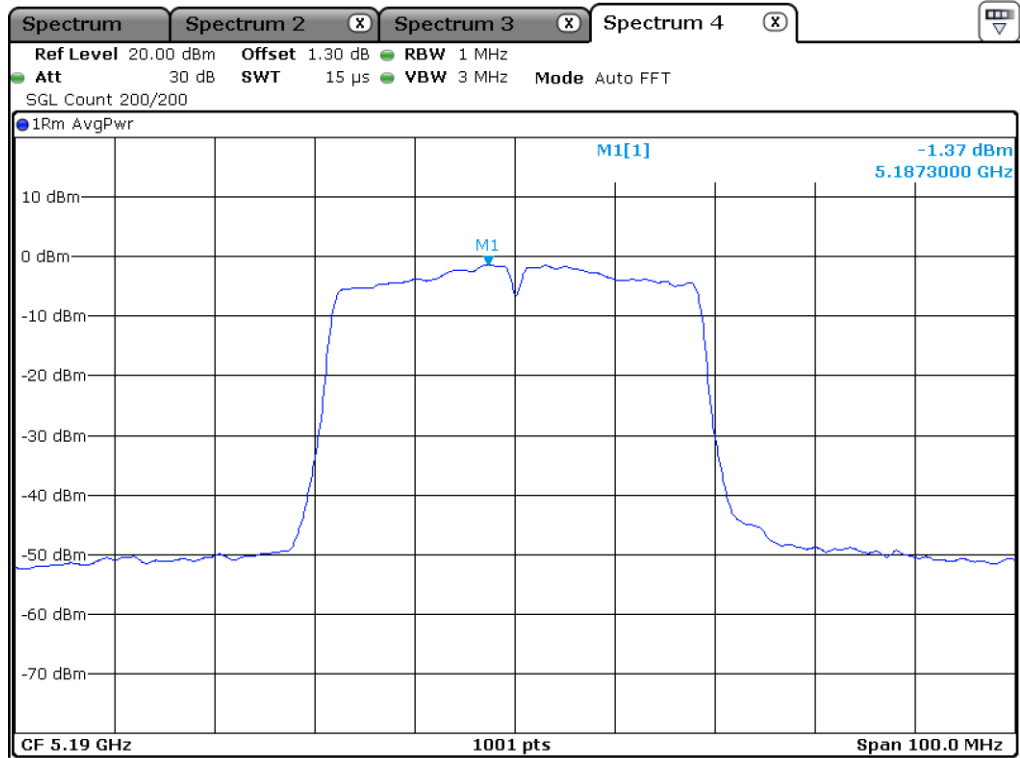
-. Duty Cycle : 90.37 % (UNII 1), 90.41 % (UNII 3)

-. Test Result : Pass

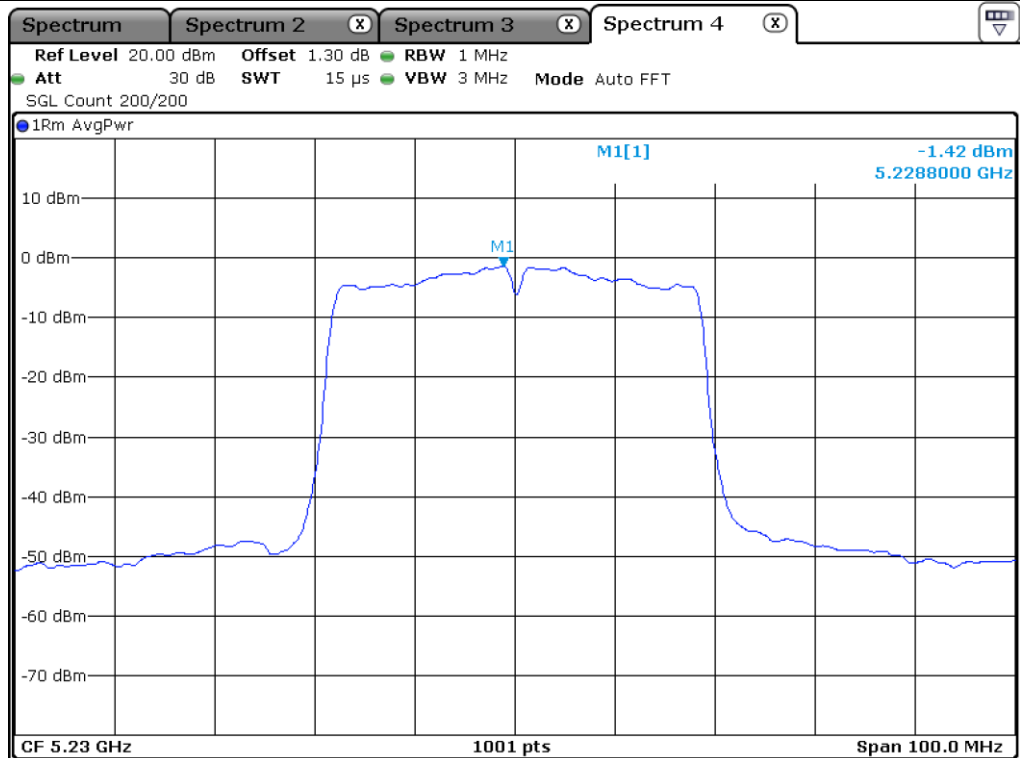
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 190.00        | -1.37                | 0.44     | -0.93        | 11.00       | 11.93       |
|                       | 5 230.00        | -1.42                | 0.44     | -0.98        | 11.00       | 11.98       |
| 5 725 ~ 5 850         | 5 755.00        | -2.51                | 0.44     | -2.07        | 30.00       | 32.07       |
|                       | 5 795.00        | -2.63                | 0.44     | -2.19        | 30.00       | 32.19       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

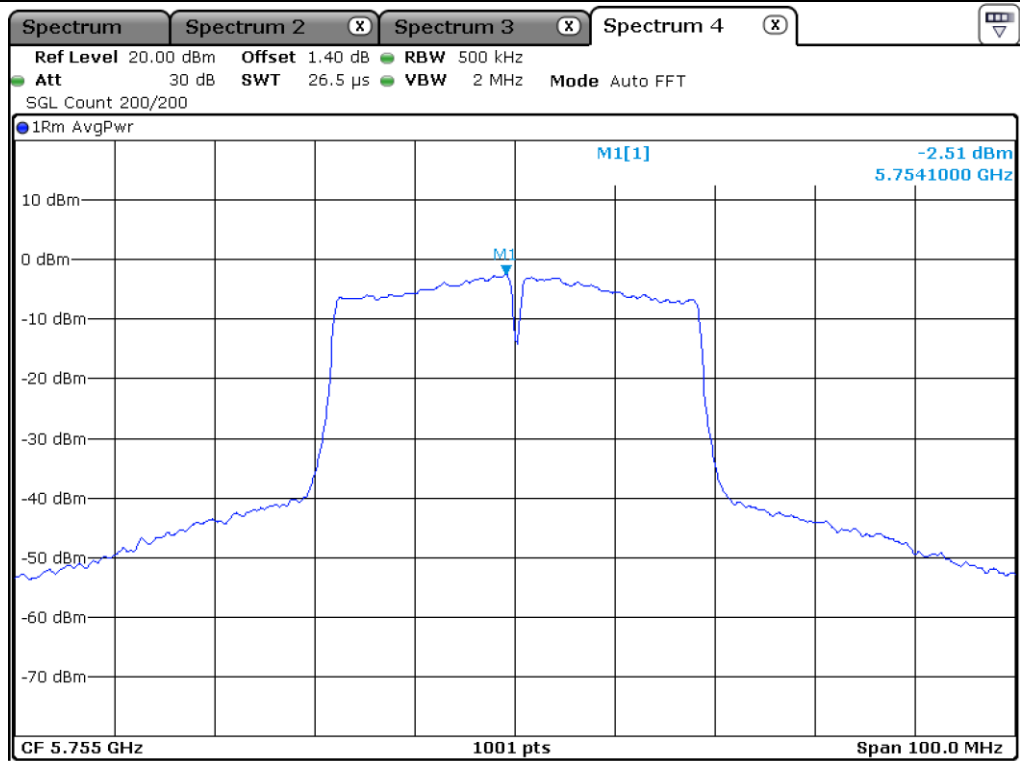
Remark: See next page for measurement data.



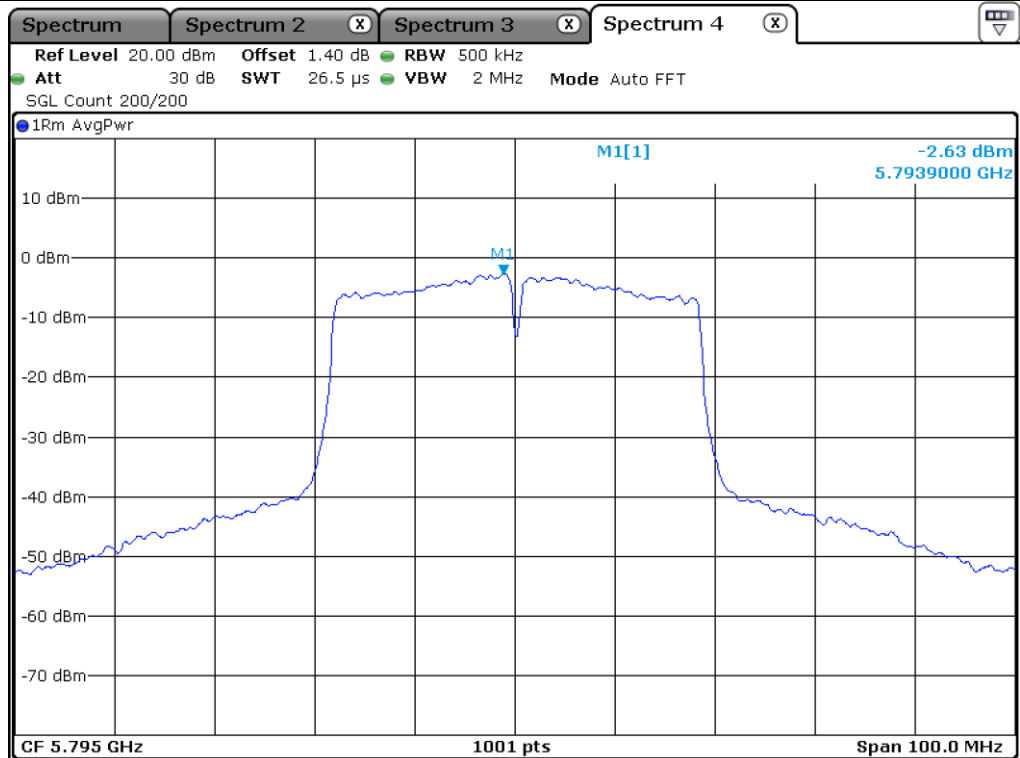
Low Channel (5 190 MHz)



High Channel (5 230 MHz)



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

### 10.6.2 Test data for External Antenna

-. Operating condition : Highest Output Power Transmitting Mode

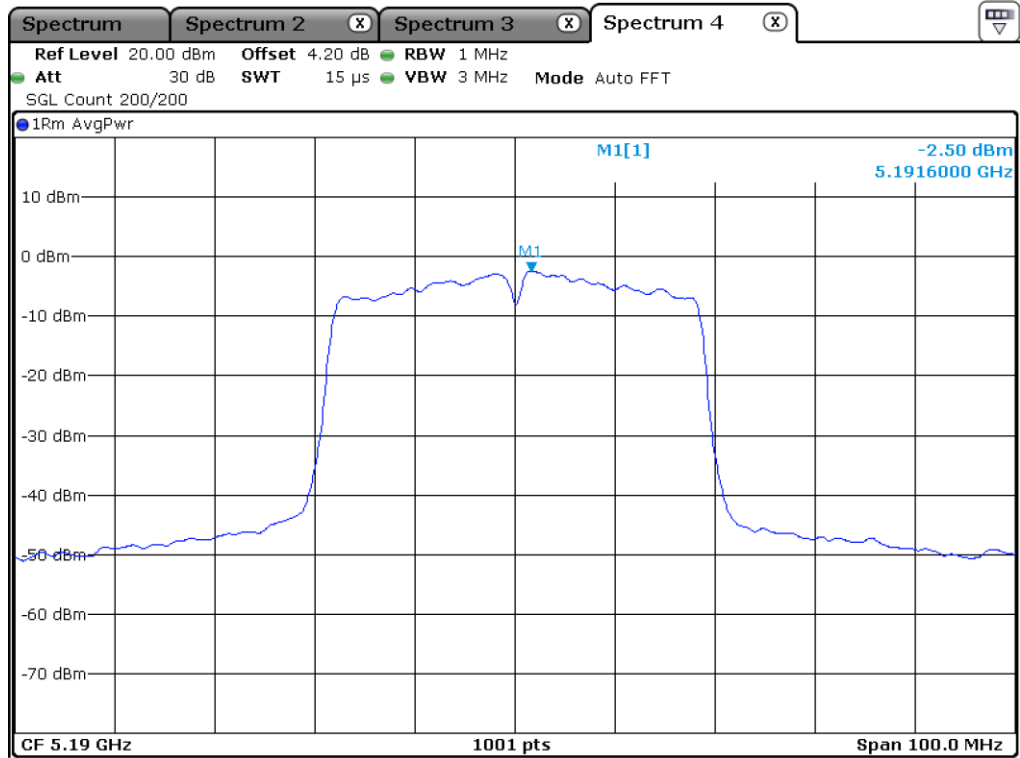
-. Duty Cycle : 89.33 % (UNII 1), 90.37 % (UNII 3)

-. Test Result : Pass

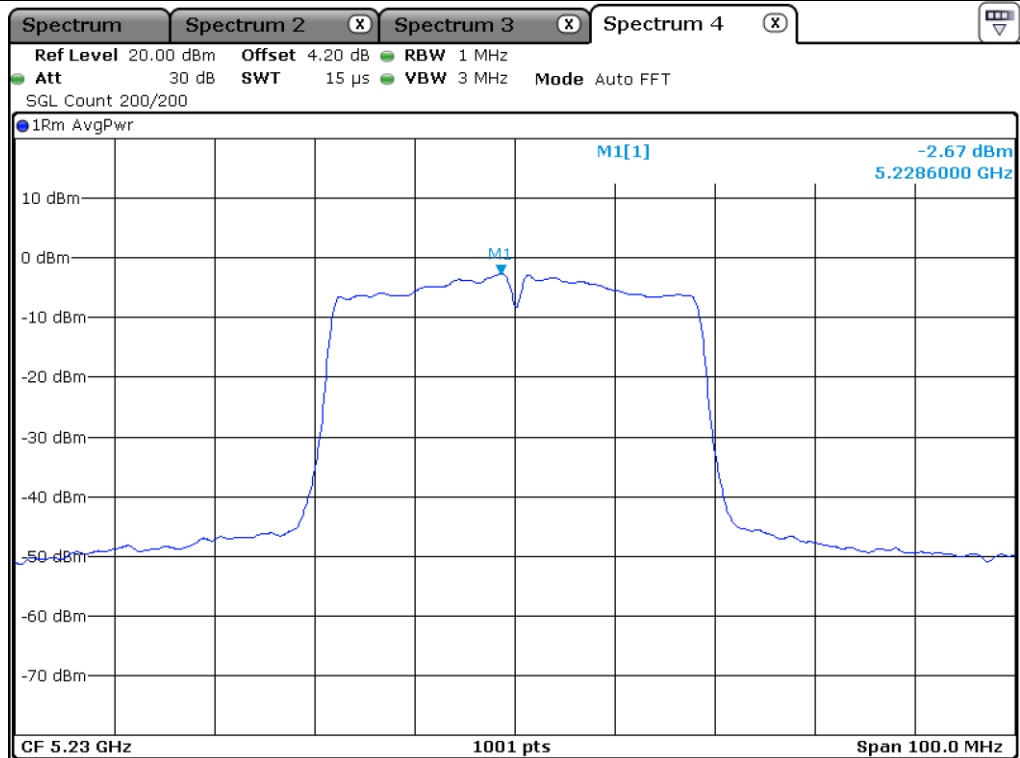
| FREQUENCY RANGE (MHz) | FREQUENCY (MHz) | MEASURED VALUE (dBm) | C.F (dB) | RESULT (dBm) | LIMIT (dBm) | MARGIN (dB) |
|-----------------------|-----------------|----------------------|----------|--------------|-------------|-------------|
| 5 150 ~ 5 250         | 5 190.00        | -2.50                | 0.49     | -2.01        | 11.00       | 13.01       |
|                       | 5 230.00        | -2.67                | 0.49     | -2.18        | 11.00       | 13.18       |
| 5 725 ~ 5 850         | 5 755.00        | -6.26                | 0.44     | -5.82        | 30.00       | 35.82       |
|                       | 5 795.00        | -6.10                | 0.44     | -5.66        | 30.00       | 35.66       |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

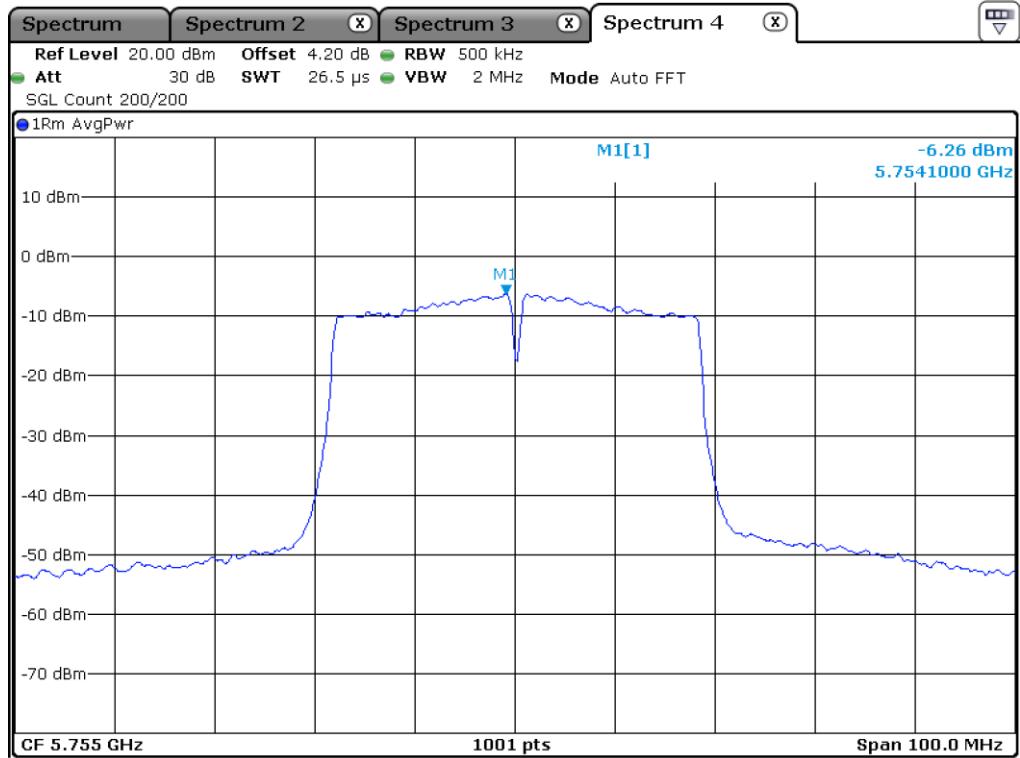
Remark: See next page for measurement data.



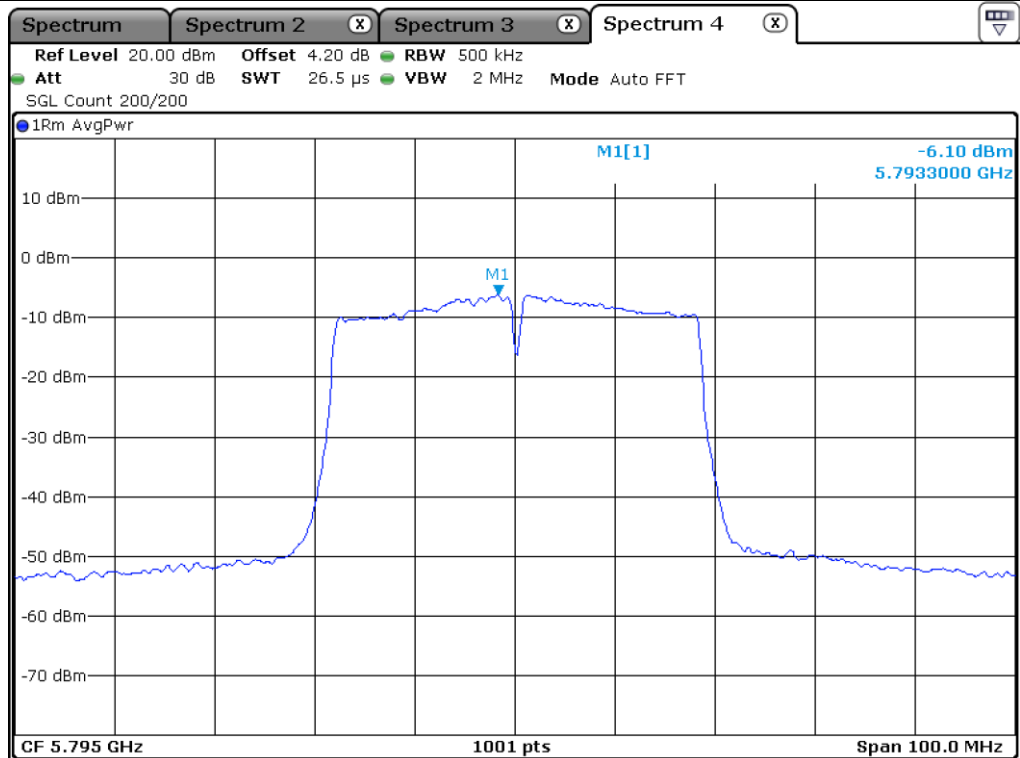
Low Channel (5 190 MHz)



High Channel (5 230 MHz)



Low Channel (5.755 MHz)



High Channel (5.795 MHz)

## 10.7 Test data for 802.11ac\_HT80 RLAN Mode

### 10.7.1 Test data for Internal Antenna

-. Operating condition : Highest Output Power Transmitting Mode

-. Duty Cycle : 81.61 % (UNII 1), 81.49 % (UNII 3)

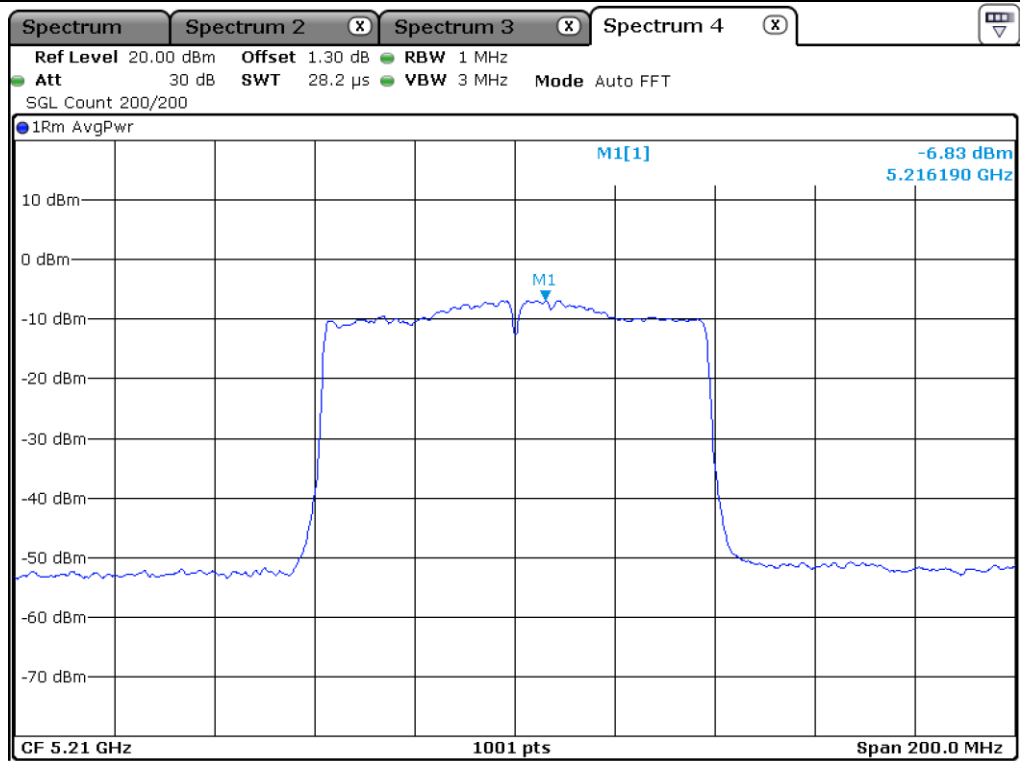
-. Test Result : Pass

| FREQUENCY<br>RANGE<br>(MHz) | FREQUENCY<br>(MHz) | MEASURED<br>VALUE<br>(dBm) | C.F<br>(dB) | RESULT<br>(dBm) | LIMIT (dBm) | MARGIN<br>(dB) |
|-----------------------------|--------------------|----------------------------|-------------|-----------------|-------------|----------------|
| 5 150 ~ 5 250               | 5 210.00           | -6.83                      | 0.88        | -5.95           | 11.00       | 16.95          |
| 5 725 ~ 5 850               | 5 775.00           | -10.25                     | 0.89        | -9.36           | 30.00       | 39.36          |

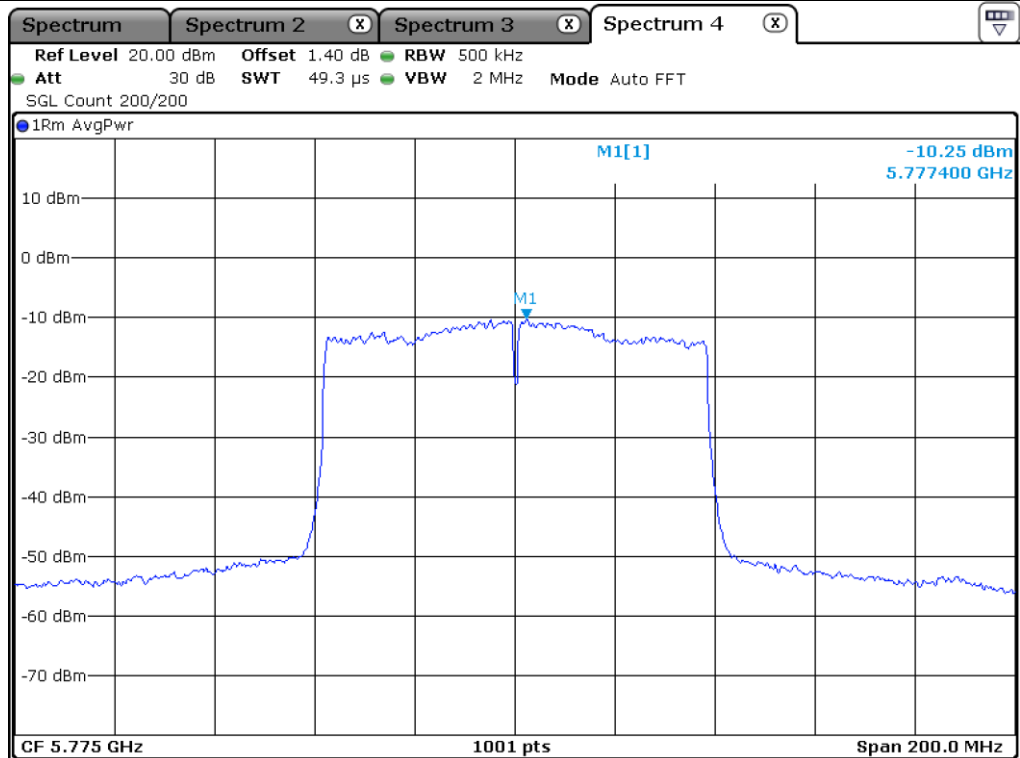
Remark. Margin = Limit – Result (=Measured Value + C.F.)

Remark: See next page for measurement data.





Middle Channel (5 210 MHz)



Middle Channel (5 775 MHz)

### 10.7.2 Test data for External Antenna

-. Operating condition : Highest Output Power Transmitting Mode

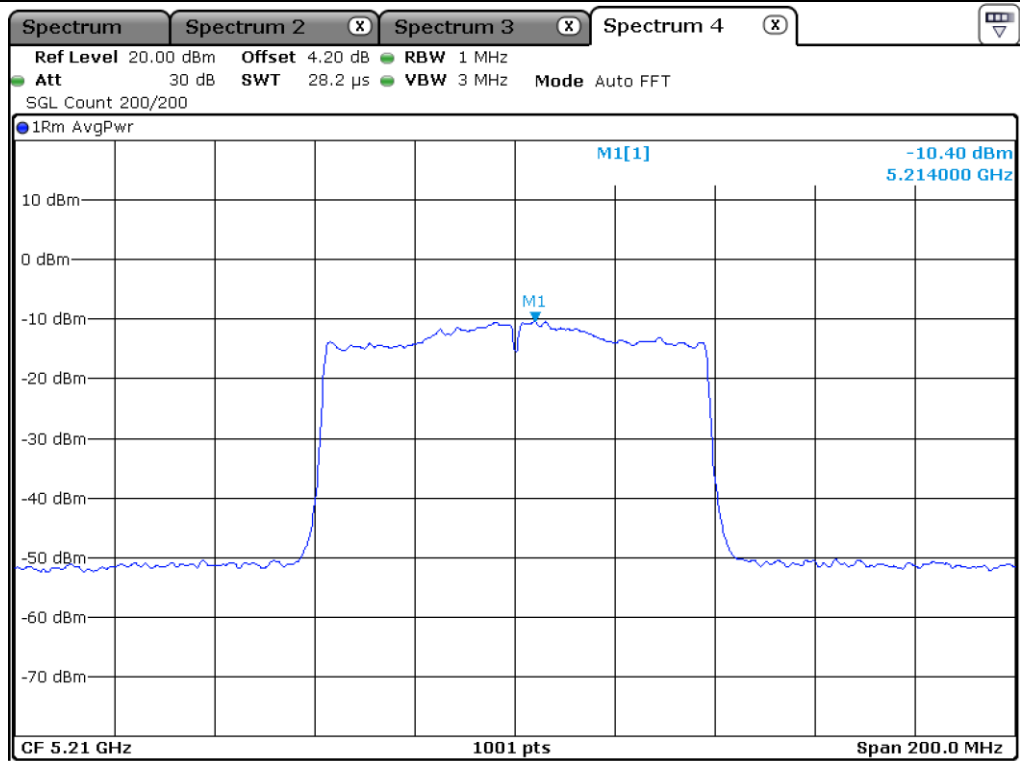
-. Duty Cycle : 82.39 % (UNII 1), 82.01 % (UNII 3)

-. Test Result : Pass

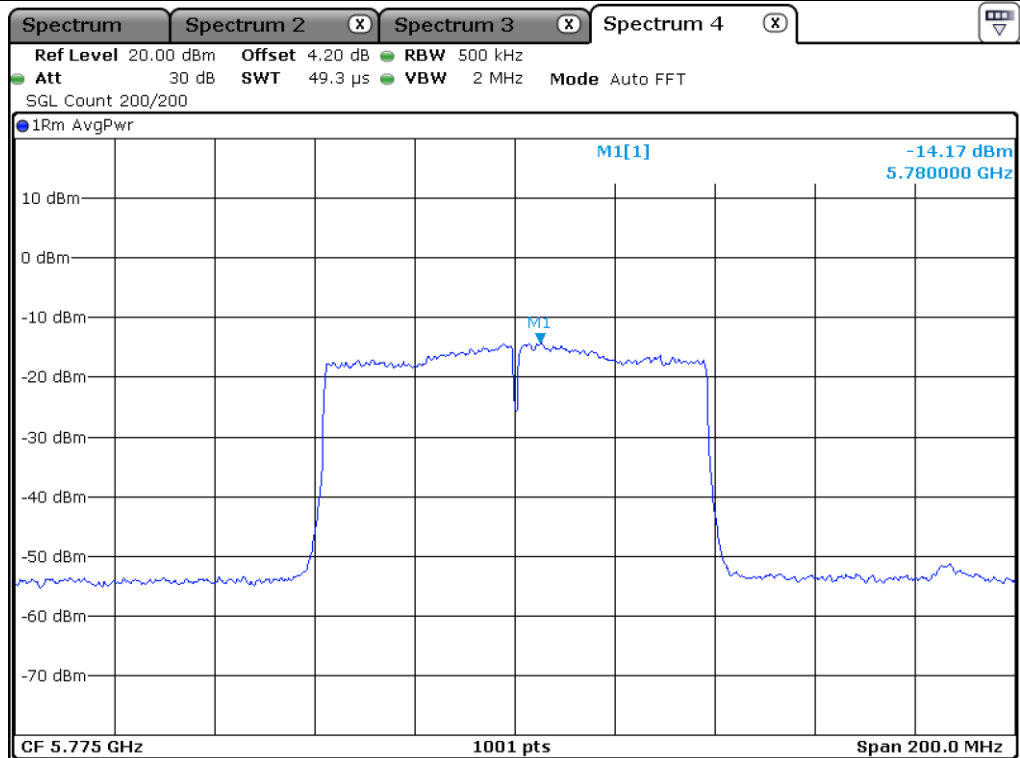
| FREQUENCY<br>RANGE<br>(MHz) | FREQUENCY<br>(MHz) | MEASURED<br>VALUE<br>(dBm) | C.F<br>(dB) | RESULT<br>(dBm) | LIMIT (dBm) | MARGIN<br>(dB) |
|-----------------------------|--------------------|----------------------------|-------------|-----------------|-------------|----------------|
| 5 150 ~ 5 250               | 5 210.00           | -10.40                     | 0.84        | -9.56           | 11.00       | 20.56          |
| 5 725 ~ 5 850               | 5 775.00           | -14.17                     | 0.86        | -13.31          | 30.00       | 43.31          |

Remark. Margin = Limit – Result (=Measured Value + C.F.)

Remark: See next page for measurement data.



Middle Channel (5 210 MHz)



Middle Channel (5 775 MHz)

## 11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

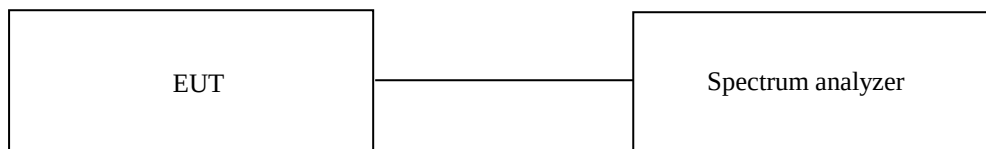
### 11.1 Operating environment

Temperature : 23 °C

Relative humidity : 41 % R.H.

### 11.2 Test set-up

Turn EUT off and set chamber temperature to -20 °C and then allow sufficient time (approximately 20 min to 30 min after chamber reach the assigned temperature) for EUT to stabilize. Turn on the EUT and measure the EUT operating frequency and then turn off the EUT after the measurement. The temperature in the chamber was raised 10 °C step from -20 °C to +50 °C. Repeat above method for frequency measurements every 10 °C step and then record all measured frequencies on each temperature step.



### 11.3 Test Date

November 25, 2021 ~ January 18, 2022

## 11.4 Test Data for U-NII-1

### 11.4.1 Test data for Internal Antenna

-. Result : Pass

| Temperature (°C) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|------------------|--------------------|---------------------|----------------------|
| -20              | 5 180 000 000      | 5 180 006 884       | 6 884                |
| -10              |                    | 5 180 005 787       | 5 787                |
| 0                |                    | 5 179 989 984       | -10 016              |
| 10               |                    | 5 179 976 250       | -23 750              |
| 20               |                    | 5 179 972 944       | -27 056              |
| 30               |                    | 5 179 956 496       | -43 504              |
| 40               |                    | 5 179 952 976       | -47 024              |
| 50               |                    | 5 179 957 748       | -42 252              |
| -20              | 5 220 000 000      | 5 220 006 856       | 6 856                |
| -10              |                    | 5 220 006 202       | 6 202                |
| 0                |                    | 5 219 989 341       | -10 659              |
| 10               |                    | 5 219 976 978       | -23 022              |
| 20               |                    | 5 219 971 929       | -28 071              |
| 30               |                    | 5 219 956 295       | -43 705              |
| 40               |                    | 5 219 952 671       | -47 329              |
| 50               |                    | 5 219 957 509       | -42 491              |
| -20              | 5 240 000 000      | 5 240 006 546       | 6 546                |
| -10              |                    | 5 240 005 471       | 5 471                |
| 0                |                    | 5 239 988 675       | -11 325              |
| 10               |                    | 5 239 978 994       | -21 006              |
| 20               |                    | 5 239 970 957       | -29 043              |
| 30               |                    | 5 239 956 402       | -43 598              |
| 40               |                    | 5 239 952 385       | -47 615              |
| 50               |                    | 5 239 957 110       | -42 890              |

### 11.4.2 Test data for External Antenna

-. Result : Pass

| Temperature (°C) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|------------------|--------------------|---------------------|----------------------|
| -20              | 5 745 000 000      | 5 745 007 309       | 7 309                |
| -10              |                    | 5 745 005 802       | 5 802                |
| 0                |                    | 5 744 987 622       | -12 378              |
| 10               |                    | 5 744 975 188       | -24 812              |
| 20               |                    | 5 744 967 407       | -32 593              |
| 30               |                    | 5 744 952 559       | -47 441              |
| 40               |                    | 5 744 947 740       | -52 260              |
| 50               |                    | 5 744 952 657       | -47 343              |
| -20              | 5 785 000 000      | 5 785 007 218       | 7 218                |
| -10              |                    | 5 785 005 318       | 5 318                |
| 0                |                    | 5 784 987 494       | -12 506              |
| 10               |                    | 5 784 975 891       | -24 109              |
| 20               |                    | 5 784 965 872       | -34 128              |
| 30               |                    | 5 784 953 046       | -46 954              |
| 40               |                    | 5 784 947 220       | -52 780              |
| 50               |                    | 5 784 952 559       | -47 441              |
| -20              | 5 825 000 000      | 5 825 007 165       | 7 165                |
| -10              |                    | 5 825 004 656       | 4 656                |
| 0                |                    | 5 824 986 812       | -13 188              |
| 10               |                    | 5 824 976 060       | -23 940              |
| 20               |                    | 5 824 965 263       | -34 737              |
| 30               |                    | 5 824 952 784       | -47 216              |
| 40               |                    | 5 824 946 836       | -53 164              |
| 50               |                    | 5 824 951 420       | -48 580              |

## 11.5 Test Data for U-NII-3

### 11.5.1 Test data for Internal Antenna

-. Result : Pass

| Temperature (°C) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|------------------|--------------------|---------------------|----------------------|
| -20              | 5 180 000 000      | 5 180 005 349       | 5 349                |
| -10              |                    | 5 180 001 021       | 1 021                |
| 0                |                    | 5 179 987 809       | -12 191              |
| 10               |                    | 5 179 983 453       | -16 547              |
| 20               |                    | 5 179 966 097       | -33 903              |
| 30               |                    | 5 179 961 969       | -38 031              |
| 40               |                    | 5 179 952 868       | -47 132              |
| 50               |                    | 5 179 954 984       | -45 016              |
| -20              | 5 220 000 000      | 5 220 005 409       | 5 409                |
| -10              |                    | 5 220 001 325       | 1 325                |
| 0                |                    | 5 219 987 944       | -12 056              |
| 10               |                    | 5 219 982 847       | -17 153              |
| 20               |                    | 5 219 966 194       | -33 806              |
| 30               |                    | 5 219 960 888       | -39 112              |
| 40               |                    | 5 219 952 493       | -47 507              |
| 50               |                    | 5 219 954 593       | -45 407              |
| -20              | 5 240 000 000      | 5 240 005 462       | 5 462                |
| -10              |                    | 5 240 001 671       | 1 671                |
| 0                |                    | 5 239 987 443       | -12 557              |
| 10               |                    | 5 239 981 850       | -18 150              |
| 20               |                    | 5 239 966 516       | -33 484              |
| 30               |                    | 5 239 959 863       | -40 137              |
| 40               |                    | 5 239 952 287       | -47 713              |
| 50               |                    | 5 239 954 598       | -45 402              |

### 11.5.2 Test data for External Antenna

-. Result : Pass

| Temperature (°C) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|------------------|--------------------|---------------------|----------------------|
| -20              | 5 745 000 000      | 5 745 006 015       | 6 015                |
| -10              |                    | 5 745 002 431       | 2 431                |
| 0                |                    | 5 744 986 600       | -13 400              |
| 10               |                    | 5 744 978 900       | -21 100              |
| 20               |                    | 5 744 963 779       | -36 221              |
| 30               |                    | 5 744 955 170       | -44 830              |
| 40               |                    | 5 744 947 520       | -52 480              |
| 50               |                    | 5 744 950 689       | -49 311              |
| -20              | 5 785 000 000      | 5 785 006 456       | 6 456                |
| -10              |                    | 5 785 003 009       | 3 009                |
| 0                |                    | 5 784 986 622       | -13 378              |
| 10               |                    | 5 784 977 731       | -22 269              |
| 20               |                    | 5 784 964 476       | -35 524              |
| 30               |                    | 5 784 954 163       | -45 837              |
| 40               |                    | 5 784 947 290       | -52 710              |
| 50               |                    | 5 784 950 923       | -49 077              |
| -20              | 5 825 000 000      | 5 825 006 499       | 6 499                |
| -10              |                    | 5 825 003 365       | 3 365                |
| 0                |                    | 5 824 986 678       | -13 322              |
| 10               |                    | 5 824 976 816       | -23 184              |
| 20               |                    | 5 824 964 573       | -35 427              |
| 30               |                    | 5 824 953 257       | -46 743              |
| 40               |                    | 5 824 947 417       | -52 583              |
| 50               |                    | 5 824 950 801       | -49 199              |



## 12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

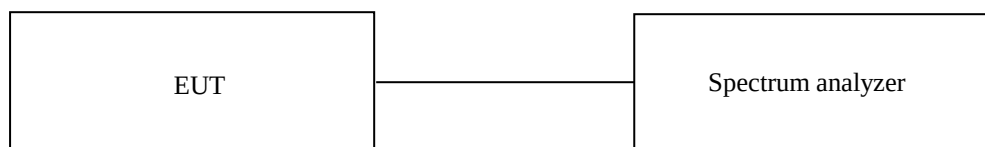
### 12.1 Operating environment

Temperature : 23 °C

Relative humidity : 41 % R.H.

### 12.2 Test set-up

An external DC power supply was connected to the input of the EUT. The voltage of EUT set to 115 % of the nominal value and then was reduced to 85 % of nominal voltage. The output frequency was recorded at each step.



### 12.3 Test Date

November 25, 2021 ~ January 18, 2022

## 12.4 Test Data for U-NII-1

### 12.4.1 Test data for Internal Antenna

-. Result : Pass

| Voltage (VDC) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|---------------|--------------------|---------------------|----------------------|
| 12.0          | 5 180 000 000      | 5 179 968 126       | -31 874              |
| 10.2          |                    | 5 179 967 955       | -32 045              |
| 13.8          |                    | 5 179 968 569       | -31 431              |
| 12.0          | 5 220 000 000      | 5 219 967 532       | -32 468              |
| 10.2          |                    | 5 219 966 941       | -33 059              |
| 13.8          |                    | 5 219 967 826       | -32 174              |
| 12.0          | 5 240 000 000      | 5 239 966 996       | -33 004              |
| 10.2          |                    | 5 239 966 701       | -33 299              |
| 13.8          |                    | 5 239 967 593       | -32 407              |

### 12.4.2 Test data for External Antenna

-. Result : Pass

| Voltage (VDC) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|---------------|--------------------|---------------------|----------------------|
| 12.0          | 5 745 000 000      | 5 744 963 339       | -36 661              |
| 10.2          |                    | 5 744 963 001       | -36 999              |
| 13.8          |                    | 5 744 963 209       | -36 791              |
| 12.0          | 5 785 000 000      | 5 784 964 066       | -35 934              |
| 10.2          |                    | 5 784 963 511       | -36 489              |
| 13.8          |                    | 5 784 965 263       | -34 737              |
| 12.0          | 5 825 000 000      | 5 824 962 194       | -37 806              |
| 10.2          |                    | 5 824 961 822       | -38 178              |
| 13.8          |                    | 5 824 963 024       | -36 976              |

## 12.5 Test Data for U-NII-3

### 12.5.1 Test data for Internal Antenna

-. Result : Pass

| Voltage (VDC) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|---------------|--------------------|---------------------|----------------------|
| 12.0          | 5 180 000 000      | 5 179 964 940       | -35 060              |
| 10.2          |                    | 5 179 964 587       | -35 413              |
| 13.8          |                    | 5 179 965 222       | -34 778              |
| 12.0          | 5 220 000 000      | 5 219 964 009       | -35 991              |
| 10.2          |                    | 5 219 963 365       | -36 635              |
| 13.8          |                    | 5 219 964 097       | -35 903              |
| 12.0          | 5 240 000 000      | 5 239 963 294       | -36 706              |
| 10.2          |                    | 5 239 961 726       | -38 274              |
| 13.8          |                    | 5 239 964 026       | -35 974              |

### 12.5.2 Test data for External Antenna

-. Result : Pass

| Voltage (VDC) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Frequency Error (Hz) |
|---------------|--------------------|---------------------|----------------------|
| 12.0          | 5 745 000 000      | 5 744 960 185       | -39 815              |
| 10.2          |                    | 5 744 959 077       | -40 923              |
| 13.8          |                    | 5 744 961 042       | -38 958              |
| 12.0          | 5 785 000 000      | 5 784 959 012       | -40 988              |
| 10.2          |                    | 5 784 958 842       | -41 158              |
| 13.8          |                    | 5 784 961 008       | -38 992              |
| 12.0          | 5 825 000 000      | 5 824 957 993       | -42 007              |
| 10.2          |                    | 5 824 956 384       | -43 616              |
| 13.8          |                    | 5 824 959 356       | -40 644              |

## 13. RADIATED SPURIOUS EMISSIONS

### 13.1 Operating environment

Temperature : 23 °C

Relative humidity : 41 % R.H.

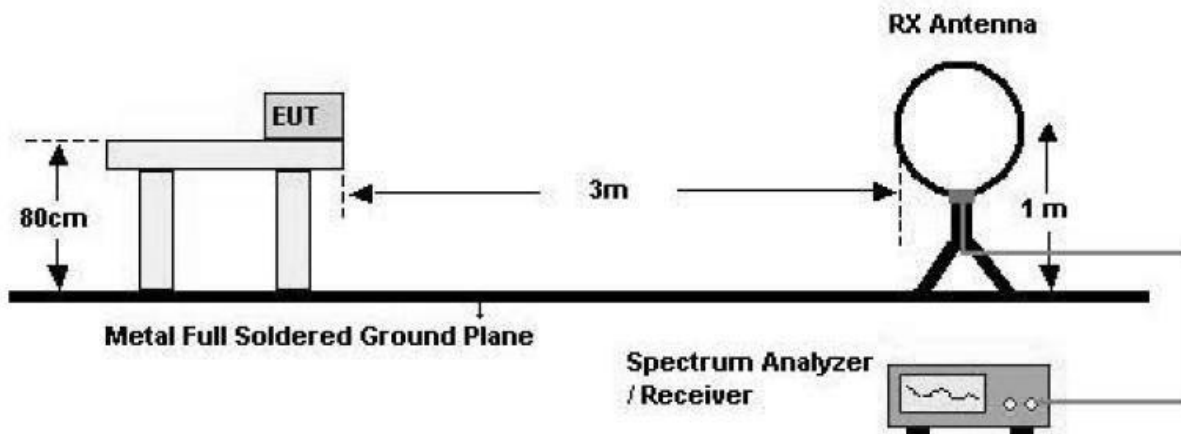
### 13.2 Test set-up for conducted measurement

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

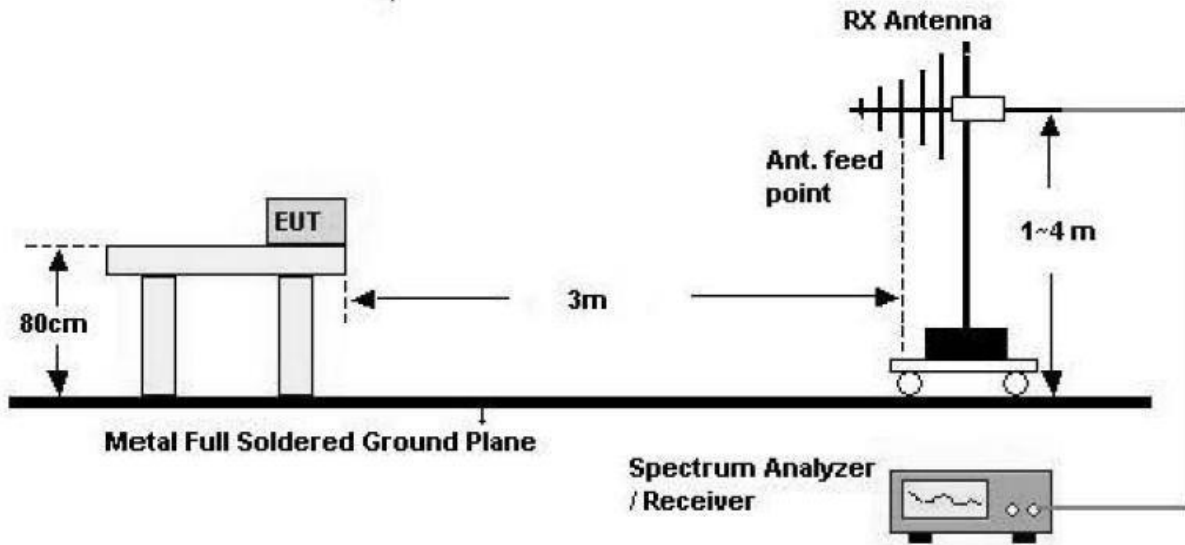
The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

#### - Test Configuration

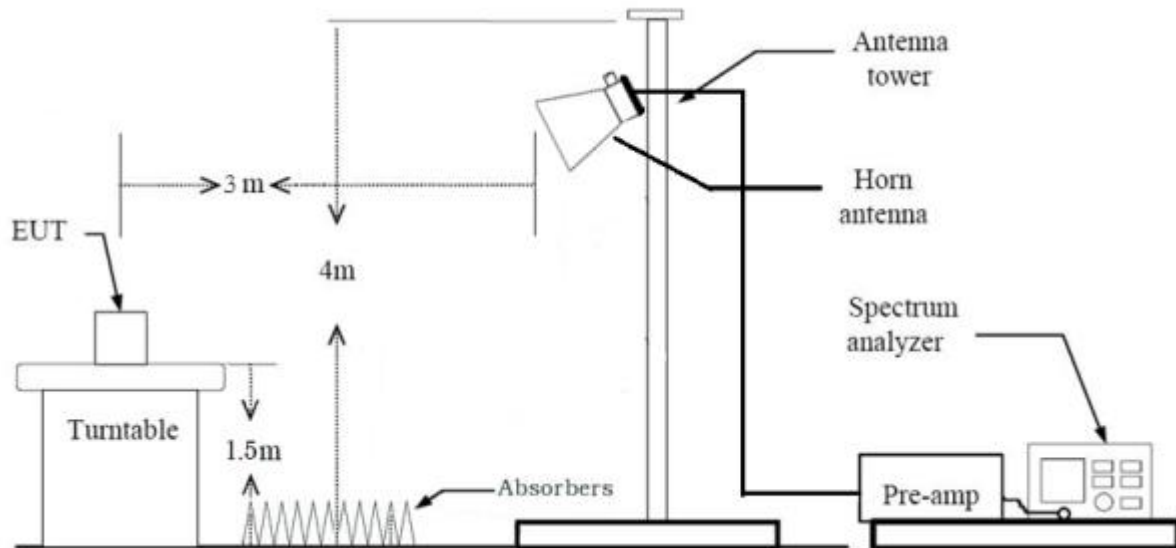
##### 1. Below 30 MHz



2. 30 MHz - 1 GHz



3. Above 1 GHz



13.3 Test Date

November 25, 2021 ~ January 18, 2022

### 13.4 Test data for Below 30 MHz

- . Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- . Frequency range : 9 kHz ~ 30 MHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

| Frequency<br>(MHz)                                                             | Reading<br>(dBμV) | Ant. Pol.<br>(H/V) | Ant.<br>Height (m) | Angle<br>(°) | Ant. Factor<br>(dB/m) | Cable<br>Loss | Emission<br>Level(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------------------------------------------------------------------|-------------------|--------------------|--------------------|--------------|-----------------------|---------------|---------------------------|--------------------|----------------|
| Emission from the EUT more than 20 dB below the limit in each frequency range. |                   |                    |                    |              |                       |               |                           |                    |                |

### 13.5 Test data for 30 MHz ~ 1 000 MHz

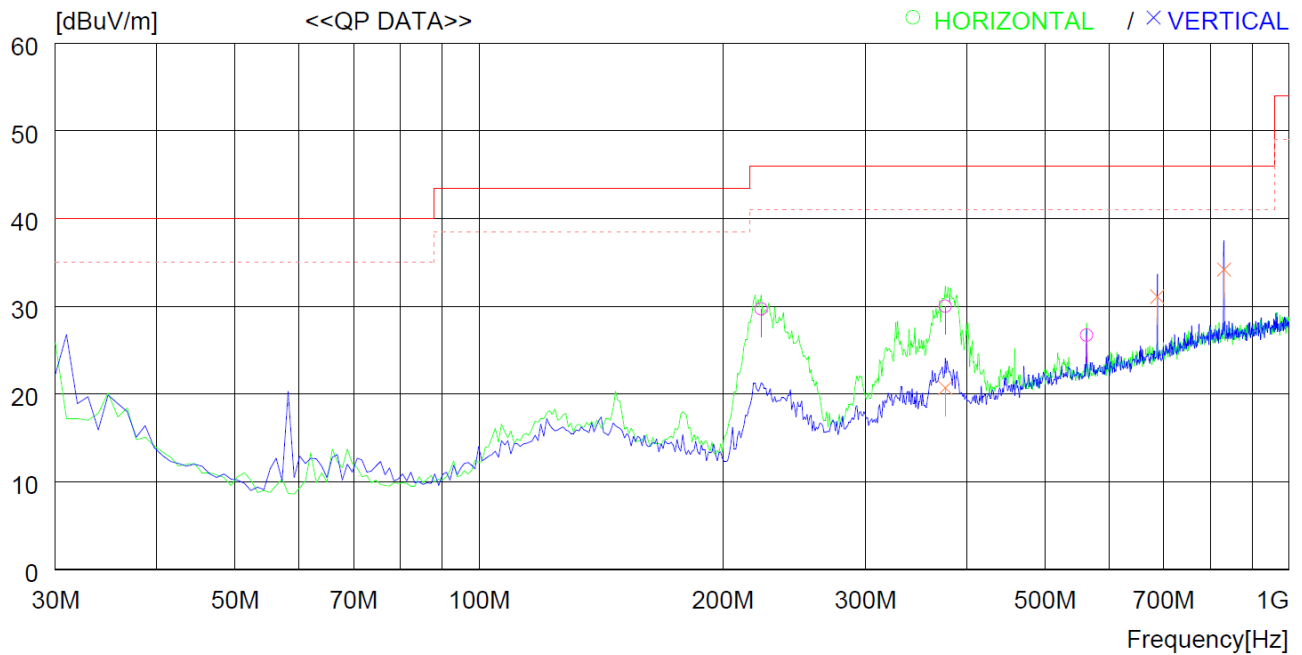
#### 13.5.1 Test data for WLAN 5 GHz\_Internal Antenna

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Silverbox RADIO ASM-RECEIVER

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



| No.                    | FREQ    | READING | ANT    | LOSS | GAIN | RESULT   | LIMIT    | MARGIN | ANTENNA | TABLE |
|------------------------|---------|---------|--------|------|------|----------|----------|--------|---------|-------|
|                        | [MHz]   | QP      | FACTOR | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB]   | [cm]    | [DEG] |
| ----- Horizontal ----- |         |         |        |      |      |          |          |        |         |       |
| 1                      | 223.030 | 42.6    | 16.6   | 2.6  | 32.1 | 29.7     | 46.0     | 16.3   | 200     | 0     |
| 2                      | 376.290 | 38.5    | 20.3   | 3.4  | 32.2 | 30.0     | 46.0     | 16.0   | 100     | 151   |
| 3                      | 562.529 | 31.2    | 23.8   | 4.1  | 32.4 | 26.7     | 46.0     | 19.3   | 200     | 291   |
| ----- Vertical -----   |         |         |        |      |      |          |          |        |         |       |
| 4                      | 376.290 | 29.2    | 20.3   | 3.4  | 32.2 | 20.7     | 46.0     | 25.3   | 300     | 0     |
| 5                      | 687.655 | 33.5    | 25.4   | 4.6  | 32.4 | 31.1     | 46.0     | 14.9   | 100     | 0     |
| 6                      | 831.211 | 34.1    | 27.2   | 5.1  | 32.2 | 34.2     | 46.0     | 11.8   | 400     | 155   |

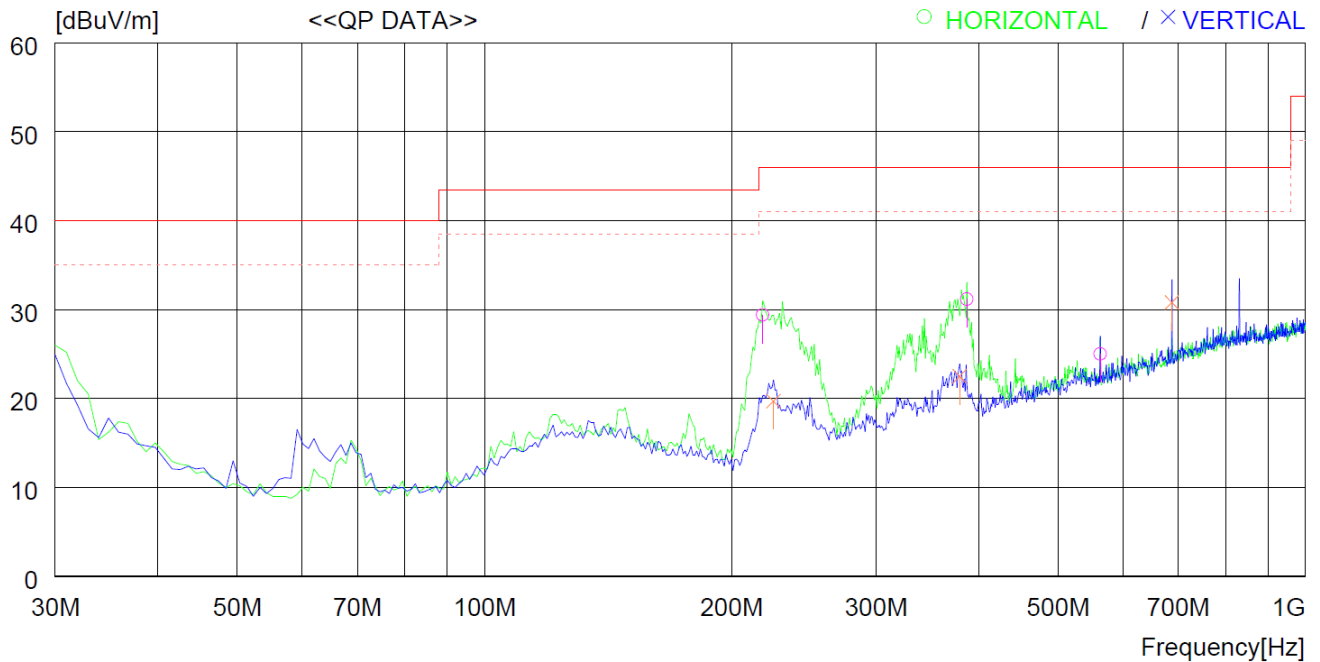
### 13.5.2 Test data for WLAN 5 GHz\_External Antenna

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Silverbox RADIO ASM-RECEIVER

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

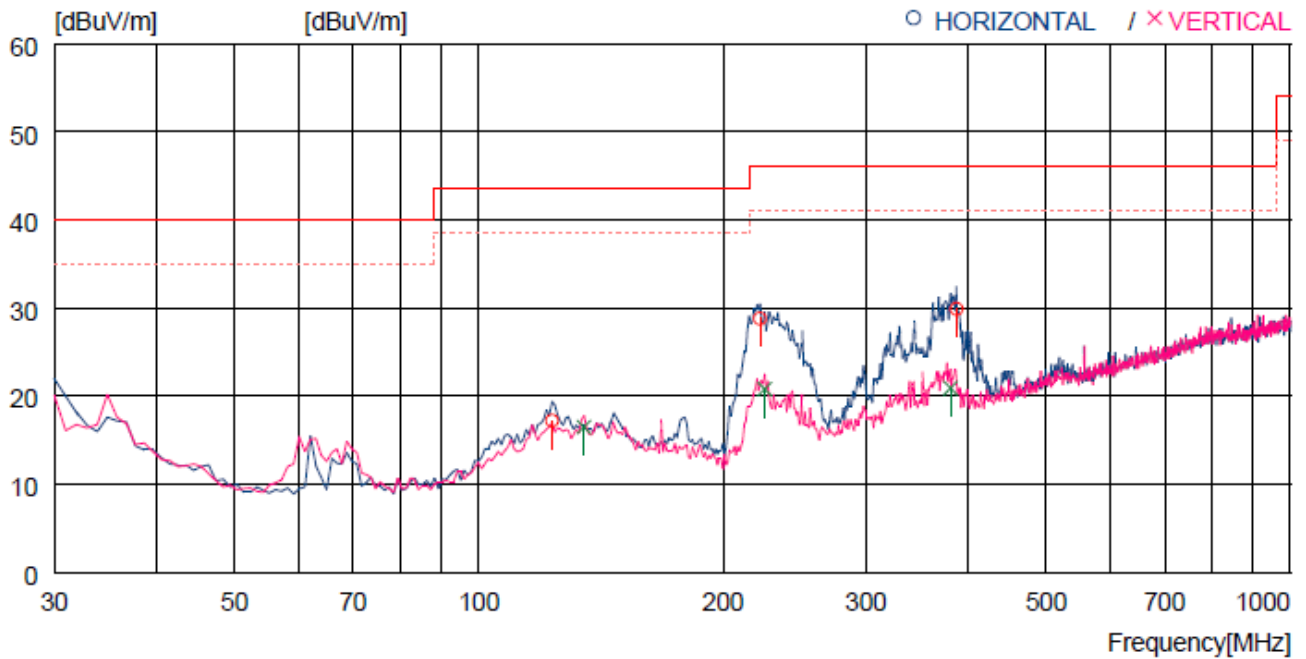


| No.                    | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                         |                       |              |              |                    |                   |                |                 |                |
| 1                      | 218.180       | 42.5                    | 16.4                  | 2.6          | 32.1         | 29.4               | 46.0              | 16.6           | 200             | 159            |
| 2                      | 386.960       | 39.5                    | 20.5                  | 3.4          | 32.2         | 31.2               | 46.0              | 14.8           | 100             | 166            |
| 3                      | 562.529       | 29.5                    | 23.8                  | 4.1          | 32.4         | 25.0               | 46.0              | 21.0           | 200             | 43             |
| ----- Vertical -----   |               |                         |                       |              |              |                    |                   |                |                 |                |
| 4                      | 224.970       | 32.5                    | 16.7                  | 2.6          | 32.1         | 19.7               | 46.0              | 26.3           | 200             | 0              |
| 5                      | 379.200       | 30.9                    | 20.4                  | 3.4          | 32.2         | 22.5               | 46.0              | 23.5           | 300             | 224            |
| 6                      | 687.655       | 33.2                    | 25.4                  | 4.6          | 32.4         | 30.8               | 46.0              | 15.2           | 100             | 141            |



### 13.5.3 Test data for Intermodulation Mode(Bluetooth + WLAN 5 GHz)

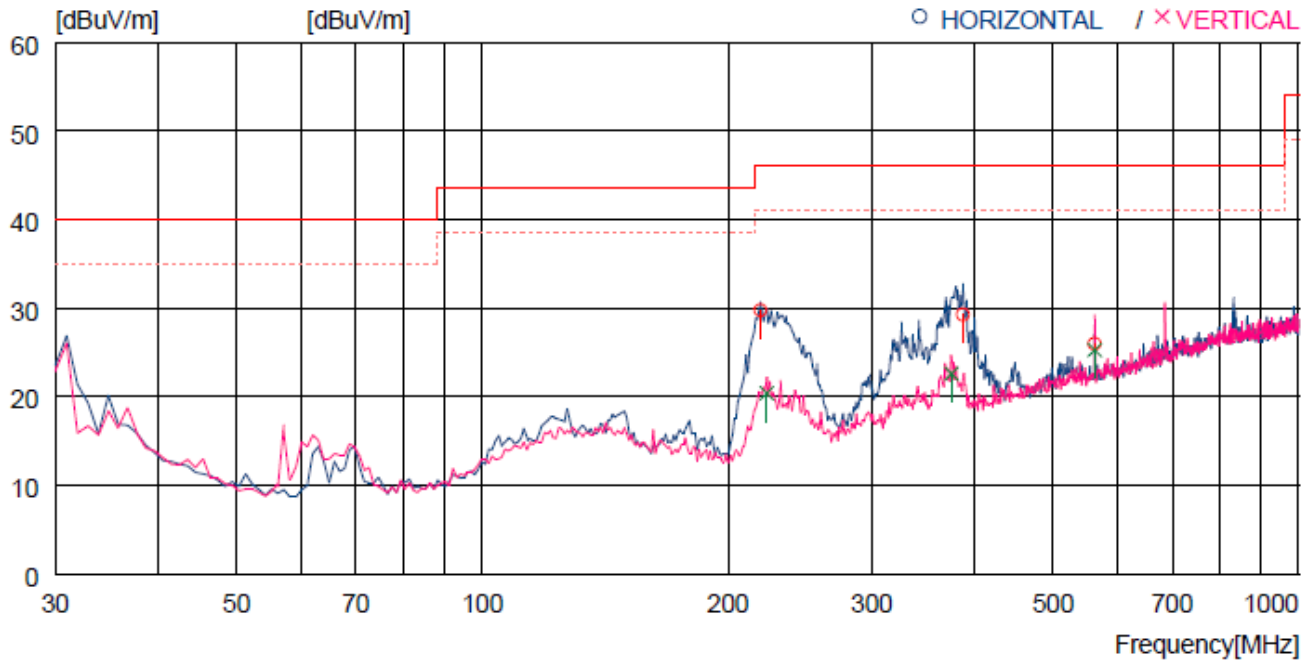
- Resolution bandwidth : 120 kHz
- Frequency range : 30 MHz ~ 1 000 MHz
- Measurement distance : 3 m



| No.                  | FREQ    | READING | ANT  | LOSS | GAIN | RESULT   | LIMIT    | MARGIN | ANTENNA | TABLE |
|----------------------|---------|---------|------|------|------|----------|----------|--------|---------|-------|
|                      | [MHz]   | [dBuV]  | [dB] | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB]   | [cm]    | [DEG] |
| ---- Horizontal ---- |         |         |      |      |      |          |          |        |         |       |
| 1                    | 123.120 | 28.6    | 18.7 | 2.0  | 32.1 | 17.2     | 43.5     | 26.3   | 300     | 130   |
| 2                    | 222.060 | 41.7    | 16.6 | 2.6  | 32.1 | 28.8     | 46.0     | 17.2   | 200     | 359   |
| 3                    | 387.930 | 38.2    | 20.5 | 3.4  | 32.2 | 29.9     | 46.0     | 16.1   | 100     | 0     |
| ---- Vertical ----   |         |         |      |      |      |          |          |        |         |       |
| 4                    | 134.760 | 27.2    | 19.3 | 2.1  | 32.1 | 16.5     | 43.5     | 27.0   | 100     | 359   |
| 5                    | 224.970 | 33.6    | 16.7 | 2.6  | 32.1 | 20.8     | 46.0     | 25.2   | 200     | 344   |
| 6                    | 381.140 | 29.3    | 20.4 | 3.4  | 32.2 | 20.9     | 46.0     | 25.1   | 300     | 359   |

### 13.5.4 Test data for Intermodulation Mode(WLAN 2.4 GHz + WLAN 5 GHz)

- Resolution bandwidth : 120 kHz
- Frequency range : 30 MHz ~ 1 000 MHz
- Measurement distance : 3 m



| No.                  | FREQ    | READING | ANT  | LOSS | GAIN | RESULT   | LIMIT    | MARGIN | ANTENNA | TABLE |
|----------------------|---------|---------|------|------|------|----------|----------|--------|---------|-------|
|                      | [MHz]   | [dBuV]  | [dB] | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB]   | [cm]    | [DEG] |
| ---- Horizontal ---- |         |         |      |      |      |          |          |        |         |       |
| 1                    | 219.150 | 42.9    | 16.4 | 2.6  | 32.1 | 29.8     | 46.0     | 16.2   | 200     | 0     |
| 2                    | 387.930 | 37.6    | 20.5 | 3.4  | 32.2 | 29.3     | 46.0     | 16.7   | 100     | 318   |
| 3                    | 562.529 | 30.5    | 23.8 | 4.1  | 32.4 | 26.0     | 46.0     | 20.0   | 300     | 232   |
| ---- Vertical ----   |         |         |      |      |      |          |          |        |         |       |
| 4                    | 223.030 | 33.3    | 16.6 | 2.6  | 32.1 | 20.4     | 46.0     | 25.6   | 300     | 207   |
| 5                    | 375.320 | 31.1    | 20.3 | 3.4  | 32.2 | 22.6     | 46.0     | 23.4   | 300     | 0     |
| 6                    | 562.529 | 29.8    | 23.8 | 4.1  | 32.4 | 25.3     | 46.0     | 20.7   | 100     | 172   |

## 13.6 Test data for Above 1 GHz

### 13.6.1 Test data for Frequency UNII I

#### 13.6.1.1 Test data for 802.11a RLAN Mode

##### 13.6.1.1.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.93 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 360.00             | 49.94             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 60.21             | 68.20              | 7.99           |
| 10 360.00             | 49.60             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 59.87             | 68.20              | 8.33           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 440.00             | 49.46             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 59.83             | 68.20              | 8.37           |
| 10 440.00             | 49.52             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 59.89             | 68.20              | 8.31           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 480.00             | 49.51             | Peak             | H                  | 39.40          | 17.07         | -            | 46.00       | 59.98             | 68.20              | 8.22           |
| 10 480.00             | 48.82             | Peak             | V                  | 39.40          | 17.07         | -            | 46.00       | 59.29             | 68.20              | 8.91           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.1.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.92 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 360.00             | 49.86             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 60.13             | 68.20              | 8.07           |
| 10 360.00             | 49.69             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 59.96             | 68.20              | 8.24           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 440.00             | 49.48             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 59.85             | 68.20              | 8.35           |
| 10 440.00             | 49.69             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.06             | 68.20              | 8.14           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 480.00             | 49.42             | Peak             | H                  | 39.40          | 17.07         | -            | 46.00       | 59.89             | 68.20              | 8.31           |
| 10 480.00             | 49.90             | Peak             | V                  | 39.40          | 17.07         | -            | 46.00       | 60.37             | 68.20              | 7.83           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.2 Test data for 802.11n\_HT20 RLAN Mode

#### 13.6.1.2.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.58 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 360.00             | 49.36             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 59.63             | 68.20              | 8.57           |
| 10 360.00             | 49.06             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 59.33             | 68.20              | 8.87           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 440.00             | 48.98             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 59.35             | 68.20              | 8.85           |
| 10 440.00             | 50.19             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.56             | 68.20              | 7.64           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 480.00             | 50.08             | Peak             | H                  | 39.40          | 17.07         | -            | 46.00       | 60.55             | 68.20              | 7.65           |
| 10 480.00             | 50.09             | Peak             | V                  | 39.40          | 17.07         | -            | 46.00       | 60.56             | 68.20              | 7.64           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.2.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.46 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 360.00             | 49.79             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 60.06             | 68.20              | 8.14           |
| 10 360.00             | 49.82             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 60.09             | 68.20              | 8.11           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 440.00             | 49.81             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 60.18             | 68.20              | 8.02           |
| 10 440.00             | 49.89             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.26             | 68.20              | 7.94           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 480.00             | 49.41             | Peak             | H                  | 39.40          | 17.07         | -            | 46.00       | 59.88             | 68.20              | 8.32           |
| 10 480.00             | 49.85             | Peak             | V                  | 39.40          | 17.07         | -            | 46.00       | 60.32             | 68.20              | 7.88           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.3 Test data for 802.11n\_HT40 RLAN Mode

#### 13.6.1.3.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Frequency range : 1 GHz ~ 40 GHz
- . Measurement distance : 3 m
- . Duty Cycle : 90.37 %
- . Operating mode : Transmitting mode

| Frequency<br>(MHz)  | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|---------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>  |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 380.00           | 49.65             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 59.92             | 68.20              | 8.28           |
| 10 380.00           | 49.27             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 59.54             | 68.20              | 8.66           |
| <b>High Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 460.00           | 49.27             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 59.64             | 68.20              | 8.56           |
| 10 460.00           | 49.89             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.26             | 68.20              | 7.94           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.3.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 89.33 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)  | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|---------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>  |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 380.00           | 49.61             | Peak             | H                  | 39.20          | 17.07         | -            | 46.00       | 59.88             | 68.20              | 8.32           |
| 10 380.00           | 49.81             | Peak             | V                  | 39.20          | 17.07         | -            | 46.00       | 60.08             | 68.20              | 8.12           |
| <b>High Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 460.00           | 49.55             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 59.92             | 68.20              | 8.28           |
| 10 460.00           | 49.81             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.18             | 68.20              | 8.02           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor



### 13.6.1.4 Test data for 802.11ac\_HT80 RLAN Mode

#### 13.6.1.4.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Frequency range : 1 GHz ~ 40 GHz
- . Measurement distance : 3 m
- . Duty Cycle : 81.61 %
- . Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 420.00             | 49.96             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 60.33             | 68.20              | 7.87           |
| 10 420.00             | 49.61             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 59.98             | 68.20              | 8.22           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.1.4.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 82.39 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 10 420.00             | 49.73             | Peak             | H                  | 39.30          | 17.07         | -            | 46.00       | 60.10             | 68.20              | 8.10           |
| 10 420.00             | 49.88             | Peak             | V                  | 39.30          | 17.07         | -            | 46.00       | 60.25             | 68.20              | 7.95           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2 Test data for Frequency UNII 3

#### 13.6.2.1 Test data for 802.11a RLAN Mode

##### 13.6.2.1.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.91 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 490.00             | 48.56             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.16             | 74.00              | 14.84          |
| 11 490.00             | 39.36             | Average          | H                  | 39.30          | 17.65         | 0.23         | 46.35       | 50.19             | 54.00              | 3.81           |
| 11 490.00             | 48.81             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.41             | 74.00              | 14.59          |
| 11 490.00             | 38.96             | Average          | V                  | 39.30          | 17.65         | 0.23         | 46.35       | 49.79             | 54.00              | 4.21           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 570.00             | 49.81             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 60.53             | 74.00              | 13.47          |
| 11 570.00             | 39.61             | Average          | H                  | 39.40          | 17.67         | 0.23         | 46.35       | 50.56             | 54.00              | 3.44           |
| 11 570.00             | 48.99             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.71             | 74.00              | 14.29          |
| 11 570.00             | 39.43             | Average          | V                  | 39.40          | 17.67         | 0.23         | 46.35       | 50.38             | 54.00              | 3.62           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 650.00             | 48.98             | Peak             | H                  | 39.70          | 17.71         | -            | 46.35       | 60.04             | 74.00              | 13.96          |
| 11 650.00             | 39.56             | Average          | H                  | 39.70          | 17.71         | 0.23         | 46.35       | 50.85             | 54.00              | 3.15           |
| 11 650.00             | 48.56             | Peak             | V                  | 39.70          | 17.71         | -            | 46.35       | 59.62             | 74.00              | 14.38          |
| 11 650.00             | 39.95             | Average          | V                  | 39.70          | 17.71         | 0.23         | 46.35       | 51.24             | 54.00              | 2.76           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2.1.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.93 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 490.00             | 48.60             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.20             | 74.00              | 14.80          |
| 11 490.00             | 39.55             | Average          | H                  | 39.30          | 17.65         | 0.23         | 46.35       | 50.38             | 54.00              | 3.62           |
| 11 490.00             | 48.62             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.22             | 74.00              | 14.78          |
| 11 490.00             | 39.47             | Average          | V                  | 39.30          | 17.65         | 0.23         | 46.35       | 50.30             | 54.00              | 3.70           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 570.00             | 48.75             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.47             | 74.00              | 14.53          |
| 11 570.00             | 39.67             | Average          | H                  | 39.40          | 17.67         | 0.23         | 46.35       | 50.62             | 54.00              | 3.38           |
| 11 570.00             | 48.90             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.62             | 74.00              | 14.38          |
| 11 570.00             | 39.29             | Average          | V                  | 39.40          | 17.67         | 0.23         | 46.35       | 50.24             | 54.00              | 3.76           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 650.00             | 48.68             | Peak             | H                  | 39.70          | 17.71         | -            | 46.35       | 59.74             | 74.00              | 14.26          |
| 11 650.00             | 39.68             | Average          | H                  | 39.70          | 17.71         | 0.23         | 46.35       | 50.97             | 54.00              | 3.03           |
| 11 650.00             | 48.62             | Peak             | V                  | 39.70          | 17.71         | -            | 46.35       | 59.68             | 74.00              | 14.32          |
| 11 650.00             | 39.25             | Average          | V                  | 39.70          | 17.71         | 0.23         | 46.35       | 50.54             | 54.00              | 3.46           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2.2 Test data for 802.11n\_HT20 RLAN Mode

#### 13.6.2.2.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.51 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 490.00             | 48.95             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.55             | 74.00              | 14.45          |
| 11 490.00             | 39.16             | Average          | H                  | 39.30          | 17.65         | 0.25         | 46.35       | 50.01             | 54.00              | 3.99           |
| 11 490.00             | 48.89             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.49             | 74.00              | 14.51          |
| 11 490.00             | 40.05             | Average          | V                  | 39.30          | 17.65         | 0.25         | 46.35       | 50.90             | 54.00              | 3.10           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 570.00             | 48.76             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.48             | 74.00              | 14.52          |
| 11 570.00             | 39.85             | Average          | H                  | 39.40          | 17.67         | 0.25         | 46.35       | 50.82             | 54.00              | 3.18           |
| 11 570.00             | 48.85             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.57             | 74.00              | 14.43          |
| 11 570.00             | 40.11             | Average          | V                  | 39.40          | 17.67         | 0.25         | 46.35       | 51.08             | 54.00              | 2.92           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 650.00             | 48.88             | Peak             | H                  | 39.70          | 17.71         | -            | 46.35       | 59.94             | 74.00              | 14.06          |
| 11 650.00             | 39.65             | Average          | H                  | 39.70          | 17.71         | 0.25         | 46.35       | 50.96             | 54.00              | 3.04           |
| 11 650.00             | 48.68             | Peak             | V                  | 39.70          | 17.71         | -            | 46.35       | 59.74             | 74.00              | 14.26          |
| 11 650.00             | 40.13             | Average          | V                  | 39.70          | 17.71         | 0.25         | 46.35       | 51.44             | 54.00              | 2.56           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2.2.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 94.63 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>    |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 490.00             | 48.82             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.42             | 74.00              | 14.58          |
| 11 490.00             | 39.81             | Average          | H                  | 39.30          | 17.65         | 0.24         | 46.35       | 50.65             | 54.00              | 3.35           |
| 11 490.00             | 48.76             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.36             | 74.00              | 14.64          |
| 11 490.00             | 39.63             | Average          | V                  | 39.30          | 17.65         | 0.24         | 46.35       | 50.47             | 54.00              | 3.53           |
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 570.00             | 48.94             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.66             | 74.00              | 14.34          |
| 11 570.00             | 39.44             | Average          | H                  | 39.40          | 17.67         | 0.24         | 46.35       | 50.40             | 54.00              | 3.60           |
| 11 570.00             | 48.63             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.35             | 74.00              | 14.65          |
| 11 570.00             | 39.52             | Average          | V                  | 39.40          | 17.67         | 0.24         | 46.35       | 50.48             | 54.00              | 3.52           |
| <b>High Channel</b>   |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 650.00             | 48.64             | Peak             | H                  | 39.70          | 17.71         | -            | 46.35       | 59.70             | 74.00              | 14.30          |
| 11 650.00             | 39.46             | Average          | H                  | 39.70          | 17.71         | 0.24         | 46.35       | 50.76             | 54.00              | 3.24           |
| 11 650.00             | 49.15             | Peak             | V                  | 39.70          | 17.71         | -            | 46.35       | 60.21             | 74.00              | 13.79          |
| 11 650.00             | 39.27             | Average          | V                  | 39.70          | 17.71         | 0.24         | 46.35       | 50.57             | 54.00              | 3.43           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2.3 Test data for 802.11n\_HT40 RLAN Mode

#### 13.6.2.3.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 90.41 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)  | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|---------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>  |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 510.00           | 48.95             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.55             | 74.00              | 14.45          |
| 11 510.00           | 39.55             | Average          | H                  | 39.30          | 17.65         | 0.44         | 46.35       | 50.59             | 54.00              | 3.41           |
| 11 510.00           | 49.31             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.91             | 74.00              | 14.09          |
| 11 510.00           | 40.11             | Average          | V                  | 39.30          | 17.65         | 0.44         | 46.35       | 51.15             | 54.00              | 2.85           |
| <b>High Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 590.00           | 48.92             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.64             | 74.00              | 14.36          |
| 11 590.00           | 39.21             | Average          | H                  | 39.40          | 17.67         | 0.44         | 46.35       | 50.37             | 54.00              | 3.63           |
| 11 590.00           | 48.96             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.68             | 74.00              | 14.32          |
| 11 590.00           | 40.33             | Average          | V                  | 39.40          | 17.67         | 0.44         | 46.35       | 51.49             | 54.00              | 2.51           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 13.6.2.3.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 90.37 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz)  | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|---------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Low Channel</b>  |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 510.00           | 48.88             | Peak             | H                  | 39.30          | 17.65         | -            | 46.35       | 59.48             | 74.00              | 14.52          |
| 11 510.00           | 39.38             | Average          | H                  | 39.30          | 17.65         | 0.44         | 46.35       | 50.42             | 54.00              | 3.58           |
| 11 510.00           | 48.94             | Peak             | V                  | 39.30          | 17.65         | -            | 46.35       | 59.54             | 74.00              | 14.46          |
| 11 510.00           | 39.61             | Average          | V                  | 39.30          | 17.65         | 0.44         | 46.35       | 50.65             | 54.00              | 3.35           |
| <b>High Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 590.00           | 49.03             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.75             | 74.00              | 14.25          |
| 11 590.00           | 39.42             | Average          | H                  | 39.40          | 17.67         | 0.44         | 46.35       | 50.58             | 54.00              | 3.42           |
| 11 590.00           | 48.82             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.54             | 74.00              | 14.46          |
| 11 590.00           | 39.84             | Average          | V                  | 39.40          | 17.67         | 0.44         | 46.35       | 51.00             | 54.00              | 3.00           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor



### 13.6.2.4 Test data for 802.11ac\_HT80 RLAN Mode

#### 13.6.2.4.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Frequency range : 1 GHz ~ 40 GHz
- . Measurement distance : 3 m
- . Duty Cycle : 81.49 %
- . Operating mode : Transmitting mode

| Frequency<br>(MHz)    | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|-----------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| <b>Middle Channel</b> |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 550.00             | 49.51             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 60.23             | 74.00              | 13.77          |
| 11 550.00             | 39.85             | Average          | H                  | 39.40          | 17.67         | 0.89         | 46.35       | 51.46             | 54.00              | 2.54           |
| 11 550.00             | 49.95             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 60.67             | 74.00              | 13.33          |
| 11 550.00             | 39.91             | Average          | V                  | 39.40          | 17.67         | 0.89         | 46.35       | 51.52             | 54.00              | 2.48           |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 13.6.2.4.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 82.01 %
- Operating mode : Transmitting mode

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F.<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|--------------|-------------|-------------------|--------------------|----------------|
| Middle Channel     |                   |                  |                    |                |               |              |             |                   |                    |                |
| 11 550.00          | 49.09             | Peak             | H                  | 39.40          | 17.67         | -            | 46.35       | 59.81             | 74.00              | 14.19          |
| 11 550.00          | 39.57             | Average          | H                  | 39.40          | 17.67         | 0.86         | 46.35       | 51.15             | 54.00              | 2.85           |
| 11 550.00          | 49.08             | Peak             | V                  | 39.40          | 17.67         | -            | 46.35       | 59.80             | 74.00              | 14.20          |
| 11 550.00          | 39.36             | Average          | V                  | 39.40          | 17.67         | 0.86         | 46.35       | 50.94             | 54.00              | 3.06           |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

## 14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

### 14.1 Operating environment

Temperature : 23 °C

Relative humidity : 41 % R.H.

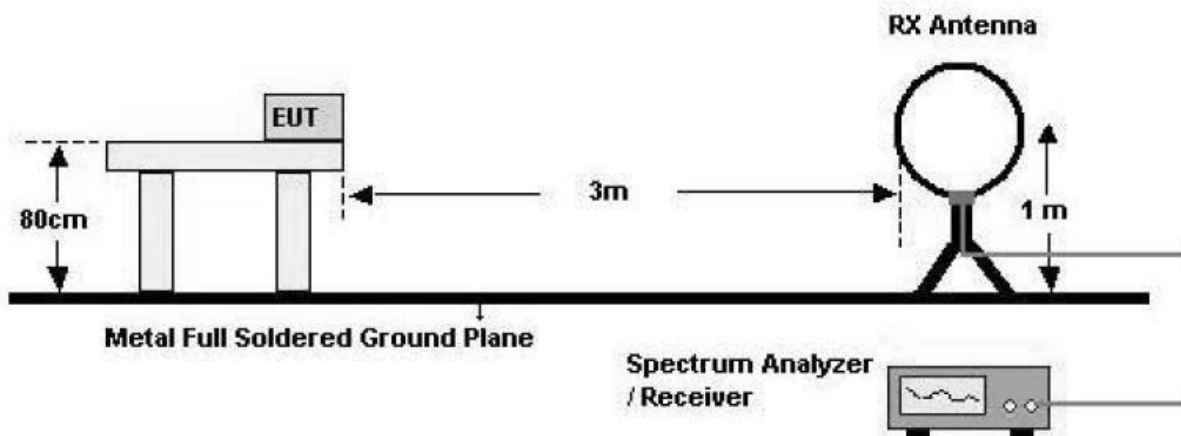
### 14.2 Test set-up for conducted measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable above the ground plane.

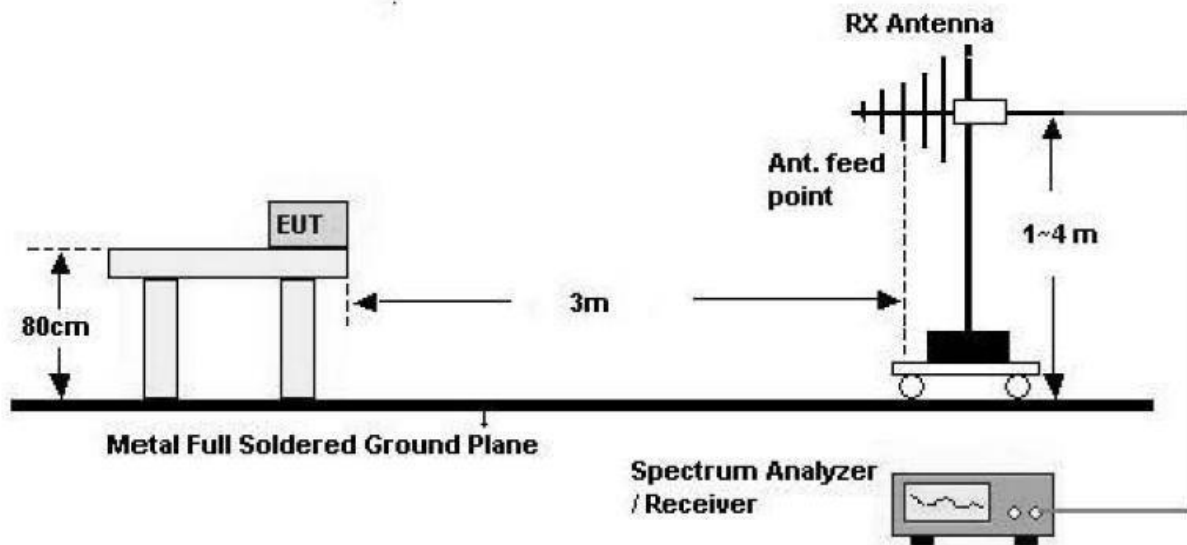
The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

#### - Test Configuration

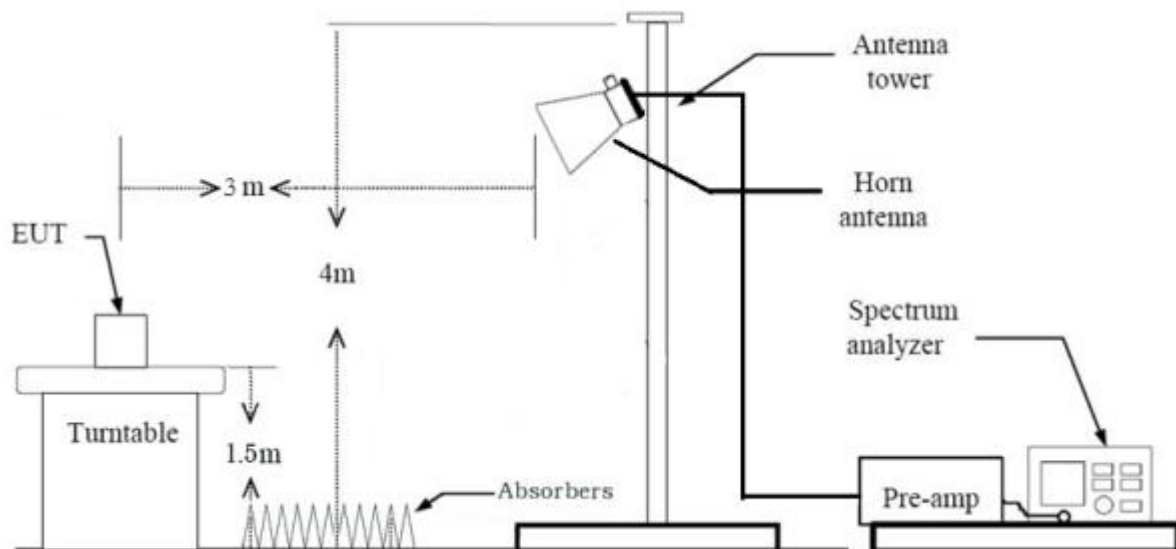
1. Below 30 MHz



2. 30 MHz - 1 GHz



3. Above 1 GHz



14.3 Test Date

November 25, 2021 ~ January 18, 2022

## 14.4 Test data for Frequency UNII I

### 14.4.1 Test data for 802.11a RLAN Mode

#### 14.4.1.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.93 %
- Result : Pass

| Frequency (MHz) | Reading (dBμV) | Detector Mode | Ant. Pol. (H/V) | Ant. Factor | Cable Loss | C.F (dB) | AMP Gain | Total (dBμV/m) | Limits (dBμV/m) | Margin (dB) |
|-----------------|----------------|---------------|-----------------|-------------|------------|----------|----------|----------------|-----------------|-------------|
| 5 124.830       | 58.47          | Peak          | H               | 34.20       | 12.50      | -        | 46.30    | 58.87          | 74.00           | 15.13       |
| 5 148.600       | 48.03          | Average       | H               | 34.20       | 12.50      | 0.23     | 46.30    | 48.66          | 54.00           | 5.34        |
| 5 112.240       | 57.34          | Peak          | V               | 34.20       | 12.50      | -        | 46.30    | 57.74          | 74.00           | 16.26       |
| 5 110.840       | 47.25          | Average       | V               | 34.20       | 12.50      | 0.23     | 46.30    | 47.88          | 54.00           | 6.12        |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.4.1.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.92 %
- Result : Pass

| Frequency (MHz) | Reading (dBμV) | Detector Mode | Ant. Pol. (H/V) | Ant. Factor | Cable Loss | C.F (dB) | AMP Gain | Total (dBμV/m) | Limits (dBμV/m) | Margin (dB) |
|-----------------|----------------|---------------|-----------------|-------------|------------|----------|----------|----------------|-----------------|-------------|
| 5 092.660       | 52.91          | Peak          | H               | 34.20       | 12.50      | -        | 46.30    | 53.31          | 74.00           | 20.69       |
| 5 122.030       | 42.10          | Average       | H               | 34.20       | 12.50      | 0.23     | 46.30    | 42.73          | 54.00           | 11.27       |
| 5 124.130       | 52.66          | Peak          | V               | 34.20       | 12.50      | -        | 46.30    | 53.06          | 74.00           | 20.94       |
| 5 145.100       | 41.99          | Average       | V               | 34.20       | 12.50      | 0.23     | 46.30    | 42.62          | 54.00           | 11.38       |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.4.2 Test data for 802.11n\_HT20 RLAN Mode

##### 14.4.2.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 94.58 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 125.520          | 58.39             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 58.79             | 74.00              | 15.21          |
| 5 150.000          | 48.34             | Average          | H                  | 34.20          | 12.50         | 0.24        | 46.30       | 48.98             | 54.00              | 5.02           |
| 5 114.340          | 57.03             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 57.43             | 74.00              | 16.57          |
| 5 107.340          | 47.15             | Average          | V                  | 34.20          | 12.50         | 0.24        | 46.30       | 47.79             | 54.00              | 6.21           |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

##### 14.4.2.2 Test data for External Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 94.46 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 129.720          | 53.20             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 53.60             | 74.00              | 20.40          |
| 5 150.000          | 43.01             | Average          | H                  | 34.20          | 12.50         | 0.25        | 46.30       | 43.66             | 54.00              | 10.34          |
| 5 110.140          | 53.24             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 53.64             | 74.00              | 20.36          |
| 5 029.020          | 43.01             | Average          | V                  | 34.20          | 12.50         | 0.25        | 46.30       | 43.66             | 54.00              | 10.34          |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 14.4.3 Test data for 802.11n\_HT40 RLAN Mode

#### 14.4.3.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 90.37 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 149.300          | 61.12             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 61.52             | 74.00              | 12.48          |
| 5 150.000          | 49.32             | Average          | H                  | 34.20          | 12.50         | 0.44        | 46.30       | 50.16             | 54.00              | 3.84           |
| 5 150.000          | 59.53             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 59.93             | 74.00              | 14.07          |
| 5 150.000          | 48.04             | Average          | V                  | 34.20          | 12.50         | 0.44        | 46.30       | 48.88             | 54.00              | 5.12           |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.4.3.2 Test data for External Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 89.33 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 143.010          | 53.92             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 54.32             | 74.00              | 19.68          |
| 5 136.710          | 43.15             | Average          | H                  | 34.20          | 12.50         | 0.49        | 46.30       | 44.04             | 54.00              | 9.96           |
| 5 059.090          | 53.43             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 53.83             | 74.00              | 20.17          |
| 5 150.000          | 42.43             | Average          | V                  | 34.20          | 12.50         | 0.49        | 46.30       | 43.32             | 54.00              | 10.68          |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.4.4 Test data for 802.11ac\_HT80 RLAN Mode

##### 14.4.4.1 Test data for Internal Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 81.61 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 142.310          | 58.96             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 59.36             | 74.00              | 14.64          |
| 5 149.300          | 48.35             | Average          | H                  | 34.20          | 12.50         | 0.88        | 46.30       | 49.63             | 54.00              | 4.37           |
| 5 147.900          | 58.63             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 59.03             | 74.00              | 14.97          |
| 5 149.300          | 47.64             | Average          | V                  | 34.20          | 12.50         | 0.88        | 46.30       | 48.92             | 54.00              | 5.08           |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

##### 14.4.4.2 Test data for External Antenna

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : 82.39 %
- . Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| 5 008.740          | 53.30             | Peak             | H                  | 34.20          | 12.50         | -           | 46.30       | 53.70             | 74.00              | 20.30          |
| 5 060.490          | 42.28             | Average          | H                  | 34.20          | 12.50         | 0.84        | 46.30       | 43.52             | 54.00              | 10.48          |
| 4 877.970          | 52.68             | Peak             | V                  | 34.20          | 12.50         | -           | 46.30       | 53.08             | 74.00              | 20.92          |
| 5 056.290          | 41.92             | Average          | V                  | 34.20          | 12.50         | 0.84        | 46.30       | 43.16             | 54.00              | 10.84          |

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor



## 14.5 Test data for Frequency U-NII-3

### 14.5.1 Test data for 802.11a RLAN Mode

#### 14.5.1.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.91 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 677.450          | 65.05             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 68.29             | 88.54              | 20.25          |
| 5 706.400          | 65.98             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 69.22             | 107.02             | 37.80          |
| 5 724.790          | 69.74             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 72.98             | 121.75             | 48.77          |
| 5 851.640          | 64.79             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.51             | 118.49             | 49.98          |
| 5 857.010          | 64.96             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.68             | 110.27             | 41.59          |
| 5 880.070          | 64.74             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.46             | 101.48             | 33.02          |
| 5 669.260          | 65.59             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.83             | 82.48              | 13.65          |
| 5 701.190          | 65.17             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.41             | 105.56             | 37.15          |
| 5 724.700          | 66.63             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 69.87             | 121.55             | 51.68          |
| 5 850.010          | 65.18             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.90             | 122.21             | 53.31          |
| 5 866.160          | 64.95             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.67             | 107.71             | 39.04          |
| 5 887.410          | 65.17             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.89             | 96.05              | 27.16          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 673.750    | 65.17 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.41 | 85.81  | 17.40 |
| 5 719.810    | 65.03 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.27 | 110.78 | 42.51 |
| 5 724.540    | 64.90 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.14 | 121.18 | 53.04 |
| 5 852.070    | 66.83 | Peak | H | 34.40 | 15.55 | - | 46.23 | 70.55 | 117.51 | 46.96 |
| 5 860.160    | 65.08 | Peak | H | 34.40 | 15.55 | - | 46.23 | 68.80 | 109.39 | 40.59 |
| 5 879.770    | 64.85 | Peak | H | 34.40 | 15.55 | - | 46.23 | 68.57 | 101.70 | 33.13 |
| 5 691.630    | 65.44 | Peak | V | 34.10 | 15.39 | - | 46.25 | 68.68 | 99.04  | 30.36 |
| 5 709.220    | 65.55 | Peak | V | 34.10 | 15.39 | - | 46.25 | 68.79 | 107.81 | 39.02 |
| 5 722.320    | 64.44 | Peak | V | 34.10 | 15.39 | - | 46.25 | 67.68 | 116.12 | 48.44 |
| 5 852.650    | 65.27 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.99 | 116.19 | 47.20 |
| 5 865.260    | 65.77 | Peak | V | 34.40 | 15.55 | - | 46.23 | 69.49 | 107.96 | 38.47 |
| 5 877.570    | 65.71 | Peak | V | 34.40 | 15.55 | - | 46.23 | 69.43 | 103.33 | 33.90 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.5.1.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.93 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 699.980          | 53.69             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 56.93             | 105.19             | 48.26          |
| 5 716.970          | 57.74             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 60.98             | 109.95             | 48.97          |
| 5 725.000          | 60.70             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 63.94             | 122.20             | 58.26          |
| 5 851.340          | 52.29             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.01             | 119.14             | 63.13          |
| 5 866.440          | 52.48             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.20             | 107.60             | 51.40          |
| 5 908.990          | 52.80             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.52             | 80.05              | 23.53          |
| 5 695.080          | 53.61             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 56.85             | 101.56             | 44.71          |
| 5 719.990          | 54.37             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 57.61             | 110.80             | 53.19          |
| 5 725.000          | 58.70             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 61.94             | 122.20             | 60.26          |
| 5 853.030          | 52.11             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 55.83             | 115.29             | 59.46          |
| 5 862.560          | 53.21             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.93             | 108.68             | 51.75          |
| 5 877.520          | 52.80             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.52             | 103.34             | 46.82          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 693.530    | 51.76 | Peak | H | 34.10 | 15.39 | - | 46.25 | 55.00 | 100.41 | 45.41 |
| 5 704.670    | 52.48 | Peak | H | 34.10 | 15.39 | - | 46.25 | 55.72 | 106.51 | 50.79 |
| 5 724.070    | 50.23 | Peak | H | 34.10 | 15.39 | - | 46.25 | 53.47 | 120.08 | 66.61 |
| 5 852.750    | 51.72 | Peak | H | 34.40 | 15.55 | - | 46.23 | 55.44 | 115.93 | 60.49 |
| 5 856.790    | 53.02 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.74 | 110.30 | 53.56 |
| 5 879.970    | 53.17 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.89 | 101.52 | 44.63 |
| 5 654.570    | 51.96 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.20 | 71.58  | 16.38 |
| 5 719.990    | 51.49 | Peak | V | 34.10 | 15.39 | - | 46.25 | 54.73 | 110.80 | 56.07 |
| 5 723.780    | 50.77 | Peak | V | 34.10 | 15.39 | - | 46.25 | 54.01 | 119.42 | 65.41 |
| 5 851.270    | 52.80 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.52 | 119.30 | 62.78 |
| 5 865.920    | 52.47 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.19 | 107.74 | 51.55 |
| 5 897.750    | 52.44 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.16 | 88.37  | 32.21 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

## 14.5.2 Test data for 802.11n\_HT20 RLAN Mode

### 14.5.2.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.51 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 697.180          | 64.65             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 67.89             | 103.14             | 35.25          |
| 5 719.810          | 65.96             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 69.20             | 110.78             | 41.58          |
| 5 724.680          | 75.97             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 79.21             | 121.50             | 42.29          |
| 5 852.100          | 65.10             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.82             | 117.44             | 48.62          |
| 5 866.120          | 63.94             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 67.66             | 107.72             | 40.06          |
| 5 893.510          | 65.80             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 69.52             | 91.53              | 22.01          |
| 5 686.740          | 64.80             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.04             | 95.42              | 27.38          |
| 5 713.920          | 64.79             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.03             | 109.13             | 41.10          |
| 5 724.880          | 72.89             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 76.13             | 121.96             | 45.83          |
| 5 851.930          | 64.59             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.31             | 117.83             | 49.52          |
| 5 863.960          | 65.30             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 69.02             | 108.32             | 39.30          |
| 5 879.420          | 64.95             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.67             | 101.96             | 33.29          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 662.810    | 65.40 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.64 | 77.71  | 9.07  |
| 5 708.680    | 65.10 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.34 | 107.66 | 39.32 |
| 5 720.740    | 64.80 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.04 | 112.52 | 44.48 |
| 5 850.110    | 67.09 | Peak | H | 34.40 | 15.55 | - | 46.23 | 70.81 | 121.98 | 51.17 |
| 5 872.990    | 65.35 | Peak | H | 34.40 | 15.55 | - | 46.23 | 69.07 | 105.79 | 36.72 |
| 5 894.610    | 65.05 | Peak | H | 34.40 | 15.55 | - | 46.23 | 68.77 | 90.72  | 21.95 |
| 5 683.990    | 65.20 | Peak | V | 34.10 | 15.39 | - | 46.25 | 68.44 | 93.38  | 24.94 |
| 5 702.210    | 64.38 | Peak | V | 34.10 | 15.39 | - | 46.25 | 67.62 | 105.85 | 38.23 |
| 5 723.550    | 64.49 | Peak | V | 34.10 | 15.39 | - | 46.25 | 67.73 | 118.92 | 51.19 |
| 5 850.370    | 67.44 | Peak | V | 34.40 | 15.55 | - | 46.23 | 71.16 | 121.39 | 50.23 |
| 5 873.750    | 65.04 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.76 | 105.58 | 36.82 |
| 5 902.030    | 64.42 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.14 | 85.23  | 17.09 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.5.2.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 94.63 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 698.430          | 52.87             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 56.11             | 104.04             | 47.93          |
| 5 719.990          | 55.55             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 58.79             | 110.80             | 52.01          |
| 5 723.610          | 60.61             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 63.85             | 119.03             | 55.18          |
| 5 850.720          | 52.66             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.38             | 120.56             | 64.18          |
| 5 874.790          | 53.03             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.75             | 105.26             | 48.51          |
| 5 921.580          | 52.54             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.26             | 70.73              | 14.47          |
| 5 697.980          | 52.72             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 55.96             | 103.71             | 47.75          |
| 5 712.780          | 54.97             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 58.21             | 108.78             | 50.57          |
| 5 724.840          | 60.30             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 63.54             | 121.84             | 58.30          |
| 5 850.140          | 52.58             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.30             | 121.88             | 65.58          |
| 5 873.470          | 52.66             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.38             | 105.63             | 49.25          |
| 5 881.670          | 52.31             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.03             | 100.26             | 44.23          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 673.150    | 51.92 | Peak | H | 34.10 | 15.39 | - | 46.25 | 55.16 | 85.33  | 30.17 |
| 5 710.940    | 51.57 | Peak | H | 34.10 | 15.39 | - | 46.25 | 54.81 | 108.26 | 53.45 |
| 5 725.000    | 51.10 | Peak | H | 34.10 | 15.39 | - | 46.25 | 54.34 | 122.20 | 67.86 |
| 5 851.750    | 52.86 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.58 | 118.21 | 61.63 |
| 5 867.980    | 53.63 | Peak | H | 34.40 | 15.55 | - | 46.23 | 57.35 | 107.17 | 49.82 |
| 5 904.300    | 52.63 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.35 | 83.52  | 27.17 |
| 5 660.910    | 52.41 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.65 | 76.27  | 20.62 |
| 5 702.270    | 52.31 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.55 | 105.84 | 50.29 |
| 5 721.340    | 52.58 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.82 | 113.86 | 58.04 |
| 5 851.850    | 53.65 | Peak | V | 34.40 | 15.55 | - | 46.23 | 57.37 | 117.98 | 60.61 |
| 5 869.480    | 53.17 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.89 | 106.75 | 49.86 |
| 5 898.000    | 53.19 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.91 | 88.18  | 31.27 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor



### 14.5.3 Test data for 802.11n\_HT40 RLAN Mode

#### 14.5.3.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 90.41 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 694.730          | 65.02             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 68.26             | 101.33             | 33.07          |
| 5 719.710          | 72.47             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 75.71             | 110.75             | 35.04          |
| 5 723.530          | 73.87             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 77.11             | 118.88             | 41.77          |
| 5 850.520          | 65.38             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 69.10             | 121.04             | 51.94          |
| 5 858.210          | 65.56             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 69.28             | 109.93             | 40.65          |
| 5 910.190          | 64.45             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.17             | 79.19              | 11.02          |
| 5 677.950          | 64.78             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.02             | 88.91              | 20.89          |
| 5 719.250          | 68.12             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 71.36             | 110.62             | 39.26          |
| 5 724.780          | 72.52             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 75.76             | 121.73             | 45.97          |
| 5 854.890          | 65.14             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.86             | 111.08             | 42.22          |
| 5 860.720          | 65.33             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 69.05             | 109.23             | 40.18          |
| 5 902.600          | 65.24             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.96             | 84.81              | 15.85          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 667.210    | 64.66 | Peak | H | 34.10 | 15.39 | - | 46.25 | 67.90 | 80.97  | 13.07 |
| 5 705.700    | 65.11 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.35 | 106.83 | 38.48 |
| 5 721.840    | 65.74 | Peak | H | 34.10 | 15.39 | - | 46.25 | 68.98 | 115.03 | 46.05 |
| 5 851.670    | 65.58 | Peak | H | 34.40 | 15.55 | - | 46.23 | 69.30 | 118.42 | 49.12 |
| 5 857.890    | 65.08 | Peak | H | 34.40 | 15.55 | - | 46.23 | 68.80 | 110.02 | 41.22 |
| 5 889.360    | 64.95 | Peak | H | 34.40 | 15.55 | - | 46.23 | 68.67 | 94.60  | 25.93 |
| 5 685.940    | 65.55 | Peak | V | 34.10 | 15.39 | - | 46.25 | 68.79 | 94.83  | 26.04 |
| 5 717.170    | 64.58 | Peak | V | 34.10 | 15.39 | - | 46.25 | 67.82 | 110.04 | 42.22 |
| 5 721.570    | 65.33 | Peak | V | 34.10 | 15.39 | - | 46.25 | 68.57 | 114.41 | 45.84 |
| 5 851.450    | 64.83 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.55 | 118.92 | 50.37 |
| 5 871.970    | 64.78 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.50 | 106.08 | 37.58 |
| 5 910.180    | 65.10 | Peak | V | 34.40 | 15.55 | - | 46.23 | 68.82 | 79.20  | 10.38 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

### 14.5.3.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 90.37 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 694.780          | 56.82             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 60.06             | 101.34             | 41.28          |
| 5 719.350          | 72.86             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 76.10             | 110.62             | 34.52          |
| 5 724.710          | 76.93             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 80.17             | 121.54             | 41.37          |
| 5 850.360          | 52.22             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 55.94             | 121.38             | 65.44          |
| 5 872.930          | 52.73             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.45             | 105.78             | 49.33          |
| 5 882.420          | 52.46             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.18             | 99.71              | 43.53          |
| 5 679.850          | 52.82             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 56.06             | 90.29              | 34.23          |
| 5 718.470          | 63.85             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 67.09             | 110.37             | 43.28          |
| 5 722.680          | 67.92             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 71.16             | 116.91             | 45.75          |
| 5 852.740          | 52.18             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 55.90             | 115.95             | 60.05          |
| 5 865.560          | 51.91             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 55.63             | 107.84             | 52.21          |
| 5 881.420          | 51.69             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 55.41             | 100.45             | 45.04          |

| High Channel |       |      |   |       |       |   |       |       |        |       |
|--------------|-------|------|---|-------|-------|---|-------|-------|--------|-------|
| 5 679.100    | 52.62 | Peak | H | 34.10 | 15.39 | - | 46.25 | 55.86 | 89.73  | 33.87 |
| 5 716.550    | 52.90 | Peak | H | 34.10 | 15.39 | - | 46.25 | 56.14 | 109.83 | 53.69 |
| 5 724.160    | 53.18 | Peak | H | 34.10 | 15.39 | - | 46.25 | 56.42 | 120.28 | 63.86 |
| 5 851.960    | 52.55 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.27 | 117.73 | 61.46 |
| 5 856.550    | 52.40 | Peak | H | 34.40 | 15.55 | - | 46.23 | 56.12 | 110.37 | 54.25 |
| 5 875.420    | 52.00 | Peak | H | 34.40 | 15.55 | - | 46.23 | 55.72 | 104.89 | 49.17 |
| 5 654.020    | 52.17 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.41 | 71.17  | 15.76 |
| 5 710.560    | 52.77 | Peak | V | 34.10 | 15.39 | - | 46.25 | 56.01 | 108.16 | 52.15 |
| 5 721.450    | 52.27 | Peak | V | 34.10 | 15.39 | - | 46.25 | 55.51 | 114.11 | 58.60 |
| 5 853.090    | 52.28 | Peak | V | 34.40 | 15.55 | - | 46.23 | 56.00 | 115.15 | 59.15 |
| 5 863.320    | 51.90 | Peak | V | 34.40 | 15.55 | - | 46.23 | 55.62 | 108.47 | 52.85 |
| 5 877.870    | 51.65 | Peak | V | 34.40 | 15.55 | - | 46.23 | 55.37 | 103.08 | 47.71 |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.5.4 Test data for 802.11ac\_HT80 RLAN Mode

##### 14.5.4.1 Test data for Internal Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 81.49 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 697.130          | 65.29             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 68.53             | 103.11             | 34.58          |
| 5 701.050          | 65.45             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 68.69             | 105.52             | 36.83          |
| 5 723.280          | 66.03             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 69.27             | 118.31             | 49.04          |
| 5 851.670          | 65.00             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.72             | 118.42             | 49.70          |
| 5 858.010          | 64.57             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.29             | 109.99             | 41.70          |
| 5 893.360          | 64.45             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 68.17             | 91.64              | 23.47          |
| 5 699.080          | 64.67             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 67.91             | 104.55             | 36.64          |
| 5 716.590          | 64.97             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 68.21             | 109.88             | 41.67          |
| 5 720.840          | 65.97             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 69.21             | 112.75             | 43.54          |
| 5 854.860          | 64.89             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.61             | 111.15             | 42.54          |
| 5 860.840          | 66.03             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 69.75             | 109.19             | 39.44          |
| 5 900.250          | 65.23             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 68.95             | 86.55              | 17.60          |

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

#### 14.5.4.2 Test data for External Antenna

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 82.01 %
- Result : Pass

| Frequency<br>(MHz) | Reading<br>(dBμV) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | C.F<br>(dB) | AMP<br>Gain | Total<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|-------------------|------------------|--------------------|----------------|---------------|-------------|-------------|-------------------|--------------------|----------------|
| Low Channel        |                   |                  |                    |                |               |             |             |                   |                    |                |
| 5 693.180          | 64.78             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 68.02             | 100.15             | 32.13          |
| 5 702.010          | 63.51             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 66.75             | 105.76             | 39.01          |
| 5 723.270          | 62.75             | Peak             | H                  | 34.10          | 15.39         | -           | 46.25       | 65.99             | 118.26             | 52.27          |
| 5 850.500          | 56.72             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 60.44             | 121.06             | 60.62          |
| 5 856.770          | 56.91             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 60.63             | 110.30             | 49.67          |
| 5 879.520          | 52.63             | Peak             | H                  | 34.40          | 15.55         | -           | 46.23       | 56.35             | 101.86             | 45.51          |
| 5 696.930          | 64.37             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 67.61             | 102.93             | 35.32          |
| 5 711.380          | 62.28             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 65.52             | 108.39             | 42.87          |
| 5 722.890          | 62.17             | Peak             | V                  | 34.10          | 15.39         | -           | 46.25       | 65.41             | 117.39             | 51.98          |
| 5 851.350          | 56.25             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 59.97             | 119.12             | 59.15          |
| 5 858.870          | 55.85             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 59.57             | 109.72             | 50.15          |
| 5 924.930          | 52.37             | Peak             | V                  | 34.40          | 15.55         | -           | 46.23       | 56.09             | 68.25              | 12.16          |

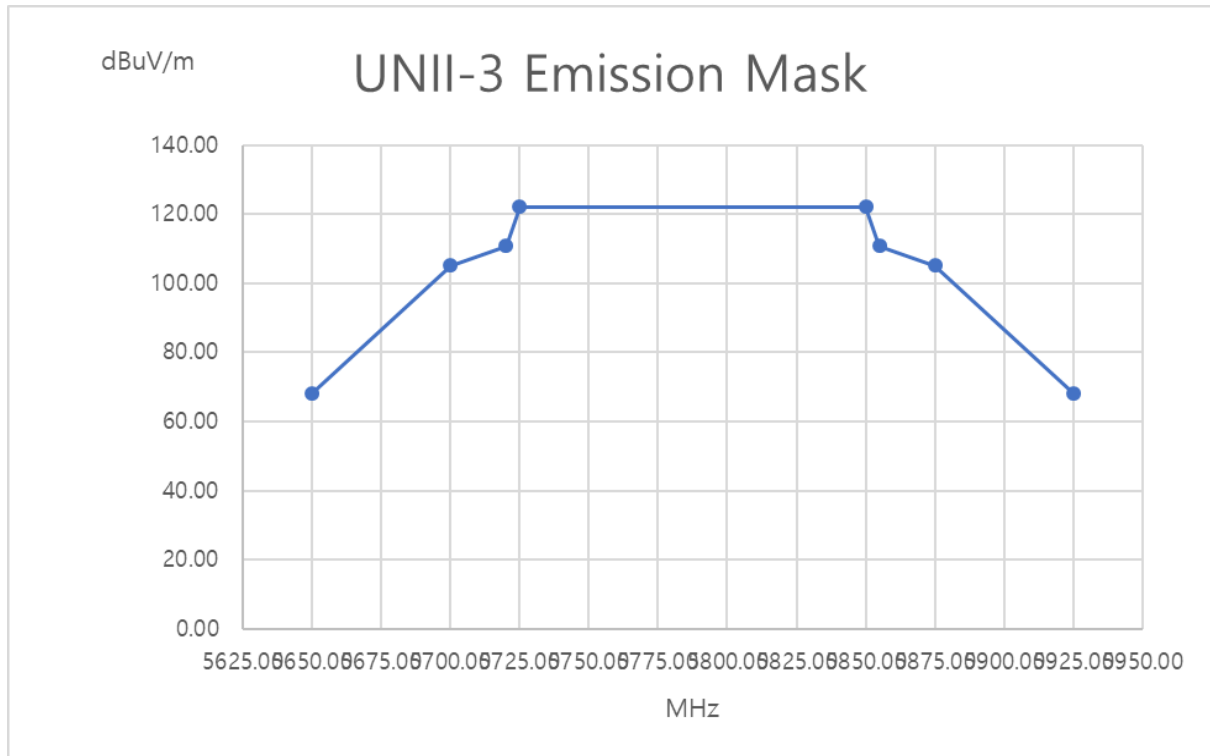
Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Correction Factor

## 14.6 U-NII-3 Emission Limits

### 14.6.1 Emission Mask Plots



Remark.

-. Title 47 → Part 15 → Subpart E—UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE DEVICES

§ 15.407 General technical requirements.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of  $-27$  dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

## 15. LIST OF TEST EQUIPMENT

| Model Number | Manufacturer         | Description              | Serial Number         | Last Cal.(Interval) |
|--------------|----------------------|--------------------------|-----------------------|---------------------|
| FSV40-N      | Rohde & Schwarz      | Signal Analyzer          | 102177                | Apr. 16, 2021 (1Y)  |
| ESW          | Rohde & Schwarz      | EMI Test Receiver        | 101851                | Mar. 22, 2021 (1Y)  |
| GP-4303D     | LG Precision Co.,Ltd | DC POWER SUPPLY          | 5071069               | Jan. 03, 2022 (1Y)  |
| F-40-5000-RF | RLC Electronis       | High Pass Filter         | 0425                  | Feb. 08, 2021 (1Y)  |
| 310N         | Sonoma Instrument    | Pre-Amplifier            | 392756                | Oct. 14, 2021 (1Y)  |
| SCU18        | Rohde & Schwarz      | Pre-Amplifier            | 102266                | Jul. 14, 2021 (1Y)  |
| SCU40A       | Rohde & Schwarz      | Signal Conditioning unit | 100436                | Feb. 08, 2021 (1Y)  |
| DT2000-2t    | Innco System         | Turn Table               | N/A                   | N/A                 |
| MA-4640-XPET | Innco System         | Antenna Master           | MA4640/652/43100318/P | N/A                 |
| HLP-2008     | TDK                  | Hybrid Antenna           | 131316                | Feb. 27, 2020 (2Y)  |
| AH-118       | Com-Power            | Horn Antenna             | 10050061              | Oct. 15, 2021 (1Y)  |
| BBHA9170     | Schwarzbeck          | Horn Antenna             | BBHA9170178           | Jan. 06, 2022 (1Y)  |
| FMZB 1513    | Schwarzbeck          | Loop Antenna             | 1513-235              | Mar. 24, 2020 (2Y)  |