

# Prüfbericht - Nr.:

Test Report No.:

ULR-TC568821300000075F

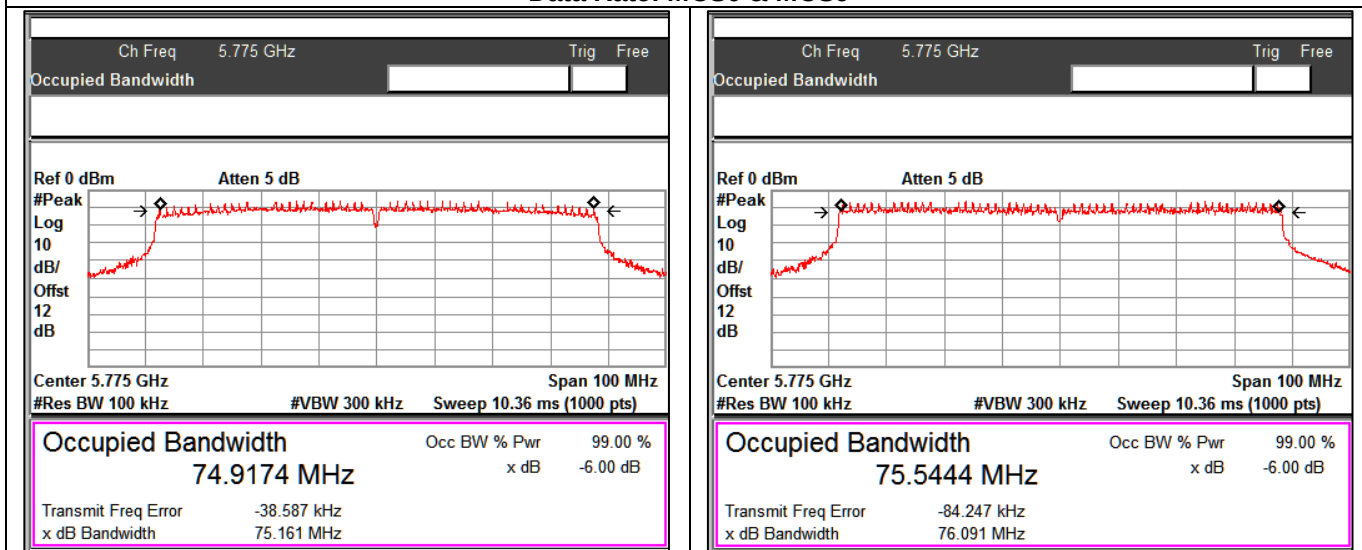
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Modulation: 802.11ac-VHT80MHz: UNII 3

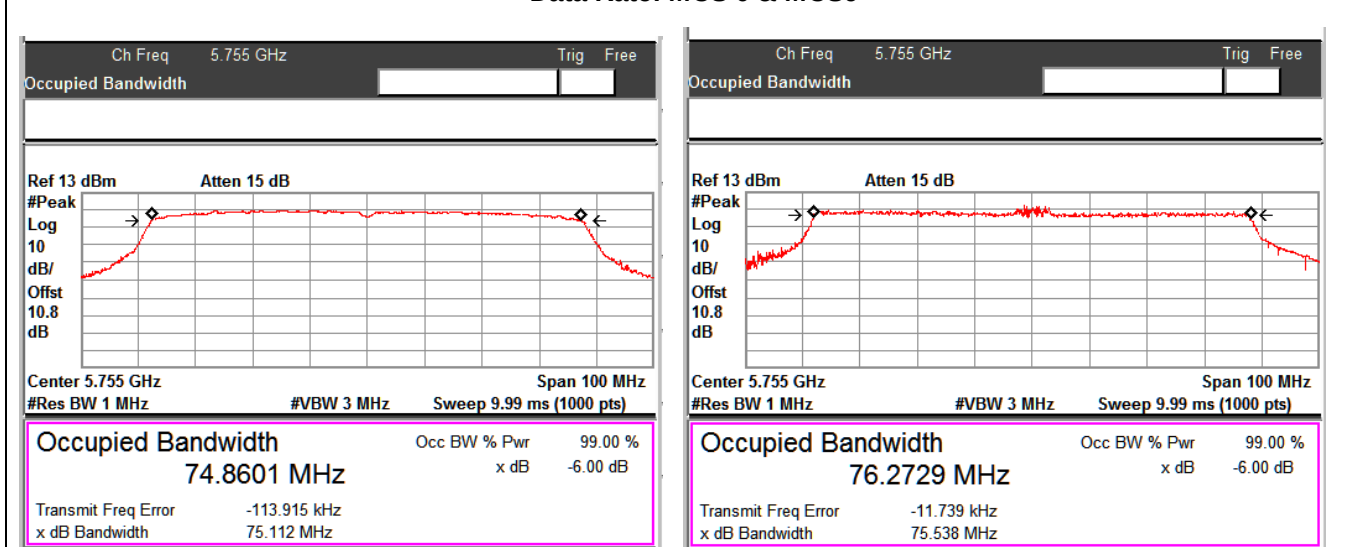
| Data rate (Mbps) | Measured Frequency (MHz) | 6 dB emission bandwidth (MHz) | Minimum Limit (MHz) |
|------------------|--------------------------|-------------------------------|---------------------|
| MCS0             | 5755                     | 75.16                         | 0.5                 |
| MCS9             | 5755                     | 76.09                         | 0.5                 |

## Data Rate: MCS0 & MCS9



| Data rate (Mbps) | Measured Frequency (MHz) | 99% Occupied Bandwidth (MHz) |
|------------------|--------------------------|------------------------------|
| MCS0             | 5755                     | 74.86                        |
| MCS9             | 5755                     | 76.27                        |

## Data Rate: MCS 0 & MCS9



## 7.2 Maximum Conducted Output Power

**Result**

**Pass**

Test Specification

FCC part 15 Subpart C 15.407 (a) / RSS 247 Issue 2  
Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4

Test Method

Subclause 12.3.2.4 of ANSI C63.10

Measurement Bandwidth

Refer the remarks below

Detector

Average sample detector mode

Port of testing

Antenna port

Requirement for FCC

1. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW

2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz

3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W

1. For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log<sub>10</sub> (B), dBm, whichever power is less. B is the 99% emission bandwidth in megahertz

2a. For the band 5.250 -5.350 GHz, the maximum conducted output power shall not exceed 250 mW or 11 + 10 log<sub>10</sub>B, dBm, whichever is less

2b. For the band 5.250 -5.350 GHz, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log<sub>10</sub>B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz

Requirement for IC

3a. For the band 5.470-5.725GHz, The maximum conducted output power shall not exceed 250 mW or 11 + 10 log<sub>10</sub>B, dBm, whichever is less

3b. For the band 5.470-5.725GHz, The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log<sub>10</sub>B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz

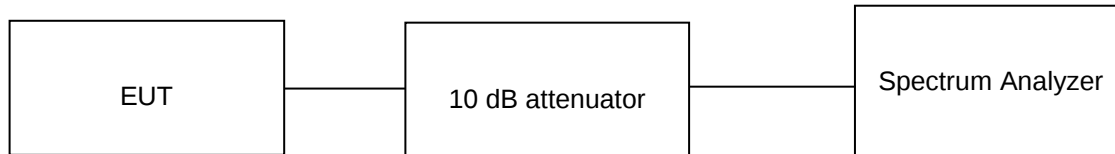
4. For the band 5.725-5.85 GHz, The maximum conducted output power shall not exceed 1 W

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## Test Method



**The following procedure shall be used (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction):**

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1MHz
4. Set VBW  $\geq 3 \times$  RBW
5. Number of points in sweep  $\geq 2 \times$  span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to "free run."
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)

## Test Condition:

### Normal Test Condition:

Temperature (Norm) = + 25 °C

Voltage = 3.3VDC

Relative humidity: 62 %

### KDB Guidelines applied:

Measurements were made as per section E (2) sub-section (d) in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

## Test results:

### Note:

1. All the losses are included during measurement and final values are mentioned in the test report  
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power  
Duty cycle Correction factor =  $10 \cdot \log(1/X)$  Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (3.10 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

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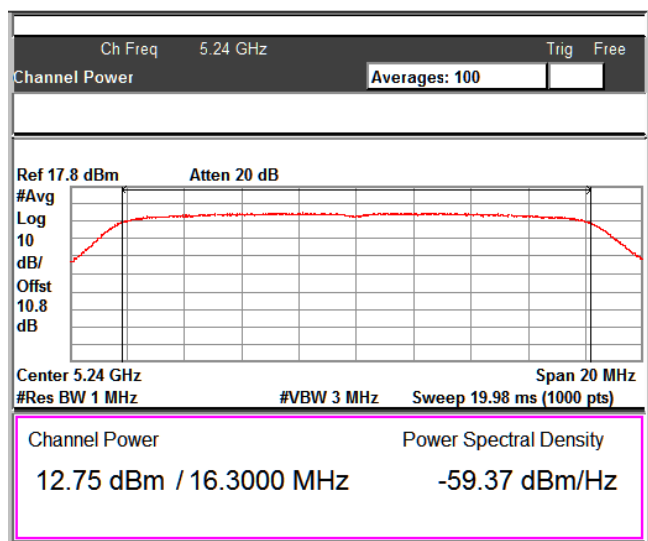
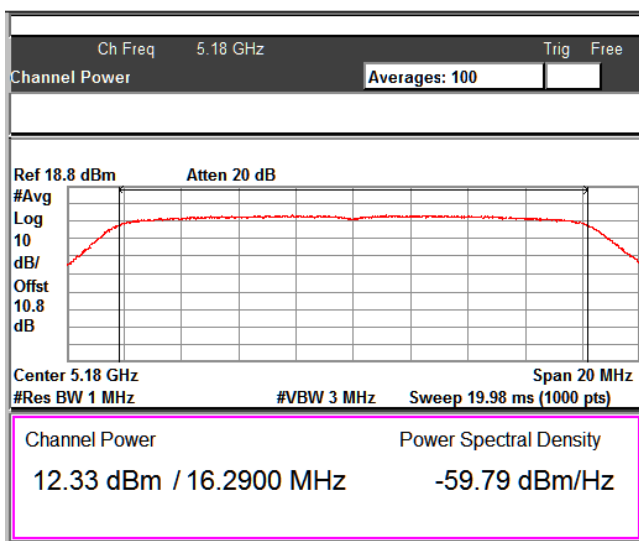
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**Modulation: 802.11a**

| Data rate (Mbps) | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power Limit (dBm) | IC e.i.r.p Limit (dBm) |
|------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------------|------------------------|
| a_mode-6Mbps     | 5180                     | 12.33                        | 95.00          | 0.22                              | 12.55                              | 15.65         | 24.00                 | -                    | 22.11                  |
|                  | 5240                     | 12.75                        | 95.00          | 0.22                              | 12.97                              | 16.07         | 24.00                 | -                    | 22.11                  |
|                  | 5260                     | 12.92                        | 95.00          | 0.22                              | 13.14                              | 16.24         | 24.00                 | 23.12                | 29.12                  |
|                  | 5320                     | 12.80                        | 95.00          | 0.22                              | 13.02                              | 16.12         | 24.00                 | 23.12                | 29.12                  |
|                  | 5500                     | 12.64                        | 95.00          | 0.22                              | 12.86                              | 15.96         | 24.00                 | 23.12                | 29.12                  |
|                  | 5700                     | 12.16                        | 95.00          | 0.22                              | 12.38                              | 15.48         | 24.00                 | 23.12                | 29.12                  |
|                  | 5720                     | 12.27                        | 95.00          | 0.22                              | 12.49                              | 15.59         | 24.00                 | 23.12                | 29.12                  |
|                  | 5745                     | 11.68                        | 95.00          | 0.22                              | 11.90                              | 15.00         | 30.00                 | 30.00                | -                      |
|                  | 5825                     | 11.71                        | 95.00          | 0.22                              | 11.93                              | 15.03         | 30.00                 | 30.00                | -                      |
| a_mode-54Mbps    | 5180                     | 11.61                        | 57.00          | 2.44                              | 14.05                              | 17.15         | 24.00                 | -                    | 22.50                  |
|                  | 5240                     | 11.50                        | 57.00          | 2.44                              | 13.94                              | 17.04         | 24.00                 | -                    | 22.50                  |
|                  | 5260                     | 11.22                        | 57.00          | 2.44                              | 13.66                              | 16.76         | 24.00                 | 23.25                | 29.25                  |
|                  | 5320                     | 11.99                        | 57.00          | 2.44                              | 14.43                              | 17.53         | 24.00                 | 23.25                | 29.25                  |
|                  | 5500                     | 11.43                        | 57.00          | 2.44                              | 13.87                              | 16.97         | 24.00                 | 23.25                | 29.25                  |
|                  | 5700                     | 11.50                        | 57.00          | 2.44                              | 13.94                              | 17.04         | 24.00                 | 23.25                | 29.25                  |
|                  | 5720                     | 10.90                        | 57.00          | 2.44                              | 13.34                              | 16.44         | 24.00                 | 23.25                | 29.25                  |
|                  | 5745                     | 10.36                        | 57.00          | 2.44                              | 12.80                              | 15.90         | 30.00                 | 30.00                | -                      |
|                  | 5825                     | 10.41                        | 57.00          | 2.44                              | 12.85                              | 15.95         | 30.00                 | 30.00                | -                      |

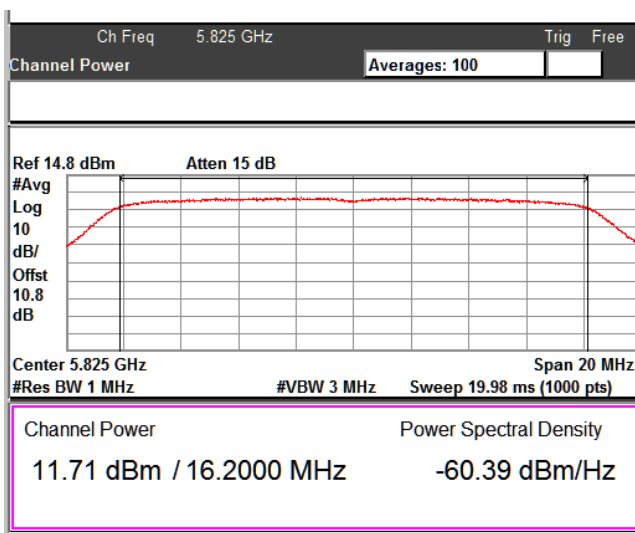
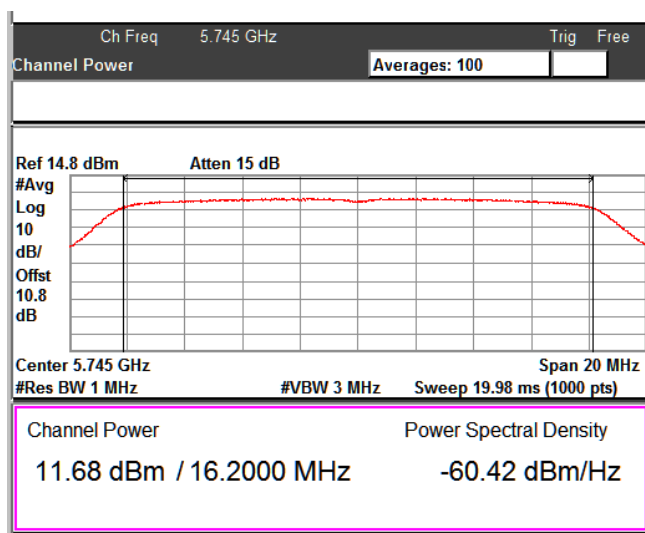
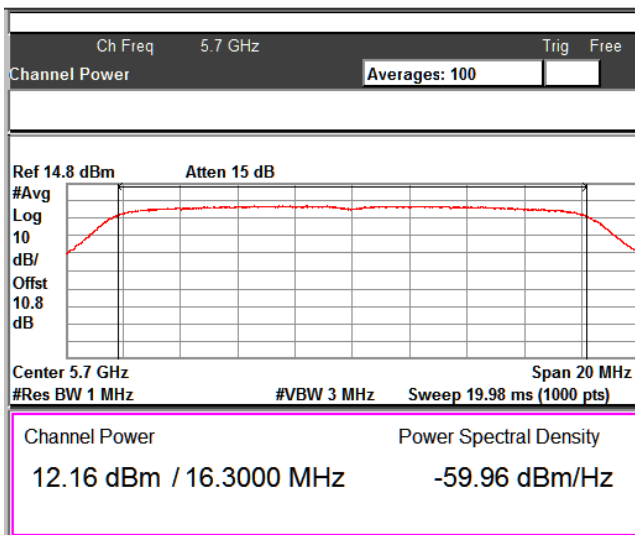
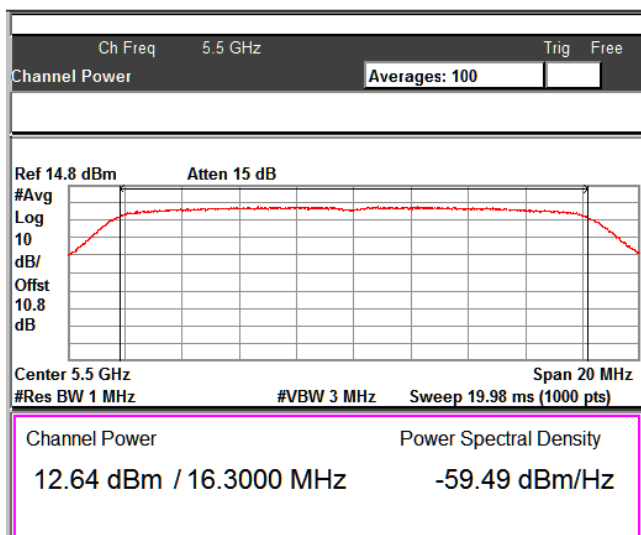
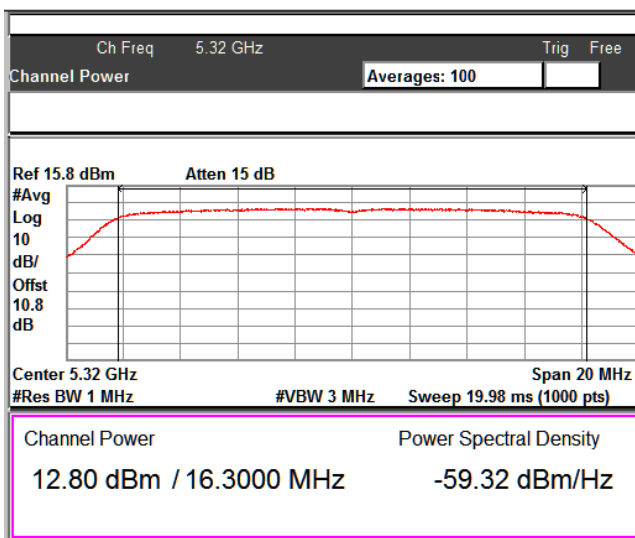
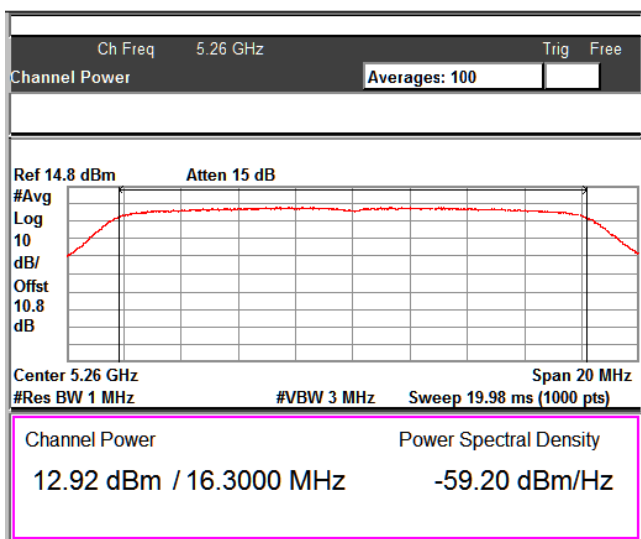
**Data Rate : 6Mbps**



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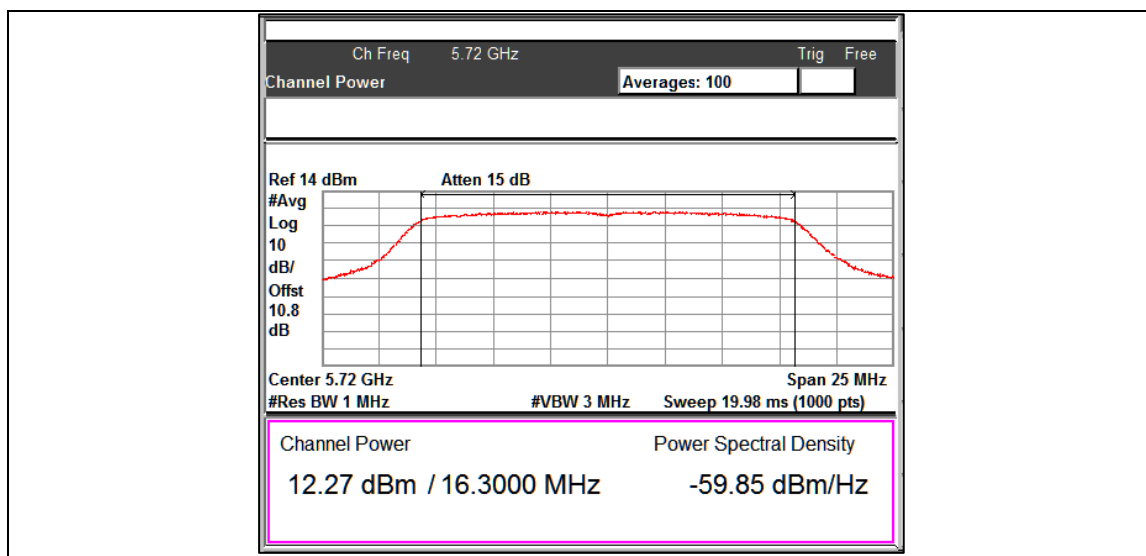
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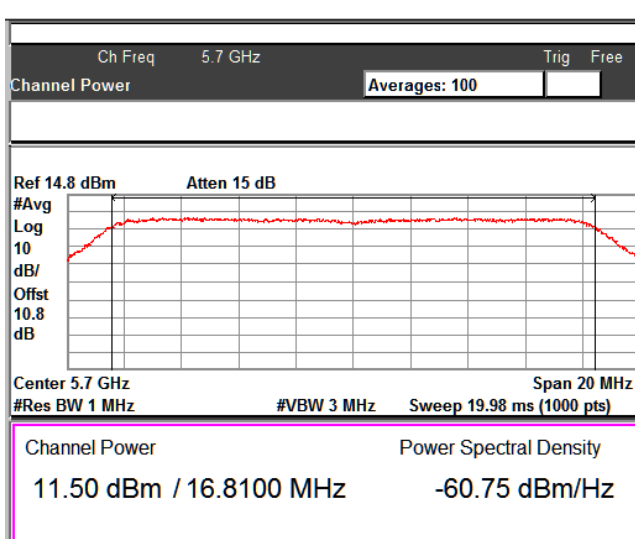
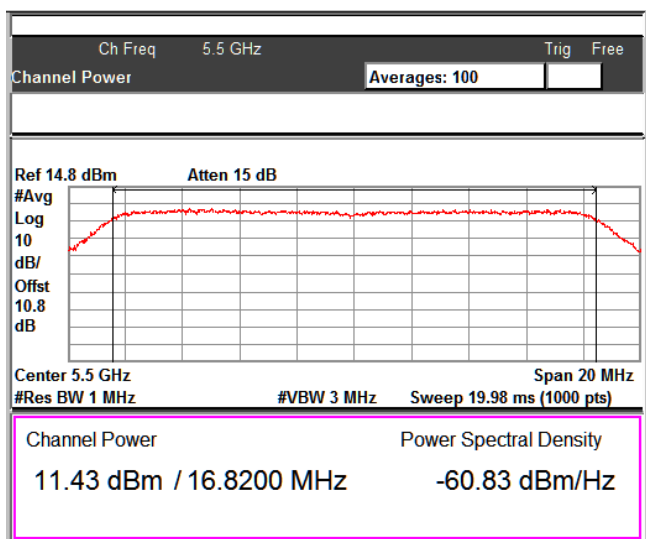
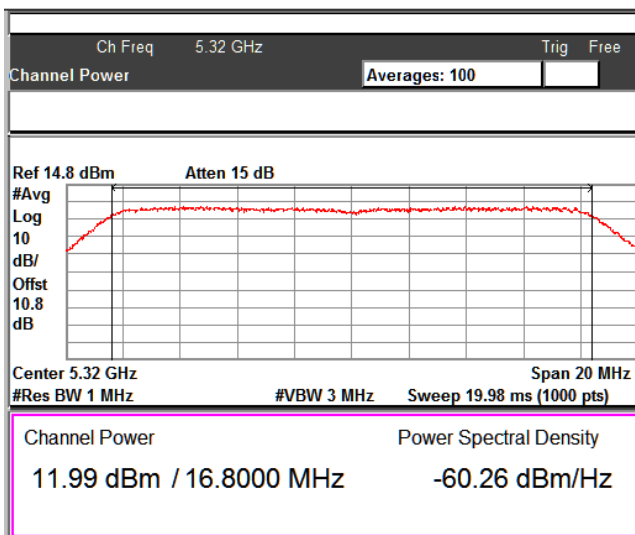
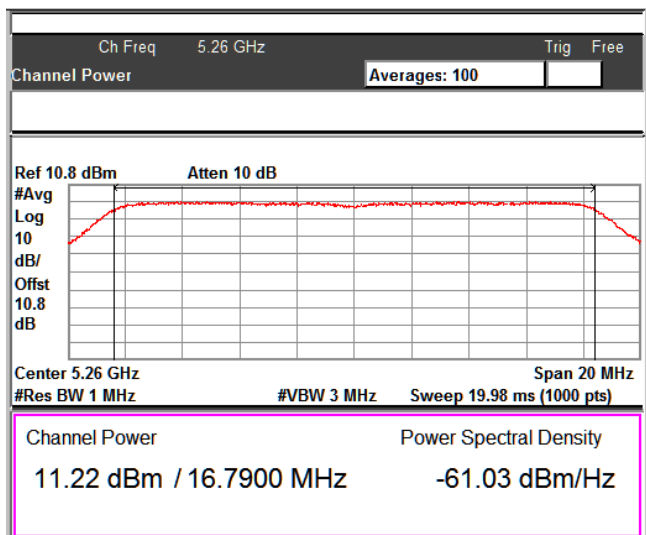
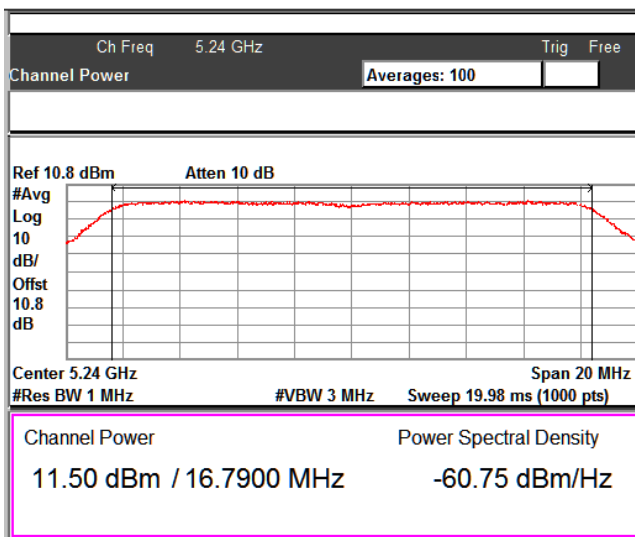
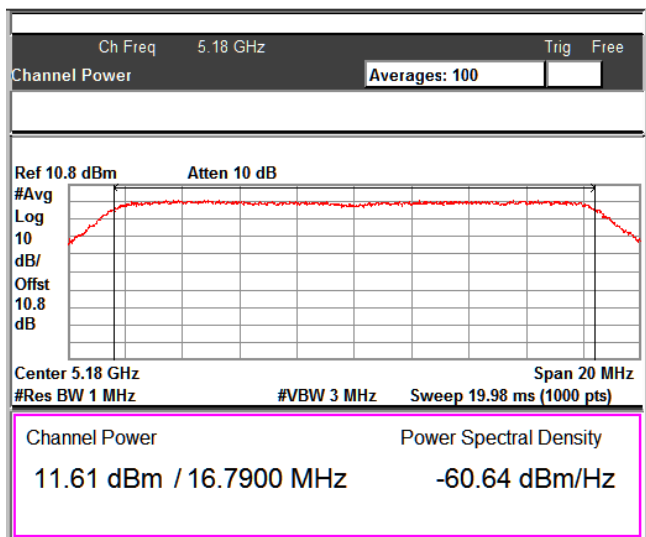
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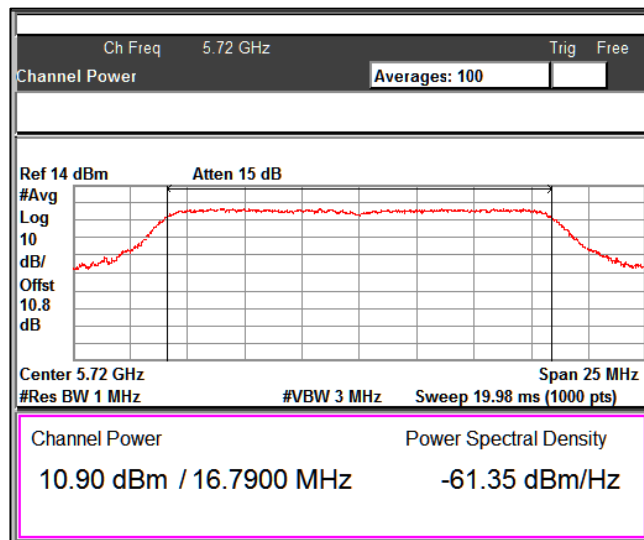
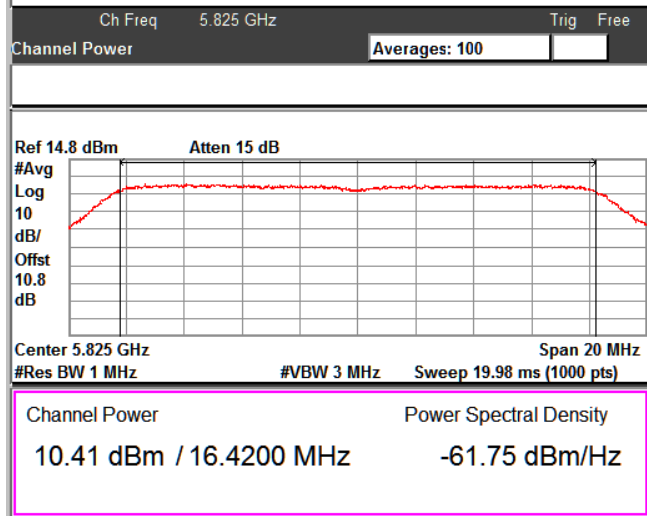
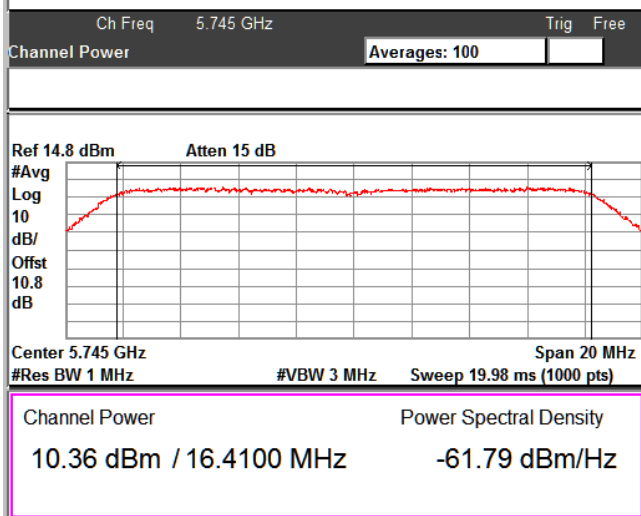
**Data Rate: 54Mbps**



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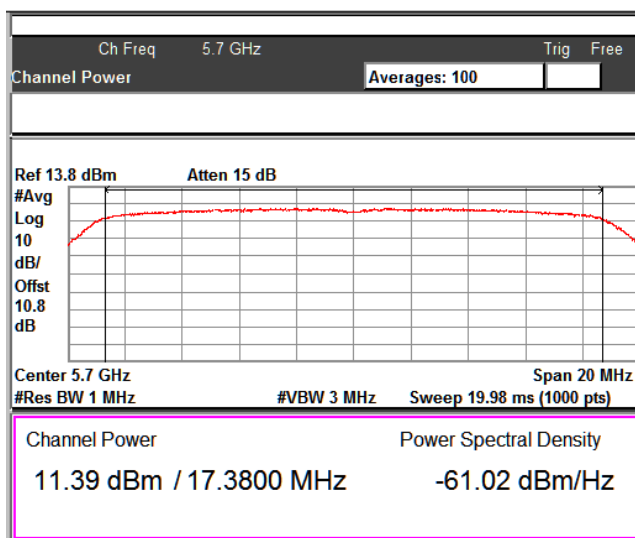
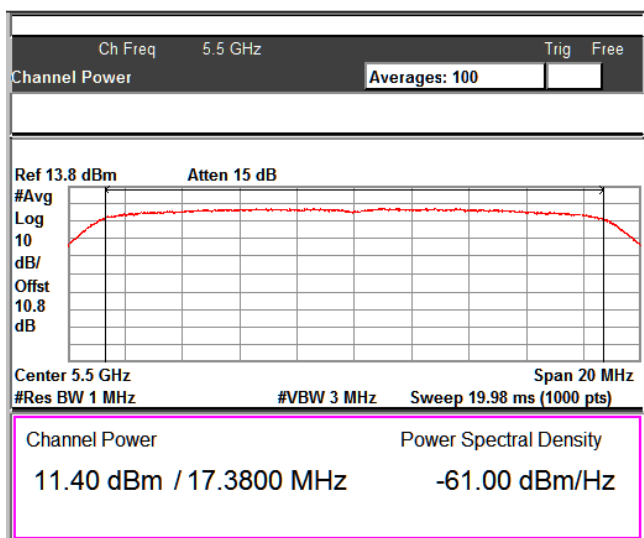
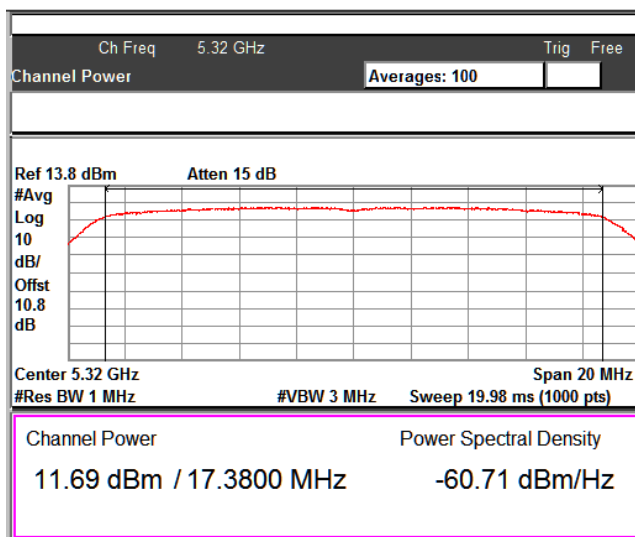
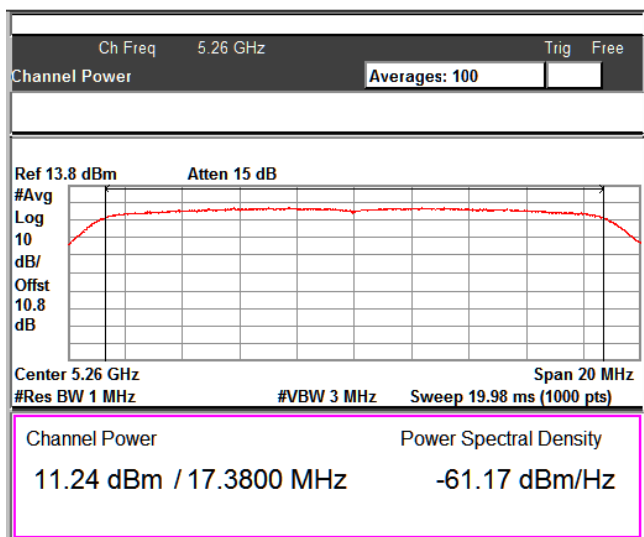
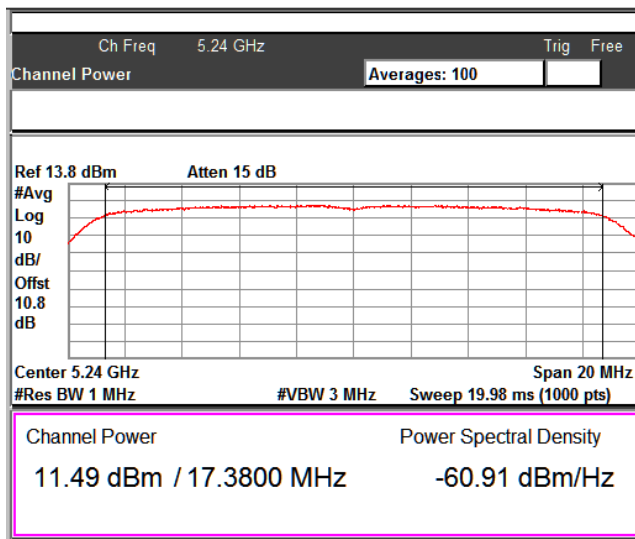
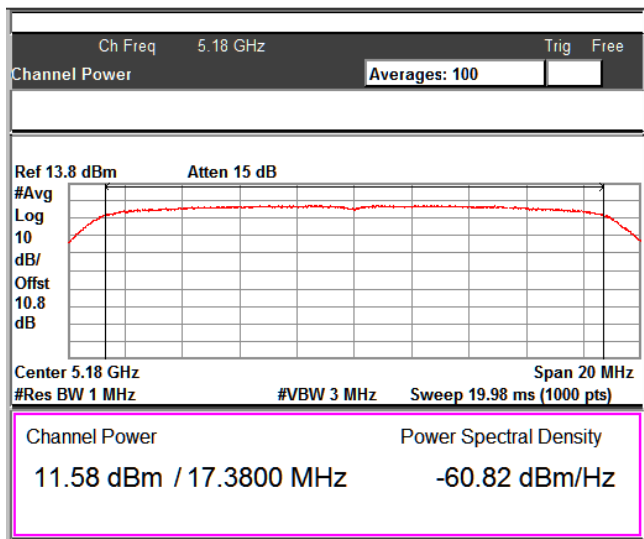
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**Modulation: 802.11n-20MHz**

| Data rate (Mbps)    | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power Limit (dBm) | IC e.i.r.p Limit (dBm) |
|---------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------------|------------------------|
| n_mode-HT20MHz-MCS0 | 5180                     | 11.58                        | 92.00          | 0.36                              | 11.94                              | 15.04         | 24.00                 | -                    | 22.51                  |
|                     | 5240                     | 11.49                        | 92.00          | 0.36                              | 11.85                              | 14.95         | 24.00                 | -                    | 22.51                  |
|                     | 5260                     | 11.24                        | 92.00          | 0.36                              | 11.60                              | 14.70         | 24.00                 | 23.51                | 29.51                  |
|                     | 5320                     | 11.69                        | 92.00          | 0.36                              | 12.05                              | 15.15         | 24.00                 | 23.51                | 29.51                  |
|                     | 5500                     | 11.40                        | 92.00          | 0.36                              | 11.76                              | 14.86         | 24.00                 | 23.40                | 29.40                  |
|                     | 5700                     | 11.39                        | 92.00          | 0.36                              | 11.75                              | 14.85         | 24.00                 | 23.40                | 29.40                  |
|                     | 5720                     | 10.98                        | 92.00          | 0.36                              | 11.34                              | 14.44         | 24.00                 | 23.40                | 29.40                  |
|                     | 5745                     | 11.51                        | 92.00          | 0.36                              | 11.87                              | 14.97         | 30.00                 | 30.00                | -                      |
|                     | 5825                     | 11.55                        | 92.00          | 0.36                              | 11.91                              | 15.01         | 30.00                 | 30.00                | -                      |
| n_mode-HT20MHz-MCS7 | 5180                     | 10.32                        | 57.00          | 2.44                              | 12.76                              | 15.86         | 24.00                 | -                    | 22.51                  |
|                     | 5240                     | 10.31                        | 57.00          | 2.44                              | 12.75                              | 15.85         | 24.00                 | -                    | 22.51                  |
|                     | 5260                     | 10.13                        | 57.00          | 2.44                              | 12.57                              | 15.67         | 24.00                 | 23.51                | 29.51                  |
|                     | 5320                     | 10.54                        | 57.00          | 2.44                              | 12.98                              | 16.08         | 24.00                 | 23.51                | 29.51                  |
|                     | 5500                     | 10.26                        | 57.00          | 2.44                              | 12.70                              | 15.80         | 24.00                 | 23.40                | 29.40                  |
|                     | 5700                     | 10.20                        | 57.00          | 2.44                              | 12.64                              | 15.74         | 24.00                 | 23.40                | 29.40                  |
|                     | 5720                     | 9.83                         | 57.00          | 2.44                              | 12.27                              | 15.37         | 24.00                 | 23.40                | 29.40                  |
|                     | 5745                     | 10.32                        | 57.00          | 2.44                              | 12.76                              | 15.86         | 30.00                 | 30.00                | -                      |
|                     | 5825                     | 10.38                        | 57.00          | 2.44                              | 12.82                              | 15.92         | 30.00                 | 30.00                | -                      |

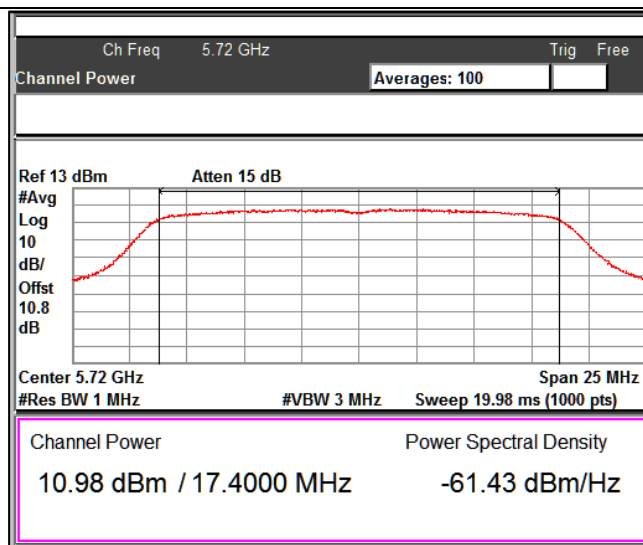
**MCS0**



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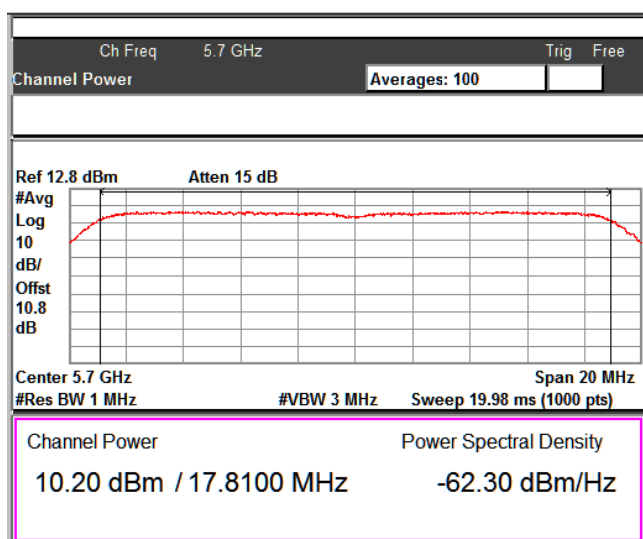
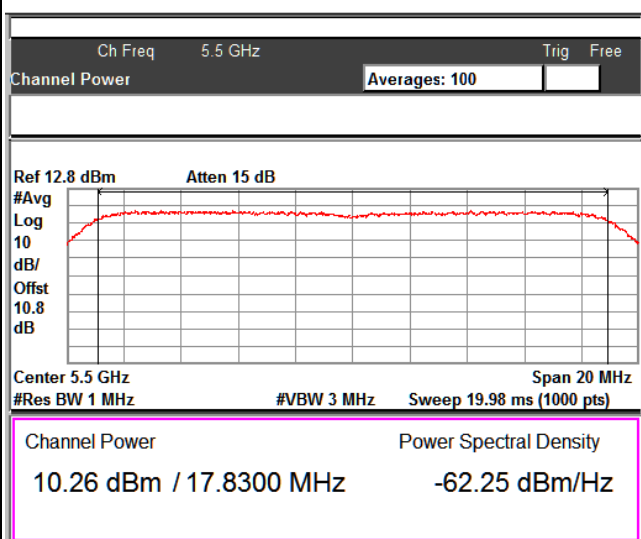
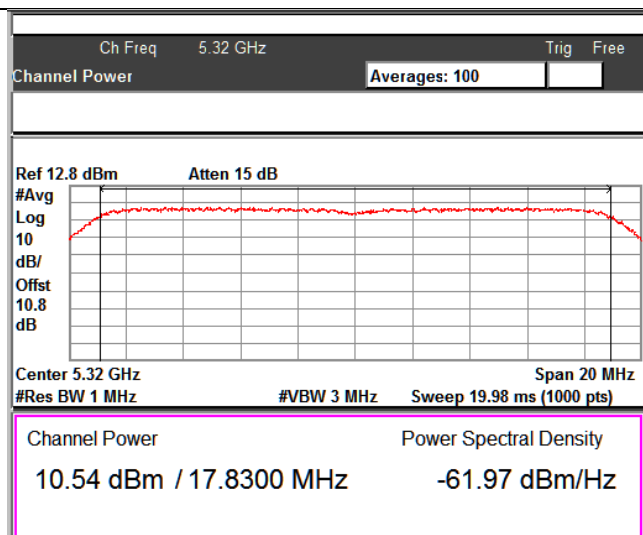
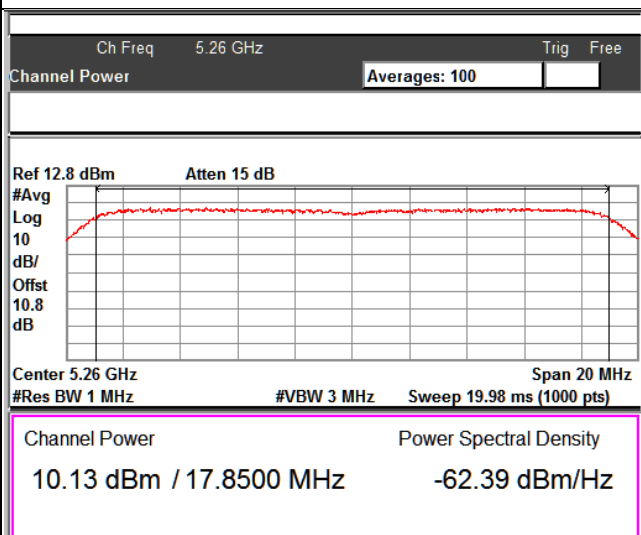
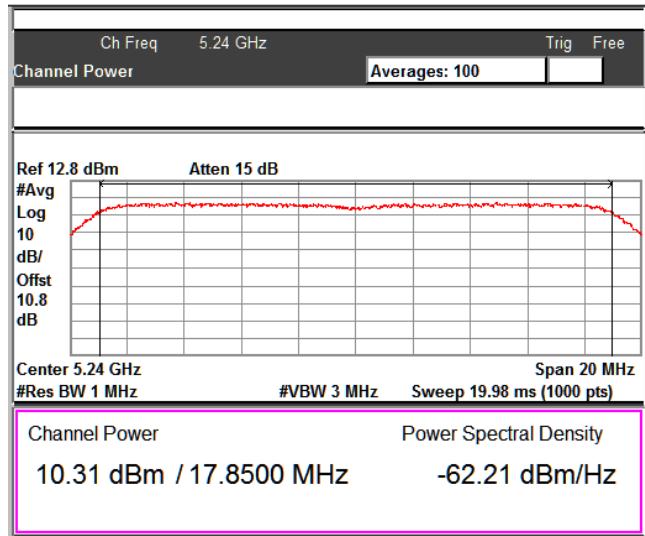
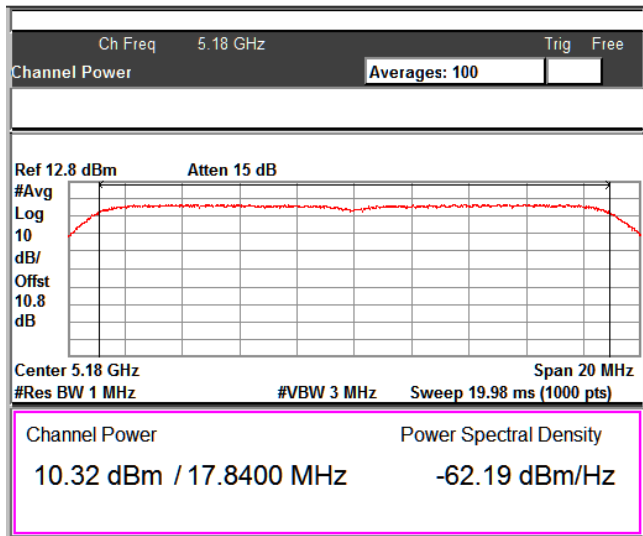


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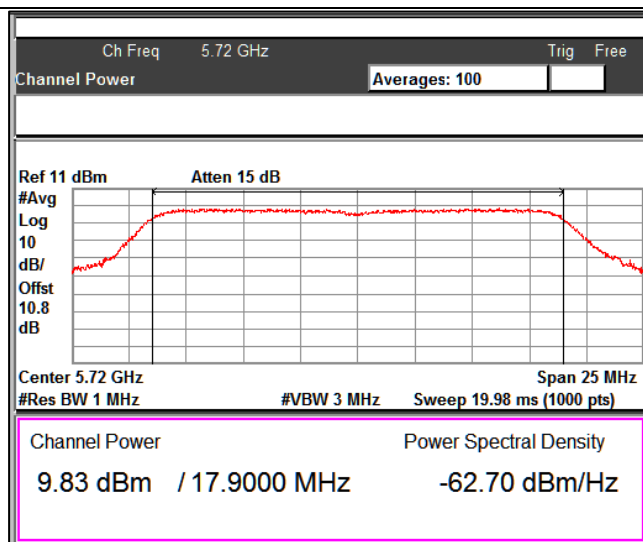
MCS 7



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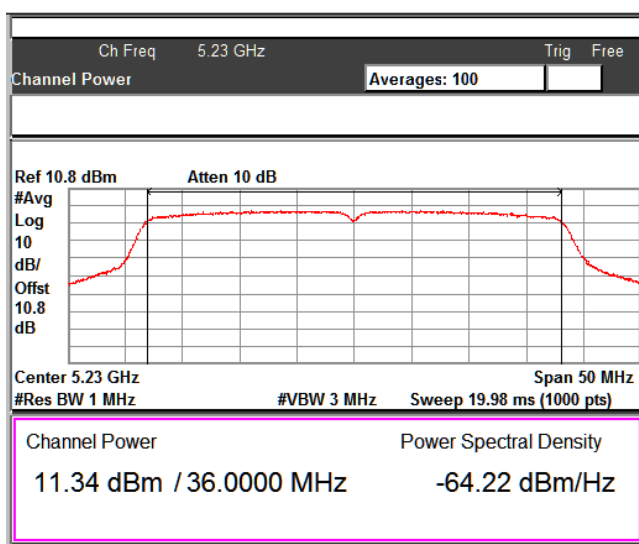
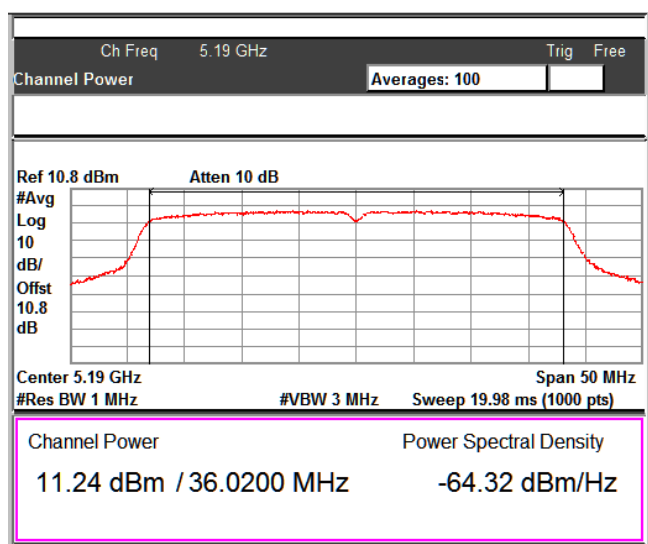
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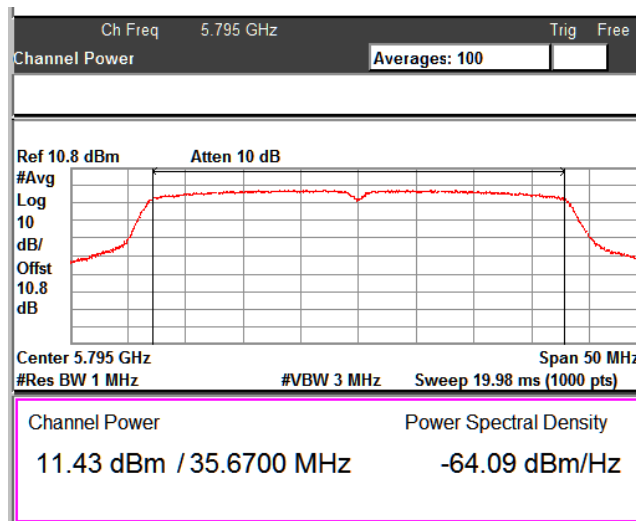
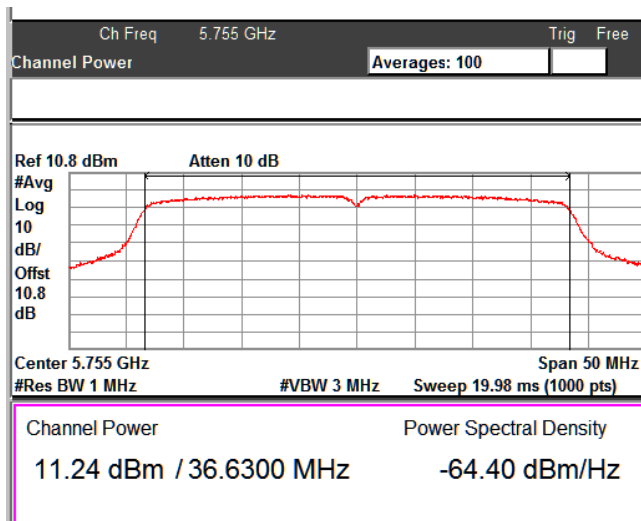
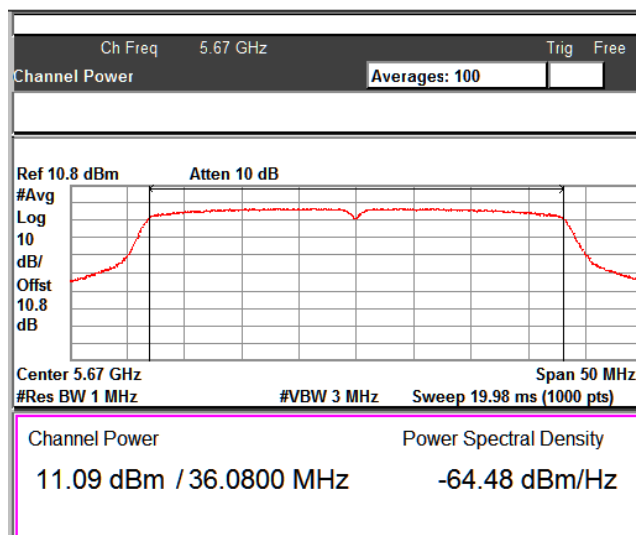
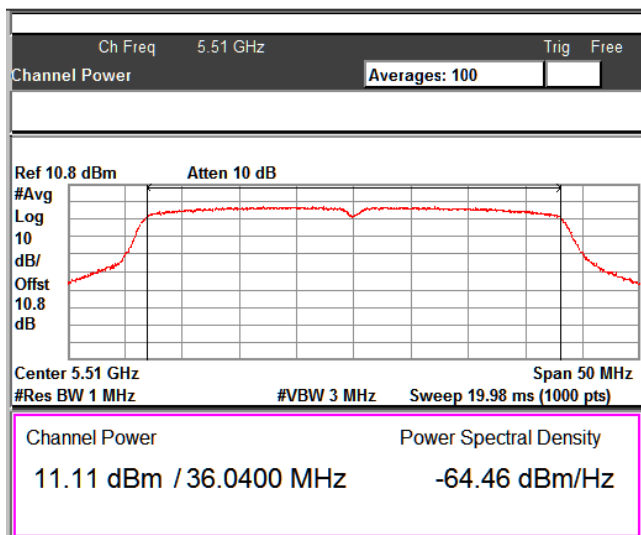
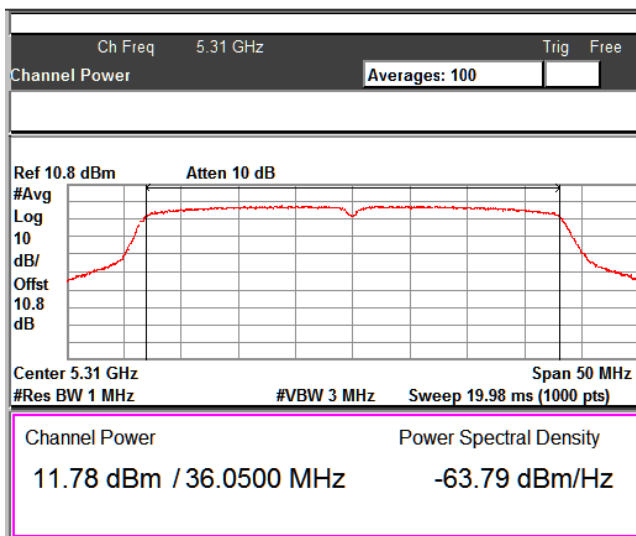
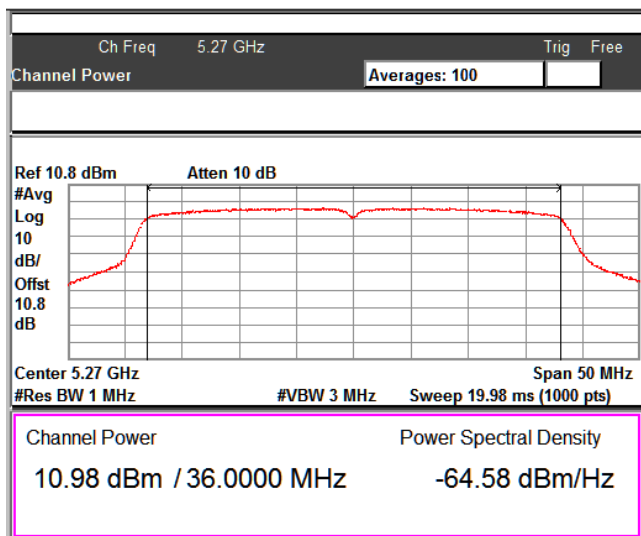
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**Modulation: 802.11n-40MHz**

| Data rate (Mbps)     | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power (dBm) | IC e.i.r.p Limit (dBm) |
|----------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------|------------------------|
| n_mode-HT40MHz_MCS 0 | 5190                     | 11.24                        | 85.00          | 0.71                              | 11.95                              | 15.05         | 24.00                 | -              | 23.00                  |
|                      | 5230                     | 11.34                        | 85.00          | 0.71                              | 12.05                              | 15.15         | 24.00                 | -              | 23.00                  |
|                      | 5270                     | 10.98                        | 85.00          | 0.71                              | 11.69                              | 14.79         | 24.00                 | 23.97          | 30.00                  |
|                      | 5310                     | 11.78                        | 85.00          | 0.71                              | 12.49                              | 15.59         | 24.00                 | 23.97          | 30.00                  |
|                      | 5510                     | 11.11                        | 85.00          | 0.71                              | 11.82                              | 14.92         | 24.00                 | 23.97          | 30.00                  |
|                      | 5590                     | 11.19                        | 85.00          | 0.71                              | 11.90                              | 15.00         | 24.00                 | 23.97          | 30.00                  |
|                      | 5670                     | 11.09                        | 85.00          | 0.71                              | 11.80                              | 14.90         | 24.00                 | 23.97          | 30.00                  |
|                      | 5710                     | 10.48                        | 85.00          | 0.71                              | 11.19                              | 14.29         | 24.00                 | 23.97          | 30.00                  |
|                      | 5755                     | 11.24                        | 85.00          | 0.71                              | 11.95                              | 15.05         | 30.00                 | 30.00          | -                      |
|                      | 5795                     | 11.43                        | 85.00          | 0.71                              | 12.14                              | 15.24         | 30.00                 | 30.00          | -                      |
| n_mode-HT40MHz_MCS 7 | 5190                     | 8.63                         | 40.00          | 3.98                              | 12.61                              | 15.71         | 24.00                 | -              | 23.00                  |
|                      | 5230                     | 8.72                         | 40.00          | 3.98                              | 12.70                              | 15.80         | 24.00                 | -              | 23.00                  |
|                      | 5270                     | 8.42                         | 40.00          | 3.98                              | 12.40                              | 15.50         | 24.00                 | 23.97          | 30.00                  |
|                      | 5310                     | 9.40                         | 40.00          | 3.98                              | 13.38                              | 16.48         | 24.00                 | 23.97          | 30.00                  |
|                      | 5510                     | 8.56                         | 40.00          | 3.98                              | 12.54                              | 15.64         | 24.00                 | 23.97          | 30.00                  |
|                      | 5590                     | 8.59                         | 40.00          | 3.98                              | 12.57                              | 15.67         | 24.00                 | 23.97          | 30.00                  |
|                      | 5670                     | 8.46                         | 40.00          | 3.98                              | 12.44                              | 15.54         | 24.00                 | 23.97          | 30.00                  |
|                      | 5710                     | 8.13                         | 40.00          | 3.98                              | 12.11                              | 15.21         | 24.00                 | 23.97          | 30.00                  |
|                      | 5755                     | 8.73                         | 40.00          | 3.98                              | 12.71                              | 15.81         | 30.00                 | 30.00          | -                      |
|                      | 5795                     | 8.95                         | 40.00          | 3.98                              | 12.93                              | 16.03         | 30.00                 | 30.00          | -                      |

**MCS0**



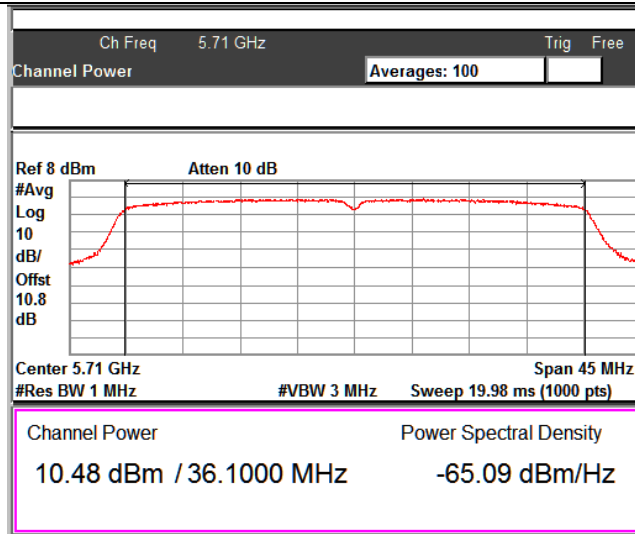


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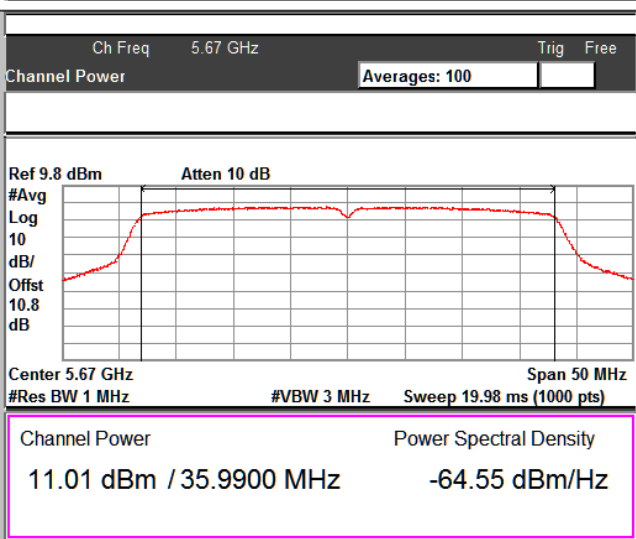
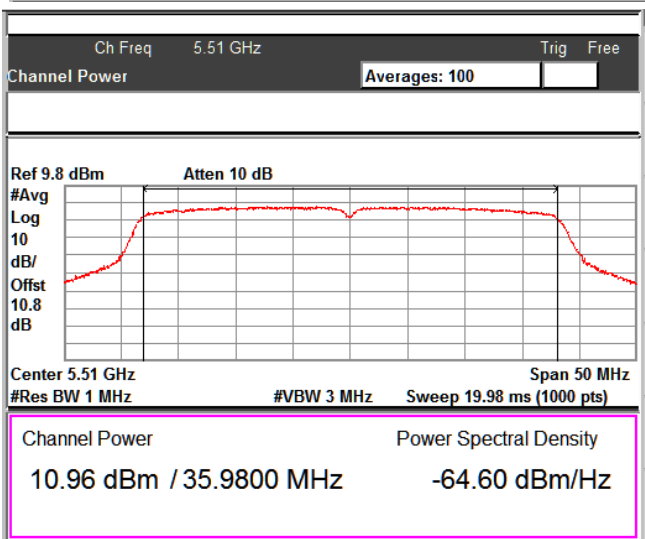
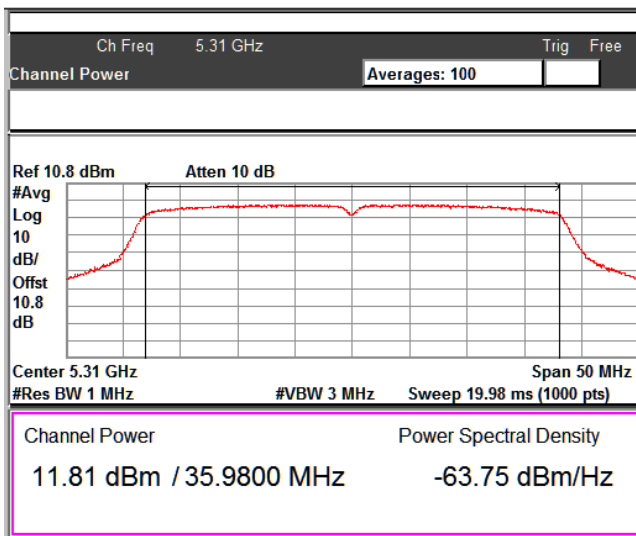
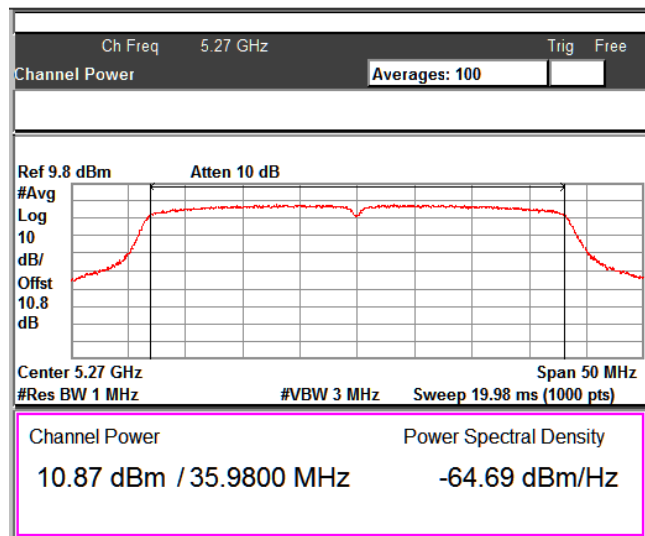
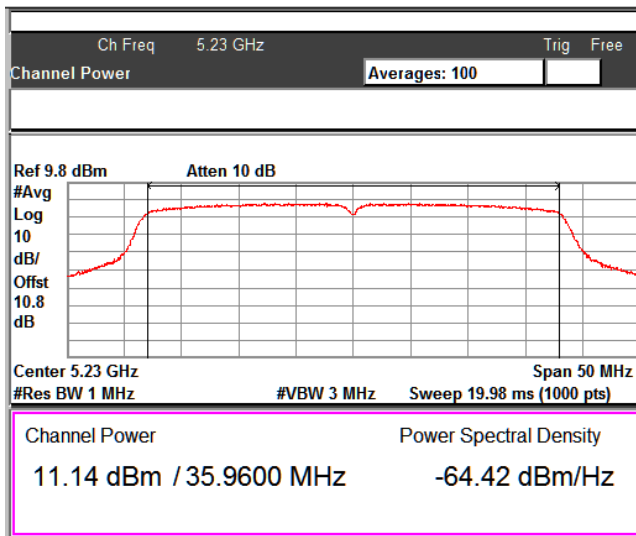
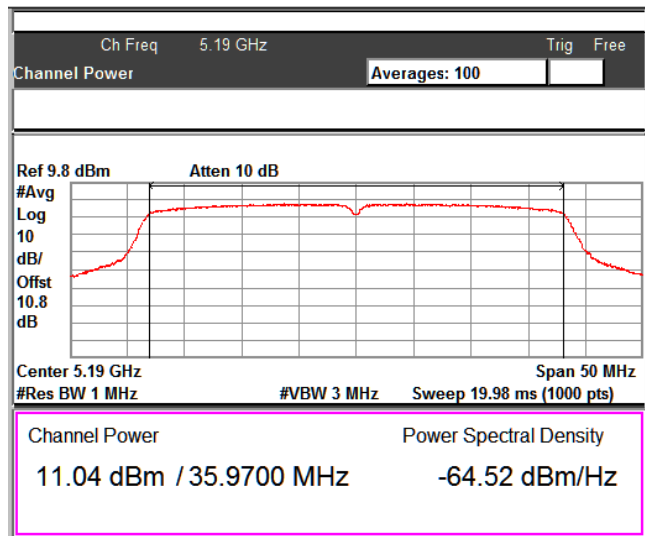
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**Modulation: 802.11n-VHT40MHz**

| Data rate (Mbps)     | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power (dBm) | IC e.i.r.p Limit (dBm) |
|----------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------|------------------------|
| n_mode_VHT40MHz_MCS0 | 5190                     | 11.04                        | 85.00          | 0.71                              | 11.75                              | 14.85         | 24.00                 | -              | 23.00                  |
|                      | 5230                     | 11.14                        | 85.00          | 0.71                              | 11.85                              | 14.95         | 24.00                 | -              | 23.00                  |
|                      | 5270                     | 10.87                        | 85.00          | 0.71                              | 11.58                              | 14.68         | 24.00                 | 23.97          | 30.00                  |
|                      | 5310                     | 11.81                        | 85.00          | 0.71                              | 12.52                              | 15.62         | 24.00                 | 23.97          | 30.00                  |
|                      | 5510                     | 10.96                        | 85.00          | 0.71                              | 11.67                              | 14.77         | 24.00                 | 23.97          | 30.00                  |
|                      | 5590                     | 11.02                        | 85.00          | 0.71                              | 11.73                              | 14.83         | 24.00                 | 23.97          | 30.00                  |
|                      | 5670                     | 11.01                        | 85.00          | 0.71                              | 11.72                              | 14.82         | 24.00                 | 23.97          | 30.00                  |
|                      | 5710                     | 10.52                        | 85.00          | 0.71                              | 11.23                              | 14.33         | 24.00                 | 23.97          | 30.00                  |
|                      | 5755                     | 11.12                        | 85.00          | 0.71                              | 11.83                              | 14.93         | 30.00                 | 30.00          | -                      |
|                      | 5795                     | 11.36                        | 85.00          | 0.71                              | 12.07                              | 15.17         | 30.00                 | 30.00          | -                      |
| n_mode_VHT40MHz_MCS9 | 5190                     | 8.30                         | 21.00          | 6.78                              | 15.08                              | 18.18         | 24.00                 | -              | 23.00                  |
|                      | 5230                     | 8.22                         | 21.00          | 6.78                              | 15.00                              | 18.10         | 24.00                 | -              | 23.00                  |
|                      | 5270                     | 7.98                         | 21.00          | 6.78                              | 14.76                              | 17.86         | 24.00                 | 23.97          | 30.00                  |
|                      | 5310                     | 9.04                         | 21.00          | 6.78                              | 15.82                              | 18.92         | 24.00                 | 23.97          | 30.00                  |
|                      | 5510                     | 8.05                         | 21.00          | 6.78                              | 14.83                              | 17.93         | 24.00                 | 23.97          | 30.00                  |
|                      | 5590                     | 8.14                         | 21.00          | 6.78                              | 14.92                              | 18.02         | 24.00                 | 23.97          | 30.00                  |
|                      | 5670                     | 7.96                         | 21.00          | 6.78                              | 14.74                              | 17.84         | 24.00                 | 23.97          | 30.00                  |
|                      | 5710                     | 7.54                         | 21.00          | 6.78                              | 14.32                              | 17.42         | 24.00                 | 23.97          | 30.00                  |
|                      | 5755                     | 8.27                         | 21.00          | 6.78                              | 15.05                              | 18.15         | 30.00                 | 30.00          | -                      |
|                      | 5795                     | 8.43                         | 21.00          | 6.78                              | 15.21                              | 18.31         | 30.00                 | 30.00          | -                      |

MCS0

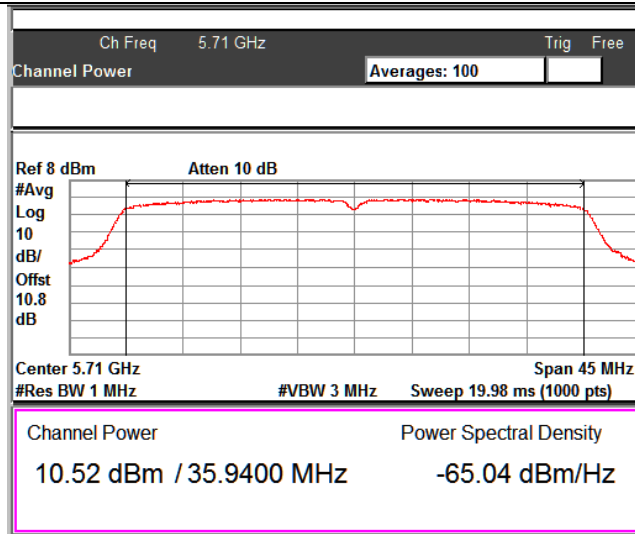


Only MCS 0 graphs are copied

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**Modulation: 802.11ac-VHT20MHz**

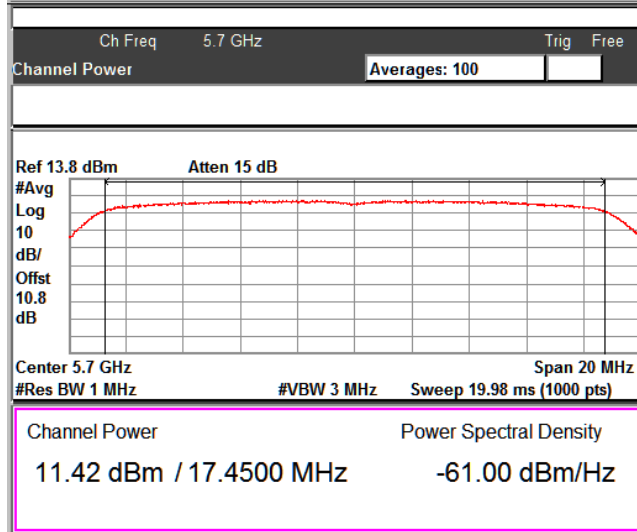
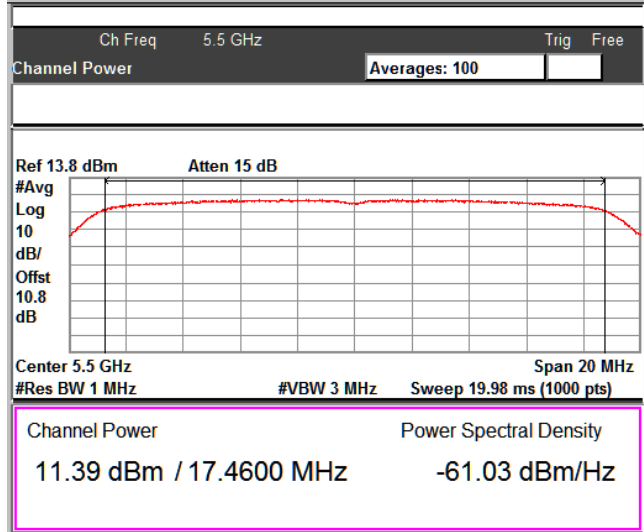
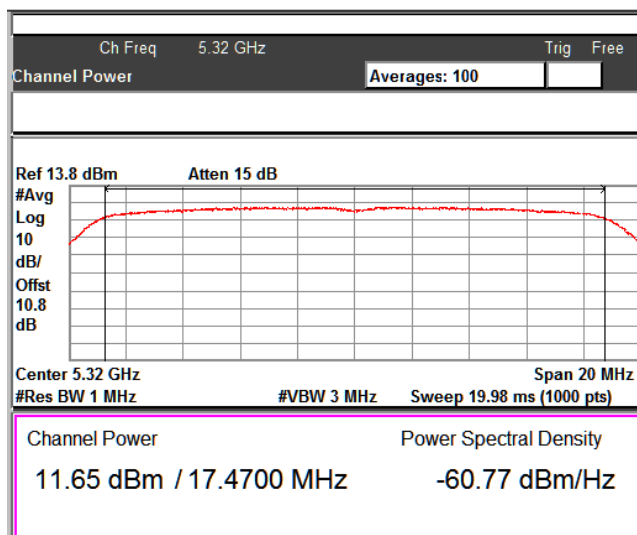
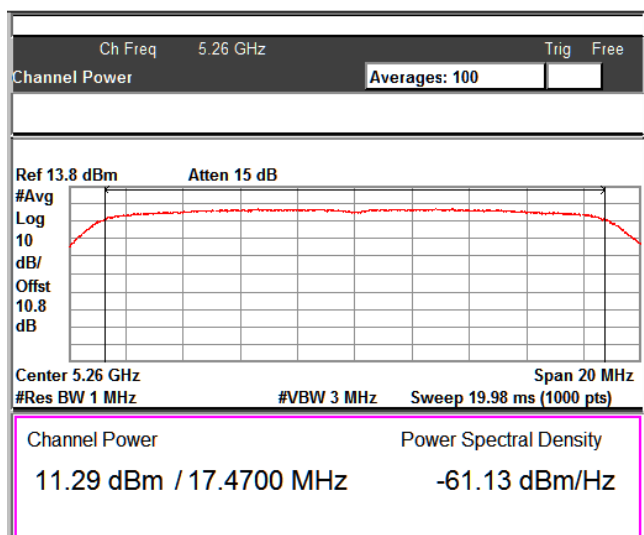
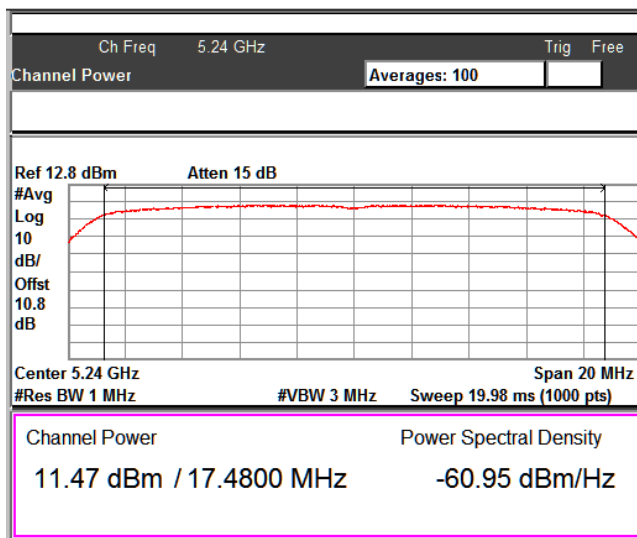
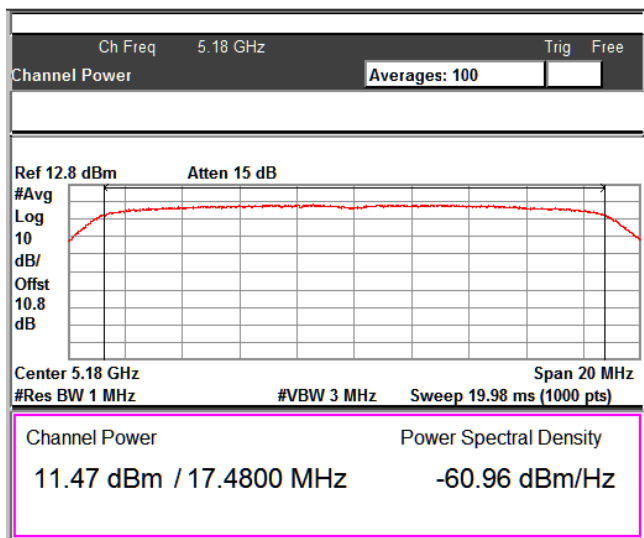
| Data rate (Mbps)      | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power (dBm) | IC e.i.r.p Limit (dBm) |
|-----------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------|------------------------|
| ac_mode-VHT20MHz-MCS0 | 5180                     | 11.47                        | 92.00          | 0.36                              | 11.83                              | 14.93         | 24.00                 | -              | 22.42                  |
|                       | 5240                     | 11.47                        | 92.00          | 0.36                              | 11.83                              | 14.93         | 24.00                 | -              | 22.42                  |
|                       | 5260                     | 11.29                        | 92.00          | 0.36                              | 11.65                              | 14.75         | 24.00                 | 23.42          | 29.42                  |
|                       | 5320                     | 11.65                        | 92.00          | 0.36                              | 12.01                              | 15.11         | 24.00                 | 23.42          | 29.42                  |
|                       | 5500                     | 11.39                        | 92.00          | 0.36                              | 11.75                              | 14.85         | 24.00                 | 23.42          | 29.42                  |
|                       | 5700                     | 11.42                        | 92.00          | 0.36                              | 11.78                              | 14.88         | 24.00                 | 23.42          | 29.42                  |
|                       | 5720                     | 10.97                        | 92.00          | 0.36                              | 11.33                              | 14.43         | 24.00                 | 23.42          | 29.42                  |
|                       | 5745                     | 11.45                        | 92.00          | 0.36                              | 11.81                              | 14.91         | 30.00                 | 30.00          | -                      |
|                       | 5825                     | 11.50                        | 92.00          | 0.36                              | 11.86                              | 14.96         | 30.00                 | 30.00          | -                      |
| ac_mode-VHT20MHz-MCS8 | 5180                     | 9.23                         | 47.00          | 3.28                              | 12.51                              | 15.61         | 24.00                 | -              | 22.46                  |
|                       | 5240                     | 9.14                         | 47.00          | 3.28                              | 12.42                              | 15.52         | 24.00                 | -              | 22.46                  |
|                       | 5260                     | 8.98                         | 47.00          | 3.28                              | 12.26                              | 15.36         | 24.00                 | 23.46          | 29.46                  |
|                       | 5320                     | 9.39                         | 47.00          | 3.28                              | 12.67                              | 15.77         | 24.00                 | 23.46          | 29.46                  |
|                       | 5500                     | 9.20                         | 47.00          | 3.28                              | 12.48                              | 15.58         | 24.00                 | 23.47          | 29.47                  |
|                       | 5700                     | 9.16                         | 47.00          | 3.28                              | 12.44                              | 15.54         | 24.00                 | 23.47          | 29.47                  |
|                       | 5720                     | 8.72                         | 47.00          | 3.28                              | 12.00                              | 15.10         | 24.00                 | 23.47          | 29.47                  |
|                       | 5745                     | 9.15                         | 47.00          | 3.28                              | 12.43                              | 15.53         | 30.00                 | 30.00          | -                      |
|                       | 5825                     | 9.10                         | 47.00          | 3.28                              | 12.38                              | 15.48         | 30.00                 | 30.00          | -                      |

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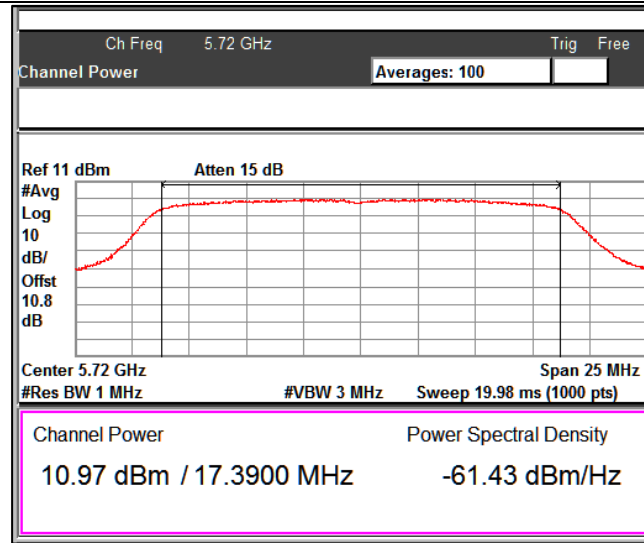
MCS0



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**Modulation: 802.11ac-VHT80MHz**

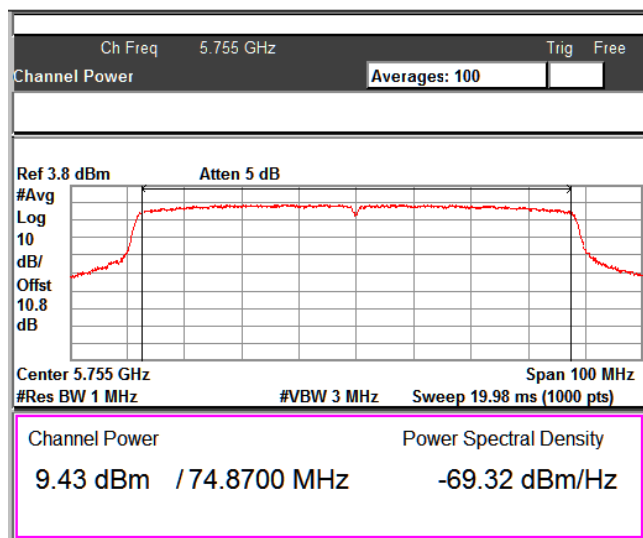
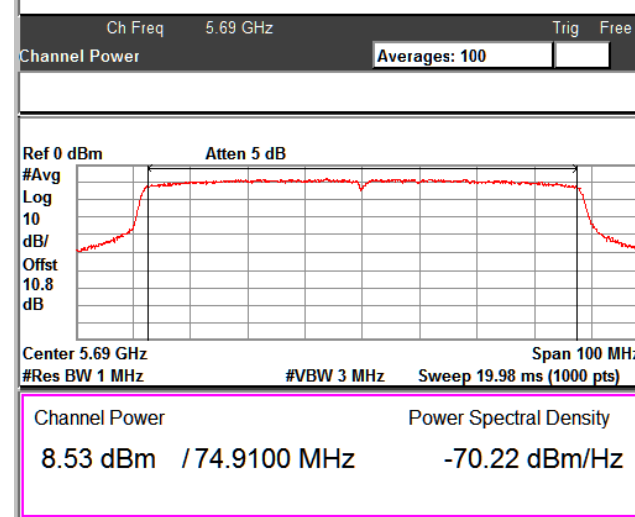
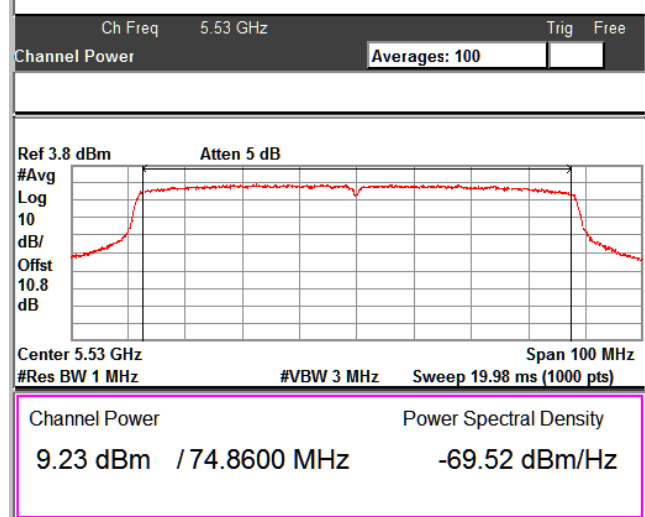
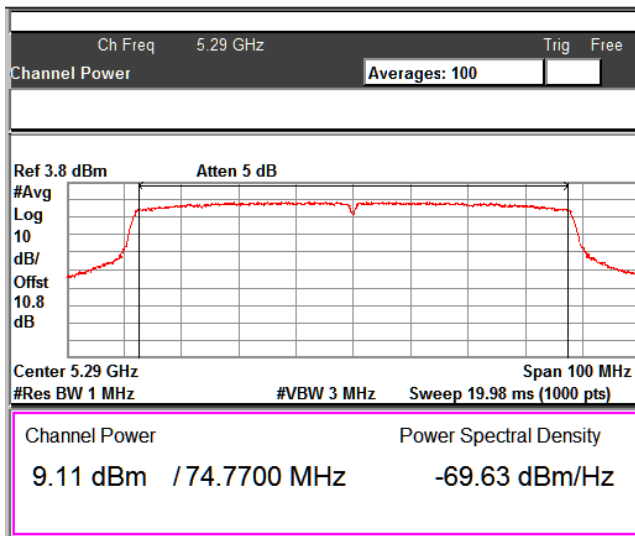
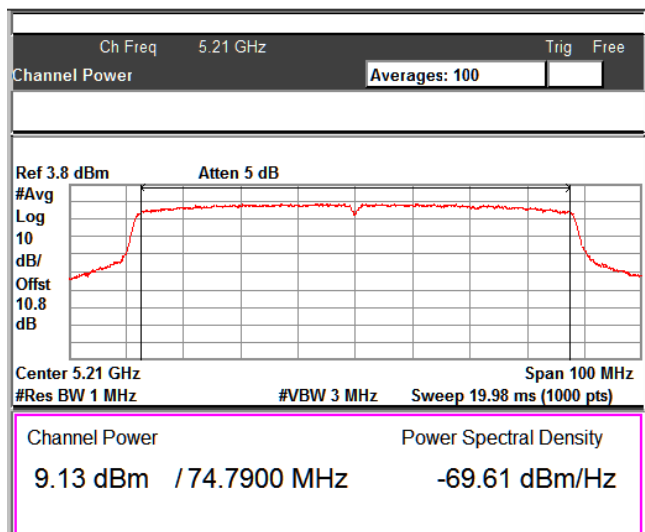
| Data rate (Mbps)      | Measured Frequency (MHz) | Measured Average Power (dBm) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average output power (dBm) | e.i.r.p (dBm) | FCC Power Limit (dBm) | IC power (dBm) | IC e.i.r.p Limit (dBm) |
|-----------------------|--------------------------|------------------------------|----------------|-----------------------------------|------------------------------------|---------------|-----------------------|----------------|------------------------|
| ac_mode-VHT80MHz_MCS0 | 5210                     | 9.13                         | 64.00          | 1.94                              | 11.07                              | 14.17         | 24.00                 | 23.97          | 23.00                  |
|                       | 5290                     | 9.11                         | 64.00          | 1.94                              | 11.05                              | 14.15         | 24.00                 | 23.97          | 23.00                  |
|                       | 5530                     | 9.23                         | 64.00          | 1.94                              | 11.17                              | 14.27         | 24.00                 | 23.97          | 23.00                  |
|                       | 5690                     | 9.11                         | 64.00          | 1.94                              | 11.05                              | 14.15         | 24.00                 | 23.97          | 23.00                  |
|                       | 5755                     | 9.43                         | 64.00          | 1.94                              | 11.37                              | 14.47         | 30.00                 | 30.00          | 23.00                  |
| ac_mode-VHT80MHz_MCS9 | 5210                     | 6.08                         | 27.00          | 5.69                              | 11.77                              | 14.87         | 24.00                 | 23.97          | 23.00                  |
|                       | 5290                     | 6.07                         | 27.00          | 5.69                              | 11.76                              | 14.86         | 24.00                 | 23.97          | 23.00                  |
|                       | 5530                     | 6.10                         | 27.00          | 5.69                              | 11.79                              | 14.89         | 24.00                 | 23.97          | 23.00                  |
|                       | 5690                     | 6.01                         | 27.00          | 5.69                              | 11.70                              | 14.80         | 24.00                 | 23.97          | 23.00                  |
|                       | 5755                     | 6.31                         | 27.00          | 5.69                              | 12.00                              | 15.10         | 30.00                 | 30.00          | 23.00                  |

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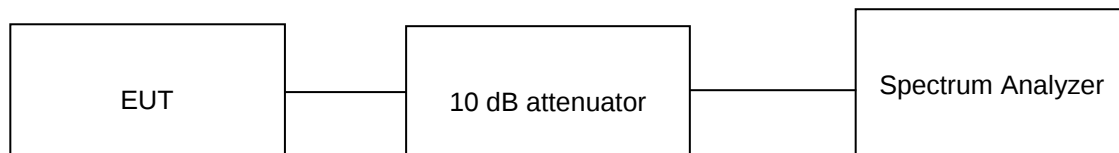
### 7.3 Maximum Power Spectral Density

**Result**

**Pass**

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Specification    | FCC part 15 Subpart C 15.407 (a) / RSS 247 Issue 2<br>Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4                                                                                                                                                                                                                                                                                                                                                  |
| Test Method           | Subclause 12.5 of ANSI C63.10                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Measurement Bandwidth | 1 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Detector              | Average sample detector                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Port of testing       | Antenna port                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Requirement for FCC   | <p>1. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band</p> <p>2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band</p> <p>3. For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band</p>                                             |
| Requirement for IC    | <p>1. For the band 5.15-5.25 GHz, The e.i.r.p. spectral density shall not exceed 10 dBm in any 1 MHz band</p> <p>2. For the 5.25-5.35 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band</p> <p>3. For the 5.47-5.725 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band</p> <p>4. For the band 5.725-5.85 GHz, The output power spectral density shall not exceed 30 dBm in any 500 kHz band</p> |

#### Test Method:



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**The following procedure shall be used:**

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal
3. Set RBW = 1MHz (5.15-5.25 GHz band) / 500kHz (5.725-5.85 GHz band)
4. Set VBW  $\geq 3 \times$  RBW
5. Number of points in sweep  $\geq 2 \times$  span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to "free run."
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)
11. If measurements are performed using a reduced resolution bandwidth ( $< 1$  MHz, or  $< 500$  kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
  - a. Set RBW = 300 kHz
  - b. Set VBW  $\geq 3$  RBW
  - c. If measurement bandwidth of Maximum PSD is specified in 500 kHz

$$\text{PSD bandwidth correction Factor} = 10 * \log(500 \text{ kHz} / \text{RBW})$$

**Test Condition:**

**Normal Test Condition:**

Temperature (Norm) = + 25 °C

Voltage = 3.3VDC

Relative humidity: 62 %

**KDB Guidelines applied:**

Measurements were made as per section F in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

**Test results:**

**Note:**

1. All the losses are included during measurement and final values are mentioned in the test report  
 $10 \text{ dB attenuator} + 0.8 \text{ dB Cable loss} = 10.8 \text{ dB total offset}$
2. Duty cycle correction factor is considered in Final Average power  
 $\text{Duty cycle Correction factor} = 10 * \text{LOG}(1/X)$  Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (3.10 dBi)
4. e.i.r.p = Maximum Average PSD (dBm) + Antenna gain in dBi

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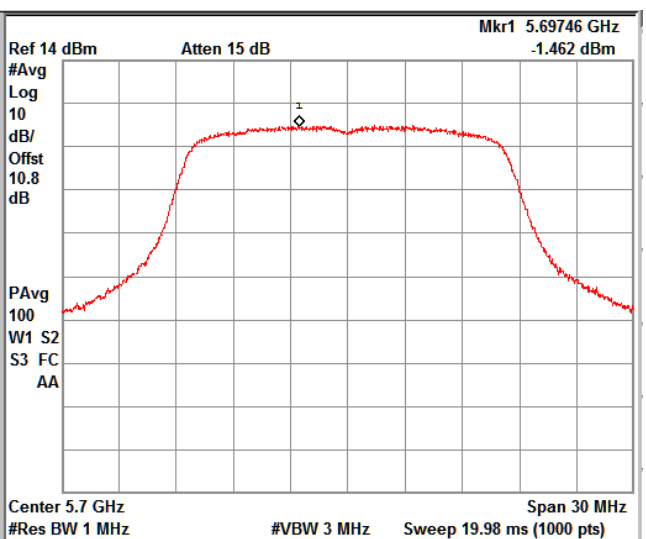
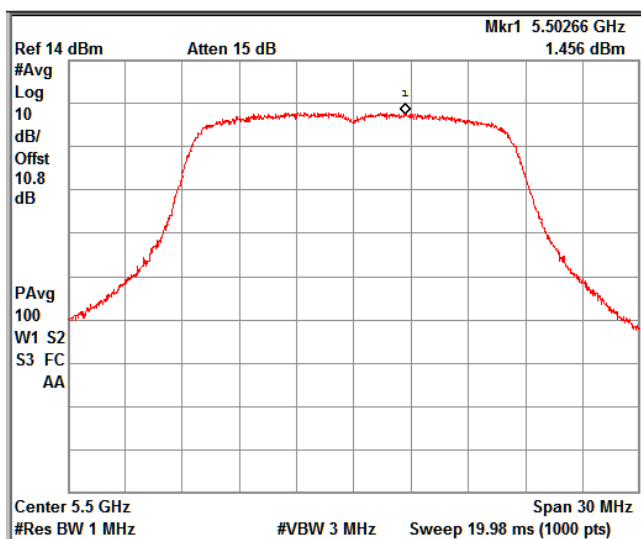
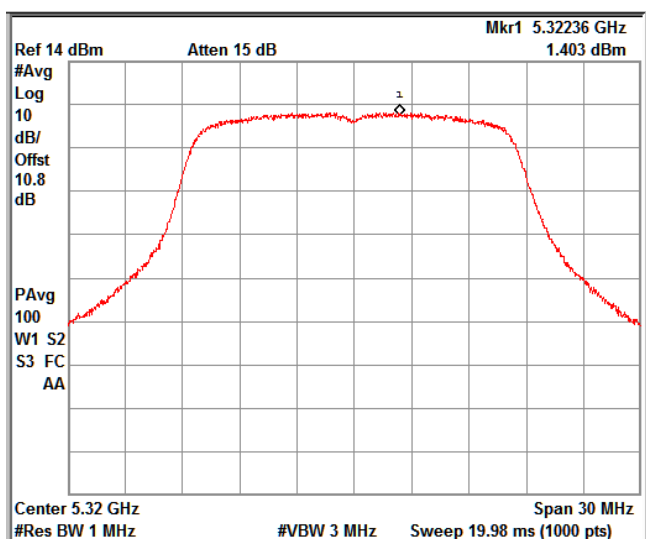
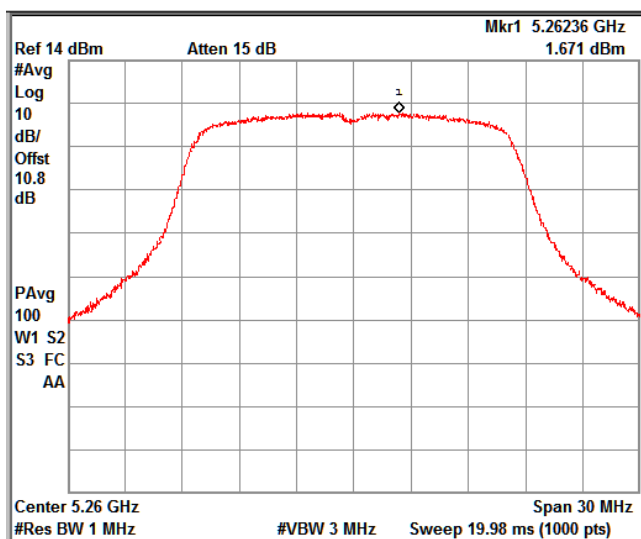
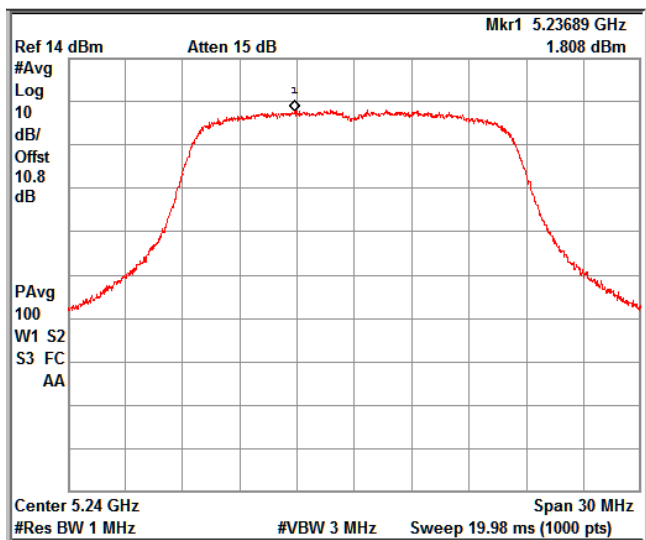
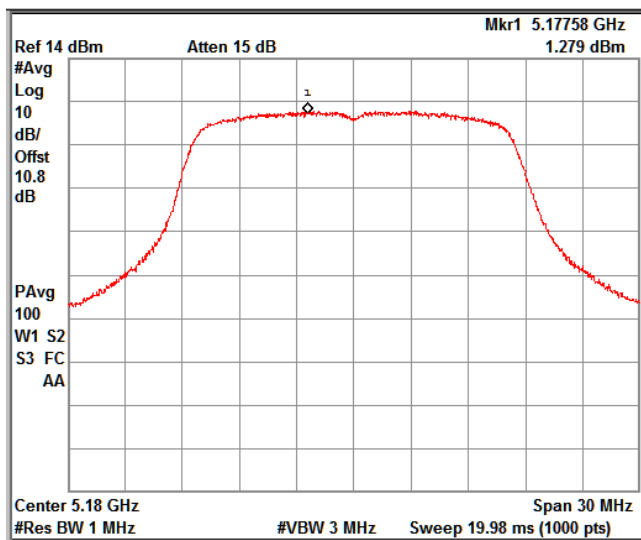
**Modulation: 802.11a – UNII 1, UNII2a, UNII2c**

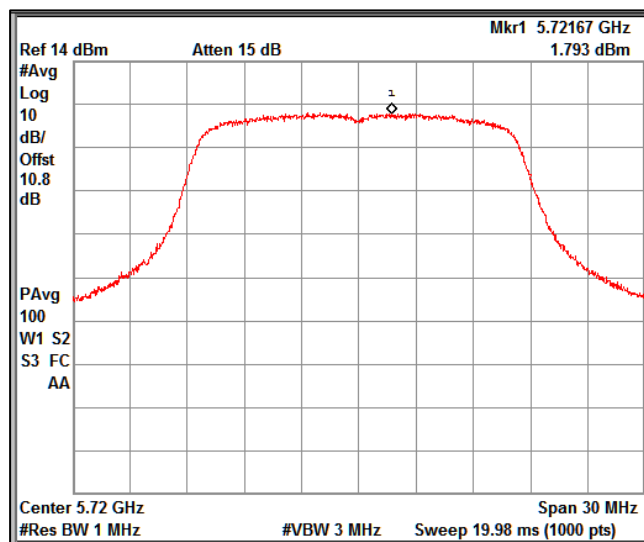
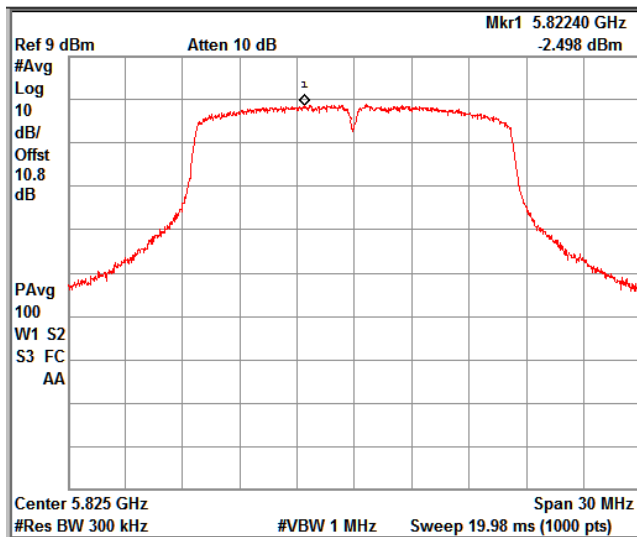
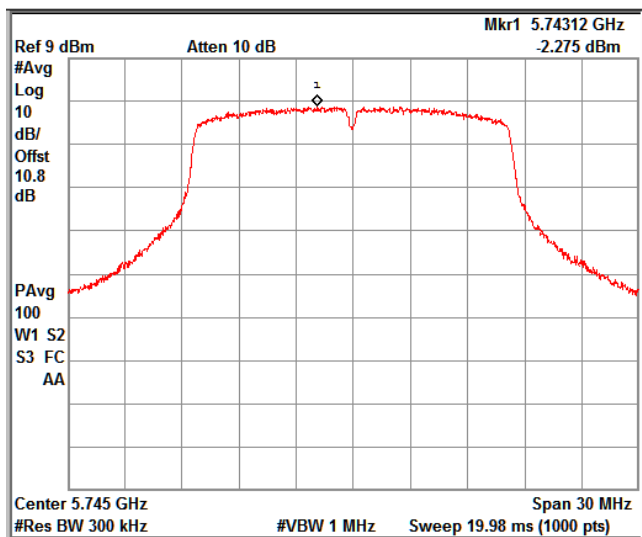
| Data rate (Mbps) | Measured Frequency (MHz) | Measured Average PSD (dBm/1MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average PSD (dBm/ 1MHz) | PSD (e.i.r.p) (dBm/ 1MHz) | FCC PSD Limit (dBm/1MHz) | IC e.i.r.p SD (dBm/ 1MHz) |
|------------------|--------------------------|---------------------------------|----------------|-----------------------------------|---------------------------------|---------------------------|--------------------------|---------------------------|
| a_mode-6Mbps     | 5180                     | 1.27                            | 95.00          | 0.22                              | 1.49                            | 4.59                      | 11.00                    | 10.00                     |
|                  | 5240                     | 1.80                            | 95.00          | 0.22                              | 2.02                            | 5.12                      | 11.00                    | 10.00                     |
|                  | 5260                     | 1.67                            | 95.00          | 0.22                              | 1.89                            | 4.99                      | 11.00                    | 10.00                     |
|                  | 5320                     | 1.40                            | 95.00          | 0.22                              | 1.62                            | 4.72                      | 11.00                    | 10.00                     |
|                  | 5500                     | 1.45                            | 95.00          | 0.22                              | 1.67                            | 4.77                      | 11.00                    | 10.00                     |
|                  | 5700                     | -1.46                           | 95.00          | 0.22                              | -1.24                           | 1.86                      | 11.00                    | 10.00                     |
|                  | 5720                     | 1.79                            | 95.00          | 0.22                              | 2.01                            | 5.11                      | 12.00                    | 10.00                     |
| a_mode-54Mbps    | 5180                     | 0.78                            | 57.00          | 2.44                              | 3.22                            | 6.32                      | 11.00                    | 10.00                     |
|                  | 5240                     | 0.16                            | 57.00          | 2.44                              | 2.60                            | 5.70                      | 11.00                    | 10.00                     |
|                  | 5260                     | 0.03                            | 57.00          | 2.44                              | 2.47                            | 5.57                      | 11.00                    | 10.00                     |
|                  | 5320                     | 1.13                            | 57.00          | 2.44                              | 3.57                            | 6.67                      | 11.00                    | 10.00                     |
|                  | 5500                     | 0.59                            | 57.00          | 2.44                              | 3.03                            | 6.13                      | 11.00                    | 10.00                     |
|                  | 5700                     | 0.63                            | 57.00          | 2.44                              | 3.07                            | 6.17                      | 11.00                    | 10.00                     |
|                  | 5720                     | -1.14                           | 57.00          | 2.44                              | 1.30                            | 4.40                      | 11.00                    | 10.00                     |

**Modulation: 802.11a – UNII 3**

| Data rate (Mbps) | Measured Frequency (MHz) | Measured Average PSD (dBm/ 0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/ 500kHz) | PSD (e.i.r.p) (dBm/ 500kHz ) | FCC PSD Limit (dBm/ 500kHz ) | IC e.i.r.p PSD (dBm/ 500kHz ) |
|------------------|--------------------------|------------------------------------|----------------|-----------------------------------|---------------------------|-----------------------------------|------------------------------|------------------------------|-------------------------------|
| a_mode-6Mbps     | 5745                     | -7.60                              | 95.00          | 0.22                              | 2.21                      | -5.17                             | -2.07                        | 11.00                        | 10.00                         |
|                  | 5825                     | -6.60                              | 95.00          | 0.22                              | 2.21                      | -4.17                             | -1.07                        | 11.00                        | 10.00                         |
| a_mode-54Mbps    | 5745                     | -4.48                              | 57.00          | 2.44                              | 2.21                      | 0.17                              | 3.27                         | 11.00                        | 10.00                         |
|                  | 5825                     | -3.84                              | 57.00          | 2.44                              | 2.21                      | 0.81                              | 3.91                         | 11.00                        | 10.00                         |

**Data Rate: 6 Mbps**





Only 6 Mbps plots are copied

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**Modulation: 802.11n – 20MHz - UNII 1, UNII2a, UNII2c**

| Data rate<br>(Mbps)         | Measured<br>Frequency<br>(MHz) | Measured<br>Average<br>PSD<br>(dBm/<br>1MHz) | Duty<br>Cycle<br>X % | Duty<br>cycle<br>correction<br>factor<br>(dB) | Maximum<br>Average<br>PSD<br>(dBm/ 1MHz) | PSD<br>(e.i.r.p)<br>(dBm/<br>1MHz) | FCC<br>PSD<br>Limit<br>(dBm/1MHz) | IC<br>e.i.r.p<br>SD<br>(dBm/<br>1MHz) |
|-----------------------------|--------------------------------|----------------------------------------------|----------------------|-----------------------------------------------|------------------------------------------|------------------------------------|-----------------------------------|---------------------------------------|
| n_mode-<br>HT20MHz-<br>MCS0 | 5180                           | 0.80                                         | 92.00                | 0.36                                          | 1.16                                     | 4.26                               | 11.00                             | 10.00                                 |
|                             | 5240                           | 0.69                                         | 92.00                | 0.36                                          | 1.05                                     | 4.15                               | 11.00                             | 10.00                                 |
|                             | 5260                           | 0.73                                         | 92.00                | 0.36                                          | 1.09                                     | 4.19                               | 11.00                             | 10.00                                 |
|                             | 5320                           | 1.22                                         | 92.00                | 0.36                                          | 1.58                                     | 4.68                               | 11.00                             | 10.00                                 |
|                             | 5500                           | 0.80                                         | 92.00                | 0.36                                          | 1.16                                     | 4.26                               | 11.00                             | 10.00                                 |
|                             | 5700                           | 1.17                                         | 92.00                | 0.36                                          | 1.53                                     | 4.63                               | 11.00                             | 10.00                                 |
|                             | 5720                           | 0.54                                         | 92.00                | 0.36                                          | 0.90                                     | 4.00                               | 11.00                             | 10.00                                 |
| n_mode-<br>HT20MHz-<br>MCS7 | 5180                           | -0.18                                        | 57.00                | 2.44                                          | 2.26                                     | 5.36                               | 11.00                             | 10.00                                 |
|                             | 5240                           | -0.25                                        | 57.00                | 2.44                                          | 2.19                                     | 5.29                               | 11.00                             | 10.00                                 |
|                             | 5260                           | -0.67                                        | 57.00                | 2.44                                          | 1.77                                     | 4.87                               | 11.00                             | 10.00                                 |
|                             | 5320                           | -0.01                                        | 57.00                | 2.44                                          | 2.43                                     | 5.53                               | 11.00                             | 10.00                                 |
|                             | 5500                           | 0.48                                         | 57.00                | 2.44                                          | 2.92                                     | 6.02                               | 11.00                             | 10.00                                 |
|                             | 5700                           | -0.32                                        | 57.00                | 2.44                                          | 2.12                                     | 5.22                               | 11.00                             | 10.00                                 |
|                             | 5720                           | -1.11                                        | 57.00                | 2.44                                          | 1.33                                     | 4.43                               | 11.00                             | 10.00                                 |

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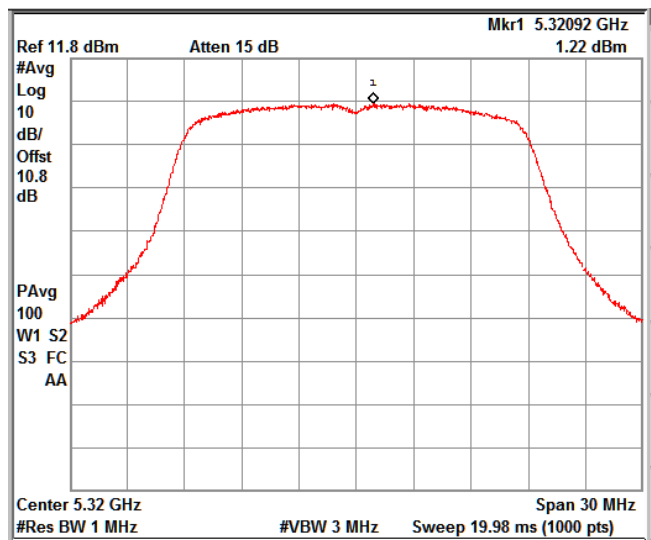
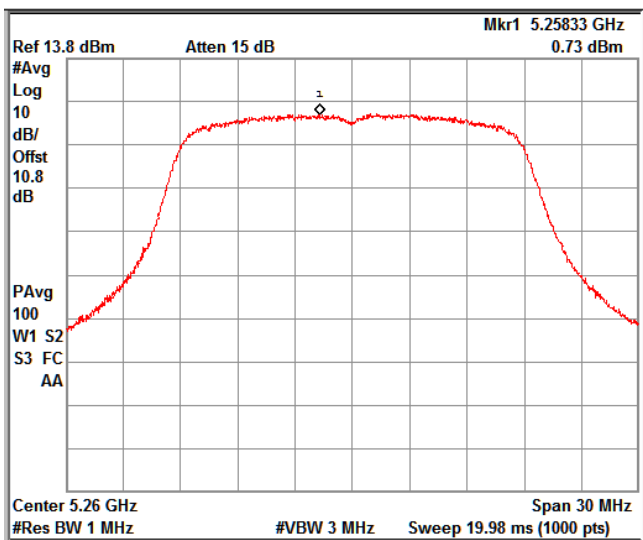
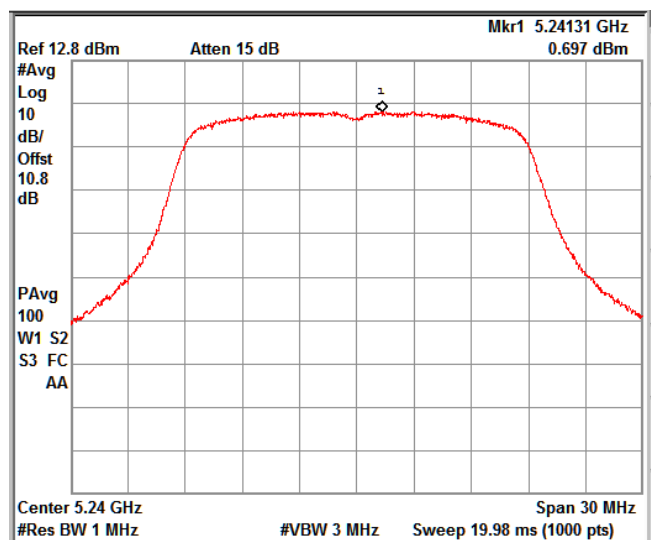
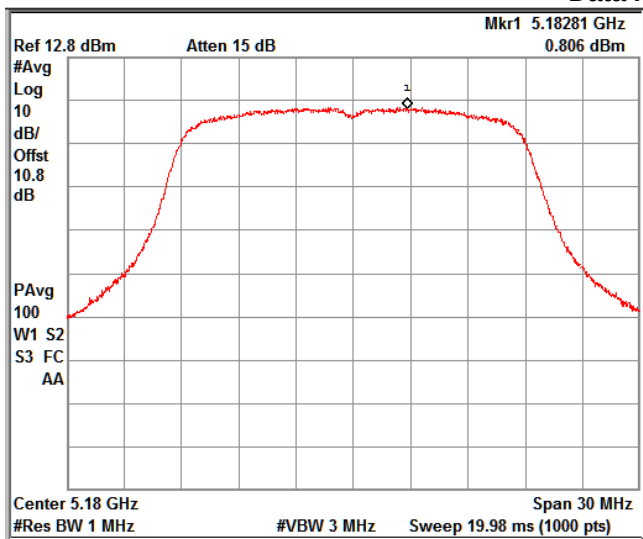
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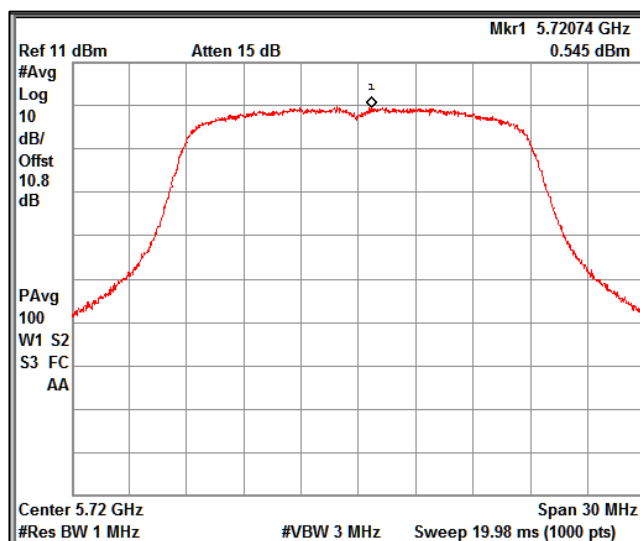
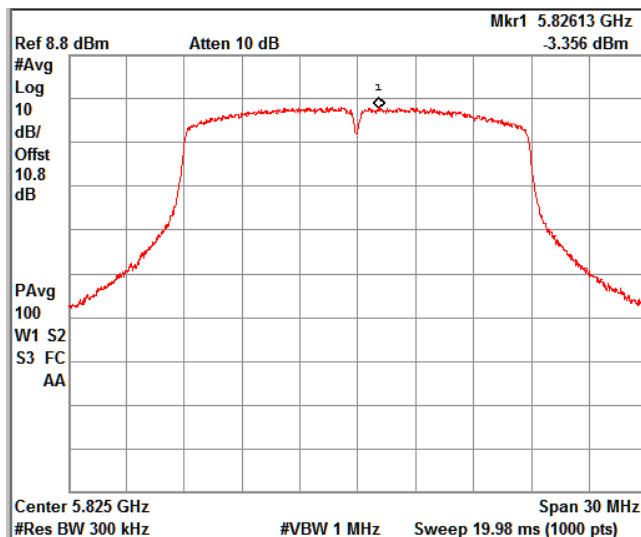
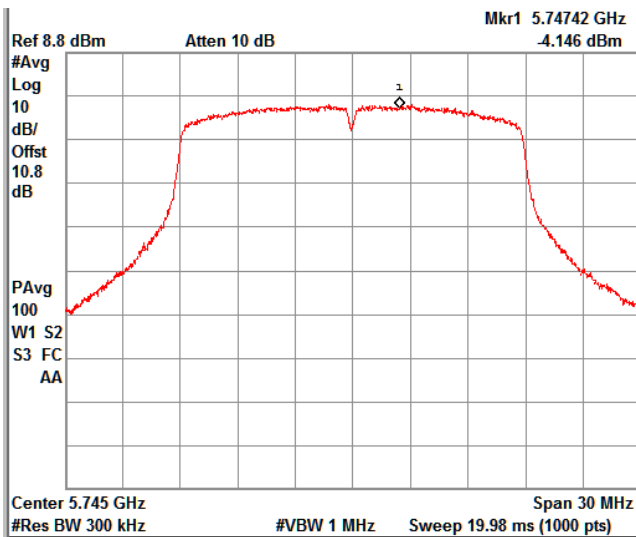
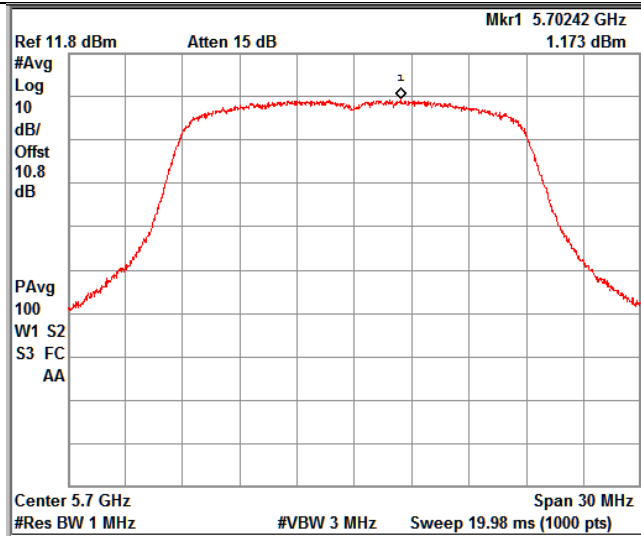
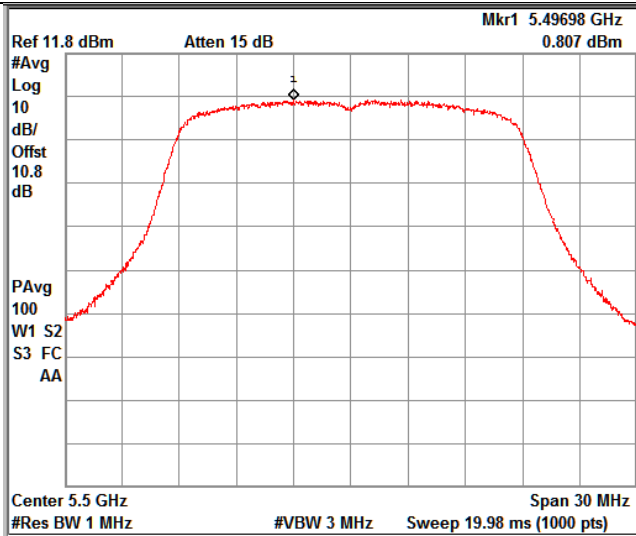
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Modulation: 802.11n – 20MHz - UNII 3

| Data rate (Mbps)    | Measured Frequency (MHz) | Measured Average PSD (dBm/0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/500kHz) | PSD (e.i.r.p) (dBm/500kHz) | FCC PSD Limit (dBm/500kHz) | IC e.i.r.p PSD (dBm/500kHz) |
|---------------------|--------------------------|-----------------------------------|----------------|-----------------------------------|---------------------------|----------------------------------|----------------------------|----------------------------|-----------------------------|
| n_mode-HT20MHz-MCS0 | 5745                     | -4.14                             | 92.00          | 0.36                              | 2.21                      | -1.57                            | 1.53                       | 11.00                      | 10.00                       |
|                     | 5825                     | -3.35                             | 92.00          | 0.36                              | 2.21                      | -0.78                            | 2.32                       | 11.00                      | 10.00                       |
| n_mode-HT20MHz-MCS7 | 5745                     | -5.01                             | 57.00          | 2.44                              | 2.21                      | -0.36                            | 2.74                       | 11.00                      | 10.00                       |
|                     | 5825                     | -4.17                             | 57.00          | 2.44                              | 2.21                      | 0.48                             | 3.58                       | 11.00                      | 10.00                       |

## Data Rate: MCS0





Only MCS0 plots are copied

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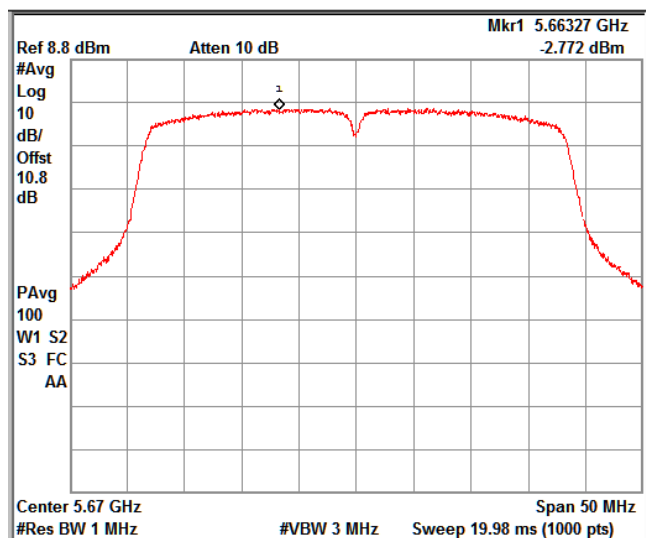
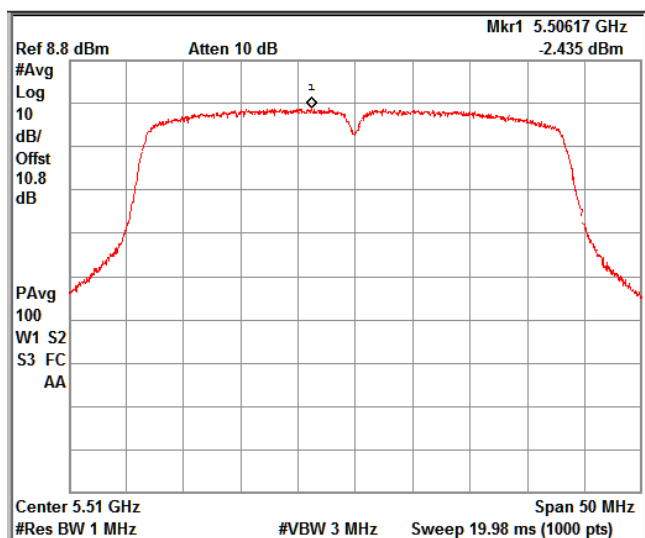
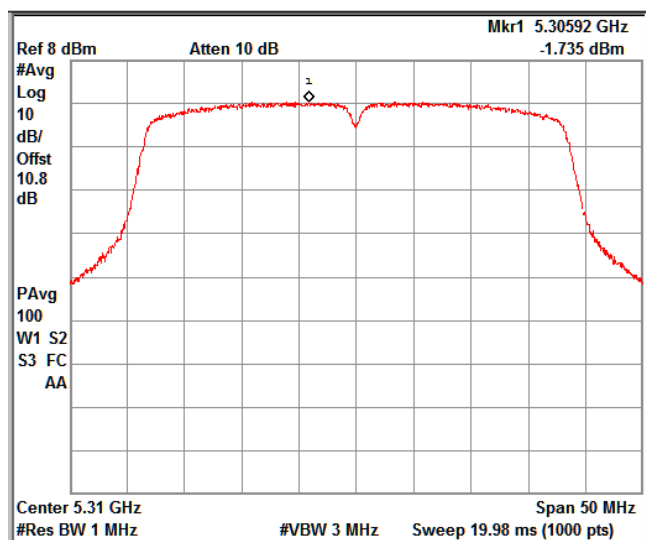
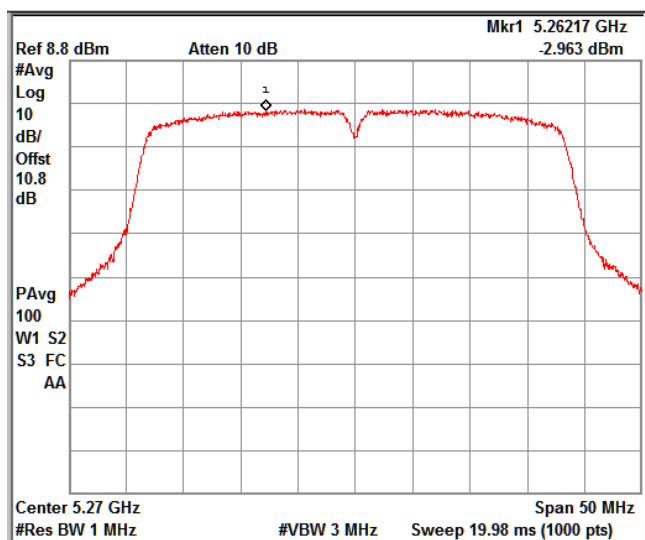
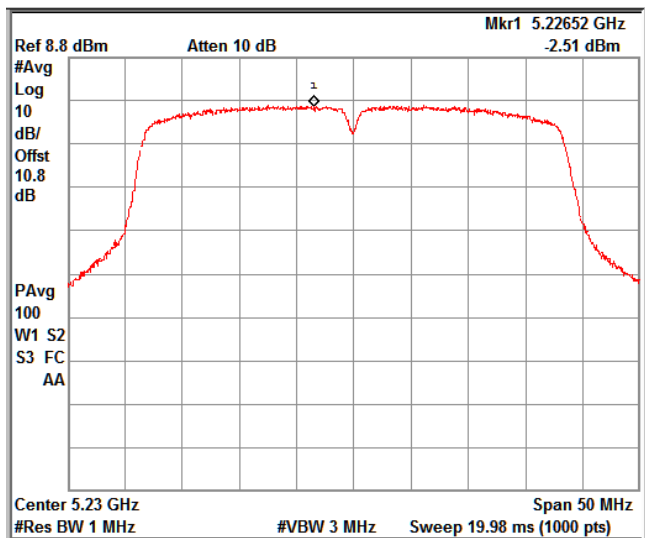
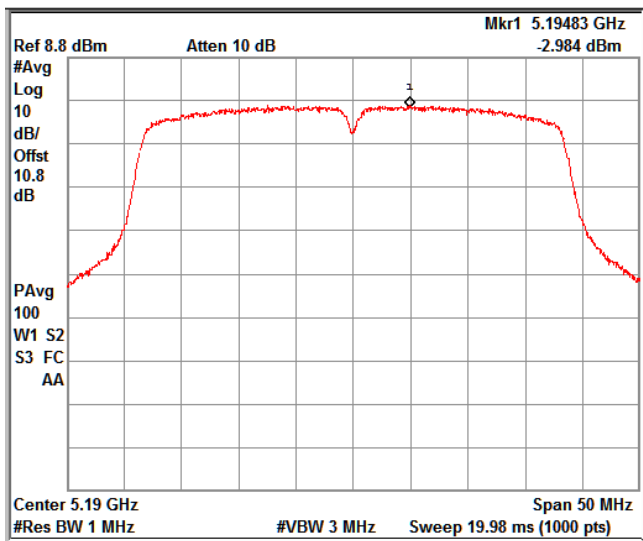
**Modulation: 802.11n – 40MHz - UNII 1, UNII2a, UNII2c**

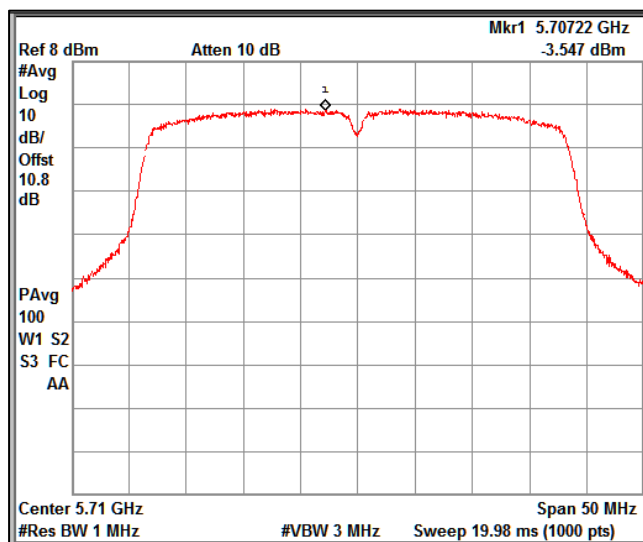
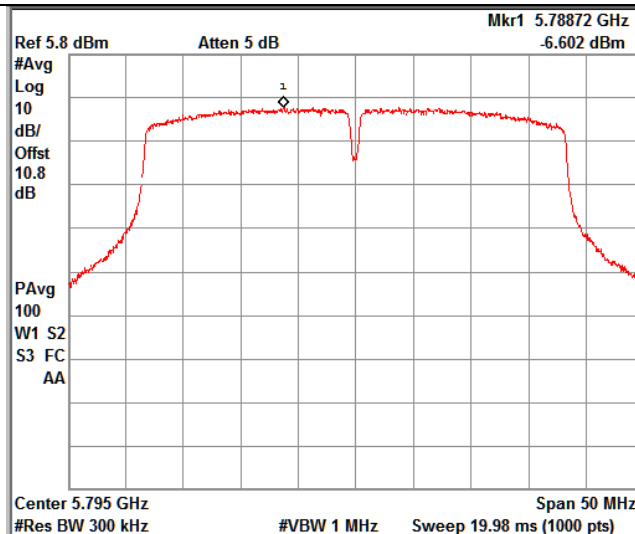
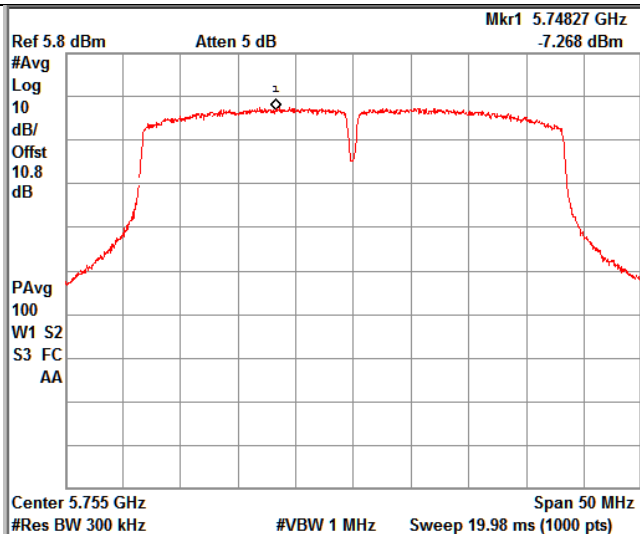
| Data rate (Mbps)    | Measured Frequency (MHz) | Measured Average PSD (dBm/1MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average PSD (dBm/1MHz) | PSD (e.i.r.p) (dBm/1MHz) | FCC PSD Limit (dBm/1MHz) | IC e.i.r.p SD (dBm/1MHz) |
|---------------------|--------------------------|---------------------------------|----------------|-----------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|
| n_mode-HT40MHz MCS0 | 5190                     | -2.98                           | 85.00          | 0.71                              | -2.27                          | 0.83                     | 11.00                    | 10.00                    |
|                     | 5230                     | -2.51                           | 85.00          | 0.71                              | -1.80                          | 1.30                     | 11.00                    | 10.00                    |
|                     | 5270                     | -2.96                           | 85.00          | 0.71                              | -2.25                          | 0.85                     | 11.00                    | 10.00                    |
|                     | 5310                     | -1.73                           | 85.00          | 0.71                              | -1.02                          | 2.08                     | 11.00                    | 10.00                    |
|                     | 5510                     | -2.43                           | 85.00          | 0.71                              | -1.72                          | 1.38                     | 11.00                    | 10.00                    |
|                     | 5590                     | -2.33                           | 85.00          | 0.71                              | -1.62                          | 1.48                     | 11.00                    | 10.00                    |
|                     | 5670                     | -2.77                           | 85.00          | 0.71                              | -2.06                          | 1.04                     | 11.00                    | 10.00                    |
|                     | 5710                     | -3.54                           | 85.00          | 0.71                              | -2.83                          | 0.27                     | 14.00                    | 10.00                    |
| n_mode-HT40MHz MCS7 | 5190                     | -5.24                           | 40.00          | 3.98                              | -1.26                          | 1.84                     | 11.00                    | 10.00                    |
|                     | 5230                     | -5.00                           | 40.00          | 3.98                              | -1.02                          | 2.08                     | 11.00                    | 10.00                    |
|                     | 5270                     | -5.47                           | 40.00          | 3.98                              | -1.49                          | 1.61                     | 11.00                    | 10.00                    |
|                     | 5310                     | -3.70                           | 40.00          | 3.98                              | 0.28                           | 3.38                     | 11.00                    | 10.00                    |
|                     | 5510                     | -4.33                           | 40.00          | 3.98                              | -0.35                          | 2.75                     | 11.00                    | 10.00                    |
|                     | 5590                     | -4.87                           | 40.00          | 3.98                              | -0.89                          | 2.21                     | 11.00                    | 10.00                    |
|                     | 5670                     | -5.02                           | 40.00          | 3.98                              | -1.04                          | 2.06                     | 11.00                    | 10.00                    |
|                     | 5710                     | -8.98                           | 40.00          | 3.98                              | -5.00                          | -1.90                    | 11.00                    | 10.00                    |

**Modulation: 802.11n – 40MHz - UNII 3**

| Data rate (Mbps)    | Measured Frequency (MHz) | Measured Average PSD (dBm/0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/500kHz) | PSD (e.i.r.p) (dBm/500kHz) | FCC PSD Limit (dBm/500kHz) | IC e.i.r.p PSD (dBm/500kHz) |
|---------------------|--------------------------|-----------------------------------|----------------|-----------------------------------|---------------------------|----------------------------------|----------------------------|----------------------------|-----------------------------|
| n_mode-HT40MHz_MCS0 | 5755                     | -7.26                             | 85.00          | 0.71                              | 2.21                      | -4.34                            | -1.24                      | 11.00                      | 10.00                       |
|                     | 5795                     | -6.60                             | 85.00          | 0.71                              | 2.21                      | -3.68                            | -0.58                      | 11.00                      | 10.00                       |
| n_mode-HT40MHz_MCS7 | 5755                     | -8.97                             | 40.00          | 3.98                              | 2.21                      | -2.78                            | 0.32                       | 11.00                      | 10.00                       |
|                     | 5795                     | -8.47                             | 40.00          | 3.98                              | 2.21                      | -2.28                            | 0.82                       | 11.00                      | 10.00                       |

**Data Rate : MCS0**





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**Modulation: 802.11n – VHT40MHz - UNII 1, UNII2a, UNII2c**

| Data rate<br>(Mbps)          | Measured<br>Frequency<br>(MHz) | Measured<br>Average<br>PSD<br>(dBm/<br>1MHz) | Duty<br>Cycle<br>X % | Duty<br>cycle<br>correction<br>factor<br>(dB) | Maximum<br>Average<br>PSD<br>(dBm/<br>1MHz) | PSD<br>(e.i.r.p)<br>(dBm/<br>1MHz) | FCC<br>PSD<br>Limit<br>(dBm/1MHz) | IC<br>e.i.r.p<br>SD<br>(dBm/<br>1MHz) |
|------------------------------|--------------------------------|----------------------------------------------|----------------------|-----------------------------------------------|---------------------------------------------|------------------------------------|-----------------------------------|---------------------------------------|
| n_mode_<br>VHT40MHz_<br>MCS0 | 5190                           | -2.65                                        | 85.00                | 0.71                                          | -1.94                                       | 1.16                               | 11.00                             | 10.00                                 |
|                              | 5230                           | -2.42                                        | 85.00                | 0.71                                          | -1.71                                       | 1.39                               | 11.00                             | 10.00                                 |
|                              | 5270                           | -2.37                                        | 85.00                | 0.71                                          | -1.66                                       | 1.44                               | 11.00                             | 10.00                                 |
|                              | 5310                           | -2.00                                        | 85.00                | 0.71                                          | -1.29                                       | 1.81                               | 11.00                             | 10.00                                 |
|                              | 5510                           | -2.58                                        | 85.00                | 0.71                                          | -1.87                                       | 1.23                               | 11.00                             | 10.00                                 |
|                              | 5590                           | -2.89                                        | 85.00                | 0.71                                          | -2.18                                       | 0.92                               | 11.00                             | 10.00                                 |
|                              | 5670                           | -2.33                                        | 85.00                | 0.71                                          | -1.62                                       | 1.48                               | 11.00                             | 10.00                                 |
|                              | 5710                           | -3.07                                        | 85.00                | 0.71                                          | -2.36                                       | 0.74                               | 14.00                             | 10.00                                 |
| n_mode_<br>VHT40MHz_<br>MCS9 | 5190                           | -5.35                                        | 21.00                | 6.78                                          | 1.43                                        | 4.53                               | 11.00                             | 10.00                                 |
|                              | 5230                           | -5.39                                        | 21.00                | 6.78                                          | 1.39                                        | 4.49                               | 11.00                             | 10.00                                 |
|                              | 5310                           | -4.19                                        | 21.00                | 6.78                                          | 2.59                                        | 5.69                               | 11.00                             | 10.00                                 |
|                              | 5270                           | -5.63                                        | 21.00                | 6.78                                          | 1.15                                        | 4.25                               | 11.00                             | 10.00                                 |
|                              | 5510                           | -6.58                                        | 21.00                | 6.78                                          | 0.20                                        | 3.30                               | 11.00                             | 10.00                                 |
|                              | 5590                           | -5.57                                        | 21.00                | 6.78                                          | 1.21                                        | 4.31                               | 11.00                             | 10.00                                 |
|                              | 5670                           | -5.25                                        | 21.00                | 6.78                                          | 1.53                                        | 4.63                               | 11.00                             | 10.00                                 |
|                              | 5710                           | -6.07                                        | 21.00                | 6.78                                          | 0.71                                        | 3.81                               | 14.00                             | 10.00                                 |

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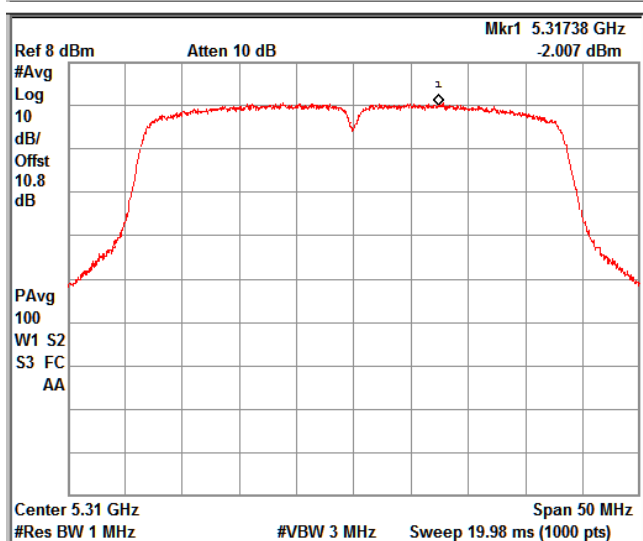
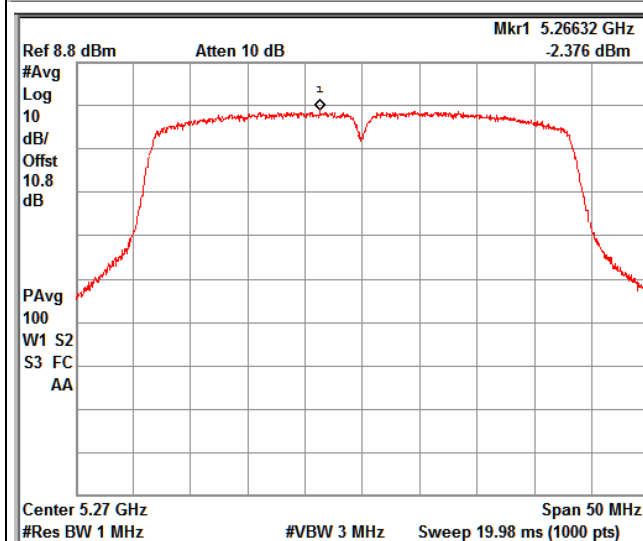
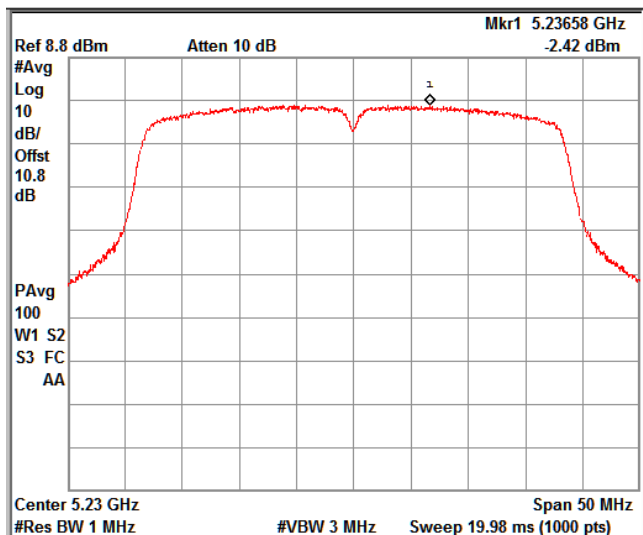
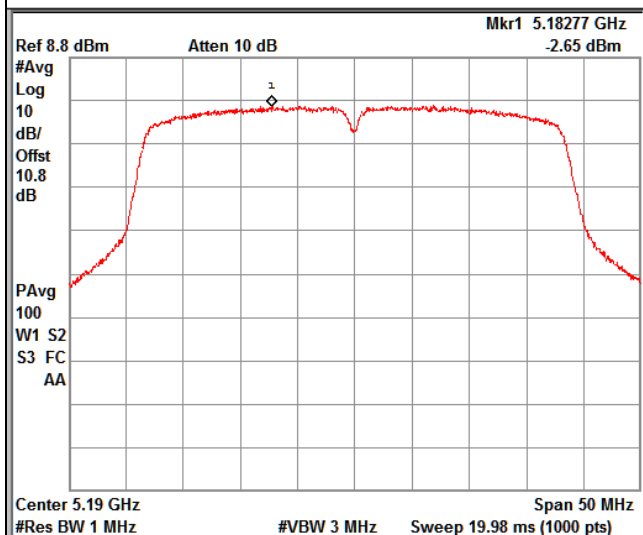
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**Modulation: 802.11n – VHT40MHz - UNII 3**

| Data rate (Mbps)      | Measured Frequency (MHz) | Measured Average PSD (dBm/0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/500kHz) | PSD (e.i.r.p) (dBm/500kHz) | FCC PSD Limit (dBm/500kHz) | IC e.i.r.p PSD (dBm/500kHz) |
|-----------------------|--------------------------|-----------------------------------|----------------|-----------------------------------|---------------------------|----------------------------------|----------------------------|----------------------------|-----------------------------|
| n_mode_VHT40 MHz_MCS0 | 5755                     | -6.85                             | 85.00          | 0.71                              | 2.21                      | -3.93                            | -0.83                      | 11.00                      | 10.00                       |
|                       | 5795                     | -6.65                             | 85.00          | 0.71                              | 2.21                      | -3.73                            | -0.63                      | 11.00                      | 10.00                       |
| n_mode_VHT40 MHz_MCS9 | 5755                     | -9.11                             | 21.00          | 6.78                              | 2.21                      | -0.12                            | 2.98                       | 11.00                      | 10.00                       |
|                       | 5795                     | -8.50                             | 21.00          | 6.78                              | 2.21                      | 0.49                             | 3.59                       | 11.00                      | 10.00                       |

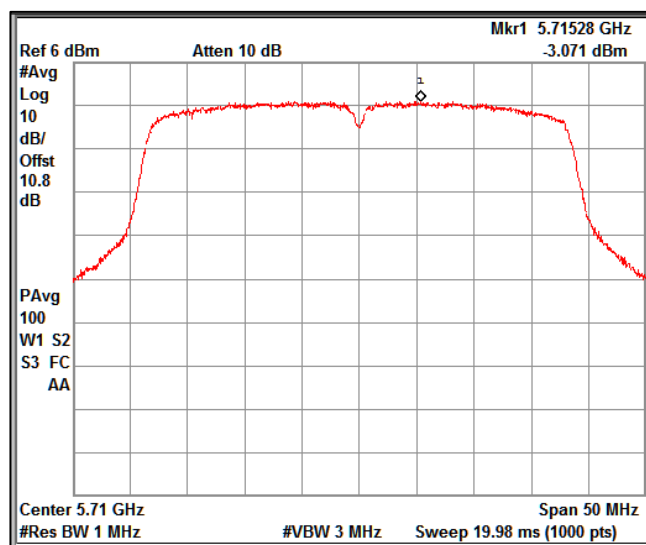
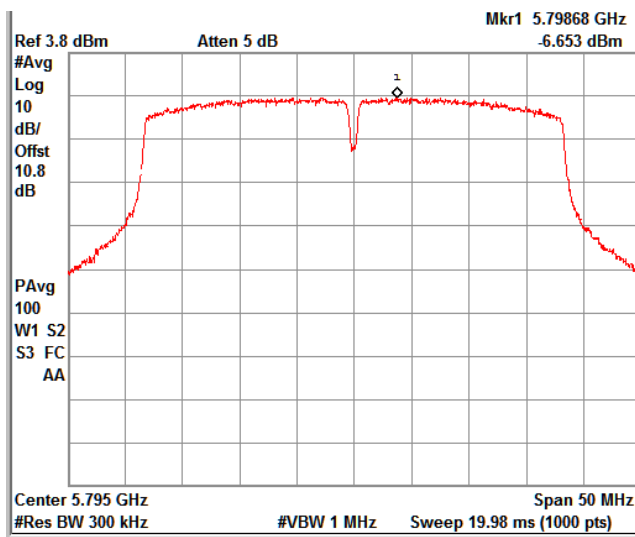
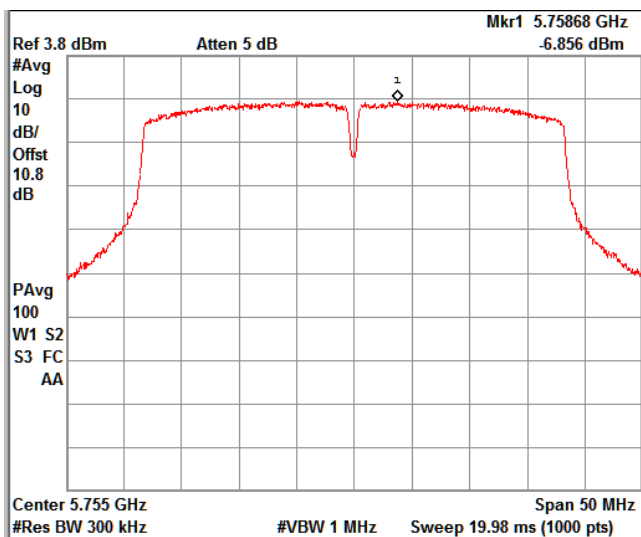
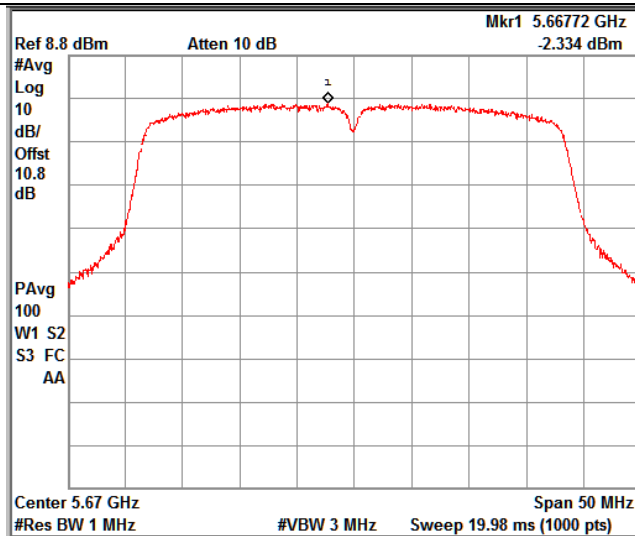
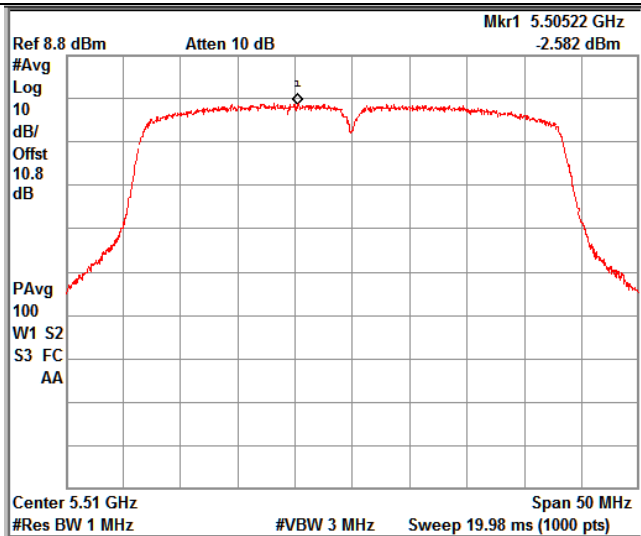
**Data Rate : MCS0**



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**Modulation: 802.11ac – VHT20MHz - UNII 1, UNII2a, UNII2c**

| Data rate (Mbps)       | Measured Frequency (MHz) | Measured Average PSD (dBm/1MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average PSD (dBm/ 1MHz) | PSD (e.i.r.p) (dBm/ 1MHz) | FCC PSD Limit (dBm/1MHz) | IC e.i.r.p SD (dBm/ 1MHz) |
|------------------------|--------------------------|---------------------------------|----------------|-----------------------------------|---------------------------------|---------------------------|--------------------------|---------------------------|
| ac_mode-VHT 20MHz-MCS0 | 5180                     | 0.80                            | 92.00          | 0.36                              | 1.16                            | 4.26                      | 11.00                    | 10.00                     |
|                        | 5240                     | 0.95                            | 92.00          | 0.36                              | 1.31                            | 4.41                      | 11.00                    | 10.00                     |
|                        | 5260                     | 0.60                            | 92.00          | 0.36                              | 0.96                            | 4.06                      | 11.00                    | 10.00                     |
|                        | 5320                     | 1.13                            | 92.00          | 0.36                              | 1.49                            | 4.59                      | 11.00                    | 10.00                     |
|                        | 5500                     | 0.30                            | 92.00          | 0.36                              | 0.66                            | 3.76                      | 11.00                    | 10.00                     |
|                        | 5700                     | 1.26                            | 92.00          | 0.36                              | 1.62                            | 4.72                      | 11.00                    | 10.00                     |
|                        | 5720                     | 0.73                            | 92.00          | 0.36                              | 1.09                            | 4.19                      | 11.00                    | 10.00                     |
| ac_mode-VHT 20MHz-MCS8 | 5180                     | -1.52                           | 47.00          | 3.28                              | 1.76                            | 4.86                      | 11.00                    | 10.00                     |
|                        | 5240                     | -1.50                           | 47.00          | 3.28                              | 1.78                            | 4.88                      | 11.00                    | 10.00                     |
|                        | 5260                     | -1.69                           | 47.00          | 3.28                              | 1.59                            | 4.69                      | 11.00                    | 10.00                     |
|                        | 5320                     | -1.14                           | 47.00          | 3.28                              | 2.14                            | 5.24                      | 11.00                    | 10.00                     |
|                        | 5500                     | -1.18                           | 47.00          | 3.28                              | 2.10                            | 5.20                      | 11.00                    | 10.00                     |
|                        | 5700                     | -2.23                           | 47.00          | 3.28                              | 1.05                            | 4.15                      | 11.00                    | 10.00                     |
|                        | 5720                     | -1.98                           | 47.00          | 3.28                              | -1.80                           | 1.30                      | 14.00                    | 10.00                     |

**Modulation: 802.11ac – VHT20MHz - UNII 3**

| Data rate (Mbps)       | Measured Frequency (MHz) | Measured Average PSD (dBm/ 0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/ 500kHz) | PSD (e.i.r.p) (dBm/ 500kHz) | FCC PSD Limit (dBm/ 500kHz) | IC e.i.r.p PSD (dBm/ 500kHz) |
|------------------------|--------------------------|------------------------------------|----------------|-----------------------------------|---------------------------|-----------------------------------|-----------------------------|-----------------------------|------------------------------|
| ac_mode-VHT 20MHz-MCS0 | 5745                     | -3.47                              | -3.47          | 92.00                             | 0.36                      | 2.21                              | -0.90                       | 11.00                       | 10.00                        |
|                        | 5825                     | -3.61                              | -3.61          | 92.00                             | 0.36                      | 2.21                              | -1.04                       | 11.00                       | 10.00                        |
| ac_mode-VHT 20MHz-MCS8 | 5745                     | -5.08                              | -5.08          | 47.00                             | 3.28                      | 2.21                              | 0.41                        | 11.00                       | 10.00                        |
|                        | 5825                     | -5.58                              | -5.58          | 47.00                             | 3.28                      | 2.21                              | -0.09                       | 11.00                       | 10.00                        |

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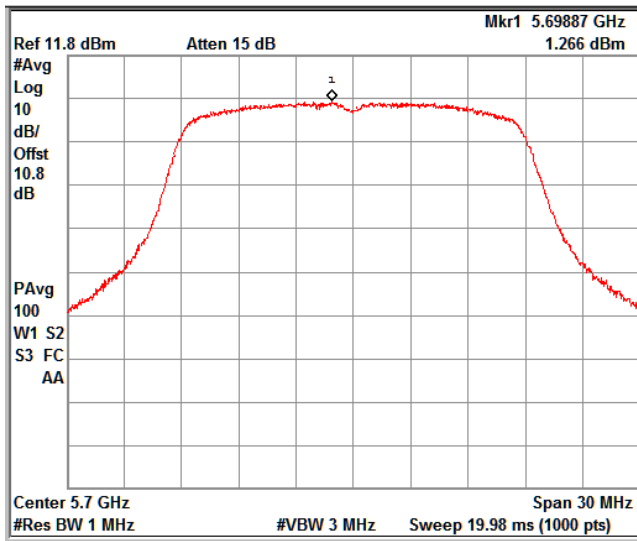
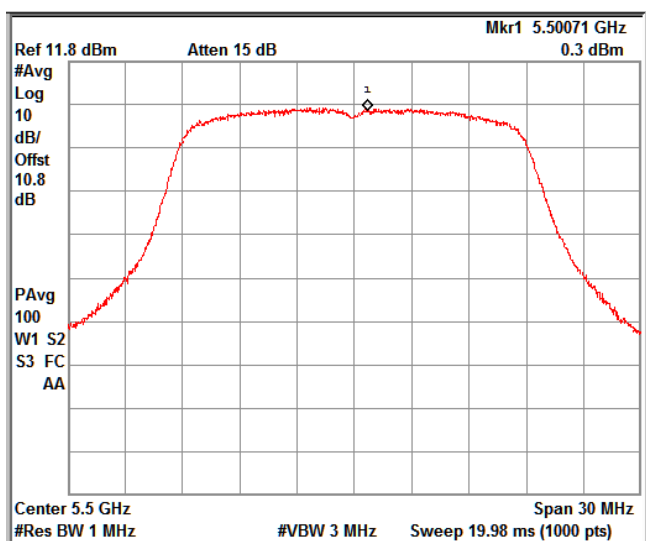
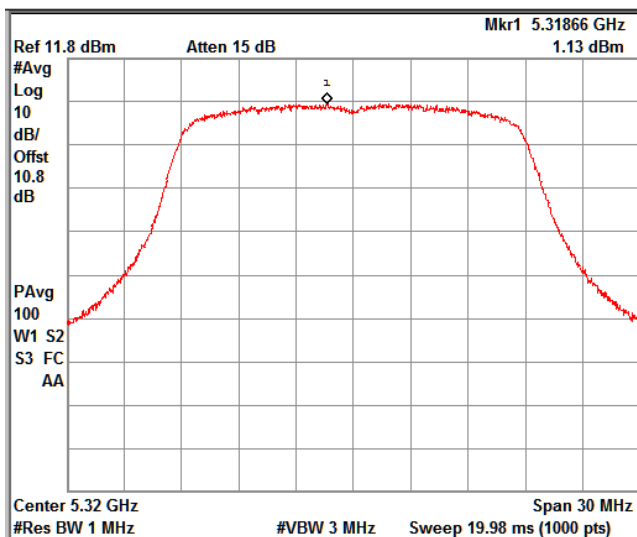
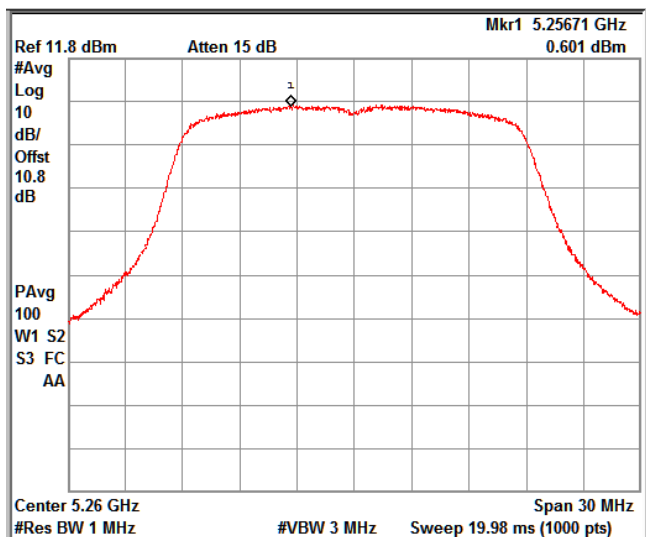
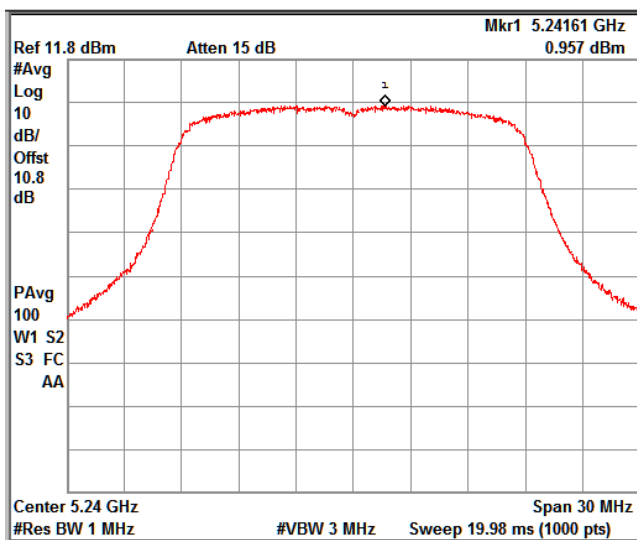
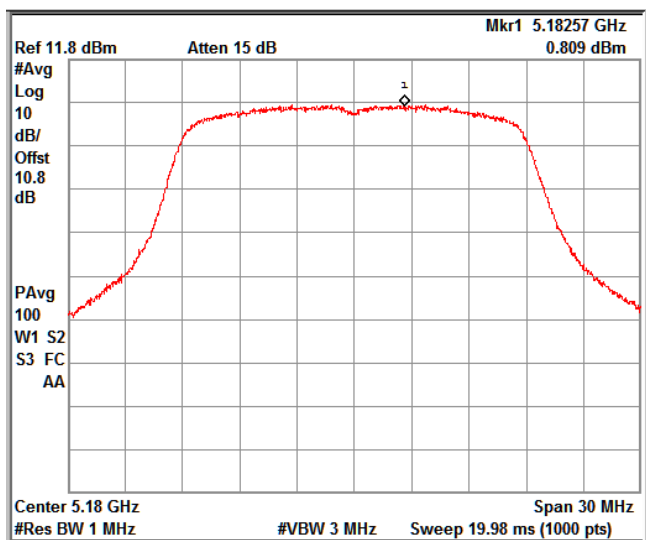
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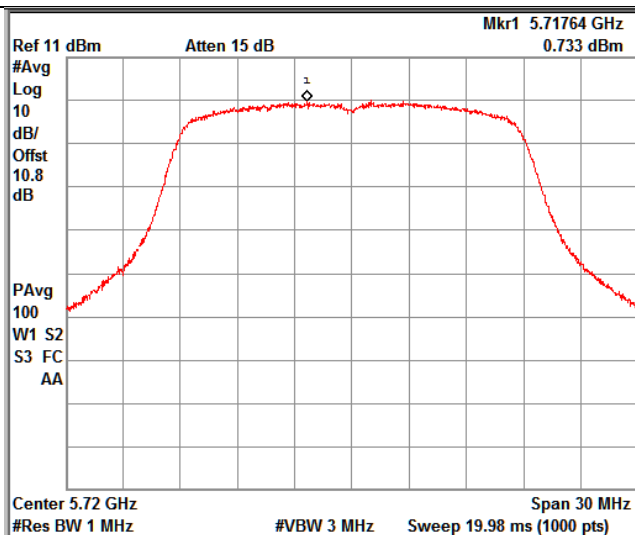
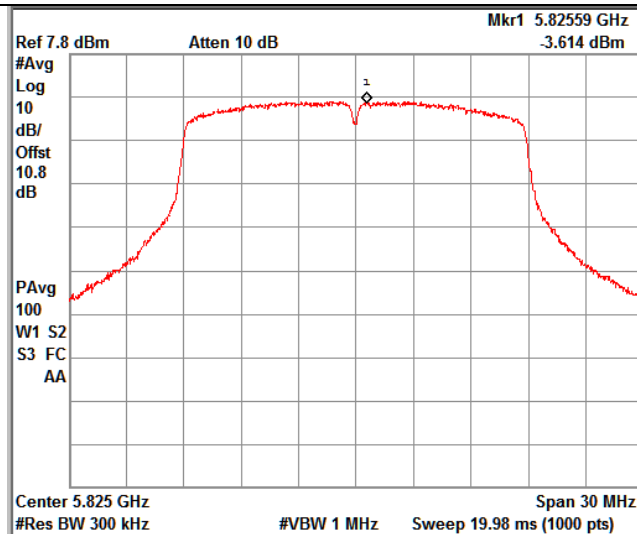
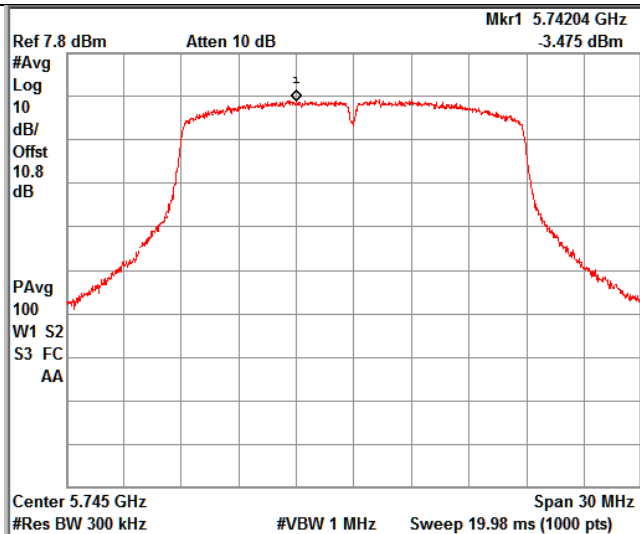
Data Rate : MCS0



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Only MCS0 graphs are copied

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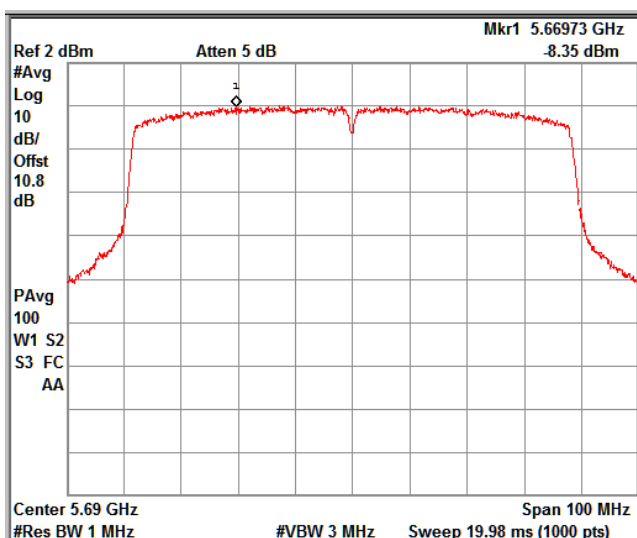
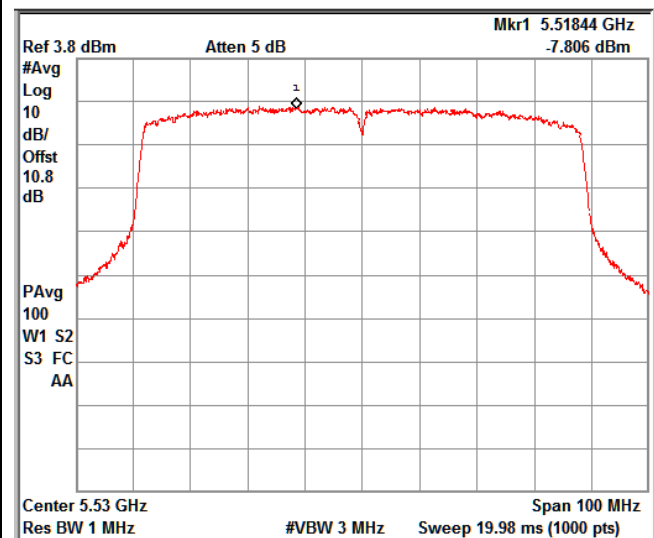
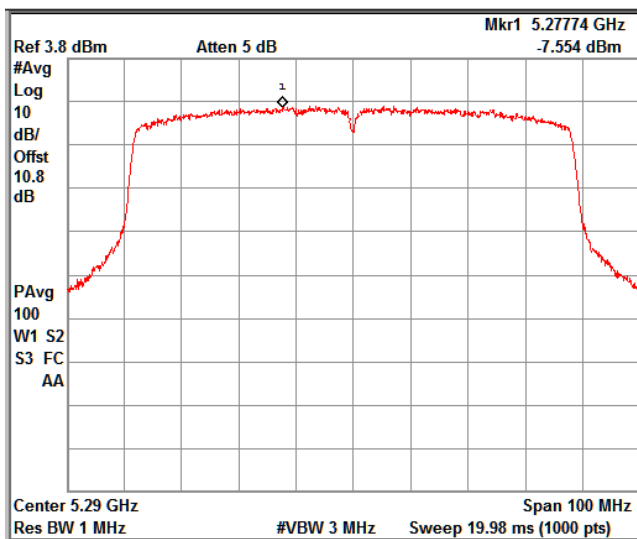
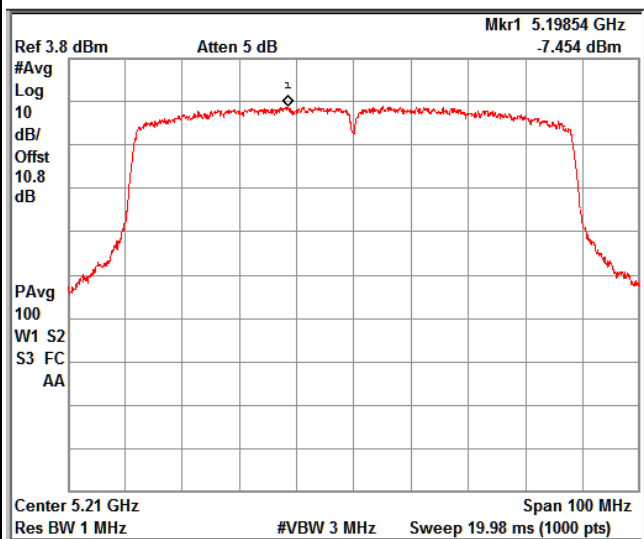
**Modulation: 802.11ac – VHT80MHz - UNII 1, UNII2a, UNII2c**

| Data rate (Mbps)       | Measured Frequency (MHz) | Measured Average PSD (dBm/1MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Maximum Average PSD (dBm/ 1MHz) | PSD (e.i.r.p) (dBm/ 1MHz) | FCC PSD Limit (dBm/1MHz) | IC e.i.r.p SD (dBm/ 1MHz) |
|------------------------|--------------------------|---------------------------------|----------------|-----------------------------------|---------------------------------|---------------------------|--------------------------|---------------------------|
| ac_mode-VHT 80MHz_MCS0 | 5210                     | -7.45                           | 64.00          | 1.94                              | -5.51                           | -2.41                     | 11.00                    | 10.00                     |
|                        | 5290                     | -7.55                           | 64.00          | 1.94                              | -5.61                           | -2.51                     | 11.00                    | 10.00                     |
|                        | 5530                     | -7.80                           | 64.00          | 1.94                              | -5.86                           | -2.76                     | 11.00                    | 10.00                     |
|                        | 5690                     | -8.18                           | 64.00          | 1.94                              | -6.24                           | -3.14                     | 11.00                    | 10.00                     |
| ac_mode-VHT 80MHz_MCS9 | 5210                     | -9.81                           | 27.00          | 5.69                              | -4.12                           | -1.02                     | 11.00                    | 10.00                     |
|                        | 5290                     | -10.70                          | 27.00          | 5.69                              | -5.01                           | -1.91                     | 11.00                    | 10.00                     |
|                        | 5530                     | -9.52                           | 27.00          | 5.69                              | -3.83                           | -0.73                     | 11.00                    | 10.00                     |
|                        | 5690                     | -9.29                           | 27.00          | 5.69                              | -3.60                           | -0.50                     | 11.00                    | 10.00                     |

**Modulation: 802.11ac – VHT80MHz - UNII 3**

| Data rate (Mbps)       | Measured Frequency (MHz) | Measured Average PSD (dBm/ 0.3MHz) | Duty Cycle X % | Duty cycle correction factor (dB) | Bandwidth Correction (dB) | Maximum Average PSD (dBm/ 500kHz) | PSD (e.i.r.p) (dBm/ 500kHz) | FCC PSD Limit (dBm/ 500kHz) | IC e.i.r.p PSD (dBm/ 500kHz) |
|------------------------|--------------------------|------------------------------------|----------------|-----------------------------------|---------------------------|-----------------------------------|-----------------------------|-----------------------------|------------------------------|
| ac_mode-VHT 80MHz_MCS0 | 5755                     | -12.93                             | 64.00          | 1.94                              | 2.21                      | -8.78                             | -5.68                       | 11.00                       | 10.00                        |
| ac_mode-VHT 80MHz_MCS9 | 5755                     | -13.20                             | 27.00          | 5.69                              | 2.21                      | -5.30                             | -2.20                       | 11.00                       | 10.00                        |

**Data Rate: MCS0**



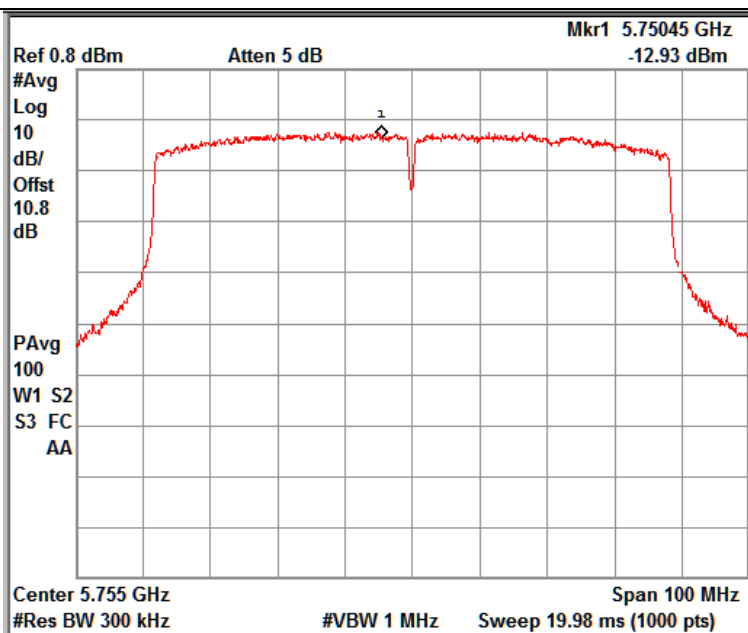
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Only MCS0 graphs are copied

## 7.4 Dynamic Frequency Selection (DFS)

**Result**

**Pass**

Test Specification 15.407 (h) / RSS 247 Issue 2 Section 6.3

Test Method FCC KDB Publication 905462 D02 & 905462 D03

Port of testing Conducted method

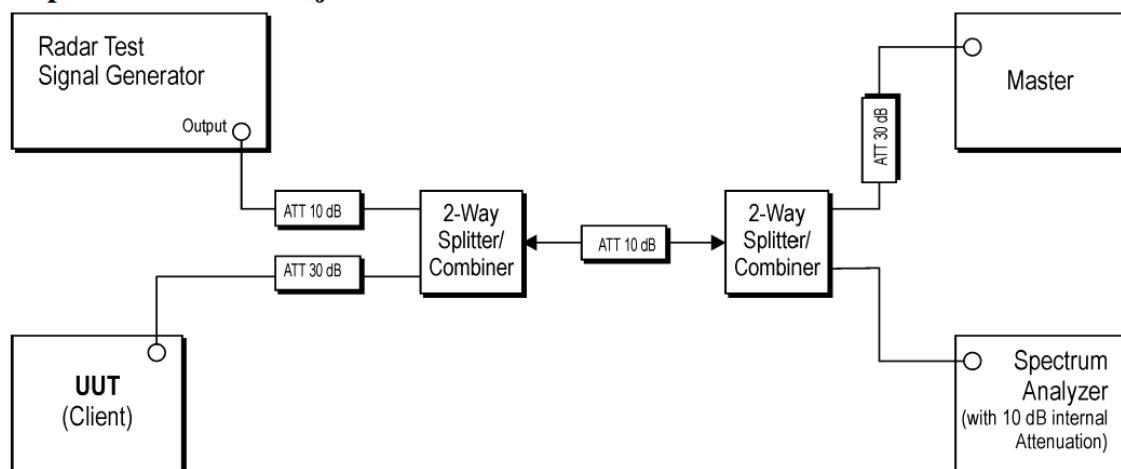
UUT Type Client without radar detection capabilities

1. Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW

2. Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems. Operators shall only use equipment with a DFS mechanism that is turned on when operating in these bands

### Test Setup :

#### Setup for Client with injection at the Master



**Note:** FCC Certified Access Point is used for testing with FCC ID: LDK102087

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**Limits :**

**Applicability of DFS Requirements Prior to Use of a Channel**

| Requirement                            | Operational Mode |                                |                             |
|----------------------------------------|------------------|--------------------------------|-----------------------------|
|                                        | Master           | Client Without Radar Detection | Client With Radar Detection |
| <i>Non-Occupancy Period</i>            | Yes              | Not required                   | Yes                         |
| <i>DFS Detection Threshold</i>         | Yes              | Not required                   | Yes                         |
| <i>Channel Availability Check Time</i> | Yes              | Not required                   | Not required                |
| <i>U-NII Detection Bandwidth</i>       | Yes              | Not required                   | Yes                         |

**Applicability of DFS requirements during normal operation**

| Requirement                              | Operational Mode                             |                                |
|------------------------------------------|----------------------------------------------|--------------------------------|
|                                          | Master Device or Client with Radar Detection | Client Without Radar Detection |
| <i>DFS Detection Threshold</i>           | Yes                                          | Not required                   |
| <i>Channel Closing Transmission Time</i> | Yes                                          | Yes                            |
| <i>Channel Move Time</i>                 | Yes                                          | Yes                            |
| <i>U-NII Detection Bandwidth</i>         | Yes                                          | Not required                   |

The operational behavior and individual DFS requirements that are associated with these modes are as follows: as per KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

**Client Devices**

- A *Client Device* will not transmit before having received appropriate control signals from a *Master Device*.
- A *Client Device* will stop all its transmissions whenever instructed by a *Master Device* to which it is associated and will meet the *Channel Move Time* and *Channel Closing Transmission Time* requirements. The *Client Device* will not resume any transmissions until it has again received control signals from a *Master Device*.
- If a *Client Device* is performing *In-Service Monitoring* and detects a *Radar Waveform* above the *DFS Detection Threshold*, it will inform the *Master Device*. This is equivalent to the *Master Device* detecting the *Radar Waveform* and d) through f) of section 5.1.1 apply.
- Irrespective of *Client Device* or *Master Device* detection the *Channel Move Time* and *Channel Closing Transmission Time* requirements remain the same.
- The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.

### DFS Detection Thresholds

below provides the *DFS Detection Thresholds* for *Master Devices* as well as *Client Devices* incorporating *In-Service Monitoring*.

#### DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

| Maximum Transmit Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Value<br>(See Notes 1, 2, and 3) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| EIRP $\geq$ 200 milliwatt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -64 dBm                          |
| EIRP $<$ 200 milliwatt and<br>power spectral density $<$ 10 dBm/MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -62 dBm                          |
| EIRP $<$ 200 milliwatt that do not meet the power spectral density<br>requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -64 dBm                          |
| <p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p><b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p><b>Note3:</b> EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p> |                                  |

### Response Requirements

provides the response requirements for *Master* and *Client Devices* incorporating DFS.

#### DFS Response Requirement Values

| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Value                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <i>Non-occupancy period</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Minimum 30 minutes                                                                                                 |
| <i>Channel Availability Check Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 60 seconds                                                                                                         |
| <i>Channel Move Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 seconds<br>See Note 1.                                                                                          |
| <i>Channel Closing Transmission Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200 milliseconds + an<br>aggregate of 60<br>milliseconds over remaining<br>10 second period.<br>See Notes 1 and 2. |
| <i>U-NII Detection Bandwidth</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Minimum 100% of the U-<br>NII 99% transmission<br>power bandwidth. See Note<br>3.                                  |
| <p><b>Note 1:</b> <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.</p> <p><b>Note 2:</b> The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</p> <p><b>Note 3:</b> During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p> |                                                                                                                    |

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Note :

1. This UUT is classified as Client device without radar detection capabilities, hence only *Channel Move Time* and *Channel Closing Transmission Time* are applicable
2. *Channel Move Time* and *Channel Closing Transmission Time* is performed with Radar Type 0
3. *U-NII Detection Bandwidth* is not applicable for this device

**Test Condition:**

**Normal Test Condition:**

Temperature (Norm) = + 25 °C

Voltage = 3.3VDC

Relative humidity: 62 %

**KDB Guidelines applied:**

Measurements were made following the guidelines of 905462 D02 UNII DFS Compliance Procedures New Rules v02 & 905462 D03 Client Without DFS New Rules v01r02

**Test results:**

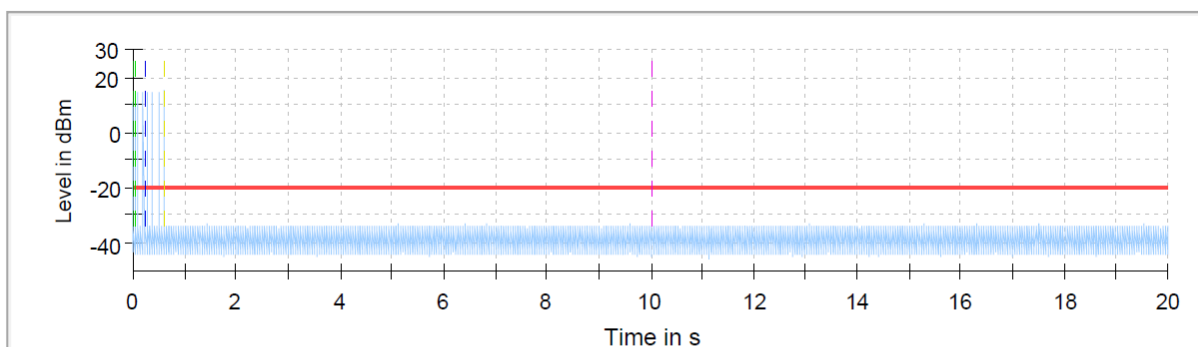
**DFS In-Service Monitoring**

**UNII band : UNII 2a**

**Channel Bandwidth : 20MHz**

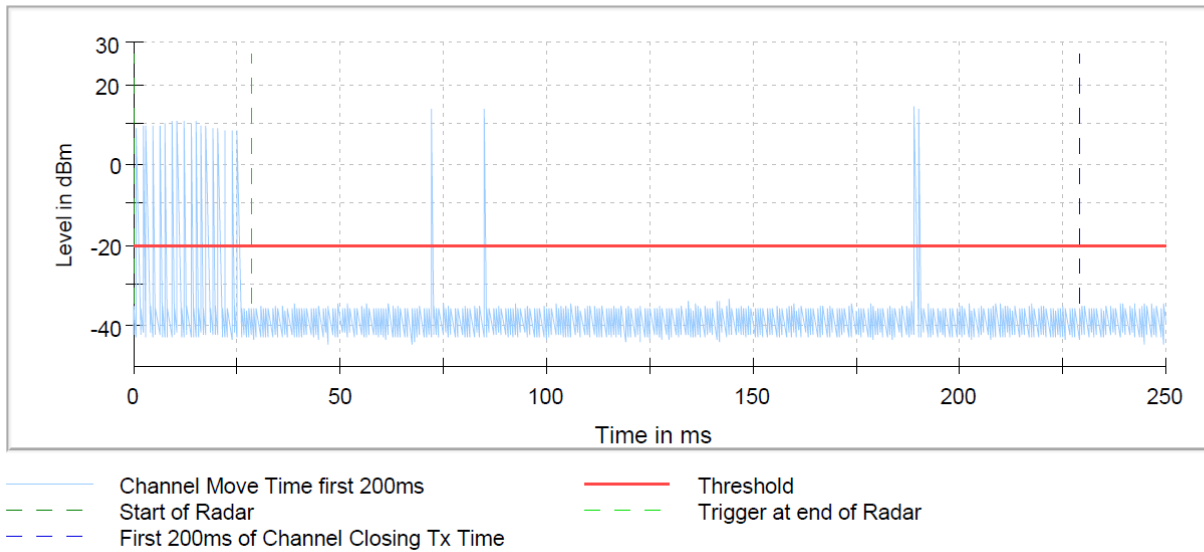
| Operating Frequency (MHz) | Test                              | Measured Value      | Limit                                                                              |
|---------------------------|-----------------------------------|---------------------|------------------------------------------------------------------------------------|
| 5320                      | Channel move Time                 | 0.579 s             | 10 sec                                                                             |
|                           | Channel Closing Transmission Time | 0.784 ms + 1.424 ms | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period |
|                           | Non Occupancy Time                | 0                   | Min 30 minutes                                                                     |

Channel Move Time

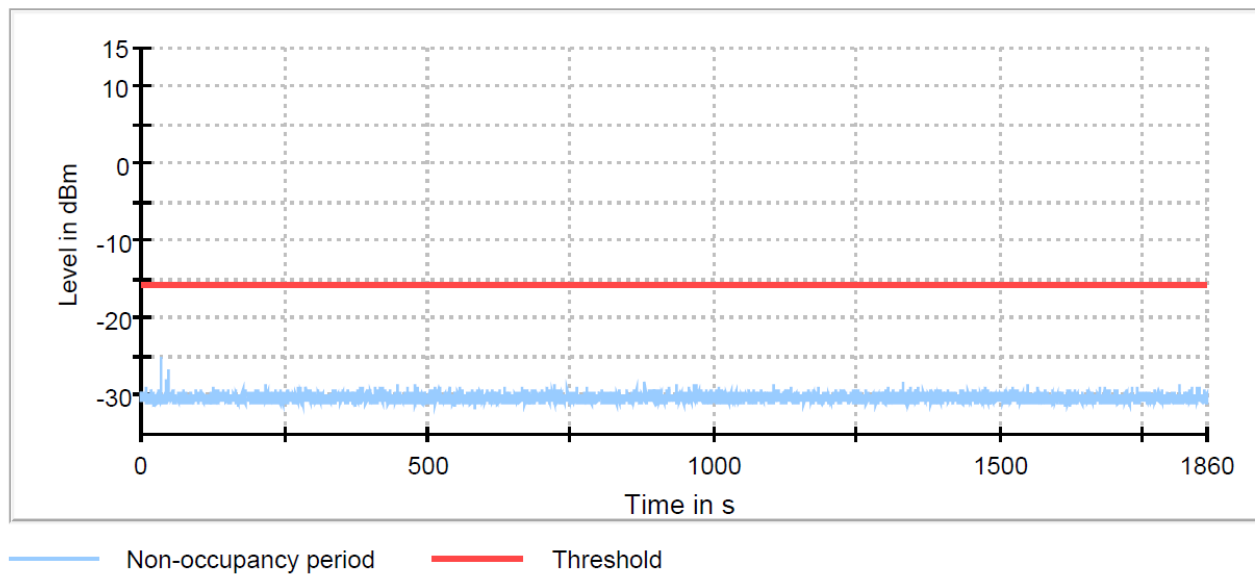


- Channel Move Time
- Threshold
- Start of Radar
- Trigger at end of Radar
- First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



Non-occupancy period



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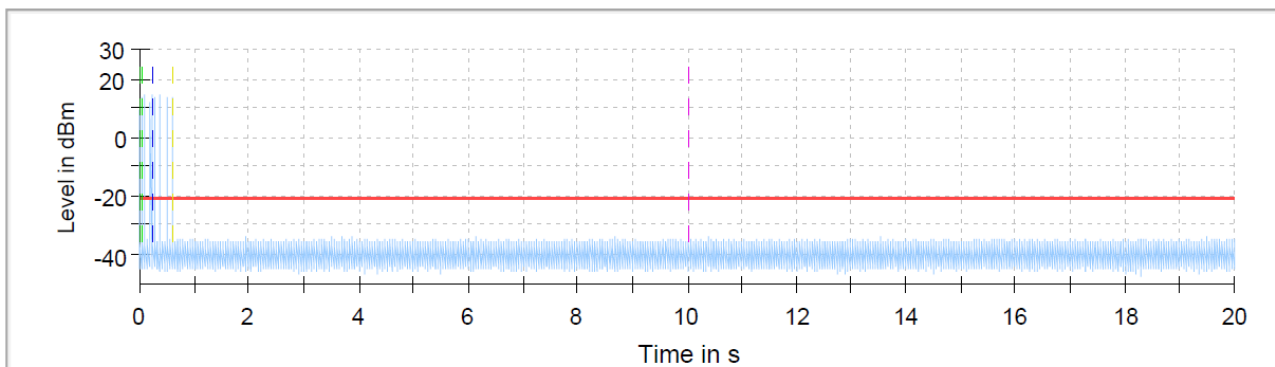
**ULR-TC568821300000075F**

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**UNII band : UNII 2a**  
**Channel Bandwidth : 40MHz**

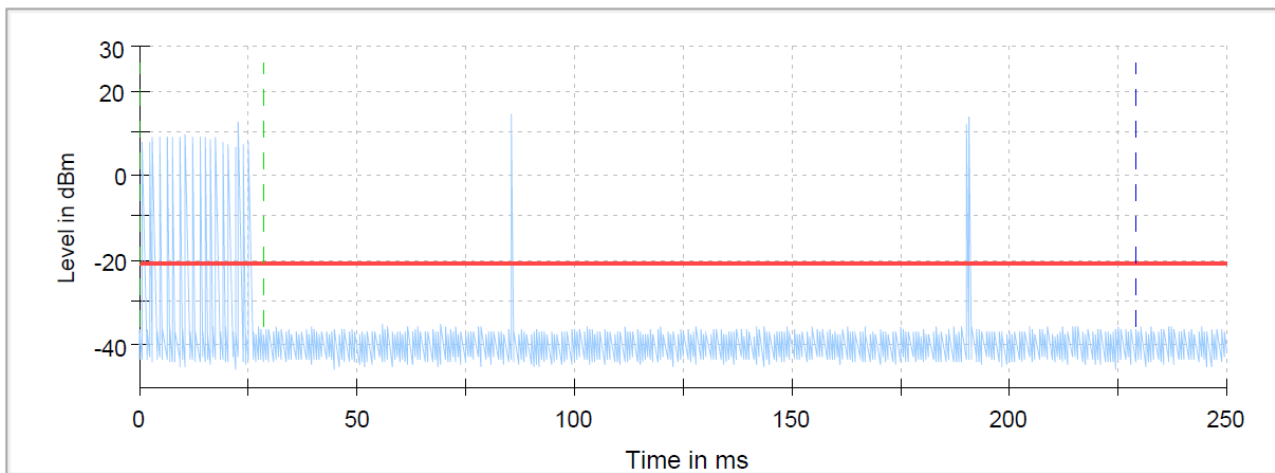
| Operating Frequency (MHz) | Test                              | Measured Value      | Limit                                                                              |
|---------------------------|-----------------------------------|---------------------|------------------------------------------------------------------------------------|
| 5260                      | Channel move Time                 | 0.580 s             | 10 sec                                                                             |
|                           | Channel Closing Transmission Time | 0.704 ms + 1.424 ms | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period |
|                           | Non Occupancy Time                | 0                   | Min 30 minutes                                                                     |

Channel Move Time



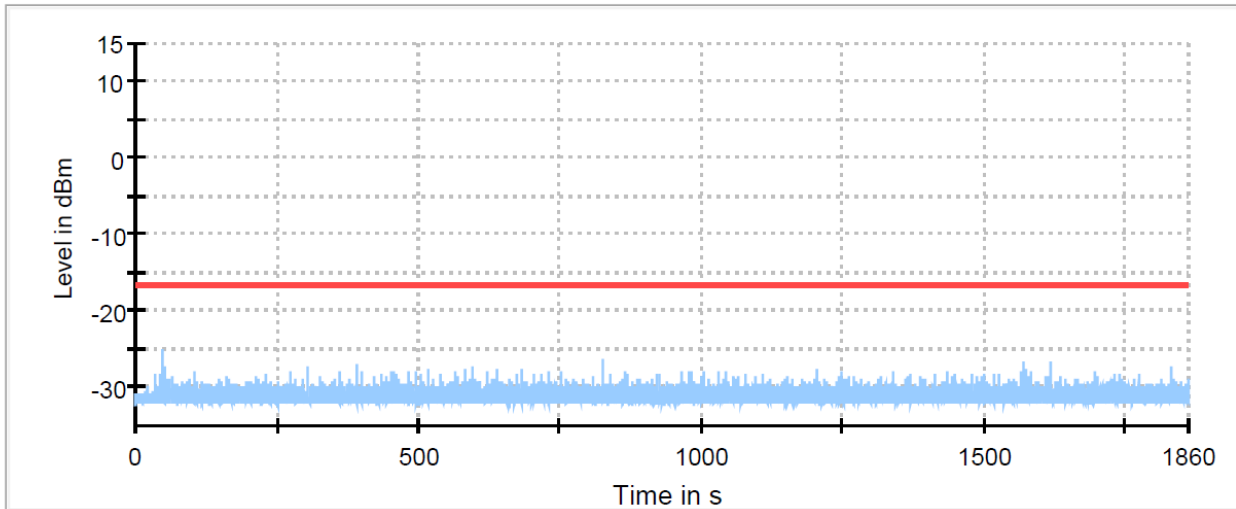
- Channel Move Time
- Threshold
- Start of Radar
- Trigger at end of Radar
- First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



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

Non-occupancy period



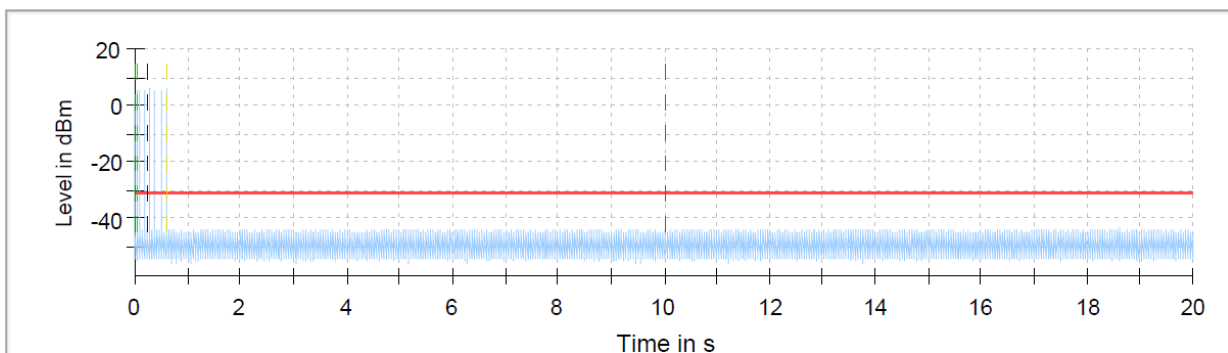
— Non-occupancy period — Threshold

**UNII band : UNII 2c**

**Channel Bandwidth : 20MHz**

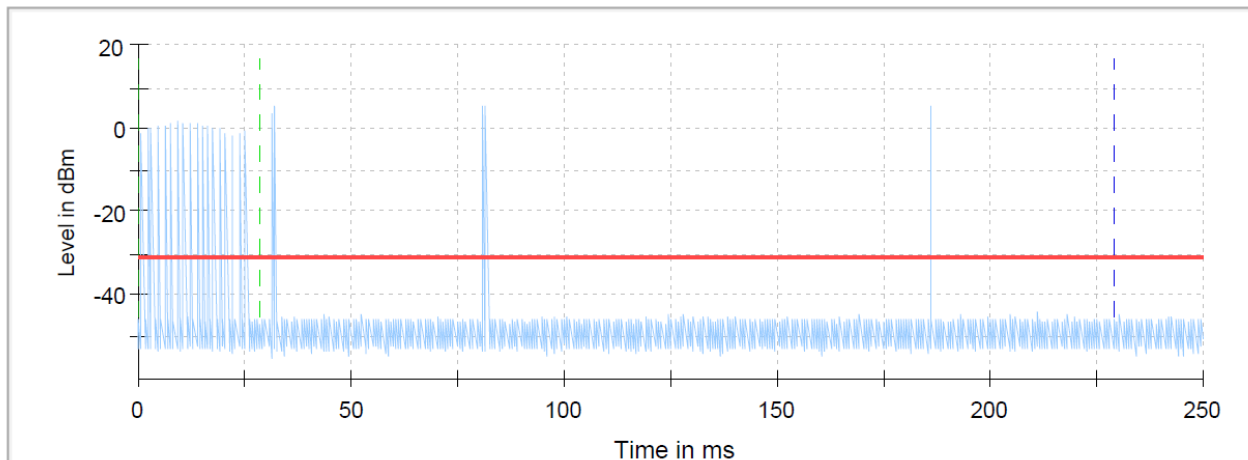
| Operating Frequency (MHz) | Test                              | Measured Value     | Limit                                                                              |
|---------------------------|-----------------------------------|--------------------|------------------------------------------------------------------------------------|
| 5500                      | Channel move Time                 | 0.575 s            | 10 sec                                                                             |
|                           | Channel Closing Transmission Time | 0.760 ms + 1.384ms | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period |
|                           | Non Occupancy Time                | 0                  | Min 30 minutes                                                                     |

Channel Move Time



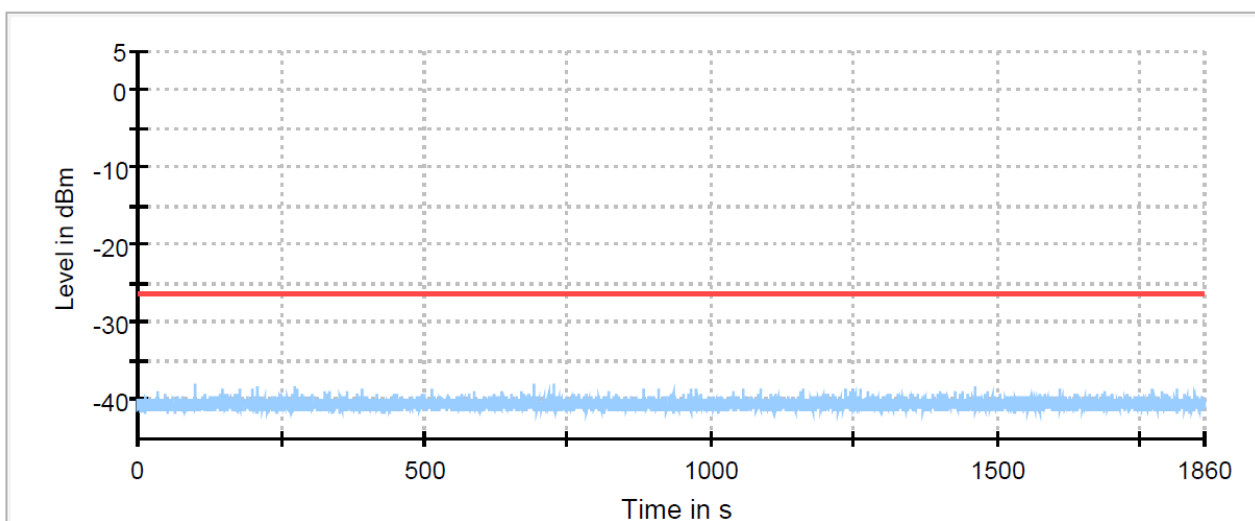
— Channel Move Time  
— Threshold  
- - - Start of Radar  
- - - Trigger at end of Radar  
- - - First 200ms of Channel Closing Tx Time  
- - - 10sec Channel Move Time Limit  
- - - Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



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

Non-occupancy period

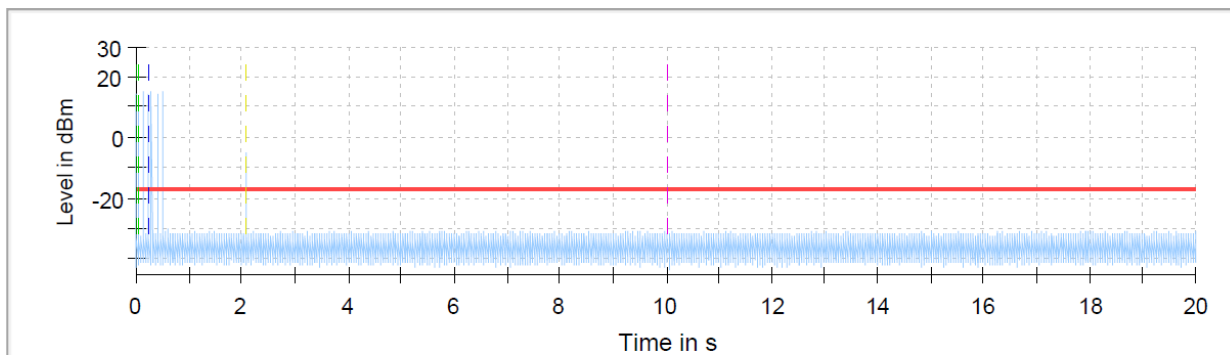


— Non-occupancy period  
— Threshold

**UNII band : UNII 2c**  
**Channel Bandwidth : 40MHz**

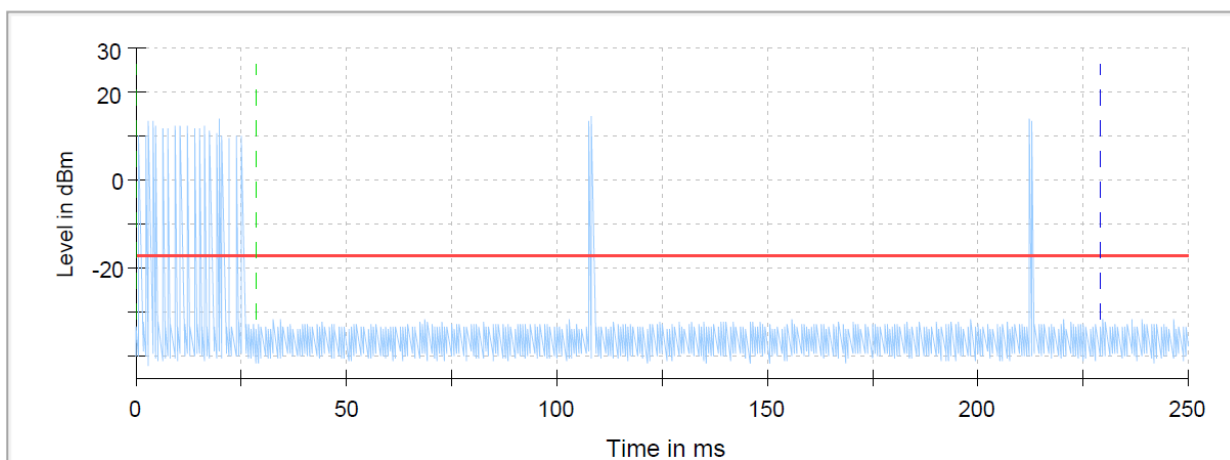
| Operating Frequency (MHz) | Test                              | Measured Value     | Limit                                                                              |
|---------------------------|-----------------------------------|--------------------|------------------------------------------------------------------------------------|
| 5700                      | Channel move Time                 | 2.056 s            | 10 sec                                                                             |
|                           | Channel Closing Transmission Time | 0.704 ms + 1.180ms | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period |
|                           | Non Occupancy Time                | 0                  | Min 30 minutes                                                                     |

Channel Move Time



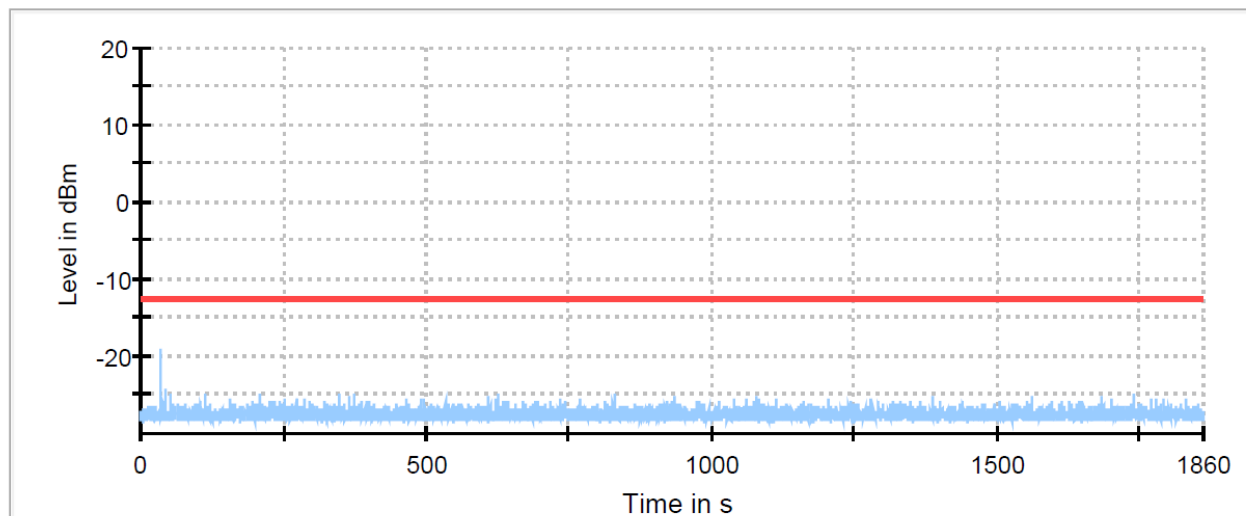
- Channel Move Time
- Threshold
- Start of Radar
- Trigger at end of Radar
- First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



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

Non-occupancy period



— Non-occupancy period      — Threshold

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## 7.5 Spurious Radiated Emissions & Restricted Bands of Operation

**Result** **Pass**

|                       |                                                                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Specification    | FCC part 15 Subpart C Section 15.407 (b) (15.205 & 15.209) / RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; 6.2.4 / RSS Gen Issue 5 Section 8.9 & 8.10 |
| Test Method           | ANSI C 63.10 – 2013                                                                                                                                  |
| Measurement Bandwidth | 100kHz for below 1GHz<br>1MHz for above 1GHz                                                                                                         |
| Measurement Location  | Semi Anechoic Chamber 30MHz - 1 GHz<br>Fully Anechoic Chamber 1 GHz - 40GHz                                                                          |
| Measuring Distance    | 3 m                                                                                                                                                  |
| Detector              | Refer Remark                                                                                                                                         |
| Requirement           | As per the limits mentioned in the below table                                                                                                       |
| Test setup            | Refer TEST METHODOLOGY                                                                                                                               |

### Limit:

**Table 6: Undesirable emission limits**

| Frequency Band | Limit                                                                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.15-5.25 GHz  | e.i.r.p. -27dBm [68.2 dBuV/3m]                                                                                                                                             |
| 5.25-5.35 GHz  | e.i.r.p. -27dBm [68.2 dBuV/3m]                                                                                                                                             |
| 5.47-5.725 GHz | e.i.r.p. -27dBm [68.2 dBuV/3m]                                                                                                                                             |
| 5.725-5.85 GHz | 5.715 GHz to 5.725 GHz - e.i.r.p. -17dBm [78.2 dBuV/3m]<br>5.85 GHz to 5.86 GHz - e.i.r.p. -17dBm [78.2 dBuV/3m]<br>other frequency range - e.i.r.p. -27dBm [68.2 dBuV/3m] |

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**Table 7: Transmitter limits for Radiated emission**

| Frequency (MHz) | Field strength (μV/m) | Field strength (dBμV/m) | Distance of Measurement (m) |
|-----------------|-----------------------|-------------------------|-----------------------------|
| 0.009 – 0.490   | 2400/F(kHz)           | 48.50 – 13.80           | 300*                        |
| 0.490 – 1.705   | 24000/F(kHz)          | 33.80 – 23.00           | 30*                         |
| 1.705 -30       | 30                    | 29.54                   | 30*                         |
| 30-88           | 100                   | 40.0                    | 3                           |
| 88-216          | 150                   | 43.5                    | 3                           |
| 216-960         | 200                   | 46.0                    | 3                           |
| Above 960       | 500                   | 54.0                    | 3                           |

Remark: \* The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dBμV/m at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

**Test Condition:**

**Normal Test Condition:**

Temperature (Norm) = + 25 °C

Voltage = 3.3VDC

Relative humidity: 62 %

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### Test results:

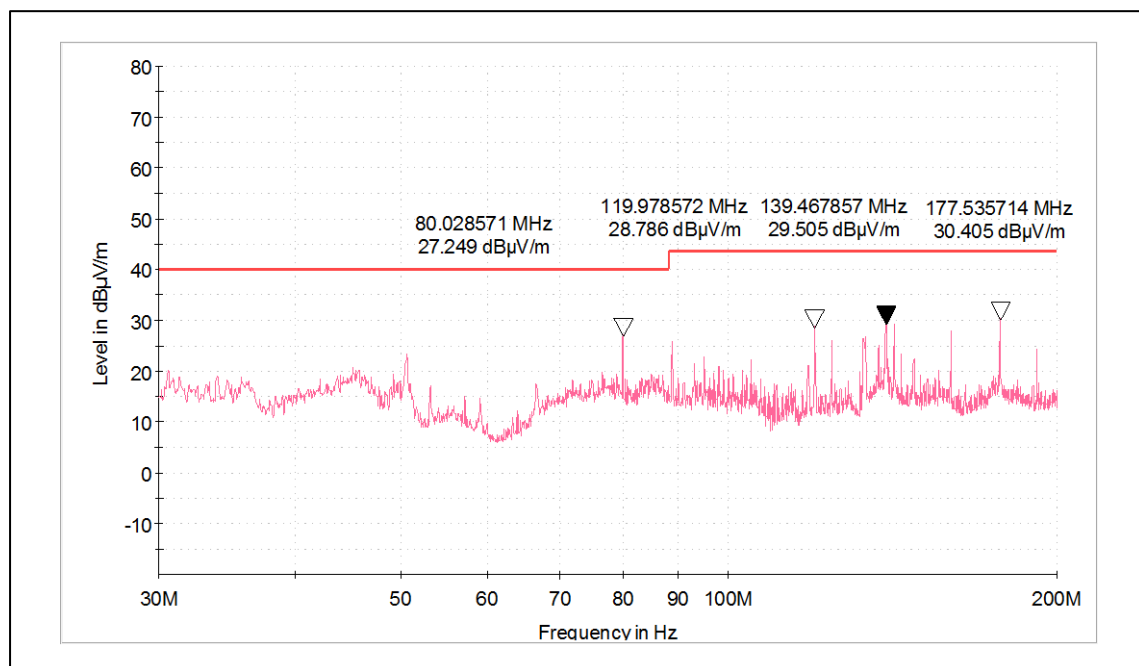
Note: All the losses are included during measurement and final values are mentioned in the test report. Refer TEST METHODOLOGY for more details

### Test results for Frequency range : 9kHz – 30MHz

No Emissions found in the frequency range 9kHz – 30MHz

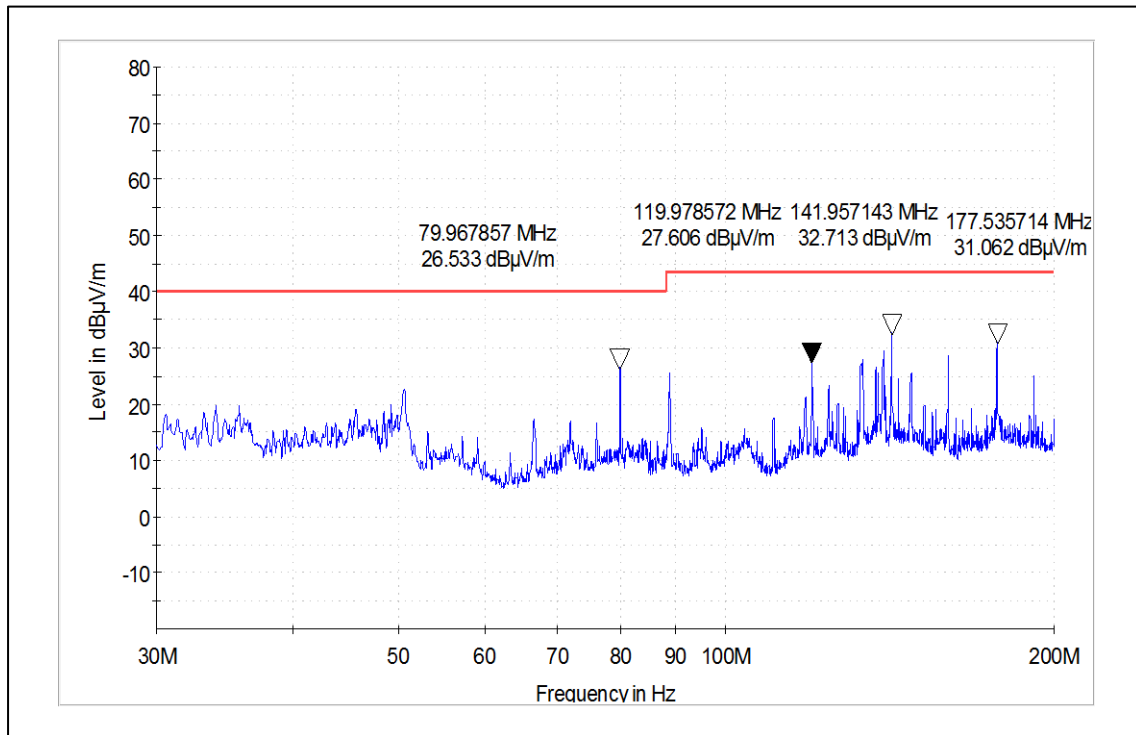
### Test results for frequency range 30MHz – 1GHz

| Antenna Polarization | Measured Frequency (MHz) | Measured value (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) |
|----------------------|--------------------------|-------------------------------|----------------------|-------------|
| Vertical             | 80.02                    | 27.24                         | 40.00                | -12.76      |
|                      | 119.97                   | 28.78                         | 43.50                | -14.72      |
|                      | 139.46                   | 29.50                         | 43.50                | -14.00      |
|                      | 177.53                   | 30.40                         | 43.50                | -13.10      |
|                      | 290.57                   | 27.91                         | 46.00                | -18.09      |
|                      | 341.14                   | 25.70                         | 46.00                | -20.30      |
|                      | 495.08                   | 40.38                         | 46.00                | -5.62       |
|                      | 540.28                   | 29.01                         | 46.00                | -16.99      |
| Horizontal           | 79.96                    | 26.53                         | 40.00                | -13.47      |
|                      | 119.97                   | 27.60                         | 43.50                | -15.90      |
|                      | 141.95                   | 32.71                         | 43.50                | -10.79      |
|                      | 177.53                   | 31.06                         | 43.50                | -12.44      |
|                      | 316.69                   | 31.90                         | 46.00                | -14.10      |
|                      | 356.75                   | 31.95                         | 46.00                | -14.05      |
|                      | 396.02                   | 34.00                         | 46.00                | -12.00      |
|                      | 490.42                   | 30.22                         | 46.00                | -15.78      |



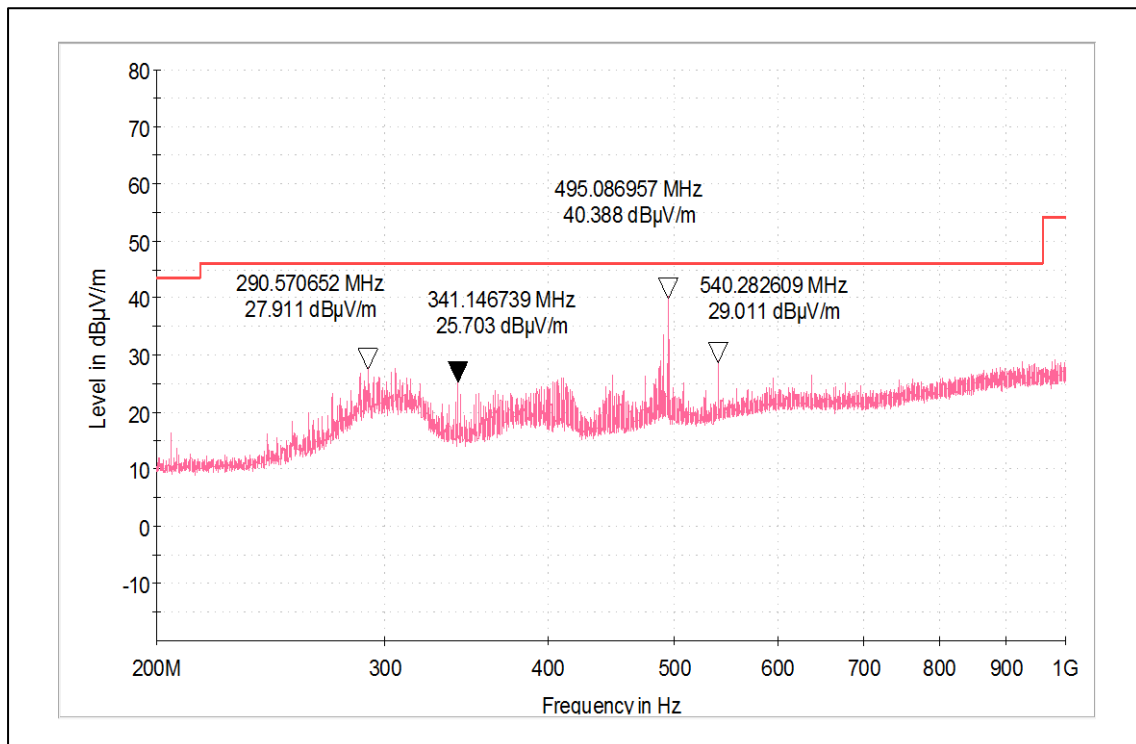
Channel Frequency 30MHz – 200MHz

Polarization Vertical



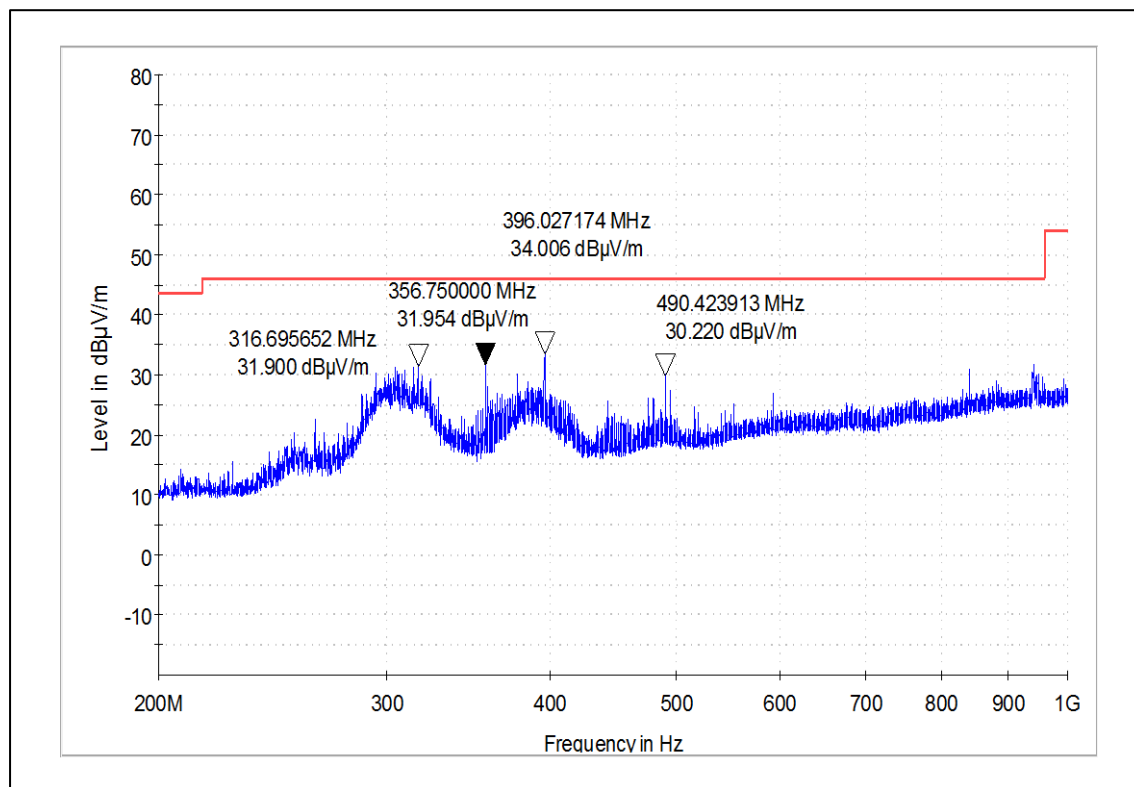
**Channel Frequency 30MHz – 200MHz**

**Polarization Horizontal**



**Channel Frequency 200MHz – 1GHz**

**Polarization Vertical**



Channel Frequency 200MHz – 1GHz

Polarization Horizontal

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**Test results for frequency range – 1GHz to 40 GHz**

**Modulation: 802.11a**  
**Data rate: 6Mbps**

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBµV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5180                    | 5180 (Pk)       | Vertical     | 104.86            | *           | -           |
|                         | 5180 (Av)       |              | 95.65             | *           | -           |
|                         | 5150 (Pk)       |              | 59.54             | 74          | -14.46      |
|                         | 5150 (Av)       |              | 46.47             | 54          | -7.53       |
|                         | 10360 (Pk)      |              | 49.91             | 68.23       | -18.32      |
|                         | 10360 (Av)      |              | 37.96             | 68.23       | -30.27      |
|                         | 15540 (Pk)      |              | 53.06             | 68.23       | -15.17      |
|                         | 15540 (Av)      |              | 40.98             | 68.23       | -27.25      |
|                         | 5180 (Pk)       | Horizontal   | 98.91             | *           | -           |
|                         | 5180 (Av)       |              | 89.65             | *           | -           |
|                         | 5150 (Pk)       |              | 54.11             | 74          | -19.89      |
|                         | 5150 (Av)       |              | 41.46             | 54          | -12.54      |
|                         | 10360 (Pk)      |              | 49.30             | 68.23       | -18.93      |
|                         | 10360 (Av)      |              | 37.82             | 68.23       | -30.41      |
|                         | 15540 (Pk)      |              | 52.89             | 68.23       | -15.34      |
|                         | 15540 (Av)      |              | 40.82             | 68.23       | -27.41      |
| 5240                    | 5240 (Pk)       | Vertical     | 106.64            | *           | -           |
|                         | 5240 (Av)       |              | 98.85             | *           | -           |
|                         | 5350 (Pk)       |              | 50.67             | 74          | -23.33      |
|                         | 5350 (Av)       |              | 37.88             | 54          | -16.12      |
|                         | 10480 (Pk)      |              | 50.75             | 68.23       | -17.48      |
|                         | 10480 (Av)      |              | 38.04             | 68.23       | -30.19      |
|                         | 15720 (Pk)      |              | 52.98             | 68.23       | -15.25      |
|                         | 15720 (Av)      |              | 40.38             | 68.23       | -27.85      |
|                         | 5240 (Pk)       | Horizontal   | 98.27             | *           | -           |
|                         | 5240 (Av)       |              | 88.68             | *           | -           |
|                         | 5350 (Pk)       |              | 45.18             | 74          | -28.82      |
|                         | 5350 (Av)       |              | 33.46             | 54          | -20.54      |
|                         | 10480 (Pk)      |              | 49.90             | 68.23       | -18.33      |
|                         | 10480 (Av)      |              | 38.13             | 68.23       | -30.10      |
|                         | 15720 (Pk)      |              | 52.99             | 68.23       | -15.24      |
|                         | 15720 (Av)      |              | 40.76             | 68.23       | -27.47      |

**Note:**

\* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5260 | 5260 (Pk)  | Vertical   | 98.32  | *     | -      |
|      | 5260 (Av)  |            | 88.88  | *     | -      |
|      | 5350 (Pk)  |            | 44.43  | 74    | -29.57 |
|      | 5350 (Av)  |            | 33.42  | 54    | -20.58 |
|      | 10520 (Pk) |            | 49.86  | 68.23 | -18.37 |
|      | 10520 (Av) |            | 37.77  | 68.23 | -30.46 |
|      | 15780 (Pk) |            | 51.56  | 68.23 | -16.67 |
|      | 15780 (Av) |            | 39.25  | 68.23 | -28.98 |
|      | 5260 (Pk)  | Horizontal | 98.68  | *     | -      |
|      | 5260 (Av)  |            | 88.96  | *     | -      |
|      | 5350 (Pk)  |            | 45.52  | 74    | -28.48 |
|      | 5350 (Av)  |            | 33.47  | 54    | -20.53 |
|      | 10520 (Pk) |            | 50.13  | 68.23 | -18.10 |
|      | 10520 (Av) |            | 37.71  | 68.23 | -30.52 |
|      | 15780 (Pk) |            | 53.02  | 68.23 | -15.21 |
|      | 15780 (Av) |            | 39.23  | 68.23 | -29.00 |
| 5320 | 5320 (Pk)  | Vertical   | 106.42 | *     | -      |
|      | 5320 (Av)  |            | 96.99  | *     | -      |
|      | 5350 (Pk)  |            | 60.27  | 74    | -13.73 |
|      | 5350 (Av)  |            | 46.66  | 54    | -7.34  |
|      | 10640 (Pk) |            | 49.89  | 68.23 | -18.34 |
|      | 10640 (Av) |            | 37.75  | 68.23 | -30.48 |
|      | 15960 (Pk) |            | 51.27  | 68.23 | -16.96 |
|      | 15960 (Av) |            | 39.18  | 68.23 | -29.05 |
|      | 5320 (Pk)  | Horizontal | 97.74  | *     | -      |
|      | 5320 (Av)  |            | 88.30  | *     | -      |
|      | 5350 (Pk)  |            | 51.11  | 74    | -22.89 |
|      | 5350 (Av)  |            | 37.38  | 54    | -16.62 |
|      | 10640 (Pk) |            | 50.33  | 68.23 | -17.90 |
|      | 10640 (Av) |            | 37.71  | 68.23 | -30.52 |
|      | 15960 (Pk) |            | 51.50  | 68.23 | -16.73 |
|      | 15960 (Av) |            | 39.25  | 68.23 | -28.98 |
| 5500 | 5500 (Pk)  | Vertical   | 107.35 | *     | -      |
|      | 5500 (Av)  |            | 97.27  | *     | -      |
|      | 5460 (Pk)  |            | 63.44  | 74    | -10.56 |
|      | 5460 (Av)  |            | 51.55  | 54    | -2.45  |
|      | 11000 (Pk) |            | 49.21  | 68.23 | -19.02 |
|      | 11000 (Av) |            | 37.36  | 68.23 | -30.87 |
|      | 16500 (Pk) |            | 52.63  | 68.23 | -15.60 |
|      | 16500 (Av) |            | 40.30  | 68.23 | -27.93 |
|      | 5500 (Pk)  | Horizontal | 97.17  | *     | -      |
|      | 5500 (Av)  |            | 87.57  | *     | -      |
|      | 5460 (Pk)  |            | 54.06  | 74    | -19.94 |
|      | 5460 (Av)  |            | 41.81  | 54    | -12.19 |
|      | 11000 (Pk) |            | 49.94  | 68.23 | -18.29 |
|      | 11000 (Av) |            | 37.26  | 68.23 | -30.97 |
|      | 16500 (Pk) |            | 52.39  | 68.23 | -15.84 |
|      | 16500 (Av) |            | 40.31  | 68.23 | -27.92 |

**Note:**

\* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5700 | 5700 (Pk)  | Vertical   | 106.56             | *     | -      |
|      | 5700 (Av)  |            | 96.81              | *     | -      |
|      | 5460 (Pk)  |            | 43.43              | 74    | -30.57 |
|      | 5460 (Av)  |            | 31.50              | 54    | -22.50 |
|      | 11400 (Pk) |            | 50.94              | 68.23 | -17.29 |
|      | 11400 (Av) |            | 38.79              | 68.23 | -29.44 |
|      | 17100 (Pk) |            | 56.25              | 68.23 | -11.98 |
|      | 17100 (Av) |            | 42.49              | 68.23 | -25.74 |
|      | 5700 (Pk)  | Horizontal | 96.39              | *     | -      |
|      | 5700 (Av)  |            | 86.64              | *     | -      |
|      | 5460 (Pk)  |            | 42.63              | 74    | -31.37 |
|      | 5460 (Av)  |            | 29.28              | 54    | -24.72 |
|      | 11400 (Pk) |            | 49.99              | 68.23 | -18.24 |
|      | 11400 (Av) |            | 37.76              | 68.23 | -30.47 |
|      | 17100 (Pk) |            | 54.84              | 68.23 | -13.39 |
|      | 17100 (Av) |            | 42.56              | 68.23 | -25.67 |
| 5720 | 5720 (Pk)  | Vertical   | 106.01             | *     | -      |
|      | 5720 (Av)  |            | 96.17              | *     | -      |
|      | 5460 (Pk)  |            | 47.74              | 74    | -26.26 |
|      | 5460 (Av)  |            | 35.81              | 54    | -18.19 |
|      | 11440 (Pk) |            | 50.67              | 68.23 | -17.56 |
|      | 11440 (Av) |            | 39.62              | 68.23 | -28.61 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
|      | 5720 (Pk)  | Horizontal | 85.40              | *     | -      |
|      | 5720 (Av)  |            | 95.20              | *     | -      |
|      | 5460 (Pk)  |            | 47.43              | 74    | -26.57 |
|      | 5460 (Av)  |            | 34.27              | 54    | -19.73 |
|      | 11440 (Pk) |            | 50.16              | 68.23 | -18.07 |
|      | 11440 (Av) |            | 38.05              | 68.23 | -30.18 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
| 5745 | 5715(Pk)   | Vertical   | 50.43              | 78.2  | -27.77 |
|      | 5725(Pk)   |            | 54.81              | 78.2  | -23.39 |
|      | 5745 (Pk)  |            | 103.55             | *     | -      |
|      | 5745 (Av)  |            | 94.01              | *     | -      |
|      | 11490 (Pk) |            | 54.96              | 68.23 | -13.27 |
|      | 11490 (Av) |            | 41.33              | 68.23 | -26.90 |
|      | 17235 (Pk) |            | 55.08              | 68.23 | -13.15 |
|      | 17235 (Av) |            | 42.62              | 68.23 | -25.61 |
|      | 5715(Pk)   | Horizontal | 43.39              | 78.2  | -34.81 |
|      | 5725(Pk)   |            | 46.12              | 78.2  | -32.08 |
|      | 5745 (Pk)  |            | 92.76              | *     | -      |
|      | 5745 (Av)  |            | 83.07              | *     | -      |
|      | 11490 (Pk) |            | 50.50              | 68.23 | -17.73 |
|      | 11490 (Av) |            | 38.21              | 68.23 | -30.02 |
|      | 17235 (Pk) |            | 54.96              | 68.23 | -13.27 |
|      | 17235 (Av) |            | 42.61              | 68.23 | -25.62 |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5825 | 5825 (Pk)  | Vertical   | 103.67 | *     | -      |
|      | 5825 (Av)  |            | 94.16  | *     | -      |
|      | 5850 (Pk)  |            | 51.03  | 78.2  | -27.17 |
|      | 5860 (Pk)  |            | 48.76  | 78.2  | -29.44 |
|      | 11650 (Pk) |            | 56.24  | 68.23 | -11.99 |
|      | 11650 (Av) |            | 42.91  | 68.23 | -25.32 |
|      | 17475 (Pk) |            | 54.98  | 68.23 | -13.25 |
|      | 17475 (Av) |            | 42.78  | 68.23 | -25.45 |
|      | 5825 (Pk)  | Horizontal | 94.25  | *     | -      |
|      | 5825 (Av)  |            | 84.59  | *     | -      |
|      | 5850 (Pk)  |            | 45.43  | 78.2  | -32.77 |
|      | 5860 (Pk)  |            | 42.80  | 78.2  | -35.40 |
|      | 11650 (Pk) |            | 51.13  | 68.23 | -17.10 |
|      | 11650 (Av) |            | 38.41  | 68.23 | -29.82 |
|      | 17475 (Pk) |            | 55.31  | 68.23 | -12.92 |
|      | 17475 (Av) |            | 42.83  | 68.23 | -25.40 |

**Note:**

\* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

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**Modulation:** 802.11a  
**Data rate:** 54Mbps

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBμV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5180                    | 5180 (Pk)       | Vertical     | 105.18            | *           | -           |
|                         | 5180 (Av)       |              | 92.11             | *           | -           |
|                         | 5150 (Pk)       |              | 63.98             | 74          | -10.02      |
|                         | 5150 (Av)       |              | 51.18             | 54          | -2.82       |
|                         | 10360 (Pk)      |              | 49.99             | 68.23       | -18.24      |
|                         | 10360 (Av)      |              | 37.50             | 68.23       | -30.73      |
|                         | 15540 (Pk)      |              | 51.93             | 68.23       | -16.30      |
|                         | 15540 (Av)      |              | 40.19             | 68.23       | -28.04      |
|                         | 5180 (Pk)       | Horizontal   | 96.92             | *           | -           |
|                         | 5180 (Av)       |              | 83.26             | *           | -           |
|                         | 5150 (Pk)       |              | 54.85             | 74          | -19.15      |
|                         | 5150 (Av)       |              | 41.32             | 54          | -12.68      |
|                         | 10360 (Pk)      |              | 49.43             | 68.23       | -18.80      |
|                         | 10360 (Av)      |              | 37.46             | 54          | -16.54      |
|                         | 15540 (Pk)      |              | 52.00             | 68.23       | -16.23      |
|                         | 15540 (Av)      |              | 40.18             | 54          | -13.82      |
| 5240                    | 5240 (Pk)       | Vertical     | 97.37             | *           | -           |
|                         | 5240 (Av)       |              | 83.88             | *           | -           |
|                         | 5350 (Pk)       |              | 45.10             | 74          | -28.90      |
|                         | 5350 (Av)       |              | 33.24             | 54          | -20.76      |
|                         | 10480 (Pk)      |              | 49.87             | 68.23       | -18.36      |
|                         | 10480 (Av)      |              | 37.80             | 68.23       | -30.43      |
|                         | 15720 (Pk)      |              | 52.00             | 68.23       | -16.23      |
|                         | 15720 (Av)      |              | 39.57             | 68.23       | -28.66      |
|                         | 5240 (Pk)       | Horizontal   | 97.37             | *           | -           |
|                         | 5240 (Av)       |              | 83.85             | *           | -           |
|                         | 5350 (Pk)       |              | 45.84             | 74          | -28.16      |
|                         | 5350 (Av)       |              | 33.29             | 54          | -20.71      |
|                         | 10480 (Pk)      |              | 50.17             | 68.23       | -18.06      |
|                         | 10480 (Av)      |              | 37.84             | 68.23       | -30.39      |
|                         | 15720 (Pk)      |              | 51.51             | 68.23       | -16.72      |
|                         | 15720 (Av)      |              | 39.61             | 68.23       | -28.62      |
| 5260                    | 5260 (Pk)       | Vertical     | 104.70            | *           | -           |
|                         | 5260 (Av)       |              | 91.47             | *           | -           |
|                         | 5350 (Pk)       |              | 49.76             | 74          | -24.24      |
|                         | 5350 (Av)       |              | 37.37             | 54          | -16.63      |
|                         | 10520 (Pk)      |              | 50.48             | 68.23       | -17.75      |
|                         | 10520 (Av)      |              | 37.54             | 68.23       | -30.69      |
|                         | 15780 (Pk)      |              | 51.58             | 68.23       | -16.65      |
|                         | 15780 (Av)      |              | 38.99             | 68.23       | -29.24      |
|                         | 5260 (Pk)       | Horizontal   | 98.13             | *           | -           |
|                         | 5260 (Av)       |              | 84.57             | *           | -           |
|                         | 5350 (Pk)       |              | 45.65             | 74          | -28.35      |
|                         | 5350 (Av)       |              | 33.32             | 54          | -20.68      |
|                         | 10520 (Pk)      |              | 49.82             | 68.23       | -18.41      |
|                         | 10520 (Av)      |              | 37.60             | 68.23       | -30.63      |
|                         | 15780 (Pk)      |              | 50.79             | 68.23       | -17.44      |
|                         | 15780 (Av)      |              | 39.07             | 68.23       | -29.16      |

|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5320 | 5320 (Pk)  | Vertical   | 106.25 | *     | -      |
|      | 5320 (Av)  |            | 92.79  | *     | -      |
|      | 5350 (Pk)  |            | 58.93  | 74    | -15.07 |
|      | 5350 (Av)  |            | 43.46  | 54    | -10.54 |
|      | 10640 (Pk) |            | 49.87  | 68.23 | -18.36 |
|      | 10640 (Av) |            | 37.66  | 68.23 | -30.57 |
|      | 15960 (Pk) |            | 51.01  | 68.23 | -17.22 |
|      | 15960 (Av) |            | 39.07  | 68.23 | -29.16 |
|      | 5320 (Pk)  | Horizontal | 97.02  | *     | -      |
|      | 5320 (Av)  |            | 83.61  | *     | -      |
|      | 5350 (Pk)  |            | 51.48  | 74    | -22.52 |
|      | 5350 (Av)  |            | 35.04  | 54    | -18.96 |
|      | 10640 (Pk) |            | 49.80  | 68.23 | -18.43 |
|      | 10640 (Av) |            | 37.60  | 68.23 | -30.63 |
|      | 15960 (Pk) |            | 51.13  | 68.23 | -17.10 |
|      | 15960 (Av) |            | 39.09  | 68.23 | -29.14 |
| 5500 | 5500 (Pk)  | Vertical   | 106.07 | *     | -      |
|      | 5500 (Av)  |            | 92.74  | *     | -      |
|      | 5460 (Pk)  |            | 64.28  | 74    | -9.72  |
|      | 5460 (Av)  |            | 51.51  | 54    | -2.49  |
|      | 11000 (Pk) |            | 49.14  | 68.23 | -19.09 |
|      | 11000 (Av) |            | 37.33  | 68.23 | -30.90 |
|      | 16500 (Pk) |            | 52.79  | 68.23 | -15.44 |
|      | 16500 (Av) |            | 40.31  | 68.23 | -27.92 |
|      | 5500 (Pk)  | Horizontal | 96.02  | *     | -      |
|      | 5500 (Av)  |            | 81.92  | *     | -      |
|      | 5460 (Pk)  |            | 53.30  | 74    | -20.70 |
|      | 5460 (Av)  |            | 41.72  | 54    | -12.28 |
|      | 11000 (Pk) |            | 49.01  | 68.23 | -19.22 |
|      | 11000 (Av) |            | 37.23  | 68.23 | -31.00 |
|      | 16500 (Pk) |            | 51.81  | 68.23 | -16.42 |
|      | 16500 (Av) |            | 40.31  | 68.23 | -27.92 |
| 5700 | 5700 (Pk)  | Vertical   | 105.59 | *     | -      |
|      | 5700 (Av)  |            | 92.04  | *     | -      |
|      | 5460 (Pk)  |            | 44.47  | 74    | -29.53 |
|      | 5460 (Av)  |            | 30.65  | 54    | -23.35 |
|      | 11400 (Pk) |            | 50.69  | 68.23 | -17.54 |
|      | 11400 (Av) |            | 38.59  | 68.23 | -29.64 |
|      | 17100 (Pk) |            | 54.90  | 68.23 | -13.33 |
|      | 17100 (Av) |            | 42.61  | 68.23 | -25.62 |
|      | 5700 (Pk)  | Horizontal | 98.08  | *     | -      |
|      | 5700 (Av)  |            | 84.37  | *     | -      |
|      | 5460 (Pk)  |            | 41.83  | 74    | -32.17 |
|      | 5460 (Av)  |            | 28.98  | 54    | -25.02 |
|      | 11400 (Pk) |            | 49.85  | 68.23 | -18.38 |
|      | 11400 (Av) |            | 37.59  | 68.23 | -30.64 |
|      | 17100 (Pk) |            | 55.21  | 68.23 | -13.02 |
|      | 17100 (Av) |            | 42.54  | 68.23 | -25.69 |

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|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5720 | 5720 (Pk)  | Vertical   | 105.35             | *     | -      |
|      | 5720 (Av)  |            | 95.53              | *     | -      |
|      | 5460 (Pk)  |            | 48.91              | 74    | -25.09 |
|      | 5460 (Av)  |            | 35.92              | 54    | -18.08 |
|      | 11440 (Pk) |            | 51.66              | 68.23 | -16.57 |
|      | 11440 (Av) |            | 39.10              | 68.23 | -29.13 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
|      | 5720 (Pk)  | Horizontal | 94.04              | *     | -      |
|      | 5720 (Av)  |            | 84.51              | *     | -      |
|      | 5460 (Pk)  |            | 47.07              | 74    | -26.93 |
|      | 5460 (Av)  |            | 34.26              | 54    | -19.74 |
|      | 11440 (Pk) |            | 49.40              | 68.23 | -18.83 |
|      | 11440 (Av) |            | 37.99              | 68.23 | -30.24 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
| 5745 | 5715(Pk)   | Vertical   | 54.85              | 78.2  | -23.35 |
|      | 5725(Pk)   |            | 68.72              | 78.2  | -9.48  |
|      | 5745 (Pk)  |            | 103.14             | *     | -      |
|      | 5745 (Av)  |            | 89.76              | *     | -      |
|      | 11490 (Pk) |            | 53.78              | 68.23 | -14.45 |
|      | 11490 (Av) |            | 39.42              | 68.23 | -28.81 |
|      | 17235 (Pk) |            | 54.74              | 68.23 | -13.49 |
|      | 17235 (Av) |            | 42.70              | 68.23 | -25.53 |
|      | 5715(Pk)   | Horizontal | 48.20              | 78.2  | -30.00 |
|      | 5725(Pk)   |            | 59.86              | 78.2  | -18.34 |
|      | 5745 (Pk)  |            | 96.53              | *     | -      |
|      | 5745 (Av)  |            | 83.07              | *     | -      |
|      | 11490 (Pk) |            | 50.14              | 68.23 | -18.09 |
|      | 11490 (Av) |            | 38.21              | 68.23 | -30.02 |
|      | 17235 (Pk) |            | 54.73              | 68.23 | -13.50 |
|      | 17235 (Av) |            | 42.71              | 68.23 | -25.52 |
| 5825 | 5825 (Pk)  | Vertical   | 104.45             | *     | -      |
|      | 5825 (Av)  |            | 91.14              | *     | -      |
|      | 5850 (Pk)  |            | 56.88              | 78.2  | -21.32 |
|      | 5860 (Pk)  |            | 50.93              | 78.2  | -27.27 |
|      | 11650 (Pk) |            | 55.05              | 68.23 | -13.18 |
|      | 11650 (Av) |            | 40.43              | 68.23 | -27.80 |
|      | 17475 (Pk) |            | 54.75              | 68.23 | -13.48 |
|      | 17475 (Av) |            | 42.85              | 68.23 | -25.38 |
|      | 5825 (Pk)  | Horizontal | 97.03              | *     | -      |
|      | 5825 (Av)  |            | 82.71              | *     | -      |
|      | 5850 (Pk)  |            | 49.46              | 78.2  | -28.74 |
|      | 5860 (Pk)  |            | 44.74              | 78.2  | -33.46 |
|      | 11650 (Pk) |            | 51.14              | 68.23 | -17.09 |
|      | 11650 (Av) |            | 38.27              | 68.23 | -29.96 |
|      | 17475 (Pk) |            | 55.84              | 68.23 | -12.39 |
|      | 17475 (Av) |            | 42.82              | 68.23 | -25.41 |

**Note:**

\* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

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**Modulation: 802.11n \_ HT 20MHz**

**Data rate: MCS0**

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBµV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5180                    | 5180 (Pk)       | Vertical     | 105.72            | *           | -           |
|                         | 5180 (Av)       |              | 95.37             | *           | -           |
|                         | 5150 (Pk)       |              | 62.10             | 74          | -11.90      |
|                         | 5150 (Av)       |              | 51.00             | 54          | -3.00       |
|                         | 10360 (Pk)      |              | 49.73             | 68.23       | -18.50      |
|                         | 10360 (Av)      |              | 38.40             | 68.23       | -29.83      |
|                         | 15540 (Pk)      |              | 52.43             | 68.23       | -15.80      |
|                         | 15540 (Av)      |              | 40.35             | 68.23       | -27.88      |
|                         | 5180 (Pk)       | Horizontal   | 94.92             | *           | -           |
|                         | 5180 (Av)       |              | 85.32             | *           | -           |
|                         | 5150 (Pk)       |              | 52.88             | 74          | -21.12      |
|                         | 5150 (Av)       |              | 41.22             | 54          | -12.78      |
|                         | 10360 (Pk)      |              | 50.22             | 68.23       | -18.01      |
|                         | 10360 (Av)      |              | 37.59             | 68.23       | -30.64      |
|                         | 15540 (Pk)      |              | 53.44             | 68.23       | -14.79      |
|                         | 15540 (Av)      |              | 40.30             | 68.23       | -27.93      |
| 5240                    | 5240 (Pk)       | Vertical     | 106.44            | *           | -           |
|                         | 5240 (Av)       |              | 96.41             | *           | -           |
|                         | 5350 (Pk)       |              | 54.74             | 74          | -19.26      |
|                         | 5350 (Av)       |              | 42.02             | 54          | -11.98      |
|                         | 10480 (Pk)      |              | 50.80             | 68.23       | -17.43      |
|                         | 10480 (Av)      |              | 37.96             | 68.23       | -30.27      |
|                         | 15720 (Pk)      |              | 53.10             | 68.23       | -15.13      |
|                         | 15720 (Av)      |              | 39.70             | 68.23       | -28.53      |
|                         | 5240 (Pk)       | Horizontal   | 95.00             | *           | -           |
|                         | 5240 (Av)       |              | 85.37             | *           | -           |
|                         | 5350 (Pk)       |              | 43.08             | 74          | -30.92      |
|                         | 5350 (Av)       |              | 30.84             | 54          | -23.16      |
|                         | 10480 (Pk)      |              | 50.33             | 68.23       | -17.90      |
|                         | 10480 (Av)      |              | 37.98             | 68.23       | -30.25      |
|                         | 15720 (Pk)      |              | 52.08             | 68.23       | -16.15      |
|                         | 15720 (Av)      |              | 39.68             | 68.23       | -28.55      |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5260 | 5260 (Pk)  | Vertical   | 106.61 | *     | -      |
|      | 5260 (Av)  |            | 96.78  | *     | -      |
|      | 5350 (Pk)  |            | 54.00  | 74    | -20.00 |
|      | 5350 (Av)  |            | 42.09  | 54    | -11.91 |
|      | 10520 (Pk) |            | 49.88  | 68.23 | -18.35 |
|      | 10520 (Av) |            | 37.79  | 68.23 | -30.44 |
|      | 15780 (Pk) |            | 51.07  | 68.23 | -17.16 |
|      | 15780 (Av) |            | 39.14  | 68.23 | -29.09 |
|      | 5260 (Pk)  | Horizontal | 95.37  | *     | -      |
|      | 5260 (Av)  |            | 85.35  | *     | -      |
|      | 5350 (Pk)  |            | 43.32  | 74    | -30.68 |
|      | 5350 (Av)  |            | 30.96  | 54    | -23.04 |
|      | 10520 (Pk) |            | 49.93  | 68.23 | -18.30 |
|      | 10520 (Av) |            | 37.76  | 68.23 | -30.47 |
|      | 15780 (Pk) |            | 51.29  | 68.23 | -16.94 |
|      | 15780 (Av) |            | 39.14  | 68.23 | -29.09 |
| 5320 | 5320 (Pk)  | Vertical   | 106.45 | *     | -      |
|      | 5320 (Av)  |            | 97.04  | *     | -      |
|      | 5350 (Pk)  |            | 57.87  | 74    | -16.13 |
|      | 5350 (Av)  |            | 44.58  | 54    | -9.42  |
|      | 10640 (Pk) |            | 50.11  | 68.23 | -18.12 |
|      | 10640 (Av) |            | 37.74  | 68.23 | -30.49 |
|      | 15960 (Pk) |            | 51.16  | 68.23 | -17.07 |
|      | 15960 (Av) |            | 39.07  | 68.23 | -29.16 |
|      | 5320 (Pk)  | Horizontal | 94.72  | *     | -      |
|      | 5320 (Av)  |            | 84.72  | *     | -      |
|      | 5350 (Pk)  |            | 46.36  | 74    | -27.64 |
|      | 5350 (Av)  |            | 33.93  | 54    | -20.07 |
|      | 10640 (Pk) |            | 49.33  | 68.23 | -18.90 |
|      | 10640 (Av) |            | 37.68  | 68.23 | -30.55 |
|      | 15960 (Pk) |            | 51.14  | 68.23 | -17.09 |
|      | 15960 (Av) |            | 39.04  | 68.23 | -29.19 |
| 5500 | 5500 (Pk)  | Vertical   | 106.50 | *     | -      |
|      | 5500 (Av)  |            | 96.58  | *     | -      |
|      | 5460 (Pk)  |            | 63.54  | 74    | -10.46 |
|      | 5460 (Av)  |            | 51.60  | 54    | -2.40  |
|      | 11000 (Pk) |            | 50.53  | 68.23 | -17.70 |
|      | 11000 (Av) |            | 37.43  | 68.23 | -30.80 |
|      | 16500 (Pk) |            | 52.33  | 68.23 | -15.90 |
|      | 16500 (Av) |            | 40.34  | 68.23 | -27.89 |
|      | 5500 (Pk)  | Horizontal | 94.61  | *     | -      |
|      | 5500 (Av)  |            | 85.05  | *     | -      |
|      | 5460 (Pk)  |            | 54.00  | 74    | -20.00 |
|      | 5460 (Av)  |            | 41.78  | 54    | -12.22 |
|      | 11000 (Pk) |            | 49.53  | 68.23 | -18.70 |
|      | 11000 (Av) |            | 37.30  | 68.23 | -30.93 |
|      | 16500 (Pk) |            | 52.78  | 68.23 | -15.45 |
|      | 16500 (Av) |            | 40.32  | 68.23 | -27.91 |

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|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5720 | 5720 (Pk)  | Vertical   | 104.13             | *     | -      |
|      | 5720 (Av)  |            | 94.27              | *     | -      |
|      | 5460 (Pk)  |            | 49.22              | 74    | -24.78 |
|      | 5460 (Av)  |            | 35.03              | 54    | -18.97 |
|      | 11440 (Pk) |            | 50.47              | 68.23 | -17.76 |
|      | 11440 (Av) |            | 38.78              | 68.23 | -29.45 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
|      | 5720 (Pk)  | Horizontal | 93.90              | *     | -      |
|      | 5720 (Av)  |            | 84.22              | *     | -      |
|      | 5460 (Pk)  |            | 48.10              | 74    | -25.90 |
|      | 5460 (Av)  |            | 34.27              | 54    | -19.73 |
|      | 11440 (Pk) |            | 50.95              | 68.23 | -17.28 |
|      | 11440 (Av) |            | 38.03              | 68.23 | -30.20 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
| 5700 | 5700 (Pk)  | Vertical   | 105.47             | *     | -      |
|      | 5700 (Av)  |            | 95.75              | *     | -      |
|      | 5460 (Pk)  |            | 45.89              | 74    | -28.11 |
|      | 5460 (Av)  |            | 32.26              | 54    | -21.74 |
|      | 11400 (Pk) |            | 50.66              | 68.23 | -17.57 |
|      | 11400 (Av) |            | 38.27              | 68.23 | -29.96 |
|      | 17100 (Pk) |            | 55.22              | 68.23 | -13.01 |
|      | 17100 (Av) |            | 42.67              | 68.23 | -25.56 |
|      | 5700 (Pk)  | Horizontal | 94.93              | *     | -      |
|      | 5700 (Av)  |            | 85.26              | *     | -      |
|      | 5460 (Pk)  |            | 41.66              | 74    | -32.34 |
|      | 5460 (Av)  |            | 28.97              | 54    | -25.03 |
|      | 11400 (Pk) |            | 50.19              | 68.23 | -18.04 |
|      | 11400 (Av) |            | 37.44              | 68.23 | -30.79 |
|      | 17100 (Pk) |            | 54.67              | 68.23 | -13.56 |
|      | 17100 (Av) |            | 42.68              | 68.23 | -25.55 |
| 5745 | 5715(Pk)   | Vertical   | 52.15              | 78.2  | -26.05 |
|      | 5725(Pk)   |            | 55.72              | 78.2  | -22.48 |
|      | 5745 (Pk)  |            | 104.57             | *     | -      |
|      | 5745 (Av)  |            | 95.03              | *     | -      |
|      | 11490 (Pk) |            | 52.50              | 68.23 | -15.73 |
|      | 11490 (Av) |            | 40.20              | 68.23 | -28.03 |
|      | 17235 (Pk) |            | 55.16              | 68.23 | -13.07 |
|      | 17235 (Av) |            | 42.71              | 68.23 | -25.52 |
|      | 5715(Pk)   | Horizontal | 45.07              | 78.2  | -33.13 |
|      | 5725(Pk)   |            | 45.94              | 78.2  | -32.26 |
|      | 5745 (Pk)  |            | 95.32              | *     | -      |
|      | 5745 (Av)  |            | 85.72              | *     | -      |
|      | 11490 (Pk) |            | 50.75              | 68.23 | -17.48 |
|      | 11490 (Av) |            | 38.03              | 68.23 | -30.20 |
|      | 17235 (Pk) |            | 55.14              | 68.23 | -13.09 |
|      | 17235 (Av) |            | 42.67              | 68.23 | -25.56 |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5825 | 5825 (Pk)  | Vertical   | 105.08 | *     | -      |
|      | 5825 (Av)  |            | 94.91  | *     | -      |
|      | 5850 (Pk)  |            | 51.24  | 78.2  | -26.96 |
|      | 5860 (Pk)  |            | 49.52  | 78.2  | -28.68 |
|      | 11650 (Pk) |            | 55.29  | 68.23 | -12.94 |
|      | 11650 (Av) |            | 41.88  | 68.23 | -26.35 |
|      | 17475 (Pk) |            | 54.87  | 68.23 | -13.36 |
|      | 17475 (Av) |            | 42.78  | 68.23 | -25.45 |
|      | 5825 (Pk)  | Horizontal | 95.71  | *     | -      |
|      | 5825 (Av)  |            | 85.74  | *     | -      |
|      | 5850 (Pk)  |            | 46.31  | 78.2  | -31.89 |
|      | 5860 (Pk)  |            | 44.00  | 78.2  | -34.20 |
|      | 11650 (Pk) |            | 50.05  | 68.23 | -18.18 |
|      | 11650 (Av) |            | 38.09  | 68.23 | -30.14 |
|      | 17475 (Pk) |            | 55.59  | 68.23 | -12.64 |
|      | 17475 (Av) |            | 42.80  | 68.23 | -25.43 |

**Note:**

\* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

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**Modulation:** 802.11n \_ HT 20MHz

**Data rate:** MCS7

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBμV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5180                    | 5180 (Pk)       | Vertical     | 107.14            | *           | -           |
|                         | 5180 (Av)       |              | 92.66             | *           | -           |
|                         | 5150 (Pk)       |              | 63.45             | 74          | -10.55      |
|                         | 5150 (Av)       |              | 51.08             | 54          | -2.92       |
|                         | 10360 (Pk)      |              | 49.01             | 68.23       | -19.22      |
|                         | 10360 (Av)      |              | 36.76             | 68.23       | -31.47      |
|                         | 15540 (Pk)      |              | 53.44             | 68.23       | -14.79      |
|                         | 15540 (Av)      |              | 41.20             | 68.23       | -27.03      |
|                         | 5180 (Pk)       | Horizontal   | 97.07             | *           | -           |
|                         | 5180 (Av)       |              | 82.34             | *           | -           |
|                         | 5150 (Pk)       |              | 53.67             | 74          | -20.33      |
|                         | 5150 (Av)       |              | 41.31             | 54          | -12.69      |
|                         | 10360 (Pk)      |              | 48.54             | 68.23       | -19.69      |
|                         | 10360 (Av)      |              | 36.51             | 68.23       | -31.72      |
|                         | 15540 (Pk)      |              | 52.44             | 68.23       | -15.79      |
|                         | 15540 (Av)      |              | 41.05             | 68.23       | -27.18      |
| 5240                    | 5240 (Pk)       | Vertical     | 108.23            | *           | -           |
|                         | 5240 (Av)       |              | 93.13             | *           | -           |
|                         | 5350 (Pk)       |              | 54.16             | 74          | -19.84      |
|                         | 5350 (Av)       |              | 42.00             | 54          | -12.00      |
|                         | 10480 (Pk)      |              | 49.58             | 68.23       | -18.65      |
|                         | 10480 (Av)      |              | 37.63             | 68.23       | -30.60      |
|                         | 15720 (Pk)      |              | 52.46             | 68.23       | -15.77      |
|                         | 15720 (Av)      |              | 40.05             | 68.23       | -28.18      |
|                         | 5240 (Pk)       | Horizontal   | 96.86             | *           | -           |
|                         | 5240 (Av)       |              | 82.19             | *           | -           |
|                         | 5350 (Pk)       |              | 43.54             | 74          | -30.46      |
|                         | 5350 (Av)       |              | 30.87             | 54          | -23.13      |
|                         | 10480 (Pk)      |              | 50.24             | 68.23       | -17.99      |
|                         | 10480 (Av)      |              | 37.81             | 68.23       | -30.42      |
|                         | 15720 (Pk)      |              | 52.56             | 68.23       | -15.67      |
|                         | 15720 (Av)      |              | 40.17             | 68.23       | -28.06      |

|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5260 | 5260 (Pk)  | Vertical   | 108.55 | *     | -      |
|      | 5260 (Av)  |            | 94.05  | *     | -      |
|      | 5350 (Pk)  |            | 54.29  | 74    | -19.71 |
|      | 5350 (Av)  |            | 42.03  | 54    | -11.97 |
|      | 10520 (Pk) |            | 50.63  | 68.23 | -17.60 |
|      | 10520 (Av) |            | 37.76  | 68.23 | -30.47 |
|      | 15780 (Pk) |            | 51.55  | 68.23 | -16.68 |
|      | 15780 (Av) |            | 39.13  | 68.23 | -29.10 |
|      | 5260 (Pk)  | Horizontal | 96.74  | *     | -      |
|      | 5260 (Av)  |            | 82.29  | *     | -      |
|      | 5350 (Pk)  |            | 44.26  | 74    | -29.74 |
|      | 5350 (Av)  |            | 30.95  | 54    | -23.05 |
|      | 10520 (Pk) |            | 50.38  | 68.23 | -17.85 |
|      | 10520 (Av) |            | 37.76  | 68.23 | -30.47 |
|      | 15780 (Pk) |            | 51.75  | 68.23 | -16.48 |
|      | 15780 (Av) |            | 39.13  | 68.23 | -29.10 |
| 5320 | 5320 (Pk)  | Vertical   | 108.78 | *     | -      |
|      | 5320 (Av)  |            | 94.21  | *     | -      |
|      | 5350 (Pk)  |            | 60.70  | 74    | -13.30 |
|      | 5350 (Av)  |            | 44.80  | 54    | -9.20  |
|      | 10640 (Pk) |            | 49.90  | 68.23 | -18.33 |
|      | 10640 (Av) |            | 37.78  | 68.23 | -30.45 |
|      | 15960 (Pk) |            | 51.66  | 68.23 | -16.57 |
|      | 15960 (Av) |            | 39.08  | 68.23 | -29.15 |
|      | 5320 (Pk)  | Horizontal | 96.51  | *     | -      |
|      | 5320 (Av)  |            | 82.02  | *     | -      |
|      | 5350 (Pk)  |            | 50.31  | 74    | -23.69 |
|      | 5350 (Av)  |            | 35.22  | 54    | -18.78 |
|      | 10640 (Pk) |            | 49.92  | 68.23 | -18.31 |
|      | 10640 (Av) |            | 37.72  | 68.23 | -30.51 |
|      | 15960 (Pk) |            | 51.26  | 68.23 | -16.97 |
|      | 15960 (Av) |            | 39.13  | 68.23 | -29.10 |
| 5500 | 5500 (Pk)  | Vertical   | 108.73 | *     | -      |
|      | 5500 (Av)  |            | 94.37  | *     | -      |
|      | 5460 (Pk)  |            | 63.73  | 74    | -10.27 |
|      | 5460 (Av)  |            | 51.62  | 54    | -2.38  |
|      | 11000 (Pk) |            | 49.76  | 68.23 | -18.47 |
|      | 11000 (Av) |            | 37.43  | 68.23 | -30.80 |
|      | 16500 (Pk) |            | 53.03  | 68.23 | -15.20 |
|      | 16500 (Av) |            | 40.40  | 68.23 | -27.83 |
|      | 5500 (Pk)  | Horizontal | 95.77  | *     | -      |
|      | 5500 (Av)  |            | 81.40  | *     | -      |
|      | 5460 (Pk)  |            | 54.63  | 74    | -19.37 |
|      | 5460 (Av)  |            | 41.78  | 54    | -12.22 |
|      | 11000 (Pk) |            | 49.63  | 68.23 | -18.60 |
|      | 11000 (Av) |            | 37.88  | 68.23 | -30.35 |
|      | 16500 (Pk) |            | 52.68  | 68.23 | -15.55 |
|      | 16500 (Av) |            | 40.38  | 68.23 | -27.85 |

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|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5720 | 5720 (Pk)  | Vertical   | 106.03             | *     | -      |
|      | 5720 (Av)  |            | 90.79              | *     | -      |
|      | 5460 (Pk)  |            | 47.86              | 74    | -26.14 |
|      | 5460 (Av)  |            | 34.83              | 54    | -19.17 |
|      | 11440 (Pk) |            | 51.39              | 68.23 | -16.84 |
|      | 11440 (Av) |            | 38.72              | 68.23 | -29.51 |
|      | 17160 (Pk) | Horizontal | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
|      | 5720 (Pk)  |            | 81.20              | *     | -      |
|      | 5720 (Av)  |            | 96.05              | *     | -      |
|      | 5460 (Pk)  |            | 46.83              | 74    | -27.17 |
|      | 5460 (Av)  |            | 34.19              | 54    | -19.81 |
|      | 11440 (Pk) |            | 50.38              | 68.23 | -17.85 |
|      | 11440 (Av) |            | 37.99              | 68.23 | -30.24 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
| 5700 | 5700 (Pk)  | Vertical   | 107.28             | *     | -      |
|      | 5700 (Av)  |            | 92.79              | *     | -      |
|      | 5460 (Pk)  |            | 44.20              | 74    | -29.80 |
|      | 5460 (Av)  |            | 31.64              | 54    | -22.36 |
|      | 11400 (Pk) |            | 50.22              | 68.23 | -18.01 |
|      | 11400 (Av) |            | 38.05              | 68.23 | -30.18 |
|      | 17100 (Pk) | Horizontal | 54.73              | 68.23 | -13.50 |
|      | 17100 (Av) |            | 42.64              | 68.23 | -25.59 |
|      | 5700 (Pk)  |            | 97.50              | *     | -      |
|      | 5700 (Av)  |            | 82.77              | *     | -      |
|      | 5460 (Pk)  |            | 41.94              | 74    | -32.06 |
|      | 5460 (Av)  |            | 29.03              | 54    | -24.97 |
|      | 11400 (Pk) |            | 49.96              | 68.23 | -18.27 |
|      | 11400 (Av) |            | 37.44              | 68.23 | -30.79 |
|      | 17100 (Pk) |            | 54.89              | 68.23 | -13.34 |
|      | 17100 (Av) |            | 42.70              | 68.23 | -25.53 |
| 5745 | 5715(Pk)   | Vertical   | 56.51              | 78.2  | -21.69 |
|      | 5725(Pk)   |            | 70.01              | 78.2  | -8.19  |
|      | 5745 (Pk)  |            | 106.94             | *     | -      |
|      | 5745 (Av)  |            | 92.38              | *     | -      |
|      | 11490 (Pk) |            | 51.87              | 68.23 | -16.36 |
|      | 11490 (Av) |            | 39.72              | 68.23 | -28.51 |
|      | 17235 (Pk) | Horizontal | 54.87              | 68.23 | -13.36 |
|      | 17235 (Av) |            | 42.67              | 68.23 | -25.56 |
|      | 5715(Pk)   |            | 48.03              | 78.2  | -30.17 |
|      | 5725(Pk)   |            | 58.20              | 78.2  | -20.00 |
|      | 5745 (Pk)  |            | 97.19              | *     | -      |
|      | 5745 (Av)  |            | 82.45              | *     | -      |
|      | 11490 (Pk) |            | 49.65              | 68.23 | -18.58 |
|      | 11490 (Av) |            | 38.04              | 68.23 | -30.19 |
|      | 17235 (Pk) |            | 54.82              | 68.23 | -13.41 |
|      | 17235 (Av) |            | 42.67              | 68.23 | -25.56 |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5825 | 5825 (Pk)  | Vertical   | 106.48 | *     | -      |
|      | 5825 (Av)  |            | 92.23  | *     | -      |
|      | 5850 (Pk)  |            | 63.22  | 78.2  | -14.98 |
|      | 5860 (Pk)  |            | 51.29  | 78.2  | -26.91 |
|      | 11650 (Pk) |            | 53.32  | 68.23 | -14.91 |
|      | 11650 (Av) |            | 39.69  | 68.23 | -28.54 |
|      | 17475 (Pk) |            | 54.79  | 68.23 | -13.44 |
|      | 17475 (Av) |            | 42.78  | 68.23 | -25.45 |
|      | 5825 (Pk)  | Horizontal | 97.16  | *     | -      |
|      | 5825 (Av)  |            | 82.74  | *     | -      |
|      | 5850 (Pk)  |            | 52.10  | 78.2  | -26.10 |
|      | 5860 (Pk)  |            | 45.24  | 78.2  | -32.96 |
|      | 11650 (Pk) |            | 50.43  | 68.23 | -17.80 |
|      | 11650 (Av) |            | 38.01  | 68.23 | -30.22 |
|      | 17475 (Pk) |            | 54.83  | 68.23 | -13.40 |
|      | 17475 (Av) |            | 43.79  | 68.23 | -24.44 |

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**Modulation:** 802.11n \_ HT 40MHz

**Data rate:** MCS0

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBμV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5190                    | 5190 (Pk)       | Vertical     | 103.70            | *           | -           |
|                         | 5190 (Av)       |              | 92.63             | *           | -           |
|                         | 5150 (Pk)       |              | 64.00             | 74          | -10.00      |
|                         | 5150 (Av)       |              | 42.25             | 54          | -11.75      |
|                         | 10380 (Pk)      |              | 47.96             | 68.23       | -20.27      |
|                         | 10380 (Av)      |              | 35.00             | 68.23       | -33.23      |
|                         | 15570 (Pk)      |              | 52.85             | 68.23       | -15.38      |
|                         | 15570 (Av)      |              | 40.22             | 68.23       | -28.01      |
|                         | 5190 (Pk)       | Horizontal   | 91.20             | *           | -           |
|                         | 5190 (Av)       |              | 80.77             | *           | -           |
|                         | 5150 (Pk)       |              | 54.11             | 74          | -19.89      |
|                         | 5150 (Av)       |              | 32.86             | 54          | -21.14      |
|                         | 10380 (Pk)      |              | 47.00             | 68.23       | -21.23      |
|                         | 10380 (Av)      |              | 35.03             | 68.23       | -33.20      |
|                         | 15570 (Pk)      |              | 52.63             | 68.23       | -15.60      |
|                         | 15570 (Av)      |              | 40.24             | 68.23       | -27.99      |
| 5230                    | 5230 (Pk)       | Vertical     | 102.90            | *           | -           |
|                         | 5230 (Av)       |              | 92.74             | *           | -           |
|                         | 5150 (Pk)       |              | 56.07             | 74          | -17.93      |
|                         | 5150 (Av)       |              | 35.15             | 54          | -18.85      |
|                         | 10460 (Pk)      |              | 47.70             | 68.23       | -20.53      |
|                         | 10460 (Av)      |              | 35.64             | 68.23       | -32.59      |
|                         | 15690 (Pk)      |              | 52.23             | 68.23       | -16.00      |
|                         | 15690 (Av)      |              | 40.05             | 68.23       | -28.18      |
|                         | 5230 (Pk)       | Horizontal   | 91.08             | *           | -           |
|                         | 5230 (Av)       |              | 80.61             | *           | -           |
|                         | 5150 (Pk)       |              | 46.53             | 74          | -27.47      |
|                         | 5150 (Av)       |              | 30.35             | 54          | -23.65      |
|                         | 10460 (Pk)      |              | 47.58             | 68.23       | -20.65      |
|                         | 10460 (Av)      |              | 35.60             | 68.23       | -32.63      |
|                         | 15690 (Pk)      |              | 52.22             | 68.23       | -16.01      |
|                         | 15690 (Av)      |              | 40.02             | 68.23       | -28.21      |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5270 | 5270 (Pk)  | Vertical   | 103.40 | *     | -      |
|      | 5270 (Av)  |            | 93.14  | *     | -      |
|      | 5350 (Pk)  |            | 58.41  | 74    | -15.59 |
|      | 5350 (Av)  |            | 36.64  | 54    | -17.36 |
|      | 10540 (Pk) |            | 48.57  | 68.23 | -19.66 |
|      | 10540 (Av) |            | 36.12  | 68.23 | -32.11 |
|      | 15810 (Pk) |            | 51.33  | 68.23 | -16.90 |
|      | 15810 (Av) |            | 39.45  | 68.23 | -28.78 |
|      | 5270 (Pk)  | Horizontal | 91.73  | *     | -      |
|      | 5270 (Av)  |            | 80.80  | *     | -      |
|      | 5350 (Pk)  |            | 44.77  | 74    | -29.23 |
|      | 5350 (Av)  |            | 30.01  | 54    | -23.99 |
|      | 10540 (Pk) |            | 48.92  | 68.23 | -19.31 |
|      | 10540 (Av) |            | 36.15  | 68.23 | -32.08 |
|      | 15810 (Pk) |            | 51.62  | 68.23 | -16.61 |
|      | 15810 (Av) |            | 39.44  | 68.23 | -28.79 |
| 5510 | 5510 (Pk)  | Vertical   | 103.10 | *     | -      |
|      | 5510 (Av)  |            | 93.05  | *     | -      |
|      | 5460 (Pk)  |            | 62.22  | 74    | -11.78 |
|      | 5460 (Av)  |            | 43.53  | 54    | -10.47 |
|      | 11020 (Pk) |            | 51.82  | 68.23 | -16.41 |
|      | 11020 (Av) |            | 39.04  | 68.23 | -29.19 |
|      | 16530 (Pk) |            | 52.65  | 68.23 | -15.58 |
|      | 16530 (Av) |            | 40.27  | 68.23 | -27.96 |
|      | 5510 (Pk)  | Horizontal | 90.77  | *     | -      |
|      | 5510 (Av)  |            | 80.24  | *     | -      |
|      | 5460 (Pk)  |            | 51.88  | 74    | -22.12 |
|      | 5460 (Av)  |            | 32.68  | 54    | -21.32 |
|      | 11020 (Pk) |            | 51.12  | 68.23 | -17.11 |
|      | 11020 (Av) |            | 38.98  | 68.23 | -29.25 |
|      | 16530 (Pk) |            | 52.62  | 68.23 | -15.61 |
|      | 16530 (Av) |            | 40.34  | 68.23 | -27.89 |
| 5590 | 5590 (Pk)  | Vertical   | 102.71 | *     | -      |
|      | 5590 (Av)  |            | 92.59  | *     | -      |
|      | 5460 (Pk)  |            | 55.65  | 74    | -18.35 |
|      | 5460 (Av)  |            | 34.01  | 54    | -19.99 |
|      | 11180 (Pk) |            | 51.39  | 68.23 | -16.84 |
|      | 11180 (Av) |            | 39.00  | 68.23 | -29.23 |
|      | 16770 (Pk) |            | 54.30  | 68.23 | -13.93 |
|      | 16770 (Av) |            | 41.49  | 68.23 | -26.74 |
|      | 5590 (Pk)  | Horizontal | 90.60  | *     | -      |
|      | 5590 (Av)  |            | 80.38  | *     | -      |
|      | 5460 (Pk)  |            | 45.40  | 74    | -28.60 |
|      | 5460 (Av)  |            | 29.62  | 54    | -24.38 |
|      | 11180 (Pk) |            | 50.54  | 68.23 | -17.69 |
|      | 11180 (Av) |            | 38.79  | 68.23 | -29.44 |
|      | 16770 (Pk) |            | 53.86  | 68.23 | -14.37 |
|      | 16770 (Av) |            | 41.50  | 68.23 | -26.73 |

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|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5670 | 5670 (Pk)  | Vertical   | 102.29             | *     | -      |
|      | 5670 (Av)  |            | 92.19              | *     | -      |
|      | 5460 (Pk)  |            | 49.12              | 74    | -24.88 |
|      | 5460 (Av)  |            | 32.88              | 54    | -21.12 |
|      | 11340 (Pk) |            | 52.30              | 68.23 | -15.93 |
|      | 11340 (Av) |            | 40.14              | 68.23 | -28.09 |
|      | 17010 (Pk) |            | 52.90              | 68.23 | -15.33 |
|      | 17010 (Av) |            | 40.61              | 68.23 | -27.62 |
|      | 5670 (Pk)  | Horizontal | 91.50              | *     | -      |
|      | 5670 (Av)  |            | 81.37              | *     | -      |
|      | 5460 (Pk)  |            | 42.46              | 74    | -31.54 |
|      | 5460 (Av)  |            | 29.63              | 54    | -24.37 |
|      | 11340 (Pk) |            | 52.02              | 68.23 | -16.21 |
|      | 11340 (Av) |            | 39.59              | 68.23 | -28.64 |
|      | 17010 (Pk) |            | 53.23              | 68.23 | -15.00 |
|      | 17010 (Av) |            | 40.60              | 68.23 | -27.63 |
| 5710 | 5720 (Pk)  | Vertical   | 100.86             | *     | -      |
|      | 5720 (Av)  |            | 89.92              | *     | -      |
|      | 5460 (Pk)  |            | 49.71              | 74    | -24.29 |
|      | 5460 (Av)  |            | 35.46              | 54    | -18.54 |
|      | 11420 (Pk) |            | 49.73              | 68.23 | -18.50 |
|      | 11420 (Av) |            | 38.17              | 68.23 | -30.06 |
|      | 17130 (Pk) |            | No Harmonics Found |       |        |
|      | 17130 (Av) |            |                    |       |        |
|      | 5720 (Pk)  | Horizontal | 90.13              | *     | -      |
|      | 5720 (Av)  |            | 80.11              | *     | -      |
|      | 5460 (Pk)  |            | 47.12              | 74    | -26.88 |
|      | 5460 (Av)  |            | 34.28              | 54    | -19.72 |
|      | 11420 (Pk) |            | 50.43              | 68.23 | -17.80 |
|      | 11420 (Av) |            | 37.87              | 68.23 | -30.36 |
|      | 17130 (Pk) |            | No Harmonics Found |       |        |
|      | 17130 (Av) |            |                    |       |        |
| 5755 | 5755 (Pk)  | Vertical   | 102.50             | *     | -      |
|      | 5755 (Av)  |            | 91.51              | *     | -      |
|      | 11510 (Pk) |            | 52.59              | 68.23 | -15.64 |
|      | 11510 (Av) |            | 40.65              | 68.23 | -27.58 |
|      | 17265 (Pk) |            | 55.54              | 68.23 | -12.69 |
|      | 17265 (Av) |            | 42.98              | 68.23 | -25.25 |
|      | 5755 (Pk)  | Horizontal | 91.82              | *     | -      |
|      | 5755 (Av)  |            | 81.74              | *     | -      |
|      | 11510 (Pk) |            | 53.66              | 68.23 | -14.57 |
|      | 11510 (Av) |            | 40.19              | 54    | -13.81 |
|      | 17265 (Pk) |            | 55.55              | 68.23 | -12.68 |
|      | 17265 (Av) |            | 42.98              | 54    | -11.02 |

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|------|------------|------------|--------|-------|--------|
| 5795 | 5795 (Pk)  | Vertical   | 101.40 | *     | -      |
|      | 5795 (Av)  |            | 90.88  | *     | -      |
|      | 11590 (Pk) |            | 53.27  | 68.23 | -14.96 |
|      | 11590 (Av) |            | 41.37  | 68.23 | -26.86 |
|      | 17385 (Pk) |            | 55.25  | 68.23 | -12.98 |
|      | 17385 (Av) |            | 42.84  | 68.23 | -25.39 |
|      | 5795 (Pk)  | Horizontal | 91.36  | *     | -      |
|      | 5795 (Av)  |            | 81.02  | *     | -      |
|      | 11590 (Pk) |            | 52.29  | 68.23 | -15.94 |
|      | 11590 (Av) |            | 40.12  | 68.23 | -28.11 |
|      | 17385 (Pk) |            | 54.75  | 68.23 | -13.48 |
|      | 17385 (Av) |            | 42.81  | 68.23 | -25.42 |

The testing is performed for **802.11n \_ HT 40MHz**, **802.11n \_ VHT 40MHz** MCS 0 & MCS 7 but not reported here, only the MCS 0 reported as a worst case senario

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**Modulation:** 802.11ac \_ VHT 20MHz

**Data rate:** MCS0

| Channel Frequency (MHz) | Frequency (MHz) | Polarization | Emission (dBµV/m) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|--------------|-------------------|-------------|-------------|
| 5180                    | 5180 (Pk)       | Vertical     | 106.54            | *           | -           |
|                         | 5180 (Av)       |              | 96.58             | *           | -           |
|                         | 5150 (Pk)       |              | 63.27             | 74          | -10.73      |
|                         | 5150 (Av)       |              | 51.02             | 54          | -2.98       |
|                         | 10360 (Pk)      |              | 49.59             | 68.23       | -18.64      |
|                         | 10360 (Av)      |              | 37.47             | 68.23       | -30.76      |
|                         | 15540 (Pk)      |              | 52.06             | 68.23       | -16.17      |
|                         | 15540 (Av)      |              | 40.11             | 68.23       | -28.12      |
|                         | 5180 (Pk)       | Horizontal   | 96.43             | *           | -           |
|                         | 5180 (Av)       |              | 85.54             | *           | -           |
|                         | 5150 (Pk)       |              | 54.67             | 74          | -19.33      |
|                         | 5150 (Av)       |              | 41.27             | 54          | -12.73      |
|                         | 10360 (Pk)      |              | 49.22             | 68.23       | -19.01      |
|                         | 10360 (Av)      |              | 37.54             | 68.23       | -30.69      |
|                         | 15540 (Pk)      |              | 52.62             | 68.23       | -15.61      |
|                         | 15540 (Av)      |              | 40.24             | 68.23       | -27.99      |
| 5240                    | 5240 (Pk)       | Vertical     | 106.21            | *           | -           |
|                         | 5240 (Av)       |              | 97.33             | *           | -           |
|                         | 5350 (Pk)       |              | 54.01             | 74          | -19.99      |
|                         | 5350 (Av)       |              | 42.02             | 54          | -11.98      |
|                         | 10480 (Pk)      |              | 49.86             | 68.23       | -18.37      |
|                         | 10480 (Av)      |              | 37.91             | 68.23       | -30.32      |
|                         | 15720 (Pk)      |              | 51.18             | 68.23       | -17.05      |
|                         | 15720 (Av)      |              | 39.67             | 68.23       | -28.56      |
|                         | 5240 (Pk)       | Horizontal   | 96.96             | *           | -           |
|                         | 5240 (Av)       |              | 86.35             | *           | -           |
|                         | 5350 (Pk)       |              | 44.28             | 74          | -29.72      |
|                         | 5350 (Av)       |              | 33.37             | 54          | -20.63      |
|                         | 10480 (Pk)      |              | 49.58             | 68.23       | -18.65      |
|                         | 10480 (Av)      |              | 37.92             | 68.23       | -30.31      |
|                         | 15720 (Pk)      |              | 51.27             | 68.23       | -16.96      |
|                         | 15720 (Av)      |              | 39.72             | 68.23       | -28.51      |

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|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5260 | 5260 (Pk)  | Vertical   | 107.16 | *     | -      |
|      | 5260 (Av)  |            | 97.46  | *     | -      |
|      | 5350 (Pk)  |            | 54.19  | 74    | -19.81 |
|      | 5350 (Av)  |            | 42.06  | 54    | -11.94 |
|      | 10520 (Pk) |            | 49.73  | 68.23 | -18.50 |
|      | 10520 (Av) |            | 37.72  | 68.23 | -30.51 |
|      | 15780 (Pk) |            | 51.02  | 68.23 | -17.21 |
|      | 15780 (Av) |            | 39.14  | 68.23 | -29.09 |
|      | 5260 (Pk)  | Horizontal | 96.42  | *     | -      |
|      | 5260 (Av)  |            | 86.50  | *     | -      |
|      | 5350 (Pk)  |            | 45.28  | 74    | -28.72 |
|      | 5350 (Av)  |            | 33.42  | 54    | -20.58 |
|      | 10520 (Pk) |            | 50.93  | 68.23 | -17.30 |
|      | 10520 (Av) |            | 37.76  | 68.23 | -30.47 |
|      | 15780 (Pk) |            | 52.76  | 68.23 | -15.47 |
|      | 15780 (Av) |            | 39.16  | 68.23 | -29.07 |
| 5320 | 5320 (Pk)  | Vertical   | 106.99 | *     | -      |
|      | 5320 (Av)  |            | 97.49  | *     | -      |
|      | 5350 (Pk)  |            | 56.77  | 74    | -17.23 |
|      | 5350 (Av)  |            | 44.66  | 54    | -9.34  |
|      | 10640 (Pk) |            | 50.32  | 68.23 | -17.91 |
|      | 10640 (Av) |            | 37.72  | 68.23 | -30.51 |
|      | 15960 (Pk) |            | 51.01  | 68.23 | -17.22 |
|      | 15960 (Av) |            | 39.12  | 68.23 | -29.11 |
|      | 5320 (Pk)  | Horizontal | 97.07  | *     | -      |
|      | 5320 (Av)  |            | 86.14  | *     | -      |
|      | 5350 (Pk)  |            | 48.97  | 74    | -25.03 |
|      | 5350 (Av)  |            | 34.89  | 54    | -19.11 |
|      | 10640 (Pk) |            | 49.77  | 68.23 | -18.46 |
|      | 10640 (Av) |            | 37.67  | 68.23 | -30.56 |
|      | 15960 (Pk) |            | 52.26  | 68.23 | -15.97 |
|      | 15960 (Av) |            | 39.80  | 68.23 | -28.43 |
| 5500 | 5500 (Pk)  | Vertical   | 106.38 | *     | -      |
|      | 5500 (Av)  |            | 96.74  | *     | -      |
|      | 5460 (Pk)  |            | 63.82  | 74    | -10.18 |
|      | 5460 (Av)  |            | 51.51  | 54    | -2.49  |
|      | 11000 (Pk) |            | 49.25  | 68.23 | -18.98 |
|      | 11000 (Av) |            | 37.37  | 68.23 | -30.86 |
|      | 16500 (Pk) |            | 52.01  | 68.23 | -16.22 |
|      | 16500 (Av) |            | 40.34  | 68.23 | -27.89 |
|      | 5500 (Pk)  | Horizontal | 95.36  | *     | -      |
|      | 5500 (Av)  |            | 84.79  | *     | -      |
|      | 5460 (Pk)  |            | 54.12  | 74    | -19.88 |
|      | 5460 (Av)  |            | 41.73  | 54    | -12.27 |
|      | 11000 (Pk) |            | 49.78  | 68.23 | -18.45 |
|      | 11000 (Av) |            | 37.51  | 68.23 | -30.72 |
|      | 16500 (Pk) |            | 52.69  | 68.23 | -15.54 |
|      | 16500 (Av) |            | 40.62  | 68.23 | -27.61 |

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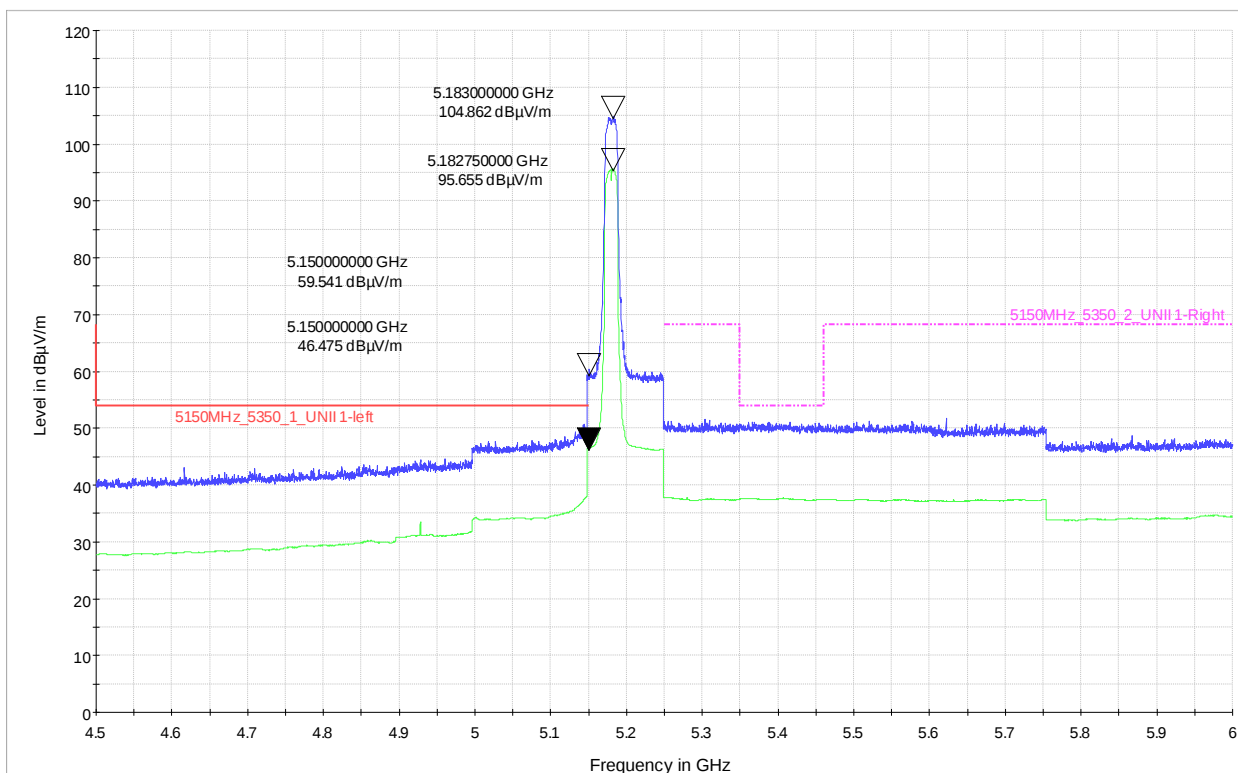
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|      |            |            |                    |       |        |
|------|------------|------------|--------------------|-------|--------|
| 5700 | 5700 (Pk)  | Vertical   | 104.36             | *     | -      |
|      | 5700 (Av)  |            | 94.37              | *     | -      |
|      | 5460 (Pk)  |            | 45.34              | 74    | -28.66 |
|      | 5460 (Av)  |            | 32.31              | 54    | -21.69 |
|      | 11400 (Pk) |            | 50.85              | 68.23 | -17.38 |
|      | 11400 (Av) |            | 38.39              | 68.23 | -29.84 |
|      | 17100 (Pk) |            | 54.50              | 68.23 | -13.73 |
|      | 17100 (Av) |            | 42.84              | 68.23 | -25.39 |
|      | 5700 (Pk)  | Horizontal | 82.03              | *     | -      |
|      | 5700 (Av)  |            | 84.59              | *     | -      |
|      | 5460 (Pk)  |            | 41.56              | 74    | -32.44 |
|      | 5460 (Av)  |            | 28.99              | 54    | -25.01 |
|      | 11400 (Pk) |            | 49.64              | 68.23 | -18.59 |
|      | 11400 (Av) |            | 37.72              | 68.23 | -30.51 |
|      | 17100 (Pk) |            | 55.12              | 68.23 | -13.11 |
|      | 17100 (Av) |            | 42.84              | 68.23 | -25.39 |
| 5720 | 5720 (Pk)  | Vertical   | 103.56             | *     | -      |
|      | 5720 (Av)  |            | 93.11              | *     | -      |
|      | 5460 (Pk)  |            | 48.38              | 74    | -25.62 |
|      | 5460 (Av)  |            | 35.65              | 54    | -18.35 |
|      | 11440 (Pk) |            | 51.43              | 68.23 | -16.80 |
|      | 11440 (Av) |            | 38.85              | 68.23 | -29.38 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
|      | 5720 (Pk)  | Horizontal | 94.05              | *     | -      |
|      | 5720 (Av)  |            | 83.79              | *     | -      |
|      | 5460 (Pk)  |            | 47.51              | 74    | -26.49 |
|      | 5460 (Av)  |            | 34.29              | 54    | -19.71 |
|      | 11440 (Pk) |            | 50.22              | 68.23 | -18.01 |
|      | 11440 (Av) |            | 38.04              | 68.23 | -30.19 |
|      | 17160 (Pk) |            | No Harmonics Found |       |        |
|      | 17160 (Av) |            |                    |       |        |
| 5745 | 5715(Pk)   | Vertical   | 51.73              | 78.2  | -26.47 |
|      | 5725(Pk)   |            | 54.05              | 78.2  | -24.15 |
|      | 5745 (Pk)  |            | 103.96             | *     | -      |
|      | 5745 (Av)  |            | 94.22              | *     | -      |
|      | 11490 (Pk) |            | 53.61              | 68.23 | -14.62 |
|      | 11490 (Av) |            | 39.40              | 68.23 | -28.83 |
|      | 17235 (Pk) |            | 55.15              | 68.23 | -13.08 |
|      | 17235 (Av) |            | 42.79              | 68.23 | -25.44 |
|      | 5715(Pk)   | Horizontal | 44.34              | 78.2  | -33.86 |
|      | 5725(Pk)   |            | 45.54              | 78.2  | -32.66 |
|      | 5745 (Pk)  |            | 94.44              | *     | -      |
|      | 5745 (Av)  |            | 85.14              | *     | -      |
|      | 11490 (Pk) |            | 50.46              | 68.23 | -17.77 |
|      | 11490 (Av) |            | 38.19              | 68.23 | -30.04 |
|      | 17235 (Pk) |            | 55.45              | 68.23 | -12.78 |
|      | 17235 (Av) |            | 42.80              | 68.23 | -25.43 |

|      |            |            |        |       |        |
|------|------------|------------|--------|-------|--------|
| 5825 | 5825 (Pk)  | Vertical   | 103.88 | *     | -      |
|      | 5825 (Av)  |            | 94.06  | *     | -      |
|      | 5850 (Pk)  |            | 51.55  | 78.2  | -26.65 |
|      | 5860 (Pk)  |            | 48.28  | 78.2  | -29.92 |
|      | 11650 (Pk) |            | 57.25  | 68.23 | -10.98 |
|      | 11650 (Av) |            | 42.48  | 68.23 | -25.75 |
|      | 17475 (Pk) |            | 55.16  | 68.23 | -13.07 |
|      | 17475 (Av) |            | 42.94  | 68.23 | -25.29 |
|      | 5825 (Pk)  | Horizontal | 95.49  | *     | -      |
|      | 5825 (Av)  |            | 86.01  | *     | -      |
|      | 5850 (Pk)  |            | 43.79  | 78.2  | -34.41 |
|      | 5860 (Pk)  |            | 43.30  | 78.2  | -34.90 |
|      | 11650 (Pk) |            | 51.08  | 68.23 | -17.15 |
|      | 11650 (Av) |            | 38.29  | 68.23 | -29.94 |
|      | 17475 (Pk) |            | 55.01  | 68.23 | -13.22 |
|      | 17475 (Av) |            | 42.98  | 68.23 | -25.25 |

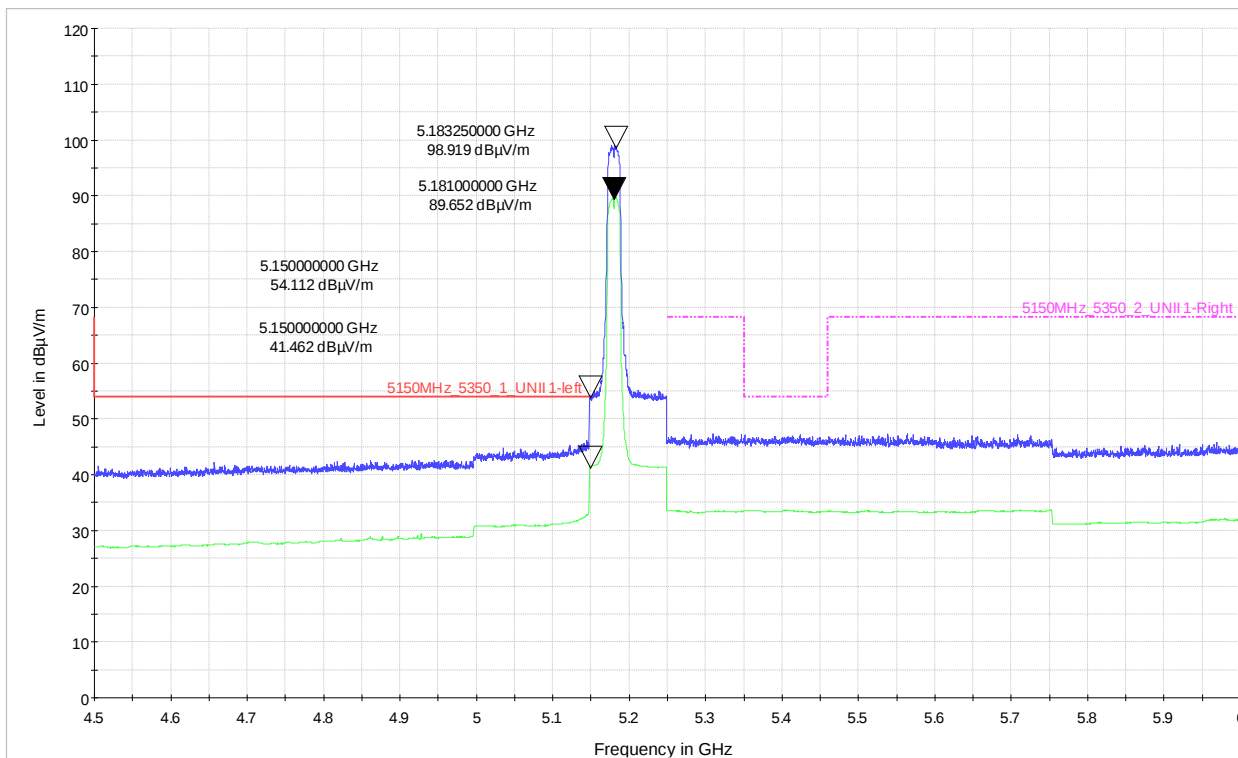
The testing is performed for **802.11ac \_ VHT 20MHz**, **802.11ac \_ VHT 80MHz** MCS 0 & MCS 7 but not reported here, only the MCS 0 reported as a worst case senario

**Worst case emissions for restricted band of operation**



**Channel Frequency: 5180MHz**

**Polarization: Vertical**



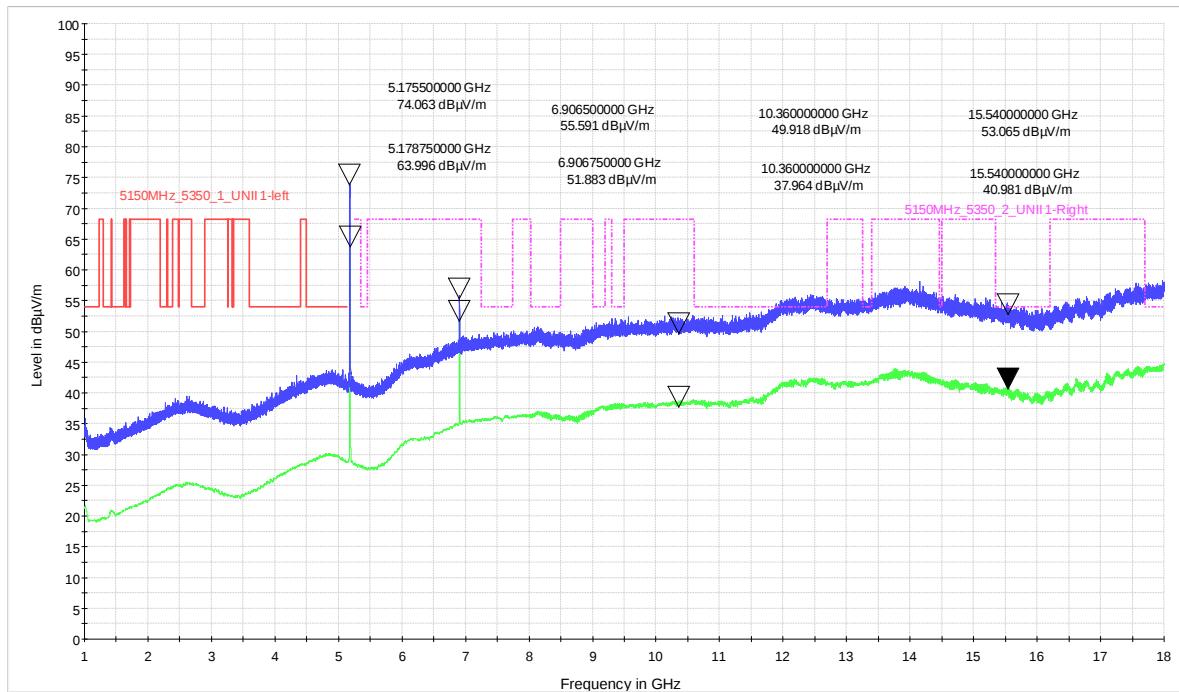
**Channel Frequency: 5180MHz**

**Polarization: Horizontal**

**Worst case emissions for Spurious radiated emissions above 1GHz**

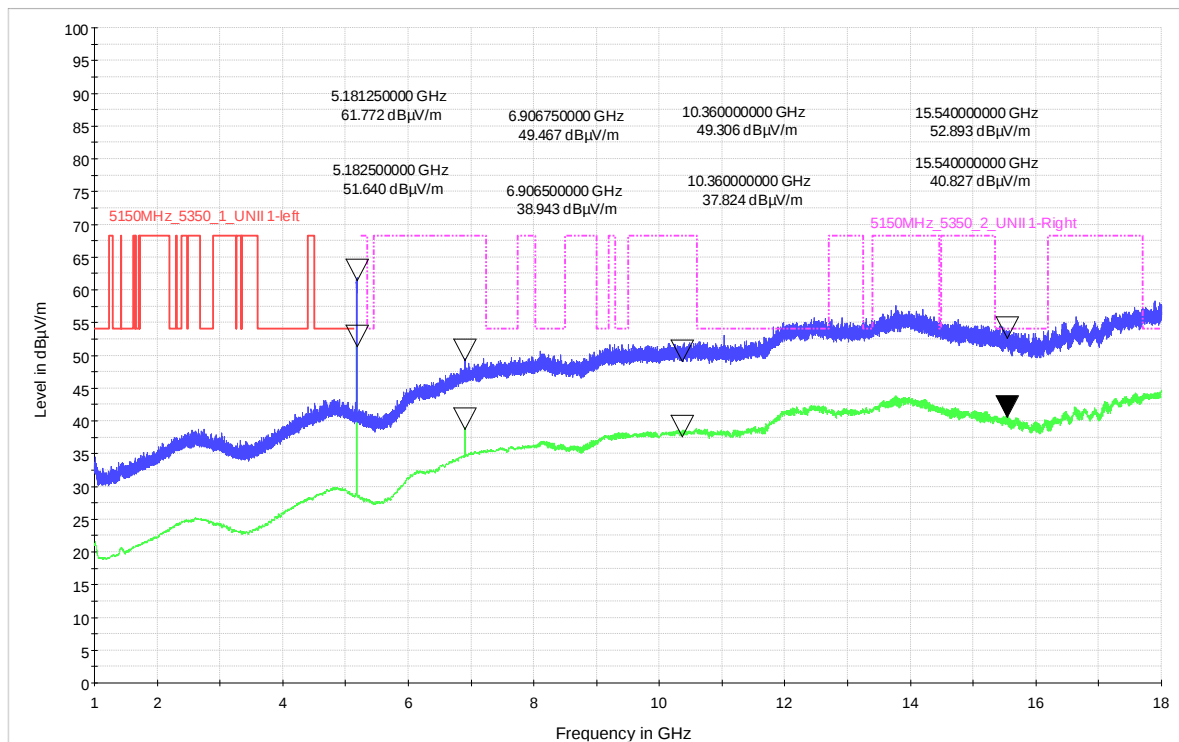
**Data rate: 6Mbps**

**Channel Frequency: 5180MHz**



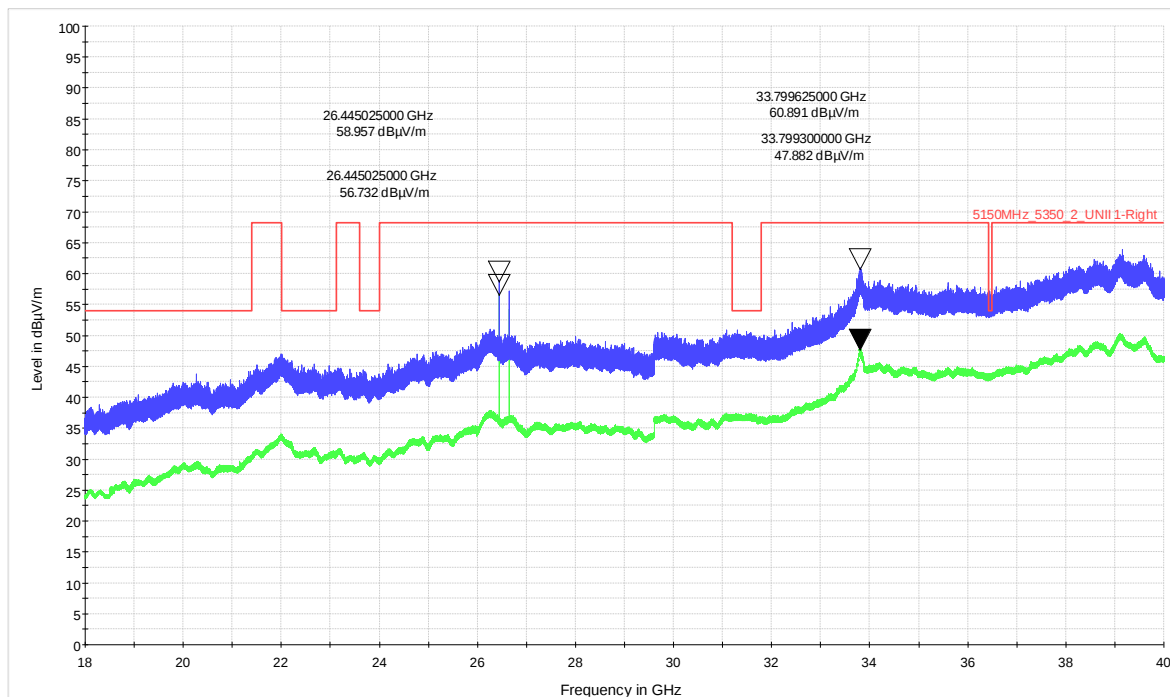
**Frequency Range: 1 to 18GHz**

**Polarization: Vertical**



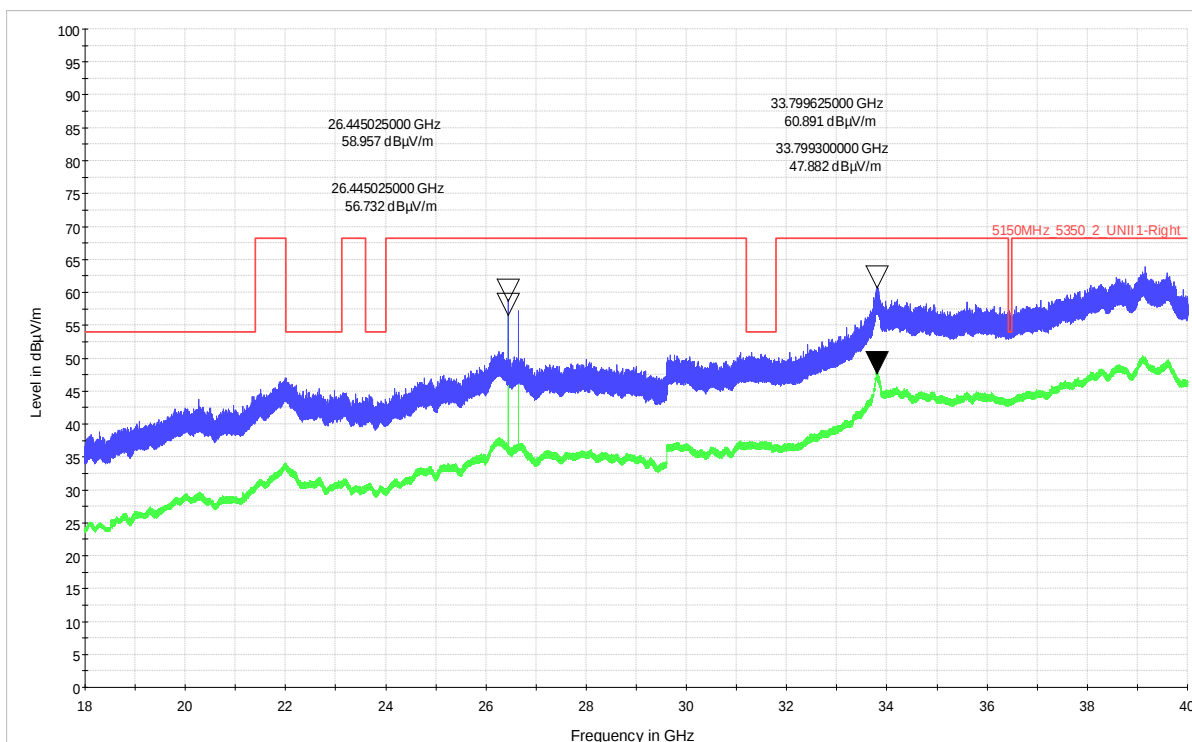
**Frequency Range: 1 to 18GHz**

**Polarization: Horizontal**



**Frequency Range: 18-40GHz**

**Polarization: Vertical**



**Frequency Range: 18-40GHz**

**Polarization: Horizontal**

## 8 Frequency Stability

### Result

### Pass

Test Specification

FCC part 15 Subpart C 15.407 (g) / RSS Gen Issue 5, Section 8.11

Test Method

Subclause 6.8.1 of ANSI C63.10

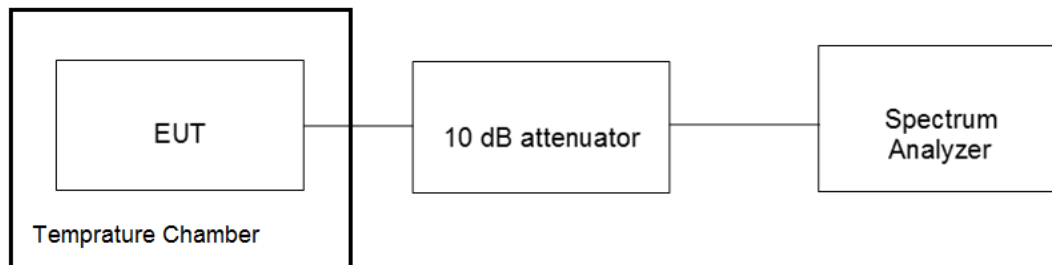
Port of testing

Antenna port

Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual

### Test Method:



### Test Condition:

#### Normal Test Condition:

Temperature (Norm) = + 25 °C

Voltage = 3.3VDC

Relative humidity: 62%

### KDB Guidelines applied:

Measurements were made as per section 3 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

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**Test results:**

| Channel<br>Frequency<br>(MHz) | Temperature | Frequency deviation for different time interval<br>(MHz) |       |       |       | Limit                                                                            |
|-------------------------------|-------------|----------------------------------------------------------|-------|-------|-------|----------------------------------------------------------------------------------|
|                               |             | 0Min                                                     | 2Min  | 5Min  | 10Min |                                                                                  |
| 5180                          | 0           | 1.57                                                     | -1.50 | 0.06  | -1.83 | Emission drift<br>measured are<br>maintained<br>within the<br>authorised<br>band |
|                               | 25          | -2.06                                                    | -1.47 | 1.89  | -1.98 |                                                                                  |
|                               | 35          | -1.2                                                     | 2.14  | -0.91 | -0.43 |                                                                                  |
| 5240                          | 0           | -2.07                                                    | -0.47 | 0.88  | -1.75 |                                                                                  |
|                               | 25          | -1.3                                                     | 2.04  | -0.75 | -1.43 |                                                                                  |
|                               | 35          | 2.57                                                     | -1.07 | 0.76  | -0.83 |                                                                                  |
| 5745                          | 0           | 2.5                                                      | -0.80 | -1.98 | -1.29 |                                                                                  |
|                               | 25          | -1.97                                                    | -1.62 | -1.95 | 1.70  |                                                                                  |
|                               | 35          | 1.13                                                     | -1.59 | -0.82 | -1.35 |                                                                                  |
| 5825                          | 0           | 1.5                                                      | -0.90 | 2.97  | -0.28 |                                                                                  |
|                               | 25          | -1.68                                                    | -1.56 | -2.05 | 1.87  |                                                                                  |
|                               | 35          | 1.49                                                     | -2.55 | -1.83 | -1.04 |                                                                                  |

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## 9 Conducted Spurious Emission test on AC Power Line

**Result**

**Pass**

Test Specification : FCC Part 15 Section 15.207 / RSS Gen Issue 5 Section 8.8  
Test Method : ANSI C 63.10-2013  
Testing Location : Screened room  
Measurement Bandwidth : 9kHz  
Frequency Range : 150kHz – 30MHz  
Supply Voltage : 110VAC,60Hz  
Test Method : Refer TEST METHODOLOGY

**\*Note: The product has tested with AC to DC adapter and Wireless Qi charger**

**Limits of section 15.207**

| Frequency of emission<br>(MHz) | QP Limit<br>(dBμV) | AV Limit<br>(dBμV/m) |
|--------------------------------|--------------------|----------------------|
| 0.15 – 0.5                     | 66 – 56*           | 56 – 46*             |
| 0.5 – 5                        | 56                 | 46                   |
| 5 – 30                         | 60                 | 50                   |

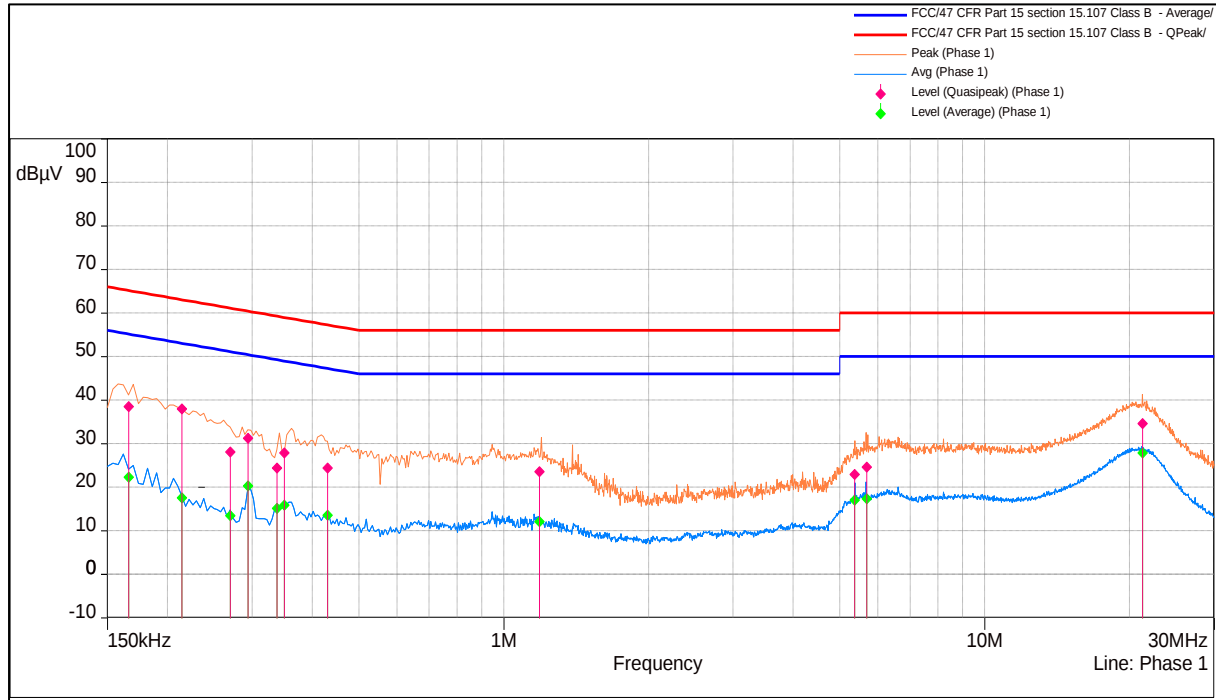
\* Decreases with the logarithm of the frequency

**Test Conditions:**

Normal Temperature = +24°C      Voltage (V norm) = 110V AC (Through AC to DC Adapter)  
RH = 64 %

**Test result:**

**Power: 110V 60HZ\_LINE**



**Line Graph**

| Quasipeak (23)  |    |              |              |             |         |                |     |           |          |                 |
|-----------------|----|--------------|--------------|-------------|---------|----------------|-----|-----------|----------|-----------------|
| Frequency (MHz) | SR | Level (dBμV) | Limit (dBμV) | Margin (dB) | Pos     | Measuring time | RBW | Meas.Time | Comments | Correction (dB) |
| 0.215           | 1  | 38.06        | 63.05        | -24.99      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.16           |
| 21.26465        | 1  | 34.62        | 60           | -25.38      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.14           |
| 0.1653          | 1  | 38.56        | 65.16        | -26.6       | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.22           |
| 0.29535         | 1  | 31.3         | 60.41        | -29.11      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.06           |
| 0.3503          | 1  | 27.85        | 58.96        | -31.11      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.07           |
| 1.1863          | 1  | 23.61        | 56           | -32.39      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.43           |
| 0.4315          | 1  | 24.4         | 57.25        | -32.85      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.08           |
| 0.2715          | 1  | 28.12        | 61.12        | -33         | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.09           |
| 0.33795         | 1  | 24.46        | 59.25        | -34.79      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.06           |
| 5.68075         | 1  | 24.6         | 60           | -35.4       | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.54           |
| 5.3592          | 1  | 23           | 60           | -37         | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.54           |

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Test Report No.:

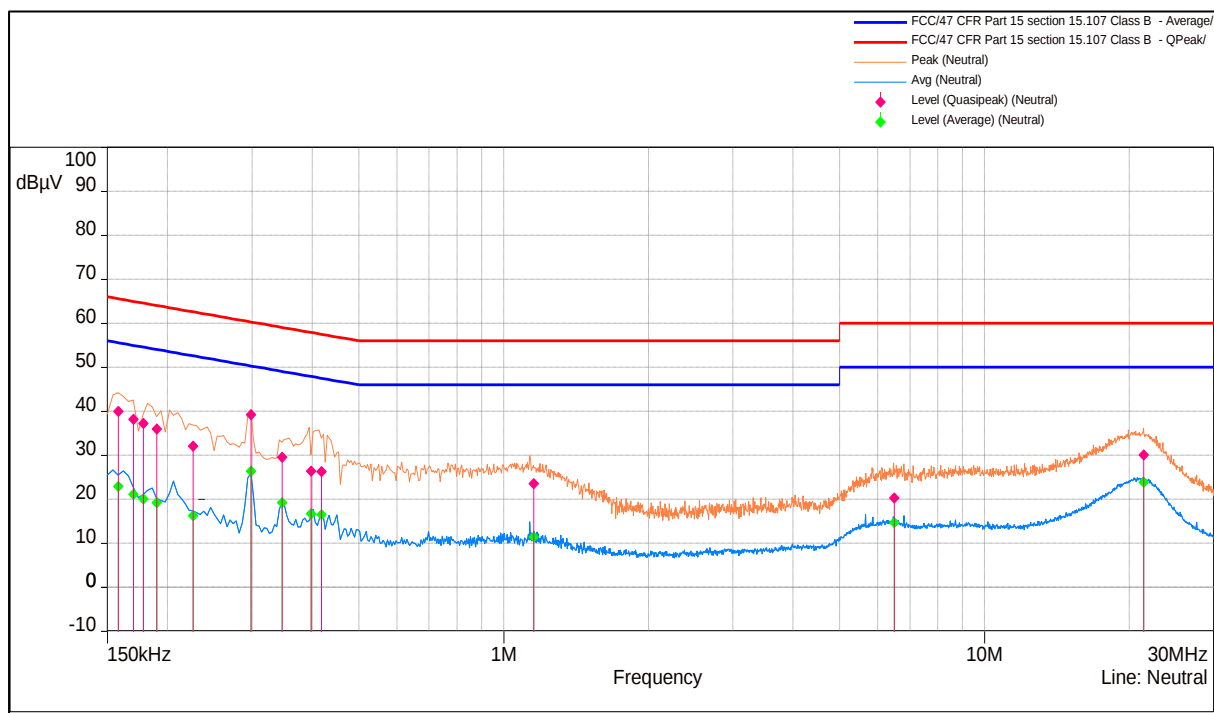
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| Average (23)    |    |              |              |             |         |                |     |           |          |                 |
|-----------------|----|--------------|--------------|-------------|---------|----------------|-----|-----------|----------|-----------------|
| Frequency (MHz) | SR | Level (dBμV) | Limit (dBμV) | Margin (dB) | Pos     | Measuring time | RBW | Meas.Time | Comments | Correction (dB) |
| 0.1653          | 1  | 22.29        | 55.16        | -32.87      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.22           |
| 0.215           | 1  | 17.61        | 53.05        | -35.44      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.16           |
| 0.2715          | 1  | 13.51        | 51.12        | -37.61      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.09           |
| 0.29535         | 1  | 20.33        | 50.41        | -30.08      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.06           |
| 0.33795         | 1  | 15.19        | 49.25        | -34.06      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.06           |
| 0.3503          | 1  | 15.93        | 48.96        | -33.03      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.07           |
| 0.4315          | 1  | 13.57        | 47.25        | -33.68      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.08           |
| 1.1863          | 1  | 12.09        | 46           | -33.91      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.43           |
| 5.3592          | 1  | 17.01        | 50           | -32.99      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.54           |
| 5.68075         | 1  | 17.42        | 50           | -32.58      | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.54           |
| 21.26465        | 1  | 27.9         | 50           | -22.1       | Phase 1 | 1              | 9k  | 0.02      | Pass     | 20.14           |

Line Table

**Power: 110V60HZ\_NEUTRAL**



Neutral Graph

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| Quasipeak (23)  |    |              |              |             |         |                |     |           |          |                 |
|-----------------|----|--------------|--------------|-------------|---------|----------------|-----|-----------|----------|-----------------|
| Frequency (MHz) | SR | Level (dBμV) | Limit (dBμV) | Margin (dB) | Pos     | Measuring time | RBW | Meas.Time | Comments | Correction (dB) |
| 0.29665         | 2  | 39.24        | 60.3         | -21.06      | Neutral | 1              | 9k  | 0.02      | Pass     | 19.96           |
| 0.15675         | 2  | 39.99        | 65.57        | -25.58      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.3            |
| 0.16805         | 2  | 38.24        | 64.96        | -26.72      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.27           |
| 0.1795          | 2  | 37.25        | 64.58        | -27.33      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.24           |
| 0.1916          | 2  | 36.02        | 64.04        | -28.01      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.21           |
| 0.3442          | 2  | 29.58        | 59.06        | -29.47      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.01           |
| 21.4065         | 2  | 30.08        | 60           | -29.92      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.43           |
| 0.2262          | 2  | 32.15        | 62.6         | -30.45      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.13           |
| 0.41605         | 2  | 26.37        | 57.49        | -31.12      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.12           |
| 0.39895         | 2  | 26.43        | 57.9         | -31.47      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.09           |
| 1.15335         | 2  | 23.55        | 56           | -32.45      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.51           |
| 6.4893          | 2  | 20.28        | 60           | -39.72      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.69           |

| Average (23)    |    |              |              |             |         |                |     |           |          |                 |
|-----------------|----|--------------|--------------|-------------|---------|----------------|-----|-----------|----------|-----------------|
| Frequency (MHz) | SR | Level (dBμV) | Limit (dBμV) | Margin (dB) | Pos     | Measuring time | RBW | Meas.Time | Comments | Correction (dB) |
| 0.29665         | 2  | 26.41        | 50.3         | -23.89      | Neutral | 1              | 9k  | 0.02      | Pass     | 19.96           |
| 21.4065         | 2  | 23.85        | 50           | -26.15      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.43           |
| 0.3442          | 2  | 19.24        | 49.06        | -29.82      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.01           |
| 0.41605         | 2  | 16.58        | 47.49        | -30.91      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.12           |
| 0.39895         | 2  | 16.71        | 47.9         | -31.19      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.09           |
| 0.15675         | 2  | 22.95        | 55.57        | -32.62      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.3            |
| 0.16805         | 2  | 21.18        | 54.96        | -33.78      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.27           |
| 0.1795          | 2  | 20.11        | 54.58        | -34.47      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.24           |
| 1.15335         | 2  | 11.44        | 46           | -34.56      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.51           |
| 0.1916          | 2  | 19.27        | 54.04        | -34.76      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.21           |
| 6.4893          | 2  | 14.7         | 50           | -35.3       | Neutral | 1              | 9k  | 0.02      | Pass     | 20.69           |
| 0.2262          | 2  | 16.31        | 52.6         | -36.29      | Neutral | 1              | 9k  | 0.02      | Pass     | 20.13           |

**Neutral Table**

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## 11 Power level used for testing

| 6Mbps      |    | HT20_MCS0 |    | VHT40_MCS0    |    |
|------------|----|-----------|----|---------------|----|
| 5180       | 17 | 5180      | 16 | 5190          | 15 |
| 5240       | 17 | 5240      | 16 | 5230          | 15 |
| 5260       | 17 | 5260      | 16 | 5270          | 15 |
| 5320       | 17 | 5320      | 16 | 5510          | 15 |
| 5500       | 17 | 5500      | 16 | 5590          | 15 |
| 5700       | 17 | 5700      | 16 | 5670          | 15 |
| 5745       | 17 | 5745      | 16 | 5755          | 15 |
| 5825       | 17 | 5825      | 16 | 5795          | 15 |
| 54Mbps     |    | HT20_MCS7 |    | VHT40_MCS9    |    |
| 5180       | 17 | 5180      | 16 | 5190          | 15 |
| 5240       | 17 | 5240      | 16 | 5230          | 15 |
| 5260       | 17 | 5260      | 16 | 5270          | 15 |
| 5320       | 17 | 5320      | 16 | 5510          | 15 |
| 5500       | 17 | 5500      | 16 | 5590          | 15 |
| 5700       | 17 | 5700      | 16 | 5670          | 15 |
| 5745       | 16 | 5745      | 16 | 5755          | 15 |
| 5825       | 16 | 5825      | 16 | 5795          | 15 |
| VHT20_MCS0 |    | HT40_MCS0 |    | ac_VHT80_MCS0 |    |
| 5180       | 16 | 5190      | 15 | 5210          | 14 |
| 5240       | 16 | 5230      | 15 | 5290          | 14 |
| 5260       | 16 | 5270      | 15 | 5530          | 14 |
| 5320       | 16 | 5510      | 15 | 5690          | 14 |
| 5500       | 16 | 5590      | 15 | 5755          | 14 |
| 5700       | 16 | 5670      | 15 | ac_VHT80_MCS9 |    |
| 5745       | 16 | 5755      | 15 | 5210          | 14 |
| 5825       | 16 | 5795      | 15 | 5290          | 14 |
| VHT20_MCS8 |    | HT40_MCS7 |    | 5530          | 14 |
| 5180       | 15 | 5190      | 15 | 5690          | 14 |
| 5240       | 15 | 5230      | 15 | 5755          | 14 |
| 5260       | 15 | 5270      | 15 | ac_VHT80_MCS9 |    |
| 5320       | 15 | 5510      | 15 | 5210          | 14 |
| 5500       | 15 | 5590      | 15 | 5290          | 14 |
| 5700       | 15 | 5670      | 15 | 5530          | 14 |
| 5745       | 15 | 5755      | 15 | 5690          | 14 |
| 5825       | 15 | 5795      | 15 | 5755          | 14 |

\*\*\*END OF TEST REPORT\*\*\*