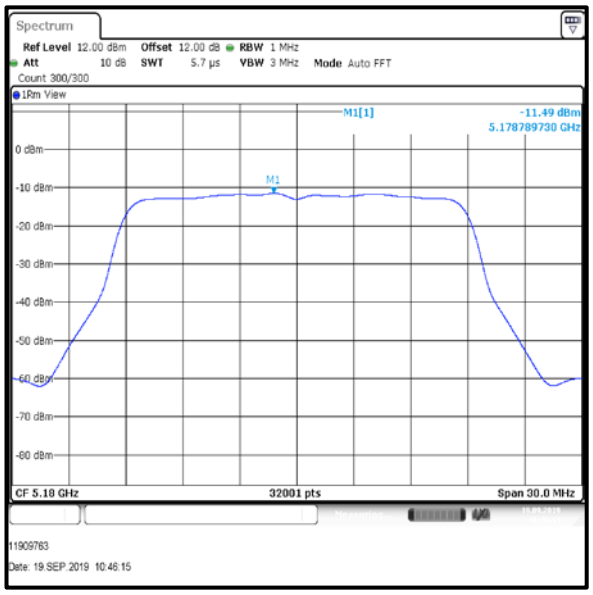
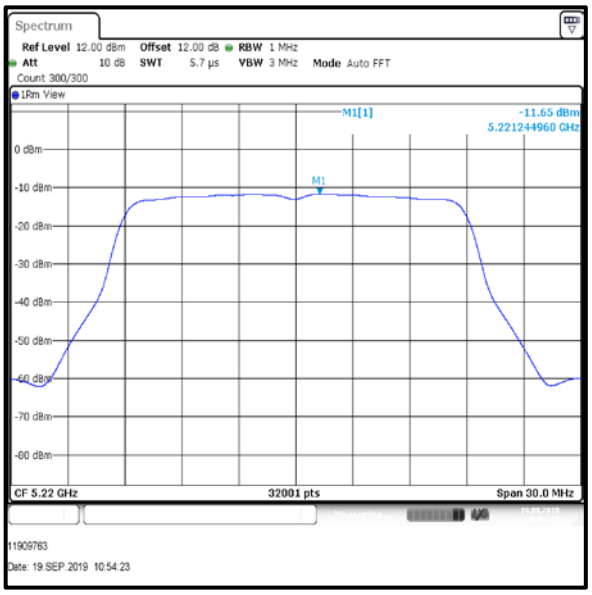
## Transmitter Maximum Power Spectral Density (continued)

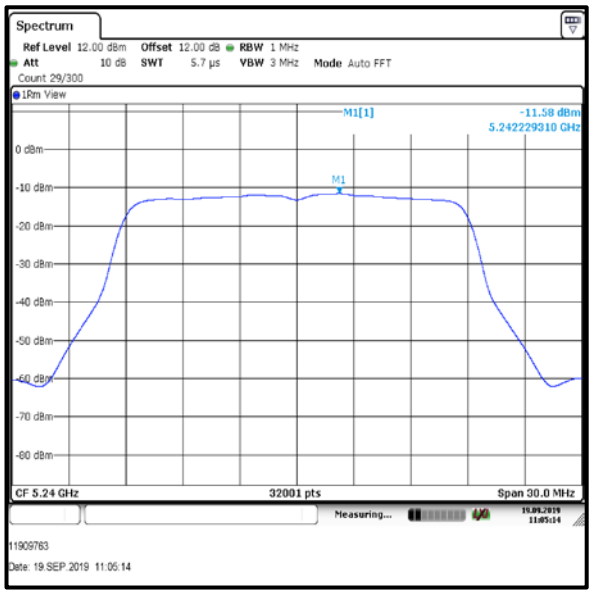
## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 3 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**



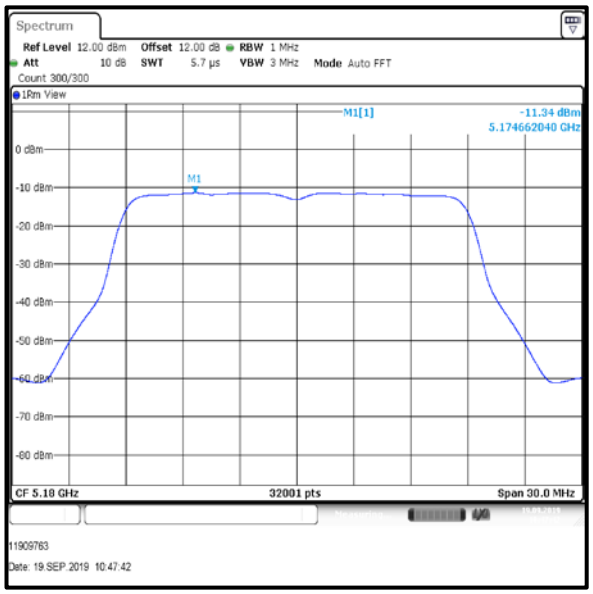

**Middle Channel**



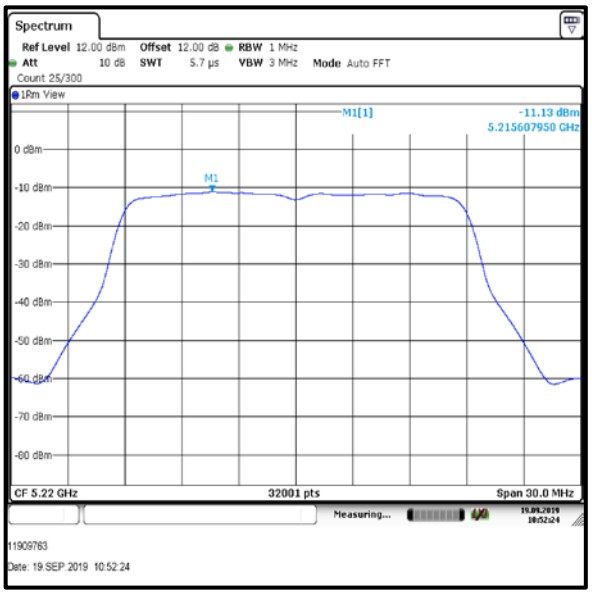

**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

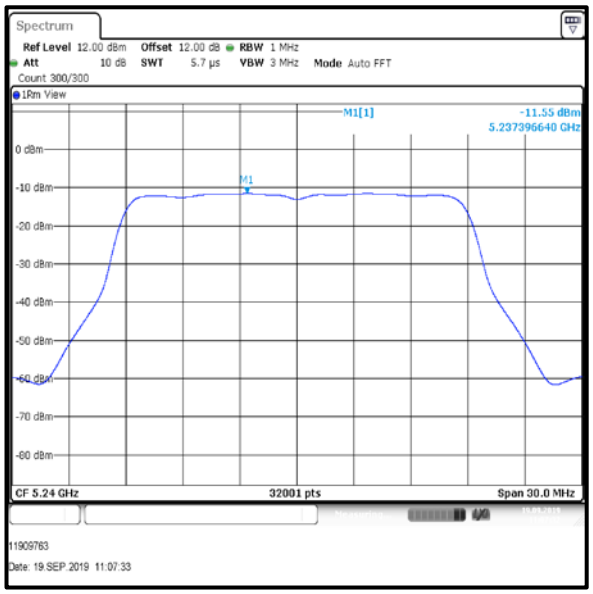
## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 4 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**




**Middle Channel**




**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1+2+3+4 / PWL 7 / 23 dBi Antenna Group

| Channel | Port 1 | | | Port 2 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -10.8 | 0.4 | -10.4 | -11.2 | 0.4 | -10.8 |
| Middle | -11.2 | 0.4 | -10.8 | -11.3 | 0.4 | -10.9 |
| Top | -11.1 | 0.4 | -10.7 | -10.7 | 0.4 | -10.3 |

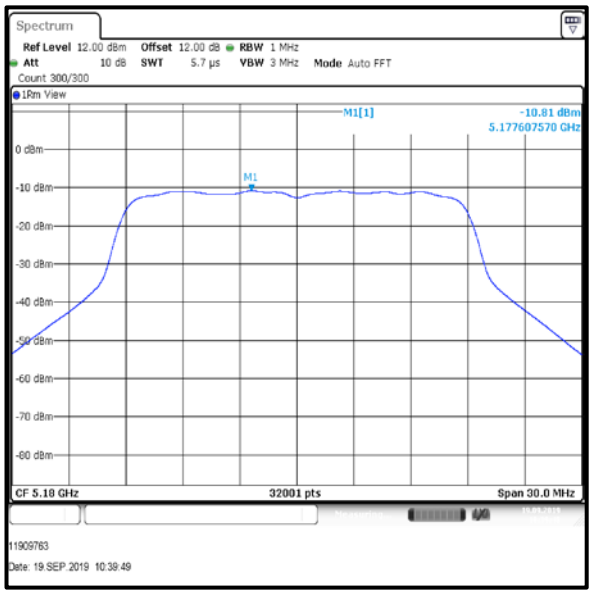
| Channel | Port 3 | | | Port 4 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -11.4 | 0.4 | -11.0 | -10.9 | 0.4 | -10.5 |
| Middle | -12.0 | 0.4 | -11.6 | -10.6 | 0.4 | -10.2 |
| Top | -11.9 | 0.4 | -11.5 | -10.8 | 0.4 | -10.4 |

| Channel | Corrected PSD Port 1 (dBm /MHz) | Corrected PSD Port 2 (dBm /MHz) | Corrected PSD Port 3 (dBm /MHz) | Corrected PSD Port 4 (dBm /MHz) | Combined PSD (dBm /MHz) | Limit (dBm/MHz) | Margin (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| Bottom | -10.4 | -10.8 | -11.0 | -10.5 | -4.6 | -3.3 | 1.3 | Complied |
| Middle | -10.8 | -10.9 | -11.6 | -10.2 | -4.8 | -3.3 | 1.5 | Complied |
| Top | -10.7 | -10.3 | -11.5 | -10.4 | -4.7 | -3.3 | 1.4 | Complied |

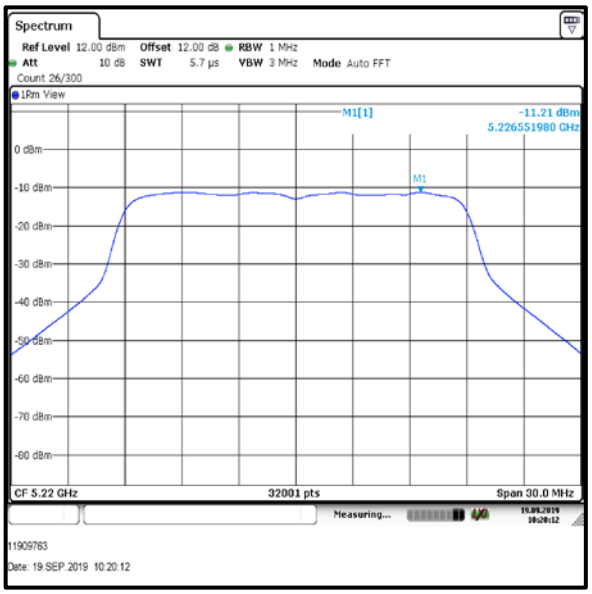
**Result: Pass**

## Transmitter Maximum Power Spectral Density (continued)

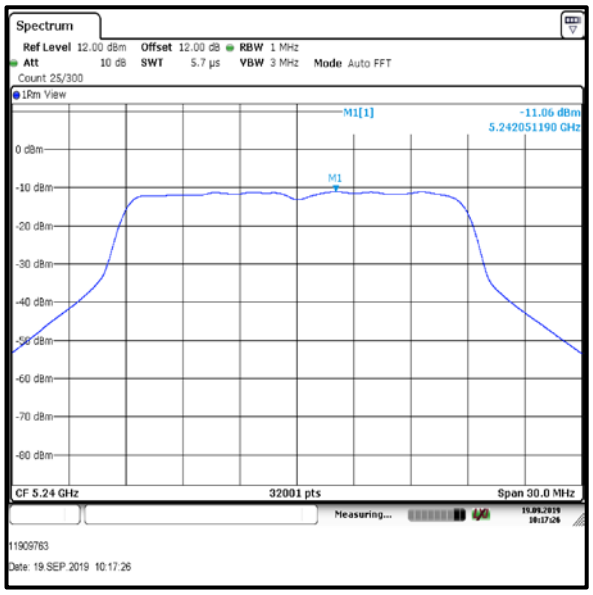
## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**



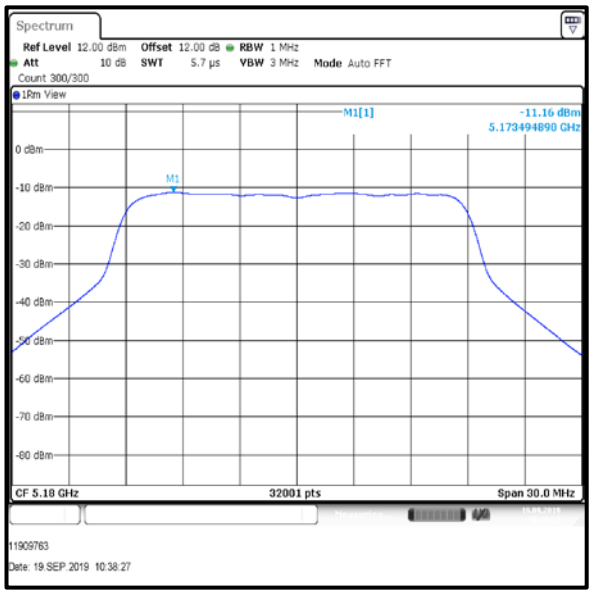

**Middle Channel**



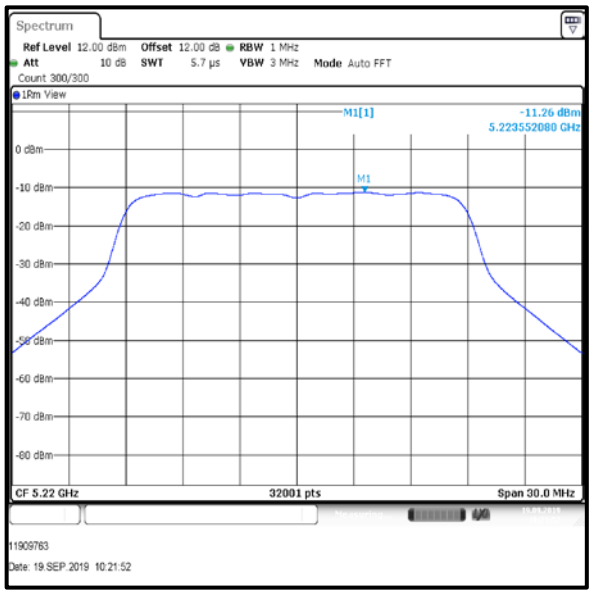

**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

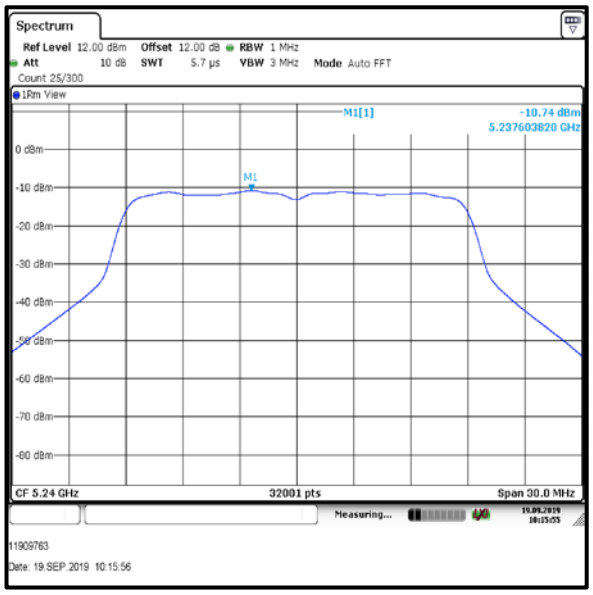
## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 2 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**



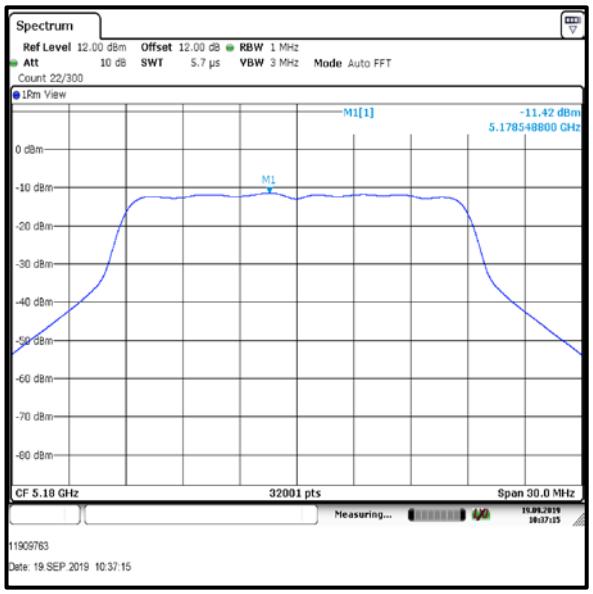

**Middle Channel**



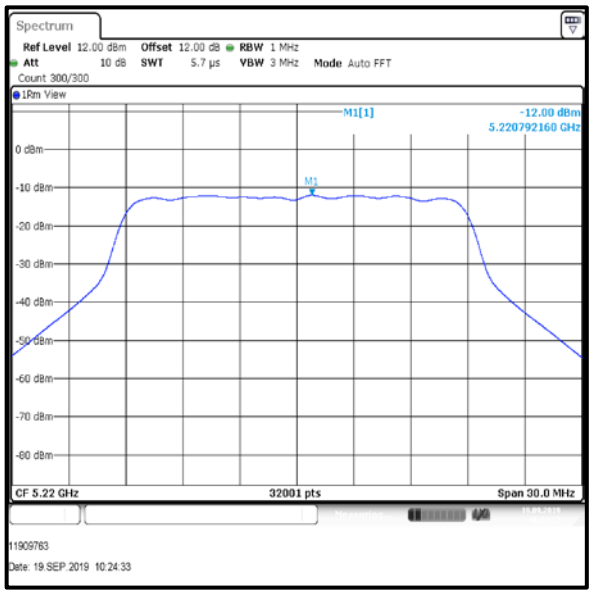

**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

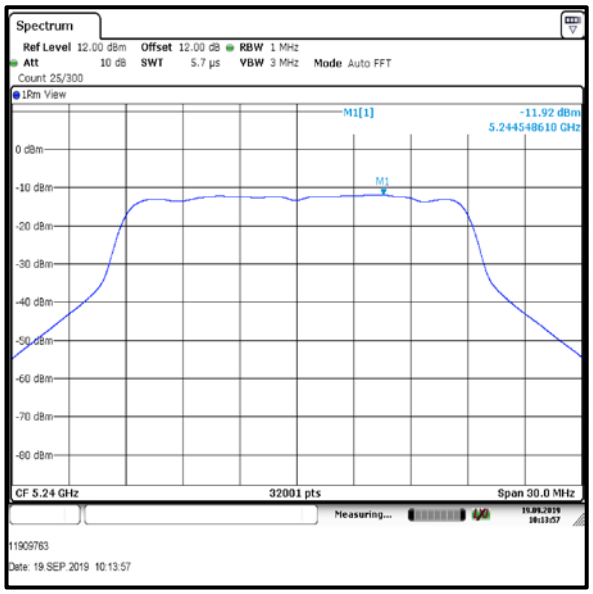
## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 3 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**




**Middle Channel**




**Top Channel**

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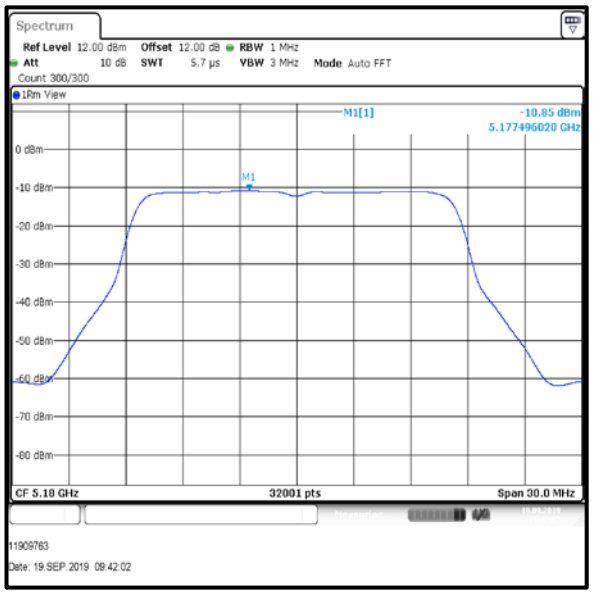
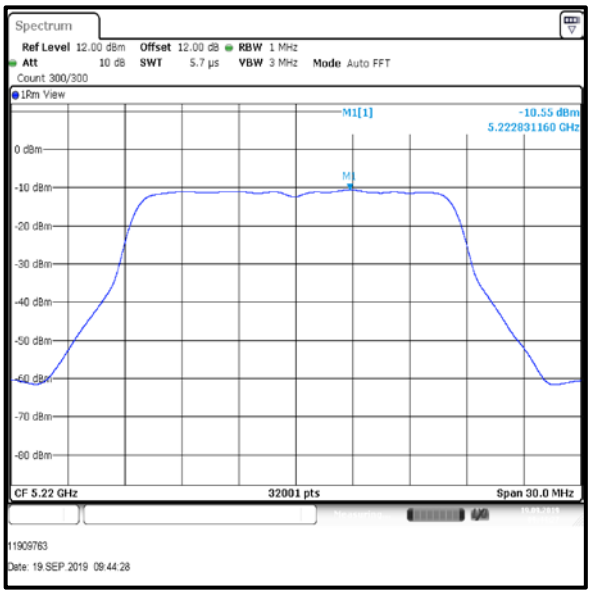
## Transmitter Maximum Power Spectral Density (continued)

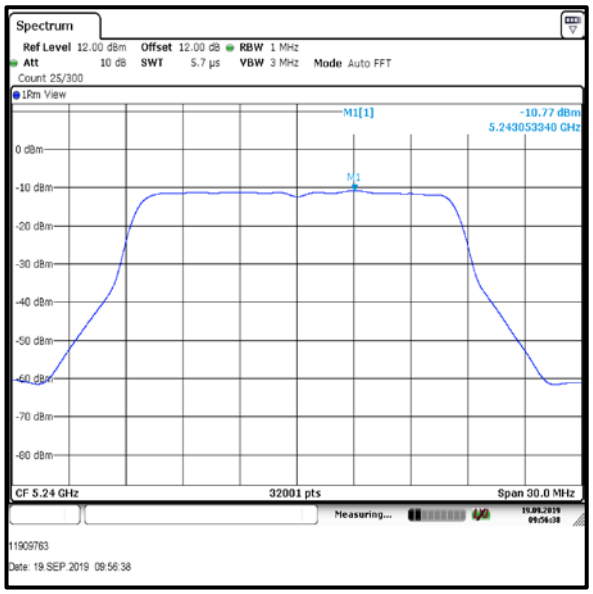
## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 4 / PWL 7 / 23 dBi Antenna Group




**Bottom Channel**




**Middle Channel**




**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11n / HT40 / MCS0 / MIMO / Port 1+2+3+4 / PWL 9 / 23 dBi Antenna Group

| Channel | Port 1 | | | Port 2 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -12.4 | 0.4 | -12.0 | -12.1 | 0.4 | -11.7 |
| Top | -12.3 | 0.4 | -11.9 | -12.5 | 0.4 | -12.1 |

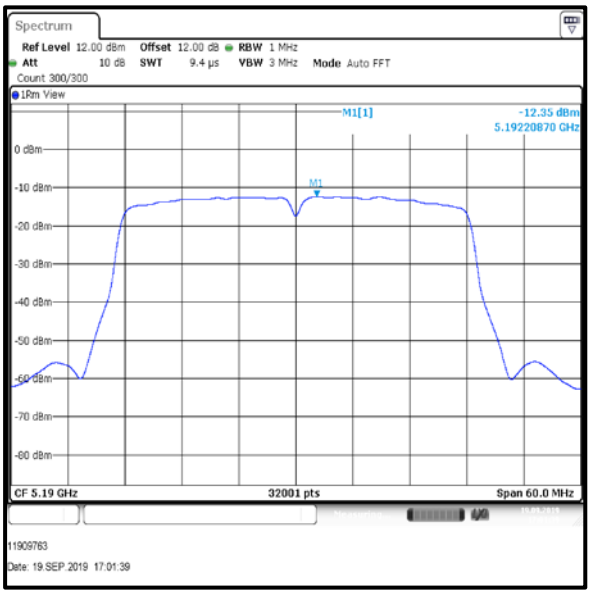
| Channel | Port 3 | | | Port 4 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -12.7 | 0.4 | -12.3 | -12.2 | 0.4 | -11.8 |
| Top | -12.9 | 0.4 | -12.5 | -12.7 | 0.4 | -12.3 |

| Channel | Corrected PSD Port 1 (dBm /MHz) | Corrected PSD Port 2 (dBm /MHz) | Corrected PSD Port 3 (dBm /MHz) | Corrected PSD Port 4 (dBm /MHz) | Combined PSD (dBm /MHz) | Limit (dBm/MHz) | Margin (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| Bottom | -12.0 | -11.7 | -12.3 | -11.8 | -5.9 | -3.3 | 2.6 | Complied |
| Top | -11.9 | -12.1 | -12.5 | -12.3 | -6.2 | -3.3 | 2.9 | Complied |

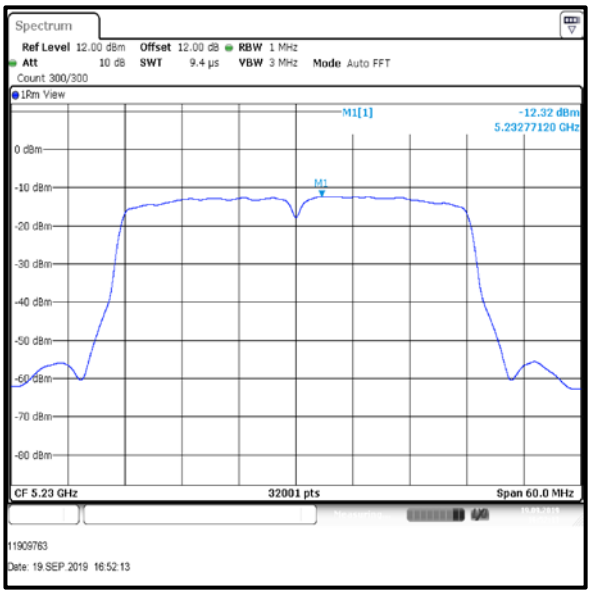
**Result: Pass**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11n / HT40 / MCS0 / MIMO / Port 1 / PWL 9 / 23 dBi Antenna Group

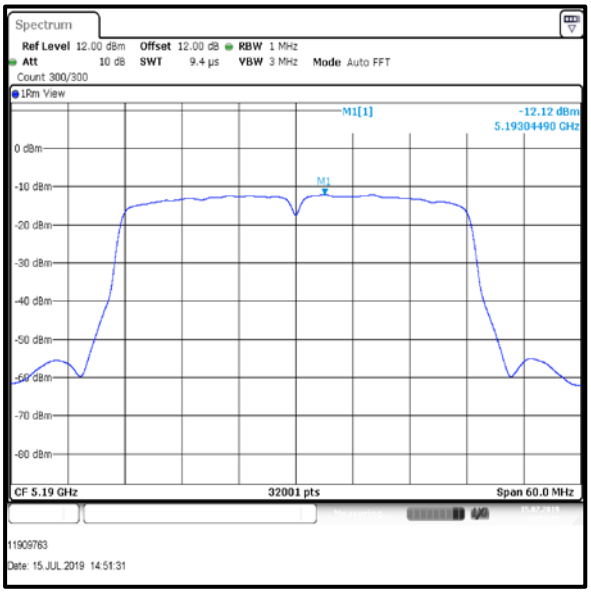



**Bottom Channel**

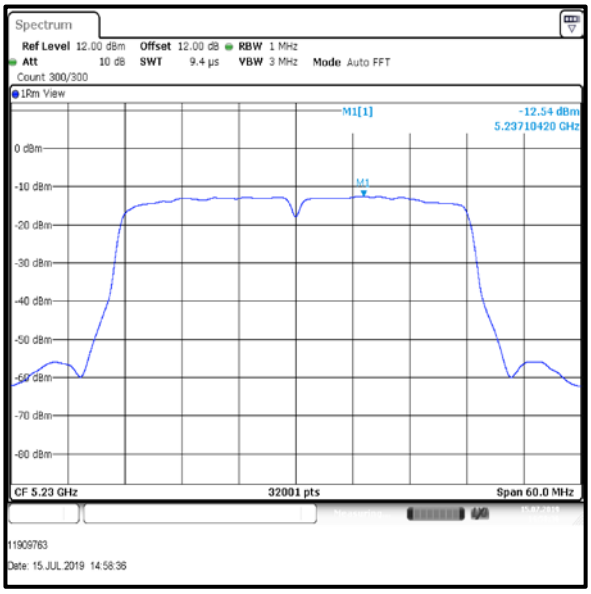



**Top Channel**

## Results: 802.11n / HT40 / MCS0 / MIMO / Port 2 / PWL 9 / 23 dBi Antenna Group



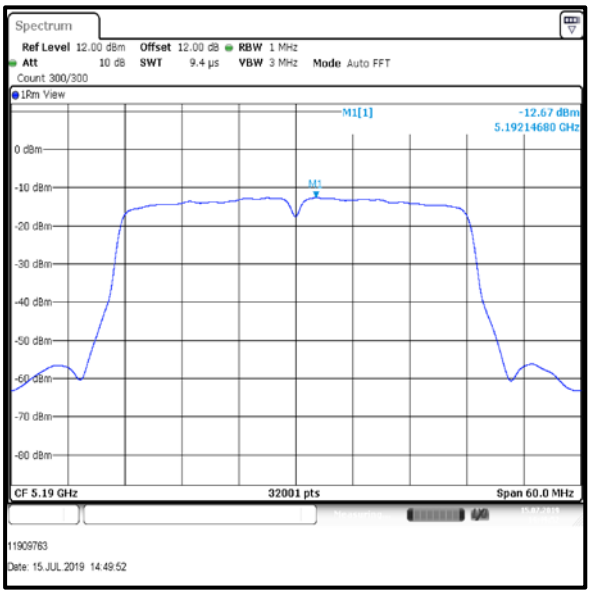

**Bottom Channel**



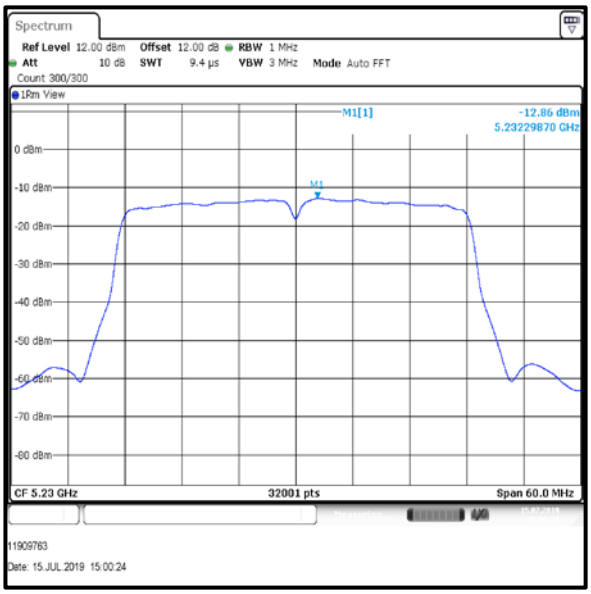

**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11n / HT40 / MCS0 / MIMO / Port 3 / PWL 9 / 23 dBi Antenna Group

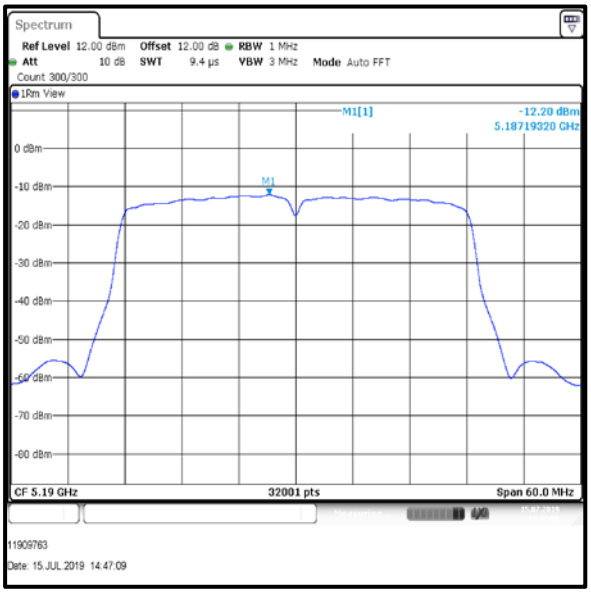



**Bottom Channel**

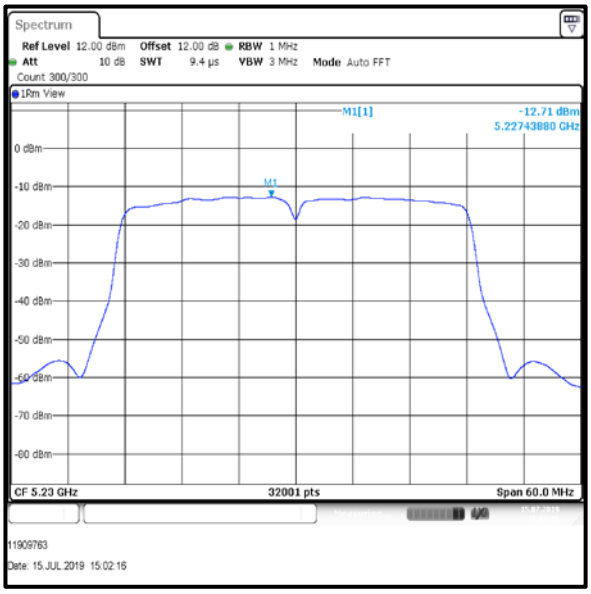



**Top Channel**

## Results: 802.11n / HT40 / MCS0 / MIMO / Port 4 / PWL 9 / 23 dBi Antenna Group




**Bottom Channel**




**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11ac / HT40 / MCS0 / MIMO / Port 1+2+3+4 / PWL 9 / 23 dBi Antenna Group

| Channel | Port 1 | | | Port 2 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -13.5 | 0.4 | -13.1 | -13.5 | 0.4 | -13.1 |
| Top | -13.5 | 0.4 | -13.1 | -13.6 | 0.4 | -13.2 |

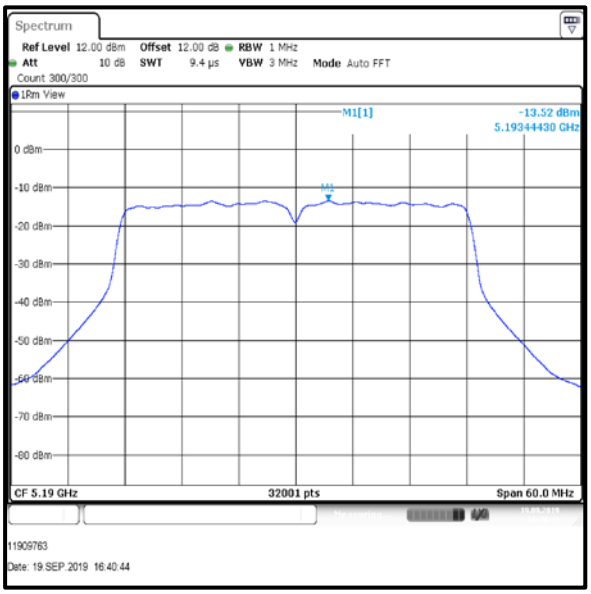
| Channel | Port 3 | | | Port 4 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Bottom | -14.4 | 0.4 | -14.0 | -14.1 | 0.4 | -13.7 |
| Top | -14.6 | 0.4 | -14.2 | -14.3 | 0.4 | -13.9 |

| Channel | Corrected PSD Port 1 (dBm /MHz) | Corrected PSD Port 2 (dBm /MHz) | Corrected PSD Port 3 (dBm /MHz) | Corrected PSD Port 4 (dBm /MHz) | Combined PSD (dBm /MHz) | Limit (dBm/MHz) | Margin (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| Bottom | -13.1 | -13.1 | -14.0 | -13.7 | -7.4 | -3.3 | 4.1 | Complied |
| Top | -13.1 | -13.2 | -14.2 | -13.9 | -7.6 | -3.3 | 4.3 | Complied |

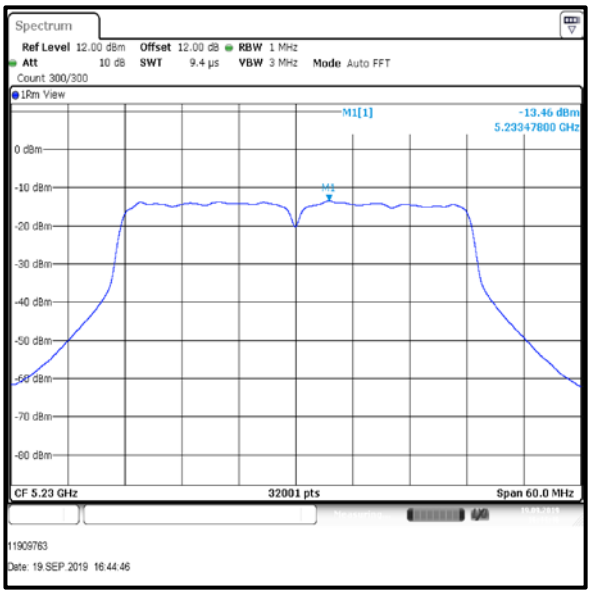
**Result: Pass**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11ac / HT40 / MCS0 / MIMO / Port 1 / PWL 9 / 23 dBi Antenna Group

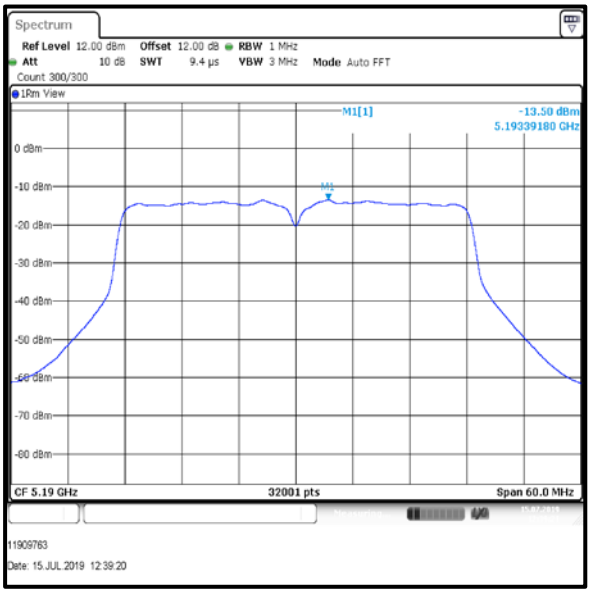



**Bottom Channel**

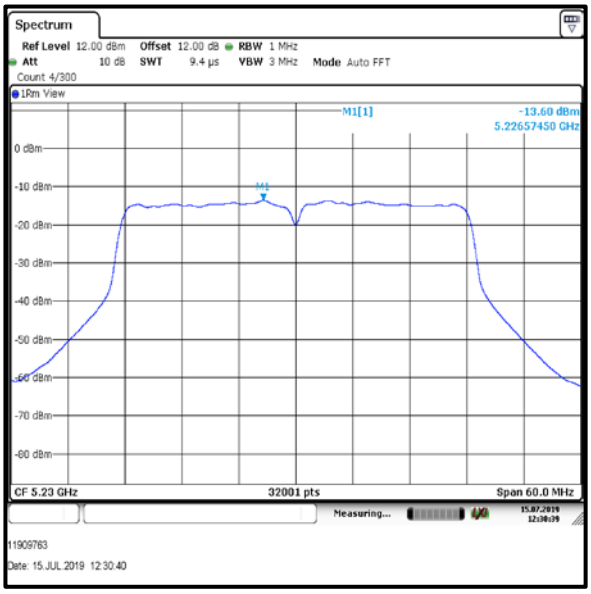



**Top Channel**

## Results: 802.11ac / HT40 / MCS0 / MIMO / Port 2 / PWL 9 / 23 dBi Antenna Group



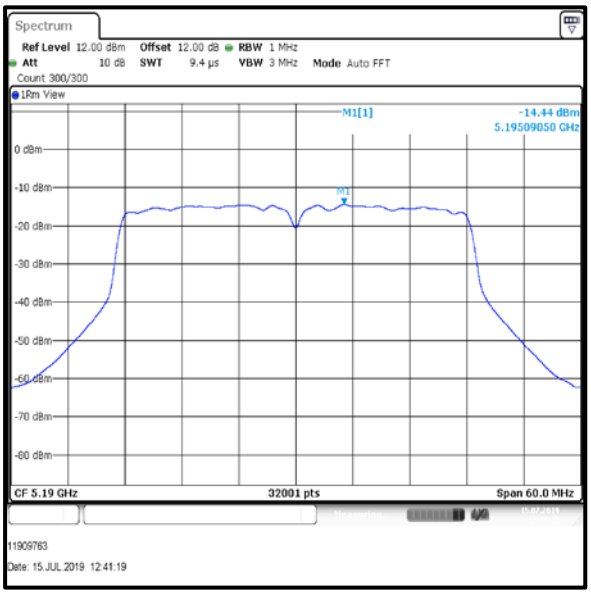

**Bottom Channel**



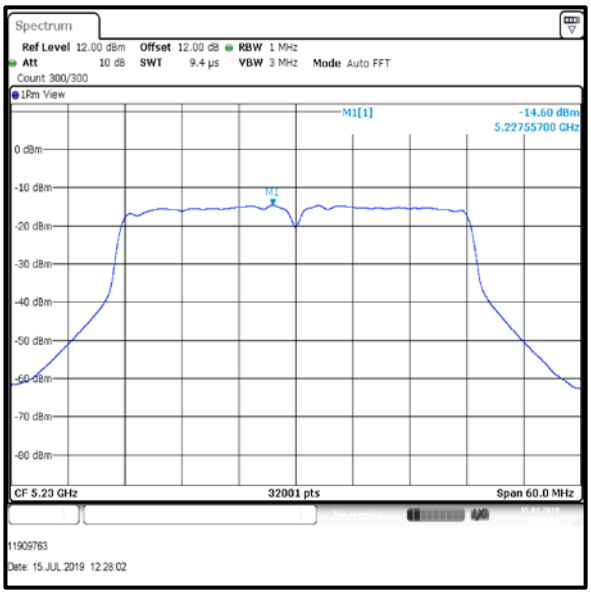

**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11ac / HT40 / MCS0 / MIMO / Port 3 / PWL 9 / 23 dBi Antenna Group

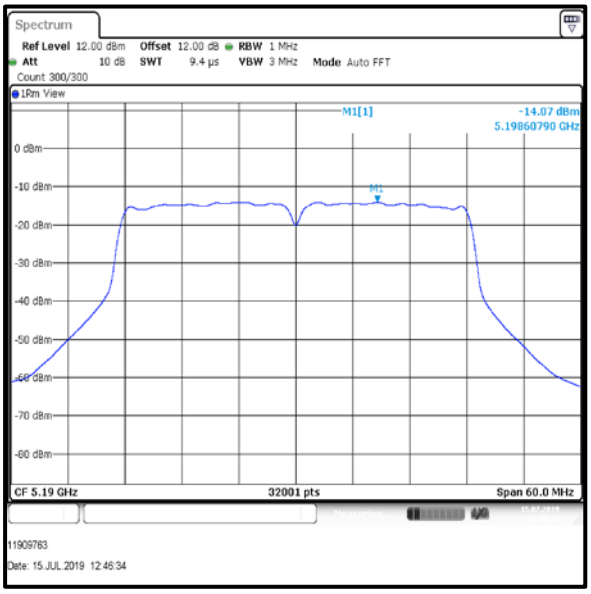



**Bottom Channel**

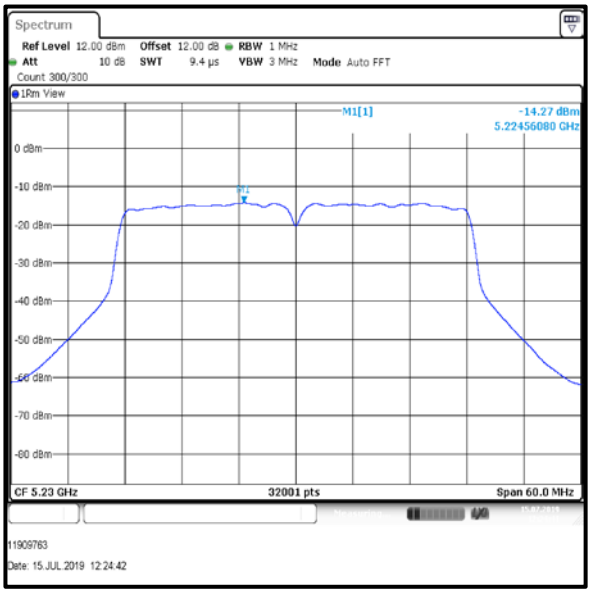



**Top Channel**

## Results: 802.11ac / HT40 / MCS0 / MIMO / Port 4 / PWL 9 / 23 dBi Antenna Group




**Bottom Channel**




**Top Channel**

## Transmitter Maximum Power Spectral Density (continued)

## Results: 802.11ac / HT80 / MCS0 / MIMO / Port 1+2+3+4 / PWL 9 / 23 dBi Antenna Group

| Channel | Port 1 | | | Port 2 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Single | -17.3 | 0.5 | -16.8 | -17.2 | 0.5 | -16.7 |

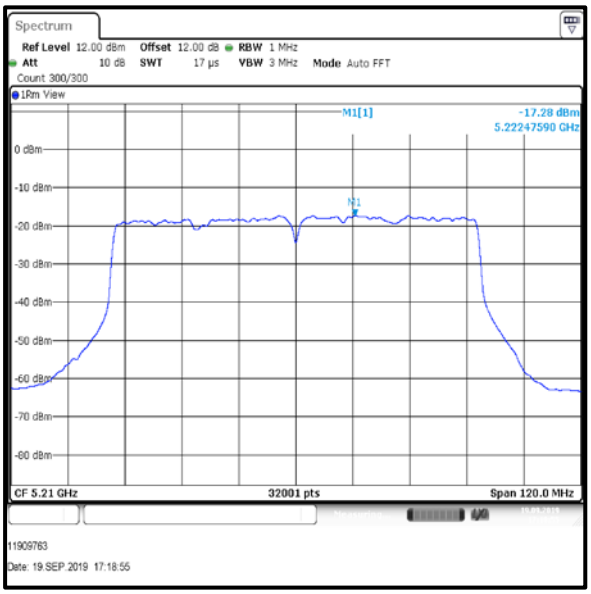
| Channel | Port 3 | | | Port 4 | | |
|---|---|---|---|---|---|---|
| | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) | PSD (dBm /MHz) | Duty Cycle Correction (dB) | Corrected PSD (dBm /MHz) |
| Single | -17.8 | 0.5 | -17.3 | -17.7 | 0.5 | -17.2 |

| Channel | Corrected PSD Port 1 (dBm /MHz) | Corrected PSD Port 2 (dBm /MHz) | Corrected PSD Port 3 (dBm /MHz) | Corrected PSD Port 4 (dBm /MHz) | Combined PSD (dBm /MHz) | Limit (dBm/MHz) | Margin (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| Single | -16.8 | -16.7 | -17.3 | -17.2 | -11.0 | -3.3 | 7.7 | Complied |

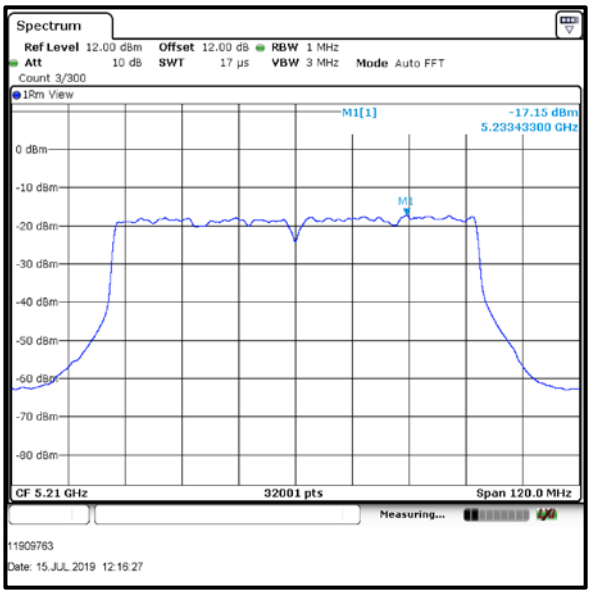
**Result: Pass**

## Transmitter Maximum Power Spectral Density (continued)

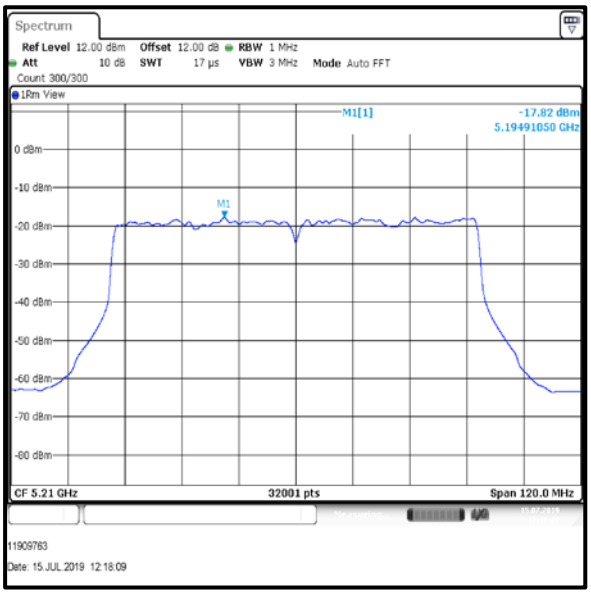
## Results: 802.11ac / HT80 / MCS0 / MIMO / Port 1+2+3+4 / PWL 9 / 23 dBi Antenna Group



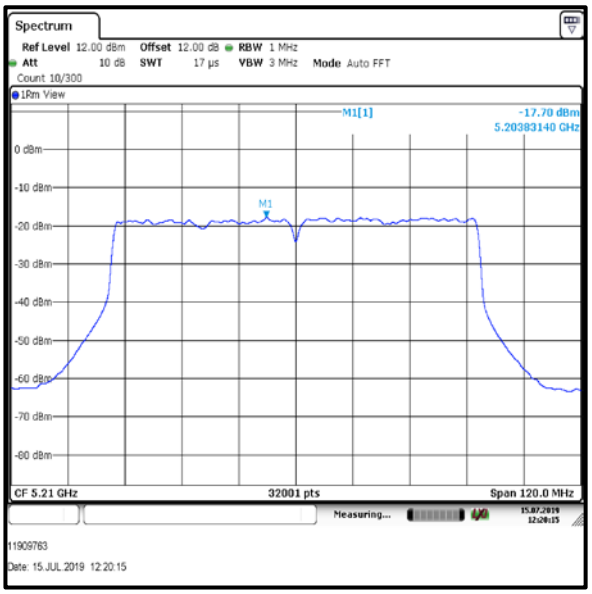

Single Channel Port 1




Single Channel Port 2




Single Channel Port 3




Single Channel Port 4

## 5.2.6. Transmitter Cabinet Radiated Emissions

### Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineer:** | Krume Ivanov | **Test Date:** | 17 April 2019 |
| **Test Sample Serial Number:** | 192.168.0.80 | | |
| **Test Site Identification** | SR 1/2 | | |

| | |
|---|---|
| **FCC Reference:** | Part 15.407(b)(1),(6),(7) & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3 & II.G.4<br>ANSI C63.10 Sections 6.3 and 6.4 |
| **Frequency Range** | 9 kHz to 30 MHz |

### Environmental Conditions:

| | |
|---|---|
| **Temperature (°C):** | 20 |
| **Relative Humidity (%):** | 30 |

### Notes:

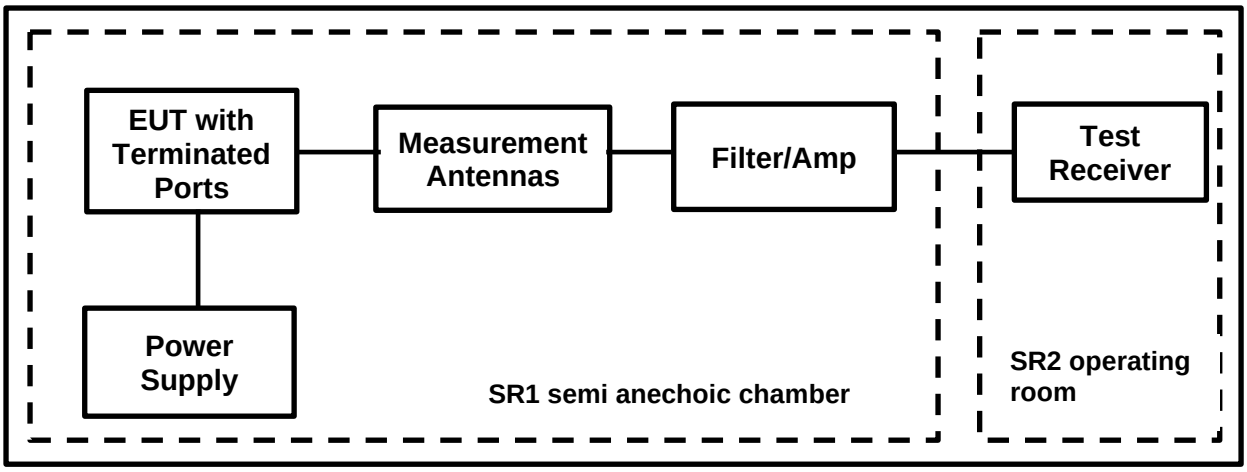
1. In accordance with FCC KDB 414788, an alternative test site may be used for the measurement below 30 MHz (The OATS / SAC comparison data is available upon request). Therefore the result from the semi-anechoic chamber tests is shown in this section of the test report.
2. In accordance with FCC KDB 789033 D02 Section II.G.3.b)(i) & (ii) Transmitter Cabinet Radiated Emissions were performed by terminating EUT's all 4-MIMO Ports with 50 Ω (nominal impedance of antennas).
3. Maximum power setting (PWL) amongst all supported SISO & MIMO modes & listed antenna groups has been used.
4. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
5. The preliminary scans showed similar emission levels below 30 MHz, amongst all supported Bandwidths, SISO & MIMO modes and channel of operations. Therefore final Transmitter Cabinet Radiated Emissions measurements were performed with the EUT set to the worst case modes.
    - Terminated Ports 1+2+3+4 | a Mode | 6 Mbps | B.W. 20 MHz | PWL 18 | CH 36
    - Terminated Ports 1+2+3+4 | n Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 44
    - Terminated Ports 1+2+3+4 | ac Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 48
6. Measurements below 30 MHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) at a distance of 3 m. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. The measurement loop antenna height was 1 m.
7. Pre-scans were performed and markers placed on the highest measured levels. The test receiver was set to:
    - Frequency range: 9 kHz-150kHz : RBW: 300 Hz /VBW: 1 kHz
    - Frequency range: 150 kHz – 30 MHz: RBW: 10 kHz /VBW: 30 kHz
    - Detector: Max-Peak detector
    - Trace Mode: Max Hold
8. Final measurements were performed on the marker frequencies and the results entered into the table below. All other emissions were greater than 20 dB below the applicable limit, below the noise floor of the measurement system or ambient.

## Transmitter Cabinet Radiated Emissions (continued)

## Notes (continued):

9. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 9 kHz, using a max-peak detector and span big enough to see the whole emission.
10. The final measured value, for the given emission, in the table below incorporates the measured cabinet radiated emission level, distance extrapolation factor, calibrated antenna factor and cable loss.
11. In accordance with ANSI C63.10 Section 12.7.5 Compliance is determined using max-peak detector, as an alternative to quasi-peak detector.
12. EMC32 V10.1.0 Software was used for these measurements.

## Test Setup:

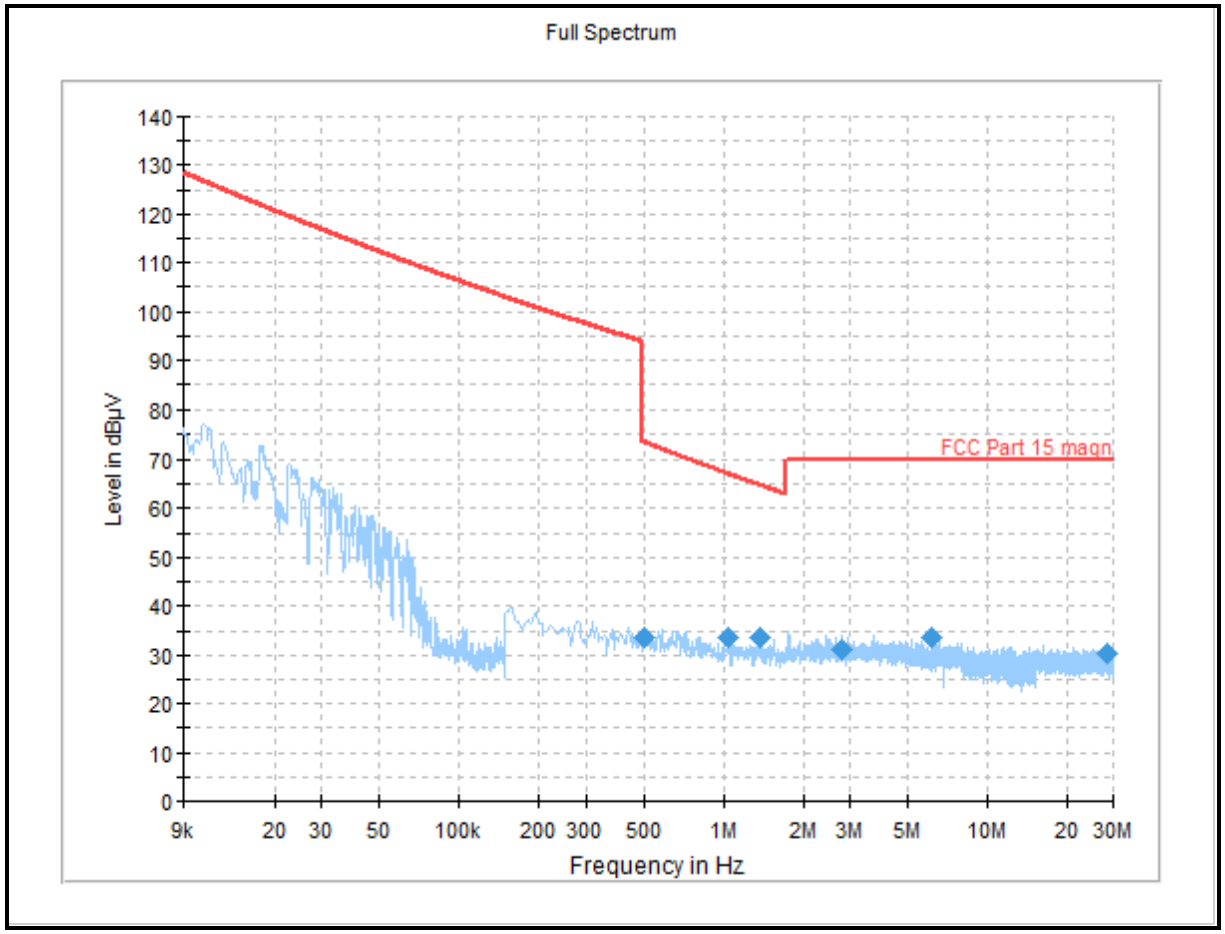


## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / Terminated Ports 1+2+3+4 / PWL 18 / CH 36

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 0.497 | Horizontal | 33.48 | 73.66 | 40.18 | Complied |
| 1.029 | Horizontal | 33.48 | 67.14 | 33.66 | Complied |
| 1.360 | Horizontal | 33.49 | 64.81 | 31.32 | Complied |
| 2.796 | Vertical | 31.08 | 70.00 | 38.92 | Complied |
| 6.100 | Horizontal | 33.48 | 70.00 | 36.52 | Complied |
| 28.295 | Vertical | 30.26 | 70.00 | 39.74 | Complied |

## Plot : 9 k HZ to 30 MHz



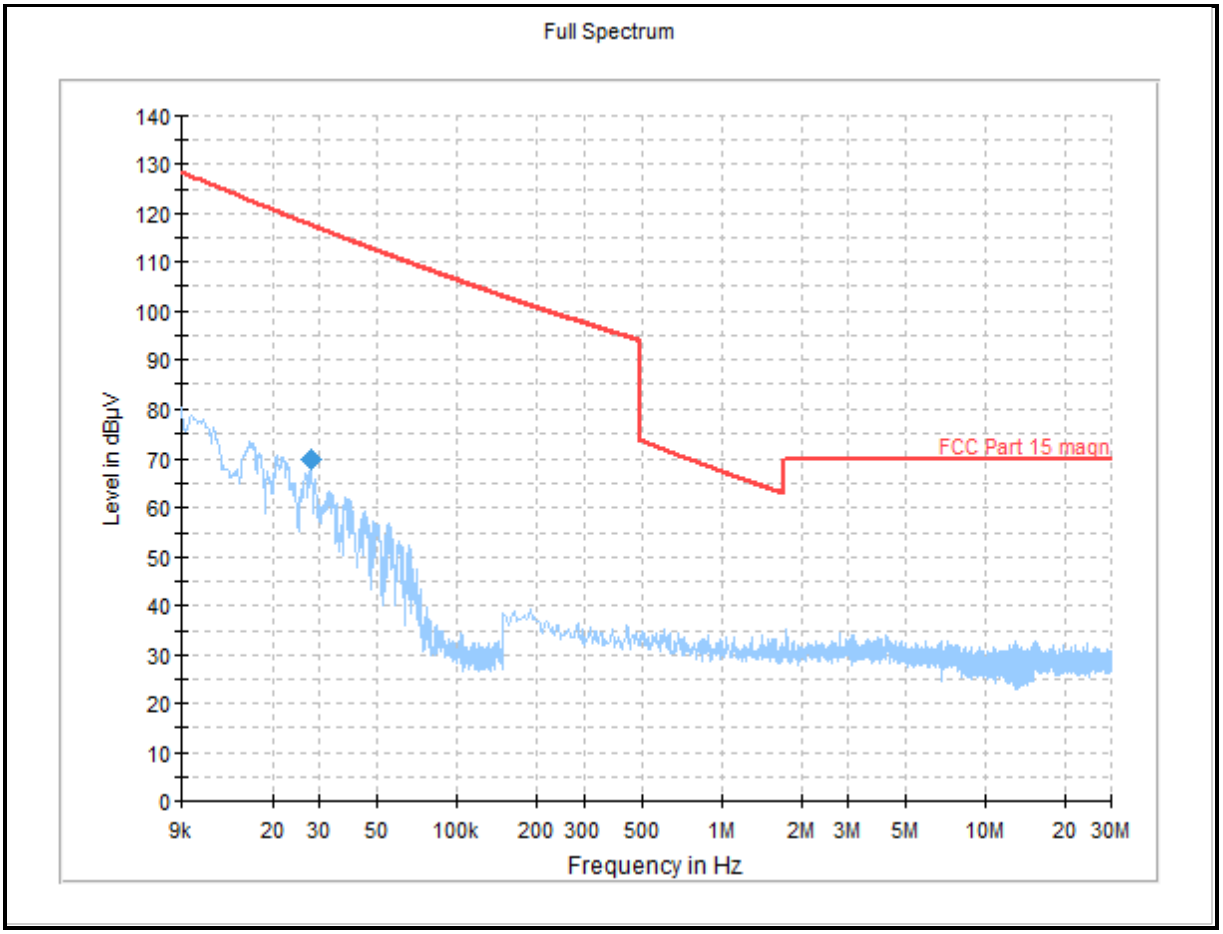

**Result:** Pass

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 44

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 0.027 | Horizontal | 69.85 | 117.60 | 47.75 | Complied |

## Plot : 9 k HZ to 30 MHz



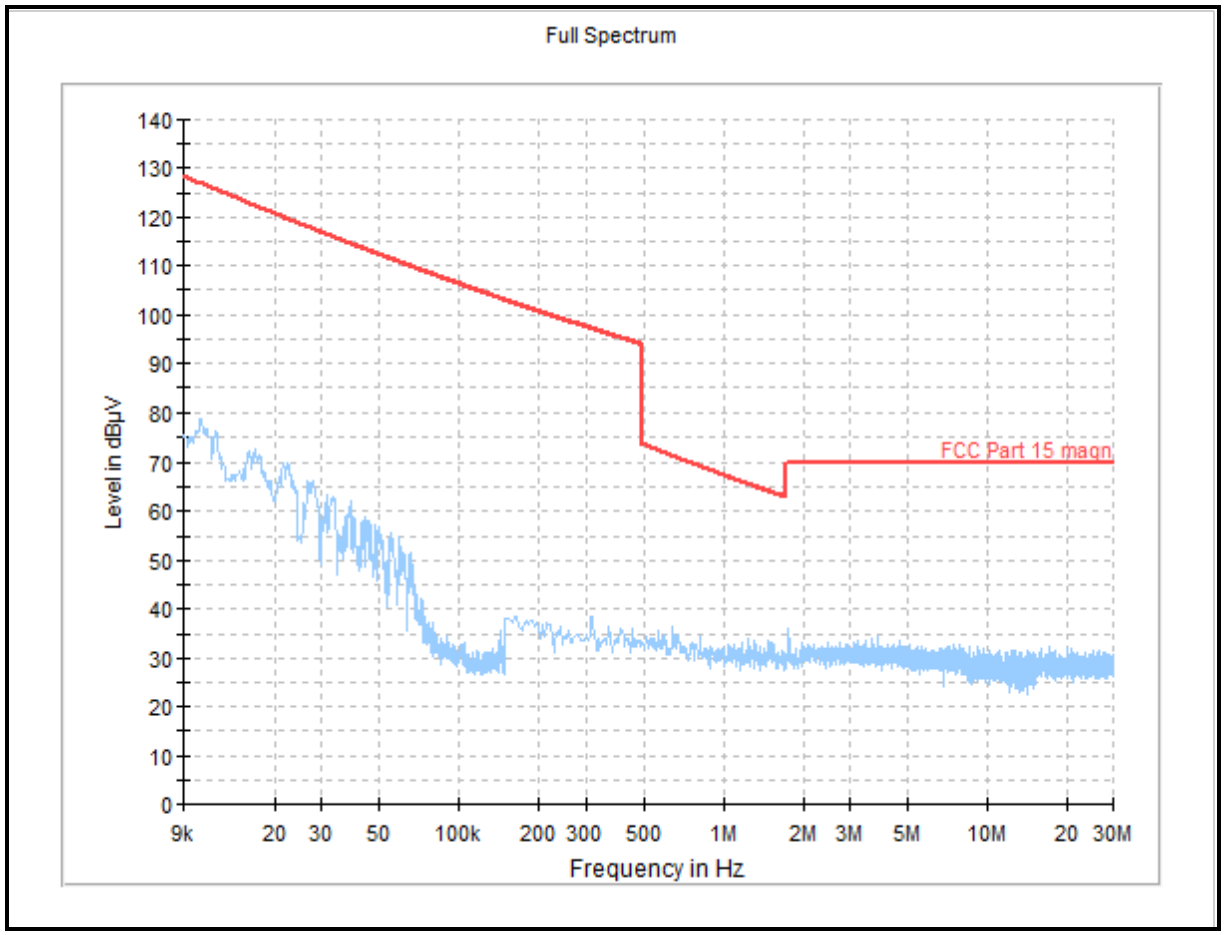

**Result: Pass**

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 48

| Frequency (MHz) | Antenna Polarization | Peak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| No criticals spurious emissions was found | | | | | |

## Plot : 9 k HZ to 30 MHz




**Result: Pass**

## Transmitter Cabinet Radiated Emissions (continued)

## Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineer:** | Krume Ivanov | **Test Date:** | 17 April 2019 |
| **Test Sample Serial Number:** | 192.168.0.80 | | |
| **Test Site Identification** | SR 1/2 | | |

| | |
|---|---|
| **FCC Reference:** | Part 15.407 (b)(1),(6),(7) & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3 & II.G.4<br>ANSI C63.10 Sections 6.3 and 6.5 |
| **Frequency Range** | 30 MHz to 1000 MHz |

## Environmental Conditions:

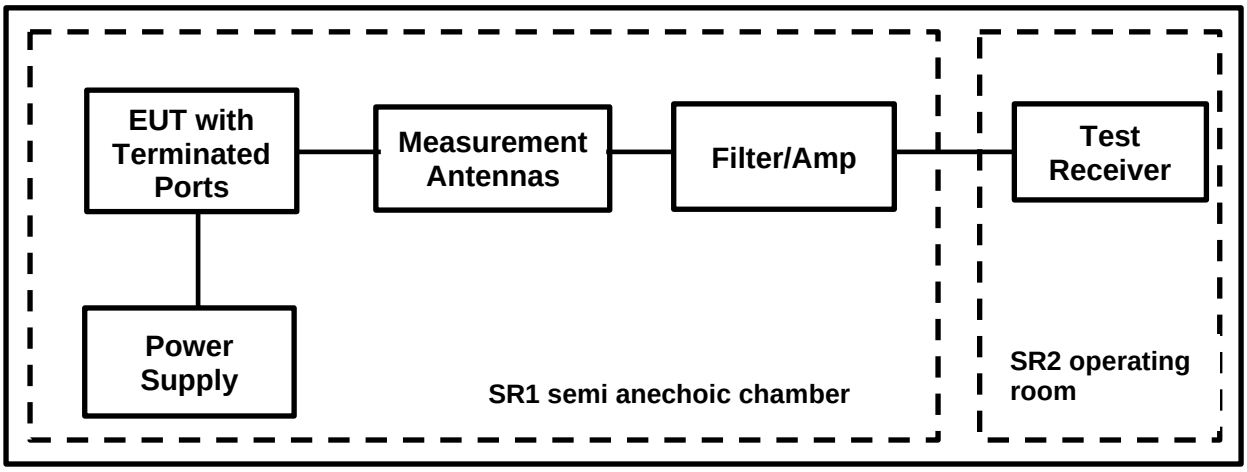
| | |
|---|---|
| **Temperature (°C):** | 20 |
| **Relative Humidity (%):** | 30 |

## Notes:

1. In accordance with FCC KDB 789033 D02 Section II.G.3.b)(i) & (ii) Transmitter Cabinet Radiated Emissions were performed by terminating EUT's all 4-MIMO Ports with 50 Ω (nominal impedance of antennas).
2. Maximum power setting (PWL) amongst all supported SISO & MIMO modes & listed antenna groups has been used.
3. The preliminary scans showed similar emission levels below 1 GHz, amongst all supported Bandwidths, SISO & MIMO modes and channel of operations. Therefore final Transmitter Cabinet Radiated Emissions measurements were performed with the EUT set to the worst case modes.
    - Terminated Ports 1+2+3+4 | a Mode | 6 Mbps | B.W. 20 MHz | PWL 18 | CH 36
    - Terminated Ports 1+2+3+4 | n Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 44
    - Terminated Ports 1+2+3+4 | ac Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 48
4. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
5. Measurements below 1 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) at a distance of 3 m. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 m to 4 m.
6. Pre-scans were performed and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold.
7. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 120 kHz, using a max-peak detector and span big enough to see the whole emission.
8. In accordance with ANSI C63.10 Section 12.7.5 Compliance is determined using max-peak detector, as an alternative to quasi-peak detector.
9. The measured value, for the given emission, in the table below incorporates the measured cabinet radiated emission level, calibrated antenna factor and cable loss.
10. EMC32 V10.1.0 Software was used for these measurements.

**Transmitter Cabinet Radiated Emissions (continued)**

**Test Setup:**

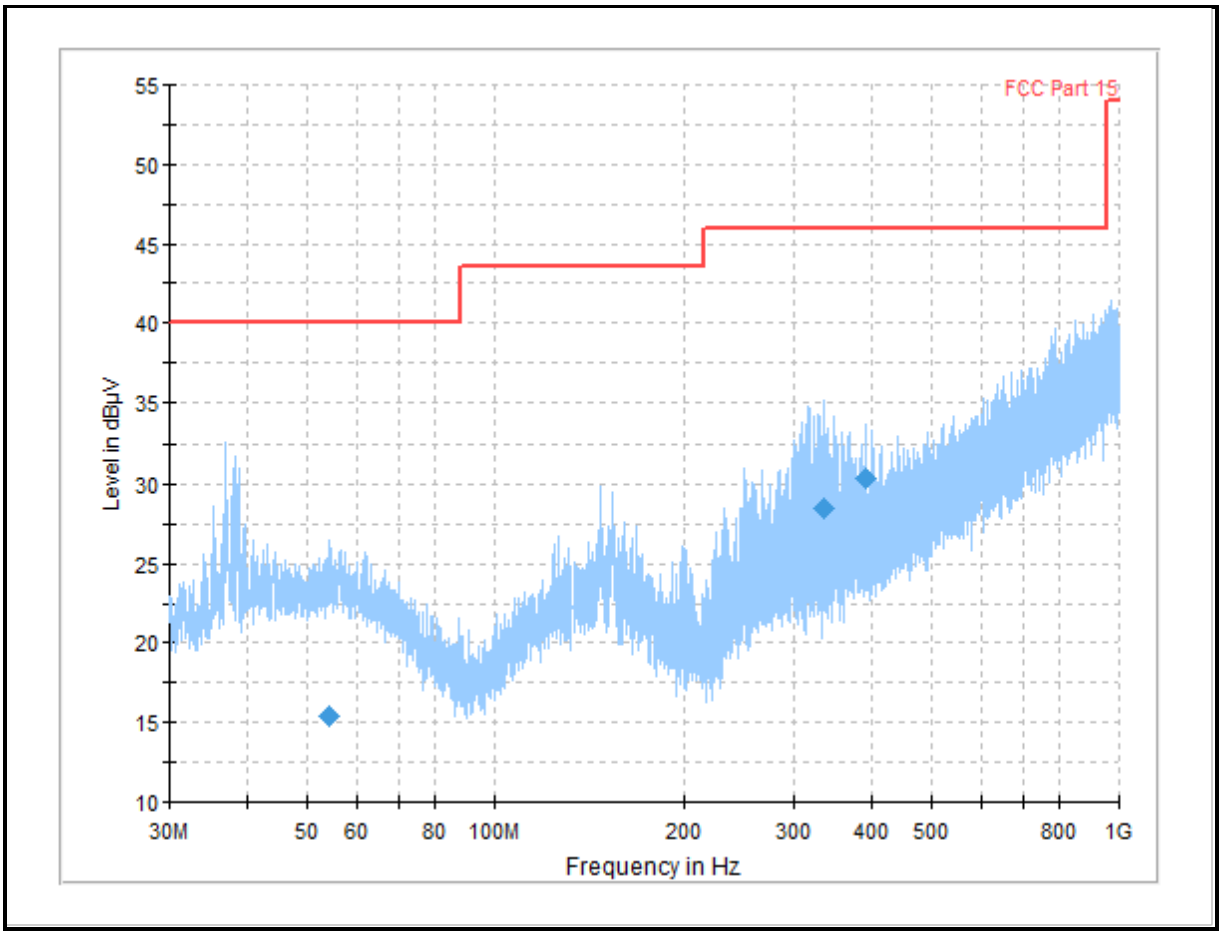


## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / Terminated Ports 1+2+3+4 / PWL 18 / CH 36

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 54.165 | Vertical | 15.43 | 40.00 | 24.57 | Complied |
| 334.733 | Horizontal | 28.46 | 46.00 | 17.54 | Complied |
| 392.600 | Horizontal | 30.32 | 46.00 | 15.68 | Complied |

## Plot : 30 MHz to 1 GHz



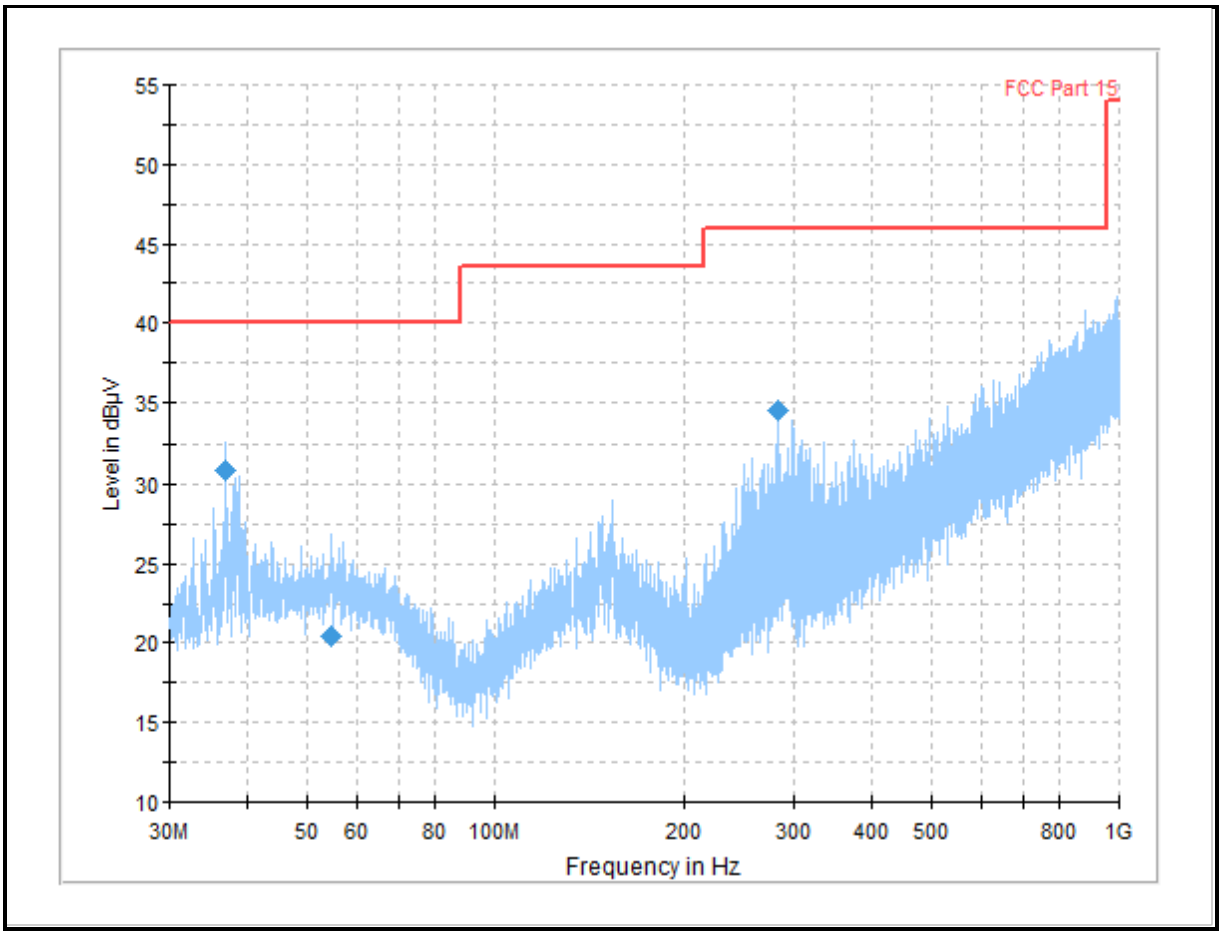

**Result: Pass**

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 44

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 36.930 | Vertical | 30.85 | 40.00 | 9.15 | Complied |
| 54.570 | Vertical | 20.39 | 40.00 | 19.61 | Complied |
| 283.755 | Horizontal | 34.45 | 46.00 | 11.55 | Complied |

## Plot : 30 MHz to 1 GHz



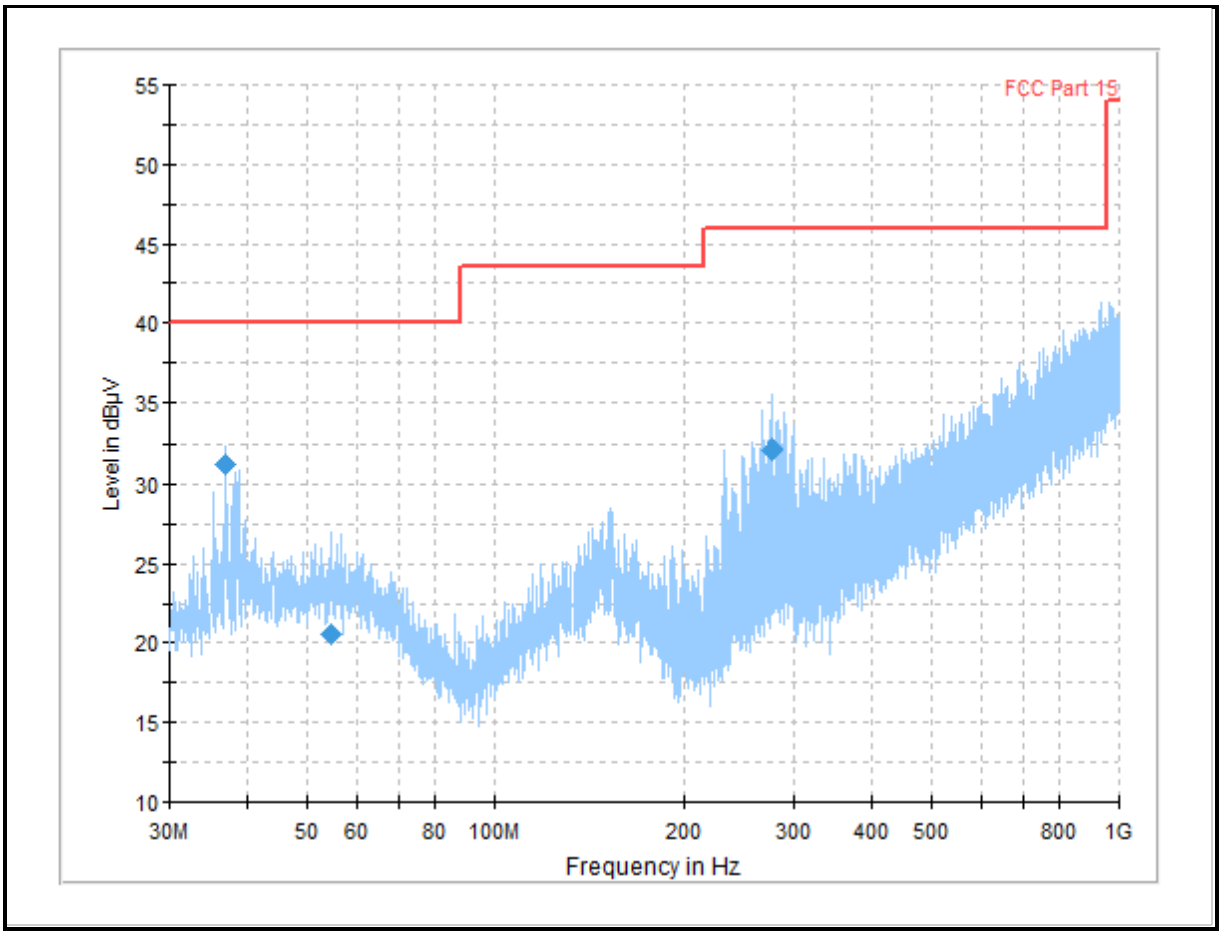

**Result:** Pass

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 48

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 36.930 | Vertical | 31.24 | 40.00 | 8.76 | Complied |
| 54.570 | Vertical | 20.50 | 40.00 | 19.5 | Complied |
| 276.555 | Horizontal | 32.07 | 46.00 | 13.93 | Complied |

## Plot : 30 MHz to 1 GHz




**Result:** Pass

## Transmitter Cabinet Radiated Emissions (continued)

## Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineer:** | Krume Ivanov | **Test Dates:** | 04 April 2019 & 21 October 2019 |
| **Test Sample Serial Number:** | 192.168.0.80 | | |
| **Test Site Identification** | SR 1/2 | | |

| | |
|---|---|
| **FCC Reference:** | Part 15.407 (b)(4),(6),(7) & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3, II.G.5 & II.G.6<br>ANSI C63.10 Sections 6.3 and 6.6 |
| **Frequency Range** | 1 GHz to 40 GHz |

## Environmental Conditions:

| | |
|---|---|
| **Temperature (°C):** | 20 to 22 |
| **Relative Humidity (%):** | 30 to 51 |

## Notes:

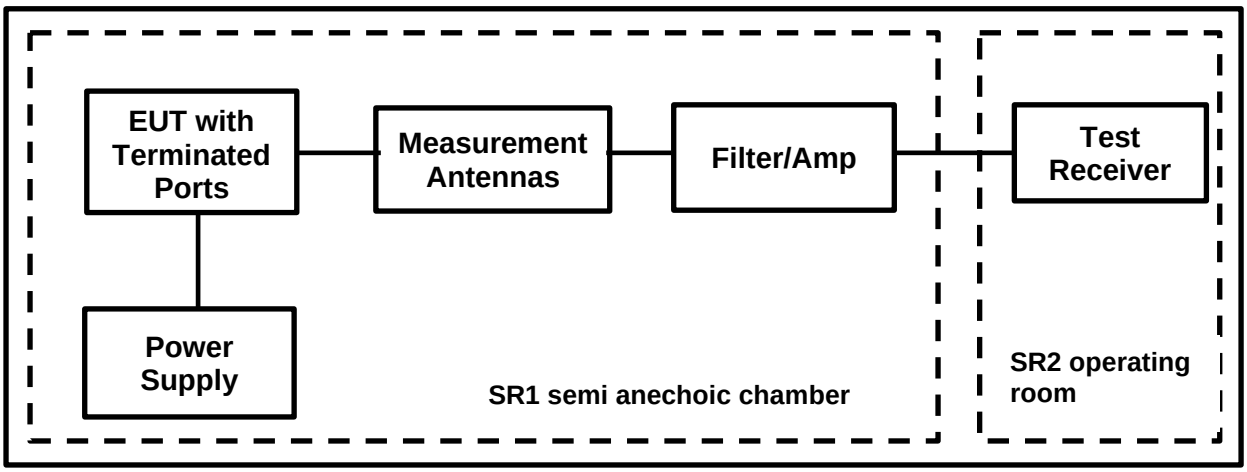
1. In accordance with FCC KDB 789033 D02 Section II.G.3.b)(i) & (ii) Transmitter Cabinet Radiated Emissions were performed by terminating EUT's all 4-MIMO Ports with 50 Ω (nominal impedance of antennas).
2. Maximum power setting (PWL) amongst all supported SISO & MIMO modes & listed antenna groups has been used.
3. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
4. The preliminary scans showed similar emission levels above 1 GHz, amongst all supported Bandwidths, SISO & MIMO modes and channel of operations. Therefore final Transmitter Cabinet Radiated Emissions measurements were performed with the EUT set to the worst case modes.
    - Terminated Ports 1+2+3+4 | a Mode | 6 Mbps | B.W. 20 MHz | PWL 18 | CH 36
    - Terminated Ports 1+2+3+4 | n Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 44
    - Terminated Ports 1+2+3+4 | ac Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 48
5. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
6. Pre-scans above 1 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with absorber on the floor at a distance of 3 m. The EUT was placed at a height of 1.5 m above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 m above the test chamber floor, in line with the EUT. Final measurements above 1 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with absorber on the floor at a distance of 3 m. The EUT was placed at a height of 1.5 m above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 m to 4 m.
7. Pre-scans were performed and a marker placed on the highest measured level of the appropriate plot. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto.

## Transmitter Cabinet Radiated Emissions (continued)

## Notes (continued):

8. The emissions shown at frequencies approximately 5.1 GHz to 5.3 GHz on the 1 GHz to 18 GHz are the EUT fundamental for the tested channel.
9. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 120 kHz, using a max-peak detector and span big enough to see the whole emission.
10. In accordance with ANSI C63.10 Section 6.6.4.3 (Note 1), if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
11. The final measured value, for the given emission, in the table below incorporates the measured cabinet radiated emission level, calibrated antenna factor and cable loss.
12. EMC32 V10.1.0 Software was used for these measurements.
13. The preliminary scans showed similar emission levels above 18 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to:
    - Terminated Ports 1+2+3+4 | a Mode | 6 Mbps | B.W. 20 MHz | PWL 18 | CH 36
    - Terminated Ports 1+2+3+4 | ac Mode | MCS0 | B.W. 20 MHz | PWL 18 | CH 48
14. Pre-scans above 18 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) at a distance of 1 metres. The EUT was placed at a height of 1.5 m above the test chamber floor in the centre of the chamber turntable. All measurement antenna was placed at a fixed height of 1.5 m above the test chamber floor, in line with the EUT.
15. Pre-scans were performed and a marker placed on the highest measured level of the appropriate plot. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto.
16. In accordance with ANSI C63.10 Section 6.6.4.3 (Note 1), if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
17. The final measured value, for the given emission, in the table below incorporates the measured cabinet radiated emission level, calibrated antenna factor and cable loss.
18. The final measured values at 1 meter distance are then compared with extrapolated limits values ( 3 to 1 m) by addting relevant distance extrapolation factor of 9.54 dB to FCC 15.209 (3 m) limits.
19. Toyo EMI | RE measurement software EP5/RE Ver 4.0.1 Software was used for these measurements.

## Test Setup:

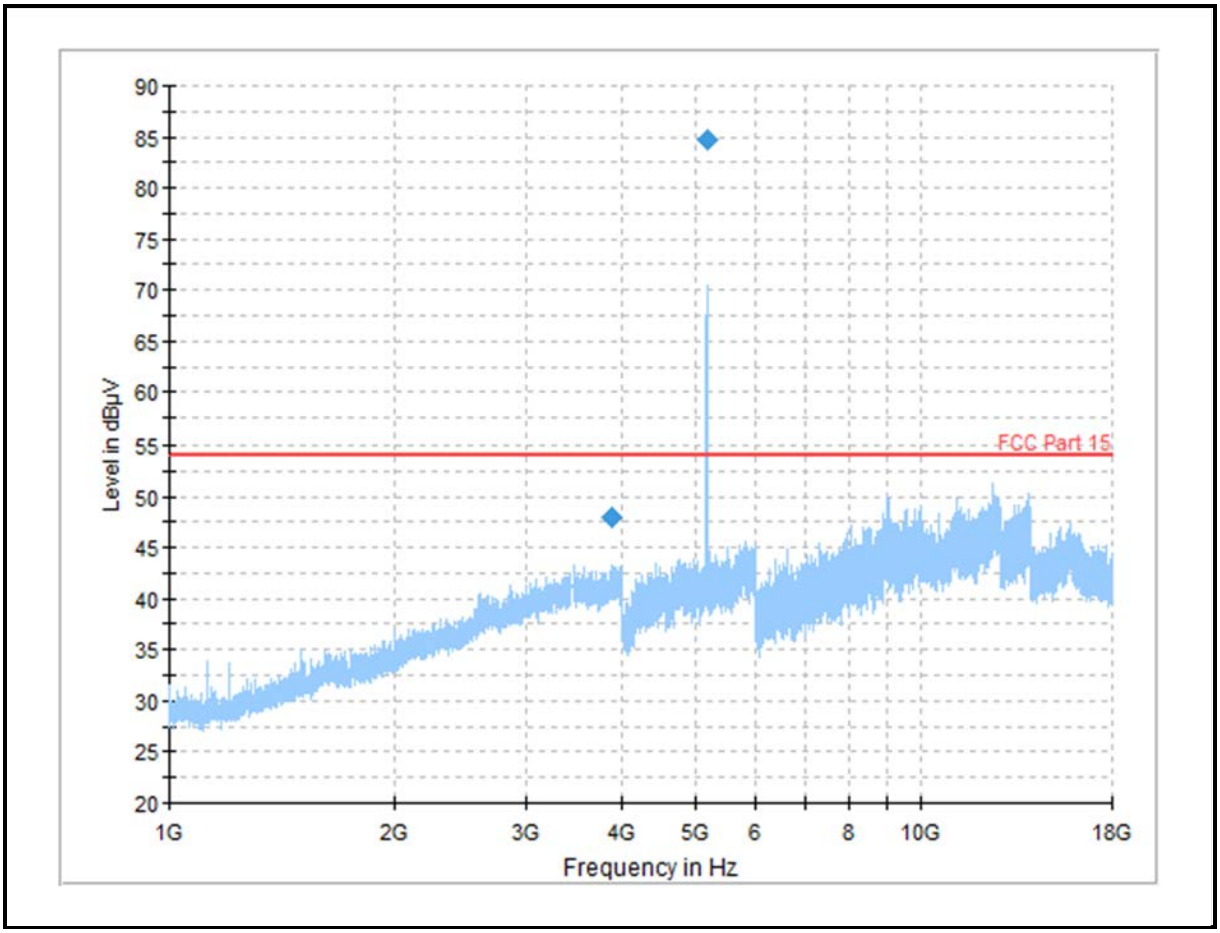


## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / Terminated Ports 1+2+3+4 / PWL 18 / CH 36

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 3869.100 | Vertical | 47.97 | 54.00 | 6.03 | Complied |

## Plot: 1 GHz to 18 GHz



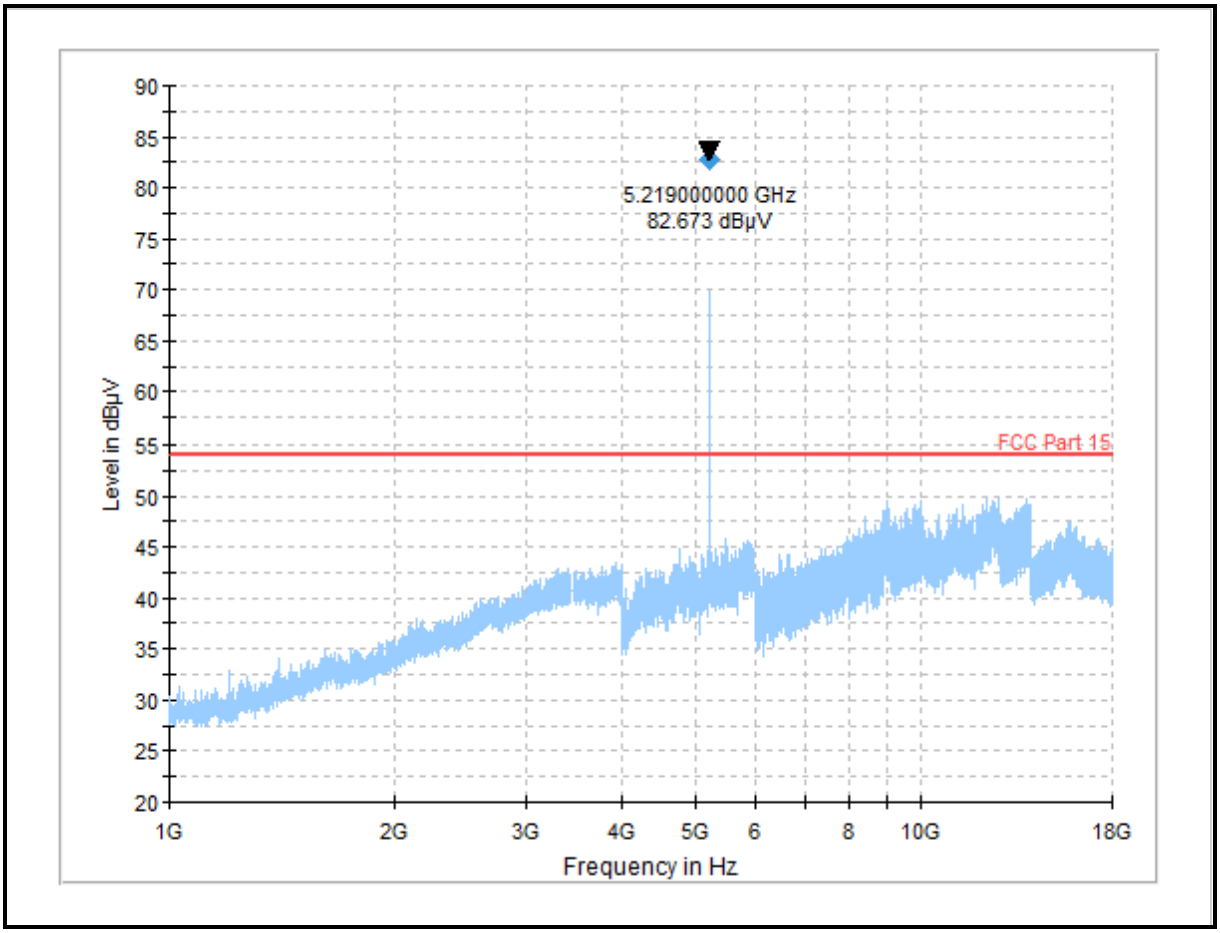

**Result: Pass**

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 44

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | |

## Plot: 1 GHz to 18 GHz



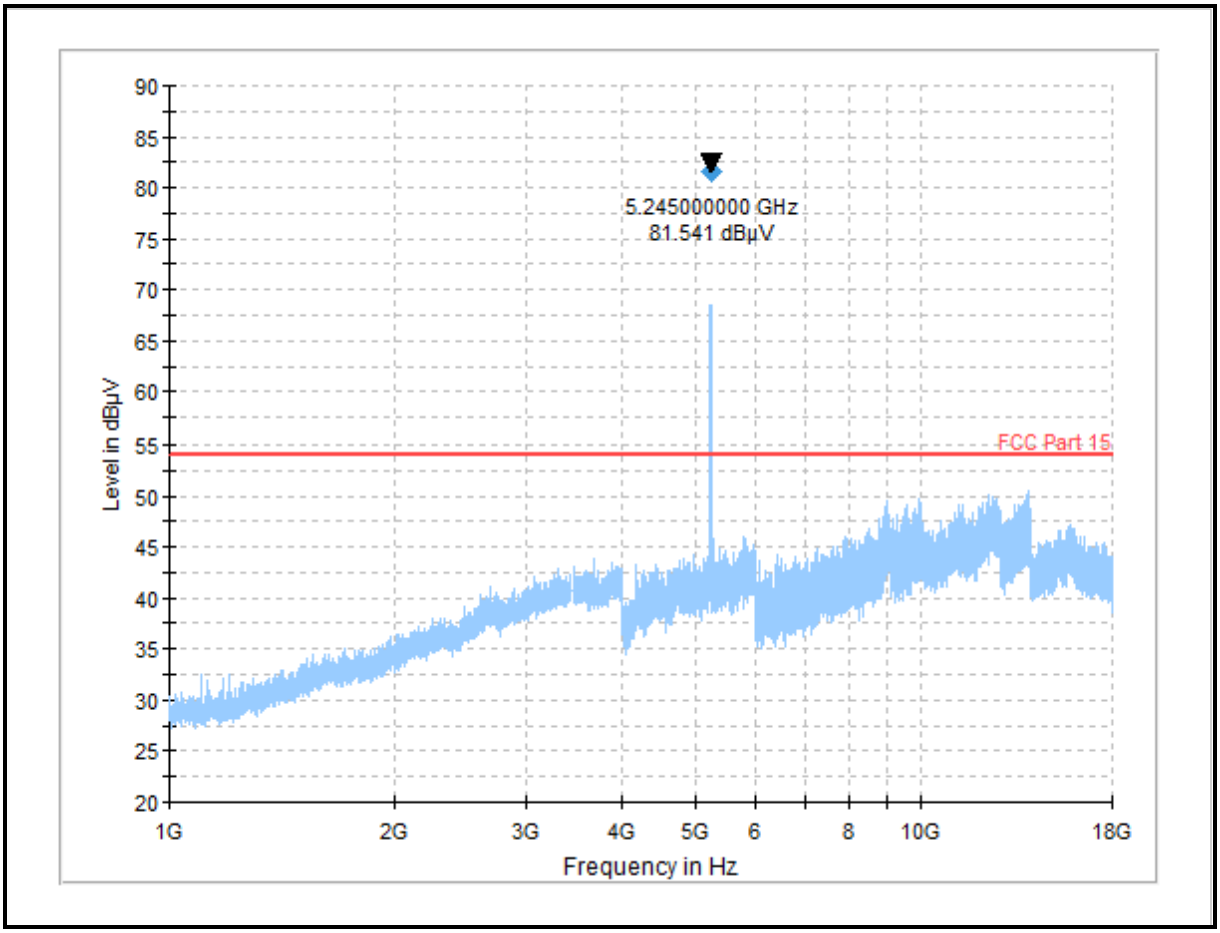

**Result:** Pass

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 48

| Frequency (MHz) | Antenna Polarization | MaxPeak Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | |

## Plot: 1 GHz to 18 GHz



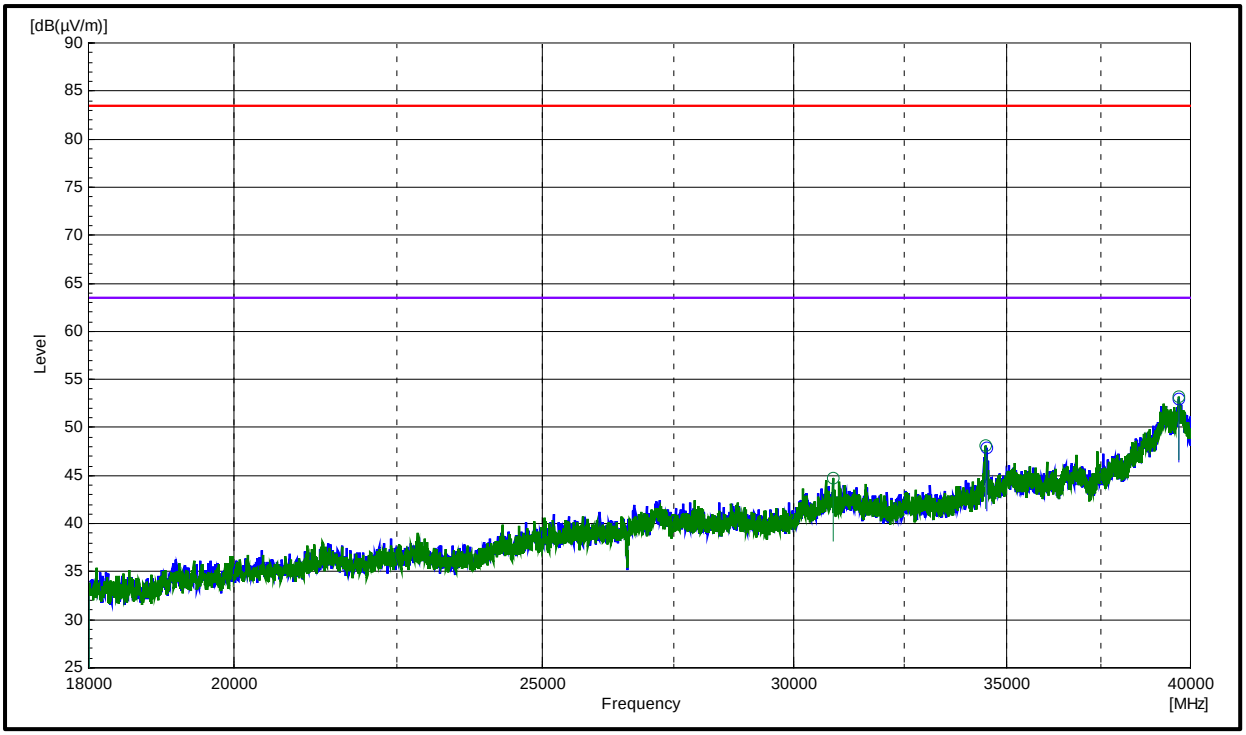

**Result:** Pass

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / Terminated Ports 1+2+3+4 / PWL 18 / CH 36

| Frequency (MHz) | Antenna Polarization | MaxPeak Level @1m (dBµV/m) | Average Limit @1m (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 30865.386 | Vertical | 44.80 | 63.54 | 18.74 | Complied |
| 34479.168 | Vertical | 48.10 | 63.54 | 15.44 | Complied |
| 34511.216 | Horizontal | 47.90 | 63.54 | 15.64 | Complied |
| 39667.468 | Horizontal | 53.00 | 63.54 | 10.54 | Complied |
| 39671.476 | Vertical | 53.20 | 63.54 | 10.34 | Complied |

## Plot: 18 GHz to 40 GHz



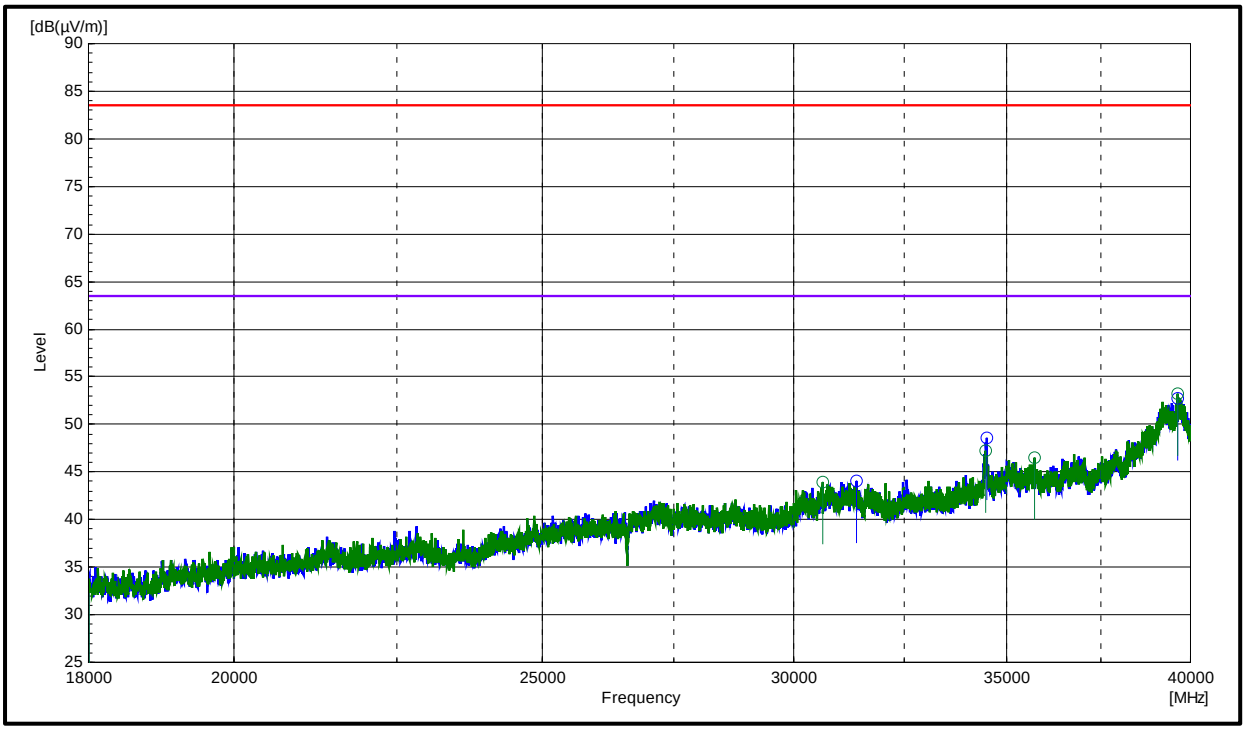

**Result: Pass**

## Transmitter Cabinet Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / Terminated Ports 1+2+3+4 / PWL 18 / CH 48

| Frequency (MHz) | Antenna Polarization | MaxPeak Level @1m (dBµV/m) | Average Limit @1m (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|
| 30633.014 | Vertical | 43.90 | 63.54 | 19.64 | Complied |
| 31414.264 | Horizontal | 44.10 | 63.54 | 19.44 | Complied |
| 34479.168 | Vertical | 47.30 | 63.54 | 16.24 | Complied |
| 34503.204 | Horizontal | 48.50 | 63.54 | 15.04 | Complied |
| 35721.152 | Vertical | 46.50 | 63.54 | 17.04 | Complied |
| 39623.396 | Vertical | 53.30 | 63.54 | 10.24 | Complied |

## Plot: 18 GHz to 40 GHz




**Result: Pass**

## 5.2.7. Transmitter Conducted Spurious Emissions

### Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineer:** | Abdoufataou Salifou | **Test Date:** | 02 August 2019 |
| **Test Sample Serial Number:** | 192.168.0.60 | | |
| **Test Site Identification** | SR 9 | | |

| | |
|---|---|
| **FCC Reference:** | Parts 15.407(b)(1),(6),(7) & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3 & II.G.4<br>FCC KDB 662911 D01 Section E)3)(iii) referring Section E)2)c) |
| **Frequency Range:** | 9 kHz to 1000 MHz |

### Environmental Conditions:

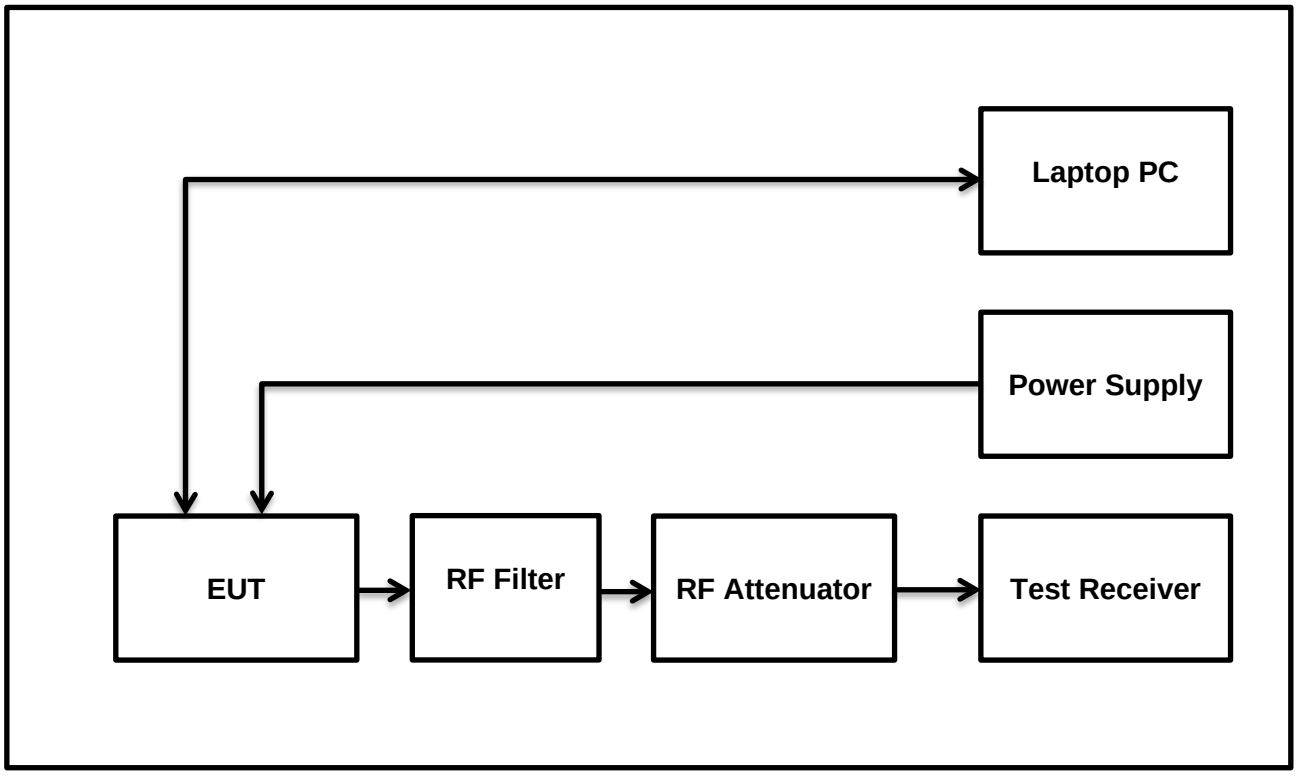
| | |
|---|---|
| **Temperature (°C):** | 22 |
| **Relative Humidity (%):** | 45 |

### Notes:

1. According to FCC KDB 789033 D02 Section II.G.3.b) to compliance of Transmitter Cabinet Radited Emissions additional transmitter conducted spurious emissions were performed.
2. Maximum power setting (PWL) amongst all supported SISO & MIMO modes & listed antenna groups has been used.
3. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
4. During initial investigations amongst all supported Bandwidths, SISO & MIMO modes a HT20 SISO mode showed worst case results. Therefore final transmitter conducted spurious emissions measurements were performed with the EUT set to the worst case a | SISO mode.
5. The preliminary scans showed similar emission levels below 1 GHz, amongst each test channel of operations. Therefore final transmitter conducted spurious emissions measurements were performed with the EUT set to the top channel only and PWL as refer to section 4.3.
6. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values takes into consideration the external attenuation correction factors. The RF cable attenuation (maximum 2.0 dB@5GHz) from the EUT to Analyzer including the 10 dB attenuation at the Spectrum Analyzer input was added as a reference level offset (12.0 dB) to each of the conducted plots.
7. Pre-scans were performed and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold
8. The observed emissions levels (in dBm) on SISO Port are reported into the table.
9. According to FCC KDB 789033 D02 Section II.G.1e) a ground reflection factor was added.
   - Frequencies below 30 MHz: ground reflection factor of 4.7 dB
   - Frequencies between 30 MHz to 1000 MHz: ground reflection factor of 6.0 dB
10. Relevant directional Antenna Gain was added for each type of listed Antenna Groups.
11. According to FCC KDB 662911 D01 Section E)3)(iii) referring Section E)2)c); a factor 10 log($N_{ANT}$) dB, (where $N_{ANT}$ is the number of outputs) was added. Since the EUT has 4 MIMO ports a factor 6.02 dB was added.
12. In accordance with KDB 789033 G.2.d)(iii); transmitter conducted spurious emissions dBm levels have been converted to dBµV/m levels by adding a conversion factor of 95.2.
13. As per applicant's declaration 23 dBi Antenna shall be only used with RF cable of length 10 m having 8.8 dB Attenuation @ 5 GHz bands. Therefore Effective Antenna Gain = 23 dBi – 8.8 dB = 14.2 dBi.

**Transmitter Conducted Spurious Emissions (continued)**

**Test Setup:**



## Transmitter Conducted Spurious Emissions (continued)

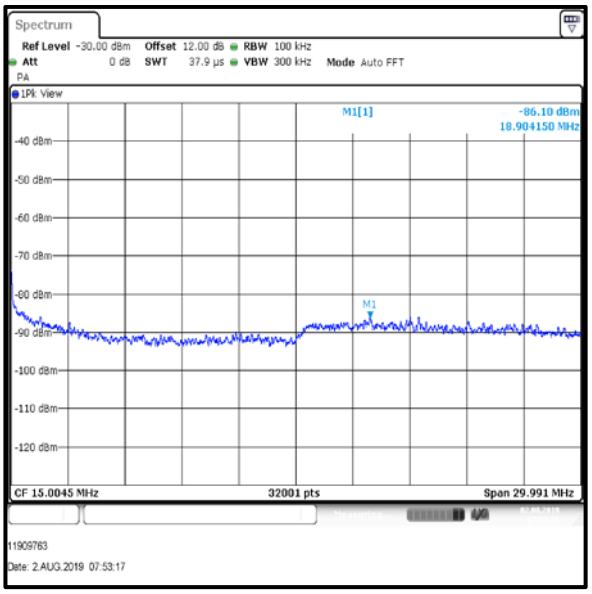
## 8 dBi Antenna Group

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 18 / CH 48 / 8 dBi Antenna Group

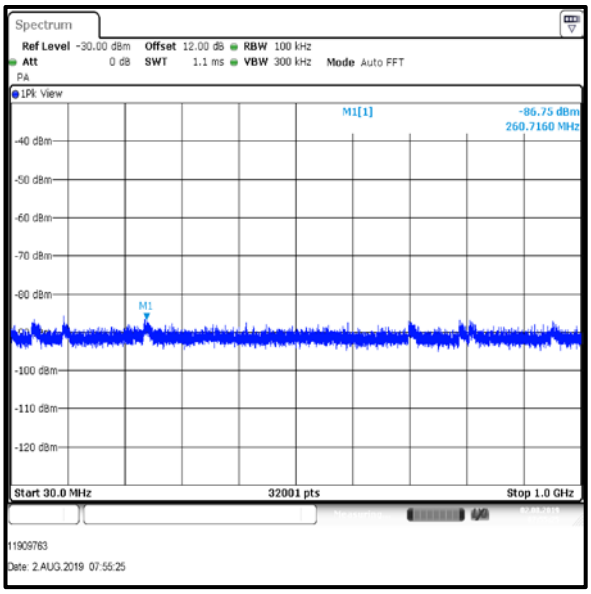
| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | | |

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 18 / CH 48 / 8 dBi Antenna Group




**Plot:9 kHz to 30 MHz**




**Plot:30 MHz to 1 GHz**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

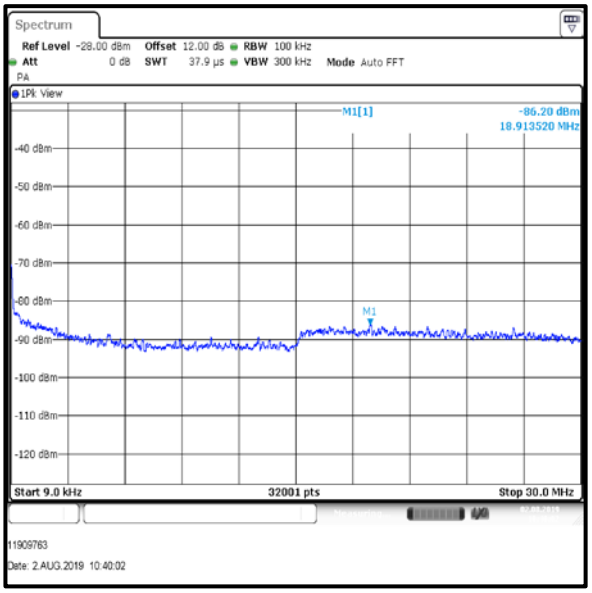
## 9 dBi Antenna Group

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 17 / CH 48 / 9 dBi Antenna Group

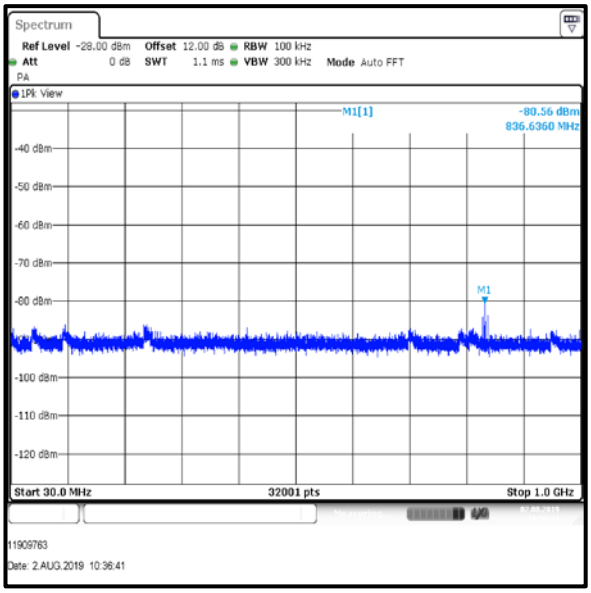
| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 836.600 | -80.32 | 4.7 | 9.0 | 6.02 | -60.60 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 836.600 | -60.60 | 95.20 | 34.60 | 46.0 | 11.40 | Complied |

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 17 / CH 48 / 9 dBi Antenna Group




**Plot:9 kHz to 30 MHz**




**Plot:30 MHz to 1 GHz**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

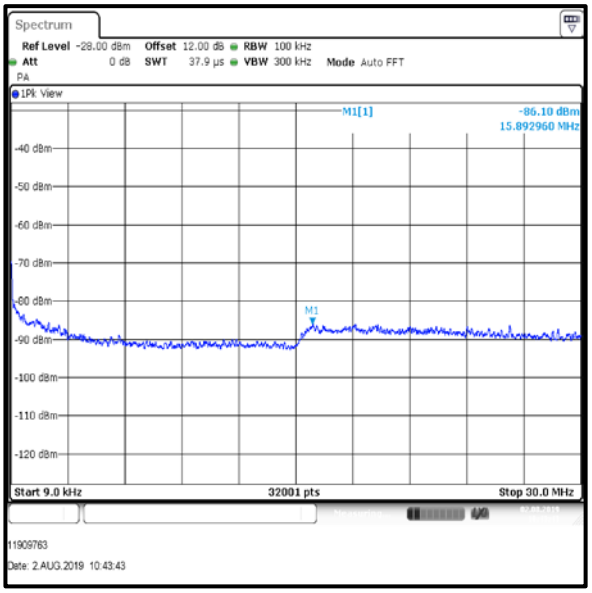
## 23 dBi Antenna Group

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 13 / Ch 48 / 23 dBi Antenna Group

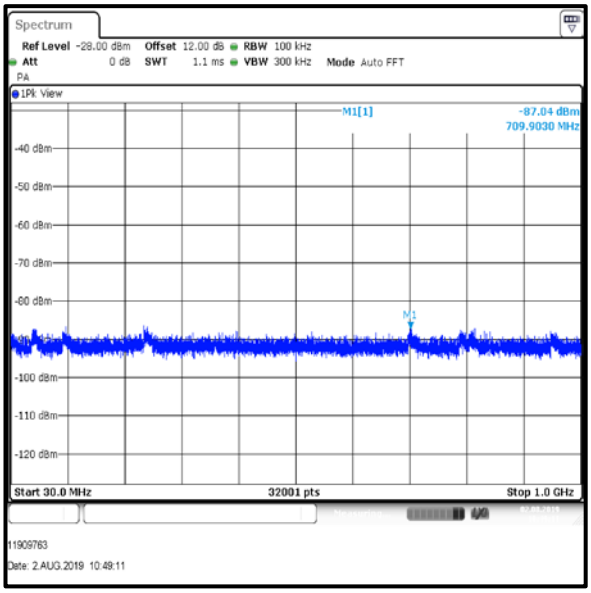
| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| No spurious emissions were detected | | | | | | |

## Results: 802.11a / HT20 / 6 MBits / Port 1 / PWL 13 / Ch 48 / 23 dBi Antenna Group




**Plot:9 kHz to 30 MHz**




**Plot:30 MHz to 1 GHz**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineer:** | Abdoufataou Salifou | **Test Date:** | 2 August 2019 |
| **Test Sample Serial Number:** | 192.168.0.60 | | |
| **Test Site Identification** | SR 9 | | |

| | |
|---|---|
| **FCC Reference:** | Parts 15.407(b)(1),(6),(7) & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3, II.G.5 & II.G.6<br>FCC KDB 662911 D01 Section E)3)(iii) referring Section E)2)c) |
| **Frequency Range:** | 1 GHz to 40 GHz |

## Environmental Conditions:

| | |
|---|---|
| **Temperature (°C):** | 23 |
| **Relative Humidity (%):** | 44 |

## Notes:

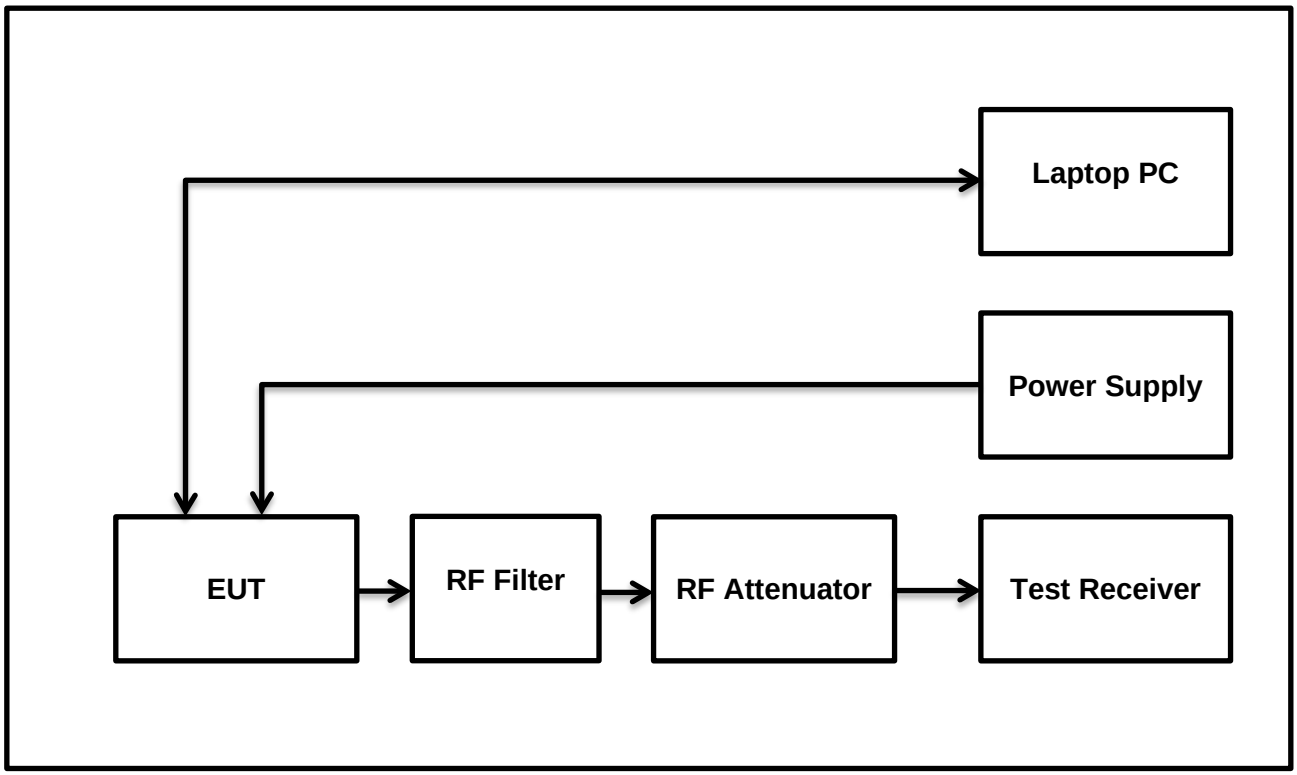
1. According to FCC KDB 789033 D02 Section II.G.3.b) to compliance of Transmitter Cabinet Radited Emissions additional transmitter conducted spurious emissions were performed.
2. Maximum power setting (PWL) amongst all supported SISO & MIMO modes & listed antenna groups has been used.
3. Therefore, transmitter cabinet radiated emissions are valid for all supported Bandwidths, SISO- MIMO modes & listed antenna groups in this report.
4. During initial investigations amongst all supported Bandwidths, SISO & MIMO modes a HT20 SISO mode showed worst case results. Therefore final Transmitter Cabinet Radiated Emissions measurements were performed with the EUT set to the worst case a | SISO mode.
5. The final transmitter conducted spurious emissions were performed with the EUT set to the bottom, middle & top channels and PWL as refer to section 4.3.
6. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values takes into consideration the external attenuation correction factors. The RF cable attenuation (maximum 2.0 dB@5GHz) from the EUT to Analyzer including the 10 dB attenuation at the Spectrum Analyzer input was added as a reference level offset (12.0 dB) to each of the conducted plots.
7. Pre-scans were performed and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. A rms detector was used, sweep time was set to auto and trace mode was average for at least 100 traces.
8. The observed emissions levels (in dBm) on SISO Port are reported into the table.
9. Since the EUT was transmitting at <98% duty cycle, the calculated duty cycle correction factor in section 5.2.3 was added to unwanted emissions measured with RMS detector compute the average power during the actual transmission time.
10. According to FCC KDB 789033 D02 Section II.G.1e) a no ground reflection factor is required.
11. Relevant directional Antenna Gain was added for each type of listed Antenna Groups.
12. According to FCC KDB 662911 D01 Section E)3)(iii) referring Section E)2)c); a factor 10 log($N_{ANT}$) dB, (where $N_{ANT}$ is the number of outputs) was added. As the EUT has 4 MIMO ports a factor 6.02 dB was added.
13. In accordance with KDB 789033 G.2.d)(iii); transmitter conducted spurious emissions dBm levels have been converted to dBµV/m levels by adding a conversion factor of 95.2.

## Transmitter Conducted Spurious Emissions (continued)

## Notes (continued):

14. For unwanted emissions measured with Peak detector there are two limit possibilities:
    - According to FCC 15.209 peak limit (above 1 GHz) is 74 dBµV/m (restricted band limit)
    - According to FCC 15.407(b)(4)(i) peak limit is 68.2 dBµV/m (non-restricted band limit)
15. Therefore unwanted emissions in restricted as well non restricted bands, measured with Peak detector lowest limit 68.2 dBµV/m has been applied.

## Test Setup:



## Transmitter Conducted Spurious Emissions (continued)

## 8 dBi Antenna Group

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

## Peak Detector / CH 36

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6907.000 | -54.89 | 0.0 | 8.0 | 6.02 | -40.87 |
| 20165.600 | -55.46 | 0.0 | 8.0 | 6.02 | -41.44 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6907.000 | -40.87 | 95.20 | 54.33 | 68.2 | 13.87 | Complied |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 20165.600 | -41.44 | 95.20 | 53.76 | 54.0 | 0.24 | Complied |

## RMS Detector/ CH 36

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6906.675 | -59.36 | 0.3 | 0.0 | 8.0 | 6.02 | -45.04 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6906.770 | -45.04 | 95.2 | 50.16 | 54 | 3.84 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

### Peak Detector/ CH 44

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6959.920 | -56.45 | 0.0 | 8.0 | 6.02 | -42.43 |
| 20157.450 | -55.56 | 0.0 | 8.0 | 6.02 | -41.54 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6959.920 | -42.43 | 95.20 | 52.77 | 68.2 | 15.43 | Complied |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 20157.450 | -41.54 | 95.20 | 53.66 | 54.0 | 0.34 | Complied |

### RMS Detector / CH 44

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6960.000 | -64.12 | 0.3 | 0.0 | 8.0 | 6.02 | -49.80 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6960.000 | -49.80 | 95.2 | 45.40 | 54 | 8.6 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

## Peak Detector/ CH 48

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6986.710 | -56.93 | 0.0 | 8.0 | 6.02 | -42.91 |
| 15725.370 | -52.19 | 0.0 | 8.0 | 6.02 | -38.16 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.710 | -42.91 | 95.20 | 52.29 | 68.2 | 15.91 | Complied |
| 15725.375 | -38.16 | 95.20 | 57.02 | 68.2 | 11.18 | Complied |

## RMS Detector/ CH 48

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6986.710 | -63.30 | 0.3 | 0.0 | 8.0 | 6.02 | -48.98 |
| 15722.115 | -63.90 | 0.3 | 0.0 | 8.0 | 6.02 | -49.58 |

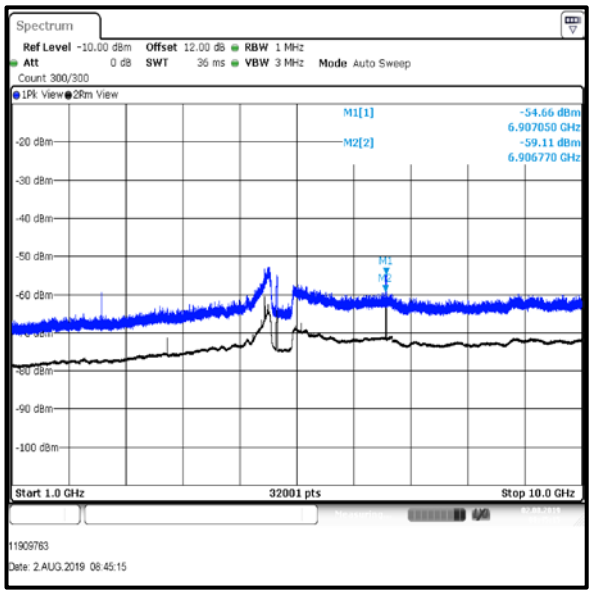
| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.710 | -48.98 | 95.2 | 46.22 | 54 | 7.78 | Complied |
| 15722.115 | -49.58 | 95.2 | 45.62 | 54 | 8.38 | Complied |

**Result: Pass**

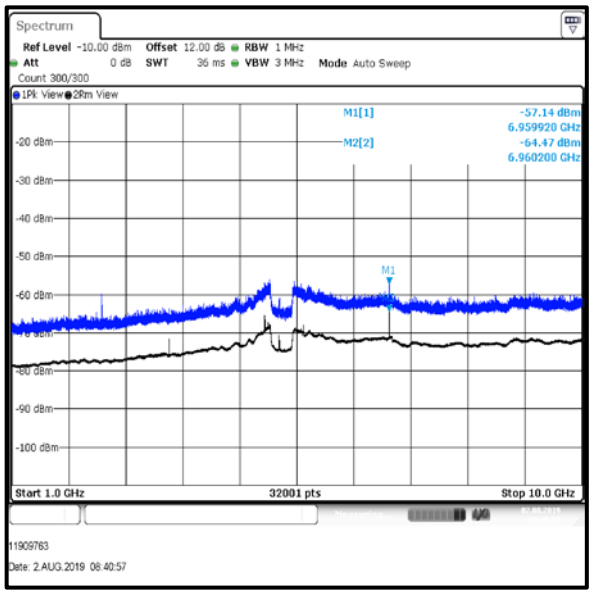
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11 a / HT20 / 6 MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

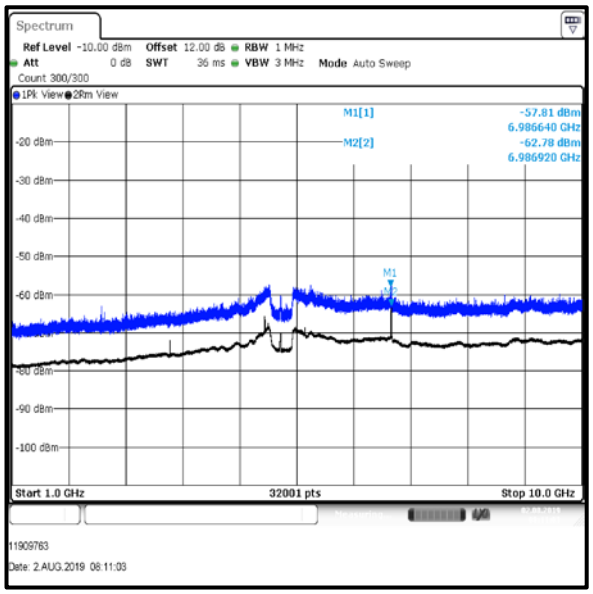
## Plots: 1 GHz to 10 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



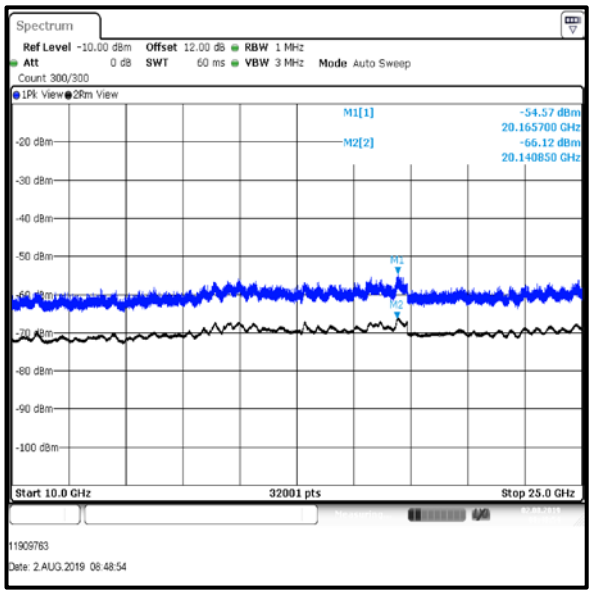

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

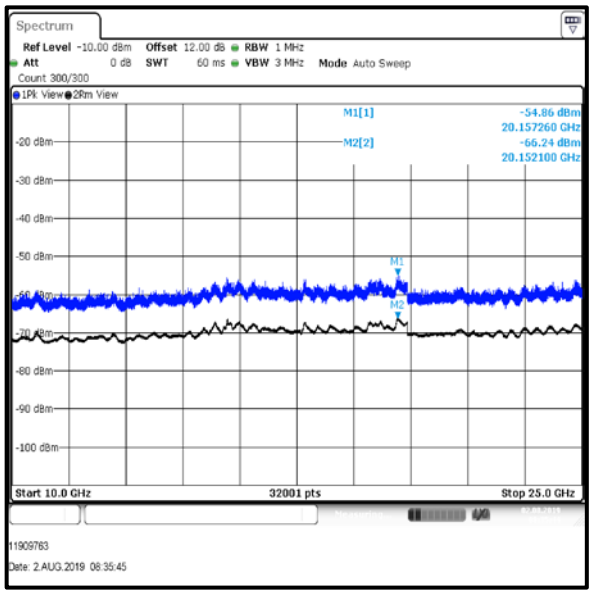
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

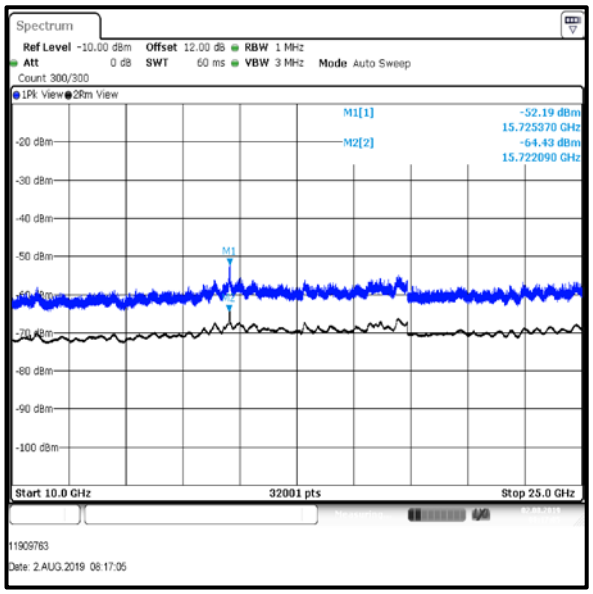
## Plots: 10 GHz to 25 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



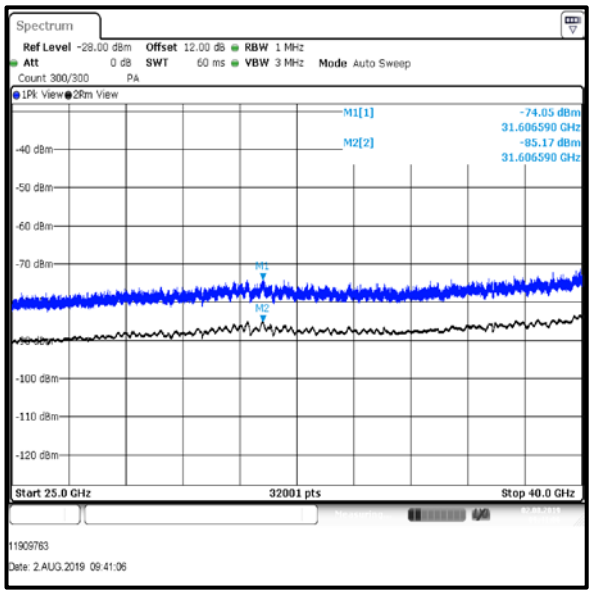

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

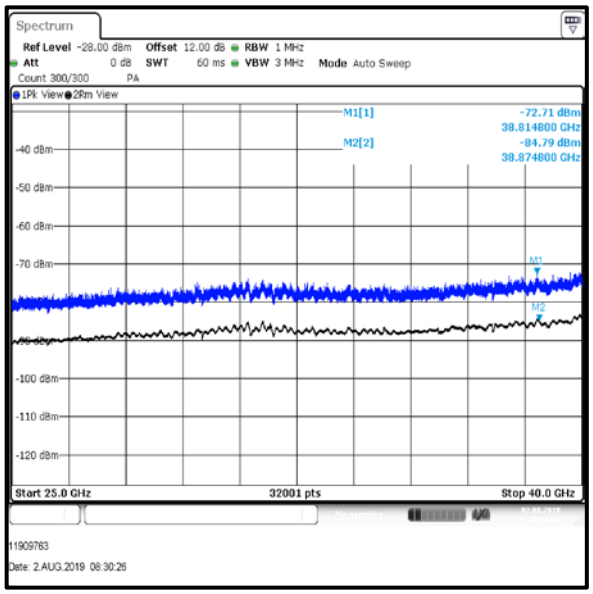
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

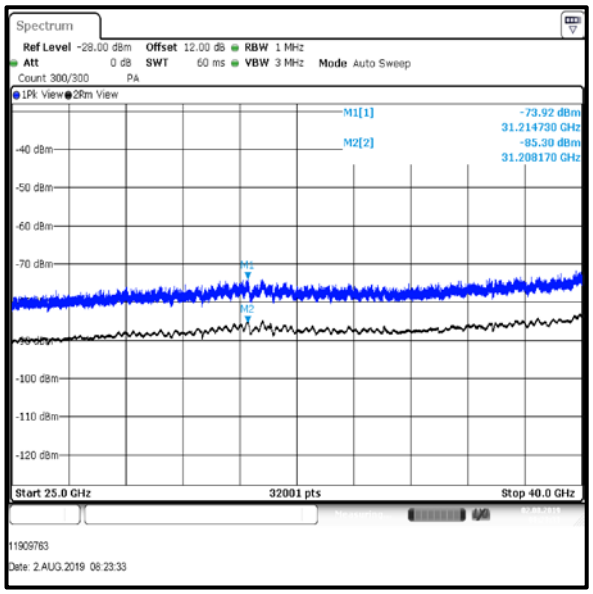
## Plots: 25 GHz to 40 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**




**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

## Transmitter Conducted Spurious Emissions (continued)
## 9 dBi group

### Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

### Peak Detector / CH 36

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6906.770 | -57.00 | 0.0 | 9.0 | 6.02 | -41.97 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6906.770 | -41.97 | 95.20 | 53.23 | 68.2 | 14.97 | Complied |

### RMS Detector/ CH 36

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6906.770 | -63.25 | 0.3 | 0.0 | 9.0 | 6.02 | -47.93 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6906.770 | -47.93 | 95.2 | 47.27 | 54 | 6.73 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

### Peak Detector/ CH 44

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6960.200 | -56.95 | 0.0 | 9.0 | 6.02 | -41.93 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6960.200 | -41.93 | 95.20 | 53.27 | 68.2 | 14.93 | Complied |

### RMS Detector / CH 44

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6960.200 | -64.66 | 0.3 | 0.0 | 9.0 | 6.02 | -49.34 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6960.200 | -49.34 | 95.2 | 45.86 | 54 | 8.14 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

## Peak Detector/ CH 48

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6986.920 | -55.88 | 0.0 | 9.0 | 6.02 | -40.86 |
| 15723.510 | -54.23 | 0.0 | 9.0 | 6.02 | -39.21 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.920 | -40.86 | 95.20 | 54.34 | 68.2 | 13.86 | Complied |
| 15723.510 | -39.21 | 95.20 | 55.99 | 68.2 | 12.21 | Complied |

## RMS Detector/ CH 48

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6986.920 | -62.75 | 0.3 | 0.0 | 8.0 | 6.02 | -47.43 |
| 15719.700 | -64.69 | 0.3 | 0.0 | 8.0 | 6.02 | -49.37 |

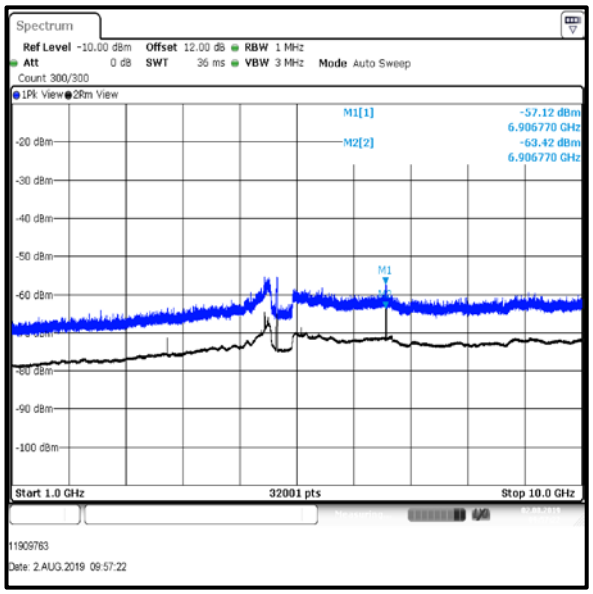
| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.920 | -47.43 | 95.2 | 47.77 | 54 | 6.23 | Complied |
| 15719.700 | -49.37 | 95.2 | 45.83 | 54 | 8.17 | Complied |

**Result: Pass**

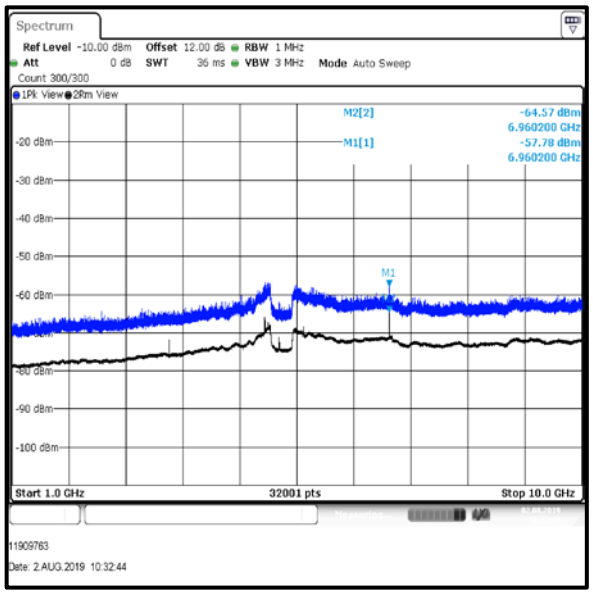
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11 a / HT20 / 6 MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

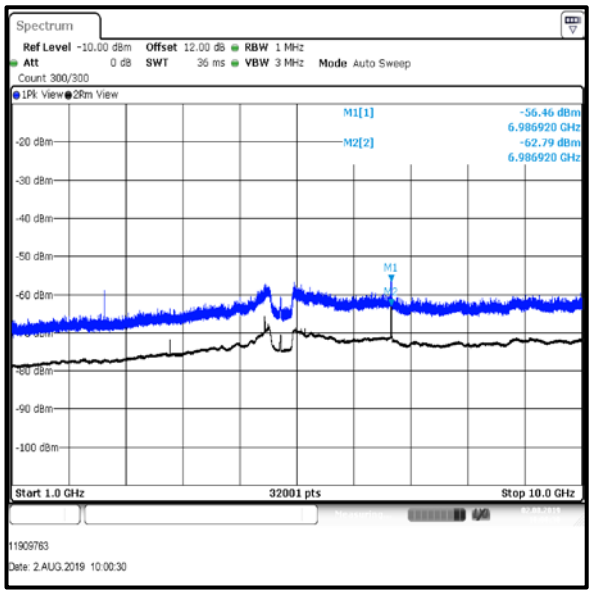
## Plots: 1 GHz to 10 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



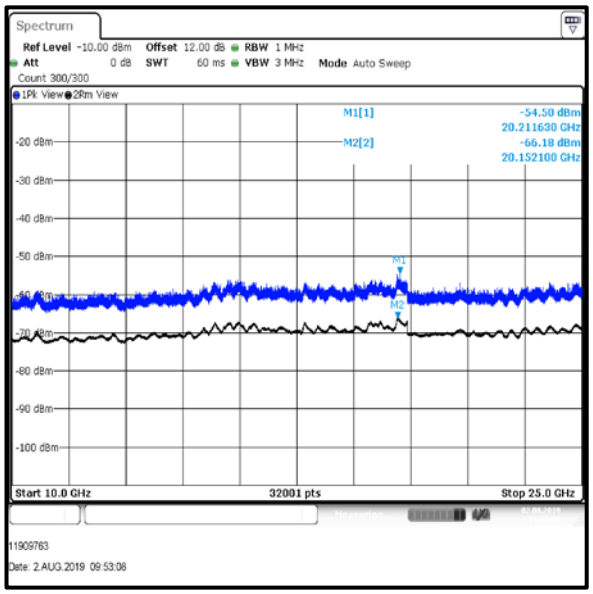

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

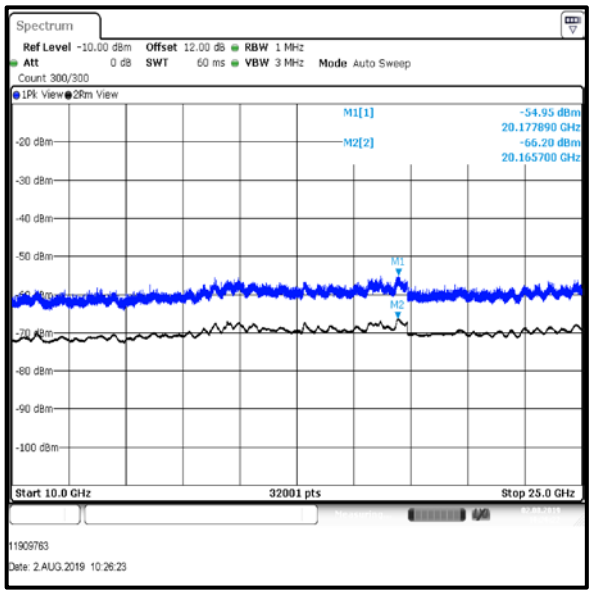
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

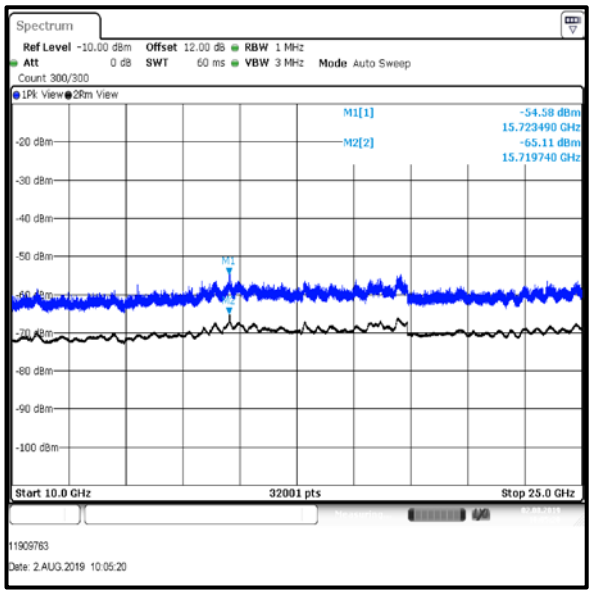
## Plots: 10 GHz to 25 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



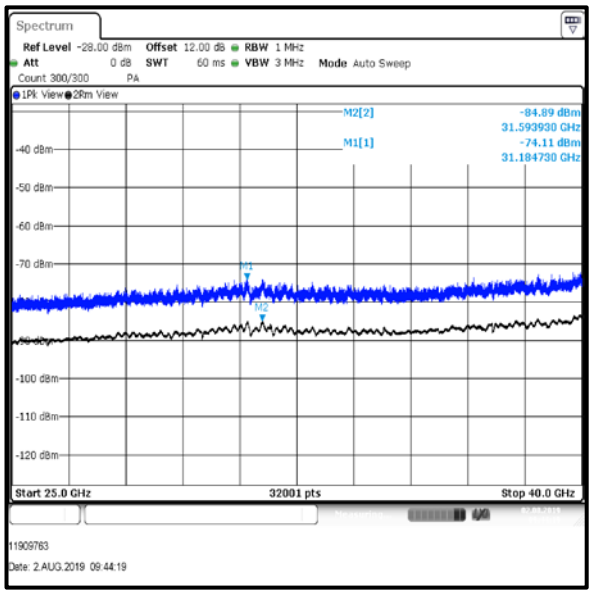

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

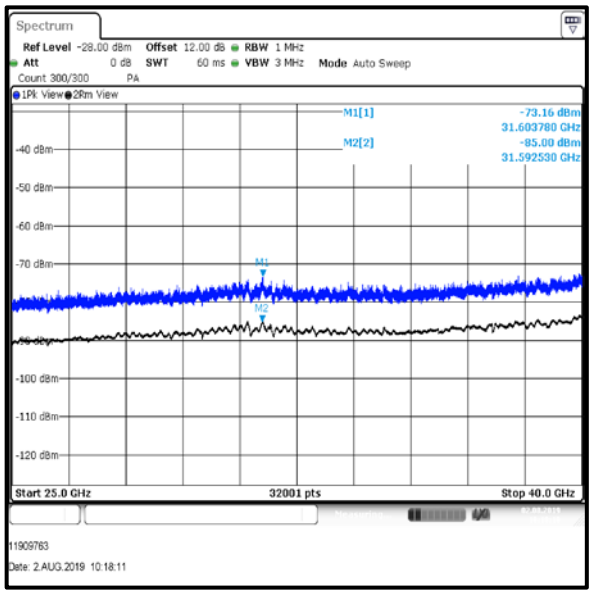
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6 MBits / SISO / Port 1 / PWL 17 / 9 dBi Antenna Group

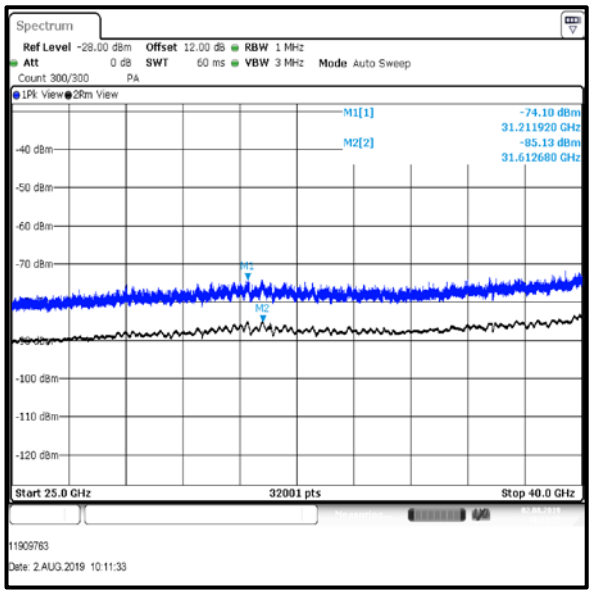
## Plots: 25 GHz to 40 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**




**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

## Transmitter Conducted Spurious Emissions (continued)

## 23 dBi Antenna Group

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

## Peak Detector / CH 36

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6906.770 | -56.85 | 0.0 | 14.2 | 6.02 | -36.63 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6906.770 | -36.63 | 95.20 | 58.57 | 68.2 | 9.63 | Complied |

## RMS Detector/ CH 36

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6906.770 | -65.65 | 0.3 | 0.0 | 14.2 | 6.02 | -45.13 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6906.770 | -45.13 | 95.2 | 50.07 | 54 | 3.93 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

### Peak Detector/ CH 44

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6959.920 | -58.56 | 0.0 | 14.2 | 6.02 | -38.34 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6959.920 | -38.34 | 95.20 | 56.86 | 68.2 | 11.34 | Complied |

### RMS Detector / CH 44

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6960.000 | -66.23 | 0.3 | 0.0 | 14.2 | 6.02 | -45.71 |

| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6960.000 | -45.71 | 95.2 | 49.49 | 54 | 4.51 | Complied |

**Result: Pass**

## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

### Peak Detector/ CH 48

| Frequency (MHz) | Analyzer Peak Level (dBm) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected Peak Level (dBm) |
|---|---|---|---|---|---|
| 6986.770 | -57.14 | 0.0 | 14.2 | 6.02 | -36.92 |

| Frequency (MHz) | Corrected Peak Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.770 | -36.92 | 95.20 | 58.28 | 68.2 | 9.92 | Complied |

### RMS Detector/ CH 48

| Frequency (MHz) | Analyzer RMS Level (dBm) | Duty Cycle Correction (dB) | Ground Reflection Factor (dB) | Antenna Gain (dBi) | 4-Port MIMO Antenna Factor (dB) | Corrected RMS Level (dBm) |
|---|---|---|---|---|---|---|
| 6986.920 | -64.96 | 0.3 | 0.0 | 14.2 | 6.02 | -44.44 |

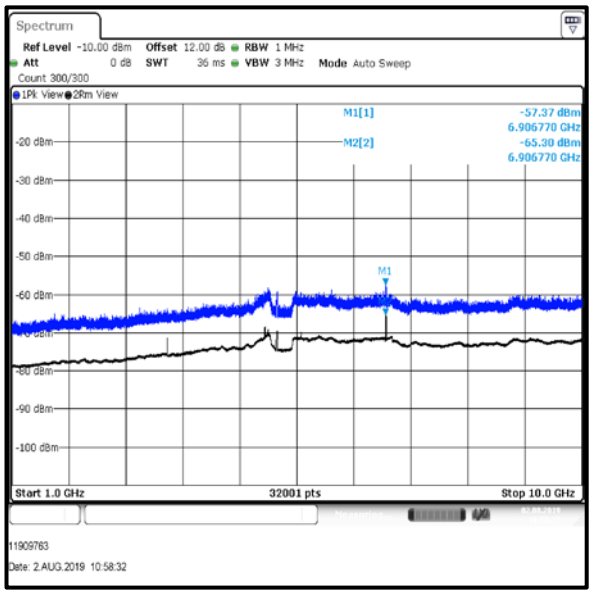
| Frequency (MHz) | Corrected RMS Level (dBm) | EIRP(dBm) to EIRP (dBµV/m) Factor | Converted Field Strength RMS Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 6986.920 | -44.44 | 95.2 | 50.76 | 54 | 3.24 | Complied |

**Result: Pass**

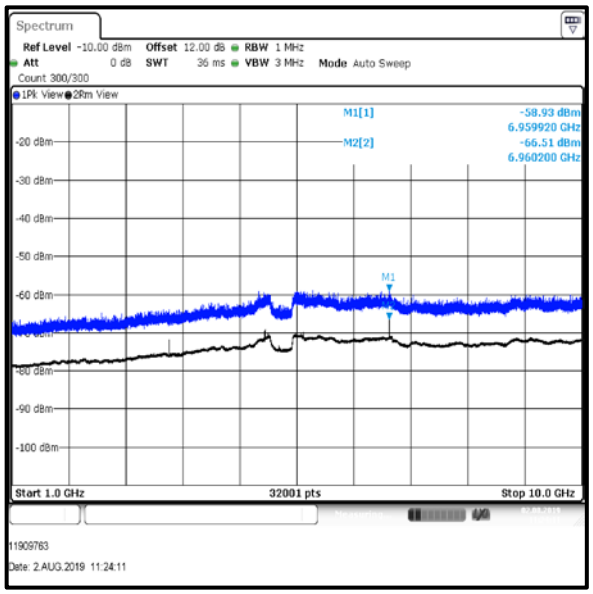
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11 a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

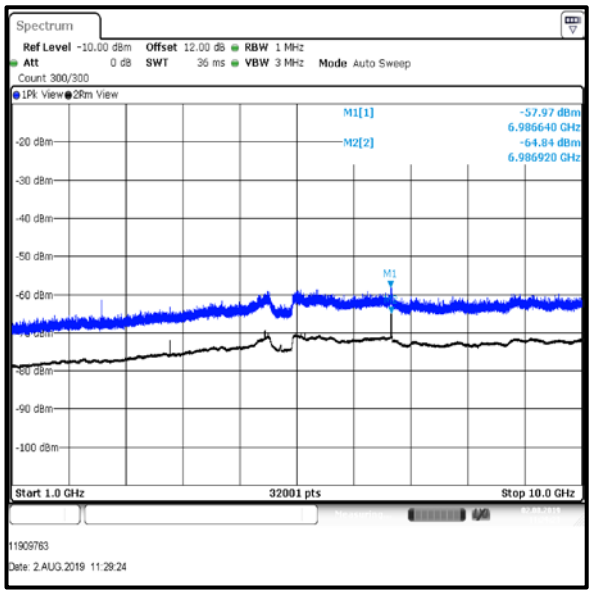
## Plots: 1 GHz to 10 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



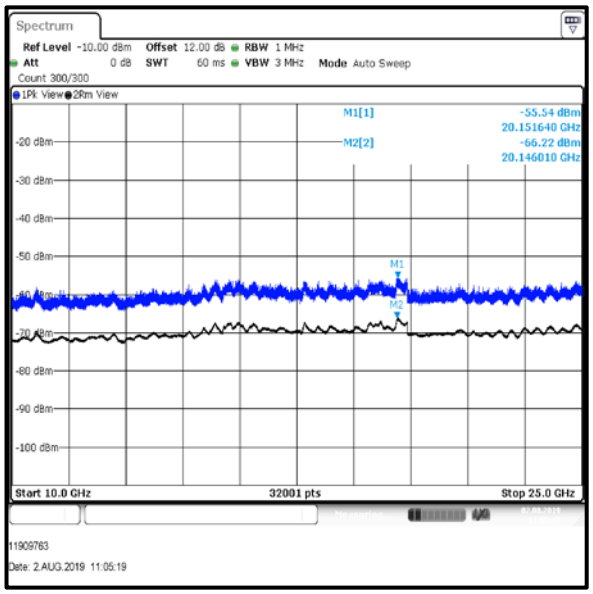

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

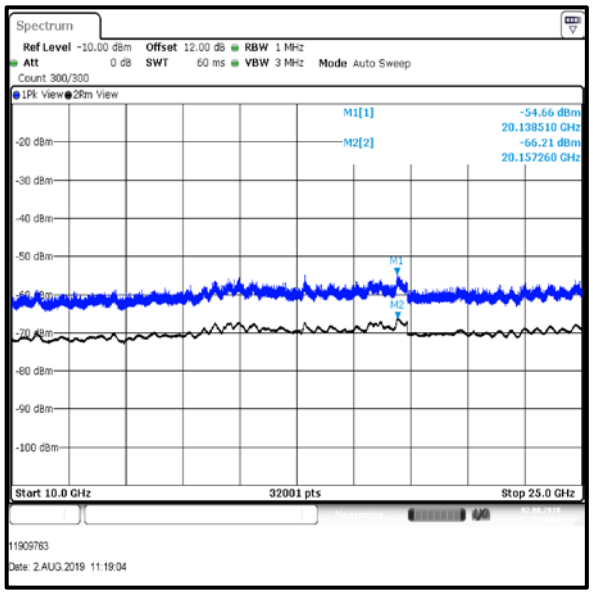
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11 a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

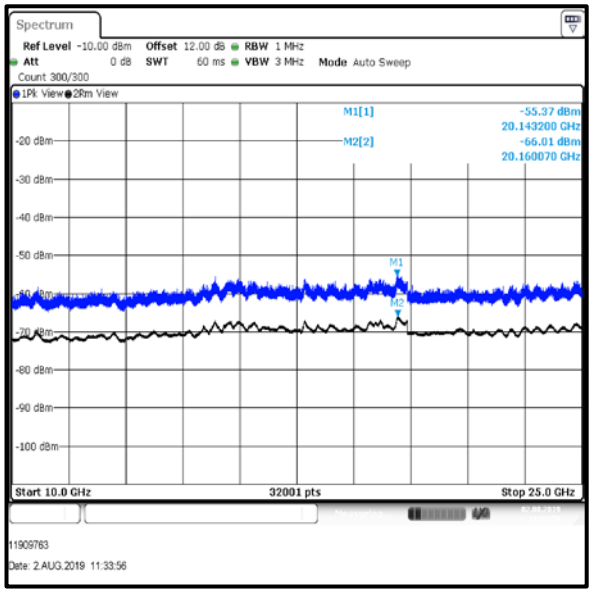
## Plots: 10 GHz to 25 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**



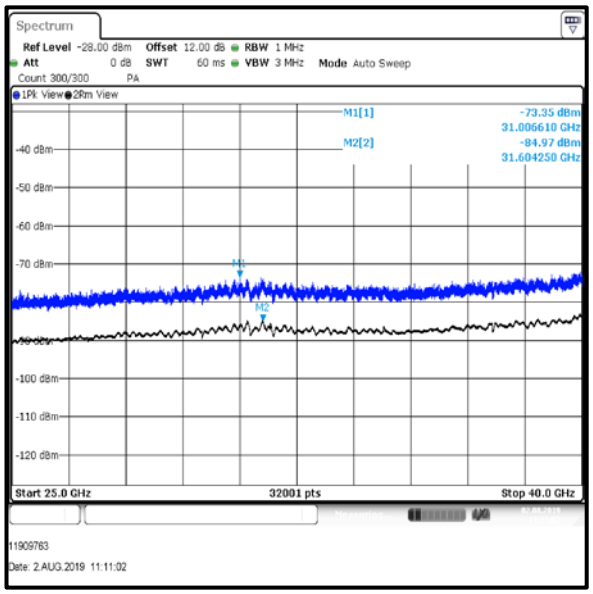

**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

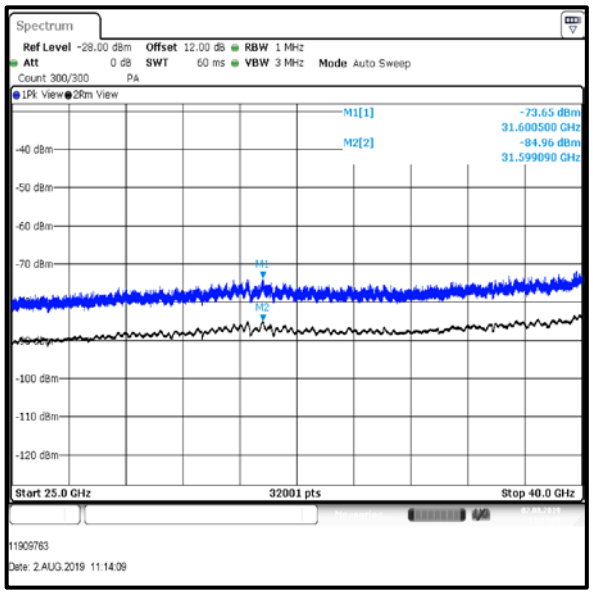
## Transmitter Conducted Spurious Emissions (continued)

## Results: 802.11 a / HT20 / 6MBits / SISO / Port 1 / PWL 13 / 23 dBi Antenna Group

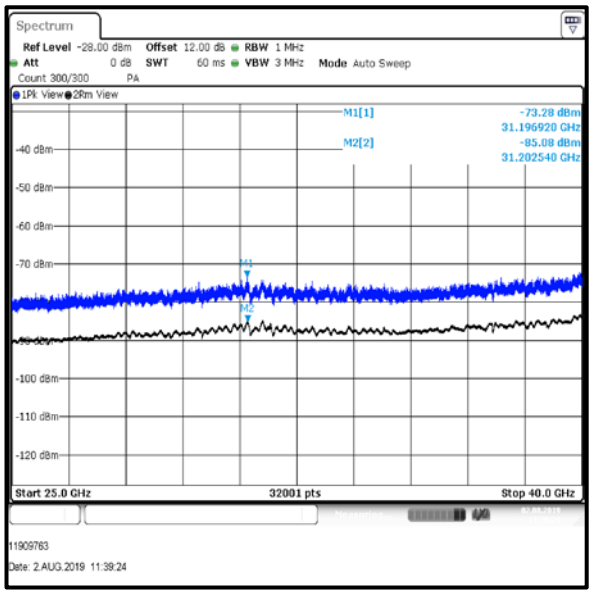
## Plots: 25 GHz to 40 GHz




**Bottom Channel (CH 36)**




**Middle Channel (CH 44)**




**Top Channel (CH 48)**

*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see table above.*

## 5.2.8. Transmitter Band Edge Radiated Emissions

### Test Summary:

| | | | |
|---|---|---|---|
| **Test Engineers:** | Krume Ivanov & Segun Adeniji | **Test Dates:** | 22 February 2019 to 20 September 2019 |
| **Test Sample Serial Number:** | 192.168.0.80 | | |
| **Test Site Identification** | SR 1/2 | | |

| | |
|---|---|
| **FCC Reference:** | Parts 15.407(b)(1),(6),(7), 15.205 & 15.209(a) |
| **Test Method Used:** | FCC KDB 789033 D02 Section II.G.1, II.G.2, II.G.3, II.G.5 & II.G.6<br>ANSI C63.10 Sections 6.3 and 6.6 |

### Environmental Conditions:

| | |
|---|---|
| **Temperature (°C):** | 22 to 24 |
| **Relative Humidity (%):** | 29 to 33 |

### Notes:

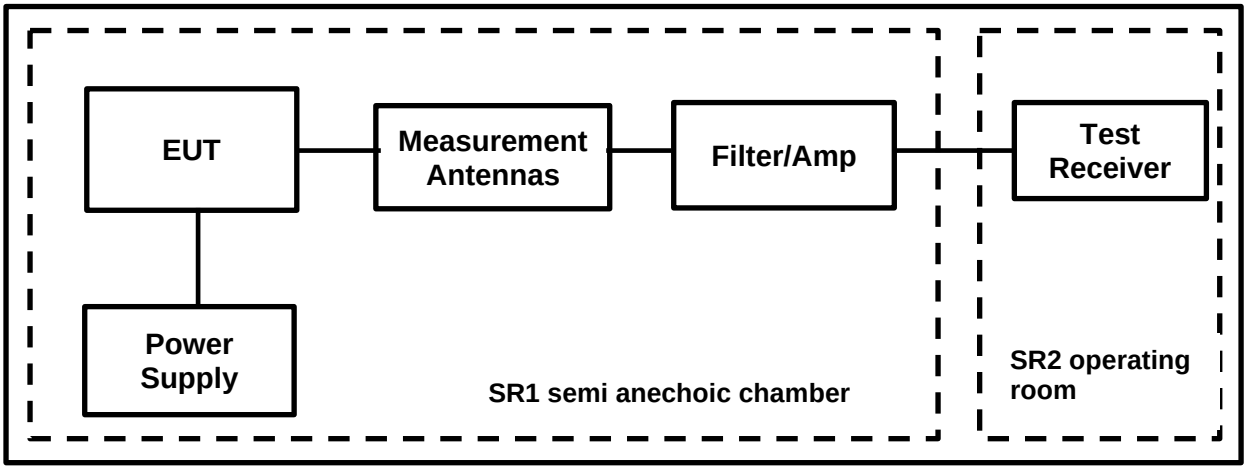
1. According to FCC KDB 789033 D02 Section II.G.5 & II.G.6 Transmitter Band Edge Radiated Emissions were performed.
2. Transmitter Band Edge Radiated Emissions were performed with :
    - each type of listed Antenna Groups.
    - maximum power setting (PWL) for each supported Bandwdith
    - maximum power setting (PWL) for each supported SISO & MIMO modes
3. As EUT uses different power levels (PWL's) for 20 MHz Bandwidth. The EUT was configured in following test modes
    - Reduced Power Level (PWL) :
        - o Lower band edge measured with EUT transmitting on the Bottom channel (CH 36).
        - o Upper band edge measured with EUT transmitting on the Top channel (CH 48)
    - Maximum Power Level (PWL) :
        - o Lower band edge measured with EUT transmitting on the Bottom +1 channel ( CH 40)
        - o Upper band edge measured with EUT transmitting on the Top -1 channel (CH 44)
4. The test receiver was set to RBW: 1 MHZ | VBW: 3 MHz | Sweep time: Auto | Trace mode: max hold | Span: large enough to capture unwanted band edge emissions with trace stabilizations. Regarding the reference level settings an Inquiry was made to the FCC and the response confirmed that this test method was acceptable. With those reference level settings test receiver input was not overloaded due to fundamental signal being measured.
5. In accordance with KDB 789033 Section II.D.v), Method AD (vi), the average measurements were performed using an increased number of sweeps A value of 300 was used for all measurements as this number ensured that the requirement Sweep ≥ 2 × Span / RBW is met.
6. Transmitter Band Edge Radiated Emissions were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with absorbers on the ground at a distance of 3 meters. The EUT was placed at a height of 1.5 meters above the test chamber floor in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna with tilting function enabled over the range 1 meter to 4 meters above the test chamber floor, in line with the EUT.
7. The maximum emissions around band edges were searched & are indicated with a marker placed on them.

## Transmitter Band Edge Radiated Emissions (continued)

## Notes (continued):

8. For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. However, there are restricted bands of operation below the lower band edge at 4.5-5.15 GHz and also above the upper band edge at 5.35-5.46 GHz therefore the provisions of FCC Part 15.205 apply.
9. As all radiated band edge measurements have been performed with R.B.W. 1 MHz; the limits in dBm / MHz can be converted to dBµV/m by adding a conversion factor of 95.2 (in accordance with KDB 789033 G.2.d)(iii)).
10. Field strength measurements using peak and average detectors were performed in the restricted bands below 5.15 GHz and above 5.35 GHz.
11. In accordance with KDB 789033 Section II.G.1.c) If all peak measurements satisfy the average limit, then average measurements are not required.
12. For unwanted emissions measured with Peak detector there are two limit possibilities:
    - According to FCC 15.209 peak limit (above 1 GHz) is 74 dBµV/m (restricted band limit)
    - According to FCC 15.407(b)(4)(i) peak limit is 68.2 dBµV/m (non-restricted band limit)
13. Therefore unwanted emissions in restricted as well non restricted bands, measured with Peak detector lowest limit 68.2 dBµV/m has been applied.
14. In accordance with ANSI C63.10 Section 12.7.7.2 Method AD g), for average measurements, data rates where the EUT was transmitting <98% duty cycle, the duty cycle correction factor calculated in section 5.2.3 was added to the measured result.

## Test Setup:



## Transmitter Band Edge Radiated Emissions (continued)

## 8 dBi Antenna Group

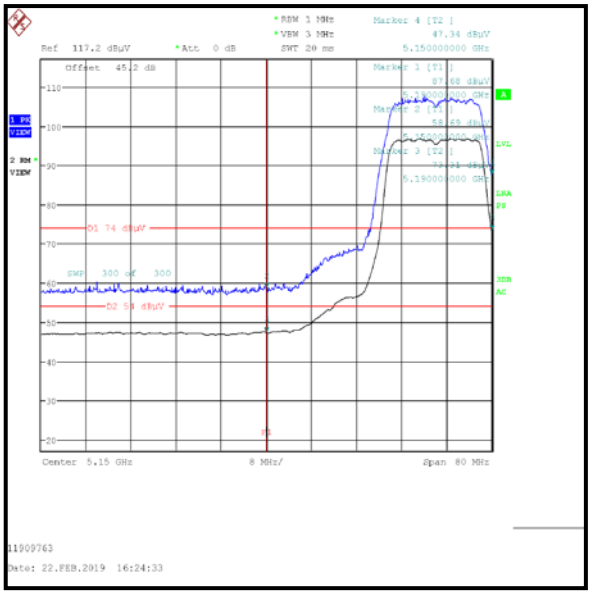
## Results: 802.11a / 20 MHz / 6 Mbps / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 58.69 | 68.2 | 9.51 | Complied |

## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.34 | 0.3 | 47.64 | 54.0 | 6.36 | Complied |




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5108.462 | 59.84 | 68.2 | 8.36 | Complied |
| 5150.0 | 57.95 | 68.2 | 10.25 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.30 | 0.3 | 47.60 | 54.0 | 6.4 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 58.19 | 68.2 | 10.01 | Complied |

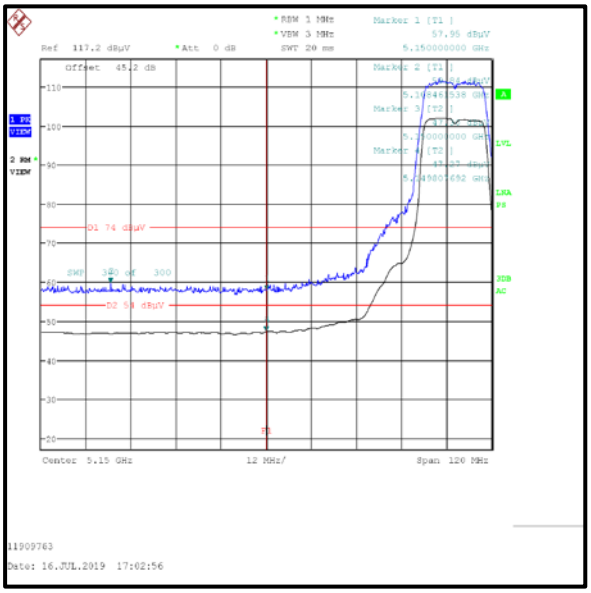
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.19 | 0.3 | 47.49 | 54.0 | 6.51 | Complied |

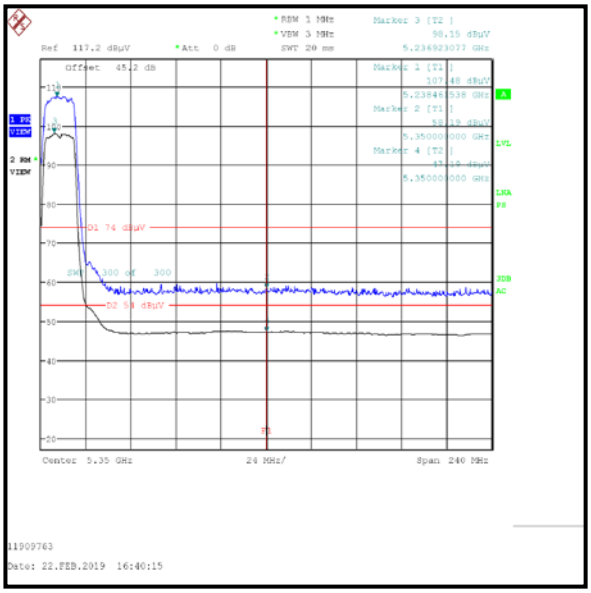
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6 Mbps / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

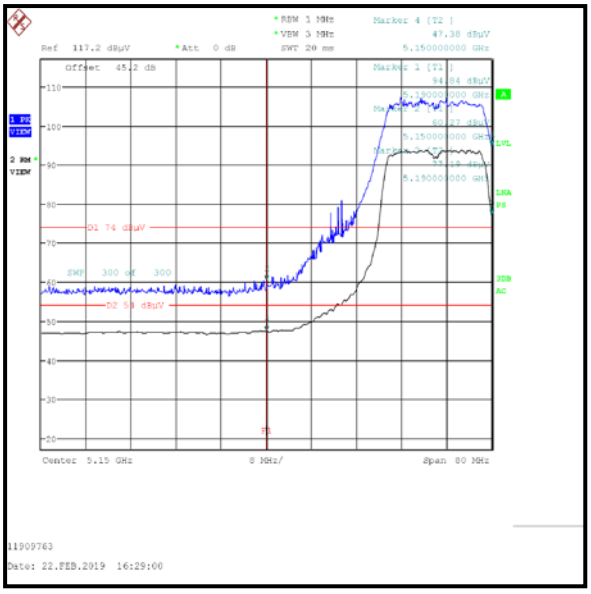
## Results: 802.11n / 20 MHz / MCS0 / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 60.27 | 68.2 | 7.93 | Complied |

## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.38 | 0.5 | 47.88 | 54.0 | 6.12 | Complied |




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 58.1 | 68.2 | 10.1 | Complied |
| 5105.577 | 59.67 | 68.2 | 8.53 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.3 | 0.5 | 47.8 | 54.0 | 6.2 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 57.14 | 68.2 | 11.06 | Complied |

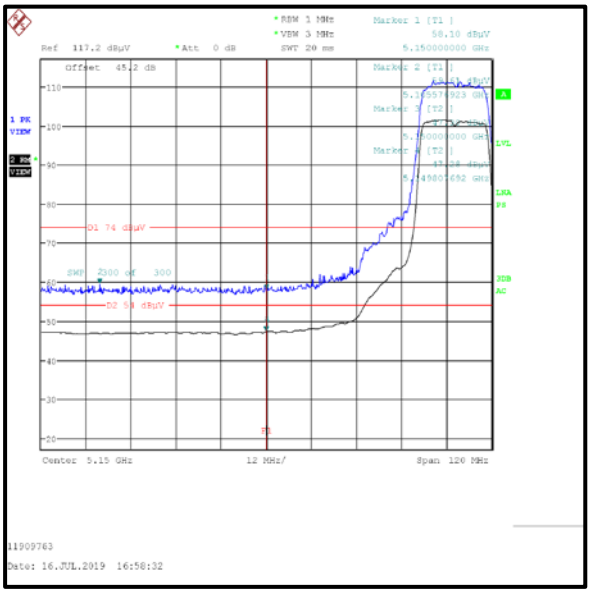
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.12 | 0.5 | 47.62 | 54.0 | 6.38 | Complied |

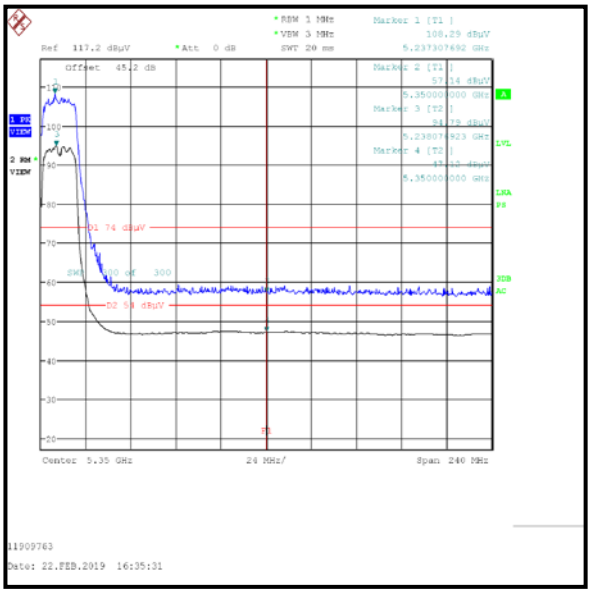
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group




Lower Band Edge Measurement




Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

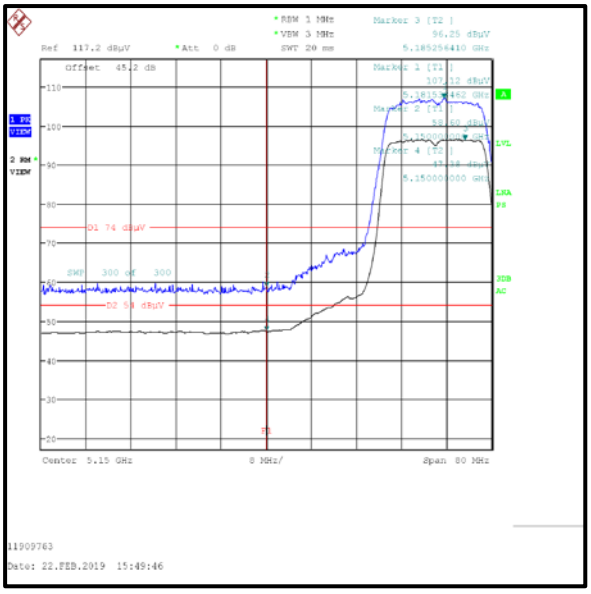
## Results: 802.11ac / 20 MHz / MCS0 / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 58.60 | 68.2 | 9.60 | Complied |

## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.38 | 0.4 | 47.78 | 54.0 | 6.22 | Complied |




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5119.615 | 59.75 | 68.2 | 8.45 | Complied |
| 5150.0 | 58.7 | 68.2 | 9.5 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 47.3 | 0.4 | 47.7 | 54.0 | 6.3 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 57.92 | 68.2 | 10.28 | Complied |

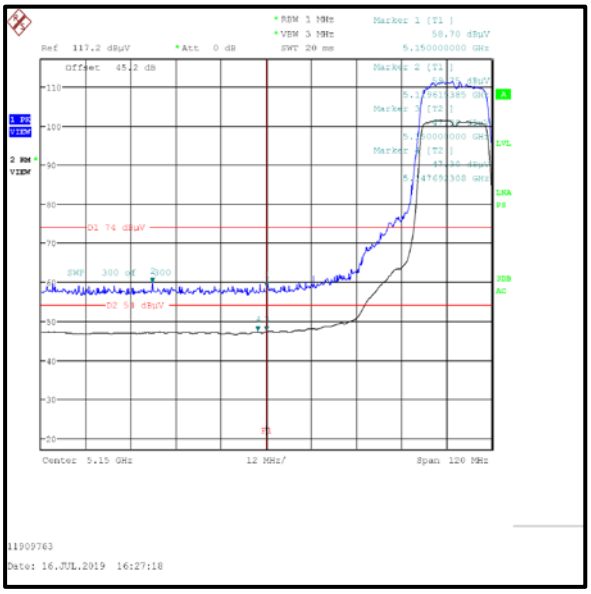
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.15 | 0.4 | 47.55 | 54.0 | 6.45 | Complied |

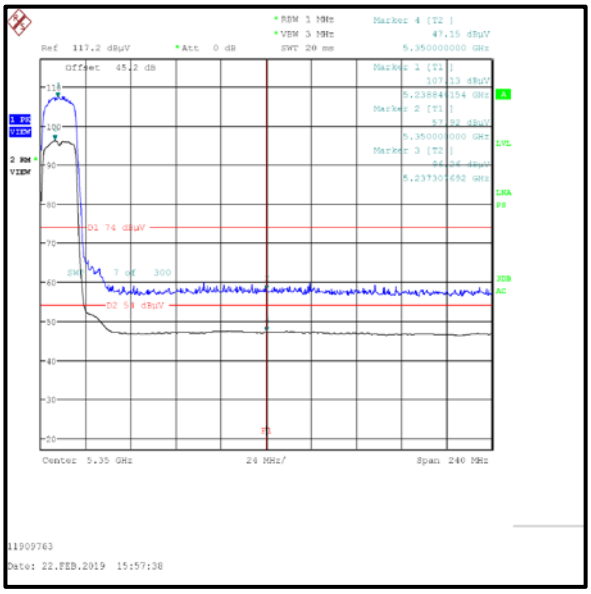
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / SISO / Port 1 / PWL 18 / 8 dBi Antenna Group




Lower Band Edge Measurement




Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 40 MHz / MCS0 / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

### Results: CH38 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 63.87 | 68.2 | 4.33 | Complied |

### Results: CH38 / Lower Band Edge / Average

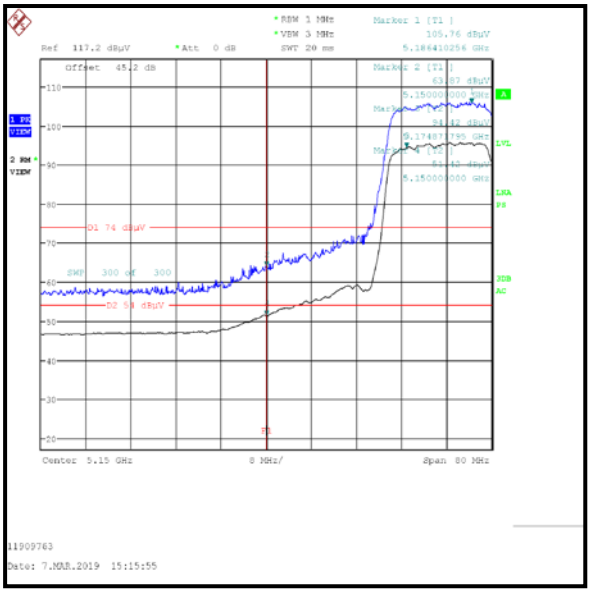
| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 51.42 | 0.4 | 51.82 | 54.0 | 2.18 | Complied |

### Results: CH46 / Upper Band Edge / Peak

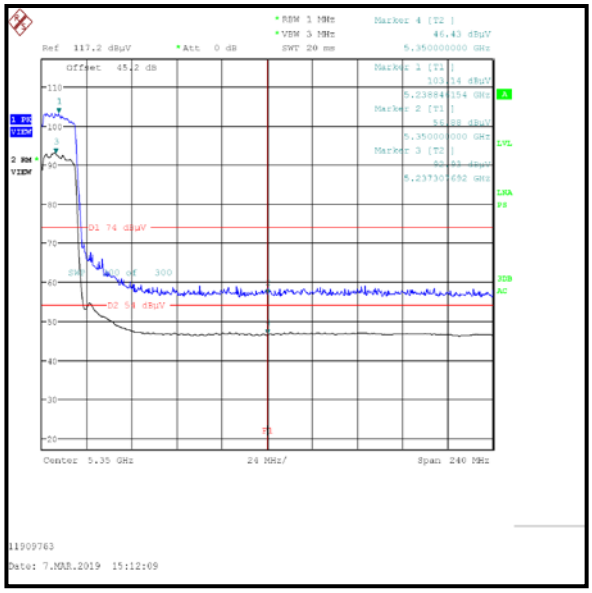
| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 56.88 | 68.2 | 11.32 | Complied |

### Results: CH46 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 46.43 | 0.4 | 46.83 | 54.0 | 7.17 | Complied |



Lower Band Edge Measurement



Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 40 MHz / MCS0 / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

### Results: CH38 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 63.32 | 68.2 | 4.88 | Complied |

### Results: CH38 / Lower Band Edge / Average

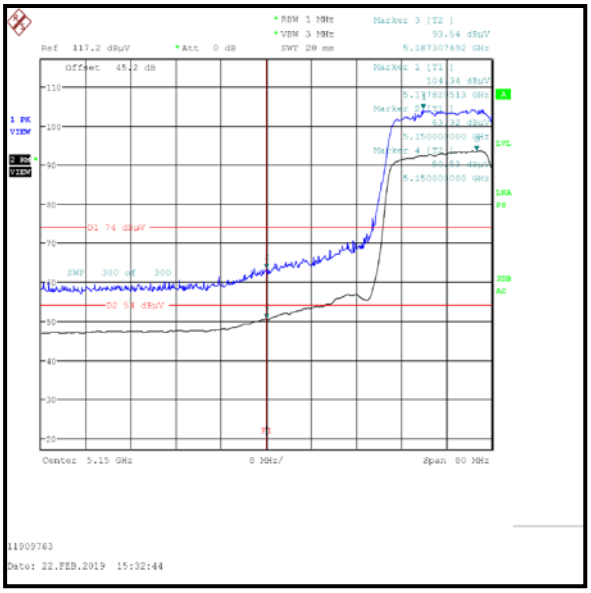
| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 50.53 | 0.4 | 50.93 | 54.0 | 3.07 | Complied |

### Results: CH46 / Upper Band Edge / Peak

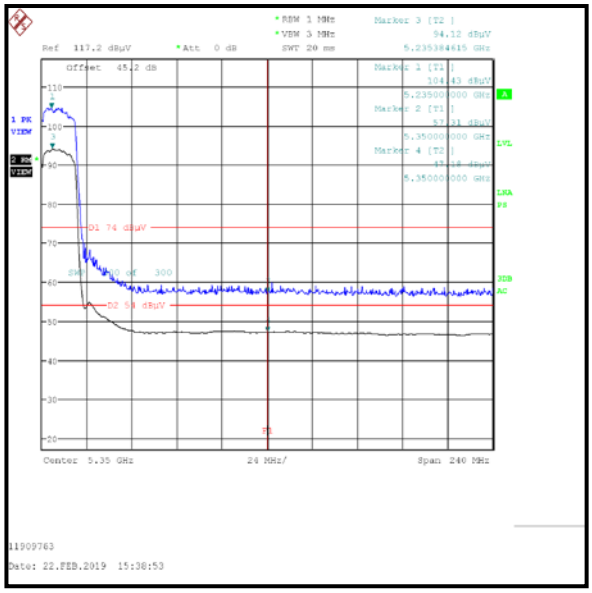
| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 57.31 | 68.2 | 10.89 | Complied |

### Results: CH46 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.18 | 0.4 | 47.58 | 54.0 | 6.42 | Complied |



Lower Band Edge Measurement



Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 80 MHz / MCS0 / SISO / Port 1 / PWL 15 / 8 dBi Antenna Group

### Results: CH42 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 64.89 | 68.2 | 3.31 | Complied |

### Results: CH42 / Lower Band Edge / Average

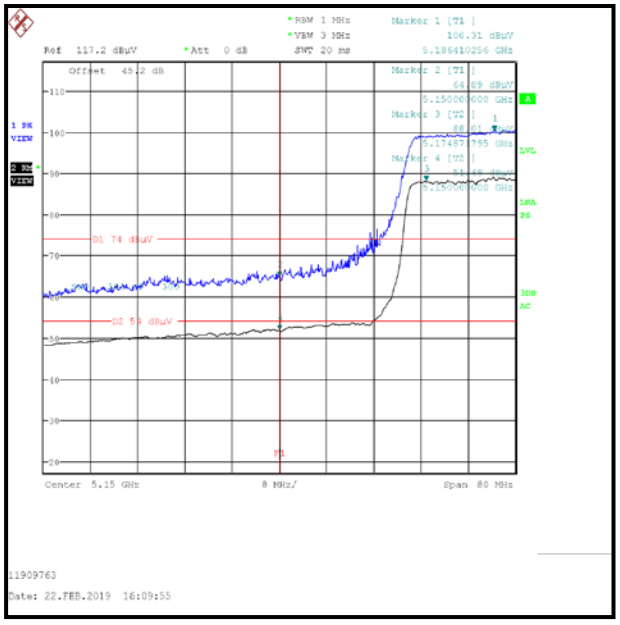
| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 51.69 | 0.5 | 52.19 | 54.0 | 1.81 | Complied |

### Results: CH42 / Upper Band Edge / Peak

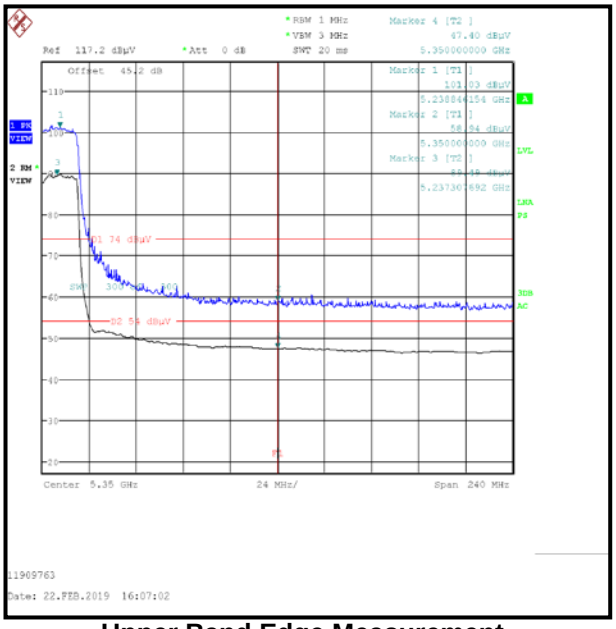
| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 58.94 | 68.2 | 9.26 | Complied |

### Results: CH42 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.40 | 0.5 | 47.90 | 54.0 | 6.1 | Complied |



Lower Band Edge Measurement



Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5127.051 | 59.11 | 68.2 | 9.09 | Complied |
| 5150.0 | 57.12 | 68.2 | 11.08 | Complied |

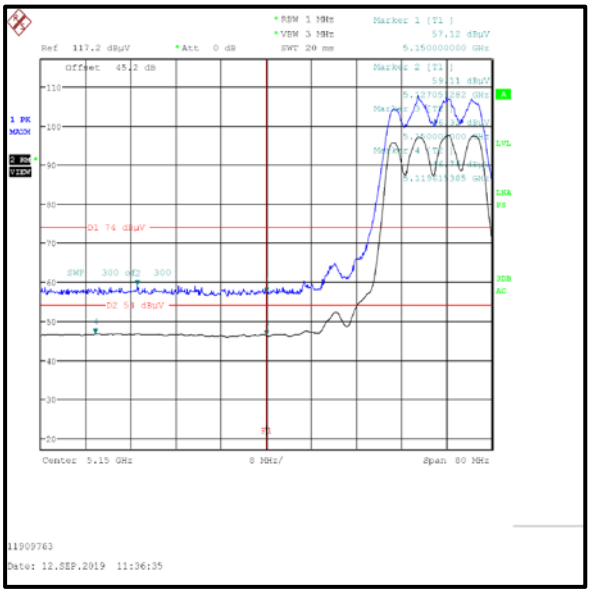
## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5119.615 | 46.76 | 0.3 | 47.06 | 54.0 | 6.94 | Complied |
| 5150.0 | 46.32 | 0.3 | 46.62 | 54.0 | 7.38 | Complied |

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5096.923 | 63.82 | 68.2 | 4.38 | Complied |
| 5150.0 | 61.81 | 68.2 | 6.39 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5090.0 | 51.49 | 0.3 | 51.79 | 54.0 | 2.21 | Complied |
| 5150.0 | 50.73 | 0.3 | 51.03 | 54.0 | 2.97 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 61.88 | 68.2 | 6.32 | Complied |
| 5384.615 | 64.24 | 68.2 | 3.96 | Complied |

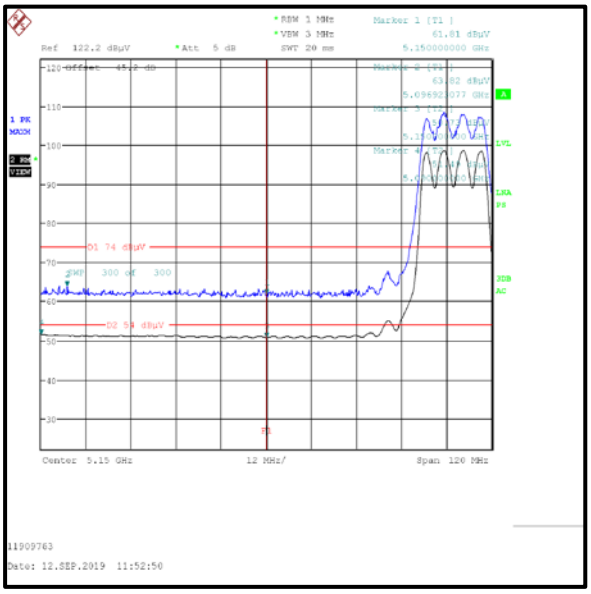
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 51.42 | 0.3 | 51.72 | 54.0 | 2.28 | Complied |
| 5358.461 | 51.68 | 0.3 | 51.98 | 54.0 | 2.02 | Complied |

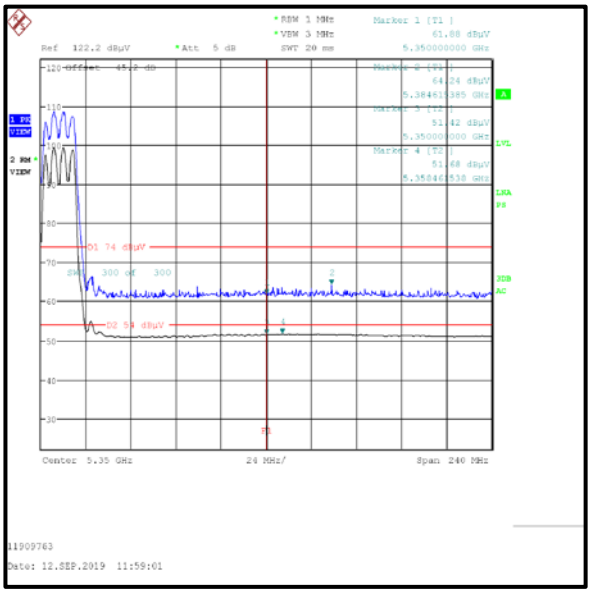
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5148.589 | 58.73 | 68.2 | 9.47 | Complied |
| 5150.0 | 57.41 | 68.2 | 10.79 | Complied |

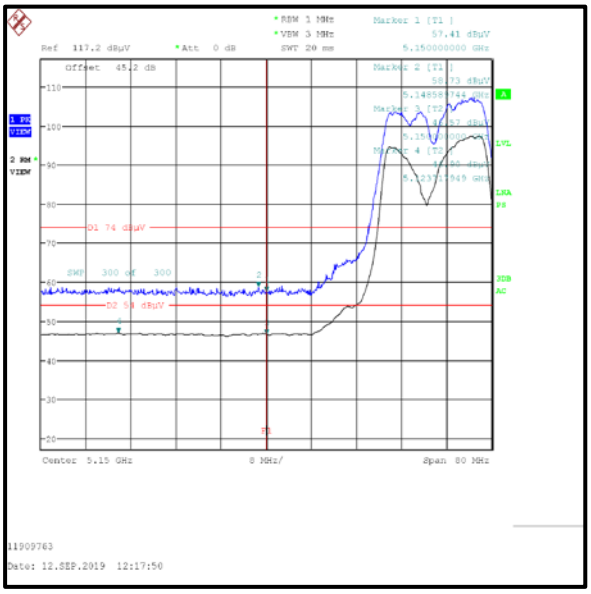
## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5123.717 | 46.90 | 0.5 | 47.40 | 54.0 | 6.6 | Complied |
| 5150.0 | 46.57 | 0.5 | 47.07 | 54.0 | 6.93 | Complied |

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5110.576 | 63.52 | 68.2 | 4.68 | Complied |
| 5150.0 | 62.18 | 68.2 | 6.02 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5090.384 | 51.54 | 0.5 | 52.04 | 54.0 | 1.96 | Complied |
| 5150.0 | 50.92 | 0.5 | 51.42 | 54.0 | 2.58 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 61.64 | 68.2 | 6.56 | Complied |
| 5422.307 | 63.72 | 68.2 | 4.48 | Complied |

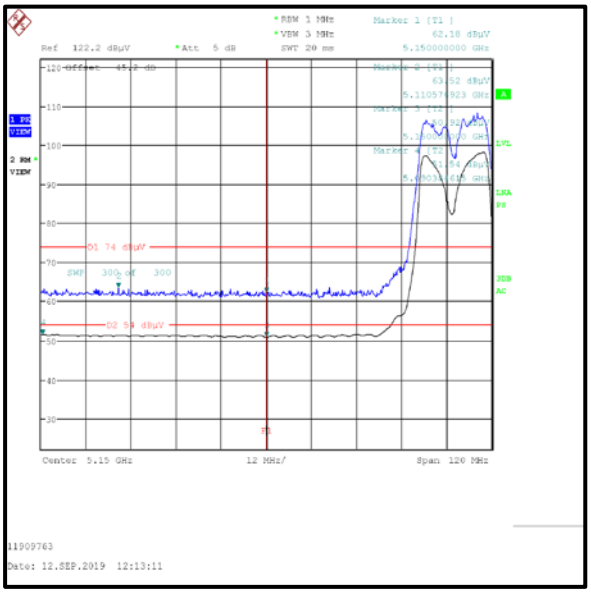
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 51.41 | 0.5 | 51.91 | 54.0 | 2.09 | Complied |
| 5373.461 | 51.68 | 0.5 | 52.18 | 54.0 | 1.82 | Complied |

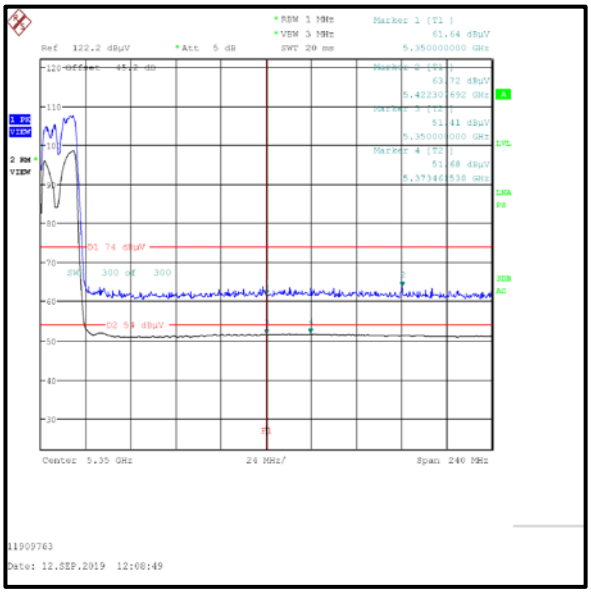
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5128.076 | 58.92 | 68.2 | 9.28 | Complied |
| 5150.0 | 57.23 | 68.2 | 10.97 | Complied |

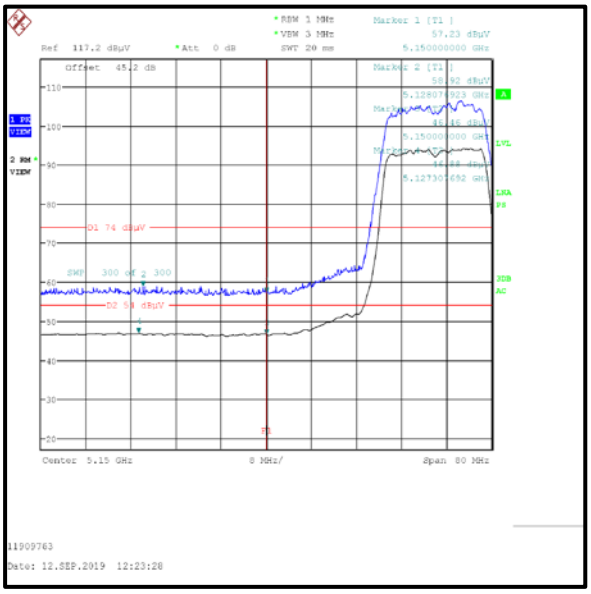
## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5127.307 | 46.88 | 0.4 | 47.28 | 54.0 | 6.72 | Complied |
| 5150.0 | 46.46 | 0.4 | 46.87 | 54.0 | 7.13 | Complied |

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 16 / 8 dBi Antenna Group




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5119.423 | 63.85 | 68.2 | 4.35 | Complied |
| 5150.0 | 61.44 | 68.2 | 6.76 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5090.384 | 51.50 | 0.4 | 51.90 | 54.0 | 2.1 | Complied |
| 5150.0 | 50.91 | 0.4 | 51.31 | 54.0 | 2.69 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 61.36 | 68.2 | 6.84 | Complied |
| 5396.923 | 63.67 | 68.2 | 4.53 | Complied |

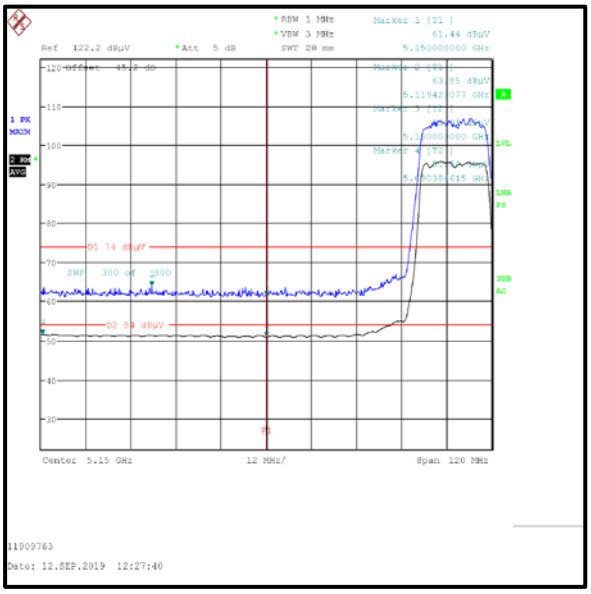
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 51.41 | 0.4 | 51.81 | 54.0 | 2.19 | Complied |
| 5355.0 | 51.67 | 0.4 | 52.07 | 54.0 | 1.93 | Complied |

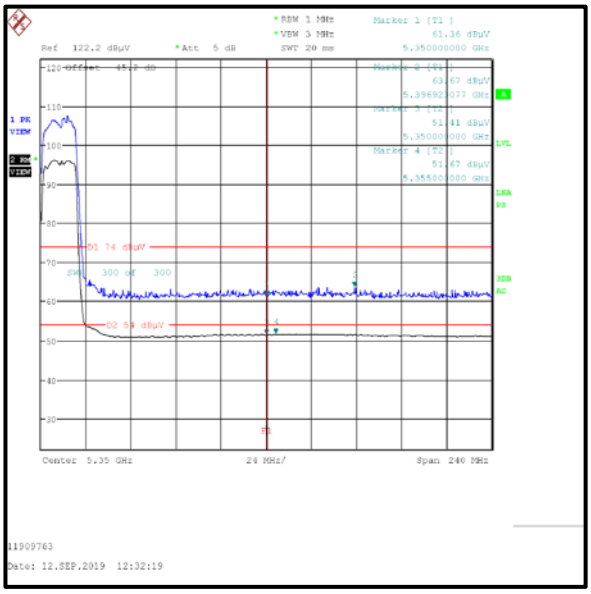
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 20 MHz / MCS0 / MIMO / Port 1+2 / PWL 17 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 40 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group

### Results: CH38 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5147.692 | 62.67 | 68.2 | 5.53 | Complied |
| 5150.0 | 60.44 | 68.2 | 7.76 | Complied |

### Results: CH38 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 49.08 | 0.4 | 49.48 | 54.0 | 4.52 | Complied |

### Results: CH46 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 57.89 | 68.2 | 10.31 | Complied |
| 5362.115 | 59.81 | 68.2 | 8.39 | Complied |

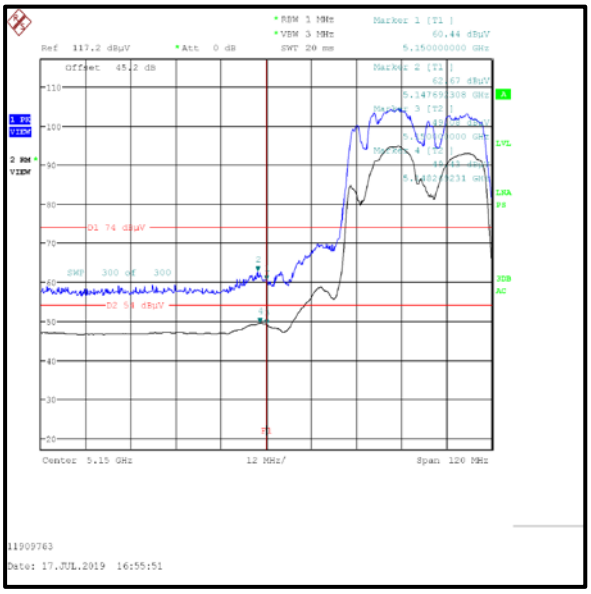
### Results: CH46 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 46.94 | 0.4 | 47.34 | 54.0 | 6.66 | Complied |

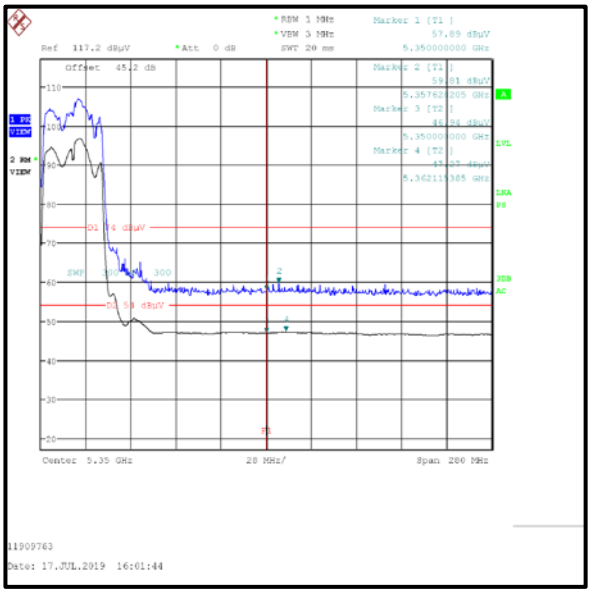
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 40 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 40 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group

### Results: CH38 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 63.59 | 68.2 | 4.61 | Complied |

### Results: CH38 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 51.02 | 0.4 | 52.42 | 54.0 | 1.58 | Complied |

### Results: CH46 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 58.52 | 68.2 | 9.68 | Complied |
| 5363.013 | 59.12 | 68.2 | 9.08 | Complied |

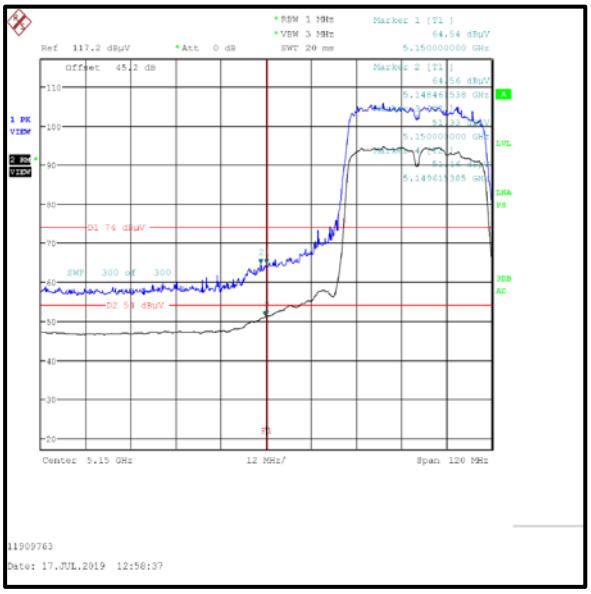
### Results: CH46 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 46.88 | 0.4 | 47.28 | 54.0 | 6.72 | Complied |

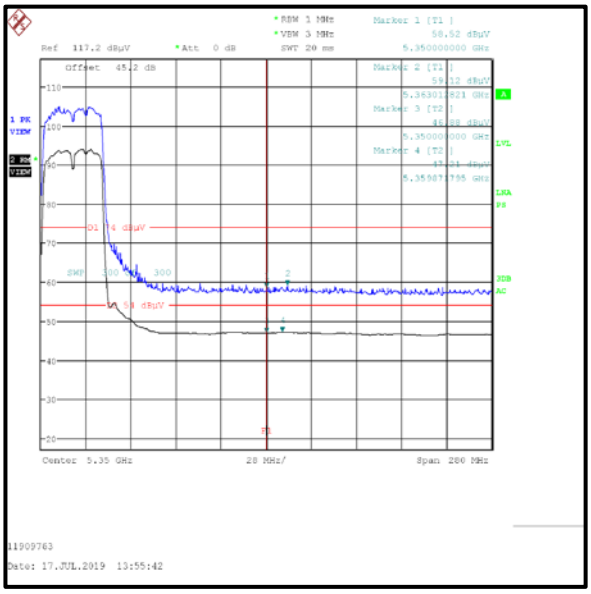
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 40 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group




Lower Band Edge Measurement




Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 80 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group

### Results: CH42 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5150.0 | 65.20 | 68.2 | 3.00 | Complied |

### Results: CH42 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5150.0 | 51.86 | 0.5 | 52.36 | 54.0 | 1.64 | Complied |

### Results: CH42 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 59.85 | 68.2 | 8.35 | Complied |
| 5508.654 | 60.03 | 68.2 | 8.17 | Complied |

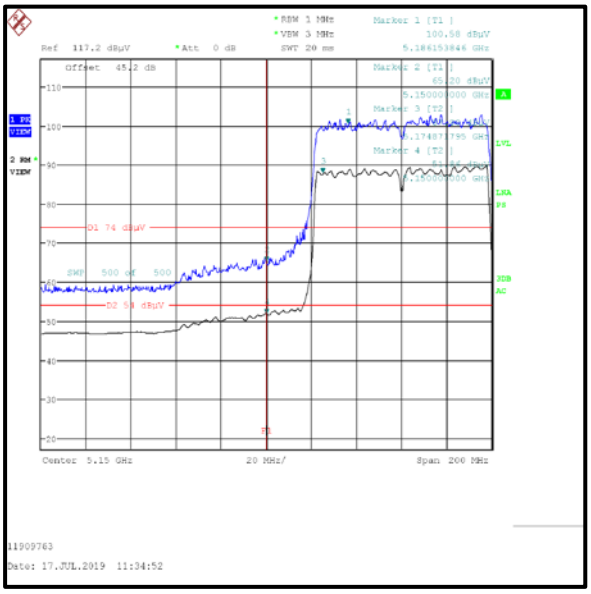
### Results: CH42 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 47.09 | 0.5 | 47.59 | 54.0 | 6.41 | Complied |

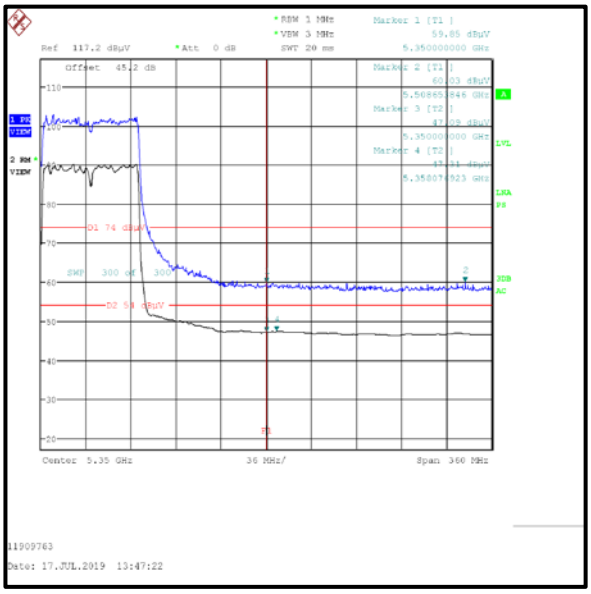
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11ac / 80 MHz / MCS0 / MIMO / Port 1+2 / PWL 18 / 8 dBi Antenna Group




Lower Band Edge Measurement




Upper Band Edge Measurement

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2+3 / PWL 13 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5119.358 | 59.43 | 68.2 | 8.77 | Complied |
| 5150.0 | 56.36 | 68.2 | 11.84 | Complied |

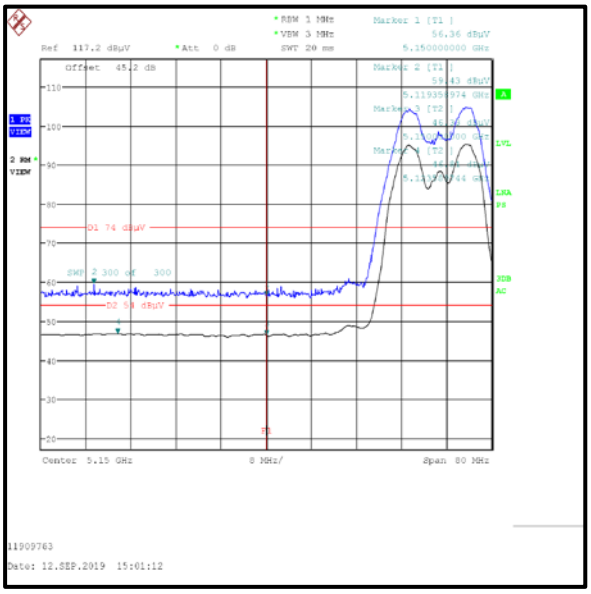
## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5123.589 | 46.81 | 0.3 | 47.11 | 54.0 | 6.89 | Complied |
| 5150.0 | 46.33 | 0.3 | 46.63 | 54.0 | 7.37 | Complied |

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2+3 / PWL 13 / 8 dBi Antenna Group




**Lower Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2+3 / PWL 15 / 8 dBi Antenna Group

### Results: CH40 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5115.576 | 63.76 | 68.2 | 4.44 | Complied |
| 5150.0 | 61.12 | 68.2 | 7.08 | Complied |

### Results: CH40 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5090.762 | 51.54 | 0.3 | 51.84 | 54.0 | 2.16 | Complied |
| 5150.0 | 50.94 | 0.3 | 51.24 | 54.0 | 2.76 | Complied |

### Results: CH48 / Upper Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5350.0 | 57.74 | 68.2 | 10.46 | Complied |
| 5449.2 | 59.59 | 68.2 | 8.61 | Complied |

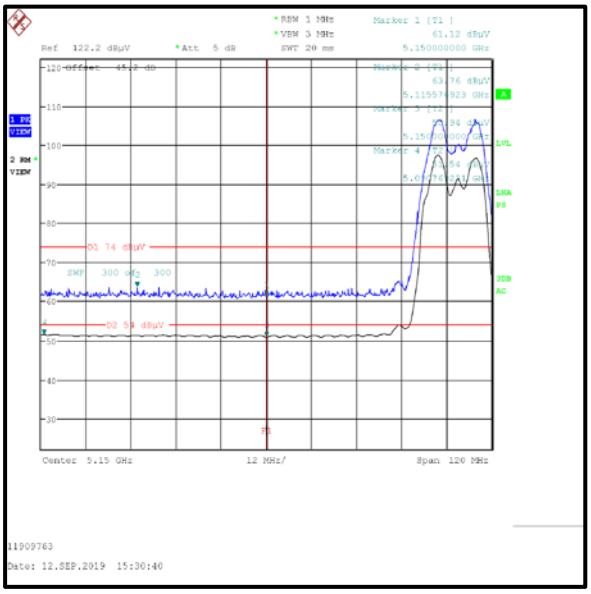
### Results: CH48 / Upper Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5350.0 | 51.45 | 0.3 | 51.75 | 54.0 | 2.25 | Complied |
| 5355.384 | 51.76 | 0.3 | 52.06 | 54.0 | 1.94 | Complied |

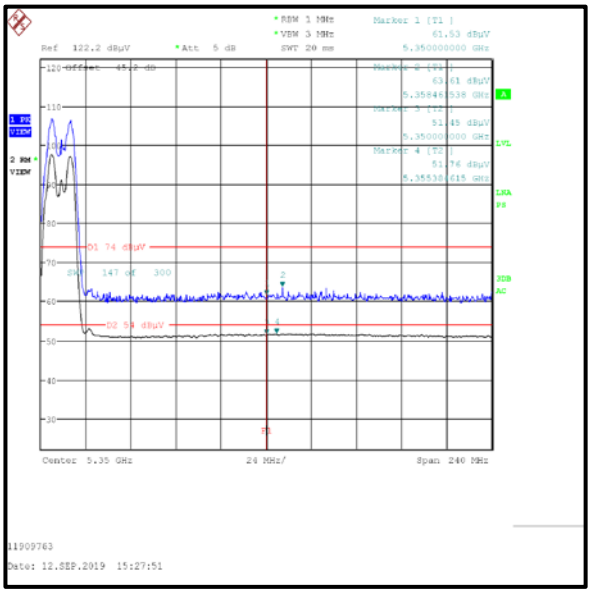
**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11a / 20 MHz / 6Mbit / MIMO / Port 1+2+3 / PWL 15 / 8 dBi Antenna Group




**Lower Band Edge Measurement**




**Upper Band Edge Measurement**

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2+3 / PWL 13 / 8 dBi Antenna Group

## Results: CH36 / Lower Band Edge / Peak

| Frequency (MHz) | Peak Level (dBµV/m) | Peak Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|
| 5120.769 | 58.90 | 68.2 | 9.3 | Complied |
| 5150.0 | 57.27 | 68.2 | 10.93 | Complied |

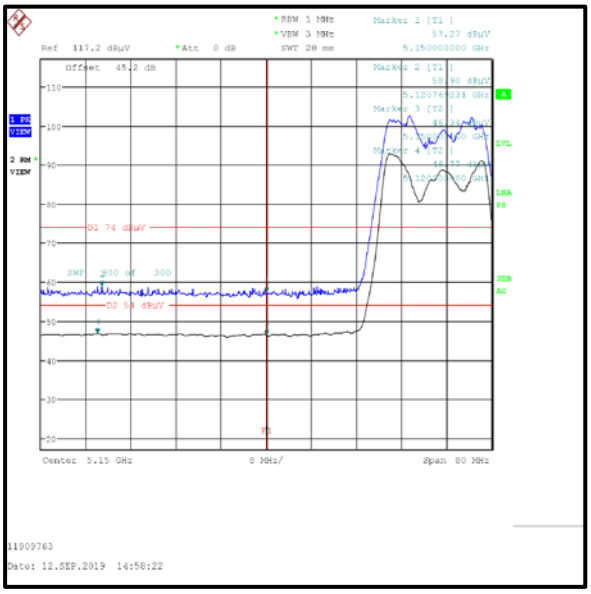
## Results: CH36 / Lower Band Edge / Average

| Frequency (MHz) | Average Level (dBµV/m) | Duty Cycle Correction (dB) | Corrected Average Level (dBµV/m) | Average Limit (dBµV/m) | Margin (dB) | Result |
|---|---|---|---|---|---|---|
| 5120.0 | 46.77 | 0.5 | 47.27 | 54.0 | 6.73 | Complied |
| 5150.0 | 46.34 | 0.5 | 46.84 | 54.0 | 7.16 | Complied |

**Result: Pass**

## Transmitter Band Edge Radiated Emissions (continued)

## Results: 802.11n / 20 MHz / MCS0 / MIMO / Port 1+2+3 / PWL 13 / 8 dBi Antenna Group




**Lower Band Edge Measurement**

**Result: Pass**