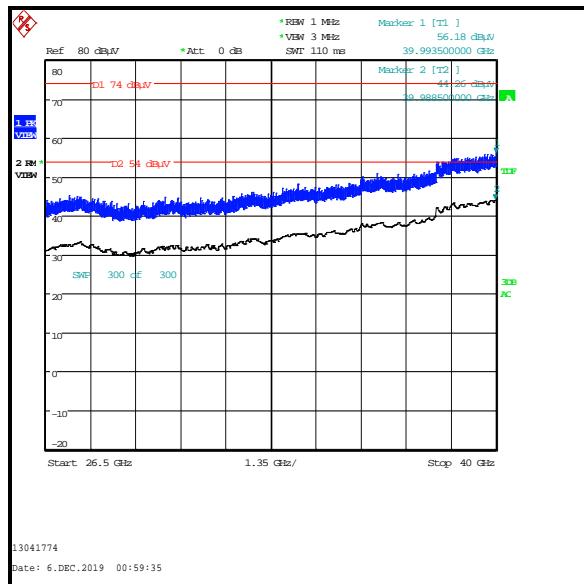
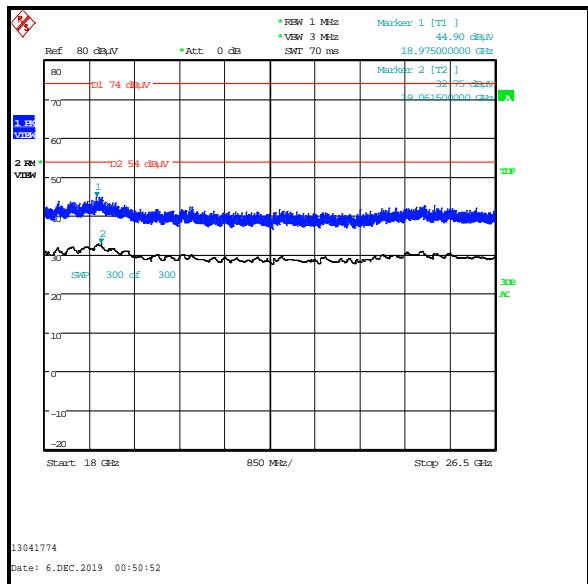
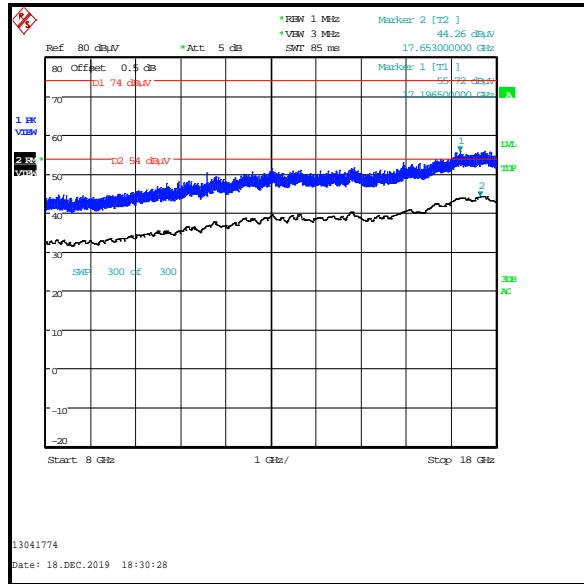
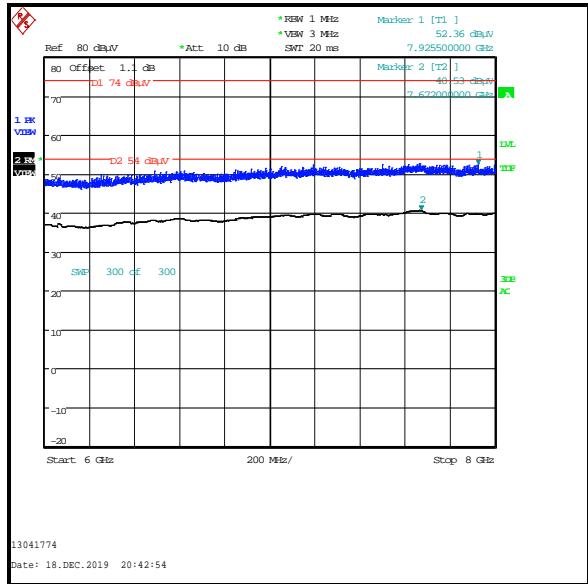


Transmitter Out of Band Radiated Emissions (5.15-5.25 GHz band operation) (continued)



5.2.2. 5.25-5.35 GHz band**Transmitter Out of Band Radiated Emissions (5.25-5.35 GHz band operation)****Test Summary:**

| | | | |
|------------------------------------|---|--------------------|--|
| Test Engineers: | John Ferdinand, Andrew Harding & Mohamed Toubella | Test Dates: | 06 December 2019, 18 December 2019 & 10 January 2020 |
| Test Sample Serial Numbers: | C02ZG00KP22J & C02ZG00UP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Part 15.407(b)(2),(7) & 15.209(a) |
| Test Method Used: | KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6 |
| Frequency Range: | 1 GHz to 40 GHz |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 23 |
| Relative Humidity (%): | 35 to 41 |

Note(s):

1. FCC Part 15.407(b)(2) states for transmitters operating in the band 5.25 to 5.35 GHz: all emissions outside of the 5.15-5.35 GHz band will not exceed -27 dBm/MHz. Part(b)(7) states the provisions of 15.205 apply e.g. restricted bands of operation.
2. Pre-scans were performed with the EUT transmitting on middle channel in the band 5.15 to 5.25 GHz. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest output power and all final measurements should be performed on any emissions seen in each band.
3. In accordance with ANSI section 5.6.2.2, radiated emissions measurements were performed on the mode which had the highest power (802.11n / HT20 / MCS0) and the mode with the highest PSD (802.11a / 6 Mbps). Pre-scans were performed on both modes. Plots in the report are for 802.11n HT20 and the pre-scans for 802.11a are stored on the company IT server and are available upon request.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. All emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor. Therefore the highest peak and average noise floor readings of the measuring receiver were recorded in the 5.15 to 5.25 GHz results section of this report.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. Measurements above 1 GHz were performed in a fully anechoic chamber (Asset Number K0001 or K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres 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 metre to 4 metres.

5.2.3. 5.47-5.725 GHz band**Transmitter Out of Band Radiated Emissions (5.47-5.725 GHz band operation)****Test Summary:**

| | | | |
|------------------------------------|---|--------------------|--|
| Test Engineers: | John Ferdinand, Andrew Harding & Mohamed Toubella | Test Dates: | 06 December 2019, 18 December 2019 & 10 January 2020 |
| Test Sample Serial Numbers: | C02ZG00KP22J & C02ZG00UP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Part 15.407(b)(3),(7) & 15.209(a) |
| Test Method Used: | KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6 |
| Frequency Range: | 1 GHz to 40 GHz |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 23 |
| Relative Humidity (%): | 35 to 36 |

Note(s):

1. FCC Part 15.407(b)(3) states for transmitters operating in the band 5.47 to 5.725 GHz: all emissions outside of the band will not exceed -27 dBm/MHz. Part(b)(7) states the provisions of 15.205 apply e.g. restricted bands of operation.
2. Pre-scans were performed with the EUT transmitting on middle channel in the band 5.15 to 5.25 GHz. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest output power and all final measurements should be performed on any emissions seen in each band.
3. In accordance with ANSI section 5.6.2.2, radiated emissions measurements were performed on the mode which had the highest power (802.11n / HT20 / MCS0) and the mode with the highest PSD (802.11a / 6 Mbps). Pre-scans were performed on both modes. Plots in the report are for 802.11n HT20 and the pre-scans for 802.11a are stored on the company IT server and are available upon request.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. All emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor. Therefore the highest peak and average noise floor readings of the measuring receiver were recorded in the 5.15 to 5.25 GHz results section of this report.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. Measurements above 1 GHz were performed in a fully anechoic chamber (Asset Number K0001 or K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres 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 metre to 4 metres.

5.2.4. Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz**Transmitter Out of Band Radiated Emissions (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz)****Test Summary:**

| | | | |
|------------------------------------|---|--------------------|--|
| Test Engineers: | John Ferdinand, Andrew Harding & Mohamed Toubella | Test Dates: | 06 December 2019, 18 December 2019 & 10 January 2020 |
| Test Sample Serial Numbers: | C02ZG00KP22J & C02ZG00UP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Part 15.407(b)(3),(4)(i),(7) & 15.209(a) |
| Test Method Used: | KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6 |
| Frequency Range: | 1 GHz to 40 GHz |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 23 |
| Relative Humidity (%): | 35 to 36 |

Note(s):

1. KDB 789033 Section III.B.2.b)(iii) states "Straddle channels are considered to be operating in both U-NII-2C and U-NII-3. The worst case out of band emission i.e. -27 dBm/MHz peak EIRP, applies at the band edges. The band edges are considered to be 5.47 GHz and 5.85 GHz."
2. Pre-scans were performed with the EUT transmitting on middle channel in the band 5.15 to 5.25 GHz. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest output power and all final measurements should be performed on any emissions seen in each band.
3. In accordance with ANSI section 5.6.2.2, radiated emissions measurements were performed on the mode which had the highest power (802.11n / HT20 / MCS0) and the mode with the highest PSD (802.11a / 6 Mbps). Pre-scans were performed on both modes. Plots in the report are for 802.11n HT20 and the pre-scans for 802.11a are stored on the company IT server and are available upon request.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. All emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor. Therefore the highest peak and average noise floor readings of the measuring receiver were recorded in the 5.15 to 5.25 GHz results section of this report.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. Measurements above 1 GHz were performed in a fully anechoic chamber (Asset Number K0001 or K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres 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 metre to 4 metres.

5.2.5. 5.725-5.85 GHz band**Transmitter Out of Band Radiated Emissions (5.725-5.85 GHz band operation)****Test Summary:**

| | | | |
|------------------------------------|---|--------------------|--|
| Test Engineers: | John Ferdinand, Andrew Harding & Mohamed Toubella | Test Dates: | 06 December 2019, 18 December 2019 & 10 January 2020 |
| Test Sample Serial Numbers: | C02ZG00KP22J & C02ZG00UP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Part 15.407(b)(4)(i),(7) & 15.209(a) |
| Test Method Used: | KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6 |
| Frequency Range: | 1 GHz to 40 GHz |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 23 |
| Relative Humidity (%): | 35 to 36 |

Note(s):

1. FCC Part 15.407(b)(4)(i) states for transmitters operating in the band 5.725 to 5.85 GHz: all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. Part(b)(7) states the provisions of 15.205 apply e.g. restricted bands of operation.
2. Pre-scans were performed with the EUT transmitting on middle channel in the band 5.15 to 5.25 GHz. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest output power and all final measurements should be performed on any emissions seen in each band.
3. In accordance with ANSI section 5.6.2.2, radiated emissions measurements were performed on the mode which had the highest power (802.11n / HT20 / MCS0) and the mode with the highest PSD (802.11a / 6 Mbps). Pre-scans were performed on both modes. Plots in the report are for 802.11n HT20 and the pre-scans for 802.11a are stored on the company IT server and are available upon request.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. All emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor. Therefore the highest peak and average noise floor readings of the measuring receiver were recorded in the 5.15 to 5.25 GHz results section of this report.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. Measurements above 1 GHz were performed in a fully anechoic chamber (Asset Number K0001 or K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres 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 metre to 4 metres.

5.3. Transmitter Band Edge Radiated Emissions

5.3.1. 5.15-5.25 GHz band

Test Summary:

| | | | |
|-----------------------------------|--|--------------------|--|
| Test Engineers: | Marco Zunarelli, Mohamed Toubella & Andrew Harding | Test Dates: | 24 October 2019 to 18 December 2019 |
| Test Sample Serial Number: | C02ZG00FP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Parts 15.407(b)(1),(7), 15.205 & 15.209(a) |
| Test Method Used: | ANSI C63.10 Section 6.10 & KDB 789033 II.G. |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 22 to 25 |
| Relative Humidity (%): | 35 to 45 |

Note(s):

1. The following modes were tested:
 - o 802.11a / SISO - BPSK / 6 Mbps / Core 2
 - o 802.11n HT20 / SISO - BPSK / MCS0 / Core 2
 - o 802.11n HT40 / SISO - BPSK / MCS0 / Core 2
 - o 802.11ac VHT80 / SISO – BPSK / MCS0x1 / Core 2
2. Lower band edge measurements were performed with the EUT transmitting on the bottom channel. Upper band edge measurements were performed with the EUT transmitting on the top channel.
3. 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. Tests were performed in these restricted bands of operation; the results are included in the transmitter 5.15-5.25 GHz band radiated spurious emission section of this test report.
4. Field strength measurements using peak and average detectors were performed in the restricted bands below 5.15 GHz and above 5.35 GHz. Field strength and EIRP results were found to be compliant with the restricted band limits and Part 15.407 out-of-band limits.
5. For all average measurements if this section, 300 sweeps were used. This satisfies the requirement for the minimum number of sweep points, as stated in KDB 789033 Section II.G.6.c) Method AD (vi).
6. In accordance with KDB 789033 Section II.G.6.c) Method AD (vii), for average measurements, data rates where the EUT was transmitting <98% duty cycle, the duty cycle correction factor calculated in section 4.1 was added to the measured result.

Transmitter Band Edge Radiated Emissions (5.15-5.25 GHz band operation) (continued)

Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Core 2

Results: Lower Band Edge / Peak

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5146.026 | 62.0 | 74.0 | 12.0 | Complied |
| 5150 | 61.5 | 74.0 | 12.5 | Complied |

Results: Upper Band Edge / Peak

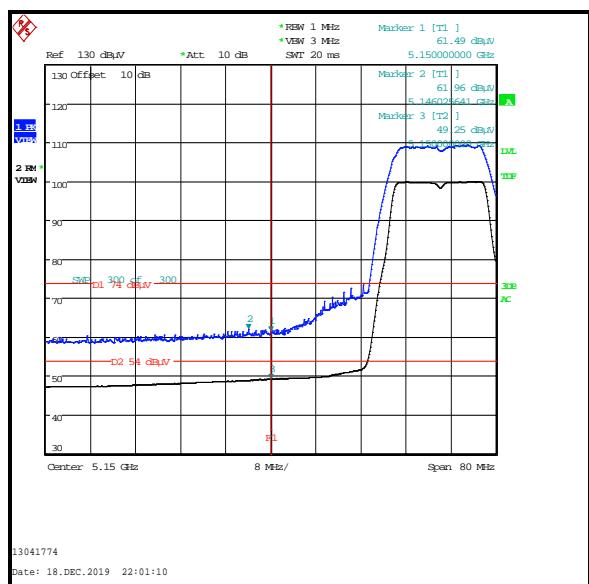
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 59.5 | 74.0 | 14.5 | Complied |
| 5388.462 | 61.0 | 74.0 | 13.0 | Complied |

Results: Lower Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5150 | 49.3 | 54.0 | 4.7 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 49.2 | 54.0 | 4.8 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.15-5.25 GHz band operation) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5149.487 | 65.3 | 74.0 | 8.7 | Complied |
| 5150 | 63.8 | 74.0 | 10.2 | Complied |

Results: Upper Band Edge / Peak

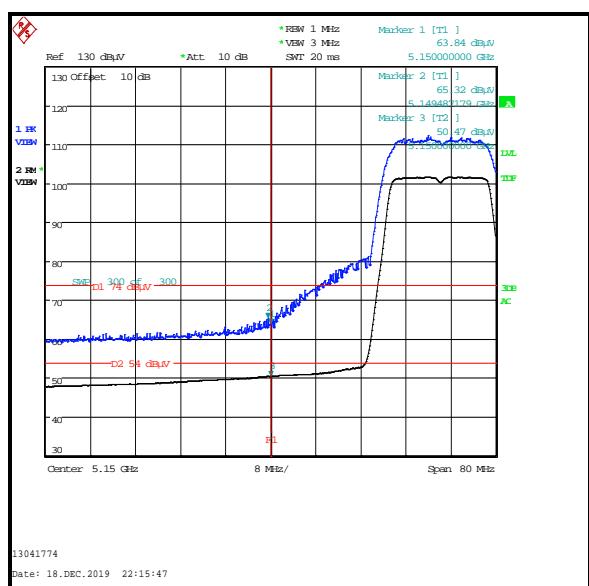
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 59.1 | 74.0 | 14.9 | Complied |
| 5352.692 | 60.6 | 74.0 | 13.4 | Complied |

Results: Lower Band Edge / Average

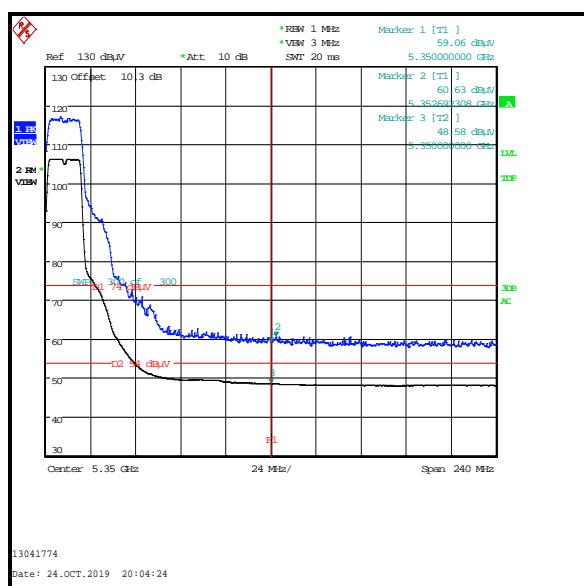
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5150 | 50.5 | 54.0 | 3.5 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 48.6 | 54.0 | 5.4 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.15-5.25 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5149.615 | 71.0 | 74.0 | 3.0 | Complied |
| 5150 | 70.9 | 74.0 | 3.1 | Complied |

Results: Upper Band Edge / Peak

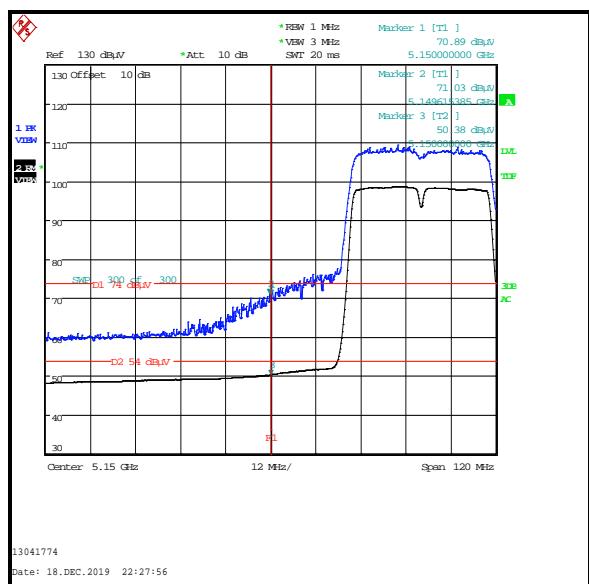
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 61.2 | 74.0 | 12.8 | Complied |
| 5350.897 | 62.2 | 74.0 | 11.8 | Complied |

Results: Lower Band Edge / Average

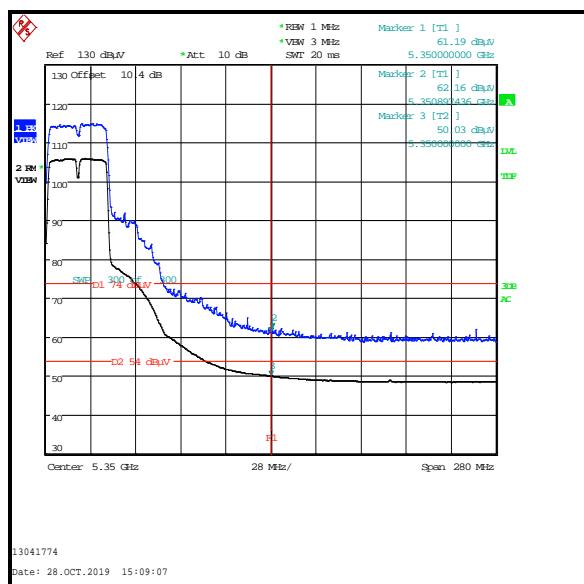
| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5150 | 50.4 | 0.1 | 50.5 | 54.0 | 3.5 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5350 | 50.0 | 0.1 | 50.1 | 54.0 | 3.9 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.15-5.25 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5145.192 | 69.3 | 74.0 | 4.7 | Complied |
| 5150 | 68.2 | 74.0 | 5.8 | Complied |

Results: Upper Band Edge / Peak

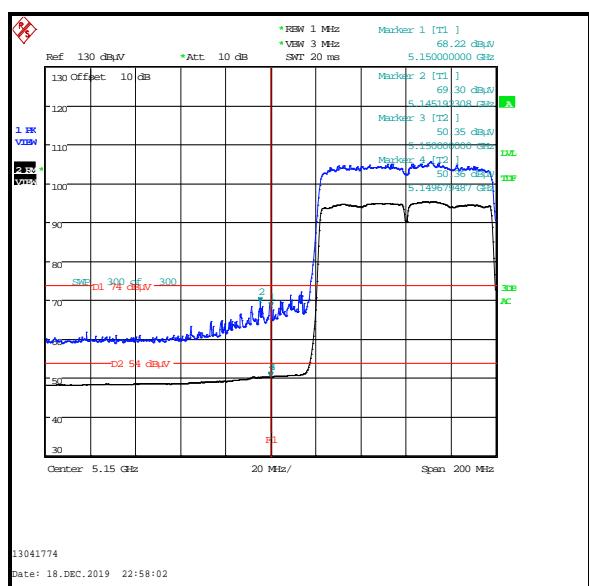
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 59.9 | 74.0 | 14.1 | Complied |
| 5385.100 | 60.9 | 74.0 | 13.1 | Complied |

Results: Lower Band Edge / Average

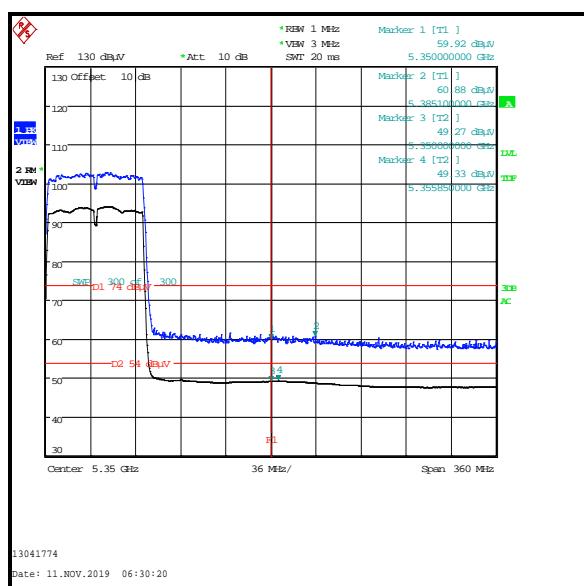
| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5150 | 50.4 | 0.2 | 50.6 | 54.0 | 3.4 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5350 | 49.3 | 0.2 | 49.5 | 54.0 | 4.5 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.25-5.35 GHz band)**5.3.2. 5.25-5.35 GHz band****Test Summary:**

| | | | |
|------------------------------------|---|--------------------|-------------------------------------|
| Test Engineers: | Marco Zunarelli, Nick Steele, Mohamed Toubella & Andrew Harding | Test Dates: | 24 October 2019 to 19 December 2019 |
| Test Sample Serial Numbers: | C02ZG00FP22J & C02ZH00BP1YX | | |

| | |
|--------------------------|---|
| FCC Reference: | Parts 15.407(b)(2),(7), 15.205 & 15.209(a) |
| Test Method Used: | ANSI C63.10 Section 6.10 & KDB 789033 II.G. |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 22 to 24 |
| Relative Humidity (%): | 36 to 45 |

Note(s):

1. The following modes were tested:
 - o 802.11a / SISO - BPSK / 6 Mbps / Core 2
 - o 802.11n HT20 / SISO - BPSK / MCS0 / Core 2
 - o 802.11n HT40 / SISO - BPSK / MCS0 / Core 2
 - o 802.11ac VHT80 / SISO – BPSK / MCS0x1 / Core 2
2. Lower band edge measurements were performed with the EUT transmitting on the bottom channel. Upper band edge measurements were performed with the EUT transmitting on the top channel.
3. For transmitters operating in the 5.25-5.35 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. Tests were performed in these restricted bands of operation with the EUT transmitting on the bottom and top channels within 5.25-5.35 GHz band, the results are included in the transmitter 5.15-5.25 GHz band radiated spurious emissions section of this test report.
4. Field strength measurements using peak and average detectors were performed in the restricted bands below 5.15 GHz and above 5.35 GHz. Field strength and EIRP results were found to be compliant with the restricted band limits and Part 15.407 out-of-band limits.
5. For all average measurements if this section, 300 sweeps were used. This satisfies the requirement for the minimum number of sweep points, as stated in KDB 789033 Section II.G.6.c) Method AD (vi).
6. In accordance with KDB 789033 Section II.G.6.c) Method AD (vii), for average measurements, data rates where the EUT was transmitting <98% duty cycle, the duty cycle correction factor calculated in section 4.1 was added to the measured result.

Transmitter Band Edge Radiated Emissions (5.25-5.35 GHz band operation) (continued)

Results: 802.11a / 20 MHz / BPSK / 6 Mbps / Core 2

Results: Lower Band Edge / Peak

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5147.692 | 60.8 | 74.0 | 13.2 | Complied |
| 5150 | 59.1 | 74.0 | 14.9 | Complied |

Results: Upper Band Edge / Peak

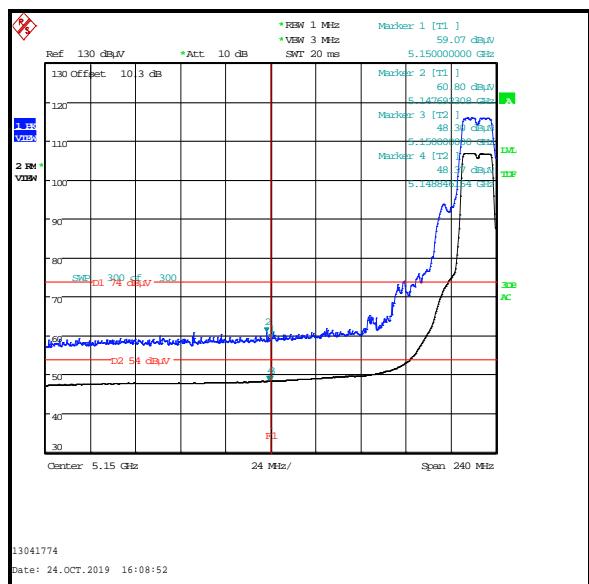
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 61.5 | 74.0 | 12.5 | Complied |
| 5356.026 | 62.8 | 74.0 | 11.2 | Complied |

Results: Lower Band Edge / Average

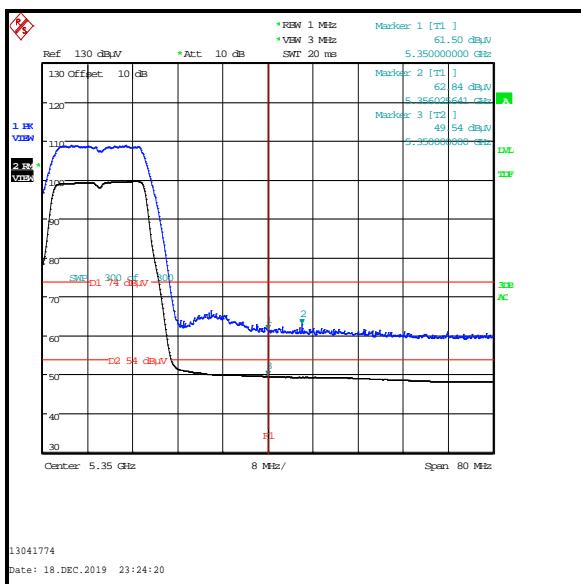
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5148.846 | 48.4 | 54.0 | 5.6 | Complied |
| 5150 | 48.3 | 54.0 | 5.7 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 49.5 | 54.0 | 4.5 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.25-5.35 GHz band operation) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5145.769 | 60.4 | 74.0 | 13.6 | Complied |
| 5150 | 58.7 | 74.0 | 15.3 | Complied |

Results: Upper Band Edge / Peak

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 61.3 | 74.0 | 12.7 | Complied |
| 5356.282 | 62.3 | 74.0 | 11.7 | Complied |

Results: Lower Band Edge / Average

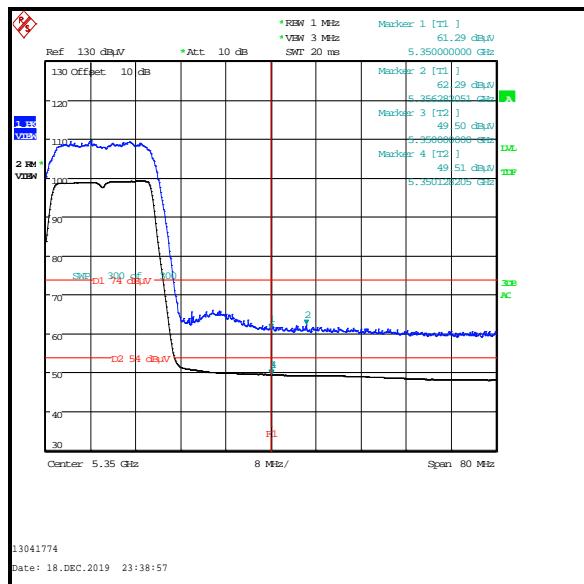
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5148.077 | 48.3 | 54.0 | 5.7 | Complied |
| 5150 | 48.2 | 54.0 | 5.8 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 49.5 | 54.0 | 4.5 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.25-5.35 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5132.949 | 61.0 | 74.0 | 13.0 | Complied |
| 5150 | 60.6 | 74.0 | 13.4 | Complied |

Results: Upper Band Edge / Peak

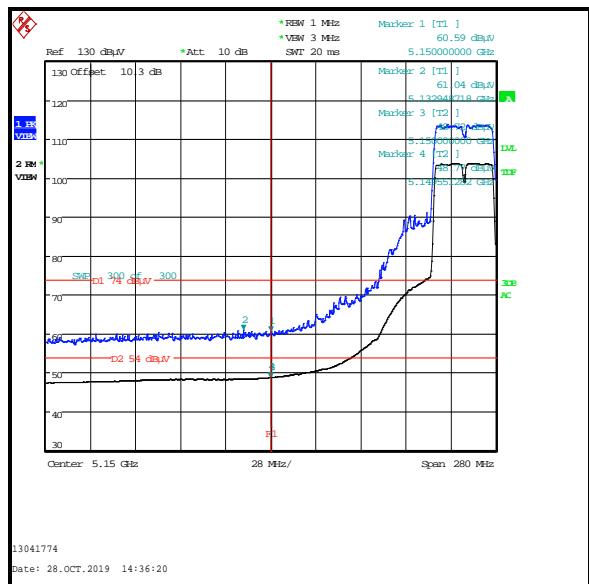
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 60.8 | 74.0 | 13.2 | Complied |
| 5372.115 | 62.5 | 74.0 | 11.5 | Complied |

Results: Lower Band Edge / Average

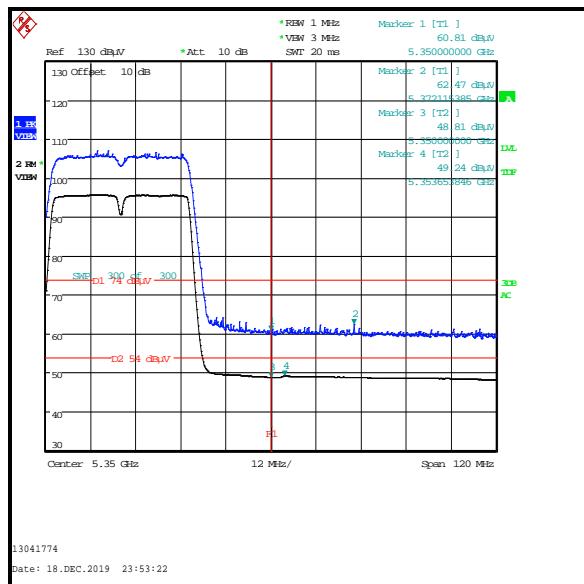
| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5149.551 | 48.8 | 0.1 | 48.9 | 54.0 | 5.1 | Complied |
| 5150 | 48.7 | 0.1 | 48.8 | 54.0 | 5.2 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5350 | 48.8 | 0.1 | 48.9 | 54.0 | 5.1 | Complied |
| 5353.653 | 49.2 | 0.1 | 49.3 | 54.0 | 4.7 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.25-5.35 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2****Results: Lower Band Edge / Peak**

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5150 | 61.2 | 74.0 | 12.8 | Complied |

Results: Upper Band Edge / Peak

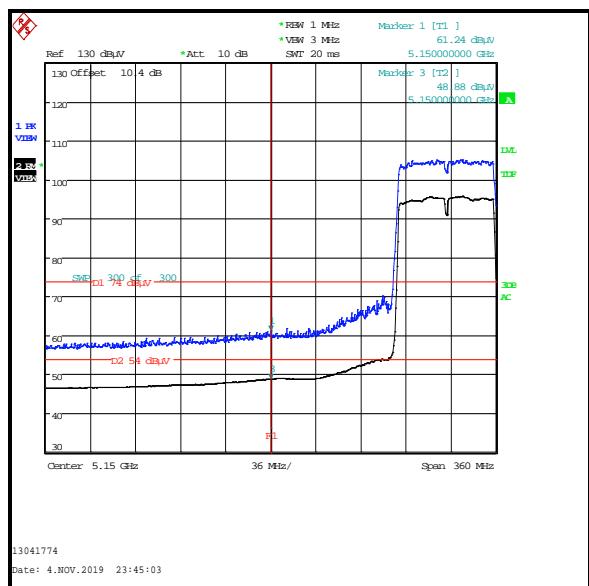
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5350 | 62.6 | 74.0 | 11.4 | Complied |

Results: Lower Band Edge / Average

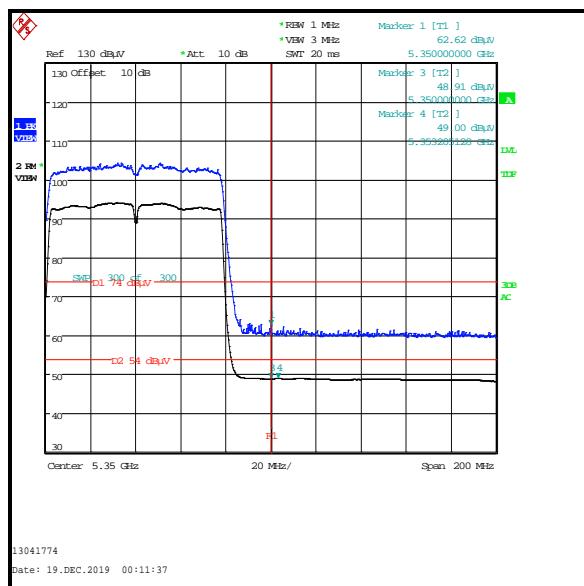
| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5150 | 48.9 | 0.2 | 49.1 | 54.0 | 4.9 | Complied |

Results: Upper Band Edge / Average

| Frequency (MHz) | Level (dB μ V/m) | Duty Cycle correction (dB) | Corrected Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------------|--------------------------------|----------------------|-------------|----------|
| 5350 | 48.9 | 0.2 | 49.1 | 54.0 | 4.9 | Complied |
| 5353.205 | 49.0 | 0.2 | 49.2 | 54.0 | 4.8 | Complied |



Lower Band Edge



Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band)**5.3.3. 5.47-5.725 GHz band****Test Summary:**

| | | | |
|-----------------------------------|--|--------------------|---------------------------------------|
| Test Engineers: | Marco Zunarelli, Mohamed Toubella & Andrew Harding | Test Dates: | 23 October 2019 to 03 January 2020 |
| Test Sample Serial Number: | C02ZG00FP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Parts 15.407(b)(3),(7), 15.205 & 15.209(a) |
| Test Method Used: | ANSI C63.10 Section 6.10 & KDB 789033 II.G. |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 22 to 24 |
| Relative Humidity (%): | 36 to 45 |

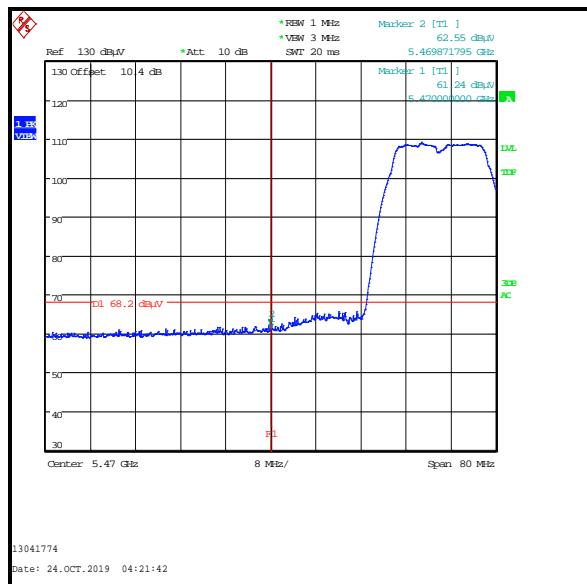
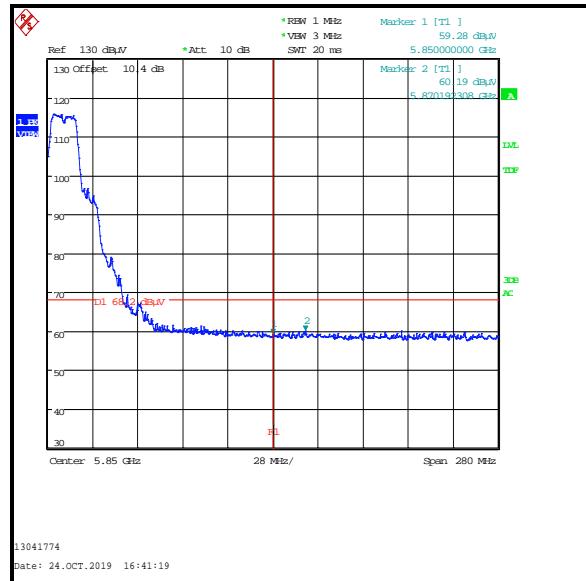
Note(s):

1. The following modes were tested:
 - o 802.11a / SISO - BPSK / 6 Mbps / Core 2
 - o 802.11n HT20 / SISO - BPSK / MCS0 / Core 2
 - o 802.11n HT40 / SISO - BPSK / MCS0 / Core 2
 - o 802.11ac VHT80 / SISO – BPSK / MCS0x1 / Core 2
2. Lower band edge measurements were performed with the EUT transmitting on the bottom channel. Upper band edge measurements were performed with the EUT transmitting on the top channel.
3. For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 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 at 5.35-5.46 GHz therefore the provisions of FCC Part 15.205 apply. Tests were performed in these restricted bands of operation with the EUT transmitting on the bottom and top channels within 5.47-5.725 GHz band, the results are included in the transmitter 5.15-5.25 GHz band radiated spurious emissions section of this test report.
4. For completeness, results are also shown as EIRP in dBm and also as field strength in dB μ V/m. Measured field strength was converted to EIRP in accordance with KDB 789033 II.G.2.c)(iii) using a conversion factor of 95.2.
5. As straddle channels overlap the upper band edge at 5725 MHz, additional testing was performed in accordance with KDB 789033 III.B.2.b)(iii) which required compliance of overlapping channels to an unwanted emission level of -27 dBm/MHz at 5850 MHz instead of 5725 MHz.

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-------------|-------------|-------------|----------|
| 5469.872 | -32.6 | -27.0 | 5.6 | Complied |
| 5470 | -34.0 | -27.0 | 7.0 | Complied |
| 5725 | -32.1 | -27.0 | 5.1 | Complied |
| 5850 | -35.9 | -27.0 | 8.9 | Complied |
| 5870.192 | -35.0 | -27.0 | 8.0 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5469.872 | 62.6 | 68.2 | 5.6 | Complied |
| 5470 | 61.2 | 68.2 | 7.0 | Complied |
| 5725 | 63.1 | 68.2 | 5.1 | Complied |
| 5850 | 59.3 | 68.2 | 8.9 | Complied |
| 5870.192 | 60.2 | 68.2 | 8.0 | Complied |

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Core 2 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-------------|-------------|-------------|----------|
| 5466.795 | -32.8 | -27.0 | 5.8 | Complied |
| 5470 | -33.6 | -27.0 | 6.6 | Complied |
| 5725 | -33.4 | -27.0 | 6.4 | Complied |
| 5726.458 | -32.1 | -27.0 | 5.1 | Complied |
| 5850 | -36.8 | -27.0 | 9.8 | Complied |
| 5982.821 | -34.7 | -27.0 | 7.7 | Complied |

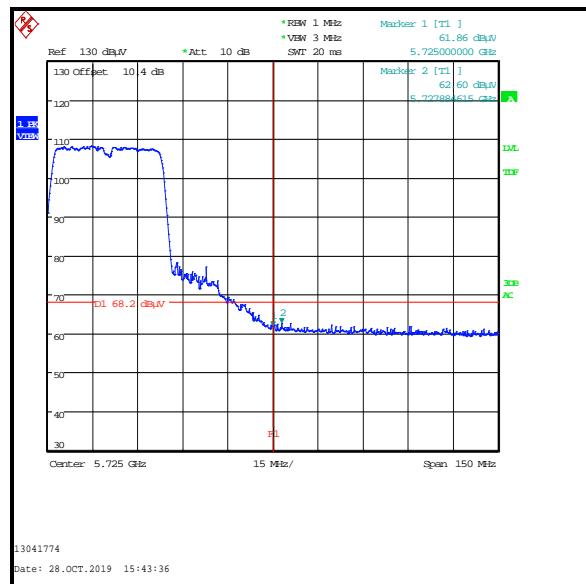
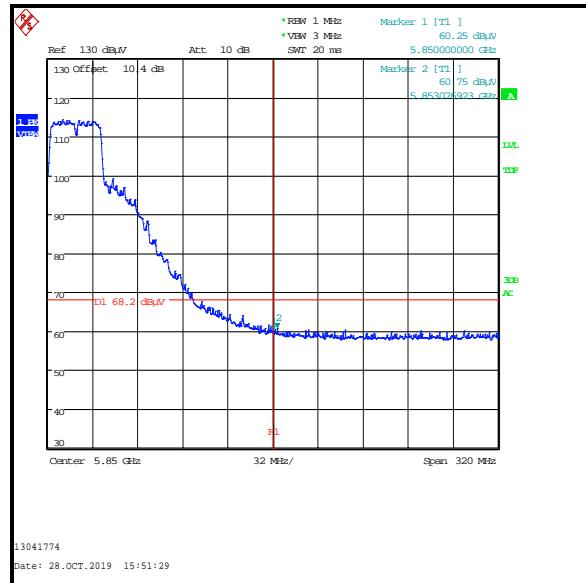
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5466.795 | 62.4 | 68.2 | 5.8 | Complied |
| 5470 | 61.6 | 68.2 | 6.6 | Complied |
| 5725 | 61.8 | 68.2 | 6.4 | Complied |
| 5726.458 | 63.1 | 68.2 | 5.1 | Complied |
| 5850 | 58.4 | 68.2 | 9.8 | Complied |
| 5982.821 | 60.5 | 68.2 | 7.7 | Complied |

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-------------|-------------|-------------|----------|
| 5463.654 | -33.5 | -27.0 | 6.5 | Complied |
| 5470 | -34.3 | -27.0 | 7.3 | Complied |
| 5725 | -33.3 | -27.0 | 6.3 | Complied |
| 5727.885 | -32.6 | -27.0 | 5.6 | Complied |
| 5850 | -34.9 | -27.0 | 7.9 | Complied |
| 5853.077 | -34.4 | -27.0 | 7.4 | Complied |

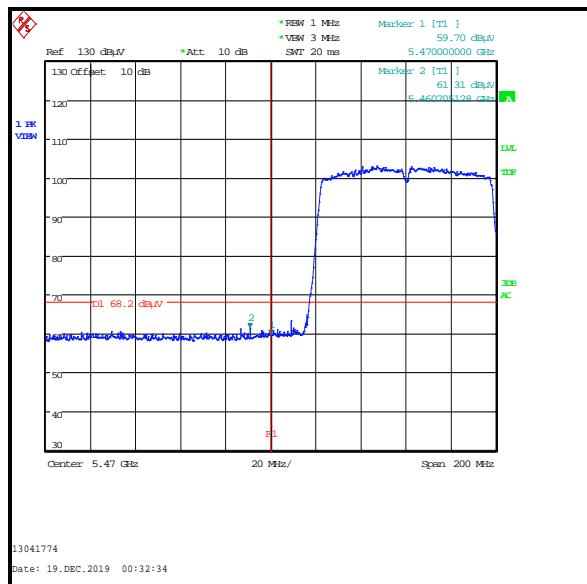
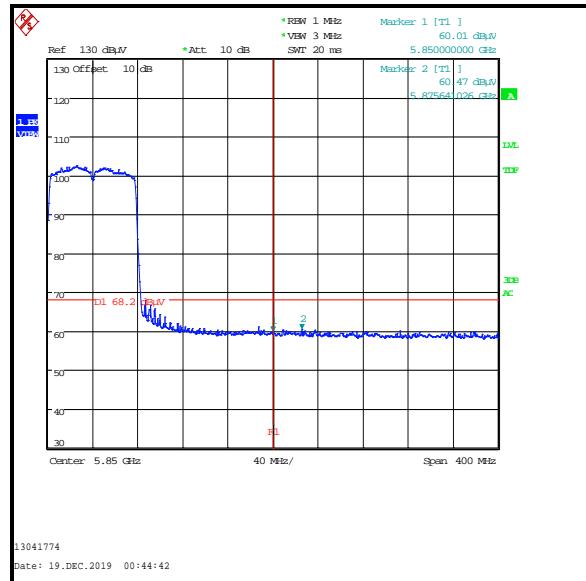
| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5463.654 | 61.7 | 68.2 | 6.5 | Complied |
| 5470 | 60.9 | 68.2 | 7.3 | Complied |
| 5725 | 61.9 | 68.2 | 6.3 | Complied |
| 5727.885 | 62.6 | 68.2 | 5.6 | Complied |
| 5850 | 60.3 | 68.2 | 7.9 | Complied |
| 5853.077 | 60.8 | 68.2 | 7.4 | Complied |

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-------------|-------------|-------------|----------|
| 5460.705 | -33.9 | -27.0 | 6.9 | Complied |
| 5470 | -35.5 | -27.0 | 8.5 | Complied |
| 5725 | -36.3 | -27.0 | 9.3 | Complied |
| 5839.263 | -34.9 | -27.0 | 7.9 | Complied |
| 5850 | -35.2 | -27.0 | 8.2 | Complied |
| 5875.641 | -34.7 | -27.0 | 7.7 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5460.705 | 61.3 | 68.2 | 6.9 | Complied |
| 5470 | 59.7 | 68.2 | 8.5 | Complied |
| 5725 | 58.9 | 68.2 | 9.3 | Complied |
| 5839.263 | 60.3 | 68.2 | 7.9 | Complied |
| 5850 | 60.0 | 68.2 | 8.2 | Complied |
| 5875.641 | 60.5 | 68.2 | 7.7 | Complied |

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band)**5.3.4. 5.725-5.85 GHz band****Test Summary:**

| | | | |
|-----------------------------------|--|--------------------|--|
| Test Engineers: | Marco Zunarelli, Mohamed Toubella & Andrew Harding | Test Dates: | 23 October 2019 to 19 December 2019 |
| Test Sample Serial Number: | C02ZG00FP22J | | |

| | |
|--------------------------|---|
| FCC Reference: | Parts 15.407(b)(4)(i),(7), 15.205 & 15.209(a) |
| Test Method Used: | ANSI C63.10 Section 6.10 & KDB 789033 II.G. |

Environmental Conditions:

| | |
|-------------------------------|----------|
| Temperature (°C): | 22 to 24 |
| Relative Humidity (%): | 40 to 45 |

Note(s):

1. The following modes were tested:
 - o 802.11a / SISO - BPSK / 6 Mbps / Core 2
 - o 802.11n HT20 / SISO - BPSK / MCS0 / Core 2
 - o 802.11n HT40 / SISO - BPSK / MCS0 / Core 2
 - o 802.11ac VHT80 / SISO – BPSK / MCS0x1 / Core 2
2. Lower band edge measurements were performed with the EUT transmitting on the bottom channel. Upper band edge measurements were performed with the EUT transmitting on the top channel.
3. For completeness, results are also shown as EIRP in dBm and also as field strength in dB μ V/m. Measured field strength was converted to EIRP in accordance with KDB 789033 G.2.c)(iii) using a conversion factor of 95.2.

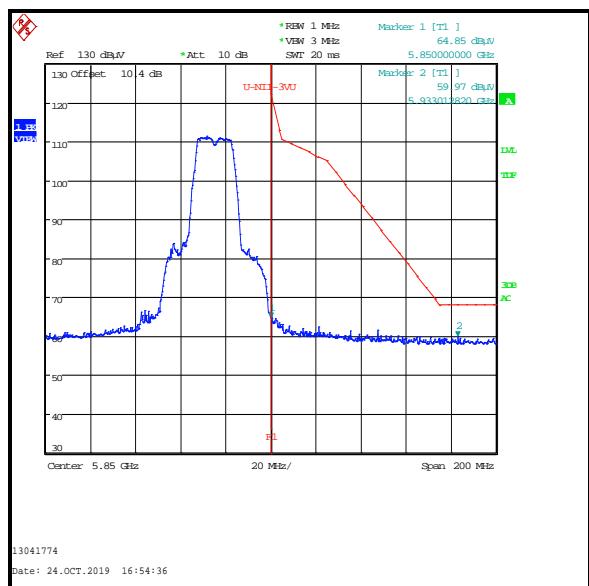
Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|-------------|-----------------|-------------|----------|
| 5645.833 | -34.7 | -27.0 | 7.7 | Complied |
| 5725 | -8.6 | 27.0 | 35.6 | Complied |
| 5850 | -30.3 | 27.0 | 57.3 | Complied |
| 5933.013 | -35.2 | -27.0 | 8.2 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5645.833 | 60.5 | 68.2 | 7.7 | Complied |
| 5725 | 86.6 | 122.2 | 35.6 | Complied |
| 5850 | 64.9 | 122.2 | 57.3 | Complied |
| 5933.013 | 60.0 | 68.2 | 8.2 | Complied |



Lower Band Edge



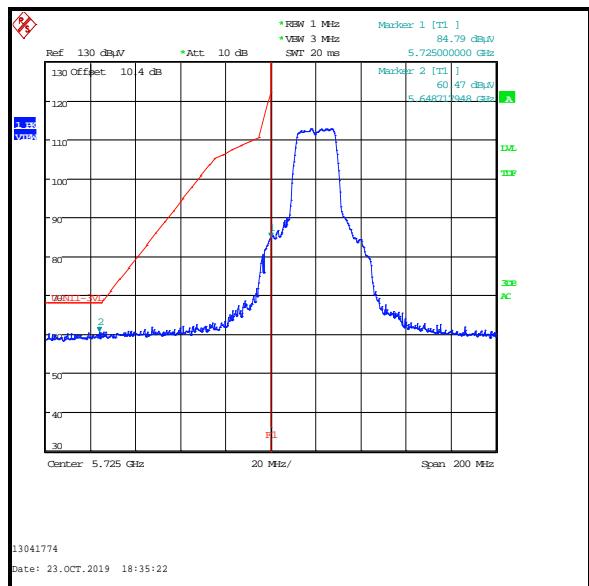
Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2 / Peak

| Frequency (MHz) | Level (dBm) | Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|-------------|-----------------|-------------|----------|
| 5648.718 | -34.7 | -27.0 | 7.7 | Complied |
| 5725 | -10.4 | 27.0 | 37.4 | Complied |
| 5850 | -26.3 | 27.0 | 53.3 | Complied |
| 5949.679 | -35.4 | -27.0 | 8.4 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5648.718 | 60.5 | 68.2 | 7.7 | Complied |
| 5725 | 84.8 | 122.2 | 37.4 | Complied |
| 5850 | 68.9 | 122.2 | 53.3 | Complied |
| 5949.679 | 59.8 | 68.2 | 8.4 | Complied |



Lower Band Edge

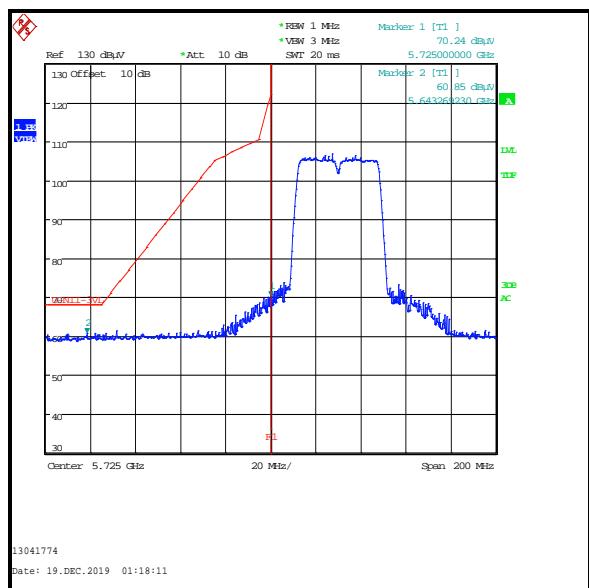


Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|-------------|-----------------|-------------|----------|
| 5643.269 | -34.3 | -27.0 | 7.3 | Complied |
| 5725 | -25.0 | 27.0 | 52.0 | Complied |
| 5850 | -11.0 | 27.0 | 38.0 | Complied |
| 5930.128 | -33.9 | -27.0 | 6.9 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5643.269 | 60.9 | 68.2 | 7.3 | Complied |
| 5725 | 70.2 | 122.2 | 52.0 | Complied |
| 5850 | 84.2 | 122.2 | 38.0 | Complied |
| 5930.128 | 61.3 | 68.2 | 6.9 | Complied |



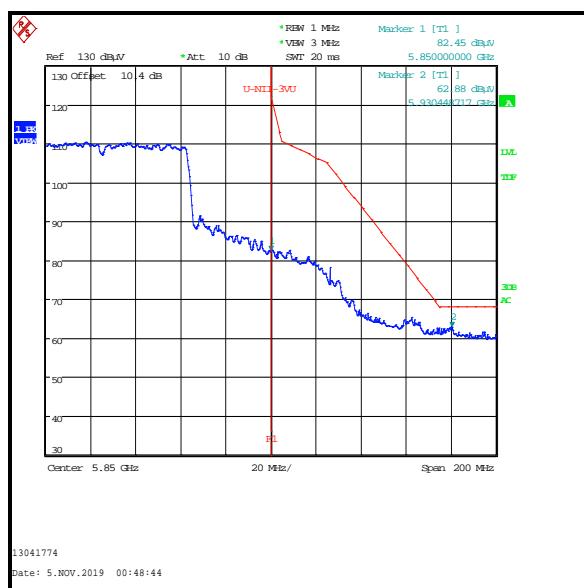
Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

| Frequency (MHz) | Level (dBm) | Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|-------------|-----------------|-------------|----------|
| 5638.782 | -33.4 | -27.0 | 6.4 | Complied |
| 5725 | -29.6 | 27.0 | 56.6 | Complied |
| 5850 | -12.7 | 27.0 | 39.7 | Complied |
| 5930.449 | -32.3 | -27.0 | 5.3 | Complied |

| Frequency (MHz) | Level (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Result |
|-----------------|----------------------|----------------------|-------------|----------|
| 5638.782 | 61.8 | 68.2 | 6.4 | Complied |
| 5725 | 65.6 | 122.2 | 56.6 | Complied |
| 5850 | 82.5 | 122.2 | 39.7 | Complied |
| 5930.449 | 62.9 | 68.2 | 5.3 | Complied |



Lower Band Edge



Upper Band Edge

--- END OF REPORT ---