

## ANNEX A: Test Result

### 1. Unwanted Emission

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the loop antenna is coplanar, the others are vertical and horizontal. and the worst case was recorded.

#### 1.1. Wi-Fi 2.4GHz

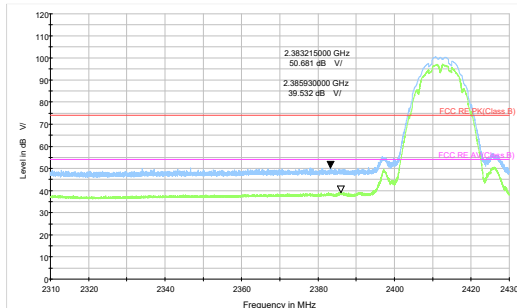
The following graphs display the maximum values of horizontal and vertical by software. Blue trace uses the peak detection, Green trace uses the average detection.

A symbol ( $\text{dB } \mu\text{V}$ ) in the test plot below means ( $\text{dB}\mu\text{V/m}$ )

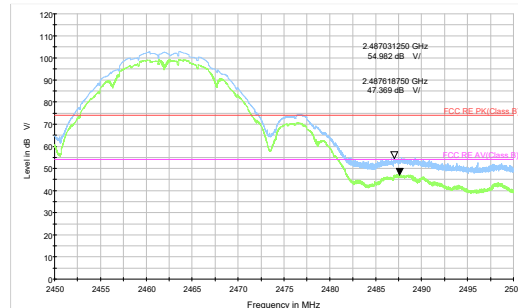
The modulation and bandwidth are similar for 802.11g mode, 802.11n mode and 802.11ax mode for 20MHz/40MHz, therefore investigated worst case to representative mode in test report.

**The signal beyond the limit is carrier.**

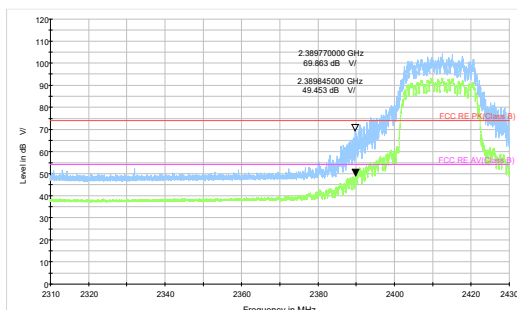
**F153C**



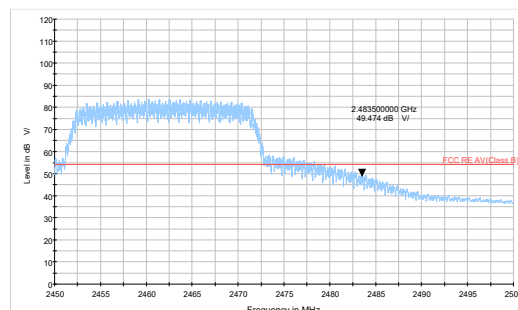
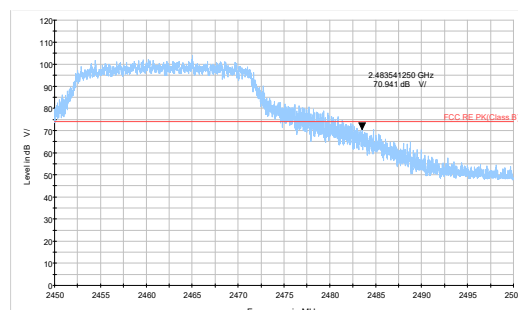
802.11b-Channel 1 Peak+ Average



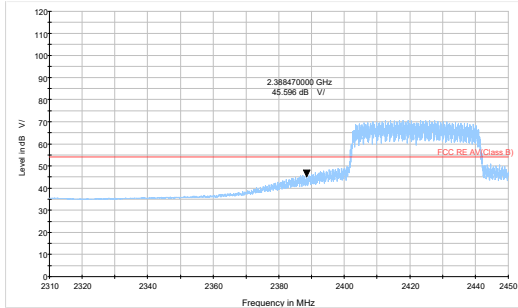
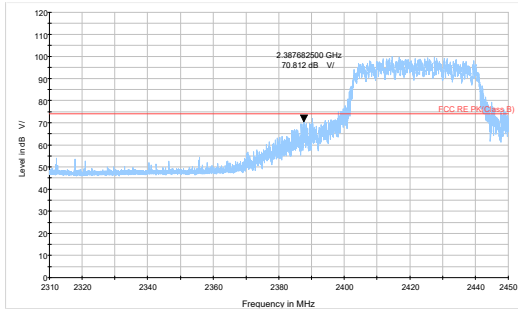
802.11b-Channel 11 Peak+ Average



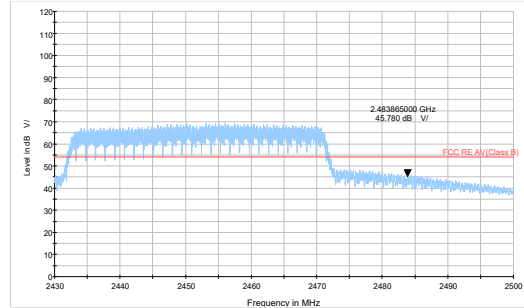
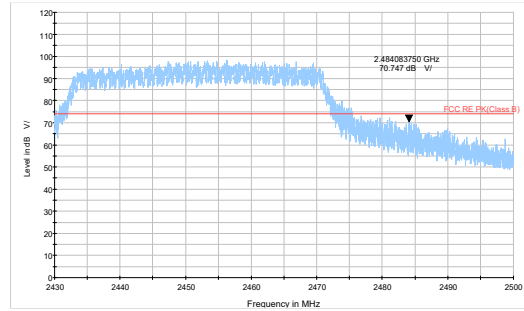
802.11ax HE20-Channel 1 Peak+ Average



802.11ax HE20-Channel 11 Peak+ Average



802.11ax HE40-Channel 3 Peak+ Average



802.11ax HE40-Channel 9 Peak+ Average

## Result of RE

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier. The Radiates Emission from 9kHz to 30MHz and 18GHz to 26.5GHz are more than 20dB below the limit are not reported.

### Remark:

1. **Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)**
2. **Margin = Limit – Quasi-Peak/ MAX Peak/ Average**
3. **A symbol (dB V/) in the test plot below means (dB $\mu$ V/m)**
4. **The following graphs display the maximum values of horizontal and vertical by software.**
5. **For below 1GHz**

QP Level @Spectrum Overview H   
 QP Level @Spectrum Overview V   
 QP Level @Final Results   
 QP Limit

**For above 1GHz**

PK Level @Spectrum Overview H   
 PK Level @Spectrum Overview V   
 PK Level @Final Results   
 PK Limit

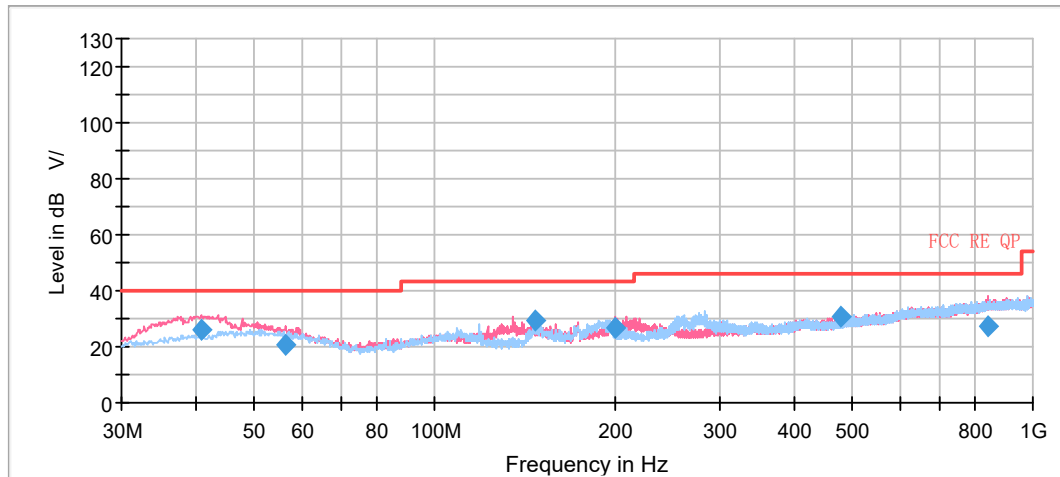
AVG Level @Spectrum Overview H   
 AVG Level @Spectrum Overview V   
 AVG Level @Final Results   
 AVG Limit

### Continuous TX mode:

#### F153C:

The modulation and bandwidth are similar for 802.11g mode, 802.11n mode and 802.11ax mode for 20MHz/40MHz, therefore investigated worst case to representative mode in test report.

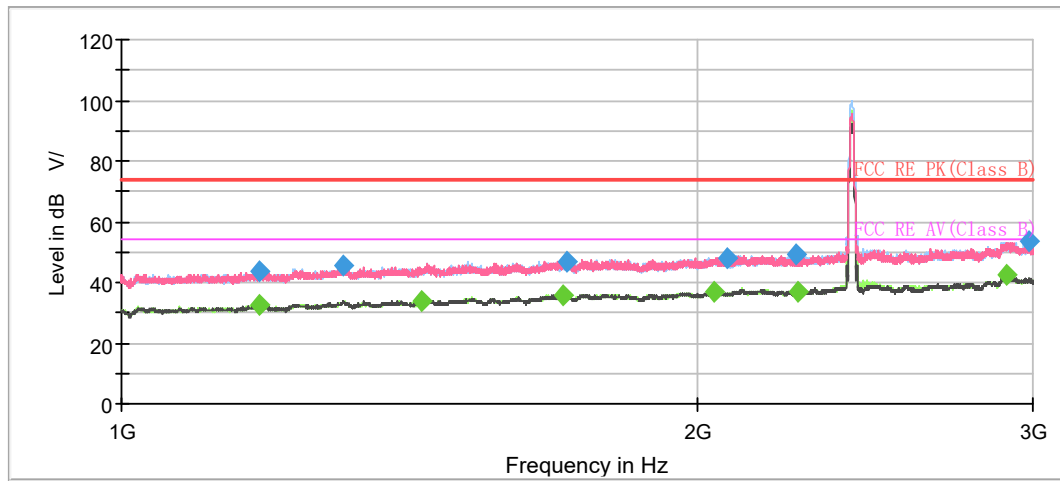
During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels, the test data of the worst-case condition was recorded in this report.



Radiates Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------------|----------------------|-------------|-------------|--------------|---------------|---------------------|
| 40.791250       | 25.99                     | 40.00                | 14.01       | 100.0       | V            | 317.0         | 19.7                |
| 56.311250       | 20.36                     | 40.00                | 19.64       | 100.0       | V            | 94.0          | 20.5                |
| 147.491250      | 29.56                     | 43.50                | 13.94       | 100.0       | V            | 193.0         | 15.6                |
| 199.992500      | 26.43                     | 43.50                | 17.07       | 100.0       | V            | 235.0         | 18.9                |
| 476.200000      | 30.79                     | 46.00                | 15.21       | 100.0       | V            | 0.0           | 24.6                |
| 843.102500      | 27.56                     | 46.00                | 18.44       | 118.0       | V            | 101.0         | 30.7                |

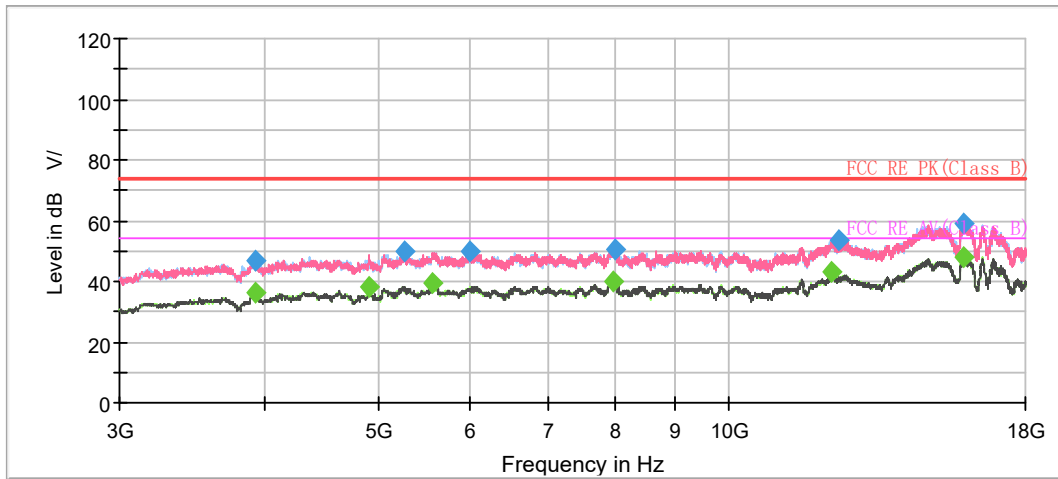
## 802.11b CH1



Note: The signal beyond the limit is carrier.

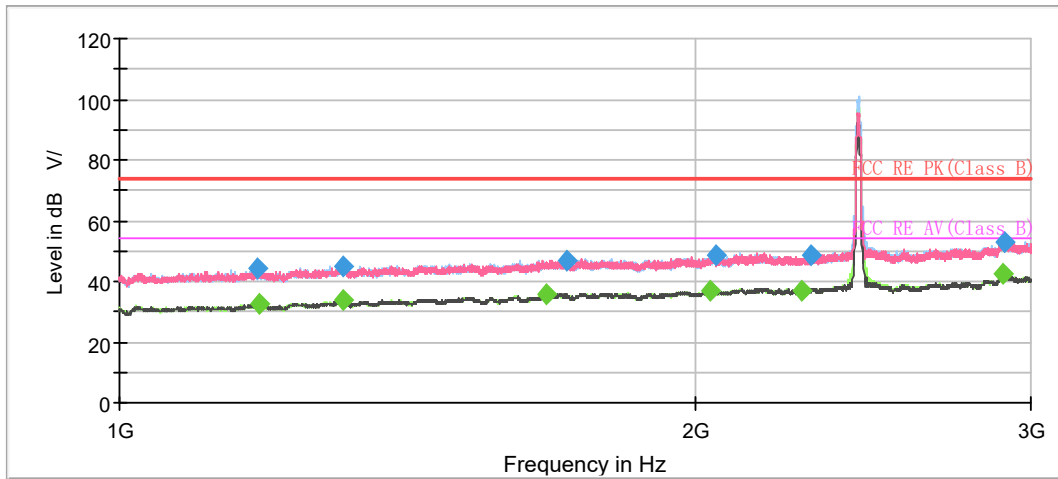
Radiates Emission from 1GHz to 3GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1179.750000     | 43.40            | ---              | 74.00          | 30.60       | 500.0           | 100.0       | V   | 281.0         | -4.0         |
| 1180.750000     | ---              | 32.34            | 54.00          | 21.66       | 500.0           | 100.0       | H   | 0.0           | -4.0         |
| 1307.500000     | 45.28            | ---              | 74.00          | 28.72       | 500.0           | 200.0       | V   | 323.0         | -2.1         |
| 1436.000000     | ---              | 34.15            | 54.00          | 19.85       | 500.0           | 100.0       | V   | 314.0         | -1.8         |
| 1703.500000     | ---              | 35.83            | 54.00          | 18.17       | 500.0           | 200.0       | H   | 118.0         | 0.4          |
| 1710.250000     | 47.06            | ---              | 74.00          | 26.94       | 500.0           | 200.0       | V   | 224.0         | 0.5          |
| 2041.500000     | ---              | 37.10            | 54.00          | 16.90       | 500.0           | 200.0       | V   | 134.0         | 2.5          |
| 2077.000000     | 48.26            | ---              | 74.00          | 25.74       | 500.0           | 100.0       | H   | 60.0          | 2.1          |
| 2255.000000     | 49.05            | ---              | 74.00          | 24.95       | 500.0           | 100.0       | V   | 3.0           | 2.9          |
| 2259.250000     | ---              | 36.91            | 54.00          | 17.09       | 500.0           | 200.0       | V   | 157.0         | 2.8          |
| 2905.000000     | ---              | 42.16            | 54.00          | 11.84       | 500.0           | 200.0       | H   | 20.0          | 8.5          |
| 2986.250000     | 53.38            | ---              | 74.00          | 20.62       | 500.0           | 200.0       | H   | 11.0          | 8.2          |



Radiates Emission from 3GHz to 18GHz

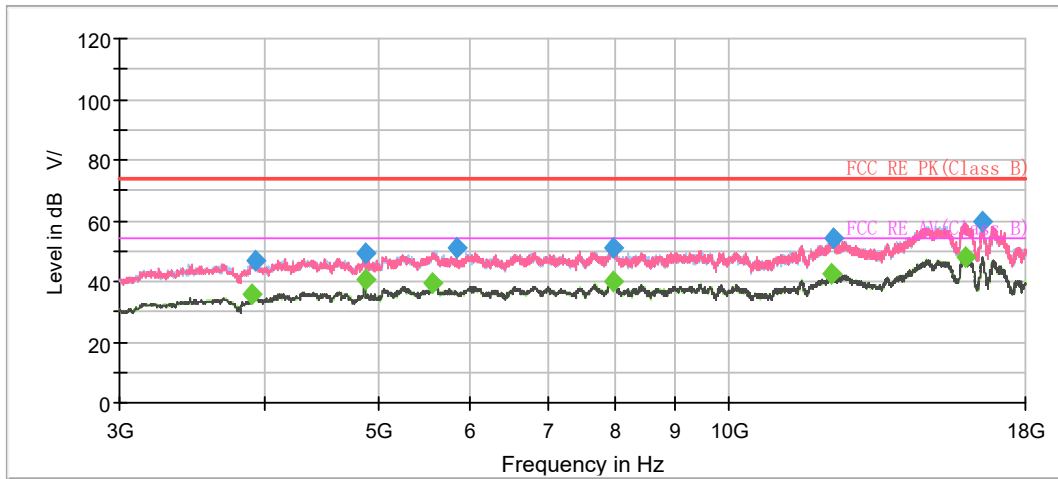
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3924.375000     | ---                    | 36.17                  | 54.00                | 17.83       | 500.0           | 100.0       | V   | 0.0           | 2.7          |
| 3924.375000     | 46.79                  | ---                    | 74.00                | 27.21       | 500.0           | 200.0       | V   | 0.0           | 2.7          |
| 4923.750000     | ---                    | 38.42                  | 54.00                | 15.58       | 500.0           | 100.0       | H   | 57.0          | 3.0          |
| 5272.500000     | 49.98                  | ---                    | 74.00                | 24.02       | 500.0           | 100.0       | H   | 310.0         | 6.5          |
| 5576.250000     | ---                    | 39.24                  | 54.00                | 14.76       | 500.0           | 100.0       | V   | 281.0         | 7.3          |
| 6001.875000     | 49.73                  | ---                    | 74.00                | 24.27       | 500.0           | 200.0       | H   | 124.0         | 6.2          |
| 7974.375000     | ---                    | 39.83                  | 54.00                | 14.17       | 500.0           | 200.0       | H   | 239.0         | 9.9          |
| 7993.125000     | 50.27                  | ---                    | 74.00                | 23.73       | 500.0           | 200.0       | H   | 36.0          | 9.9          |
| 12288.750000    | ---                    | 42.78                  | 54.00                | 11.22       | 500.0           | 100.0       | H   | 297.0         | 14.4         |
| 12451.875000    | 53.57                  | ---                    | 74.00                | 20.43       | 500.0           | 100.0       | V   | 57.0          | 13.3         |
| 15946.875000    | ---                    | 47.98                  | 54.00                | 6.02        | 500.0           | 100.0       | V   | 272.0         | 19.6         |
| 15950.625000    | 59.11                  | ---                    | 74.00                | 14.89       | 500.0           | 200.0       | V   | 148.0         | 19.6         |



Note: The signal beyond the limit is carrier.

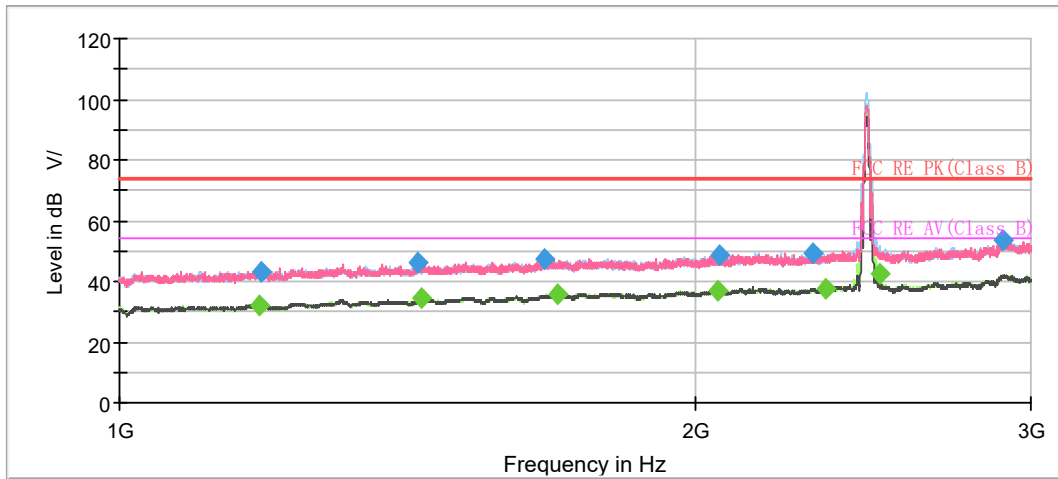
Radiates Emission from 1GHz to 3GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1180.250000     | 44.18            | ---              | 74.00          | 29.82       | 500.0           | 100.0       | H   | 60.0          | -4.0         |
| 1183.500000     | ---              | 32.34            | 54.00          | 21.66       | 500.0           | 100.0       | H   | 159.0         | -3.9         |
| 1308.250000     | 45.18            | ---              | 74.00          | 28.82       | 500.0           | 200.0       | H   | 218.0         | -2.0         |
| 1309.750000     | ---              | 34.07            | 54.00          | 19.93       | 500.0           | 200.0       | V   | 341.0         | -2.2         |
| 1671.500000     | ---              | 35.99            | 54.00          | 18.01       | 500.0           | 100.0       | V   | 274.0         | 0.2          |
| 1713.250000     | 46.58            | ---              | 74.00          | 27.42       | 500.0           | 200.0       | V   | 333.0         | 0.4          |
| 2039.250000     | ---              | 36.96            | 54.00          | 17.04       | 500.0           | 200.0       | V   | 225.0         | 2.4          |
| 2054.000000     | 48.55            | ---              | 74.00          | 25.45       | 500.0           | 100.0       | H   | 52.0          | 2.4          |
| 2277.750000     | ---              | 36.96            | 54.00          | 17.04       | 500.0           | 200.0       | V   | 208.0         | 3.0          |
| 2300.750000     | 48.38            | ---              | 74.00          | 25.63       | 500.0           | 200.0       | H   | 76.0          | 3.4          |
| 2901.000000     | ---              | 42.26            | 54.00          | 11.74       | 500.0           | 200.0       | H   | 134.0         | 8.6          |
| 2908.750000     | 53.15            | ---              | 74.00          | 20.85       | 500.0           | 200.0       | H   | 281.0         | 8.4          |



Radiates Emission from 3GHz to 18GHz

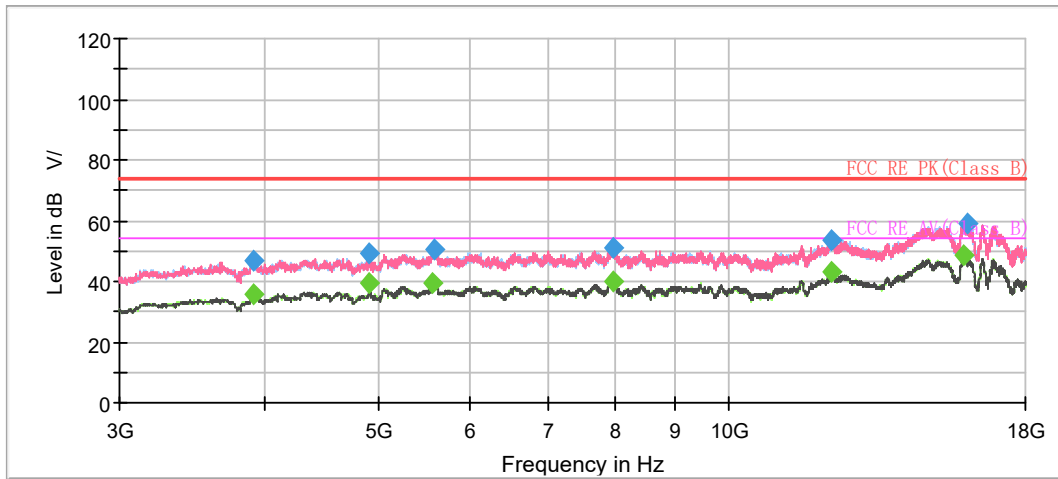
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3901.875000     | ---                    | 35.99                  | 54.00                | 18.01       | 500.0           | 100.0       | H   | 194.0         | 3.1          |
| 3928.125000     | 46.72                  | ---                    | 74.00                | 27.28       | 500.0           | 200.0       | V   | 202.0         | 2.4          |
| 4873.125000     | ---                    | 40.90                  | 54.00                | 13.10       | 500.0           | 100.0       | V   | 211.0         | 3.1          |
| 4875.000000     | 49.44                  | ---                    | 74.00                | 24.56       | 500.0           | 100.0       | V   | 211.0         | 3.1          |
| 5581.875000     | ---                    | 39.25                  | 54.00                | 14.75       | 500.0           | 100.0       | H   | 165.0         | 7.6          |
| 5848.125000     | 51.01                  | ---                    | 74.00                | 22.99       | 500.0           | 200.0       | H   | 107.0         | 4.5          |
| 7968.750000     | ---                    | 40.17                  | 54.00                | 13.83       | 500.0           | 200.0       | V   | 270.0         | 9.9          |
| 7980.000000     | 50.98                  | ---                    | 74.00                | 23.02       | 500.0           | 100.0       | H   | 275.0         | 9.9          |
| 12288.750000    | ---                    | 42.62                  | 54.00                | 11.38       | 500.0           | 100.0       | H   | 259.0         | 14.4         |
| 12322.500000    | 53.87                  | ---                    | 74.00                | 20.13       | 500.0           | 100.0       | V   | 182.0         | 13.8         |
| 15993.750000    | ---                    | 47.99                  | 54.00                | 6.01        | 500.0           | 200.0       | H   | 184.0         | 20.0         |
| 16537.500000    | 59.75                  | ---                    | 74.00                | 14.25       | 500.0           | 100.0       | V   | 252.0         | 20.5         |



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

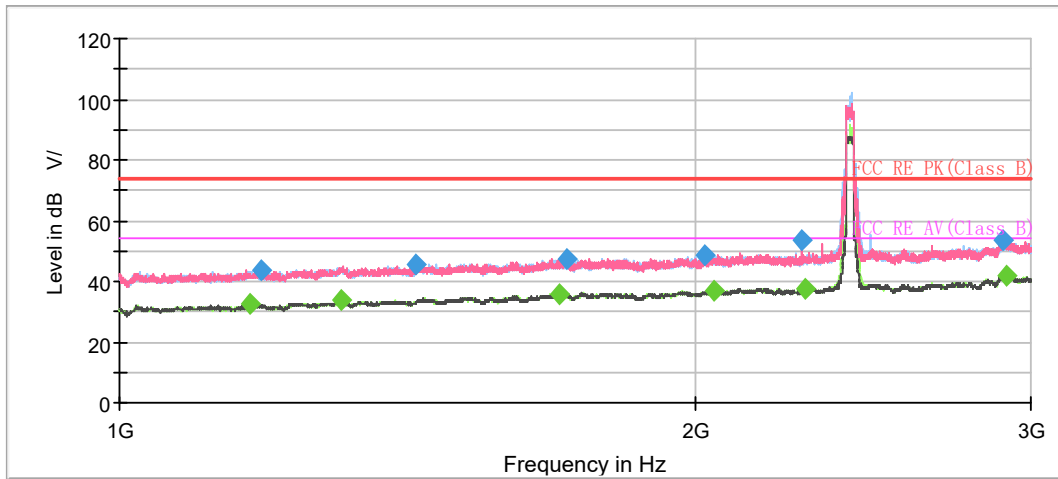
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1183.250000     | ---              | 32.27            | 54.00          | 21.73       | 500.0           | 200.0       | V   | 297.0         | -3.9         |
| 1185.250000     | 43.19            | ---              | 74.00          | 30.81       | 500.0           | 100.0       | V   | 5.0           | -3.9         |
| 1431.500000     | 45.87            | ---              | 74.00          | 28.13       | 500.0           | 200.0       | H   | 91.0          | -1.9         |
| 1439.000000     | ---              | 34.25            | 54.00          | 19.75       | 500.0           | 100.0       | V   | 171.0         | -1.7         |
| 1669.250000     | 47.26            | ---              | 74.00          | 26.74       | 500.0           | 100.0       | H   | 0.0           | 0.2          |
| 1696.000000     | ---              | 35.86            | 54.00          | 18.14       | 500.0           | 100.0       | H   | 117.0         | 0.3          |
| 2057.750000     | ---              | 36.91            | 54.00          | 17.09       | 500.0           | 200.0       | H   | 312.0         | 2.3          |
| 2059.750000     | 48.47            | ---              | 74.00          | 25.53       | 500.0           | 200.0       | V   | 70.0          | 2.3          |
| 2306.000000     | 48.93            | ---              | 74.00          | 25.07       | 500.0           | 200.0       | V   | 230.0         | 3.5          |
| 2343.750000     | ---              | 37.50            | 54.00          | 16.50       | 500.0           | 100.0       | H   | 58.0          | 3.5          |
| 2498.250000     | ---              | 42.34            | 54.00          | 11.66       | 500.0           | 200.0       | H   | 195.0         | 4.8          |
| 2900.500000     | 53.51            | ---              | 74.00          | 20.49       | 500.0           | 200.0       | V   | 15.0          | 8.6          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3911.250000     | 47.04            | ---              | 74.00          | 26.96       | 500.0           | 100.0       | V   | 340.0         | 3.5          |
| 3913.125000     | ---              | 35.99            | 54.00          | 18.01       | 500.0           | 200.0       | V   | 322.0         | 3.4          |
| 4910.625000     | 49.07            | ---              | 74.00          | 24.93       | 500.0           | 100.0       | V   | 204.0         | 3.0          |
| 4918.125000     | ---              | 39.09            | 54.00          | 14.91       | 500.0           | 100.0       | V   | 204.0         | 3.0          |
| 5581.875000     | ---              | 39.17            | 54.00          | 14.83       | 500.0           | 100.0       | H   | 122.0         | 7.6          |
| 5596.875000     | 50.37            | ---              | 74.00          | 23.63       | 500.0           | 200.0       | V   | 294.0         | 7.9          |
| 7976.250000     | ---              | 40.05            | 54.00          | 13.95       | 500.0           | 200.0       | V   | 312.0         | 9.9          |
| 7981.875000     | 51.31            | ---              | 74.00          | 22.69       | 500.0           | 200.0       | H   | 354.0         | 9.9          |
| 12255.000000    | ---              | 42.91            | 54.00          | 11.09       | 500.0           | 100.0       | V   | 312.0         | 14.2         |
| 12286.875000    | 53.53            | ---              | 74.00          | 20.47       | 500.0           | 100.0       | V   | 237.0         | 14.4         |
| 15960.000000    | ---              | 48.33            | 54.00          | 5.67        | 500.0           | 200.0       | V   | 312.0         | 19.7         |
| 16065.000000    | 59.20            | ---              | 74.00          | 14.80       | 500.0           | 100.0       | V   | 33.0          | 20.1         |

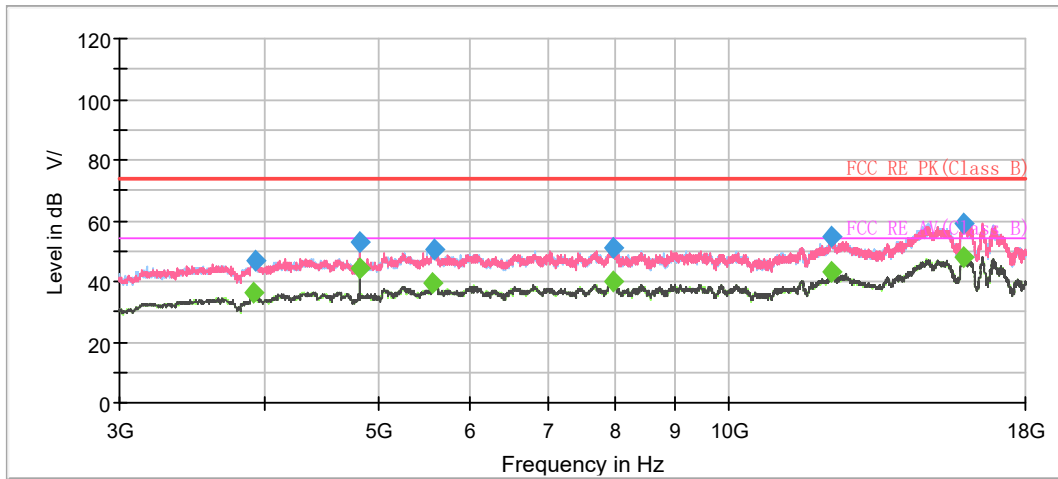
## 802.11ax HE20 CH 1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

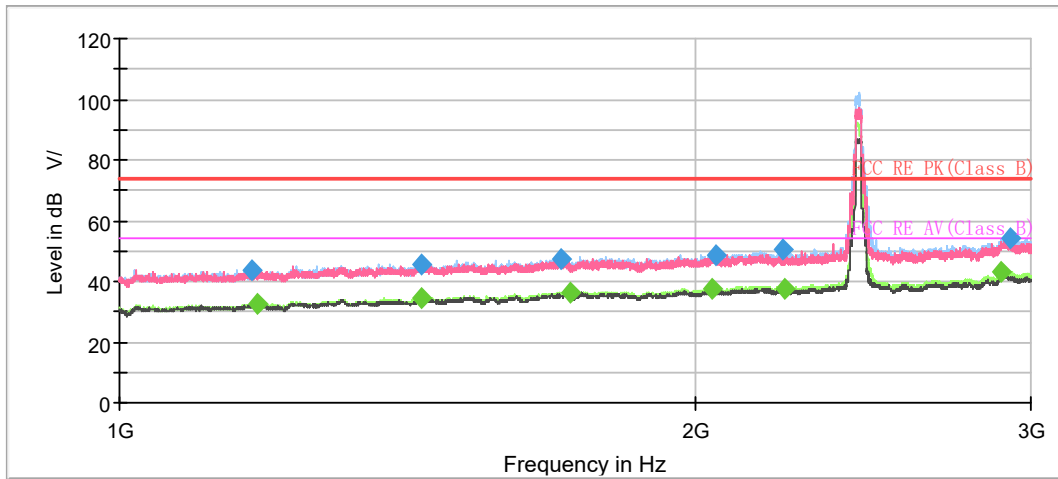
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1171.250000     | ---              | 32.36            | 54.00          | 21.64       | 500.0           | 200.0       | V   | 160.0         | -4.4         |
| 1186.250000     | 43.99            | ---              | 74.00          | 30.01       | 500.0           | 100.0       | H   | 311.0         | -4.0         |
| 1307.250000     | ---              | 34.07            | 54.00          | 19.93       | 500.0           | 100.0       | V   | 5.0           | -2.1         |
| 1430.750000     | 45.38            | ---              | 74.00          | 28.62       | 500.0           | 200.0       | V   | 311.0         | -2.0         |
| 1700.750000     | ---              | 35.65            | 54.00          | 18.35       | 500.0           | 200.0       | H   | 0.0           | 0.4          |
| 1713.750000     | 47.54            | ---              | 74.00          | 26.46       | 500.0           | 200.0       | H   | 217.0         | 0.4          |
| 2025.250000     | 48.62            | ---              | 74.00          | 25.38       | 500.0           | 100.0       | H   | 5.0           | 2.1          |
| 2047.750000     | ---              | 37.22            | 54.00          | 16.78       | 500.0           | 100.0       | H   | 0.0           | 2.6          |
| 2275.250000     | 53.33            | ---              | 74.00          | 20.67       | 500.0           | 100.0       | V   | 0.0           | 3.0          |
| 2284.750000     | ---              | 37.34            | 54.00          | 16.66       | 500.0           | 200.0       | H   | 148.0         | 3.1          |
| 2903.500000     | 53.23            | ---              | 74.00          | 20.77       | 500.0           | 200.0       | V   | 319.0         | 8.5          |
| 2915.250000     | ---              | 42.02            | 54.00          | 11.98       | 500.0           | 200.0       | H   | 266.0         | 8.3          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3909.375000     | ---              | 36.03            | 54.00          | 17.97       | 500.0           | 100.0       | V   | 44.0          | 3.7          |
| 3924.375000     | 46.84            | ---              | 74.00          | 27.16       | 500.0           | 200.0       | V   | 185.0         | 2.7          |
| 4822.500000     | ---              | 44.54            | 54.00          | 9.46        | 500.0           | 100.0       | V   | 213.0         | 2.7          |
| 4824.375000     | 52.89            | ---              | 74.00          | 21.11       | 500.0           | 100.0       | V   | 213.0         | 2.7          |
| 5572.500000     | ---              | 39.38            | 54.00          | 14.62       | 500.0           | 200.0       | H   | 206.0         | 7.2          |
| 5583.750000     | 50.44            | ---              | 74.00          | 23.56       | 500.0           | 200.0       | H   | 61.0          | 7.7          |
| 7963.125000     | 50.91            | ---              | 74.00          | 23.09       | 500.0           | 200.0       | H   | 149.0         | 9.9          |
| 7974.375000     | ---              | 39.96            | 54.00          | 14.04       | 500.0           | 100.0       | V   | 242.0         | 9.9          |
| 12264.375000    | ---              | 42.95            | 54.00          | 11.05       | 500.0           | 100.0       | H   | 149.0         | 14.4         |
| 12286.875000    | 54.71            | ---              | 74.00          | 19.29       | 500.0           | 100.0       | H   | 0.0           | 14.4         |
| 15937.500000    | 59.19            | ---              | 74.00          | 14.81       | 500.0           | 100.0       | H   | 15.0          | 19.5         |
| 15948.750000    | ---              | 47.97            | 54.00          | 6.03        | 500.0           | 100.0       | V   | 280.0         | 19.6         |

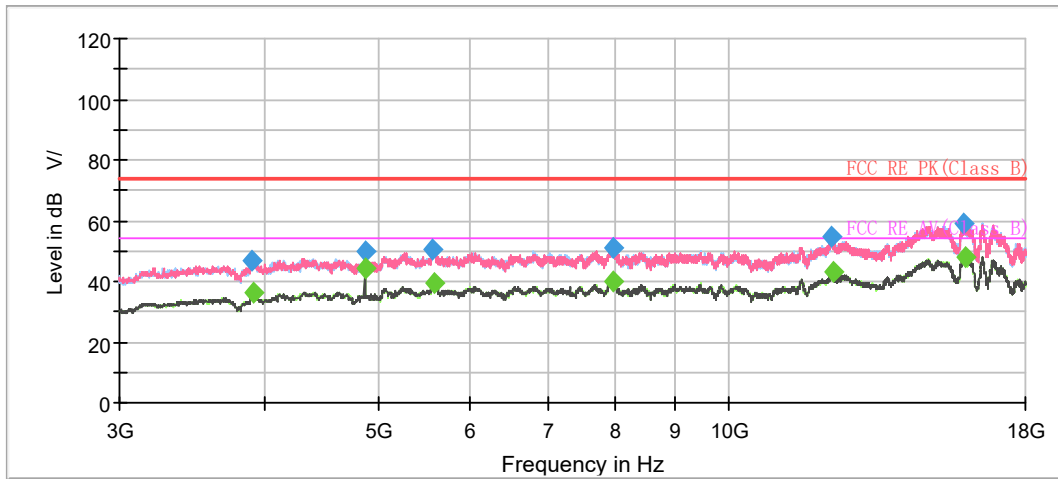
## 802.11ax HE20 CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

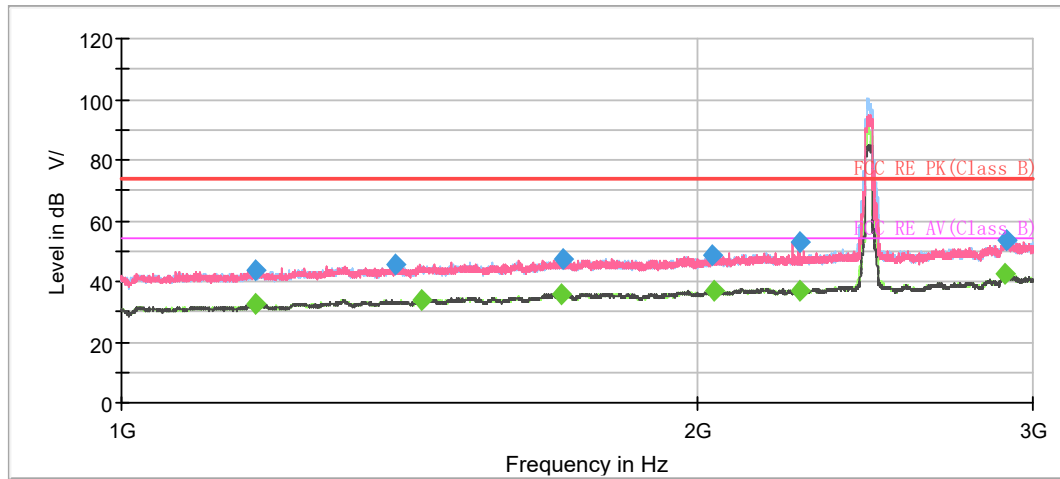
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1172.500000     | 43.73                  | ---                    | 74.00                | 30.27       | 500.0           | 200.0       | H   | 124.0         | -4.3         |
| 1180.500000     | ---                    | 32.79                  | 54.00                | 21.21       | 500.0           | 100.0       | V   | 42.0          | -4.0         |
| 1437.750000     | ---                    | 34.29                  | 54.00                | 19.71       | 500.0           | 100.0       | H   | 108.0         | -1.8         |
| 1438.000000     | 45.56                  | ---                    | 74.00                | 28.44       | 500.0           | 100.0       | H   | 66.0          | -1.7         |
| 1703.000000     | 47.29                  | ---                    | 74.00                | 26.71       | 500.0           | 200.0       | H   | 170.0         | 0.4          |
| 1720.500000     | ---                    | 36.29                  | 54.00                | 17.71       | 500.0           | 200.0       | H   | 108.0         | -0.1         |
| 2043.500000     | ---                    | 37.81                  | 54.00                | 16.19       | 500.0           | 200.0       | H   | 66.0          | 2.5          |
| 2053.000000     | 48.88                  | ---                    | 74.00                | 25.12       | 500.0           | 200.0       | V   | 188.0         | 2.4          |
| 2223.000000     | 50.25                  | ---                    | 74.00                | 23.75       | 500.0           | 100.0       | V   | 98.0          | 3.1          |
| 2228.500000     | ---                    | 37.72                  | 54.00                | 16.28       | 500.0           | 200.0       | H   | 6.0           | 3.1          |
| 2897.250000     | ---                    | 43.31                  | 54.00                | 10.69       | 500.0           | 100.0       | H   | 124.0         | 8.4          |
| 2929.750000     | 54.22                  | ---                    | 74.00                | 19.78       | 500.0           | 200.0       | H   | 82.0          | 8.0          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3898.125000     | 46.61                  | ---                    | 74.00                | 27.39       | 500.0           | 100.0       | V   | 292.0         | 2.8          |
| 3911.250000     | ---                    | 36.28                  | 54.00                | 17.72       | 500.0           | 200.0       | H   | 224.0         | 3.5          |
| 4873.125000     | ---                    | 44.30                  | 54.00                | 9.71        | 500.0           | 100.0       | V   | 217.0         | 3.1          |
| 4873.125000     | 50.09                  | ---                    | 74.00                | 23.91       | 500.0           | 100.0       | V   | 217.0         | 3.1          |
| 5580.000000     | 50.22                  | ---                    | 74.00                | 23.78       | 500.0           | 100.0       | H   | 348.0         | 7.5          |
| 5585.625000     | ---                    | 39.33                  | 54.00                | 14.67       | 500.0           | 100.0       | H   | 110.0         | 7.8          |
| 7978.125000     | 51.27                  | ---                    | 74.00                | 22.73       | 500.0           | 200.0       | H   | 215.0         | 9.9          |
| 7978.125000     | ---                    | 39.83                  | 54.00                | 14.17       | 500.0           | 200.0       | V   | 245.0         | 9.9          |
| 12277.500000    | 54.93                  | ---                    | 74.00                | 19.07       | 500.0           | 100.0       | H   | 244.0         | 14.6         |
| 12290.625000    | ---                    | 42.82                  | 54.00                | 11.18       | 500.0           | 100.0       | H   | 39.0          | 14.3         |
| 15950.625000    | 59.15                  | ---                    | 74.00                | 14.85       | 500.0           | 100.0       | H   | 96.0          | 19.6         |
| 15971.250000    | ---                    | 48.11                  | 54.00                | 5.89        | 500.0           | 100.0       | H   | 354.0         | 19.8         |

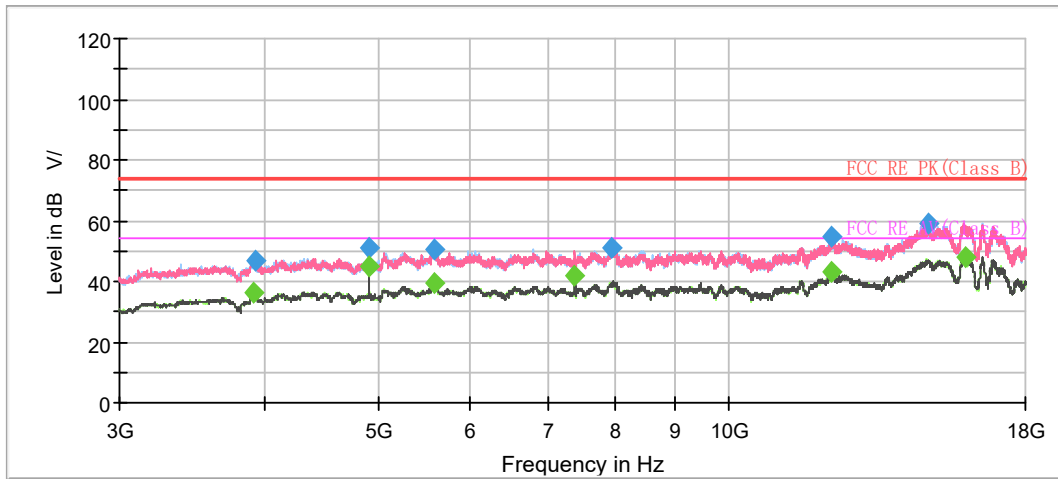
## 802.11ax HE20 CH11



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

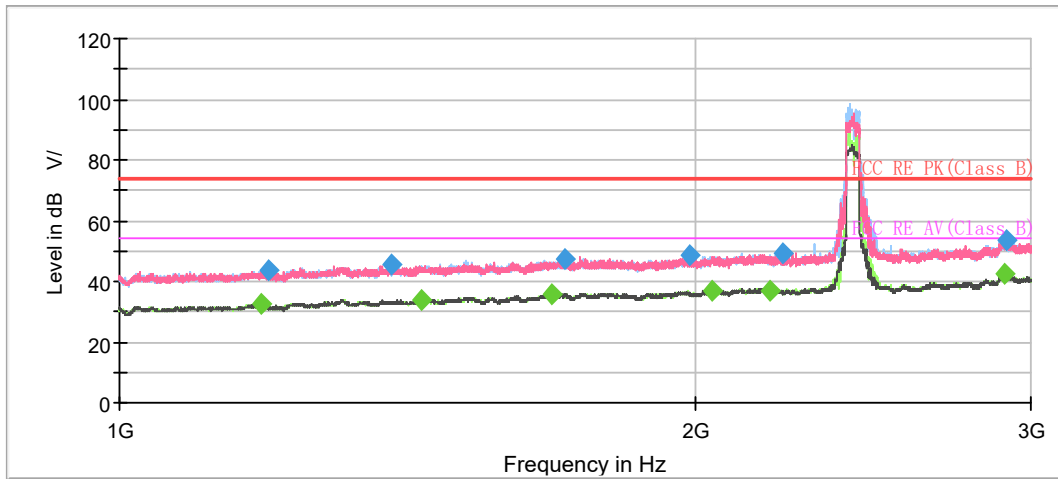
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1176.500000     | ---              | 32.44            | 54.00          | 21.56       | 500.0           | 200.0       | H   | 250.0         | -4.2         |
| 1176.750000     | 43.51            | ---              | 74.00          | 30.49       | 500.0           | 100.0       | V   | 319.0         | -4.2         |
| 1390.500000     | 45.42            | ---              | 74.00          | 28.58       | 500.0           | 200.0       | H   | 192.0         | -2.4         |
| 1436.000000     | ---              | 34.07            | 54.00          | 19.93       | 500.0           | 100.0       | V   | 261.0         | -1.8         |
| 1699.750000     | ---              | 35.73            | 54.00          | 18.27       | 500.0           | 200.0       | H   | 92.0          | 0.4          |
| 1703.000000     | 47.31            | ---              | 74.00          | 26.69       | 500.0           | 100.0       | H   | 109.0         | 0.4          |
| 2040.000000     | 48.62            | ---              | 74.00          | 25.38       | 500.0           | 100.0       | H   | 0.0           | 2.4          |
| 2042.750000     | ---              | 37.17            | 54.00          | 16.83       | 500.0           | 100.0       | V   | 135.0         | 2.5          |
| 2264.750000     | 52.82            | ---              | 74.00          | 21.18       | 500.0           | 200.0       | V   | 95.0          | 2.9          |
| 2266.750000     | ---              | 36.95            | 54.00          | 17.05       | 500.0           | 200.0       | V   | 177.0         | 2.9          |
| 2900.000000     | ---              | 42.30            | 54.00          | 11.70       | 500.0           | 200.0       | V   | 359.0         | 8.6          |
| 2908.250000     | 53.43            | ---              | 74.00          | 20.57       | 500.0           | 200.0       | H   | 67.0          | 8.4          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3907.500000     | ---                    | 36.23                  | 54.00                | 17.77       | 500.0           | 200.0       | V   | 353.0         | 3.6          |
| 3931.875000     | 46.67                  | ---                    | 74.00                | 27.33       | 500.0           | 100.0       | H   | 10.0          | 2.2          |
| 4923.750000     | ---                    | 45.13                  | 54.00                | 8.87        | 500.0           | 100.0       | V   | 211.0         | 3.0          |
| 4923.750000     | 51.20                  | ---                    | 74.00                | 22.80       | 500.0           | 100.0       | V   | 211.0         | 3.0          |
| 5583.750000     | ---                    | 39.26                  | 54.00                | 14.74       | 500.0           | 100.0       | H   | 20.0          | 7.7          |
| 5583.750000     | 50.70                  | ---                    | 74.00                | 23.30       | 500.0           | 200.0       | V   | 267.0         | 7.7          |
| 7385.625000     | ---                    | 42.04                  | 54.00                | 11.96       | 500.0           | 200.0       | V   | 134.0         | 5.9          |
| 7931.250000     | 50.94                  | ---                    | 74.00                | 23.06       | 500.0           | 200.0       | V   | 184.0         | 9.9          |
| 12285.000000    | 54.65                  | ---                    | 74.00                | 19.35       | 500.0           | 100.0       | V   | 184.0         | 14.4         |
| 12288.750000    | ---                    | 42.80                  | 54.00                | 11.20       | 500.0           | 100.0       | V   | 184.0         | 14.4         |
| 14844.375000    | 59.28                  | ---                    | 74.00                | 14.72       | 500.0           | 200.0       | H   | 30.0          | 19.1         |
| 15997.500000    | ---                    | 47.99                  | 54.00                | 6.01        | 500.0           | 100.0       | H   | 180.0         | 20.0         |

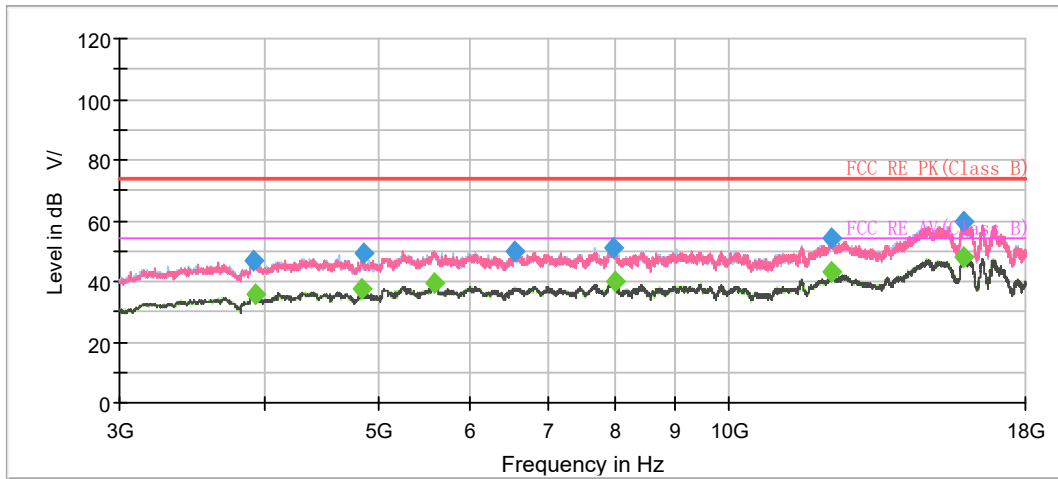
## 802.11ax HE40 CH3



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

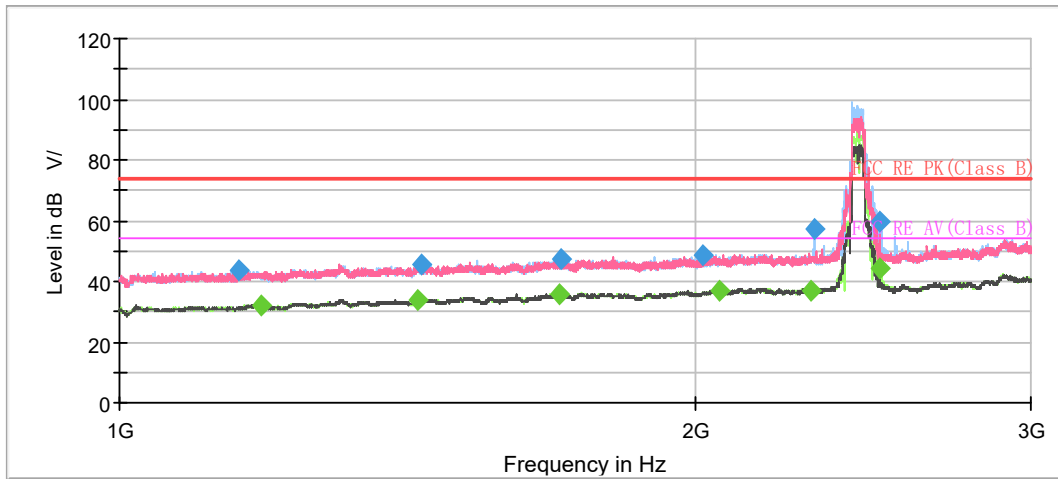
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1185.250000     | ---              | 32.55            | 54.00          | 21.45       | 500.0           | 100.0       | H   | 171.0         | -3.9         |
| 1196.750000     | 43.58            | ---              | 74.00          | 30.42       | 500.0           | 100.0       | V   | 98.0          | -4.5         |
| 1389.250000     | 45.82            | ---              | 74.00          | 28.18       | 500.0           | 200.0       | H   | 52.0          | -2.4         |
| 1440.500000     | ---              | 34.01            | 54.00          | 19.99       | 500.0           | 200.0       | V   | 0.0           | -1.7         |
| 1683.000000     | ---              | 35.77            | 54.00          | 18.23       | 500.0           | 200.0       | H   | 323.0         | 0.4          |
| 1712.250000     | 47.26            | ---              | 74.00          | 26.74       | 500.0           | 100.0       | V   | 299.0         | 0.5          |
| 1989.750000     | 48.34            | ---              | 74.00          | 25.66       | 500.0           | 200.0       | H   | 196.0         | 1.6          |
| 2041.750000     | ---              | 37.00            | 54.00          | 17.00       | 500.0           | 100.0       | V   | 248.0         | 2.5          |
| 2192.250000     | ---              | 36.97            | 54.00          | 17.03       | 500.0           | 100.0       | H   | 0.0           | 2.9          |
| 2224.250000     | 49.19            | ---              | 74.00          | 24.81       | 500.0           | 200.0       | H   | 120.0         | 3.1          |
| 2907.250000     | ---              | 42.19            | 54.00          | 11.81       | 500.0           | 200.0       | H   | 102.0         | 8.5          |
| 2912.500000     | 53.49            | ---              | 74.00          | 20.51       | 500.0           | 200.0       | V   | 265.0         | 8.4          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3911.250000     | 46.59            | ---              | 74.00          | 27.41       | 500.0           | 100.0       | H   | 57.0          | 3.5          |
| 3920.625000     | ---              | 35.95            | 54.00          | 18.05       | 500.0           | 200.0       | H   | 341.0         | 2.9          |
| 4848.750000     | ---              | 37.82            | 54.00          | 16.18       | 500.0           | 100.0       | V   | 222.0         | 2.9          |
| 4858.125000     | 49.42            | ---              | 74.00          | 24.58       | 500.0           | 100.0       | V   | 203.0         | 3.0          |
| 5598.750000     | ---              | 39.22            | 54.00          | 14.78       | 500.0           | 200.0       | H   | 67.0          | 7.8          |
| 6558.750000     | 50.11            | ---              | 74.00          | 23.89       | 500.0           | 200.0       | V   | 155.0         | 6.8          |
| 7959.375000     | 50.96            | ---              | 74.00          | 23.04       | 500.0           | 100.0       | V   | 320.0         | 9.9          |
| 7991.250000     | ---              | 39.91            | 54.00          | 14.09       | 500.0           | 100.0       | V   | 273.0         | 9.9          |
| 12279.375000    | ---              | 42.81            | 54.00          | 11.19       | 500.0           | 200.0       | V   | 273.0         | 14.5         |
| 12288.750000    | 53.88            | ---              | 74.00          | 20.12       | 500.0           | 100.0       | V   | 0.0           | 14.4         |
| 15948.750000    | ---              | 48.09            | 54.00          | 5.91        | 500.0           | 100.0       | H   | 213.0         | 19.6         |
| 15954.375000    | 59.55            | ---              | 74.00          | 14.45       | 500.0           | 100.0       | V   | 310.0         | 19.6         |

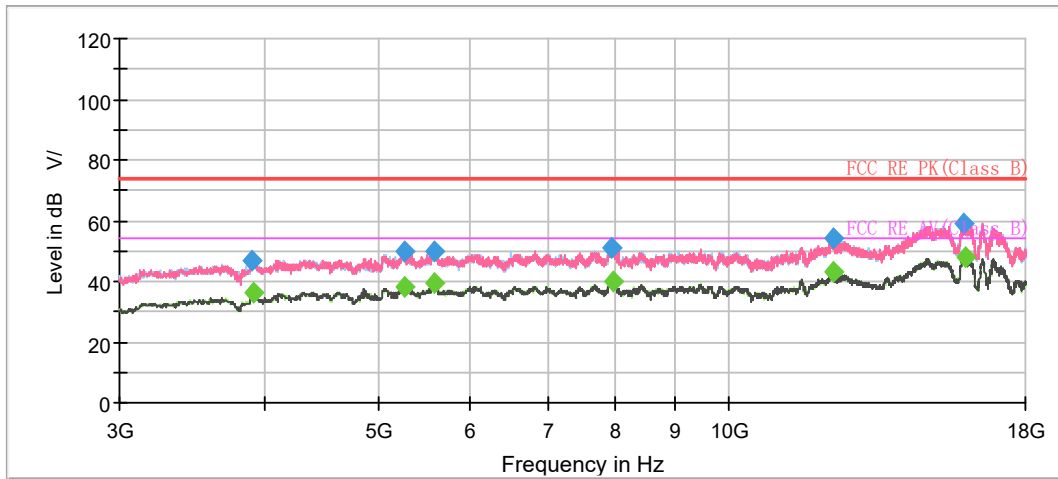
## 802.11ax HE40 CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

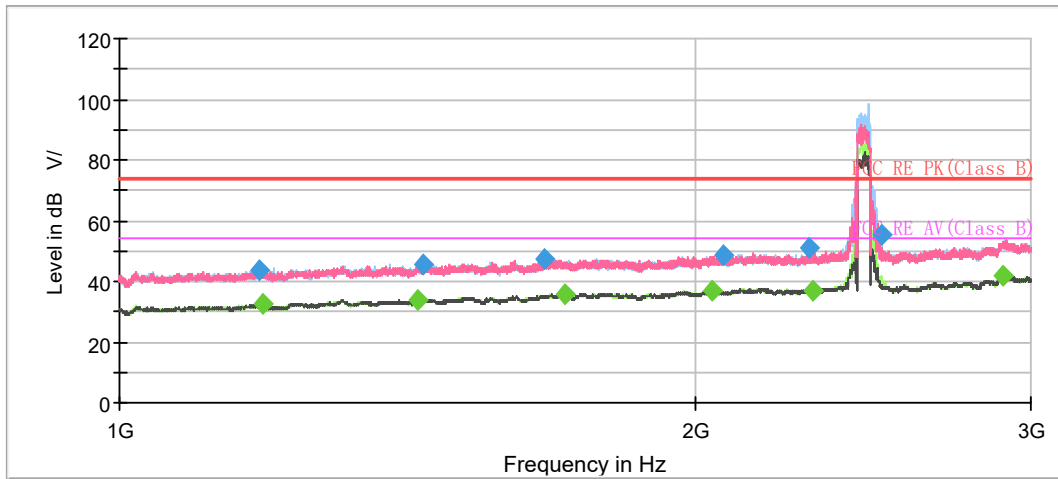
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1155.500000     | 43.62            | ---              | 74.00          | 30.38       | 500.0           | 200.0       | H   | 255.0         | -5.0         |
| 1186.250000     | ---              | 32.31            | 54.00          | 21.69       | 500.0           | 100.0       | V   | 0.0           | -4.0         |
| 1433.500000     | ---              | 33.92            | 54.00          | 20.08       | 500.0           | 100.0       | V   | 341.0         | -1.9         |
| 1438.000000     | 45.30            | ---              | 74.00          | 28.70       | 500.0           | 200.0       | V   | 240.0         | -1.7         |
| 1698.250000     | ---              | 35.88            | 54.00          | 18.12       | 500.0           | 100.0       | V   | 307.0         | 0.4          |
| 1701.750000     | 47.33            | ---              | 74.00          | 26.67       | 500.0           | 200.0       | H   | 171.0         | 0.4          |
| 2020.000000     | 48.36            | ---              | 74.00          | 25.64       | 500.0           | 200.0       | V   | 172.0         | 2.0          |
| 2063.500000     | ---              | 36.90            | 54.00          | 17.10       | 500.0           | 100.0       | V   | 0.0           | 2.2          |
| 2302.500000     | ---              | 37.23            | 54.00          | 16.77       | 500.0           | 200.0       | H   | 44.0          | 3.4          |
| 2312.250000     | 57.23            | ---              | 74.00          | 16.77       | 500.0           | 200.0       | H   | 162.0         | 3.4          |
| 2499.750000     | ---              | 44.05            | 54.00          | 9.95        | 500.0           | 100.0       | H   | 205.0         | 4.8          |
| 2499.750000     | 59.43            | ---              | 74.00          | 14.57       | 500.0           | 200.0       | H   | 205.0         | 4.8          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3903.750000     | 47.01                  | ---                    | 74.00                | 26.99       | 500.0           | 100.0       | H   | 45.0          | 3.3          |
| 3916.875000     | ---                    | 36.07                  | 54.00                | 17.93       | 500.0           | 200.0       | V   | 94.0          | 3.2          |
| 5272.500000     | ---                    | 38.27                  | 54.00                | 15.73       | 500.0           | 100.0       | H   | 303.0         | 6.5          |
| 5276.250000     | 50.09                  | ---                    | 74.00                | 23.91       | 500.0           | 100.0       | H   | 64.0          | 6.4          |
| 5585.625000     | ---                    | 39.28                  | 54.00                | 14.72       | 500.0           | 200.0       | H   | 181.0         | 7.8          |
| 5591.250000     | 49.98                  | ---                    | 74.00                | 24.02       | 500.0           | 200.0       | V   | 348.0         | 8.1          |
| 7942.500000     | 50.84                  | ---                    | 74.00                | 23.16       | 500.0           | 100.0       | V   | 0.0           | 9.9          |
| 7970.625000     | ---                    | 39.82                  | 54.00                | 14.18       | 500.0           | 100.0       | V   | 0.0           | 9.9          |
| 12290.625000    | ---                    | 42.89                  | 54.00                | 11.11       | 500.0           | 100.0       | H   | 209.0         | 14.3         |
| 12298.125000    | 53.97                  | ---                    | 74.00                | 20.03       | 500.0           | 200.0       | V   | 263.0         | 14.2         |
| 15920.625000    | 59.16                  | ---                    | 74.00                | 14.84       | 500.0           | 100.0       | V   | 86.0          | 19.3         |
| 15995.625000    | ---                    | 47.76                  | 54.00                | 6.24        | 500.0           | 200.0       | V   | 234.0         | 20.0         |

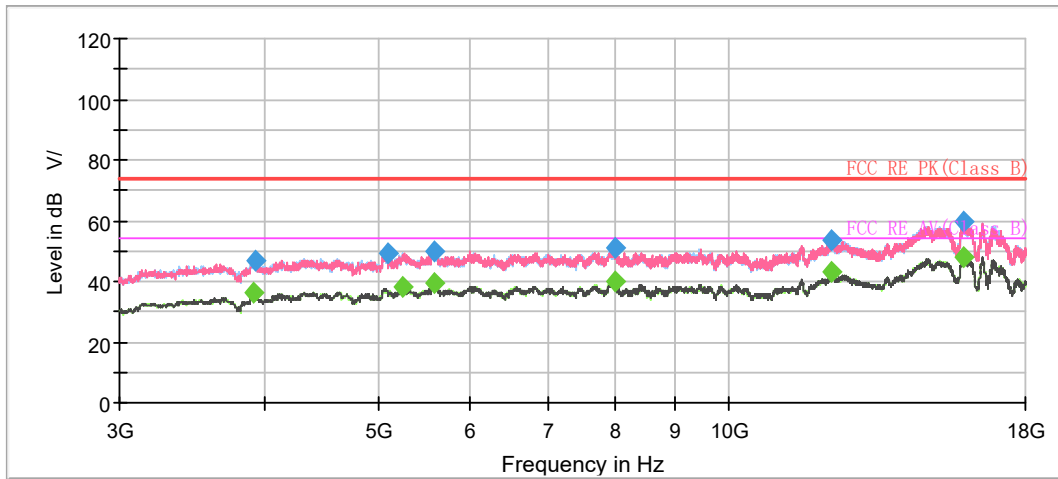
## 802.11ax HE40 CH9



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1184.000000     | 43.48            | ---              | 74.00          | 30.52       | 500.0           | 200.0       | H   | 264.0         | -3.9         |
| 1187.750000     | ---              | 32.33            | 54.00          | 21.67       | 500.0           | 100.0       | V   | 214.0         | -4.1         |
| 1431.500000     | ---              | 33.97            | 54.00          | 20.03       | 500.0           | 200.0       | H   | 150.0         | -1.9         |
| 1442.000000     | 45.44            | ---              | 74.00          | 28.56       | 500.0           | 200.0       | V   | 0.0           | -1.6         |
| 1668.750000     | 47.26            | ---              | 74.00          | 26.74       | 500.0           | 100.0       | V   | 223.0         | 0.1          |
| 1711.250000     | ---              | 35.74            | 54.00          | 18.26       | 500.0           | 200.0       | V   | 337.0         | 0.5          |
| 2041.750000     | ---              | 36.89            | 54.00          | 17.11       | 500.0           | 200.0       | H   | 304.0         | 2.5          |
| 2068.500000     | 48.63            | ---              | 74.00          | 25.37       | 500.0           | 100.0       | V   | 288.0         | 2.1          |
| 2297.000000     | 51.06            | ---              | 74.00          | 22.94       | 500.0           | 100.0       | H   | 183.0         | 3.3          |
| 2307.500000     | ---              | 36.77            | 54.00          | 17.23       | 500.0           | 200.0       | H   | 271.0         | 3.5          |
| 2503.750000     | 55.23            | ---              | 74.00          | 18.77       | 500.0           | 200.0       | H   | 183.0         | 4.7          |
| 2901.250000     | ---              | 41.91            | 54.00          | 12.09       | 500.0           | 200.0       | V   | 197.0         | 8.6          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3916.875000     | ---              | 36.28            | 54.00          | 17.72       | 500.0           | 200.0       | V   | 315.0         | 3.2          |
| 3926.250000     | 46.97            | ---              | 74.00          | 27.03       | 500.0           | 100.0       | H   | 98.0          | 2.6          |
| 5092.500000     | 49.44            | ---              | 74.00          | 24.56       | 500.0           | 100.0       | H   | 0.0           | 4.7          |
| 5251.875000     | ---              | 38.00            | 54.00          | 16.00       | 500.0           | 100.0       | V   | 111.0         | 6.1          |
| 5600.625000     | ---              | 39.43            | 54.00          | 14.57       | 500.0           | 100.0       | V   | 131.0         | 7.6          |
| 5602.500000     | 49.98            | ---              | 74.00          | 24.02       | 500.0           | 100.0       | V   | 315.0         | 7.5          |
| 7991.250000     | 51.25            | ---              | 74.00          | 22.75       | 500.0           | 200.0       | H   | 108.0         | 9.9          |
| 7991.250000     | ---              | 40.22            | 54.00          | 13.78       | 500.0           | 200.0       | H   | 108.0         | 9.9          |
| 12286.875000    | 53.68            | ---              | 74.00          | 20.32       | 500.0           | 200.0       | V   | 345.0         | 14.4         |
| 12288.750000    | ---              | 43.15            | 54.00          | 10.85       | 500.0           | 200.0       | V   | 296.0         | 14.4         |
| 15952.500000    | ---              | 48.20            | 54.00          | 5.80        | 500.0           | 100.0       | H   | 0.0           | 19.6         |
| 15956.250000    | 59.83            | ---              | 74.00          | 14.17       | 500.0           | 100.0       | V   | 212.0         | 19.7         |

## 1.2. Bluetooth LE

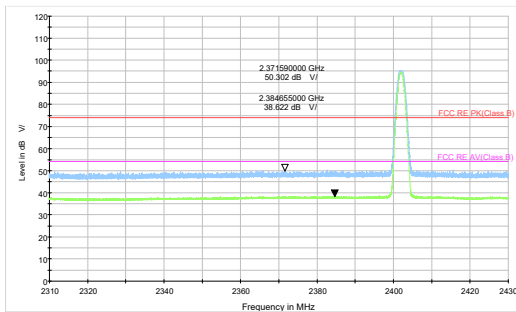
The following graphs display the maximum values of horizontal and vertical by software.  
Blue trace uses the peak detection, Green trace uses the average detection.

A symbol ( $\text{dB } \mu\text{V/m}$ ) in the test plot below means ( $\text{dB}\mu\text{V/m}$ )

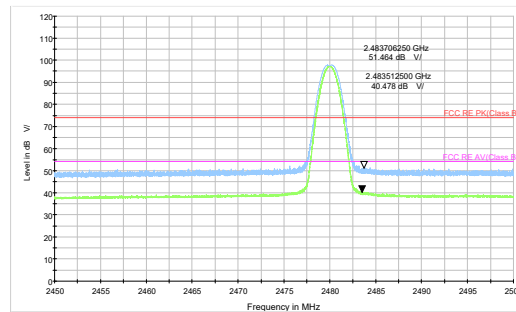
**The signal beyond the limit is carrier.**

**After the pretest, Bluetooth LE (1M) was selected as the worst Mode for Bluetooth LE.**

**F153C:**



Bluetooth LE (1M) Channel 0 Peak+ Average



Bluetooth LE (1M) Channel 39 Peak+Average

## Result of RE

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier.  
The Radiates Emission from 18GHz to 26.5GHz are more than 20dB below the limit are not reported.

### Remark:

1. **Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)**
2. **Margin = Limit – Quasi-Peak/ MAX Peak/ Average**
3. **A symbol (dB V/) in the test plot below means (dB $\mu$ V/m)**
4. **The following graphs display the maximum values of horizontal and vertical by software.**
5. **For below 1GHz**

 QP Level @Spectrum Overview H
  QP Level @Spectrum Overview V
  QP Level @Final Results
  QP Limit

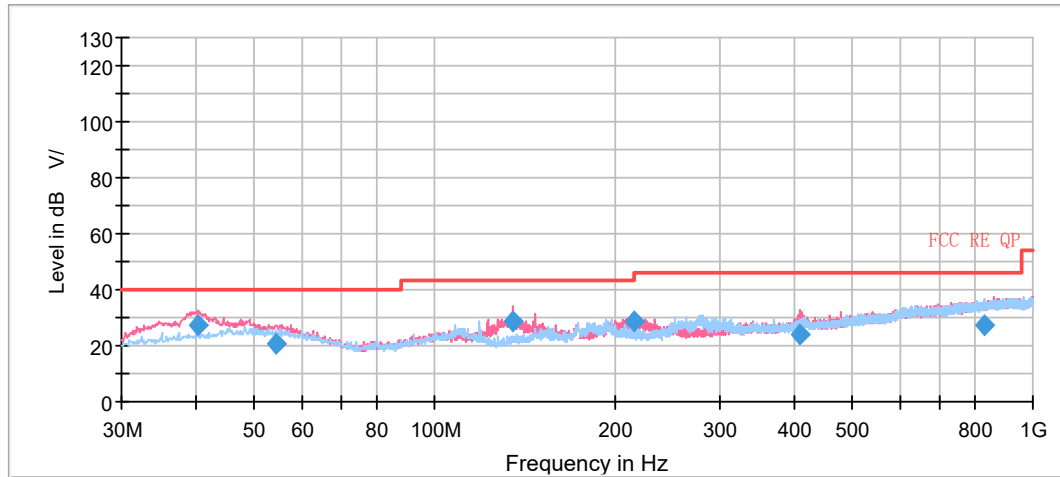
### For above 1GHz

 PK Level @Spectrum Overview H
  PK Level @Spectrum Overview V
  PK Level @Final Results
  PK Limit  
 AVG Level @Spectrum Overview H
  AVG Level @Spectrum Overview V
  AVG Level @Final Results
  AVG Limit

### Continuous TX mode:

#### F153C:

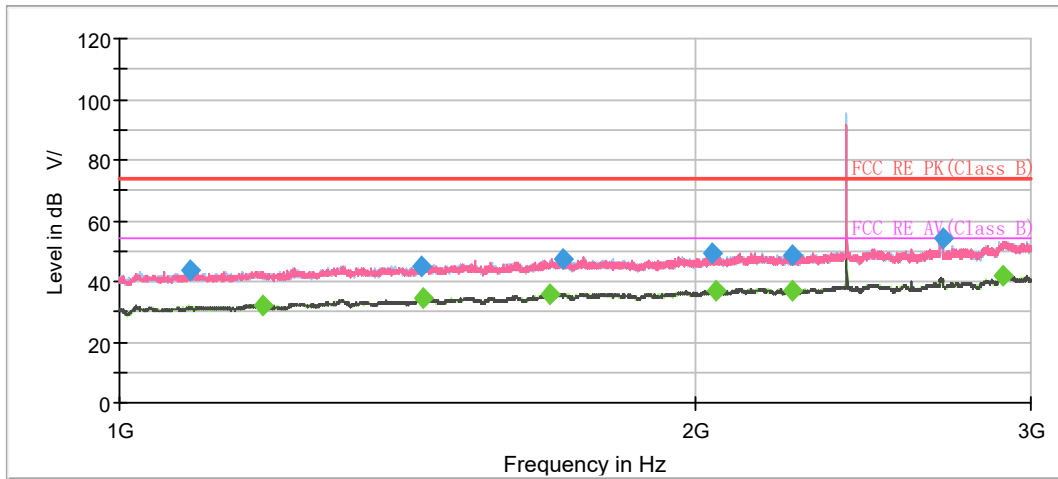
During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels. The test data of the worst-case condition was recorded in this report.



Radiates Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------------|----------------------|-------------|-------------|--------------|---------------|---------------------|
| 40.306250       | 27.20                     | 40.00                | 12.80       | 106.0       | V            | 25.0          | 19.9                |
| 54.492500       | 20.78                     | 40.00                | 19.22       | 100.0       | V            | 151.0         | 20.8                |
| 135.123750      | 28.57                     | 43.50                | 14.93       | 101.0       | V            | 243.0         | 15.8                |
| 215.997500      | 28.84                     | 43.50                | 14.66       | 100.0       | V            | 196.0         | 18.6                |
| 407.693750      | 23.85                     | 46.00                | 22.15       | 115.0       | V            | 2.0           | 23.7                |
| 831.462500      | 27.32                     | 46.00                | 18.68       | 100.0       | H            | 0.0           | 30.4                |

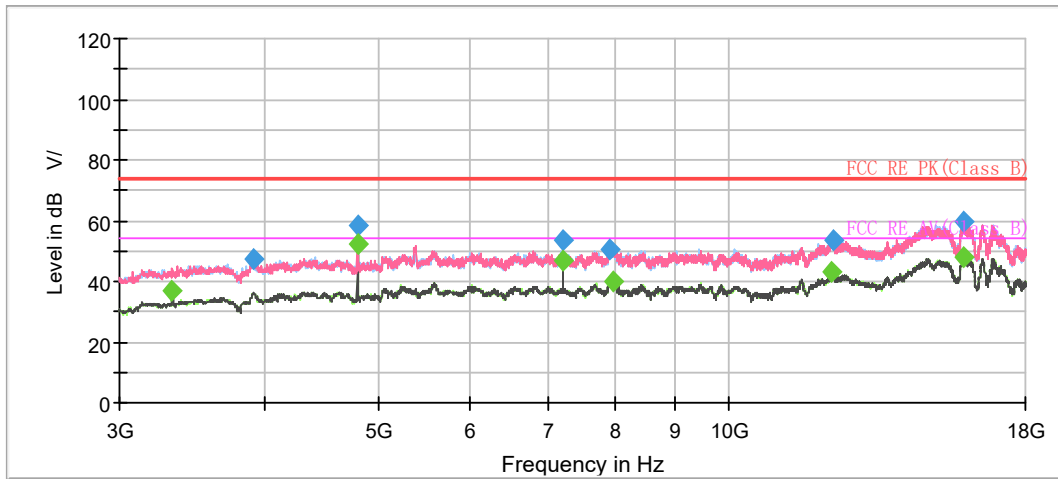
# Bluetooth LE-Channel 0



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

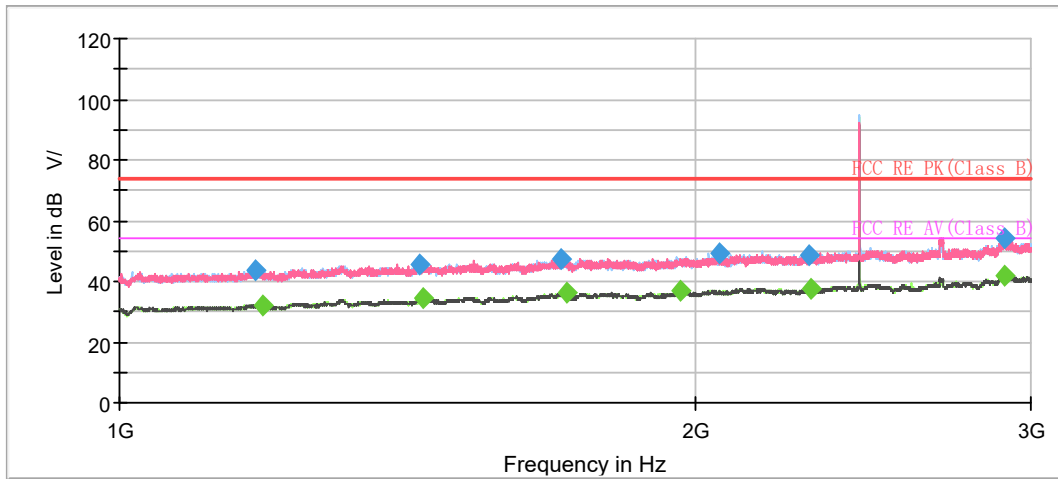
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1088.250000     | 43.47            | ---              | 74.00          | 30.53       | 500.0           | 100.0       | H   | 81.0          | -5.3         |
| 1187.750000     | ---              | 32.24            | 54.00          | 21.76       | 500.0           | 200.0       | H   | 98.0          | -4.1         |
| 1440.250000     | 44.95            | ---              | 74.00          | 29.05       | 500.0           | 100.0       | V   | 307.0         | -1.7         |
| 1441.500000     | ---              | 34.40            | 54.00          | 19.60       | 500.0           | 100.0       | V   | 152.0         | -1.6         |
| 1681.000000     | ---              | 35.86            | 54.00          | 18.14       | 500.0           | 200.0       | H   | 154.0         | 0.4          |
| 1706.000000     | 47.20            | ---              | 74.00          | 26.80       | 500.0           | 200.0       | H   | 0.0           | 0.4          |
| 2045.250000     | 48.98            | ---              | 74.00          | 25.02       | 500.0           | 100.0       | V   | 65.0          | 2.5          |
| 2050.000000     | ---              | 36.93            | 54.00          | 17.07       | 500.0           | 100.0       | V   | 144.0         | 2.5          |
| 2251.000000     | ---              | 37.10            | 54.00          | 16.90       | 500.0           | 200.0       | V   | 0.0           | 3.0          |
| 2251.500000     | 48.33            | ---              | 74.00          | 25.67       | 500.0           | 200.0       | V   | 136.0         | 3.0          |
| 2697.500000     | 54.42            | ---              | 74.00          | 19.58       | 500.0           | 200.0       | V   | 184.0         | 5.0          |
| 2900.250000     | ---              | 42.15            | 54.00          | 11.85       | 500.0           | 200.0       | H   | 325.0         | 8.6          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3331.875000     | ---                    | 36.75                  | 54.00                | 17.25       | 500.0           | 200.0       | V   | 190.0         | -1.1         |
| 3913.125000     | 47.30                  | ---                    | 74.00                | 26.70       | 500.0           | 100.0       | V   | 51.0          | 3.4          |
| 4803.750000     | ---                    | 52.22                  | 54.00                | 1.78        | 500.0           | 100.0       | V   | 32.0          | 2.2          |
| 4803.750000     | 58.20                  | ---                    | 74.00                | 15.80       | 500.0           | 100.0       | V   | 32.0          | 2.2          |
| 7205.625000     | ---                    | 46.77                  | 54.00                | 7.23        | 500.0           | 100.0       | H   | 276.0         | 7.2          |
| 7205.625000     | 53.58                  | ---                    | 74.00                | 20.42       | 500.0           | 200.0       | H   | 276.0         | 7.2          |
| 7906.875000     | 50.60                  | ---                    | 74.00                | 23.40       | 500.0           | 200.0       | V   | 212.0         | 9.4          |
| 7968.750000     | ---                    | 40.01                  | 54.00                | 13.99       | 500.0           | 200.0       | V   | 83.0          | 9.9          |
| 12268.125000    | ---                    | 42.80                  | 54.00                | 11.20       | 500.0           | 100.0       | H   | 324.0         | 14.5         |
| 12301.875000    | 53.66                  | ---                    | 74.00                | 20.34       | 500.0           | 100.0       | H   | 310.0         | 14.1         |
| 15943.125000    | ---                    | 47.86                  | 54.00                | 6.14        | 500.0           | 100.0       | H   | 87.0          | 19.5         |
| 15950.625000    | 59.65                  | ---                    | 74.00                | 14.36       | 500.0           | 200.0       | V   | 102.0         | 19.6         |

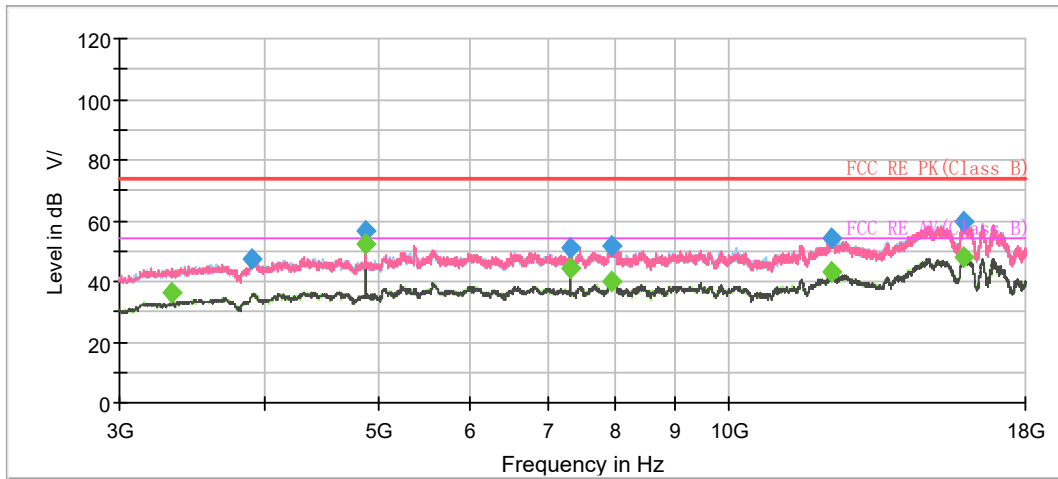
# Bluetooth LE-Channel 19



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

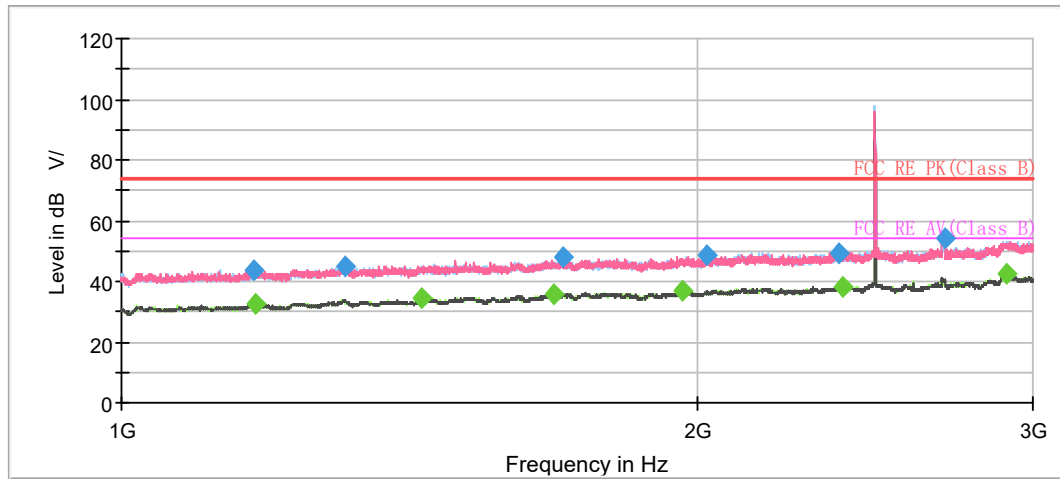
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1177.750000     | 43.39                  | ---                    | 74.00                | 30.61       | 500.0           | 200.0       | V   | 290.0         | -4.1         |
| 1189.750000     | ---                    | 32.15                  | 54.00                | 21.85       | 500.0           | 100.0       | V   | 182.0         | -4.2         |
| 1435.250000     | 45.51                  | ---                    | 74.00                | 28.49       | 500.0           | 100.0       | V   | 198.0         | -1.8         |
| 1441.500000     | ---                    | 34.34                  | 54.00                | 19.66       | 500.0           | 100.0       | H   | 179.0         | -1.6         |
| 1703.750000     | 47.64                  | ---                    | 74.00                | 26.36       | 500.0           | 200.0       | V   | 101.0         | 0.4          |
| 1713.750000     | ---                    | 36.10                  | 54.00                | 17.90       | 500.0           | 200.0       | V   | 355.0         | 0.4          |
| 1966.500000     | ---                    | 36.91                  | 54.00                | 17.09       | 500.0           | 200.0       | H   | 343.0         | 2.3          |
| 2062.750000     | 49.24                  | ---                    | 74.00                | 24.76       | 500.0           | 100.0       | H   | 359.0         | 2.2          |
| 2297.000000     | 48.42                  | ---                    | 74.00                | 25.58       | 500.0           | 200.0       | H   | 56.0          | 3.3          |
| 2301.000000     | ---                    | 37.53                  | 54.00                | 16.47       | 500.0           | 200.0       | H   | 285.0         | 3.4          |
| 2905.000000     | 54.16                  | ---                    | 74.00                | 19.84       | 500.0           | 100.0       | V   | 306.0         | 8.5          |
| 2905.250000     | ---                    | 42.13                  | 54.00                | 11.87       | 500.0           | 200.0       | H   | 16.0          | 8.5          |



Radiates Emission from 3GHz to 18GHz

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3331.875000     | ---                    | 36.07                  | 54.00                | 17.93       | 500.0           | 100.0       | V   | 181.0         | -1.1         |
| 3898.125000     | 47.51                  | ---                    | 74.00                | 26.49       | 500.0           | 200.0       | V   | 0.0           | 2.8          |
| 4878.750000     | ---                    | 52.18                  | 54.00                | 1.82        | 500.0           | 100.0       | V   | 30.0          | 3.1          |
| 4878.750000     | 56.70                  | ---                    | 74.00                | 17.30       | 500.0           | 100.0       | V   | 30.0          | 3.1          |
| 7320.000000     | 50.79                  | ---                    | 74.00                | 23.21       | 500.0           | 100.0       | V   | 301.0         | 6.0          |
| 7320.000000     | ---                    | 44.05                  | 54.00                | 9.95        | 500.0           | 200.0       | H   | 257.0         | 6.0          |
| 7942.500000     | 51.83                  | ---                    | 74.00                | 22.17       | 500.0           | 200.0       | H   | 0.0           | 9.9          |
| 7942.500000     | ---                    | 39.99                  | 54.00                | 14.01       | 500.0           | 200.0       | H   | 0.0           | 9.9          |
| 12264.375000    | ---                    | 42.91                  | 54.00                | 11.09       | 500.0           | 100.0       | H   | 129.0         | 14.4         |
| 12286.875000    | 54.28                  | ---                    | 74.00                | 19.72       | 500.0           | 100.0       | V   | 320.0         | 14.4         |
| 15937.500000    | ---                    | 47.96                  | 54.00                | 6.04        | 500.0           | 100.0       | H   | 110.0         | 19.5         |
| 15937.500000    | 59.39                  | ---                    | 74.00                | 14.61       | 500.0           | 200.0       | H   | 110.0         | 19.5         |

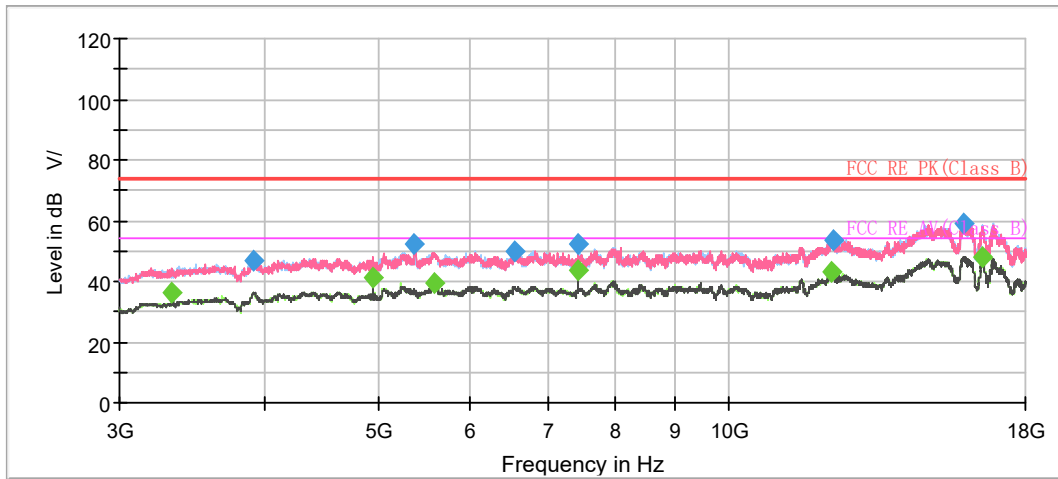
# Bluetooth LE-Channel 39



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1173.500000     | 43.77            | ---              | 74.00          | 30.23       | 500.0           | 200.0       | H   | 0.0           | -4.3         |
| 1176.500000     | ---              | 32.32            | 54.00          | 21.68       | 500.0           | 100.0       | H   | 49.0          | -4.2         |
| 1308.000000     | 44.97            | ---              | 74.00          | 29.03       | 500.0           | 100.0       | V   | 10.0          | -2.0         |
| 1437.250000     | ---              | 34.23            | 54.00          | 19.77       | 500.0           | 100.0       | H   | 82.0          | -1.8         |
| 1682.500000     | ---              | 35.74            | 54.00          | 18.26       | 500.0           | 100.0       | V   | 271.0         | 0.4          |
| 1701.750000     | 47.76            | ---              | 74.00          | 26.24       | 500.0           | 200.0       | V   | 40.0          | 0.4          |
| 1967.500000     | ---              | 36.99            | 54.00          | 17.01       | 500.0           | 200.0       | V   | 312.0         | 2.3          |
| 2026.250000     | 48.82            | ---              | 74.00          | 25.18       | 500.0           | 200.0       | H   | 98.0          | 2.1          |
| 2372.500000     | 49.34            | ---              | 74.00          | 24.66       | 500.0           | 100.0       | H   | 255.0         | 4.0          |
| 2383.000000     | ---              | 38.25            | 54.00          | 15.75       | 500.0           | 200.0       | V   | 328.0         | 4.2          |
| 2699.500000     | 54.34            | ---              | 74.00          | 19.66       | 500.0           | 200.0       | V   | 188.0         | 5.0          |
| 2906.000000     | ---              | 42.22            | 54.00          | 11.78       | 500.0           | 200.0       | V   | 279.0         | 8.5          |



Radiates Emission from 3GHz to 18GHz

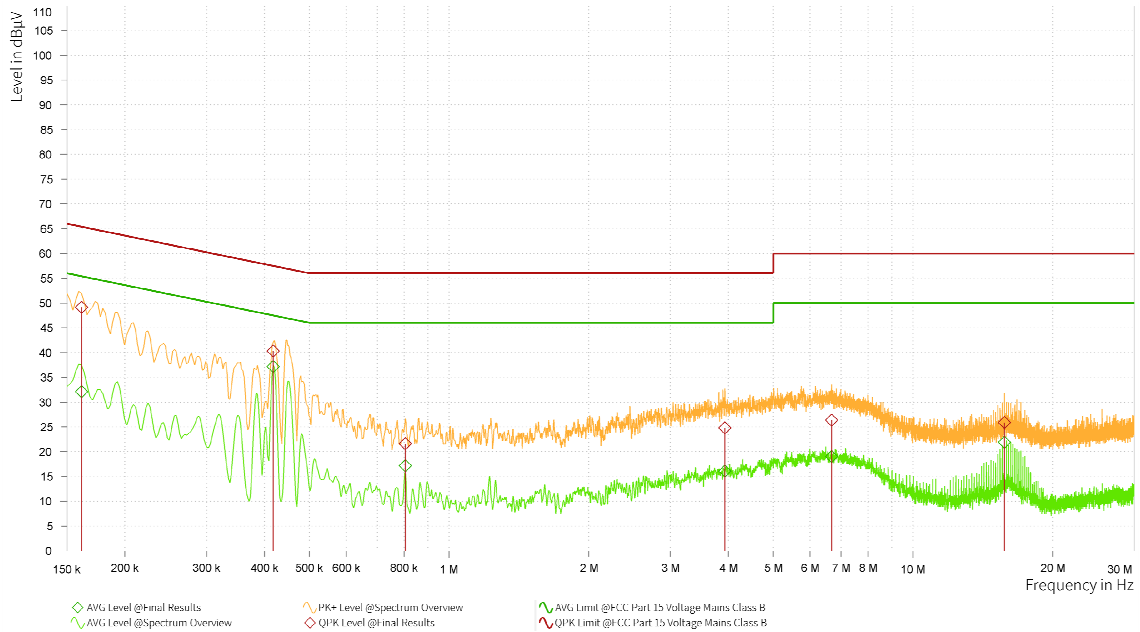
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 3331.875000     | ---                    | 36.25                  | 54.00                | 17.75       | 500.0           | 100.0       | V   | 181.0         | -1.1         |
| 3918.750000     | 46.91                  | ---                    | 74.00                | 27.09       | 500.0           | 200.0       | V   | 191.0         | 3.1          |
| 4959.375000     | ---                    | 41.37                  | 54.00                | 12.63       | 500.0           | 100.0       | V   | 321.0         | 3.3          |
| 5375.625000     | 52.07                  | ---                    | 74.00                | 21.93       | 500.0           | 100.0       | V   | 55.0          | 4.6          |
| 5583.750000     | ---                    | 39.39                  | 54.00                | 14.61       | 500.0           | 200.0       | H   | 260.0         | 7.7          |
| 6551.250000     | 49.84                  | ---                    | 74.00                | 24.16       | 500.0           | 200.0       | V   | 135.0         | 6.7          |
| 7438.125000     | 52.04                  | ---                    | 74.00                | 21.96       | 500.0           | 200.0       | V   | 311.0         | 7.3          |
| 7440.000000     | ---                    | 43.85                  | 54.00                | 10.15       | 500.0           | 100.0       | V   | 311.0         | 7.3          |
| 12286.875000    | ---                    | 42.94                  | 54.00                | 11.06       | 500.0           | 100.0       | V   | 17.0          | 14.4         |
| 12292.500000    | 53.61                  | ---                    | 74.00                | 20.39       | 500.0           | 100.0       | H   | 195.0         | 14.3         |
| 15943.125000    | 59.15                  | ---                    | 74.00                | 14.85       | 500.0           | 200.0       | V   | 321.0         | 19.5         |
| 16535.625000    | ---                    | 48.25                  | 54.00                | 5.75        | 500.0           | 100.0       | H   | 27.0          | 20.4         |

## 2. Conducted Emission

### 2.1. Wi-Fi 2.4GHz

During the test, the Conducted Emission was performed in all modes with all channel. The test data of the worst-case condition was recorded in this report.

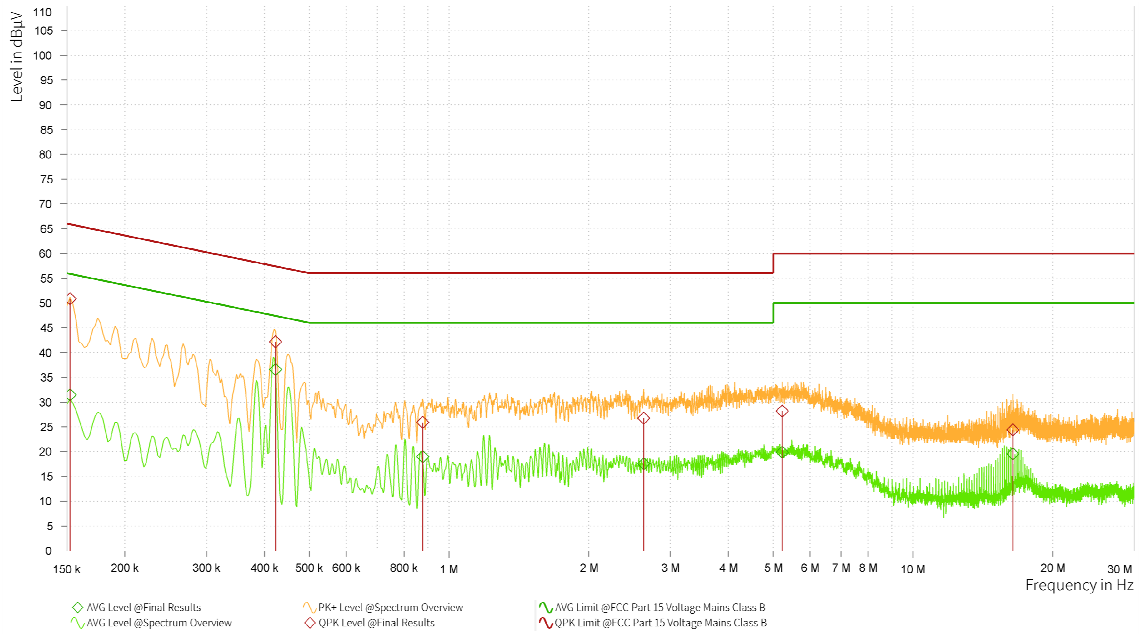
#### F153C:



| Frequency [MHz] | QPK Level [dBμV] | QPK Limit [dBμV] | QPK Margin [dB] | AVG Level [dBμV] | AVG Limit [dBμV] | AVG Margin [dB] | Correction [dB] | Line |
|-----------------|------------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|------|
| 0.161           | 49.16            | 65.40            | 16.24           | 32.13            | 55.40            | 23.27           | 20.89           | L1   |
| 0.418           | 40.33            | 57.49            | 17.17           | 37.19            | 47.49            | 10.31           | 20.86           | L1   |
| 0.805           | 21.64            | 56.00            | 34.36           | 17.18            | 46.00            | 28.82           | 20.32           | L1   |
| 3.932           | 24.82            | 56.00            | 31.18           | 16.09            | 46.00            | 29.91           | 19.43           | L1   |
| 6.677           | 26.39            | 60.00            | 33.61           | 19.03            | 50.00            | 30.97           | 19.41           | L1   |
| 15.749          | 25.89            | 60.00            | 34.11           | 21.90            | 50.00            | 28.10           | 19.53           | L1   |

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz



| Frequency [MHz] | QPK Level [dBµV] | QPK Limit [dBµV] | QPK Margin [dB] | AVG Level [dBµV] | AVG Limit [dBµV] | AVG Margin [dB] | Correction [dB] | Line | Meas. BW [kHz] | Meas. Time [s] |
|-----------------|------------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|------|----------------|----------------|
| 0.152           | 50.85            | 65.88            | 15.02           | 31.45            | 55.88            | 24.43           | 20.91           | N    | 9.000          | 1.000          |
| 0.422           | 42.19            | 57.40            | 15.22           | 36.56            | 47.40            | 10.84           | 20.86           | N    | 9.000          | 1.000          |
| 0.877           | 25.92            | 56.00            | 30.08           | 18.98            | 46.00            | 27.02           | 20.27           | N    | 9.000          | 1.000          |
| 2.627           | 26.75            | 56.00            | 29.25           | 17.53            | 46.00            | 28.47           | 19.54           | N    | 9.000          | 1.000          |
| 5.226           | 28.17            | 60.00            | 31.83           | 19.89            | 50.00            | 30.11           | 19.41           | N    | 9.000          | 1.000          |
| 16.429          | 24.36            | 60.00            | 35.64           | 19.52            | 50.00            | 30.48           | 19.58           | N    | 9.000          | 1.000          |

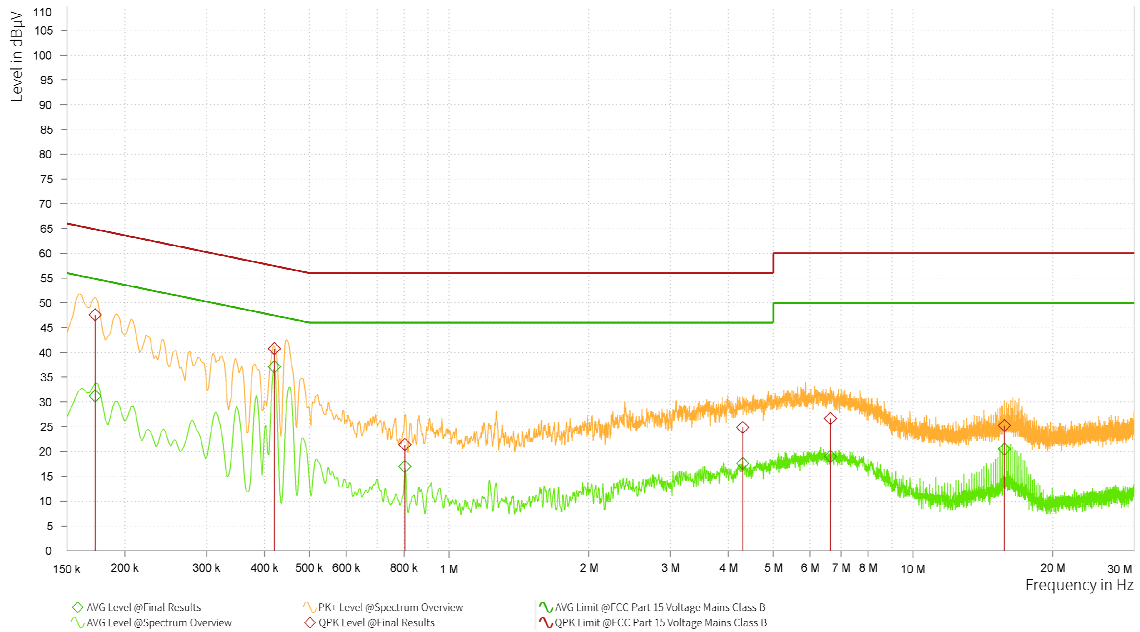
Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz

## 2.2. Bluetooth LE

During the test, the Conducted Emission was performed in all modes with all channels. The test data of the worst-case condition was recorded in this report.

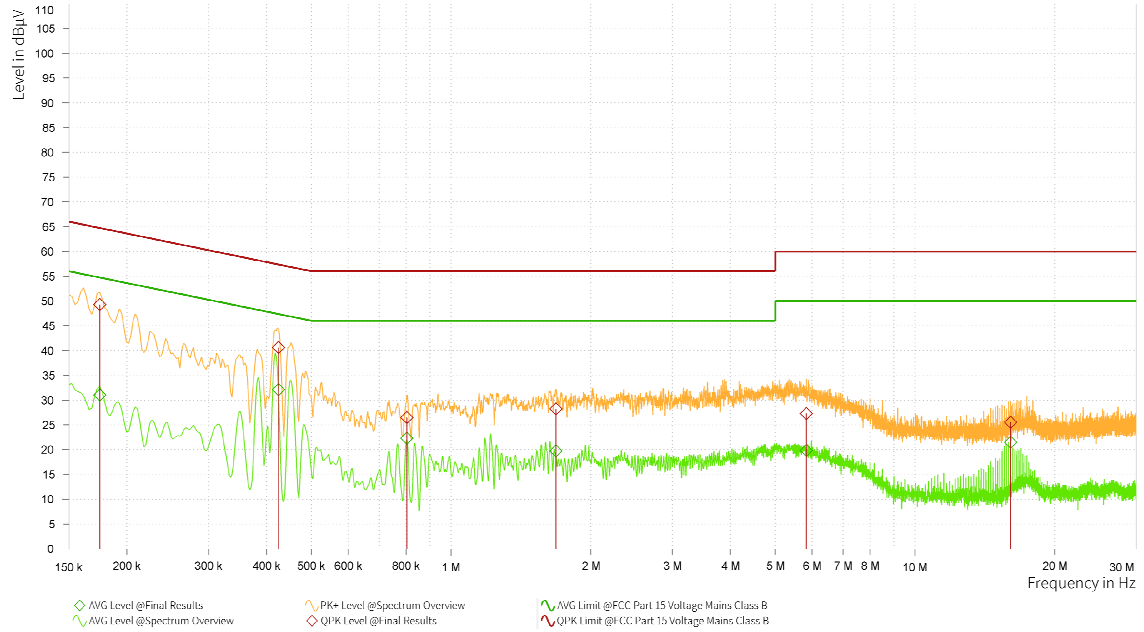
### F153C:



| Frequency [MHz] | QPK Level [dBµV] | QPK Limit [dBµV] | QPK Margin [dB] | AVG Level [dBµV] | AVG Limit [dBµV] | AVG Margin [dB] | Correction [dB] | Line | Meas. BW [kHz] | Meas. Time [s] |
|-----------------|------------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|------|----------------|----------------|
| 0.173           | 47.57            | 64.84            | 17.27           | 31.23            | 54.84            | 23.60           | 20.89           | L1   | 9.000          | 1.000          |
| 0.420           | 40.77            | 57.45            | 16.68           | 37.09            | 47.45            | 10.36           | 20.86           | L1   | 9.000          | 1.000          |
| 0.803           | 21.39            | 56.00            | 34.61           | 17.00            | 46.00            | 29.00           | 20.33           | L1   | 9.000          | 1.000          |
| 4.295           | 24.86            | 56.00            | 31.14           | 17.59            | 46.00            | 28.41           | 19.42           | L1   | 9.000          | 1.000          |
| 6.637           | 26.64            | 60.00            | 33.36           | 19.01            | 50.00            | 30.99           | 19.41           | L1   | 9.000          | 1.000          |
| 15.752          | 25.23            | 60.00            | 34.77           | 20.49            | 50.00            | 29.51           | 19.53           | L1   | 9.000          | 1.000          |

**Remark: Correct factor=cable loss + LISN factor**

L line Conducted Emission from 150 kHz to 30 MHz



| Frequency [MHz] | QPK Level [dBµV] | QPK Limit [dBµV] | QPK Margin [dB] | AVG Level [dBµV] | AVG Limit [dBµV] | AVG Margin [dB] | Correction [dB] | Line | Meas. BW [kHz] | Meas. Time [s] |
|-----------------|------------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|------|----------------|----------------|
| 0.175           | 49.30            | 64.73            | 15.44           | 31.03            | 54.73            | 23.70           | 21.04           | N    | 9.000          | 1.000          |
| 0.425           | 40.63            | 57.36            | 16.73           | 32.12            | 47.36            | 15.24           | 20.86           | N    | 9.000          | 1.000          |
| 0.803           | 26.48            | 56.00            | 29.52           | 22.28            | 46.00            | 23.72           | 20.34           | N    | 9.000          | 1.000          |
| 1.682           | 28.23            | 56.00            | 27.77           | 19.71            | 46.00            | 26.29           | 19.77           | N    | 9.000          | 1.000          |
| 5.834           | 27.25            | 60.00            | 32.75           | 19.83            | 50.00            | 30.17           | 19.41           | N    | 9.000          | 1.000          |
| 16.089          | 25.50            | 60.00            | 34.50           | 21.50            | 50.00            | 28.50           | 19.57           | N    | 9.000          | 1.000          |

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz