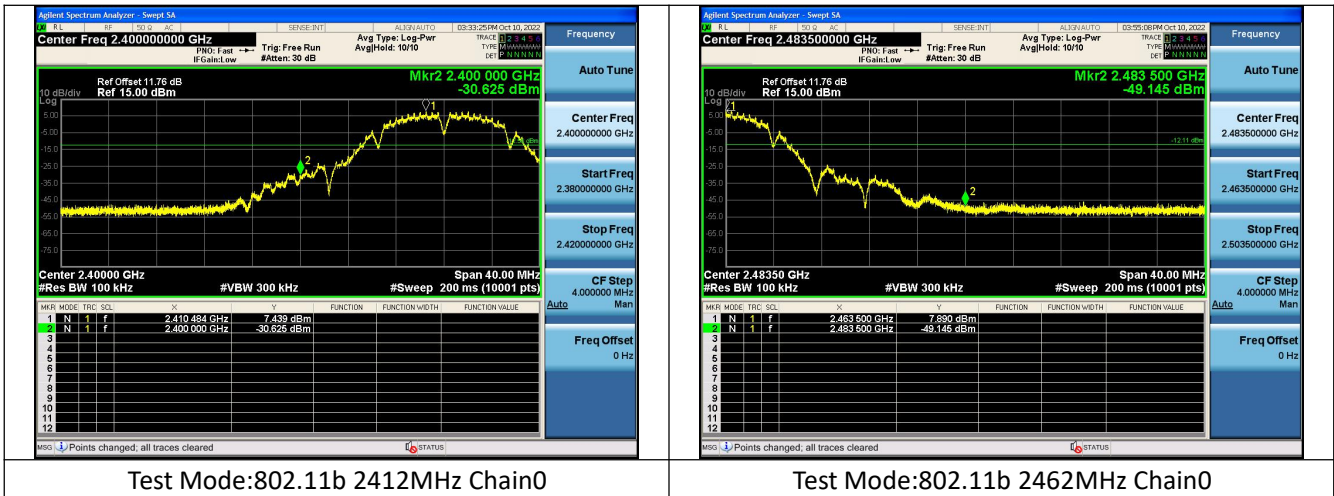
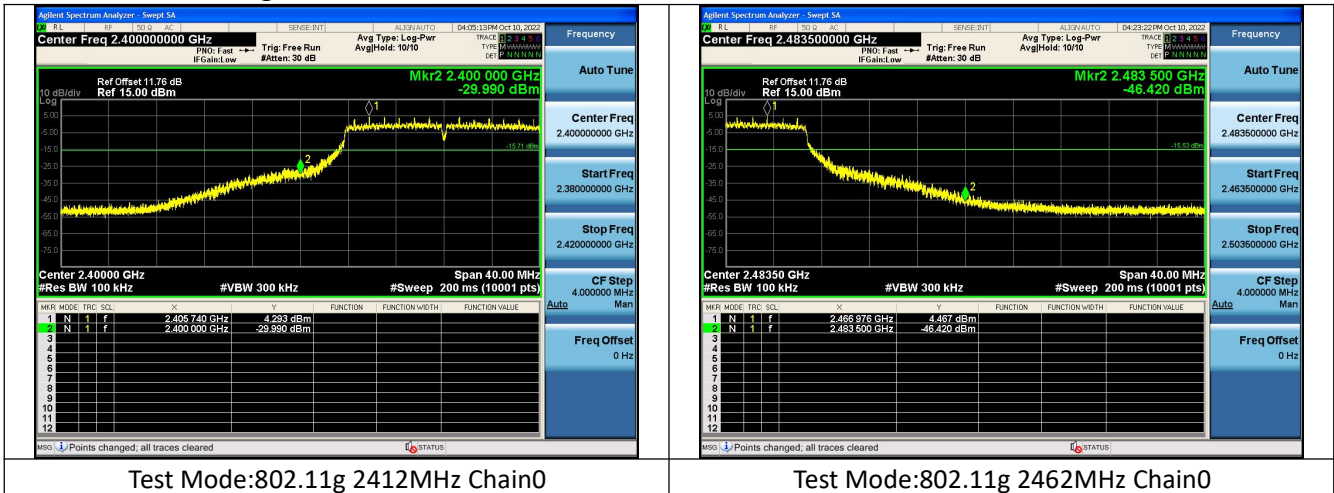


## Band edge measurement

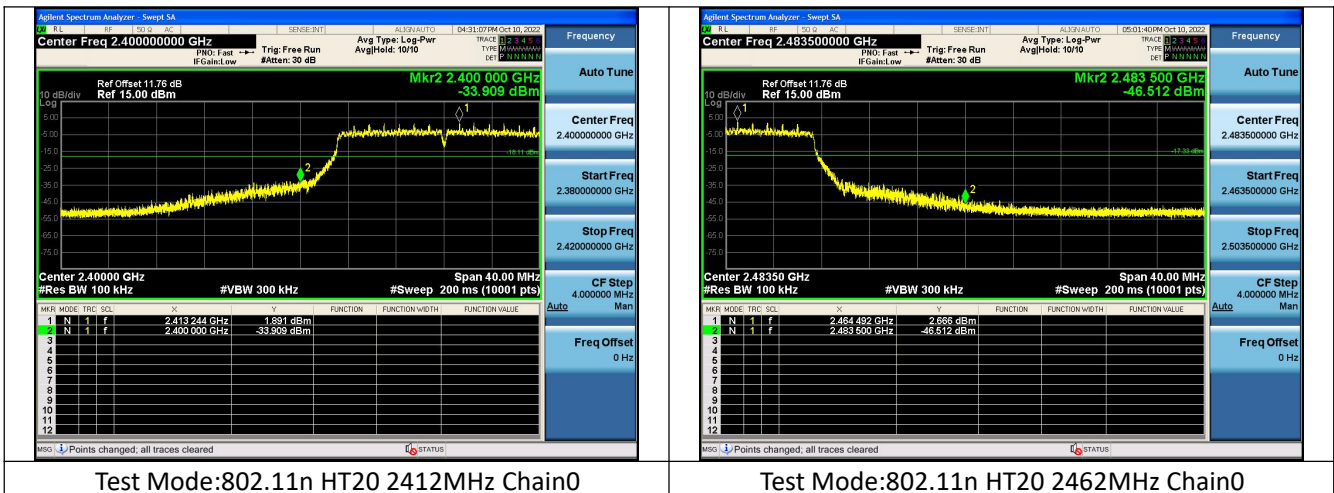
Test Mode: 802.11b



Test Mode: 802.11g



Test Mode: 802.11n HT20



## APPENDIX B – TEST DATA OF RADIATED EMISSION

### Worst case(11b)

#### Radiated Emission Band Edge

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (87.70 dBuV/m) = (53.70 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

Note: There were no emissions above 18GHz found within 20dB of the limit. Thus the test result was not reported according to §15.31 (o)

The measurement results contain the correction factor of the duty cycle.

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (1/m) |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-----------------|----------------------|
| 1  | 2412            | 95.52                  | 61.52                | N/A             | N/A            | 8.90            | 25.10                |
| 2  | 2390            | 46.51                  | 12.51                | -27.49          | 74.00          | 8.90            | 25.10                |

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Horizontal

Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (1/m) |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-----------------|----------------------|
| 1  | 2412            | 92.93                  | 58.93                | N/A             | N/A            | 8.90            | 25.10                |
| 2  | 2390            | 44.71                  | 10.71                | -29.29          | 74.00          | 8.90            | 25.10                |

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Average

| No | Frequency (MHz) | Measure Level | Reading Level | Over Limit | Limit (dBuV/m) | cable loss | antenna factor |
|----|-----------------|---------------|---------------|------------|----------------|------------|----------------|
|----|-----------------|---------------|---------------|------------|----------------|------------|----------------|

|   |      | (dBuV/m) | (dBuV) | (dB)   |       | (dB) | (1/m) |
|---|------|----------|--------|--------|-------|------|-------|
| 1 | 2412 | 92.05    | 58.05  | N/A    | N/A   | 8.90 | 25.10 |
| 2 | 2390 | 36.31    | 2.31   | -17.69 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Horizontal

Detector: Average

| No | Frequency<br>(MHz) | Measure<br>Level<br>(dBuV/m) | Reading<br>Level<br>(dBuV) | Over<br>Limit<br>(dB) | Limit<br>(dBuv/m) | cable<br>loss<br>(dB) | antenna<br>factor<br>(1/m) |
|----|--------------------|------------------------------|----------------------------|-----------------------|-------------------|-----------------------|----------------------------|
| 1  | 2412               | 89.17                        | 55.17                      | N/A                   | N/A               | 8.90                  | 25.10                      |
| 2  | 2390               | 34.68                        | 0.68                       | -19.32                | 54.00             | 8.90                  | 25.10                      |

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11b

Polarity:Vertical

Detector: Peak

| No | Frequency<br>(MHz) | Measure<br>Level<br>(dBuV/m) | Reading<br>Level<br>(dBuV) | Over<br>Limit<br>(dB) | Limit<br>(dBuv/m) | cable<br>loss<br>(dB) | antenna<br>factor<br>(1/m) |
|----|--------------------|------------------------------|----------------------------|-----------------------|-------------------|-----------------------|----------------------------|
| 1  | 2462               | 96.46                        | 62.46                      | N/A                   | N/A               | 8.90                  | 25.10                      |
| 2  | 2483.5             | 45.54                        | 11.54                      | -28.46                | 74.00             | 8.90                  | 25.10                      |

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11b

Polarity:Horizontal

Detector: Peak

| No | Frequency<br>(MHz) | Measure<br>Level<br>(dBuV/m) | Reading<br>Level<br>(dBuV) | Over<br>Limit<br>(dB) | Limit<br>(dBuv/m) | cable<br>loss<br>(dB) | antenna<br>factor<br>(1/m) |
|----|--------------------|------------------------------|----------------------------|-----------------------|-------------------|-----------------------|----------------------------|
| 1  | 2462               | 94.28                        | 60.28                      | N/A                   | N/A               | 8.90                  | 25.10                      |
| 2  | 2483.5             | 43.88                        | 9.88                       | -30.12                | 74.00             | 8.90                  | 25.10                      |

Carrier frequency (MHz): 2462  
Channel No.:11  
Test Mode: 802.11b  
Polarity:Vertical  
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuv/m) | cable loss (dB) | antenna factor (1/m) |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-----------------|----------------------|
| 1  | 2462            | 92.86                  | 58.86                | N/A             | N/A            | 8.90            | 25.10                |
| 2  | 2483.5          | 36.56                  | 2.56                 | -17.44          | 54.00          | 8.90            | 25.10                |

Carrier frequency (MHz): 2462  
Channel No.:11  
Test Mode: 802.11b  
Polarity:Horizontal  
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuv/m) | cable loss (dB) | antenna factor (1/m) |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-----------------|----------------------|
| 1  | 2462            | 90.00                  | 56.00                | N/A             | N/A            | 8.90            | 25.10                |
| 2  | 2483.5          | 35.57                  | 1.57                 | -18.43          | 54.00          | 8.90            | 25.10                |

## Sample Calculations

### Determining Spurious Emissions Levels

A “reference path loss” is established and the  $A_{Rpl}$  is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

Below 1GHz:

QuasiPeak=Reading Value +  $A_{Rpl}$

Above 1GHz:

MaxPeak=Reading MaxPeak +  $A_{Rpl}$

OR

Average=Reading Average +  $A_{Rpl}$

Sample calculation: (17.45 dB $\mu$ V/m) = (41.25 dB $\mu$ V) + (-23.80 dB/m), the corresponding frequency is 148.437MHz.

The worst case attitude: The mobile lay down.

Spurious Radiated Emissions below 30MHz:

There were no emissions from 9kHz to 30MHz found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o).

For 802.11b Channel No.:1

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 47.993500       | 22.81           | -17.7     | 40.51         | Vertical | 40.00          | 17.19       |
| 96.542000       | 26.92           | -19.8     | 46.72         | Vertical | 43.50          | 16.58       |
| 98.142500       | 29.05           | -19.5     | 48.55         | Vertical | 43.50          | 14.45       |
| 196.161000      | 32.38           | -19.4     | 51.78         | Vertical | 43.50          | 11.12       |
| 527.173500      | 16.95           | -10.3     | 27.25         | Vertical | 46.00          | 29.05       |
| 918.180500      | 21.24           | -3.0      | 24.24         | Vertical | 46.00          | 24.76       |

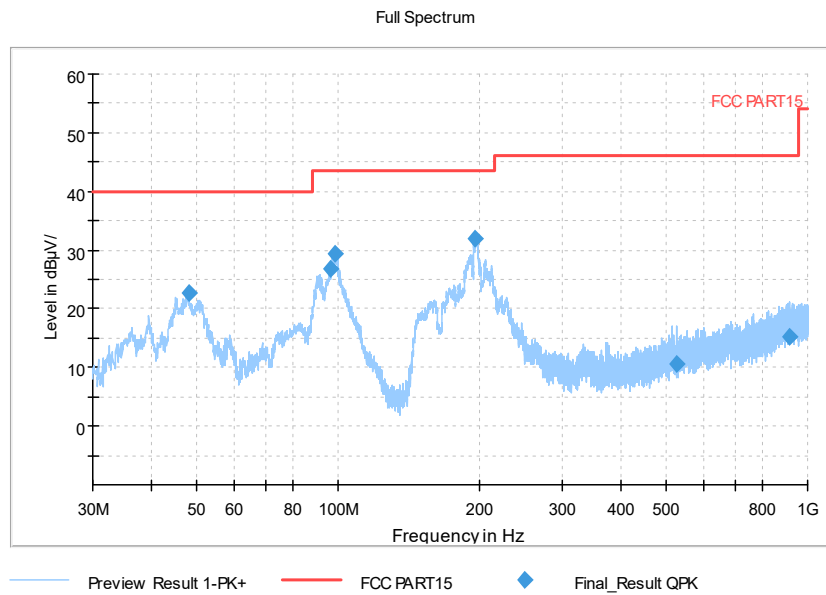
For 802.11b Channel No.:6

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 47.654000       | 22.87           | -17.7     | 40.57         | Vertical | 40.00          | 17.13       |
| 96.251000       | 26.55           | -19.9     | 46.45         | Vertical | 43.50          | 16.95       |
| 98.579000       | 29.74           | -19.4     | 49.14         | Vertical | 43.50          | 13.76       |
| 195.627500      | 31.67           | -19.4     | 51.07         | Vertical | 43.50          | 11.83       |
| 545.700500      | 16.22           | -9.8      | 26.02         | Vertical | 46.00          | 29.78       |
| 932.488000      | 21.17           | -2.9      | 24.07         | Vertical | 46.00          | 24.83       |

For 802.11b Channel No.:11

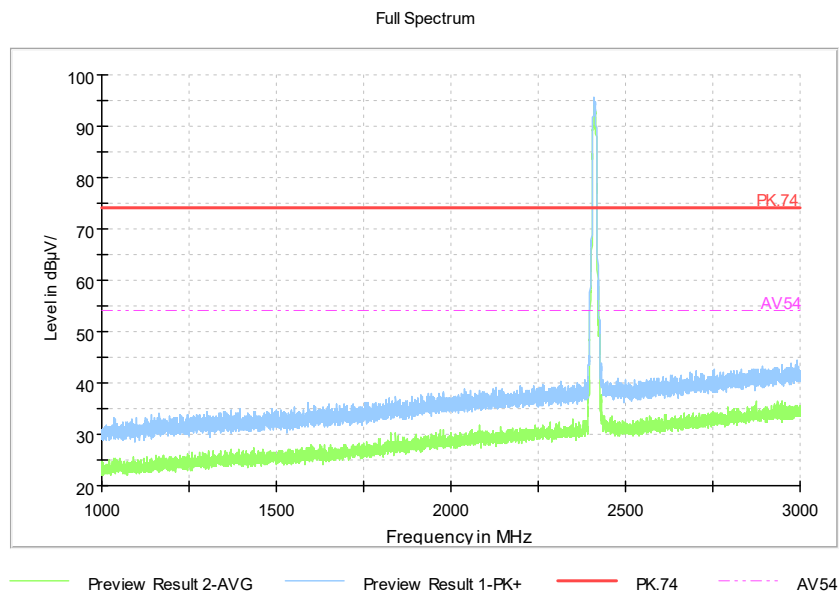
| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 47.993500       | 22.63           | -17.7     | 40.33         | Vertical | 40.00          | 17.37       |
| 96.542000       | 26.49           | -19.8     | 46.29         | Vertical | 43.50          | 17.01       |
| 98.385000       | 29.64           | -19.4     | 49.04         | Vertical | 43.50          | 13.86       |
| 195.676000      | 31.74           | -19.4     | 51.14         | Vertical | 43.50          | 11.76       |
| 557.389000      | 15.87           | -9.5      | 25.37         | Vertical | 46.00          | 30.13       |
| 953.246000      | 22.60           | -2.7      | 25.30         | Vertical | 46.00          | 23.40       |

Carrier frequency (MHz): 2412  
Channel No.:1



Comment

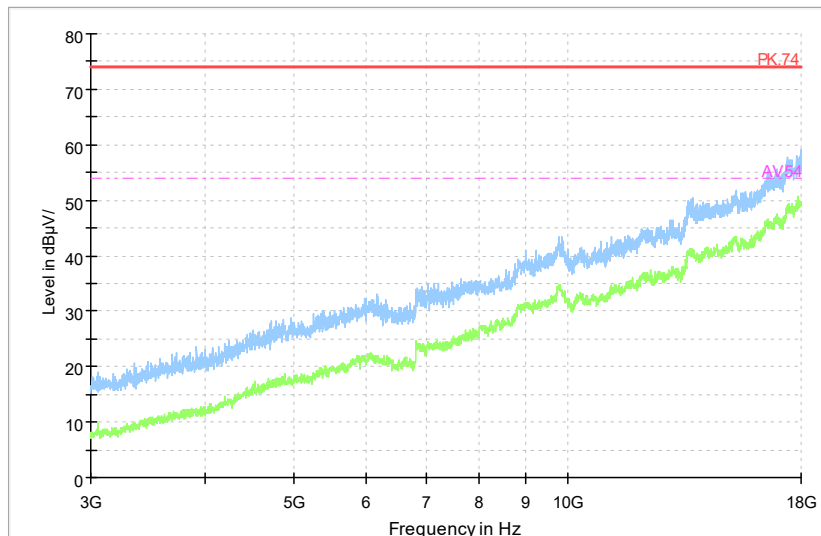
Frequency Range: 30MHz -1GHz  
Detector: QP mode  
Test Mode: 802.11b



Comment

Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

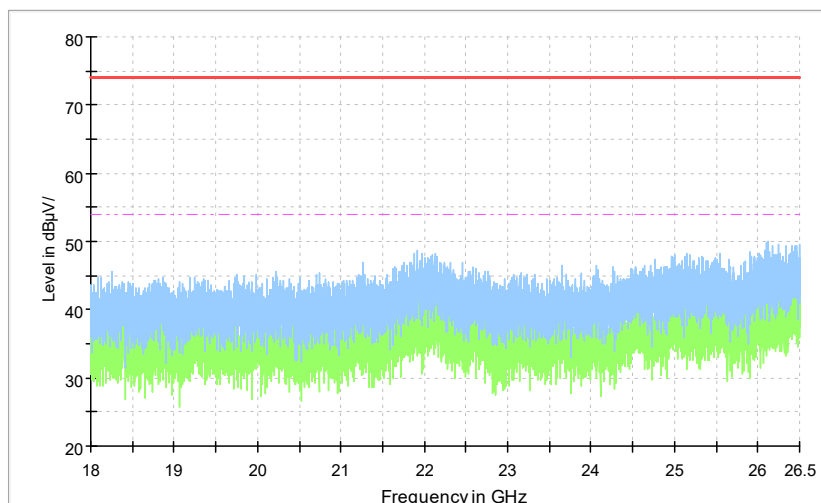
Full Spectrum



Comment

Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

Full Spectrum



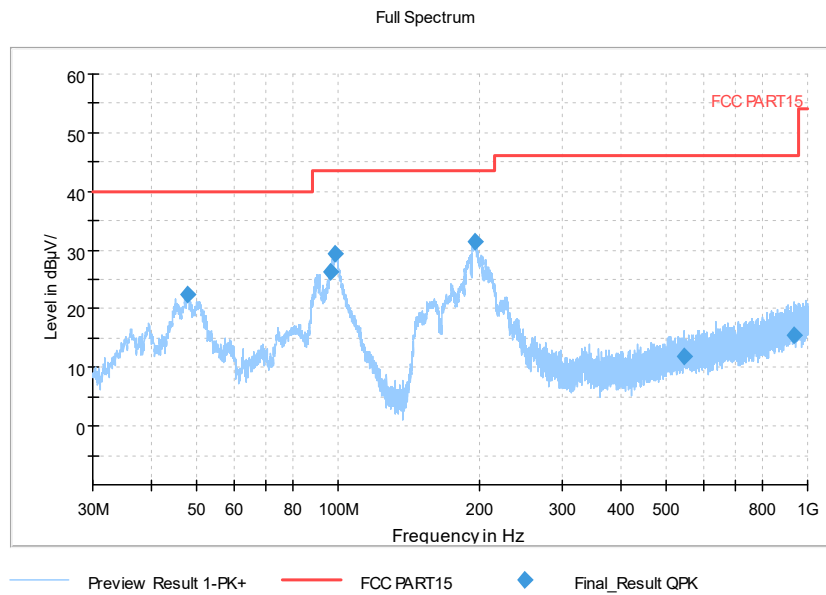
Preview Result 2-AVG    Preview Result 1-PK+    PK70-74    AV50-54

Comment

Frequency Range: 18GHz -25GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

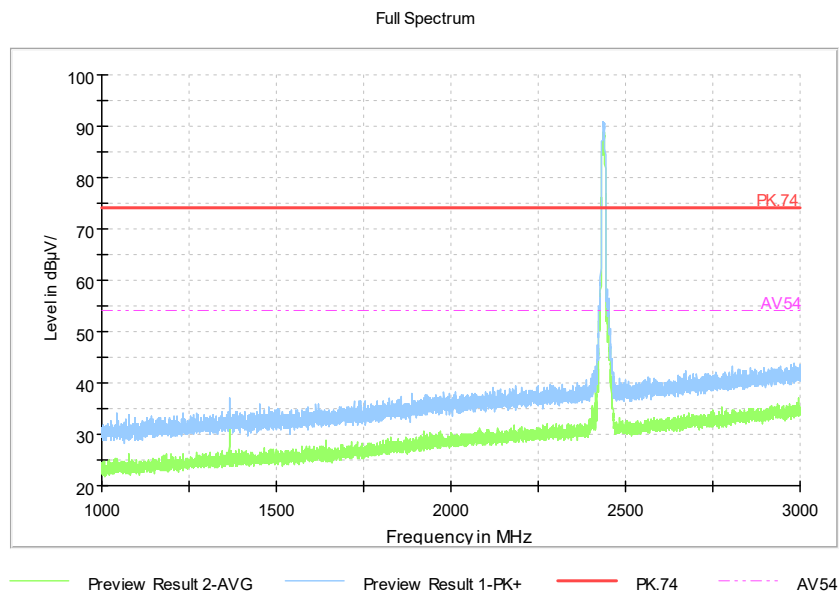


Carrier frequency (MHz): 2437  
Channel No.:6



Comment

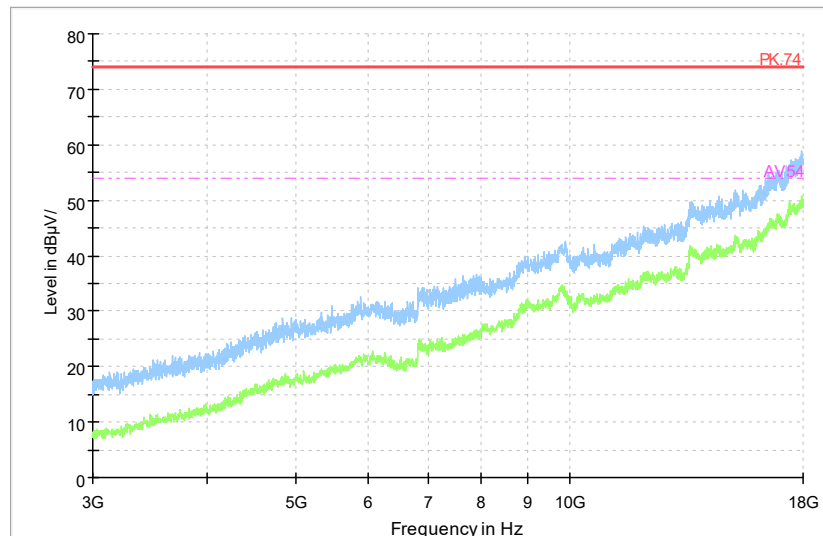
Frequency Range: 30MHz -1GHz  
Detector: QP mode  
Test Mode: 802.11b



Comment

Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

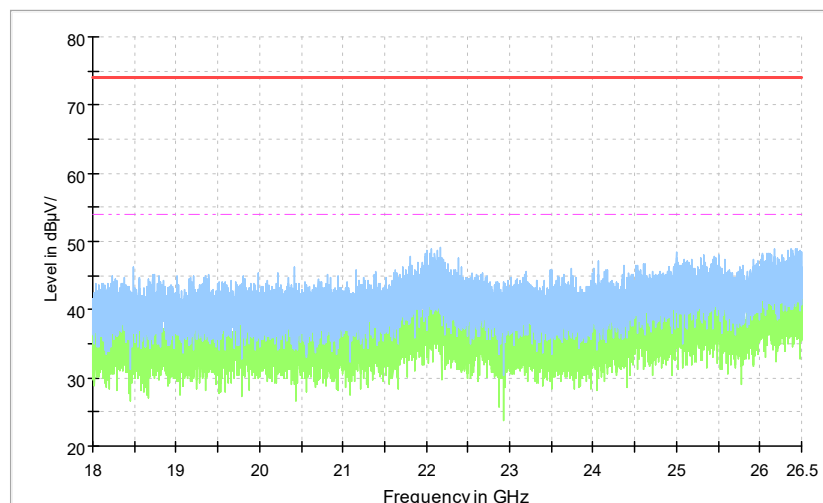
Full Spectrum



Comment

Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

Full Spectrum

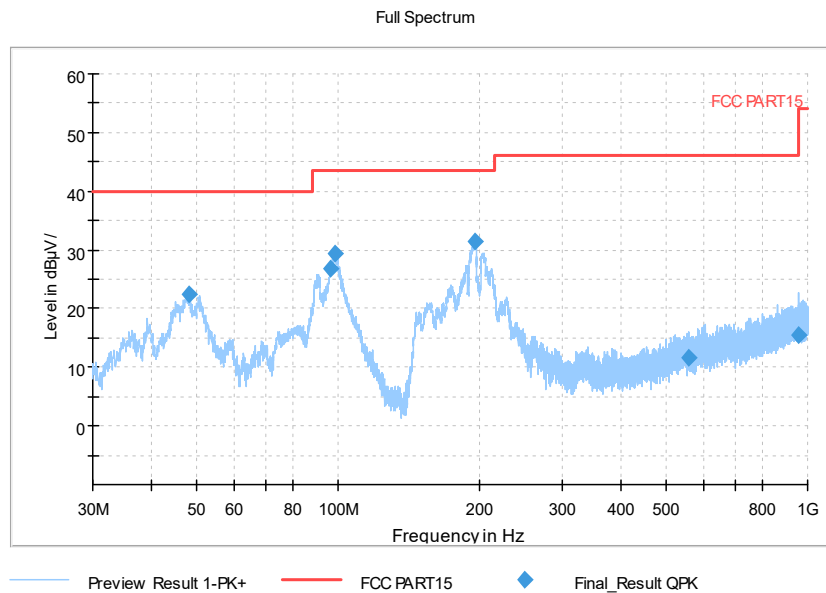


Preview Result 2-AVG    Preview Result 1-PK+    PK70-74    AV50-54

Comment

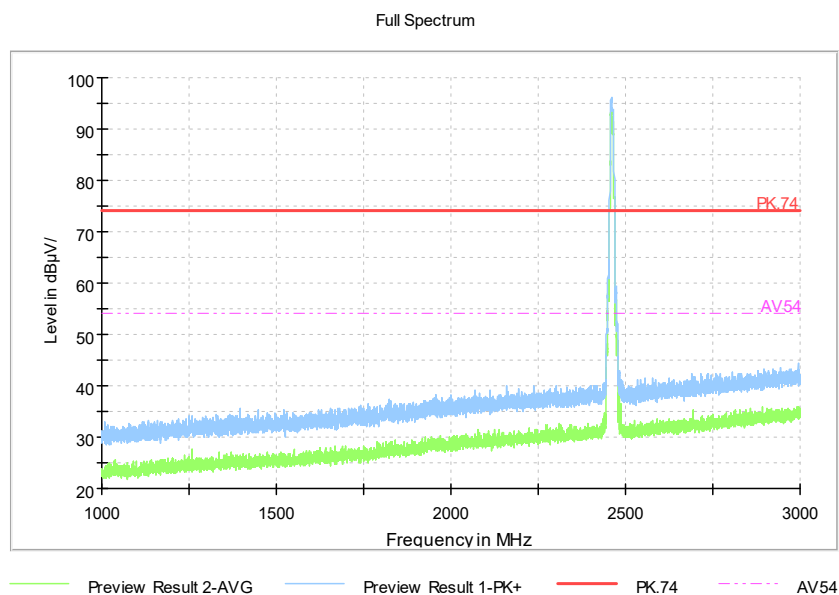
Frequency Range: 18GHz -25GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

Carrier frequency (MHz): 2462  
Channel No.:11



Comment

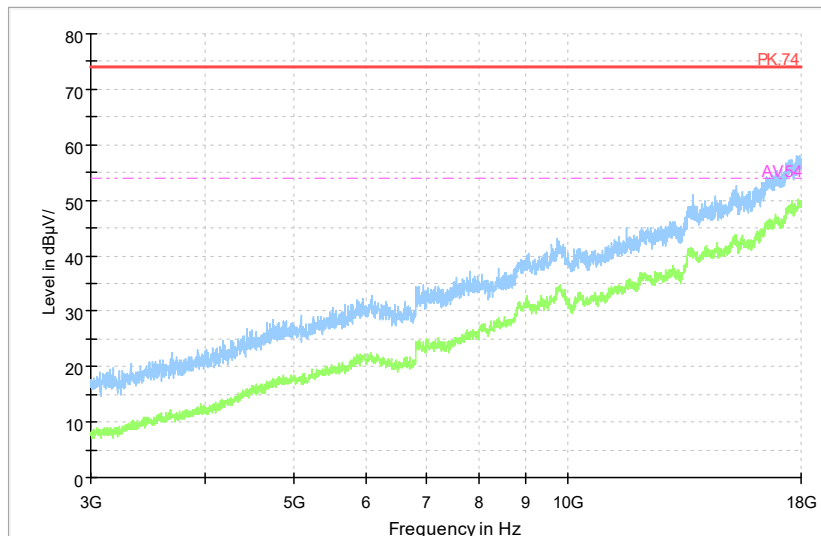
Frequency Range: 30MHz -1GHz  
Detector: QP mode  
Test Mode: 802.11b



Comment

Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

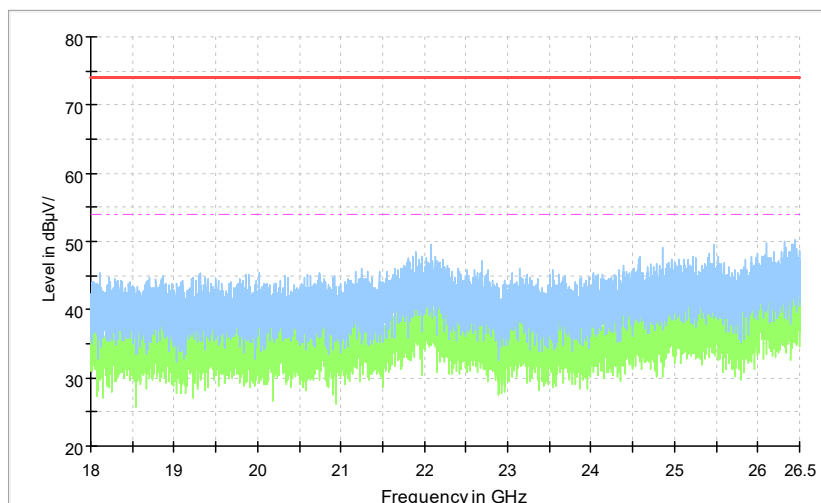
Full Spectrum



Comment

Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

Full Spectrum

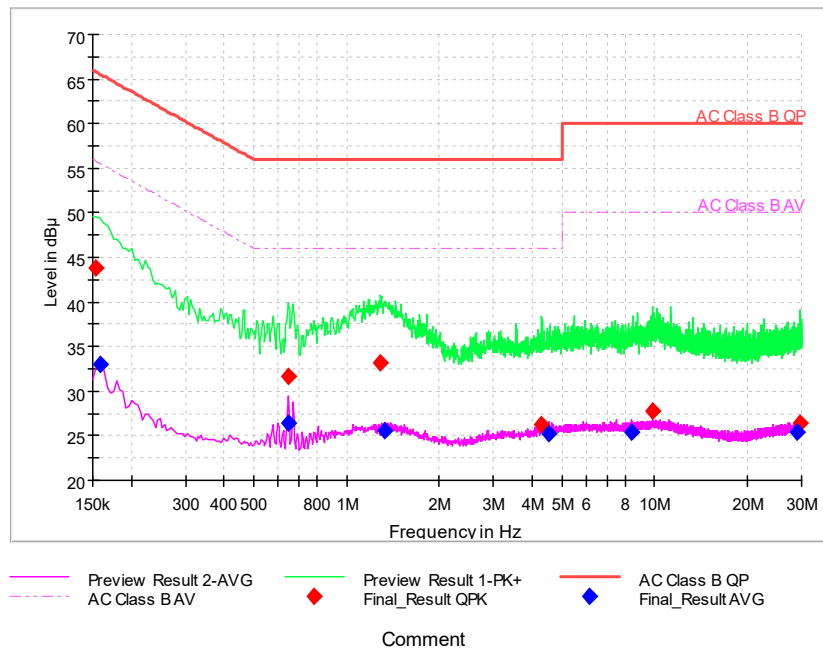


Preview Result 2-AVG    Preview Result 1-PK+    PK70-74    AV50-54

Comment

Frequency Range: 18GHz -25GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

## AC Power line Conducted Emission



### L+N Line

#### MEASUREMENT RESULT:

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) | Pmea QuasiPeak (dBμV) | Pmea Average (dBμV) |
|-----------------|------------------|----------------|--------------|-------------|------|------------|-----------------------|---------------------|
| 0.154264        | 43.75            | ---            | 65.77        | 22.02       | N    | 29.7       | 14.05                 | ---                 |
| 0.158529        | ---              | 33.00          | 55.54        | 22.54       | N    | 29.7       | ---                   | 3.3                 |
| 0.644657        | ---              | 26.44          | 46.00        | 19.56       | N    | 29.7       | ---                   | -3.26               |
| 0.644657        | 31.69            | ---            | 56.00        | 24.31       | L1   | 29.7       | 1.99                  | ---                 |
| 1.292829        | 33.20            | ---            | 56.00        | 22.80       | N    | 29.8       | 3.4                   | ---                 |
| 1.322679        | ---              | 25.52          | 46.00        | 20.48       | N    | 29.8       | ---                   | -4.28               |
| 4.307679        | 26.20            | ---            | 56.00        | 29.80       | L1   | 29.8       | -3.6                  | ---                 |
| 4.529421        | ---              | 25.17          | 46.00        | 20.83       | L1   | 29.9       | ---                   | -4.73               |
| 8.439771        | ---              | 25.36          | 50.00        | 24.64       | L1   | 29.9       | ---                   | -4.54               |
| 9.885364        | 27.78            | ---            | 60.00        | 32.22       | N    | 29.9       | -2.12                 | ---                 |
| 29.014950       | ---              | 25.40          | 50.00        | 24.60       | N    | 30.0       | ---                   | -4.6                |
| 29.825164       | 26.34            | ---            | 60.00        | 33.66       | N    | 30.0       | -3.66                 | ---                 |

---End of the test report---