

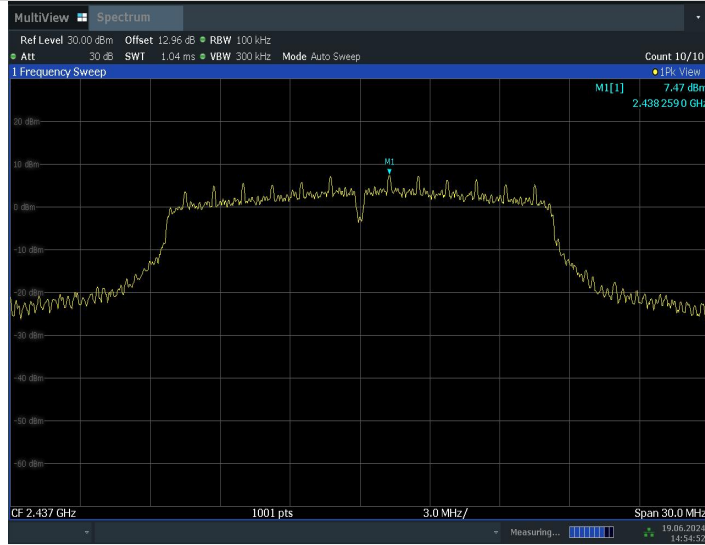
14:52:31 19.06.2024

11G_2412_1000~26500



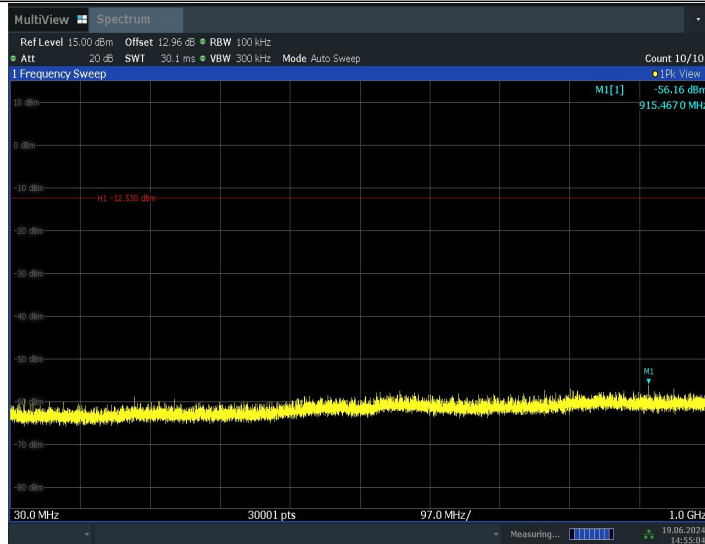
14:53:08 19.06.2024

11G_2437_0~Reference



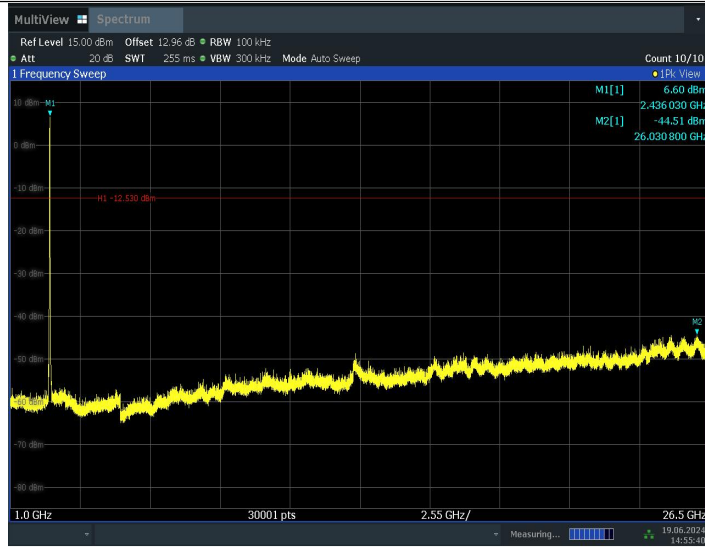
14:54:53 19.06.2024

11G_2437_30~1000



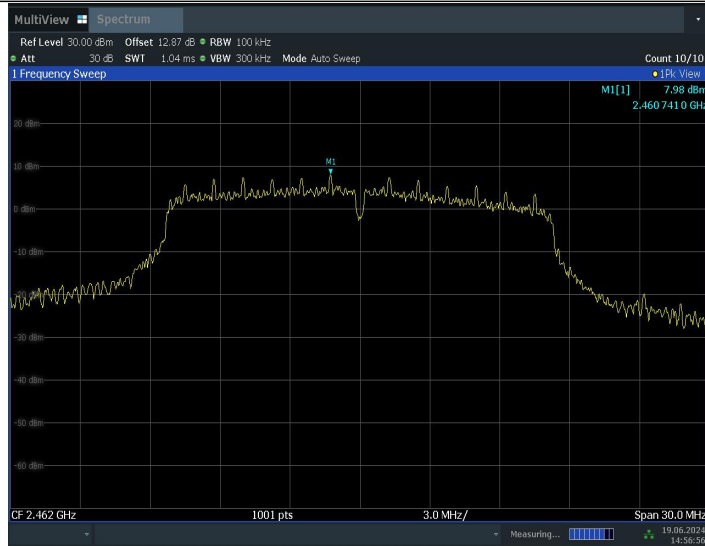
14:55:05 19.06.2024

11G_2437_1000~26500



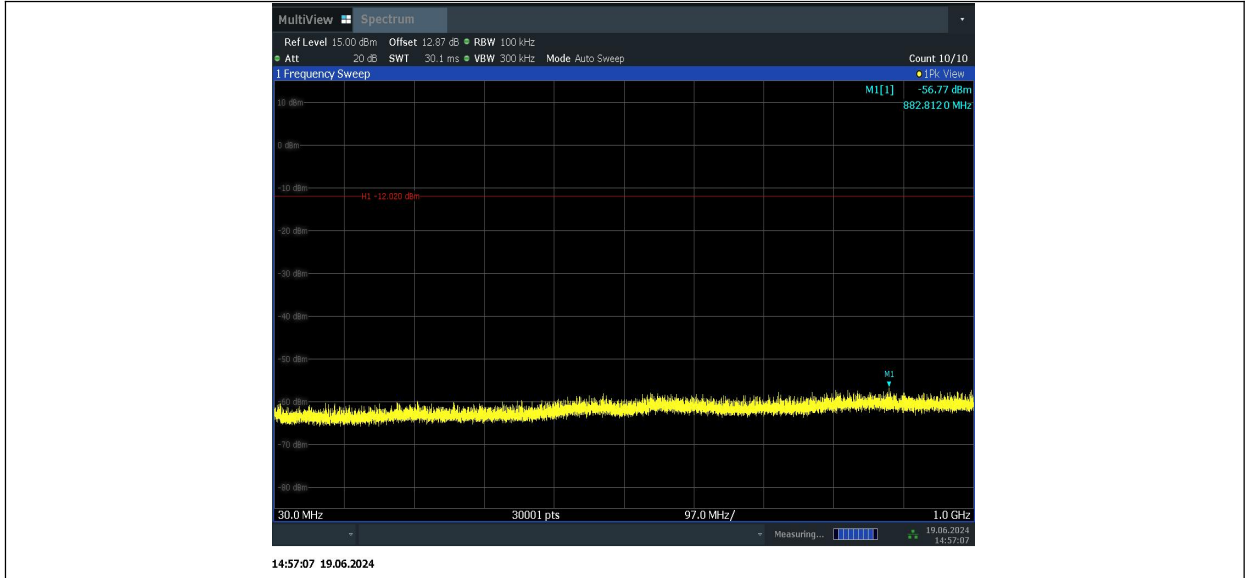
14:55:41 19.06.2024

11G_2462_0~Reference

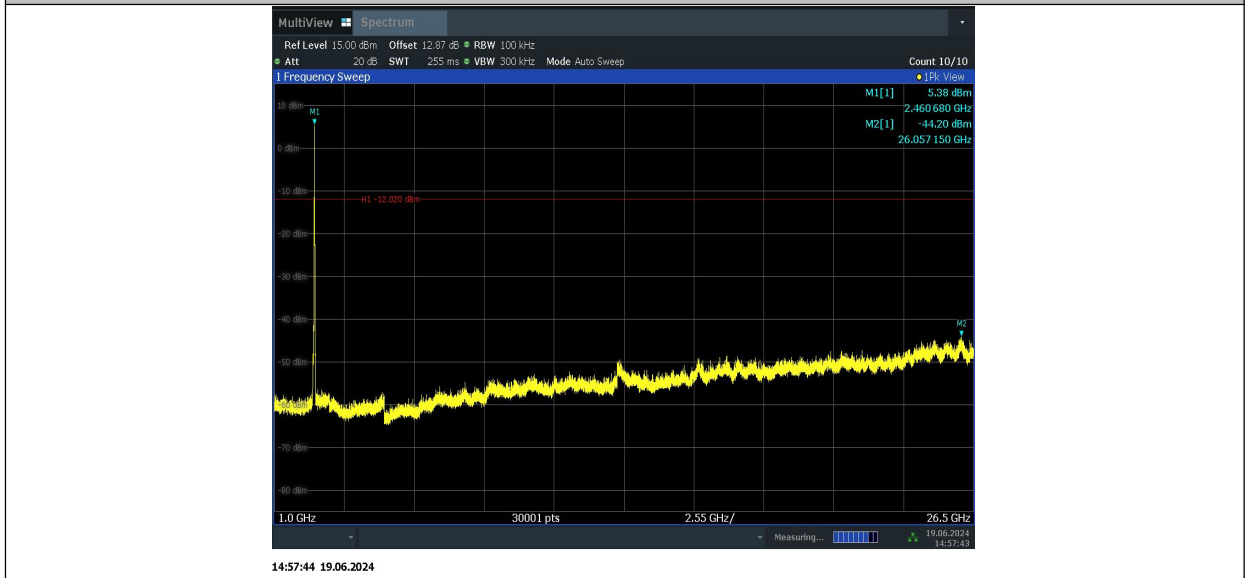


14:56:56 19.06.2024

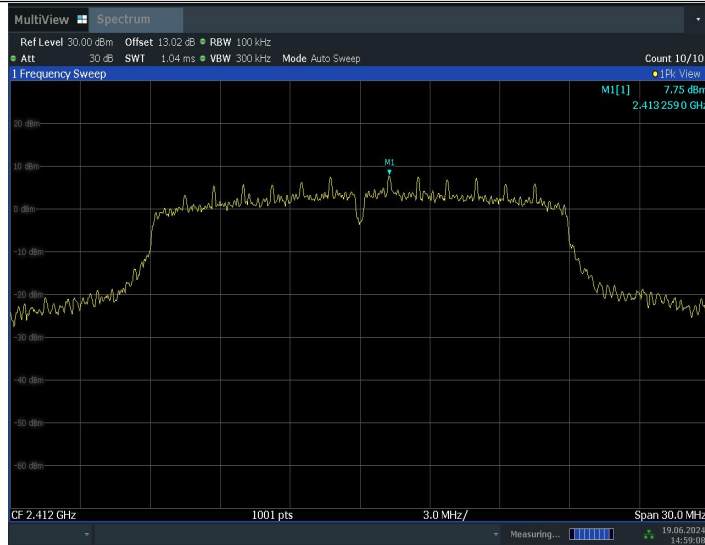
11G_2462_30~1000



11G_2462_1000~26500

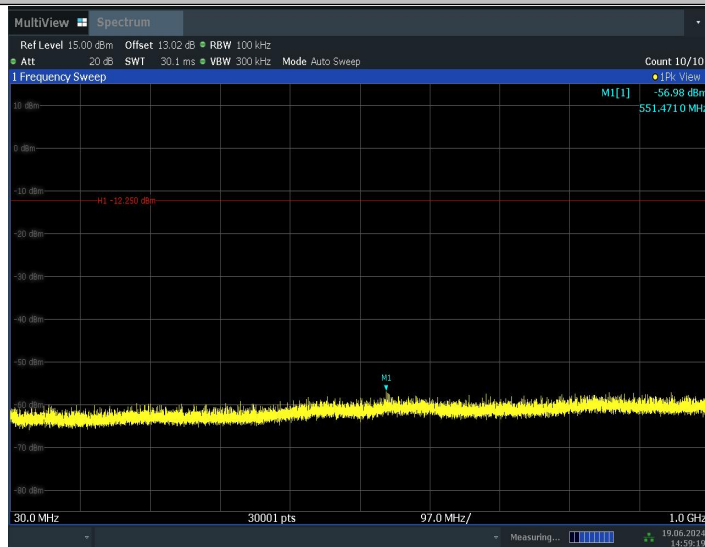


11N20SISO_2412_0~Reference



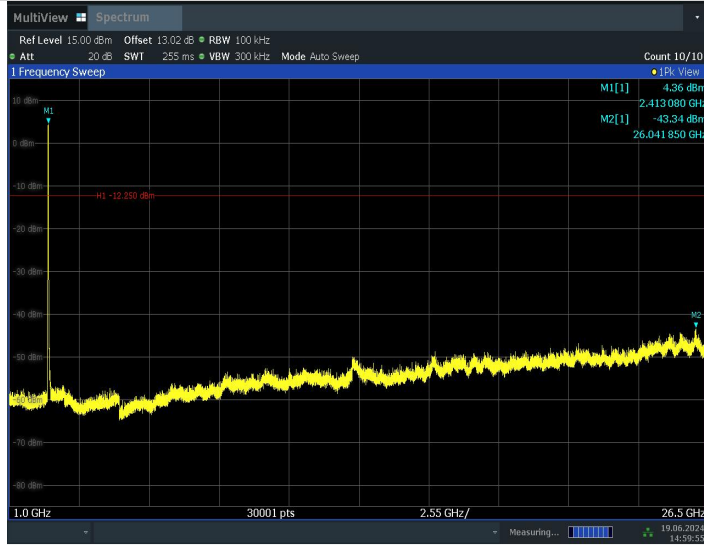
14:59:08 19.06.2024

11N20SISO_2412_30~1000



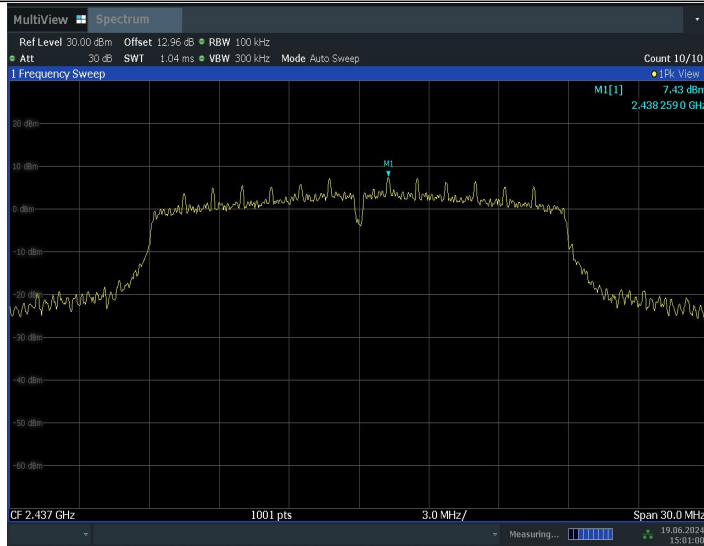
14:59:19 19.06.2024

11N20SISO_2412_1000~26500



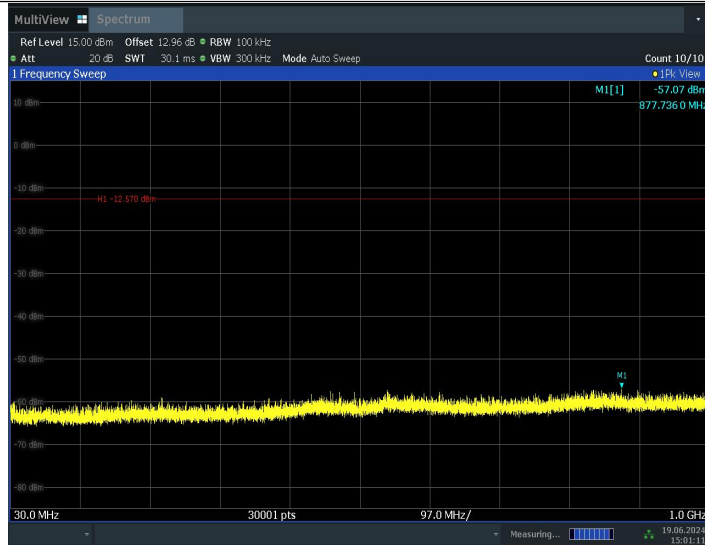
14:59:55 19.06.2024

11N20SISO_2437_0~Reference



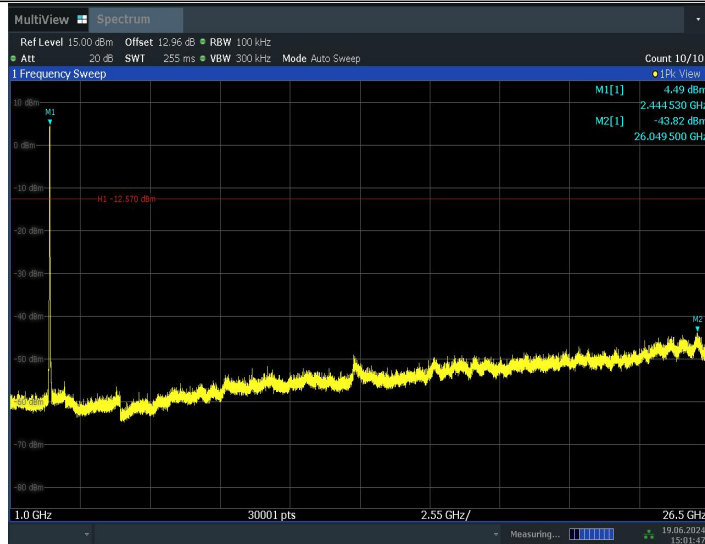
15:01:00 19.06.2024

11N20SISO_2437_30~1000



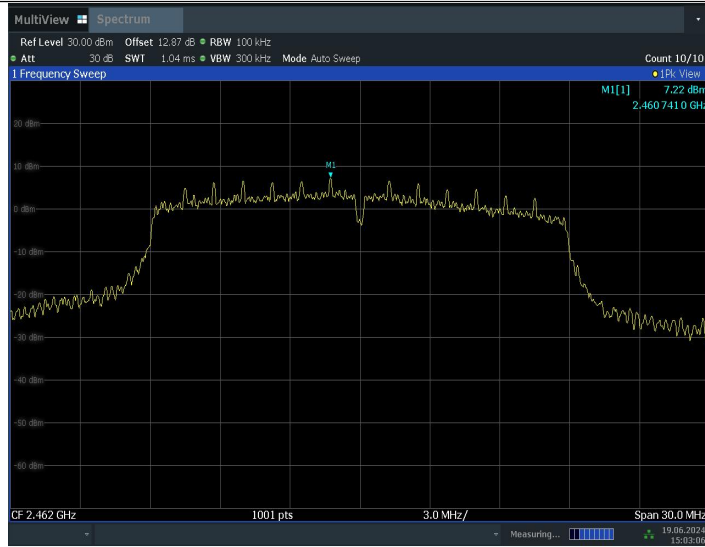
15:01:11 19.06.2024

11N20SISO_2437_1000~26500



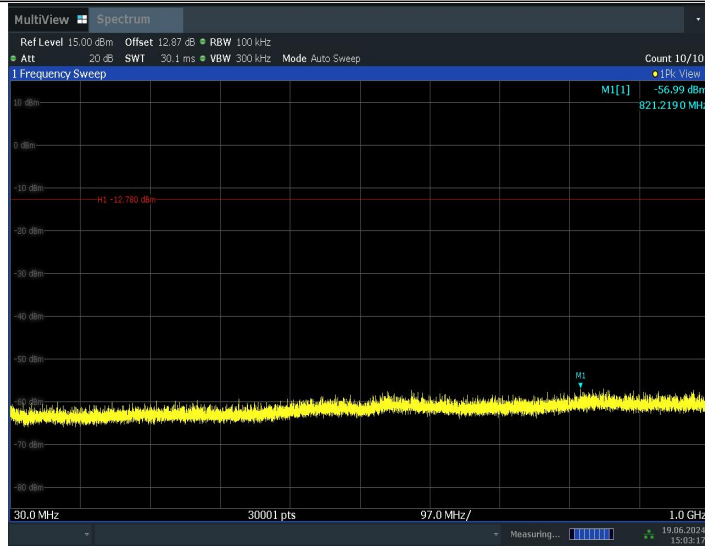
15:01:47 19.06.2024

11N20SISO_2462_0~Reference



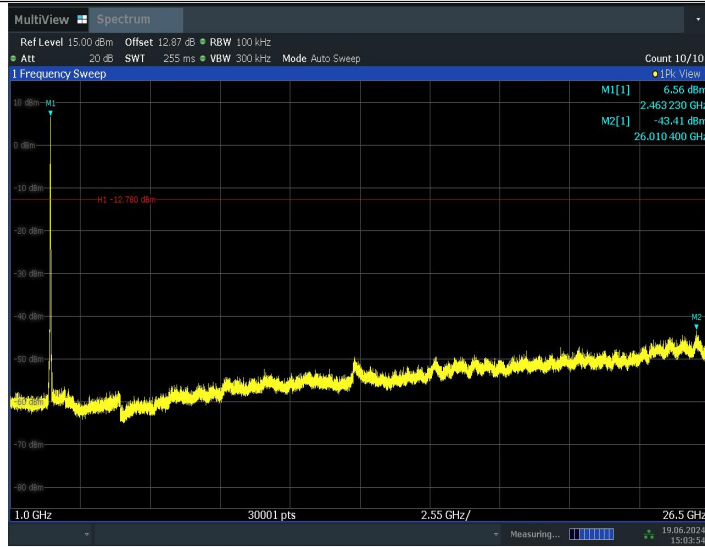
15:03:07 19.06.2024

11N20SISO_2462_30~1000



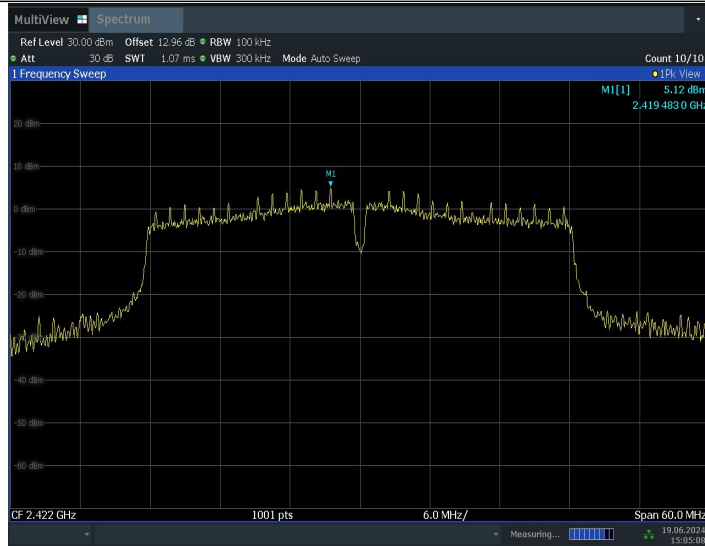
15:03:18 19.06.2024

11N20SISO_2462_1000~26500



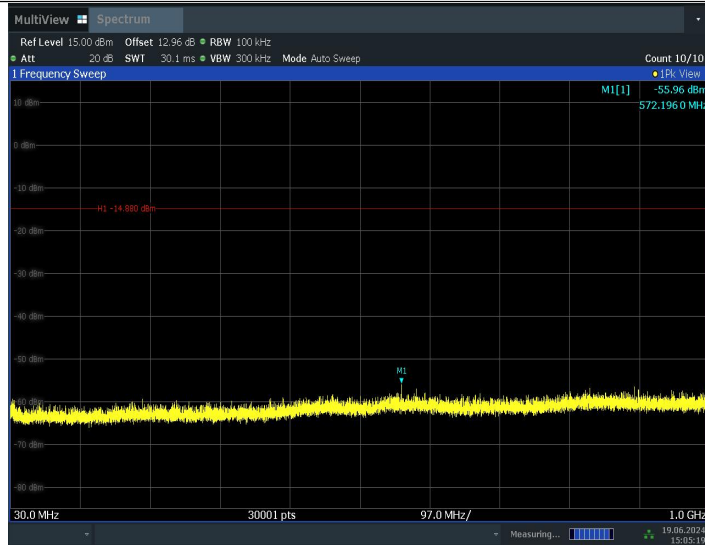
15:03:54 19.06.2024

11N40SISO_2422_0~Reference



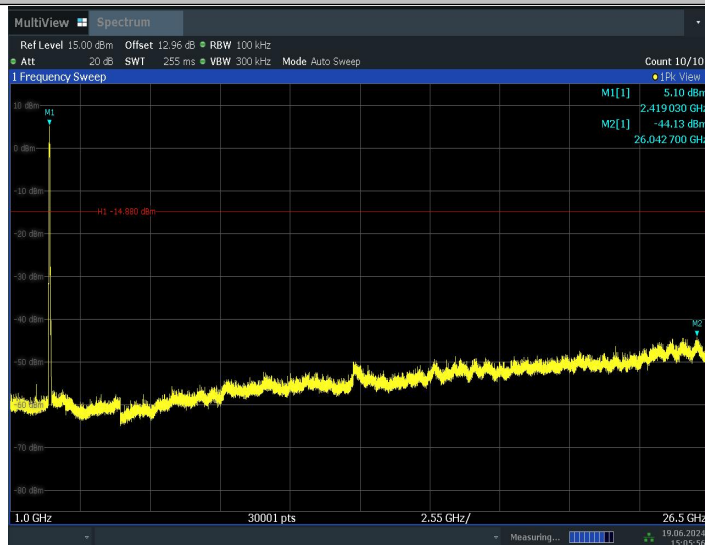
15:05:09 19.06.2024

11N40SISO_2422_30~1000



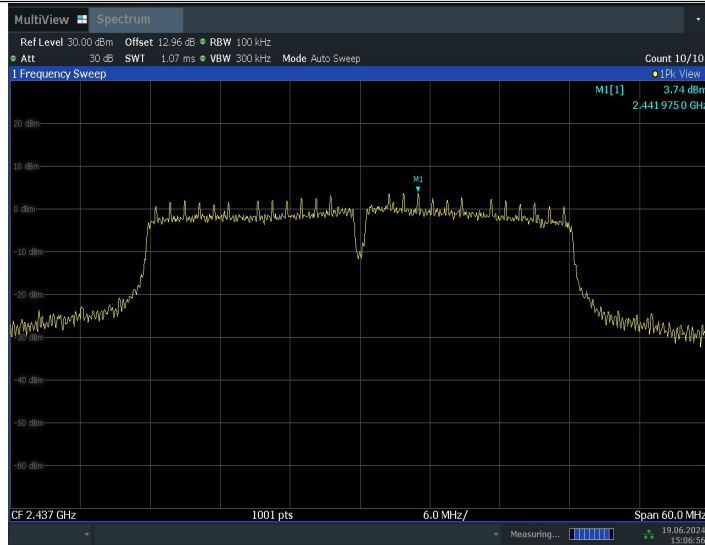
15:05:20 19.06.2024

11N40SISO_2422_1000~26500



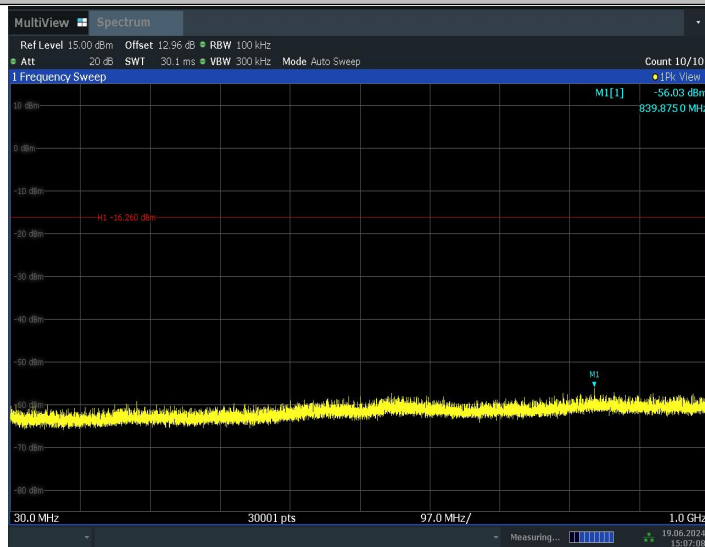
15:05:56 19.06.2024

11N40SISO_2437_0~Reference



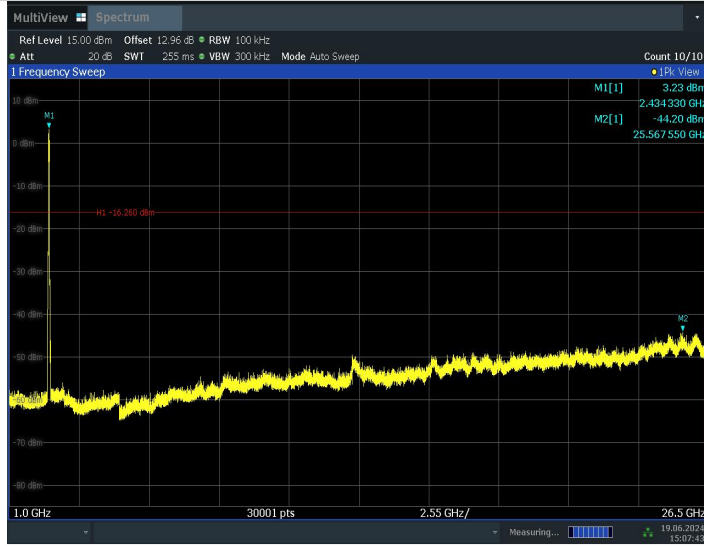
15:06:57 19.06.2024

11N40SISO_2437_30~1000



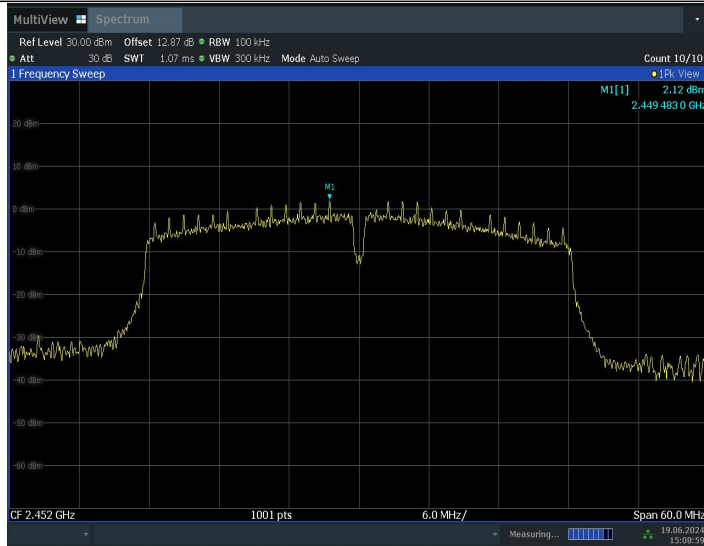
15:07:08 19.06.2024

11N40SISO_2437_1000~26500



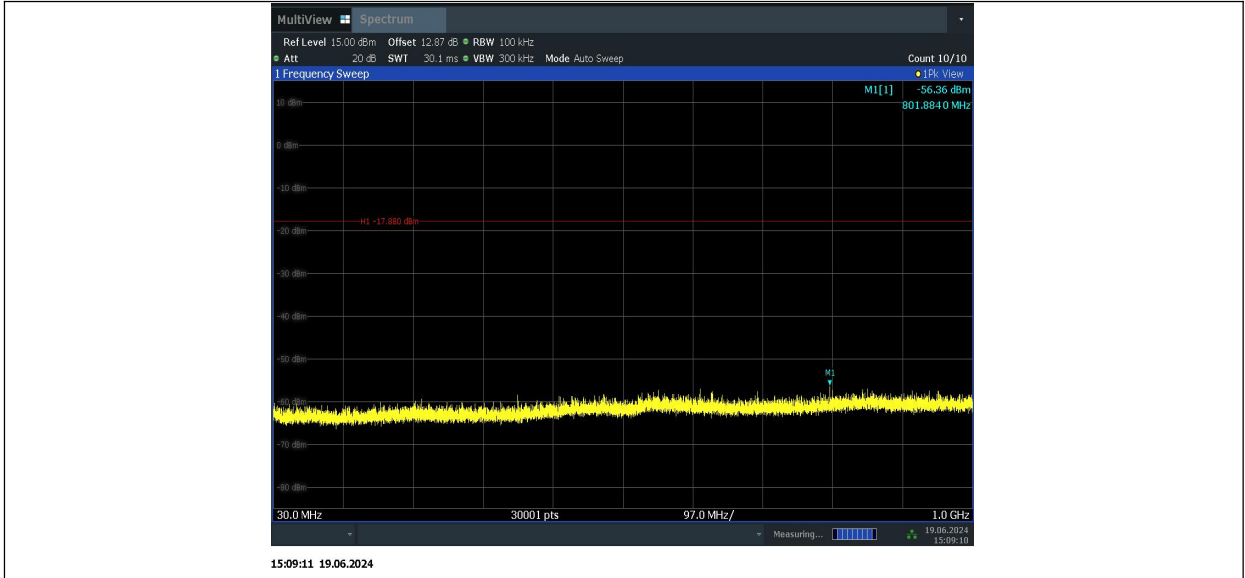
15:07:44 19.06.2024

11N40SISO_2452_0~Reference



15:09:00 19.06.2024

11N40SISO_2452_30~1000



11N40SISO_2452_1000~26500



Conclusion: Pass

A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 &6.5 & 6.6

Measurement Limit:

| Standard | Limit |
|--|------------------------------|
| FCC 47 CFR Part 15.247, 15.205, 15.209 | 20dB below peak output power |

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

| Frequency of emission (MHz) | Field strength(uV/m) | Field strength(dBuV/m) |
|-----------------------------|----------------------|------------------------|
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

| Frequency (MHz) | Field strength(μV/m) | Measurement distance (m) |
|-----------------|----------------------|--------------------------|
| 0.009 - 0.490 | 2400/F(kHz) | 300 |
| 0.490 - 1.705 | 24000/F(kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

| Frequency of emission (MHz) | RBW/VBW | Sweep Time(s) |
|-----------------------------|---------------|---------------|
| 30-1000 | 100KHz/300KHz | 5 |
| 1000-4000 | 1MHz/1MHz | 15 |
| 4000-18000 | 1MHz/1MHz | 40 |
| 18000-26500 | 1MHz/1MHz | 20 |

EUT ID: UT41a

Measurement Results:

802.11b mode

| Mode | Channel | Test Results | Conclusion |
|---------|---------|--------------|------------|
| 802.11b | 1 | Fig.A.6.2.1 | P |
| | 11 | Fig.A.6.2.2 | P |

802.11g mode

| Mode | Channel | Test Results | Conclusion |
|---------|---------|--------------|------------|
| 802.11g | 1 | Fig.A.6.2.3 | P |
| | 11 | Fig.A.6.2.4 | P |

802.11n-HT20 mode

| Mode | Channel | Test Results | Conclusion |
|-------------------|---------|--------------|------------|
| 802.11n (HT20) | 1 | Fig.A.6.2.5 | P |
| | 11 | Fig.A.6.2.6 | P |

802.11n-HT40 mode

| Mode | Channel | Test Results | Conclusion |
|-------------------|---------|--------------|------------|
| 802.11n (HT40) | 3 | Fig.A.6.2.7 | P |
| | 9 | Fig.A.6.2.8 | P |

Conclusion: Pass

Note:

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.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

Peak
802.11b

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 4824.000 | 51.26 | -37.70 | 33.00 | 55.96 | 74.00 | 22.74 | H |
| 17501.500 | 51.25 | -29.20 | 44.50 | 35.85 | 74.00 | 22.75 | V |
| 7237.500 | 48.67 | -35.60 | 36.40 | 47.87 | 74.00 | 25.33 | V |
| 13735.500 | 48.54 | -31.00 | 41.10 | 38.44 | 74.00 | 25.46 | V |
| 12780.000 | 45.44 | -31.50 | 39.80 | 37.14 | 74.00 | 28.56 | V |
| 2346.400 | 51.20 | -19.60 | 28.20 | 42.60 | 74.00 | 22.80 | V |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 4873.500 | 52.61 | -37.50 | 33.40 | 56.71 | 74.00 | 21.39 | H |
| 17956.500 | 51.62 | -29.40 | 46.00 | 35.02 | 74.00 | 22.38 | H |
| 13767.500 | 48.42 | -30.90 | 41.20 | 38.12 | 74.00 | 25.58 | H |
| 12852.500 | 46.47 | -31.90 | 39.90 | 38.47 | 74.00 | 27.53 | V |
| 7312.500 | 45.38 | -35.40 | 36.60 | 44.18 | 74.00 | 28.62 | V |
| 9339.000 | 44.84 | -34.10 | 37.80 | 41.14 | 74.00 | 29.16 | H |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17602.500 | 51.38 | -29.60 | 45.10 | 35.78 | 74.00 | 22.62 | V |
| 4924.000 | 49.75 | -37.60 | 33.30 | 54.05 | 74.00 | 24.25 | V |
| 7387.000 | 48.81 | -35.10 | 36.60 | 47.31 | 74.00 | 25.19 | H |
| 13716.000 | 48.76 | -31.00 | 41.10 | 38.66 | 74.00 | 25.24 | H |
| 10470.000 | 46.11 | -34.10 | 38.20 | 42.01 | 74.00 | 27.89 | V |
| 2485.200 | 52.22 | -19.70 | 28.20 | 43.72 | 74.00 | 21.78 | V |

802.11g

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7246.500 | 57.54 | -35.60 | 36.40 | 56.74 | 74.00 | 16.46 | V |
| 17613.000 | 51.41 | -29.60 | 45.10 | 35.81 | 74.00 | 22.59 | H |
| 14104.500 | 48.45 | -30.20 | 41.70 | 36.95 | 74.00 | 25.55 | V |
| 12977.000 | 46.84 | -31.90 | 40.10 | 38.64 | 74.00 | 27.16 | V |
| 4830.500 | 45.42 | -37.70 | 33.00 | 50.12 | 74.00 | 28.58 | V |
| 2389.500 | 62.62 | -19.80 | 28.20 | 54.22 | 74.00 | 11.38 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17644.500 | 52.03 | -29.50 | 45.40 | 36.13 | 74.00 | 21.97 | H |
| 14573.500 | 48.67 | -29.00 | 41.90 | 35.77 | 74.00 | 25.33 | H |
| 7307.000 | 48.05 | -35.40 | 36.60 | 46.85 | 74.00 | 25.95 | V |
| 12980.500 | 46.76 | -31.90 | 40.10 | 38.56 | 74.00 | 27.24 | H |
| 4875.000 | 45.21 | -37.50 | 33.40 | 49.31 | 74.00 | 28.79 | H |
| 9098.500 | 44.61 | -34.60 | 37.70 | 41.51 | 74.00 | 29.39 | V |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17956.000 | 51.23 | -29.40 | 46.00 | 34.63 | 74.00 | 22.77 | V |
| 7387.000 | 50.22 | -35.10 | 36.60 | 48.72 | 74.00 | 23.78 | V |
| 13743.500 | 48.71 | -31.00 | 41.10 | 38.61 | 74.00 | 25.29 | V |
| 11826.500 | 45.78 | -32.00 | 39.20 | 38.58 | 74.00 | 28.22 | H |
| 9515.500 | 44.87 | -33.80 | 37.60 | 41.07 | 74.00 | 29.13 | V |
| 2485.000 | 62.20 | -19.70 | 28.20 | 53.70 | 74.00 | 11.80 | H |

802.11n-HT20

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7256.000 | 59.09 | -35.60 | 36.40 | 58.29 | 74.00 | 14.91 | H |
| 17606.500 | 52.17 | -29.60 | 45.10 | 36.57 | 74.00 | 21.83 | V |
| 13683.000 | 48.83 | -31.00 | 41.00 | 38.83 | 74.00 | 25.17 | V |
| 4831.500 | 47.10 | -37.70 | 33.00 | 51.80 | 74.00 | 26.90 | H |
| 12750.500 | 46.64 | -31.80 | 39.60 | 38.74 | 74.00 | 27.36 | V |
| 2389.900 | 65.63 | -19.80 | 28.20 | 57.23 | 74.00 | 8.37 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7311.000 | 53.20 | -35.40 | 36.60 | 52.00 | 74.00 | 20.80 | V |
| 17605.500 | 51.58 | -29.60 | 45.10 | 35.98 | 74.00 | 22.42 | V |
| 14135.000 | 49.53 | -30.80 | 41.70 | 38.63 | 74.00 | 24.47 | H |
| 4869.500 | 46.64 | -37.50 | 33.40 | 50.74 | 74.00 | 27.36 | H |
| 11399.500 | 46.24 | -32.60 | 39.00 | 39.84 | 74.00 | 27.76 | V |
| 8746.000 | 45.40 | -34.80 | 37.90 | 42.30 | 74.00 | 28.60 | V |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7383.000 | 58.47 | -35.10 | 36.60 | 56.97 | 74.00 | 15.53 | H |
| 17628.000 | 51.53 | -29.50 | 45.40 | 35.63 | 74.00 | 22.47 | H |
| 13721.500 | 48.34 | -31.00 | 41.10 | 38.24 | 74.00 | 25.66 | V |
| 12713.000 | 45.87 | -31.90 | 39.50 | 38.27 | 74.00 | 28.13 | H |
| 9393.500 | 44.42 | -34.10 | 37.90 | 40.62 | 74.00 | 29.58 | V |
| 2485.300 | 66.43 | -19.70 | 28.20 | 57.93 | 74.00 | 7.57 | V |

802.11n-HT40

Ch3

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17509.000 | 51.99 | -29.20 | 44.50 | 36.59 | 74.00 | 22.01 | H |
| 13742.500 | 49.41 | -31.00 | 41.10 | 39.31 | 74.00 | 24.59 | H |
| 11875.500 | 46.32 | -32.80 | 39.10 | 39.92 | 74.00 | 27.68 | V |
| 7277.000 | 45.79 | -35.60 | 36.40 | 44.99 | 74.00 | 28.21 | H |
| 9623.000 | 44.98 | -34.30 | 37.60 | 41.68 | 74.00 | 29.02 | H |
| 2389.900 | 65.01 | -19.80 | 28.20 | 56.61 | 74.00 | 8.99 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17993.000 | 52.39 | -29.40 | 46.00 | 35.79 | 74.00 | 21.61 | V |
| 13711.500 | 49.31 | -31.00 | 41.00 | 39.31 | 74.00 | 24.69 | H |
| 12750.500 | 46.17 | -31.80 | 39.60 | 38.27 | 74.00 | 27.83 | V |
| 8959.500 | 45.26 | -33.90 | 37.70 | 41.46 | 74.00 | 28.74 | V |
| 7317.000 | 44.88 | -35.40 | 36.60 | 43.68 | 74.00 | 29.12 | H |
| 4887.500 | 42.47 | -37.50 | 33.40 | 46.57 | 74.00 | 31.53 | V |

Ch9

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17495.500 | 51.71 | -29.20 | 44.50 | 36.31 | 74.00 | 22.29 | H |
| 7366.000 | 51.05 | -35.90 | 36.60 | 50.35 | 74.00 | 22.95 | V |
| 14606.000 | 48.94 | -30.80 | 41.70 | 38.04 | 74.00 | 25.06 | V |
| 11769.500 | 46.54 | -32.90 | 39.20 | 40.24 | 74.00 | 27.46 | H |
| 9174.000 | 44.85 | -34.70 | 37.70 | 41.85 | 74.00 | 29.15 | V |
| 2485.400 | 67.06 | -19.70 | 28.20 | 58.56 | 74.00 | 6.94 | V |

Average
802.11b

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 4824.000 | 49.24 | -37.70 | 33.00 | 53.94 | 54.00 | 4.76 | H |
| 7237.000 | 43.23 | -35.60 | 36.40 | 42.43 | 54.00 | 10.77 | V |
| 17607.500 | 41.85 | -29.60 | 45.10 | 26.25 | 54.00 | 12.15 | V |
| 13730.500 | 39.01 | -31.00 | 41.10 | 28.91 | 54.00 | 14.99 | V |
| 12844.500 | 36.31 | -31.90 | 39.90 | 28.31 | 54.00 | 17.69 | H |
| 2386.900 | 39.91 | -19.80 | 28.20 | 31.51 | 54.00 | 14.09 | V |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 4874.000 | 50.66 | -37.50 | 33.40 | 54.76 | 54.00 | 3.34 | H |
| 17502.000 | 42.20 | -29.20 | 44.50 | 26.80 | 54.00 | 11.80 | V |
| 13731.500 | 39.01 | -31.00 | 41.10 | 28.91 | 54.00 | 14.99 | V |
| 7310.000 | 38.70 | -35.40 | 36.60 | 37.50 | 54.00 | 15.30 | V |
| 12760.000 | 36.25 | -31.80 | 39.60 | 28.35 | 54.00 | 17.75 | V |
| 9410.000 | 35.57 | -33.60 | 37.90 | 31.27 | 54.00 | 18.43 | H |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 4924.000 | 47.75 | -37.60 | 33.30 | 52.05 | 54.00 | 6.25 | V |
| 7387.500 | 43.83 | -35.10 | 36.60 | 42.33 | 54.00 | 10.17 | H |
| 17943.000 | 42.35 | -29.40 | 46.00 | 25.75 | 54.00 | 11.65 | V |
| 13703.000 | 39.03 | -31.00 | 41.00 | 29.03 | 54.00 | 14.97 | H |
| 12778.500 | 36.15 | -31.50 | 39.80 | 27.85 | 54.00 | 17.85 | V |
| 2488.100 | 41.35 | -19.70 | 28.20 | 32.85 | 54.00 | 12.65 | H |

802.11g

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7236.500 | 45.63 | -35.60 | 36.40 | 44.83 | 54.00 | 8.37 | V |
| 17964.500 | 41.78 | -29.40 | 46.00 | 25.18 | 54.00 | 12.22 | V |
| 14192.000 | 38.95 | -30.20 | 41.70 | 27.45 | 54.00 | 15.05 | V |
| 12658.500 | 36.64 | -31.80 | 39.40 | 29.04 | 54.00 | 17.36 | H |
| 4823.500 | 36.63 | -37.70 | 33.00 | 41.33 | 54.00 | 17.37 | H |
| 2389.600 | 48.40 | -19.80 | 28.20 | 40.00 | 54.00 | 5.60 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17934.000 | 41.77 | -29.40 | 46.00 | 25.17 | 54.00 | 12.23 | V |
| 13748.000 | 39.05 | -31.00 | 41.10 | 28.95 | 54.00 | 14.95 | H |
| 4874.500 | 37.80 | -37.50 | 33.40 | 41.90 | 54.00 | 16.20 | H |
| 7307.000 | 36.86 | -35.40 | 36.60 | 35.66 | 54.00 | 17.14 | V |
| 12745.500 | 36.23 | -31.80 | 39.60 | 28.33 | 54.00 | 17.77 | H |
| 9612.000 | 34.87 | -34.30 | 37.60 | 31.57 | 54.00 | 19.13 | H |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17596.500 | 41.71 | -29.60 | 45.10 | 26.11 | 54.00 | 12.29 | V |
| 7387.500 | 39.93 | -35.10 | 36.60 | 38.43 | 54.00 | 14.07 | H |
| 14097.000 | 39.09 | -30.20 | 41.70 | 27.59 | 54.00 | 14.91 | H |
| 11897.000 | 36.31 | -32.40 | 39.10 | 29.61 | 54.00 | 17.69 | V |
| 9169.500 | 35.00 | -34.70 | 37.70 | 32.00 | 54.00 | 19.00 | V |
| 2485.000 | 48.02 | -19.70 | 28.20 | 39.52 | 54.00 | 5.98 | H |

802.11n-HT20

Ch1

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17935.000 | 42.31 | -29.40 | 46.00 | 25.71 | 54.00 | 11.69 | V |
| 14084.000 | 39.08 | -30.20 | 41.70 | 27.58 | 54.00 | 14.92 | H |
| 7256.000 | 38.22 | -35.60 | 36.40 | 37.42 | 54.00 | 15.78 | H |
| 4827.500 | 36.61 | -37.70 | 33.00 | 41.31 | 54.00 | 17.39 | H |
| 12995.000 | 36.52 | -31.90 | 40.10 | 28.32 | 54.00 | 17.48 | V |
| 2389.800 | 49.85 | -19.80 | 28.20 | 41.45 | 54.00 | 4.15 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17637.500 | 42.37 | -29.50 | 45.40 | 26.47 | 54.00 | 11.63 | H |
| 7310.500 | 41.05 | -35.40 | 36.60 | 39.85 | 54.00 | 12.95 | V |
| 13724.000 | 39.15 | -31.00 | 41.10 | 29.05 | 54.00 | 14.85 | H |
| 4872.500 | 37.83 | -37.50 | 33.40 | 41.93 | 54.00 | 16.17 | H |
| 12750.000 | 36.58 | -31.80 | 39.60 | 28.68 | 54.00 | 17.42 | H |
| 9418.000 | 34.92 | -33.60 | 37.90 | 30.62 | 54.00 | 19.08 | V |

Ch11

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 7387.000 | 46.80 | -35.10 | 36.60 | 45.30 | 54.00 | 7.20 | H |
| 17974.500 | 41.90 | -29.40 | 46.00 | 25.30 | 54.00 | 12.10 | H |
| 13771.000 | 38.96 | -30.90 | 41.20 | 28.66 | 54.00 | 15.04 | H |
| 12652.000 | 36.20 | -31.80 | 39.40 | 28.60 | 54.00 | 17.80 | V |
| 9423.000 | 35.52 | -33.60 | 37.90 | 31.22 | 54.00 | 18.48 | H |
| 2485.200 | 50.54 | -19.70 | 28.20 | 42.04 | 54.00 | 3.46 | V |

802.11n-HT40

Ch3

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17607.500 | 42.28 | -29.60 | 45.10 | 26.68 | 54.00 | 11.72 | H |
| 13949.500 | 38.98 | -30.60 | 41.40 | 28.18 | 54.00 | 15.02 | V |
| 12745.000 | 36.73 | -31.80 | 39.60 | 28.83 | 54.00 | 17.27 | V |
| 9311.500 | 35.47 | -34.10 | 37.80 | 31.77 | 54.00 | 18.53 | H |
| 7256.500 | 35.41 | -35.60 | 36.40 | 34.61 | 54.00 | 18.59 | H |
| 2389.800 | 53.08 | -19.80 | 28.20 | 44.68 | 54.00 | 0.92 | H |

Ch6

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17601.000 | 42.83 | -29.60 | 45.10 | 27.23 | 54.00 | 11.17 | V |
| 13743.000 | 39.20 | -31.00 | 41.10 | 29.10 | 54.00 | 14.80 | H |
| 10904.000 | 36.72 | -32.80 | 38.50 | 31.02 | 54.00 | 17.28 | H |
| 7311.000 | 35.76 | -35.40 | 36.60 | 34.56 | 54.00 | 18.24 | H |
| 9406.000 | 35.11 | -33.60 | 37.90 | 30.81 | 54.00 | 18.89 | H |
| 4867.500 | 34.04 | -37.50 | 33.40 | 38.14 | 54.00 | 19.96 | V |

Ch9

| Frequency (MHz) | Measurement Result (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBuV) | Limit (dBuV/m) | Margin (dB) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 17612.500 | 42.34 | -29.60 | 45.10 | 26.74 | 54.00 | 11.66 | H |
| 13725.500 | 39.48 | -31.00 | 41.10 | 29.38 | 54.00 | 14.52 | V |
| 7366.000 | 39.20 | -35.90 | 36.60 | 38.50 | 54.00 | 14.80 | V |
| 12766.000 | 36.83 | -31.80 | 39.60 | 28.93 | 54.00 | 17.17 | H |
| 9412.500 | 35.29 | -33.60 | 37.90 | 30.99 | 54.00 | 18.71 | H |
| 2485.500 | 51.88 | -19.70 | 28.20 | 43.38 | 54.00 | 2.12 | H |

Test graphs as below:

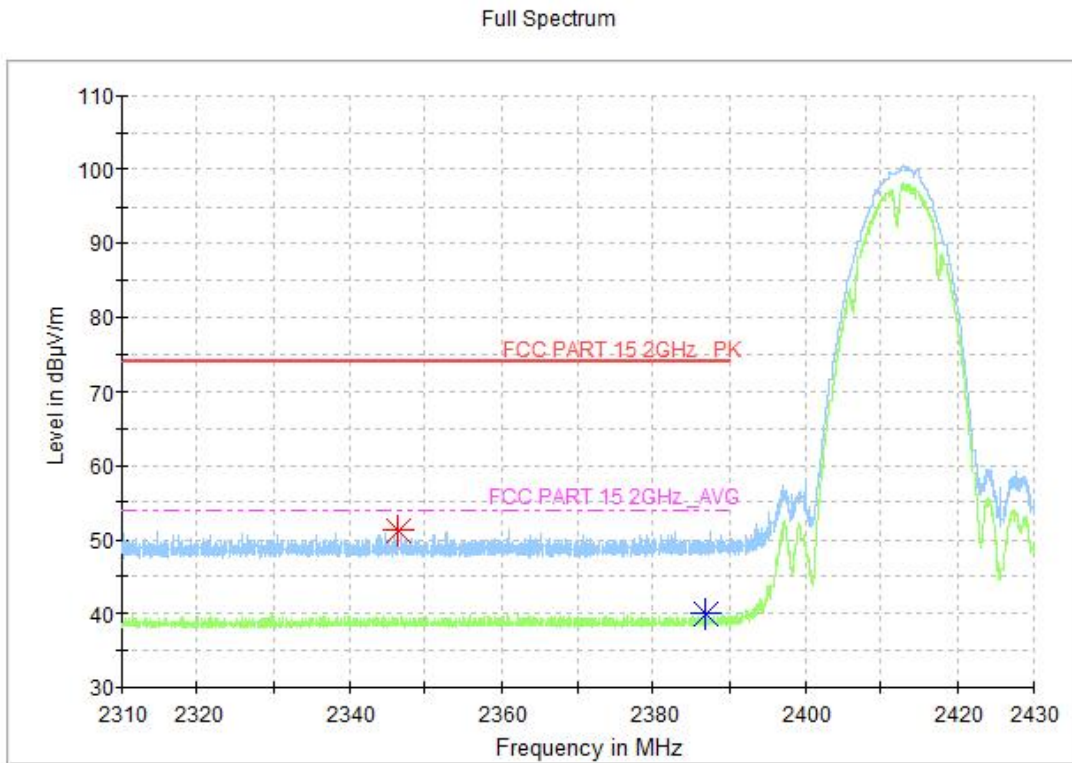


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz

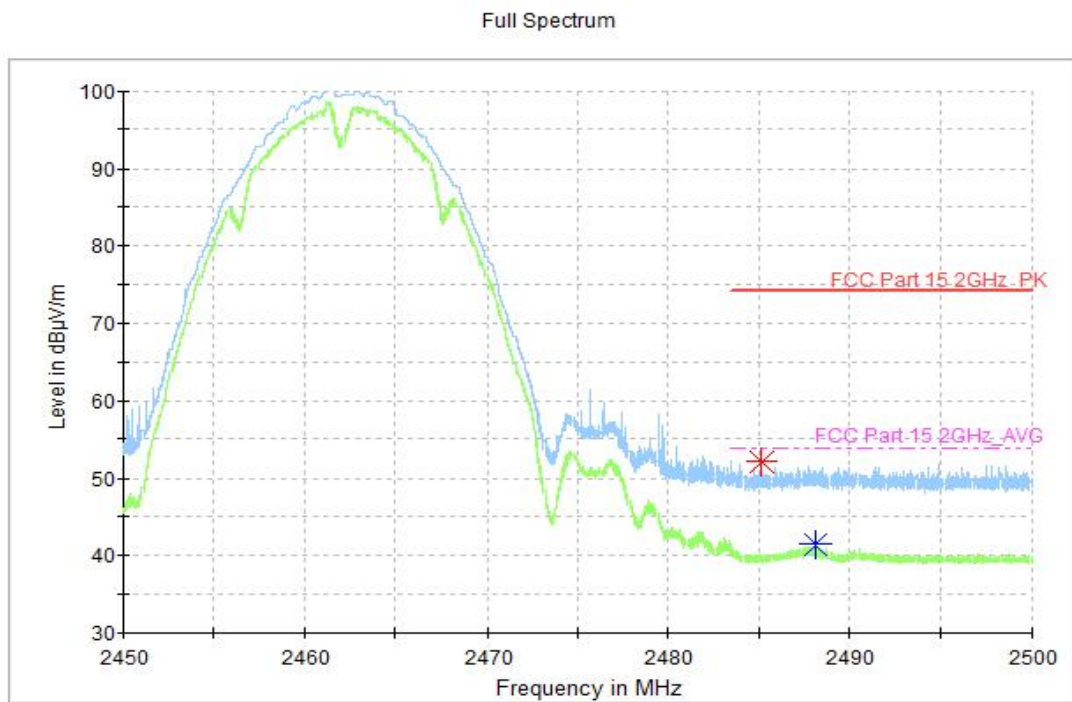


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

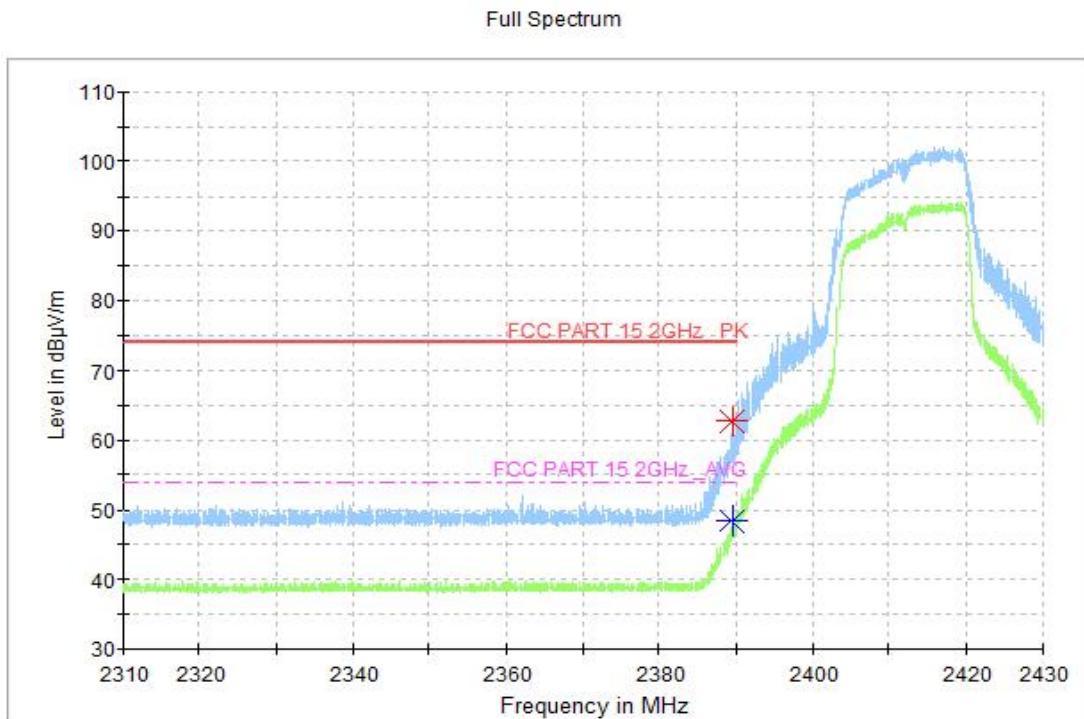


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

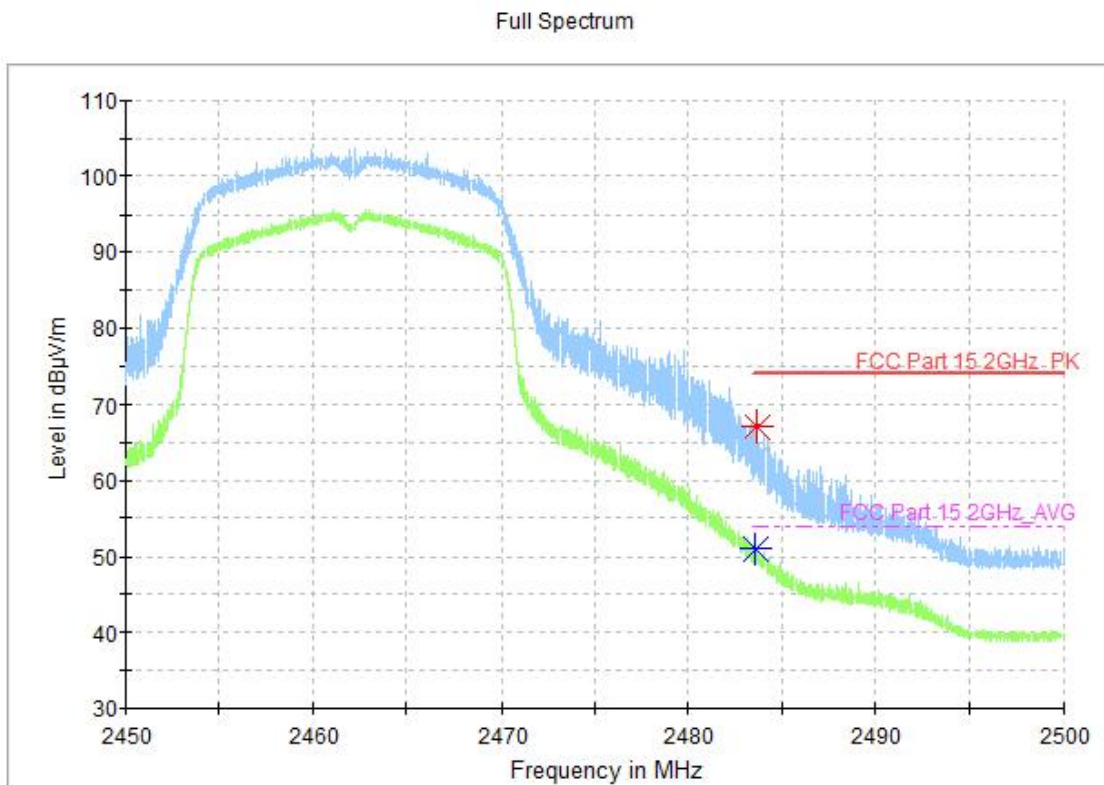


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

Full Spectrum

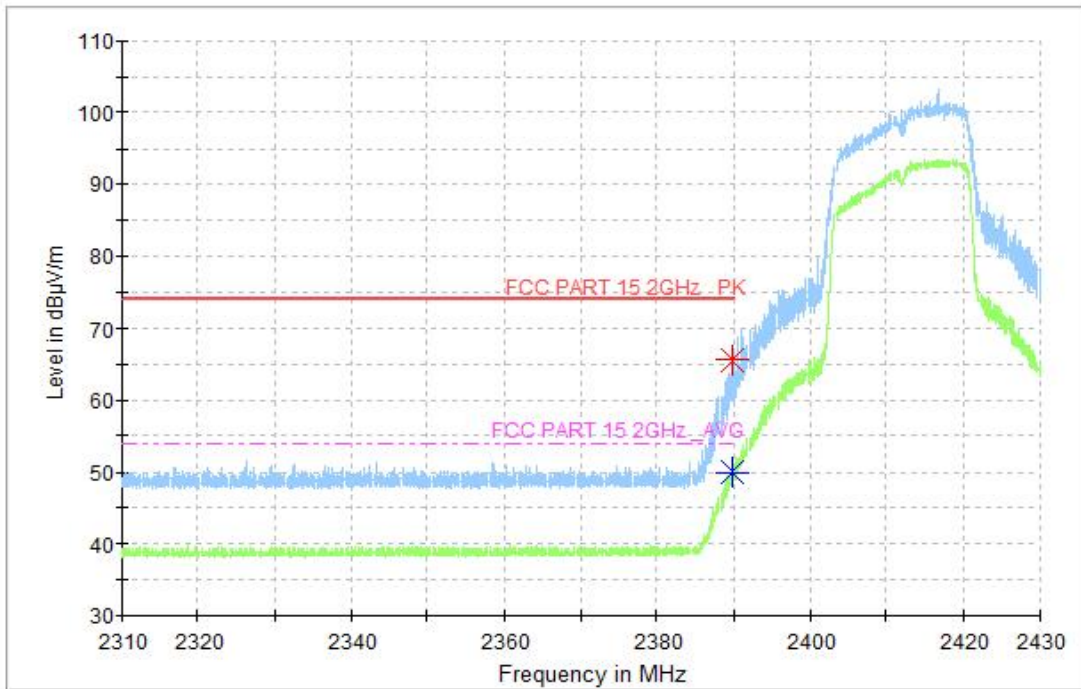


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz

Full Spectrum

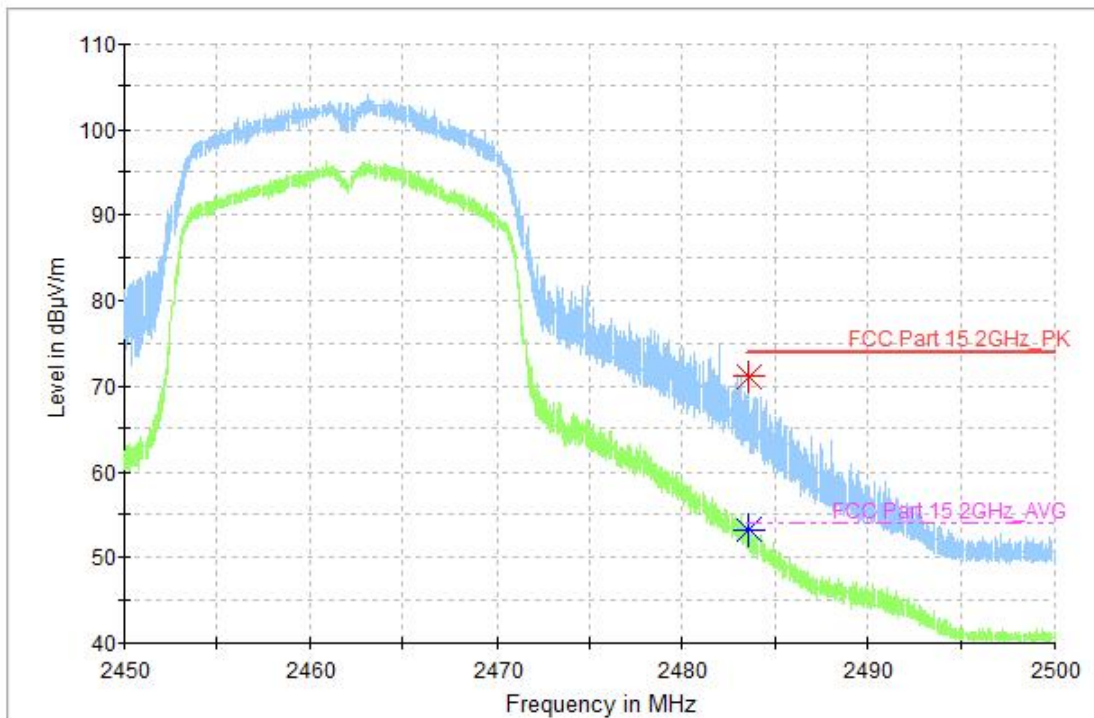


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

Full Spectrum

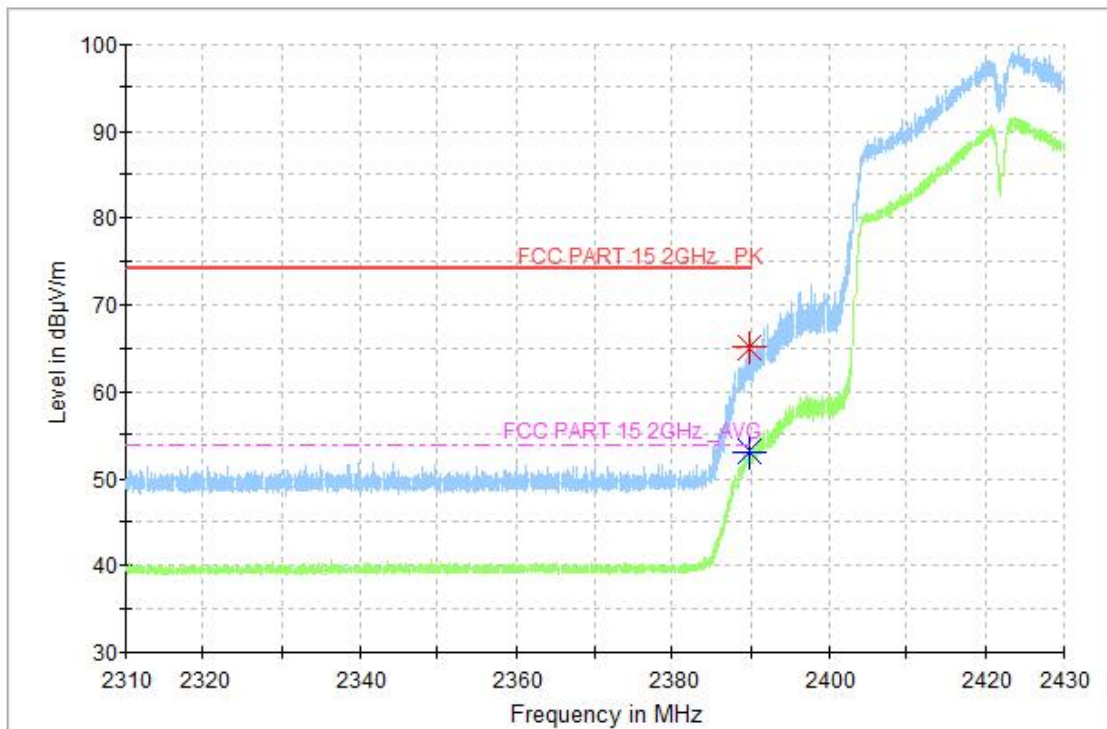


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz

Full Spectrum

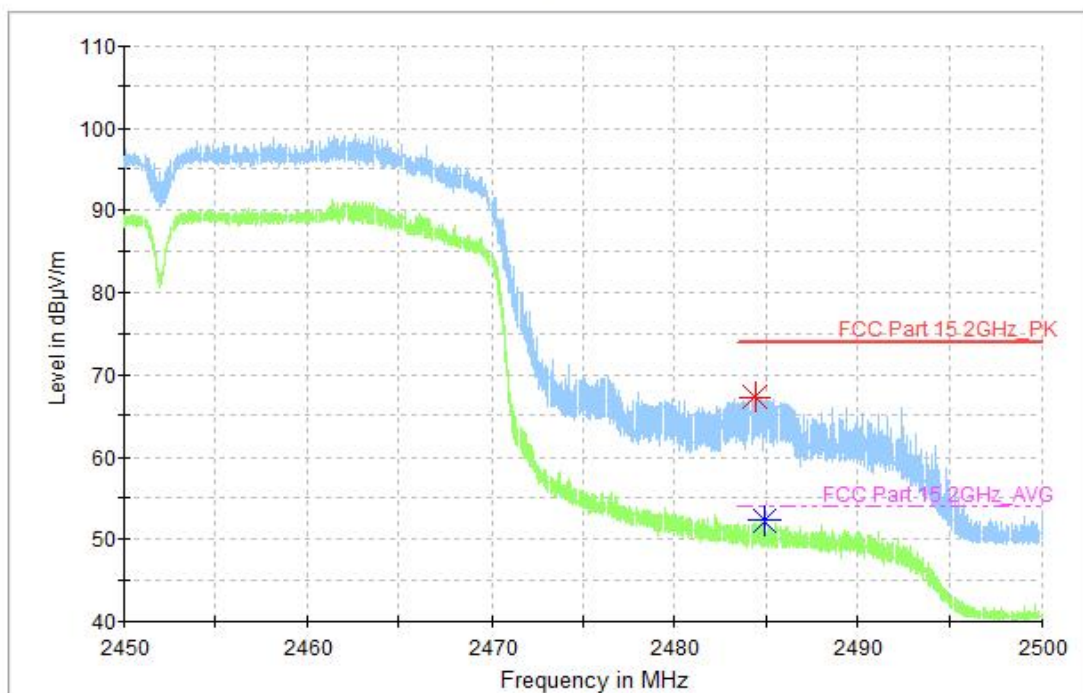


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

A.7. AC Power-line Conducted Emission

Summary

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

Method of Measurement:

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

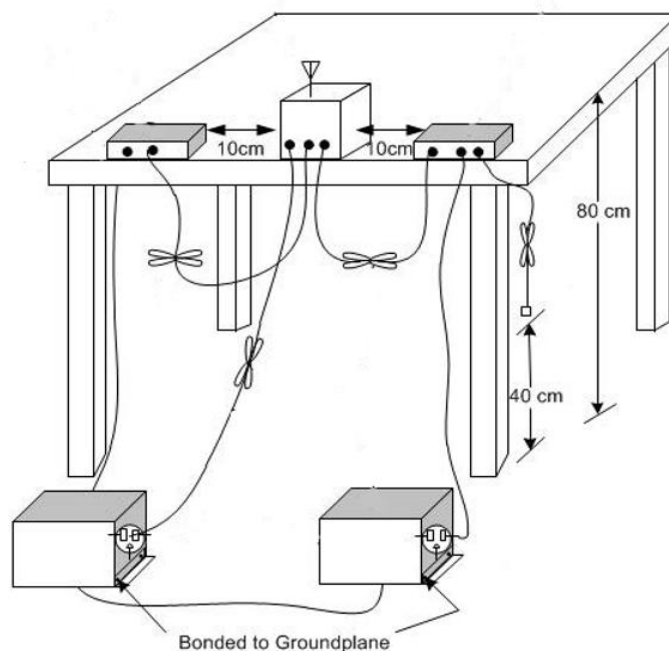
The measurement bandwidth is:

| Frequency of Emission (MHz) | RBW/IF bandwidth |
|-----------------------------|------------------|
| 0.15-30 | 9kHz |

Test Condition:

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120 | 60 |

Test setup



Measurement Result and limit:

WLAN (Quasi-peak Limit)

| Frequency range (MHz) | Quasi-peak Limit (dB μ V) | Result (dB μ V) | | Conclusion |
|-----------------------|-------------------------------|---------------------|-----------|------------|
| | | With charger | | |
| | | 802.11b | Idle | |
| 0.15 to 0.5 | 66 to 56 | Fig.A.7.1 | Fig.A.7.2 | P |
| 0.5 to 5 | 56 | | | |
| 5 to 30 | 60 | | | |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

| Frequency range (MHz) | Average Limit (dB μ V) | Result (dB μ V) | | Conclusion |
|-----------------------|----------------------------|---------------------|-----------|------------|
| | | With charger | | |
| | | 802.11b | Idle | |
| 0.15 to 0.5 | 56 to 46 | Fig.A.7.1 | Fig.A.7.2 | P |
| 0.5 to 5 | 46 | | | |
| 5 to 30 | 50 | | | |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: Pass
Test graphs as below:

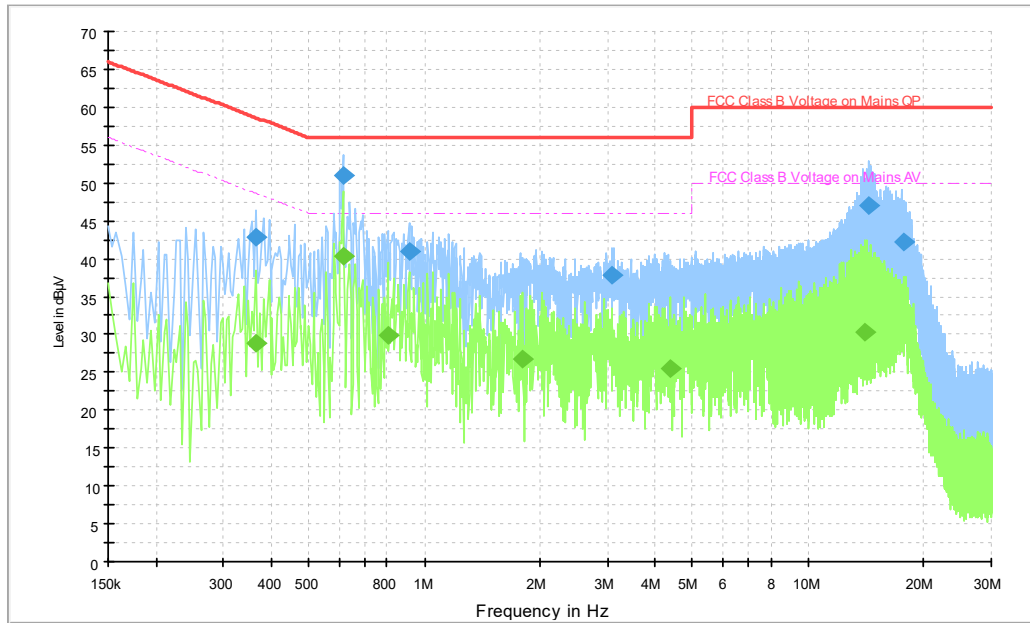


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|------------------|------------|-----------------|--------|------|------------|-------------|--------------|
| 0.366000 | 42.8 | 2000.0 | 9.000 | On | N | 19.8 | 15.8 | 58.6 |
| 0.614000 | 51.0 | 2000.0 | 9.000 | On | N | 19.8 | 5.0 | 56.0 |
| 0.914000 | 41.0 | 2000.0 | 9.000 | On | L1 | 19.9 | 15.0 | 56.0 |
| 3.082000 | 37.8 | 2000.0 | 9.000 | On | L1 | 19.8 | 18.2 | 56.0 |
| 14.350000 | 47.0 | 2000.0 | 9.000 | On | N | 19.8 | 13.0 | 60.0 |
| 17.742000 | 42.2 | 2000.0 | 9.000 | On | N | 19.8 | 17.8 | 60.0 |

Final Result 2

| Frequency (MHz) | CAverage (dBµV) | Meas. Time | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-----------------|------------|-----------------|--------|------|------------|-------------|--------------|
| 0.366000 | 28.8 | 2000.0 | 9.000 | On | N | 19.8 | 19.8 | 48.6 |
| 0.614000 | 40.4 | 2000.0 | 9.000 | On | N | 19.8 | 5.6 | 46.0 |
| 0.802000 | 30.0 | 2000.0 | 9.000 | On | L1 | 19.9 | 16.0 | 46.0 |
| 1.806000 | 26.8 | 2000.0 | 9.000 | On | L1 | 19.8 | 19.2 | 46.0 |
| 4.390000 | 25.6 | 2000.0 | 9.000 | On | L1 | 19.8 | 20.4 | 46.0 |
| 14.078000 | 30.4 | 2000.0 | 9.000 | On | N | 19.8 | 19.6 | 50.0 |

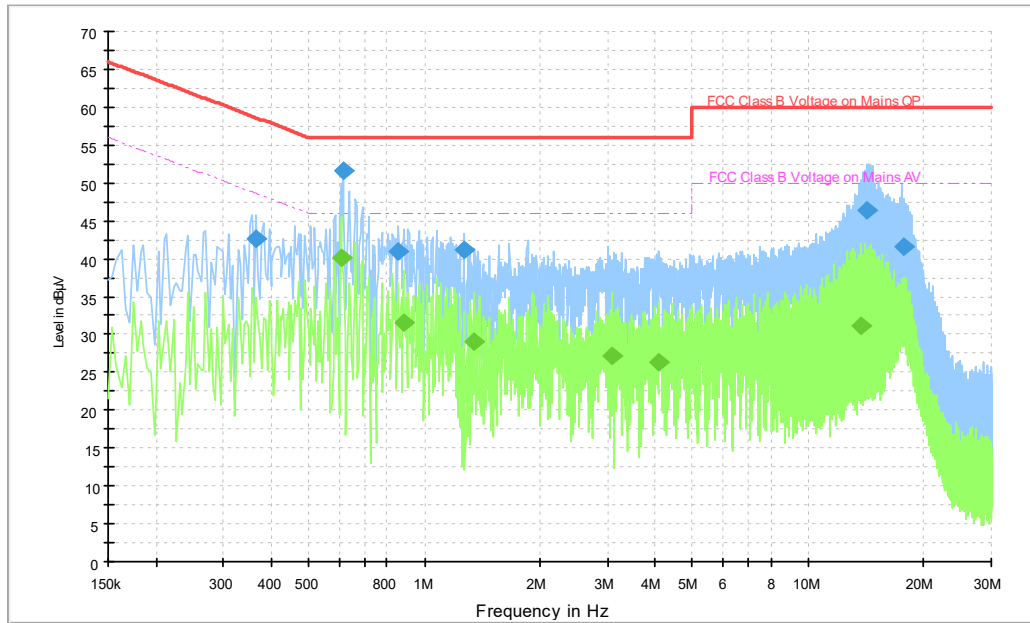


Fig.A.7.2 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | Meas. Time | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|------------|-----------------|--------|------|------------|-------------|--------------|
| 0.366000 | 42.6 | 2000.0 | 9.000 | On | N | 19.8 | 16.0 | 58.6 |
| 0.614000 | 51.5 | 2000.0 | 9.000 | On | N | 19.8 | 4.5 | 56.0 |
| 0.858000 | 40.9 | 2000.0 | 9.000 | On | L1 | 19.9 | 15.1 | 56.0 |
| 1.270000 | 41.1 | 2000.0 | 9.000 | On | L1 | 19.9 | 14.9 | 56.0 |
| 14.202000 | 46.5 | 2000.0 | 9.000 | On | N | 19.8 | 13.5 | 60.0 |
| 17.782000 | 41.6 | 2000.0 | 9.000 | On | N | 19.8 | 18.4 | 60.0 |

Final Result 2

| Frequency (MHz) | CAverage (dBμV) | Meas. Time | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|-----------------|------------|-----------------|--------|------|------------|-------------|--------------|
| 0.606000 | 40.2 | 2000.0 | 9.000 | On | L1 | 20.0 | 5.8 | 46.0 |
| 0.882000 | 31.5 | 2000.0 | 9.000 | On | L1 | 19.9 | 14.5 | 46.0 |
| 1.350000 | 29.0 | 2000.0 | 9.000 | On | L1 | 19.9 | 17.0 | 46.0 |
| 3.094000 | 27.2 | 2000.0 | 9.000 | On | L1 | 19.8 | 18.8 | 46.0 |
| 4.094000 | 26.4 | 2000.0 | 9.000 | On | L1 | 19.8 | 19.6 | 46.0 |
| 13.770000 | 31.2 | 2000.0 | 9.000 | On | L1 | 20.0 | 18.8 | 50.0 |

A.8. Antenna Requirement

The antenna of the device is permanently attached. There are no provisions for connection to an external antenna.

The unit complies with the requirement of FCC Part 15.203.

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX C: Accreditation Certificate



The accreditation certificate features a central text area with logos for ILAC-MRA and A2LA at the top. The text reads: "Accredited Laboratory", "A2LA has accredited", "TELECOMMUNICATION TECHNOLOGY LABS, CAICT", "Beijing, People's Republic of China", "for technical competence in the field of", "Electrical Testing". Below this, it states: "This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017)." To the left is a gold seal with "CORPORATE SEAL 1998" and "A2LA" text. To the right is a signature and the text: "Presented this 26th day of June 2023.", "Mr. Trace McInturff, Vice President, Accreditation Services", "For the Accreditation Council", "Certificate Number 7049.01", "Valid to July 31, 2024". At the bottom, it says: "For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation."

*****END OF REPORT*****