

Fig.A.6.1.7 Transmitter Spurious Emission - Conducted (802.11b, Ch11, Center Frequency)

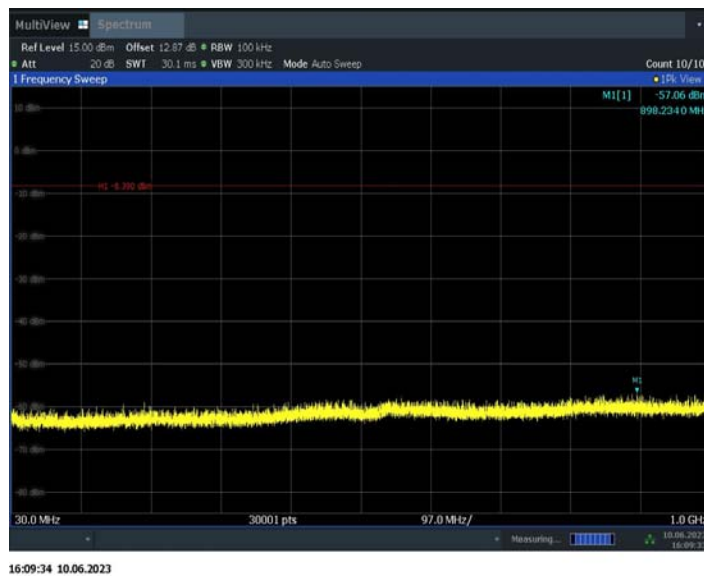


Fig.A.6.1.8 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 30 MHz-1 GHz)



16:10:10 10.06.2023

Fig.A.6.1.9 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 1 GHz-26.5 GHz)



16:14:33 10.06.2023

Fig.A.6.1.10 Transmitter Spurious Emission - Conducted (802.11g, Ch1, Center Frequency)



Fig.A.6.1.11 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 30 MHz-1 GHz)

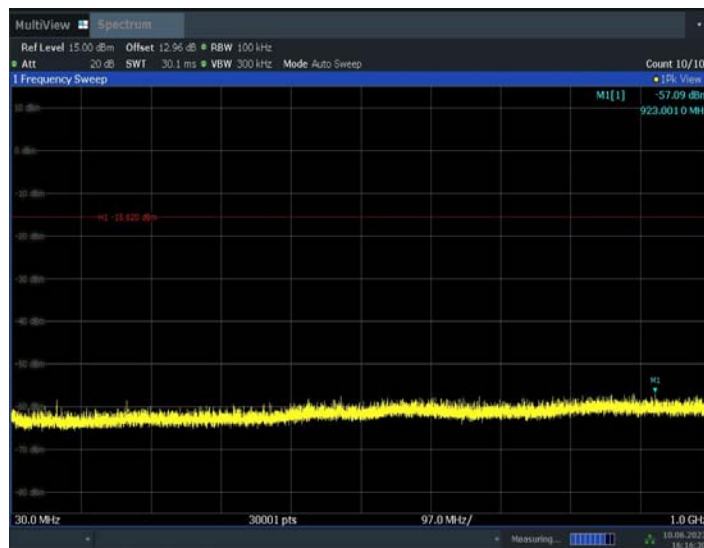


Fig.A.6.1.12 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-26.5 GHz)



16:16:20 10.06.2023

Fig.A.6.1.13 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)



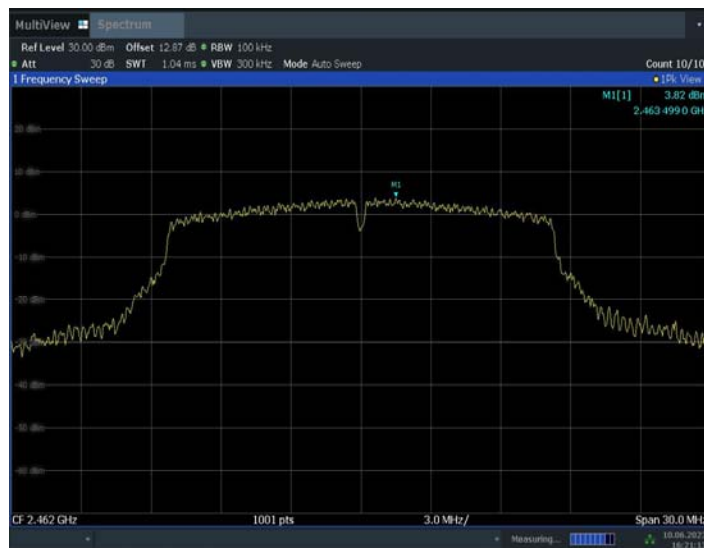
16:16:31 10.06.2023

Fig.A.6.1.14 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)



16:17:07 10.06.2023

Fig.A.6.1.15 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-26.5 GHz)



16:21:13 10.06.2023

Fig.A.6.1.16 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)



Fig.A.6.1.17 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)



Fig.A.6.1.18 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-26.5 GHz)

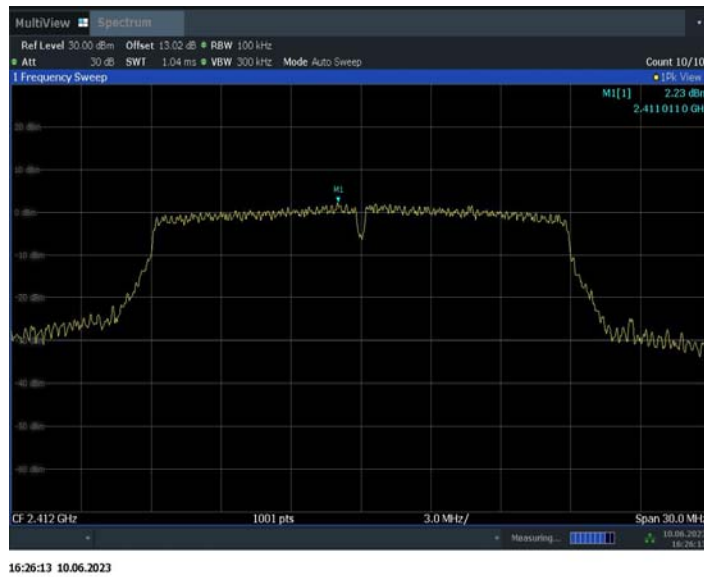


Fig.A.6.1.19 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)

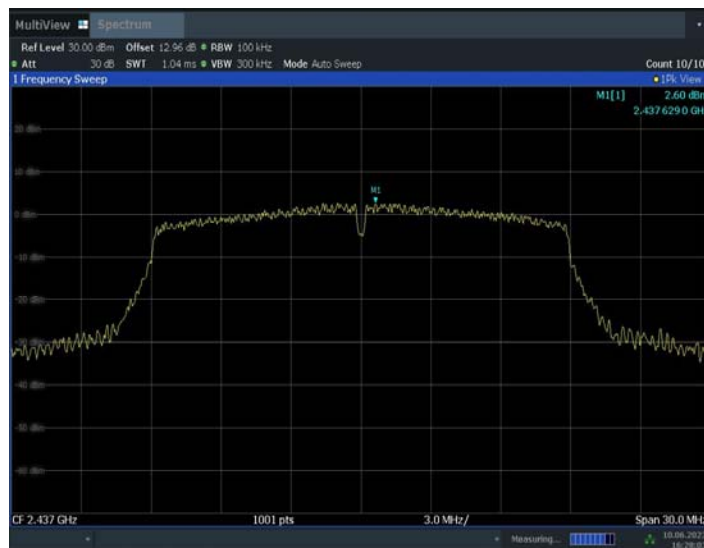


Fig.A.6.1.20 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)



16:27:00 10.06.2023

Fig.A.6.1.21 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-26.5 GHz)



16:28:03 10.06.2023

Fig.A.6.1.22 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

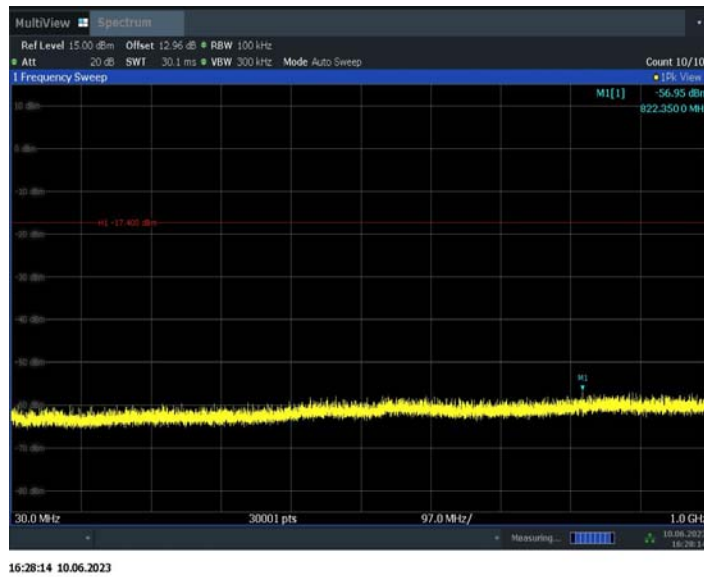
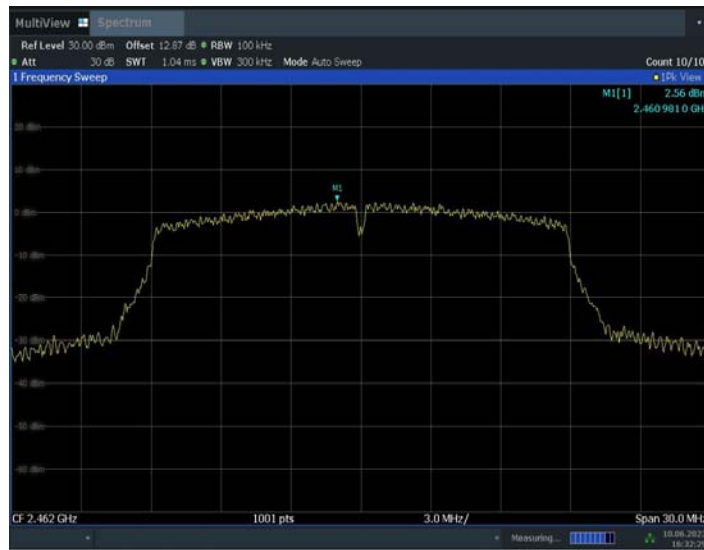


Fig.A.6.1.23 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

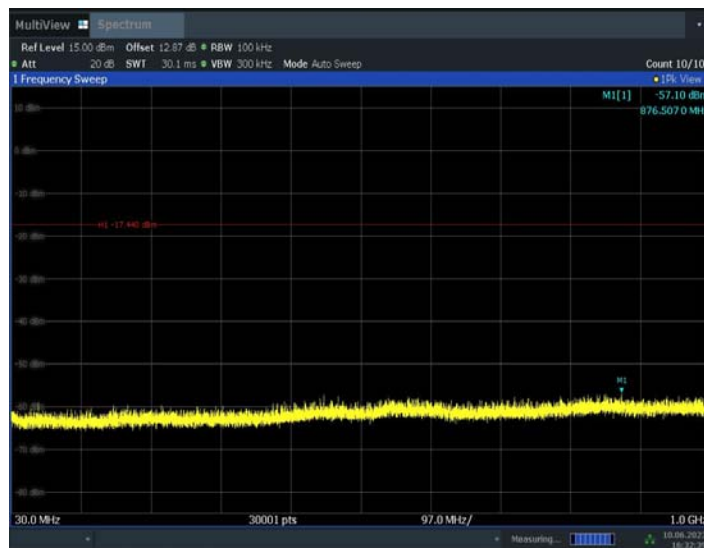


Fig.A.6.1.24 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-26.5 GHz)



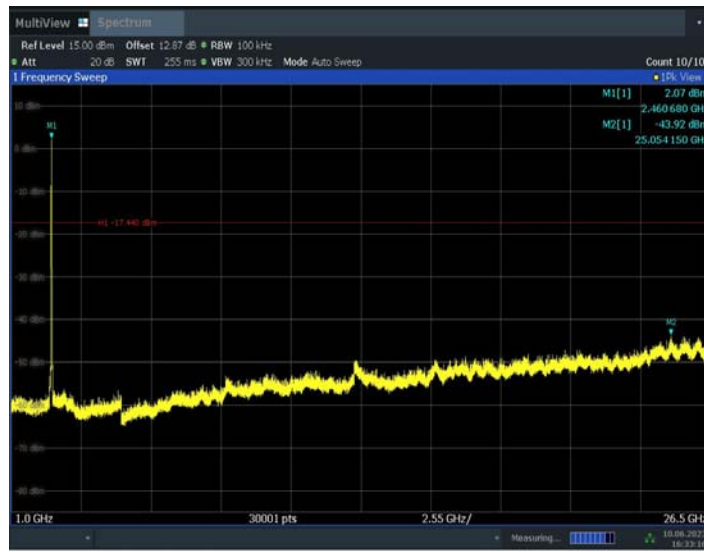
16:32:29 10.06.2023

Fig.A.6.1.25 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)



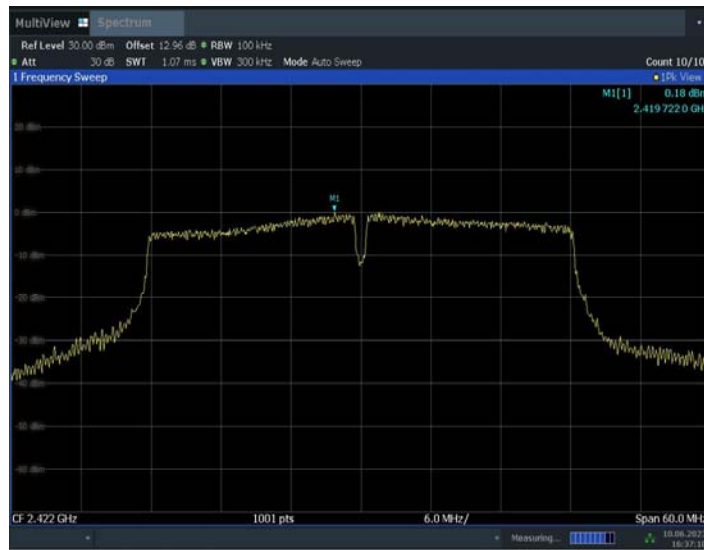
16:32:40 10.06.2023

Fig.A.6.1.26 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)



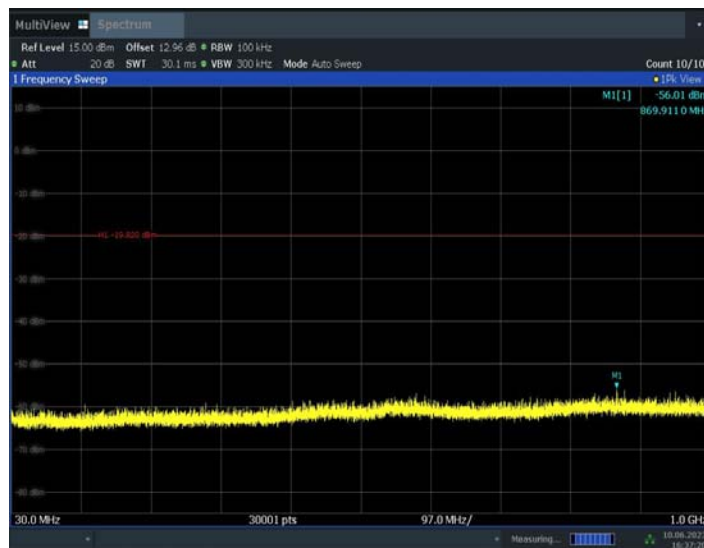
16:33:16 10.06.2023

Fig.A.6.1.27 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-26.5 GHz)



16:37:10 10.06.2023

Fig.A.6.1.28 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)



16:37:21 10.06.2023

Fig.A.6.1.29 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)



16:37:57 10.06.2023

Fig.A.6.1.30 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-26.5 GHz)



16:39:11 10.06.2023

Fig.A.6.1.31 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

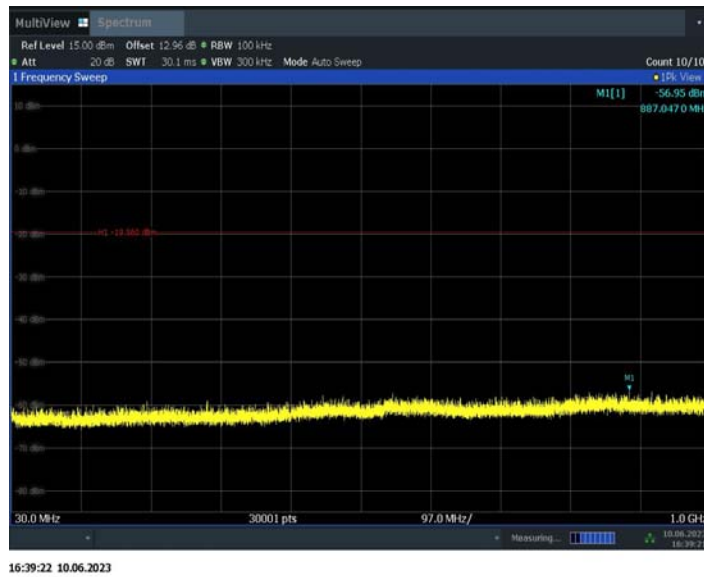


Fig.A.6.1.32 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)



Fig.A.6.1.33 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-26.5 GHz)



Fig.A.6.1.34 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

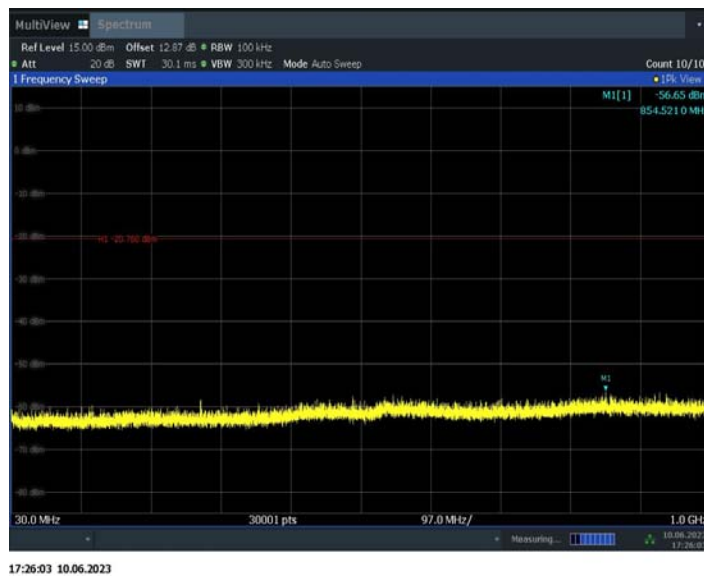


Fig.A.6.1.35 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)



Fig.A.6.1.36 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-26.5 GHz)

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) | Measurement distance (m) |
|-----------------------------|-----------------------|-------------------------|--------------------------|
| 30-88 | 100 | 40 | 3 |
| 88-216 | 150 | 43.5 | 3 |
| 216-960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

| 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 |

Set up:

Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m. For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m

The EUT and transmitting antenna shall be centered on the turntable.

Test Procedure

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The receiver references:

| Frequency of emission (MHz) | RBW/VBW | Sweep Time(s) |
|-----------------------------|---------------|---------------|
| 30-1000 | 100kHz/300kHz | 5 |
| 1000-3000 | 1MHz/3MHz | 15 |
| 3000-18000 | 1MHz/3MHz | 40 |
| 18000-26500 | 1MHz/3MHz | 20 |

Measurement results:
802.11b mode

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|---------|---------|---------------------|--------------|------------|
| 802.11b | 1 | 2.31GHz~2.43GHz---L | Fig.A.6.1.1 | P |
| | 11 | 2.45GHz~2.50GHz---H | Fig.A.6.1.2 | P |

802.11g mode

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|---------|---------|---------------------|--------------|------------|
| 802.11g | 1 | 2.31GHz~2.43GHz---L | Fig.A.6.1.3 | P |
| | 11 | 2.45GHz~2.50GHz---H | Fig.A.6.1.4 | P |

802.11n-HT20 mode

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|-------------------|---------|---------------------|--------------|------------|
| 802.11n (HT20) | 1 | 2.31GHz~2.43GHz---L | Fig.A.6.1.5 | P |
| | 11 | 2.45GHz~2.50GHz---H | Fig.A.6.1.6 | P |

802.11n-HT40 mode

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|-------------------|---------|---------------------|--------------|------------|
| 802.11n (HT40) | 3 | 2.31GHz~2.43GHz---L | Fig.A.6.1.7 | P |
| | 9 | 2.45GHz~2.50GHz---H | Fig.A.6.1.8 | P |

Conclusion: Pass
Note:

1. 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:

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

2. The range of evaluated frequency is from 9 kHz to 26GHz. Measurement value show only up to 6 maximum emissions noted.

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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2375.590 | 60.83 | 5.32 | 32.06 | 23.45 | 74.00 | 13.17 | V |
| 2783.066 | 60.56 | 5.80 | 32.07 | 22.69 | 74.00 | 13.44 | H |
| 4824.000 | 53.39 | -35.00 | 34.10 | 54.29 | 74.00 | 20.61 | V |
| 7235.500 | 50.87 | -32.59 | 35.87 | 47.58 | 74.00 | 23.13 | H |
| 9648.000 | 49.22 | -32.04 | 36.90 | 44.36 | 74.00 | 24.78 | V |
| 12059.000 | 47.09 | -31.70 | 38.82 | 39.98 | 74.00 | 26.91 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2374.400 | 42.62 | -29.12 | 32.04 | 39.70 | 74.00 | 31.38 | V |
| 2501.200 | 43.91 | -28.29 | 32.60 | 39.60 | 74.00 | 30.09 | V |
| 4873.500 | 45.10 | -34.26 | 34.15 | 45.21 | 74.00 | 28.90 | H |
| 7309.500 | 50.12 | -32.61 | 35.96 | 46.76 | 74.00 | 23.88 | H |
| 9747.500 | 46.70 | -32.21 | 36.90 | 42.02 | 74.00 | 27.30 | H |
| 12182.000 | 46.47 | -31.21 | 39.06 | 38.62 | 74.00 | 27.53 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2484.170 | 61.46 | 5.46 | 32.60 | 23.40 | 74.00 | 12.54 | V |
| 2487.345 | 62.31 | 5.47 | 32.60 | 24.24 | 74.00 | 11.69 | V |
| 4923.500 | 52.95 | -34.61 | 34.25 | 53.31 | 74.00 | 21.05 | H |
| 7387.500 | 50.25 | -32.60 | 35.80 | 47.05 | 74.00 | 23.75 | V |
| 9848.000 | 48.76 | -32.52 | 37.00 | 44.28 | 74.00 | 25.24 | H |
| 12310.500 | 48.03 | -31.03 | 38.91 | 40.15 | 74.00 | 25.97 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.688 | 67.23 | 5.35 | 32.26 | 29.62 | 74.00 | 6.77 | V |
| 2389.954 | 67.83 | 5.35 | 32.26 | 30.22 | 74.00 | 6.17 | V |
| 4821.500 | 46.47 | -35.05 | 34.10 | 47.42 | 74.00 | 27.53 | V |
| 7233.500 | 49.97 | -32.59 | 35.87 | 46.69 | 74.00 | 24.03 | H |
| 9648.000 | 44.95 | -32.04 | 36.90 | 40.09 | 74.00 | 29.05 | H |
| 12060.000 | 44.67 | -31.70 | 38.82 | 37.55 | 74.00 | 29.33 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2373.600 | 41.98 | -29.14 | 32.03 | 39.09 | 74.00 | 32.02 | H |
| 2502.000 | 43.54 | -28.33 | 32.60 | 39.27 | 74.00 | 30.46 | V |
| 4869.500 | 48.41 | -34.23 | 34.14 | 48.51 | 74.00 | 25.59 | H |
| 7307.000 | 49.54 | -32.61 | 35.97 | 46.18 | 74.00 | 24.46 | H |
| 9748.000 | 43.55 | -32.22 | 36.90 | 38.87 | 74.00 | 30.45 | H |
| 12185.000 | 45.95 | -31.20 | 39.07 | 38.08 | 74.00 | 28.05 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2483.535 | 71.85 | 5.46 | 32.60 | 33.79 | 74.00 | 2.15 | V |
| 2483.750 | 71.17 | 5.46 | 32.60 | 33.11 | 74.00 | 2.83 | H |
| 4936.000 | 49.40 | -34.68 | 34.27 | 49.81 | 74.00 | 24.60 | H |
| 7396.000 | 50.67 | -32.59 | 35.80 | 47.46 | 74.00 | 23.33 | V |
| 9848.000 | 43.42 | -32.52 | 37.00 | 38.94 | 74.00 | 30.58 | V |
| 12310.000 | 47.22 | -31.03 | 38.91 | 39.34 | 74.00 | 26.78 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.674 | 69.93 | 5.35 | 32.26 | 32.32 | 74.00 | 4.07 | V |
| 2389.912 | 69.74 | 5.35 | 32.26 | 32.13 | 74.00 | 4.26 | H |
| 4834.500 | 46.65 | -34.80 | 34.10 | 47.35 | 74.00 | 27.35 | H |
| 7233.500 | 48.93 | -32.59 | 35.87 | 45.65 | 74.00 | 25.07 | V |
| 9648.000 | 44.78 | -32.04 | 36.90 | 39.91 | 74.00 | 29.22 | V |
| 12040.000 | 44.25 | -31.78 | 38.78 | 37.25 | 74.00 | 29.75 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2374.600 | 42.28 | -29.11 | 32.05 | 39.35 | 74.00 | 31.72 | V |
| 2501.400 | 43.03 | -28.30 | 32.60 | 38.73 | 74.00 | 30.97 | H |
| 4864.500 | 47.05 | -34.22 | 34.13 | 47.14 | 74.00 | 26.95 | V |
| 7304.500 | 48.98 | -32.61 | 35.98 | 45.60 | 74.00 | 25.02 | V |
| 9748.000 | 44.32 | -32.22 | 36.90 | 39.64 | 74.00 | 29.68 | H |
| 12185.000 | 45.40 | -31.20 | 39.07 | 37.54 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2483.545 | 71.84 | 5.46 | 32.60 | 33.78 | 74.00 | 2.16 | H |
| 2484.205 | 71.52 | 5.46 | 32.60 | 33.46 | 74.00 | 2.48 | V |
| 4936.500 | 48.45 | -34.68 | 34.27 | 48.86 | 74.00 | 25.55 | H |
| 7391.000 | 51.01 | -32.60 | 35.80 | 47.80 | 74.00 | 22.99 | V |
| 9848.000 | 42.62 | -32.52 | 37.00 | 38.14 | 74.00 | 31.38 | H |
| 12310.000 | 46.88 | -31.03 | 38.91 | 39.00 | 74.00 | 27.12 | H |

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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2388.764 | 67.20 | 5.35 | 32.24 | 29.60 | 74.00 | 6.80 | V |
| 2389.450 | 66.16 | 5.35 | 32.25 | 28.56 | 74.00 | 7.84 | H |
| 4860.500 | 44.77 | -34.29 | 34.12 | 44.94 | 74.00 | 29.23 | V |
| 7276.000 | 45.20 | -32.59 | 35.95 | 41.84 | 74.00 | 28.80 | H |
| 9688.000 | 44.53 | -32.04 | 36.82 | 39.75 | 74.00 | 29.47 | V |
| 12110.000 | 45.25 | -31.49 | 38.92 | 37.81 | 74.00 | 28.75 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2374.000 | 41.44 | -29.13 | 32.04 | 38.53 | 74.00 | 32.56 | V |
| 2501.200 | 42.72 | -28.29 | 32.60 | 38.41 | 74.00 | 31.28 | H |
| 4866.500 | 46.19 | -34.21 | 34.13 | 46.27 | 74.00 | 27.81 | H |
| 7295.000 | 45.97 | -32.60 | 35.99 | 42.58 | 74.00 | 28.03 | H |
| 9748.000 | 44.56 | -32.22 | 36.90 | 39.88 | 74.00 | 29.44 | V |
| 12185.000 | 45.60 | -31.20 | 39.07 | 37.73 | 74.00 | 28.40 | H |

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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2484.360 | 67.75 | 5.46 | 32.60 | 29.69 | 74.00 | 6.25 | H |
| 2484.810 | 66.99 | 5.46 | 32.60 | 28.93 | 74.00 | 7.01 | V |
| 4904.000 | 41.19 | -34.48 | 34.21 | 41.46 | 74.00 | 32.81 | H |
| 7356.000 | 42.91 | -32.60 | 35.80 | 39.71 | 74.00 | 31.09 | V |
| 9808.000 | 43.55 | -32.40 | 37.00 | 38.95 | 74.00 | 30.45 | V |
| 12260.000 | 46.90 | -30.95 | 38.98 | 38.87 | 74.00 | 27.10 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.312 | 45.91 | 5.35 | 32.25 | 8.31 | 54.00 | 8.09 | V |
| 2389.988 | 46.07 | 5.35 | 32.26 | 8.46 | 54.00 | 7.93 | V |
| 4823.733 | 51.07 | -35.00 | 34.10 | 51.97 | 54.00 | 2.93 | H |
| 7235.200 | 44.19 | -32.59 | 35.87 | 40.91 | 54.00 | 9.81 | H |
| 9648.000 | 43.47 | -32.04 | 36.90 | 38.60 | 54.00 | 10.53 | H |
| 12061.333 | 34.34 | -31.69 | 38.82 | 27.20 | 54.00 | 19.66 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2411.963 | 46.52 | 5.38 | 32.45 | 8.69 | 54.00 | 7.48 | V |
| 2461.500 | 48.31 | 5.43 | 32.60 | 10.28 | 54.00 | 5.69 | V |
| 4870.933 | 37.36 | -34.24 | 34.14 | 37.46 | 54.00 | 16.64 | V |
| 7310.133 | 43.90 | -32.61 | 35.96 | 40.54 | 54.00 | 10.10 | H |
| 9748.000 | 38.54 | -32.22 | 36.90 | 33.86 | 54.00 | 15.46 | V |
| 12183.733 | 34.72 | -31.21 | 39.07 | 26.86 | 54.00 | 19.28 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2486.775 | 49.82 | 5.46 | 32.60 | 11.76 | 54.00 | 4.18 | V |
| 2487.075 | 49.85 | 5.47 | 32.60 | 11.79 | 54.00 | 4.15 | V |
| 4923.733 | 51.17 | -34.61 | 34.25 | 51.53 | 54.00 | 2.83 | H |
| 7385.067 | 43.47 | -32.60 | 35.80 | 40.27 | 54.00 | 10.53 | H |
| 9848.000 | 44.57 | -32.52 | 37.00 | 40.09 | 54.00 | 9.43 | H |
| 12309.067 | 35.81 | -31.02 | 38.91 | 27.92 | 54.00 | 18.19 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.950 | 50.32 | 5.35 | 32.26 | 12.70 | 54.00 | 3.68 | V |
| 2389.988 | 50.32 | 5.35 | 32.26 | 12.71 | 54.00 | 3.68 | V |
| 4825.333 | 34.55 | -34.97 | 34.10 | 35.42 | 54.00 | 19.45 | V |
| 7236.000 | 35.97 | -32.59 | 35.87 | 32.68 | 54.00 | 18.03 | V |
| 9648.000 | 33.25 | -32.04 | 36.90 | 28.39 | 54.00 | 20.75 | V |
| 12060.000 | 33.31 | -31.70 | 38.82 | 26.18 | 54.00 | 20.69 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2402.588 | 47.82 | 5.38 | 32.41 | 10.03 | 54.00 | 6.18 | V |
| 2472.562 | 49.13 | 5.45 | 32.60 | 11.08 | 54.00 | 4.87 | V |
| 4868.533 | 33.90 | -34.23 | 34.14 | 33.99 | 54.00 | 20.10 | V |
| 7308.000 | 34.85 | -32.61 | 35.97 | 31.49 | 54.00 | 19.15 | V |
| 9748.000 | 32.88 | -32.22 | 36.90 | 28.20 | 54.00 | 21.12 | H |
| 121850.667 | 33.87 | 0.00 | 0.00 | 33.87 | 54.00 | 20.13 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2483.512 | 50.68 | 5.46 | 32.60 | 12.62 | 54.00 | 3.32 | V |
| 2483.625 | 50.45 | 5.46 | 32.60 | 12.39 | 54.00 | 3.55 | V |
| 4926.933 | 35.75 | -34.63 | 34.25 | 36.12 | 54.00 | 18.25 | V |
| 7386.933 | 36.27 | -32.60 | 35.80 | 33.07 | 54.00 | 17.73 | H |
| 9848.000 | 32.22 | -32.52 | 37.00 | 27.75 | 54.00 | 21.78 | V |
| 12310.133 | 34.39 | -31.03 | 38.91 | 26.51 | 54.00 | 19.61 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.912 | 49.70 | 5.35 | 32.26 | 12.09 | 54.00 | 4.30 | V |
| 2389.988 | 49.80 | 5.35 | 32.26 | 12.19 | 54.00 | 4.20 | V |
| 4826.133 | 34.23 | -34.96 | 34.10 | 35.09 | 54.00 | 19.77 | H |
| 7234.667 | 35.63 | -32.59 | 35.87 | 32.35 | 54.00 | 18.37 | H |
| 9648.000 | 33.05 | -32.04 | 36.90 | 28.19 | 54.00 | 20.95 | H |
| 12060.000 | 33.24 | -31.70 | 38.82 | 26.12 | 54.00 | 20.76 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2400.525 | 47.95 | 5.38 | 32.40 | 10.17 | 54.00 | 6.05 | V |
| 2476.200 | 48.59 | 5.45 | 32.60 | 10.53 | 54.00 | 5.41 | V |
| 4866.933 | 33.54 | -34.21 | 34.13 | 33.62 | 54.00 | 20.46 | V |
| 7308.080 | 34.53 | -32.61 | 35.97 | 31.17 | 54.00 | 19.47 | V |
| 9748.000 | 32.78 | -32.22 | 36.90 | 28.10 | 54.00 | 21.22 | V |
| 12185.067 | 33.94 | -31.20 | 39.07 | 26.07 | 54.00 | 20.06 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2483.550 | 50.27 | 5.46 | 32.60 | 12.20 | 54.00 | 3.73 | V |
| 2483.662 | 50.20 | 5.46 | 32.60 | 12.14 | 54.00 | 3.80 | V |
| 4927.733 | 35.59 | -34.63 | 34.26 | 35.97 | 54.00 | 18.41 | H |
| 7386.400 | 35.83 | -32.60 | 35.80 | 32.62 | 54.00 | 18.17 | V |
| 9848.000 | 32.03 | -32.52 | 37.00 | 27.56 | 54.00 | 21.97 | V |
| 12310.133 | 34.30 | -31.03 | 38.91 | 26.41 | 54.00 | 19.70 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.875 | 50.21 | 5.35 | 32.26 | 12.60 | 54.00 | 3.79 | V |
| 2389.988 | 50.29 | 5.35 | 32.26 | 12.68 | 54.00 | 3.71 | V |
| 4859.733 | 32.41 | -34.31 | 34.12 | 32.60 | 54.00 | 21.59 | H |
| 7275.733 | 32.77 | -32.59 | 35.95 | 29.41 | 54.00 | 21.23 | V |
| 9688.000 | 32.59 | -32.04 | 36.82 | 27.80 | 54.00 | 21.41 | H |
| 12110.133 | 33.23 | -31.49 | 38.92 | 25.80 | 54.00 | 20.77 | 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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2389.912 | 51.89 | 5.35 | 32.26 | 14.28 | 54.00 | 2.11 | V |
| 2483.400 | 50.93 | 5.46 | 32.60 | 12.87 | 54.00 | 3.07 | V |
| 4865.333 | 31.93 | -34.20 | 34.13 | 32.00 | 54.00 | 22.07 | H |
| 7308.000 | 33.12 | -32.61 | 35.97 | 29.76 | 54.00 | 20.88 | V |
| 9748.000 | 32.56 | -32.22 | 36.90 | 27.88 | 54.00 | 21.44 | H |
| 12185.067 | 33.86 | -31.20 | 39.07 | 25.99 | 54.00 | 20.14 | H |

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) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|----------------|-------------|--------------------|
| 2483.550 | 50.64 | 5.46 | 32.60 | 12.58 | 54.00 | 3.36 | V |
| 2483.662 | 50.60 | 5.46 | 32.60 | 12.54 | 54.00 | 3.40 | V |
| 4904.000 | 30.29 | -34.48 | 34.21 | 30.56 | 54.00 | 23.71 | V |
| 7356.000 | 32.08 | -32.60 | 35.80 | 28.88 | 54.00 | 21.92 | H |
| 9808.000 | 32.10 | -32.40 | 37.00 | 27.50 | 54.00 | 21.90 | V |
| 12260.000 | 34.42 | -30.95 | 38.98 | 26.39 | 54.00 | 19.58 | V |

Test graphs as below:

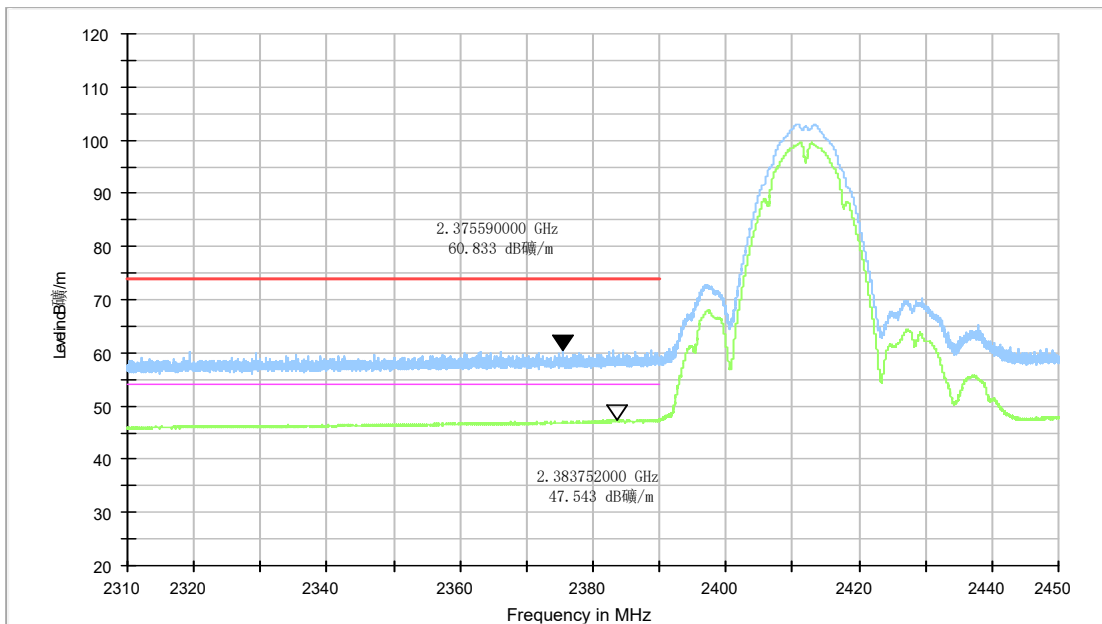


Fig.A.6.1.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

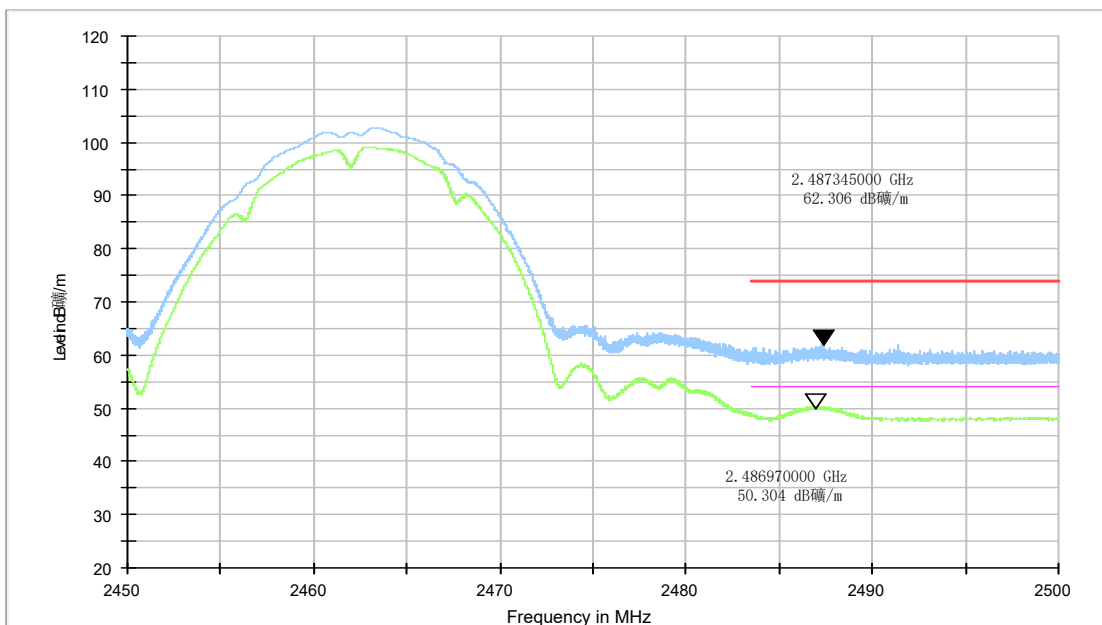


Fig.A.6.1.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

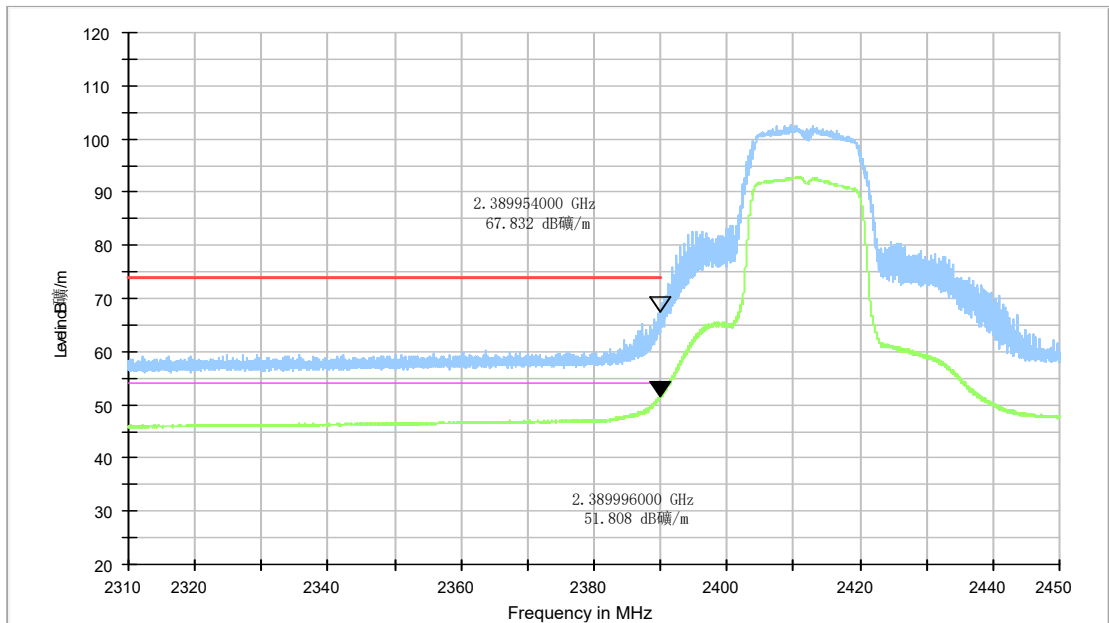


Fig.A.6.1.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz

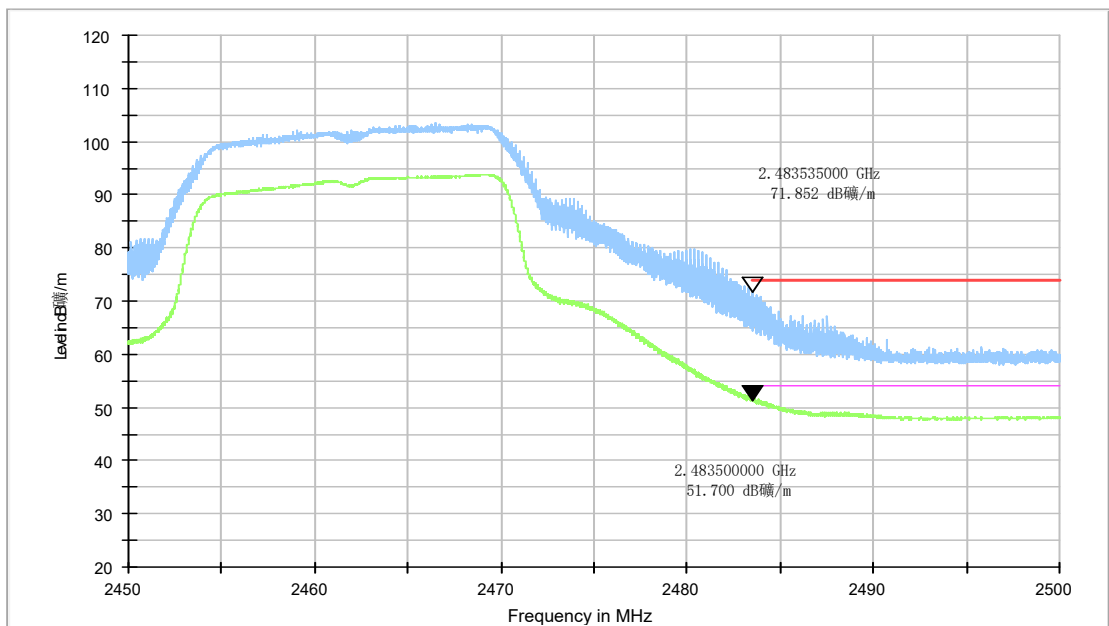


Fig.A.6.1.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

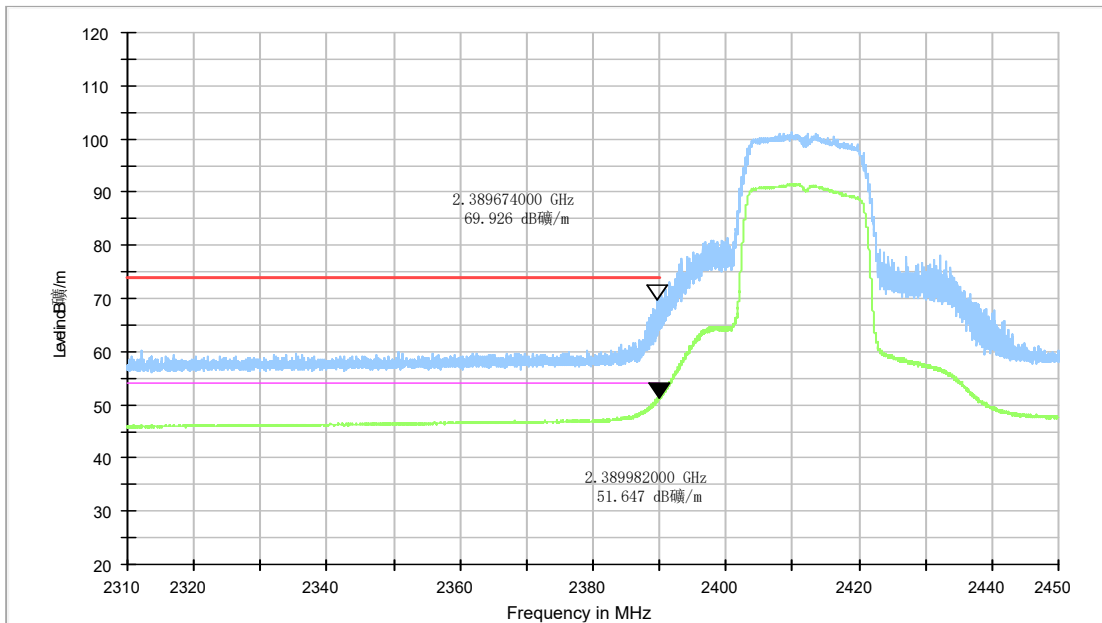


Fig.A.6.1.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz

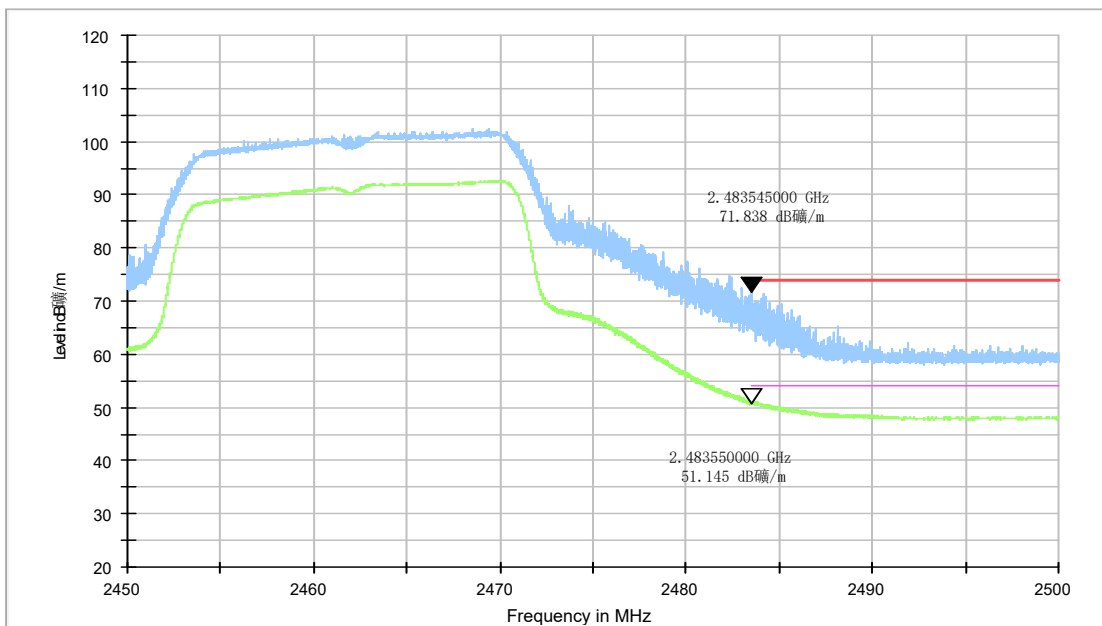


Fig.A.6.1.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

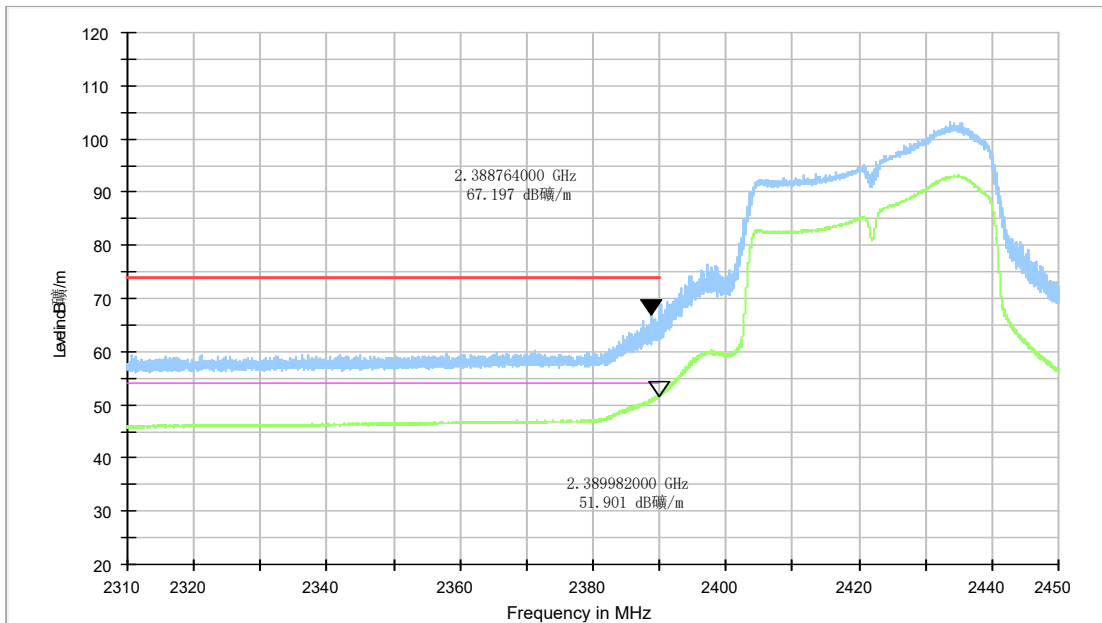


Fig.A.6.1.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz

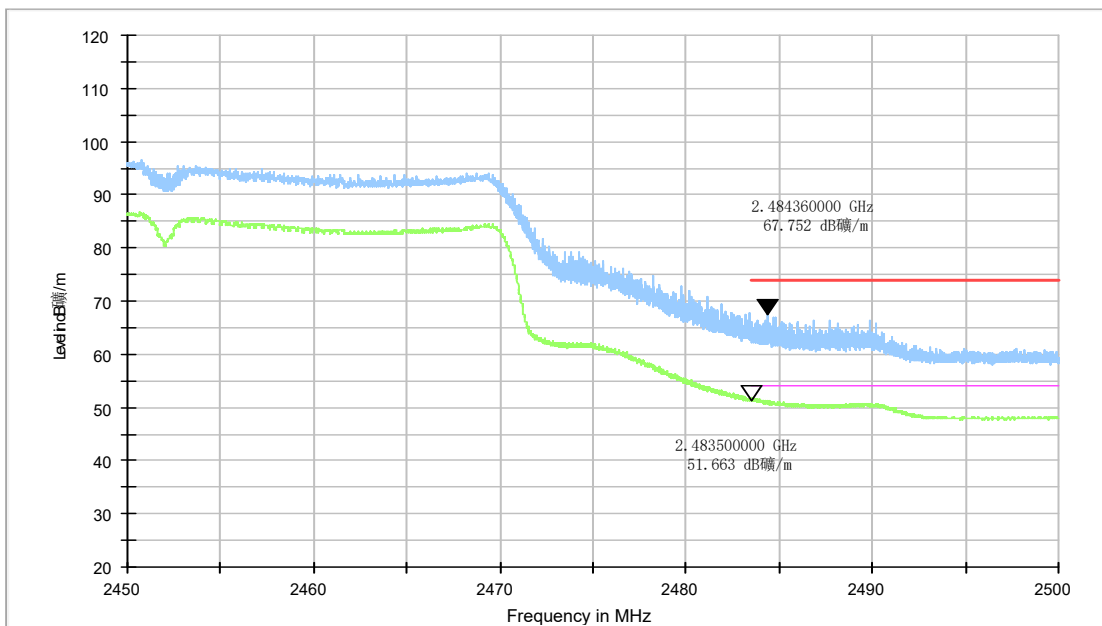


Fig.A.6.1.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

A.7. AC Power-line Conducted Emission

Method of Measurement:

See Clause 6.2 of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 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.

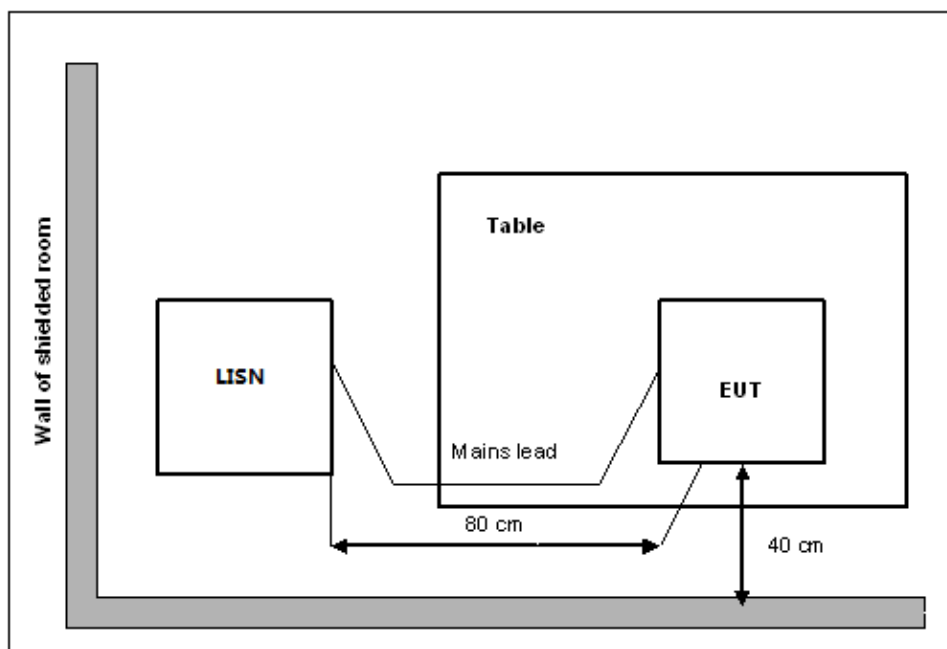
The measurement bandwidth is:

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

Test Condition:

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

Measurement 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:

Note: The measurement results showed here are worst cases.

Result for Traffic:

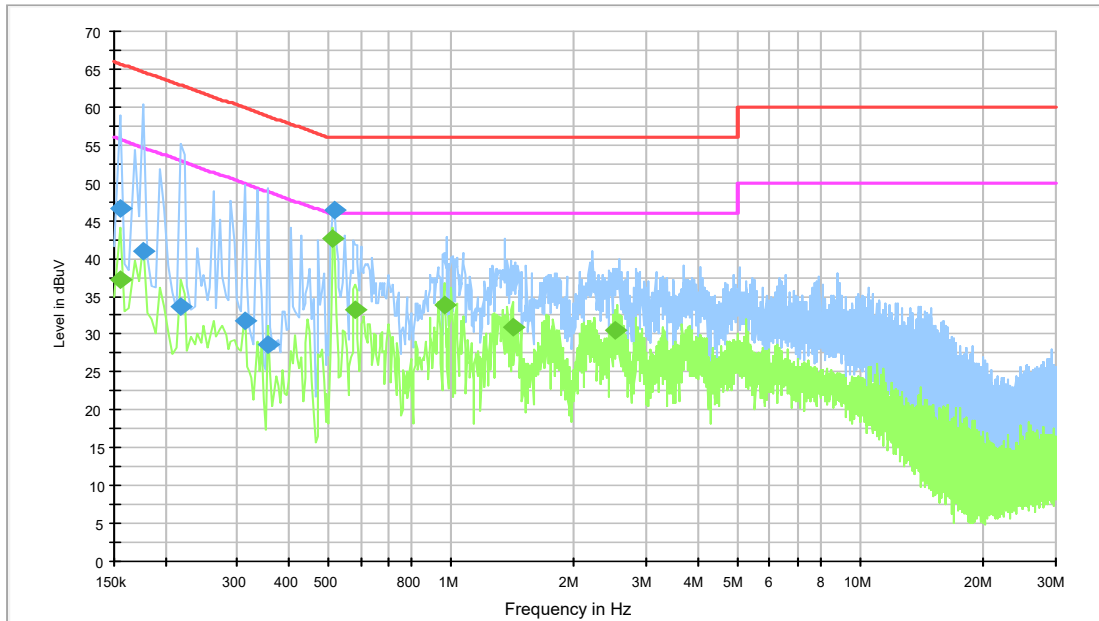


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

Note1: 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 (ms) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----------------|-----------------|------|------------|-------------|--------------|
| 0.154500 | 46.5 | 1000. | 9.000 | N | 27.7 | 19.3 | 65.8 |
| 0.177000 | 41.1 | 1000. | 9.000 | N | 23.5 | 23.6 | 64.6 |
| 0.217500 | 33.7 | 1000. | 9.000 | N | 19.7 | 29.2 | 62.9 |
| 0.312000 | 31.7 | 1000. | 9.000 | N | 19.7 | 28.2 | 59.9 |
| 0.357000 | 28.7 | 1000. | 9.000 | N | 19.7 | 30.1 | 58.8 |
| 0.519000 | 46.4 | 1000. | 9.000 | N | 19.8 | 9.6 | 56.0 |

Final Result 2

| Frequency (MHz) | Average (dBμV) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|-----------------|-----------------|------|------------|-------------|--------------|
| 0.154500 | 37.2 | 1000.0 | 9.000 | N | 27.7 | 18.6 | 55.8 |
| 0.514500 | 42.6 | 1000.0 | 9.000 | N | 19.8 | 3.4 | 46.0 |
| 0.582000 | 33.2 | 1000.0 | 9.000 | N | 19.7 | 12.8 | 46.0 |
| 0.960000 | 33.8 | 1000.0 | 9.000 | N | 19.7 | 12.2 | 46.0 |
| 1.410000 | 30.9 | 1000.0 | 9.000 | N | 19.6 | 15.1 | 46.0 |
| 2.499000 | 30.4 | 1000.0 | 9.000 | N | 19.6 | 15.6 | 46.0 |

Result for Idle:

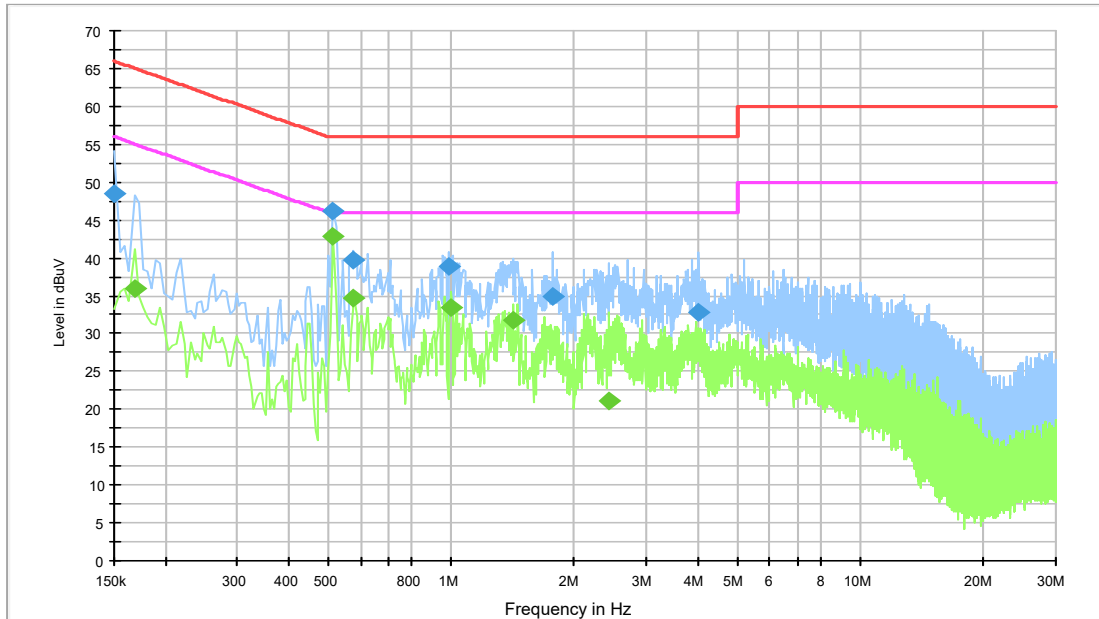


Fig.A.7.2 AC Powerline Conducted Emission-Idle

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

| Frequency (MHz) | QuasiPeak (dB μ V) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dB μ V) |
|-----------------|------------------------|-----------------|-----------------|------|------------|-------------|--------------------|
| 0.150000 | 48.6 | 1000. | 9.000 | L1 | 28.6 | 17.4 | 66.0 |
| 0.514500 | 46.1 | 1000. | 9.000 | N | 19.8 | 9.9 | 56.0 |
| 0.577500 | 39.7 | 1000. | 9.000 | N | 19.7 | 16.3 | 56.0 |
| 0.987000 | 38.9 | 1000. | 9.000 | N | 19.6 | 17.1 | 56.0 |
| 1.770000 | 34.8 | 1000. | 9.000 | N | 19.6 | 21.2 | 56.0 |
| 4.033500 | 32.9 | 1000. | 9.000 | N | 19.6 | 23.1 | 56.0 |

Final Result 2

| Frequency (MHz) | Average (dB μ V) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dB μ V) |
|-----------------|----------------------|-----------------|-----------------|------|------------|-------------|--------------------|
| 0.168000 | 35.9 | 1000.0 | 9.000 | N | 25.1 | 19.1 | 55.1 |
| 0.514500 | 42.9 | 1000.0 | 9.000 | N | 19.8 | 3.1 | 46.0 |
| 0.577500 | 34.6 | 1000.0 | 9.000 | N | 19.7 | 11.4 | 46.0 |
| 1.000500 | 33.5 | 1000.0 | 9.000 | N | 19.6 | 12.5 | 46.0 |
| 1.414500 | 31.8 | 1000.0 | 9.000 | N | 19.6 | 14.2 | 46.0 |
| 2.422500 | 21.2 | 1000.0 | 9.000 | L1 | 19.6 | 24.8 | 46.0 |

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

| | |
|--|---|
| <p>United States Department of Commerce National Institute of Standards and Technology</p>   | |
| <hr/> <h3>Certificate of Accreditation to ISO/IEC 17025:2017</h3> <hr/> | |
| <p>NVLAP LAB CODE: 600118-0</p> | |
| <p>Telecommunication Technology Labs, CAICT Beijing China</p> | |
| <p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> | |
| <p>Electromagnetic Compatibility & Telecommunications</p> | |
| <p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p> | |
| <hr/> <p>2022-10-01 through 2023-09-30 <i>Effective Dates</i></p> |   <i>For the National Voluntary Laboratory Accreditation Program</i> |

END OF REPORT