

ANNEX A: Test Result

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 (Y axis) and the loop antenna is coplanar, the others are vertical and horizontal. and the worst case was recorded.

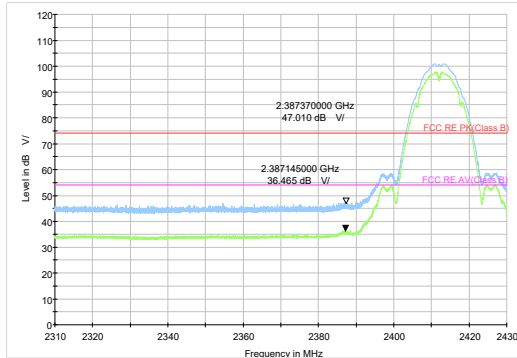
1. Unwanted Emission

1.1. Wi-Fi 2.4GHz

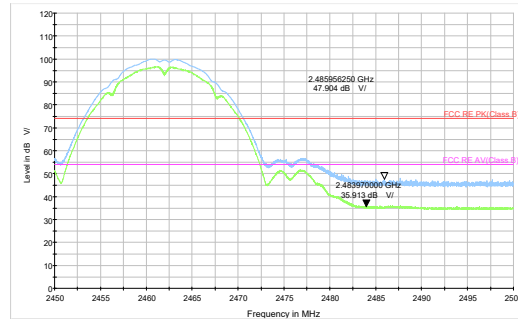
The following graphs display the maximum values of horizontal and vertical by software. Blue trace uses the peak detection, Green trace uses the average detection.

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

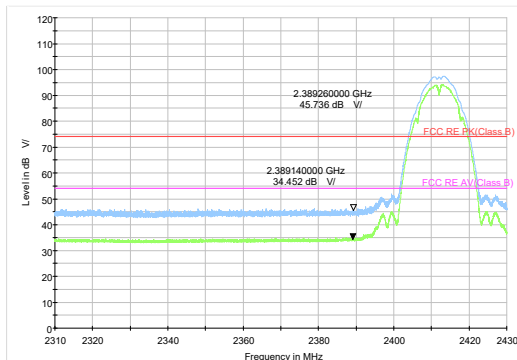
The signal beyond the limit is carrier.



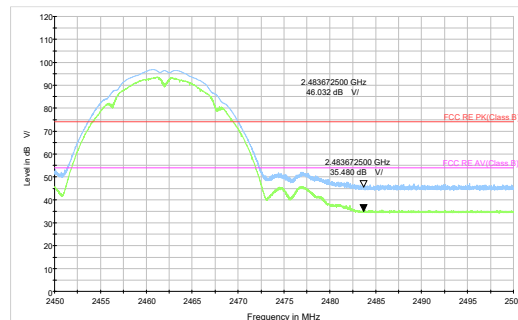
802.11b-Channel 1 Peak+ Average



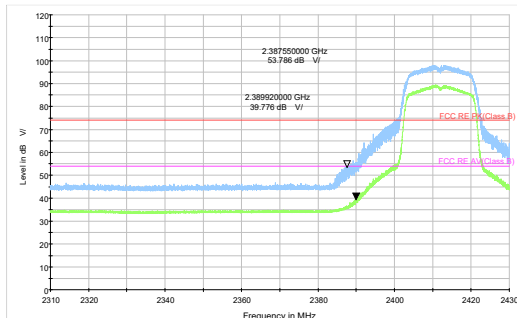
802.11b-Channel 11 Peak+ Average



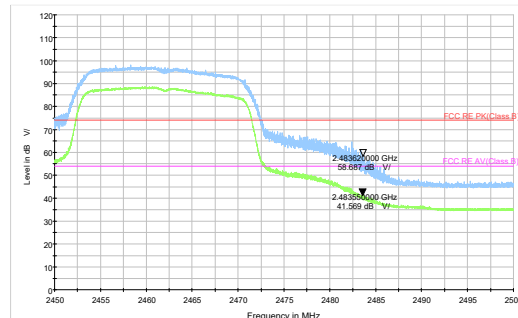
802.11g-Channel 1 Peak+ Average



802.11g-Channel 11 Peak+ Average



802.11n HT20-Channel 1 Peak+ Average



802.11n HT20-Channel 3 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 ($\text{dB } \mu\text{V/m}$) in the test plot below means ($\text{dB}\mu\text{V/m}$)**
4. **The following graphs display the maximum values of coaxial and coplanar for 9k-30MHz; horizontal and vertical for above 30MHz by software.**
5. **For below 1GHz**

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

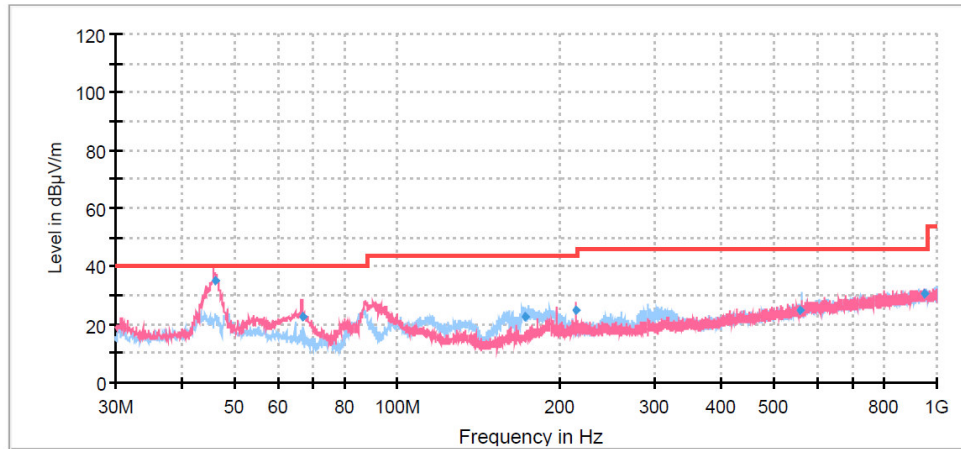
For above 1GHz

 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:

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.

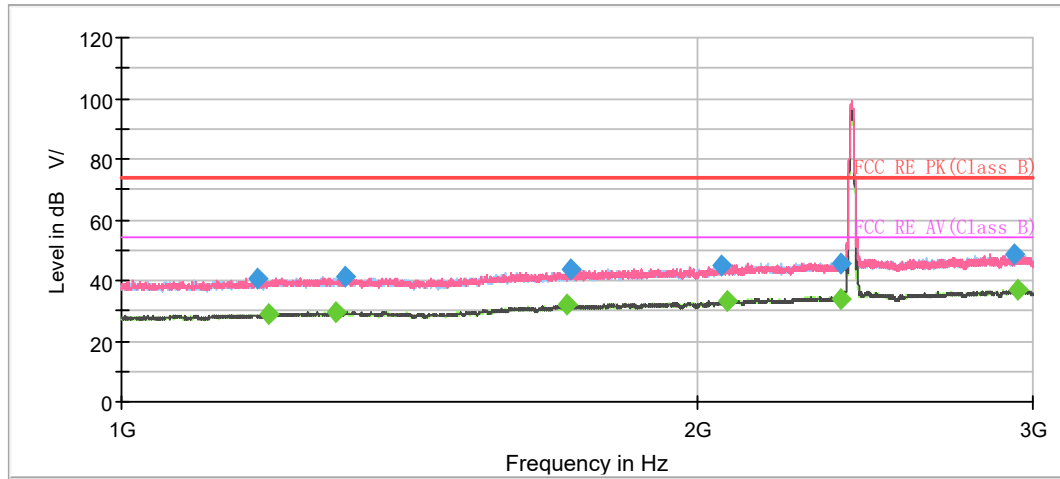


Radiates Emission from 30MHz to 1GHz

Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.95	39.44	40.00	0.56	100.0	V	192.00	20
66.62	28.88	40.00	11.12	224.0	V	156.00	17
172.32	26.01	43.50	17.49	122.0	H	203.00	16
214.49	27.53	43.50	15.97	198.0	V	164.00	18
556.37	27.24	46.00	18.76	225.0	H	177.00	26
951.56	32.26	46.00	13.74	100.0	H	90.00	32

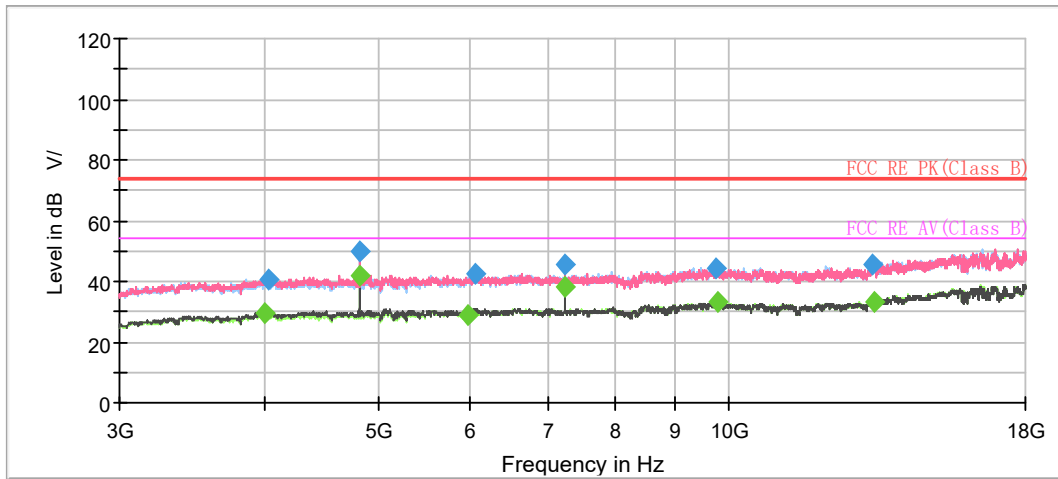
802.11b CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

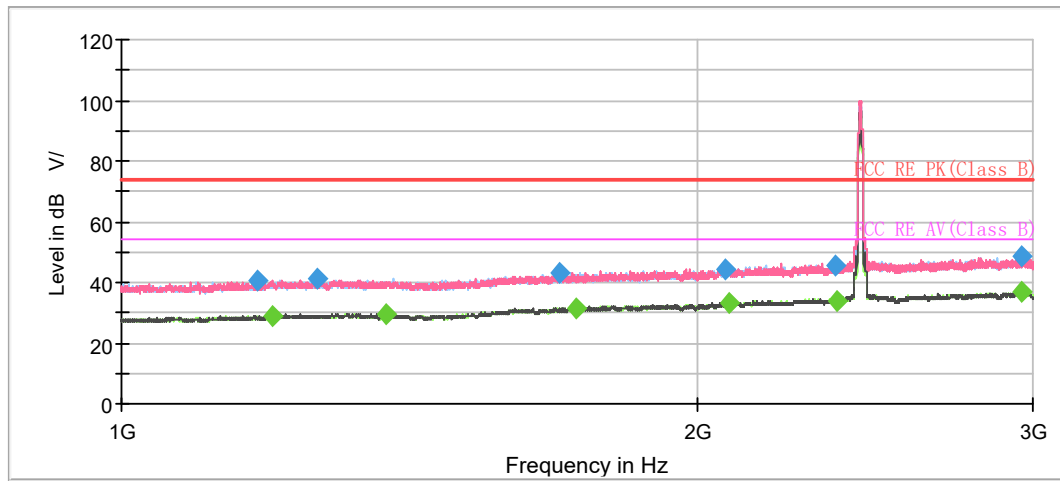
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1177.000000	40.90	---	74.00	33.10	500.0	100.0	V	77.0	-9.3
1194.750000	---	29.23	54.00	24.77	500.0	100.0	H	301.0	-8.9
1294.000000	---	29.53	54.00	24.47	500.0	100.0	V	237.0	-8.2
1310.000000	41.25	---	74.00	32.75	500.0	200.0	V	306.0	-8.1
1712.500000	---	31.74	54.00	22.26	500.0	200.0	V	239.0	-5.9
1719.000000	43.65	---	74.00	30.35	500.0	100.0	H	292.0	-5.9
2062.500000	45.16	---	74.00	28.84	500.0	100.0	V	169.0	-4.1
2073.500000	---	33.28	54.00	20.72	500.0	100.0	H	276.0	-4.0
2382.000000	45.55	---	74.00	28.45	500.0	200.0	H	188.0	-2.7
2382.250000	---	33.92	54.00	20.08	500.0	200.0	V	56.0	-2.7
2931.500000	48.54	---	74.00	25.46	500.0	100.0	H	125.0	-1.0
2947.250000	---	36.62	54.00	17.38	500.0	200.0	V	178.0	-0.9



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3999.375000	---	29.62	54.00	24.38	500.0	200.0	V	296.0	-6.8
4033.125000	40.91	---	74.00	33.09	500.0	100.0	V	69.0	-6.8
4822.500000	---	41.94	54.00	12.06	500.0	100.0	V	65.0	-6.1
4824.375000	49.60	---	74.00	24.40	500.0	100.0	V	74.0	-6.1
5985.000000	---	29.17	54.00	24.83	500.0	100.0	H	315.0	-4.6
6058.125000	42.76	---	74.00	31.24	500.0	100.0	V	16.0	-4.1
7233.750000	45.43	---	74.00	28.57	500.0	100.0	V	41.0	-2.9
7233.750000	---	38.01	54.00	15.99	500.0	100.0	V	41.0	-2.9
9770.625000	44.44	---	74.00	29.56	500.0	100.0	V	31.0	-0.5
9800.625000	---	33.18	54.00	20.82	500.0	100.0	H	141.0	-0.4
13318.125000	45.38	---	74.00	28.62	500.0	200.0	V	143.0	2.3
13336.875000	---	33.48	54.00	20.52	500.0	200.0	V	195.0	2.3

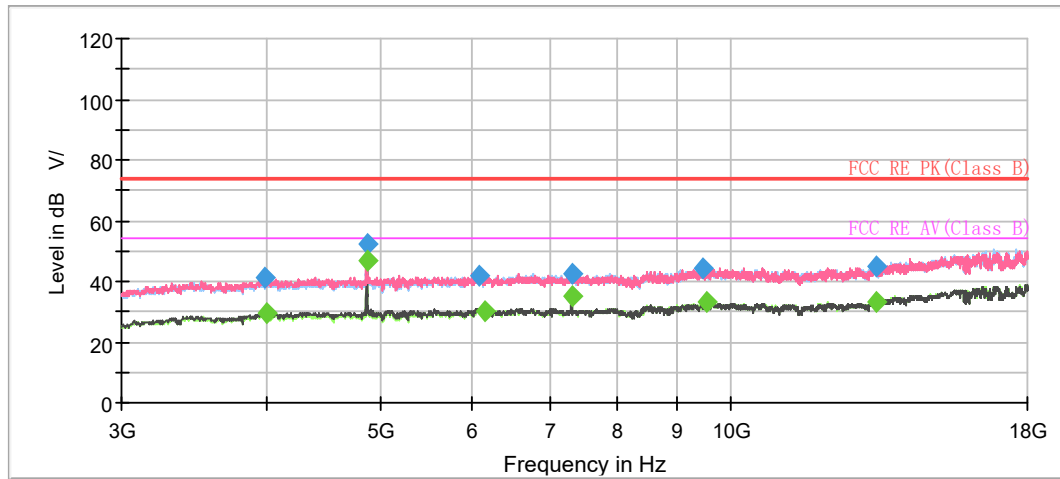
802.11b CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

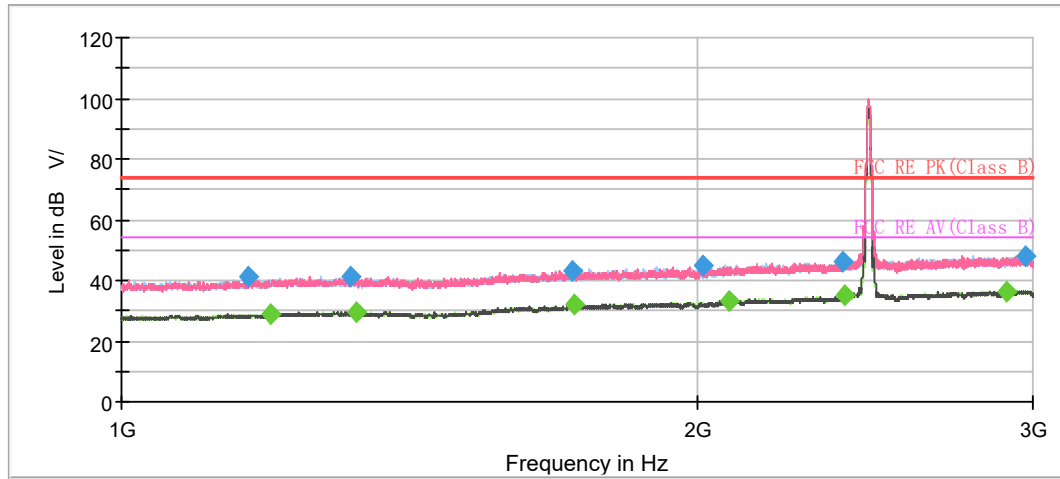
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1178.000000	40.46	---	74.00	33.54	500.0	100.0	H	197.0	-9.3
1200.500000	---	29.00	54.00	25.00	500.0	100.0	H	258.0	-8.8
1264.750000	41.26	---	74.00	32.74	500.0	200.0	H	13.0	-8.5
1376.000000	---	29.51	54.00	24.49	500.0	200.0	V	134.0	-7.7
1696.250000	43.29	---	74.00	30.71	500.0	200.0	V	169.0	-6.0
1730.000000	---	31.50	54.00	22.50	500.0	100.0	H	232.0	-5.8
2069.000000	44.45	---	74.00	29.55	500.0	100.0	H	291.0	-4.0
2079.000000	---	33.40	54.00	20.60	500.0	100.0	H	274.0	-3.9
2366.500000	45.31	---	74.00	28.69	500.0	100.0	H	0.0	-2.8
2370.000000	---	34.10	54.00	19.90	500.0	100.0	H	44.0	-2.8
2958.000000	---	36.65	54.00	17.35	500.0	100.0	H	163.0	-0.8
2960.500000	48.48	---	74.00	25.52	500.0	100.0	V	25.0	-0.8



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3984.375000	40.94	---	74.00	33.06	500.0	100.0	V	175.0	-6.8
3995.625000	---	29.41	54.00	24.59	500.0	200.0	V	202.0	-6.8
4873.125000	---	46.78	54.00	7.22	500.0	200.0	H	128.0	-5.8
4873.125000	52.07	---	74.00	21.93	500.0	200.0	H	128.0	-5.8
6078.750000	42.01	---	74.00	31.99	500.0	200.0	H	44.0	-4.3
6146.250000	---	30.41	54.00	23.59	500.0	100.0	H	175.0	-4.6
7310.625000	42.77	---	74.00	31.23	500.0	100.0	V	89.0	-3.0
7310.625000	---	34.98	54.00	19.02	500.0	100.0	V	89.0	-3.0
9466.875000	44.42	---	74.00	29.58	500.0	100.0	V	156.0	-0.1
9532.500000	---	33.04	54.00	20.96	500.0	100.0	H	214.0	-0.2
13338.750000	45.12	---	74.00	28.88	500.0	200.0	H	64.0	2.3
13346.250000	---	33.46	54.00	20.54	500.0	100.0	H	77.0	2.4

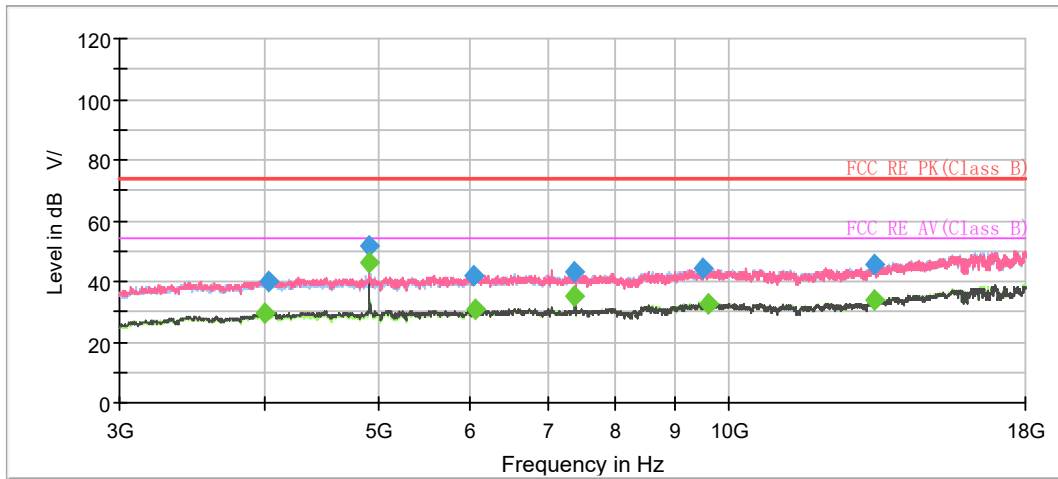
802.11b CH11



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

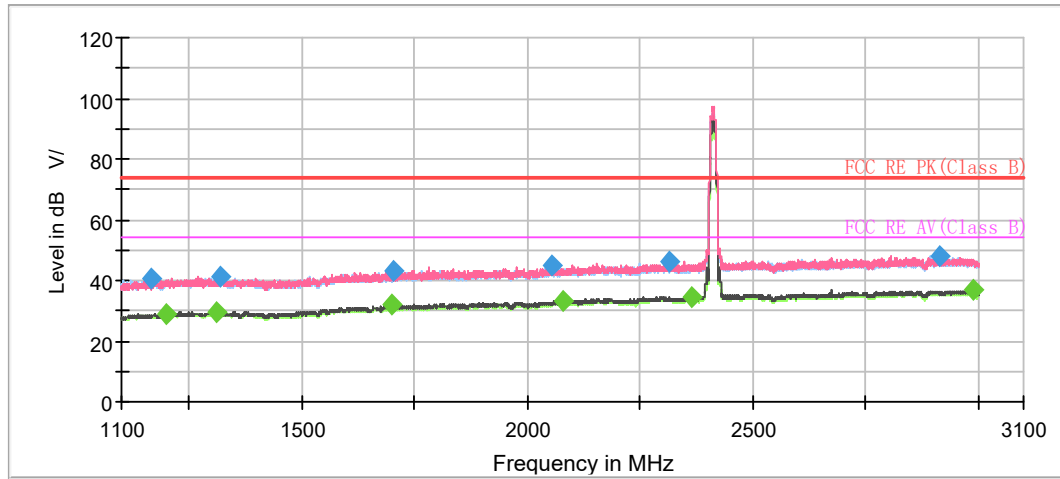
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1164.750000	41.20	---	74.00	32.80	500.0	200.0	V	41.0	-9.5
1197.250000	---	28.92	54.00	25.08	500.0	100.0	H	316.0	-8.9
1318.500000	41.22	---	74.00	32.78	500.0	100.0	H	156.0	-8.1
1328.000000	---	29.48	54.00	24.52	500.0	100.0	H	257.0	-8.0
1720.750000	43.17	---	74.00	30.83	500.0	200.0	H	191.0	-5.9
1728.000000	---	31.79	54.00	22.21	500.0	100.0	H	206.0	-5.8
2014.250000	44.89	---	74.00	29.11	500.0	100.0	V	21.0	-4.4
2079.750000	---	33.04	54.00	20.96	500.0	100.0	H	84.0	-3.9
2386.750000	46.16	---	74.00	27.84	500.0	200.0	V	20.0	-2.7
2391.500000	---	35.16	54.00	18.84	500.0	200.0	V	107.0	-2.6
2907.250000	---	36.57	54.00	17.43	500.0	100.0	H	231.0	-1.0
2975.500000	48.12	---	74.00	25.88	500.0	100.0	H	156.0	-0.7



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)
4001.250000	---	29.34	54.00	24.66	500.0	100.0	V	0.0	-6.8
4033.125000	40.21	---	74.00	33.79	500.0	100.0	V	0.0	-6.8
4923.750000	---	46.33	54.00	7.67	500.0	200.0	H	133.0	-5.3
4923.750000	51.69	---	74.00	22.31	500.0	200.0	H	133.0	-5.3
6045.000000	41.59	---	74.00	32.41	500.0	200.0	H	351.0	-4.2
6075.000000	---	30.97	54.00	23.03	500.0	200.0	V	285.0	-4.3
7383.750000	---	35.34	54.00	18.66	500.0	100.0	V	81.0	-2.8
7383.750000	43.07	---	74.00	30.93	500.0	100.0	V	81.0	-2.8
9523.125000	44.30	---	74.00	29.70	500.0	100.0	H	139.0	-0.1
9630.000000	---	32.66	54.00	21.34	500.0	200.0	V	105.0	-0.6
13336.875000	---	33.61	54.00	20.39	500.0	100.0	H	0.0	2.3
13350.000000	45.32	---	74.00	28.68	500.0	200.0	V	173.0	2.4

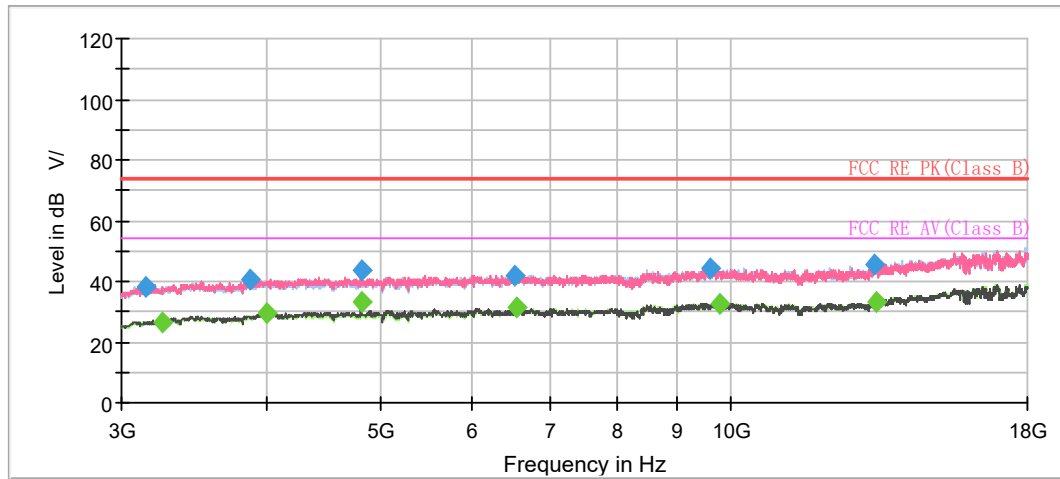
802.11g CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

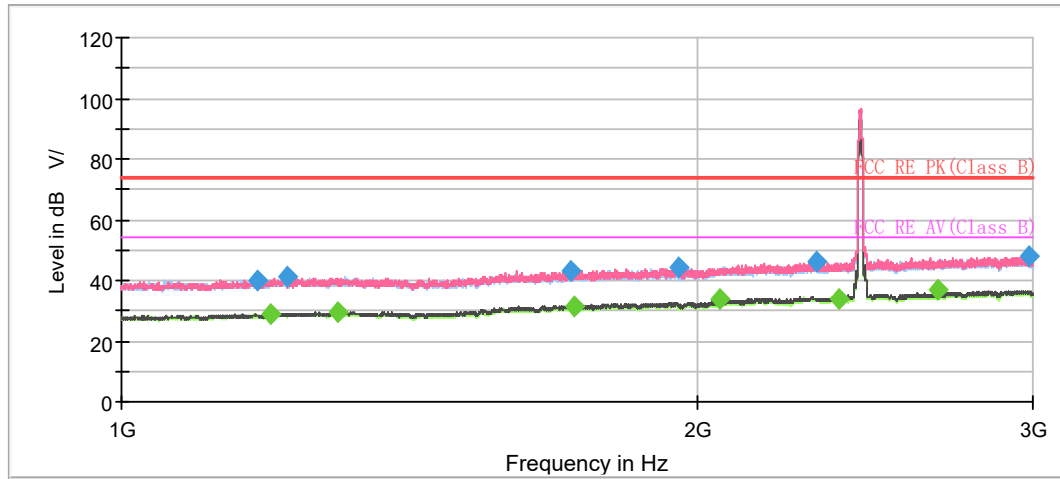
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1167.750000	40.66	---	74.00	33.34	500.0	100.0	V	55.0	-9.4
1200.000000	---	29.13	54.00	24.87	500.0	200.0	V	352.0	-8.8
1310.500000	---	29.54	54.00	24.46	500.0	200.0	V	0.0	-8.1
1319.500000	41.12	---	74.00	32.88	500.0	100.0	V	328.0	-8.1
1698.000000	---	31.71	54.00	22.29	500.0	200.0	V	276.0	-6.0
1704.750000	43.31	---	74.00	30.69	500.0	200.0	V	301.0	-6.0
2055.750000	44.69	---	74.00	29.31	500.0	200.0	V	250.0	-4.2
2079.000000	---	33.17	54.00	20.83	500.0	100.0	V	0.0	-3.9
2315.000000	46.25	---	74.00	27.75	500.0	200.0	V	326.0	-2.9
2365.250000	---	34.18	54.00	19.82	500.0	200.0	V	259.0	-2.9
2912.250000	48.12	---	74.00	25.88	500.0	200.0	V	259.0	-1.0
2988.250000	---	36.79	54.00	17.21	500.0	200.0	V	352.0	-0.7



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3142.500000	38.46	---	74.00	35.54	500.0	100.0	H	299.0	-10.3
3258.750000	---	26.71	54.00	27.29	500.0	200.0	V	278.0	-9.6
3862.500000	40.35	---	74.00	33.65	500.0	200.0	V	317.0	-7.4
4005.000000	---	29.44	54.00	24.56	500.0	100.0	V	11.0	-6.8
4822.500000	---	33.47	54.00	20.53	500.0	200.0	H	131.0	-6.1
4824.375000	43.44	---	74.00	30.56	500.0	200.0	H	131.0	-6.1
6530.625000	42.12	---	74.00	31.88	500.0	200.0	H	231.0	-3.6
6549.375000	---	31.12	54.00	22.88	500.0	200.0	V	288.0	-3.5
9609.375000	44.09	---	74.00	29.91	500.0	100.0	H	26.0	-0.7
9783.750000	---	32.86	54.00	21.14	500.0	200.0	H	208.0	-0.5
13314.375000	45.25	---	74.00	28.75	500.0	100.0	V	61.0	2.3
13333.125000	---	33.52	54.00	20.48	500.0	200.0	V	341.0	2.3

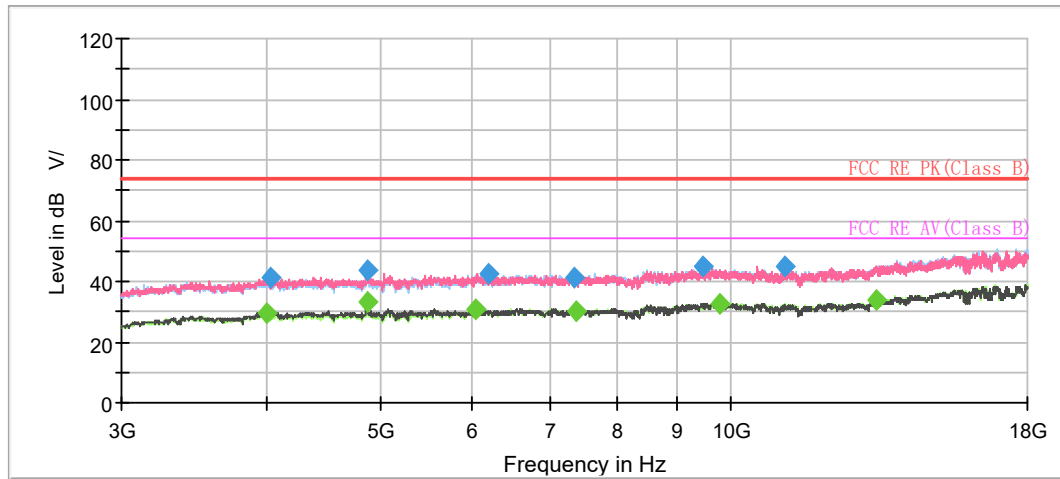
802.11g CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

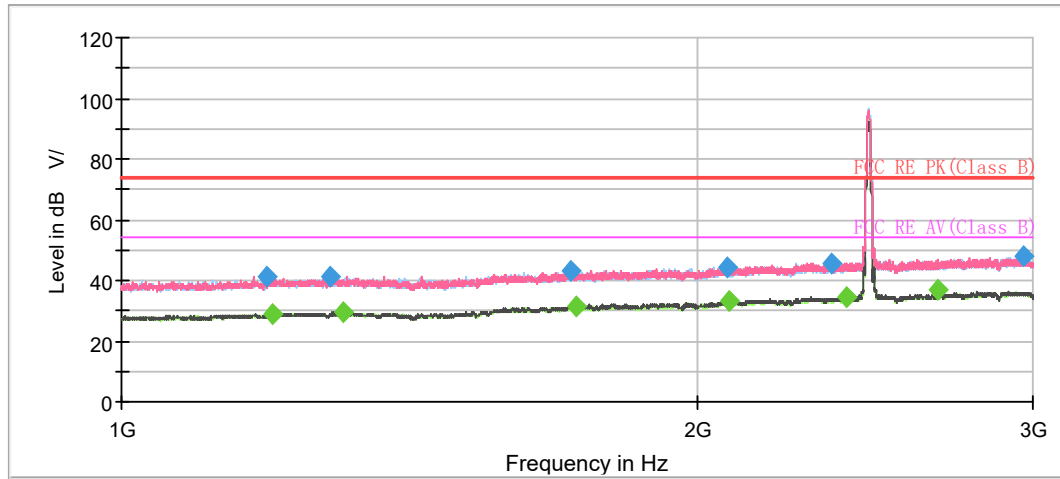
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1177.750000	40.19	---	74.00	33.81	500.0	100.0	H	308.0	-9.3
1197.000000	---	29.12	54.00	24.88	500.0	200.0	V	265.0	-8.9
1221.750000	41.25	---	74.00	32.75	500.0	200.0	V	265.0	-8.7
1299.000000	---	29.62	54.00	24.38	500.0	200.0	V	351.0	-8.2
1719.500000	42.87	---	74.00	31.13	500.0	200.0	H	175.0	-5.9
1724.500000	---	31.62	54.00	22.38	500.0	200.0	V	351.0	-5.9
1959.000000	44.38	---	74.00	29.62	500.0	200.0	V	231.0	-4.7
2057.750000	---	33.58	54.00	20.42	500.0	200.0	V	215.0	-4.1
2311.500000	46.42	---	74.00	27.58	500.0	200.0	V	249.0	-2.8
2377.500000	---	34.03	54.00	19.97	500.0	100.0	H	0.0	-2.8
2673.000000	---	37.01	54.00	16.99	500.0	100.0	V	31.0	-1.8
2986.500000	48.09	---	74.00	25.91	500.0	100.0	V	0.0	-0.7



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)
4003.125000	---	29.47	54.00	24.53	500.0	200.0	V	277.0	-6.8
4033.125000	41.41	---	74.00	32.59	500.0	200.0	V	0.0	-6.8
4876.875000	---	33.32	54.00	20.68	500.0	200.0	H	118.0	-5.8
4880.625000	43.81	---	74.00	30.19	500.0	100.0	H	34.0	-5.7
6054.375000	---	30.98	54.00	23.02	500.0	200.0	V	181.0	-4.1
6191.250000	42.50	---	74.00	31.50	500.0	100.0	H	359.0	-4.4
7346.250000	41.40	---	74.00	32.60	500.0	200.0	V	331.0	-3.0
7378.125000	---	29.96	54.00	24.04	500.0	200.0	H	318.0	-2.8
9465.000000	44.62	---	74.00	29.38	500.0	200.0	V	55.0	-0.1
9789.375000	---	32.76	54.00	21.24	500.0	100.0	H	180.0	-0.5
11156.250000	44.75	---	74.00	29.25	500.0	100.0	V	329.0	-0.5
13348.125000	---	33.72	54.00	20.28	500.0	100.0	V	309.0	2.4

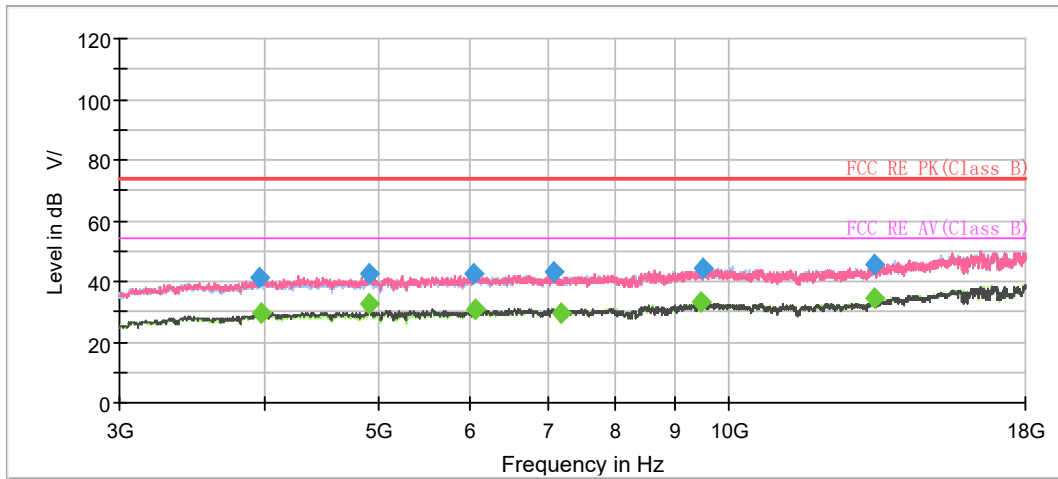
802.11g CH11



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

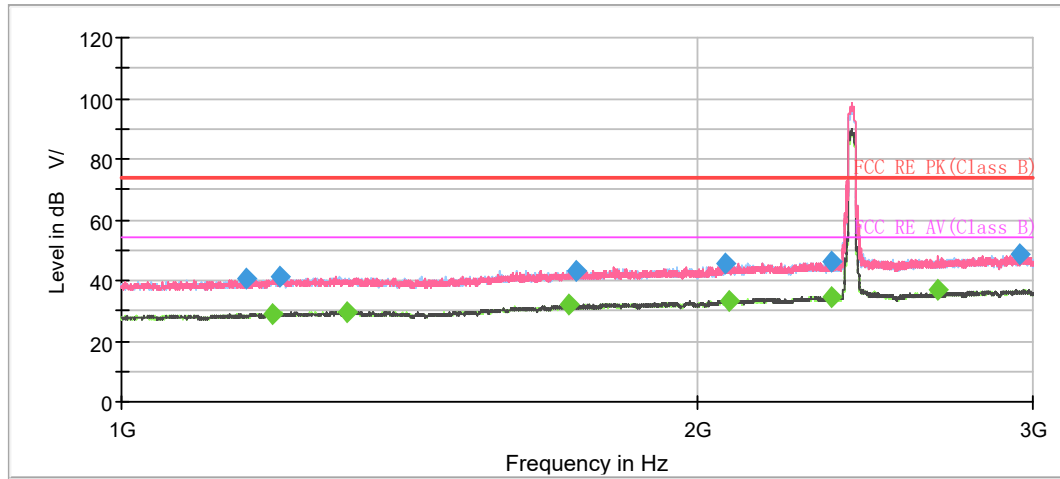
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1191.500000	41.05	---	74.00	32.95	500.0	100.0	H	297.0	-9.0
1199.500000	---	29.09	54.00	24.91	500.0	100.0	H	0.0	-8.8
1287.500000	41.35	---	74.00	32.65	500.0	200.0	H	190.0	-8.3
1307.250000	---	29.34	54.00	24.66	500.0	200.0	V	203.0	-8.1
1720.000000	42.84	---	74.00	31.16	500.0	200.0	V	346.0	-5.9
1729.500000	---	31.41	54.00	22.59	500.0	100.0	V	53.0	-5.8
2076.750000	44.59	---	74.00	29.41	500.0	100.0	V	19.0	-3.9
2079.250000	---	33.09	54.00	20.91	500.0	100.0	V	206.0	-3.9
2353.250000	45.57	---	74.00	28.43	500.0	100.0	V	27.0	-2.9
2395.500000	---	34.71	54.00	19.29	500.0	200.0	V	286.0	-2.6
2673.250000	---	36.90	54.00	17.10	500.0	100.0	V	277.0	-1.8
2969.500000	47.93	---	74.00	26.07	500.0	200.0	V	220.0	-0.7



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3954.375000	41.04	---	74.00	32.96	500.0	200.0	V	324.0	-7.2
3969.375000	---	29.56	54.00	24.44	500.0	200.0	V	142.0	-7.0
4916.250000	42.31	---	74.00	31.69	500.0	200.0	H	117.0	-5.3
4923.750000	---	32.59	54.00	21.41	500.0	200.0	H	132.0	-5.3
6052.500000	42.41	---	74.00	31.59	500.0	100.0	V	217.0	-4.1
6076.875000	---	30.96	54.00	23.04	500.0	200.0	V	133.0	-4.3
7091.250000	42.86	---	74.00	31.14	500.0	200.0	H	243.0	-3.0
7181.250000	---	29.73	54.00	24.27	500.0	200.0	V	295.0	-3.0
9470.625000	---	33.17	54.00	20.83	500.0	200.0	V	290.0	-0.1
9523.125000	44.10	---	74.00	29.90	500.0	100.0	V	121.0	-0.1
13336.875000	---	34.37	54.00	19.63	500.0	100.0	H	333.0	2.3
13351.875000	45.56	---	74.00	28.44	500.0	200.0	H	267.0	2.4

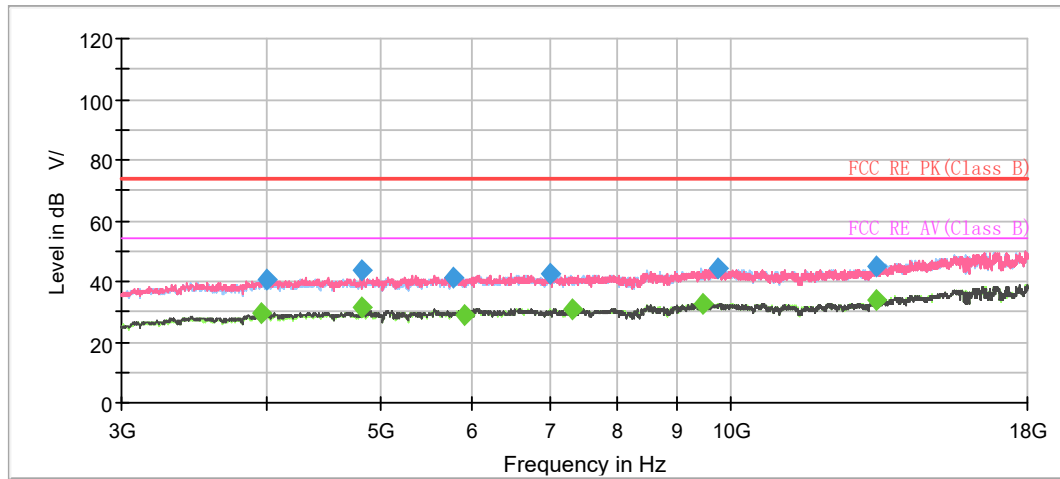
802.11n (HT20) CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

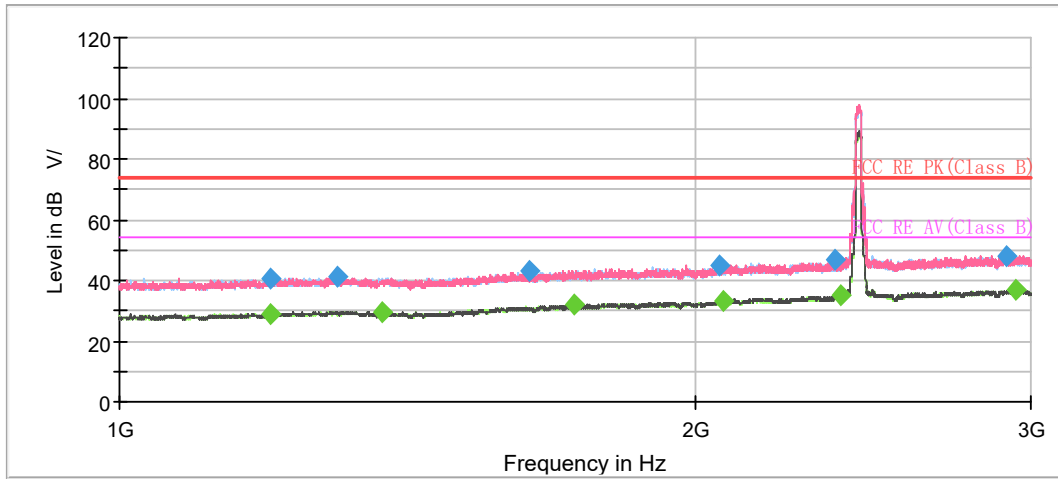
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1162.250000	40.72	---	74.00	33.28	500.0	100.0	V	25.0	-9.5
1200.000000	---	29.22	54.00	24.78	500.0	200.0	H	228.0	-8.8
1210.250000	41.54	---	74.00	32.46	500.0	200.0	V	75.0	-8.7
1311.000000	---	29.53	54.00	24.47	500.0	200.0	V	281.0	-8.1
1713.000000	---	31.72	54.00	22.28	500.0	200.0	H	276.0	-5.9
1729.000000	43.23	---	74.00	30.77	500.0	100.0	H	173.0	-5.8
2072.250000	45.27	---	74.00	28.73	500.0	200.0	H	8.0	-4.0
2079.250000	---	33.40	54.00	20.60	500.0	100.0	V	43.0	-3.9
2353.000000	46.29	---	74.00	27.71	500.0	200.0	V	298.0	-2.9
2353.500000	---	34.16	54.00	19.84	500.0	200.0	V	281.0	-2.9
2673.000000	---	37.09	54.00	16.91	500.0	100.0	V	34.0	-1.8
2955.750000	48.49	---	74.00	25.51	500.0	200.0	H	92.0	-0.8



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3961.875000	---	29.46	54.00	24.54	500.0	200.0	V	317.0	-7.1
4005.000000	40.78	---	74.00	33.22	500.0	200.0	V	332.0	-6.8
4818.750000	43.64	---	74.00	30.36	500.0	100.0	V	69.0	-6.1
4820.625000	---	31.63	54.00	22.37	500.0	100.0	V	60.0	-6.1
5788.125000	41.13	---	74.00	32.87	500.0	200.0	V	265.0	-4.7
5904.375000	---	29.20	54.00	24.80	500.0	200.0	H	166.0	-4.9
7005.000000	42.77	---	74.00	31.23	500.0	100.0	V	197.0	-3.0
7329.375000	---	30.79	54.00	23.21	500.0	200.0	V	223.0	-3.0
9461.250000	---	32.76	54.00	21.24	500.0	100.0	V	141.0	-0.2
9774.375000	44.45	---	74.00	29.55	500.0	100.0	V	54.0	-0.5
13335.000000	44.74	---	74.00	29.26	500.0	100.0	V	0.0	2.3
13342.500000	---	33.62	54.00	20.38	500.0	100.0	H	311.0	2.3

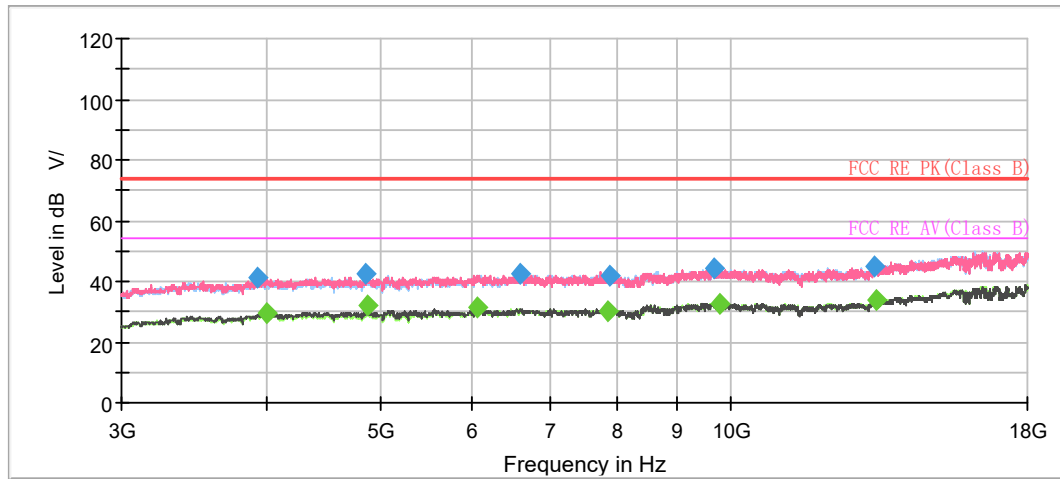
802.11n (HT20) CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

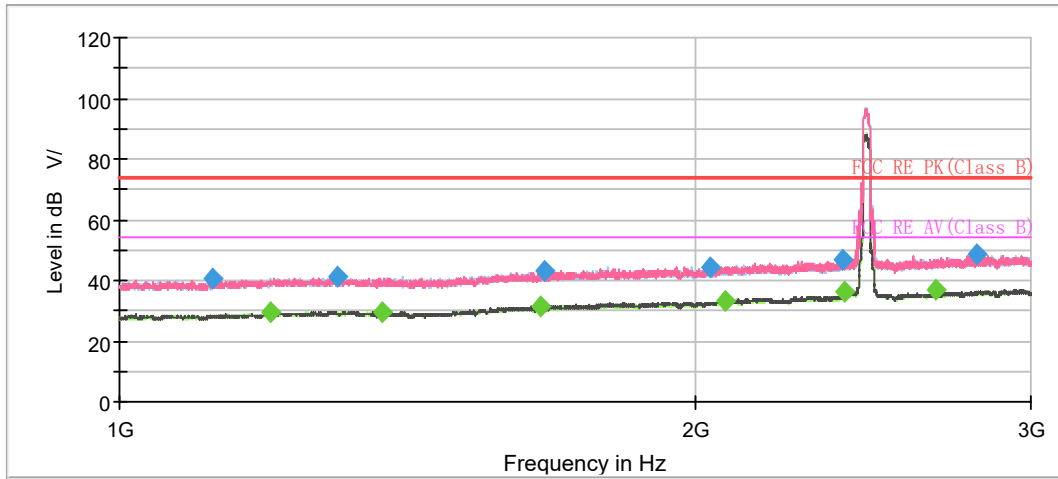
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.250000	40.71	---	74.00	33.29	500.0	200.0	H	257.0	-8.8
1200.500000	---	29.18	54.00	24.82	500.0	200.0	V	0.0	-8.8
1300.500000	41.47	---	74.00	32.53	500.0	100.0	H	172.0	-8.2
1372.500000	---	29.77	54.00	24.23	500.0	100.0	V	43.0	-7.7
1638.250000	43.18	---	74.00	30.82	500.0	200.0	V	313.0	-6.2
1729.000000	---	31.70	54.00	22.30	500.0	200.0	H	80.0	-5.8
2062.750000	44.79	---	74.00	29.21	500.0	100.0	V	51.0	-4.1
2071.000000	---	33.24	54.00	20.76	500.0	200.0	V	236.0	-4.0
2369.750000	46.47	---	74.00	27.53	500.0	200.0	V	0.0	-2.8
2387.500000	---	35.25	54.00	18.75	500.0	200.0	V	313.0	-2.7
2913.250000	48.10	---	74.00	25.91	500.0	200.0	H	55.0	-1.0
2944.250000	---	36.69	54.00	17.31	500.0	100.0	V	26.0	-0.9



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)
3922.500000	41.17	---	74.00	32.83	500.0	100.0	V	26.0	-7.3
4001.250000	---	29.29	54.00	24.71	500.0	200.0	V	340.0	-6.8
4871.250000	42.33	---	74.00	31.67	500.0	200.0	H	130.0	-5.8
4875.000000	---	31.74	54.00	22.26	500.0	200.0	H	130.0	-5.8
6056.250000	---	31.14	54.00	22.86	500.0	200.0	V	69.0	-4.1
6596.250000	42.34	---	74.00	31.66	500.0	200.0	H	173.0	-3.4
7856.250000	---	30.35	54.00	23.65	500.0	100.0	H	339.0	-2.4
7882.500000	41.65	---	74.00	32.35	500.0	100.0	H	320.0	-2.3
9671.250000	44.58	---	74.00	29.42	500.0	100.0	V	250.0	-0.6
9781.875000	---	32.84	54.00	21.16	500.0	200.0	H	217.0	-0.5
13314.375000	44.69	---	74.00	29.31	500.0	200.0	H	63.0	2.3
13329.375000	---	33.63	54.00	20.37	500.0	100.0	H	296.0	2.3

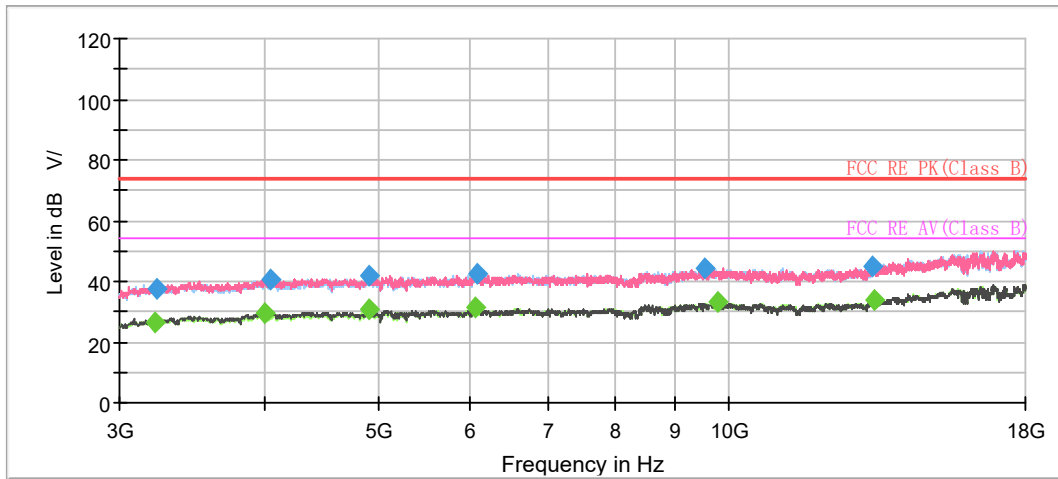
802.11n (HT20) CH11



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)
1118.750000	40.46	---	74.00	33.54	500.0	200.0	H	87.0	-10.0
1200.500000	---	29.36	54.00	24.64	500.0	100.0	H	313.0	-8.8
1302.000000	41.21	---	74.00	32.79	500.0	200.0	H	40.0	-8.2
1373.250000	---	29.74	54.00	24.26	500.0	200.0	V	210.0	-7.7
1661.000000	---	31.61	54.00	22.39	500.0	200.0	V	236.0	-6.1
1668.000000	42.88	---	74.00	31.12	500.0	200.0	V	210.0	-6.1
2038.750000	44.37	---	74.00	29.63	500.0	200.0	H	79.0	-4.3
2075.500000	---	33.47	54.00	20.53	500.0	200.0	V	0.0	-4.0
2393.500000	46.68	---	74.00	27.32	500.0	200.0	V	166.0	-2.6
2398.000000	---	36.20	54.00	17.81	500.0	200.0	V	148.0	-2.6
2673.000000	---	36.99	54.00	17.01	500.0	100.0	V	4.0	-1.8
2812.750000	48.62	---	74.00	25.38	500.0	200.0	V	304.0	-1.2



Radiates Emission from 3GHz to 18GHz

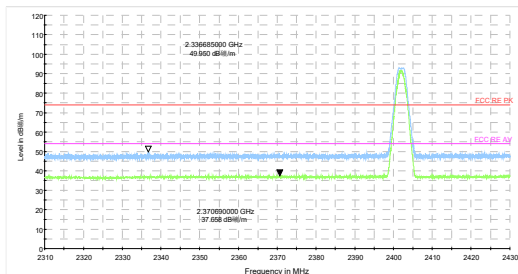
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3221.250000	---	26.76	54.00	27.24	500.0	100.0	V	189.0	-9.8
3228.750000	37.83	---	74.00	36.17	500.0	200.0	V	208.0	-9.8
4005.000000	---	29.57	54.00	24.43	500.0	200.0	V	164.0	-6.8
4040.625000	40.37	---	74.00	33.63	500.0	100.0	V	324.0	-6.7
4908.750000	41.72	---	74.00	32.28	500.0	200.0	V	67.0	-5.4
4921.875000	---	30.93	54.00	23.07	500.0	200.0	H	20.0	-5.3
6073.125000	---	31.19	54.00	22.81	500.0	100.0	V	185.0	-4.3
6088.125000	42.29	---	74.00	31.71	500.0	200.0	V	227.0	-4.4
9556.875000	44.29	---	74.00	29.71	500.0	200.0	H	55.0	-0.3
9789.375000	---	33.15	54.00	20.85	500.0	100.0	V	136.0	-0.5
13286.250000	44.89	---	74.00	29.11	500.0	100.0	H	233.0	2.3
13331.250000	---	33.76	54.00	20.24	500.0	100.0	H	152.0	2.3

1.2. Bluetooth LE

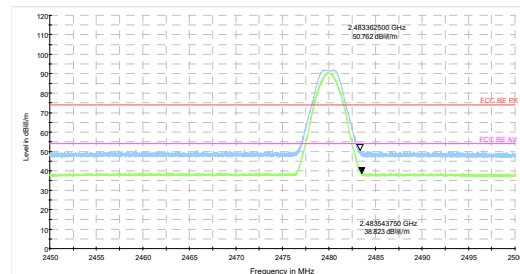
The following graphs display the maximum values of horizontal and vertical by software. Blue trace uses the peak detection, Green trace uses the average detection.

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

After the pretest, Bluetooth LE (2M) was selected as the worst Mode for Bluetooth LE.



Bluetooth LE (2M) Channel 0 Peak+ Average



Bluetooth LE (2M) 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 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 μ V/m) in the test plot below means (dB μ V/m)**
4. **The following graphs display the maximum values of coaxial and coplanar for 9k-30MHz; horizontal and vertical for above 30MHz by software.**
5. **For below 1GHz**

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

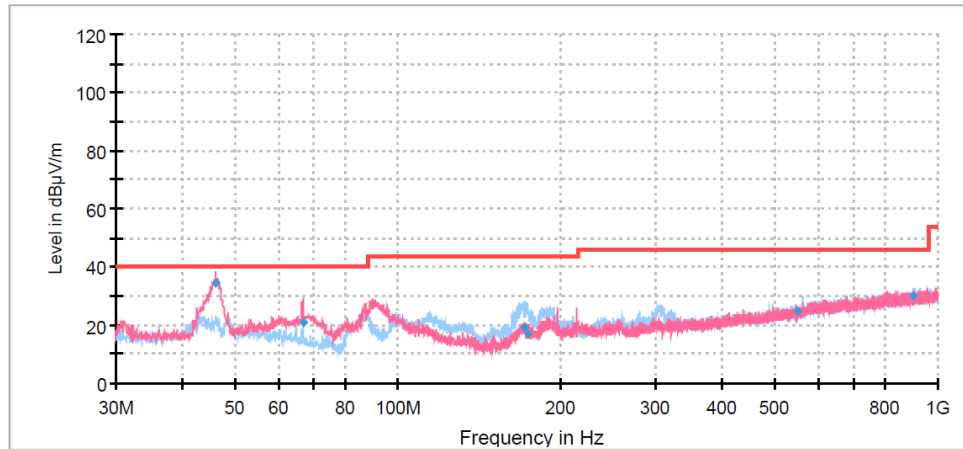
For above 1GHz

 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:

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.

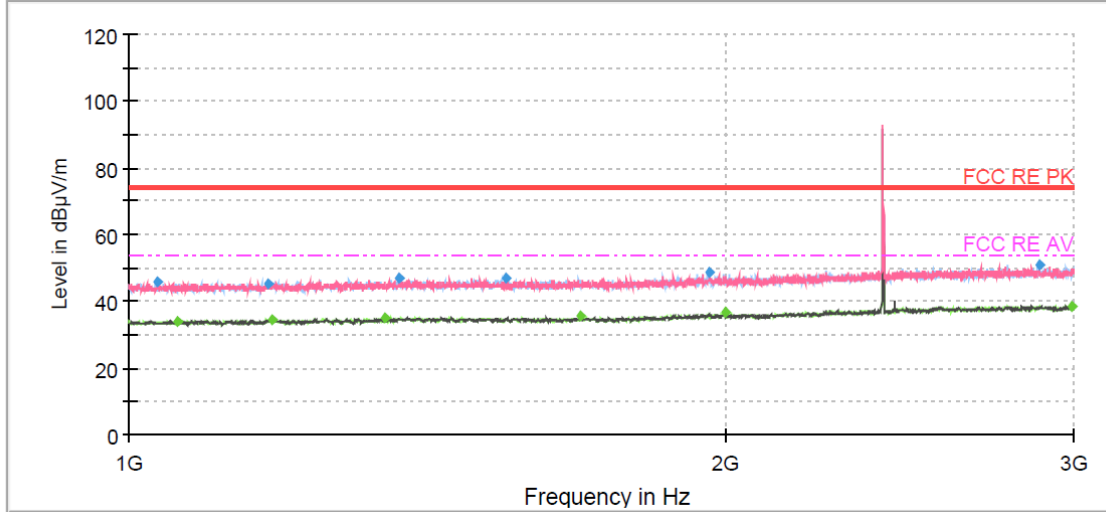


Radiates Emission from 30MHz to 1GHz

Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.93	38.52	40.00	1.48	100.0	V	300.00	20
66.62	29.28	40.00	10.72	100.0	V	163.00	17
171.77	28.09	43.50	15.41	199.0	H	210.00	16
174.08	27.67	43.50	15.83	183.0	H	53.00	16
547.81	27.12	46.00	18.88	174.0	V	135.00	26
903.31	33.04	46.00	12.96	225.0	H	34.00	31

Bluetooth LE-Channel 0

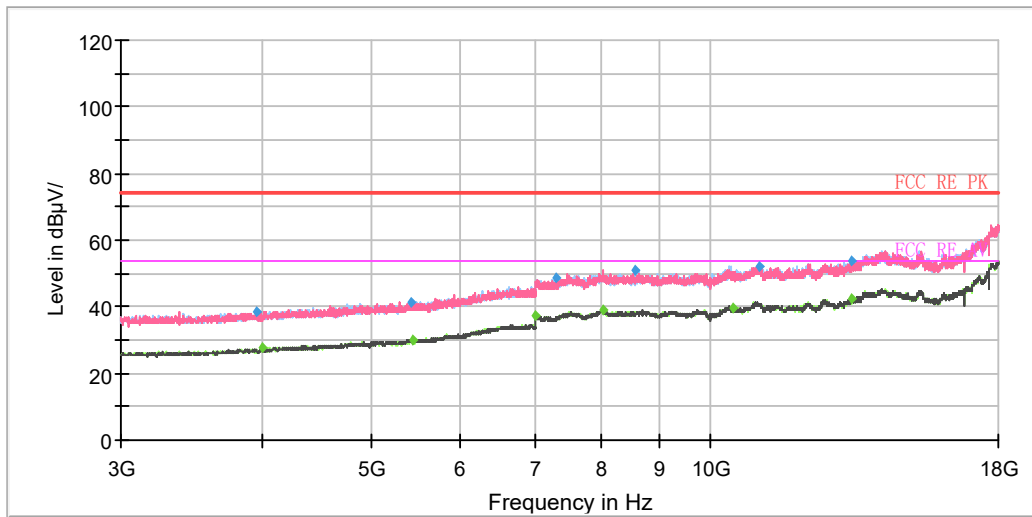


Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Final Result

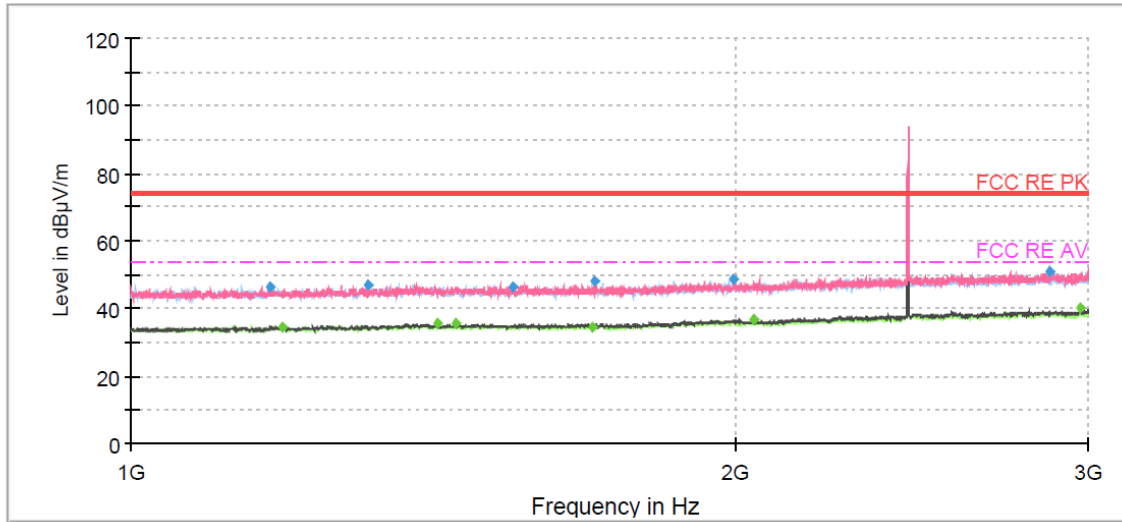
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1033.25	45.78	---	74.00	28.22	200.0	H	343.00	-6
1058.75	---	33.80	54.00	20.20	200.0	H	324.00	-6
1176.25	45.30	---	74.00	28.70	200.0	V	57.00	-5
1181.75	---	34.53	54.00	19.47	100.0	H	98.00	-5
1348.00	---	35.26	54.00	18.74	100.0	H	203.00	-4
1368.50	47.03	---	74.00	26.97	200.0	H	271.00	-4
1549.00	46.91	---	74.00	27.09	100.0	V	225.00	-4
1689.50	---	35.42	54.00	18.58	100.0	H	4.00	-3
1963.75	48.46	---	74.00	25.54	100.0	V	357.00	-2
1999.50	---	36.56	54.00	17.44	100.0	H	7.00	-1
2885.75	50.79	---	74.00	23.21	100.0	H	26.00	2
2992.25	---	38.73	54.00	15.27	100.0	V	133.00	2



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)
3954.38	38.59	---	74.00	35.41	500.00	200.0	V	309.00	-8
4005.00	---	27.49	54.00	26.51	500.00	200.0	H	0.00	-8
5433.75	41.26	---	74.00	32.74	500.00	100.0	V	69.00	-5
5450.63	---	29.96	54.00	24.04	500.00	200.0	H	3.00	-5
7003.13	---	37.31	54.00	16.69	500.00	100.0	V	69.00	0
7299.38	48.46	---	74.00	25.54	500.00	100.0	V	264.00	1
8021.25	---	39.32	54.00	14.68	500.00	200.0	V	325.00	2
8585.63	50.88	---	74.00	23.12	500.00	200.0	H	58.00	2
10466.25	---	39.39	54.00	14.61	500.00	200.0	H	25.00	4
11064.38	52.18	---	74.00	21.82	500.00	200.0	V	260.00	5
13342.50	---	42.67	54.00	11.33	500.00	200.0	H	0.00	7
13351.88	53.95	---	74.00	20.05	500.00	200.0	H	74.00	7

Bluetooth LE-Channel 19

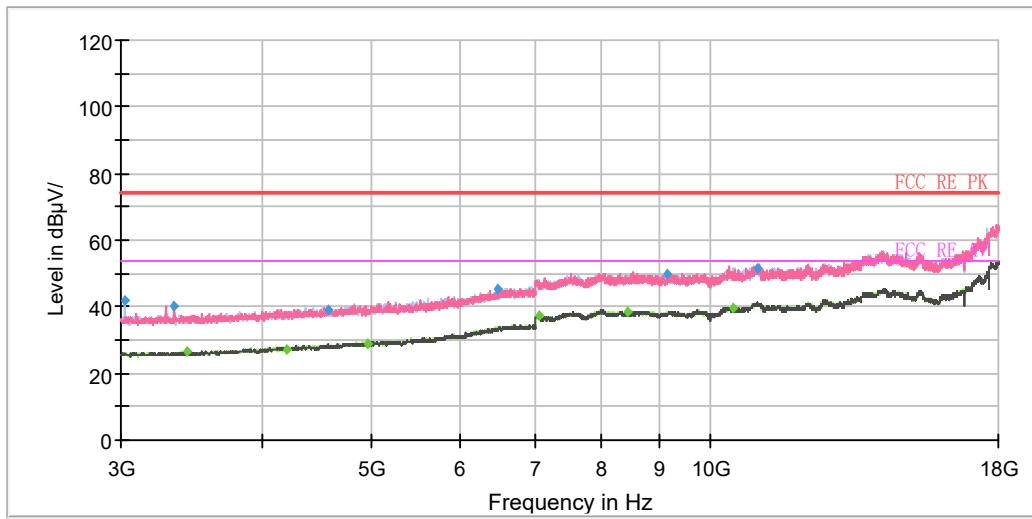


Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Final Result

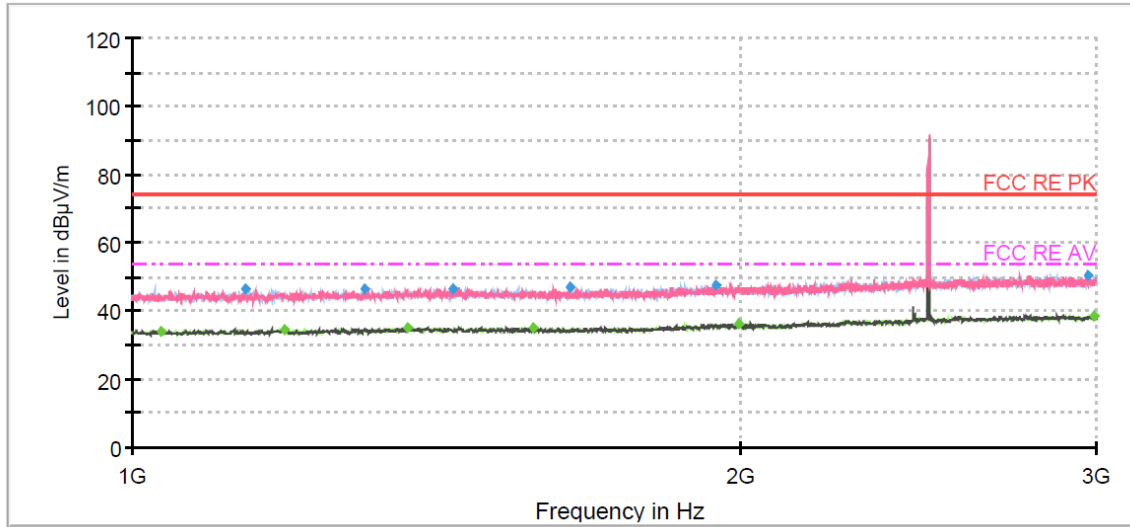
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1172.25	46.62	---	74.00	27.38	100.0	V	330.00	-5
1190.25	---	34.69	54.00	19.31	100.0	V	0.00	-5
1313.50	47.16	---	74.00	26.84	100.0	H	0.00	-5
1420.25	---	35.41	54.00	18.59	100.0	V	296.00	-4
1452.75	---	35.71	54.00	18.29	100.0	V	290.00	-4
1550.00	46.63	---	74.00	27.37	200.0	H	217.00	-4
1697.00	---	34.56	54.00	19.44	100.0	H	21.00	-3
1700.75	48.02	---	74.00	25.98	100.0	V	296.00	-3
1994.00	48.50	---	74.00	25.50	100.0	V	348.00	-2
2044.75	---	36.72	54.00	17.28	100.0	V	0.00	-2
2866.25	50.77	---	74.00	23.23	200.0	H	0.00	2
2972.75	---	39.92	54.00	14.08	100.0	V	330.00	2



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)
3022.50	41.63	---	74.00	32.37	500.00	200.0	H	223.00	-10
3346.88	40.37	---	74.00	33.63	500.00	100.0	V	230.00	-10
3429.38	---	26.47	54.00	27.53	500.00	100.0	V	28.00	-10
4211.25	---	26.92	54.00	27.08	500.00	100.0	H	0.00	-8
4586.25	38.80	---	74.00	35.20	500.00	100.0	H	291.00	-7
4968.75	---	29.00	54.00	25.00	500.00	100.0	H	179.00	-6
6474.38	45.30	---	74.00	28.70	500.00	100.0	V	4.00	-1
7040.63	---	37.24	54.00	16.76	500.00	100.0	V	110.00	0
8446.88	---	38.22	54.00	15.78	500.00	100.0	H	0.00	2
9157.50	49.95	---	74.00	24.05	500.00	100.0	H	243.00	2
10477.50	---	39.42	54.00	14.58	500.00	100.0	H	243.00	4
10985.63	51.46	---	74.00	22.54	500.00	200.0	V	126.00	5

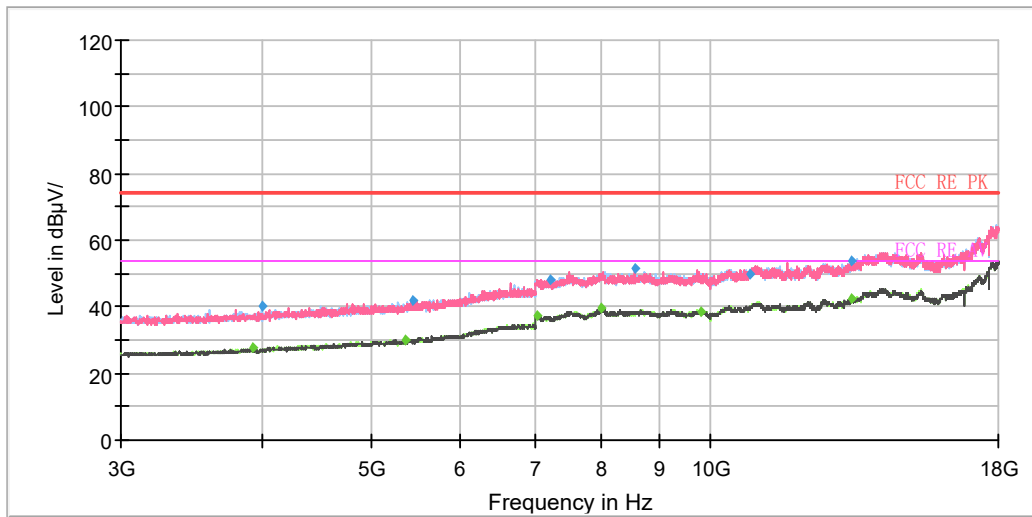
Bluetooth LE-Channel 39



Note: The signal beyond the limit is carrier.
Radiates Emission from 1GHz to 3GHz

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1034.00	---	33.78	54.00	20.22	100.0	V	284.00	-6
1136.75	46.58	---	74.00	27.42	200.0	H	222.00	-6
1189.75	---	34.77	54.00	19.23	100.0	H	56.00	-5
1303.75	46.14	---	74.00	27.86	200.0	V	179.00	-5
1369.25	---	35.18	54.00	18.82	100.0	H	119.00	-4
1441.75	46.68	---	74.00	27.32	200.0	V	165.00	-4
1580.50	---	35.27	54.00	18.73	100.0	V	240.00	-4
1646.00	47.00	---	74.00	27.00	100.0	V	0.00	-4
1947.00	47.72	---	74.00	26.28	200.0	V	46.00	-2
1997.75	---	36.33	54.00	17.67	200.0	V	58.00	-1
2975.50	50.55	---	74.00	23.45	200.0	V	165.00	2
2995.00	---	38.67	54.00	15.33	100.0	V	322.00	2



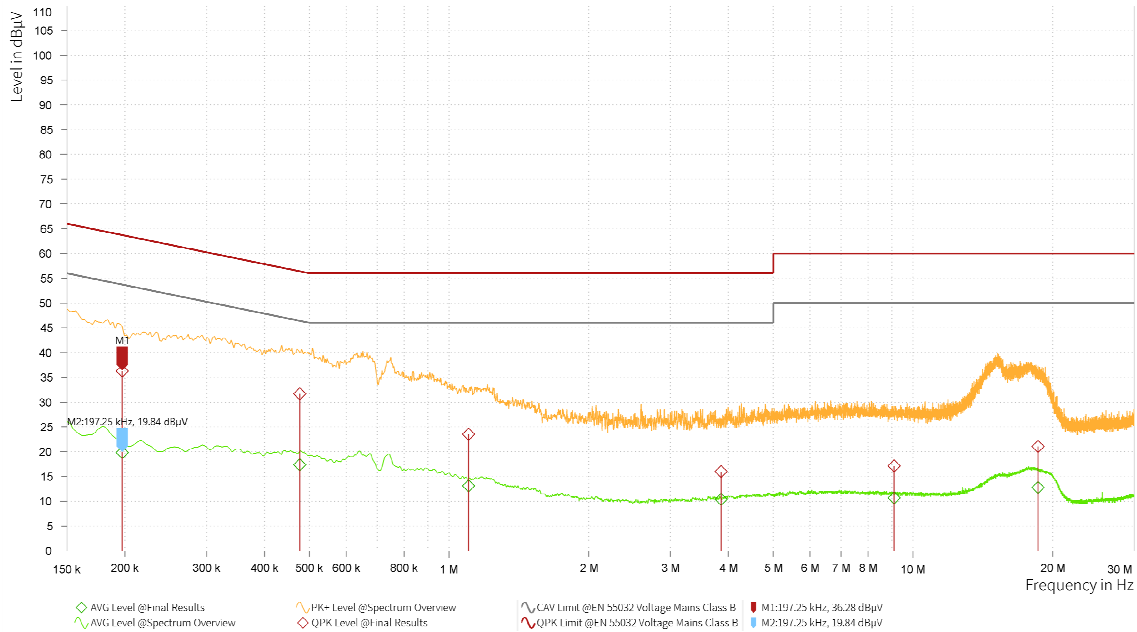
Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3920.63	---	27.69	54.00	26.31	500.00	100.0	V	135.00	-8
3995.63	39.99	---	74.00	34.01	500.00	200.0	H	1.00	-8
5368.13	---	30.14	54.00	23.86	500.00	200.0	V	188.00	-5
5439.38	42.15	---	74.00	31.85	500.00	100.0	V	102.00	-5
7006.88	---	37.38	54.00	16.62	500.00	100.0	V	0.00	0
7205.63	48.37	---	74.00	25.63	500.00	200.0	H	176.00	1
7996.88	---	39.41	54.00	14.59	500.00	100.0	V	102.00	2
8553.75	51.28	---	74.00	22.72	500.00	200.0	V	333.00	2
9815.63	---	38.76	54.00	15.24	500.00	100.0	H	351.00	2
10839.38	49.53	---	74.00	24.47	500.00	200.0	V	138.00	4
13321.88	53.78	---	74.00	20.22	500.00	100.0	V	0.00	7
13350.00	---	42.62	54.00	11.38	500.00	100.0	V	358.00	7

2. Conducted Emission

2.1. Wi-Fi 2.4GHz

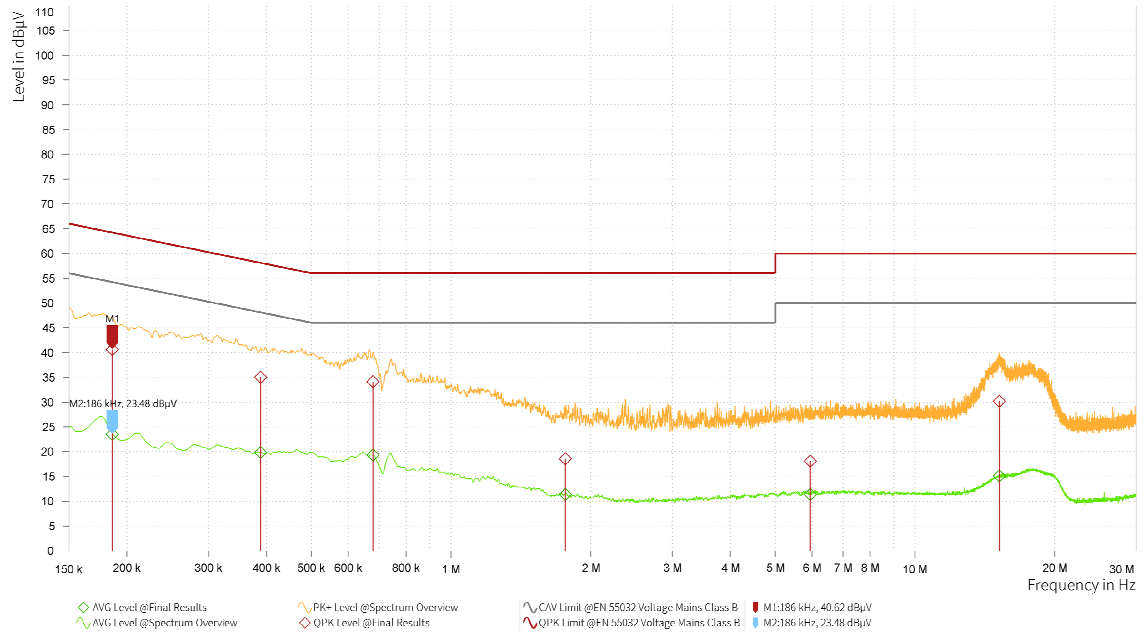
During the test, the Conducted Emission was performed in all modes with all channel. The test data of the worst-case condition was recorded in this report.



Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.197	36.28	63.73	27.45	19.84	53.73	33.89	21.02	L1	9.000	1.000
0.476	31.68	56.40	24.73	17.38	46.40	29.03	20.80	L1	9.000	1.000
1.102	23.51	56.00	32.49	13.10	46.00	32.90	20.08	L1	9.000	1.000
3.860	15.97	56.00	40.03	10.41	46.00	35.59	19.43	L1	9.000	1.000
9.110	17.13	60.00	42.87	10.67	50.00	39.33	19.41	L1	9.000	1.000
18.616	21.05	60.00	38.95	12.74	50.00	37.26	19.62	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz



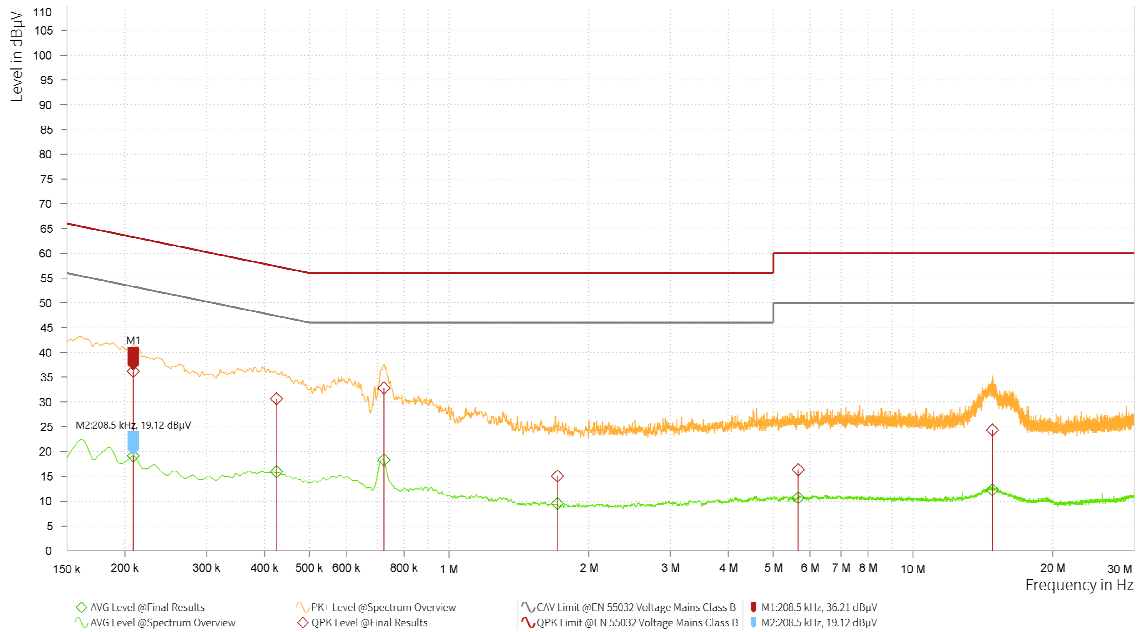
Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG: CAV Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.186	40.62	64.21	23.59	23.48	54.21	30.73	21.03	N	9.000	1.000
0.389	35.00	58.10	23.10	19.83	48.10	28.26	20.90	N	9.000	1.000
0.679	34.13	56.00	21.87	19.31	46.00	26.69	20.60	N	9.000	1.000
1.763	18.53	56.00	37.47	11.32	46.00	34.68	19.74	N	9.000	1.000
5.953	18.07	60.00	41.93	11.36	50.00	38.64	19.41	N	9.000	1.000
15.207	30.18	60.00	29.82	15.09	50.00	34.91	19.54	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

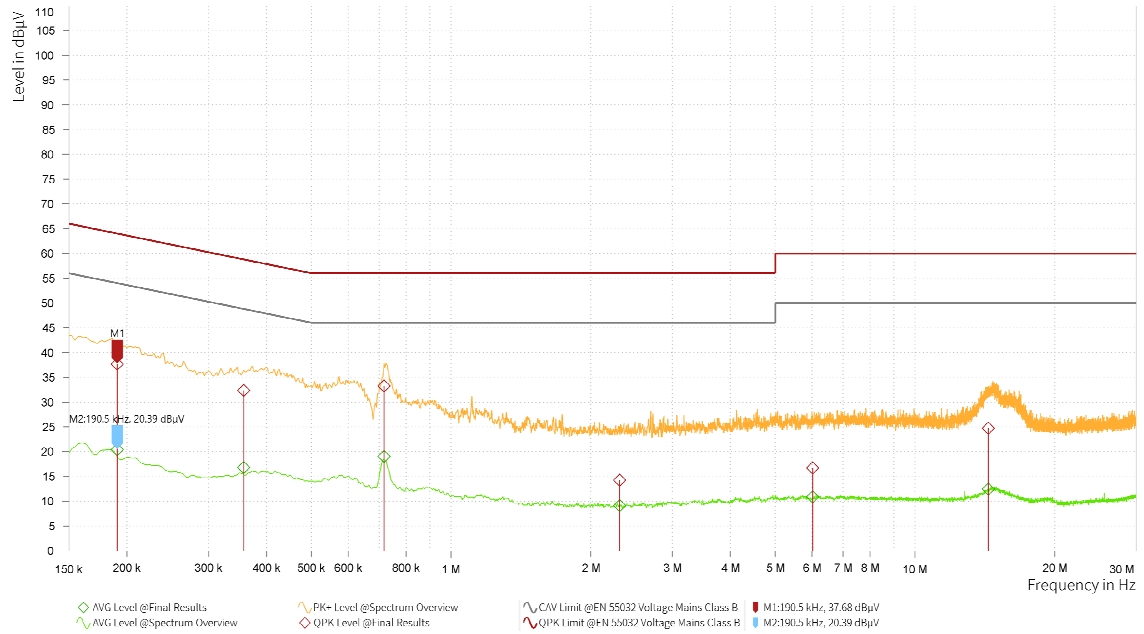
During the test, the Conducted Emission was performed in all modes with all channels. The test data of the worst-case condition was recorded in this report.



Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG: CAV Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.209	36.21	63.26	27.06	19.12	53.26	34.14	21.01	L1	9.000	1.000
0.425	30.63	57.36	26.73	15.95	47.36	31.41	20.85	L1	9.000	1.000
0.724	32.79	56.00	23.21	18.30	46.00	27.70	20.54	L1	9.000	1.000
1.712	15.04	56.00	40.96	9.47	46.00	36.53	19.75	L1	9.000	1.000
5.656	16.32	60.00	43.68	10.68	50.00	39.32	19.40	L1	9.000	1.000
14.845	24.35	60.00	35.65	12.27	50.00	37.73	19.50	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: CAV Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.191	37.68	64.01	26.34	20.39	54.01	33.63	21.03	N	9.000	1.000
0.357	32.35	58.80	26.45	16.81	48.80	31.99	20.93	N	9.000	1.000
0.717	33.26	56.00	22.74	19.03	46.00	26.97	20.56	N	9.000	1.000
2.308	14.21	56.00	41.79	9.08	46.00	36.92	19.59	N	9.000	1.000
6.020	16.70	60.00	43.30	10.87	50.00	39.13	19.41	N	9.000	1.000
14.397	24.72	60.00	35.28	12.44	50.00	37.56	19.52	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz