

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 stand-up position (Z axis) and the loop antenna is vertical, the others are vertical and horizontal. and the worst case was recorded.

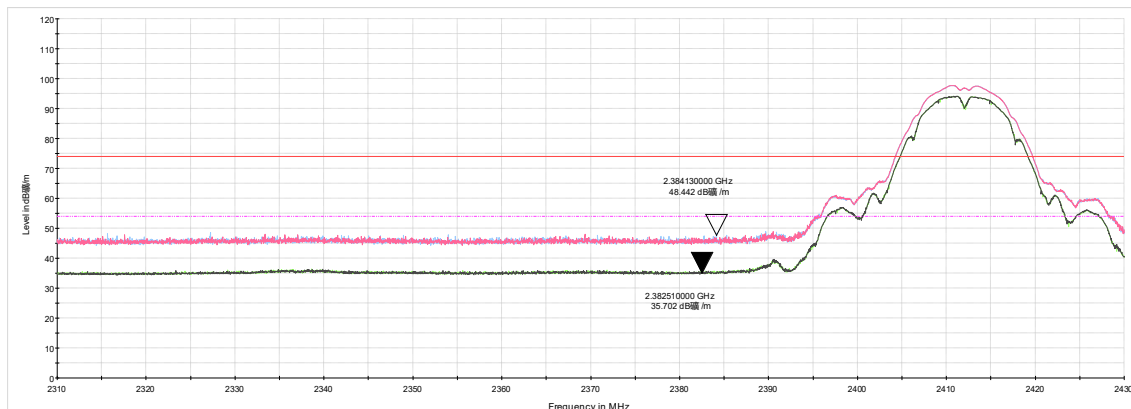
1. Unwanted Emission

1.1. Wi-Fi 2.4GHz

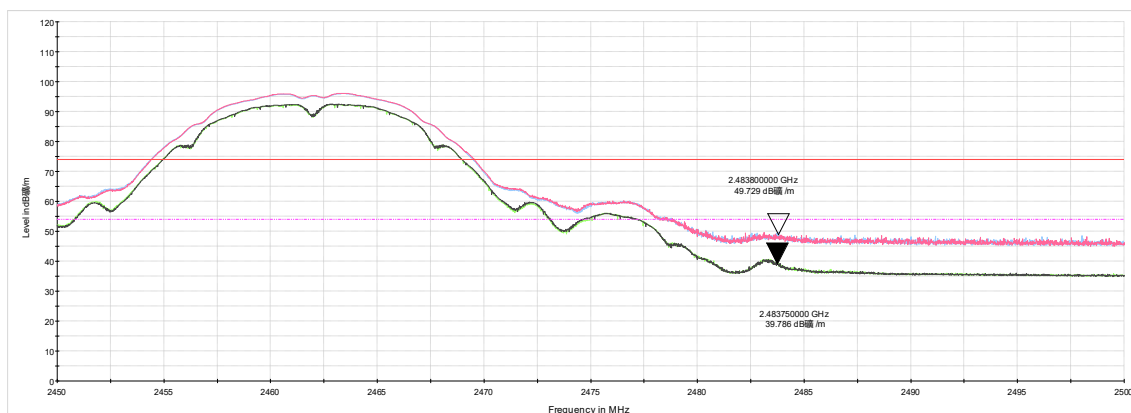
The following graphs display the maximum values of horizontal and vertical by software.
Blue trace uses the peak detection, Green trace uses the average detection.

A symbol (dB μ V/m) in the test plot below means (dB μ V/m)

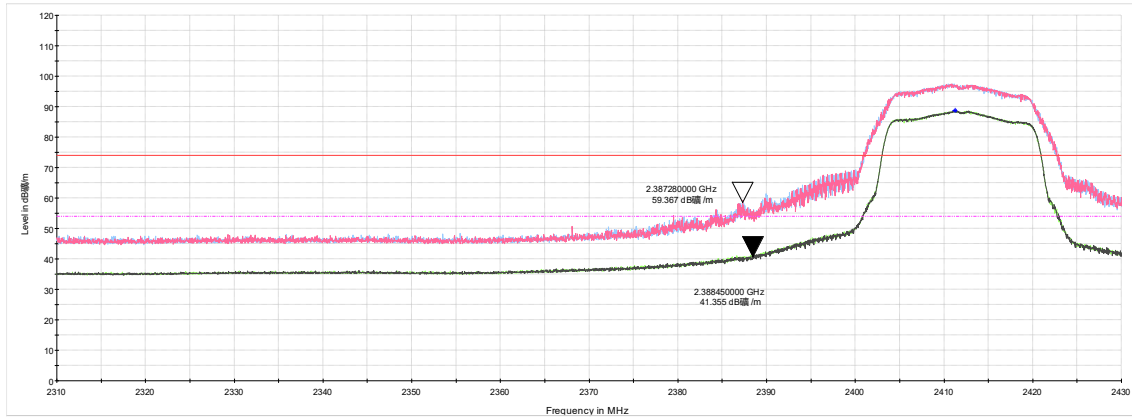
The signal beyond the limit is carrier.



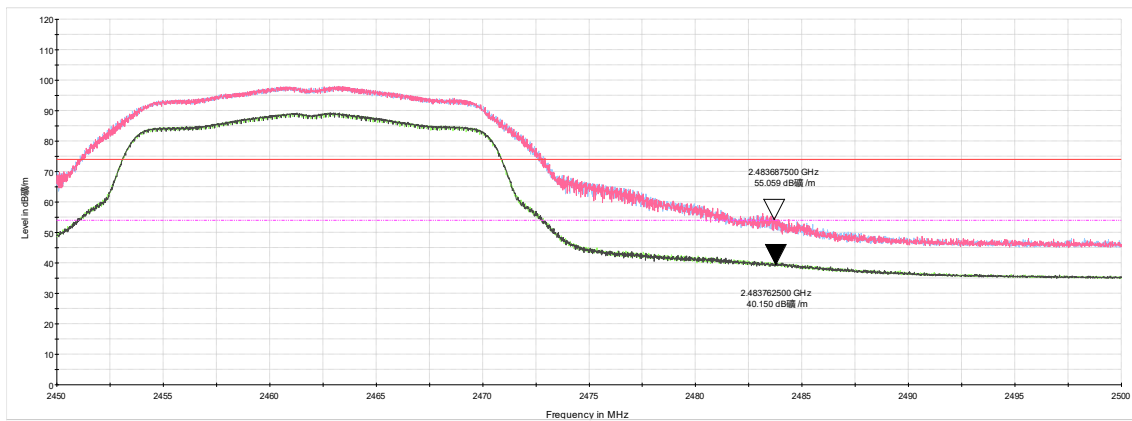
BANDEDGE_2.4G WIFI_b CH1_1M_Z_TP17.5_2.31-2.43GHz



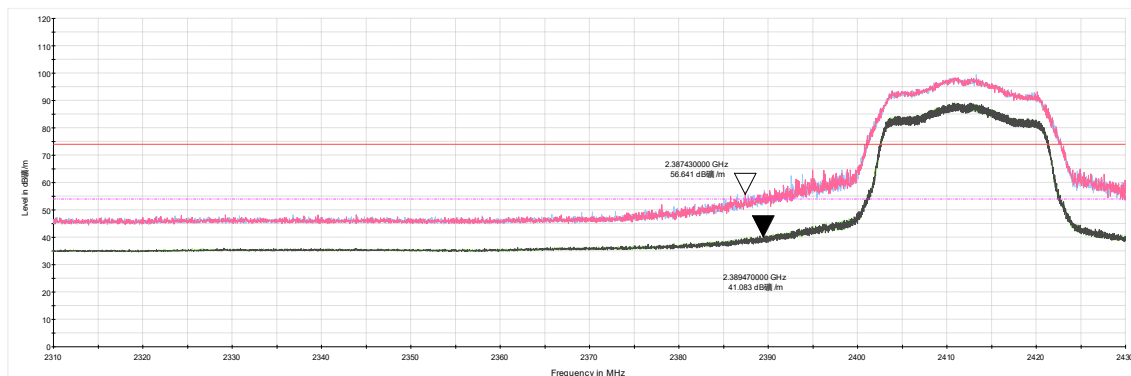
BANDEDGE_2.4G WIFI_b CH11_1M_Z_TP17.5_2.45-2.5GHz



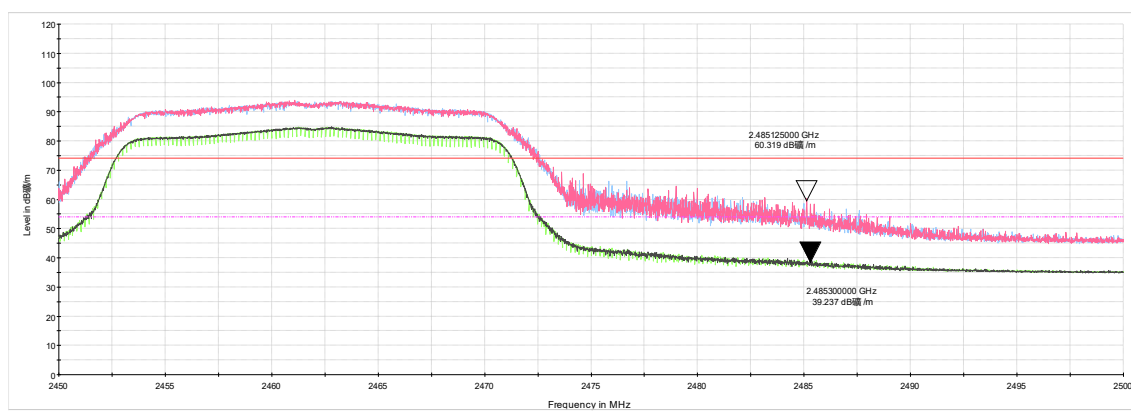
BANDEDGE_2.4G WIFI_g CH1_6M_Z_TP15_2.31-2.43GHz



BANDEDGE_2.4G WIFI_g CH11_6M_Z_TP15_2.45-2.5GHz



BANDEDGE_2.4G WIFI_n(20) CH1_MCS0_Z_TP15_2.31-2.43GHz



BANDEDGE_2.4G WIFI_n(20) CH11_MCS0_Z_TP15_2.45-2.5GHz

Result of RE

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

Remark:

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

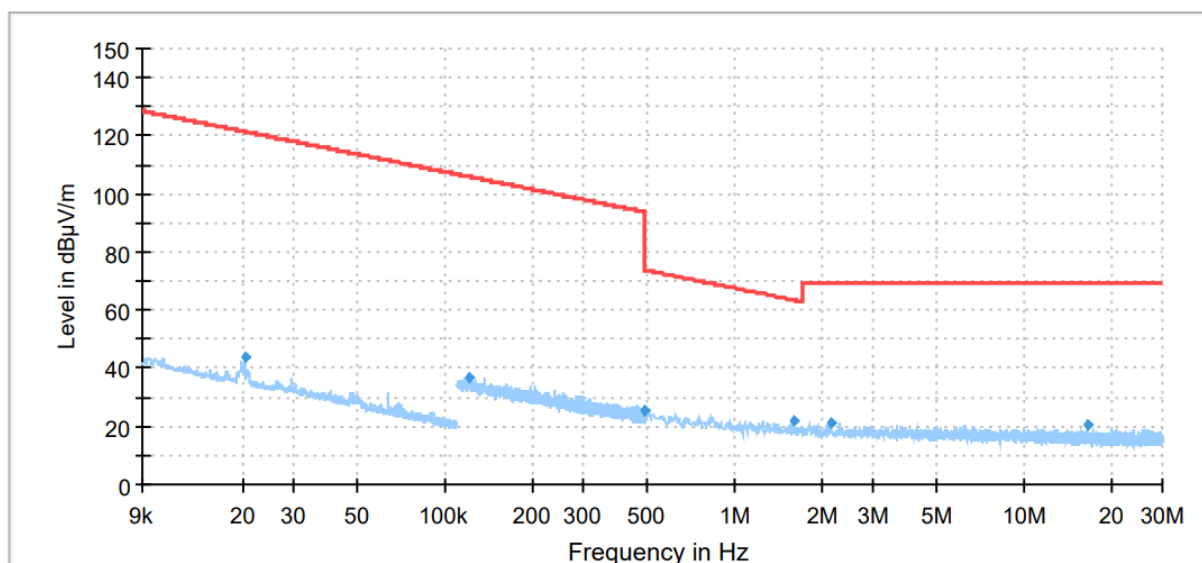
QP Level @Spectrum Overview H
 QP Level @Spectrum Overview V
 QP Level @Final Results
 QP Limit

For above 1GHz

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

Continuous TX mode:

During the test, the Radiates Emission from 9kHz to 1GHz was performed in all modes with all channels, the test data of the worst-case condition was recorded in this report.



Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Azimuth (deg)	Corr. (dB/m)
0.02	43.74	121.45	77.71	500.00	170.00	17
0.12	36.50	105.92	69.41	150.00	12.00	17
0.49	25.38	73.80	48.42	150.00	222.00	17
1.60	21.79	63.53	41.74	150.00	122.00	17
2.14	21.48	69.50	48.03	150.00	337.00	17
16.67	20.24	69.50	49.26	150.00	210.00	17

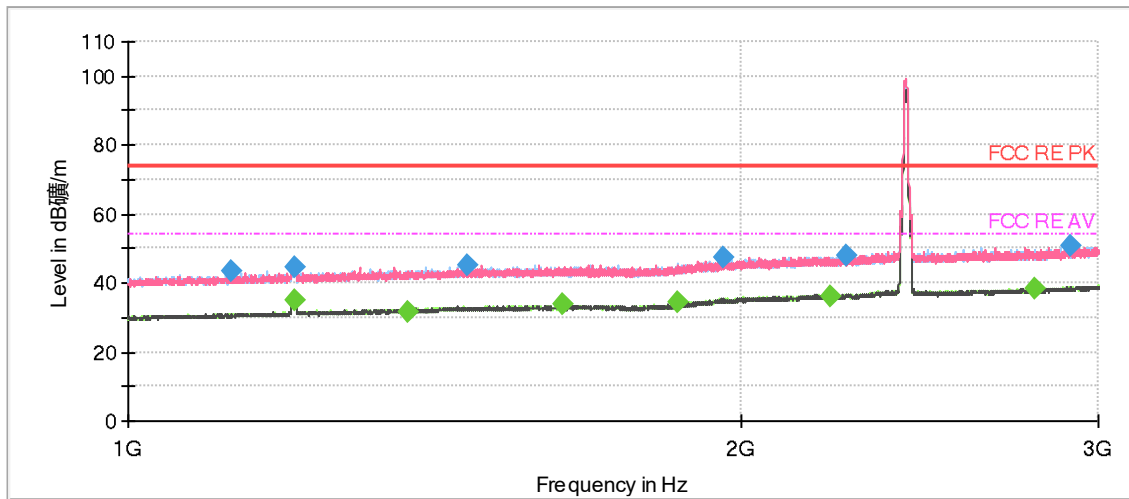
Radiates Emission from 9kHz to 30MHz

Spectrum Overview H/V



Radiates Emission from 30MHz to 1GHz

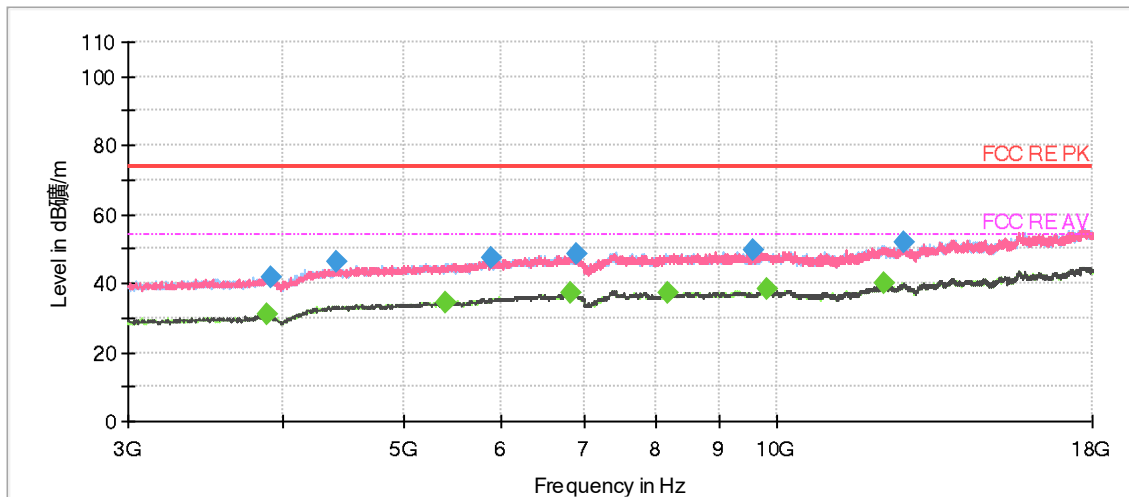
Frequency (MHz)	Quasi-Peak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (m)	Polarization	Azimuth (deg)	Correct Factor (dB)
42.349	8.45	30.00	21.55	1.20	V	282.6	-8.93
58.289	7.95	30.00	22.05	1.25	V	329.8	-9.07
91.810	6.02	33.50	27.48	1.07	V	187.2	-11.27
120.004	5.65	33.50	27.85	1.20	V	93.4	-11.47
237.019	8.37	36.00	27.63	1.20	V	151.9	-8.73
960.048	19.86	44.00	24.14	1.23	H	94.5	1.53



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

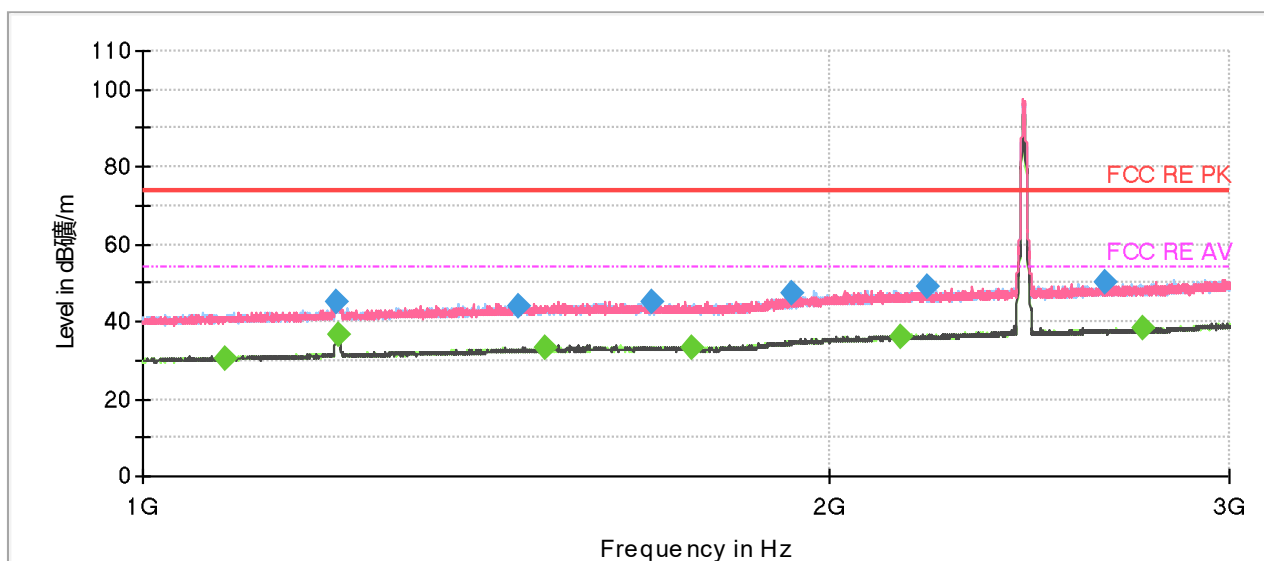
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1122.750000	43.27	---	74.00	30.73	500.0	200.0	H	133.0	-7
1207.750000	44.45	---	74.00	29.55	500.0	100.0	V	48.0	-6
1208.750000	---	34.89	54.00	19.11	500.0	100.0	V	48.0	-6
1371.750000	---	31.85	54.00	22.15	500.0	200.0	V	303.0	-5
1469.250000	45.29	---	74.00	28.71	500.0	100.0	V	133.0	-4
1634.500000	---	33.61	54.00	20.39	500.0	100.0	H	160.0	-3
1861.250000	---	34.16	54.00	19.84	500.0	100.0	V	0.0	-1
1960.250000	47.51	---	74.00	26.49	500.0	200.0	V	275.0	0
2217.000000	---	36.36	54.00	17.64	500.0	100.0	H	301.0	0
2257.500000	47.71	---	74.00	26.29	500.0	200.0	H	142.0	1
2794.250000	---	38.18	54.00	15.82	500.0	200.0	V	163.0	3
2908.000000	50.88	---	74.00	23.12	500.0	100.0	H	226.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3888.750000	---	30.80	54.00	23.20	500.0	200.0	H	136.0	-5
3916.875000	42.00	---	74.00	32.00	500.0	200.0	H	65.0	-5
4419.375000	46.34	---	74.00	27.66	500.0	100.0	H	82.0	-2
5401.875000	---	34.57	54.00	19.43	500.0	200.0	V	27.0	0
5889.375000	47.62	---	74.00	26.38	500.0	100.0	V	137.0	0
6815.625000	---	36.99	54.00	17.01	500.0	100.0	H	164.0	1
6907.500000	48.47	---	74.00	25.53	500.0	200.0	V	223.0	1
8165.625000	---	36.96	54.00	17.04	500.0	200.0	V	142.0	3
9581.250000	49.67	---	74.00	24.33	500.0	200.0	V	253.0	3
9832.500000	---	38.16	54.00	15.84	500.0	100.0	H	214.0	3
12215.625000	---	40.32	54.00	13.68	500.0	100.0	V	281.0	5
12699.375000	51.64	---	74.00	22.36	500.0	200.0	H	249.0	5

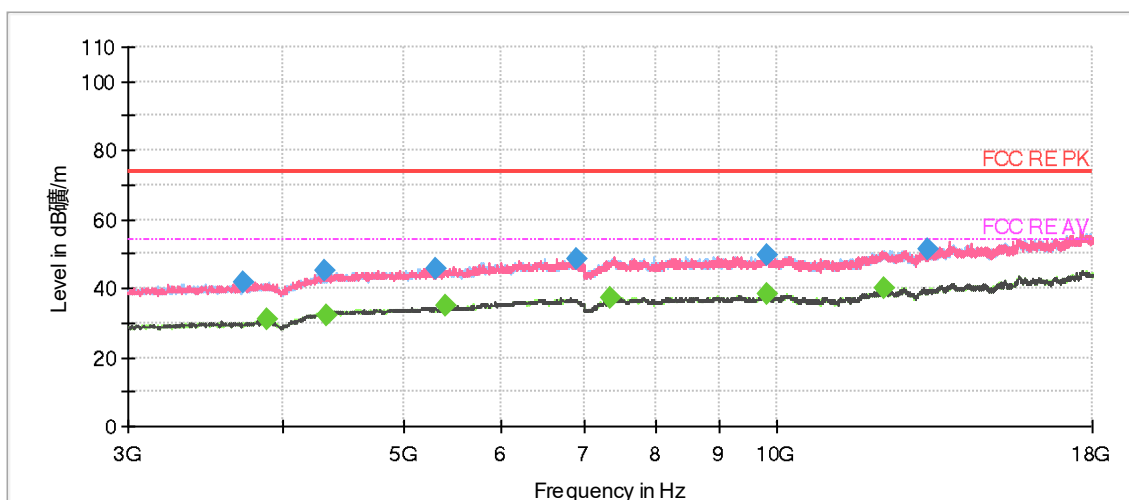
802.11b CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

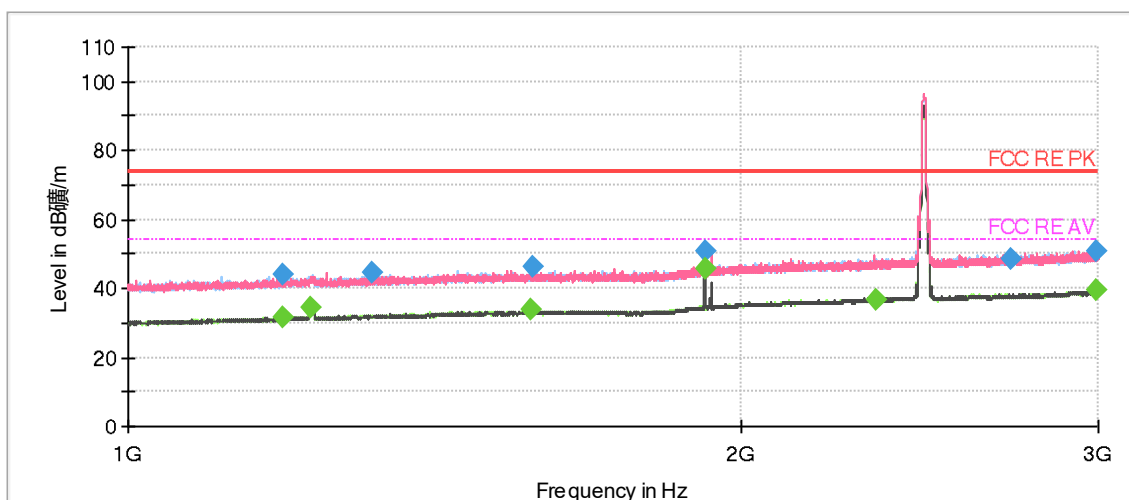
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1085.500000	---	30.44	54.00	23.57	500.0	200.0	H	179.0	-7
1216.500000	45.24	---	74.00	28.76	500.0	200.0	H	207.0	-6
1217.500000	---	36.42	54.00	17.58	500.0	100.0	V	42.0	-6
1460.500000	44.25	---	74.00	29.75	500.0	100.0	V	108.0	-4
1500.750000	---	33.40	54.00	20.60	500.0	200.0	V	50.0	-4
1672.250000	45.19	---	74.00	28.81	500.0	200.0	V	322.0	-2
1742.750000	---	33.13	54.00	20.87	500.0	200.0	V	340.0	-2
1928.750000	47.43	---	74.00	26.57	500.0	200.0	H	358.0	0
2153.750000	---	36.18	54.00	17.82	500.0	200.0	H	123.0	0
2208.000000	49.13	---	74.00	24.87	500.0	200.0	H	133.0	0
2648.000000	50.07	---	74.00	23.93	500.0	200.0	V	154.0	2
2745.250000	---	38.27	54.00	15.73	500.0	200.0	V	312.0	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)
3718.125000	41.64	---	74.00	32.36	500.0	200.0	V	172.0	-6
3881.250000	---	31.02	54.00	22.98	500.0	200.0	H	308.0	-5
4316.250000	44.91	---	74.00	29.09	500.0	100.0	H	357.0	-3
4340.625000	---	32.41	54.00	21.59	500.0	200.0	V	21.0	-2
5308.125000	45.75	---	74.00	28.25	500.0	100.0	V	348.0	-1
5409.375000	---	34.74	54.00	19.26	500.0	100.0	V	338.0	0
6890.625000	48.36	---	74.00	25.64	500.0	200.0	V	0.0	1
7342.500000	---	37.24	54.00	16.76	500.0	100.0	H	90.0	2
9821.250000	---	38.16	54.00	15.84	500.0	100.0	V	278.0	3
9836.250000	49.61	---	74.00	24.39	500.0	100.0	H	1.0	3
12221.250000	---	39.87	54.00	14.13	500.0	200.0	H	288.0	5
13269.375000	51.52	---	74.00	22.48	500.0	200.0	H	146.0	5

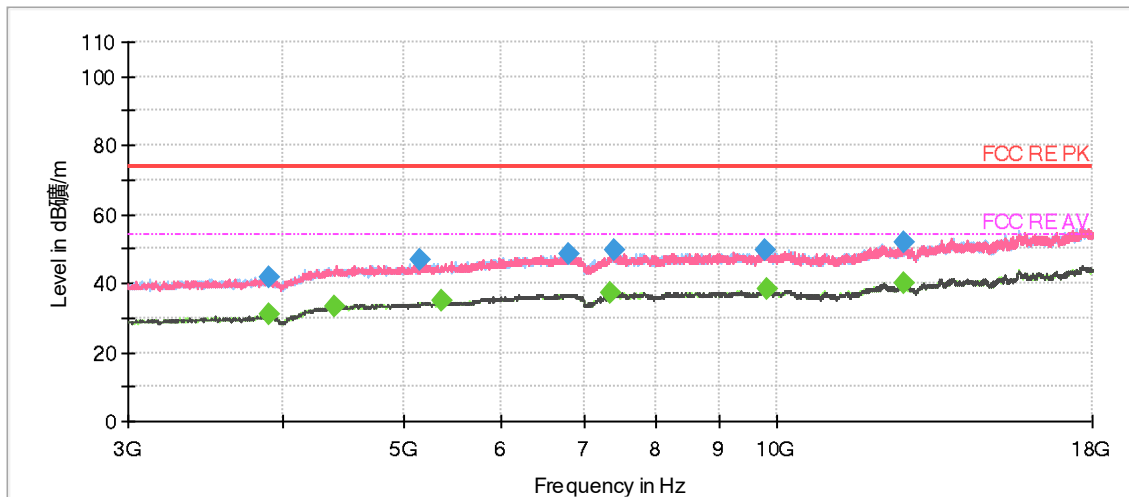
802.11b CH11



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

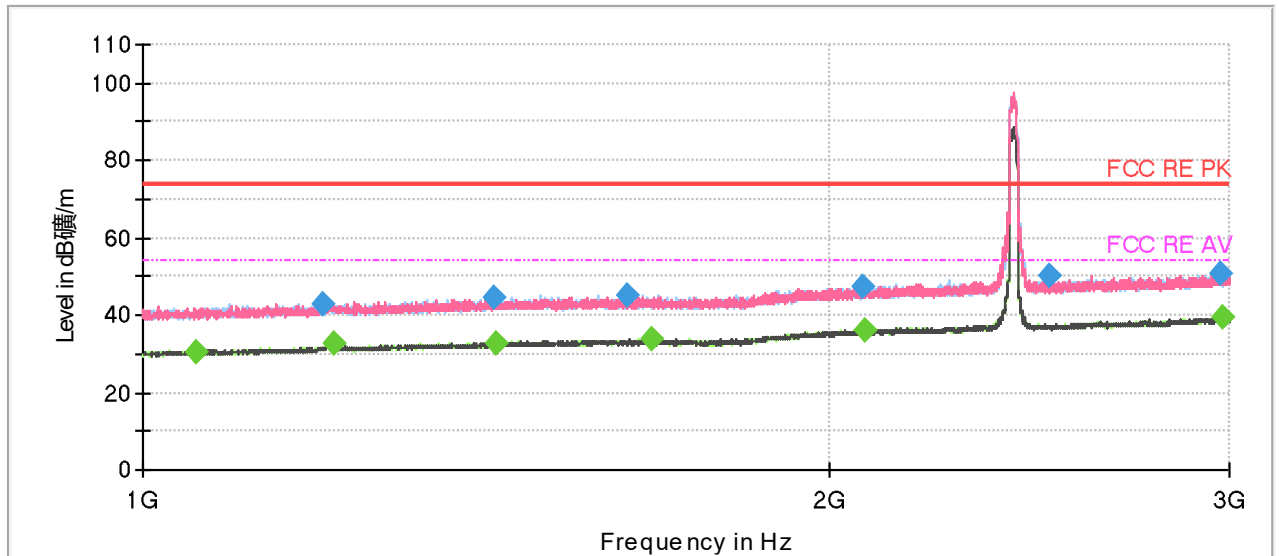
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1191.250000	43.83	---	74.00	30.17	500.0	200.0	V	226.0	-6
1192.750000	---	31.82	54.00	22.18	500.0	100.0	V	350.0	-6
1230.000000	---	34.56	54.00	19.44	500.0	200.0	H	276.0	-6
1319.250000	44.68	---	74.00	29.32	500.0	200.0	V	0.0	-5
1579.000000	---	33.65	54.00	20.35	500.0	200.0	H	285.0	-3
1581.750000	46.27	---	74.00	27.73	500.0	100.0	V	218.0	-3
1920.750000	50.52	---	74.00	23.48	500.0	100.0	V	0.0	0
1920.750000	---	45.76	54.00	8.24	500.0	100.0	V	0.0	0
2333.500000	---	36.85	54.00	17.15	500.0	100.0	V	87.0	1
2720.000000	48.77	---	74.00	25.23	500.0	200.0	V	37.0	2
2994.500000	---	39.41	54.00	14.59	500.0	200.0	H	116.0	3
2994.750000	50.81	---	74.00	23.19	500.0	100.0	V	0.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3892.500000	---	30.82	54.00	23.18	500.0	200.0	H	217.0	-5
3900.000000	41.80	---	74.00	32.20	500.0	200.0	V	181.0	-5
4402.500000	---	33.24	54.00	20.76	500.0	200.0	H	358.0	-2
5156.250000	46.63	---	74.00	27.37	500.0	100.0	H	202.0	-1
5371.875000	---	34.73	54.00	19.27	500.0	100.0	H	120.0	-1
6806.250000	48.31	---	74.00	25.69	500.0	200.0	H	156.0	1
7335.000000	---	37.06	54.00	16.94	500.0	200.0	H	258.0	2
7398.750000	49.49	---	74.00	24.51	500.0	100.0	V	0.0	2
9793.125000	49.77	---	74.00	24.23	500.0	100.0	H	326.0	3
9828.750000	---	38.34	54.00	15.66	500.0	100.0	V	312.0	3
12693.750000	51.83	---	74.00	22.17	500.0	200.0	H	217.0	5
12703.125000	---	40.20	54.00	13.80	500.0	200.0	V	38.0	5

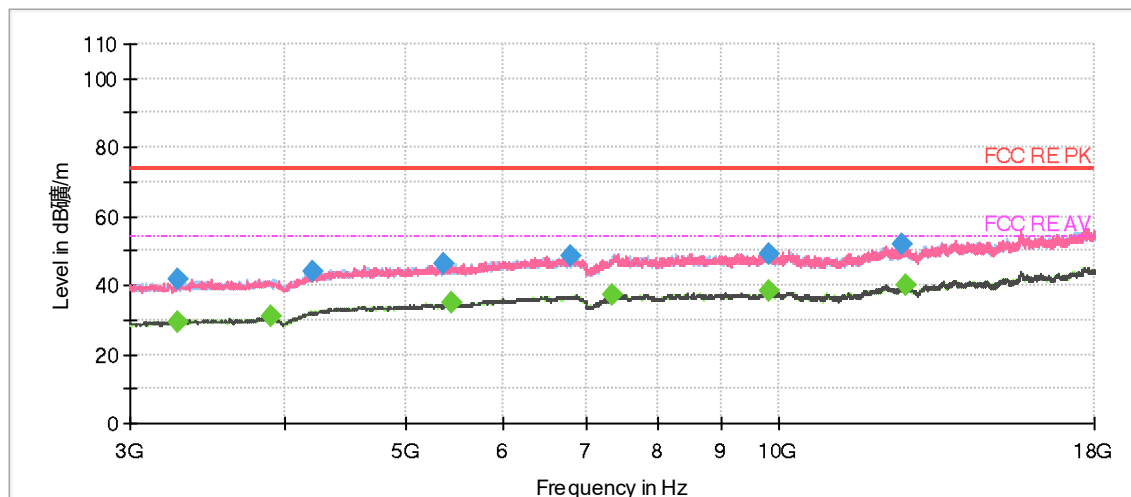
802.11g CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

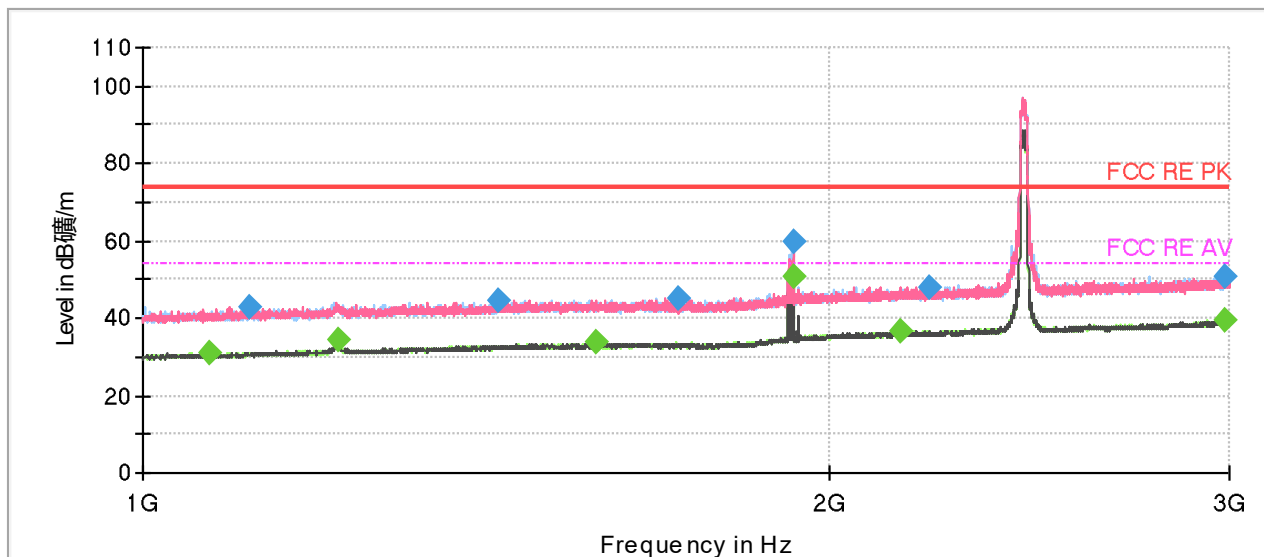
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1056.000000	---	30.28	54.00	23.72	500.0	200.0	H	0.0	-7
1200.750000	43.11	---	74.00	30.89	500.0	200.0	V	77.0	-6
1212.250000	---	32.87	54.00	21.13	500.0	100.0	V	283.0	-6
1424.750000	44.63	---	74.00	29.37	500.0	200.0	H	248.0	-4
1428.000000	---	33.00	54.00	21.00	500.0	200.0	V	31.0	-4
1633.000000	45.21	---	74.00	28.79	500.0	100.0	H	146.0	-3
1673.000000	---	33.85	54.00	20.15	500.0	200.0	V	349.0	-2
2072.750000	47.16	---	74.00	26.84	500.0	200.0	V	143.0	0
2073.750000	---	36.18	54.00	17.82	500.0	200.0	V	114.0	0
2502.000000	50.06	---	74.00	23.94	500.0	200.0	H	0.0	1
2975.500000	50.96	---	74.00	23.04	500.0	100.0	H	331.0	3
2982.000000	---	39.46	54.00	14.54	500.0	200.0	H	303.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3273.750000	41.94	---	74.00	32.06	500.0	200.0	H	317.0	-6
3283.125000	---	29.08	54.00	24.92	500.0	200.0	V	222.0	-6
3896.250000	---	30.78	54.00	23.22	500.0	100.0	V	338.0	-5
4216.875000	43.94	---	74.00	30.06	500.0	200.0	V	0.0	-3
5371.875000	46.25	---	74.00	27.75	500.0	100.0	V	265.0	-1
5445.000000	---	34.87	54.00	19.13	500.0	200.0	H	74.0	0
6798.750000	48.79	---	74.00	25.21	500.0	200.0	V	121.0	1
7344.375000	---	37.11	54.00	16.89	500.0	200.0	V	303.0	2
9819.375000	49.35	---	74.00	24.65	500.0	200.0	V	212.0	3
9819.375000	---	38.18	54.00	15.82	500.0	200.0	H	136.0	3
12585.000000	51.81	---	74.00	22.19	500.0	200.0	H	186.0	5
12691.875000	---	40.09	54.00	13.91	500.0	200.0	V	81.0	5

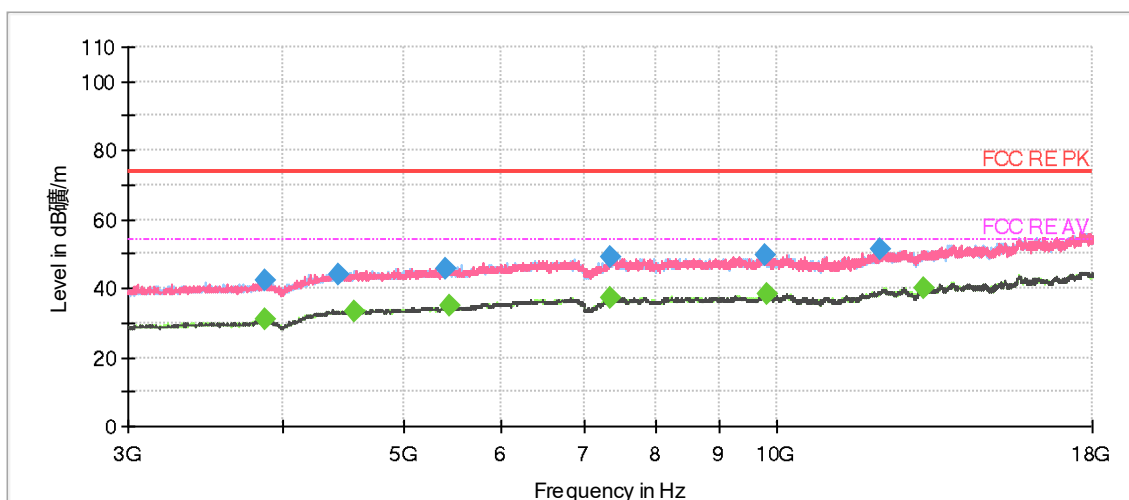
802.11g CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

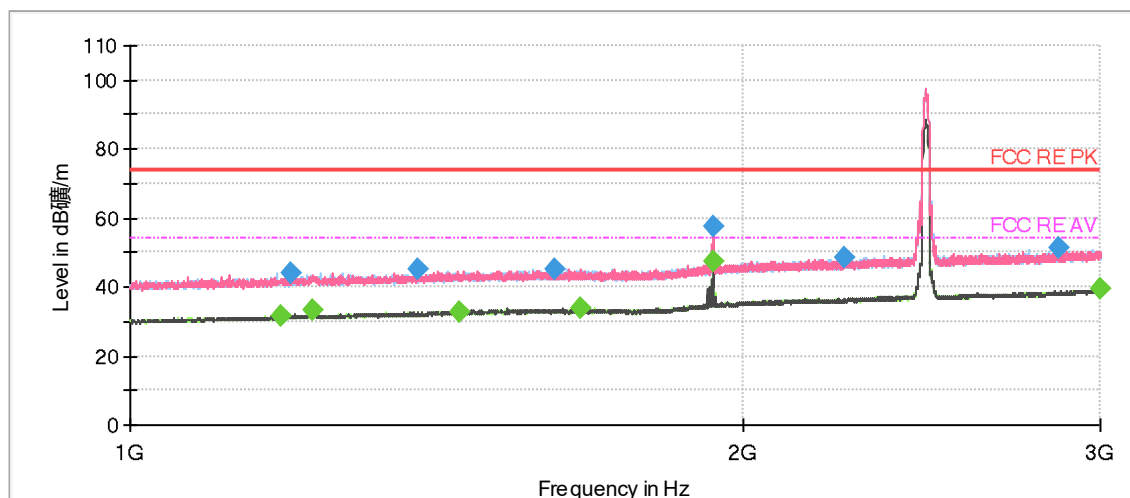
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1070.500000	---	30.85	54.00	23.15	500.0	200.0	V	0.0	-7
1113.500000	43.04	---	74.00	30.96	500.0	100.0	H	320.0	-7
1217.500000	---	34.14	54.00	19.86	500.0	200.0	V	283.0	-6
1433.750000	44.39	---	74.00	29.61	500.0	200.0	H	143.0	-4
1581.000000	---	33.69	54.00	20.31	500.0	200.0	V	0.0	-3
1717.000000	45.15	---	74.00	28.85	500.0	200.0	V	311.0	-2
1930.000000	59.82	---	74.00	14.18	500.0	100.0	V	339.0	0
1930.250000	---	50.79	54.00	3.21	500.0	200.0	V	339.0	0
2149.500000	---	36.89	54.00	17.11	500.0	200.0	V	0.0	0
2213.000000	48.09	---	74.00	25.91	500.0	200.0	H	264.0	0
2987.250000	50.58	---	74.00	23.42	500.0	100.0	V	162.0	3
2989.750000	---	39.55	54.00	14.45	500.0	200.0	H	180.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3868.125000	---	30.90	54.00	23.10	500.0	200.0	H	0.0	-5
3873.750000	42.21	---	74.00	31.79	500.0	200.0	H	229.0	-5
4441.875000	43.90	---	74.00	30.10	500.0	200.0	H	351.0	-2
4575.000000	---	33.17	54.00	20.83	500.0	100.0	H	143.0	-2
5405.625000	45.94	---	74.00	28.06	500.0	200.0	H	300.0	0
5450.625000	---	34.99	54.00	19.01	500.0	100.0	V	300.0	0
7344.375000	49.03	---	74.00	24.97	500.0	200.0	H	148.0	2
7344.375000	---	37.36	54.00	16.64	500.0	200.0	H	148.0	2
9806.250000	49.87	---	74.00	24.13	500.0	100.0	V	330.0	3
9840.000000	---	38.57	54.00	15.43	500.0	100.0	H	235.0	3
12144.375000	51.31	---	74.00	22.69	500.0	100.0	V	0.0	4
13143.750000	---	40.10	54.00	13.90	500.0	100.0	V	156.0	5

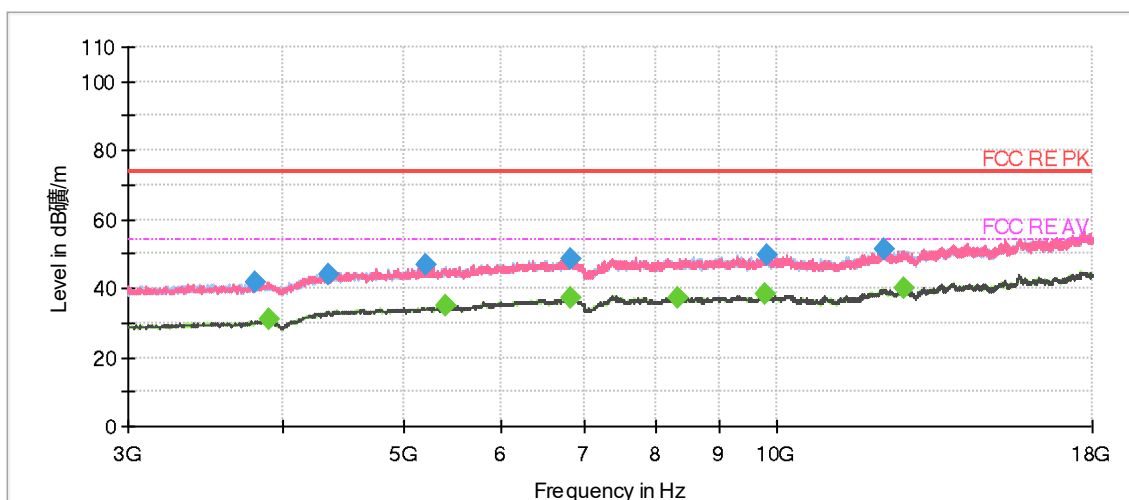
802.11g CH11



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

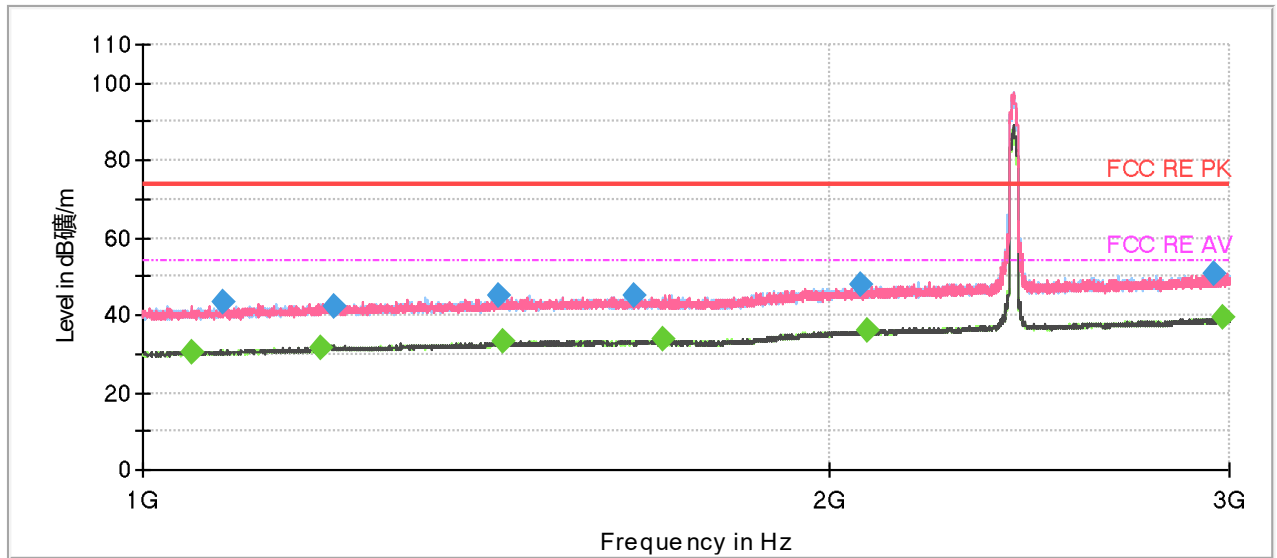
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1187.000000	---	31.71	54.00	22.29	500.0	100.0	H	264.0	-6
1198.250000	44.11	---	74.00	29.89	500.0	200.0	V	221.0	-6
1229.250000	---	33.01	54.00	20.99	500.0	100.0	H	282.0	-6
1386.500000	44.87	---	74.00	29.13	500.0	200.0	H	236.0	-5
1452.500000	---	32.95	54.00	21.05	500.0	200.0	H	236.0	-4
1618.750000	45.28	---	74.00	28.72	500.0	200.0	V	286.0	-3
1667.000000	---	33.71	54.00	20.29	500.0	200.0	H	97.0	-2
1936.250000	57.31	---	74.00	16.69	500.0	100.0	V	320.0	0
1936.250000	---	47.23	54.00	6.77	500.0	100.0	V	320.0	0
2247.500000	48.40	---	74.00	25.60	500.0	100.0	H	142.0	1
2863.000000	51.30	---	74.00	22.70	500.0	200.0	H	0.0	3
2999.250000	---	39.44	54.00	14.56	500.0	100.0	H	350.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3802.500000	41.86	---	74.00	32.14	500.0	100.0	V	289.0	-5
3901.875000	---	30.97	54.00	23.03	500.0	200.0	V	0.0	-5
4361.250000	44.01	---	74.00	29.99	500.0	200.0	H	0.0	-2
5212.500000	46.88	---	74.00	27.12	500.0	100.0	H	203.0	-1
5403.750000	---	34.73	54.00	19.27	500.0	100.0	V	309.0	0
6821.250000	48.42	---	74.00	25.58	500.0	200.0	V	102.0	1
6825.000000	---	37.17	54.00	16.83	500.0	100.0	H	2.0	1
8334.375000	---	37.23	54.00	16.77	500.0	100.0	V	178.0	3
9795.000000	---	38.24	54.00	15.76	500.0	200.0	H	208.0	3
9823.125000	49.64	---	74.00	24.36	500.0	200.0	H	116.0	3
12240.000000	51.49	---	74.00	22.51	500.0	200.0	H	208.0	5
12695.625000	---	40.09	54.00	13.91	500.0	200.0	V	143.0	5

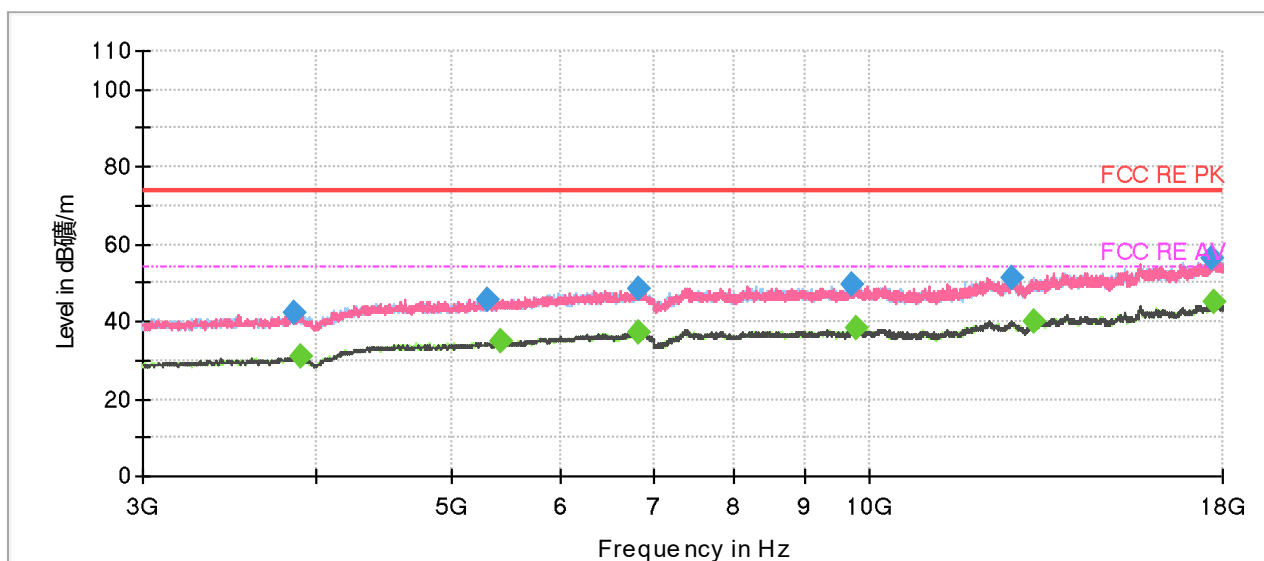
802.11n (HT20) CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

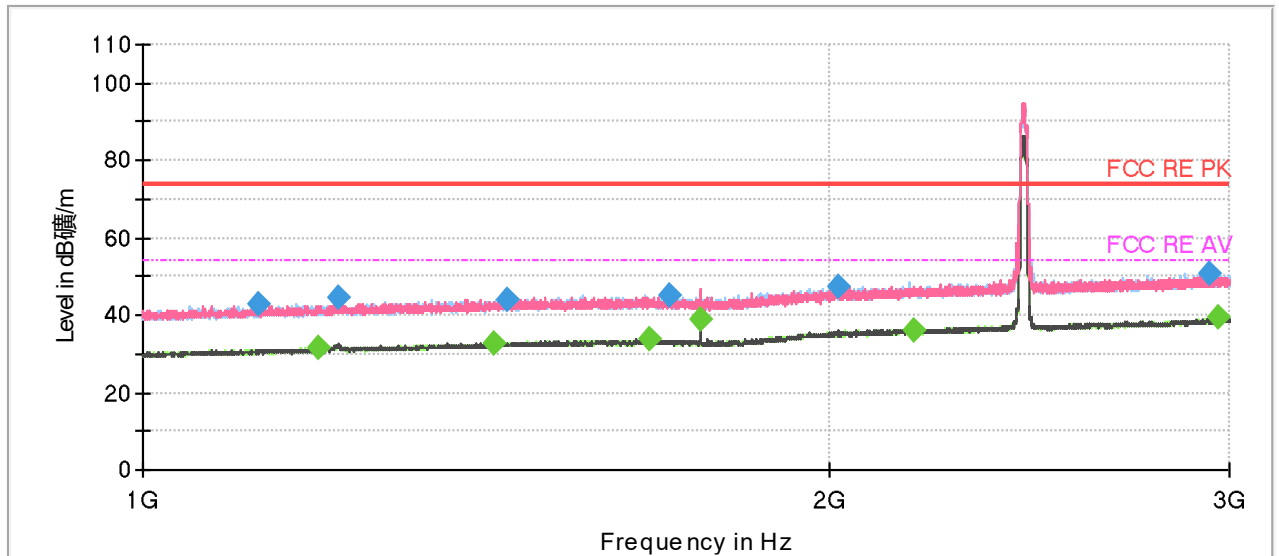
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1050.250000	---	30.31	54.00	23.69	500.0	200.0	H	359.0	-7
1084.250000	43.17	---	74.00	30.83	500.0	100.0	H	201.0	-7
1196.500000	---	31.66	54.00	22.34	500.0	200.0	H	98.0	-6
1213.250000	42.45	---	74.00	31.55	500.0	200.0	H	284.0	-6
1433.500000	45.18	---	74.00	28.82	500.0	200.0	H	0.0	-4
1438.750000	---	33.01	54.00	20.99	500.0	200.0	H	220.0	-4
1644.250000	45.28	---	74.00	28.72	500.0	100.0	H	303.0	-3
1692.250000	---	33.60	54.00	20.40	500.0	200.0	H	172.0	-2
2067.500000	47.83	---	74.00	26.17	500.0	200.0	H	359.0	0
2077.750000	---	35.91	54.00	18.09	500.0	200.0	H	352.0	0
2954.000000	50.79	---	74.00	23.21	500.0	100.0	V	76.0	3
2982.500000	---	39.42	54.00	14.58	500.0	200.0	H	324.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3860.625000	42.08	---	74.00	31.92	500.0	200.0	H	72.0	-5
3890.625000	---	30.87	54.00	23.13	500.0	200.0	V	54.0	-5
5308.125000	45.60	---	74.00	28.40	500.0	200.0	V	265.0	-1
5441.250000	---	34.72	54.00	19.28	500.0	100.0	V	64.0	0
6819.375000	48.34	---	74.00	25.66	500.0	200.0	V	245.0	1
6823.125000	---	37.17	54.00	16.83	500.0	200.0	V	295.0	1
9714.375000	49.83	---	74.00	24.17	500.0	100.0	H	194.0	3
9795.000000	---	38.23	54.00	15.77	500.0	200.0	H	244.0	3
12676.875000	51.52	---	74.00	22.48	500.0	100.0	H	92.0	5
13151.250000	---	40.02	54.00	13.98	500.0	200.0	V	0.0	5
17681.250000	56.26	---	74.00	17.74	500.0	200.0	V	355.0	10
17767.500000	---	45.23	54.00	8.77	500.0	200.0	V	355.0	10

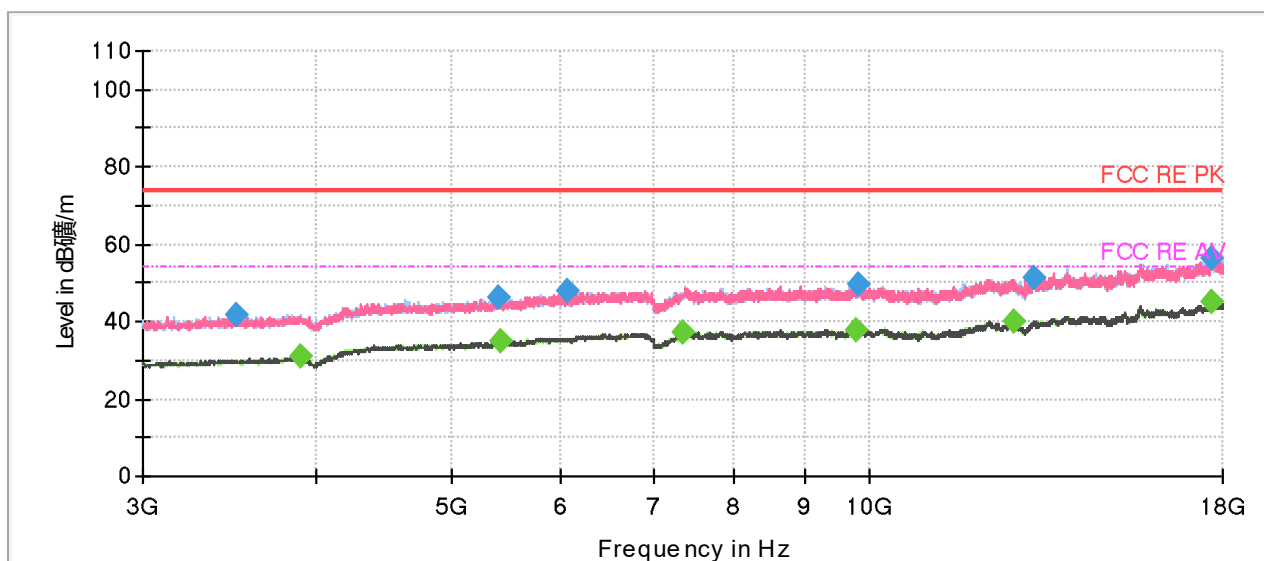
802.11n (HT20) CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

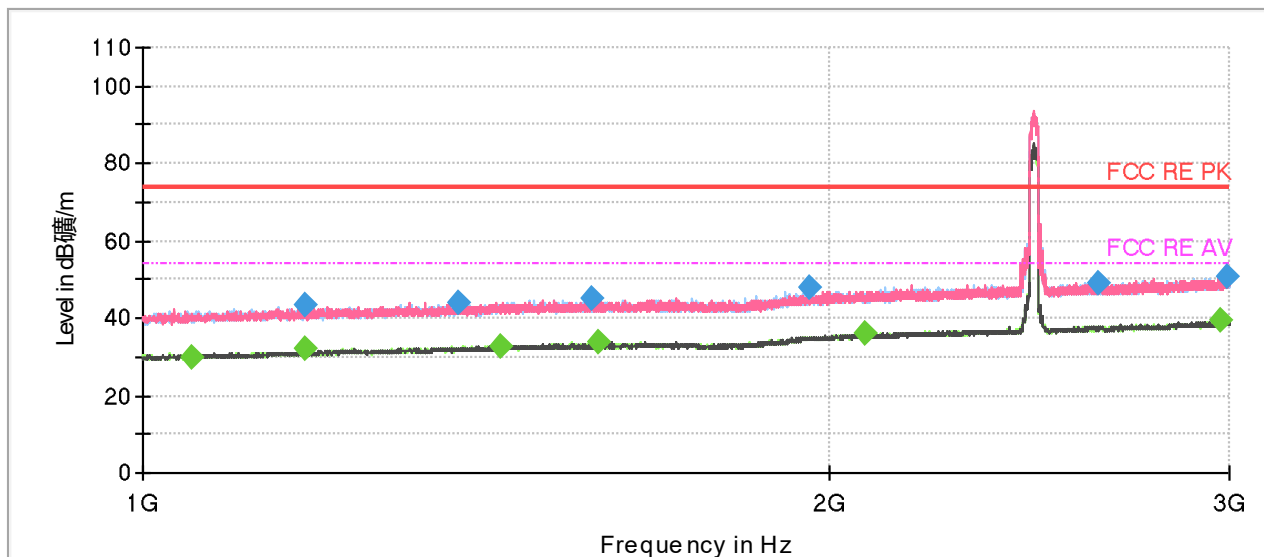
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1125.000000	42.94	---	74.00	31.06	500.0	200.0	V	310.0	-7
1195.500000	---	31.51	54.00	22.49	500.0	200.0	H	282.0	-6
1217.750000	44.34	---	74.00	29.66	500.0	100.0	V	338.0	-6
1426.750000	---	32.82	54.00	21.18	500.0	200.0	V	245.0	-4
1444.250000	44.12	---	74.00	29.88	500.0	200.0	V	106.0	-4
1669.750000	---	33.99	54.00	20.01	500.0	100.0	H	235.0	-2
1705.000000	45.23	---	74.00	28.77	500.0	200.0	H	102.0	-2
1756.750000	---	38.89	54.00	15.11	500.0	200.0	V	3.0	-2
2020.250000	47.43	---	74.00	26.57	500.0	200.0	H	83.0	0
2182.000000	---	36.19	54.00	17.81	500.0	100.0	H	46.0	0
2942.750000	50.89	---	74.00	23.11	500.0	200.0	V	310.0	3
2967.750000	---	39.26	54.00	14.74	500.0	200.0	H	0.0	3



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3506.250000	41.84	---	74.00	32.16	500.0	200.0	V	277.0	-6
3894.375000	---	30.82	54.00	23.18	500.0	200.0	V	287.0	-5
5401.875000	46.21	---	74.00	27.79	500.0	100.0	V	0.0	0
5435.625000	---	34.70	54.00	19.30	500.0	200.0	V	217.0	0
6075.000000	48.14	---	74.00	25.86	500.0	200.0	H	10.0	0
7342.500000	---	37.14	54.00	16.86	500.0	100.0	V	350.0	2
9798.750000	---	38.00	54.00	16.00	500.0	200.0	H	173.0	3
9838.125000	49.70	---	74.00	24.30	500.0	200.0	H	90.0	3
12718.125000	---	39.98	54.00	14.02	500.0	200.0	H	0.0	5
13156.875000	51.40	---	74.00	22.60	500.0	100.0	V	0.0	5
17653.125000	56.44	---	74.00	17.56	500.0	200.0	V	0.0	10
17694.375000	---	45.01	54.00	8.99	500.0	200.0	H	153.0	10

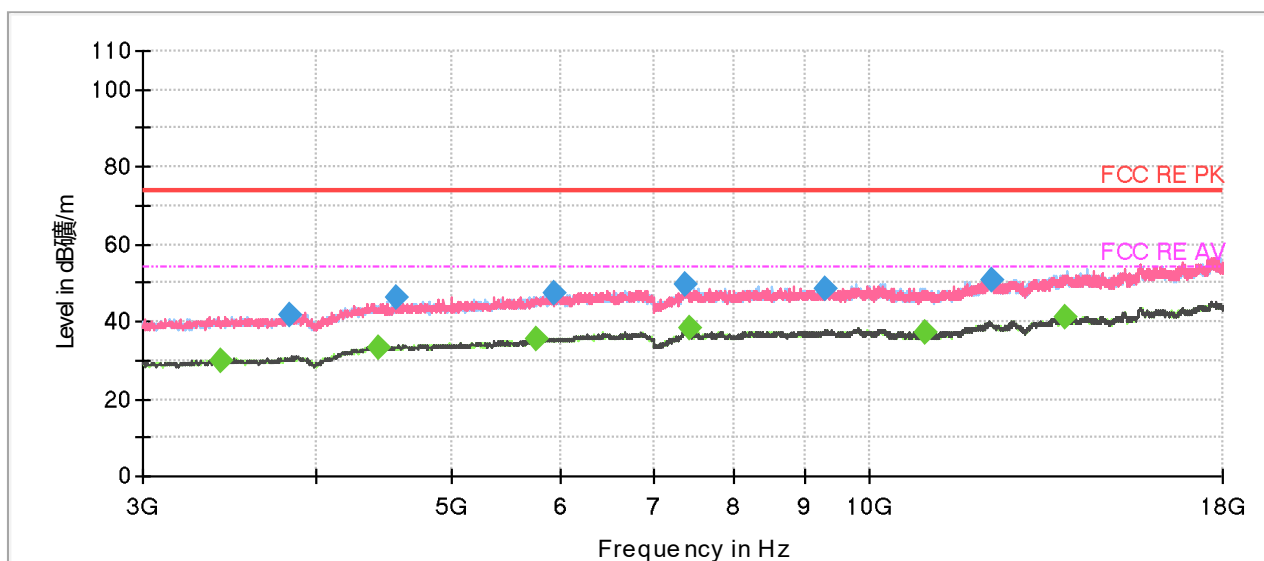
802.11n (HT20) CH11



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)
1051.750000	---	30.11	54.00	23.89	500.0	200.0	H	96.0	-7
1177.250000	43.23	---	74.00	30.77	500.0	200.0	H	55.0	-6
1179.000000	---	31.93	54.00	22.07	500.0	200.0	V	292.0	-6
1376.250000	44.14	---	74.00	29.86	500.0	200.0	V	283.0	-5
1437.000000	---	32.83	54.00	21.17	500.0	100.0	H	188.0	-4
1575.250000	45.36	---	74.00	28.64	500.0	200.0	H	188.0	-3
1584.000000	---	33.95	54.00	20.05	500.0	200.0	H	55.0	-3
1961.250000	47.82	---	74.00	26.18	500.0	100.0	V	144.0	0
2077.500000	---	35.84	54.00	18.16	500.0	200.0	V	341.0	0
2624.750000	49.05	---	74.00	24.95	500.0	200.0	V	322.0	2
2973.250000	---	39.45	54.00	14.55	500.0	100.0	V	228.0	3
2996.250000	50.77	---	74.00	23.23	500.0	200.0	V	0.0	3



Radiates Emission from 3GHz to 18GHz

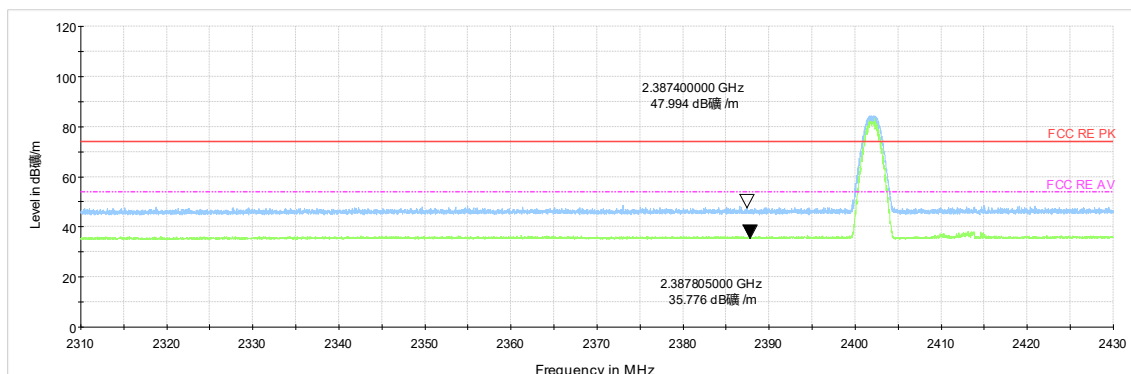
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3416.250000	---	29.95	54.00	24.05	500.0	100.0	V	173.0	-6
3823.125000	41.95	---	74.00	32.05	500.0	200.0	H	124.0	-5
4440.000000	---	33.09	54.00	20.91	500.0	200.0	H	13.0	-2
4571.250000	46.28	---	74.00	27.72	500.0	200.0	V	284.0	-2
5767.500000	---	35.72	54.00	18.28	500.0	100.0	H	174.0	0
5926.875000	47.34	---	74.00	26.66	500.0	200.0	V	153.0	0
7378.125000	49.90	---	74.00	24.10	500.0	200.0	H	104.0	2
7419.375000	---	38.26	54.00	15.74	500.0	200.0	H	205.0	2
9301.875000	48.24	---	74.00	25.76	500.0	100.0	H	0.0	3
10987.500000	---	37.11	54.00	16.89	500.0	200.0	H	286.0	2
12271.875000	51.04	---	74.00	22.96	500.0	200.0	H	0.0	5
13852.500000	---	41.07	54.00	12.93	500.0	200.0	V	22.0	6

1.2. Bluetooth LE

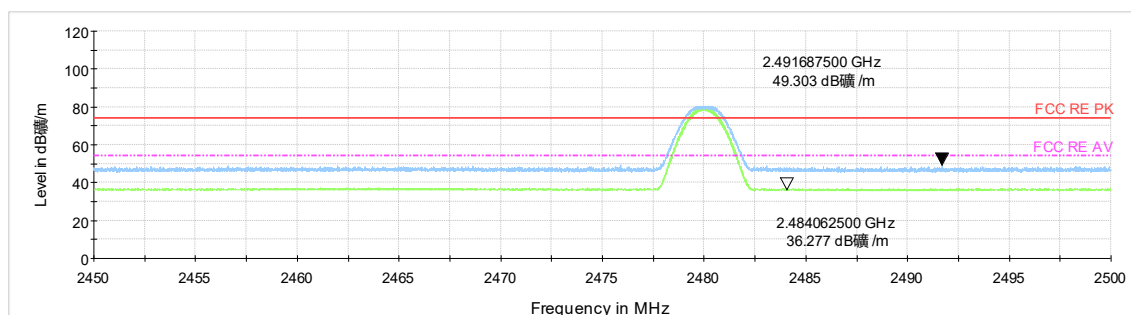
The following graphs display the maximum values of horizontal and vertical by software.
Blue trace uses the peak detection, Green trace uses the average detection.

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

The signal beyond the limit is carrier.



BANDEDGE_BLE CH0_Z_2.31-2.43GHz



BANDEDGE\BANDEDGE_BLE CH39_Z_2.45-2.5GHz

Result of RE

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

Remark:

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

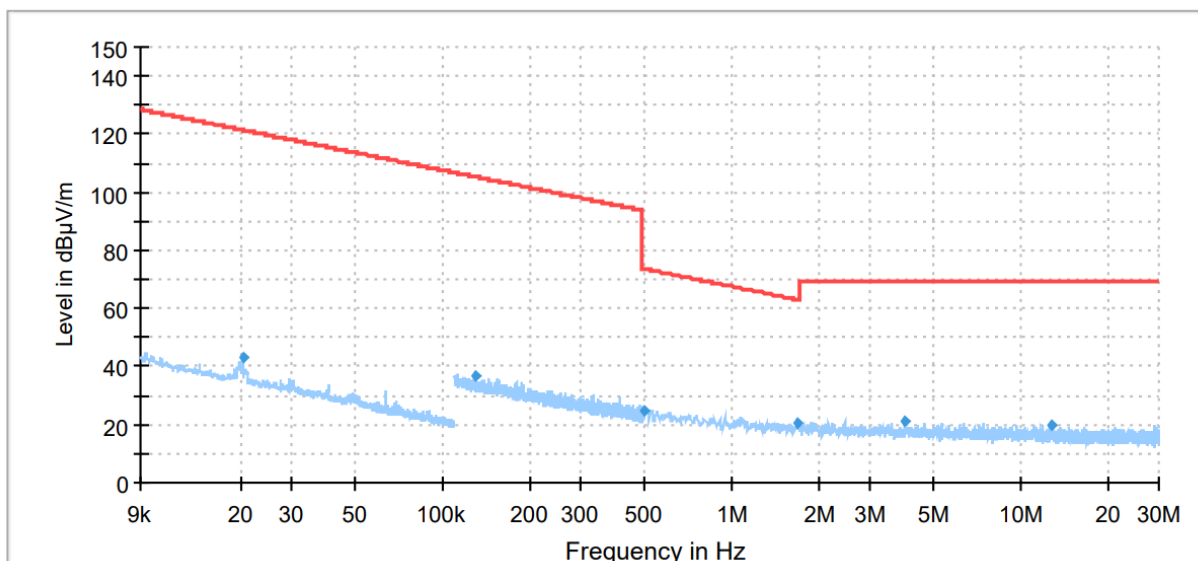
 QP Level @Spectrum Overview H
  QP Level @Spectrum Overview V
  QP Level @Final Results
  QP Limit

For above 1GHz

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

Continuous TX mode:

During the test, the Radiates Emission from 9kHz to 1GHz was performed in all modes with all channels. The test data of the worst-case condition was recorded in this report.

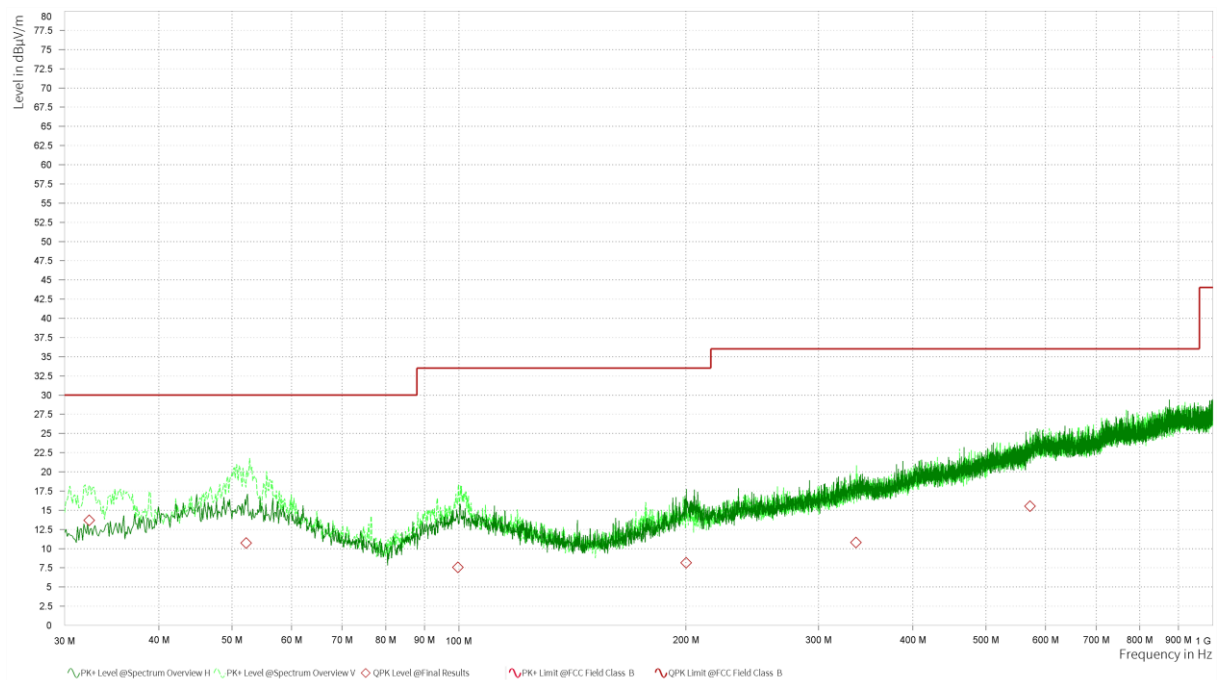


Radiates Emission from 9kHz to 30MHz

Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Azimuth (deg)	Corr. (dB/m)
0.02	43.18	121.44	78.26	500.00	181.00	17
0.13	36.59	105.38	68.79	150.00	208.00	17
0.49	24.95	73.74	48.78	150.00	307.00	17
1.68	20.32	63.08	42.76	150.00	356.00	17
3.99	21.16	69.50	48.34	150.00	3.00	17
12.80	19.96	69.50	49.54	150.00	1.00	17

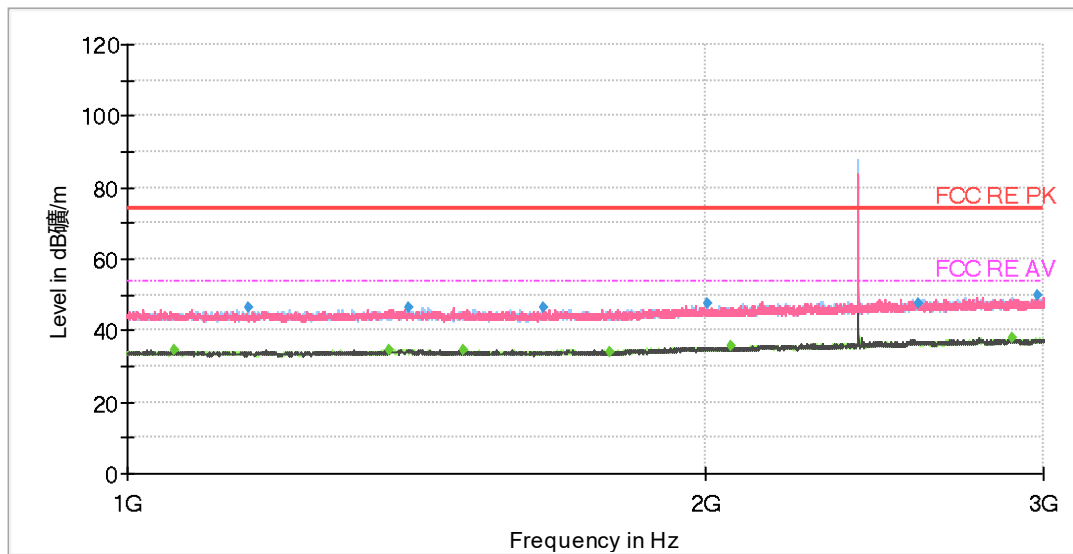
Spectrum Overview H/V



Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (m)	Polarization	Azimuth (deg)	Correct Factor (dB)
32.347	13.67	30.00	16.33	1.14	V	66.9	-11.57
52.231	10.70	30.00	19.30	1.79	V	228.9	-8.27
99.660	7.54	33.50	25.96	1.25	V	349.6	-9.70
200.104	8.12	33.50	25.38	1.79	H	284.2	-9.72
336.281	10.77	36.00	25.23	1.25	V	26.8	-6.07
571.993	15.51	36.00	20.49	1.17	V	275.5	-1.87

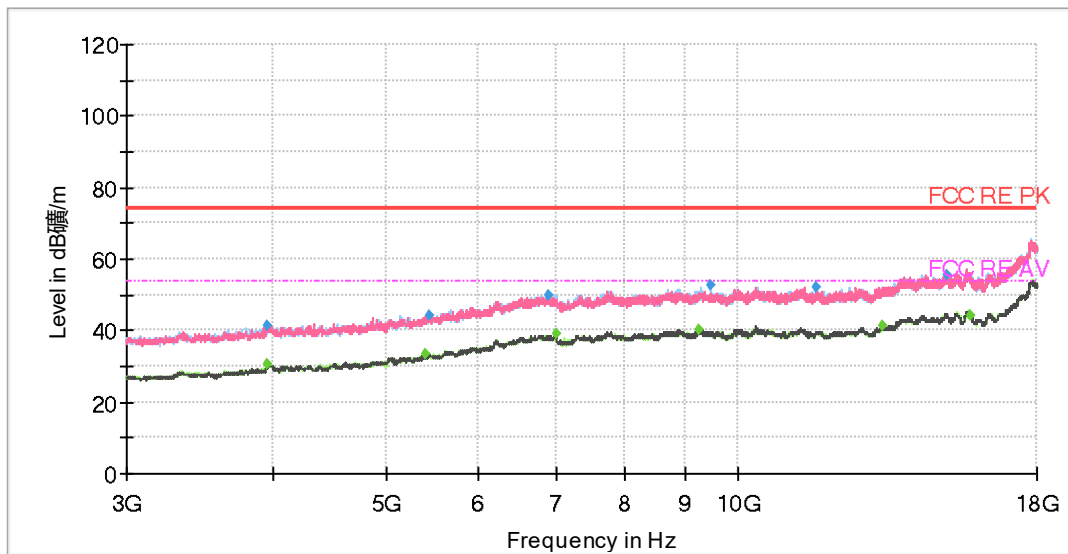
Bluetooth LE-Channel 0



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

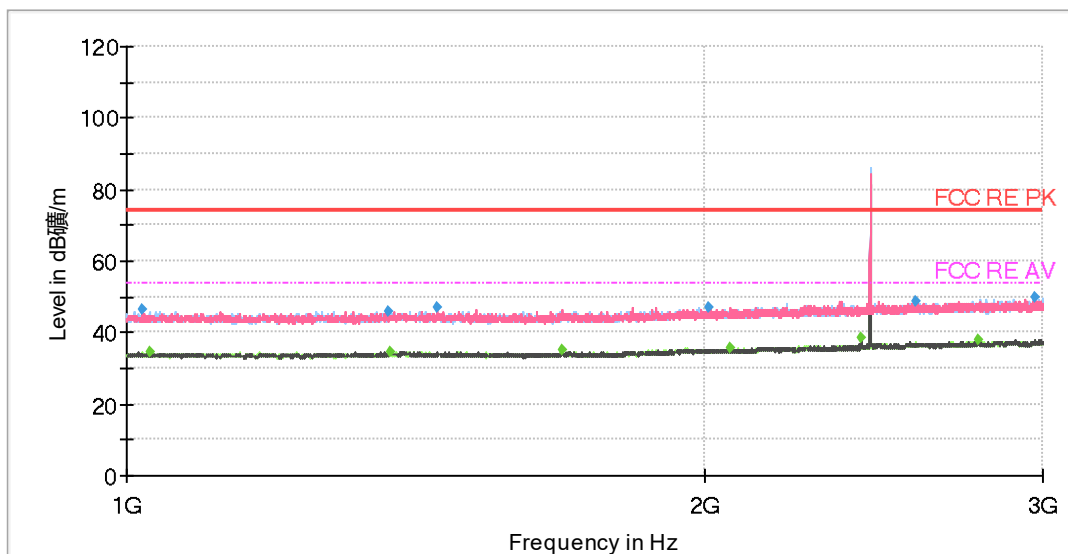
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1058.00	---	34.79	54.00	19.22	500.00	200.0	V	1.00	3
1155.75	46.14	---	74.00	27.86	500.00	100.0	H	313.00	3
1368.50	---	34.65	54.00	19.35	500.00	100.0	H	347.00	4
1402.25	46.57	---	74.00	27.43	500.00	100.0	H	0.00	5
1494.50	---	34.59	54.00	19.41	500.00	200.0	V	153.00	4
1647.75	46.66	---	74.00	27.34	500.00	100.0	H	353.00	5
1782.25	---	34.15	54.00	19.85	500.00	100.0	H	57.00	5
2007.00	47.58	---	74.00	26.42	500.00	200.0	H	136.00	6
2062.50	---	35.67	54.00	18.33	500.00	100.0	V	207.00	6
2581.50	47.59	---	74.00	26.41	500.00	200.0	V	181.00	8
2891.75	---	37.75	54.00	16.25	500.00	100.0	H	224.00	8
2976.00	49.65	---	74.00	24.35	500.00	100.0	V	110.00	8



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)
3958.13	---	30.36	54.00	23.64	500.00	200.0	H	105.00	1
3960.00	41.56	---	74.00	32.44	500.00	200.0	H	0.00	1
5409.38	---	33.19	54.00	20.81	500.00	200.0	H	88.00	4
5435.63	44.30	---	74.00	29.70	500.00	100.0	V	43.00	4
6883.13	50.03	---	74.00	23.97	500.00	200.0	H	105.00	9
6995.63	---	38.84	54.00	15.16	500.00	100.0	H	351.00	9
9260.63	---	40.32	54.00	13.68	500.00	100.0	V	0.00	13
9478.13	52.88	---	74.00	21.12	500.00	100.0	H	0.00	13
11656.88	52.29	---	74.00	21.71	500.00	200.0	V	0.00	16
13305.00	---	41.20	54.00	12.80	500.00	100.0	H	358.00	17
15086.25	55.38	---	74.00	18.62	500.00	200.0	H	18.00	18
15815.63	---	44.04	54.00	9.96	500.00	200.0	H	347.00	16

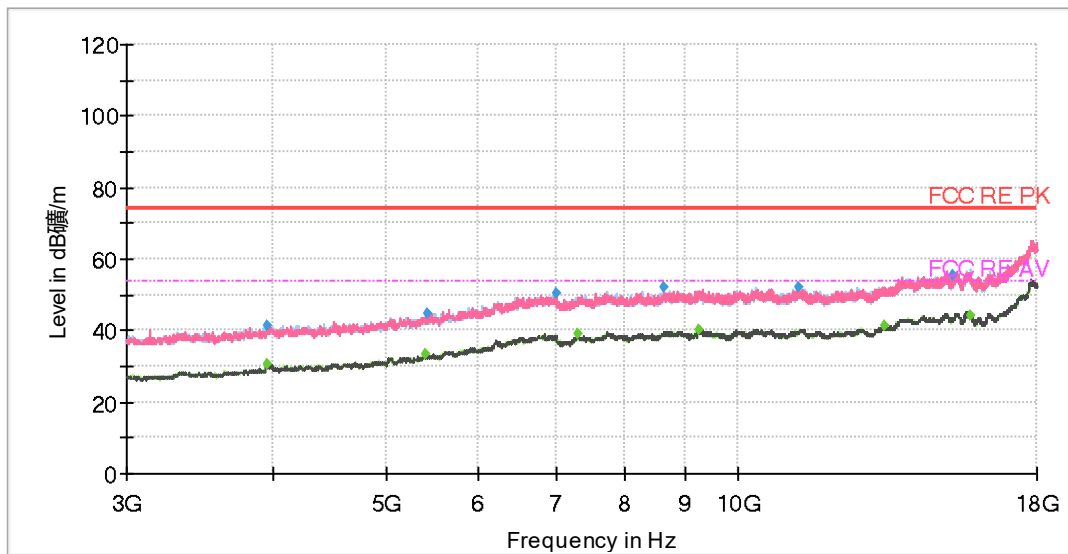
Bluetooth LE-Channel 19



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

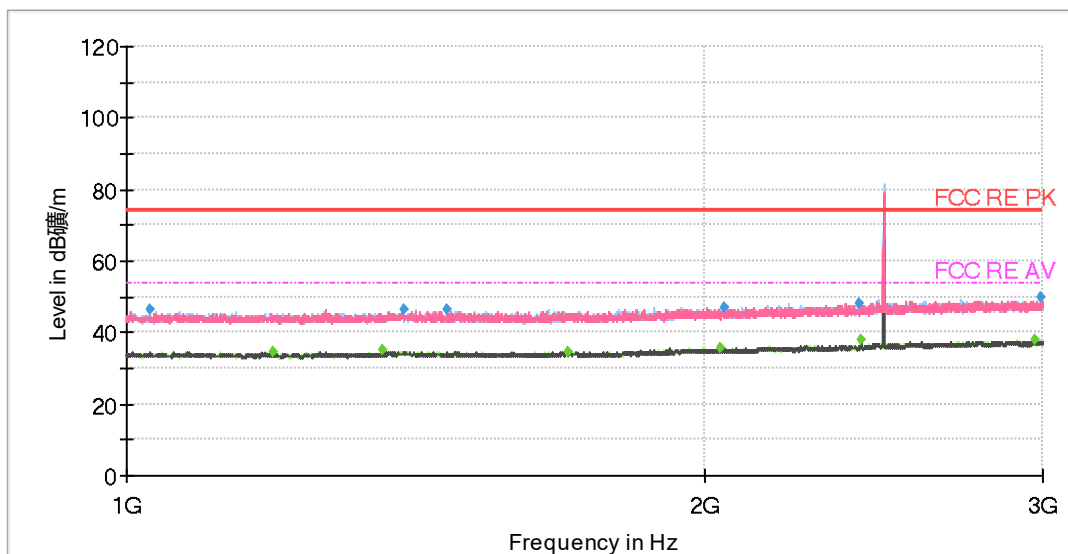
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1019.00	46.24	---	74.00	27.76	500.00	100.0	V	45.00	3
1028.25	---	34.37	54.00	19.63	500.00	200.0	V	357.00	3
1368.75	46.05	---	74.00	27.95	500.00	200.0	H	98.00	4
1371.75	---	34.76	54.00	19.24	500.00	100.0	V	3.00	4
1452.50	46.77	---	74.00	27.23	500.00	200.0	V	357.00	5
1686.00	---	34.89	54.00	19.11	500.00	100.0	V	78.00	5
2011.75	46.91	---	74.00	27.09	500.00	200.0	V	0.00	6
2062.75	---	35.53	54.00	18.47	500.00	100.0	H	0.00	6
2410.50	---	38.24	54.00	15.76	500.00	200.0	V	308.00	7
2577.75	48.45	---	74.00	25.55	500.00	100.0	V	236.00	8
2775.75	---	37.91	54.00	16.09	500.00	100.0	H	56.00	8
2971.75	49.86	---	74.00	24.14	500.00	200.0	V	317.00	8



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)
3956.25	41.47	---	74.00	32.53	500.00	100.0	H	316.00	1
3960.00	---	30.55	54.00	23.45	500.00	100.0	H	68.00	1
5392.50	---	33.30	54.00	20.70	500.00	100.0	H	306.00	4
5422.50	44.75	---	74.00	29.25	500.00	100.0	H	264.00	4
6997.50	50.36	---	74.00	23.64	500.00	200.0	H	0.00	9
7299.38	---	38.93	54.00	15.07	500.00	200.0	V	162.00	11
8623.13	51.92	---	74.00	22.08	500.00	200.0	V	351.00	12
9268.13	---	40.31	54.00	13.69	500.00	100.0	H	250.00	13
11253.75	52.32	---	74.00	21.68	500.00	200.0	V	308.00	16
13325.63	---	41.14	54.00	12.86	500.00	100.0	H	346.00	17
15253.13	55.46	---	74.00	18.54	500.00	100.0	H	353.00	17
15819.38	---	44.05	54.00	9.95	500.00	100.0	H	326.00	16

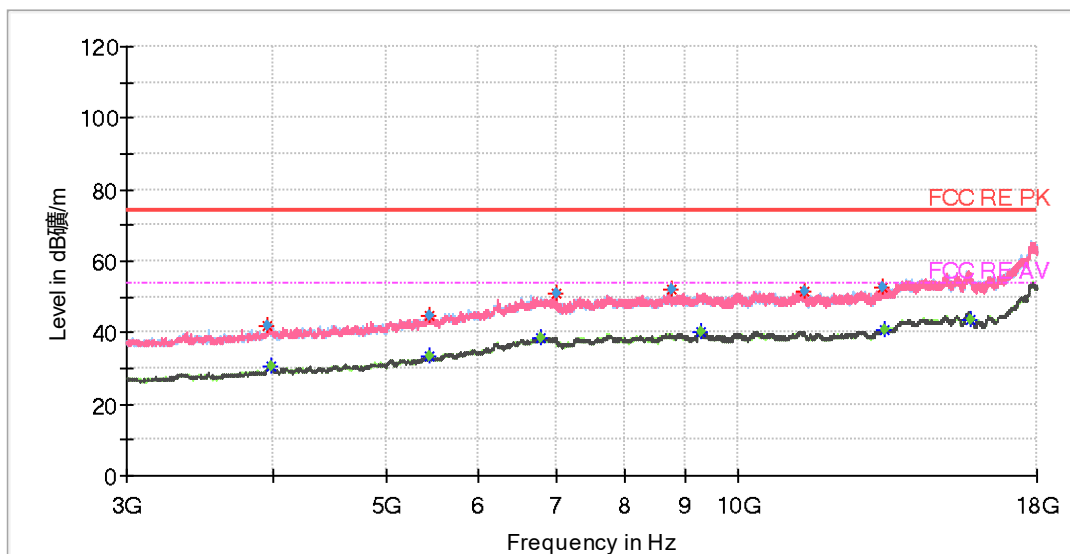
Bluetooth LE-Channel 39



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1029.00	46.42	---	74.00	27.58	500.00	200.0	H	276.00	3
1192.75	---	34.47	54.00	19.53	500.00	200.0	H	0.00	4
1359.00	---	34.87	54.00	19.13	500.00	200.0	V	306.00	4
1393.25	46.63	---	74.00	27.37	500.00	200.0	H	0.00	5
1468.50	46.44	---	74.00	27.56	500.00	200.0	V	344.00	4
1696.75	---	34.73	54.00	19.27	500.00	200.0	H	23.00	5
2039.25	---	35.69	54.00	18.31	500.00	200.0	H	13.00	6
2049.50	46.88	---	74.00	27.12	500.00	200.0	H	17.00	6
2405.75	47.89	---	74.00	26.11	500.00	100.0	V	13.00	7
2414.00	---	38.02	54.00	15.98	500.00	100.0	V	236.00	7
2971.25	---	37.78	54.00	16.22	500.00	100.0	H	293.00	8
2991.00	49.81	---	74.00	24.19	500.00	100.0	H	72.00	9



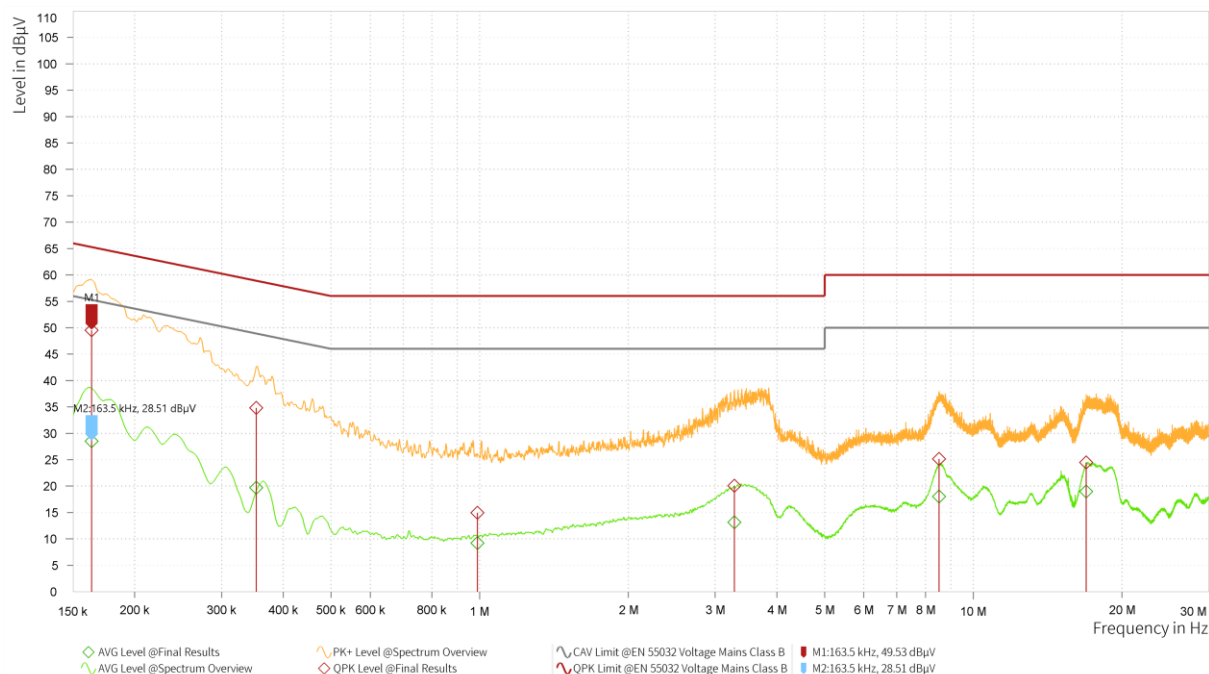
Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3956.25	41.79	---	74.00	32.21	500.00	200.0	V	194.00	1
3980.63	---	30.59	54.00	23.41	500.00	200.0	H	163.00	1
5439.38	44.65	---	74.00	29.35	500.00	100.0	H	344.00	4
5450.63	---	33.38	54.00	20.62	500.00	200.0	V	342.00	4
6772.50	---	38.62	54.00	15.38	500.00	100.0	V	207.00	9
6997.50	50.79	---	74.00	23.22	500.00	200.0	H	2.00	9
8769.38	51.86	---	74.00	22.14	500.00	100.0	H	27.00	13
9286.88	---	40.04	54.00	13.96	500.00	100.0	H	164.00	13
11379.38	51.27	---	74.00	22.73	500.00	100.0	H	286.00	16
13284.38	52.68	---	74.00	21.32	500.00	100.0	H	348.00	17
13316.25	---	40.93	54.00	13.07	500.00	100.0	H	356.00	17
15810.00	---	43.87	54.00	10.13	500.00	200.0	H	8.00	16

2. Conducted Emission

2.1. Wi-Fi 2.4GHz

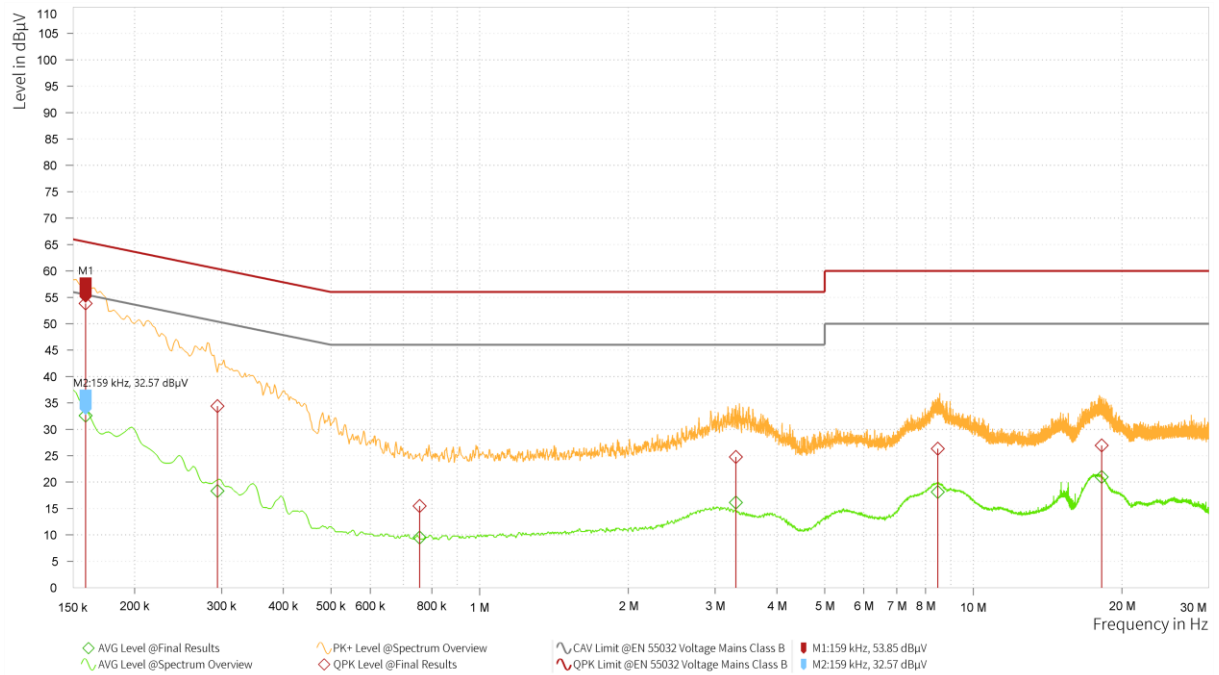
During the test, the Conducted Emission was performed in all modes with all channel. The test data of the worst-case condition was recorded in this report.



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]
0.164	49.53	65.28	15.75	28.51	55.28	26.77	20.89	L1	9.000	1.000
0.353	34.84	58.90	24.07	19.68	48.90	29.23	20.92	L1	9.000	1.000
0.989	14.93	56.00	41.07	9.18	46.00	36.82	20.17	L1	9.000	1.000
3.280	20.07	56.00	35.93	13.13	46.00	32.87	19.46	L1	9.000	1.000
8.520	25.13	60.00	34.87	18.02	50.00	31.98	19.41	L1	9.000	1.000
16.928	24.47	60.00	35.53	18.97	50.00	31.03	19.56	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz



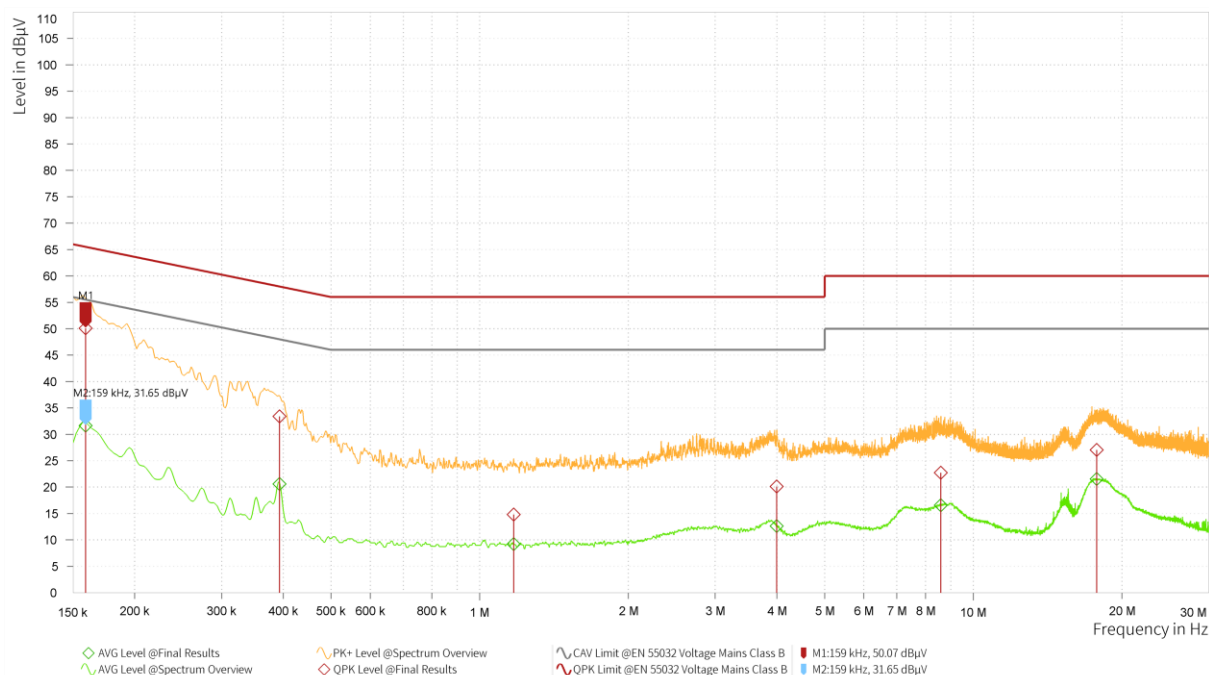
Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.159	53.85	65.52	11.67	32.57	55.52	22.94	20.91	N	9.000	1.000
0.294	34.40	60.41	26.01	18.31	50.41	32.10	20.96	N	9.000	1.000
0.755	15.48	56.00	40.52	9.48	46.00	36.52	20.38	N	9.000	1.000
3.305	24.75	56.00	31.25	16.13	46.00	29.87	19.47	N	9.000	1.000
8.473	26.33	60.00	33.67	18.14	50.00	31.86	19.42	N	9.000	1.000
18.204	26.95	60.00	33.05	20.98	50.00	29.02	19.65	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

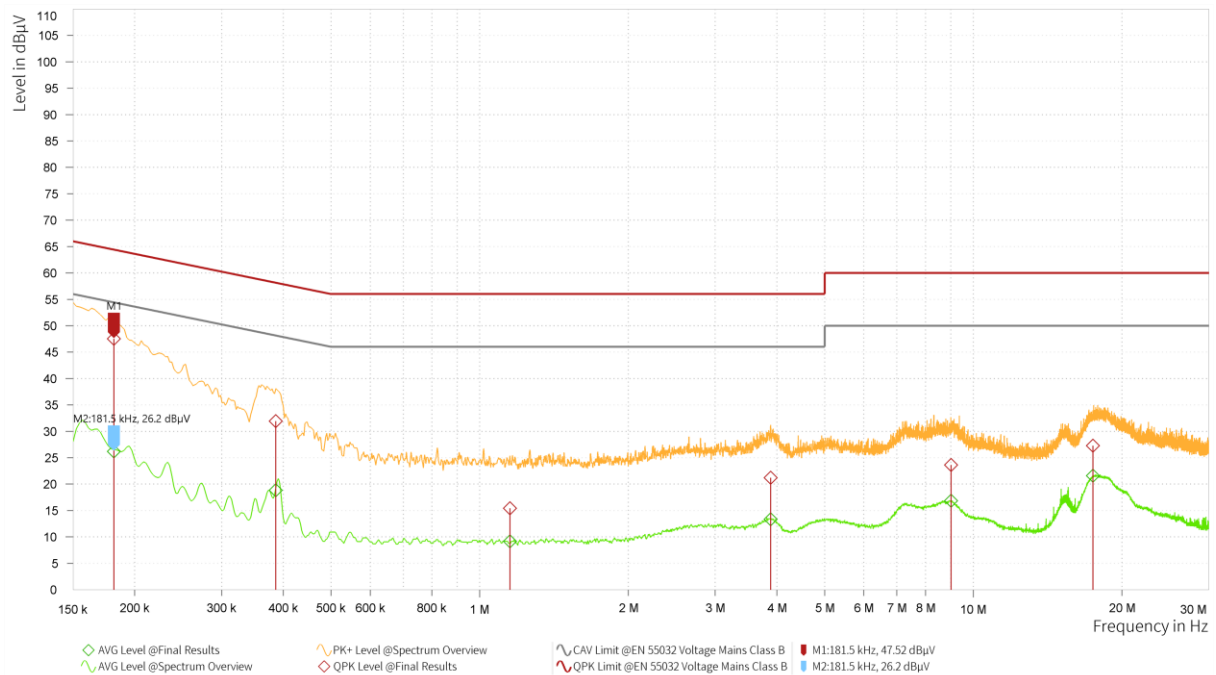
During the test, the Conducted Emission was performed in all modes with all channels. The test data of the worst-case condition was recorded in this report.



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]
0.159	50.07	65.52	15.45	31.65	55.52	23.87	20.90	L1	9.000	1.000
0.393	33.41	58.00	24.59	20.59	48.00	27.41	20.88	L1	9.000	1.000
1.172	14.81	56.00	41.19	9.22	46.00	36.78	20.04	L1	9.000	1.000
3.998	20.13	56.00	35.87	12.62	46.00	33.38	19.43	L1	9.000	1.000
8.597	22.71	60.00	37.29	16.57	50.00	33.43	19.41	L1	9.000	1.000
17.792	27.04	60.00	32.96	21.55	50.00	28.45	19.59	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]
0.182	47.52	64.42	16.90	26.20	54.42	28.22	21.04	N	9.000	1.000
0.386	31.94	58.14	26.21	18.82	48.14	29.33	20.90	N	9.000	1.000
1.151	15.43	56.00	40.57	9.14	46.00	36.86	20.06	N	9.000	1.000
3.885	21.18	56.00	34.82	13.35	46.00	32.65	19.44	N	9.000	1.000
9.017	23.63	60.00	36.37	16.86	50.00	33.14	19.42	N	9.000	1.000
17.482	27.26	60.00	32.74	21.59	50.00	28.41	19.62	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz