

ANNEX A: Test Result

1. Unwanted Emission

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

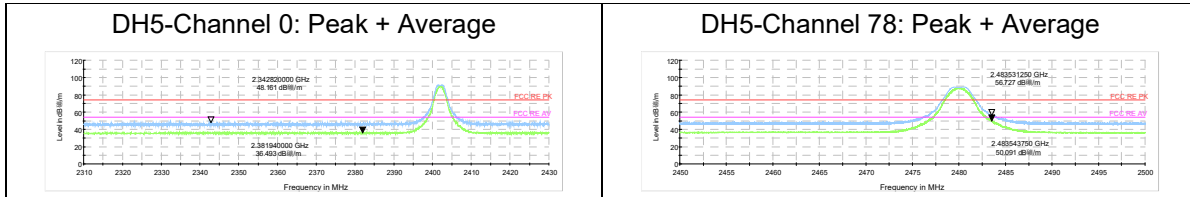
Bluetooth	Y axis
Bluetooth LE	Y axis

1.1. Bluetooth

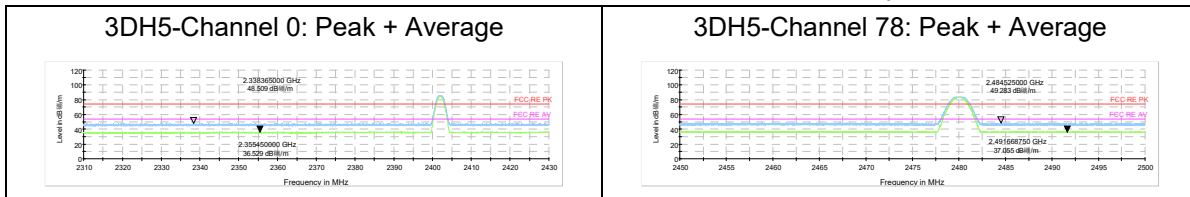
The following graphs display the maximum values of horizontal and vertical by software. Blue trace uses the peak detection, Green trace uses the average detection.

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

The signal beyond the limit is carrier.



The bandage was performed in all EDR mode (2DH5 and 3DH5), 3DH5 was selected as the worse condition. The test data of the worst-case condition was recorded in this report.



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. The following graphs display the maximum values of horizontal and vertical by software.
4. For below 1GHz

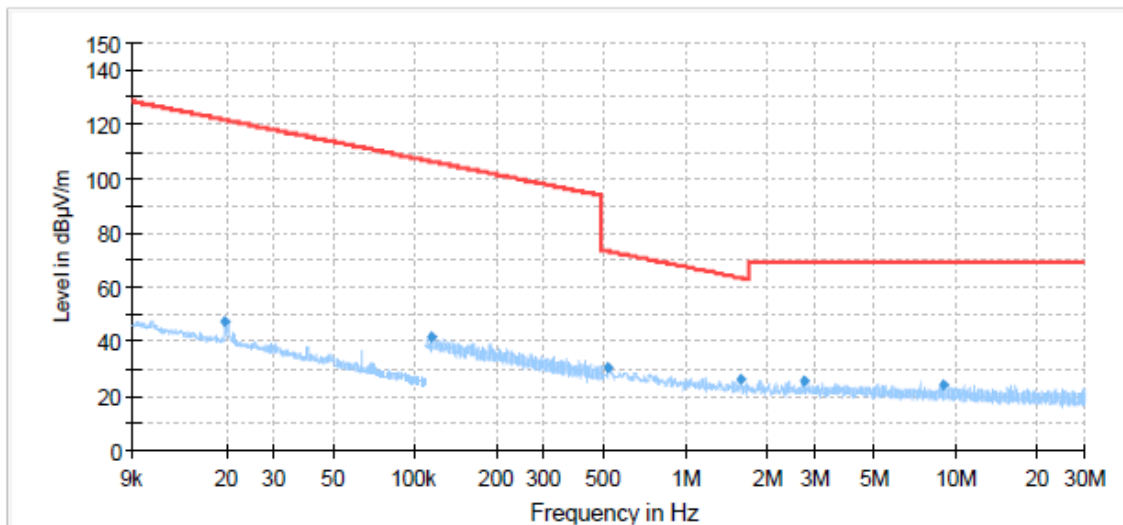
~ QP Level @Spectrum Overview H
 ~ QP Level @Spectrum Overview V
 ◆ QP Level @Final Results
 — QP Limit

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

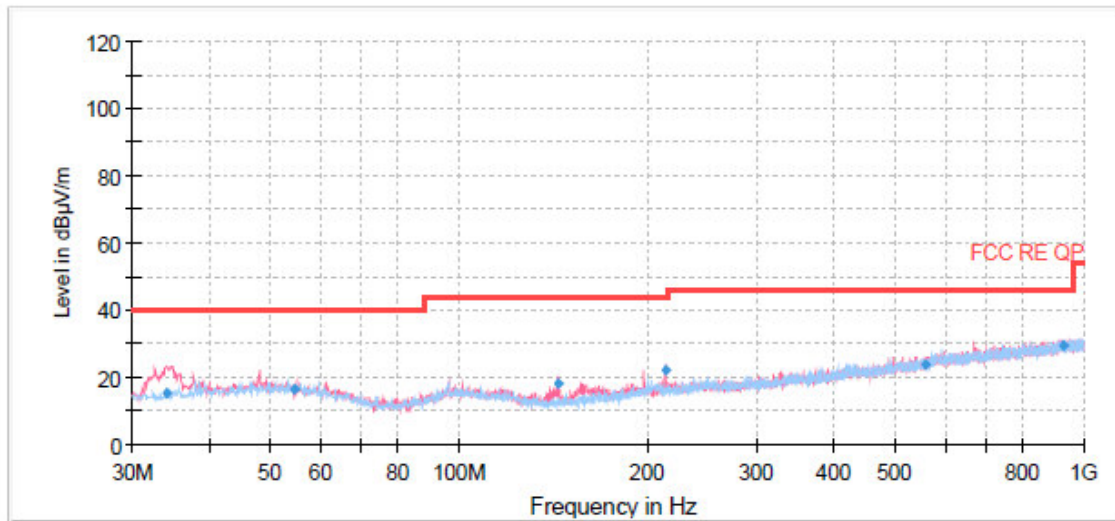
Continuous TX mode:

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

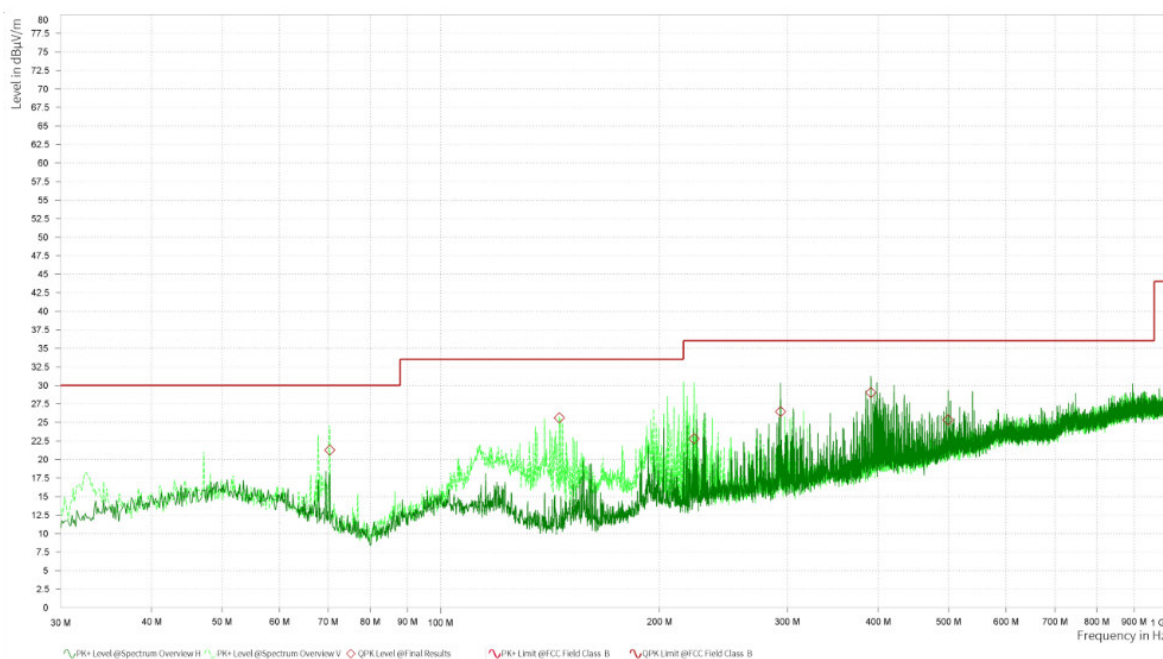
1#



Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
34.17	15.11	40.00	24.89	101.0	V	275.00	18
54.50	16.40	40.00	23.60	225.0	V	224.00	20
144.02	18.01	43.50	25.49	101.0	V	270.00	15
214.50	22.08	43.50	21.42	198.0	V	174.00	18
557.40	23.80	46.00	22.20	101.0	V	38.00	26
925.83	29.22	46.00	16.78	101.0	V	102.00	32

2#

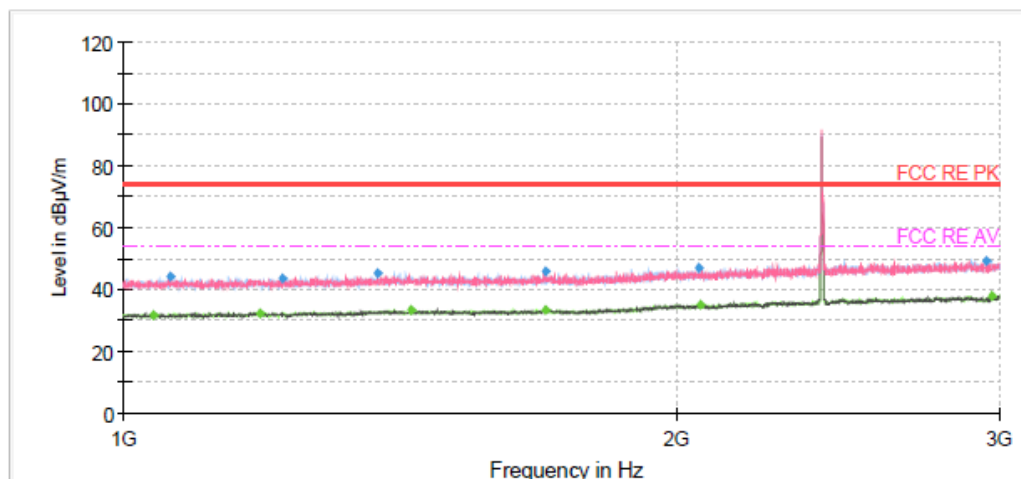


Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (m)	Polarization	Azimuth (deg)	Correct Factor (dB)
70.368	21.26	30.00	8.74	2.17	V	310.8	-12.41
145.644	25.60	33.50	7.90	1.25	V	294	-13.19
223.336	22.79	36.00	13.21	1.77	V	299.2	-9.43
293.714	26.44	36.00	9.56	1.92	H	112	-7.50
391.094	29.01	36.00	6.99	2.01	H	174.4	-5.08
499.104	25.31	36.00	10.69	1.85	H	78.6	-3.15

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)
2. Margin = Limit – Quasi-Peak

DH5-Channel 0

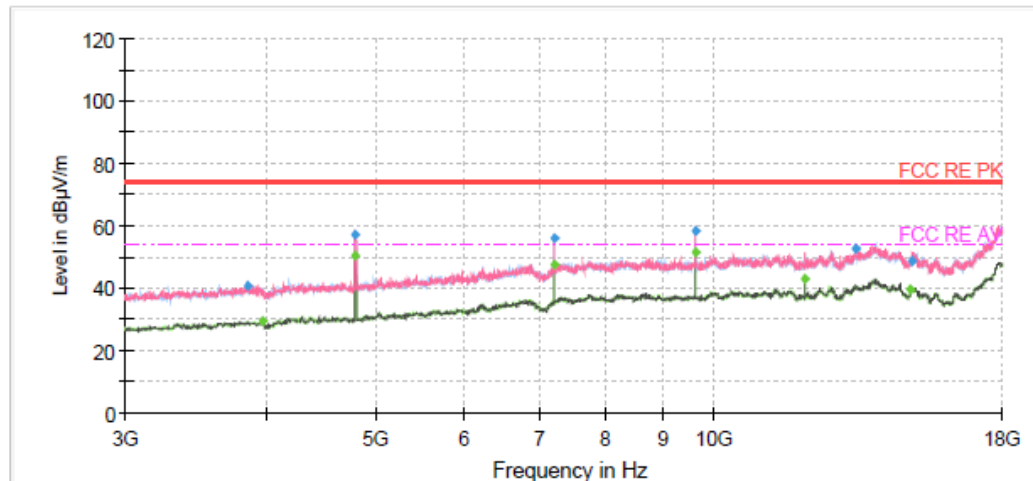


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1039.25	---	31.49	54.00	22.51	500.00	100.0	H	30.00	-5
1059.50	44.12	---	74.00	29.88	500.00	100.0	V	0.00	-5
1185.50	---	32.54	54.00	21.46	500.00	100.0	H	10.00	-4
1220.75	43.80	---	74.00	30.20	500.00	200.0	H	293.00	-4
1376.25	45.38	---	74.00	28.62	500.00	200.0	V	344.00	-3
1434.25	---	33.23	54.00	20.77	500.00	100.0	H	7.00	-3
1697.00	---	33.67	54.00	20.33	500.00	100.0	V	359.00	-2
1699.25	46.01	---	74.00	27.99	500.00	200.0	H	144.00	-2
2056.00	46.74	---	74.00	27.26	500.00	100.0	H	10.00	1
2064.25	---	35.13	54.00	18.87	500.00	100.0	V	326.00	1
2950.00	49.48	---	74.00	24.52	500.00	200.0	V	359.00	3
2971.25	---	37.83	54.00	16.17	500.00	100.0	V	333.00	4

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

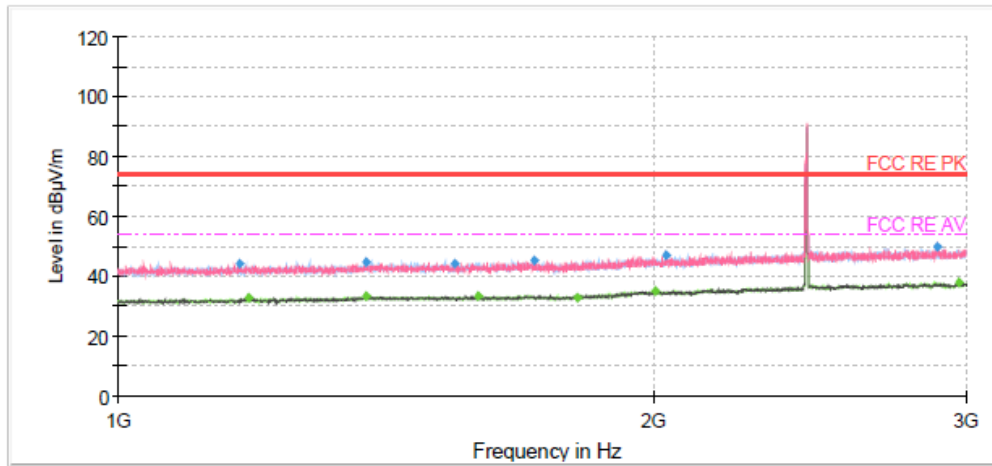


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3849.38	40.95	---	74.00	33.05	500.00	200.0	H	359.00	-4
3967.50	---	29.64	54.00	24.36	500.00	200.0	H	195.00	-4
4801.88	57.07	---	74.00	16.93	500.00	100.0	V	294.00	-2
4803.75	---	50.47	54.00	3.53	500.00	100.0	V	294.00	-2
7203.75	56.31	---	74.00	17.69	500.00	100.0	V	265.00	4
7207.50	---	47.64	54.00	6.36	500.00	100.0	V	265.00	4
9609.38	58.49	---	74.00	15.51	500.00	200.0	V	232.00	7
9609.38	---	51.27	54.00	2.73	500.00	200.0	V	232.00	7
12013.13	---	43.00	54.00	11.00	500.00	100.0	V	205.00	9
13344.38	52.62	---	74.00	21.38	500.00	100.0	H	8.00	11
14936.25	---	39.76	54.00	14.24	500.00	200.0	H	195.00	10
14956.88	48.64	---	74.00	25.36	500.00	200.0	H	149.00	10

Radiates Emission from 3GHz to 18GHz

DH5-Channel 39

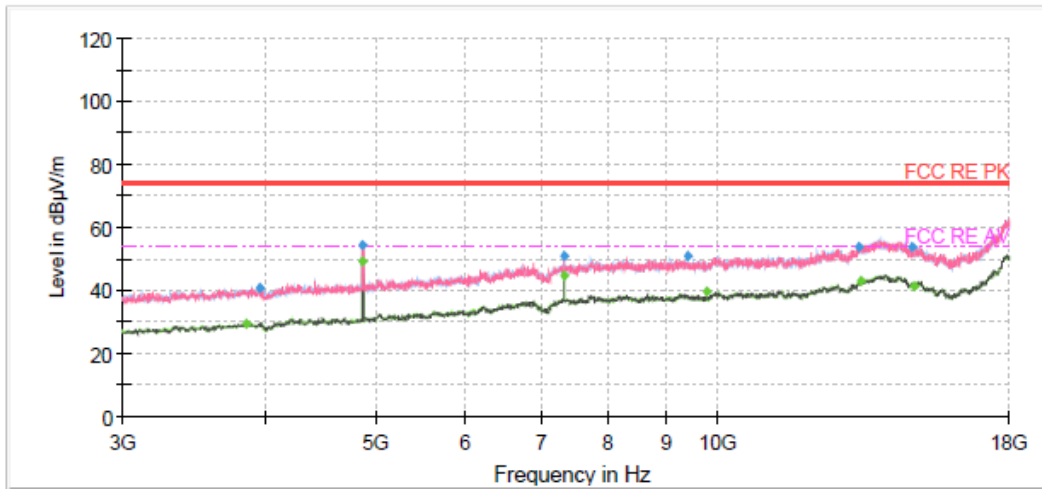


Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1170.50	43.91	---	74.00	30.09	500.00	100.0	H	0.00	-4
1182.50	---	32.55	54.00	21.45	500.00	100.0	H	62.00	-4
1378.25	44.71	---	74.00	29.29	500.00	200.0	H	0.00	-3
1378.75	---	33.19	54.00	20.81	500.00	100.0	V	287.00	-3
1546.00	44.01	---	74.00	29.99	500.00	100.0	H	2.00	-2
1593.75	---	33.60	54.00	20.40	500.00	100.0	H	0.00	-2
1713.50	45.22	---	74.00	28.78	500.00	100.0	V	328.00	-2
1814.50	---	33.07	54.00	20.93	500.00	200.0	H	222.00	-1
2005.00	---	35.04	54.00	18.96	500.00	100.0	H	307.00	1
2035.75	46.74	---	74.00	27.26	500.00	100.0	V	275.00	0
2886.50	49.91	---	74.00	24.09	500.00	100.0	V	167.00	3
2971.00	---	37.86	54.00	16.14	500.00	100.0	V	287.00	4

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

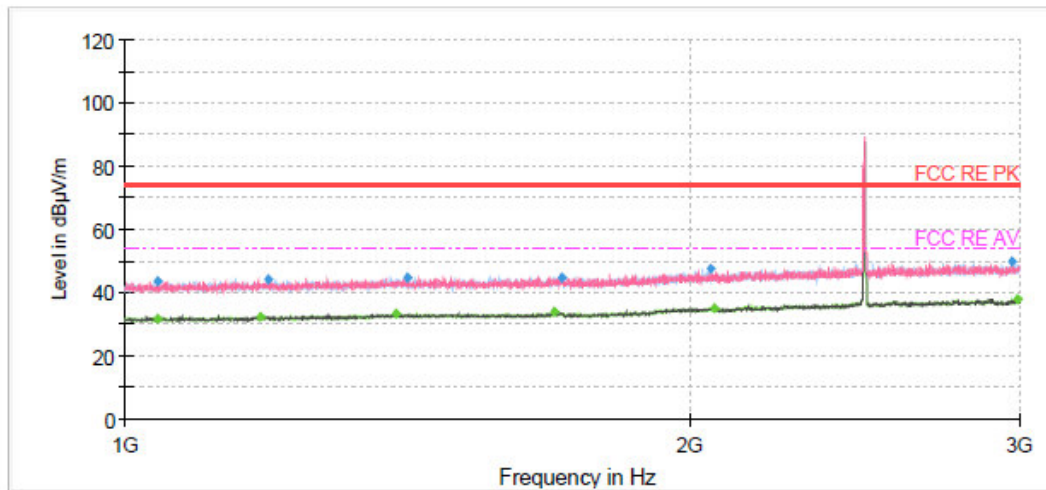


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3858.75	---	29.70	54.00	24.30	500.00	200.0	H	268.00	-4
3952.50	40.97	---	74.00	33.03	500.00	100.0	V	356.00	-4
4878.75	---	49.45	54.00	4.55	500.00	100.0	V	224.00	-1
4878.75	54.14	---	74.00	19.86	500.00	100.0	V	224.00	-1
7320.00	---	44.71	54.00	9.29	500.00	200.0	V	24.00	5
7320.00	51.20	---	74.00	22.80	500.00	200.0	V	24.00	5
9388.13	51.02	---	74.00	22.98	500.00	200.0	H	236.00	7
9759.38	---	39.46	54.00	14.54	500.00	200.0	V	247.00	7
13284.38	54.02	---	74.00	19.98	500.00	200.0	H	357.00	11
13350.00	---	43.14	54.00	10.86	500.00	100.0	H	3.00	11
14769.38	53.63	---	74.00	20.37	500.00	200.0	H	318.00	10
14876.25	---	41.53	54.00	12.47	500.00	100.0	H	0.00	10

Radiates Emission from 3GHz to 18GHz

DH5-Channel 78

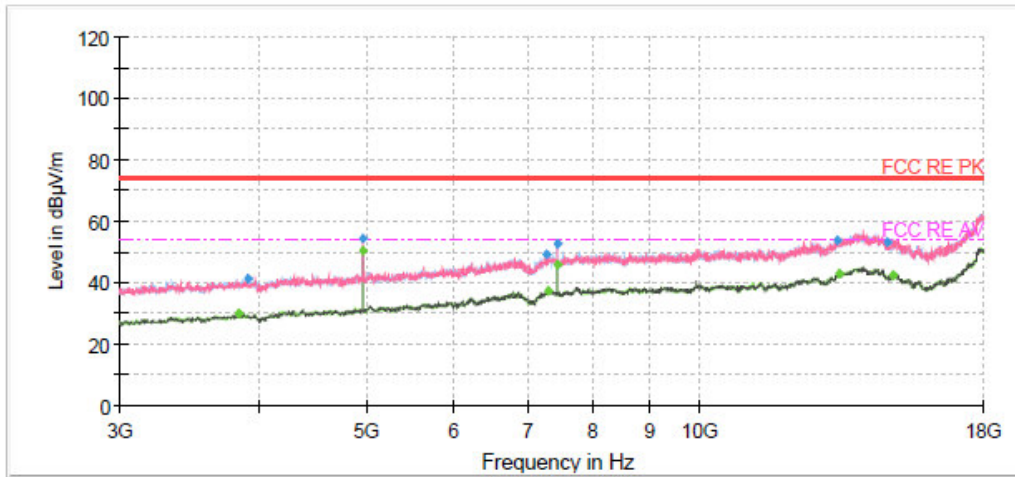


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1041.00	---	31.80	54.00	22.20	500.00	100.0	H	239.00	-5
1041.00	43.51	---	74.00	30.49	500.00	100.0	V	335.00	-5
1179.75	---	32.52	54.00	21.48	500.00	100.0	H	3.00	-4
1191.75	43.97	---	74.00	30.03	500.00	200.0	V	335.00	-4
1395.75	---	33.32	54.00	20.68	500.00	100.0	H	4.00	-3
1415.75	44.49	---	74.00	29.51	500.00	100.0	H	16.00	-3
1693.25	---	33.69	54.00	20.31	500.00	200.0	V	0.00	-2
1709.25	44.89	---	74.00	29.11	500.00	100.0	H	0.00	-2
2051.25	47.67	---	74.00	26.33	500.00	100.0	H	21.00	1
2060.25	---	35.27	54.00	18.73	500.00	100.0	V	0.00	1
2971.50	49.57	---	74.00	24.43	500.00	100.0	V	358.00	4
2990.75	---	38.06	54.00	15.94	500.00	200.0	V	357.00	4

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



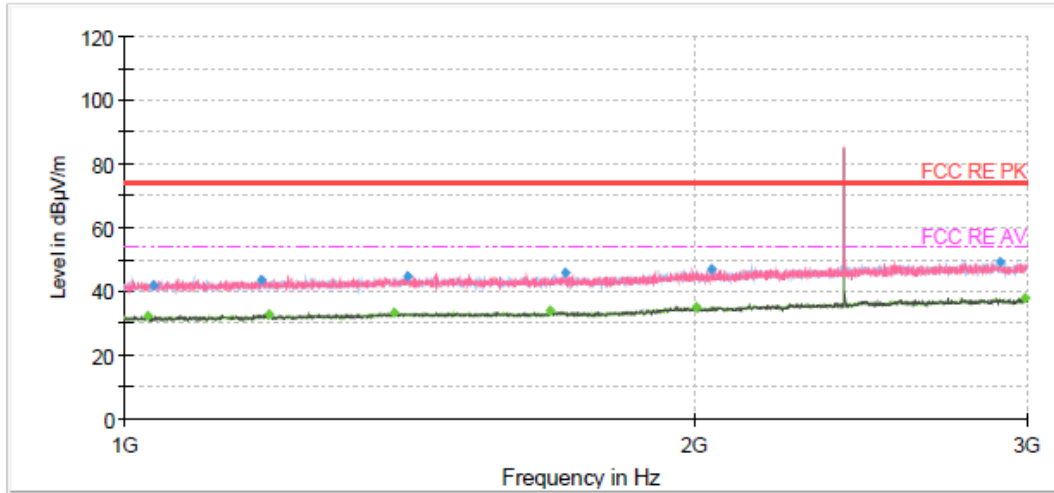
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3843.75	---	29.83	54.00	24.17	500.00	200.0	H	304.00	-4
3916.88	41.28	---	74.00	32.72	500.00	100.0	V	13.00	-5
4959.38	---	50.32	54.00	3.68	500.00	100.0	V	218.00	-1
4959.38	54.62	---	74.00	19.38	500.00	100.0	V	218.00	-1
7260.00	49.02	---	74.00	24.98	500.00	100.0	V	0.00	5
7299.38	---	37.35	54.00	16.65	500.00	200.0	H	188.00	6
7440.00	52.56	---	74.00	21.44	500.00	200.0	V	241.00	6
7440.00	---	46.07	54.00	7.93	500.00	100.0	H	169.00	6
13263.75	53.94	---	74.00	20.06	500.00	100.0	V	337.00	11
13344.38	---	42.93	54.00	11.07	500.00	200.0	H	0.00	11
14722.50	53.06	---	74.00	20.94	500.00	200.0	H	0.00	10
14889.38	---	42.54	54.00	11.46	500.00	200.0	H	202.00	10

Radiates Emission from 3GHz to 18GHz

The Radiates Emission was performed in all EDR mode (2DH5 and 3DH5), 3DH5 was selected as the worse condition. The test data of the worst-case condition was recorded in this report.

3DH5-Channel 0

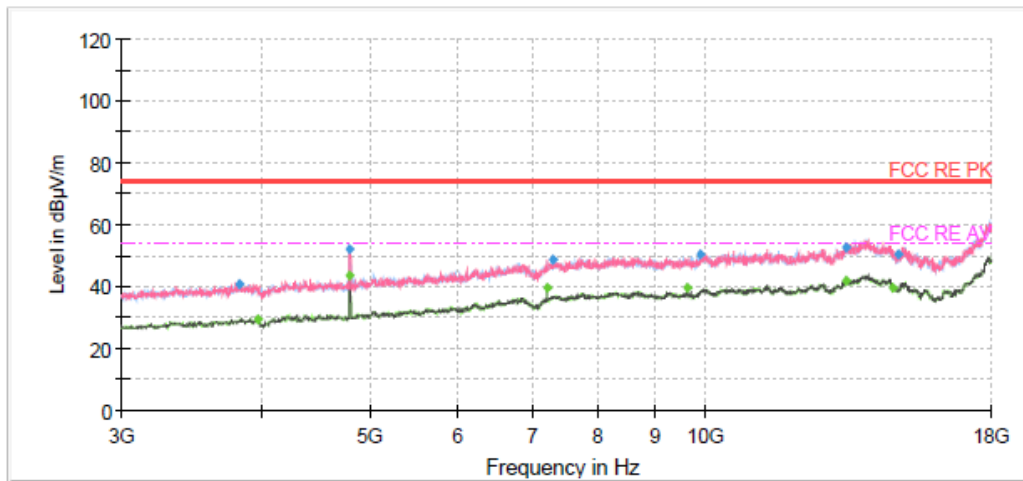


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1029.50	---	32.01	54.00	21.99	500.00	200.0	V	222.00	-5
1034.75	42.08	---	74.00	31.92	500.00	200.0	H	205.00	-5
1179.75	43.82	---	74.00	30.18	500.00	100.0	H	349.00	-4
1191.50	---	32.62	54.00	21.38	500.00	100.0	H	152.00	-4
1387.00	---	33.36	54.00	20.64	500.00	200.0	V	0.00	-3
1411.25	44.79	---	74.00	29.21	500.00	100.0	V	84.00	-3
1677.50	---	33.79	54.00	20.21	500.00	100.0	V	140.00	-2
1709.75	45.58	---	74.00	28.42	500.00	100.0	H	11.00	-2
2003.50	---	35.23	54.00	18.77	500.00	200.0	H	178.00	1
2041.75	46.79	---	74.00	27.21	500.00	100.0	V	2.00	0
2902.75	49.15	---	74.00	24.85	500.00	100.0	V	9.00	3
2993.25	---	37.94	54.00	16.06	500.00	100.0	V	0.00	4

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

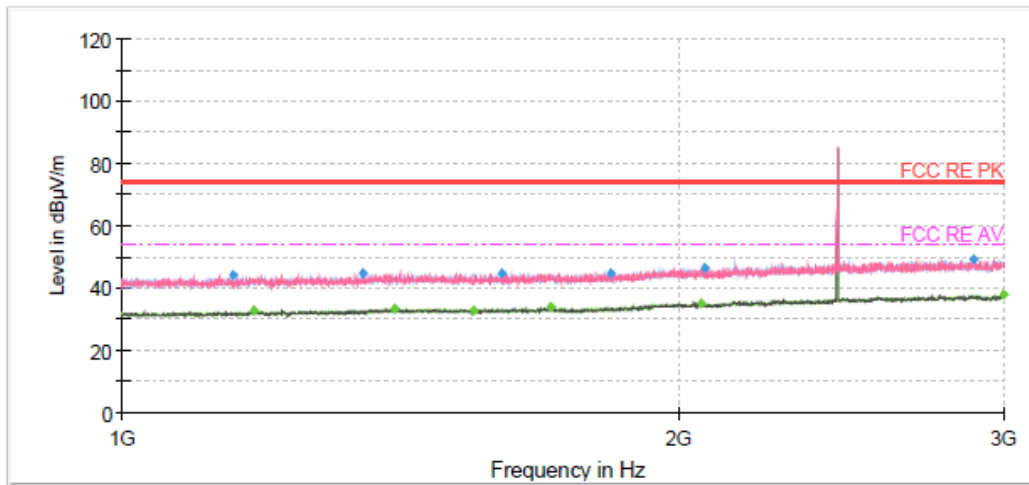


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3823.13	41.02	---	74.00	32.98	500.00	200.0	H	138.00	-5
3969.38	---	29.41	54.00	24.59	500.00	200.0	V	0.00	-4
4803.75	---	43.49	54.00	10.51	500.00	100.0	V	151.00	-2
4803.75	51.88	---	74.00	22.12	500.00	100.0	V	151.00	-2
7203.75	---	39.65	54.00	14.35	500.00	100.0	V	198.00	4
7301.25	48.92	---	74.00	25.08	500.00	200.0	H	0.00	6
9609.38	---	39.69	54.00	14.31	500.00	200.0	V	234.00	7
9890.63	50.31	---	74.00	23.69	500.00	200.0	H	10.00	7
13336.88	---	41.76	54.00	12.24	500.00	100.0	V	0.00	11
13350.00	52.68	---	74.00	21.32	500.00	200.0	V	346.00	11
14701.88	---	39.71	54.00	14.29	500.00	200.0	H	45.00	10
14842.50	50.40	---	74.00	23.60	500.00	200.0	H	106.00	10

Radiates Emission from 3GHz to 18GHz

3DH5-Channel 39

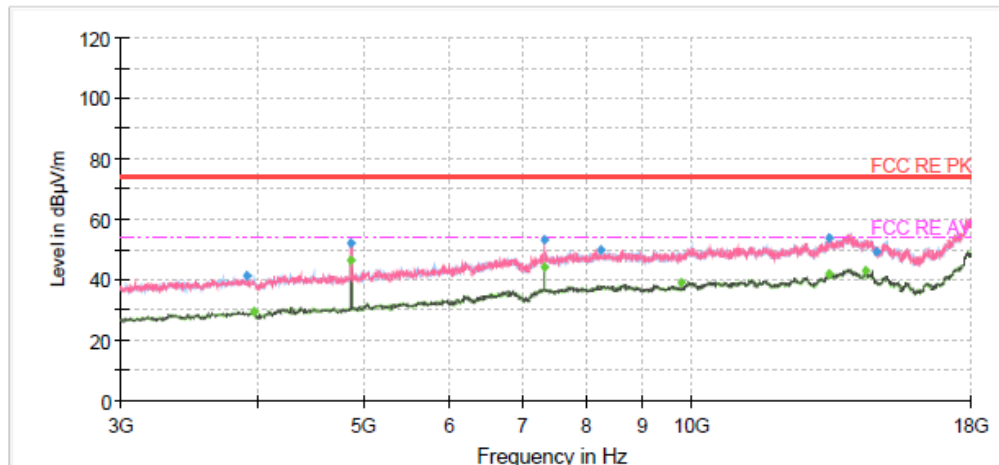


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1148.75	43.93	---	74.00	30.07	500.00	100.0	H	0.00	-4
1178.50	---	32.67	54.00	21.33	500.00	100.0	H	286.00	-4
1350.00	44.92	---	74.00	29.08	500.00	100.0	V	16.00	-3
1405.00	---	33.61	54.00	20.39	500.00	100.0	H	326.00	-3
1550.00	---	33.00	54.00	21.00	500.00	100.0	H	340.00	-2
1606.75	44.99	---	74.00	29.01	500.00	200.0	H	286.00	-2
1707.50	---	33.94	54.00	20.06	500.00	200.0	H	357.00	-2
1839.75	44.51	---	74.00	29.49	500.00	100.0	H	340.00	-1
2057.25	---	35.26	54.00	18.74	500.00	200.0	V	0.00	1
2067.25	46.42	---	74.00	27.58	500.00	100.0	H	261.00	1
2889.25	49.51	---	74.00	24.49	500.00	100.0	H	219.00	3
2996.75	---	38.01	54.00	15.99	500.00	200.0	V	9.00	4

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

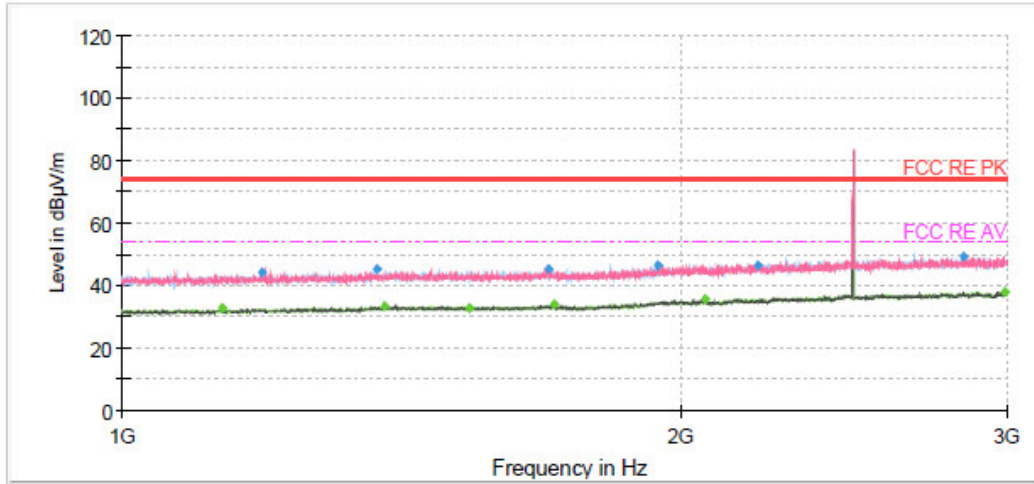


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3909.38	41.15	---	74.00	32.85	500.00	100.0	H	296.00	-4
3965.63	---	29.61	54.00	24.39	500.00	200.0	H	166.00	-4
4878.75	---	46.19	54.00	7.81	500.00	100.0	V	212.00	-1
4878.75	52.27	---	74.00	21.73	500.00	100.0	V	212.00	-1
7318.13	---	44.21	54.00	9.79	500.00	100.0	V	261.00	5
7321.88	53.26	---	74.00	20.74	500.00	100.0	V	261.00	5
8246.25	49.98	---	74.00	24.02	500.00	200.0	H	150.00	6
9761.25	---	39.27	54.00	14.73	500.00	100.0	V	226.00	7
13333.13	53.78	---	74.00	20.22	500.00	100.0	H	318.00	11
13335.00	---	41.85	54.00	12.15	500.00	100.0	V	158.00	11
14401.88	---	43.01	54.00	10.99	500.00	100.0	V	0.00	11
14728.13	49.23	---	74.00	24.77	500.00	200.0	H	196.00	10

Radiates Emission from 3GHz to 18GHz

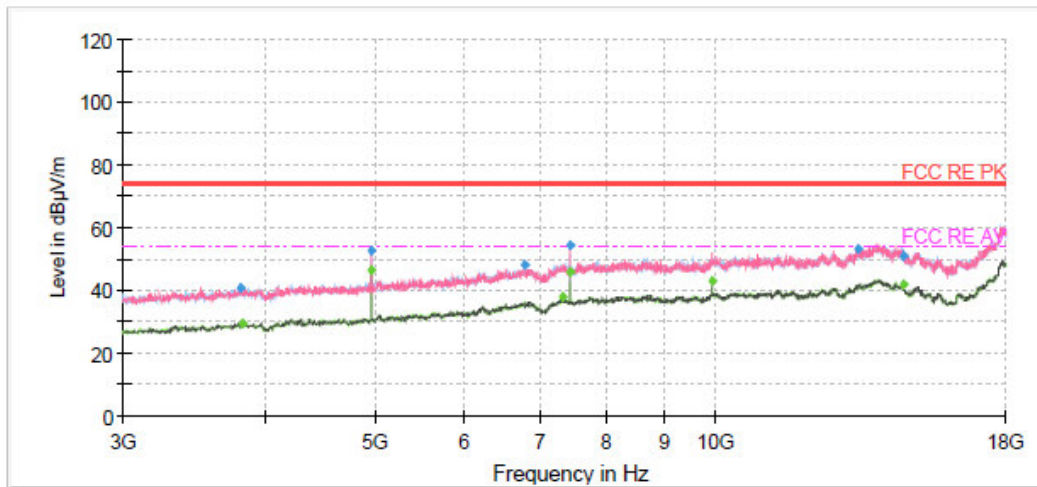
3DH5-Channel 78



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1131.50	---	32.68	54.00	21.32	500.00	100.0	H	192.00	-4
1188.75	44.31	---	74.00	29.69	500.00	200.0	H	299.00	-4
1371.00	45.11	---	74.00	28.89	500.00	200.0	H	344.00	-3
1384.25	---	33.50	54.00	20.50	500.00	100.0	V	14.00	-3
1540.25	---	32.74	54.00	21.26	500.00	200.0	H	299.00	-2
1696.50	45.15	---	74.00	28.85	500.00	100.0	V	2.00	-2
1708.25	---	33.71	54.00	20.29	500.00	200.0	V	192.00	-2
1947.25	46.60	---	74.00	27.40	500.00	100.0	H	339.00	0
2061.50	---	35.44	54.00	18.56	500.00	200.0	V	5.00	1
2200.75	46.65	---	74.00	27.35	500.00	100.0	V	70.00	1
2844.50	49.52	---	74.00	24.48	500.00	100.0	H	179.00	3
2993.75	---	37.87	54.00	16.13	500.00	100.0	H	247.00	4

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)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3810.00	40.90	---	74.00	33.10	500.00	100.0	H	350.00	-5
3826.88	---	29.47	54.00	24.53	500.00	200.0	H	181.00	-5
4959.38	---	46.60	54.00	7.40	500.00	100.0	H	187.00	-1
4959.38	52.45	---	74.00	21.55	500.00	100.0	V	324.00	-1
6783.75	48.11	---	74.00	25.89	500.00	200.0	H	2.00	4
7310.63	---	37.64	54.00	16.36	500.00	200.0	H	34.00	5
7438.13	54.27	---	74.00	19.73	500.00	100.0	V	261.00	6
7438.13	---	45.60	54.00	8.40	500.00	100.0	V	261.00	6
9918.75	---	42.77	54.00	11.23	500.00	200.0	V	224.00	7
13351.88	53.24	---	74.00	20.76	500.00	200.0	H	358.00	11
14598.75	---	41.74	54.00	12.26	500.00	100.0	H	202.00	11
14621.25	50.68	---	74.00	23.32	500.00	100.0	H	22.00	10

Radiates Emission from 3GHz to 18GHz

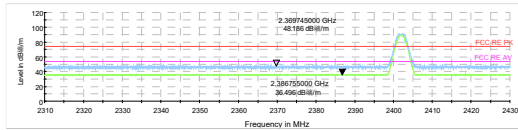
1.2. Bluetooth LE

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.

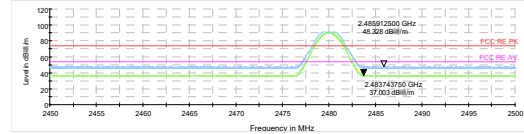
A symbol ($\text{dB}\mu\text{V}/\text{m}$) in the test plot below means ($\text{dB}\mu\text{V}/\text{m}$)

The signal beyond the limit is carrier.

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 18GHz to 26.5GHz are more than 20dB below the limit are not reported.

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

Remark:

1. **Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)**
2. **Marginal = Limit – Quasi-Peak/ MAX Peak/ Average**
3. **The following graphs display the maximum values of horizontal and vertical by software.**
4. **For below 1GHz**

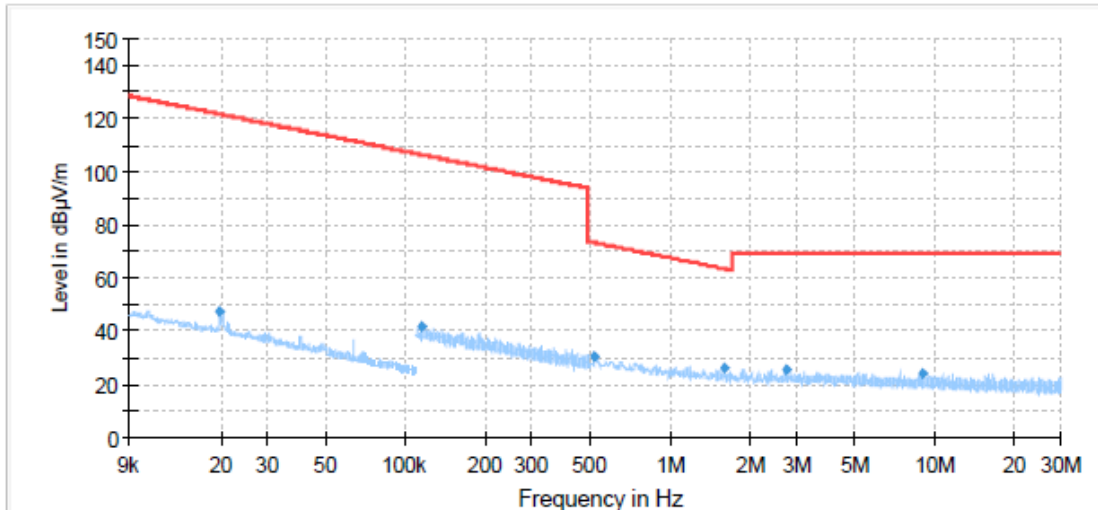
~ QP Level @Spectrum Overview H
 ~ QP Level @Spectrum Overview V
 ◆ QP Level @Final Results
 — QP Limit

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

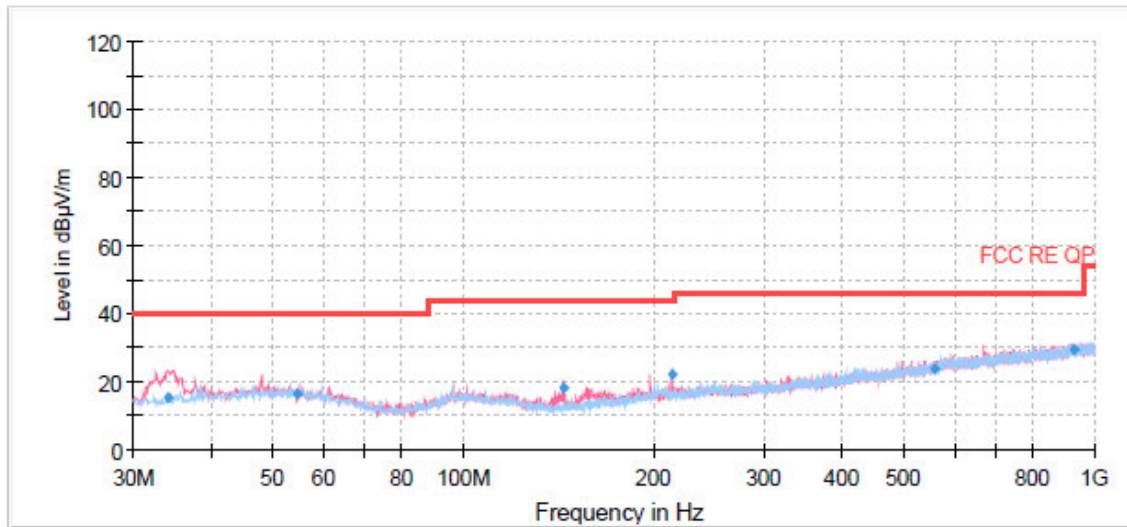
Continuous TX mode:

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

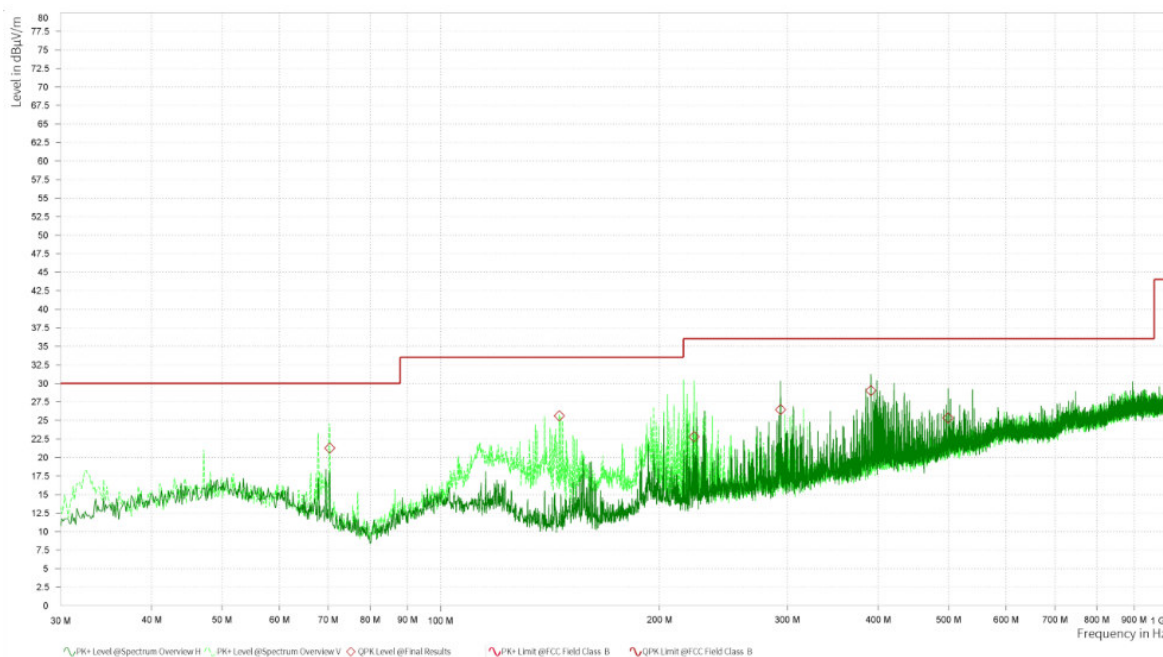
1#



Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
34.17	15.11	40.00	24.89	101.0	V	275.00	18
54.50	16.40	40.00	23.60	225.0	V	224.00	20
144.02	18.01	43.50	25.49	101.0	V	270.00	15
214.50	22.08	43.50	21.42	198.0	V	174.00	18
557.40	23.80	46.00	22.20	101.0	V	38.00	26
925.83	29.22	46.00	16.78	101.0	V	102.00	32

2#

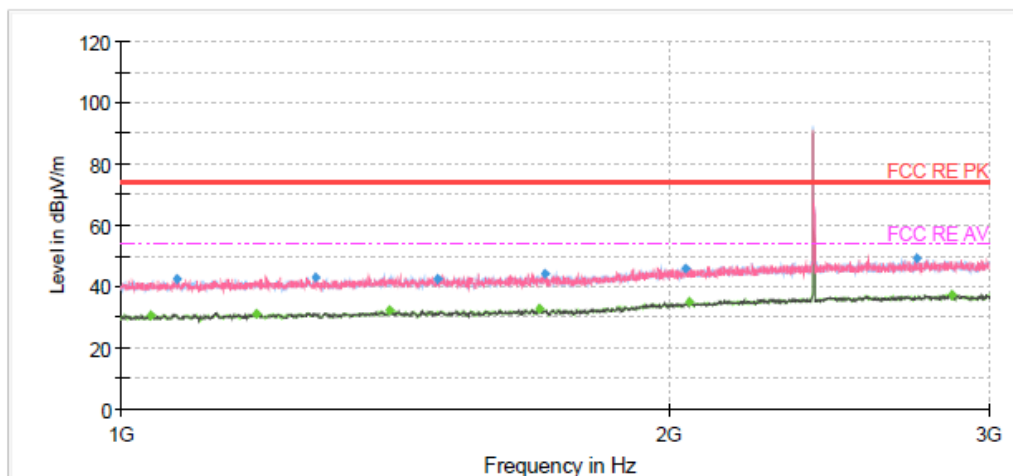


Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (m)	Polarization	Azimuth (deg)	Correct Factor (dB)
70.368	21.26	30.00	8.74	2.17	V	310.8	-12.41
145.644	25.60	33.50	7.90	1.25	V	294	-13.19
223.336	22.79	36.00	13.21	1.77	V	299.2	-9.43
293.714	26.44	36.00	9.56	1.92	H	112	-7.50
391.094	29.01	36.00	6.99	2.01	H	174.4	-5.08
499.104	25.31	36.00	10.69	1.85	H	78.6	-3.15

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)
 2. Margin = Limit – Quasi-Peak

Bluetooth LE(2M)-Channel 0

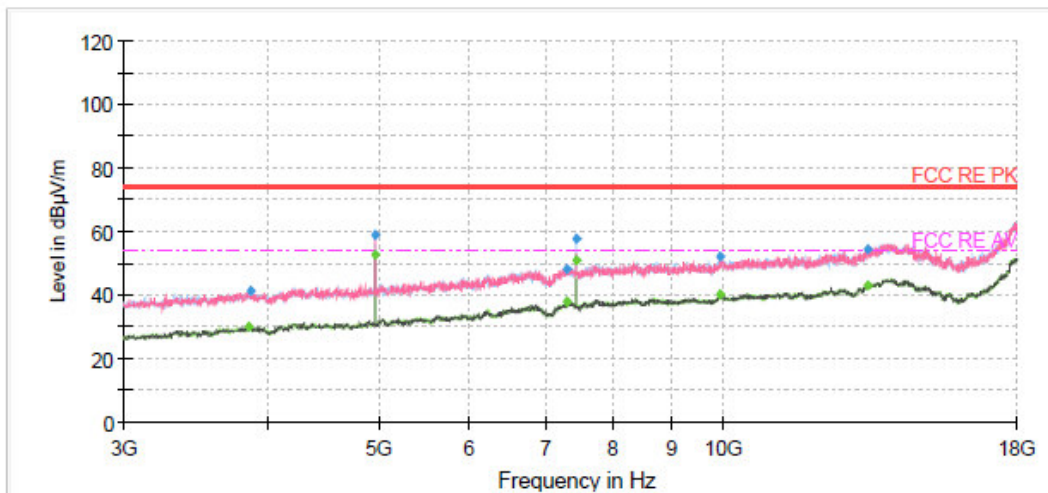


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1038.50	---	30.52	54.00	23.48	500.00	100.0	V	34.00	-5
1073.75	42.65	---	74.00	31.35	500.00	100.0	V	208.00	-5
1187.75	---	31.24	54.00	22.76	500.00	100.0	H	350.00	-4
1279.75	43.10	---	74.00	30.90	500.00	100.0	V	0.00	-4
1405.50	---	32.25	54.00	21.75	500.00	100.0	H	346.00	-3
1494.00	42.56	---	74.00	31.44	500.00	100.0	V	108.00	-2
1698.50	---	32.74	54.00	21.26	500.00	100.0	V	8.00	-2
1710.50	44.28	---	74.00	29.72	500.00	100.0	H	19.00	-2
2042.25	45.86	---	74.00	28.14	500.00	100.0	V	11.00	0
2051.75	---	34.98	54.00	19.02	500.00	100.0	H	0.00	1
2736.25	48.99	---	74.00	25.01	500.00	100.0	H	166.00	3
2859.75	---	37.51	54.00	16.49	500.00	100.0	V	74.00	3

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

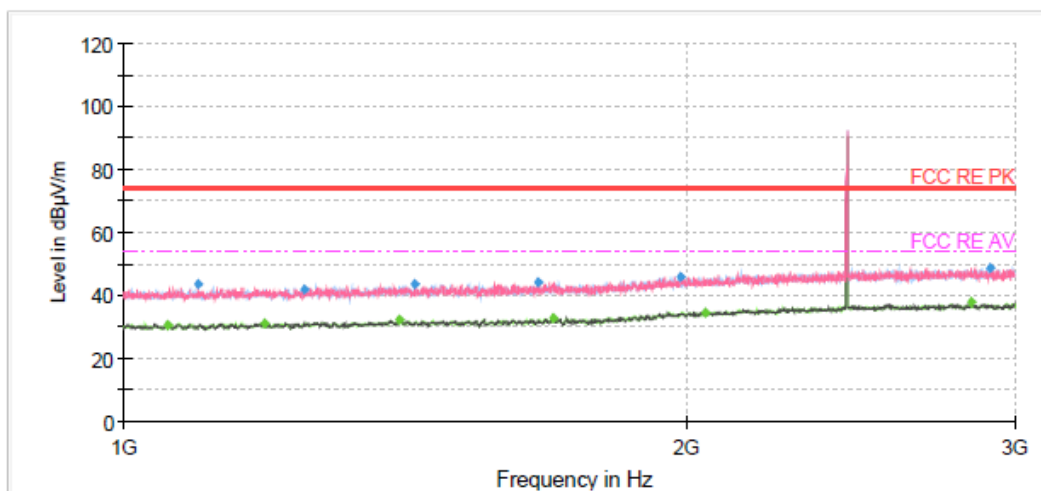


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3853.13	---	29.78	54.00	24.22	500.00	100.0	V	178.00	-4
3870.00	41.04	---	74.00	32.96	500.00	100.0	H	354.00	-4
4957.50	58.69	---	74.00	15.31	500.00	100.0	V	117.00	-1
4959.38	---	52.52	54.00	1.48	500.00	100.0	V	117.00	-1
7299.38	---	37.85	54.00	16.15	500.00	100.0	V	1.00	6
7299.38	48.36	---	74.00	25.64	500.00	200.0	H	57.00	6
7438.13	---	50.74	54.00	3.26	500.00	200.0	H	324.00	6
7441.88	57.89	---	74.00	16.11	500.00	200.0	H	304.00	6
9922.50	---	40.23	54.00	13.77	500.00	200.0	H	69.00	7
9922.50	52.06	---	74.00	21.94	500.00	200.0	V	118.00	7
13323.75	54.47	---	74.00	19.53	500.00	100.0	V	163.00	11
13351.88	---	43.24	54.00	10.76	500.00	100.0	H	221.00	11

Radiates Emission from 3GHz to 18GHz

Bluetooth LE(2M)-Channel 19

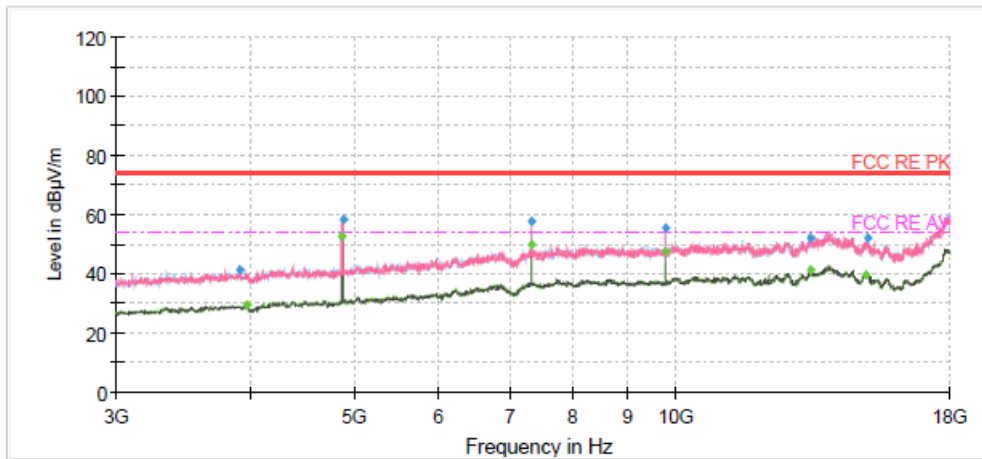


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1055.50	---	30.84	54.00	23.16	500.00	100.0	H	1.00	-5
1095.75	43.34	---	74.00	30.66	500.00	100.0	V	0.00	-5
1190.00	---	31.26	54.00	22.74	500.00	100.0	V	77.00	-4
1249.50	41.99	---	74.00	32.01	500.00	100.0	H	358.00	-4
1404.75	---	32.35	54.00	21.65	500.00	100.0	V	66.00	-3
1431.25	43.54	---	74.00	30.46	500.00	100.0	H	350.00	-3
1667.25	44.01	---	74.00	29.99	500.00	100.0	V	91.00	-2
1696.00	---	32.81	54.00	21.19	500.00	100.0	H	183.00	-2
1988.75	46.08	---	74.00	27.92	500.00	100.0	H	342.00	0
2046.25	---	34.77	54.00	19.23	500.00	100.0	H	336.00	1
2842.75	---	37.64	54.00	16.36	500.00	100.0	H	302.00	3
2909.00	48.61	---	74.00	25.39	500.00	100.0	V	77.00	3

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

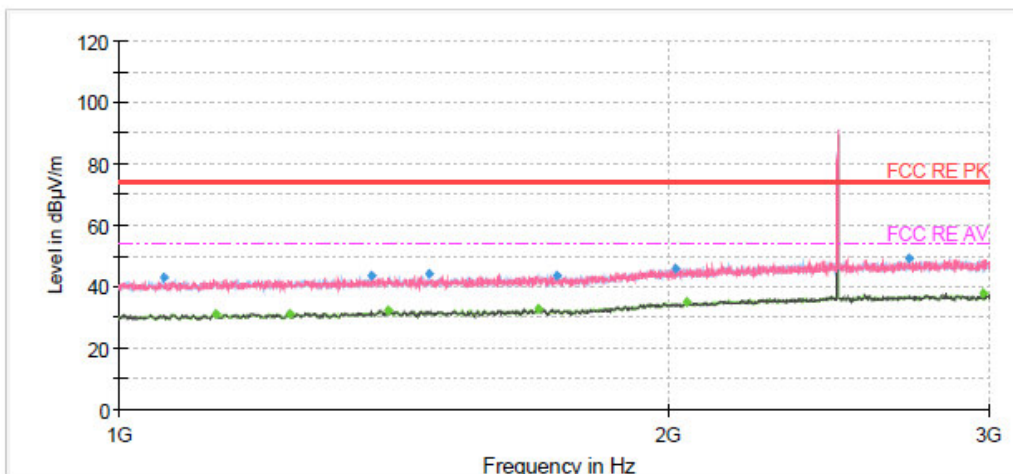


Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3918.75	41.56	---	74.00	32.44	500.00	100.0	V	50.00	-5
3965.63	---	29.27	54.00	24.73	500.00	100.0	H	140.00	-4
4878.75	---	52.65	54.00	1.35	500.00	100.0	V	203.00	-1
4880.63	58.56	---	74.00	15.44	500.00	100.0	V	203.00	-1
7318.13	57.85	---	74.00	16.15	500.00	100.0	V	249.00	5
7318.13	---	49.53	54.00	4.47	500.00	100.0	V	249.00	5
9761.25	55.62	---	74.00	18.38	500.00	200.0	V	233.00	7
9761.25	---	47.44	54.00	6.56	500.00	200.0	V	233.00	7
13335.00	---	41.19	54.00	12.81	500.00	100.0	V	350.00	11
13336.88	52.20	---	74.00	21.80	500.00	100.0	V	357.00	11
15045.00	---	39.71	54.00	14.29	500.00	100.0	H	170.00	10
15101.25	51.90	---	74.00	22.10	500.00	200.0	H	172.00	9

Radiates Emission from 3GHz to 18GHz

Bluetooth LE(2M)-Channel 39

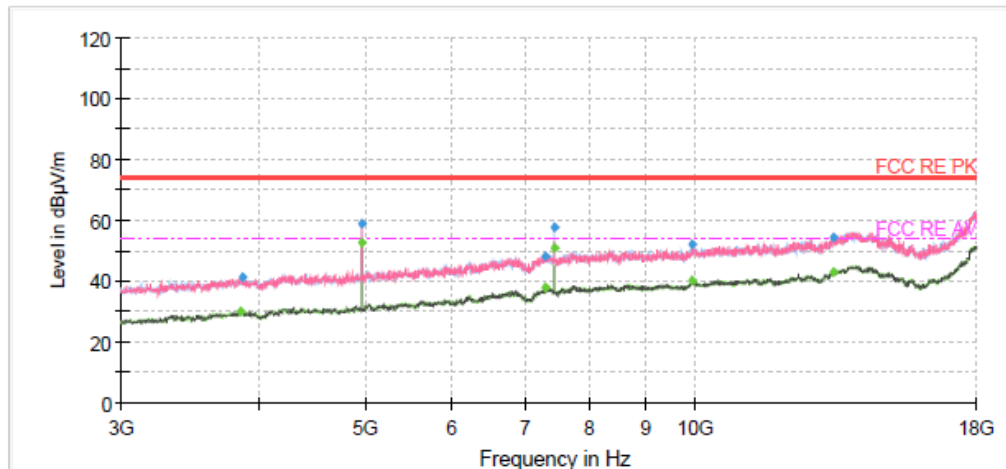


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1057.25	42.80	---	74.00	31.20	500.00	100.0	H	222.00	-5
1129.25	---	31.23	54.00	22.77	500.00	100.0	V	224.00	-4
1241.00	---	30.94	54.00	23.06	500.00	100.0	V	10.00	-4
1375.00	43.65	---	74.00	30.35	500.00	100.0	H	336.00	-3
1406.00	---	32.47	54.00	21.53	500.00	100.0	H	320.00	-3
1478.50	44.24	---	74.00	29.76	500.00	100.0	H	350.00	-3
1696.25	---	32.94	54.00	21.06	500.00	100.0	V	0.00	-2
1737.25	43.67	---	74.00	30.33	500.00	100.0	H	30.00	-2
2019.75	46.07	---	74.00	27.93	500.00	100.0	H	264.00	0
2048.75	---	35.06	54.00	18.94	500.00	100.0	V	14.00	1
2714.25	49.26	---	74.00	24.74	500.00	100.0	V	306.00	3
2976.00	---	37.77	54.00	16.23	500.00	100.0	H	358.00	4

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)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3853.13	---	29.78	54.00	24.22	500.00	100.0	V	178.00	-4
3870.00	41.04	---	74.00	32.96	500.00	100.0	H	354.00	-4
4957.50	58.69	---	74.00	15.31	500.00	100.0	V	117.00	-1
4959.38	---	52.52	54.00	1.48	500.00	100.0	V	117.00	-1
7299.38	48.36	---	74.00	25.64	500.00	200.0	H	57.00	6
7299.38	---	37.85	54.00	16.15	500.00	100.0	V	1.00	6
7438.13	---	50.74	54.00	3.26	500.00	200.0	H	324.00	6
7441.88	57.89	---	74.00	16.11	500.00	200.0	H	304.00	6
9922.50	52.06	---	74.00	21.94	500.00	200.0	V	118.00	7
9922.50	---	40.23	54.00	13.77	500.00	200.0	H	69.00	7
13323.75	54.47	---	74.00	19.53	500.00	100.0	V	163.00	11
13351.88	---	43.24	54.00	10.76	500.00	100.0	H	221.00	11

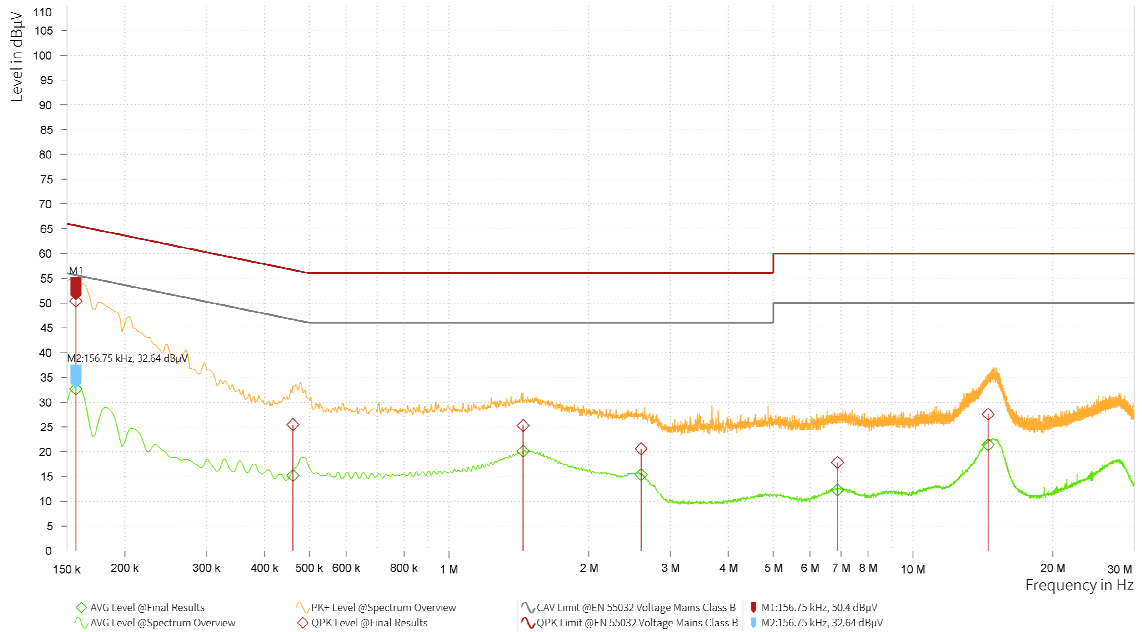
Radiates Emission from 3GHz to 18GHz

2. Conducted Emission

2.1. Bluetooth

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.

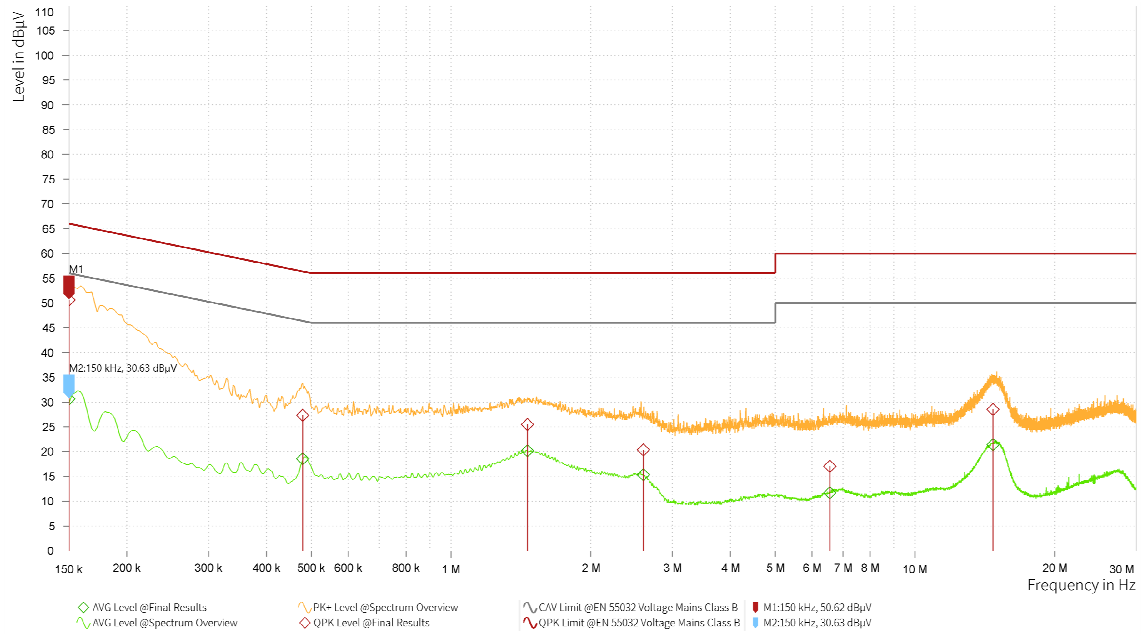
1#



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]
0.157	50.40	65.63	15.24	32.64	55.63	22.99	20.90	L1	9.000	1.000
0.461	25.46	56.68	31.22	15.18	46.68	31.50	20.82	L1	9.000	1.000
1.444	25.30	56.00	30.70	20.11	46.00	25.89	19.87	L1	9.000	1.000
2.596	20.60	56.00	35.40	15.37	46.00	30.63	19.53	L1	9.000	1.000
6.875	17.82	60.00	42.18	12.27	50.00	37.73	19.41	L1	9.000	1.000
14.525	27.58	60.00	32.42	21.42	50.00	28.58	19.49	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz

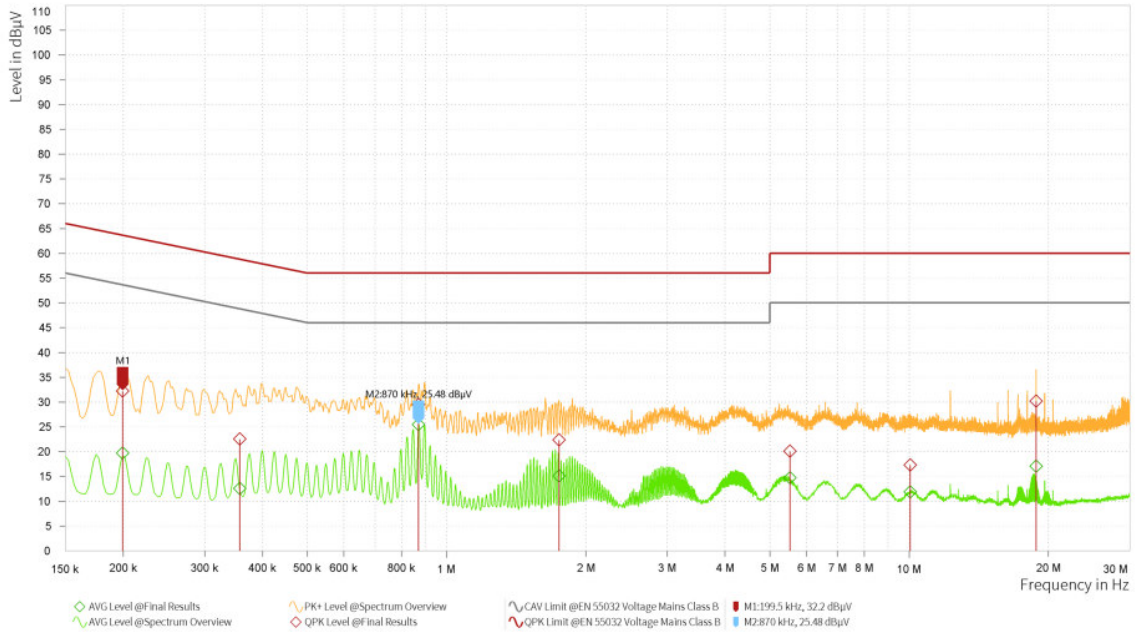


Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG: CAV Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.150	50.62	66.00	15.38	30.63	56.00	25.37	20.91	N	9.000	1.000
0.479	27.33	56.37	29.03	18.57	46.37	27.80	20.81	N	9.000	1.000
1.462	25.46	56.00	30.54	20.15	46.00	25.85	19.87	N	9.000	1.000
2.598	20.33	56.00	35.67	15.32	46.00	30.68	19.54	N	9.000	1.000
6.556	17.03	60.00	42.97	11.69	50.00	38.31	19.41	N	9.000	1.000
14.732	28.50	60.00	31.50	21.40	50.00	28.60	19.53	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz

2#

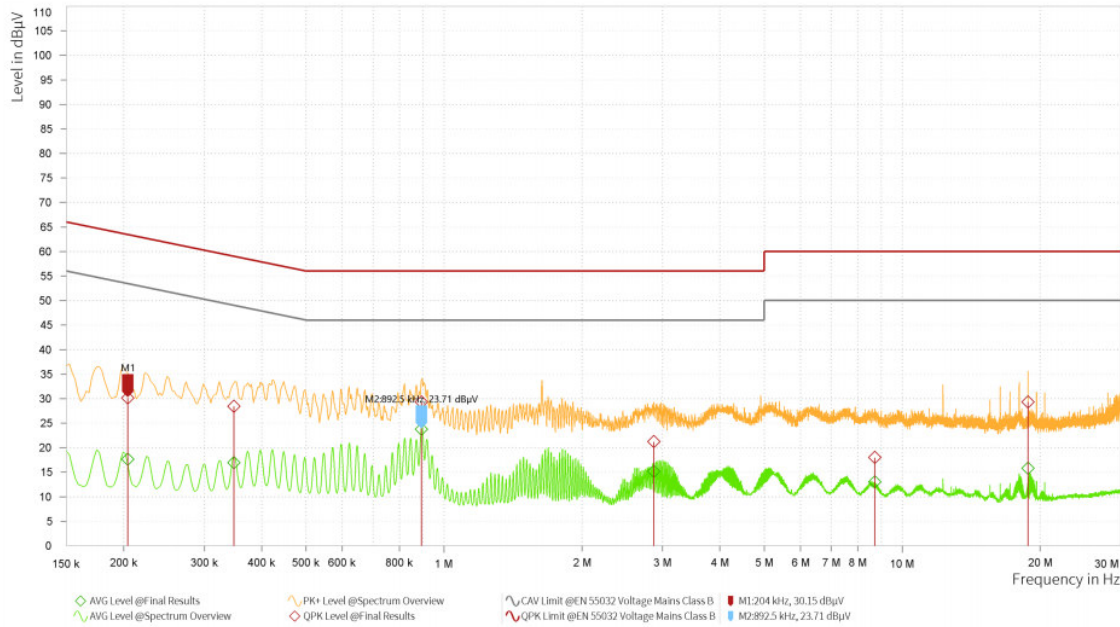


Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
1	0.200	32.20	63.63	31.43	19.71	53.63	33.92	21.01	L1	9.000	1.000
1	0.357	22.51	58.80	36.28	12.57	48.80	36.23	20.92	L1	9.000	1.000
1	0.870	29.48	56.00	26.52	25.48	46.00	20.52	20.27	L1	9.000	1.000
1	1.750	22.35	56.00	33.65	15.09	46.00	30.91	19.73	L1	9.000	1.000
1	5.525	20.06	60.00	39.94	14.74	50.00	35.26	19.40	L1	9.000	1.000
1	10.055	17.31	60.00	42.69	11.89	50.00	38.11	19.42	L1	9.000	1.000
1	18.818	30.18	60.00	29.82	17.06	50.00	32.94	19.62	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz



Rg	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]
1	0.204	30.15	63.45	33.30	17.61	53.45	35.84	21.02	N	9.000	1.000
1	0.348	28.42	59.01	30.59	16.94	49.01	32.07	20.93	N	9.000	1.000
1	0.893	29.29	56.00	26.71	23.71	46.00	22.29	20.26	N	9.000	1.000
1	2.873	21.20	56.00	34.80	15.18	46.00	30.82	19.51	N	9.000	1.000
1	8.720	17.97	60.00	42.03	13.02	50.00	36.98	19.42	N	9.000	1.000
1	18.816	29.30	60.00	30.70	15.81	50.00	34.19	19.67	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

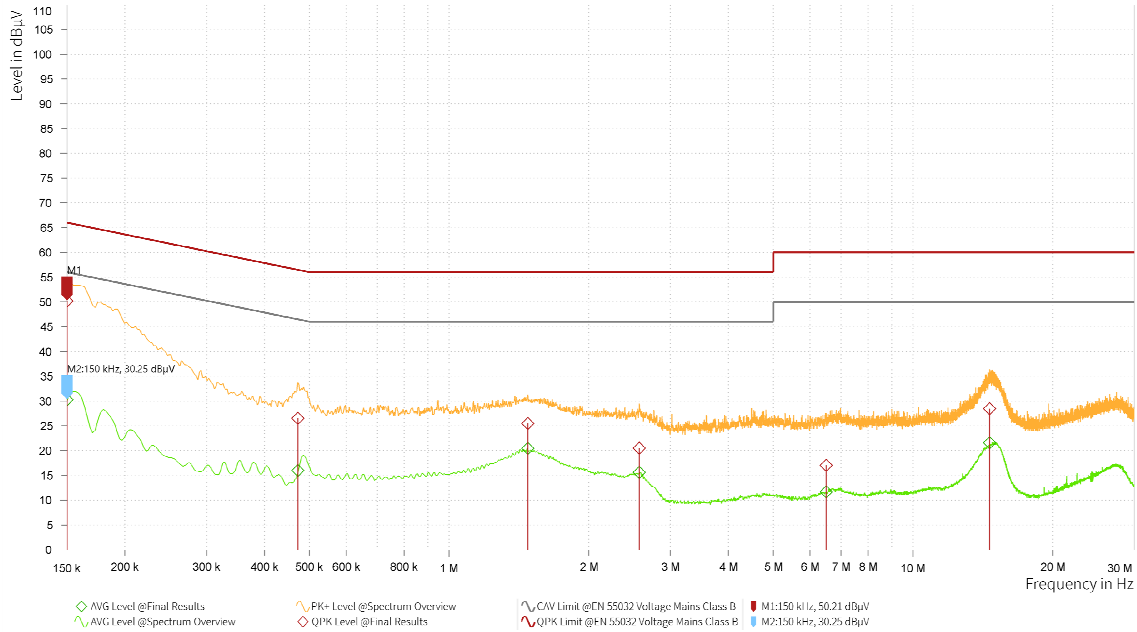
N line

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.

1#



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]
0.150	50.21	66.00	15.79	30.25	56.00	25.75	20.90	L1	9.000	1.000
0.472	26.49	56.48	29.99	15.96	46.48	30.52	20.81	L1	9.000	1.000
1.478	25.46	56.00	30.54	20.42	46.00	25.58	19.85	L1	9.000	1.000
2.571	20.50	56.00	35.50	15.61	46.00	30.39	19.53	L1	9.000	1.000
6.504	17.04	60.00	42.96	11.67	50.00	38.33	19.40	L1	9.000	1.000
14.631	28.46	60.00	31.54	21.60	50.00	28.40	19.49	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz

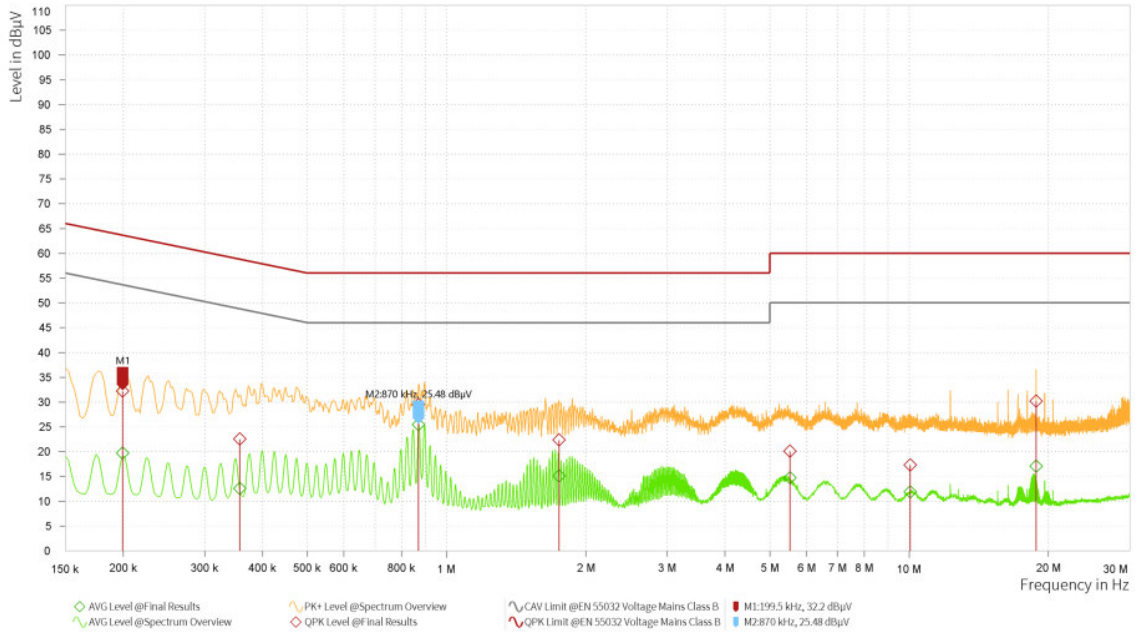


Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG: CAV Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.159	49.69	65.52	15.83	31.92	55.52	23.60	20.91	N	9.000	1.000
0.476	27.15	56.40	29.25	17.84	46.40	28.57	20.81	N	9.000	1.000
1.430	25.34	56.00	30.66	20.26	46.00	25.74	19.89	N	9.000	1.000
2.654	19.79	56.00	36.21	14.43	46.00	31.57	19.53	N	9.000	1.000
6.333	16.85	60.00	43.15	11.49	50.00	38.51	19.41	N	9.000	1.000
14.586	28.51	60.00	31.49	21.57	50.00	28.43	19.52	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz

2#

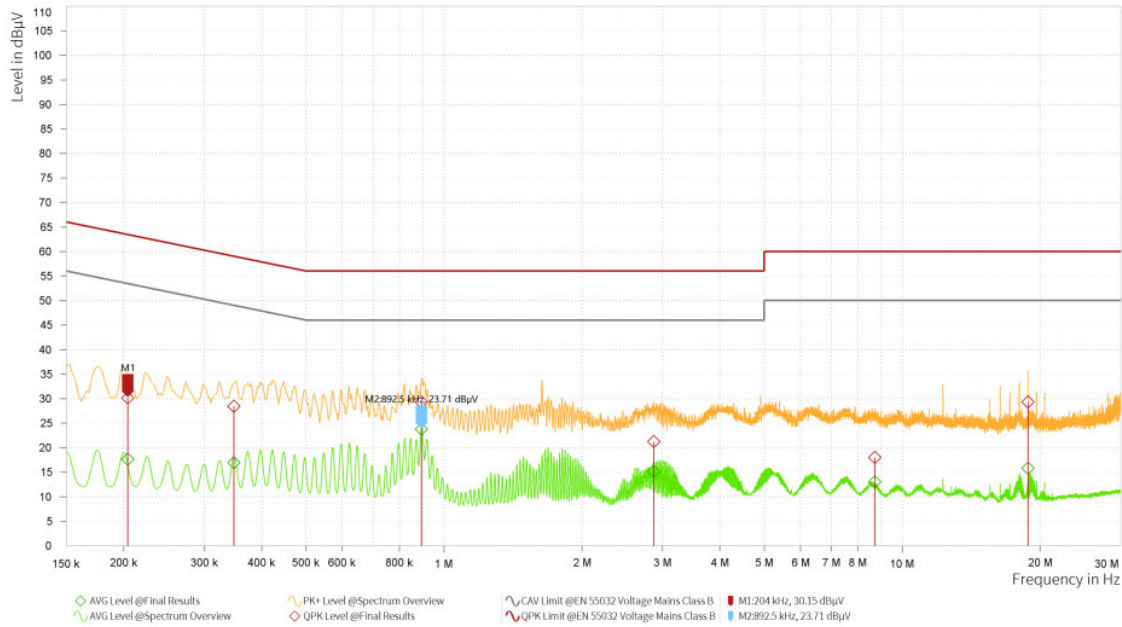


Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
1	0.200	32.20	63.63	31.43	19.71	53.63	33.92	21.01	L1	9.000	1.000
1	0.357	22.51	58.80	36.28	12.57	48.80	36.23	20.92	L1	9.000	1.000
1	0.870	29.48	56.00	26.52	25.48	46.00	20.52	20.27	L1	9.000	1.000
1	1.750	22.35	56.00	33.65	15.09	46.00	30.91	19.73	L1	9.000	1.000
1	5.525	20.06	60.00	39.94	14.74	50.00	35.26	19.40	L1	9.000	1.000
1	10.055	17.31	60.00	42.69	11.89	50.00	38.11	19.42	L1	9.000	1.000
1	18.818	30.18	60.00	29.82	17.06	50.00	32.94	19.62	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz



Rg	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]
1	0.204	30.15	63.45	33.30	17.61	53.45	35.84	21.02	N	9.000	1.000
1	0.348	28.42	59.01	30.59	16.94	49.01	32.07	20.93	N	9.000	1.000
1	0.893	29.29	56.00	26.71	23.71	46.00	22.29	20.26	N	9.000	1.000
1	2.873	21.20	56.00	34.80	15.18	46.00	30.82	19.51	N	9.000	1.000
1	8.720	17.97	60.00	42.03	13.02	50.00	36.98	19.42	N	9.000	1.000
1	18.816	29.30	60.00	30.70	15.81	50.00	34.19	19.67	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 kHz to 30 MHz