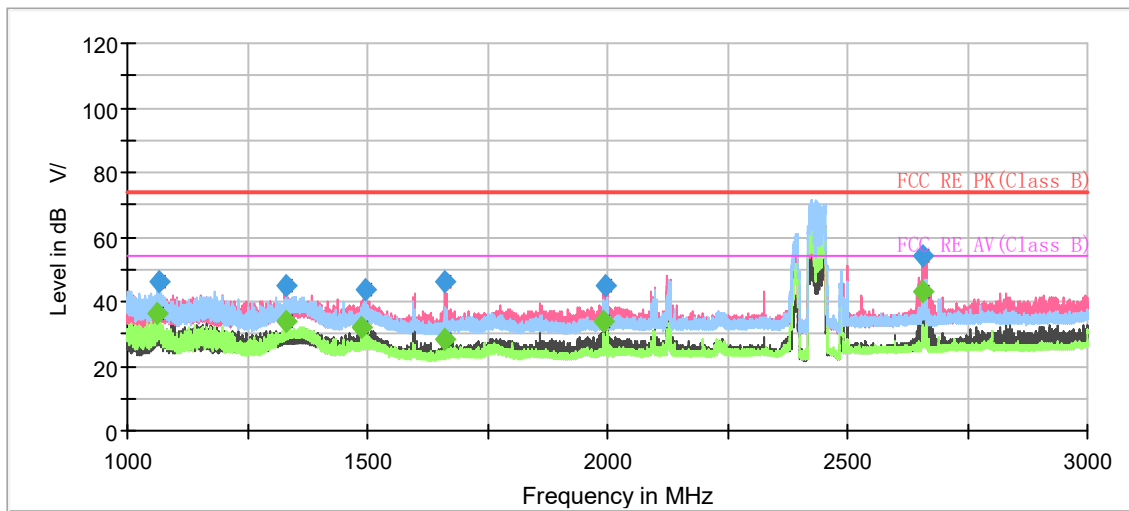
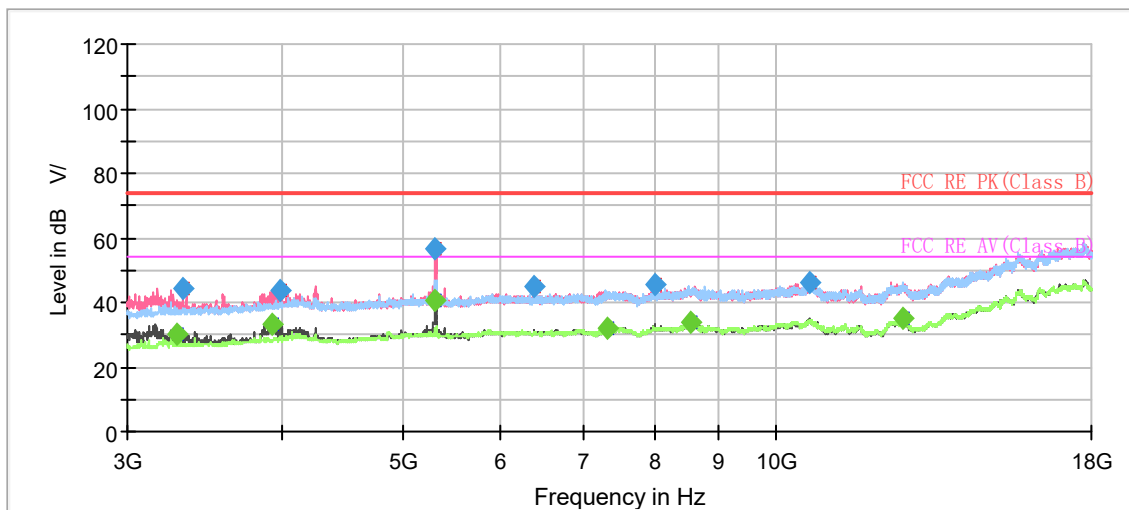


802.11n (HT40) CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



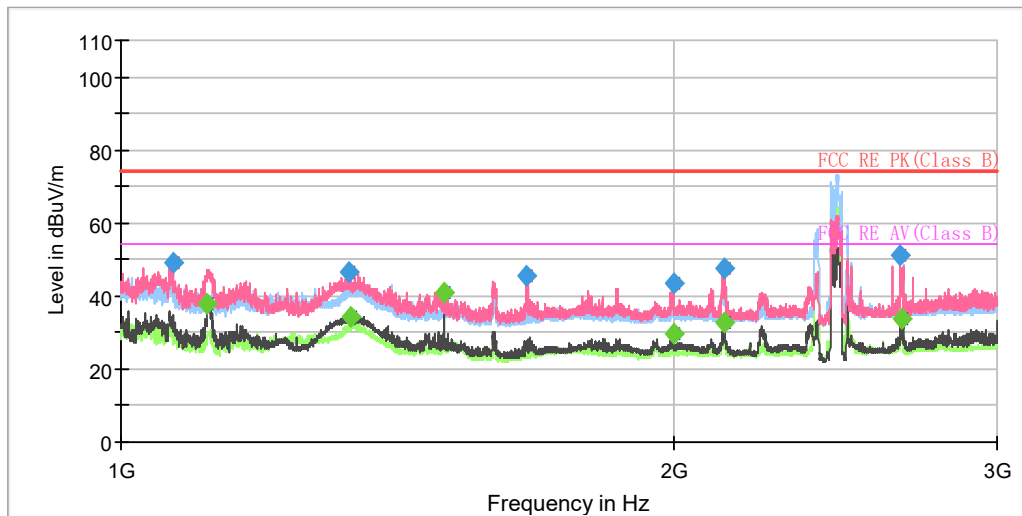
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1062.933333	---	36.58	54.00	17.42	500.0	200.0	H	49.0
1066.200000	46.24	---	74.00	27.76	500.0	200.0	H	49.0
1331.466667	45.01	---	74.00	28.99	500.0	200.0	V	279.0
1331.533333	---	33.98	54.00	20.02	500.0	200.0	V	259.0
1489.200000	---	32.14	54.00	21.86	500.0	200.0	V	92.0
1497.333333	43.84	---	74.00	30.16	500.0	100.0	V	133.0
1660.866667	46.32	---	74.00	27.68	500.0	100.0	V	322.0
1661.333333	---	28.01	54.00	25.99	500.0	100.0	V	146.0
1992.666667	---	34.11	54.00	19.89	500.0	100.0	V	140.0
1994.000000	44.78	---	74.00	29.22	500.0	200.0	V	85.0
2656.933333	53.94	---	74.00	20.06	500.0	200.0	V	220.0
2657.200000	---	42.94	54.00	11.06	500.0	200.0	V	220.0

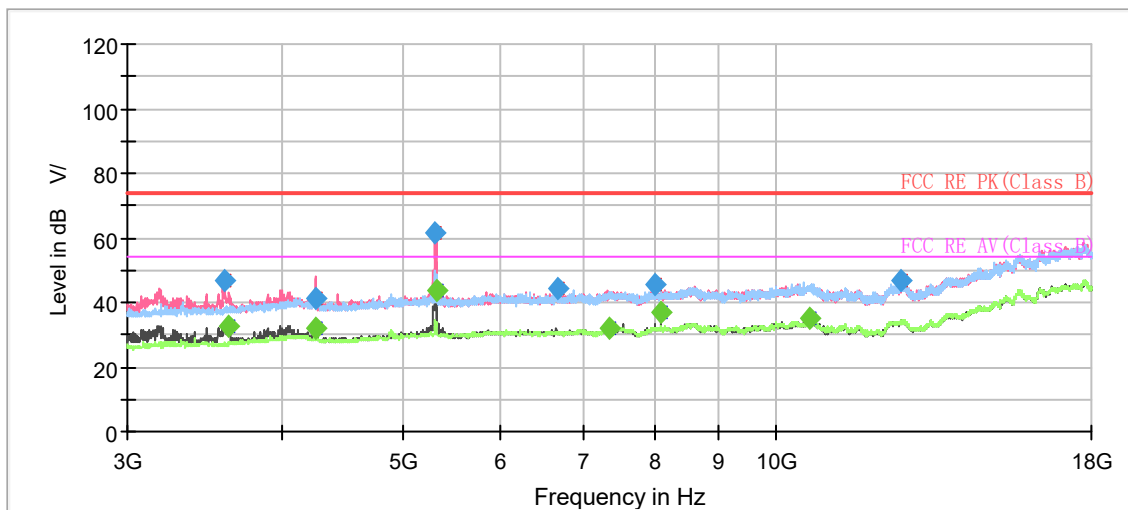
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH9



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



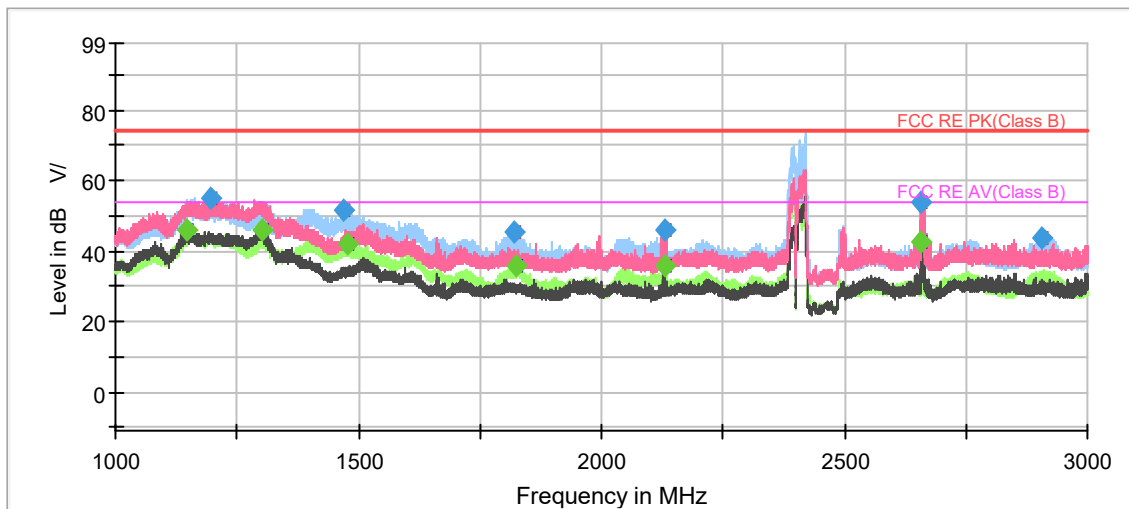
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1067.000000	49.27	---	74.00	24.73	200.0	V	305.0	-18.5
1113.750000	---	37.66	54.00	16.34	200.0	V	311.0	-18.3
1332.250000	46.59	---	74.00	27.41	200.0	H	350.0	-17.1
1334.500000	---	34.44	54.00	19.56	200.0	V	294.0	-17.1
1500.000000	---	41.07	54.00	12.93	200.0	H	217.0	-16.2
1661.250000	45.29	---	74.00	28.71	200.0	V	340.0	-15.2
1998.750000	43.37	---	74.00	30.63	200.0	V	218.0	-13.4
1999.750000	---	29.80	54.00	24.20	100.0	V	104.0	-13.4
2129.750000	47.38	---	74.00	26.62	200.0	V	251.0	-12.8
2129.750000	---	32.63	54.00	21.37	200.0	V	251.0	-12.8
2657.250000	51.33	---	74.00	22.67	200.0	V	34.0	-10.7
2659.750000	---	33.62	54.00	20.38	200.0	V	332.0	-10.7

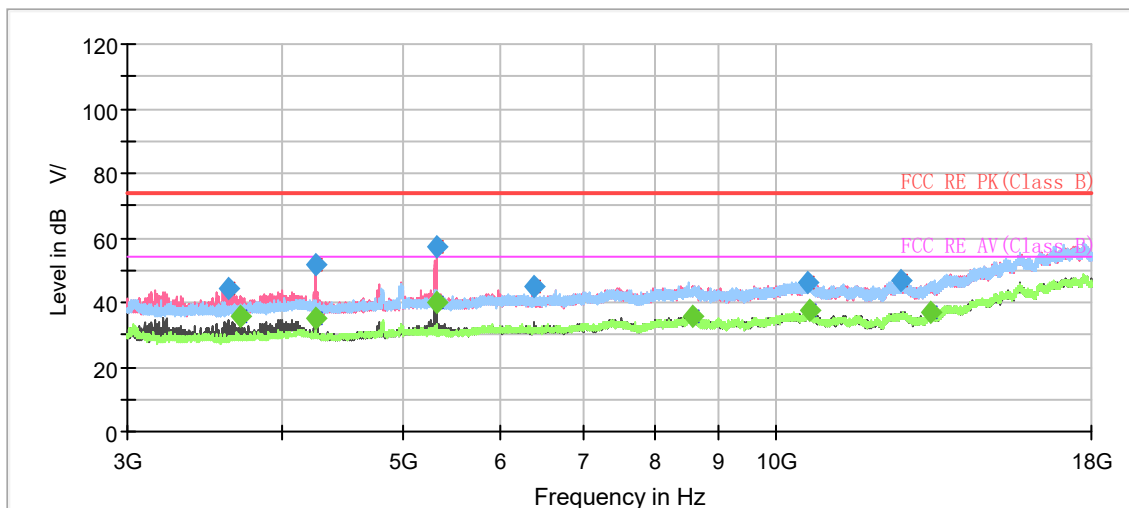
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE20) CH1



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

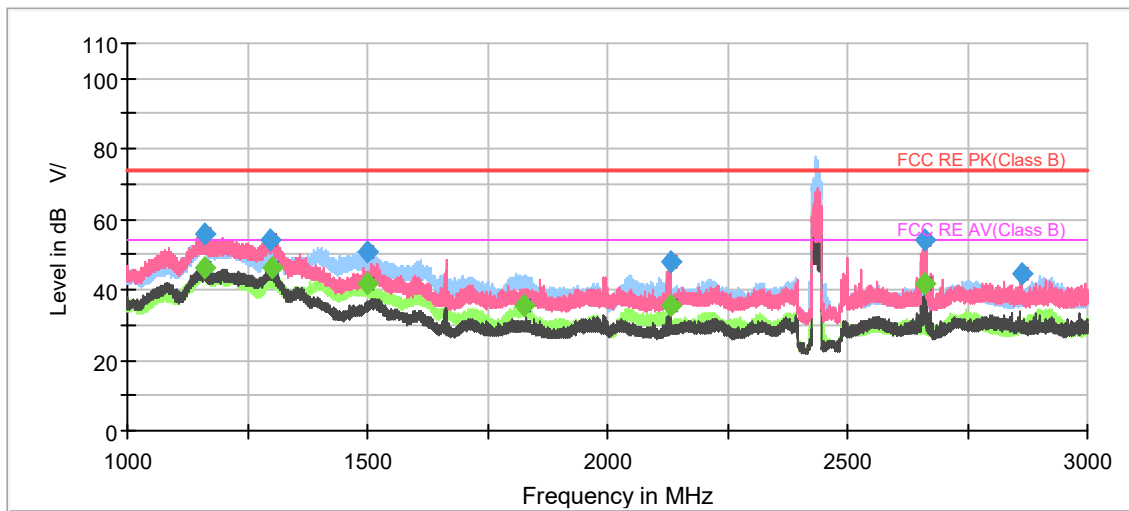


Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1147.733333	---	45.74	54.00	8.26	200.0	V	164.0	-17.6
1195.200000	54.85	---	74.00	19.15	200.0	V	164.0	-17.3
1302.400000	---	45.83	54.00	8.17	200.0	V	181.0	-16.7
1469.333333	51.35	---	74.00	22.65	200.0	H	179.0	-15.7
1475.933333	---	42.10	54.00	11.90	100.0	H	183.0	-15.7
1820.466667	45.51	---	74.00	28.49	200.0	H	179.0	-13.7
1823.000000	---	35.72	54.00	18.28	200.0	H	179.0	-13.7
2130.733333	---	35.85	54.00	18.15	100.0	V	23.0	-12.1
2130.733333	46.13	---	74.00	27.87	100.0	V	23.0	-12.1
2657.466667	---	42.36	54.00	11.64	100.0	V	74.0	-9.6
2657.466667	54.03	---	74.00	19.97	100.0	V	74.0	-9.6
2904.133333	43.85	---	74.00	30.15	100.0	H	183.0	-8.7

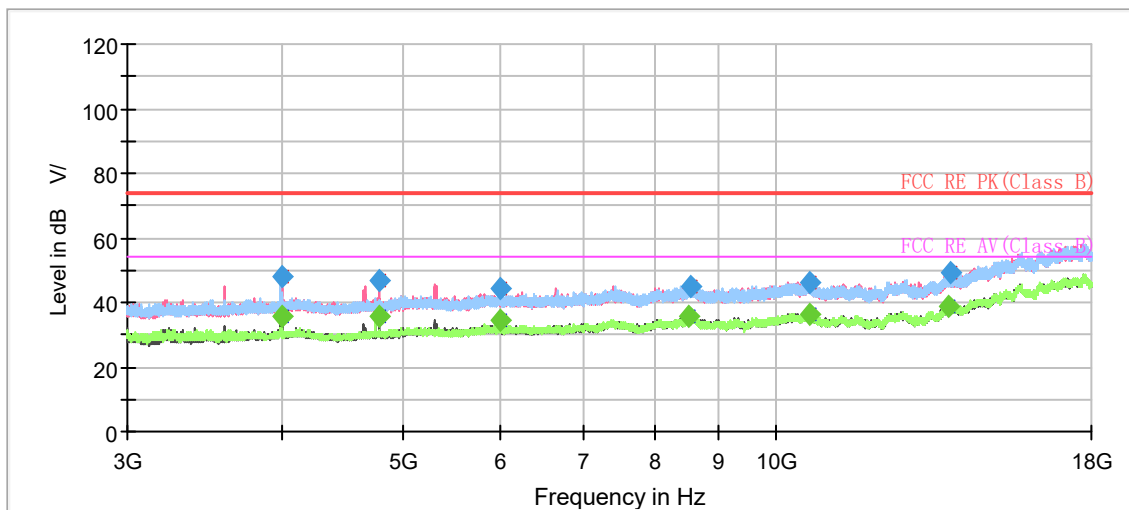
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE20) CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



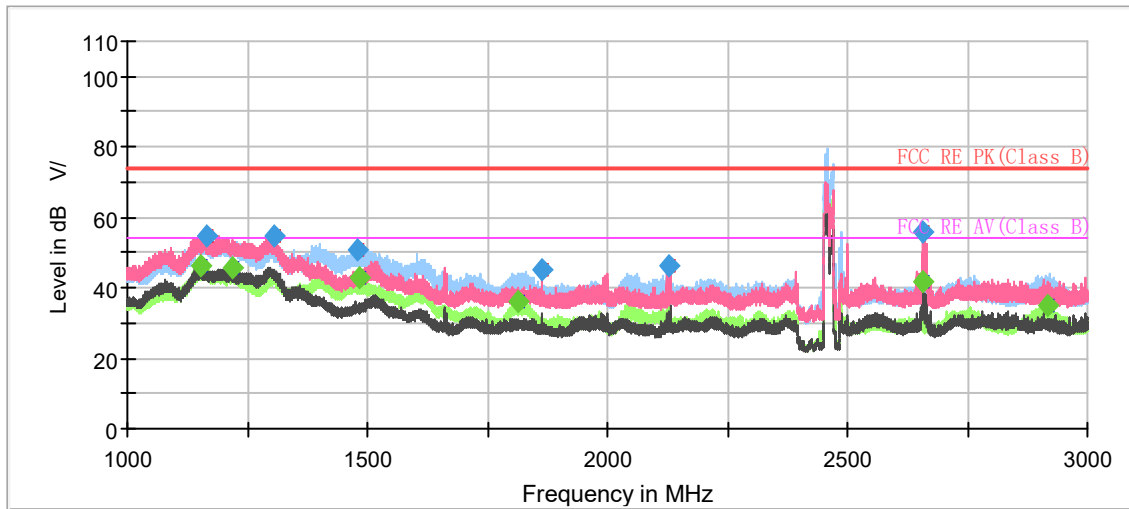
Radiates Emission from 3GHz to 18GHz



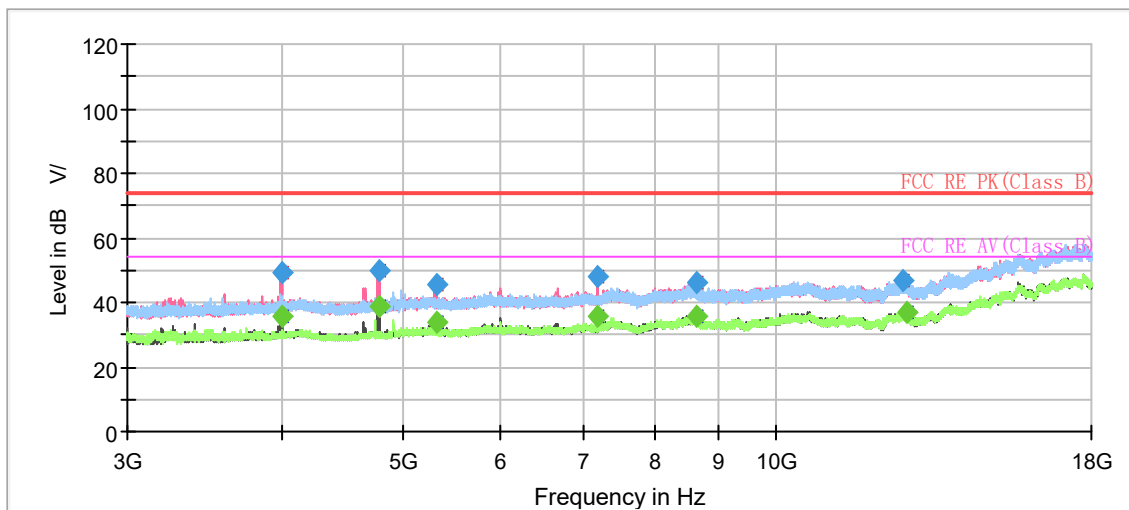
Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1160.400000	---	46.12	54.00	7.88	200.0	H	215.0	-17.5
1161.333333	55.80	---	74.00	18.20	200.0	H	223.0	-17.5
1297.733333	54.33	---	74.00	19.67	200.0	V	186.0	-16.8
1299.866667	---	46.48	54.00	7.52	200.0	V	186.0	-16.7
1498.133333	51.03	---	74.00	22.97	200.0	H	189.0	-15.6
1500.866667	---	41.59	54.00	12.41	200.0	H	179.0	-15.6
1826.533333	---	35.68	54.00	18.32	200.0	H	179.0	-13.7
2132.600000	---	35.81	54.00	18.19	100.0	H	0.0	-12.1
2132.600000	47.68	---	74.00	26.32	100.0	H	0.0	-12.1
2663.066667	---	41.93	54.00	12.07	100.0	V	63.0	-9.6
2663.066667	53.88	---	74.00	20.12	100.0	V	63.0	-9.6
2862.333333	44.50	---	74.00	29.50	100.0	V	190.0	-8.9

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE20) CH11



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



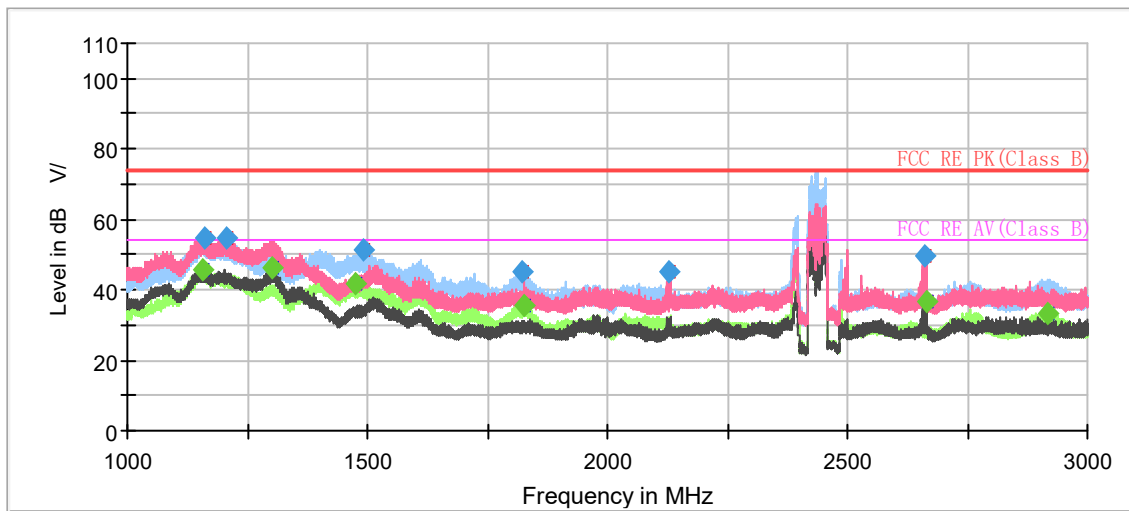
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1152.466667	---	46.05	54.00	7.95	200.0	V	165.0	-17.5
1164.933333	54.97	---	74.00	19.03	200.0	V	165.0	-17.5
1221.000000	---	45.55	54.00	8.45	200.0	V	165.0	-17.2
1305.266667	54.59	---	74.00	19.41	200.0	V	182.0	-16.7
1477.600000	50.72	---	74.00	23.28	200.0	H	177.0	-15.7
1484.933333	---	42.68	54.00	11.32	200.0	H	187.0	-15.7
1812.266667	---	36.24	54.00	17.76	200.0	H	187.0	-13.8
1861.866667	44.88	---	74.00	29.12	100.0	V	226.0	-13.5
2126.266667	46.39	---	74.00	27.61	100.0	H	359.0	-12.1
2657.400000	55.60	---	74.00	18.40	100.0	V	53.0	-9.6
2657.400000	---	41.54	54.00	12.46	100.0	V	53.0	-9.6
2918.000000	---	34.86	54.00	19.14	100.0	H	172.0	-8.7

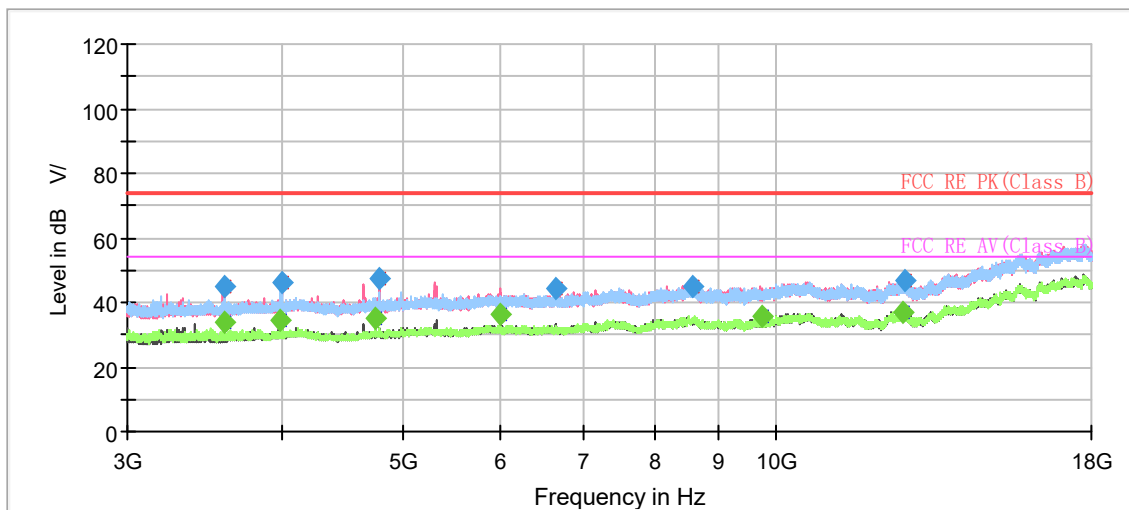
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE40) CH3



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



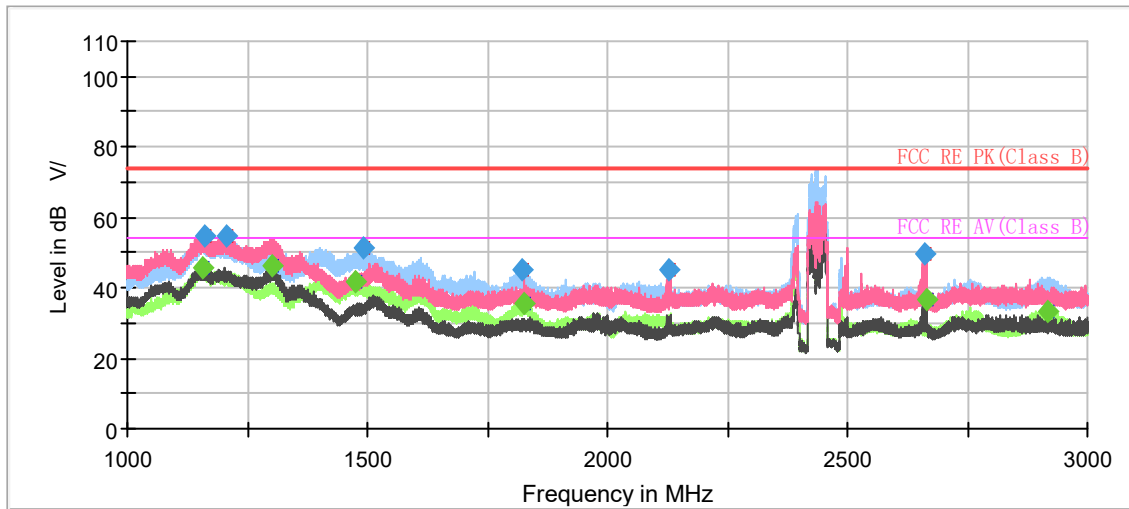
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1158.466667	---	45.59	54.00	8.41	200.0	H	220.0	-17.5
1159.600000	54.75	---	74.00	19.25	200.0	H	220.0	-17.5
1205.333333	54.99	---	74.00	19.01	100.0	V	163.0	-17.3
1302.133333	---	46.24	54.00	7.76	200.0	V	190.0	-16.7
1473.333333	---	41.51	54.00	12.49	100.0	H	182.0	-15.7
1492.533333	51.07	---	74.00	22.93	200.0	H	182.0	-15.6
1823.133333	45.28	---	74.00	28.72	100.0	H	182.0	-13.7
1828.133333	---	35.55	54.00	18.45	200.0	H	192.0	-13.7
2127.400000	45.36	---	74.00	28.64	100.0	V	163.0	-12.1
2663.200000	49.51	---	74.00	24.49	200.0	V	113.0	-9.6
2663.600000	---	36.72	54.00	17.28	100.0	V	113.0	-9.6
2915.600000	---	33.17	54.00	20.83	200.0	H	182.0	-8.7

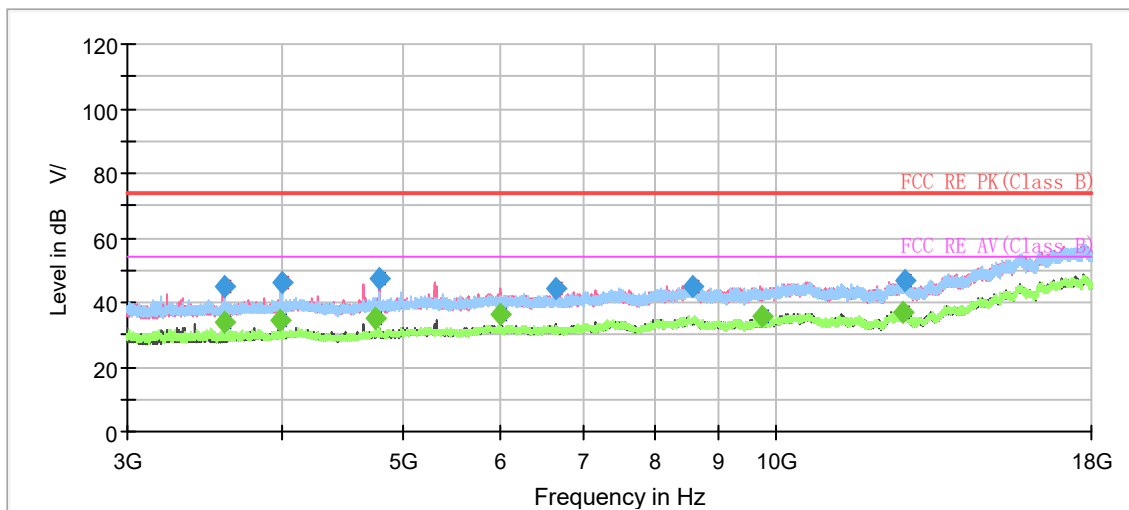
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE40) CH6



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



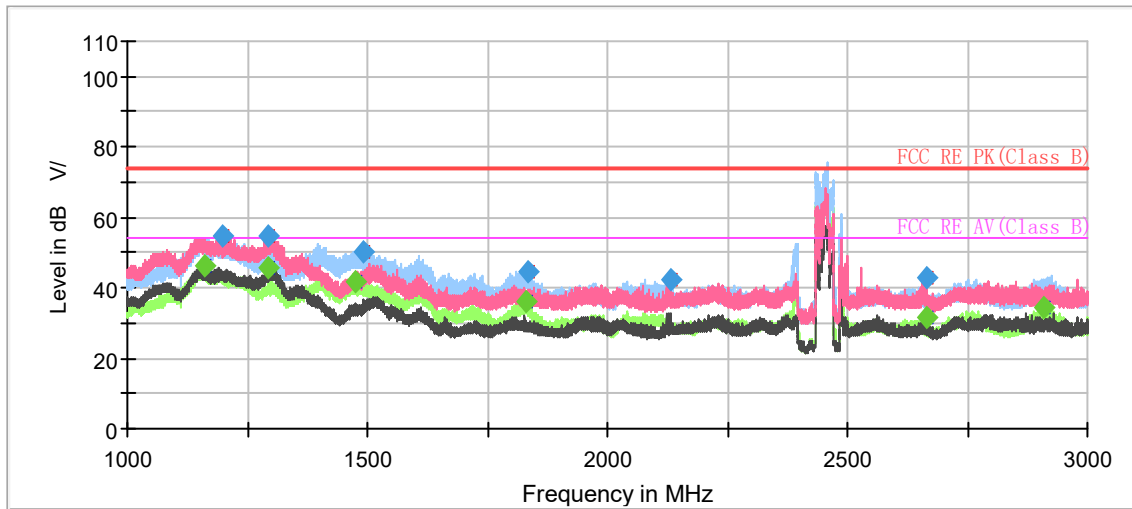
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1158.466667	---	45.59	54.00	8.41	200.0	H	220.0	-17.5
1159.600000	54.75	---	74.00	19.25	200.0	H	220.0	-17.5
1205.333333	54.99	---	74.00	19.01	100.0	V	163.0	-17.3
1302.133333	---	46.24	54.00	7.76	200.0	V	190.0	-16.7
1473.333333	---	41.51	54.00	12.49	100.0	H	182.0	-15.7
1492.533333	51.07	---	74.00	22.93	200.0	H	182.0	-15.6
1823.133333	45.28	---	74.00	28.72	100.0	H	182.0	-13.7
1828.133333	---	35.55	54.00	18.45	200.0	H	192.0	-13.7
2127.400000	45.36	---	74.00	28.64	100.0	V	163.0	-12.1
2663.200000	49.51	---	74.00	24.49	200.0	V	113.0	-9.6
2663.600000	---	36.72	54.00	17.28	100.0	V	113.0	-9.6
2915.600000	---	33.17	54.00	20.83	200.0	H	182.0	-8.7

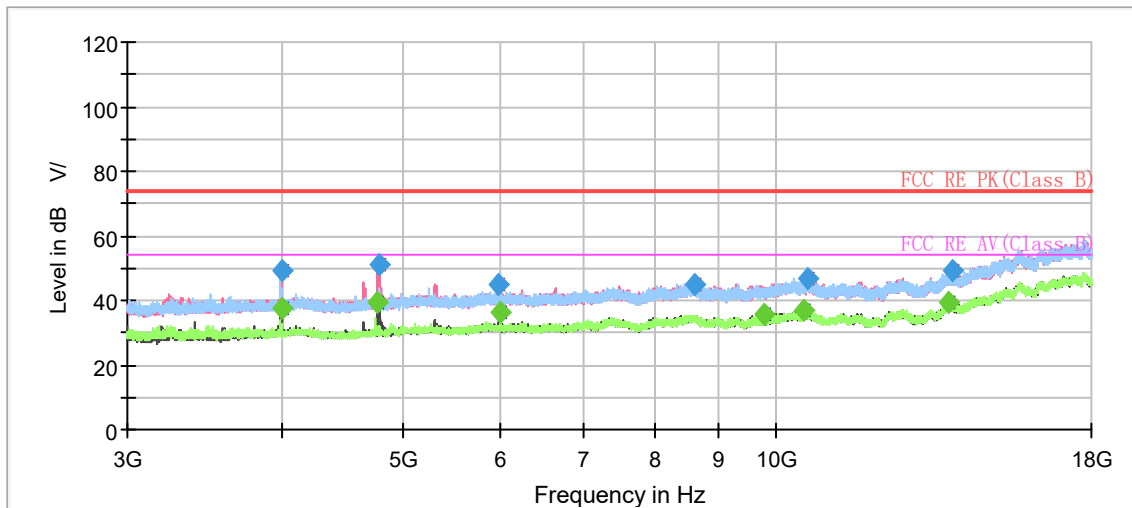
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ax (HE40) CH9



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



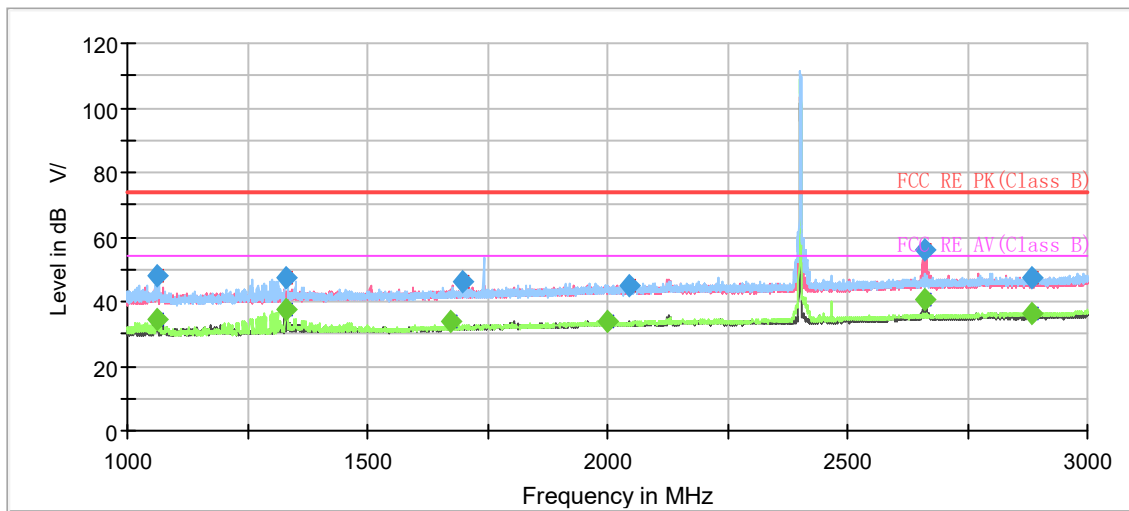
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1160.066667	---	46.17	54.00	7.83	200.0	H	219.0	-17.5
1196.400000	55.00	---	74.00	19.00	100.0	V	164.0	-17.3
1293.866667	54.55	---	74.00	19.45	200.0	V	191.0	-16.8
1294.933333	---	45.64	54.00	8.36	200.0	V	191.0	-16.8
1476.666667	---	41.68	54.00	12.32	200.0	H	190.0	-15.7
1492.866667	50.48	---	74.00	23.52	100.0	H	190.0	-15.6
1832.466667	---	36.19	54.00	17.81	200.0	H	181.0	-13.7
1835.666667	44.67	---	74.00	29.33	200.0	H	181.0	-13.7
2133.266667	42.47	---	74.00	31.53	100.0	H	0.0	-12.1
2666.466667	43.06	---	74.00	30.94	200.0	V	288.0	-9.6
2666.466667	---	31.52	54.00	22.48	100.0	V	288.0	-9.6
2909.066667	---	34.13	54.00	19.87	200.0	H	181.0	-8.7

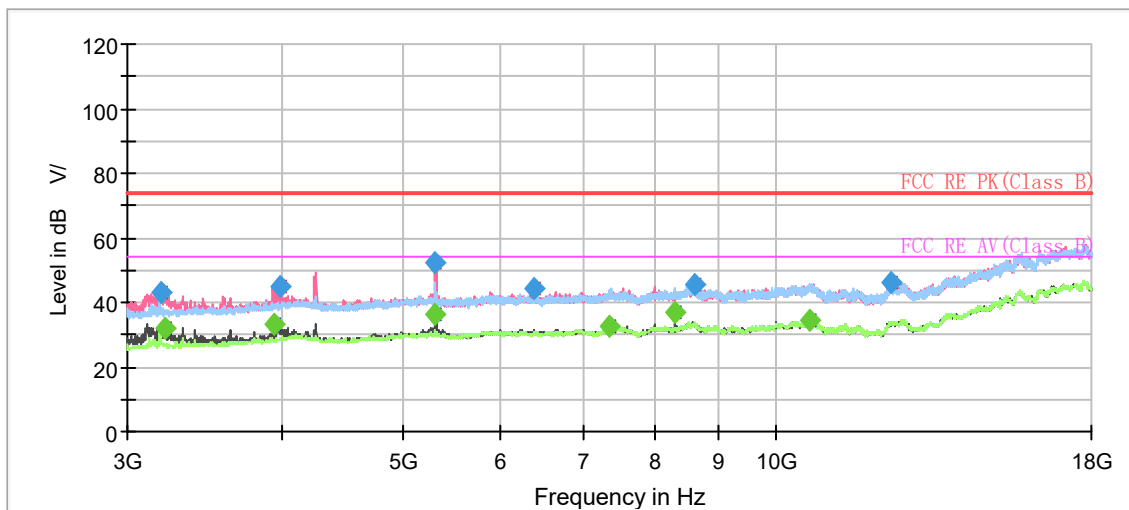
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Bluetooth LE-Channel 0



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



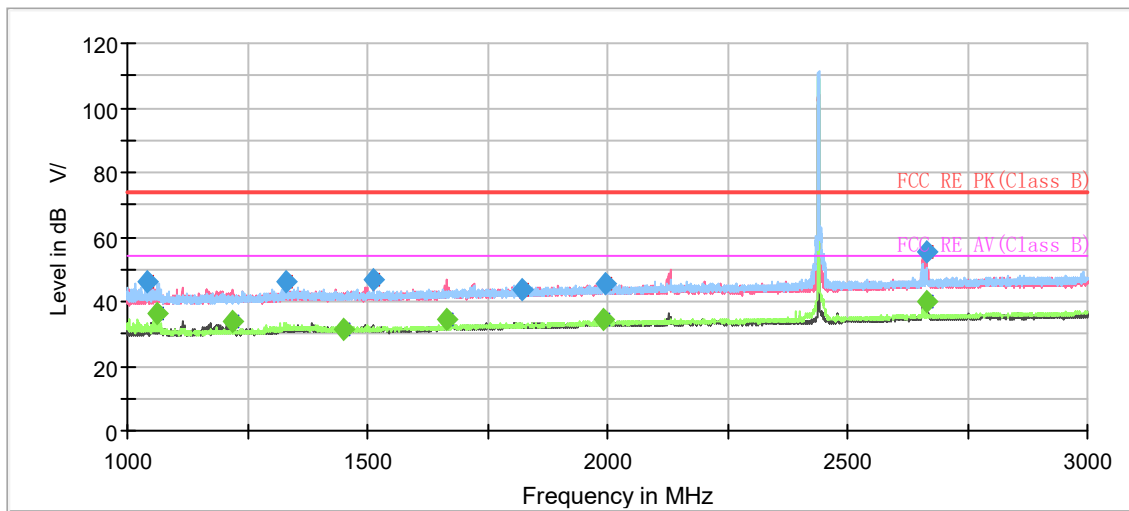
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1062.250000	47.93	---	74.00	26.07	200.0	H	330.0	-8.0
1062.250000	---	34.29	54.00	19.71	200.0	H	330.0	-8.0
1329.000000	47.34	---	74.00	26.66	200.0	H	254.0	-6.6
1329.000000	---	37.58	54.00	16.42	200.0	H	254.0	-6.6
1674.000000	---	33.70	54.00	20.30	200.0	V	318.0	-4.6
1699.750000	46.04	---	74.00	27.96	100.0	V	228.0	-4.5
2000.000000	---	34.05	54.00	19.95	100.0	V	37.0	-2.7
2046.500000	44.67	---	74.00	29.33	100.0	V	96.0	-2.5
2660.500000	56.25	---	74.00	17.75	200.0	V	203.0	0.4
2661.250000	---	40.42	54.00	13.58	200.0	V	203.0	0.4
2883.500000	---	36.11	54.00	17.89	200.0	H	129.0	1.2
2885.000000	47.14	---	74.00	26.86	200.0	H	79.0	1.2

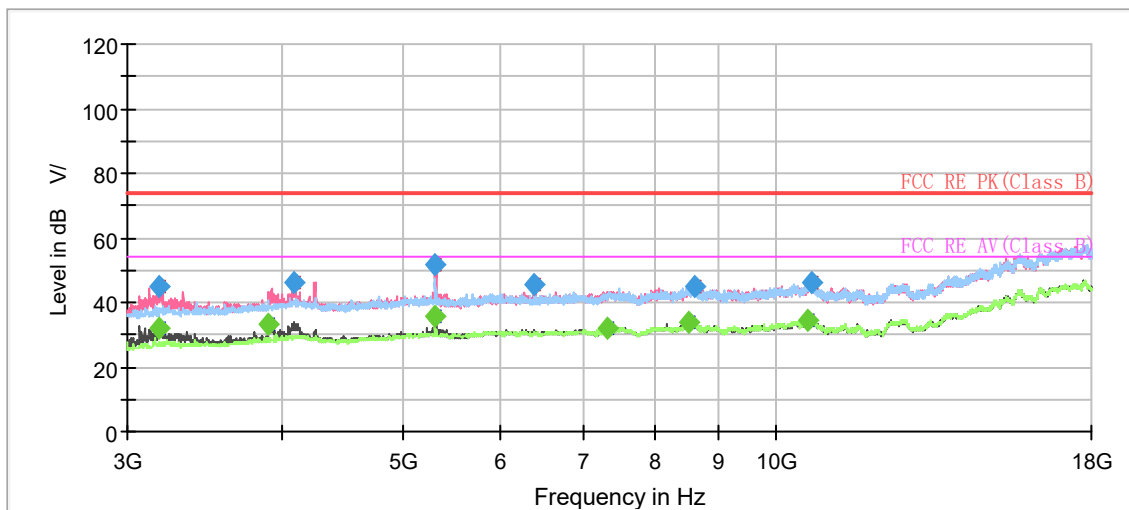
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Bluetooth LE-Channel 19



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



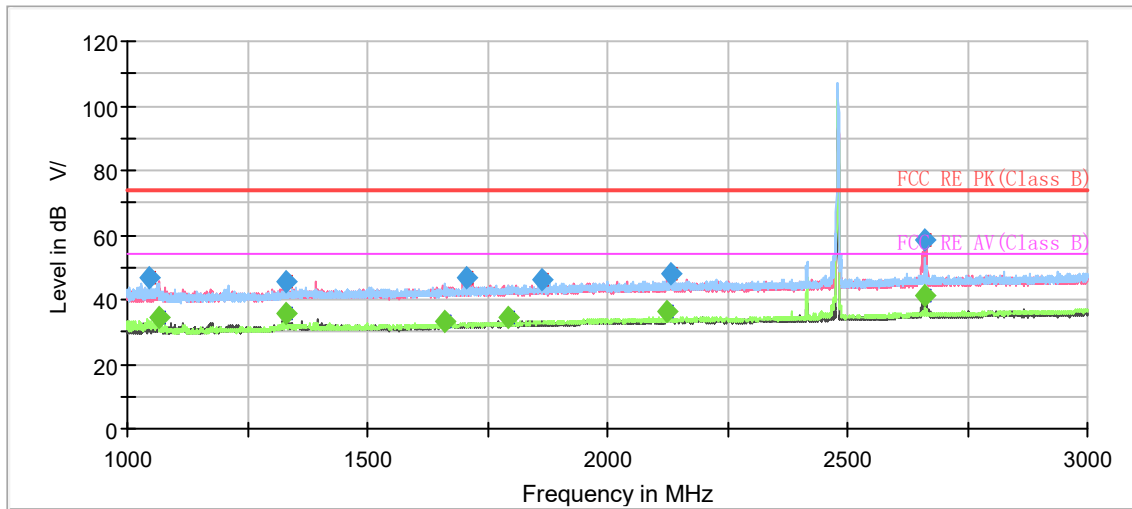
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1040.250000	46.44	---	74.00	27.56	100.0	H	326.0	-8.2
1063.500000	---	36.09	54.00	17.91	200.0	H	322.0	-8.0
1221.000000	---	34.00	54.00	20.00	200.0	V	254.0	-7.2
1329.500000	45.99	---	74.00	28.01	200.0	H	264.0	-6.6
1449.750000	---	31.69	54.00	22.31	200.0	V	355.0	-5.9
1513.500000	46.99	---	74.00	27.01	200.0	V	43.0	-5.5
1663.500000	---	34.24	54.00	19.76	100.0	V	289.0	-4.7
1824.000000	43.90	---	74.00	30.10	200.0	V	236.0	-3.7
1993.000000	---	34.18	54.00	19.82	100.0	V	42.0	-2.7
1995.250000	45.51	---	74.00	28.49	100.0	V	311.0	-2.7
2665.750000	---	40.19	54.00	13.81	100.0	V	153.0	0.4
2666.000000	55.38	---	74.00	18.62	100.0	V	153.0	0.4

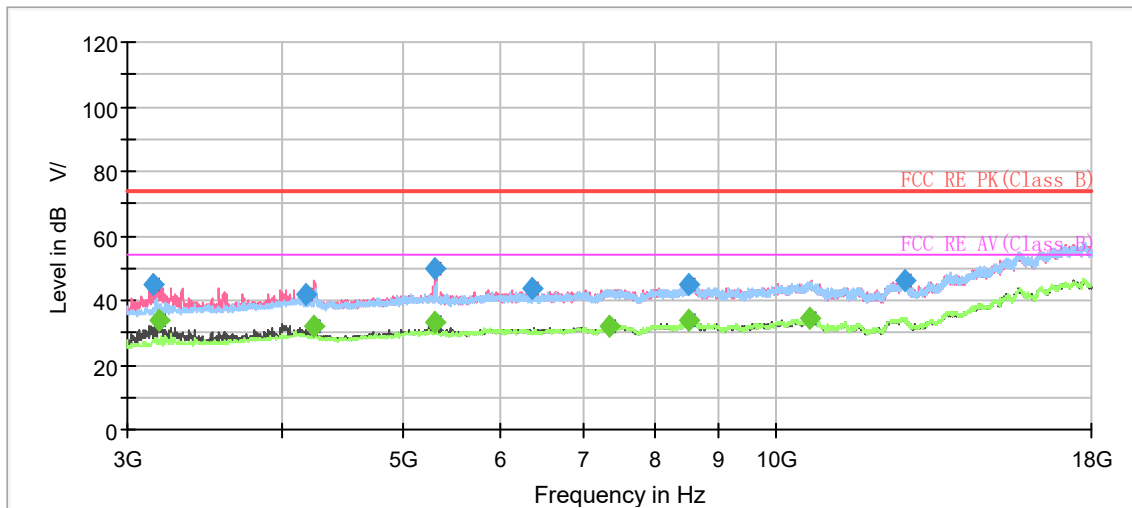
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Bluetooth LE-Channel 39



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz



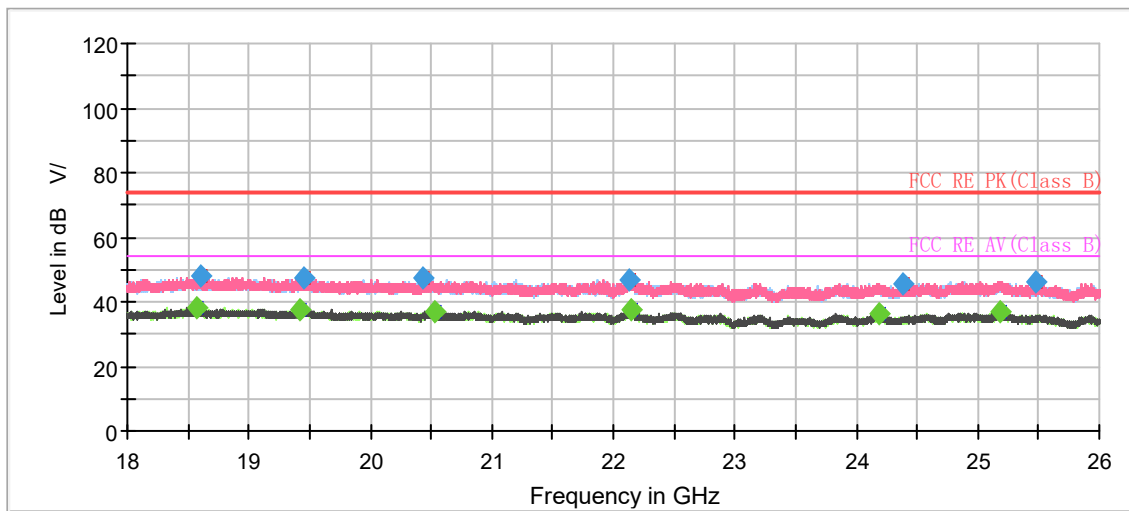
Radiates Emission from 3GHz to 18GHz



Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1043.750000	46.82	---	74.00	27.18	200.0	H	326.0	-8.2
1065.000000	---	34.50	54.00	19.50	200.0	V	299.0	-8.0
1330.000000	---	35.78	54.00	18.22	200.0	V	287.0	-6.6
1331.000000	45.82	---	74.00	28.18	200.0	V	316.0	-6.6
1659.500000	---	33.04	54.00	20.96	100.0	V	277.0	-4.7
1707.250000	46.69	---	74.00	27.31	100.0	V	236.0	-4.4
1794.750000	---	34.17	54.00	19.83	100.0	V	277.0	-3.8
1865.250000	46.34	---	74.00	27.66	200.0	H	36.0	-3.5
2125.750000	---	36.21	54.00	17.79	100.0	V	89.0	-2.1
2131.500000	48.06	---	74.00	25.94	100.0	V	106.0	-2.1
2661.750000	58.41	---	74.00	15.59	100.0	V	225.0	0.4
2661.750000	---	41.23	54.00	12.77	100.0	V	225.0	0.4

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

During the test, the Radiates Emission from 18GHz to 26GHz was performed in all modes with all channels, 802.11ax (HE20) CH6 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Radiates Emission from 18GHz to 26GHz

5.7. Conducted Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

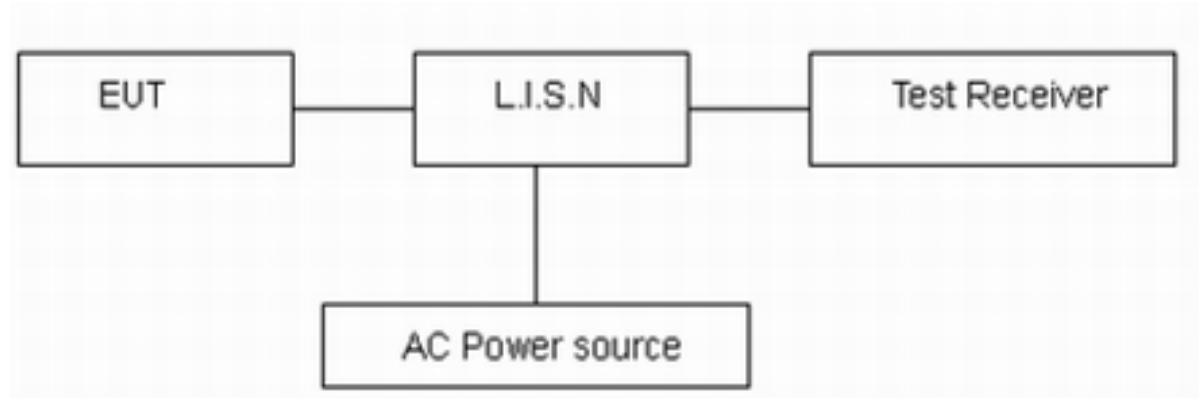
Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz.

The measurement result should include both L line and N line.

The test is in transmitting mode.

Test Setup



Note: AC Power source is used to change the voltage 110V/60Hz.

Limits

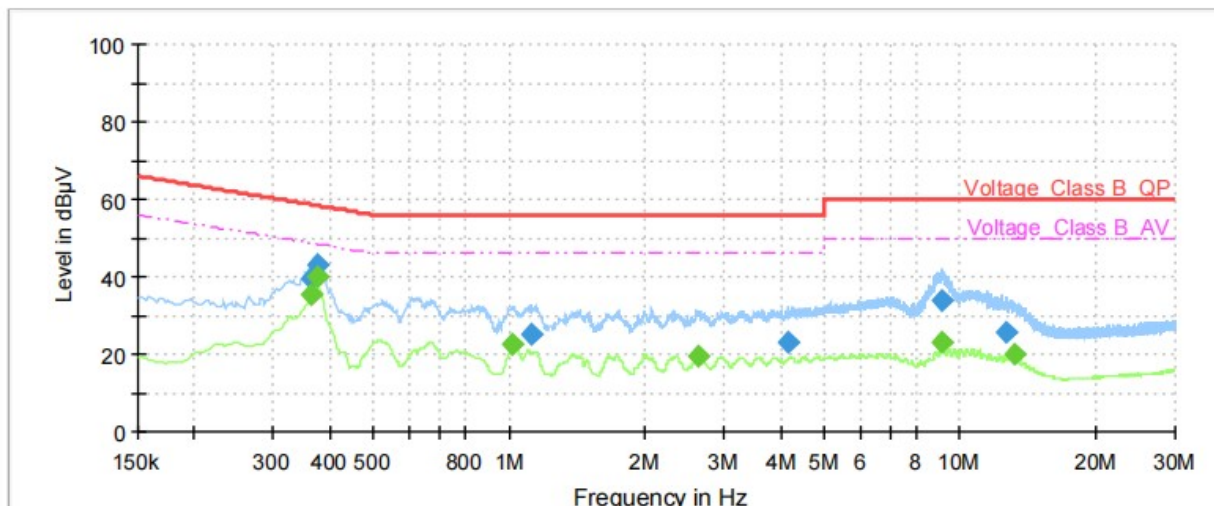
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46 *
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 2.69$ dB.

Test Results:

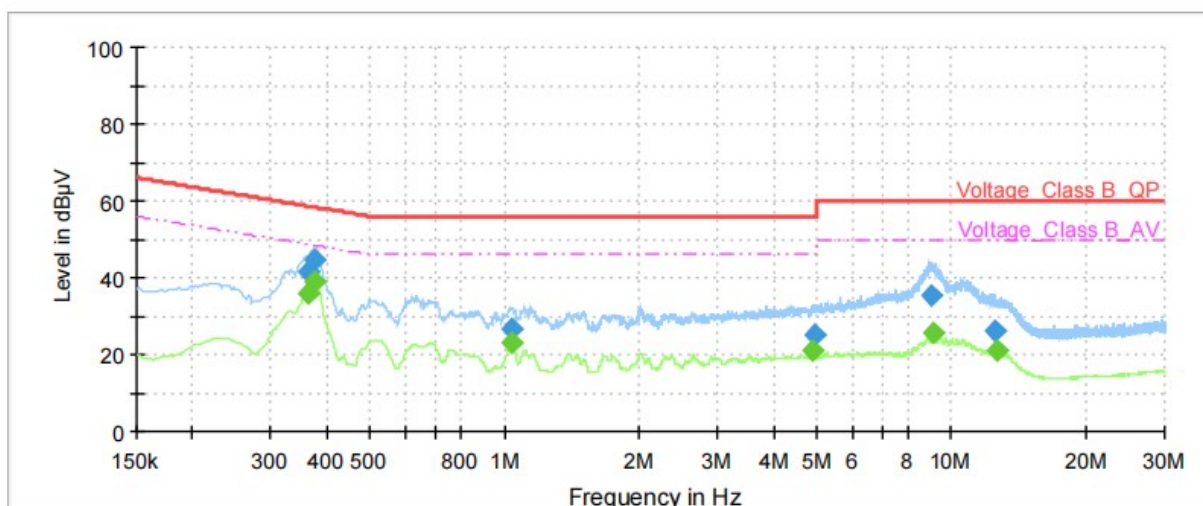
Following plots, Blue trace uses the peak detection and Green trace uses the average detection. During the test, the Conducted Emission was performed in all modes (WIFI 2.4G /Bluetooth LE) with all channels, 802.11ax (HE20) CH6 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.36	---	35.22	48.69	13.47	70.0	9.000	L1	ON	21
0.36	39.33	---	58.69	19.36	70.0	9.000	L1	ON	21
0.38	---	39.77	48.34	8.57	70.0	9.000	L1	ON	21
0.38	43.12	---	58.34	15.22	70.0	9.000	L1	ON	21
1.02	---	22.66	46.00	23.34	70.0	9.000	L1	ON	20
1.12	25.37	---	56.00	30.63	70.0	9.000	L1	ON	20
2.62	---	19.73	46.00	26.27	70.0	9.000	L1	ON	19
4.14	22.98	---	56.00	33.02	70.0	9.000	L1	ON	19
9.14	---	22.93	50.00	27.07	70.0	9.000	L1	ON	20
9.14	33.75	---	60.00	26.25	70.0	9.000	L1	ON	20
12.61	25.89	---	60.00	34.11	70.0	9.000	L1	ON	20
13.23	---	19.99	50.00	30.01	70.0	9.000	L1	ON	20

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 KHz to 30 MHz



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.36	41.79	---	58.69	16.90	70.0	9.000	N	ON	21
0.36	---	35.75	48.69	12.94	70.0	9.000	N	ON	21
0.38	44.60	---	58.39	13.79	70.0	9.000	N	ON	21
0.38	---	39.22	48.34	9.12	70.0	9.000	N	ON	21
1.03	---	23.31	46.00	22.69	70.0	9.000	N	ON	20
1.04	26.72	---	56.00	29.28	70.0	9.000	N	ON	20
4.91	---	20.89	46.00	25.11	70.0	9.000	N	ON	19
4.92	25.34	---	56.00	30.66	70.0	9.000	N	ON	19
9.05	35.58	---	60.00	24.42	70.0	9.000	N	ON	20
9.10	---	25.44	50.00	24.56	70.0	9.000	N	ON	20
12.58	26.02	---	60.00	33.98	70.0	9.000	N	ON	20
12.62	---	20.82	50.00	29.18	70.0	9.000	N	ON	20

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 KHz to 30 MHz

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Spectrum Analyzer	R&S	FSV30	100815	2020-12-13	2021-12-12
EMI Test Receiver	R&S	ESCI	100948	2020-05-18	2021-05-17
				2021-05-15	2022-05-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	391	2019-12-16	2021-12-15
Horn Antenna	R&S	HF907	102723	2018-08-11	2021-08-10
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2021-06-19
EMI Test Receiver	R&S	ESR	101667	2020-05-18	2021-05-17
				2021-05-16	2022-05-15
LISN	R&S	ENV216	101171	2018-12-15	2021-12-14
Spectrum Analyzer	Agilent	N9010A	MY47191109	2020-05-18	2021-05-17
				2021-05-15	2022-05-14
Power Meter	R&S	NRP2	104306	2020-05-18	2021-05-17
				2021-05-15	2022-05-14
Power Sensor	R&S	NRP-Z21	104799	2020-05-18	2021-05-17
				2021-05-15	2022-05-14
RF Cable	Agilent	SMA 15cm	0001	2020-12-10	2021-06-09
Software	R&S	EMC32	9.26.0	/	/

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



ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.



ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.