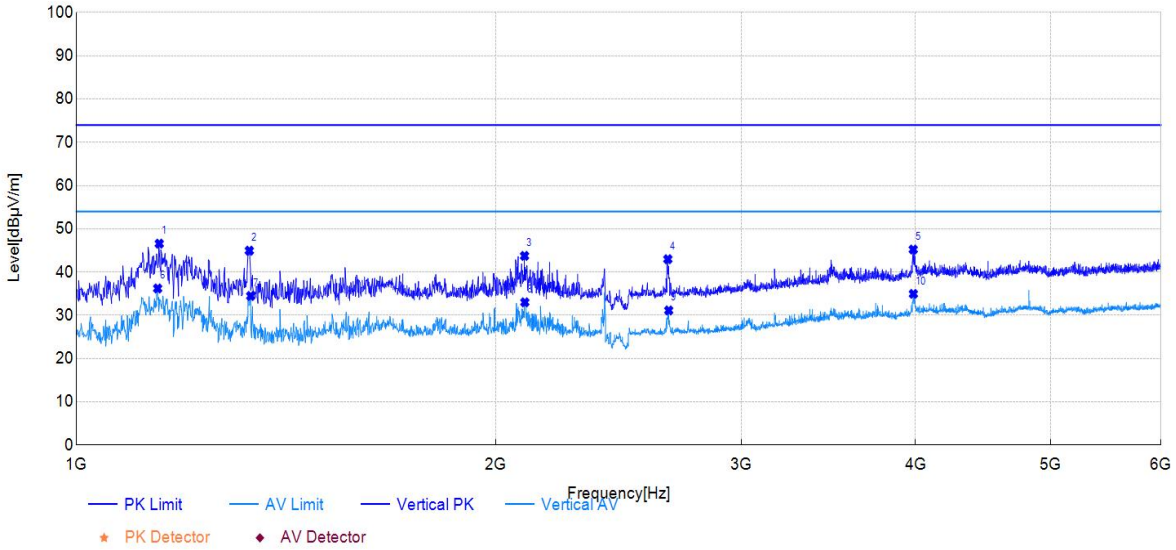
than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2412MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



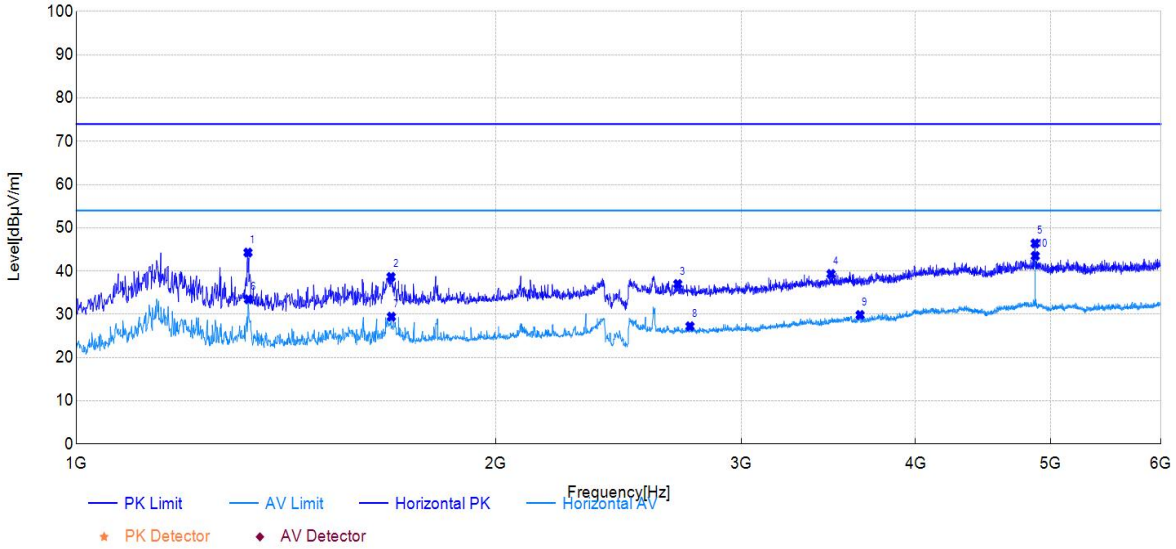
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1147.00	46.57	-22.64	74.00	27.43	PK	Vertical
1331.00	44.95	-21.78	74.00	29.05	PK	Vertical
2097.00	43.74	-17.40	74.00	30.26	PK	Vertical
2657.00	42.98	-15.47	74.00	31.02	PK	Vertical
3985.00	45.21	-8.37	74.00	28.79	PK	Vertical
1144.00	36.21	-22.65	54.00	17.79	AV	Vertical
1334.00	34.47	-21.75	54.00	19.53	AV	Vertical
2098.00	33.01	-17.40	54.00	20.99	AV	Vertical
2661.00	31.13	-15.47	54.00	22.87	AV	Vertical
3986.00	34.95	-8.36	54.00	19.05	AV	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

1GHz – 6GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

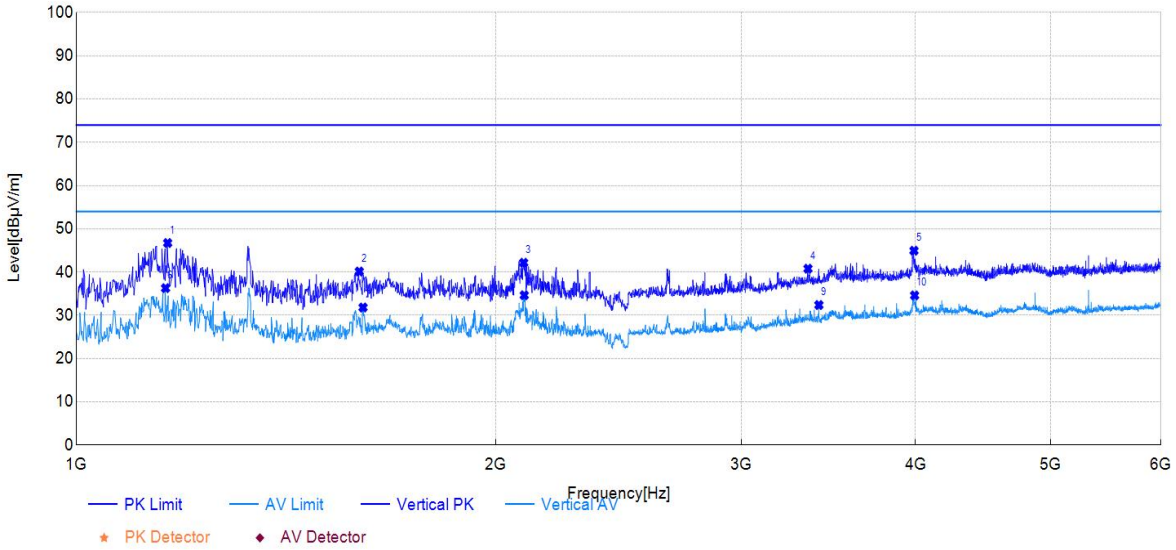


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1328.00	44.28	-22.69	74.00	29.72	PK	Horizontal
1682.00	38.65	-20.47	74.00	35.35	PK	Horizontal
2701.00	37.00	-15.19	74.00	37.00	PK	Horizontal
3479.00	39.34	-12.46	74.00	34.66	PK	Horizontal
4874.00	46.39	-6.58	74.00	27.61	PK	Horizontal
1329.00	33.47	-22.69	54.00	20.53	AV	Horizontal
1683.00	29.44	-20.46	54.00	24.56	AV	Horizontal
2756.00	27.23	-15.18	54.00	26.77	AV	Horizontal
3650.00	29.84	-11.28	54.00	24.16	AV	Horizontal
4875.00	43.49	-6.57	54.00	10.51	AV	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



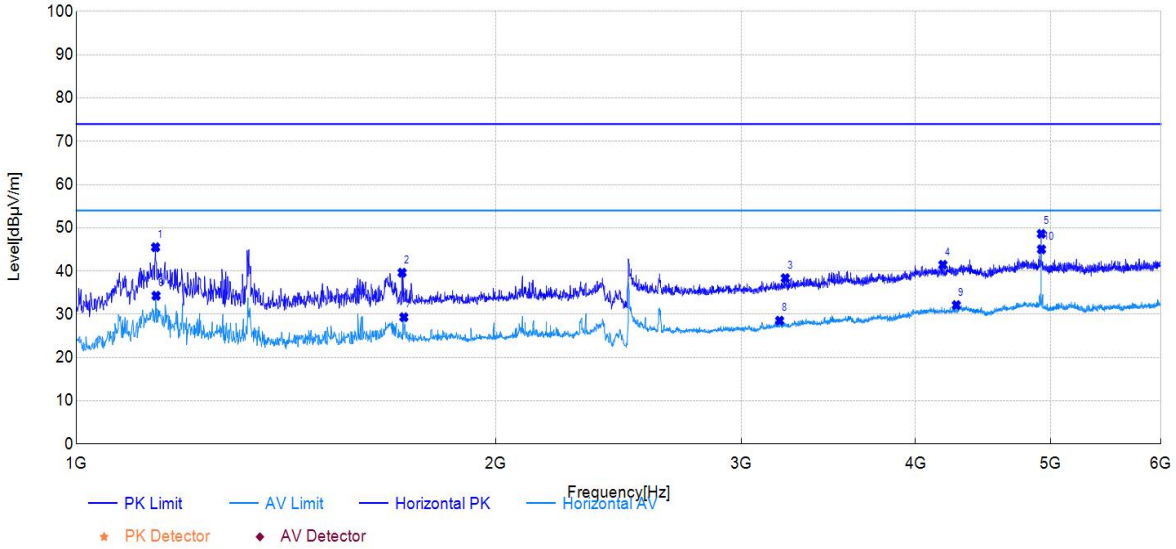
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1163.00	46.72	-22.59	74.00	27.28	PK	Vertical
1596.00	40.13	-20.39	74.00	33.87	PK	Vertical
2094.00	42.15	-17.42	74.00	31.85	PK	Vertical
3349.00	40.78	-12.33	74.00	33.22	PK	Vertical
3990.00	44.94	-8.34	74.00	29.06	PK	Vertical
1159.00	36.28	-22.60	54.00	17.72	AV	Vertical
1606.00	31.81	-20.33	54.00	22.19	AV	Vertical
2096.00	34.64	-17.40	54.00	19.36	AV	Vertical
3410.00	32.38	-12.04	54.00	21.62	AV	Vertical
3994.00	34.60	-8.32	54.00	19.40	AV	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

1GHz – 6GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

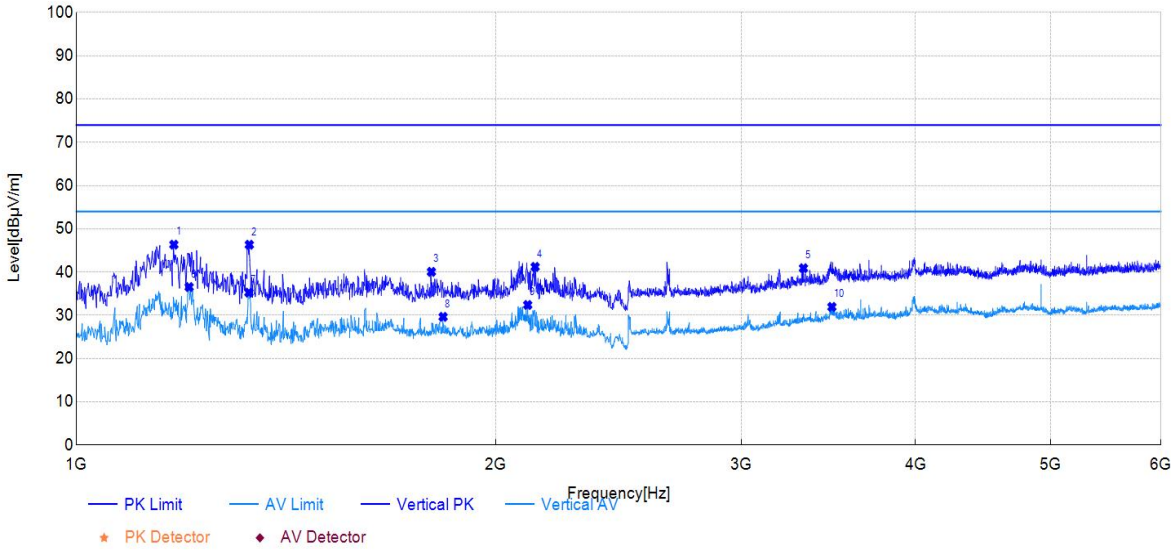


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1140.00	45.50	-23.69	74.00	28.50	PK	Horizontal
1713.00	39.62	-20.22	74.00	34.38	PK	Horizontal
3226.00	38.36	-13.48	74.00	35.64	PK	Horizontal
4185.00	41.45	-8.00	74.00	32.55	PK	Horizontal
4924.00	48.61	-6.39	74.00	25.39	PK	Horizontal
1141.00	34.28	-23.68	54.00	19.72	AV	Horizontal
1718.00	29.33	-20.18	54.00	24.67	AV	Horizontal
3196.00	28.53	-13.62	54.00	25.47	AV	Horizontal
4279.00	32.13	-7.69	54.00	21.87	AV	Horizontal
4925.00	45.01	-6.38	54.00	8.99	AV	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



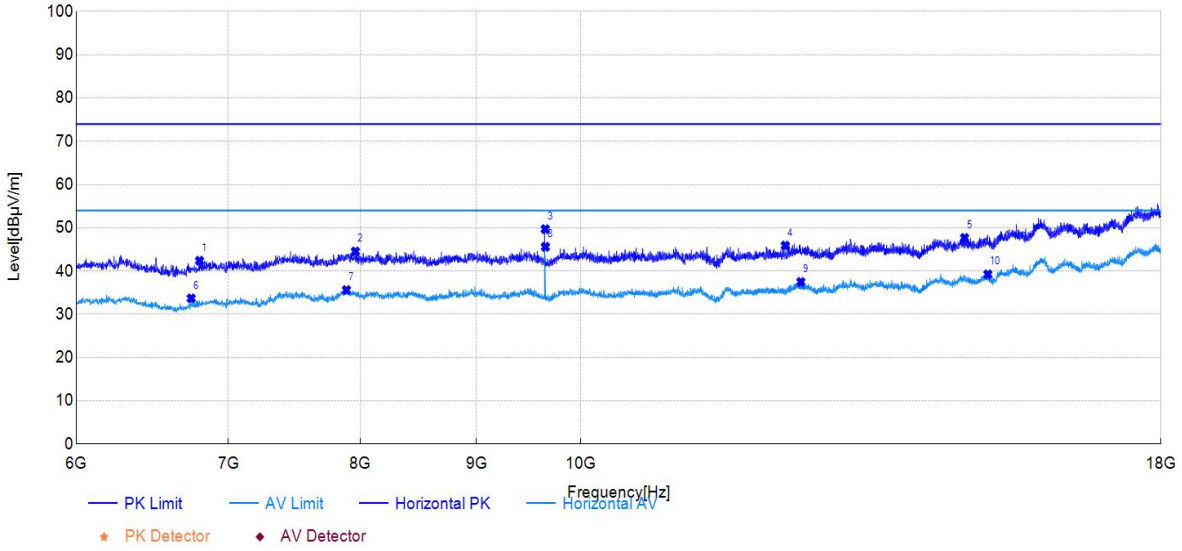
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1175.00	46.34	-22.55	74.00	27.66	PK	Vertical
1331.00	46.32	-21.78	74.00	27.68	PK	Vertical
1798.00	40.05	-18.94	74.00	33.95	PK	Vertical
2134.00	41.20	-17.29	74.00	32.80	PK	Vertical
3324.00	40.90	-12.45	74.00	33.10	PK	Vertical
1205.00	36.54	-22.45	54.00	17.46	AV	Vertical
1330.00	35.25	-21.78	54.00	18.75	AV	Vertical
1833.00	29.64	-18.80	54.00	24.36	AV	Vertical
2108.00	32.39	-17.36	54.00	21.61	AV	Vertical
3484.00	31.94	-11.66	54.00	22.06	AV	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

6GHz – 18GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2412MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

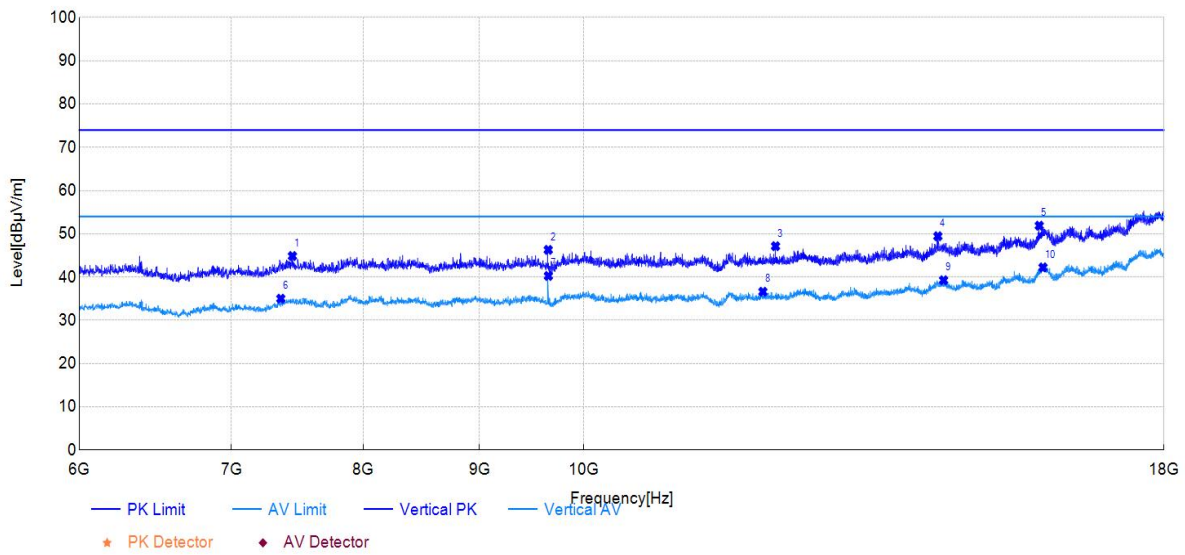


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
6798.00	42.38	-4.92	74.00	31.62	PK	Horizontal
7960.50	44.53	-1.30	74.00	29.47	PK	Horizontal
9648.00	49.69	-0.70	74.00	24.31	PK	Horizontal
12303.00	45.89	1.60	74.00	28.11	PK	Horizontal
14754.00	47.67	5.41	74.00	26.33	PK	Horizontal
6741.00	33.69	-5.43	54.00	20.31	AV	Horizontal
7888.50	35.61	-1.20	54.00	18.39	AV	Horizontal
9649.50	45.61	-0.71	54.00	8.39	AV	Horizontal
12499.50	37.48	2.45	54.00	16.52	AV	Horizontal
15105.00	39.25	5.81	54.00	14.75	AV	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2412MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



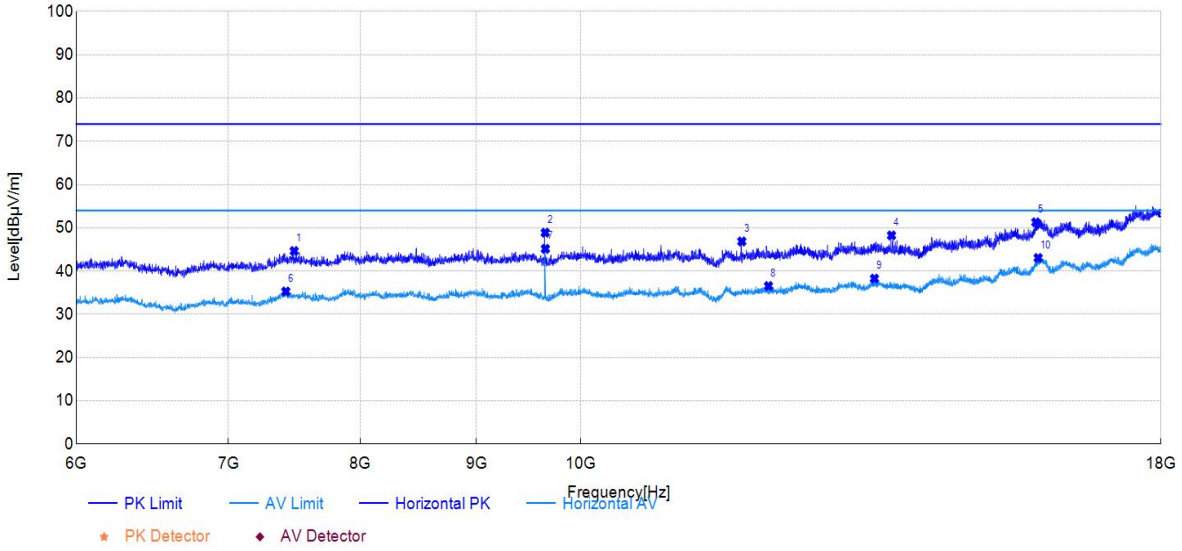
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7446.00	44.86	-2.86	74.00	29.14	PK	Vertical
9648.00	46.29	-0.55	74.00	27.71	PK	Vertical
12145.50	47.14	1.64	74.00	26.86	PK	Vertical
14316.00	49.44	5.37	74.00	24.56	PK	Vertical
15864.00	51.88	8.62	74.00	22.12	PK	Vertical
7359.00	35.00	-3.04	54.00	19.00	AV	Vertical
9649.50	40.26	-0.56	54.00	13.74	AV	Vertical
11991.00	36.61	1.49	54.00	17.39	AV	Vertical
14398.50	39.27	5.61	54.00	14.73	AV	Vertical
15924.00	42.23	9.30	54.00	11.77	AV	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

6GHz – 18GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

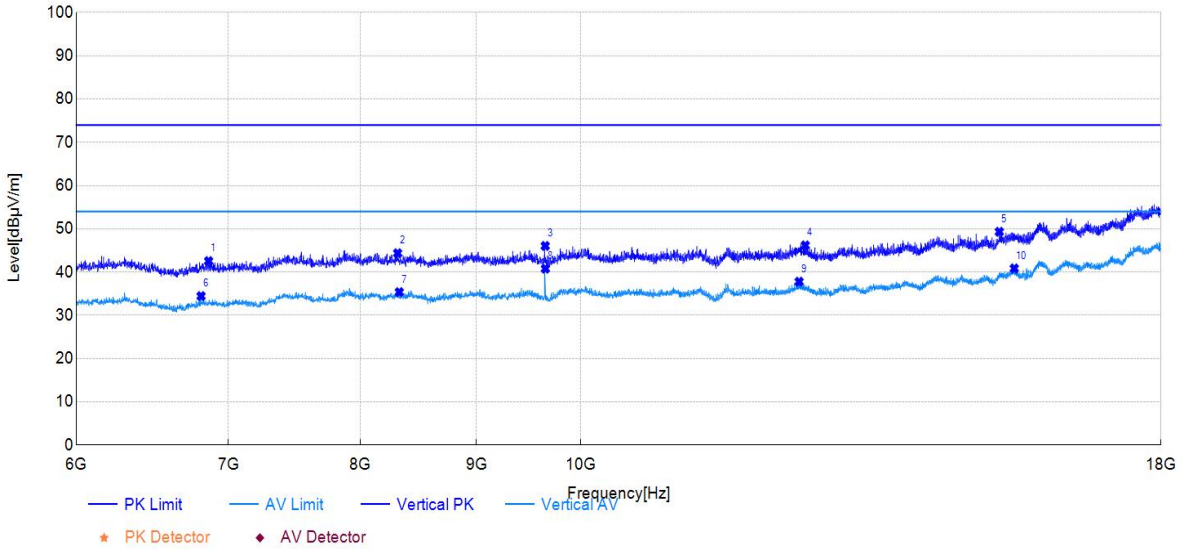


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7482.00	44.63	-2.96	74.00	29.37	PK	Horizontal
9648.00	48.88	-0.70	74.00	25.12	PK	Horizontal
11773.50	46.85	1.11	74.00	27.15	PK	Horizontal
13701.00	48.24	3.23	74.00	25.76	PK	Horizontal
15856.50	51.27	8.95	74.00	22.73	PK	Horizontal
7419.00	35.27	-2.79	54.00	18.73	AV	Horizontal
9649.50	45.14	-0.71	54.00	8.86	AV	Horizontal
12096.00	36.54	1.49	54.00	17.46	AV	Horizontal
13465.50	38.26	3.18	54.00	15.74	AV	Horizontal
15894.00	43.03	9.66	54.00	10.97	AV	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



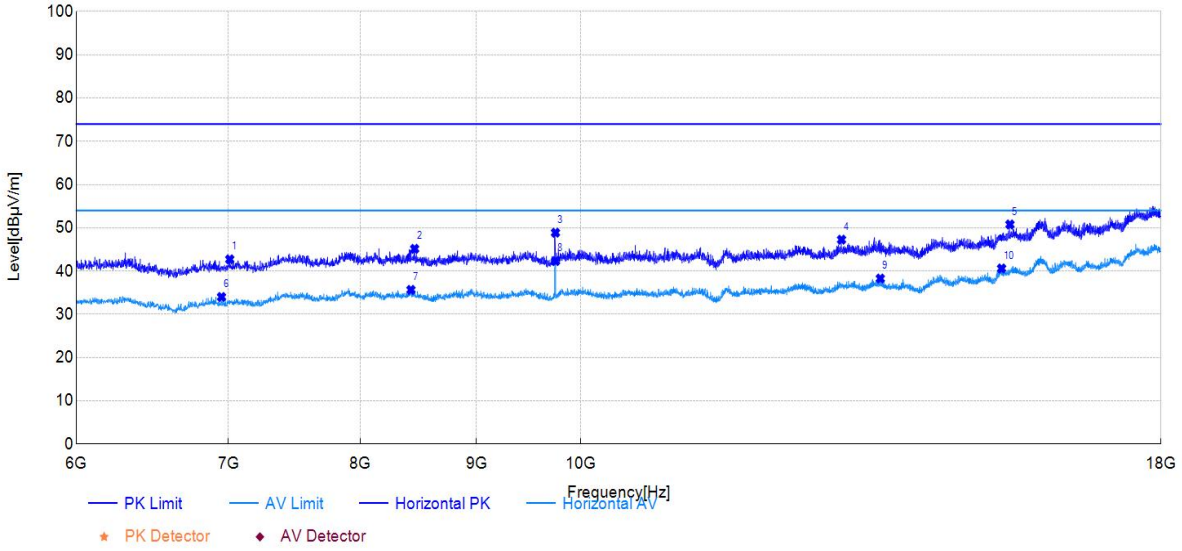
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
6861.00	42.54	-4.51	74.00	31.46	PK	Vertical
8308.50	44.36	-1.15	74.00	29.64	PK	Vertical
9648.00	46.04	-0.55	74.00	27.96	PK	Vertical
12555.00	46.17	2.38	74.00	27.83	PK	Vertical
15282.00	49.31	6.80	74.00	24.69	PK	Vertical
6808.50	34.44	-4.75	54.00	19.56	AV	Vertical
8322.00	35.36	-1.13	54.00	18.64	AV	Vertical
9649.50	40.78	-0.56	54.00	13.22	AV	Vertical
12477.00	37.77	2.51	54.00	16.23	AV	Vertical
15514.50	40.84	7.10	54.00	13.16	AV	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

6GHz – 18GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

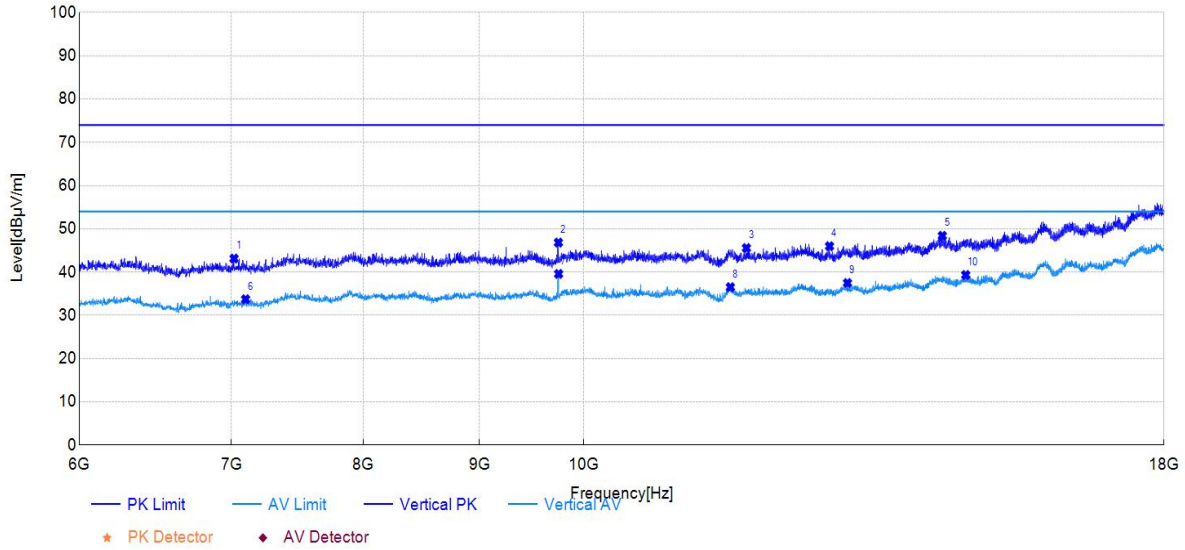


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7009.50	42.71	-4.80	74.00	31.29	PK	Horizontal
8452.50	45.14	-1.32	74.00	28.86	PK	Horizontal
9748.50	48.87	-0.74	74.00	25.13	PK	Horizontal
13024.50	47.26	2.77	74.00	26.74	PK	Horizontal
15447.00	50.77	7.20	74.00	23.23	PK	Horizontal
6951.00	34.01	-4.63	54.00	19.99	AV	Horizontal
8421.00	35.65	-1.12	54.00	18.35	AV	Horizontal
9750.00	42.31	-0.73	54.00	11.69	AV	Horizontal
13546.50	38.27	3.22	54.00	15.73	AV	Horizontal
15316.50	40.60	7.22	54.00	13.40	AV	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7018.50	43.12	-4.74	74.00	30.88	PK	Vertical
9748.50	46.82	-0.49	74.00	27.18	PK	Vertical
11793.00	45.55	1.42	74.00	28.45	PK	Vertical
12828.00	45.98	1.75	74.00	28.02	PK	Vertical
14380.50	48.38	5.56	74.00	25.62	PK	Vertical
7101.00	33.71	-4.21	54.00	20.29	AV	Vertical
9750.00	39.57	-0.48	54.00	14.43	AV	Vertical
11602.50	36.51	1.79	54.00	17.49	AV	Vertical
13063.50	37.47	2.41	54.00	16.53	AV	Vertical
14725.50	39.32	5.61	54.00	14.68	AV	Vertical

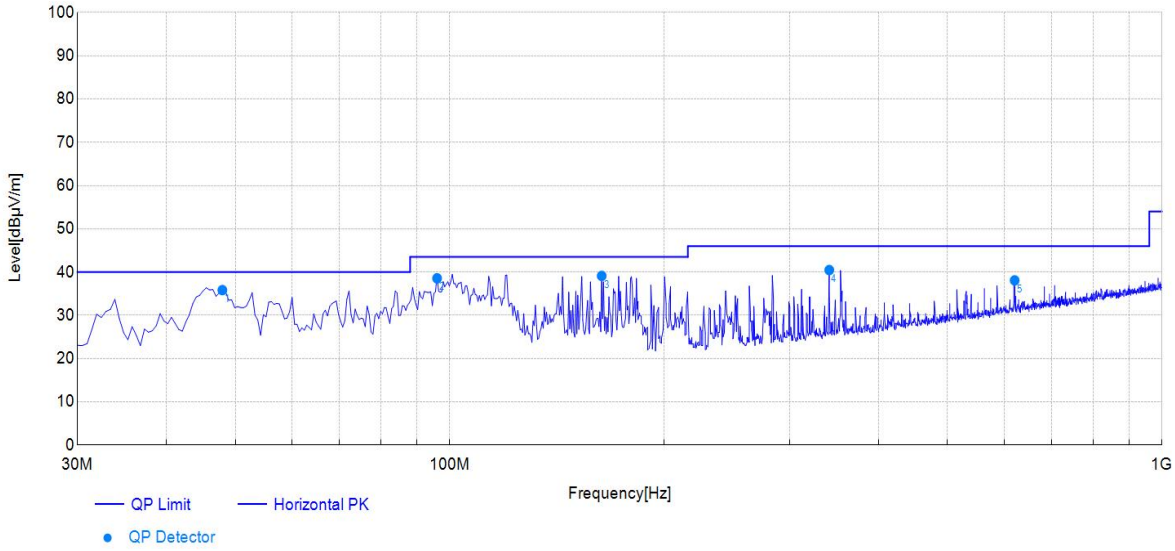
Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

The worst case of Radiated Emission below 1GHz:

30MHz – 1GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2412MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

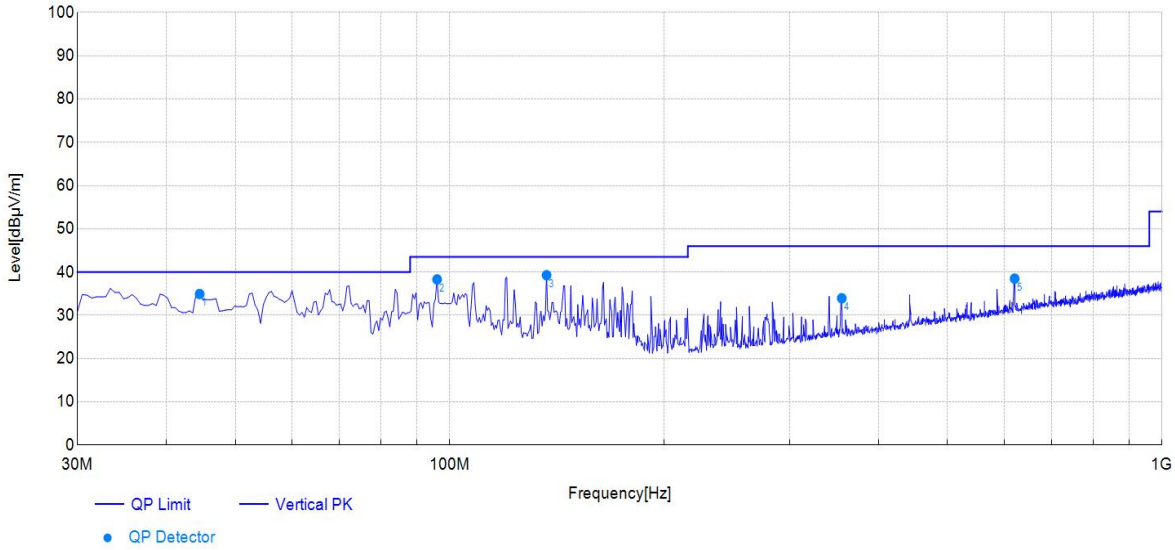


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	47.95	14.55	35.83	40.00	4.17	150	20	Horizontal
2	95.99	11.20	38.56	43.50	4.94	150	85	Horizontal
3	163.44	15.44	39.12	43.50	4.38	150	187	Horizontal
4	341.04	16.16	40.48	46.00	5.52	150	198	Horizontal
5	621.03	21.97	38.08	46.00	7.92	100	60	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2412MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph

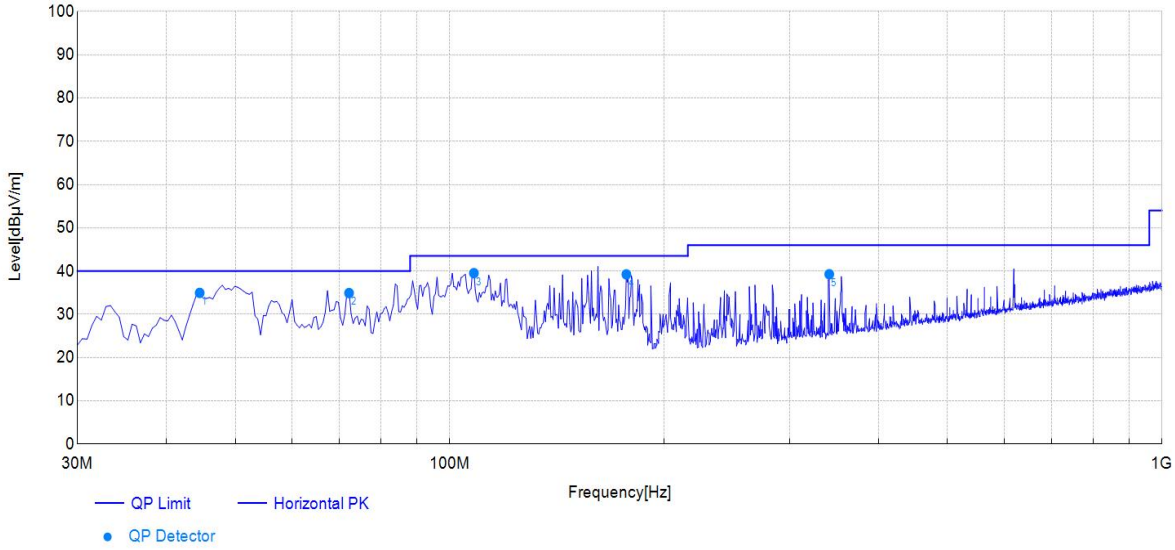


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	44.56	14.61	34.93	40.00	5.07	100	310	Vertical
2	95.99	11.20	38.31	43.50	5.19	100	137	Vertical
3	136.75	14.91	39.28	43.50	4.22	150	115	Vertical
4	355.11	16.45	33.95	46.00	12.05	100	87	Vertical
5	621.03	21.97	38.48	46.00	7.52	100	83	Vertical

30MHz – 1GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

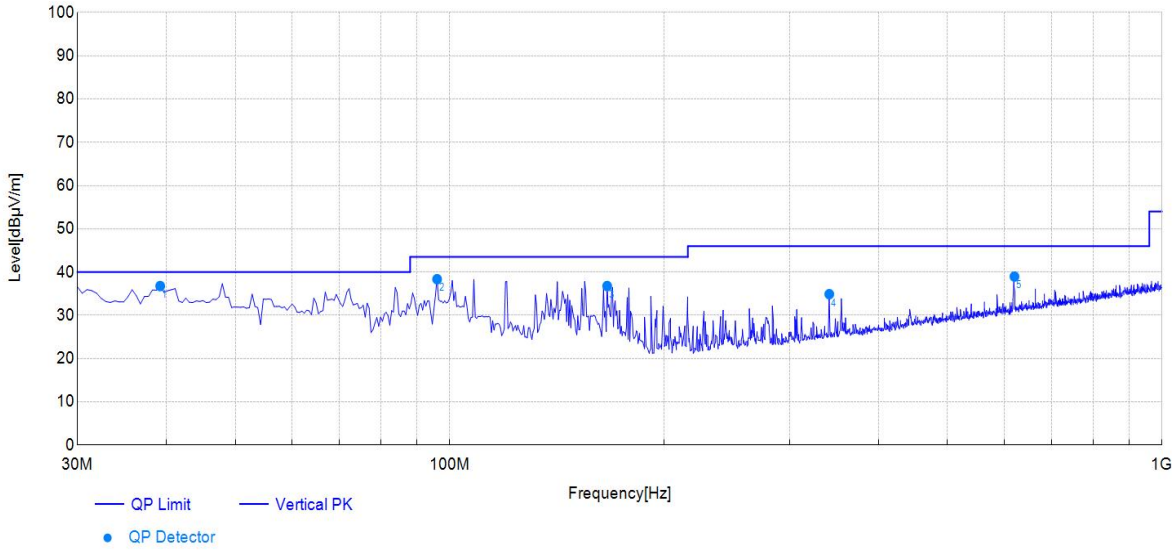
Test Graph



Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	44.56	14.61	34.96	40.00	5.04	150	34	Horizontal
2	72.22	11.73	34.92	40.00	5.08	150	20	Horizontal
3	108.12	12.45	39.53	43.50	3.97	150	82	Horizontal
4	177.03	13.88	39.24	43.50	4.26	100	2	Horizontal
5	341.04	16.16	39.27	46.00	6.73	150	198	Horizontal

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2437MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



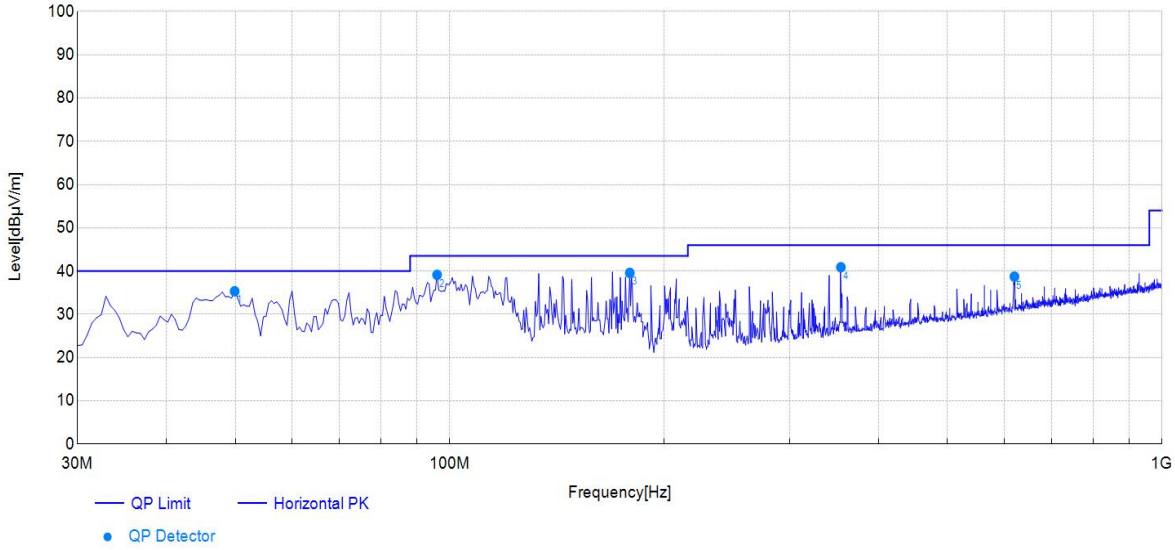
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	39.22	14.81	36.78	40.00	3.22	100	12	Vertical
2	95.99	11.20	38.36	43.50	5.14	100	198	Vertical
3	166.35	15.10	36.78	43.50	6.72	150	182	Vertical
4	341.04	16.16	34.90	46.00	11.10	150	199	Vertical
5	620.54	21.96	38.97	46.00	7.03	150	88	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

30MHz – 1GHz Test Data

EUT:	matter controller	Polarity:	Horizontal
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

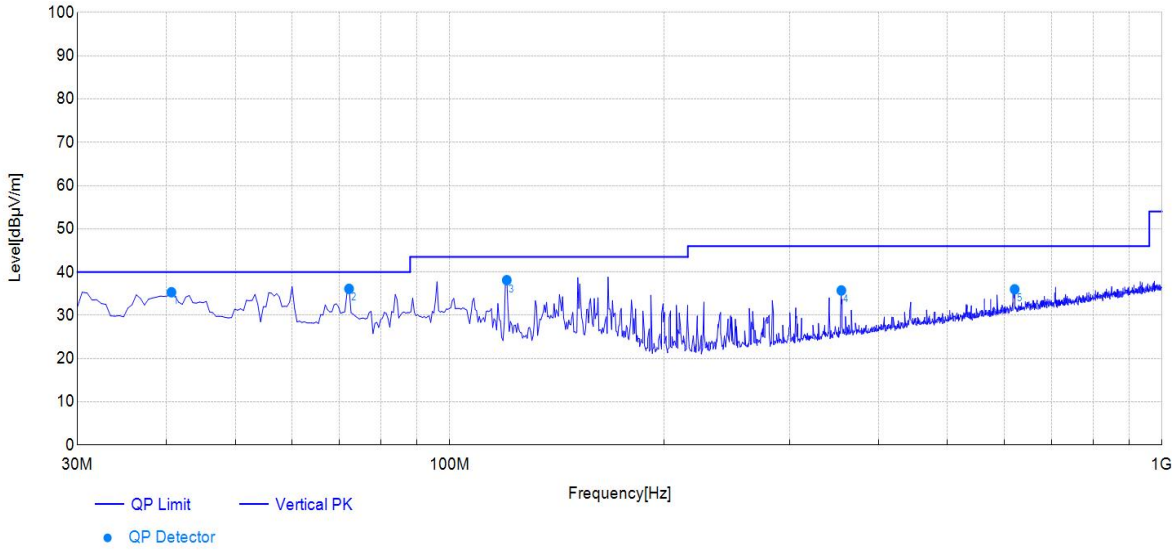
Test Graph



Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	49.89	14.53	35.34	40.00	4.66	150	55	Horizontal
2	95.99	11.20	39.13	43.50	4.37	150	248	Horizontal
3	178.97	13.66	39.59	43.50	3.91	100	97	Horizontal
4	354.14	16.43	40.90	46.00	5.10	100	87	Horizontal
5	620.54	21.96	38.73	46.00	7.27	100	69	Horizontal

EUT:	matter controller	Polarity:	Vertical
Model:	LITE MT	S/N:	/
Mode:	Transmit by 802.11b at Channel 2462MHz	Voltage:	DC 24V
Environment:	Temp: 18.5℃; Humi:49%	Engineer:	Chuang Li

Test Graph



Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.68	14.88	35.34	40.00	4.66	100	241	Vertical
2	72.22	11.73	36.13	40.00	3.87	100	360	Vertical
3	120.26	13.77	38.13	43.50	5.37	150	87	Vertical
4	354.63	16.43	35.74	46.00	10.26	100	65	Vertical
5	621.03	21.97	36.01	46.00	9.99	100	264	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.7. Restricted Band Edge Measurement

7.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.25 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.7.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.7.3. Test Setting

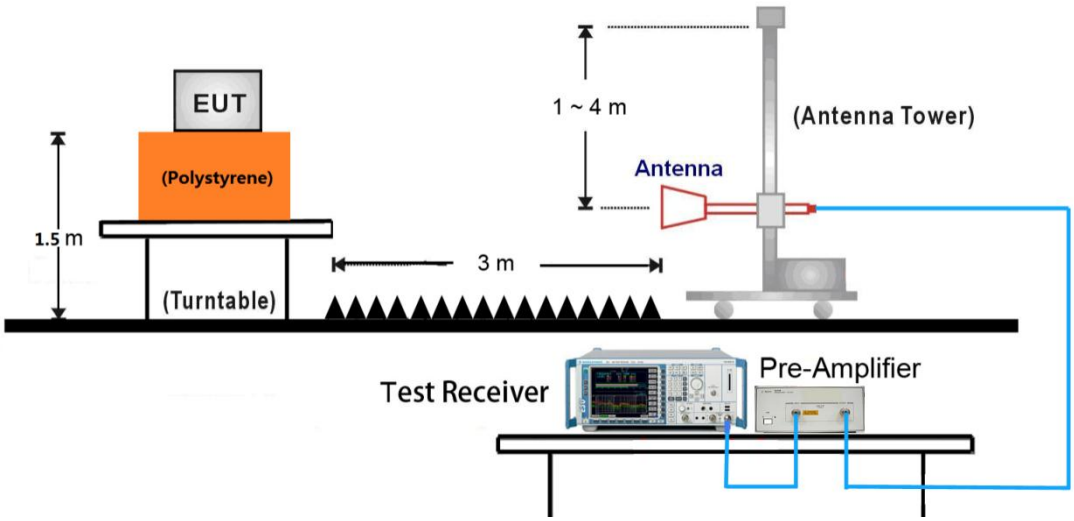
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Power Average (RMS)
5. Number of sweep point = 2001 (Number of sweep points must be ≥ 2 x span / RBW)
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces.

7.7.4. Test Setup

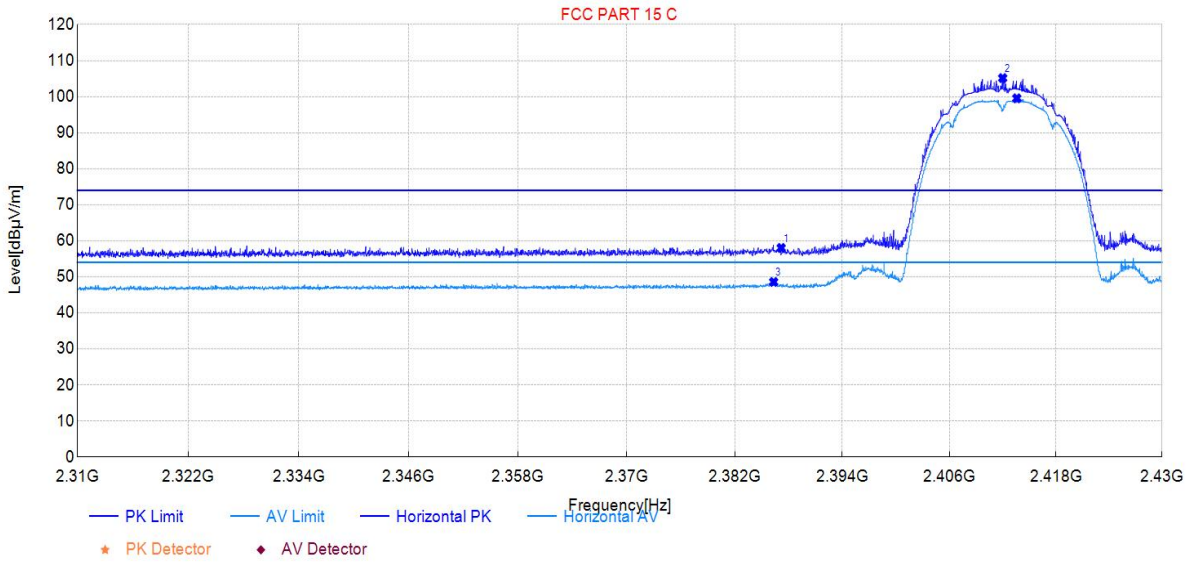


7.7.5. Test Result

802.11b

Test Mode:	802.11b	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

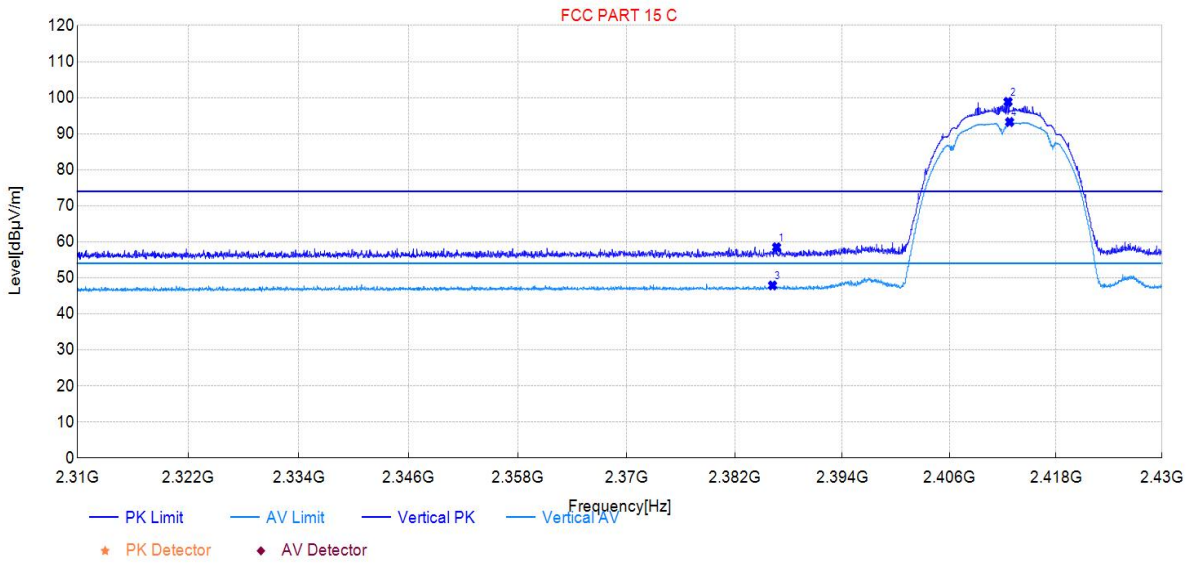
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2387.18	58.03	36.09	74.00	15.97	150	160	Peak	Horizontal
2412.00	105.16	36.18	74.00	-31.16	150	127	Peak	Horizontal
2386.34	48.59	36.08	54.00	5.41	150	127	Average	Horizontal
2413.59	99.55	36.18	54.00	-45.55	150	132	Average	Horizontal

Test Mode:	802.11b	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

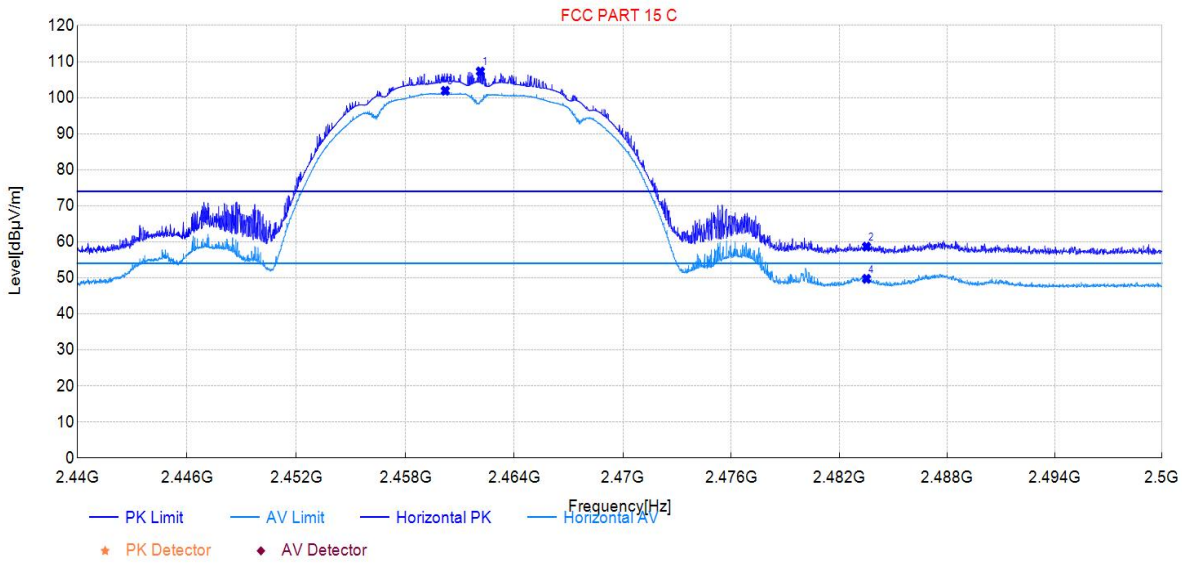
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2386.67	58.50	35.94	74.00	15.50	150	250	Peak	Vertical
2412.60	98.84	36.00	74.00	-24.84	150	33	Peak	Vertical
2386.22	47.89	35.94	54.00	6.11	150	45	Average	Vertical
2412.78	93.24	36.00	54.00	-39.24	150	33	Average	Vertical

Test Mode:	802.11b	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

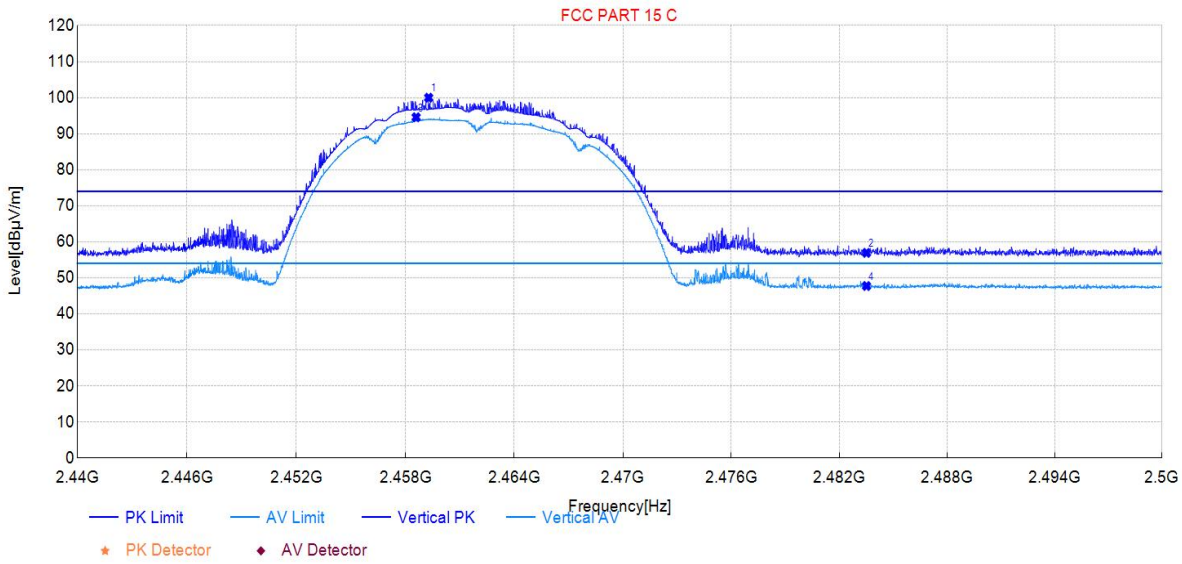
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2462.13	107.28	36.31	74.00	-33.28	150	259	Peak	Horizontal
2483.51	58.66	36.36	74.00	15.34	150	222	Peak	Horizontal
2460.20	101.92	36.30	54.00	-47.92	150	256	Average	Horizontal
2483.51	49.74	36.36	54.00	4.26	150	128	Average	Horizontal

Test Mode:	802.11b	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

Test Graph

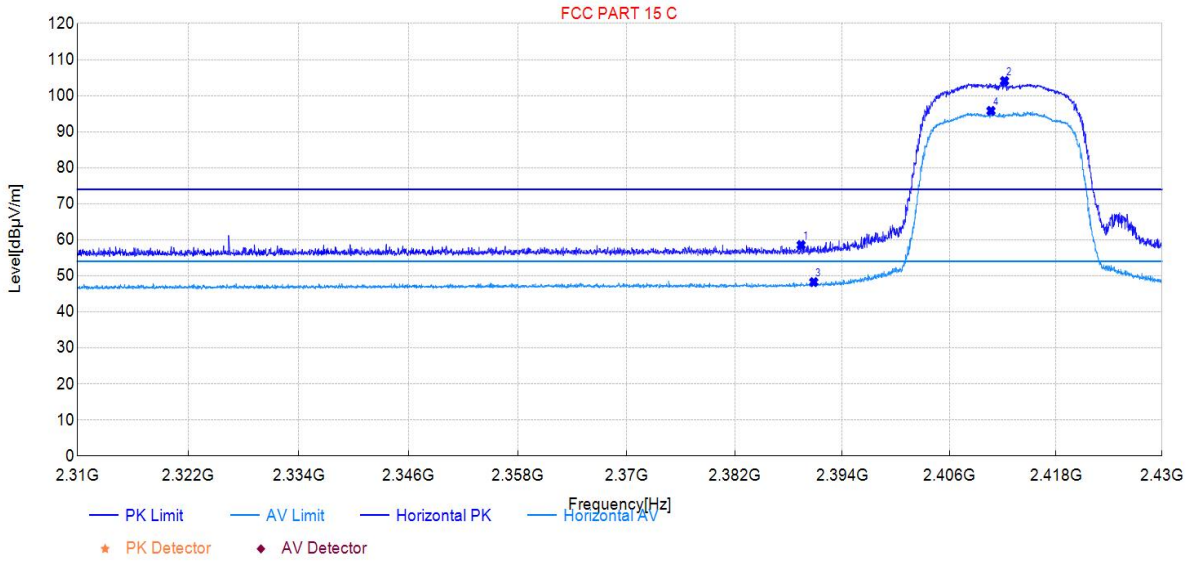


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2459.28	99.98	36.06	74.00	-25.98	150	239	Peak	Vertical
2483.51	56.94	36.08	74.00	17.06	150	243	Peak	Vertical
2458.59	94.56	36.06	54.00	-40.56	150	248	Average	Vertical
2483.51	47.74	36.08	54.00	6.26	150	49	Average	Vertical

802.11g

Test Mode:	802.11g	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

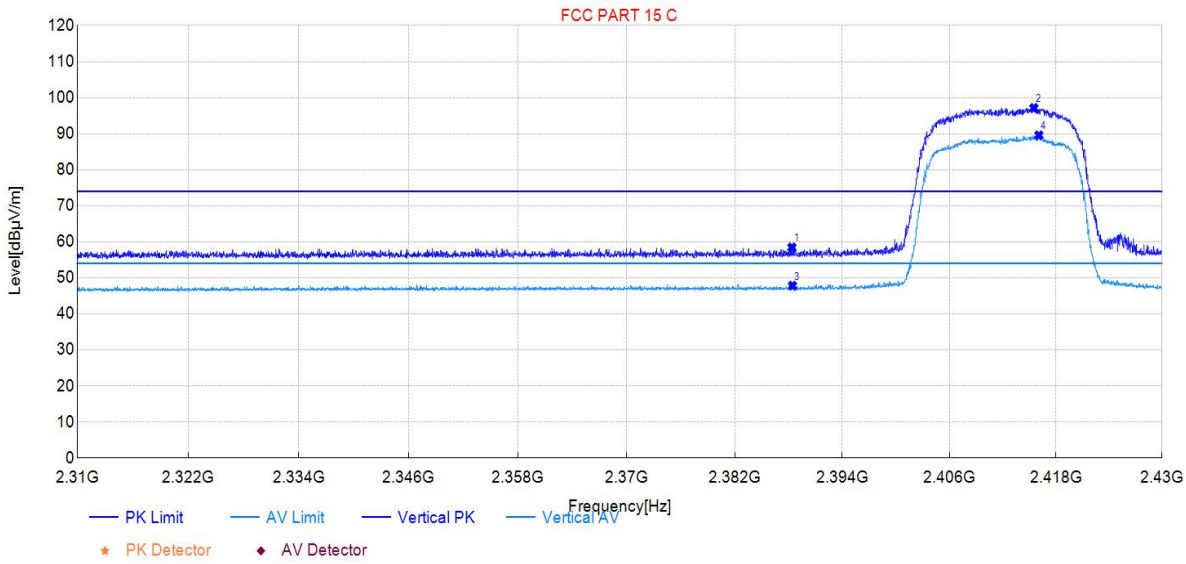
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2389.40	58.55	36.09	74.00	15.45	150	360	Peak	Horizontal
2412.21	104.09	36.18	74.00	-30.09	150	127	Peak	Horizontal
2390.81	48.27	36.11	54.00	5.73	150	190	Average	Horizontal
2410.68	95.79	36.18	54.00	-41.79	150	127	Average	Horizontal

Test Mode:	802.11g	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

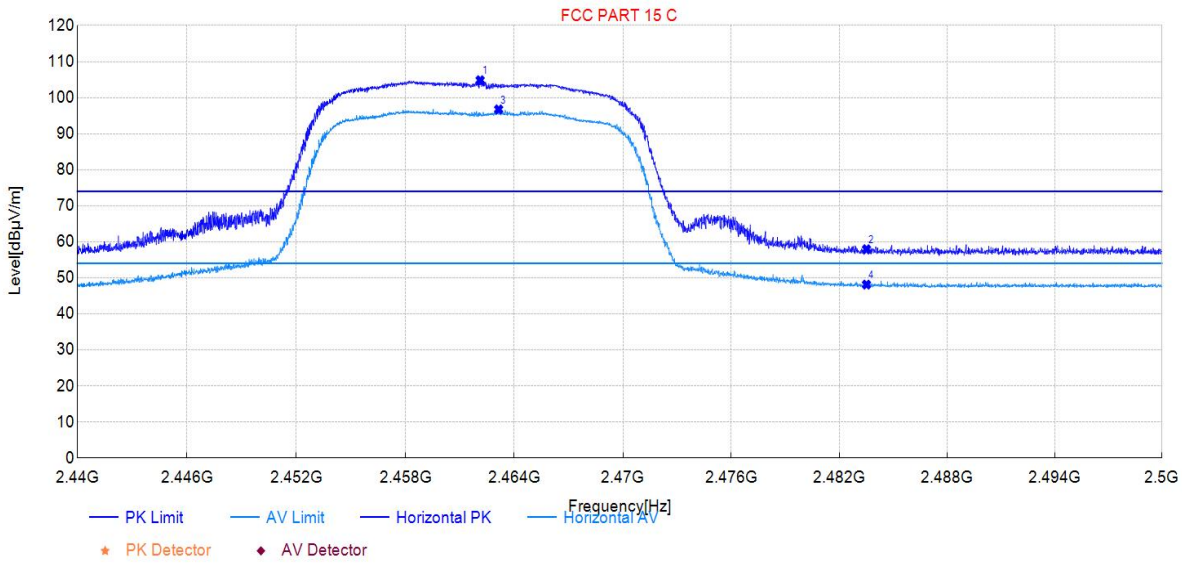
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2388.38	58.44	35.95	74.00	15.56	150	106	Peak	Vertical
2415.51	97.13	36.01	74.00	-23.13	150	33	Peak	Vertical
2388.44	47.82	35.95	54.00	6.18	150	119	Average	Vertical
2416.08	89.55	36.01	54.00	-35.55	150	33	Average	Vertical

Test Mode:	802.11g	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

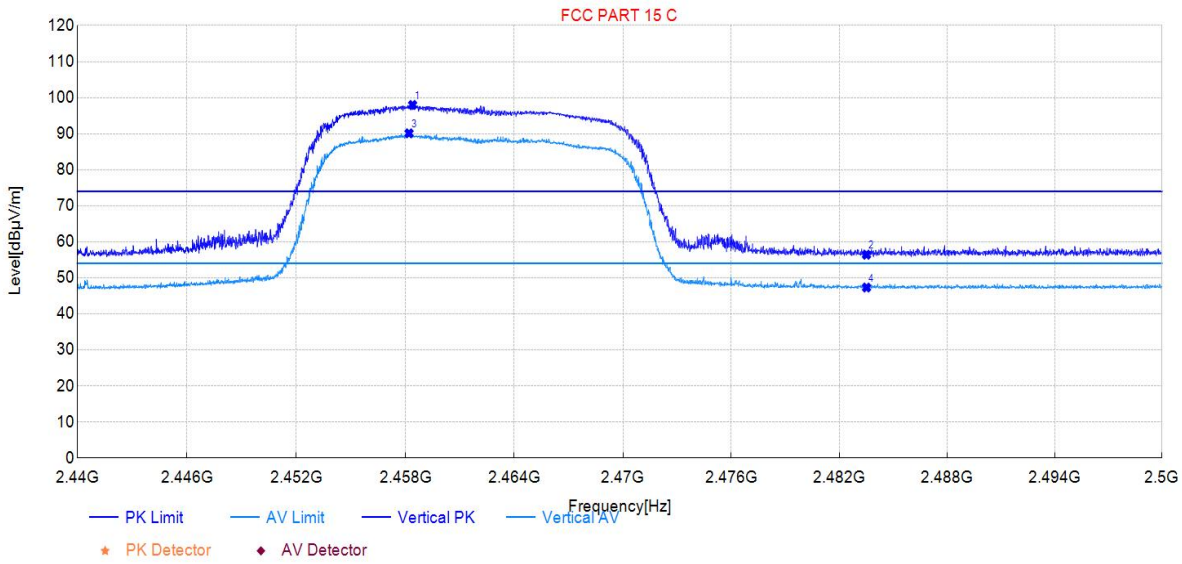
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2462.12	104.84	36.31	74.00	-30.84	150	259	Peak	Horizontal
2483.51	57.94	36.36	74.00	16.06	150	285	Peak	Horizontal
2463.14	96.75	36.31	54.00	-42.75	150	255	Average	Horizontal
2483.51	48.13	36.36	54.00	5.87	150	128	Average	Horizontal

Test Mode:	802.11g	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

Test Graph

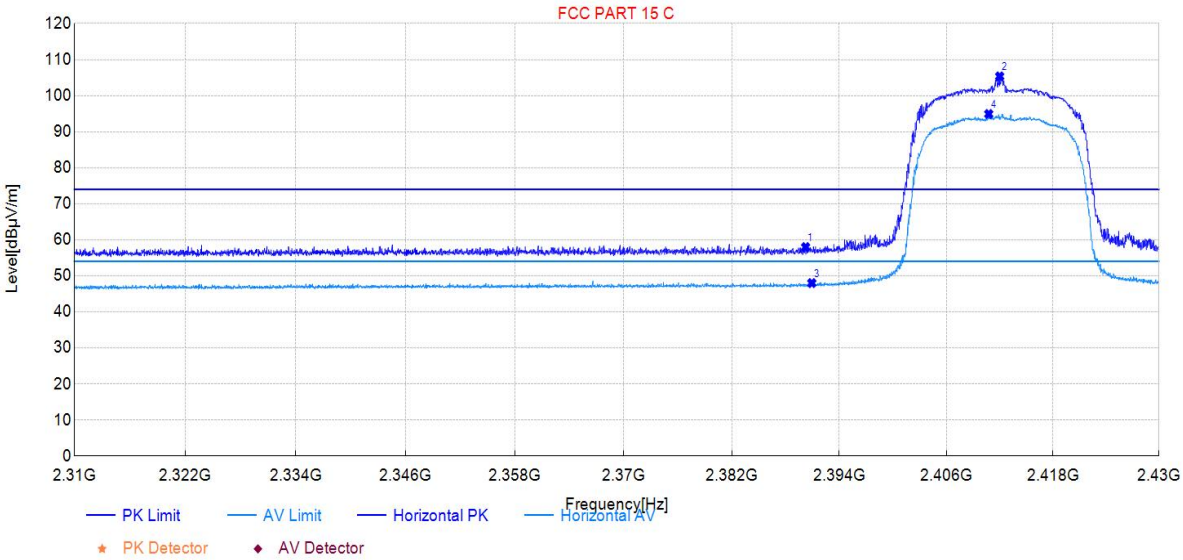


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2458.39	97.99	36.06	74.00	-23.99	150	245	Peak	Vertical
2483.51	56.41	36.08	74.00	17.59	150	152	Peak	Vertical
2458.20	90.12	36.06	54.00	-36.12	150	242	Average	Vertical
2483.51	47.32	36.08	54.00	6.68	150	351	Average	Vertical

802.11n20SISO

Test Mode:	802.11n20SISO	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

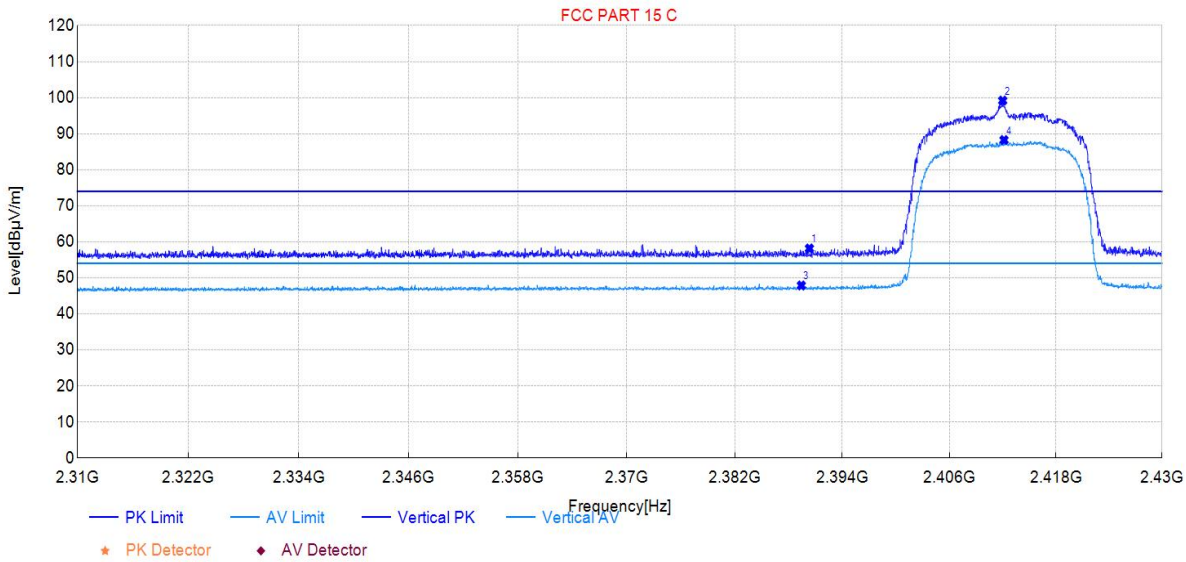
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2390.24	57.98	36.10	74.00	16.02	150	119	Peak	Horizontal
2412.00	105.36	36.18	74.00	-31.36	150	128	Peak	Horizontal
2390.93	47.99	36.11	54.00	6.01	150	348	Average	Horizontal
2410.77	94.92	36.18	54.00	-40.92	150	124	Average	Horizontal

Test Mode:	802.11n20SISO	Test Date:	2024-11-11
Test Channel:	2412	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

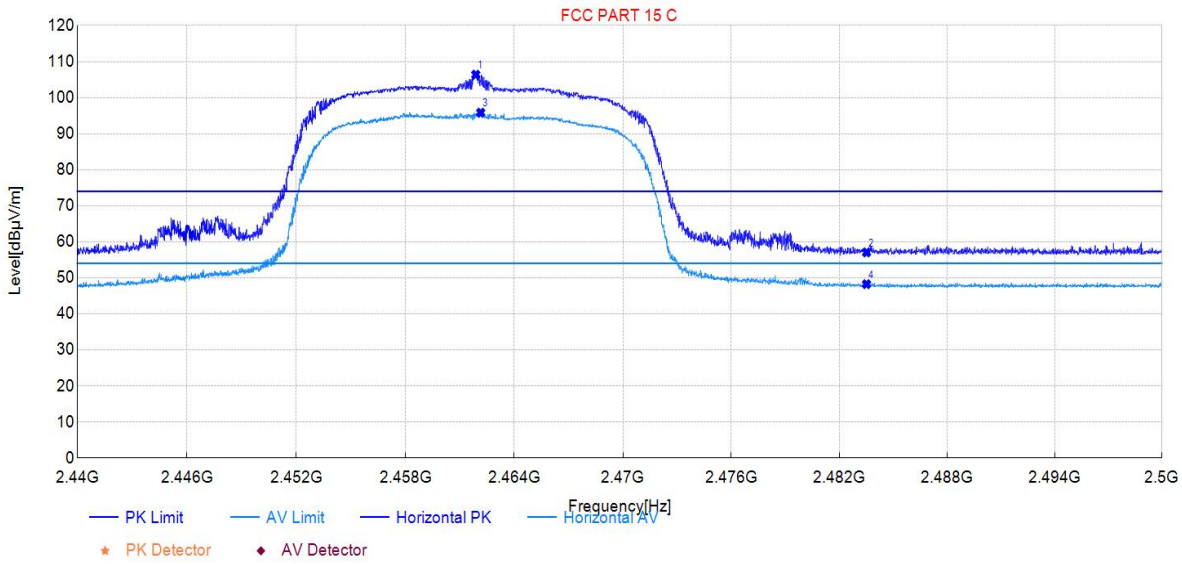
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2390.33	58.16	35.95	74.00	15.84	150	359	Peak	Vertical
2412.00	99.19	36.00	74.00	-25.19	150	33	Peak	Vertical
2389.43	47.88	35.95	54.00	6.12	150	108	Average	Vertical
2412.15	88.24	36.00	54.00	-34.24	150	33	Average	Vertical

Test Mode:	802.11n20SISO	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

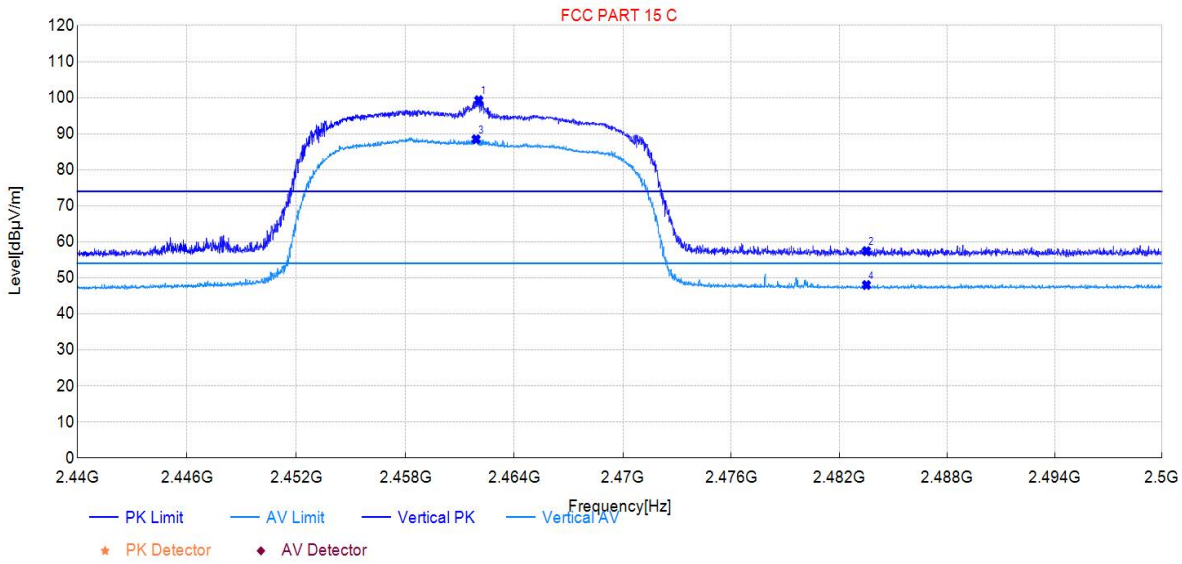
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2461.88	106.39	36.31	74.00	-32.39	150	257	Peak	Horizontal
2483.51	57.06	36.36	74.00	16.94	150	26	Peak	Horizontal
2462.15	95.84	36.31	54.00	-41.84	150	257	Average	Horizontal
2483.51	48.25	36.36	54.00	5.75	150	289	Average	Horizontal

Test Mode:	802.11n20SISO	Test Date:	2024-11-11
Test Channel:	2462	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

Test Graph

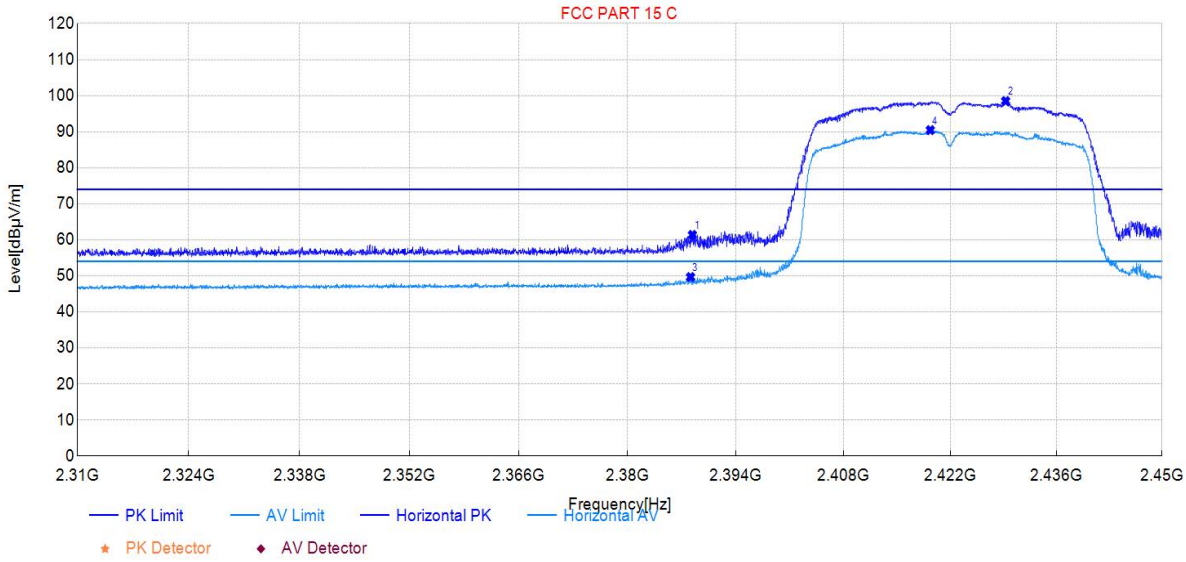


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2462.04	99.30	36.06	74.00	-25.30	150	246	Peak	Vertical
2483.51	57.42	36.08	74.00	16.58	150	305	Peak	Vertical
2461.89	88.46	36.06	54.00	-34.46	150	242	Average	Vertical
2483.51	48.01	36.08	54.00	5.99	150	305	Average	Vertical

802.11n40SISO

Test Mode:	802.11n40SISO	Test Date:	2024-11-11
Test Channel:	2422	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

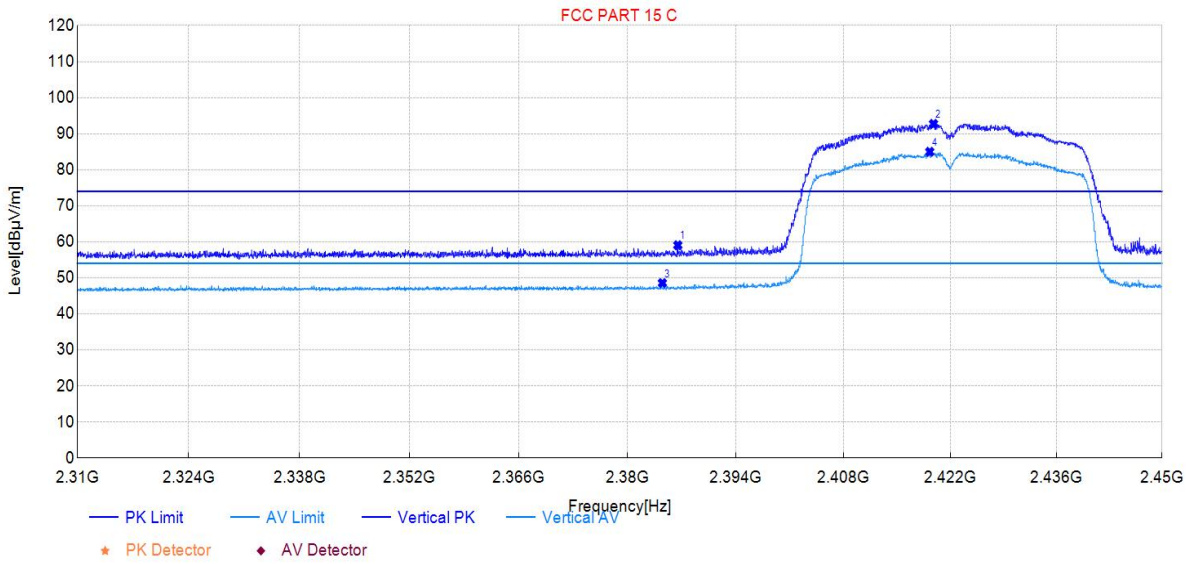
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2388.38	61.37	36.09	74.00	12.63	150	117	Peak	Horizontal
2429.31	98.51	36.22	74.00	-24.51	150	263	Peak	Horizontal
2388.14	49.67	36.09	54.00	4.33	150	167	Average	Horizontal
2419.40	90.45	36.20	54.00	-36.45	150	126	Average	Horizontal

Test Mode:	802.11n40SISO	Test Date:	2024-11-11
Test Channel:	2422	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

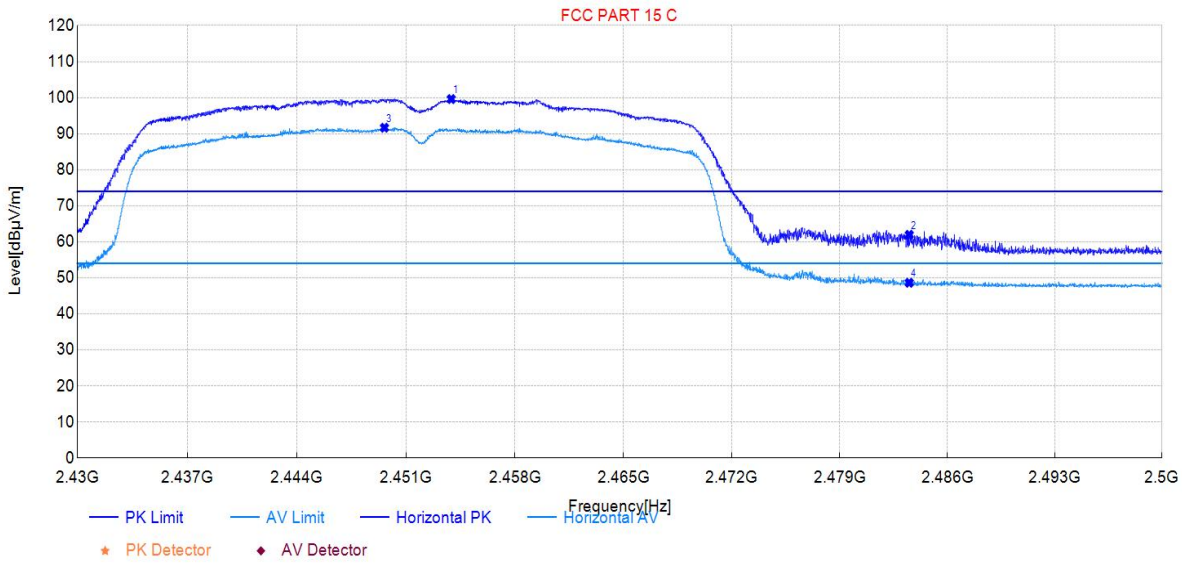
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2386.49	59.05	35.94	74.00	14.95	150	50	Peak	Vertical
2419.82	92.73	36.01	74.00	-18.73	150	33	Peak	Vertical
2384.50	48.56	35.93	54.00	5.44	150	75	Average	Vertical
2419.33	84.98	36.01	54.00	-30.98	150	33	Average	Vertical

Test Mode:	802.11n40SISO	Test Date:	2024-11-11
Test Channel:	2452	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

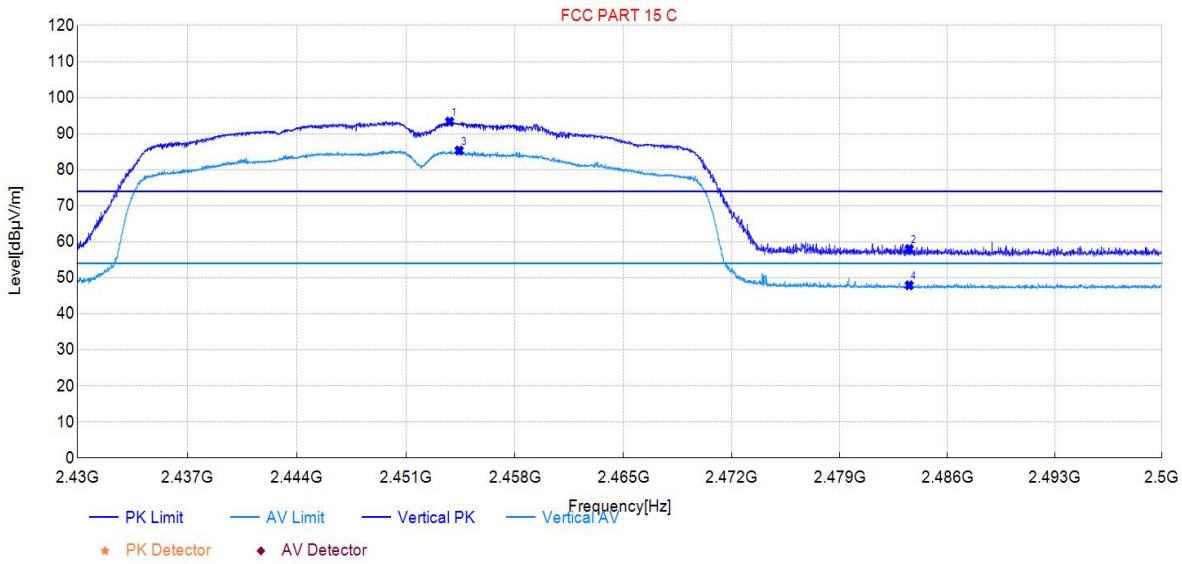
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2453.91	99.61	36.29	74.00	-25.61	150	262	Peak	Horizontal
2483.51	61.94	36.36	74.00	12.06	150	262	Peak	Horizontal
2449.62	91.66	36.27	54.00	-37.66	150	257	Average	Horizontal
2483.51	48.64	36.36	54.00	5.36	150	128	Average	Horizontal

Test Mode:	802.11n40SISO	Test Date:	2024-11-11
Test Channel:	2452	Test Engineer:	Chuang Li
Remark:	The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.		

Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2453.81	93.37	36.05	74.00	-19.37	150	244	Peak	Vertical
2483.51	58.02	36.08	74.00	15.98	150	240	Peak	Vertical
2454.42	85.34	36.05	54.00	-31.34	150	244	Average	Vertical
2483.51	47.93	36.08	54.00	6.07	150	257	Average	Vertical

7.8. AC Conducted Emissions Measurement

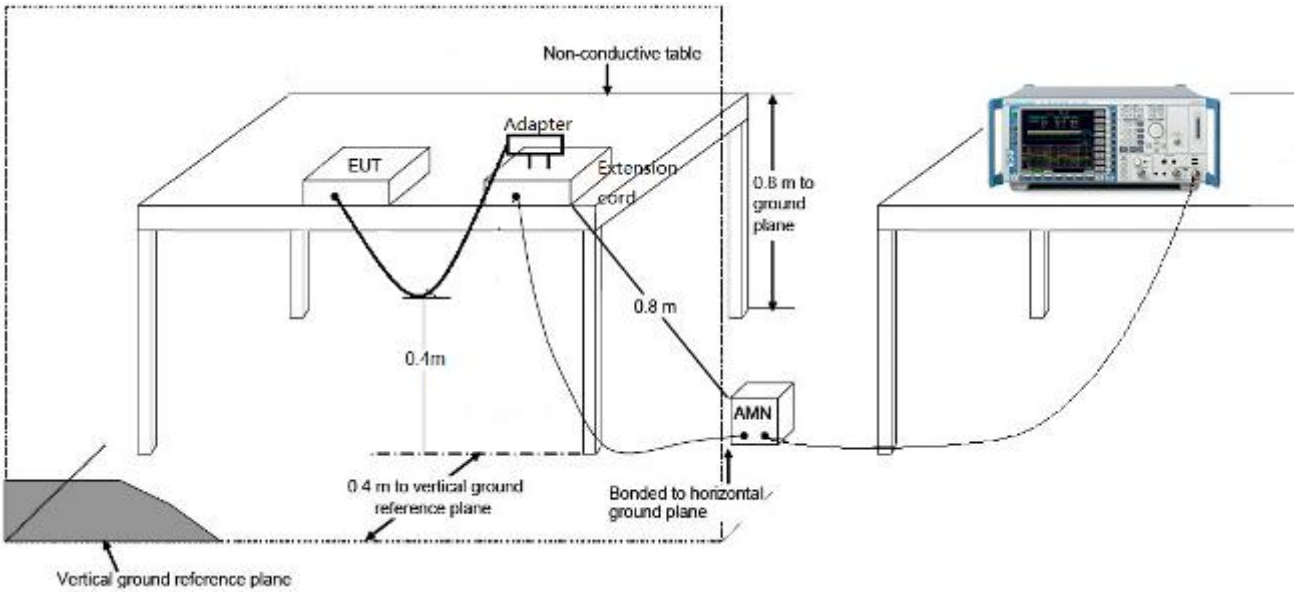
7.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2. Test Setup



7.8.3. Test Result

Not Applicable . The device is only powered by DC 24V.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **matter controller** is in compliance with Part 15C of the FCC Rules.

The End