

7.5.5. Test Result

Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	4.57	4.57	---	PASS
			30~1000	4.57	-60.44	≤-15.43	PASS
			1000~26500	4.57	-51.97	≤-15.43	PASS
		2440	Reference	4.80	4.80	---	PASS
			30~1000	4.80	-60.86	≤-15.2	PASS
			1000~26500	4.80	-51.66	≤-15.2	PASS
		2480	Reference	4.77	4.77	---	PASS
			30~1000	4.77	-60.54	≤-15.23	PASS
			1000~26500	4.77	-51.86	≤-15.23	PASS

Test Graphs of Conducted Band Edge



Test Graphs of Out-of-Band Emissions

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

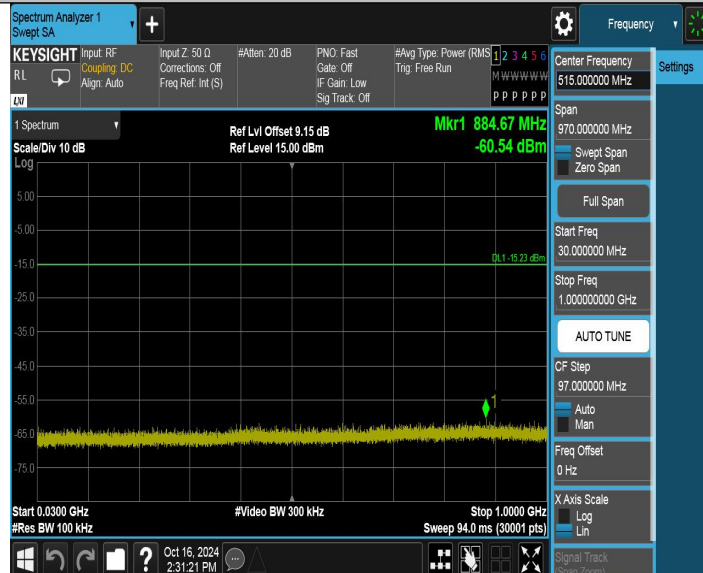


BLE_1M_Ant1_2440_30~1000





BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



7.6. Radiated Spurious Emission Measurement

7.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR 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

7.6.2. Test Procedure Used

ANSI C63.10-2013 – Section 6.6.4.3

7.6.3. Test Setting

Peak Field Strength Measurements

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

Table 1 - RBW as a function of frequency

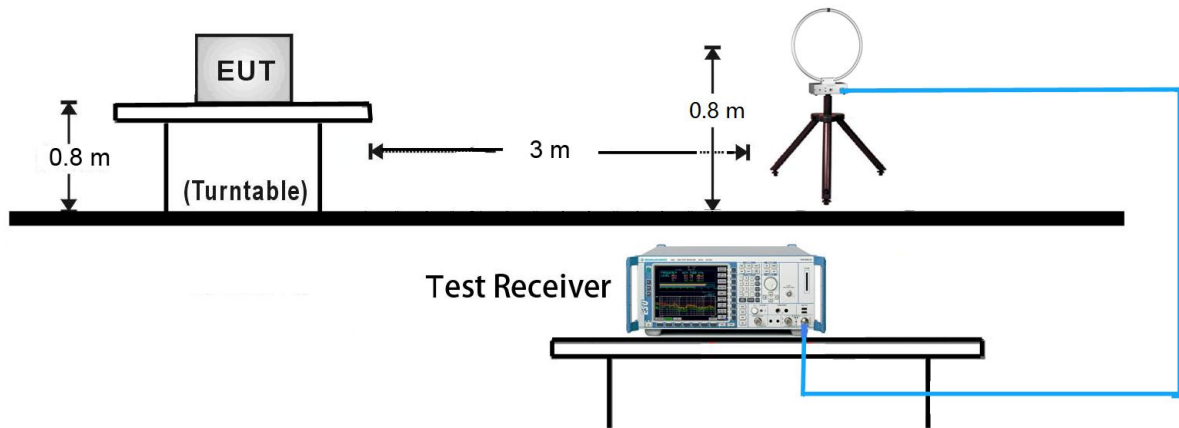
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

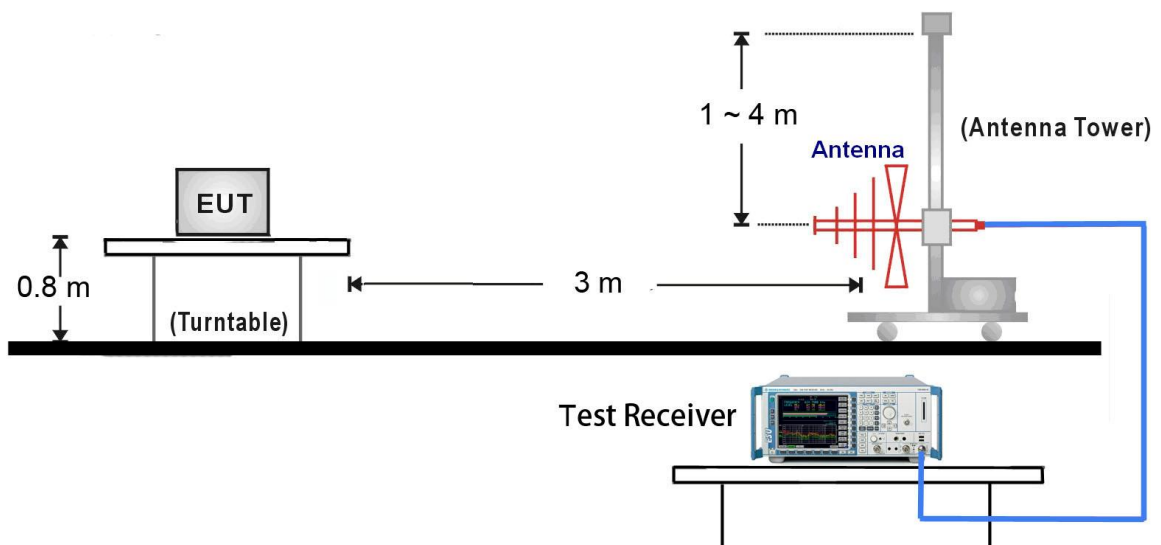
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Power Average (RMS)
5. Number of sweep point = 2001 (Number of sweep points must be $\geq 2 \times \text{span} / \text{RBW}$)
6. Sweep time = auto
7. Trace (RMS)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

7.6.4. Test Setup

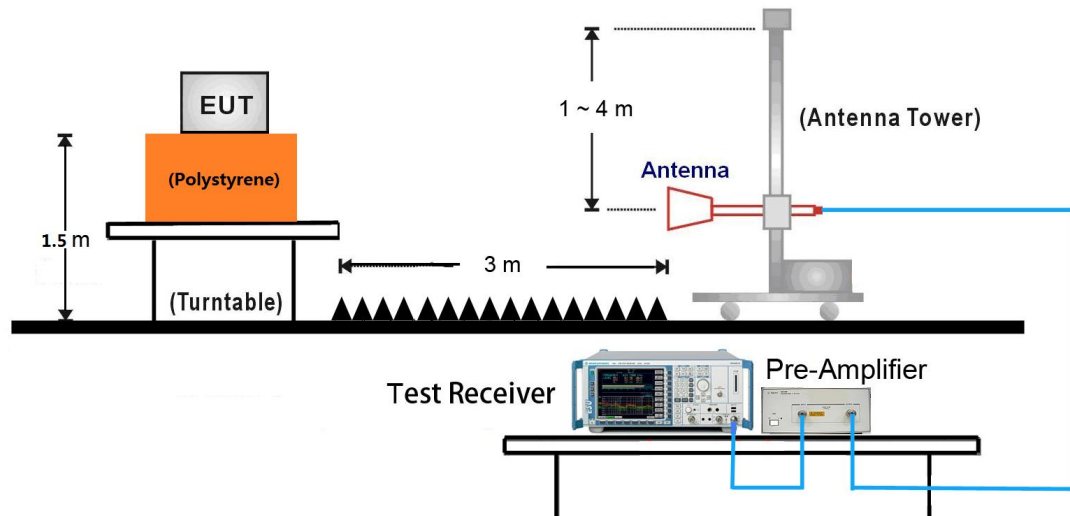
9kHz ~ 30MHz Test Setup:



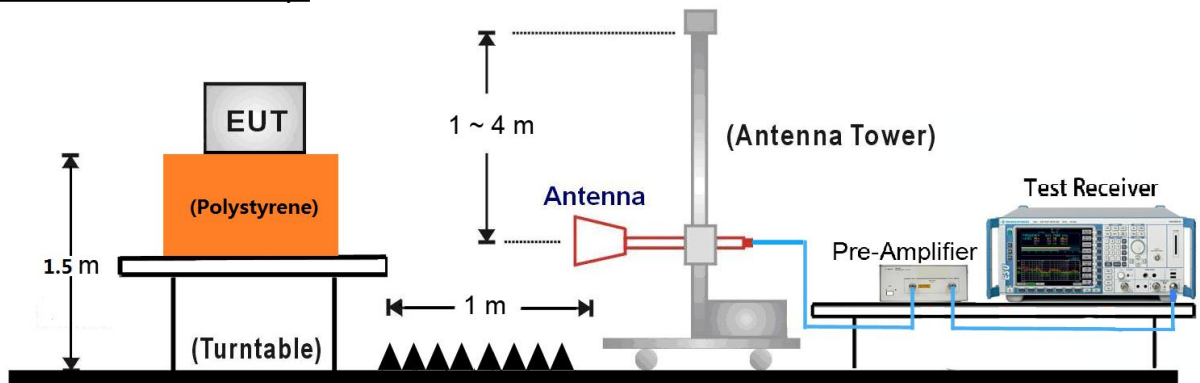
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~ 25GHz Test Setup:



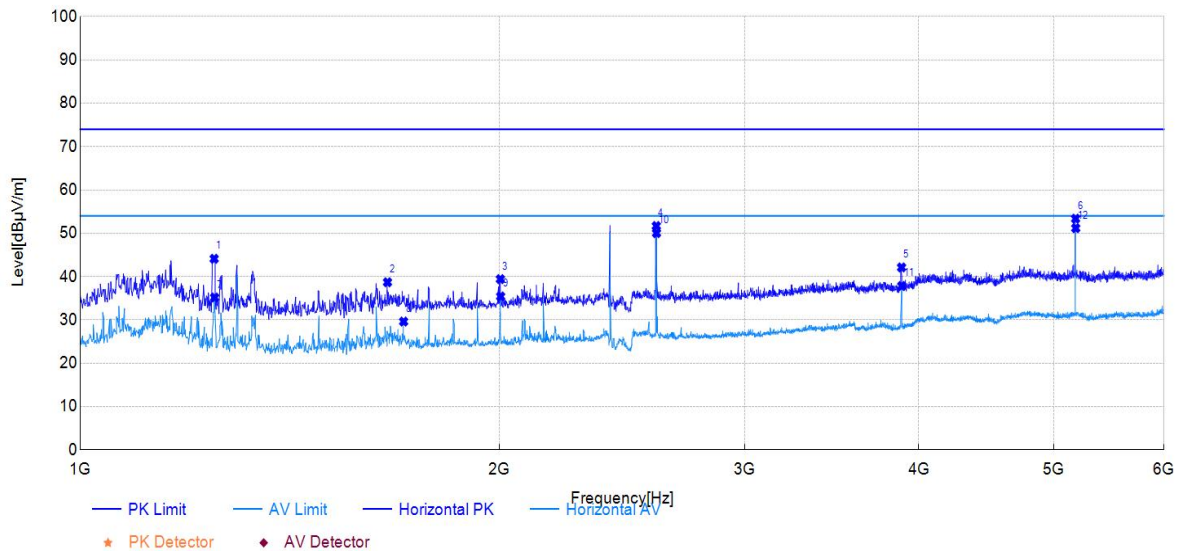
7.6.5. Test Result

The worst case of Radiated Emission above 1GHz:

1GHz – 6GHz Test Data

EUT:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

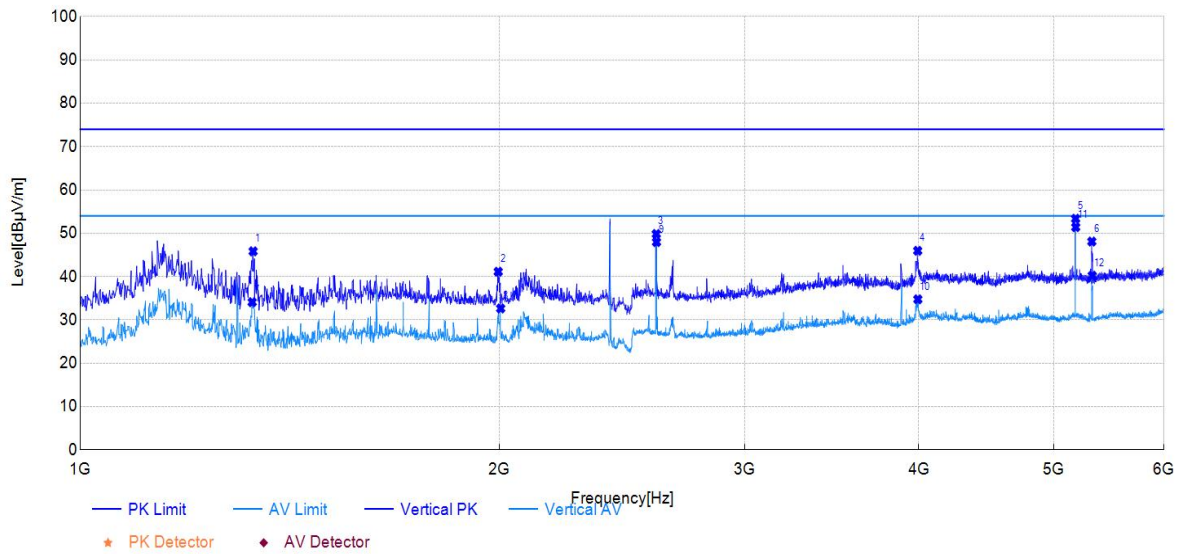


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1248.00	44.11	-23.18	74.00	29.89	PK	Horizontal
1662.00	38.69	-20.62	74.00	35.31	PK	Horizontal
2003.00	39.41	-18.14	74.00	34.59	PK	Horizontal
2592.00	51.67	-15.55	74.00	22.33	PK	Horizontal
3888.00	42.11	-9.37	74.00	31.89	PK	Horizontal
5184.00	53.36	-6.22	74.00	20.64	PK	Horizontal
1249.00	35.16	-23.17	54.00	18.84	AV	Horizontal
1707.00	29.61	-20.27	54.00	24.39	AV	Horizontal
2004.00	35.41	-18.14	54.00	18.59	AV	Horizontal
2593.00	50.04	-15.55	54.00	3.96	AV	Horizontal
3889.00	37.83	-9.36	54.00	16.17	AV	Horizontal
5185.00	51.17	-6.22	54.00	2.83	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



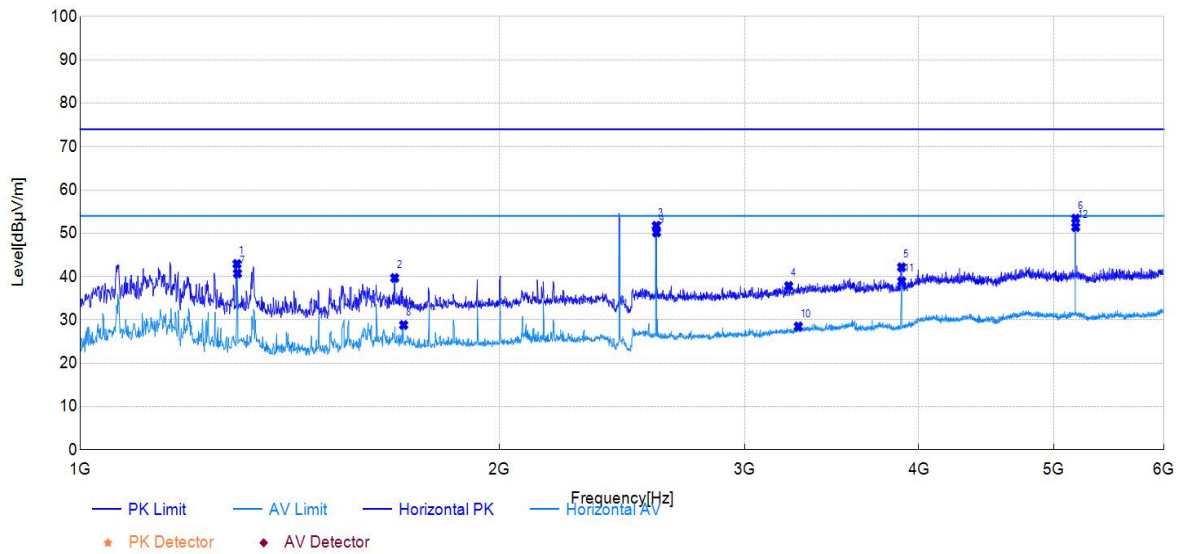
Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1331.00	45.83	-21.78	74.00	28.17	PK	Vertical
1996.00	41.12	-17.79	74.00	32.88	PK	Vertical
2592.00	49.83	-15.76	74.00	24.17	PK	Vertical
3993.00	45.95	-8.32	74.00	28.05	PK	Vertical
5184.00	53.35	-6.67	74.00	20.65	PK	Vertical
5325.00	48.09	-6.39	74.00	25.91	PK	Vertical
1329.00	34.09	-21.78	54.00	19.91	AV	Vertical
2004.00	32.64	-17.75	54.00	21.36	AV	Vertical
2593.00	47.96	-15.76	54.00	6.04	AV	Vertical
3994.00	34.75	-8.32	54.00	19.25	AV	Vertical
5185.00	51.40	-6.66	54.00	2.60	AV	Vertical
5328.00	40.20	-6.38	54.00	13.80	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

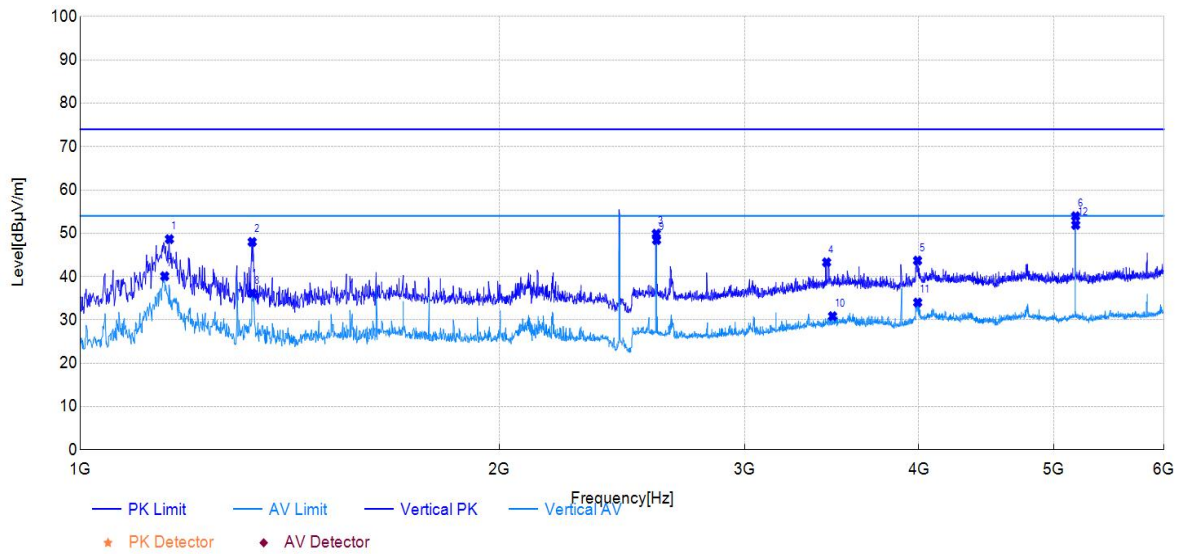


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1296.00	42.91	-22.91	74.00	31.09	PK	Horizontal
1682.00	39.67	-20.47	74.00	34.33	PK	Horizontal
2592.00	51.72	-15.55	74.00	22.28	PK	Horizontal
3226.00	37.82	-13.48	74.00	36.18	PK	Horizontal
3888.00	42.15	-9.37	74.00	31.85	PK	Horizontal
5184.00	53.38	-6.22	74.00	20.62	PK	Horizontal
1297.00	40.71	-22.90	54.00	13.29	AV	Horizontal
1707.00	28.81	-20.27	54.00	25.19	AV	Horizontal
2593.00	50.18	-15.55	54.00	3.82	AV	Horizontal
3278.00	28.48	-13.22	54.00	25.52	AV	Horizontal
3889.00	38.90	-9.36	54.00	15.10	AV	Horizontal
5185.00	51.41	-6.22	54.00	2.59	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



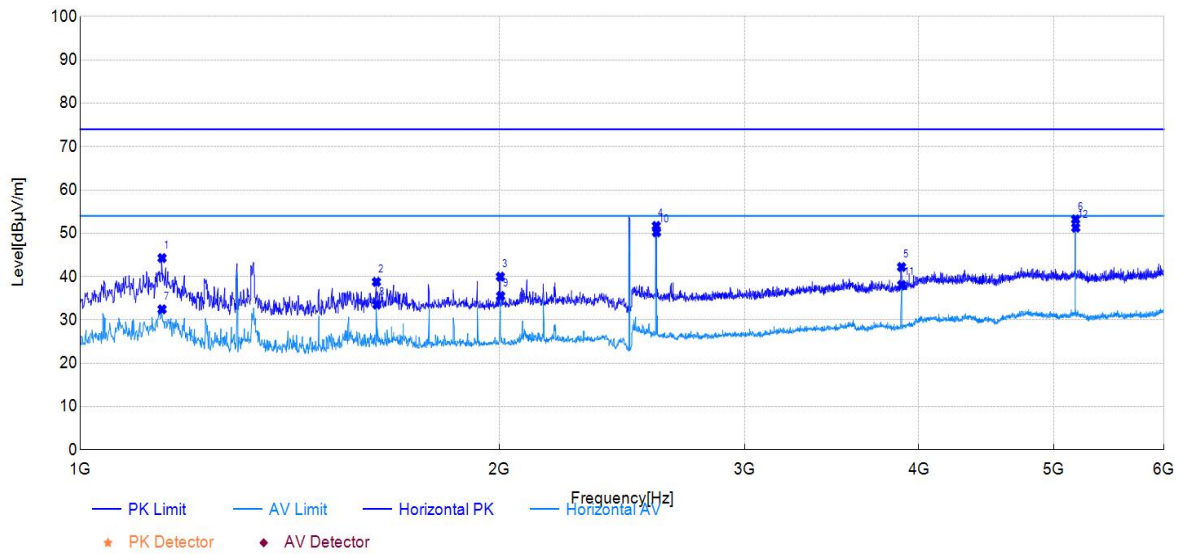
Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1159.00	48.64	-22.60	74.00	25.36	PK	Vertical
1329.00	47.99	-21.78	74.00	26.01	PK	Vertical
2592.00	49.89	-15.76	74.00	24.11	PK	Vertical
3435.00	43.29	-11.91	74.00	30.71	PK	Vertical
3992.00	43.69	-8.33	74.00	30.31	PK	Vertical
5184.00	53.92	-6.67	74.00	20.08	PK	Vertical
1150.00	40.08	-22.64	54.00	13.92	AV	Vertical
1329.00	36.17	-21.78	54.00	17.83	AV	Vertical
2593.00	48.43	-15.76	54.00	5.57	AV	Vertical
3469.00	30.85	-11.73	54.00	23.15	AV	Vertical
3993.00	34.01	-8.32	54.00	19.99	AV	Vertical
5185.00	51.91	-6.66	54.00	2.09	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

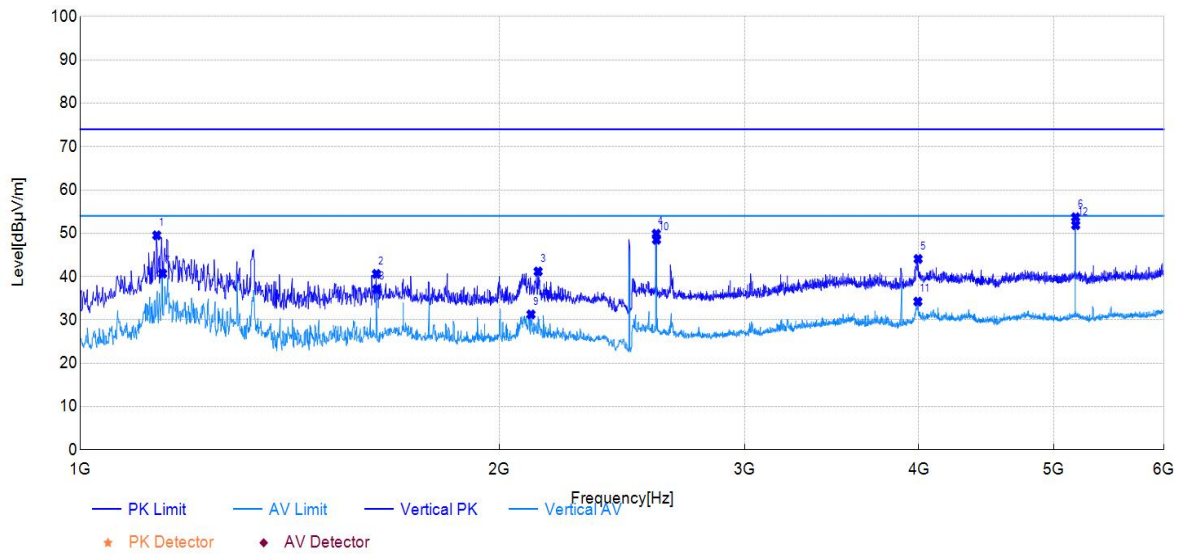


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1145.00	44.27	-23.66	74.00	29.73	PK	Horizontal
1632.00	38.77	-20.85	74.00	35.23	PK	Horizontal
2003.00	39.98	-18.14	74.00	34.02	PK	Horizontal
2592.00	51.70	-15.55	74.00	22.30	PK	Horizontal
3888.00	42.20	-9.37	74.00	31.80	PK	Horizontal
5184.00	53.19	-6.22	74.00	20.81	PK	Horizontal
1145.00	32.45	-23.66	54.00	21.55	AV	Horizontal
1633.00	33.52	-20.84	54.00	20.48	AV	Horizontal
2004.00	35.51	-18.14	54.00	18.49	AV	Horizontal
2593.00	50.21	-15.55	54.00	3.79	AV	Horizontal
3889.00	38.06	-9.36	54.00	15.94	AV	Horizontal
5185.00	51.27	-6.22	54.00	2.73	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



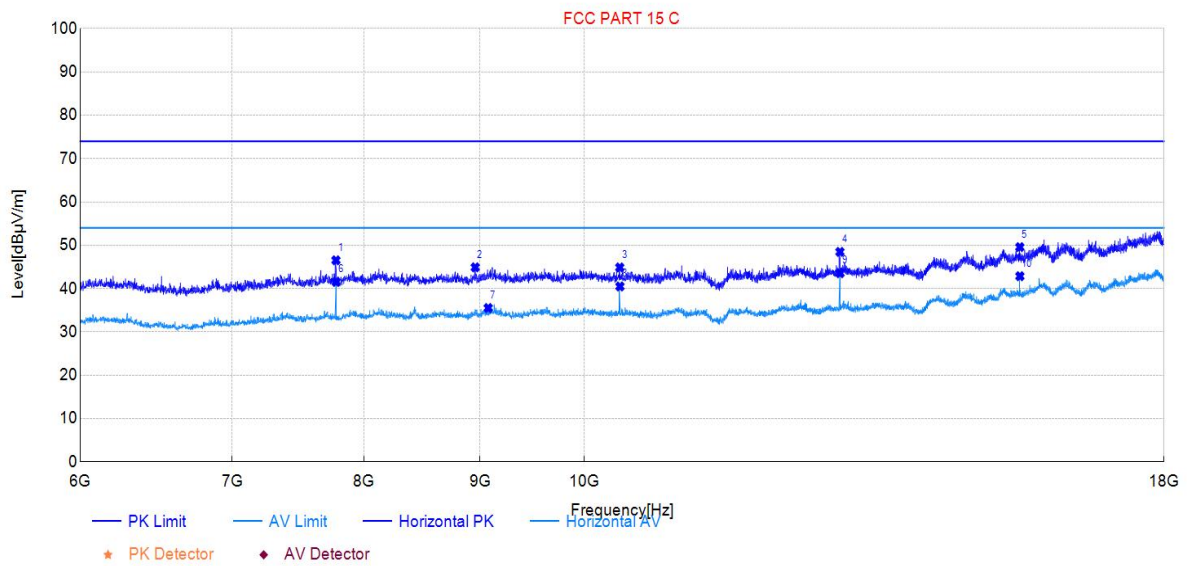
Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1135.00	49.52	-22.68	74.00	24.48	PK	Vertical
1632.00	40.61	-20.15	74.00	33.39	PK	Vertical
2132.00	41.17	-17.30	74.00	32.83	PK	Vertical
2592.00	49.89	-15.76	74.00	24.11	PK	Vertical
3996.00	44.06	-8.30	74.00	29.94	PK	Vertical
5184.00	53.69	-6.67	74.00	20.31	PK	Vertical
1146.00	40.68	-22.65	54.00	13.32	AV	Vertical
1633.00	37.09	-20.15	54.00	16.91	AV	Vertical
2107.00	31.26	-17.37	54.00	22.74	AV	Vertical
2593.00	48.49	-15.76	54.00	5.51	AV	Vertical
3994.00	34.22	-8.32	54.00	19.78	AV	Vertical
5185.00	51.86	-6.66	54.00	2.14	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

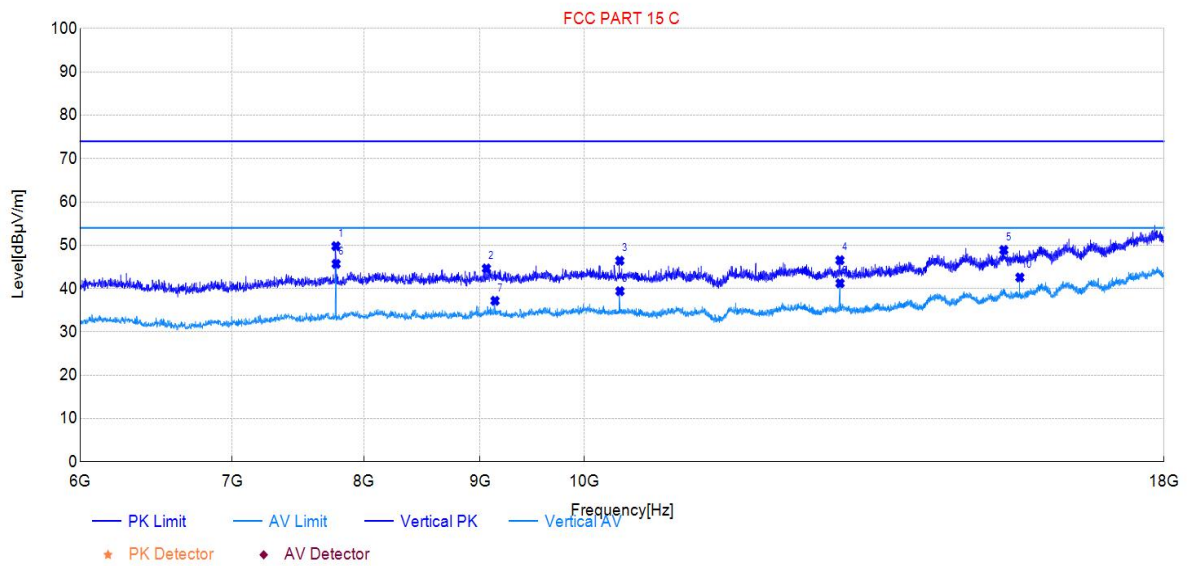


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	46.53	-2.98	74.00	27.47	PK	Horizontal
8955.00	44.90	-0.97	74.00	29.10	PK	Horizontal
10368.00	44.88	0.15	74.00	29.12	PK	Horizontal
12960.00	48.47	2.32	74.00	25.53	PK	Horizontal
15552.00	49.57	7.31	74.00	24.43	PK	Horizontal
7777.50	41.54	-2.99	54.00	12.46	AV	Horizontal
9073.50	35.51	-0.78	54.00	18.49	AV	Horizontal
10369.50	40.49	0.15	54.00	13.51	AV	Horizontal
12961.50	43.55	2.33	54.00	10.45	AV	Horizontal
15553.50	42.86	7.30	54.00	11.14	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



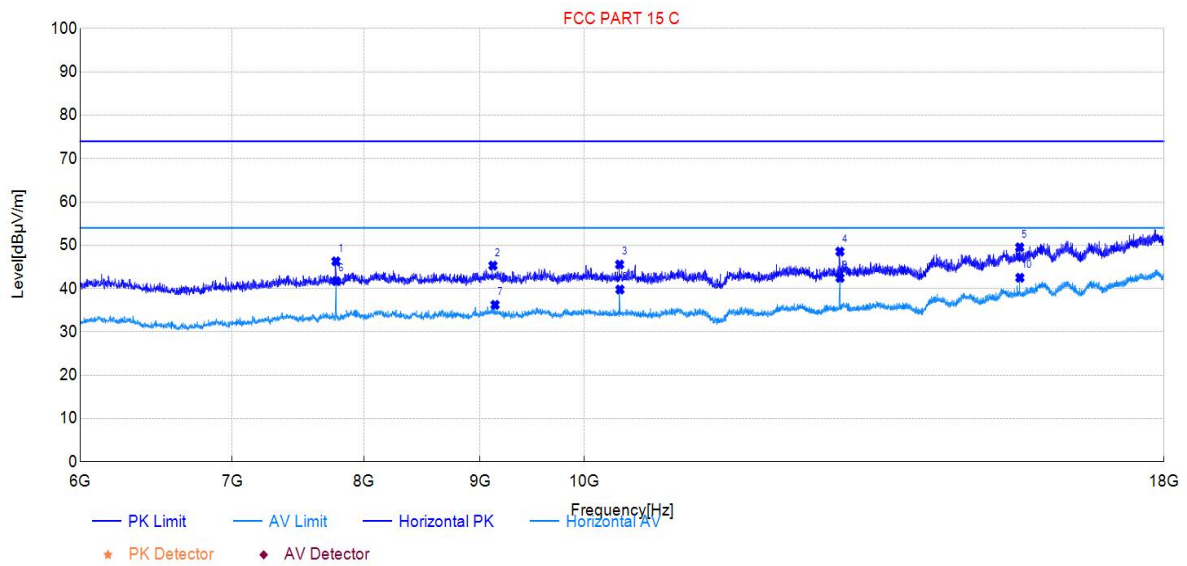
Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	49.79	-2.98	74.00	24.21	PK	Vertical
9057.00	44.63	-0.78	74.00	29.37	PK	Vertical
10368.00	46.43	0.50	74.00	27.57	PK	Vertical
12960.00	46.55	1.96	74.00	27.45	PK	Vertical
15301.50	48.90	7.08	74.00	25.10	PK	Vertical
7777.50	45.69	-2.99	54.00	8.31	AV	Vertical
9136.50	37.17	-0.92	54.00	16.83	AV	Vertical
10369.50	39.40	0.50	54.00	14.60	AV	Vertical
12961.50	41.22	1.97	54.00	12.78	AV	Vertical
15553.50	42.57	6.89	54.00	11.43	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

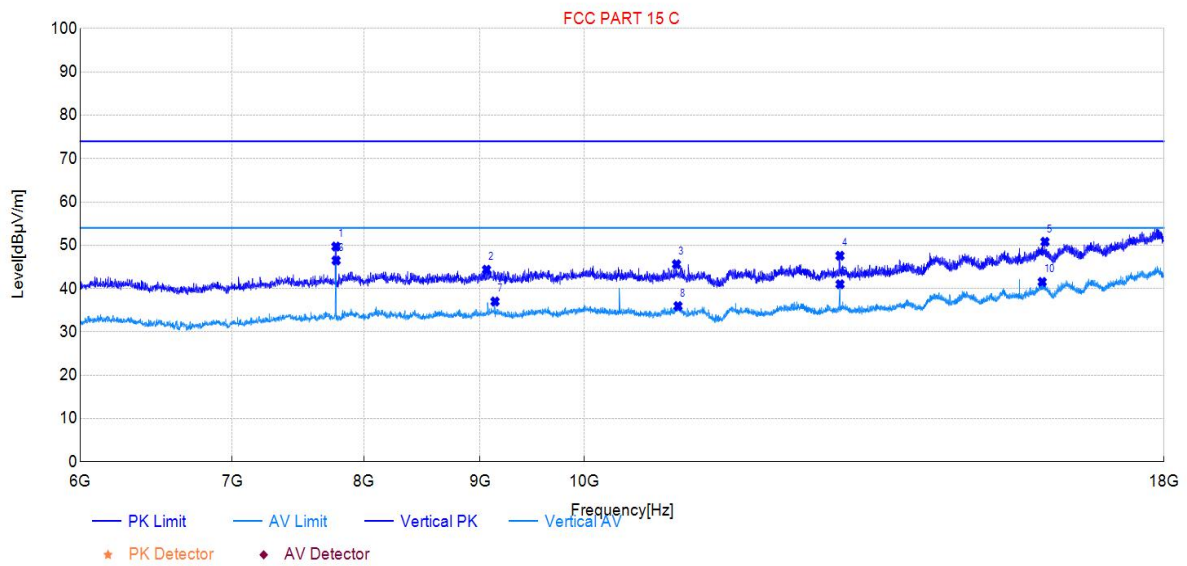


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	46.28	-2.98	74.00	27.72	PK	Horizontal
9117.00	45.30	-0.84	74.00	28.70	PK	Horizontal
10366.50	45.55	0.15	74.00	28.45	PK	Horizontal
12960.00	48.54	2.32	74.00	25.46	PK	Horizontal
15550.50	49.53	7.32	74.00	24.47	PK	Horizontal
7777.50	41.73	-2.99	54.00	12.27	AV	Horizontal
9136.50	36.24	-0.92	54.00	17.76	AV	Horizontal
10369.50	39.78	0.15	54.00	14.22	AV	Horizontal
12961.50	42.47	2.33	54.00	11.53	AV	Horizontal
15553.50	42.50	7.30	54.00	11.50	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



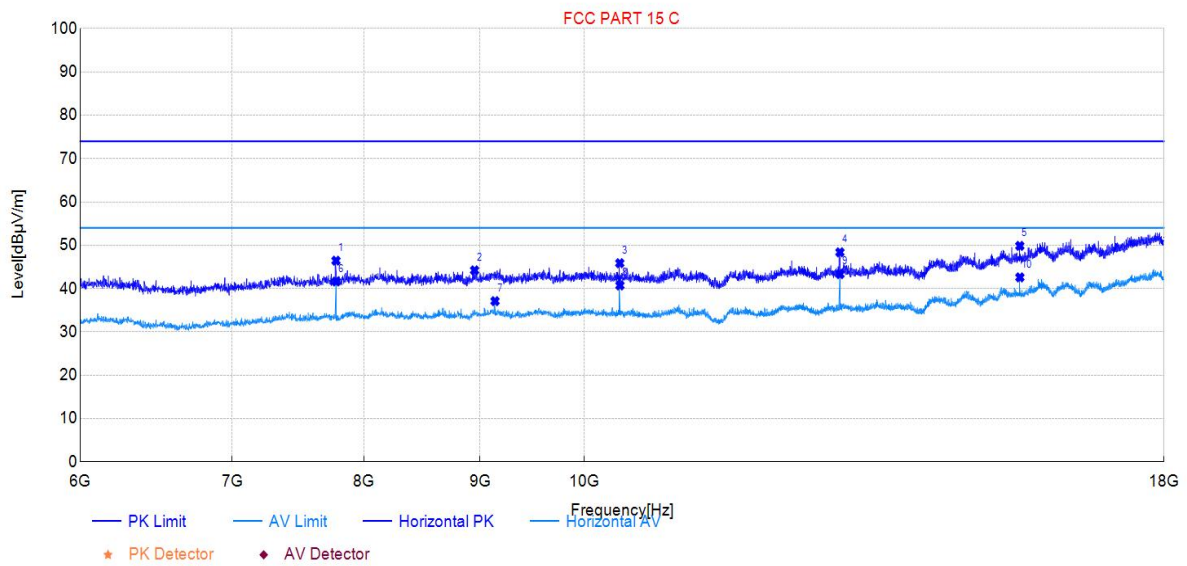
Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	49.70	-2.98	74.00	24.30	PK	Vertical
9058.50	44.35	-0.78	74.00	29.65	PK	Vertical
10981.50	45.61	1.35	74.00	28.39	PK	Vertical
12960.00	47.58	1.96	74.00	26.42	PK	Vertical
15954.00	50.80	9.29	74.00	23.20	PK	Vertical
7777.50	46.48	-2.99	54.00	7.52	AV	Vertical
9136.50	37.01	-0.92	54.00	16.99	AV	Vertical
10998.00	35.96	1.40	54.00	18.04	AV	Vertical
12961.50	41.00	1.97	54.00	13.00	AV	Vertical
15909.00	41.53	9.30	54.00	12.47	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph

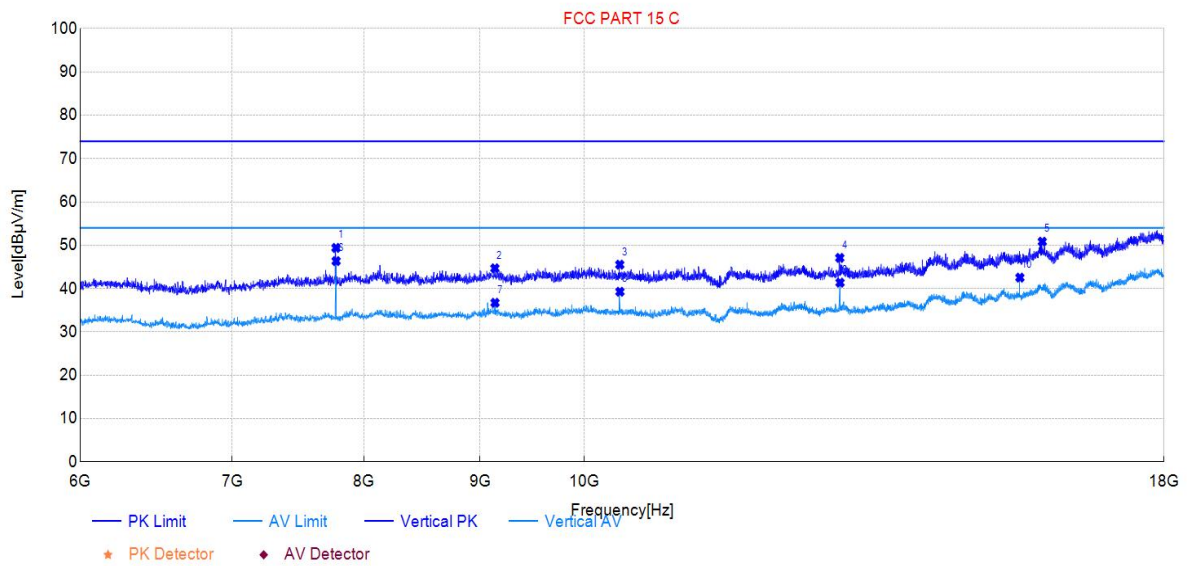


Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	46.44	-2.98	74.00	27.56	PK	Horizontal
8949.00	44.21	-0.99	74.00	29.79	PK	Horizontal
10368.00	45.86	0.15	74.00	28.14	PK	Horizontal
12960.00	48.37	2.32	74.00	25.63	PK	Horizontal
15552.00	49.86	7.31	74.00	24.14	PK	Horizontal
7777.50	41.63	-2.99	54.00	12.37	AV	Horizontal
9136.50	37.10	-0.92	54.00	16.90	AV	Horizontal
10369.50	40.72	0.15	54.00	13.28	AV	Horizontal
12961.50	43.33	2.33	54.00	10.67	AV	Horizontal
15553.50	42.59	7.30	54.00	11.41	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
7776.00	49.39	-2.98	74.00	24.61	PK	Vertical
9135.00	44.68	-0.91	74.00	29.32	PK	Vertical
10368.00	45.52	0.50	74.00	28.48	PK	Vertical
12958.50	47.08	1.94	74.00	26.92	PK	Vertical
15910.50	50.83	9.30	74.00	23.17	PK	Vertical
7777.50	46.35	-2.99	54.00	7.65	AV	Vertical
9136.50	36.72	-0.92	54.00	17.28	AV	Vertical
10369.50	39.27	0.50	54.00	14.73	AV	Vertical
12961.50	41.37	1.97	54.00	12.63	AV	Vertical
15553.50	42.53	6.89	54.00	11.47	AV	Vertical

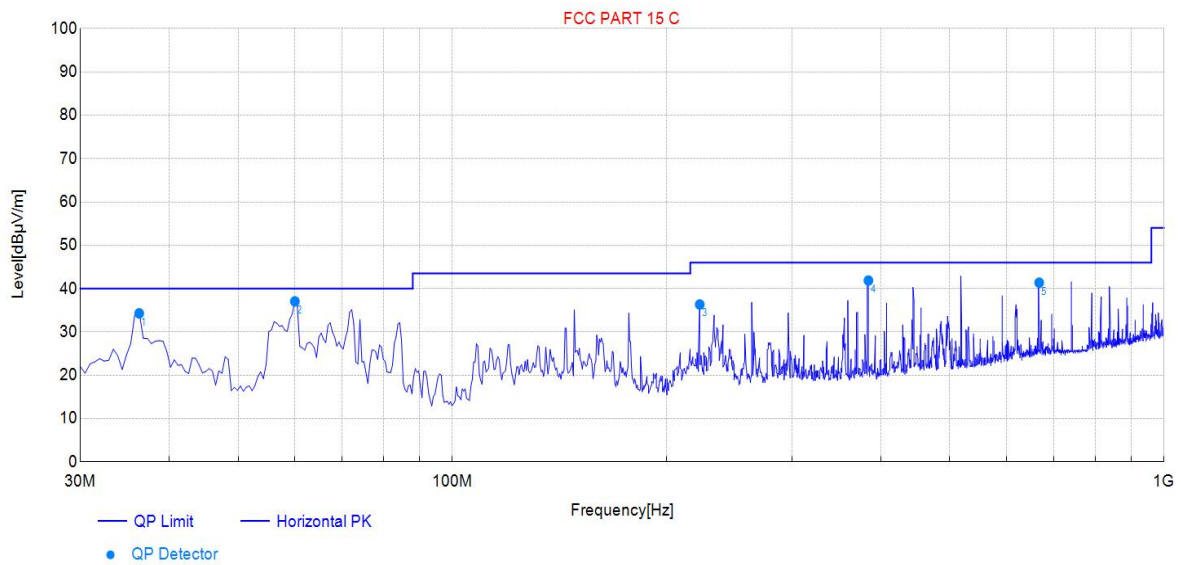
Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

The worst case of Radiated Emission below 1GHz:

30MHz – 1GHz Test Data

EUT:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



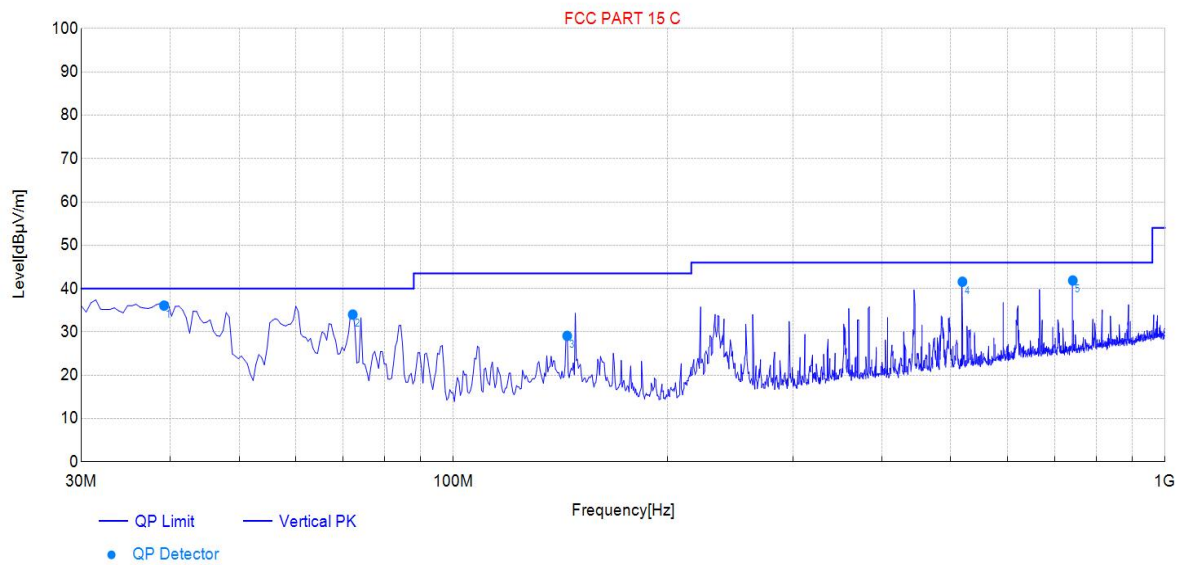
Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.31	14.26	34.29	40.00	5.71	100	348	Horizontal
2	60.09	13.64	37.05	40.00	2.95	100	182	Horizontal
3	222.64	12.33	36.33	46.00	9.67	100	13	Horizontal
4	384.23	16.67	41.86	46.00	4.14	100	26	Horizontal
5	667.61	22.13	41.36	46.00	4.64	100	151	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:	AI Recorder II	Polarity:	Vertical
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 00	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



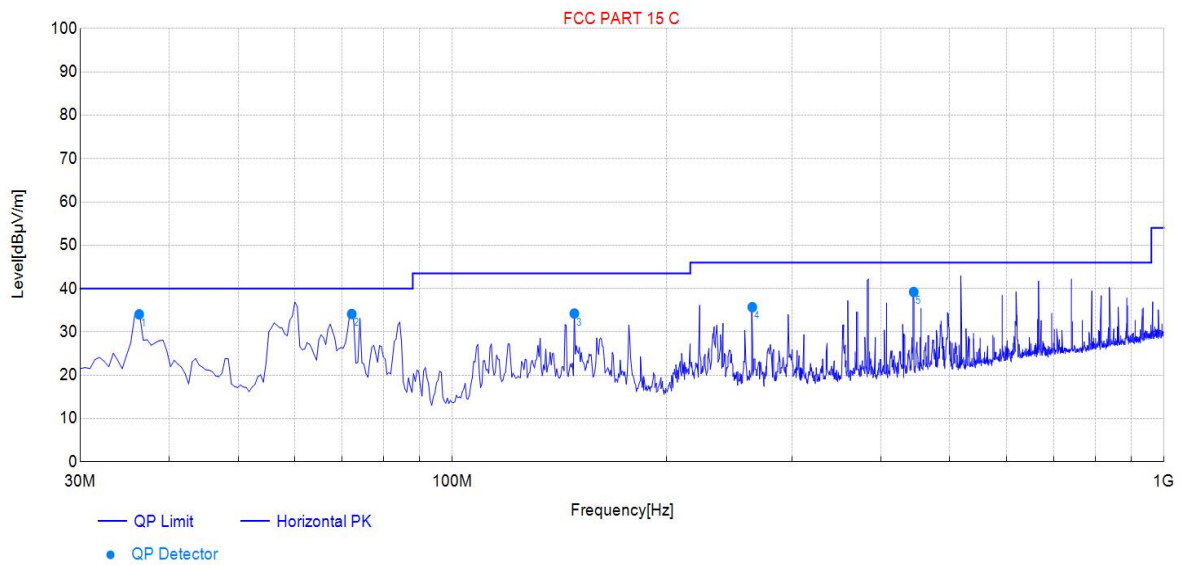
Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	39.22	14.68	36.07	40.00	3.93	100	275	Vertical
2	72.22	11.45	34.00	40.00	6.00	100	88	Vertical
3	144.52	15.02	29.09	43.50	14.41	100	359	Vertical
4	519.12	19.41	41.58	46.00	4.42	100	155	Vertical
5	741.85	23.14	41.87	46.00	4.13	100	140	Vertical

30MHz – 1GHz Test Data

EUT:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



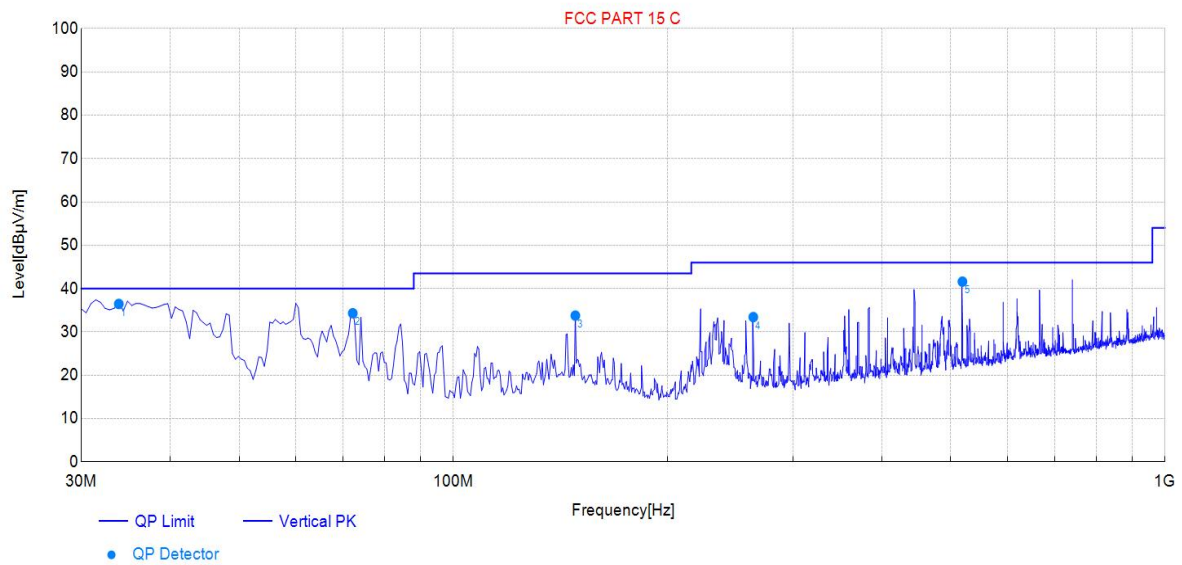
Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.31	14.26	34.06	40.00	5.94	100	0	Horizontal
2	72.22	11.45	34.14	40.00	5.86	100	174	Horizontal
3	148.40	15.15	34.25	43.50	9.25	100	174	Horizontal
4	263.89	13.73	35.72	46.00	10.28	100	32	Horizontal
5	444.88	18.23	39.21	46.00	6.79	100	150	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:	AI Recorder II	Polarity:	Vertical
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 19	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



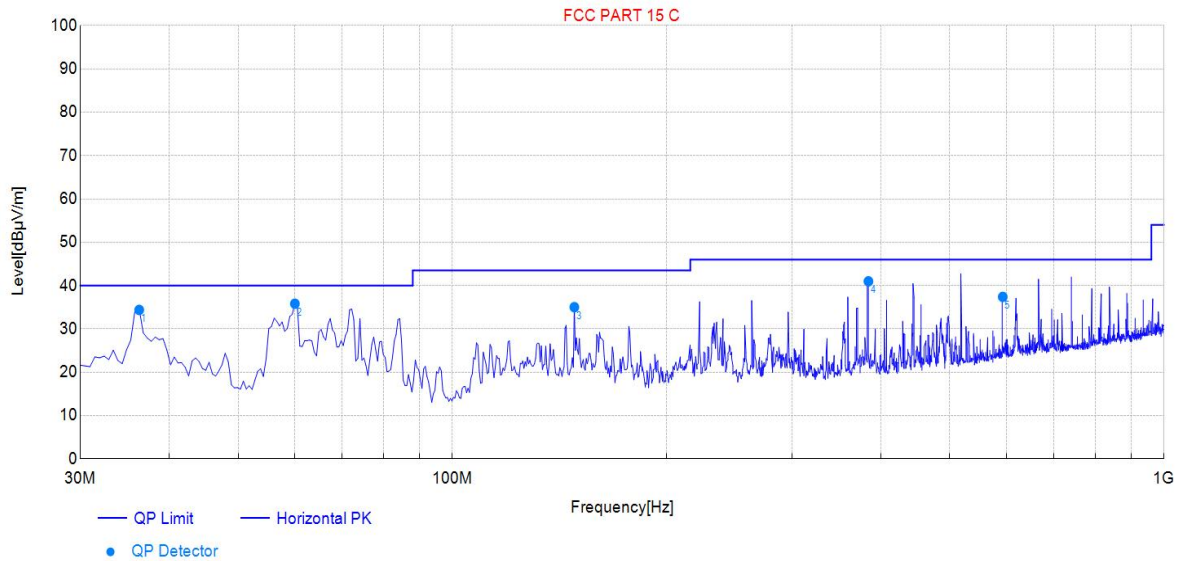
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.88	14.01	36.46	40.00	3.54	100	345	Vertical
2	72.22	11.45	34.31	40.00	5.69	100	110	Vertical
3	148.40	15.15	33.77	43.50	9.73	100	331	Vertical
4	263.89	13.73	33.42	46.00	12.58	100	182	Vertical
5	519.12	19.41	41.61	46.00	4.39	100	152	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	Engineer:	Chuang Li

Test Graph



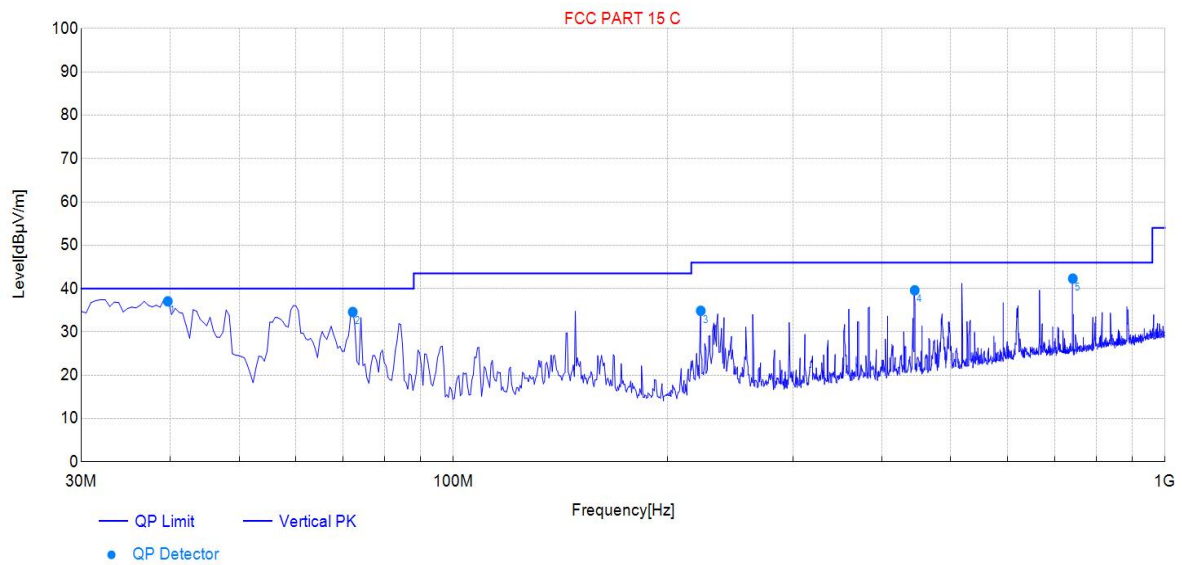
Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.31	14.26	34.39	40.00	5.61	100	0	Horizontal
2	60.09	13.64	35.82	40.00	4.18	100	176	Horizontal
3	148.40	15.15	35.02	43.50	8.48	100	172	Horizontal
4	384.23	16.67	40.99	46.00	5.01	100	25	Horizontal
5	593.37	20.94	37.40	46.00	8.60	100	145	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:	AI Recorder II	Polarity:	Vertical
Model:	CAM18	SN:	N/A
Mode:	Transmit at BLE_1M Channel 39	Voltage:	DC 14V
Environment:	Temp: 19°C; Humi:56%	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	39.70	14.76	37.06	40.00	2.94	100	275	Vertical
2	72.22	11.45	34.59	40.00	5.41	100	89	Vertical
3	222.64	12.33	34.87	46.00	11.13	100	51	Vertical
4	444.88	18.23	39.60	46.00	6.40	100	98	Vertical
5	741.85	23.14	42.30	46.00	3.70	100	137	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

For RSS-Gen Section 8.10 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 8.10 of RSS-Gen, must also comply with the radiated emission limits specified in Section 8.9.

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.009 - 0.110	240 - 285	9.0 - 9.2
2.1735 - 2.1905	322 - 335.4	9.3 - 9.5
3.020 - 3.026	399.9 - 410	10.6 - 12.7
4.125 - 4.128	608 - 614	13.25 - 13.4
4.17725 - 4.17775	960 - 1427	14.47 - 14.5
4.20725 - 4.20775	1435 - 1626.5	15.35 - 16.2
5.677 - 5.683	1645.5 - 1646.5	17.7 - 21.4
6.215 - 6.218	1660 - 1710	22.01 - 23.12
6.26775 - 6.26825	1718.8 -1722.2	23.6 - 24.0
6.31175 - 6.31225	2200 - 2300	31.2 - 31.8
8.291 - 8.294	2310 -2390	36.43 - 36.5
8.362 - 8.366	2655 - 2900	Above 38.6
8.37625 - 8.38675	3260 - 3267	--
8.41425 - 8.41475	3332 -3339	
12.29 - 12.293	334.5 - 3358	
12.51975 - 12.52025	3500 - 4400	
12.57675 - 12.57725	4500 - 5150	
13.36 -13.41	5350 - 5460	
16.42 - 16.423	7250 - 7750	
16.69475 - 16.69525	8025 - 8500	
16.80425 - 16.80475	--	
25.5 - 25.67		
37.5 - 38.25		
73 - 74.6		
74.8 - 75.2		
108 - 138		
156.52475 - 156.525225		
156.7 - 156.9		

All out of band emissions appearing in a restricted band as specified in Section 8.10 of the RSS-Gen

must not exceed the limits shown in Table per Section 8.9.

RSS-Gen Section 8.9		
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

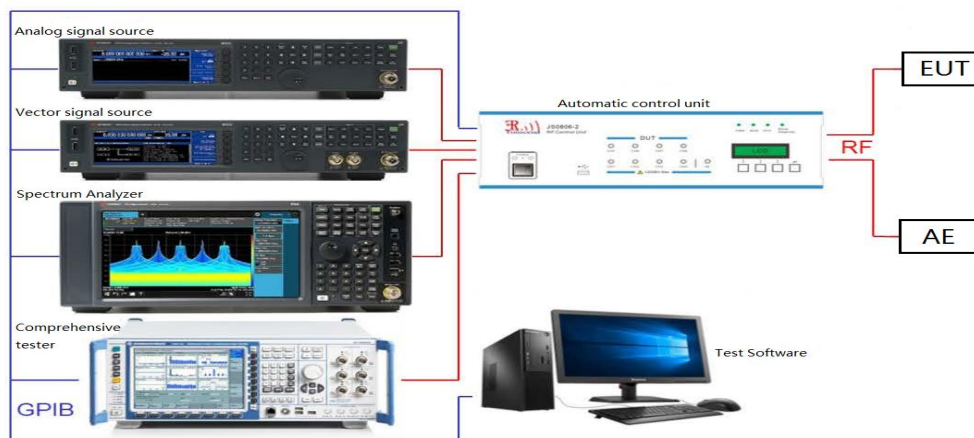
Peak Field Strength Measurements

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 $\geq 2 \times \text{span} / \text{RBW}$)
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces.

7.7.4. Test Setup

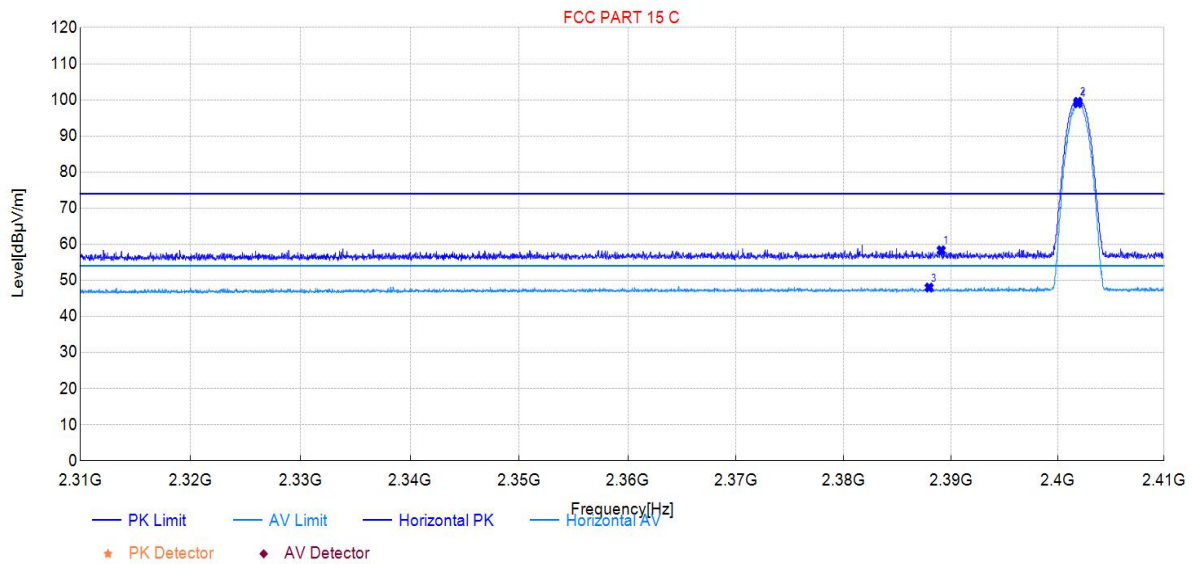


7.7.5. Test Result

BLE_1M

Test Mode:	BLE_1M	Test Date:	2024-10-26
Test Channel:	2402	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.		

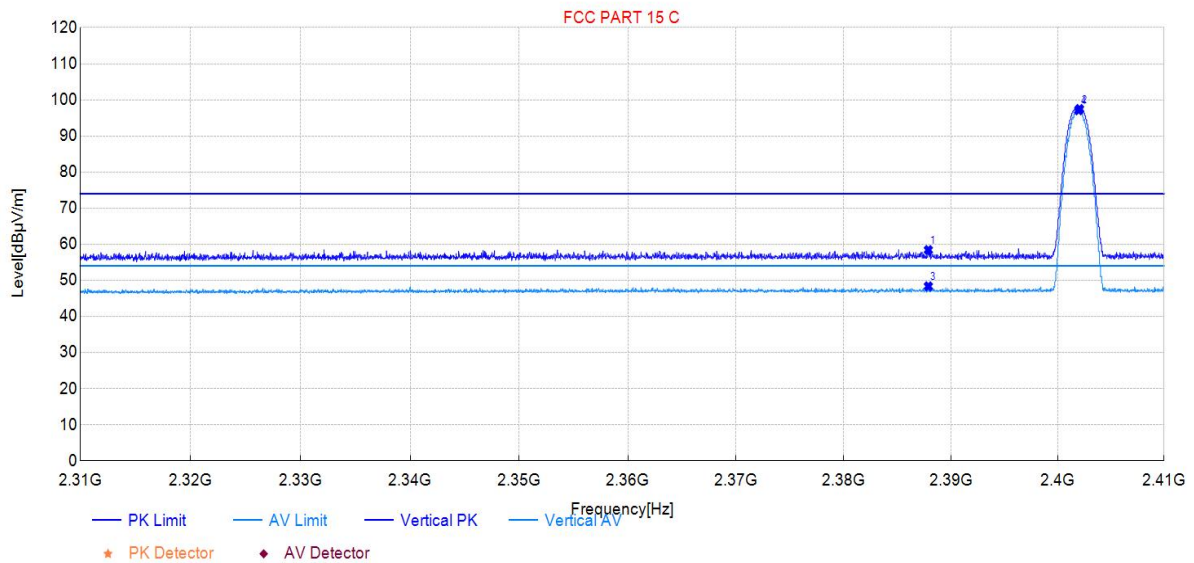
Test Graph



Freq. [MHz]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2389.09	58.33	36.09	74.00	15.67	150	93	Peak	Horizontal
2401.90	99.48	36.15	74.00	-25.48	150	35	Peak	Horizontal
2387.97	48.00	36.09	54.00	6.00	150	72	Average	Horizontal
2401.90	99.03	36.15	54.00	-45.03	150	25	Average	Horizontal

Test Mode:	BLE_1M	Test Date:	2024-10-26
Test Channel:	2402	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.		

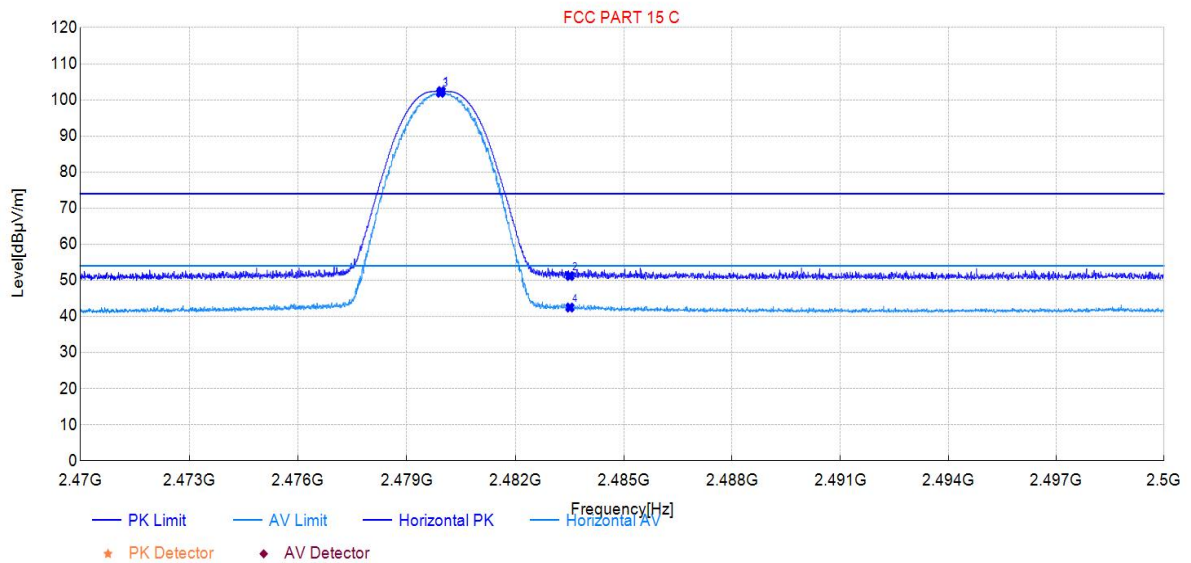
Test Graph



Freq. [MHz]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2387.89	58.41	35.95	74.00	15.59	150	353	Peak	Vertical
2402.05	97.48	35.99	74.00	-23.48	150	46	Peak	Vertical
2387.89	48.35	35.95	54.00	5.65	150	344	Average	Vertical
2401.97	97.11	35.99	54.00	-43.11	150	125	Average	Vertical

Test Mode:	BLE_1M	Test Date:	2024-10-26
Test Channel:	2480	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.		

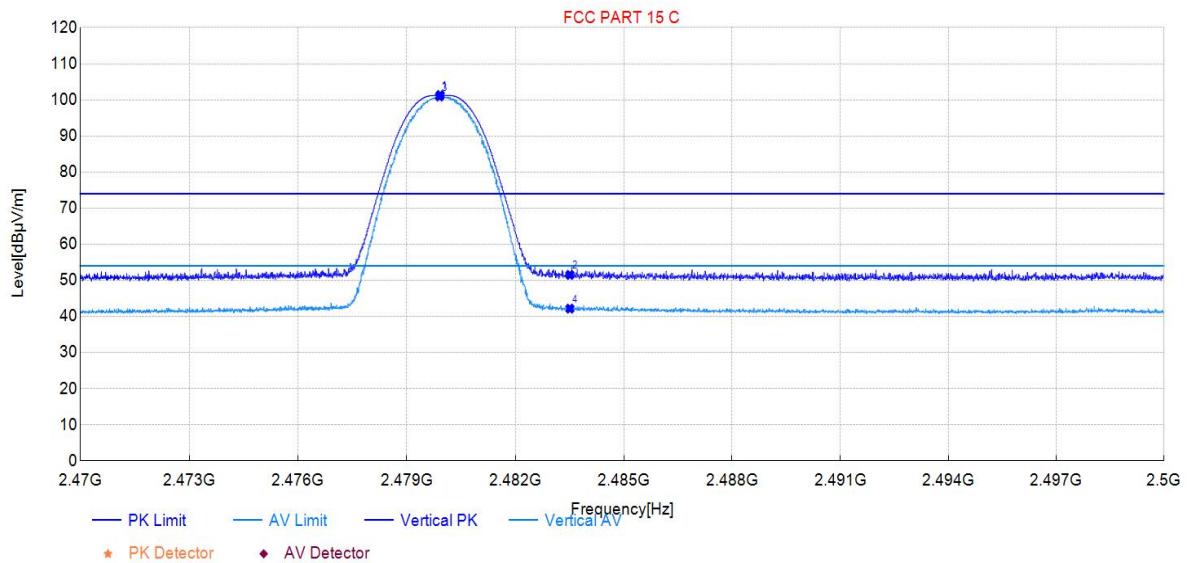
Test Graph



Freq. [MHz]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.95	102.43	36.35	74.00	-28.43	150	25	Peak	Horizontal
2483.51	51.21	36.36	74.00	22.79	150	234	Peak	Horizontal
2479.93	101.95	36.35	54.00	-47.95	150	25	Average	Horizontal
2483.51	42.47	36.36	54.00	11.53	150	13	Average	Horizontal

Test Mode:	BLE_1M	Test Date:	2024-10-26
Test Channel:	2480	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 [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.92	101.34	36.08	74.00	-27.34	150	45	Peak	Vertical
2483.51	51.52	36.08	74.00	22.48	150	172	Peak	Vertical
2479.91	100.93	36.08	54.00	-46.93	150	49	Average	Vertical
2483.51	42.17	36.08	54.00	11.83	150	49	Average	Vertical

7.8. AC Conducted Emissions Measurement

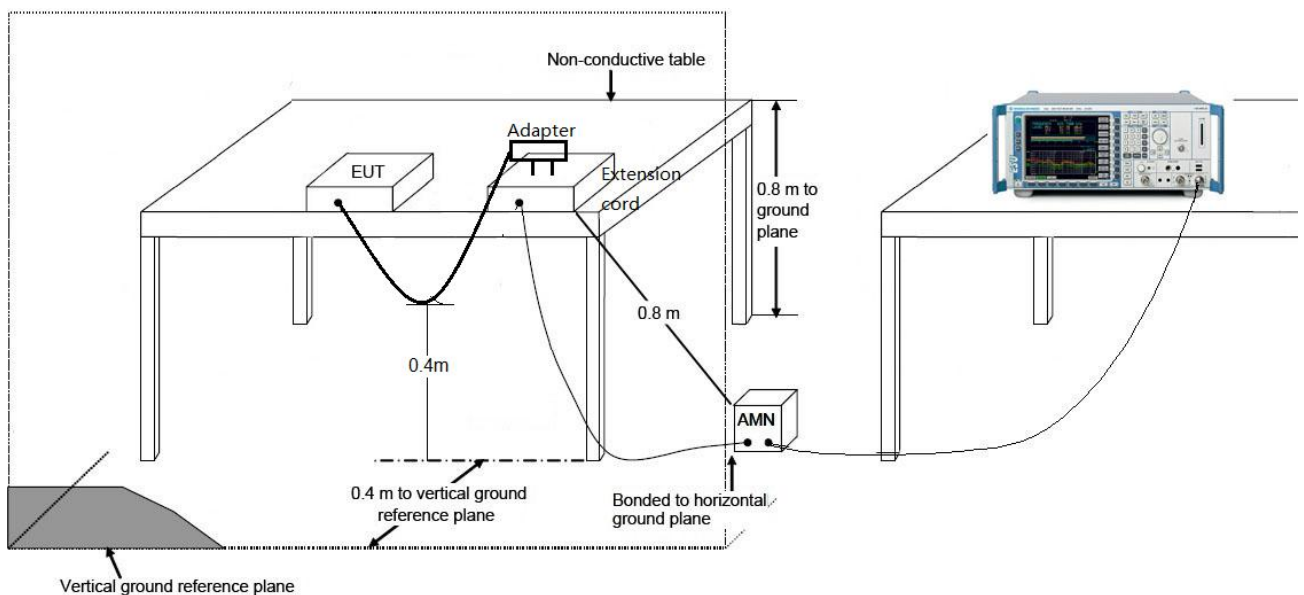
7.8.1. Test Limit

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 14V.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **AI Recorder II (Model: CAM18)** is in compliance with Part 15C of the FCC Rules.

_____ The End _____