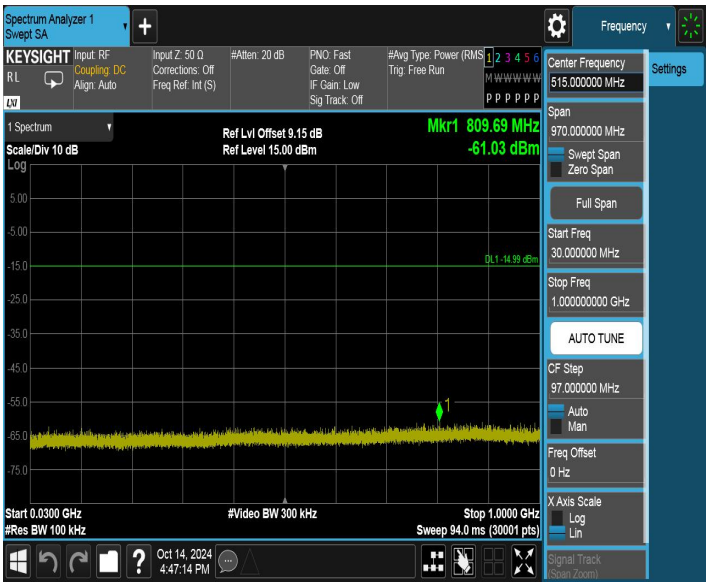
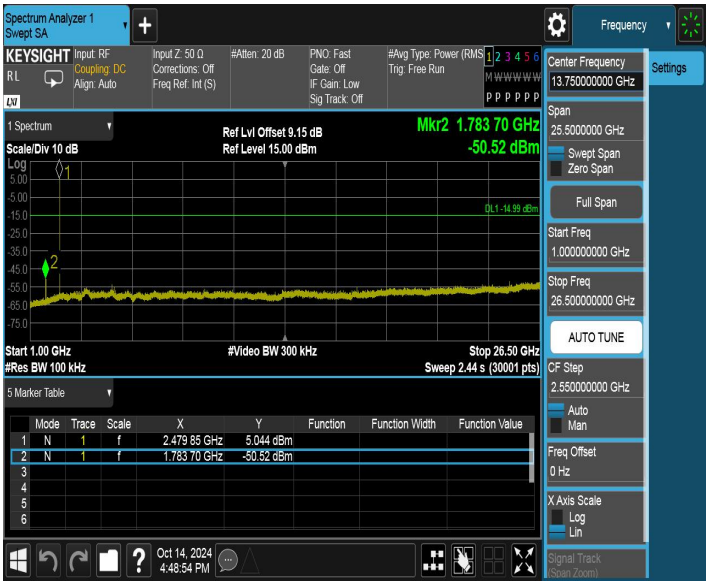
3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Free Run
Frequency
Settings
Center Frequency
13.750000000 GHz
Span
25.5000000 GHz
Swept Span
Zero Span
Full Span
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
AUTO TUNE
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 9.15 dB
Ref Level 15.00 dBm
Mkr2 1.783 70 GHz
-50.52 dBm
Start 1.00 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Stop 26.50 GHz
Sweep 2.44 s (30001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.479 85 GHz 5.044 dBm
2 N 1 f 1.783 70 GHz -50.52 dBm
Oct 14, 2024
4:48:54 PM

7.9. Radiated Spurious Emission Measurement

7.9.1. 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

7.9.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

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

7.9.3. Test Setting

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. 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

Peak Measurements above 1GHz

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 Measurements above 1GHz (Method VB)

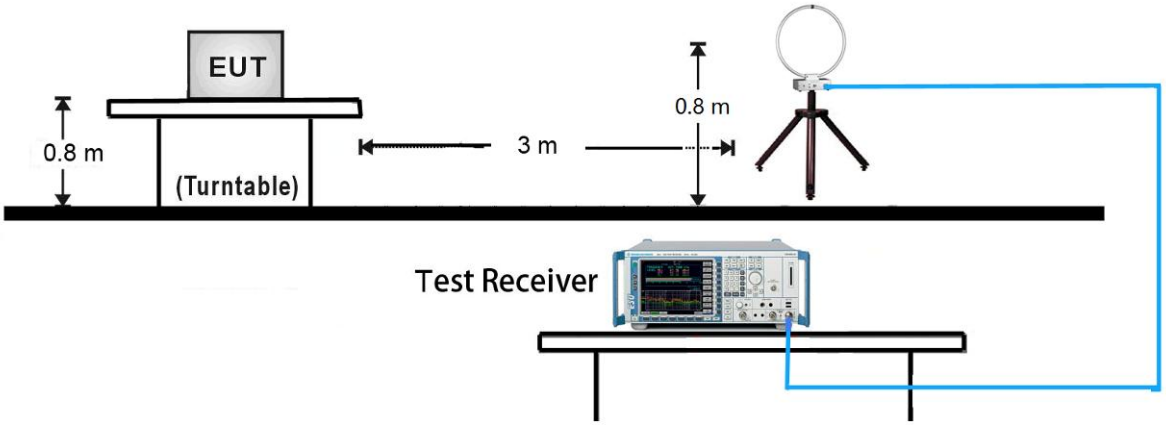
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto

6. Trace mode = max hold

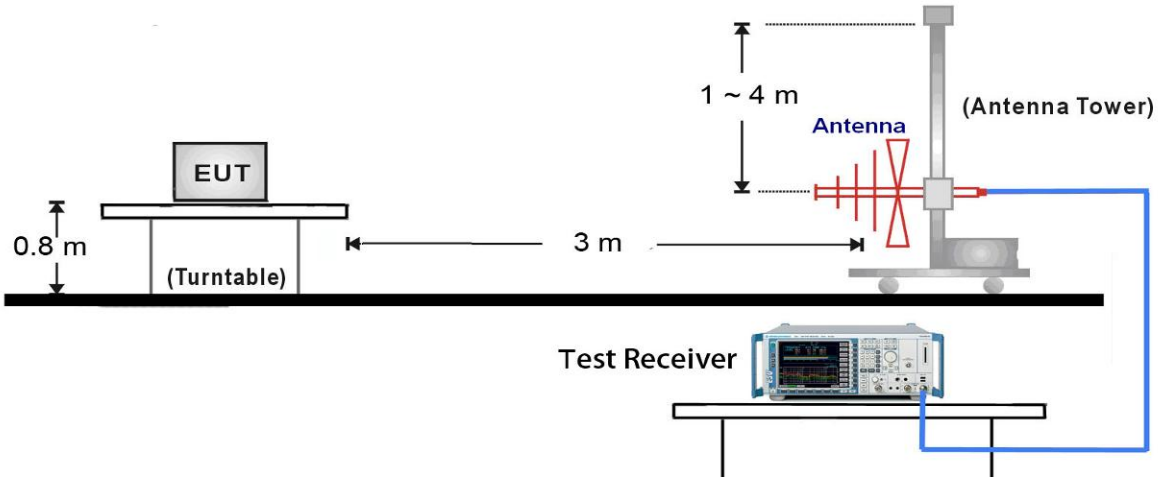
7. Trace was allowed to stabilize

7.9.4. Test Setup

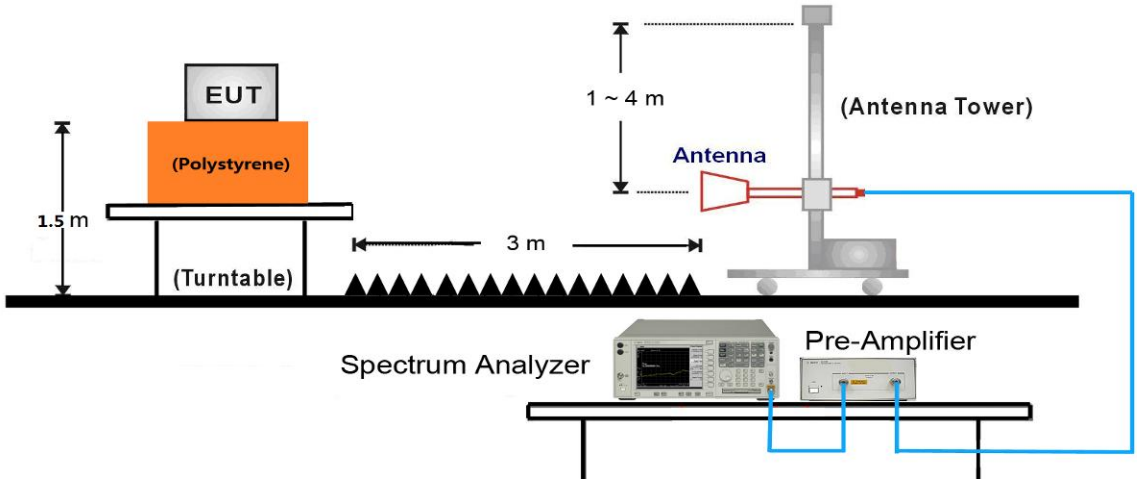
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:



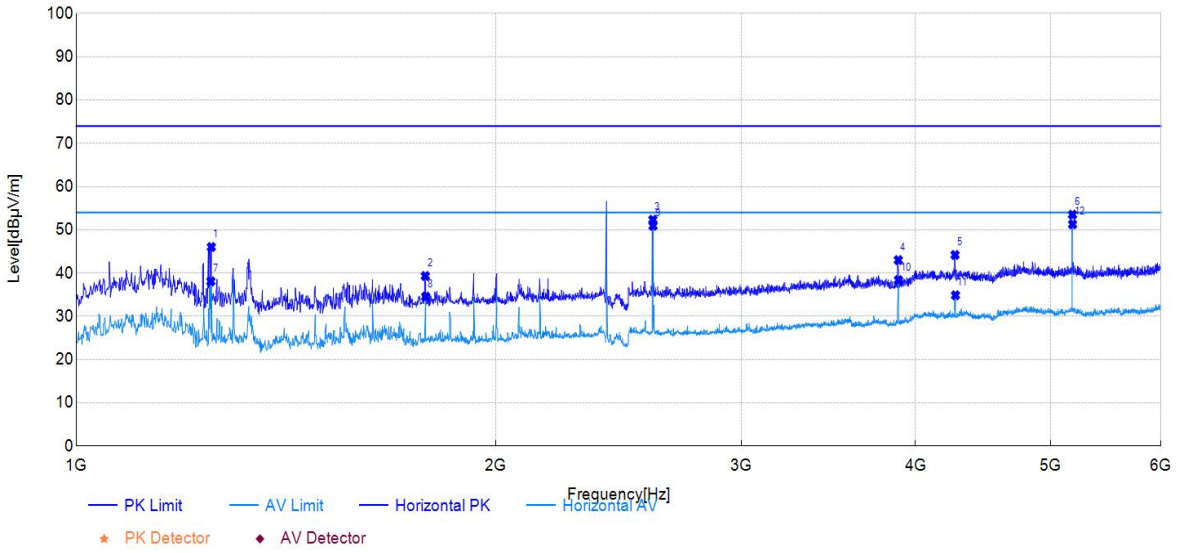
7.9.5. Test Result

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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



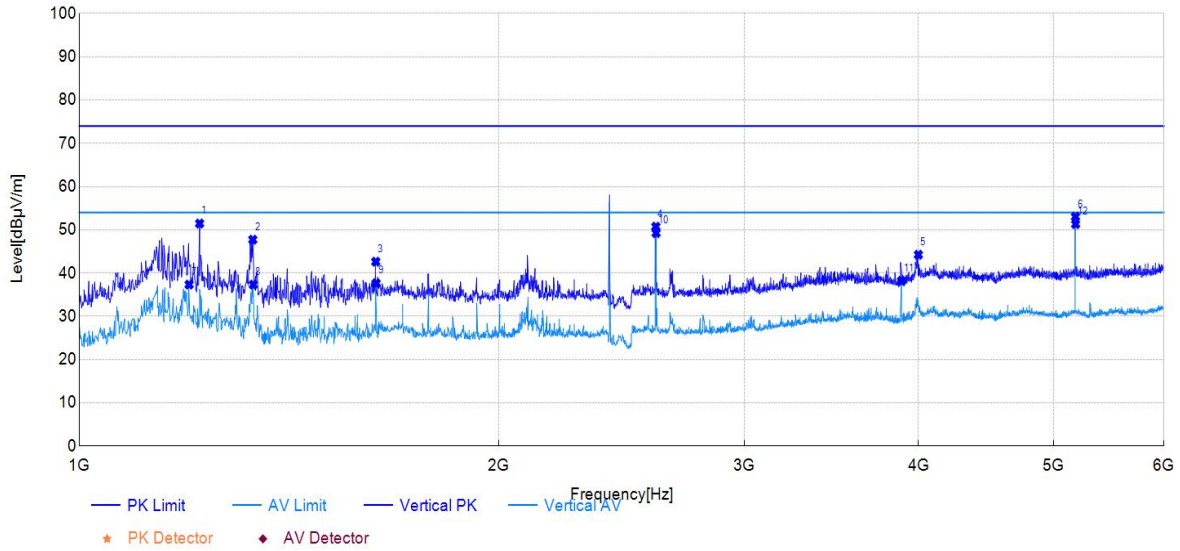
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1250.00	46.03	-23.17	74.00	27.97	PK	Horizontal
1780.00	39.32	-19.65	74.00	34.68	PK	Horizontal
2592.00	52.33	-15.55	74.00	21.67	PK	Horizontal
3888.00	43.00	-9.37	74.00	31.00	PK	Horizontal
4270.00	44.19	-7.72	74.00	29.81	PK	Horizontal
5184.00	53.50	-6.22	74.00	20.50	PK	Horizontal
1249.00	38.08	-23.17	54.00	15.92	AV	Horizontal
1781.00	34.55	-19.64	54.00	19.45	AV	Horizontal
2593.00	50.93	-15.55	54.00	3.07	AV	Horizontal
3889.00	38.37	-9.36	54.00	15.63	AV	Horizontal
4273.00	34.86	-7.72	54.00	19.14	AV	Horizontal

5185.00	51.26	-6.22	54.00	2.74	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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



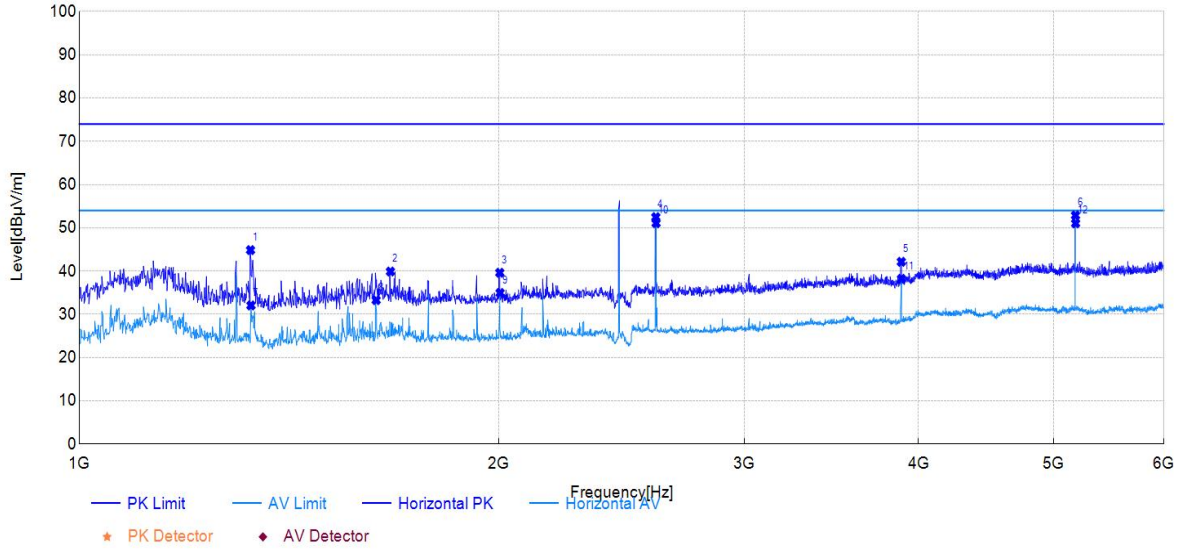
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1220.00	51.46	-22.37	74.00	22.54	PK	Vertical
1332.00	47.72	-21.76	74.00	26.28	PK	Vertical
1632.00	42.63	-20.15	74.00	31.37	PK	Vertical
2592.00	50.73	-15.76	74.00	23.27	PK	Vertical
3999.00	44.24	-8.28	74.00	29.76	PK	Vertical
5184.00	53.03	-6.67	74.00	20.97	PK	Vertical
1199.00	37.34	-22.47	54.00	16.66	AV	Vertical
1333.00	37.33	-21.76	54.00	16.67	AV	Vertical
1633.00	37.64	-20.15	54.00	16.36	AV	Vertical
2593.00	49.24	-15.76	54.00	4.76	AV	Vertical
3889.00	38.18	-8.95	54.00	15.82	AV	Vertical
5185.00	51.32	-6.66	54.00	2.68	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.

1GHz – 6GHz Test Data

EUT:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

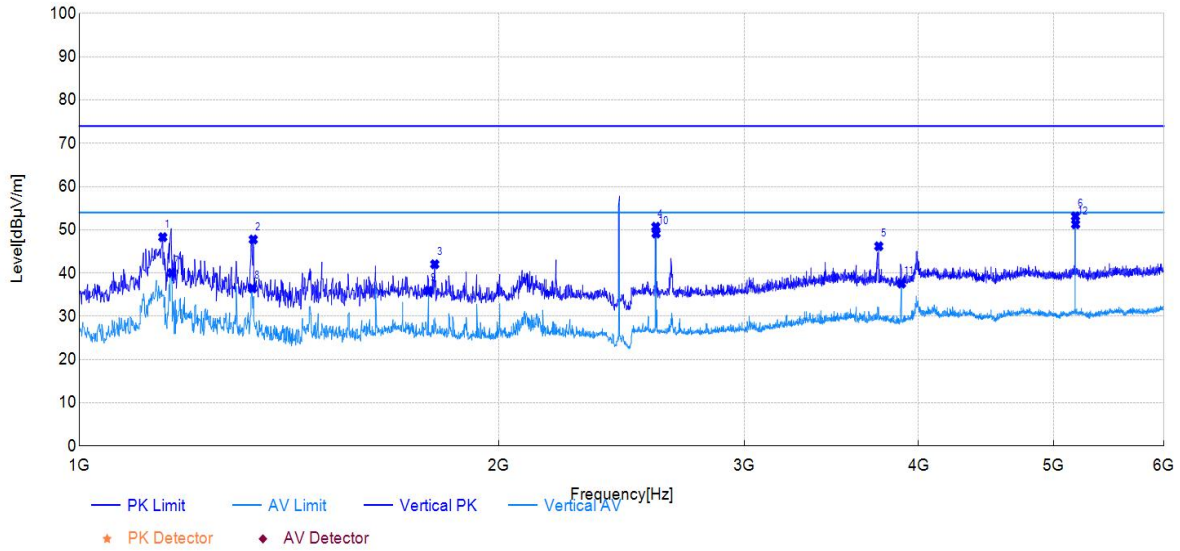


Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1327.00	44.85	-22.71	74.00	29.15	PK	Horizontal
1672.00	39.89	-20.54	74.00	34.11	PK	Horizontal
2003.00	39.61	-18.14	74.00	34.39	PK	Horizontal
2592.00	52.47	-15.55	74.00	21.53	PK	Horizontal
3888.00	42.14	-9.37	74.00	31.86	PK	Horizontal
5184.00	52.87	-6.22	74.00	21.13	PK	Horizontal
1328.00	32.05	-22.69	54.00	21.95	AV	Horizontal
1633.00	33.27	-20.84	54.00	20.73	AV	Horizontal
2004.00	34.94	-18.14	54.00	19.06	AV	Horizontal
2593.00	51.06	-15.55	54.00	2.94	AV	Horizontal
3889.00	38.20	-9.36	54.00	15.80	AV	Horizontal
5185.00	51.02	-6.22	54.00	2.98	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 DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



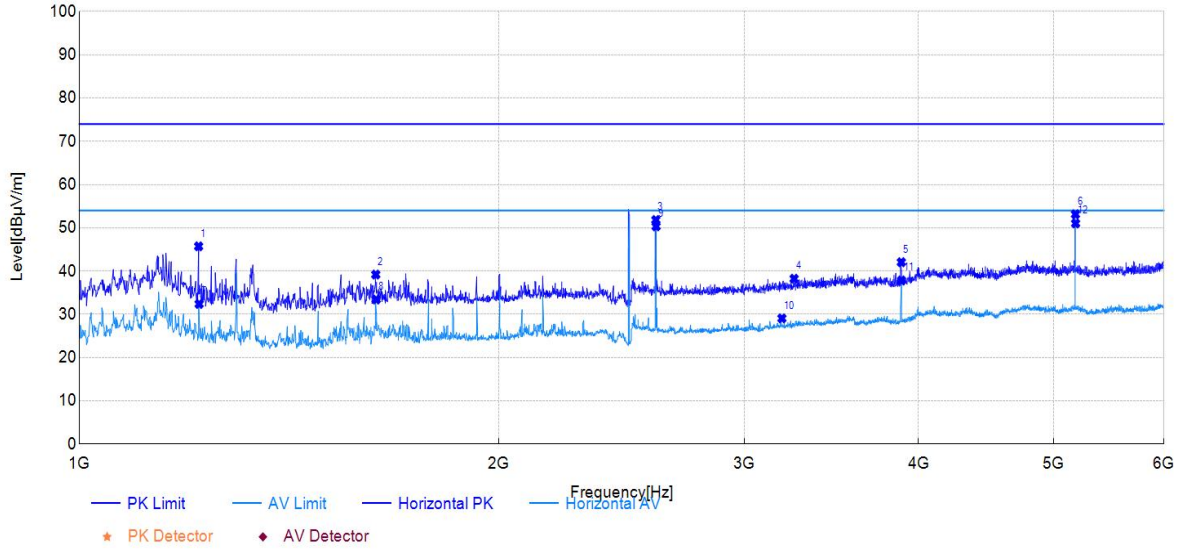
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1148.00	48.30	-22.64	74.00	25.70	PK	Vertical
1333.00	47.76	-21.76	74.00	26.24	PK	Vertical
1799.00	42.04	-18.93	74.00	31.96	PK	Vertical
2592.00	50.70	-15.76	74.00	23.30	PK	Vertical
3746.00	46.19	-10.10	74.00	27.81	PK	Vertical
5184.00	53.11	-6.67	74.00	20.89	PK	Vertical
1165.00	40.04	-22.59	54.00	13.96	AV	Vertical
1331.00	36.48	-21.78	54.00	17.52	AV	Vertical
1781.00	35.90	-19.07	54.00	18.10	AV	Vertical
2593.00	49.14	-15.76	54.00	4.86	AV	Vertical
3889.00	37.57	-8.95	54.00	16.43	AV	Vertical
5185.00	51.27	-6.66	54.00	2.73	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 DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

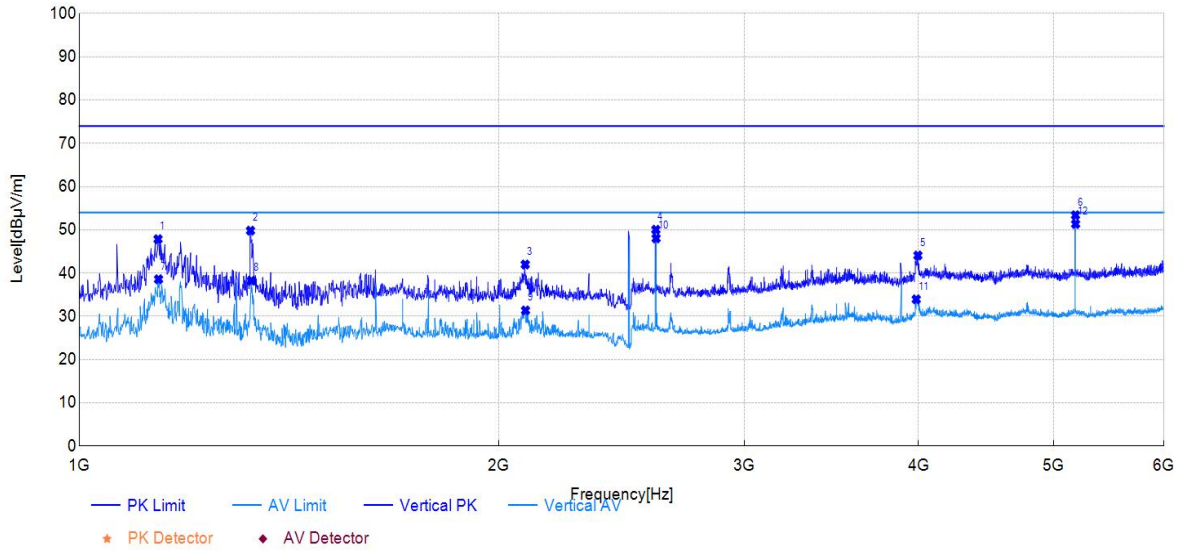


Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1218.00	45.72	-23.35	74.00	28.28	PK	Horizontal
1632.00	39.19	-20.85	74.00	34.81	PK	Horizontal
2592.00	51.82	-15.55	74.00	22.18	PK	Horizontal
3257.00	38.23	-13.32	74.00	35.77	PK	Horizontal
3888.00	42.05	-9.37	74.00	31.95	PK	Horizontal
5184.00	53.13	-6.22	74.00	20.87	PK	Horizontal
1219.00	32.39	-23.34	54.00	21.61	AV	Horizontal
1633.00	33.42	-20.84	54.00	20.58	AV	Horizontal
2593.00	50.33	-15.55	54.00	3.67	AV	Horizontal
3192.00	29.06	-13.64	54.00	24.94	AV	Horizontal
3889.00	37.83	-9.36	54.00	16.17	AV	Horizontal
5185.00	51.01	-6.22	54.00	2.99	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:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	S/N:	/
Mode:	Transmit at DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



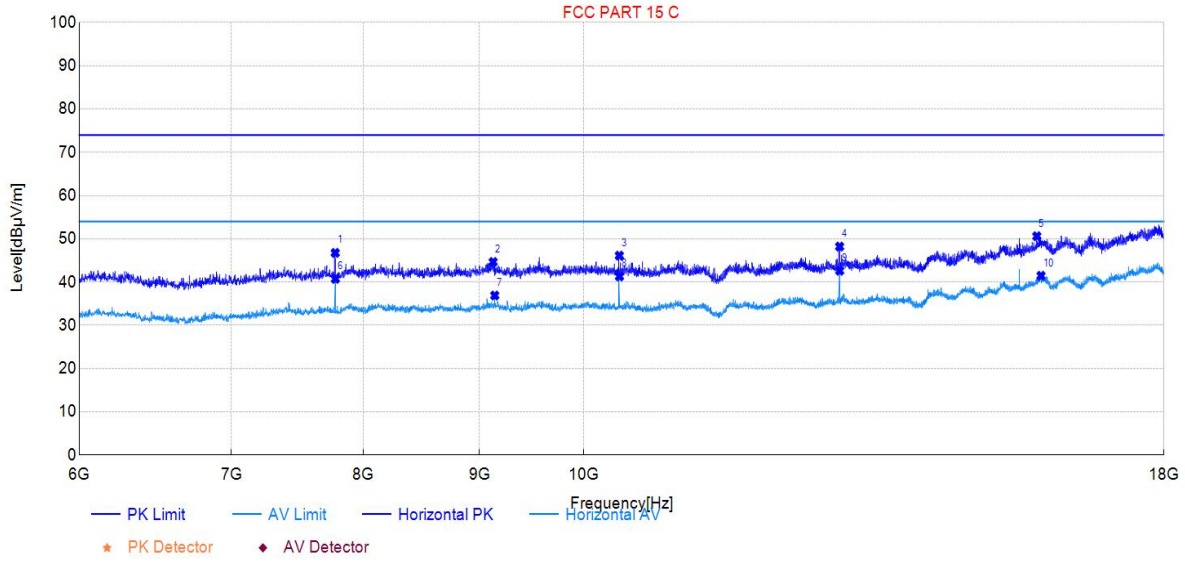
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
1139.00	47.84	-22.67	74.00	26.16	PK	Vertical
1327.00	49.81	-21.80	74.00	24.19	PK	Vertical
2089.00	41.98	-17.43	74.00	32.02	PK	Vertical
2592.00	50.02	-15.76	74.00	23.98	PK	Vertical
3996.00	44.07	-8.30	74.00	29.93	PK	Vertical
5184.00	53.38	-6.67	74.00	20.62	PK	Vertical
1140.00	38.57	-22.67	54.00	15.43	AV	Vertical
1329.00	38.24	-21.78	54.00	15.76	AV	Vertical
2090.00	31.35	-17.43	54.00	22.65	AV	Vertical
2593.00	48.02	-15.76	54.00	5.98	AV	Vertical
3985.00	33.93	-8.37	54.00	20.07	AV	Vertical
5185.00	51.34	-6.66	54.00	2.66	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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

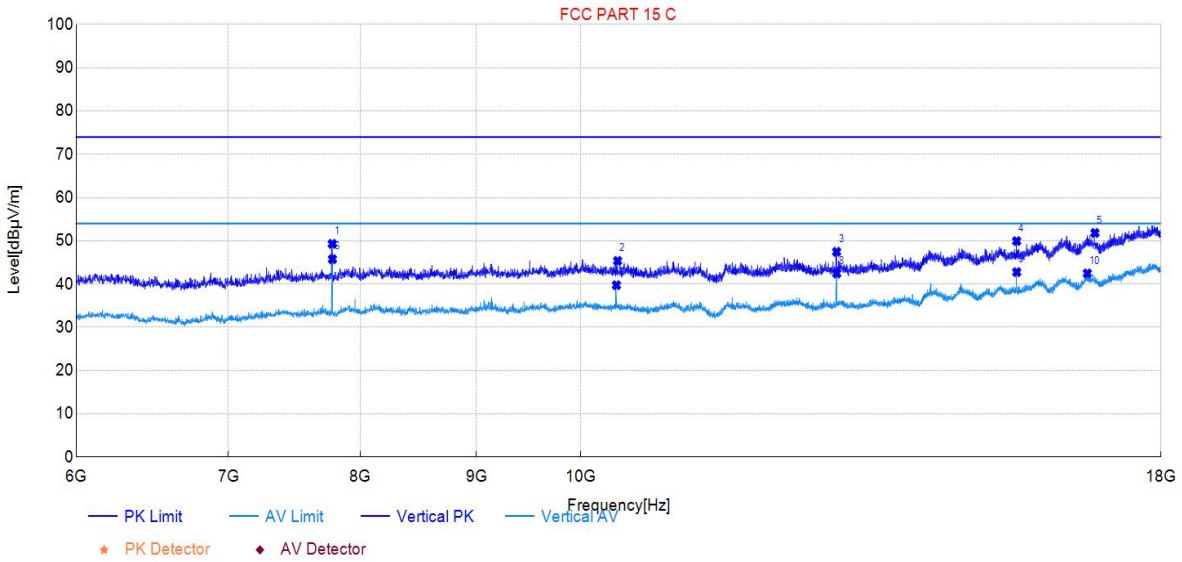


Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7776.00	46.75	-2.98	74.00	27.25	PK	Horizontal
9124.50	44.65	-0.88	74.00	29.35	PK	Horizontal
10368.00	46.11	0.15	74.00	27.89	PK	Horizontal
12960.00	48.21	2.32	74.00	25.79	PK	Horizontal
15825.00	50.60	8.35	74.00	23.40	PK	Horizontal
7777.50	40.74	-2.99	54.00	13.26	AV	Horizontal
9139.50	36.89	-0.93	54.00	17.11	AV	Horizontal
10369.50	41.30	0.15	54.00	12.70	AV	Horizontal
12961.50	42.62	2.33	54.00	11.38	AV	Horizontal
15892.50	41.46	9.64	54.00	12.54	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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



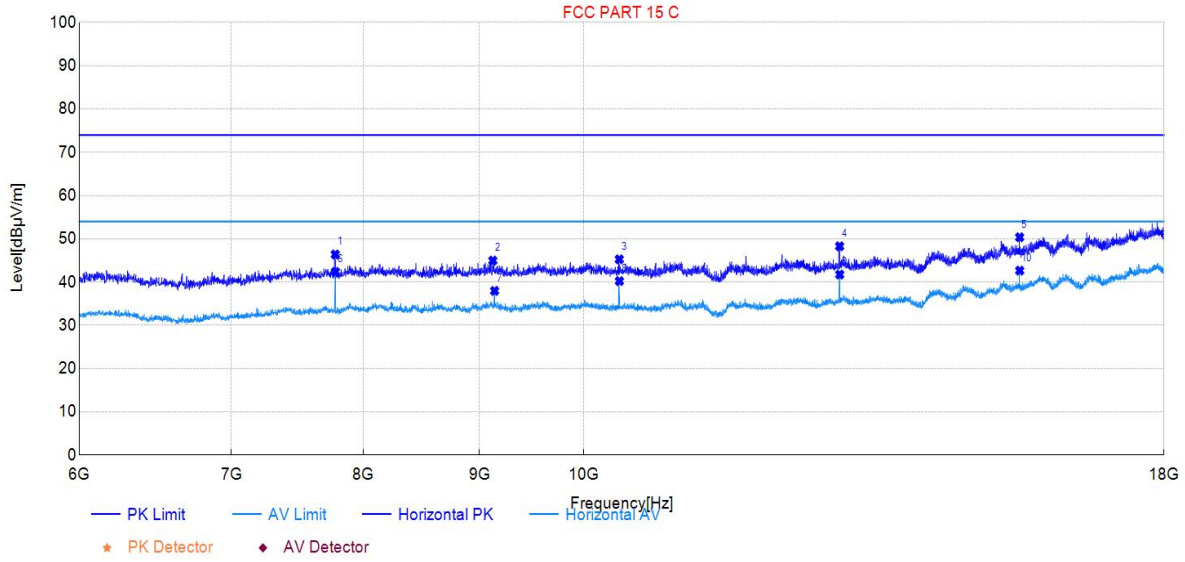
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7776.00	49.30	-2.98	74.00	24.70	PK	Vertical
10381.50	45.36	0.51	74.00	28.64	PK	Vertical
12960.00	47.46	1.96	74.00	26.54	PK	Vertical
15552.00	49.93	6.89	74.00	24.07	PK	Vertical
16836.00	51.81	9.61	74.00	22.19	PK	Vertical
7777.50	45.75	-2.99	54.00	8.25	AV	Vertical
10369.50	39.74	0.50	54.00	14.26	AV	Vertical
12961.50	42.45	1.97	54.00	11.55	AV	Vertical
15553.50	42.76	6.89	54.00	11.24	AV	Vertical
16705.50	42.47	10.29	54.00	11.53	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 DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

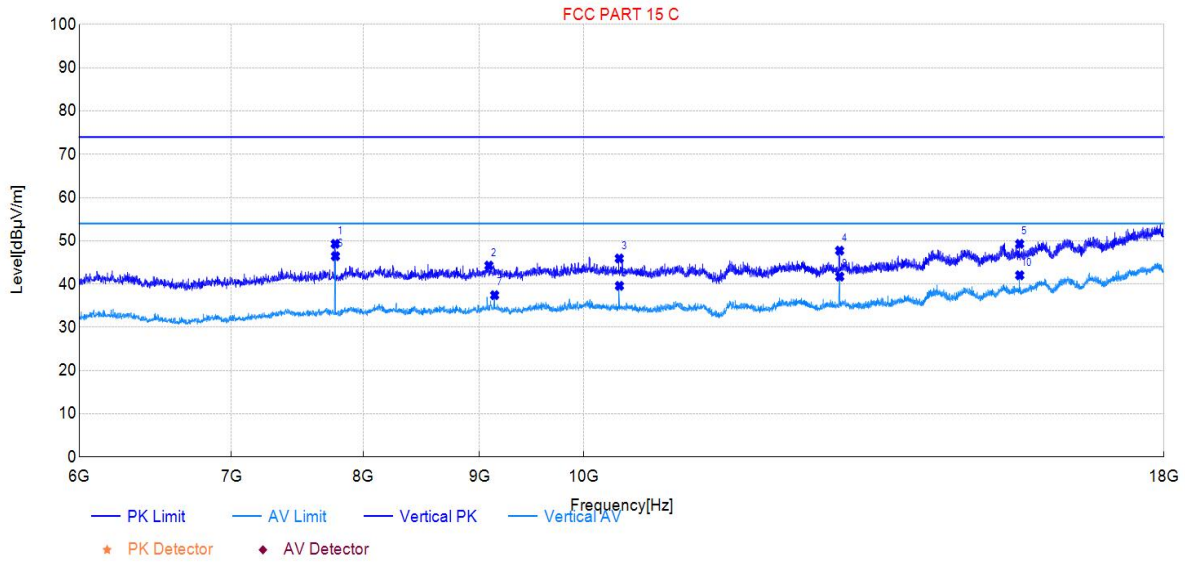


Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7776.00	46.38	-2.98	74.00	27.62	PK	Horizontal
9121.50	44.96	-0.86	74.00	29.04	PK	Horizontal
10368.00	45.26	0.15	74.00	28.74	PK	Horizontal
12960.00	48.28	2.32	74.00	25.72	PK	Horizontal
15552.00	50.36	7.31	74.00	23.64	PK	Horizontal
7777.50	42.37	-2.99	54.00	11.63	AV	Horizontal
9138.00	37.96	-0.93	54.00	16.04	AV	Horizontal
10369.50	40.22	0.15	54.00	13.78	AV	Horizontal
12961.50	41.73	2.33	54.00	12.27	AV	Horizontal
15553.50	42.65	7.30	54.00	11.35	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 DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



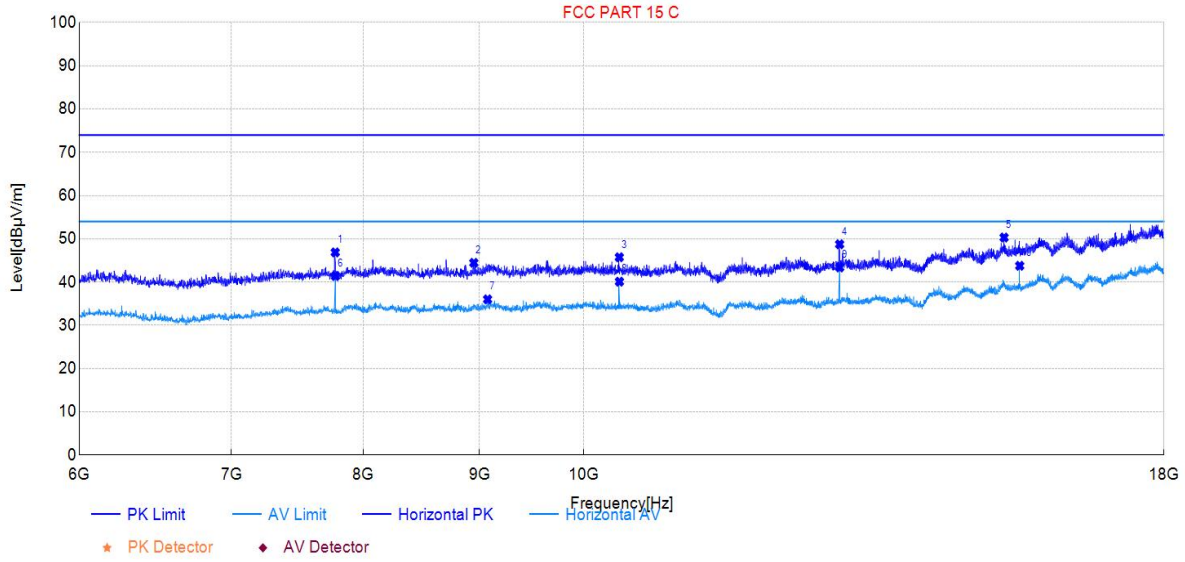
Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7776.00	49.29	-2.98	74.00	24.71	PK	Vertical
9085.50	44.27	-0.77	74.00	29.73	PK	Vertical
10368.00	45.92	0.50	74.00	28.08	PK	Vertical
12960.00	47.73	1.96	74.00	26.27	PK	Vertical
15552.00	49.29	6.89	74.00	24.71	PK	Vertical
7777.50	46.45	-2.99	54.00	7.55	AV	Vertical
9138.00	37.43	-0.93	54.00	16.57	AV	Vertical
10369.50	39.58	0.50	54.00	14.42	AV	Vertical
12961.50	41.72	1.97	54.00	12.28	AV	Vertical
15553.50	42.03	6.89	54.00	11.97	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 DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

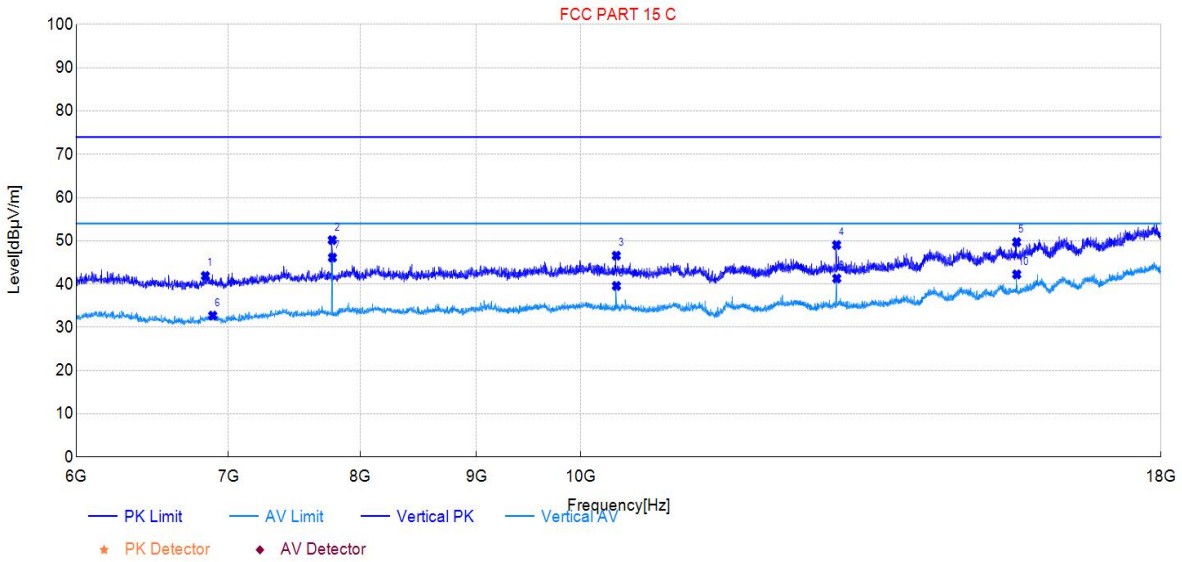


Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
7776.00	46.86	-2.98	74.00	27.14	PK	Horizontal
8947.50	44.44	-0.99	74.00	29.56	PK	Horizontal
10368.00	45.73	0.15	74.00	28.27	PK	Horizontal
12960.00	48.74	2.32	74.00	25.26	PK	Horizontal
15309.00	50.30	7.26	74.00	23.70	PK	Horizontal
7777.50	41.39	-2.99	54.00	12.61	AV	Horizontal
9073.50	36.00	-0.78	54.00	18.00	AV	Horizontal
10369.50	40.09	0.15	54.00	13.91	AV	Horizontal
12961.50	43.38	2.33	54.00	10.62	AV	Horizontal
15553.50	43.76	7.30	54.00	10.24	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 DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
6838.50	41.88	-4.61	74.00	32.12	PK	Vertical
7776.00	50.16	-2.98	74.00	23.84	PK	Vertical
10368.00	46.57	0.50	74.00	27.43	PK	Vertical
12960.00	49.04	1.96	74.00	24.96	PK	Vertical
15552.00	49.69	6.89	74.00	24.31	PK	Vertical
6889.50	32.70	-4.38	54.00	21.30	AV	Vertical
7777.50	46.12	-2.99	54.00	7.88	AV	Vertical
10369.50	39.57	0.50	54.00	14.43	AV	Vertical
12961.50	41.29	1.97	54.00	12.71	AV	Vertical
15553.50	42.23	6.89	54.00	11.77	AV	Vertical

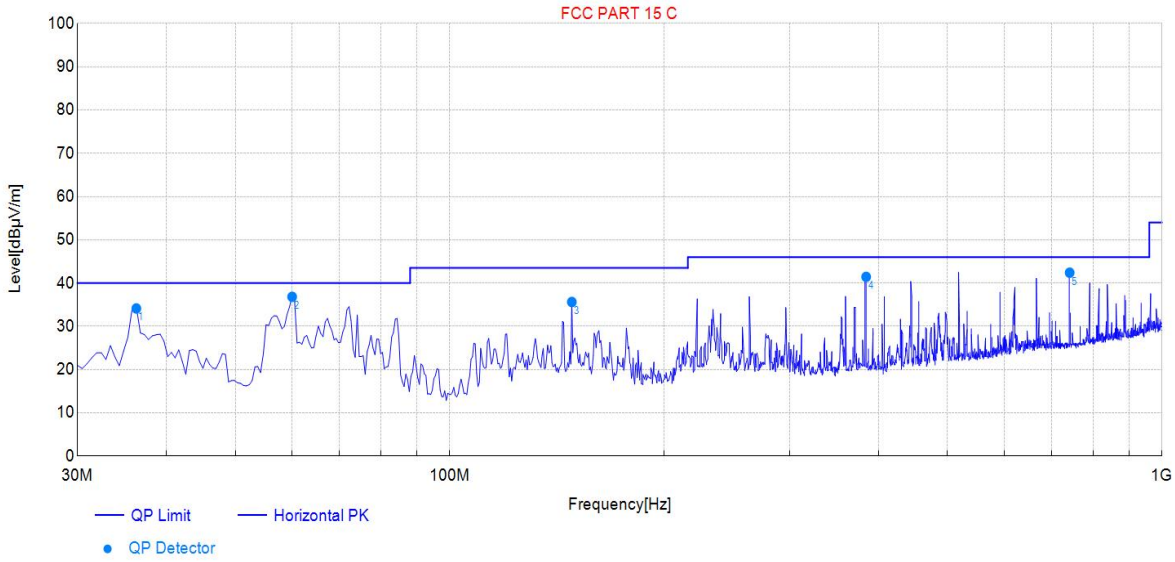
Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 26.5GHz), therefore no data appear in the report.

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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

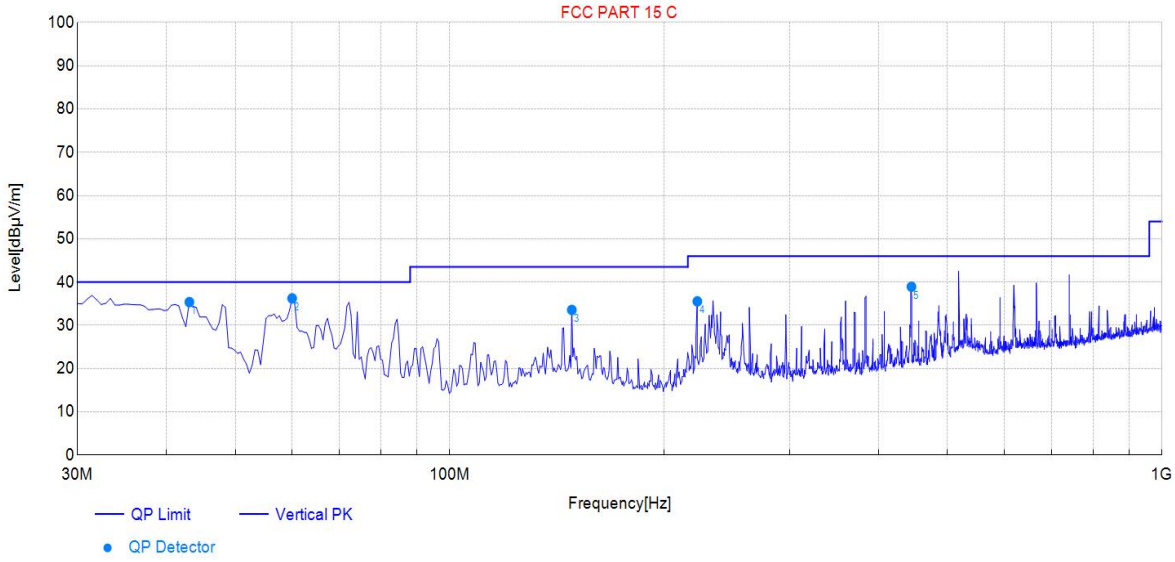


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.31	14.26	34.13	40.00	5.87	100	7	Horizontal
2	60.09	13.64	36.83	40.00	3.17	100	0	Horizontal
3	148.40	15.15	35.63	43.50	7.87	100	168	Horizontal
4	384.23	16.67	41.44	46.00	4.56	100	23	Horizontal
5	741.85	23.14	42.40	46.00	3.60	100	195	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 DH5 Channel 00	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

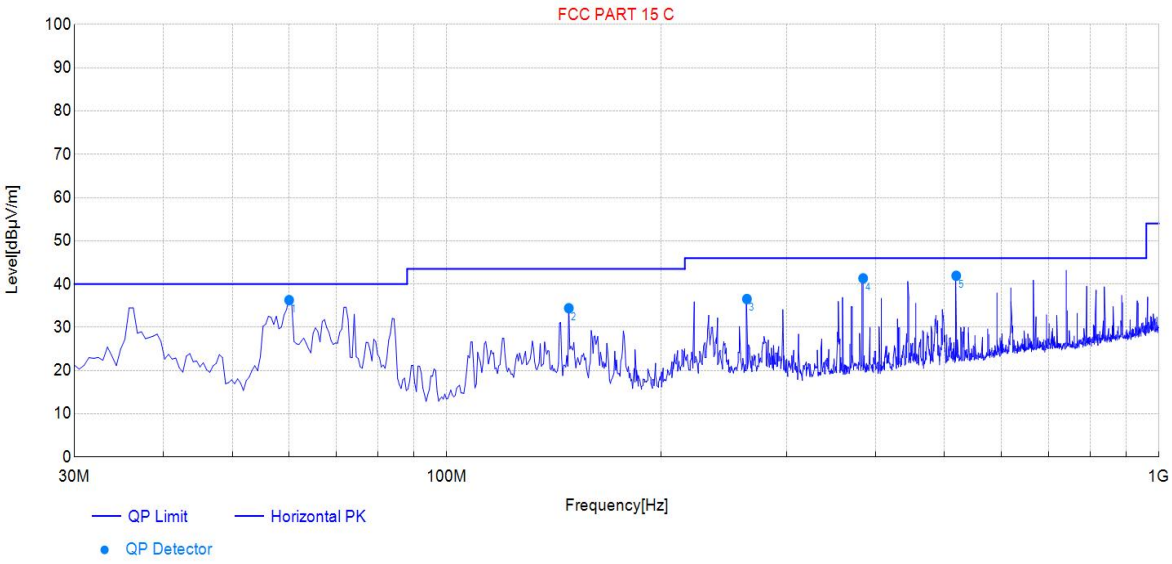


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	43.10	14.57	35.38	40.00	4.62	100	278	Vertical
2	60.09	13.64	36.24	40.00	3.76	100	264	Vertical
3	148.40	15.15	33.56	43.50	9.94	100	346	Vertical
4	222.64	12.33	35.54	46.00	10.46	100	41	Vertical
5	444.88	18.23	38.93	46.00	7.07	100	99	Vertical

30MHz – 1GHz Test Data

EUT:	AI Recorder II	Polarity:	Horizontal
Model:	CAM18	SN:	N/A
Mode:	Transmit at DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

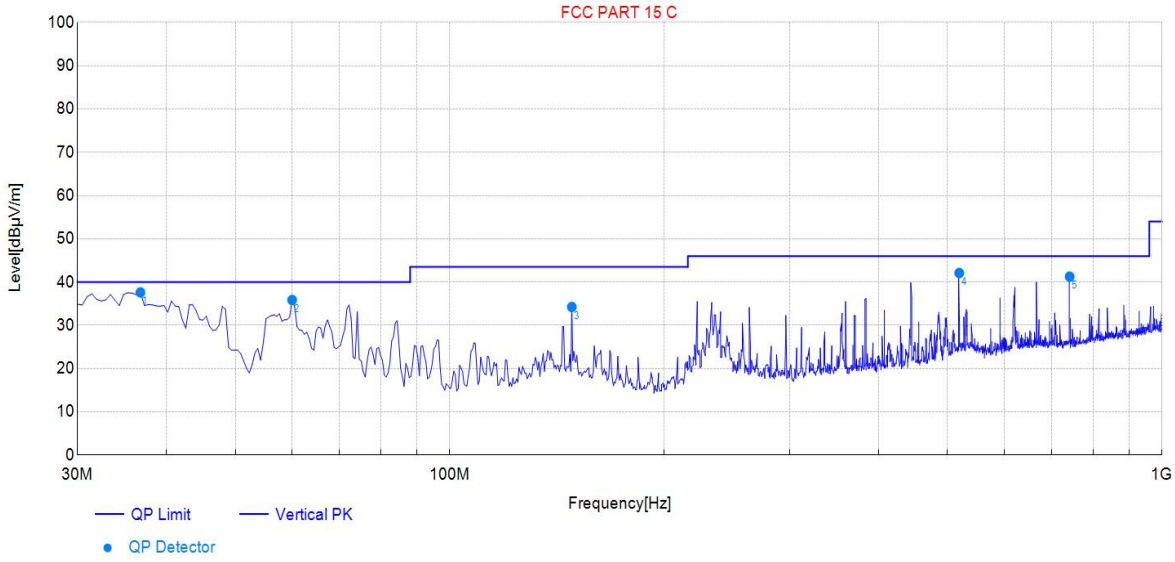


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	60.09	13.64	36.29	40.00	3.71	100	172	Horizontal
2	148.40	15.15	34.42	43.50	9.08	100	172	Horizontal
3	263.89	13.73	36.55	46.00	9.45	100	33	Horizontal
4	384.23	16.67	41.33	46.00	4.67	100	22	Horizontal
5	519.12	19.41	41.92	46.00	4.08	100	340	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 DH5 Channel 39	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph



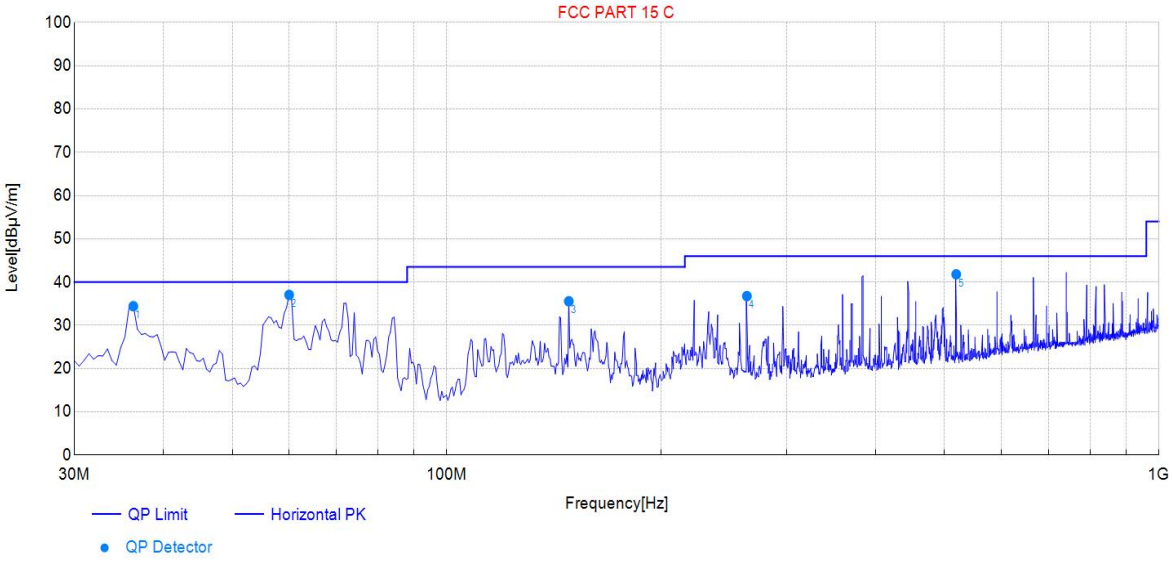
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.79	14.33	37.61	40.00	2.39	100	276	Vertical
2	60.09	13.64	35.86	40.00	4.14	100	276	Vertical
3	148.40	15.15	34.25	43.50	9.25	100	338	Vertical
4	519.12	19.41	42.10	46.00	3.90	100	159	Vertical
5	741.85	23.14	41.26	46.00	4.74	100	144	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 DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; Humi:56%	Engineer:	Chuang Li

Test Graph

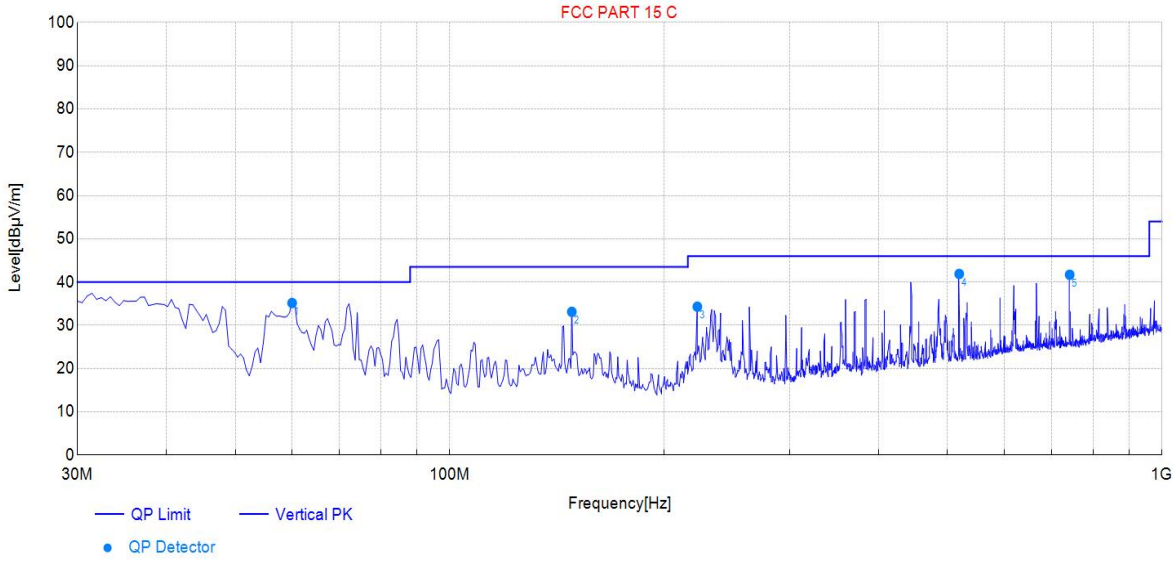


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.31	14.26	34.43	40.00	5.57	100	0	Horizontal
2	60.09	13.64	37.04	40.00	2.96	100	185	Horizontal
3	148.40	15.15	35.56	43.50	7.94	100	168	Horizontal
4	263.89	13.73	36.76	46.00	9.24	100	40	Horizontal
5	519.12	19.41	41.80	46.00	4.20	100	350	Horizontal
6	610.64	21.81	26.55	46.00	19.45	100	248	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 DH5 Channel 78	Voltage:	DC 14V
Environment:	Temp: 19℃; 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	60.09	13.64	35.16	40.00	4.84	100	281	Vertical
2	148.40	15.15	33.12	43.50	10.38	100	327	Vertical
3	222.64	12.33	34.31	46.00	11.69	100	41	Vertical
4	519.12	19.41	41.89	46.00	4.11	100	154	Vertical
5	741.85	23.14	41.70	46.00	4.30	100	144	Vertical
6	475.68	19.19	22.94	46.00	23.06	100	355	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.

7.10. Radiated Restricted Band Edge Measurement

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

7.10.1. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

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

7.10.2. Test Setting

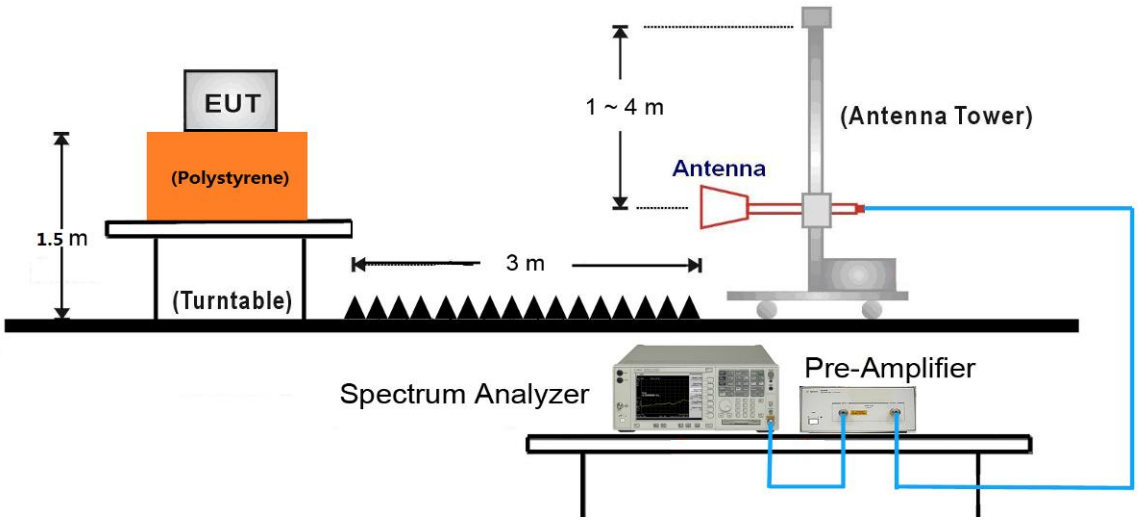
Peak Field Strength Measurements

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 Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.10.3. Test Setup

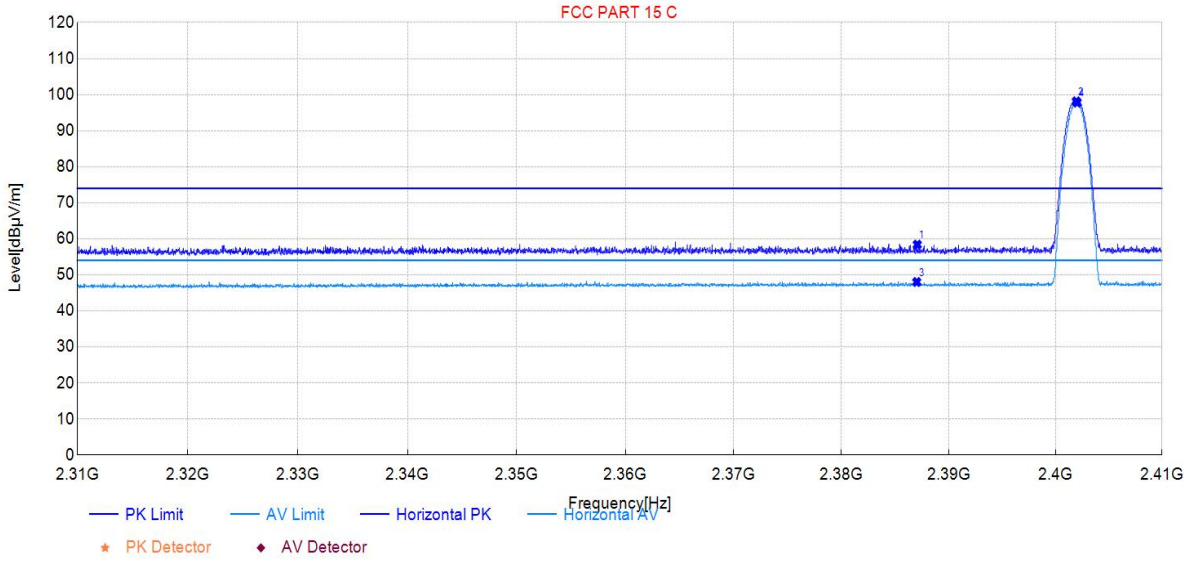


7.10.4. Test Result

DH5

Test Mode:	DH5	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.		

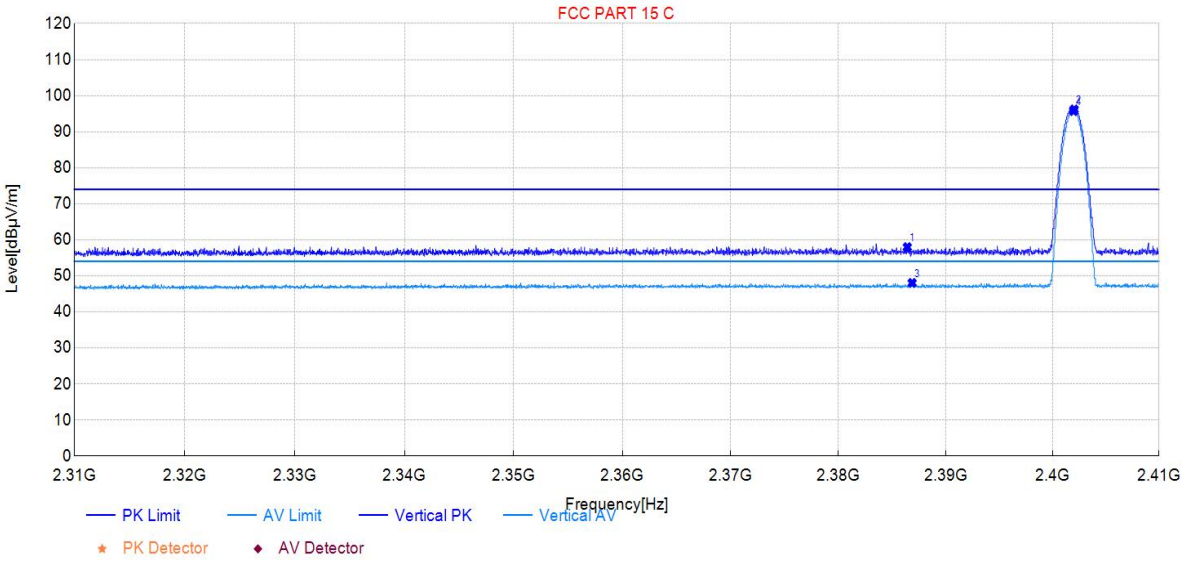
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2387.07	58.39	36.09	74.00	15.61	150	165	Peak	Horizontal
2401.95	98.16	36.15	74.00	-24.16	150	38	Peak	Horizontal
2387.02	48.03	36.08	54.00	5.97	150	85	Average	Horizontal
2402.02	97.80	36.15	54.00	-43.80	150	38	Average	Horizontal

Test Mode:	DH5	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.		

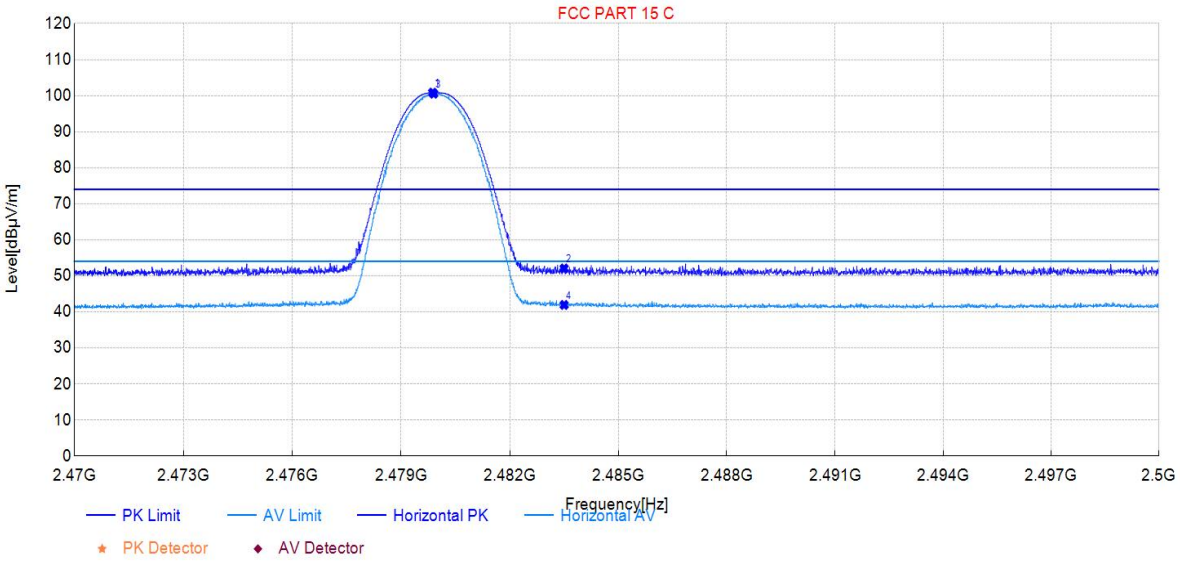
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2386.42	57.97	35.94	74.00	16.03	150	229	Peak	Vertical
2402.02	96.18	35.99	74.00	-22.18	150	44	Peak	Vertical
2386.87	48.03	35.94	54.00	5.97	150	334	Average	Vertical
2401.97	95.74	35.99	54.00	-41.74	150	44	Average	Vertical

Test Mode:	DH5	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.		

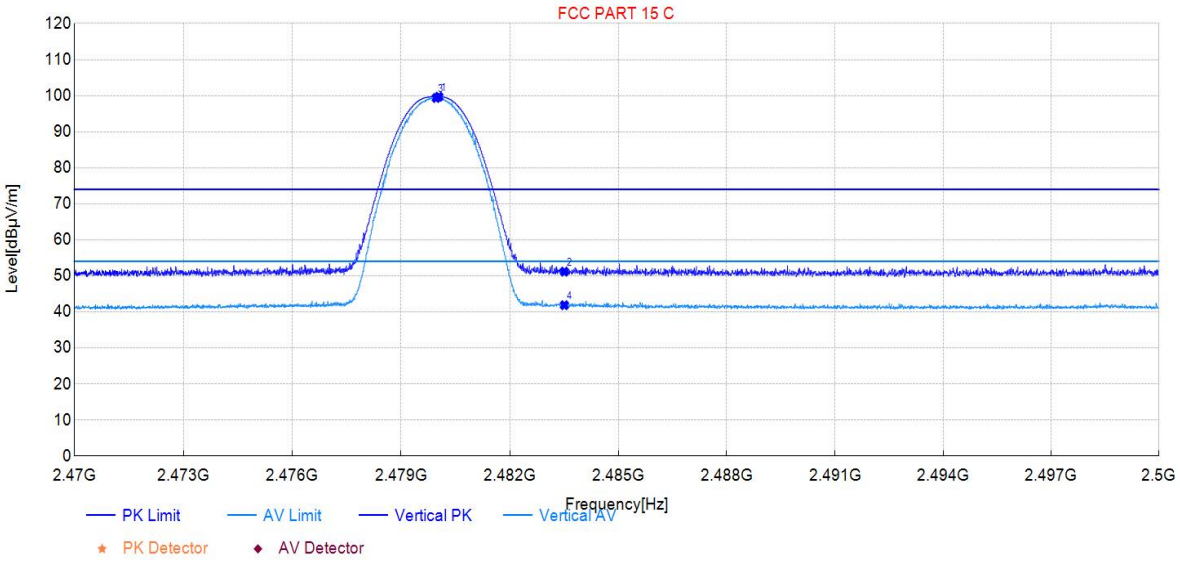
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.87	100.83	36.35	74.00	-26.83	150	25	Peak	Horizontal
2483.50	52.05	36.36	74.00	21.95	150	9	Peak	Horizontal
2479.90	100.56	36.35	54.00	-46.56	150	25	Average	Horizontal
2483.50	41.93	36.36	54.00	12.07	150	21	Average	Horizontal

Test Mode:	DH5	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

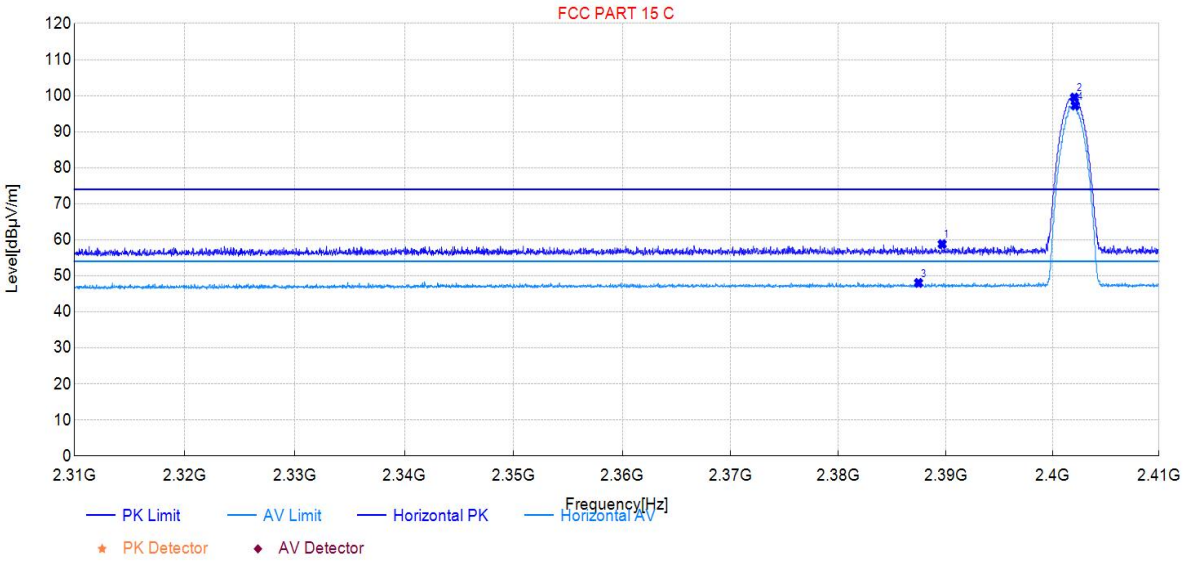


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2480.05	99.71	36.08	74.00	-25.71	150	49	Peak	Vertical
2483.51	51.17	36.08	74.00	22.83	150	167	Peak	Vertical
2479.97	99.36	36.08	54.00	-45.36	150	49	Average	Vertical
2483.51	41.86	36.08	54.00	12.14	150	311	Average	Vertical

2DH5

Test Mode:	2DH5	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.		

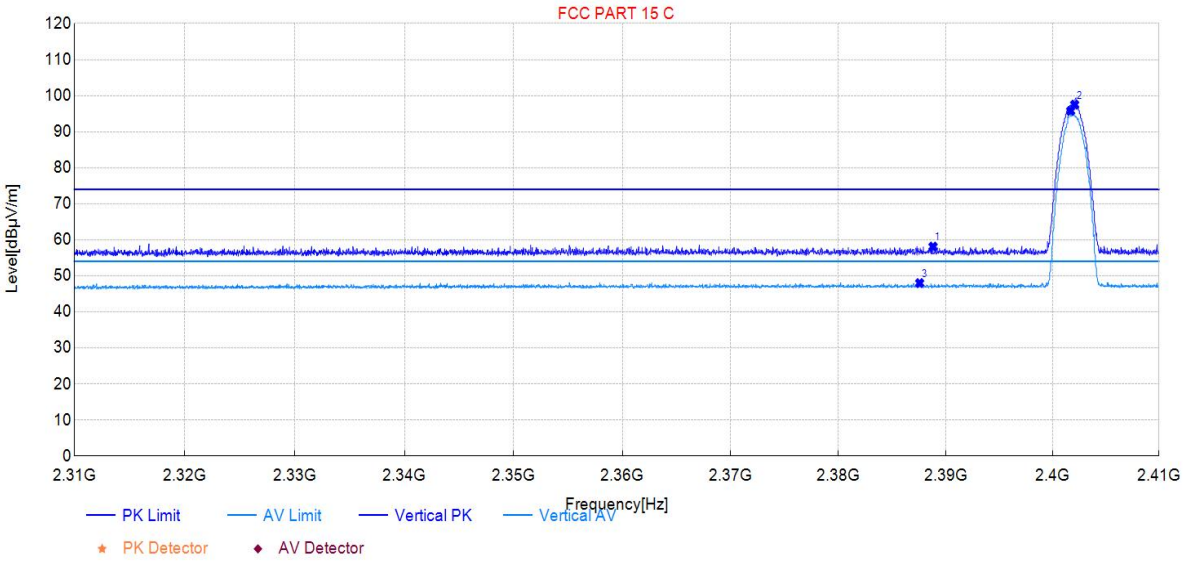
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2389.67	58.81	36.10	74.00	15.19	150	168	Peak	Horizontal
2402.05	99.47	36.15	74.00	-25.47	150	29	Peak	Horizontal
2387.47	48.04	36.09	54.00	5.96	150	240	Average	Horizontal
2402.12	97.26	36.16	54.00	-43.26	150	21	Average	Horizontal

Test Mode:	2DH5	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.		

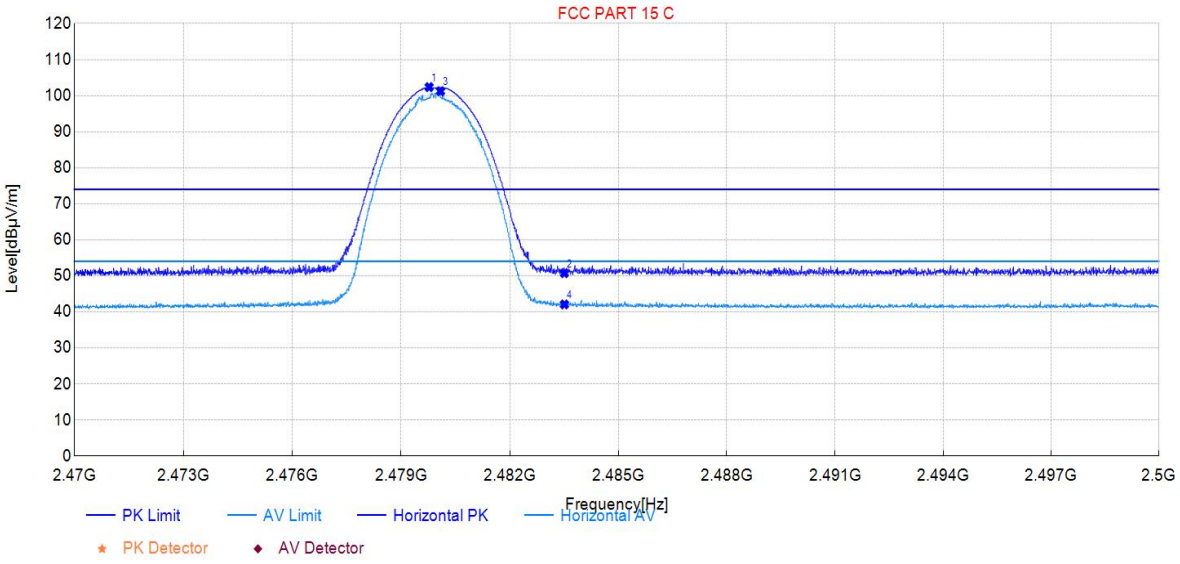
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2388.82	58.11	35.95	74.00	15.89	150	27	Peak	Vertical
2402.07	97.52	35.99	74.00	-23.52	150	158	Peak	Vertical
2387.57	47.99	35.95	54.00	6.01	150	331	Average	Vertical
2401.70	95.77	35.99	54.00	-41.77	150	44	Average	Vertical

Test Mode:	2DH5	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.		

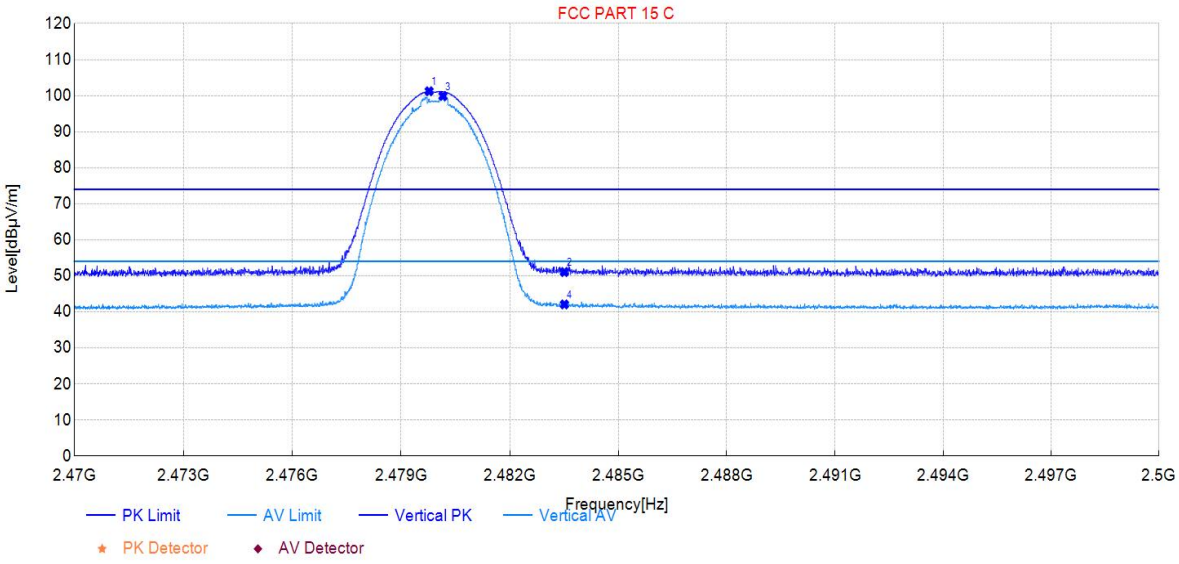
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.77	102.38	36.35	74.00	-28.38	150	24	Peak	Horizontal
2483.51	50.74	36.36	74.00	23.26	150	307	Peak	Horizontal
2480.09	101.23	36.35	54.00	-47.23	150	33	Average	Horizontal
2483.51	42.07	36.36	54.00	11.93	150	273	Average	Horizontal

Test Mode:	2DH5	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

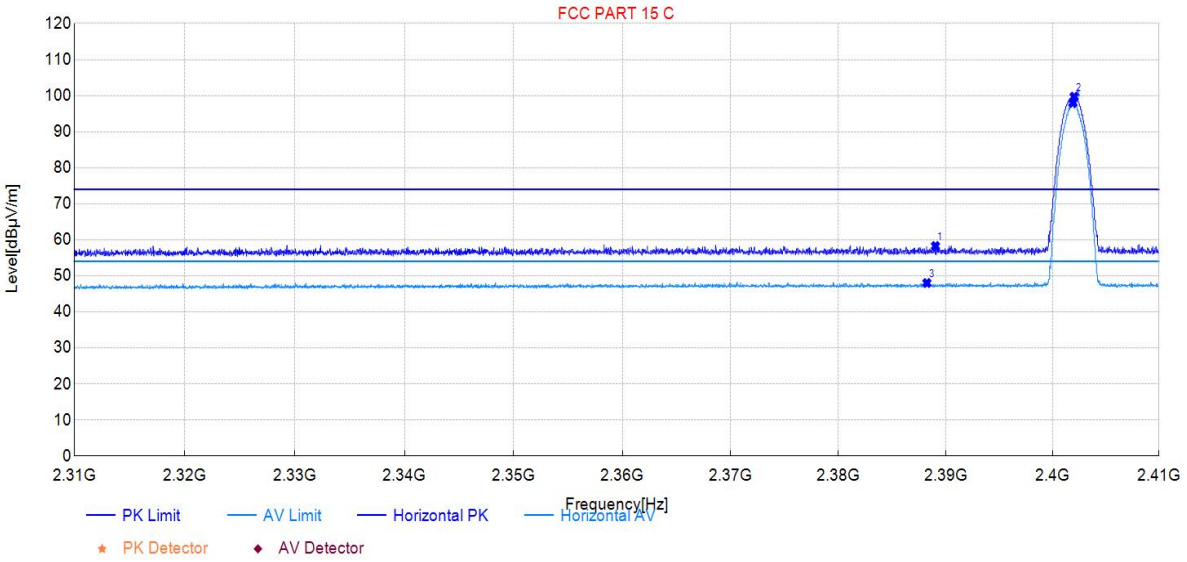


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.77	101.23	36.08	74.00	-27.23	150	49	Peak	Vertical
2483.51	51.06	36.08	74.00	22.94	150	196	Peak	Vertical
2480.16	99.91	36.08	54.00	-45.91	150	151	Average	Vertical
2483.51	42.07	36.08	54.00	11.93	150	49	Average	Vertical

3DH5

Test Mode:	3DH5	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.		

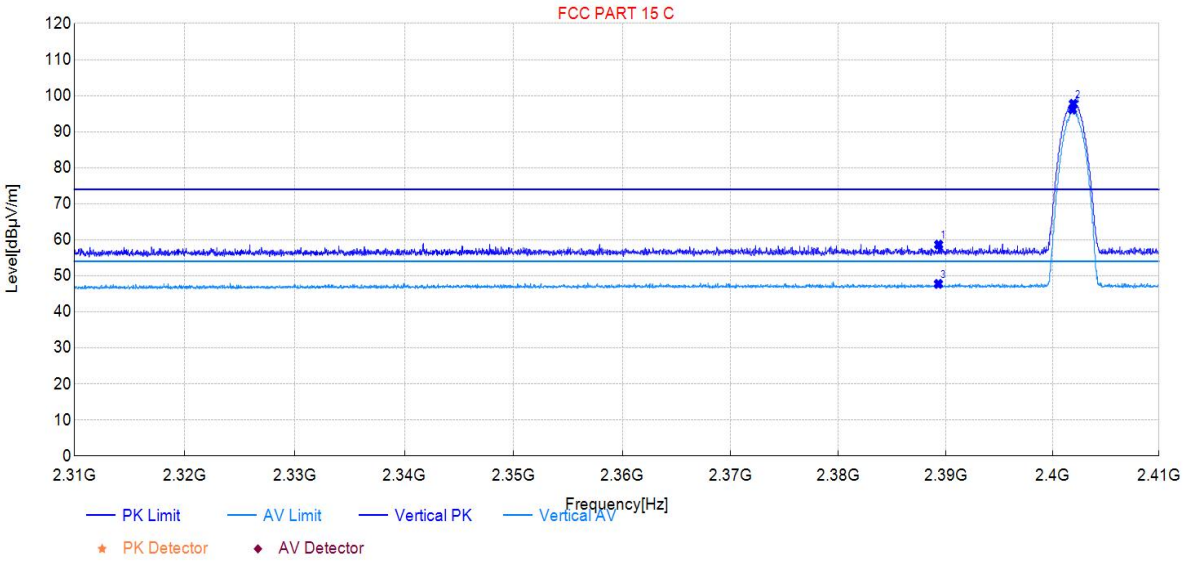
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2389.04	58.28	36.09	74.00	15.72	150	29	Peak	Horizontal
2402.02	99.71	36.15	74.00	-25.71	150	29	Peak	Horizontal
2388.24	48.02	36.09	54.00	5.98	150	67	Average	Horizontal
2401.90	97.98	36.15	54.00	-43.98	150	33	Average	Horizontal

Test Mode:	3DH5	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.		

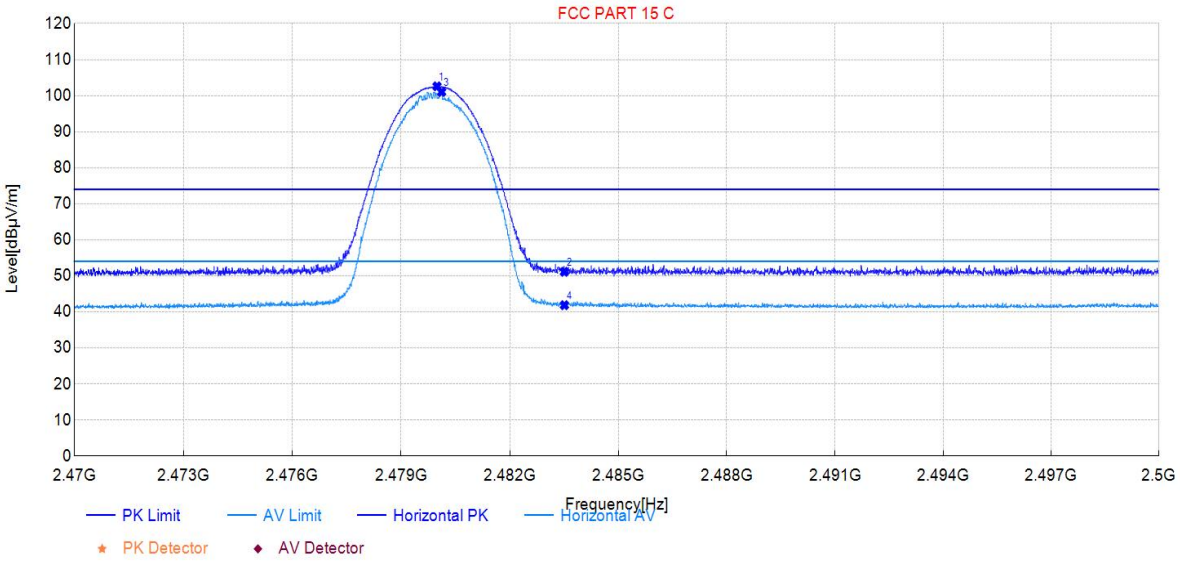
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2389.34	58.66	35.95	74.00	15.34	150	255	Peak	Vertical
2401.95	97.75	35.99	74.00	-23.75	150	43	Peak	Vertical
2389.32	47.77	35.95	54.00	6.23	150	103	Average	Vertical
2401.87	96.18	35.99	54.00	-42.18	150	43	Average	Vertical

Test Mode:	3DH5	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.		

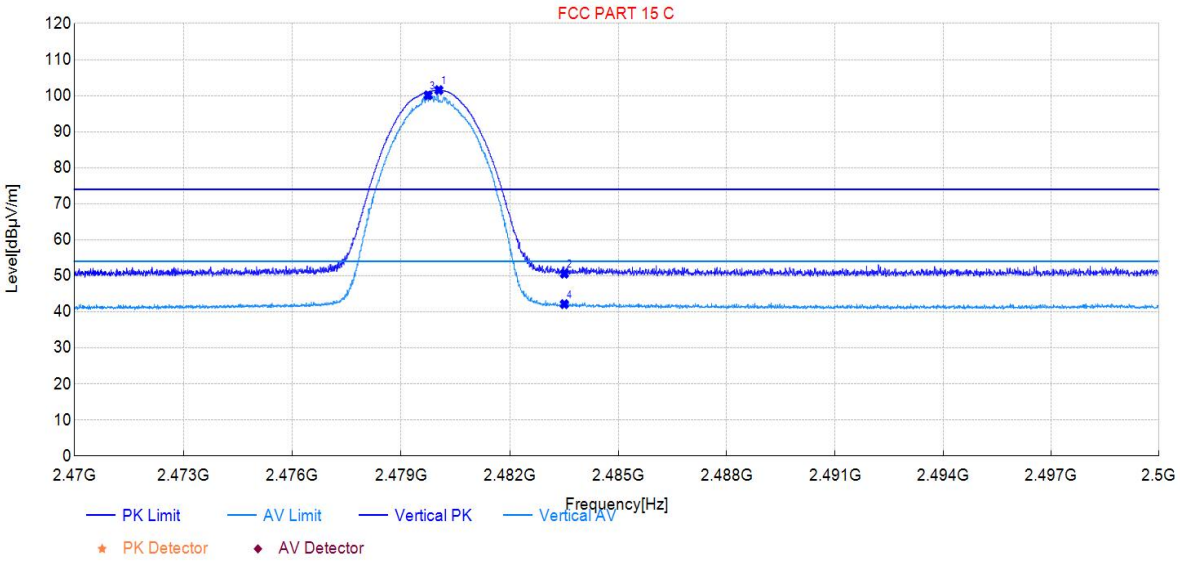
Test Graph



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2479.99	102.59	36.35	74.00	-28.59	150	26	Peak	Horizontal
2483.51	51.13	36.36	74.00	22.87	150	323	Peak	Horizontal
2480.12	101.02	36.35	54.00	-47.02	150	26	Average	Horizontal
2483.51	41.86	36.36	54.00	12.14	150	26	Average	Horizontal

Test Mode:	3DH5	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 [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
2480.05	101.54	36.08	74.00	-27.54	150	44	Peak	Vertical
2483.51	50.60	36.08	74.00	23.40	150	302	Peak	Vertical
2479.74	100.09	36.08	54.00	-46.09	150	48	Average	Vertical
2483.51	42.15	36.08	54.00	11.85	150	327	Average	Vertical

7.11. AC Conducted Emissions Measurement

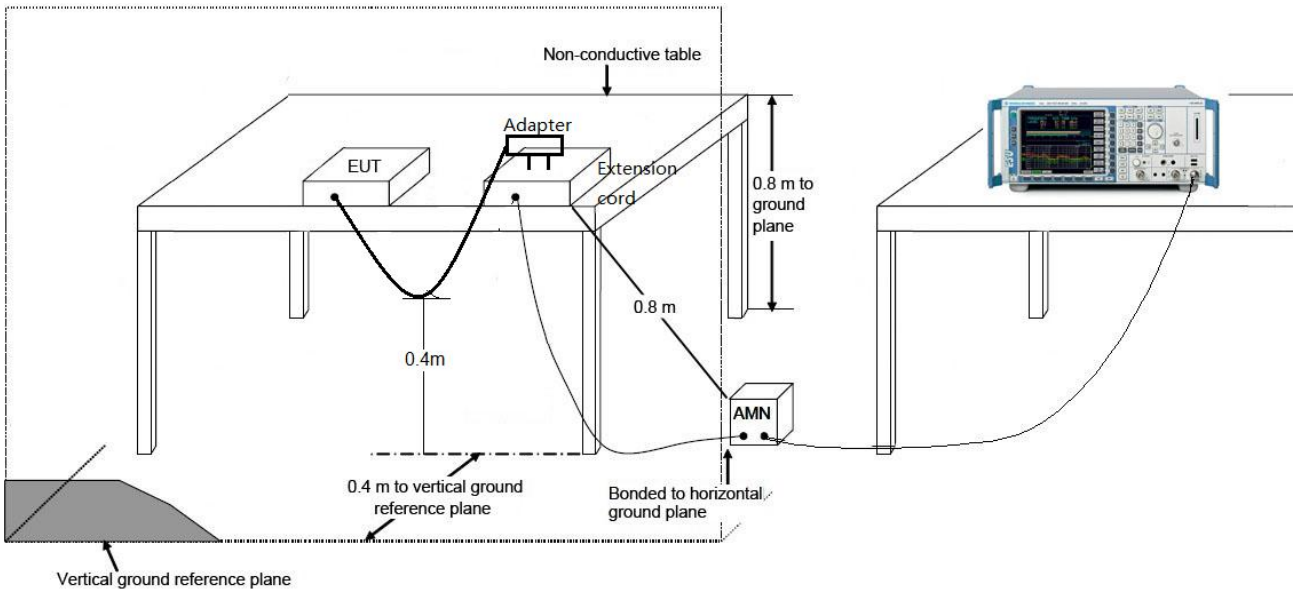
7.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBμV)	Average (dBμV)
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.

7.11.2. Test Setup



7.11.3. 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** is in compliance with Part 15C of the FCC Rules.

The End