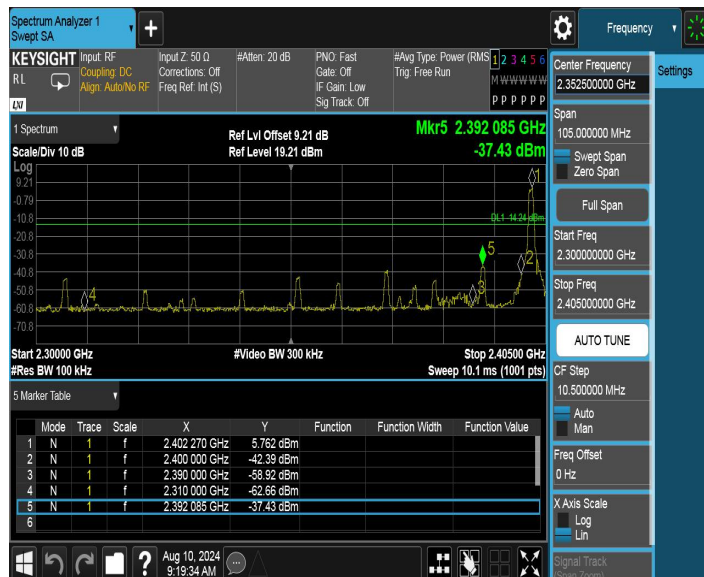


BLE_1M_Low_2402



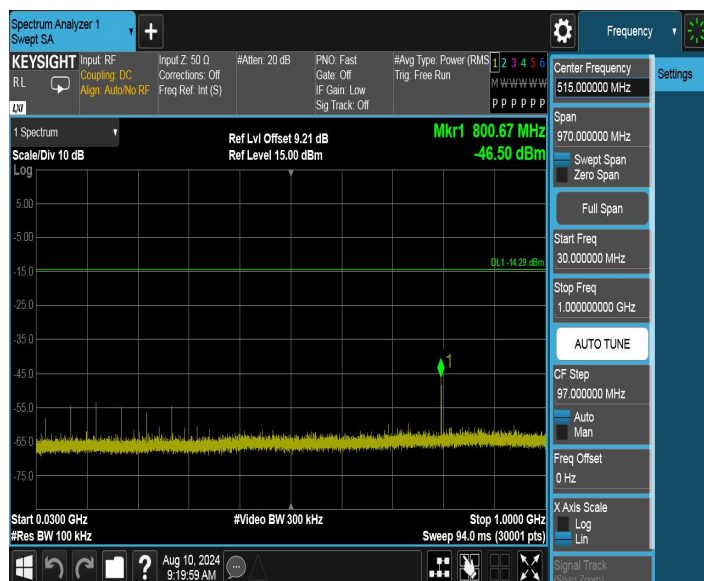
BLE_1M_High_2480



BLE_1M_2402_0~Reference



BLE_1M_2402_30~1000



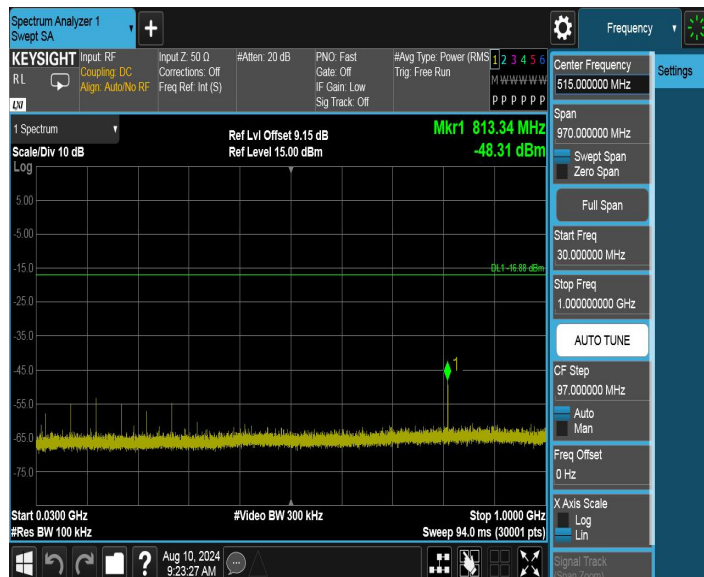
BLE_1M_2402_1000~26500



BLE_1M_2440_0~Reference



BLE_1M_2440_30~1000



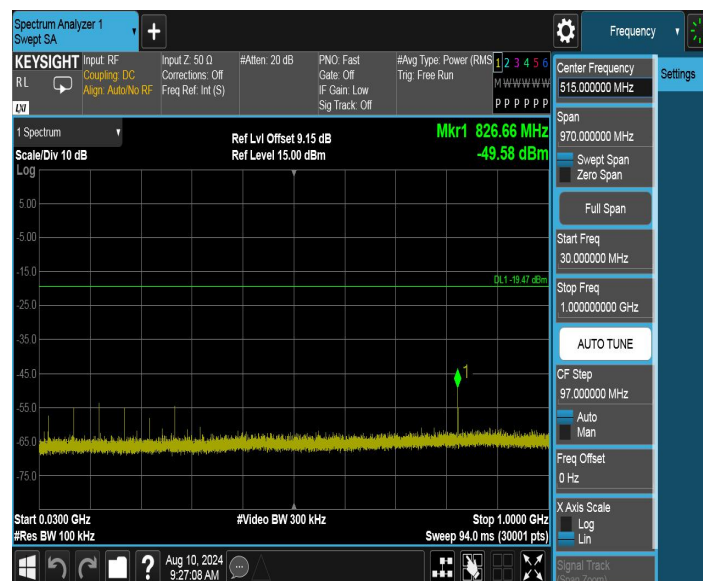
BLE_1M_2440_1000~26500



BLE_1M_2480_0~Reference



BLE_1M_2480_30~1000



BLE_1M_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

- Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

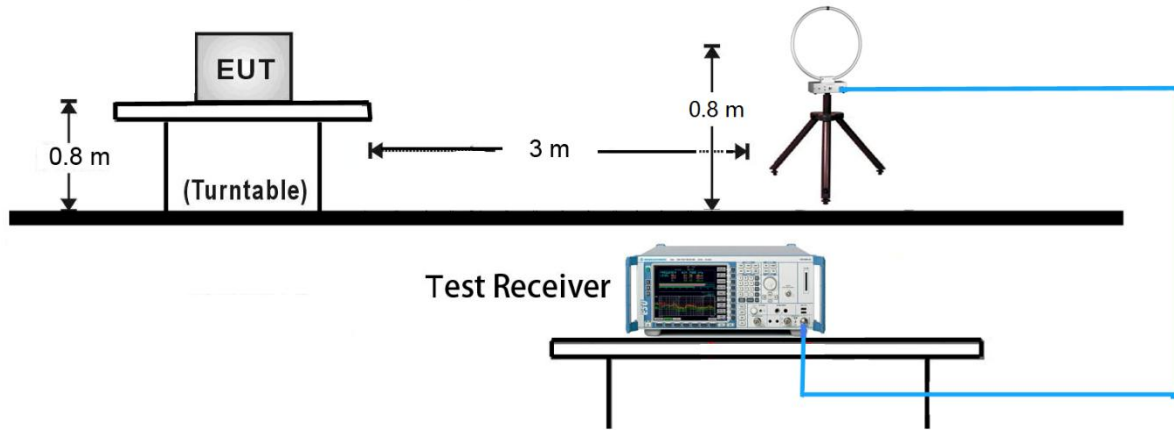
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

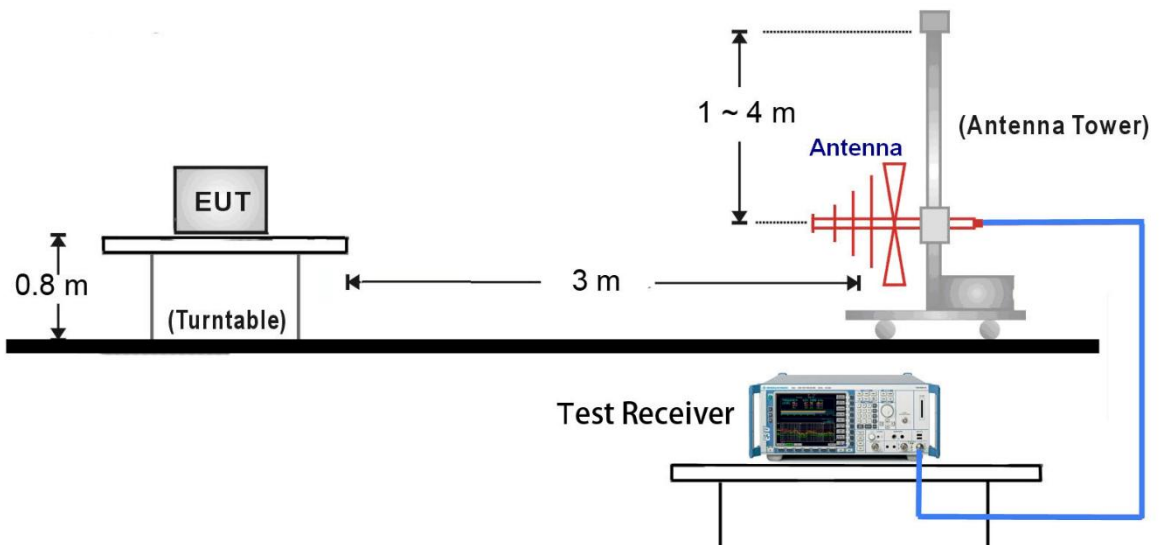
- Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- RBW = 1MHz
- VBW = 3MHz
- Detector = Power Average (RMS)
- Number of sweep point = 2001 (Number of sweep points must be $\geq 2 \times \text{span} / \text{RBW}$)
- Sweep time = auto
- Trace (RMS) averaging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

7.6.4. Test Setup

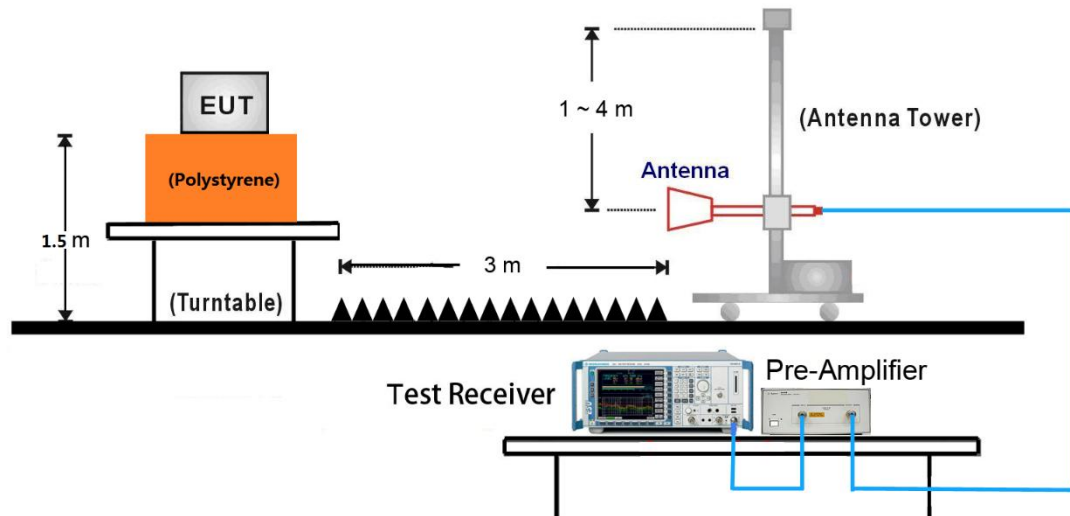
9kHz ~ 30MHz Test Setup:



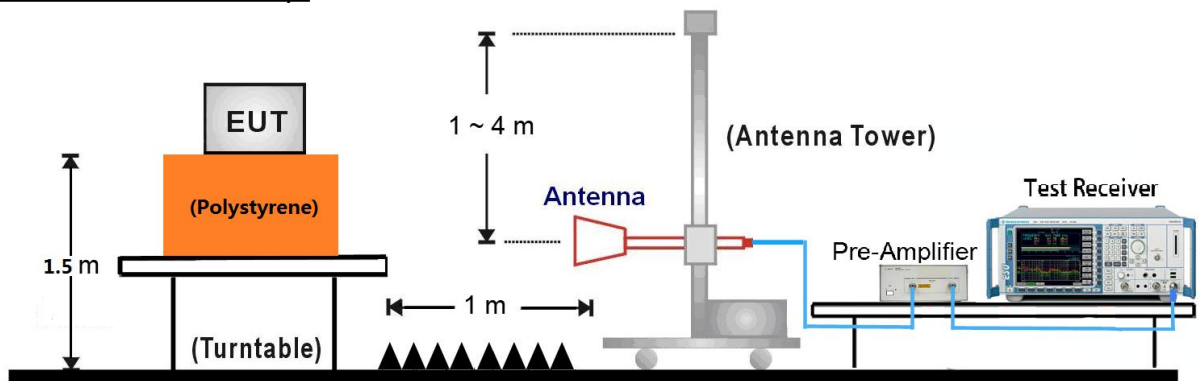
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~ 25GHz Test Setup:

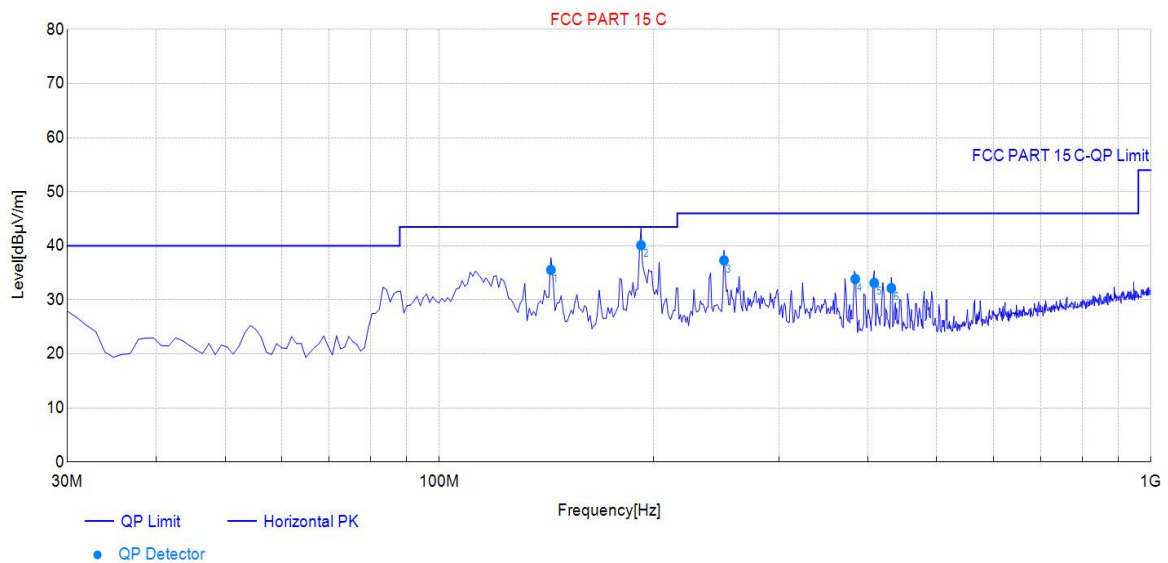


7.6.5. Test Result

The worst case of Radiated Emission below 1GHz:

30MHz – 1GHz Test Data

EUT:	Car Audio	Polarity:	Horizontal
Model:	TN-100	SN:	N/A
Mode:	Transmit at BLE Channel 00	Voltage:	DC 12V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang



Final Data List

NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	143.49	15.28	20.27	35.55	43.50	7.95	100	244	Horizontal	PASS
2	191.99	12.52	27.59	40.11	43.50	3.39	100	250	Horizontal	PASS
3	251.16	13.77	23.54	37.31	46.00	8.69	100	256	Horizontal	PASS
4	384.05	17.10	16.75	33.85	46.00	12.15	100	140	Horizontal	PASS
5	408.30	17.65	15.49	33.14	46.00	12.86	100	224	Horizontal	PASS
6	431.58	18.30	13.87	32.17	46.00	13.83	100	146	Horizontal	PASS

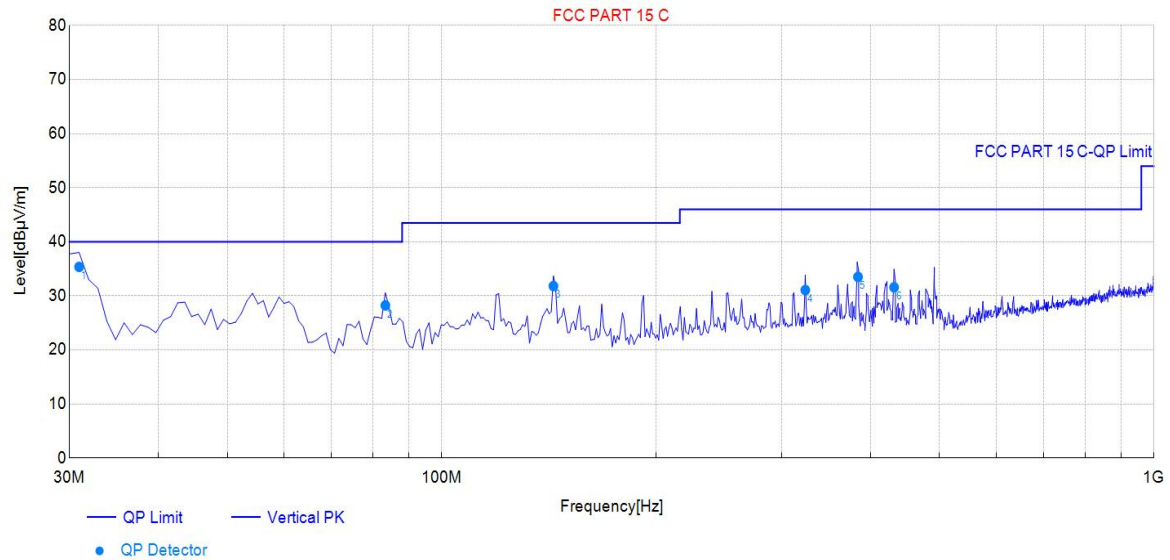
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) 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:	Car Audio	Polarity:	Vertical
Model:	TN-100	SN:	N/A
Mode:	Transmit at BLE Channel 00	Voltage:	DC 12V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	30.97	13.94	21.43	35.37	40.00	4.63	100	305	Vertical	PASS
2	83.35	10.58	17.65	28.23	40.00	11.77	100	227	Vertical	PASS
3	143.49	15.28	16.54	31.82	43.50	11.68	200	176	Vertical	PASS
4	323.91	15.80	15.28	31.08	46.00	14.92	100	230	Vertical	PASS
5	384.05	17.10	16.42	33.52	46.00	12.48	100	159	Vertical	PASS
6	431.58	18.30	13.29	31.59	46.00	14.41	100	172	Vertical	PASS

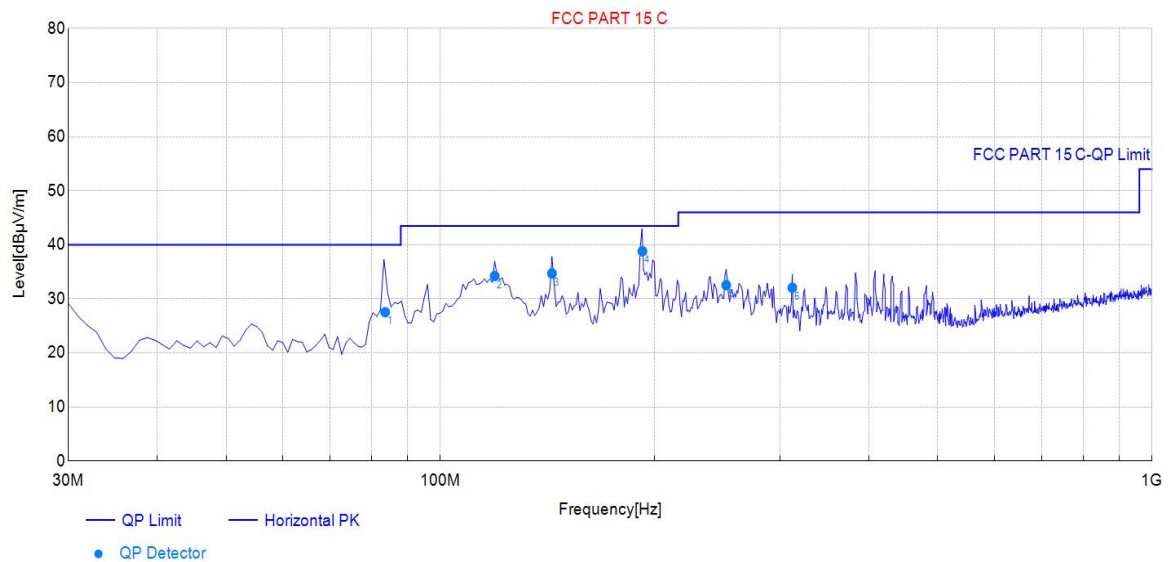
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) 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:	Car Audio	Polarity:	Horizontal
Model:	TN-100	SN:	N/A
Mode:	Transmit at BLE Channel 00	Voltage:	DC 24V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	83.65	10.58	16.96	27.54	40.00	12.46	199.9	168	Horizontal	PASS
2	119.24	13.68	20.56	34.24	43.50	9.26	200	272	Horizontal	PASS
3	143.49	15.28	19.43	34.71	43.50	8.79	100	29	Horizontal	PASS
4	192.28	12.52	26.31	38.83	43.50	4.67	100.1	236	Horizontal	PASS
5	252.13	13.80	18.74	32.54	46.00	13.46	100	194	Horizontal	PASS
6	312.27	15.48	16.59	32.07	46.00	13.93	100	211	Horizontal	PASS

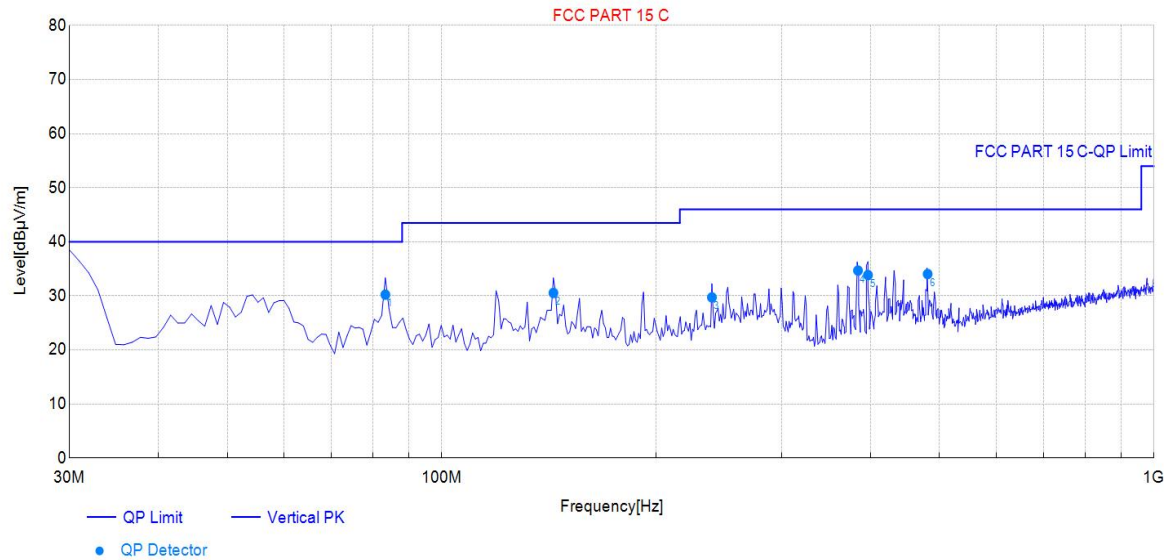
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) 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:	Car Audio	Polarity:	Vertical
Model:	TN-100	SN:	N/A
Mode:	Transmit at BLE Channel 00	Voltage:	DC 24V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	83.35	10.58	19.65	30.23	40.00	9.77	200	279	Vertical	PASS
2	143.49	15.28	15.27	30.55	43.50	12.95	200	155	Vertical	PASS
3	239.52	13.29	16.43	29.72	46.00	16.28	100	256	Vertical	PASS
4	384.05	17.10	17.59	34.69	46.00	11.31	100	166	Vertical	PASS
5	396.66	17.33	16.52	33.85	46.00	12.15	100	159	Vertical	PASS
6	481.05	19.26	14.79	34.05	46.00	11.95	100	256	Vertical	PASS

Note:

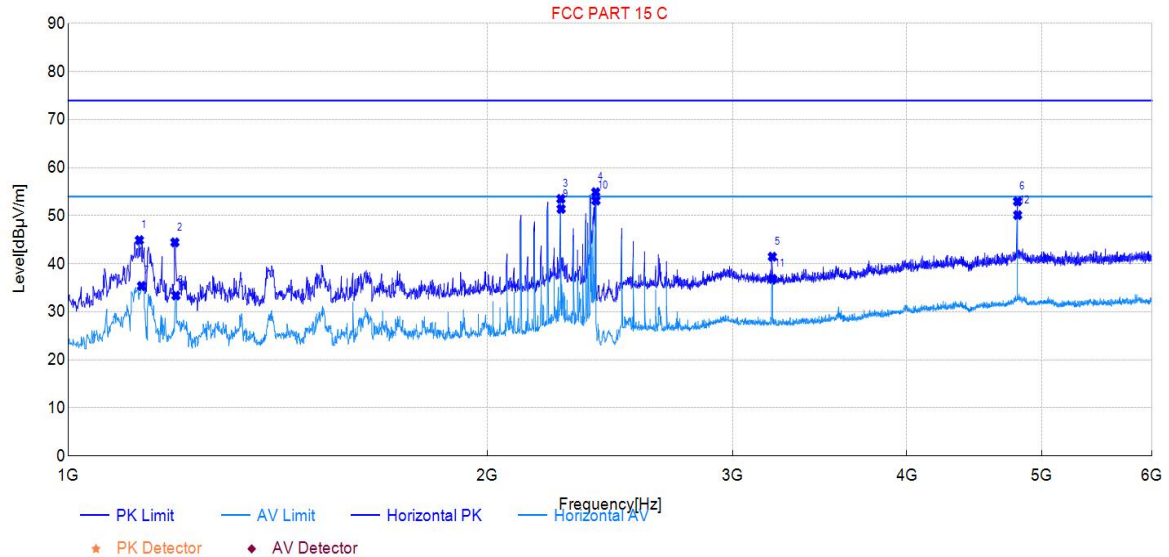
(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) 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.

1GHz-6GHz

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	00	Test Engineer:	Stone Zhang



Suspected Data List

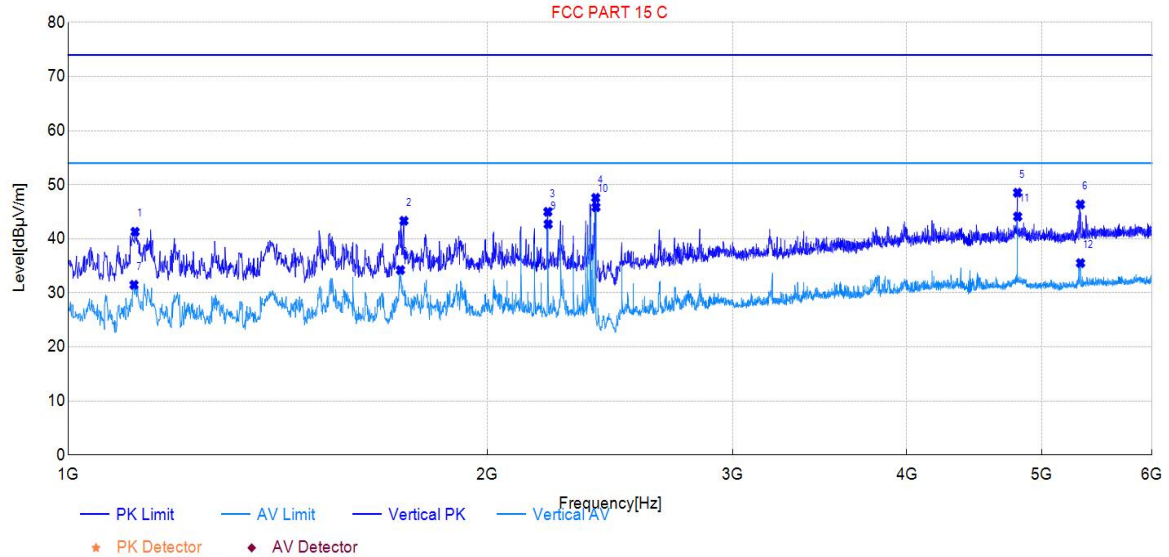
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1125.00	68.66	44.92	-23.74	74.00	29.08	150	137	PK	Horizontal	PASS
2	1193.00	67.95	44.47	-23.48	74.00	29.53	150	141	PK	Horizontal	PASS
3	2258.00	70.51	53.52	-16.99	74.00	20.48	150	347	PK	Horizontal	PASS
4	2392.00	71.25	54.91	-16.34	74.00	19.09	150	354	PK	Horizontal	PASS
5	3203.00	55.06	41.48	-13.58	74.00	32.52	150	17	PK	Horizontal	PASS
6	4804.00	59.77	52.99	-6.78	74.00	21.01	150	291	PK	Horizontal	PASS
7	1129.00	59.12	35.39	-23.73	54.00	18.61	150	137	AV	Horizontal	PASS
8	1195.00	56.87	33.40	-23.47	54.00	20.60	150	137	AV	Horizontal	PASS
9	2259.00	68.41	51.42	-16.99	54.00	2.58	150	344	AV	Horizontal	PASS
10	2393.00	69.50	53.16	-16.34	54.00	0.84	150	357	AV	Horizontal	PASS
11	3204.00	50.45	36.87	-13.58	54.00	17.13	150	12	AV	Horizontal	PASS
12	4805.00	56.92	50.14	-6.78	54.00	3.86	150	296	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	00	Test Engineer:	Stone Zhang



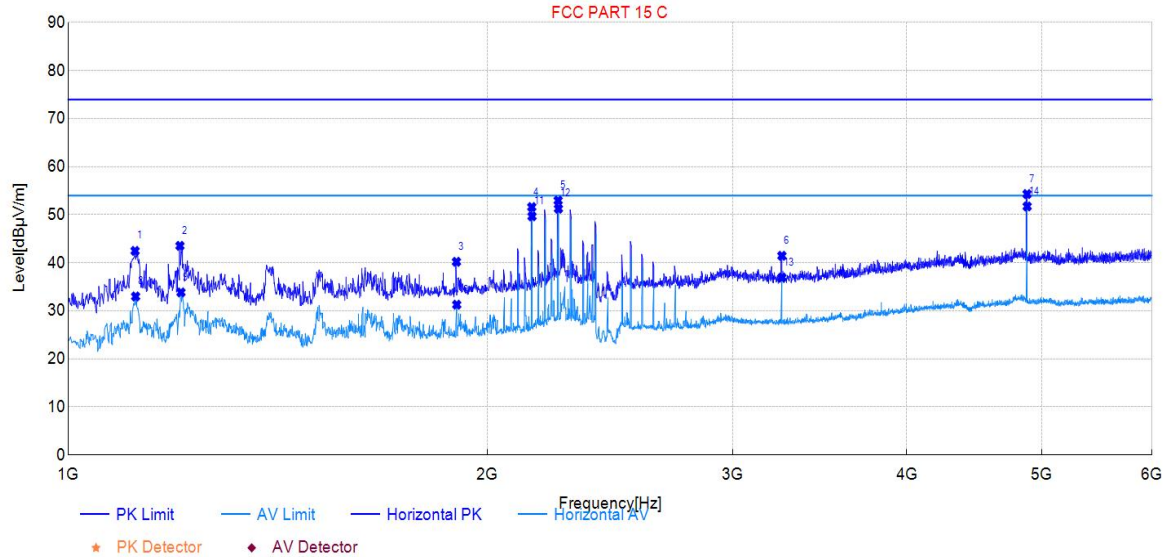
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1117.00	64.04	41.30	-22.74	74.00	32.70	150	127	PK	Vertical	PASS
2	1742.00	62.70	43.33	-19.37	74.00	30.67	150	118	PK	Vertical	PASS
3	2210.00	62.06	44.99	-17.07	74.00	29.01	150	360	PK	Vertical	PASS
4	2392.00	64.07	47.58	-16.49	74.00	26.42	150	360	PK	Vertical	PASS
5	4804.00	55.85	48.53	-7.32	74.00	25.47	150	331	PK	Vertical	PASS
6	5330.00	52.74	46.36	-6.38	74.00	27.64	150	161	PK	Vertical	PASS
7	1115.00	54.23	31.48	-22.75	54.00	22.52	150	131	AV	Vertical	PASS
8	1732.00	53.66	34.22	-19.44	54.00	19.78	150	118	AV	Vertical	PASS
9	2211.00	59.77	42.70	-17.07	54.00	11.30	150	360	AV	Vertical	PASS
10	2393.00	62.34	45.85	-16.49	54.00	8.15	150	360	AV	Vertical	PASS
11	4805.00	51.43	44.11	-7.32	54.00	9.89	150	331	AV	Vertical	PASS
12	5331.00	41.88	35.51	-6.37	54.00	18.49	150	161	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	19	Test Engineer:	Stone Zhang



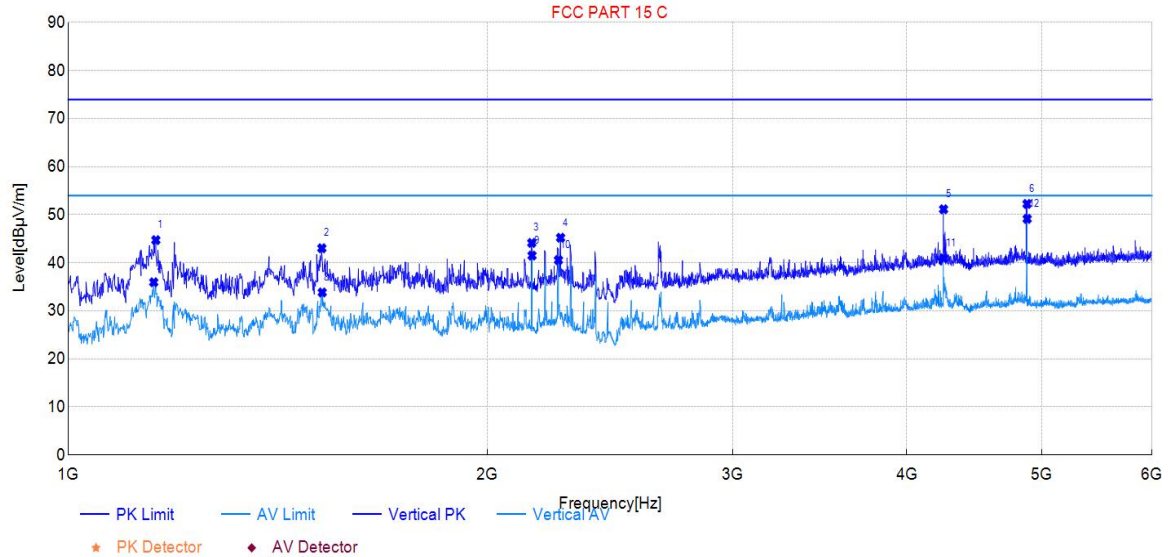
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1117.00	66.26	42.49	-23.77	74.00	31.51	150	150	PK	Horizontal	PASS
2	1203.00	66.98	43.54	-23.44	74.00	30.46	150	129	PK	Horizontal	PASS
3	1900.00	59.26	40.22	-19.04	74.00	33.78	150	284	PK	Horizontal	PASS
4	2152.00	69.04	51.61	-17.43	74.00	22.39	150	4	PK	Horizontal	PASS
5	2248.00	70.00	52.97	-17.03	74.00	21.03	150	347	PK	Horizontal	PASS
6	3254.00	54.81	41.47	-13.34	74.00	32.53	150	17	PK	Horizontal	PASS
7	4880.00	60.88	54.32	-6.56	74.00	19.68	150	301	AV	Horizontal	PASS
8	1118.00	56.77	33.00	-23.77	54.00	21.00	150	146	AV	Horizontal	PASS
9	1205.00	57.28	33.85	-23.43	54.00	20.15	150	129	AV	Horizontal	PASS
10	1901.00	50.32	31.29	-19.03	54.00	22.71	150	284	AV	Horizontal	PASS
11	2153.00	67.09	49.68	-17.41	54.00	4.32	150	360	AV	Horizontal	PASS
12	2249.00	68.30	51.27	-17.03	54.00	2.73	150	347	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	19	Test Engineer:	Stone Zhang



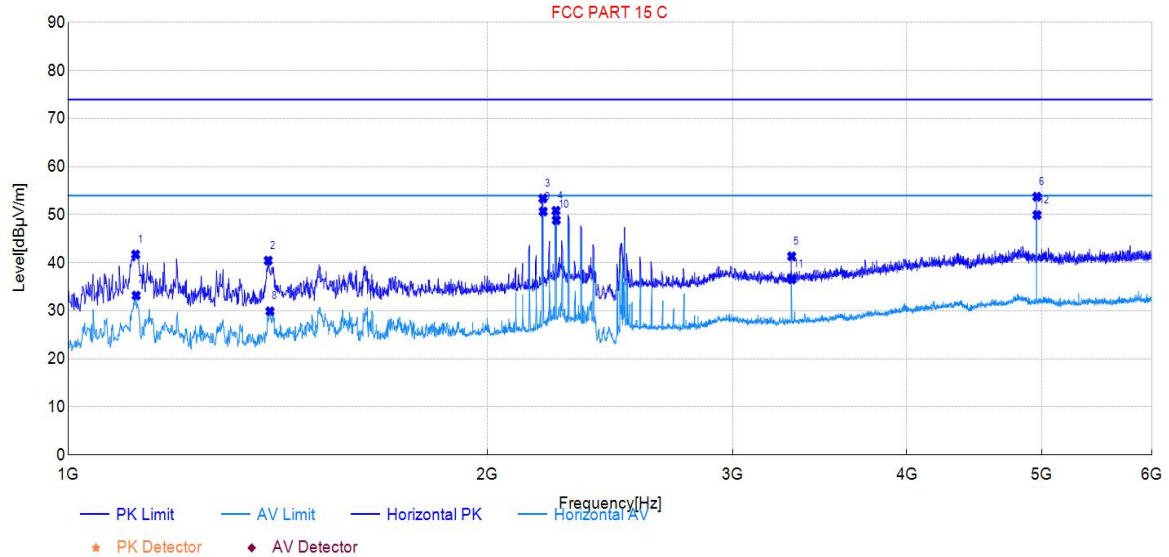
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1156.00	67.35	44.73	-22.62	74.00	29.27	150	121	PK	Vertical	PASS
2	1521.00	63.87	43.04	-20.83	74.00	30.96	150	98	PK	Vertical	PASS
3	2152.00	61.38	44.14	-17.24	74.00	29.86	150	357	PK	Vertical	PASS
4	2257.00	62.18	45.22	-16.96	74.00	28.78	150	56	PK	Vertical	PASS
5	4251.00	58.95	51.15	-7.80	74.00	22.85	150	8	PK	Vertical	PASS
6	4880.00	59.43	52.26	-7.17	74.00	21.74	150	326	PK	Vertical	PASS
7	1152.00	58.59	35.96	-22.63	54.00	18.04	150	121	AV	Vertical	PASS
8	1522.00	54.67	33.84	-20.83	54.00	20.16	150	108	AV	Vertical	PASS
9	2153.00	58.74	41.51	-17.23	54.00	12.49	150	357	AV	Vertical	PASS
10	2249.00	57.55	40.57	-16.98	54.00	13.43	150	254	AV	Vertical	PASS
11	4251.00	48.74	40.94	-7.80	54.00	13.06	150	8	AV	Vertical	PASS
12	4881.00	56.31	49.15	-7.16	54.00	4.85	150	326	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	39	Test Engineer:	Stone Zhang



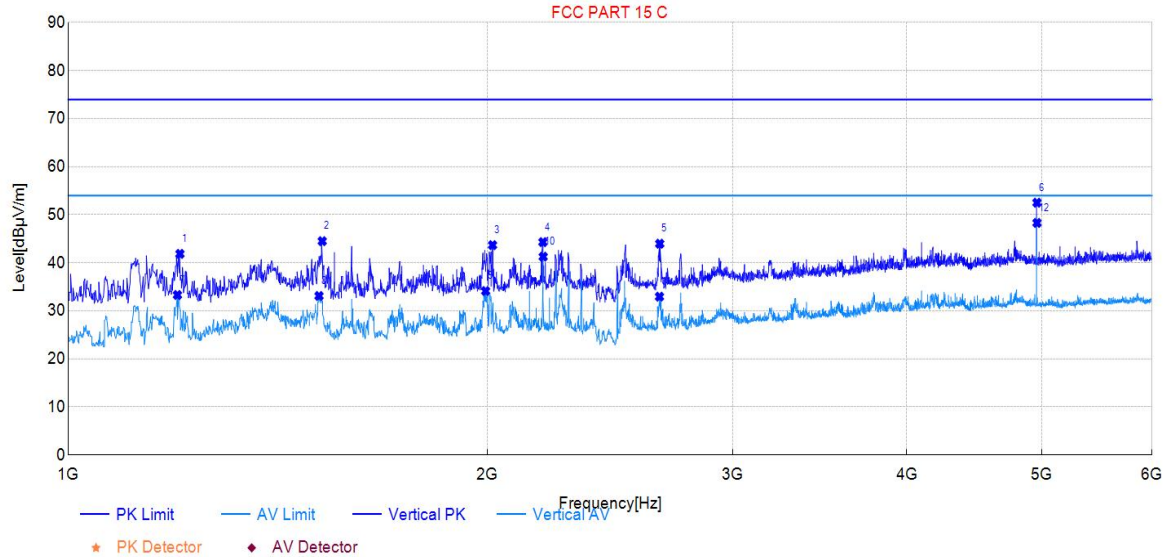
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1118.00	65.51	41.74	-23.77	74.00	32.26	150	159	PK	Horizontal	PASS
2	1392.00	62.72	40.47	-22.25	74.00	33.53	150	137	PK	Horizontal	PASS
3	2192.00	70.64	53.39	-17.25	74.00	20.61	150	344	PK	Horizontal	PASS
4	2240.00	67.90	50.84	-17.06	74.00	23.16	150	349	PK	Horizontal	PASS
5	3307.00	54.45	41.36	-13.09	74.00	32.64	150	305	PK	Horizontal	PASS
6	4960.00	59.97	53.76	-6.21	74.00	20.24	150	283	PK	Horizontal	PASS
7	1119.00	56.95	33.19	-23.76	54.00	20.81	150	146	AV	Horizontal	PASS
8	1396.00	52.14	29.92	-22.22	54.00	24.08	150	134	AV	Horizontal	PASS
9	2193.00	67.92	50.68	-17.24	54.00	3.32	150	340	AV	Horizontal	PASS
10	2241.00	65.94	48.88	-17.06	54.00	5.12	150	349	AV	Horizontal	PASS
11	3308.00	49.63	36.54	-13.09	54.00	17.46	150	305	AV	Horizontal	PASS
12	4961.00	56.17	49.96	-6.21	54.00	4.04	150	283	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	39	Test Engineer:	Stone Zhang



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1203.00	64.33	41.87	-22.46	74.00	32.13	150	122	PK	Vertical	PASS
2	1522.00	65.34	44.51	-20.83	74.00	29.49	150	83	PK	Vertical	PASS
3	2017.00	61.38	43.69	-17.69	74.00	30.31	150	92	PK	Vertical	PASS
4	2192.00	61.43	44.31	-17.12	74.00	29.69	150	360	PK	Vertical	PASS
5	2659.00	59.45	43.98	-15.47	74.00	30.02	150	104	PK	Vertical	PASS
6	4961.00	59.40	52.52	-6.88	74.00	21.48	150	317	PK	Vertical	PASS
7	1198.00	55.79	33.31	-22.48	54.00	20.69	150	126	AV	Vertical	PASS
8	1514.00	53.98	33.11	-20.87	54.00	20.89	150	88	AV	Vertical	PASS
9	1994.00	51.94	34.13	-17.81	54.00	19.87	150	92	AV	Vertical	PASS
10	2193.00	58.39	41.28	-17.11	54.00	12.72	150	360	AV	Vertical	PASS
11	2658.00	48.43	32.96	-15.47	54.00	21.04	150	104	AV	Vertical	PASS
12	4961.00	55.19	48.31	-6.88	54.00	5.69	150	317	AV	Vertical	PASS

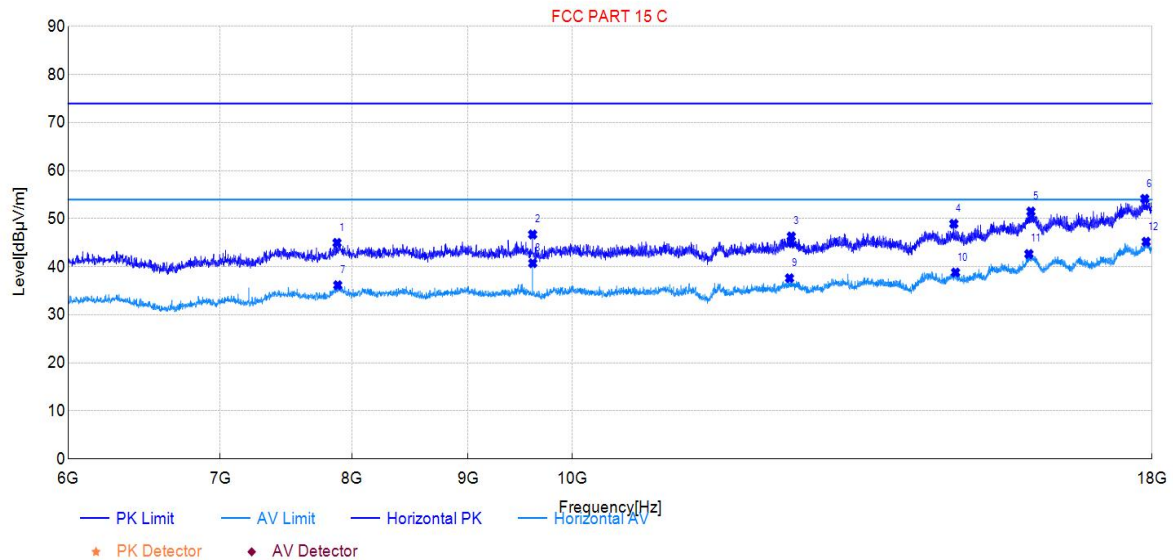
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

6GHz-18GHz

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	00	Test Engineer:	Stone Zhang



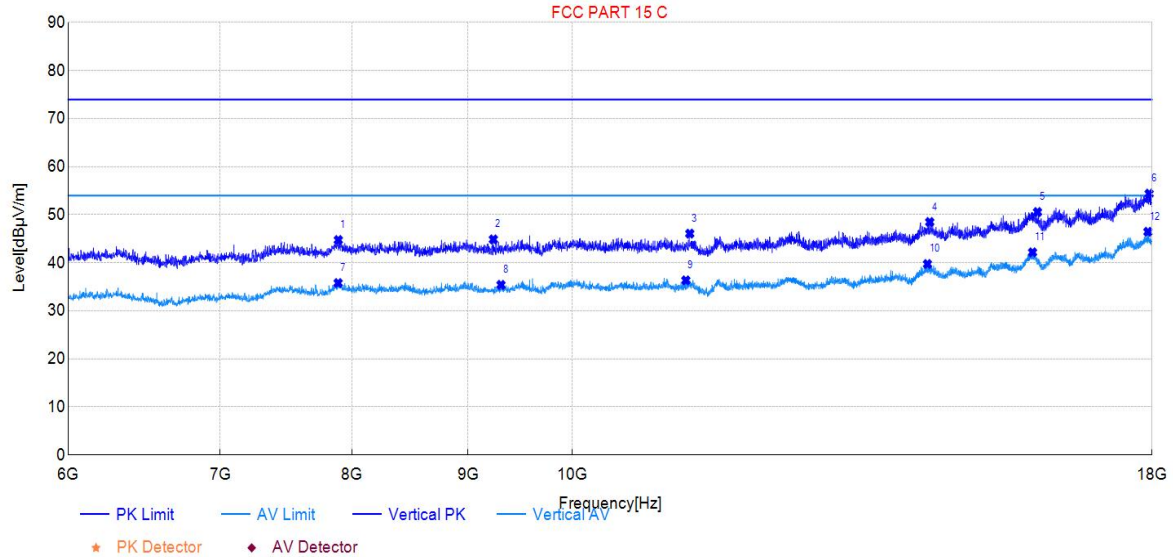
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7879.50	46.39	44.99	-1.40	74.00	29.01	150	352	PK	Horizontal	PASS
2	9607.50	47.01	46.73	-0.28	74.00	27.27	150	292	PK	Horizontal	PASS
3	12487.50	43.90	46.33	2.43	74.00	27.67	150	227	PK	Horizontal	PASS
4	14724.00	43.57	48.96	5.39	74.00	25.04	150	117	PK	Horizontal	PASS
5	15921.00	41.73	51.51	9.78	74.00	22.49	150	0	PK	Horizontal	PASS
6	17868.00	39.91	54.16	14.25	74.00	19.84	150	331	PK	Horizontal	PASS
7	7885.50	37.45	36.18	-1.27	54.00	17.82	150	1	AV	Horizontal	PASS
8	9609.00	41.05	40.75	-0.30	54.00	13.25	150	287	AV	Horizontal	PASS
9	12465.00	35.24	37.63	2.39	54.00	16.37	150	0	AV	Horizontal	PASS
10	14749.50	33.41	38.83	5.42	54.00	15.17	150	0	AV	Horizontal	PASS
11	15888.00	33.12	42.67	9.55	54.00	11.33	150	1	AV	Horizontal	PASS
12	17892.00	30.84	45.22	14.38	54.00	8.78	150	152	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	00	Test Engineer:	Stone Zhang



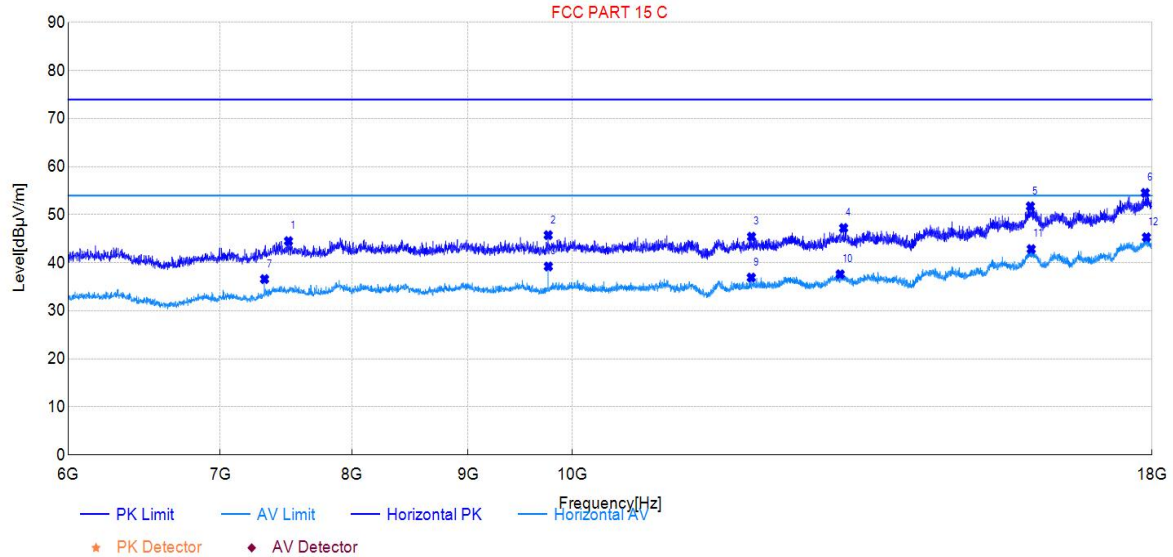
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7890.00	45.92	44.75	-1.17	74.00	29.25	150	10	PK	Vertical	PASS
2	9232.50	46.01	44.87	-1.14	74.00	29.13	150	311	PK	Vertical	PASS
3	11266.50	44.98	46.08	1.10	74.00	27.92	150	245	PK	Vertical	PASS
4	14368.50	42.97	48.49	5.52	74.00	25.51	150	155	PK	Vertical	PASS
5	16027.50	41.68	50.57	8.89	74.00	23.43	150	125	PK	Vertical	PASS
6	17947.50	39.69	54.39	14.70	74.00	19.61	150	316	PK	Vertical	PASS
7	7888.50	36.99	35.79	-1.20	54.00	18.21	150	276	AV	Vertical	PASS
8	9304.50	36.46	35.41	-1.05	54.00	18.59	150	240	AV	Vertical	PASS
9	11221.50	35.33	36.35	1.02	54.00	17.65	150	250	AV	Vertical	PASS
10	14335.50	34.33	39.75	5.42	54.00	14.25	150	150	AV	Vertical	PASS
11	15946.50	32.89	42.18	9.29	54.00	11.82	150	291	AV	Vertical	PASS
12	17925.00	31.62	46.46	14.84	54.00	7.54	150	341	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	19	Test Engineer:	Stone Zhang



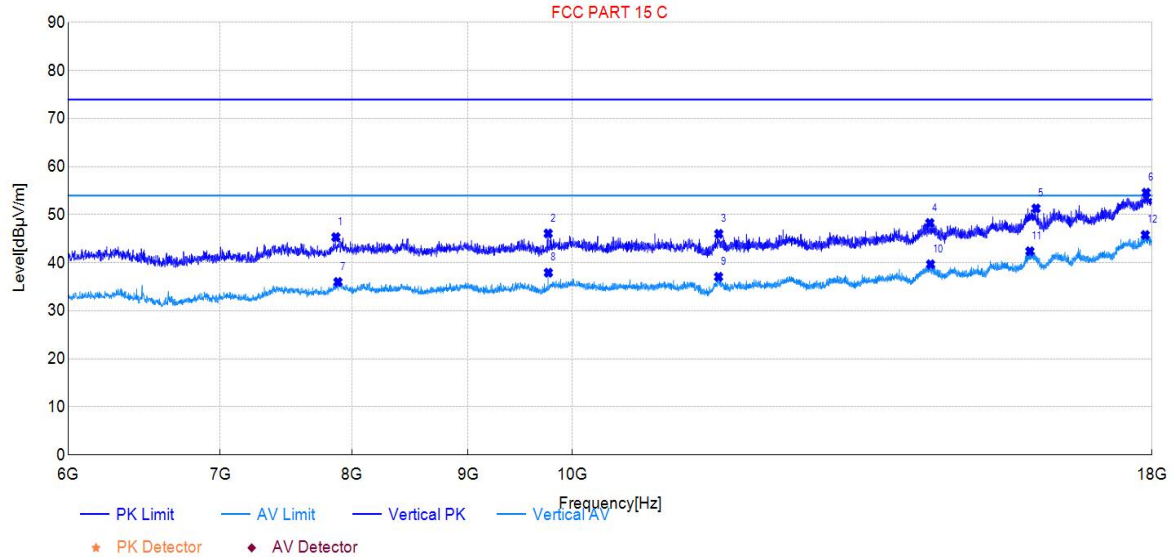
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7501.50	47.54	44.52	-3.02	74.00	29.48	150	131	PK	Horizontal	PASS
2	9760.50	46.38	45.76	-0.62	74.00	28.24	150	276	PK	Horizontal	PASS
3	11994.00	43.94	45.44	1.50	74.00	28.56	150	262	PK	Horizontal	PASS
4	13167.00	43.98	47.24	3.26	74.00	26.76	150	176	PK	Horizontal	PASS
5	15912.00	41.98	51.76	9.78	74.00	22.24	150	14	PK	Horizontal	PASS
6	17877.00	40.26	54.56	14.30	74.00	19.44	150	0	PK	Horizontal	PASS
7	7321.50	39.94	36.62	-3.32	54.00	17.38	150	55	AV	Horizontal	PASS
8	9762.00	39.84	39.24	-0.60	54.00	14.76	150	281	AV	Horizontal	PASS
9	11991.00	35.45	36.94	1.49	54.00	17.06	150	186	AV	Horizontal	PASS
10	13122.00	34.61	37.62	3.01	54.00	16.38	150	306	AV	Horizontal	PASS
11	15925.50	33.08	42.86	9.78	54.00	11.14	150	256	AV	Horizontal	PASS
12	17898.00	30.91	45.32	14.41	54.00	8.68	150	50	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	19	Test Engineer:	Stone Zhang



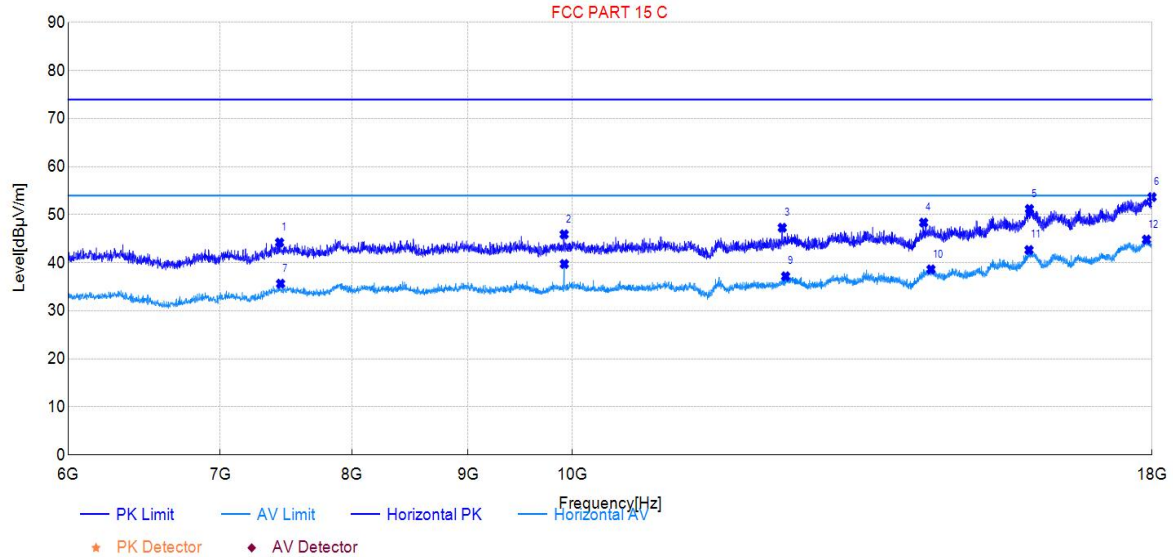
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7870.50	46.92	45.34	-1.58	74.00	28.66	150	300	PK	Vertical	PASS
2	9760.50	46.47	46.11	-0.36	74.00	27.89	150	336	PK	Vertical	PASS
3	11602.50	44.23	46.02	1.79	74.00	27.98	150	124	PK	Vertical	PASS
4	14370.00	42.77	48.29	5.52	74.00	25.71	150	360	PK	Vertical	PASS
5	16003.50	42.08	51.31	9.23	74.00	22.69	150	357	PK	Vertical	PASS
6	17893.50	39.64	54.60	14.96	74.00	19.40	150	0	PK	Vertical	PASS
7	7887.00	37.25	36.01	-1.24	54.00	17.99	150	214	AV	Vertical	PASS
8	9762.00	38.29	37.95	-0.34	54.00	16.05	150	336	AV	Vertical	PASS
9	11599.50	35.27	37.08	1.81	54.00	16.92	150	340	AV	Vertical	PASS
10	14380.50	34.13	39.69	5.56	54.00	14.31	150	346	AV	Vertical	PASS
11	15904.50	33.11	42.41	9.30	54.00	11.59	150	39	AV	Vertical	PASS
12	17877.00	30.92	45.79	14.87	54.00	8.21	150	79	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	39	Test Engineer:	Stone Zhang



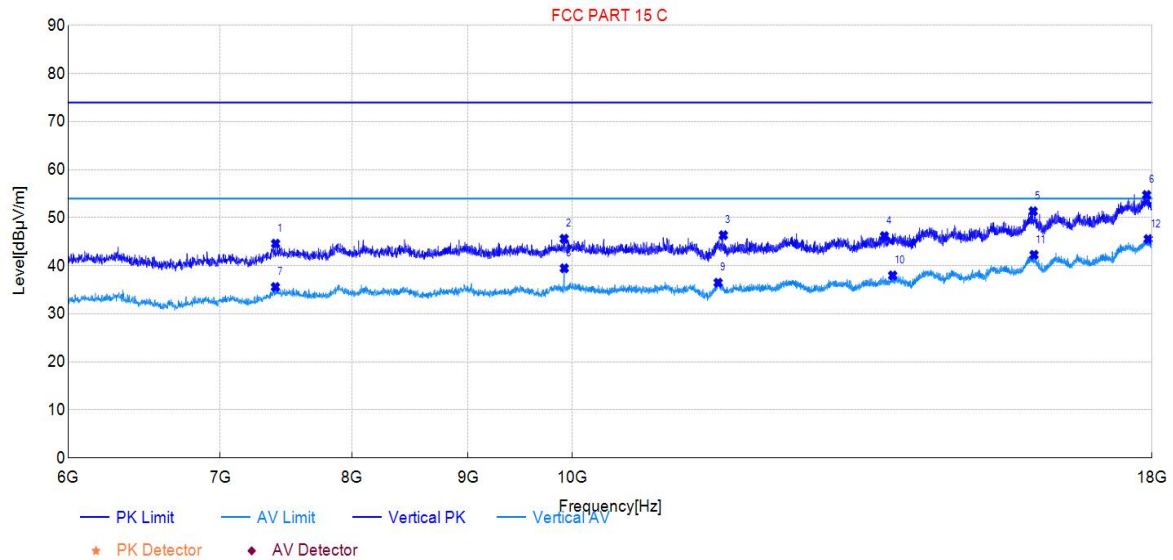
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7434.00	47.06	44.23	-2.83	74.00	29.77	150	222	PK	Horizontal	PASS
2	9919.50	46.28	45.93	-0.35	74.00	28.07	150	276	PK	Horizontal	PASS
3	12373.50	45.21	47.31	2.10	74.00	26.69	150	84	PK	Horizontal	PASS
4	14280.00	43.87	48.38	4.51	74.00	25.62	150	195	PK	Horizontal	PASS
5	15897.00	41.49	51.21	9.72	74.00	22.79	150	251	PK	Horizontal	PASS
6	18000.00	39.90	53.68	13.78	74.00	20.32	150	170	PK	Horizontal	PASS
7	7441.50	38.51	35.66	-2.85	54.00	18.34	150	94	AV	Horizontal	PASS
8	9921.00	40.11	39.76	-0.35	54.00	14.24	150	287	AV	Horizontal	PASS
9	12415.50	34.89	37.20	2.31	54.00	16.80	150	222	AV	Horizontal	PASS
10	14386.50	33.53	38.64	5.11	54.00	15.36	150	125	AV	Horizontal	PASS
11	15889.50	33.09	42.67	9.58	54.00	11.33	150	24	AV	Horizontal	PASS
12	17899.50	30.42	44.84	14.42	54.00	9.16	150	0	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	BLE	Test Date:	2024-08-23
Test Channel:	39	Test Engineer:	Stone Zhang



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7404.00	47.35	44.61	-2.74	74.00	29.39	150	64	PK	Vertical	PASS
2	9919.50	45.56	45.63	0.07	74.00	28.37	150	24	PK	Vertical	PASS
3	11656.50	45.14	46.37	1.23	74.00	27.63	150	359	PK	Vertical	PASS
4	13723.50	42.86	46.19	3.33	74.00	27.81	150	285	PK	Vertical	PASS
5	15957.00	42.07	51.36	9.29	74.00	22.64	150	149	PK	Vertical	PASS
6	17902.50	39.75	54.74	14.99	74.00	19.26	150	219	PK	Vertical	PASS
7	7402.50	38.33	35.59	-2.74	54.00	18.41	150	249	AV	Vertical	PASS
8	9921.00	39.42	39.49	0.07	54.00	14.51	150	29	AV	Vertical	PASS
9	11595.00	34.77	36.49	1.72	54.00	17.51	150	354	AV	Vertical	PASS
10	13839.00	34.27	38.00	3.73	54.00	16.00	150	235	AV	Vertical	PASS
11	15970.50	32.99	42.28	9.29	54.00	11.72	150	59	AV	Vertical	PASS
12	17931.00	30.77	45.57	14.80	54.00	8.43	150	35	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

7.7. Radiated 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	--	--	--

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510MHz.

² Above 38.6

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

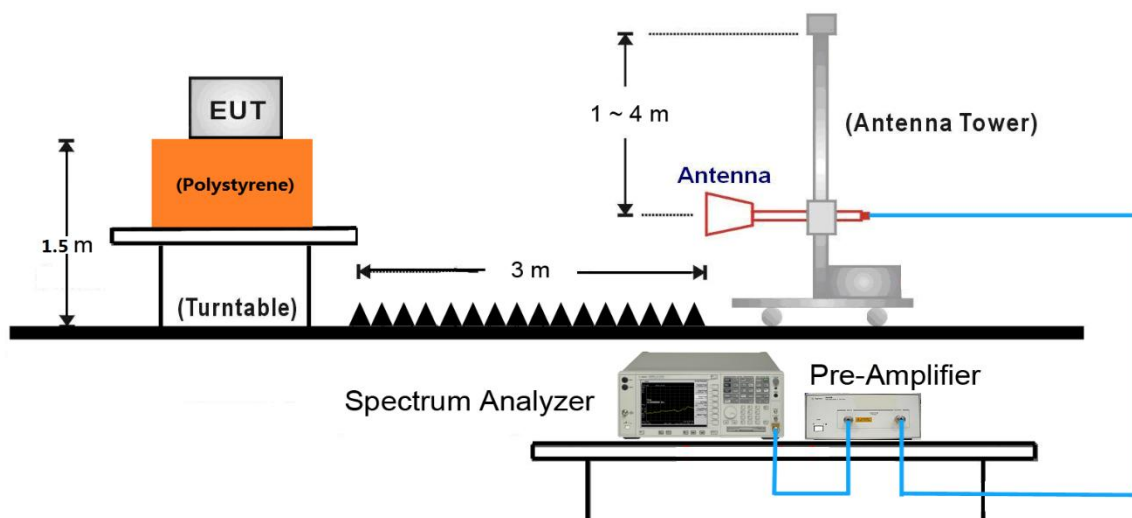
Peak Field Strength Measurements

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

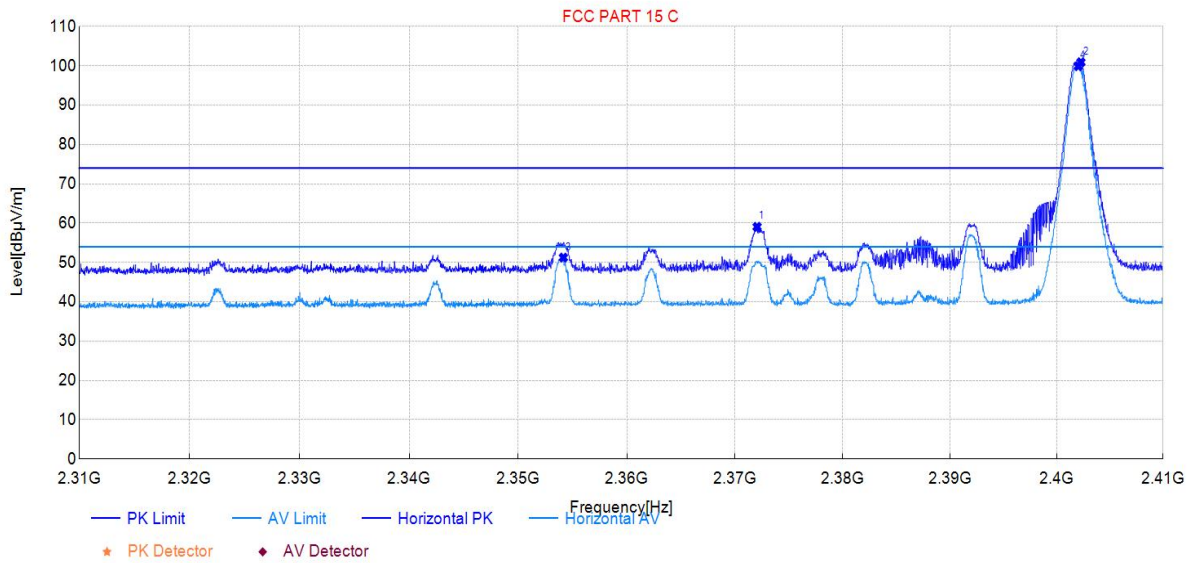
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Power Average (RMS)
5. Number of sweep point = 2001 (Number of sweep points must be $\geq 2 \times \text{span} / \text{RBW}$)
6. Sweep time = auto
7. Trace (RMS)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

7.7.4. Test Setup



7.7.5. Test Result

Project Information			
EUT:	Car Audio	Model:	TN-100
Test Date:	2024-08-23	Voltage:	DC 12V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang
Remark:	Transmit by BLE at Channel 2402MHz		

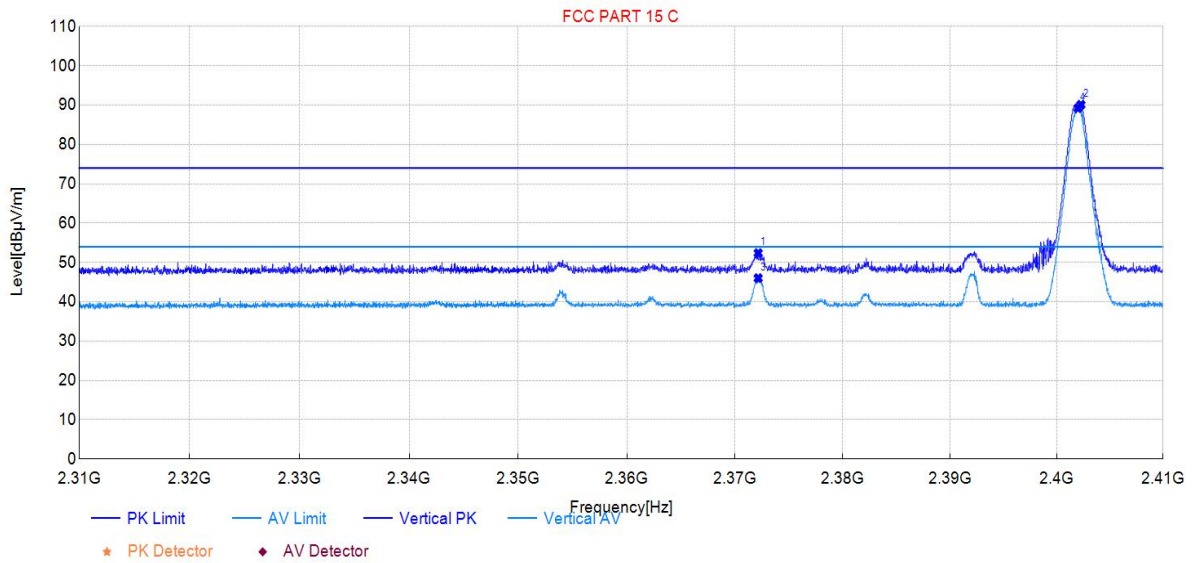


Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2372.05	23.07	59.07	36.00	74.00	14.93	150	352	PK	Horizontal	PASS
2	2402.28	64.77	100.93	36.16	/	/	150	354	PK	Horizontal	PASS
3	2354.15	15.32	51.24	35.92	54.00	2.76	150	0	AV	Horizontal	PASS
4	2402.03	63.77	99.92	36.15	/	/	150	354	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level



Suspected Data List

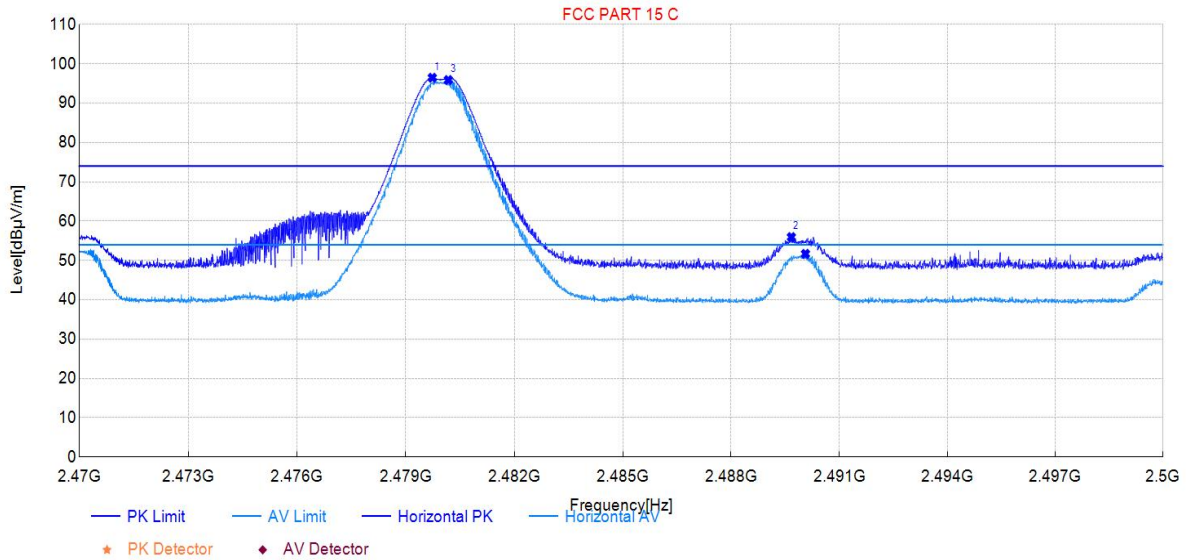
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2372.15	16.50	52.38	35.88	74.00	21.62	150	1	PK	Vertical	PASS
2	2402.28	54.12	90.11	35.99	/	/	150	5	PK	Vertical	PASS
3	2372.15	10.13	46.01	35.88	54.00	7.99	150	354	AV	Vertical	PASS
4	2402.00	53.27	89.26	35.99	/	/	150	3	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Project Information			
EUT:	Car Audio	Model:	TN-100
Test Date:	2024-08-23	Voltage:	DC 12V
Environment:	Temp: 27.1°C; Humi:51%	Engineer:	Stone Zhang
Remark:	Transmit by BLE at Channel 2480MHz		

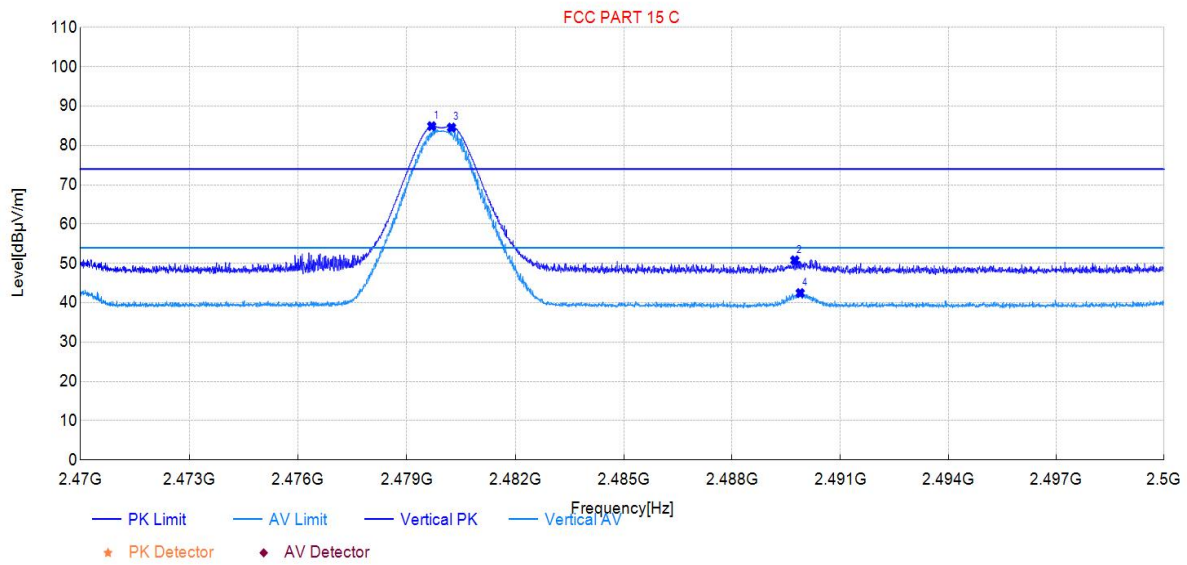


Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2479.74	60.13	96.48	36.35	/	/	150	358	PK	Horizontal	PASS
2	2489.67	19.57	55.95	36.38	74.00	18.05	150	360	PK	Horizontal	PASS
3	2480.18	59.55	95.90	36.35	/	/	150	360	AV	Horizontal	PASS
4	2490.06	15.31	51.69	36.38	54.00	2.31	150	360	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level



Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2479.69	48.85	84.93	36.08	/	/	150	357	PK	Vertical	PASS
2	2489.74	14.71	50.80	36.09	74.00	23.20	150	200	PK	Vertical	PASS
3	2480.24	48.49	84.57	36.08	/	/	150	121	AV	Vertical	PASS
4	2489.89	6.38	42.47	36.09	54.00	11.53	150	357	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

7.8. AC Conducted Emissions Measurement

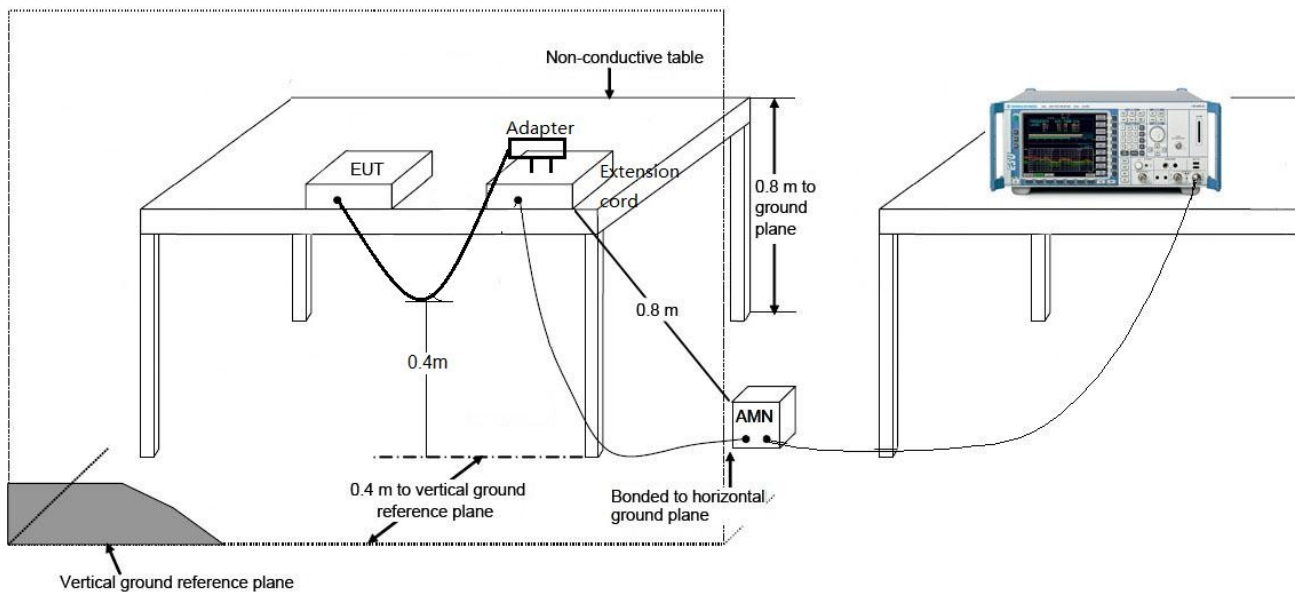
7.8.1. Test Limit

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

The EUT is DC supply, this item only for the EUT is designed to be connected to the public utility (AC) power line. Not applicable.

8. CONCLUSION

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

_____ The End _____