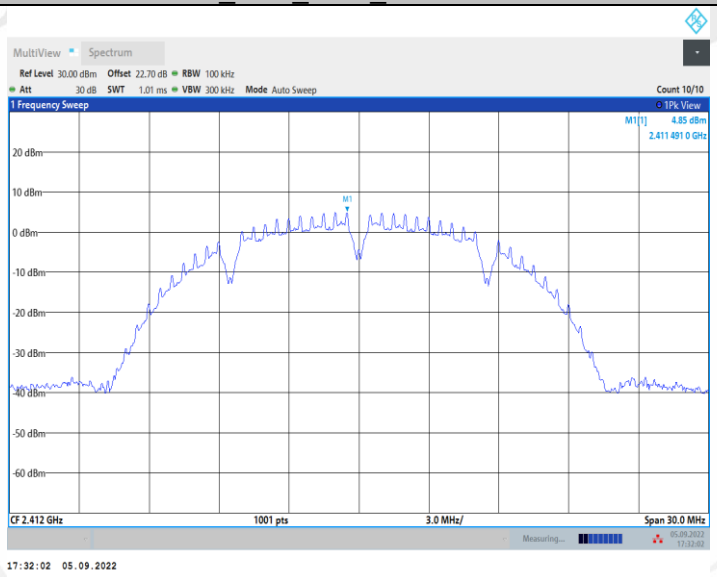
9.4. Test Result

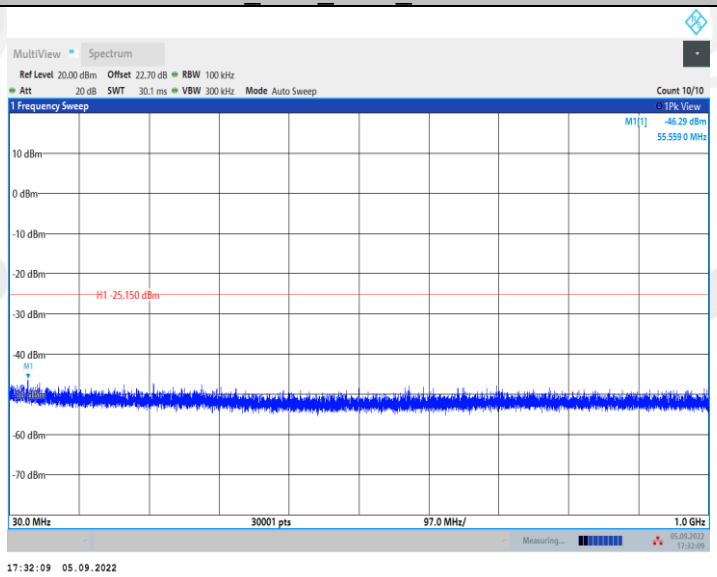
EUT Set Mode	CH or Frequency	Result (dBm)	EUT Set Mode	CH or Frequency	Result Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	11n HT 40	CH3	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH9	Pass

9.5. original test data

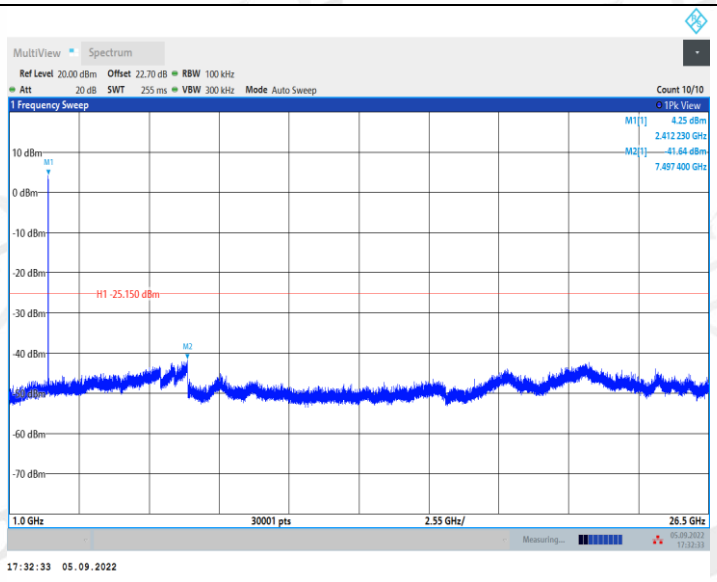
11B_Ant1_2412_0~Reference



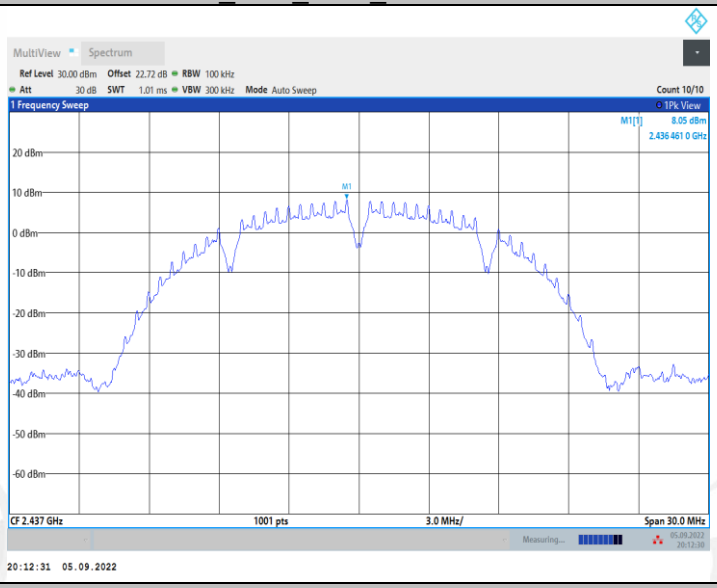
11B_Ant1_2412_30~1000



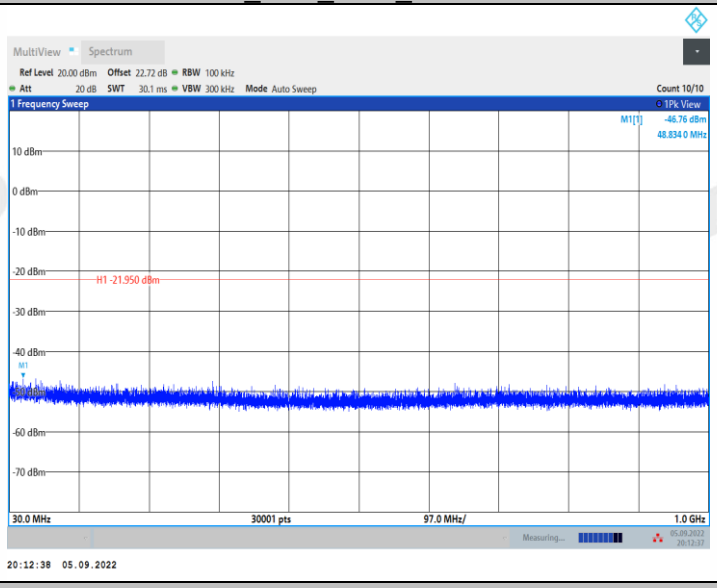
11B_Ant1_2412_1000~26500



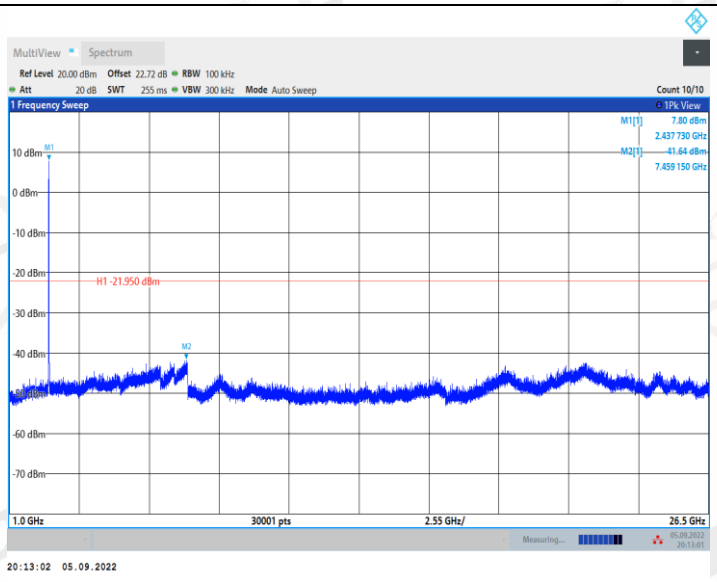
11B_Ant1_2437_0~Reference



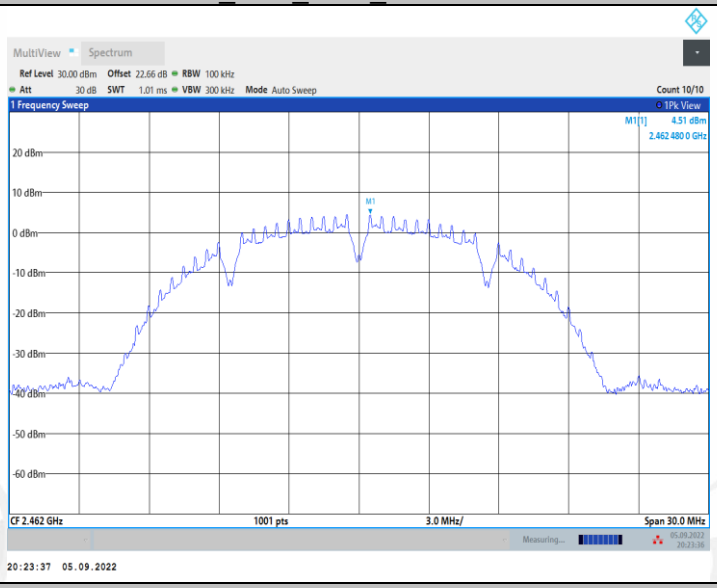
11B_Ant1_2437_30~1000



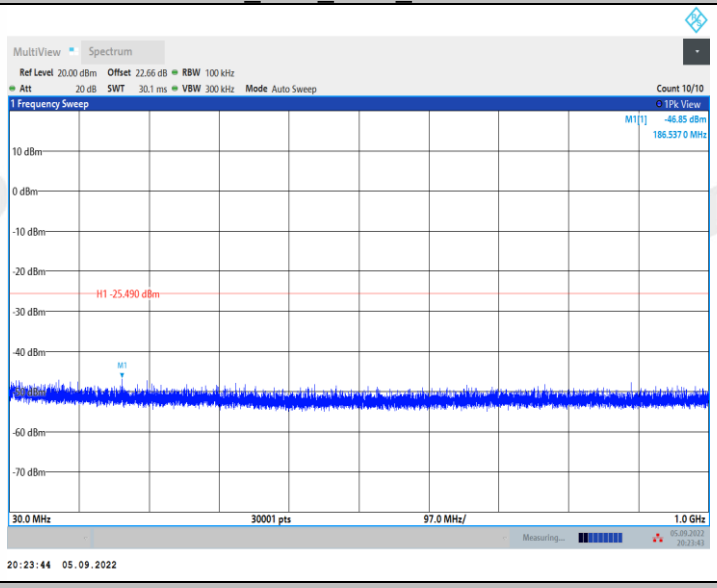
11B_Ant1_2437_1000~26500



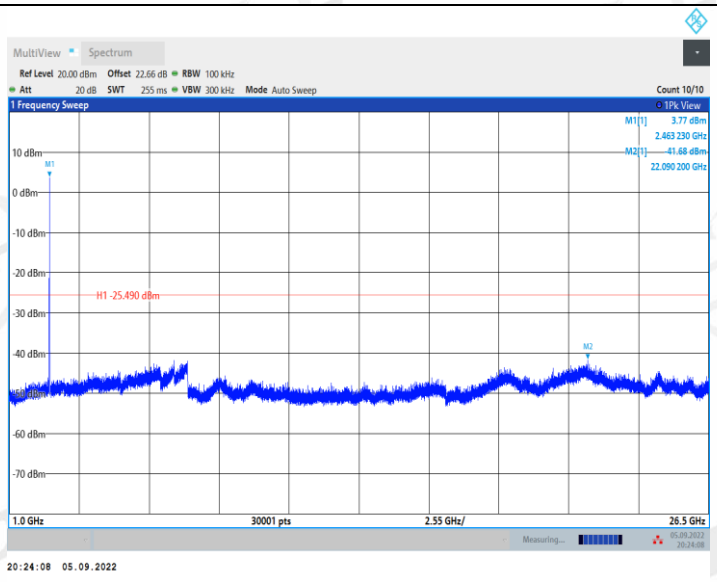
11B_Ant1_2462_0~Reference



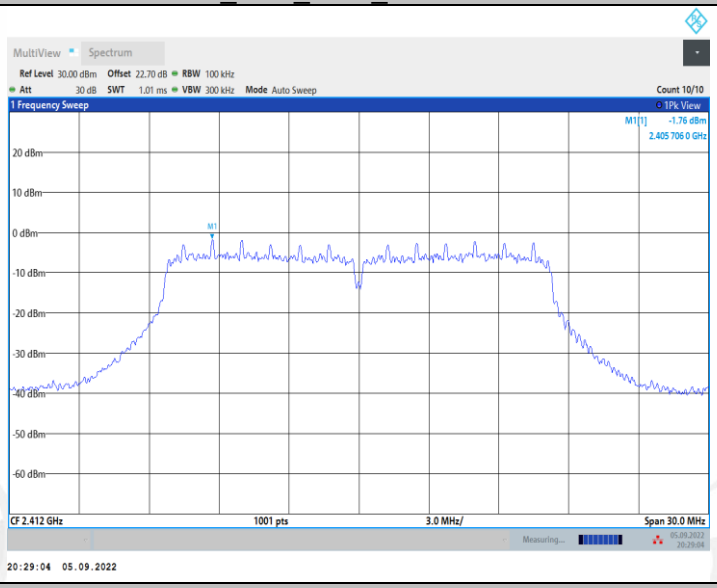
11B_Ant1_2462_30~1000



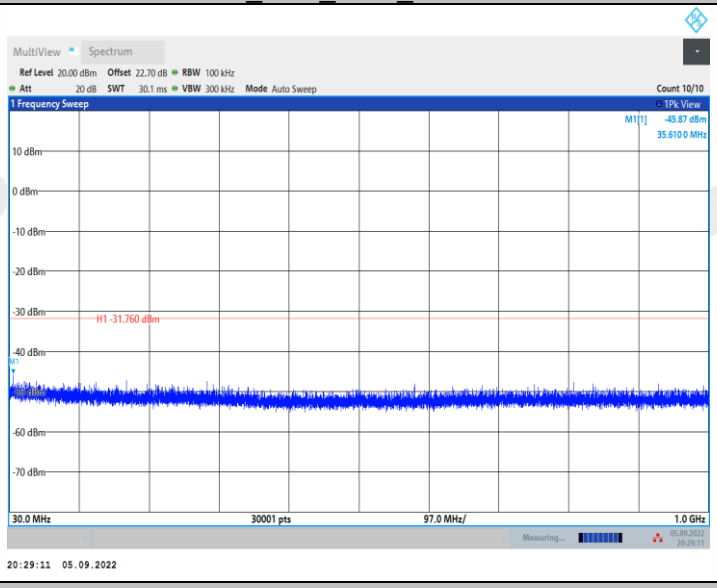
11B_Ant1_2462_1000~26500



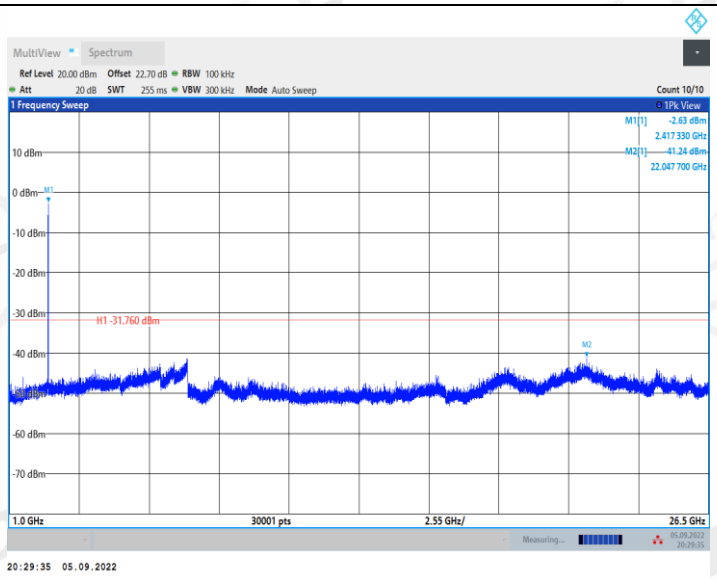
11G_Ant1_2412_0~Reference



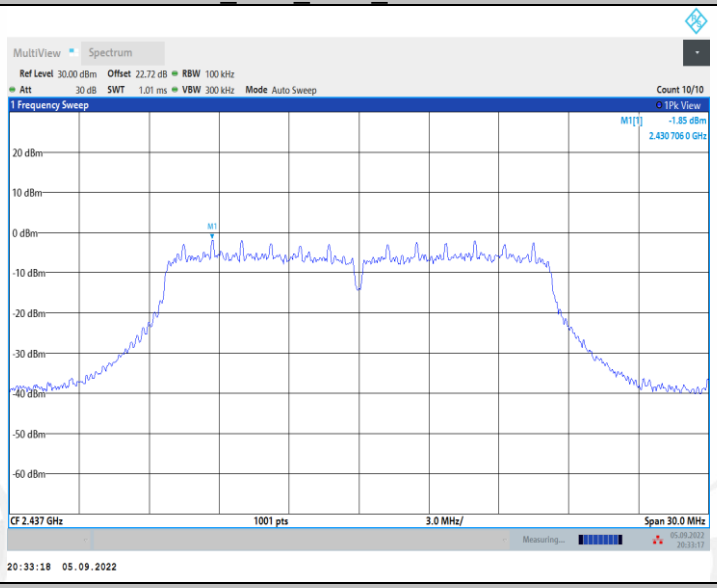
11G_Ant1_2412_30~1000



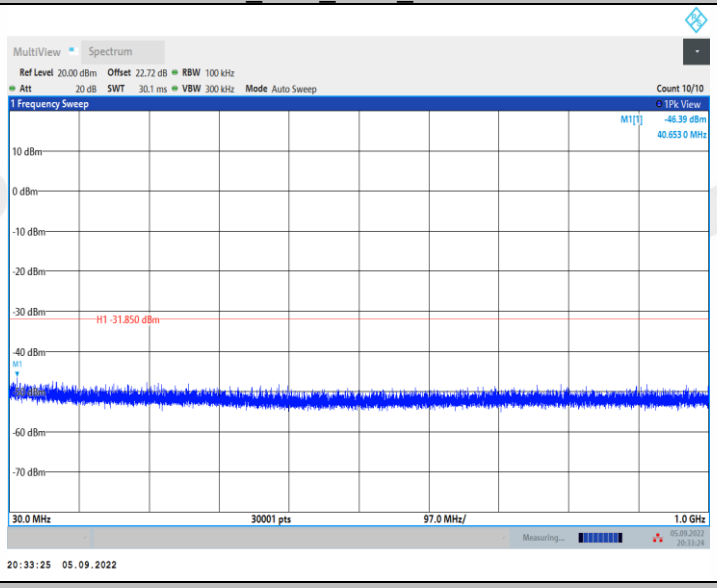
11G_Ant1_2412_1000~26500



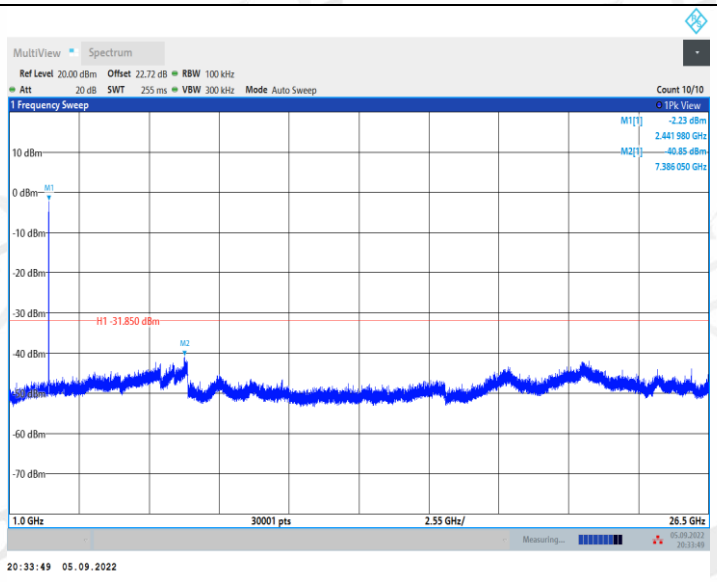
11G_Ant1_2437_0~Reference



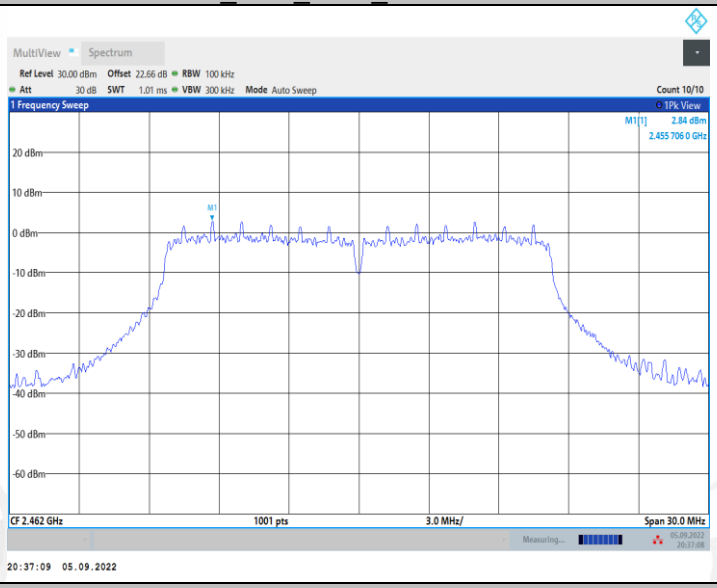
11G_Ant1_2437_30~1000



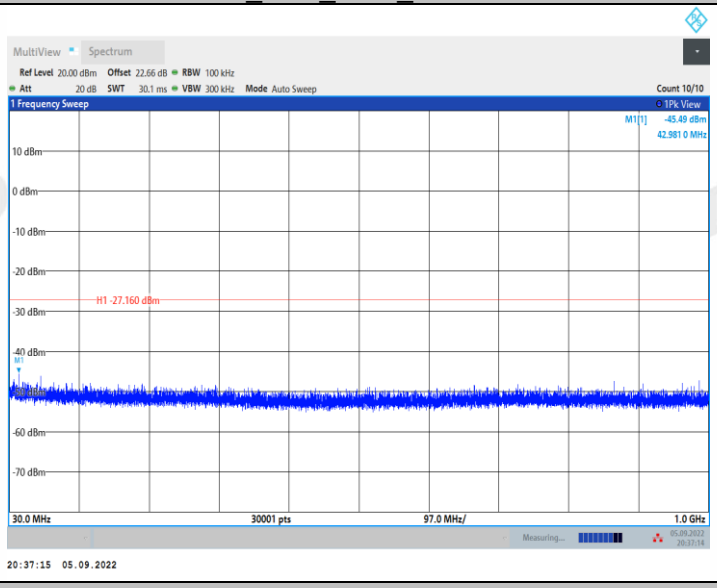
11G_Ant1_2437_1000~26500



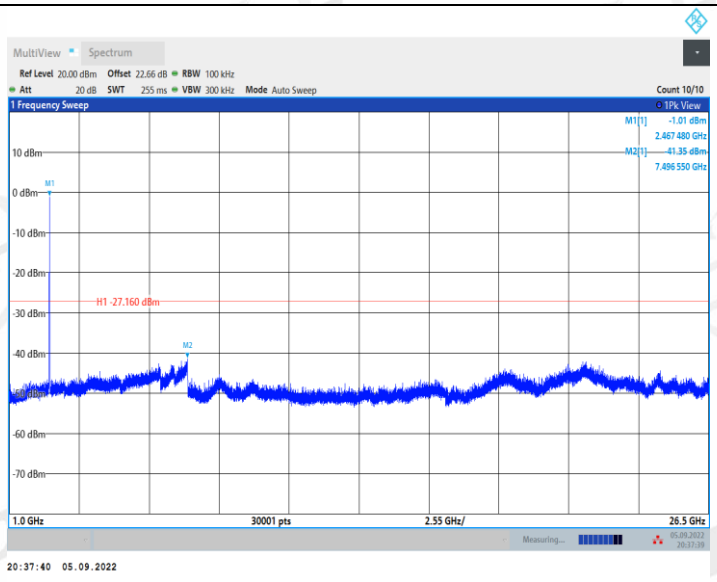
11G_Ant1_2462_0~Reference



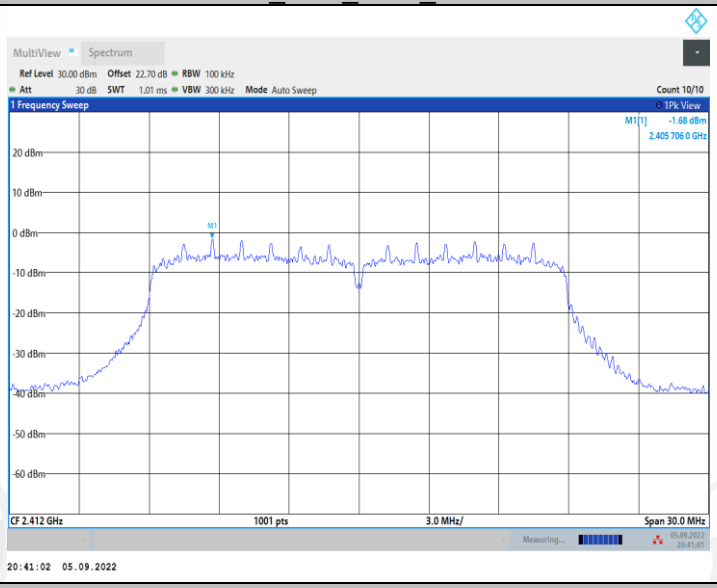
11G_Ant1_2462_30~1000



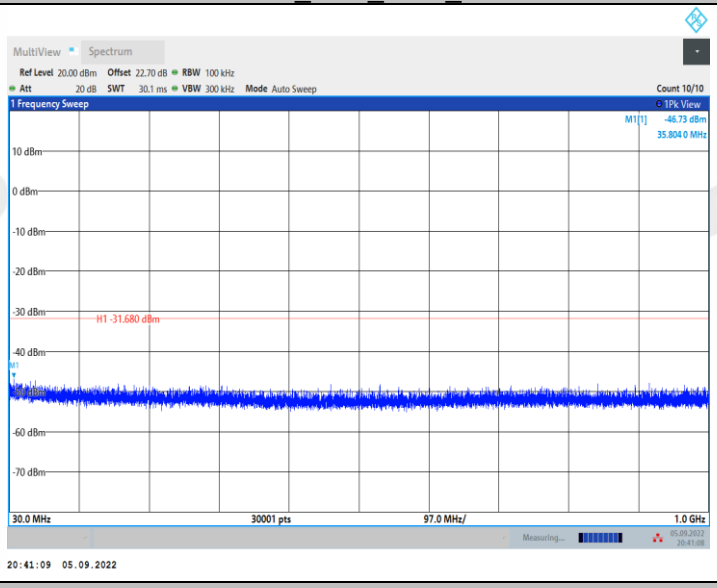
11G_Ant1_2462_1000~26500



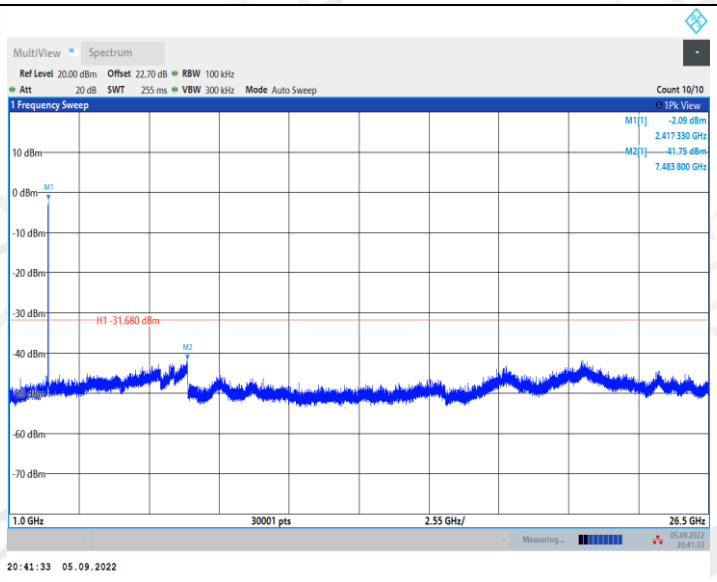
11N20SISO_Ant1_2412_0~Reference



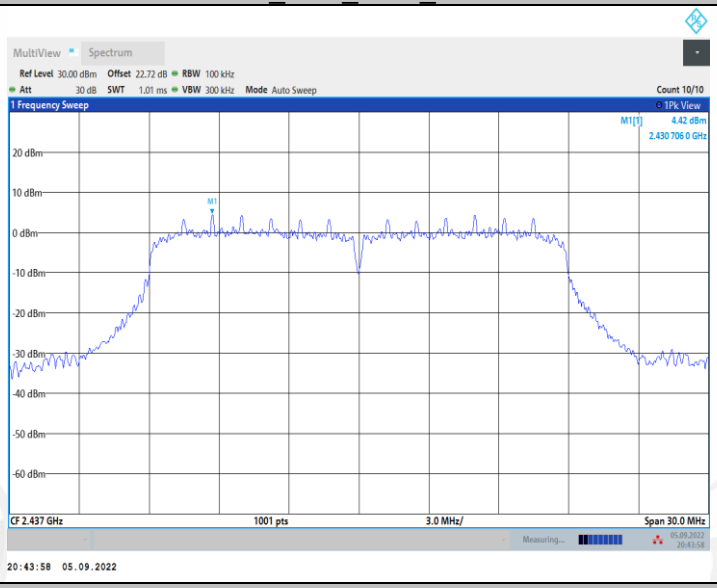
11N20SISO_Ant1_2412_30~1000



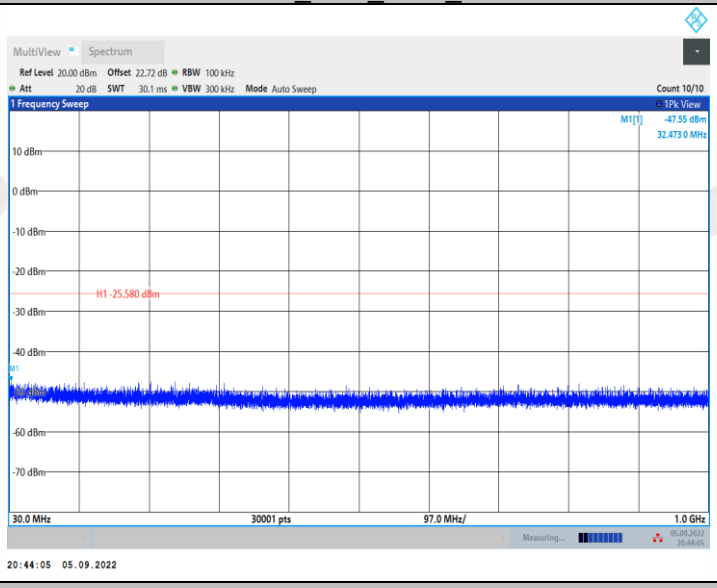
11N20SISO_Ant1_2412_1000~26500



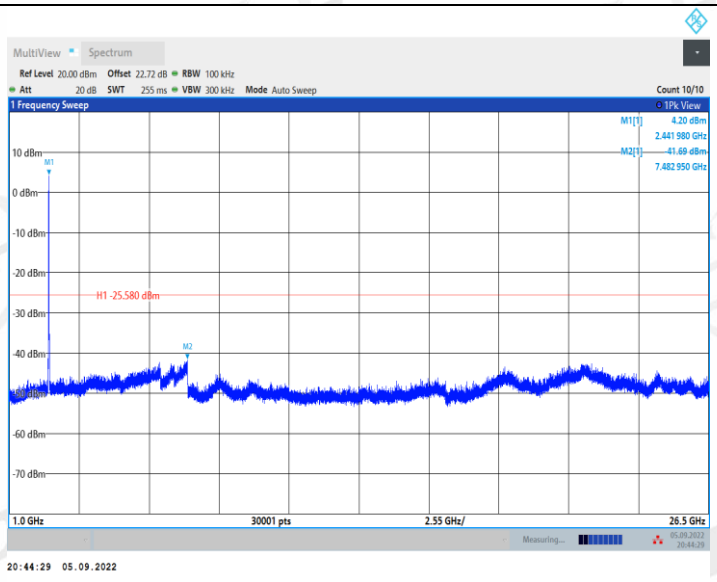
11N20SISO_Ant1_2437_0~Reference



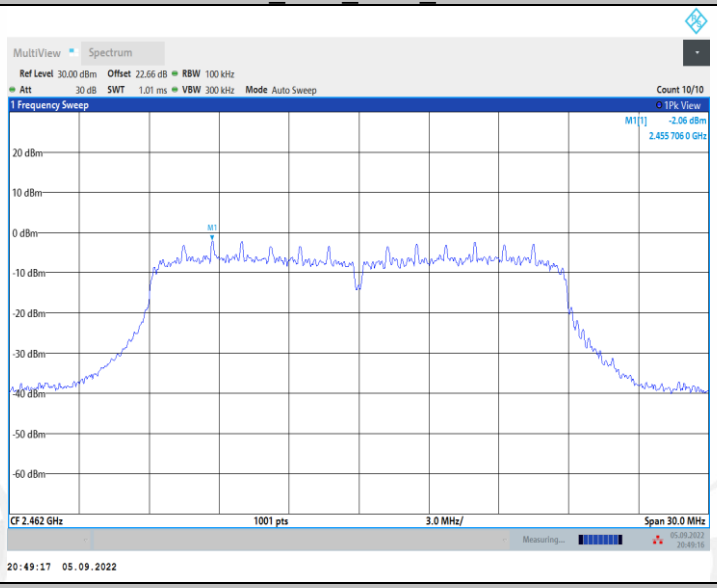
11N20SISO_Ant1_2437_30~1000



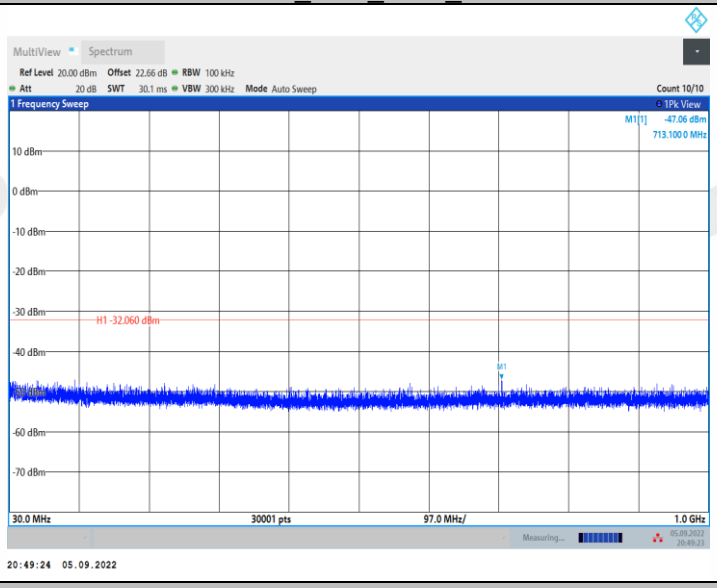
11N20SISO_Ant1_2437_1000~26500



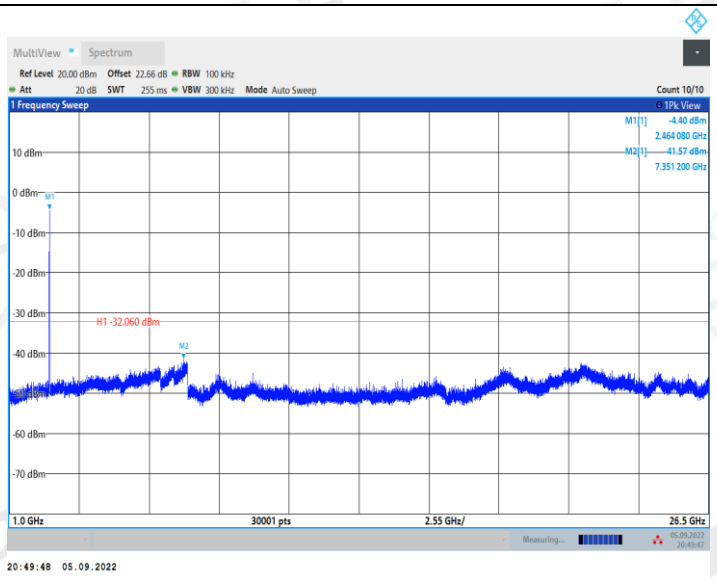
11N20SISO_Ant1_2462_0~Reference



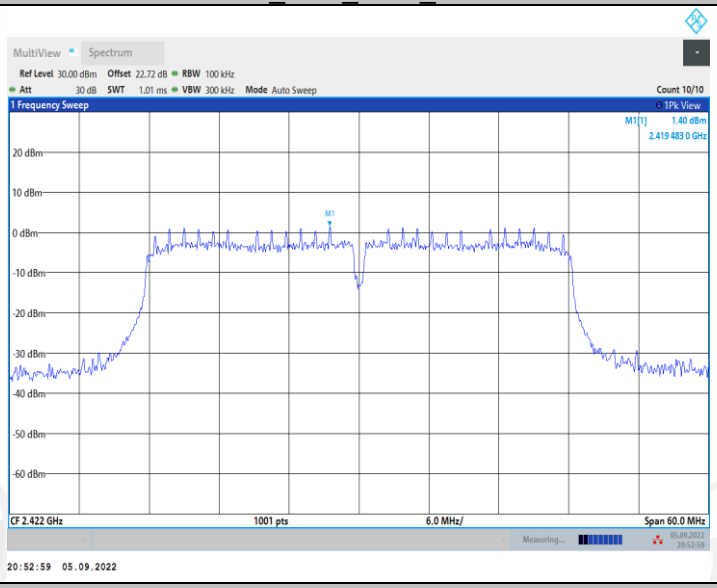
11N20SISO_Ant1_2462_30~1000



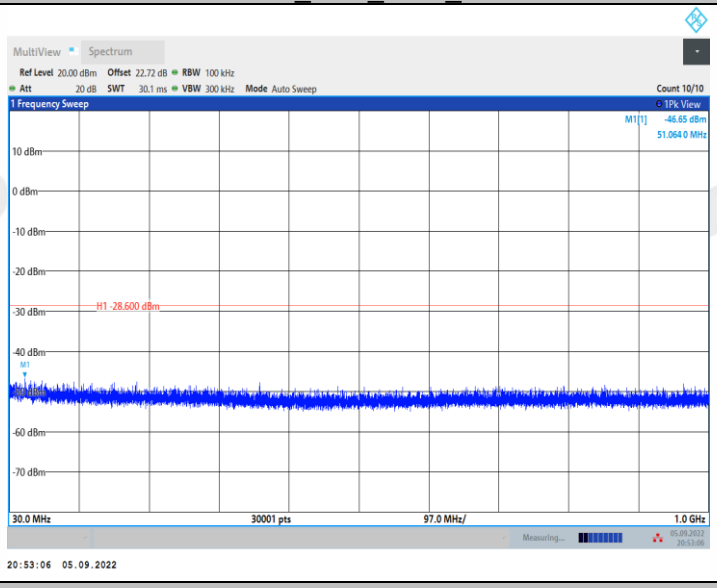
11N20SISO_Ant1_2462_1000~26500



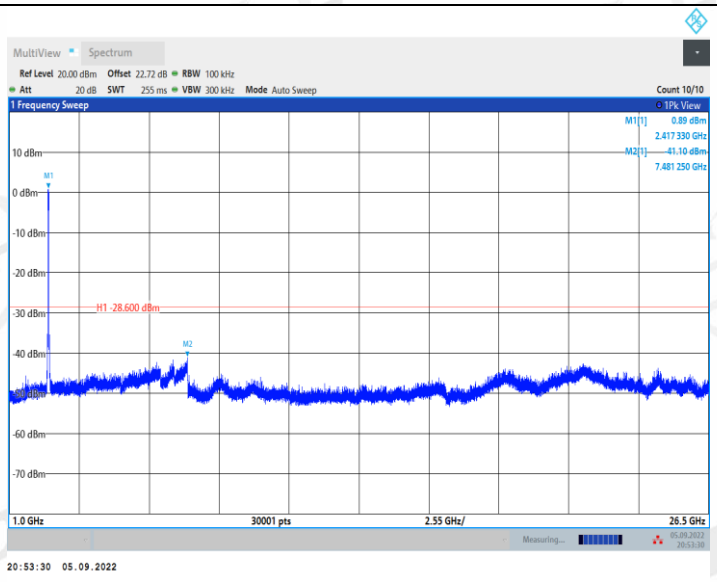
11N40SISO_Ant1_2422_0~Reference



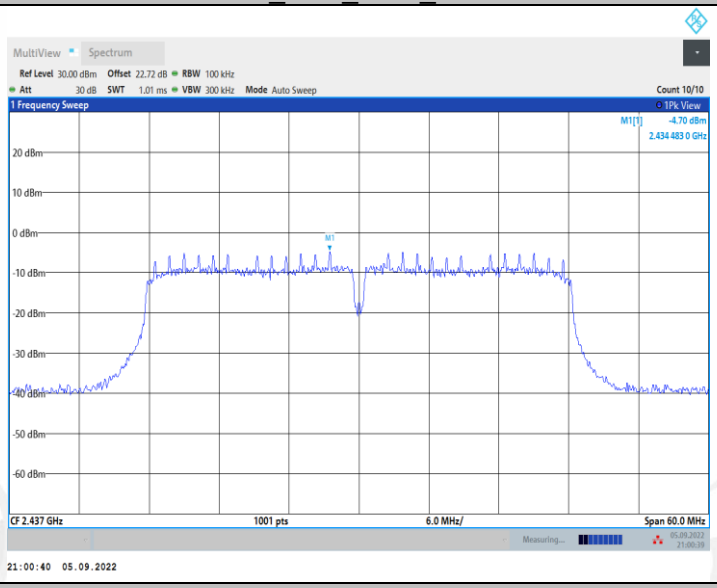
11N40SISO_Ant1_2422_30~1000



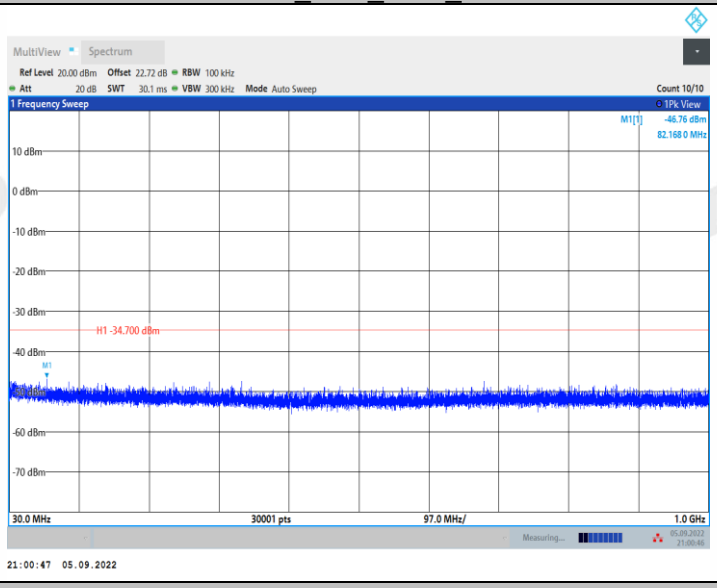
11N40SISO_Ant1_2422_1000~26500



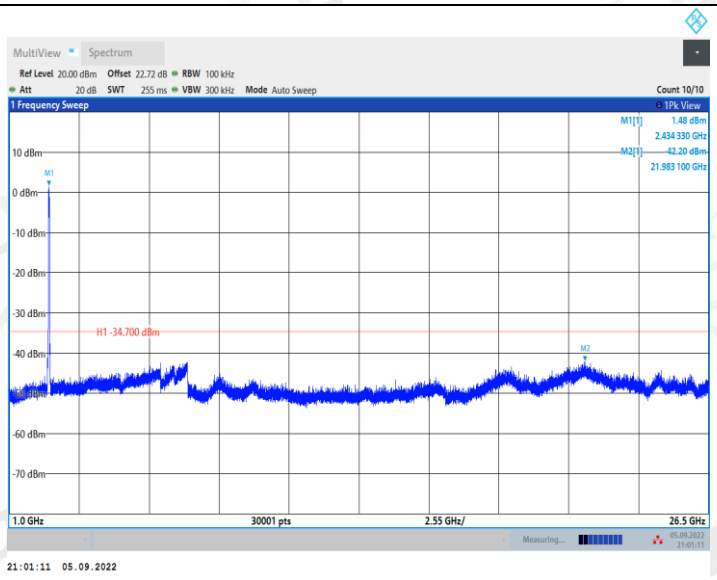
11N40SISO_Ant1_2437_0~Reference



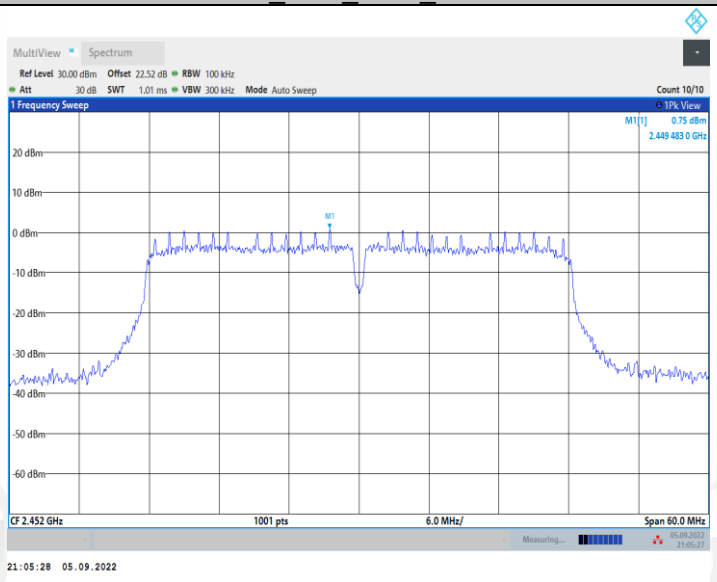
11N40SISO_Ant1_2437_30~1000



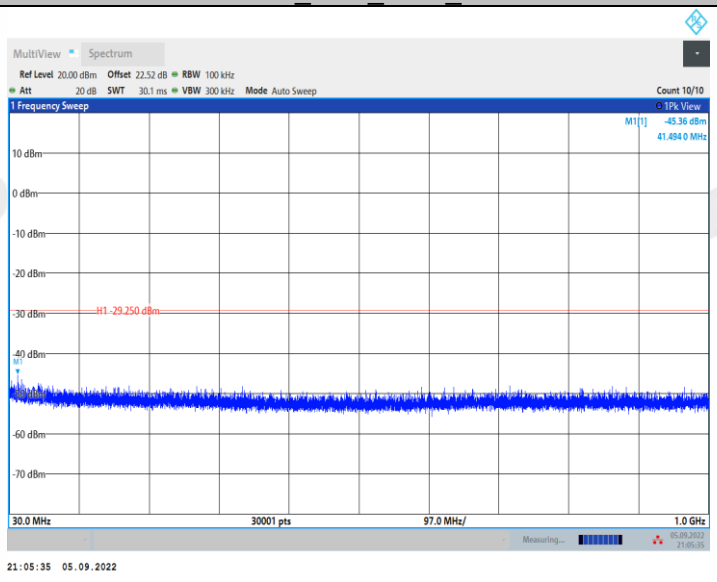
11N40SISO_Ant1_2437_1000~26500



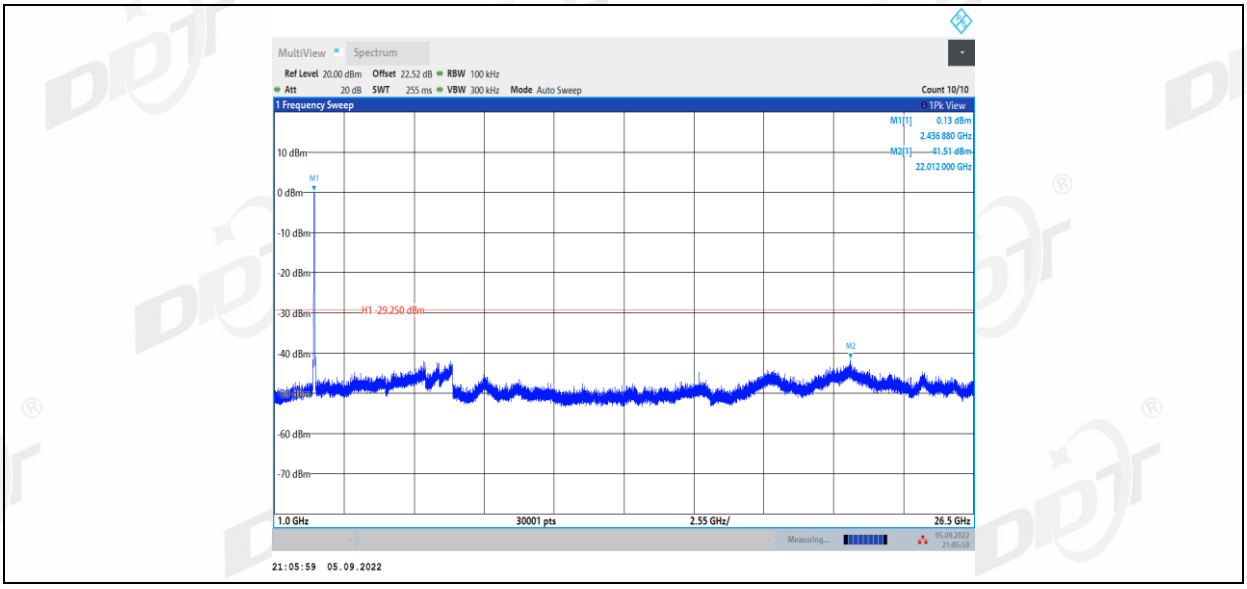
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



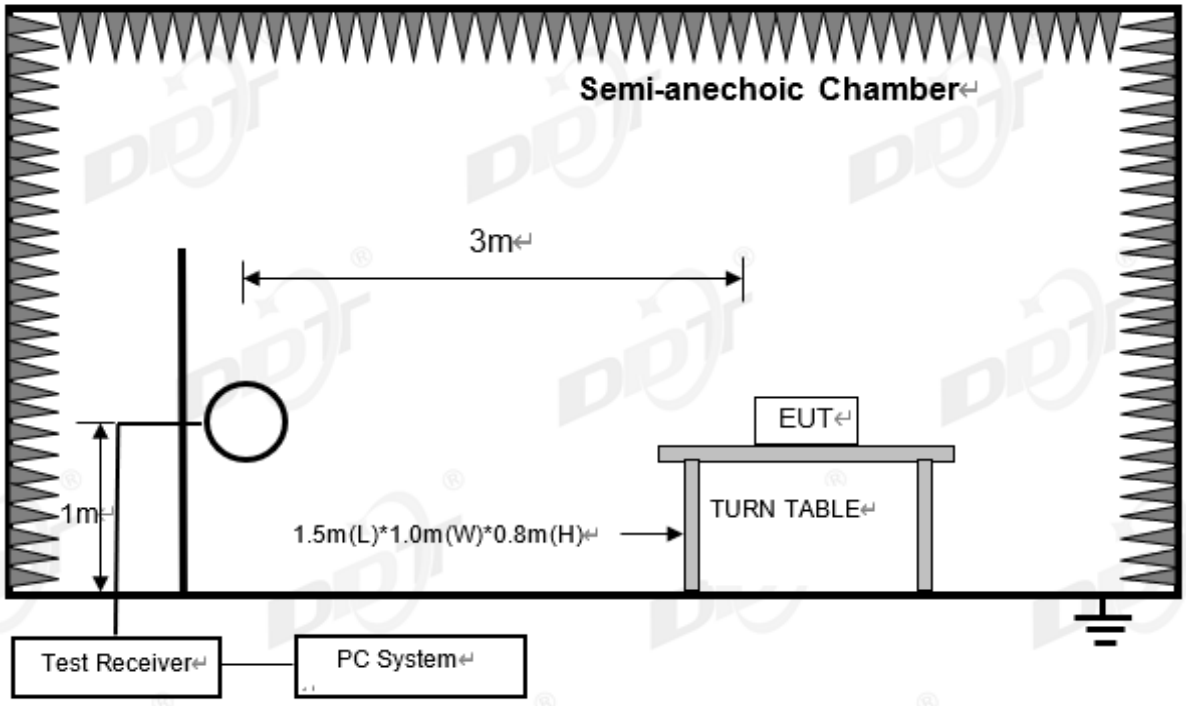
11N40SISO_Ant1_2452_1000~26500


MultiView
Spectrum
Ref Level 20.00 dBm Offset 22.52 dB RBW 100 kHz
Att 20 dB SWT 255 ms VBW 300 kHz Mode Auto Sweep
Count 10/10
1 Frequency Sweep
1Pk View
M1[1] 0.13 dBm
2.436 880 GHz
M2[1] 41.51 dBm
22.012 000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
H1 -29.250 dBm
M1
M2
1.0 GHz
30001 pts
2.55 GHz/
26.5 GHz
Measuring...
05.09.2022
21:05:59
21:05:59 05.09.2022

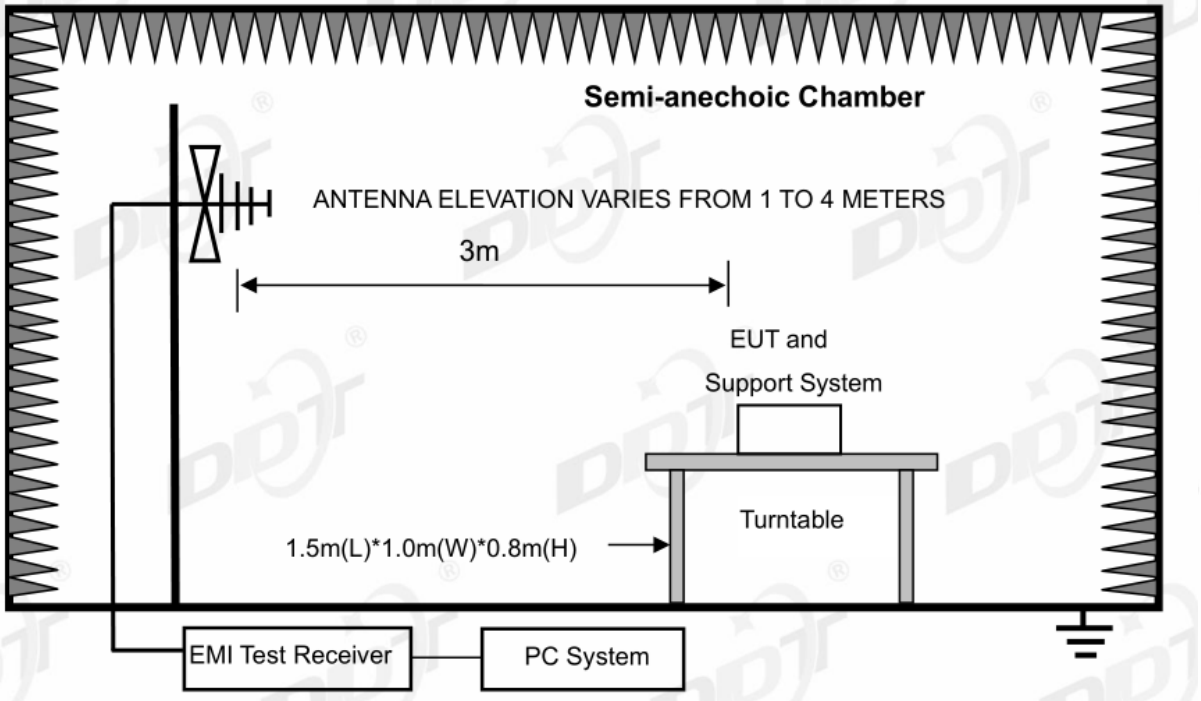
10. Radiated Spurious Emissions

10.1. Block diagram of test setup

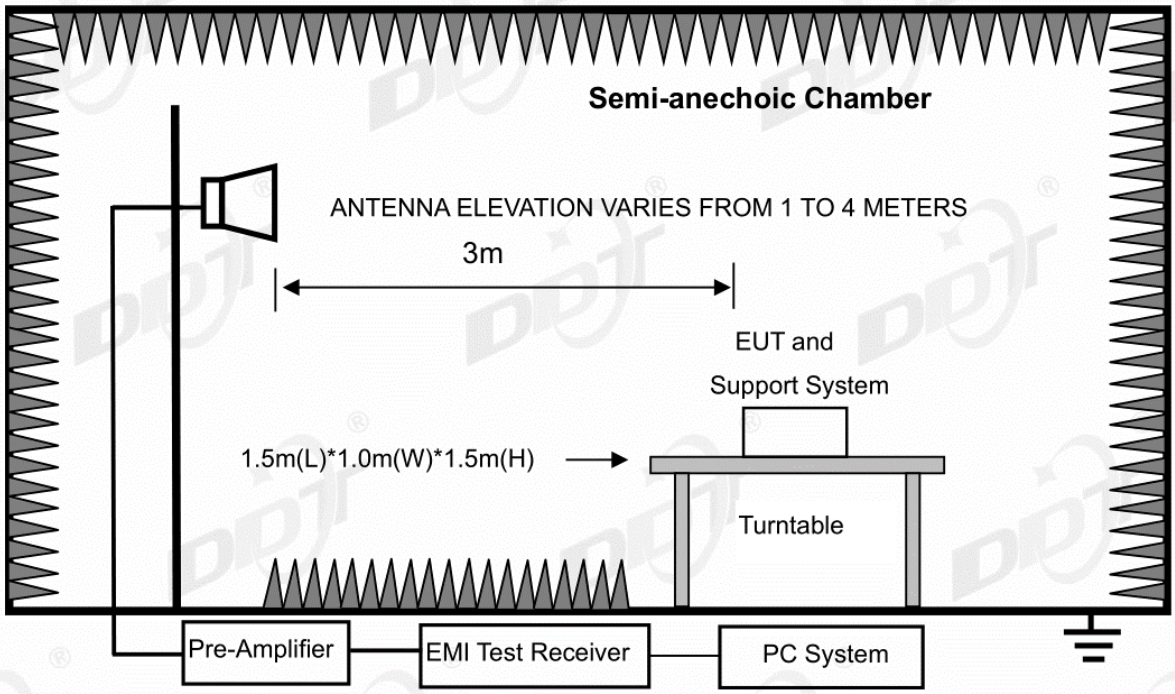
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

10.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	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	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&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	156.52475-156.52525	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 0.490-0.510 MHz.

[2]Above 38.6

(2) FCC 15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

10.3. Test Procedure

(1) EUT height should be 0.8 m for below 1 GHz at a semi-anechoic chamber while EUT height should be 1.5 m for above 1 GHz at full chamber or semi-anechoic chamber ground with absorbers.

(2) The antenna used as below table.

Test frequency range	Test antenna used	Measuring distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	3 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30 MHz, the Trilog Broadband Antenna or

Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18GHz to 25GHz, so below final test was performed with frequency range from 9kHz to 18GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90 kHz,110 kHz-490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; RMS detector RBW 1 MHz VBW 10 Hz for Average measure (according ANSI C63.10:2013 clause 4.2.3.2.3 procedure for average measure).

10.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits.

Note1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: 30 MHz ~ 25 GHz: (Scan with all mode, the worst case is 8022.11b mode)

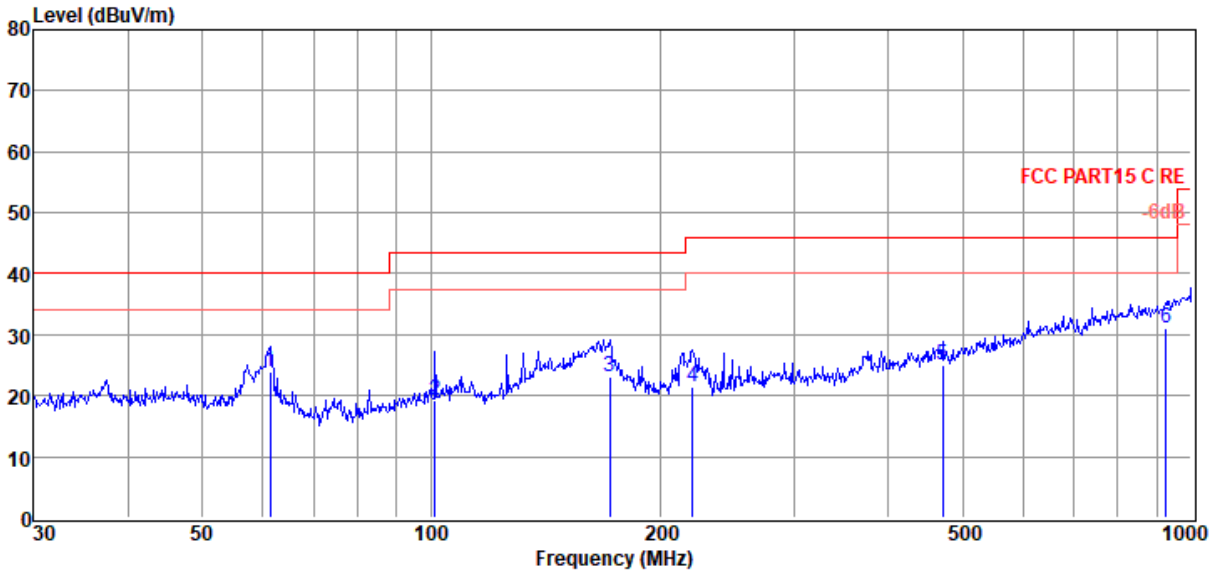
Note3: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 802.11b, Tx 2412 MHz mode.

Note4: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC BELOW 1G.EM6	
Test Date	: 2022-08-05	**Tested By**	: Bairong
EUT	: Car Audio	**Model Number**	: AV-1327W-99
Power Supply	: DC 12V	**Test Mode**	: Tx Mode
Condition	: Temp:22.8°C,Humi:59.1%,Press:100.1kPa	**Antenna/Distance**	: 2022 9161 #3/3m/HORIZONTAL
Memo	: 2.4G wifi		

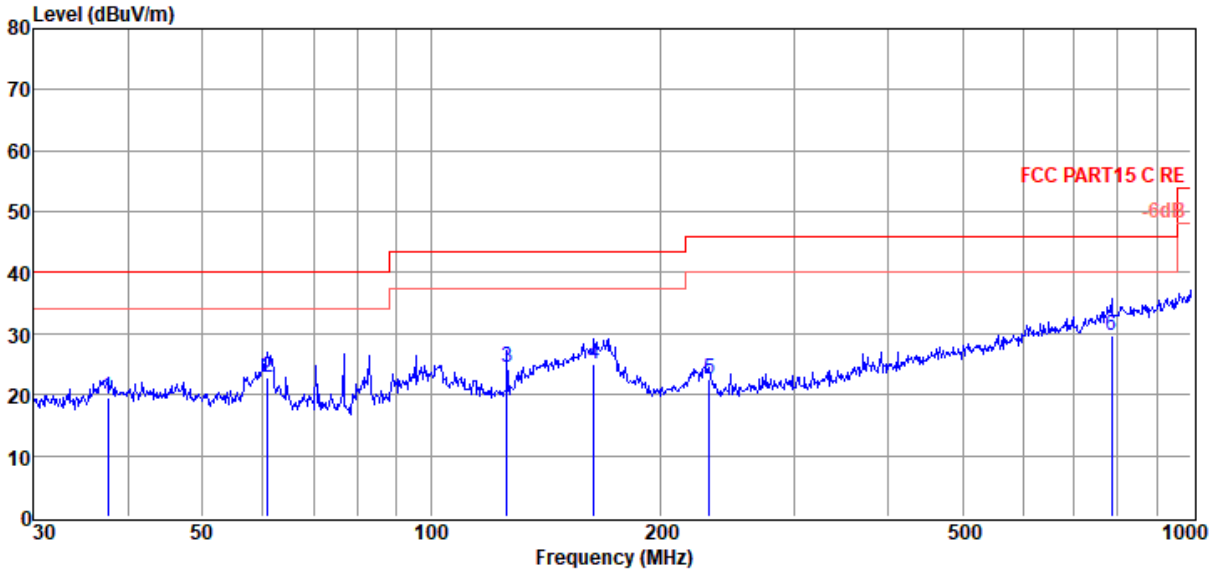


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	61.35	8.38	11.80	3.76	23.94	40.00	-16.06	QP	HORIZONTAL
2	101.29	2.75	12.43	3.99	19.17	43.50	-24.33	QP	HORIZONTAL
3	172.00	-0.06	18.90	4.35	23.19	43.50	-20.31	QP	HORIZONTAL
4	220.62	5.30	11.66	4.54	21.50	46.00	-24.50	QP	HORIZONTAL
5	470.52	2.32	17.20	5.39	24.91	46.00	-21.09	QP	HORIZONTAL
6	925.76	1.72	22.92	6.53	31.17	46.00	-14.83	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC BELOW 1G.EM6	
Test Date	: 2022-08-05	**Tested By**	: Bairong
EUT	: Car Audio	**Model Number**	: AV-1327W-99
Power Supply	: DC 12V	**Test Mode**	: Tx Mode
Condition	: Temp:22.8°C,Humi:59.1%,Press:100.1kPa	**Antenna/Distance**	: 2022 9161 #3/3m/VERTICAL
Memo	: 2.4G wifi		



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	37.55	3.98	11.96	3.60	19.54	40.00	-20.46	QP	VERTICAL
2	60.92	7.23	11.89	3.76	22.88	40.00	-17.12	QP	VERTICAL
3	125.89	7.54	12.67	4.14	24.35	43.50	-19.15	QP	VERTICAL
4	163.76	1.23	19.50	4.31	25.04	43.50	-18.46	QP	VERTICAL
5	232.53	6.33	11.55	4.59	22.47	46.00	-23.53	QP	VERTICAL
6	785.09	1.96	21.60	6.19	29.75	46.00	-16.25	QP	VERTICAL

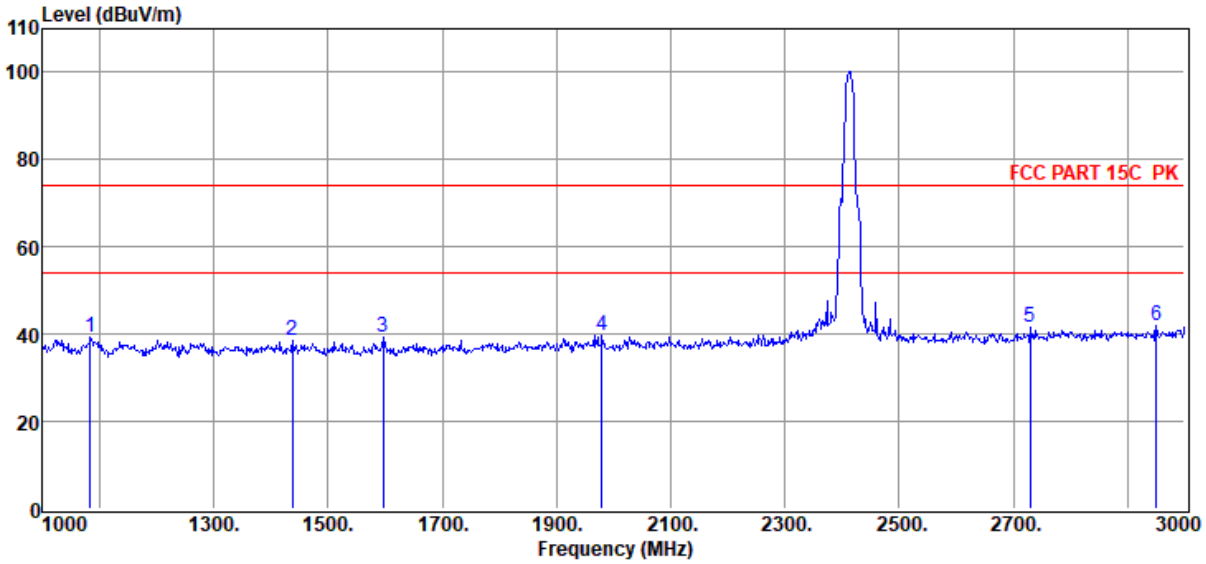
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2412			

Data: 23



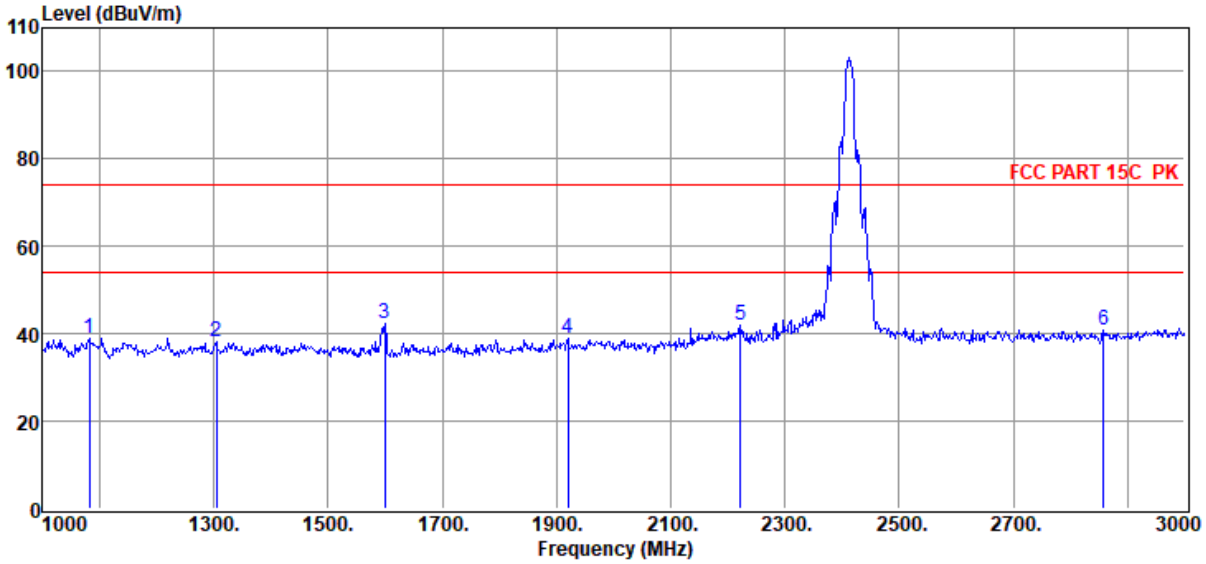
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1084.00	50.27	25.48	38.03	1.15	0.52	39.39	74.00	-34.61	Peak	HORIZONTAL
2	1438.00	49.90	25.41	38.56	1.35	0.58	38.68	74.00	-35.32	Peak	HORIZONTAL
3	1596.00	50.26	25.65	38.79	1.42	0.61	39.15	74.00	-34.85	Peak	HORIZONTAL
4	1980.00	50.21	26.65	39.37	1.59	0.68	39.76	74.00	-34.24	Peak	HORIZONTAL
5	2730.00	50.28	28.47	39.77	1.80	0.76	41.54	74.00	-32.46	Peak	HORIZONTAL
6	2950.00	49.81	29.31	39.88	1.86	0.78	41.88	74.00	-32.12	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2412			

Data: 24



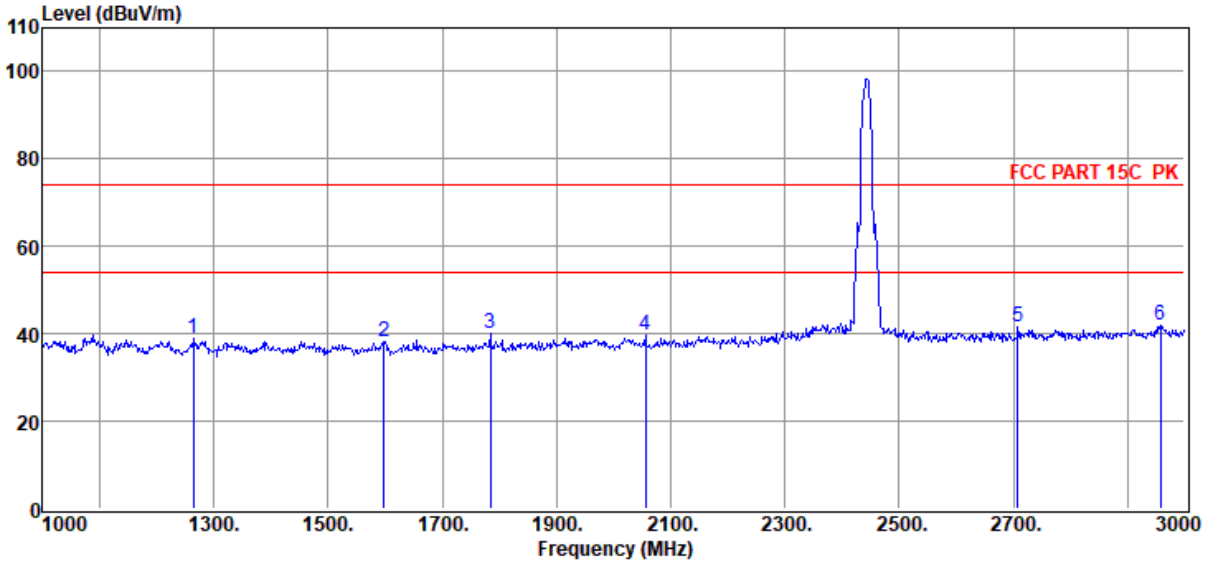
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1082.00	49.98	25.48	38.02	1.15	0.51	39.10	74.00	-34.90	Peak	VERTICAL
2	1304.00	49.28	25.44	38.36	1.27	0.55	38.18	74.00	-35.82	Peak	VERTICAL
3	1600.00	53.37	25.66	38.80	1.42	0.61	42.26	74.00	-31.74	Peak	VERTICAL
4	1920.00	49.40	26.49	39.28	1.56	0.67	38.84	74.00	-35.16	Peak	VERTICAL
5	2222.00	51.92	27.10	39.51	1.66	0.70	41.87	74.00	-32.13	Peak	VERTICAL
6	2858.00	48.92	28.96	39.83	1.83	0.77	40.65	74.00	-33.35	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2437			

Data: 25



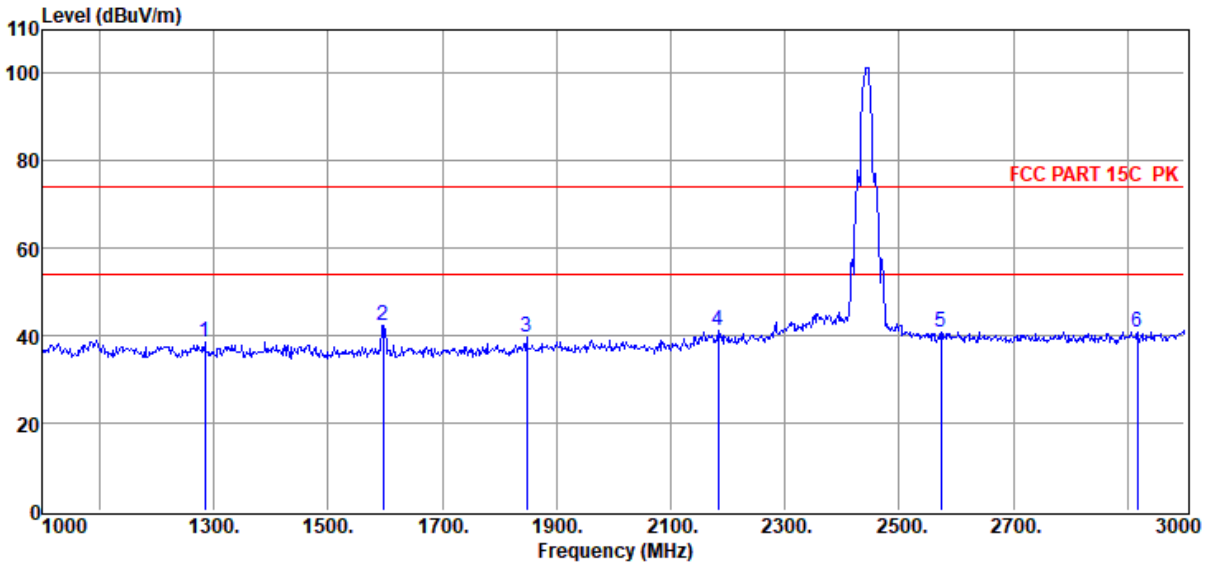
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1264.00	50.16	25.45	38.30	1.25	0.55	39.11	74.00	-34.89	Peak	HORIZONTAL
2	1598.00	49.20	25.65	38.80	1.42	0.61	38.08	74.00	-35.92	Peak	HORIZONTAL
3	1784.00	50.94	26.14	39.08	1.50	0.64	40.14	74.00	-33.86	Peak	HORIZONTAL
4	2056.00	50.19	26.80	39.43	1.62	0.69	39.87	74.00	-34.13	Peak	HORIZONTAL
5	2708.00	50.40	28.39	39.75	1.79	0.76	41.59	74.00	-32.41	Peak	HORIZONTAL
6	2958.00	49.81	29.34	39.88	1.86	0.79	41.92	74.00	-32.08	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2437			

Data: 26



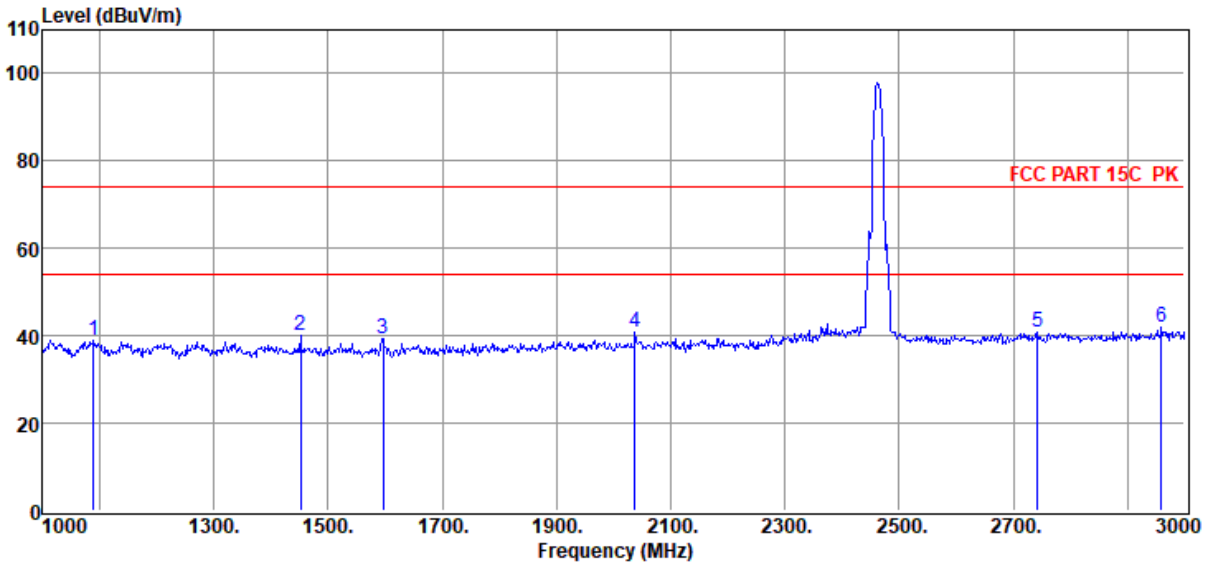
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1284.00	49.78	25.44	38.33	1.26	0.55	38.70	74.00	-35.30	Peak	VERTICAL
2	1596.00	53.47	25.65	38.79	1.42	0.61	42.36	74.00	-31.64	Peak	VERTICAL
3	1848.00	50.19	26.30	39.17	1.53	0.65	39.50	74.00	-34.50	Peak	VERTICAL
4	2184.00	51.22	27.03	39.49	1.65	0.70	41.11	74.00	-32.89	Peak	VERTICAL
5	2574.00	50.26	27.88	39.69	1.76	0.74	40.95	74.00	-33.05	Peak	VERTICAL
6	2918.00	48.94	29.19	39.86	1.85	0.78	40.90	74.00	-33.10	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2462			

Data: 27



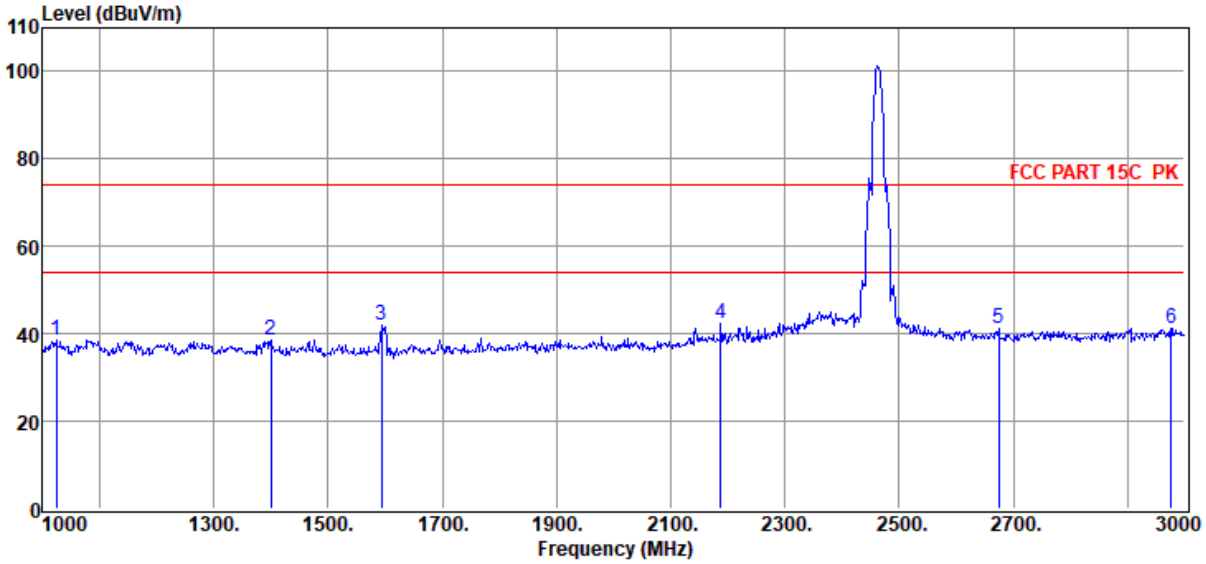
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1090.00	49.63	25.48	38.03	1.15	0.52	38.75	74.00	-35.25	Peak	HORIZONTAL
2	1452.00	51.37	25.41	38.58	1.35	0.58	40.13	74.00	-33.87	Peak	HORIZONTAL
3	1596.00	50.41	25.65	38.79	1.42	0.61	39.30	74.00	-34.70	Peak	HORIZONTAL
4	2038.00	51.12	26.77	39.42	1.61	0.68	40.76	74.00	-33.24	Peak	HORIZONTAL
5	2742.00	49.42	28.52	39.77	1.80	0.76	40.73	74.00	-33.27	Peak	HORIZONTAL
6	2960.00	50.00	29.35	39.88	1.86	0.79	42.12	74.00	-31.88	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2462			

Data: 28



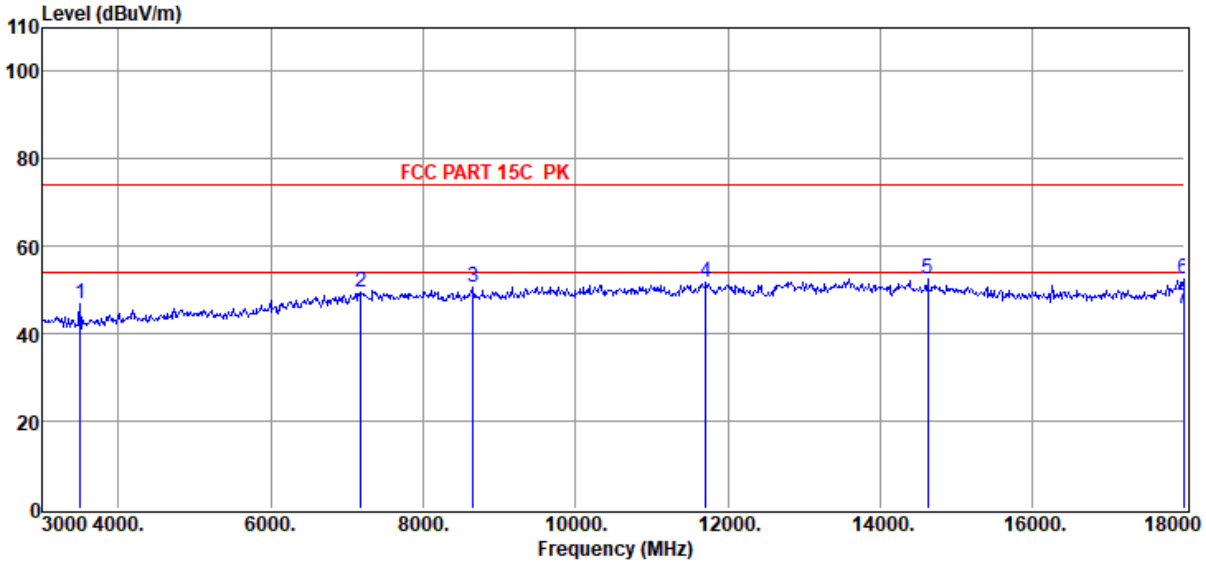
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1024.00	49.48	25.50	37.94	1.11	0.50	38.65	74.00	-35.35	Peak	VERTICAL
2	1400.00	49.65	25.42	38.50	1.32	0.57	38.46	74.00	-35.54	Peak	VERTICAL
3	1594.00	52.97	25.64	38.79	1.42	0.61	41.85	74.00	-32.15	Peak	VERTICAL
4	2188.00	52.57	27.04	39.49	1.65	0.70	42.47	74.00	-31.53	Peak	VERTICAL
5	2674.00	50.24	28.26	39.74	1.79	0.75	41.30	74.00	-32.70	Peak	VERTICAL
6	2976.00	49.01	29.41	39.89	1.86	0.79	41.18	74.00	-32.82	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2412			

Data: 17



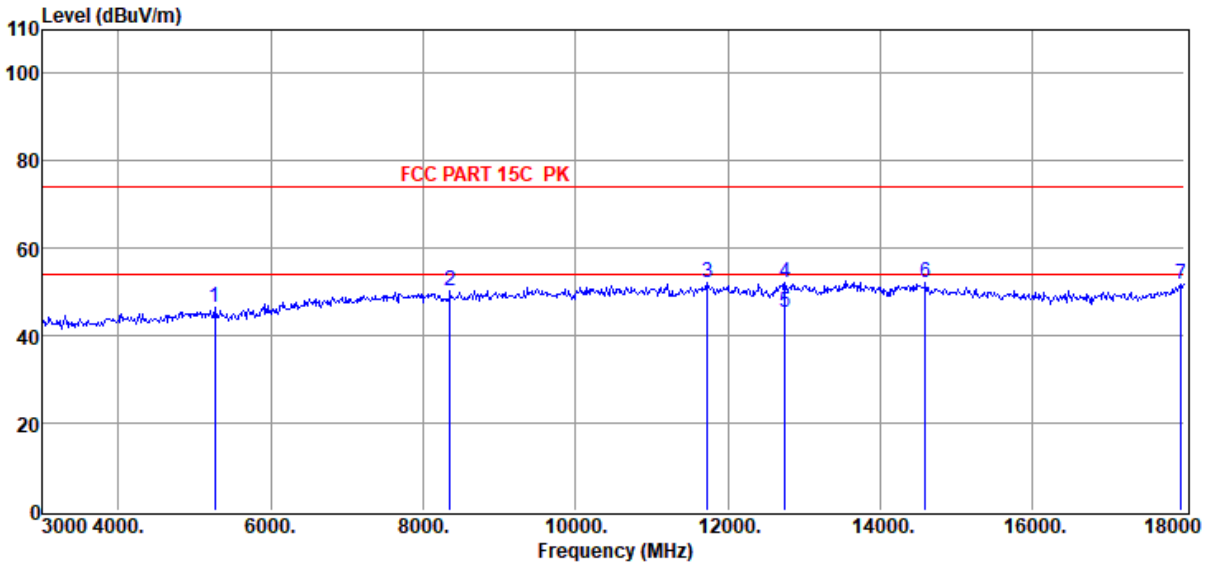
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	3495.00	53.13	29.40	40.05	1.69	2.61	46.78	74.00	-27.22	Peak	HORIZONTAL
2	7185.00	47.91	36.15	39.72	3.06	2.26	49.66	74.00	-24.34	Peak	HORIZONTAL
3	8655.00	46.95	37.95	39.87	3.25	2.21	50.49	74.00	-23.51	Peak	HORIZONTAL
4	11715.00	46.60	39.09	40.13	4.00	2.39	51.95	74.00	-22.05	Peak	HORIZONTAL
5	14625.00	45.42	39.80	39.64	4.38	2.72	52.68	74.00	-21.32	Peak	HORIZONTAL
6	17985.00	42.24	42.41	40.69	4.96	3.79	52.71	74.00	-21.29	Peak	HORIZONTAL
7	17985.00	35.36	42.41	40.69	4.96	3.79	45.83	54.00	-8.17	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2412			

Data: 18



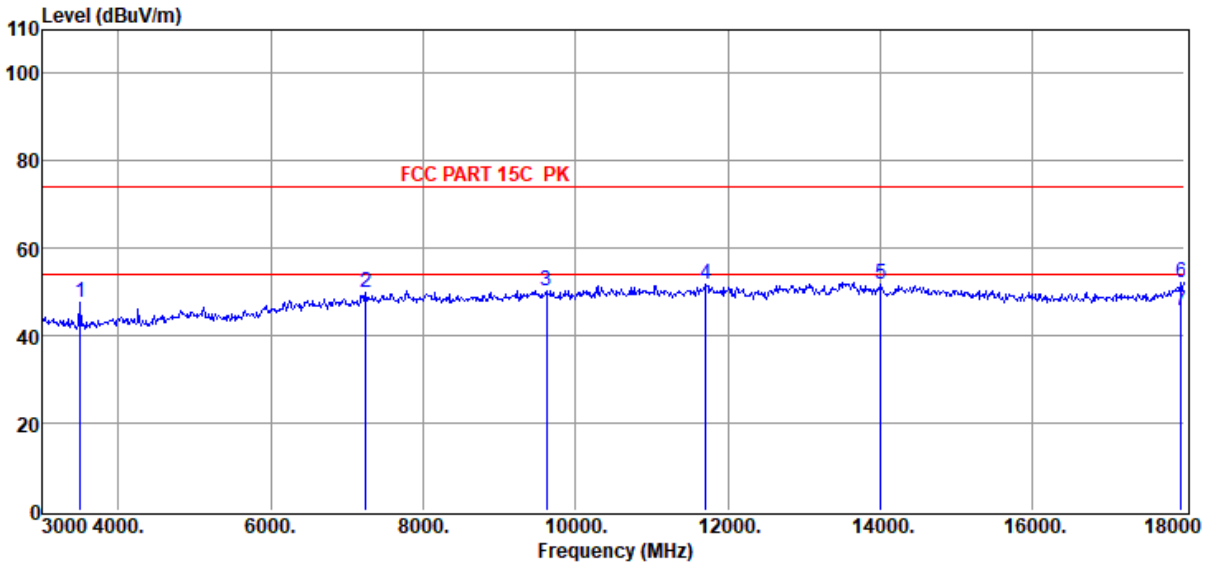
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5265.00	49.08	32.94	40.43	2.56	2.35	46.50	74.00	-27.50	Peak	VERTICAL
2	8355.00	46.94	37.57	39.84	3.21	2.24	50.12	74.00	-23.88	Peak	VERTICAL
3	11730.00	46.66	39.09	40.13	4.01	2.39	52.02	74.00	-21.98	Peak	VERTICAL
4	12750.00	46.36	39.30	40.33	4.06	2.82	52.21	74.00	-21.79	Peak	VERTICAL
5	12750.00	39.65	39.30	40.33	4.06	2.82	45.50	54.00	-8.50	Average	VERTICAL
6	14595.00	44.72	39.82	39.64	4.37	2.73	52.00	74.00	-22.00	Peak	VERTICAL
7	17955.00	41.60	42.22	40.67	4.95	3.78	51.88	74.00	-22.12	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2437			

Data: 19



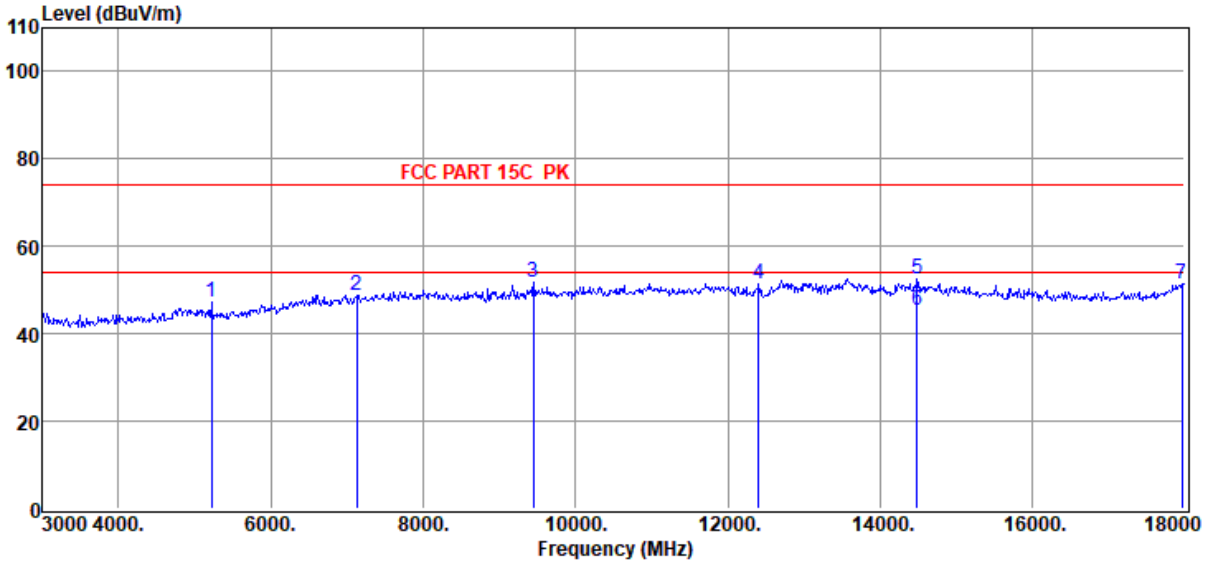
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	3495.00	53.89	29.40	40.05	1.69	2.61	47.54	74.00	-26.46	Peak	HORIZONTAL
2	7245.00	48.19	36.20	39.72	3.08	2.26	50.01	74.00	-23.99	Peak	HORIZONTAL
3	9615.00	46.16	38.63	40.33	3.63	2.36	50.45	74.00	-23.55	Peak	HORIZONTAL
4	11715.00	46.58	39.09	40.13	4.00	2.39	51.93	74.00	-22.07	Peak	HORIZONTAL
5	14010.00	44.33	39.90	39.70	4.53	2.90	51.96	74.00	-22.04	Peak	HORIZONTAL
6	17955.00	41.96	42.22	40.67	4.95	3.78	52.24	74.00	-21.76	Peak	HORIZONTAL
7	17955.00	35.38	42.22	40.67	4.95	3.78	45.66	54.00	-8.34	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2437			

Data: 20



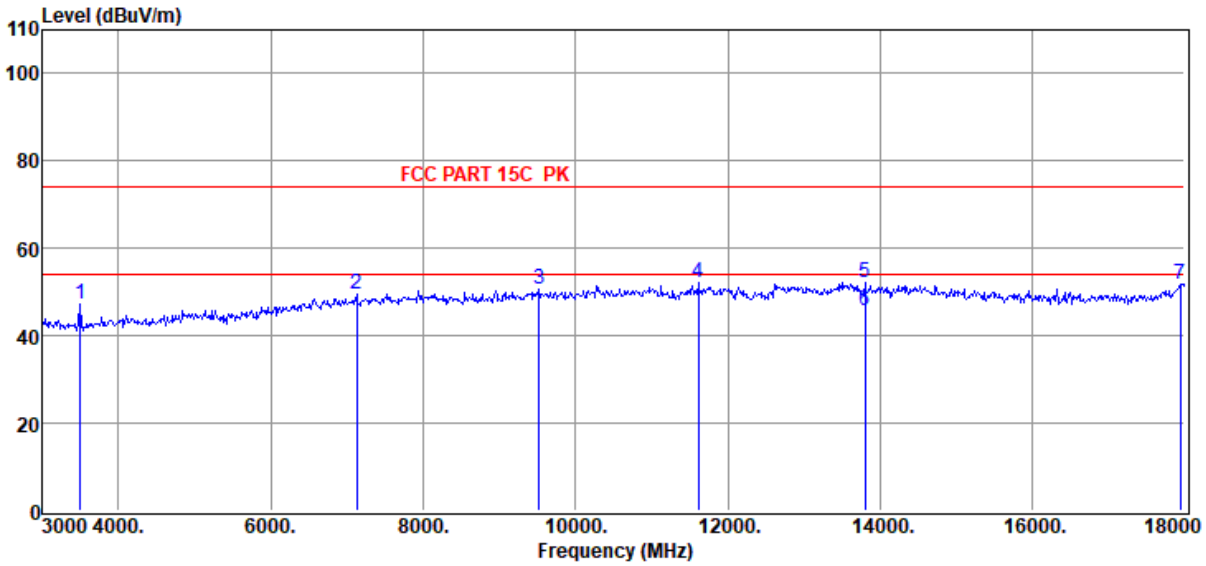
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5220.00	49.77	32.97	40.42	2.55	2.32	47.19	74.00	-26.81	Peak	VERTICAL
2	7125.00	47.19	36.10	39.71	3.05	2.26	48.89	74.00	-25.11	Peak	VERTICAL
3	9450.00	47.43	38.66	40.22	3.59	2.32	51.78	74.00	-22.22	Peak	VERTICAL
4	12405.00	46.25	39.04	40.22	3.77	2.63	51.47	74.00	-22.53	Peak	VERTICAL
5	14490.00	45.02	39.90	39.65	4.35	2.76	52.38	74.00	-21.62	Peak	VERTICAL
6	14490.00	38.18	39.90	39.65	4.35	2.76	45.54	54.00	-8.46	Average	VERTICAL
7	17970.00	41.08	42.31	40.68	4.95	3.78	51.44	74.00	-22.56	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2462			

Data: 21



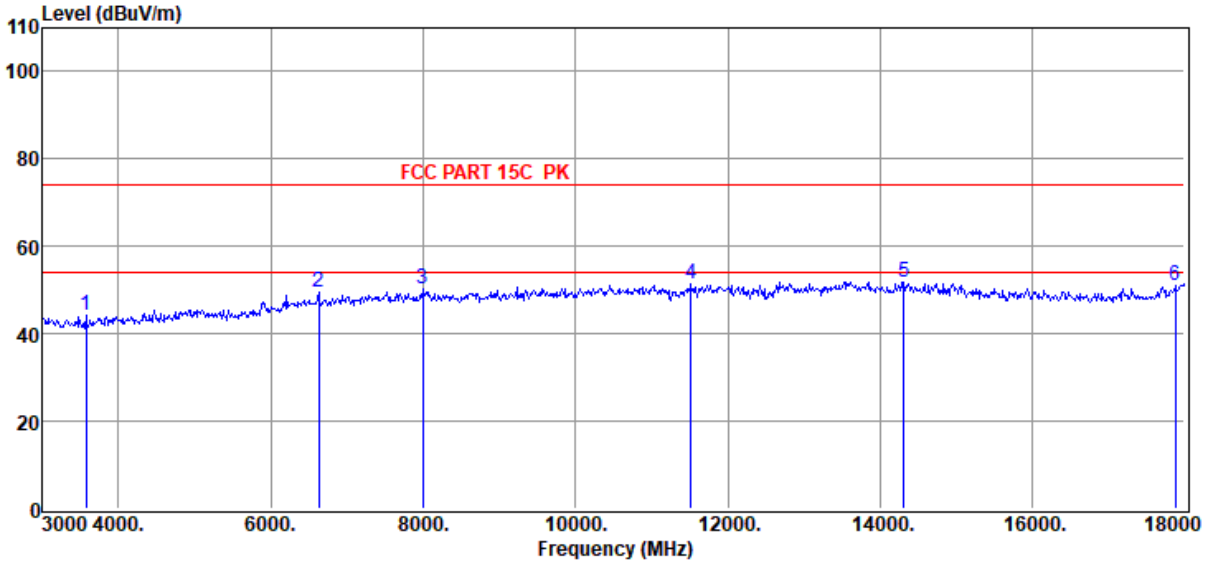
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	3495.00	53.46	29.40	40.05	1.69	2.61	47.11	74.00	-26.89	Peak	HORIZONTAL
2	7125.00	47.90	36.10	39.71	3.05	2.26	49.60	74.00	-24.40	Peak	HORIZONTAL
3	9525.00	46.41	38.69	40.27	3.62	2.34	50.79	74.00	-23.21	Peak	HORIZONTAL
4	11610.00	46.71	39.04	40.14	3.99	2.39	51.99	74.00	-22.01	Peak	HORIZONTAL
5	13800.00	44.78	39.94	39.84	4.31	2.91	52.10	74.00	-21.90	Peak	HORIZONTAL
6	13800.00	38.59	39.94	39.84	4.31	2.91	45.91	54.00	-8.09	Average	HORIZONTAL
7	17940.00	41.66	42.13	40.66	4.94	3.77	51.84	74.00	-22.16	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2462			

Data: 22

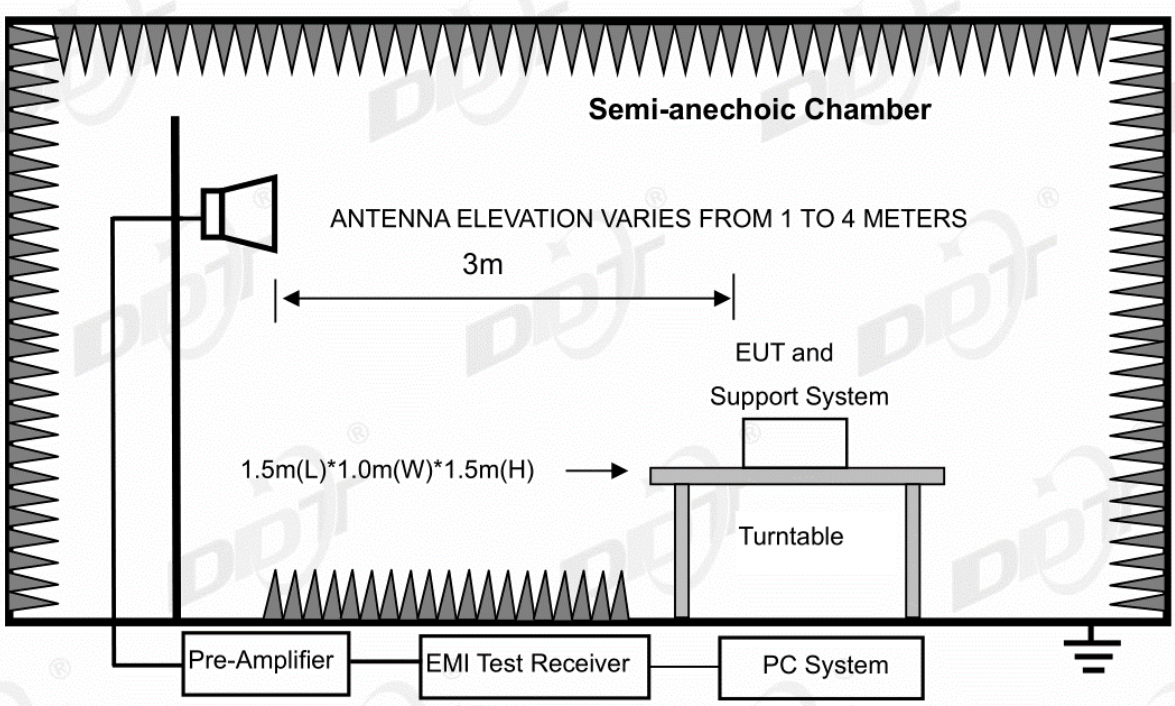


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	3570.00	50.38	29.64	40.07	1.75	2.53	44.23	74.00	-29.77	Peak	VERTICAL
2	6630.00	48.30	35.41	40.00	3.20	2.46	49.37	74.00	-24.63	Peak	VERTICAL
3	7995.00	47.59	36.99	39.80	3.19	2.28	50.25	74.00	-23.75	Peak	VERTICAL
4	11520.00	46.12	39.01	40.15	3.97	2.39	51.34	74.00	-22.66	Peak	VERTICAL
5	14310.00	44.42	39.90	39.67	4.42	2.81	51.88	74.00	-22.12	Peak	VERTICAL
6	17880.00	41.23	41.76	40.63	4.93	3.76	51.05	74.00	-22.95	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

11. Radiated Band Edge Compliance

11.1. Block diagram of test setup



11.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20dB below the fundamental emissions or comply with FCC 15.209 limits.

11.3. Test Procedure

Same with clause 8.3 except change investigated frequency range from 2310 MHz to 2430 MHz and 2450 MHz to 2500 MHz, 2310 MHz to 2450 MHz and 2430 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

11.4. Test result

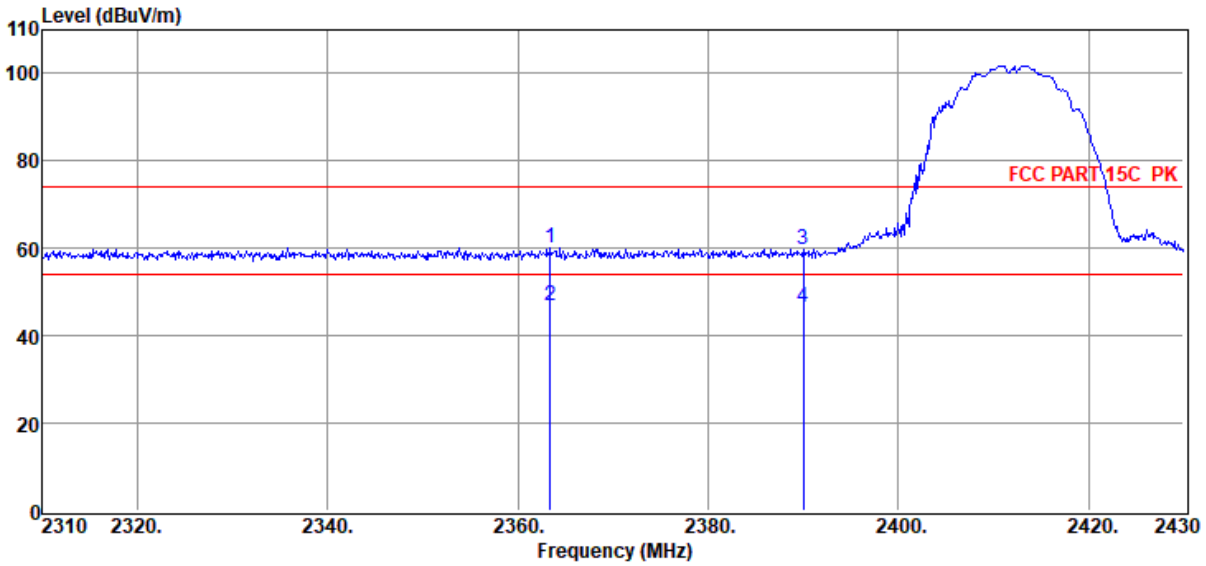
Pass. (See below detailed test result)

Note: All mode were tested and only the worst case was recorded this report.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2412			

Data: 1



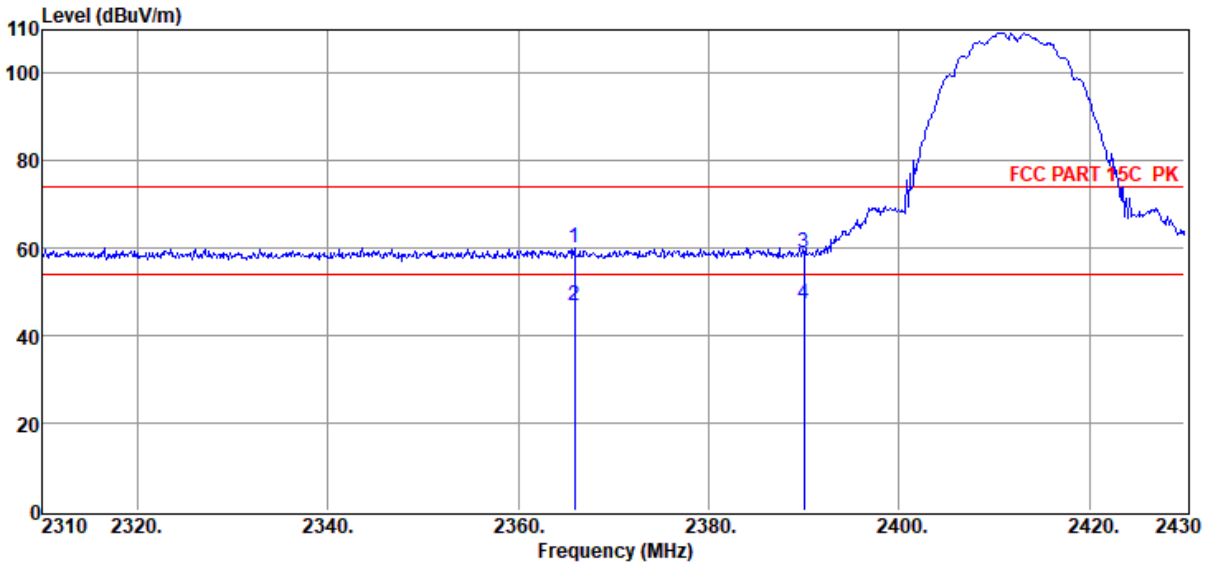
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2363.40	49.96	27.35	39.58	1.70	0.72	60.15	74.00	-13.85	Peak	HORIZONTAL
2	2363.40	36.55	27.35	39.58	1.70	0.72	46.74	54.00	-7.26	Average	HORIZONTAL
3	2390.04	49.32	27.40	39.60	1.71	0.72	59.55	74.00	-14.45	Peak	HORIZONTAL
4	2390.04	36.18	27.40	39.60	1.71	0.72	46.41	54.00	-7.59	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2412			

Data: 2



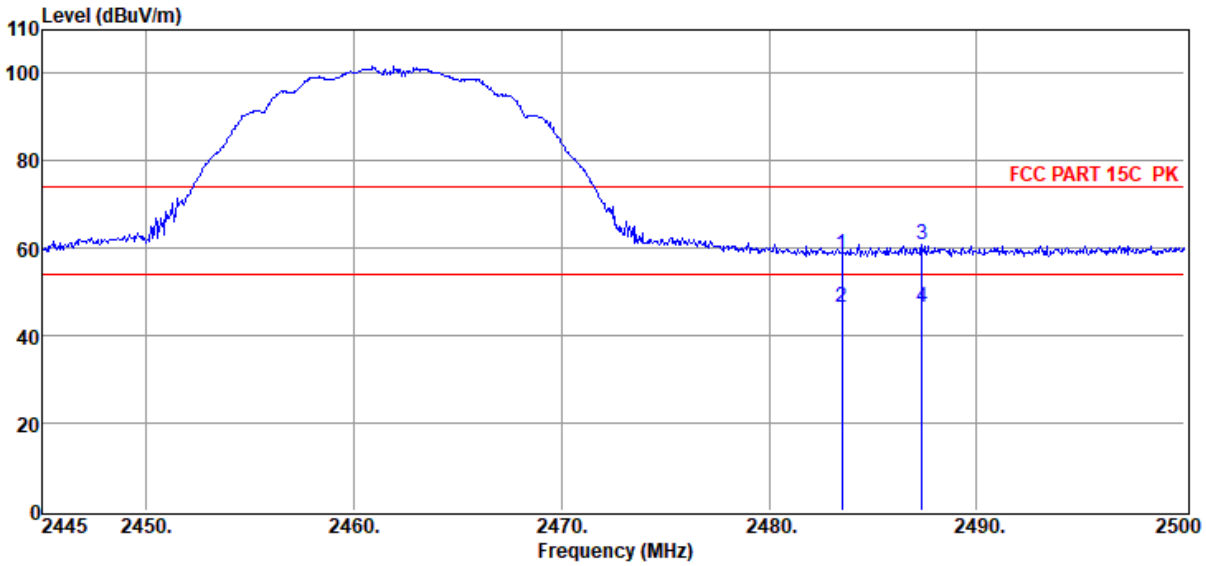
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2365.92	50.04	27.36	39.58	1.70	0.72	60.24	74.00	-13.76	Peak	VERTICAL
2	2365.92	36.64	27.36	39.58	1.70	0.72	46.84	54.00	-7.16	Average	VERTICAL
3	2390.04	48.83	27.40	39.60	1.71	0.72	59.06	74.00	-14.94	Peak	VERTICAL
4	2390.04	37.15	27.40	39.60	1.71	0.72	47.38	54.00	-6.62	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11B 2462			

Data: 3



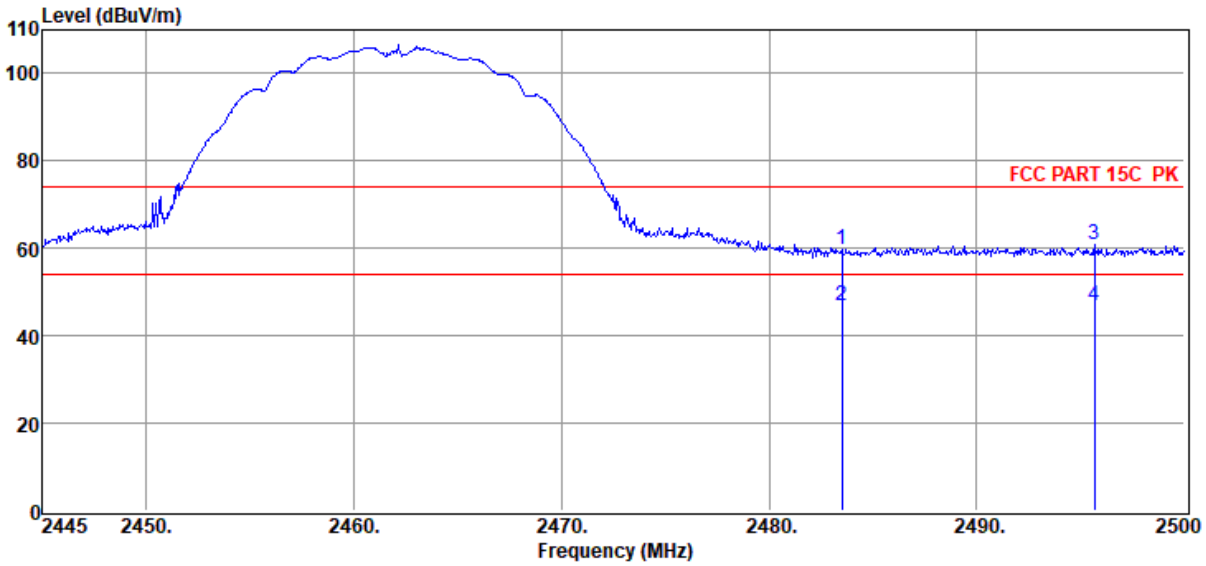
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.14	27.57	39.64	1.74	0.73	58.54	74.00	-15.46	Peak	HORIZONTAL
2	2483.50	35.97	27.57	39.64	1.74	0.73	46.37	54.00	-7.63	Average	HORIZONTAL
3	2487.35	50.29	27.58	39.64	1.74	0.73	60.70	74.00	-13.30	Peak	HORIZONTAL
4	2487.35	36.16	27.58	39.64	1.74	0.73	46.57	54.00	-7.43	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11B 2462			

Data: 4



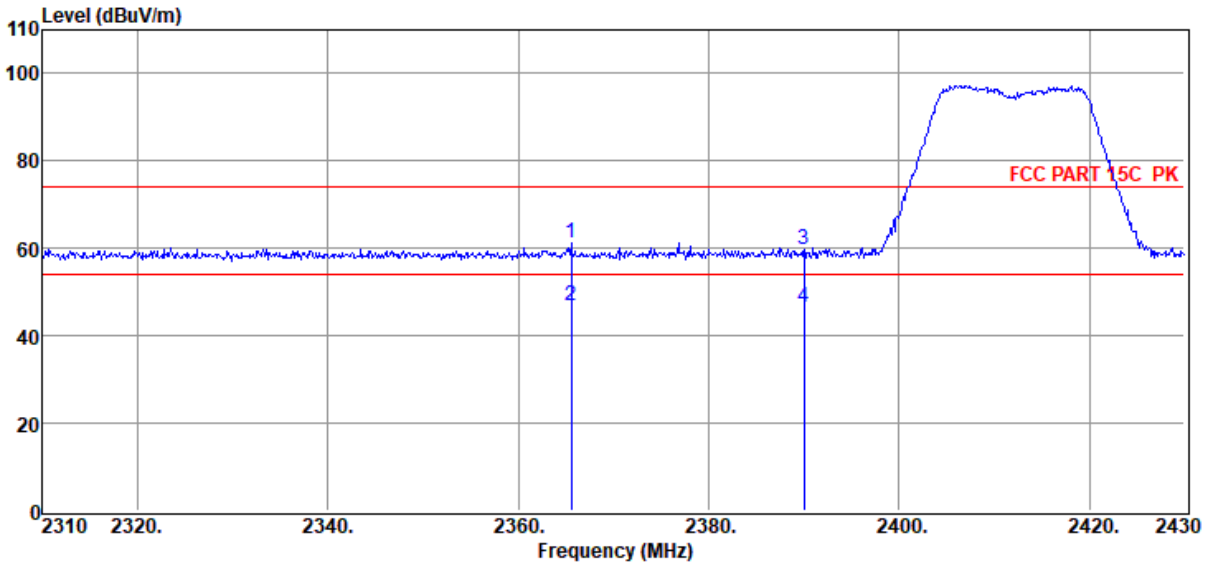
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	49.44	27.57	39.64	1.74	0.73	59.84	74.00	-14.16	Peak	VERTICAL
2	2483.50	36.34	27.57	39.64	1.74	0.73	46.74	54.00	-7.26	Average	VERTICAL
3	2495.66	50.35	27.59	39.65	1.74	0.73	60.76	74.00	-13.24	Peak	VERTICAL
4	2495.66	36.60	27.59	39.65	1.74	0.73	47.01	54.00	-6.99	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11G 2412			

Data: 5



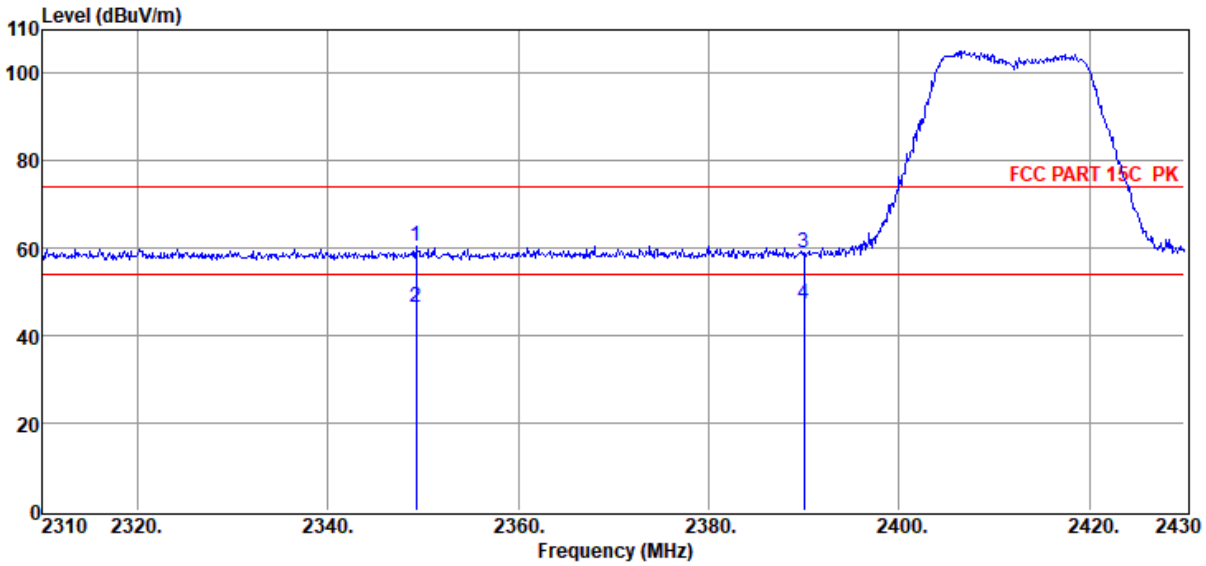
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2365.56	50.99	27.36	39.58	1.70	0.72	61.19	74.00	-12.81	Peak	HORIZONTAL
2	2365.56	36.55	27.36	39.58	1.70	0.72	46.75	54.00	-7.25	Average	HORIZONTAL
3	2390.04	49.45	27.40	39.60	1.71	0.72	59.68	74.00	-14.32	Peak	HORIZONTAL
4	2390.04	36.35	27.40	39.60	1.71	0.72	46.58	54.00	-7.42	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11G 2412			

Data: 6



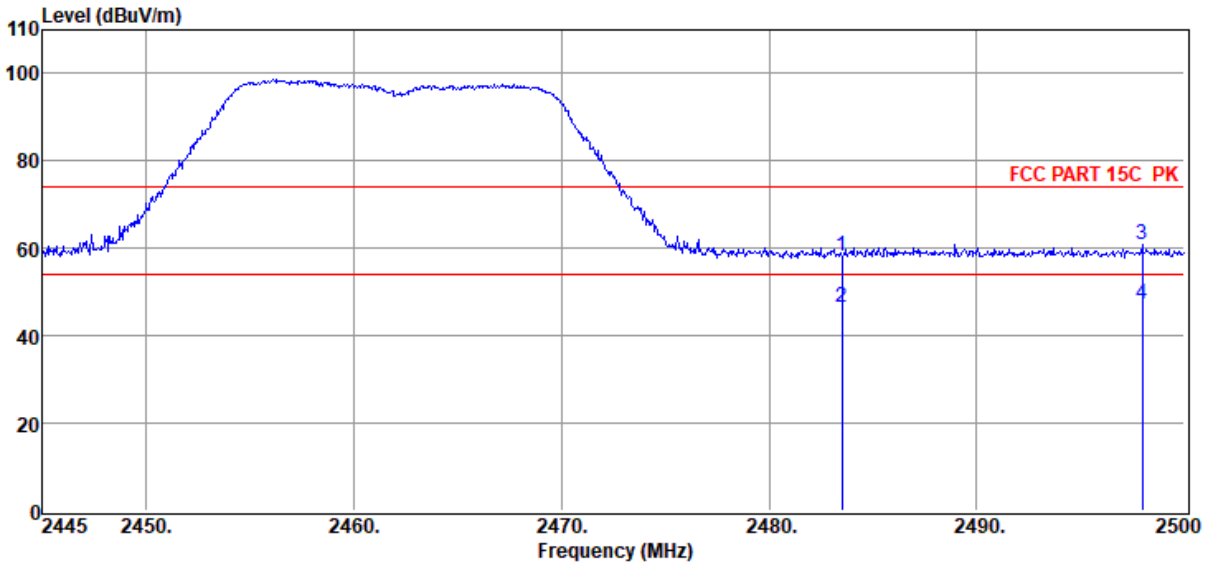
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2349.24	50.48	27.33	39.57	1.70	0.72	60.66	74.00	-13.34	Peak	VERTICAL
2	2349.24	36.21	27.33	39.57	1.70	0.72	46.39	54.00	-7.61	Average	VERTICAL
3	2390.04	48.77	27.40	39.60	1.71	0.72	59.00	74.00	-15.00	Peak	VERTICAL
4	2390.04	36.95	27.40	39.60	1.71	0.72	47.18	54.00	-6.82	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11G 2462			

Data: 7



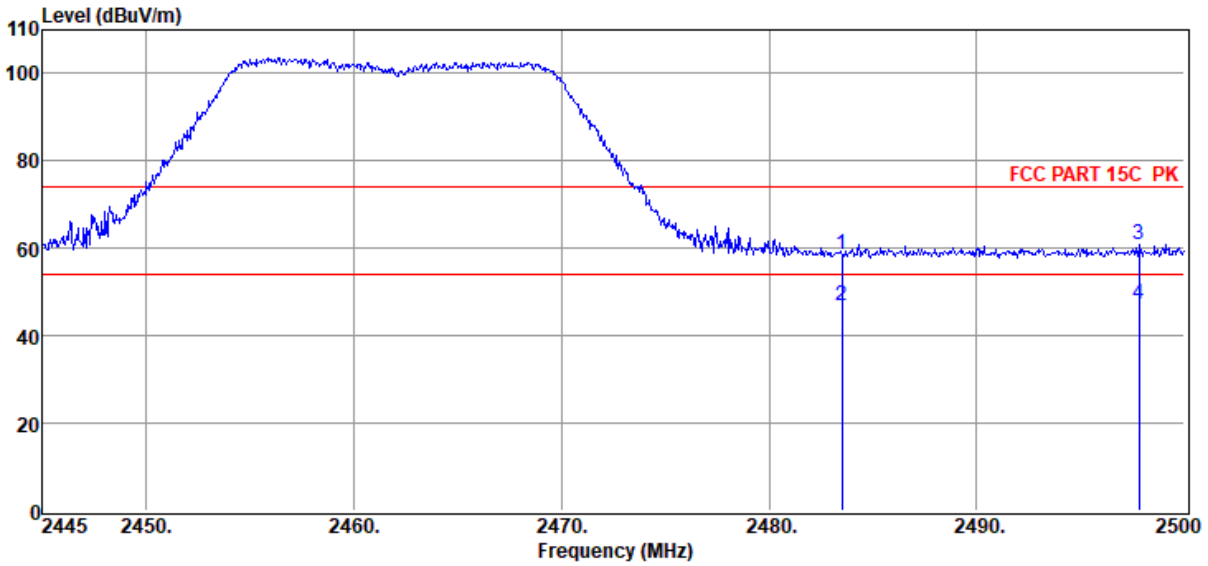
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	47.67	27.57	39.64	1.74	0.73	58.07	74.00	-15.93	Peak	HORIZONTAL
2	2483.50	36.19	27.57	39.64	1.74	0.73	46.59	54.00	-7.41	Average	HORIZONTAL
3	2497.97	50.46	27.60	39.65	1.74	0.73	60.88	74.00	-13.12	Peak	HORIZONTAL
4	2497.97	36.85	27.60	39.65	1.74	0.73	47.27	54.00	-6.73	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11G 2462			

Data: 8



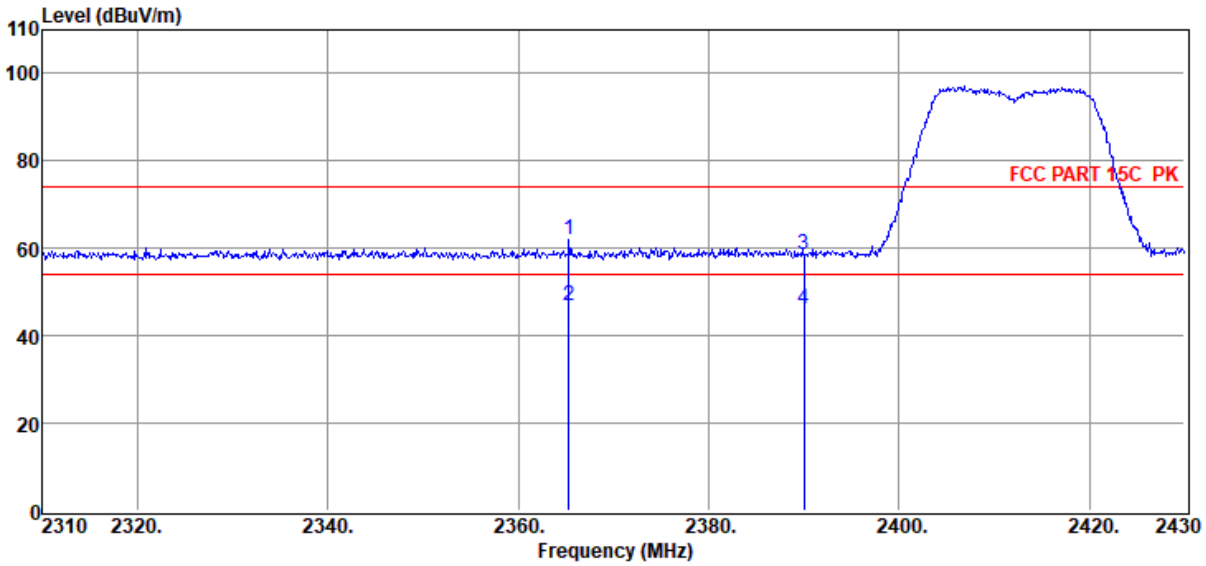
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.37	27.57	39.64	1.74	0.73	58.77	74.00	-15.23	Peak	VERTICAL
2	2483.50	36.54	27.57	39.64	1.74	0.73	46.94	54.00	-7.06	Average	VERTICAL
3	2497.80	50.37	27.60	39.65	1.74	0.73	60.79	74.00	-13.21	Peak	VERTICAL
4	2497.80	36.77	27.60	39.65	1.74	0.73	47.19	54.00	-6.81	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-25	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11N20 2412 Power:37			

Data: 9



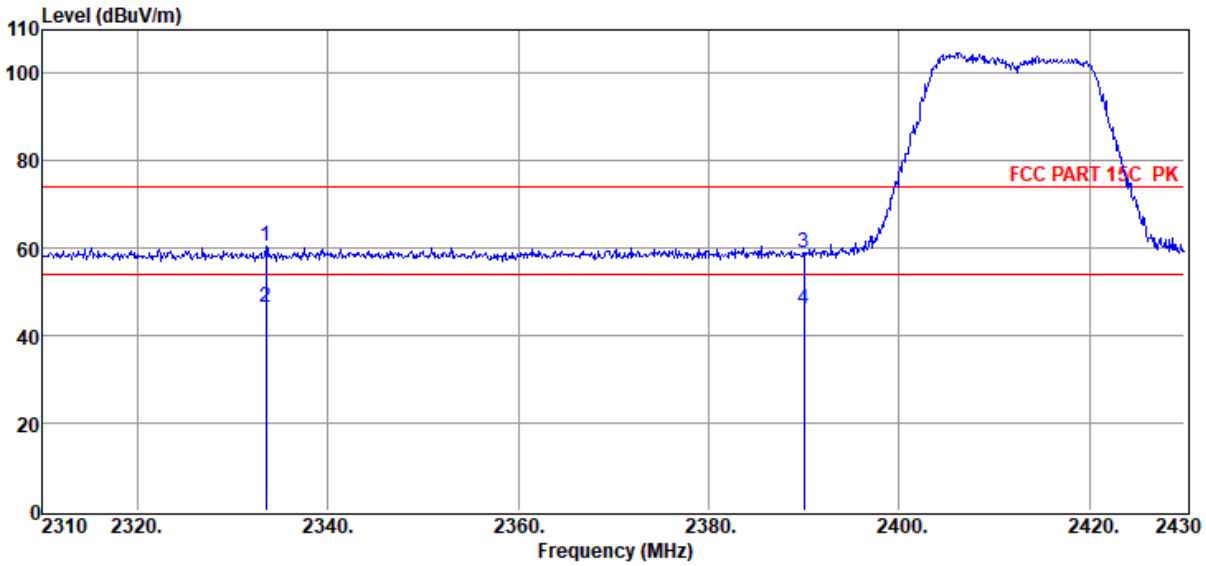
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2365.32	51.87	27.36	39.58	1.70	0.72	62.07	74.00	-11.93	Peak	HORIZONTAL
2	2365.32	36.64	27.36	39.58	1.70	0.72	46.84	54.00	-7.16	Average	HORIZONTAL
3	2390.04	48.40	27.40	39.60	1.71	0.72	58.63	74.00	-15.37	Peak	HORIZONTAL
4	2390.04	35.98	27.40	39.60	1.71	0.72	46.21	54.00	-7.79	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11N20 2412 Power:37			

Data: 10



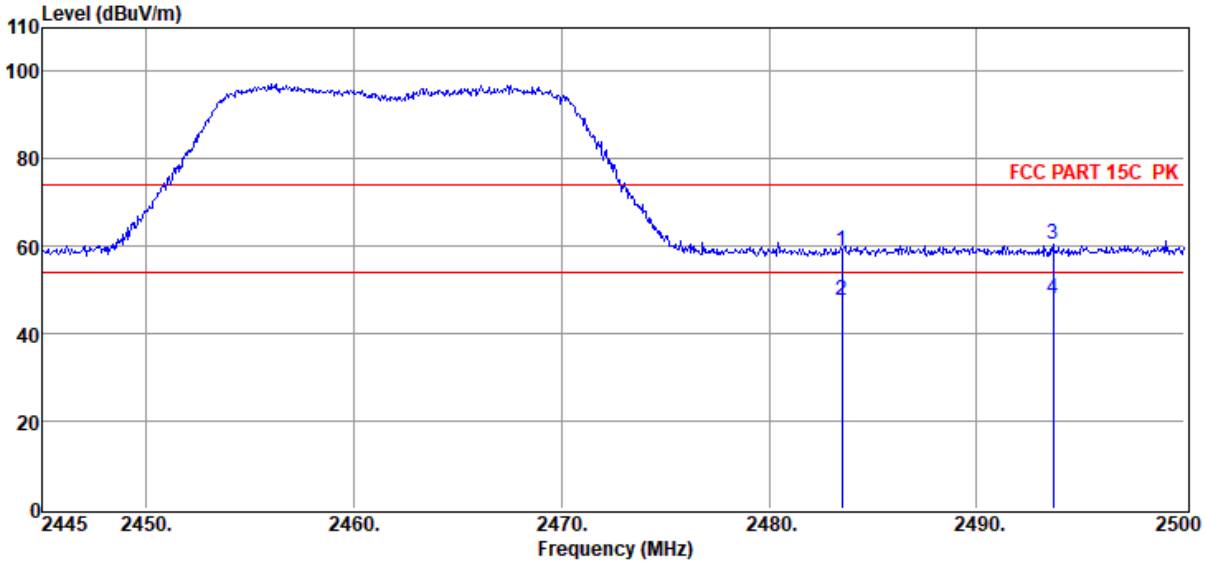
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2333.52	50.22	27.30	39.57	1.69	0.72	60.36	74.00	-13.64	Peak	VERTICAL
2	2333.52	36.41	27.30	39.57	1.69	0.72	46.55	54.00	-7.45	Average	VERTICAL
3	2390.04	48.91	27.40	39.60	1.71	0.72	59.14	74.00	-14.86	Peak	VERTICAL
4	2390.04	35.88	27.40	39.60	1.71	0.72	46.11	54.00	-7.89	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11N20 2462 Power:37			

Data: 11



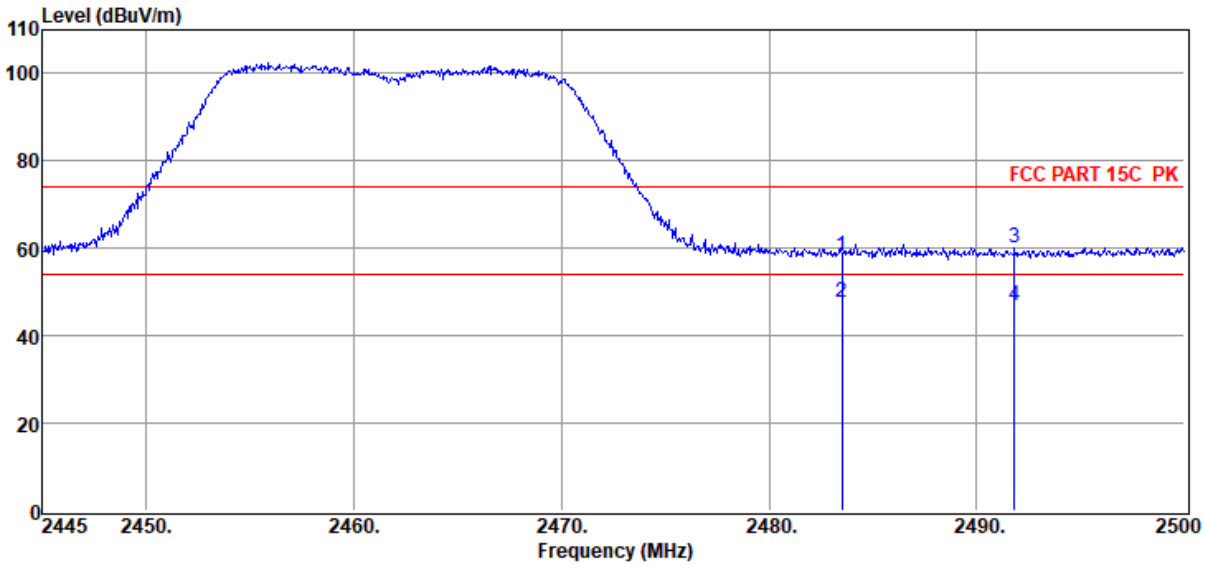
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.76	27.57	39.64	1.74	0.73	59.16	74.00	-14.84	Peak	HORIZONTAL
2	2483.50	37.29	27.57	39.64	1.74	0.73	47.69	54.00	-6.31	Average	HORIZONTAL
3	2493.68	50.21	27.59	39.65	1.74	0.73	60.62	74.00	-13.38	Peak	HORIZONTAL
4	2493.68	37.41	27.59	39.65	1.74	0.73	47.82	54.00	-6.18	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11N20 2462 Power:37			

Data: 12



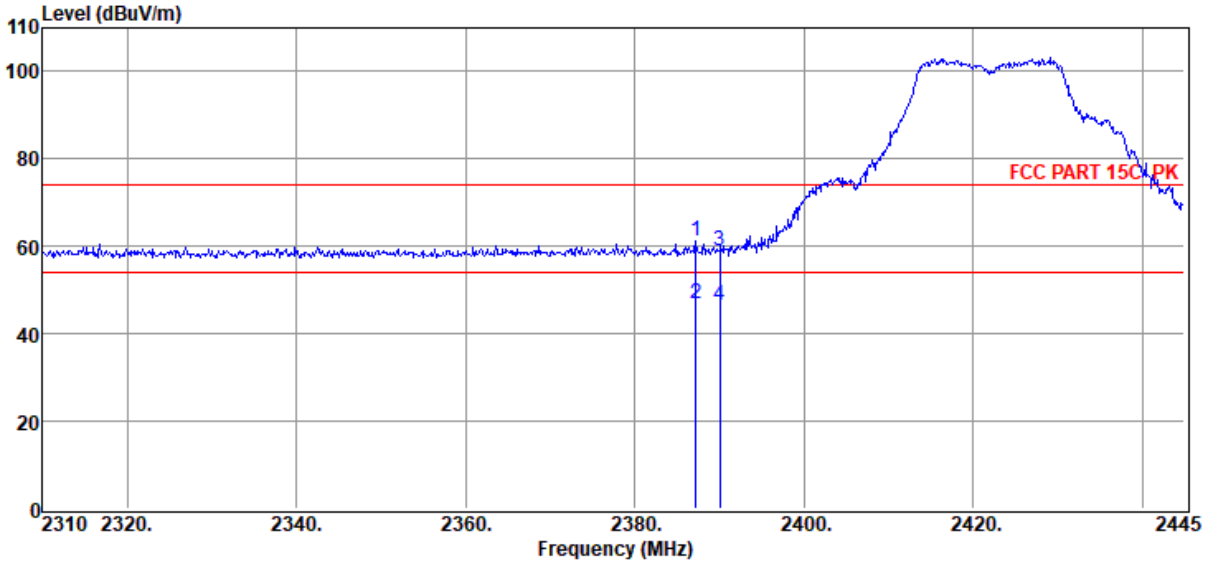
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	47.74	27.57	39.64	1.74	0.73	58.14	74.00	-15.86	Peak	VERTICAL
2	2483.50	37.24	27.57	39.64	1.74	0.73	47.64	54.00	-6.36	Average	VERTICAL
3	2491.81	49.71	27.59	39.65	1.74	0.73	60.12	74.00	-13.88	Peak	VERTICAL
4	2491.81	36.63	27.59	39.65	1.74	0.73	47.04	54.00	-6.96	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11N40 2422			

Data: 13



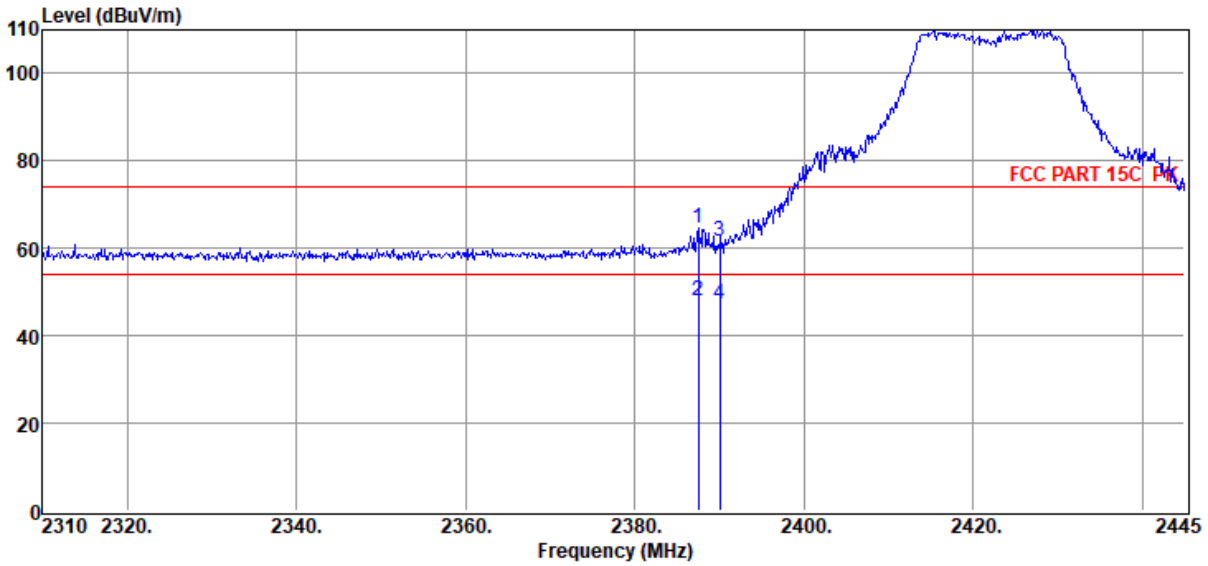
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2387.22	51.07	27.40	39.59	1.71	0.72	61.31	74.00	-12.69	Peak	HORIZONTAL
2	2387.22	36.45	27.40	39.59	1.71	0.72	46.69	54.00	-7.31	Average	HORIZONTAL
3	2390.06	48.57	27.40	39.60	1.71	0.72	58.80	74.00	-15.20	Peak	HORIZONTAL
4	2390.06	36.30	27.40	39.60	1.71	0.72	46.53	54.00	-7.47	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11N40 2422			

Data: 14



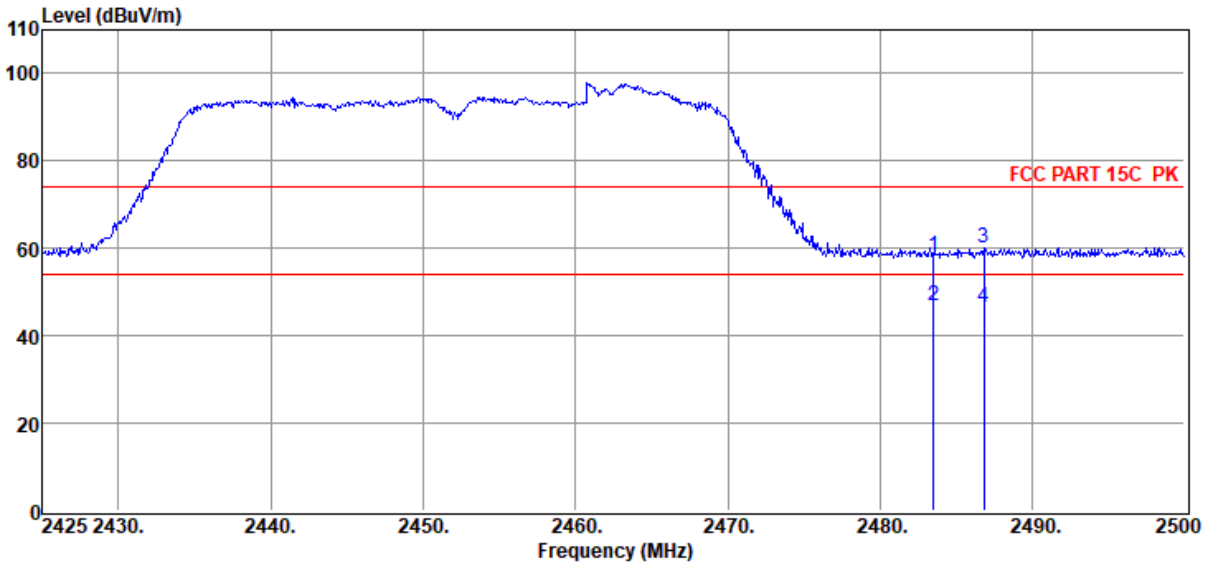
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2387.49	54.33	27.40	39.59	1.71	0.72	64.57	74.00	-9.43	Peak	VERTICAL
2	2387.49	37.67	27.40	39.59	1.71	0.72	47.91	54.00	-6.09	Average	VERTICAL
3	2390.06	51.23	27.40	39.60	1.71	0.72	61.46	74.00	-12.54	Peak	VERTICAL
4	2390.06	37.07	27.40	39.60	1.71	0.72	47.30	54.00	-6.70	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	:	11N40 2452			

Data: 15



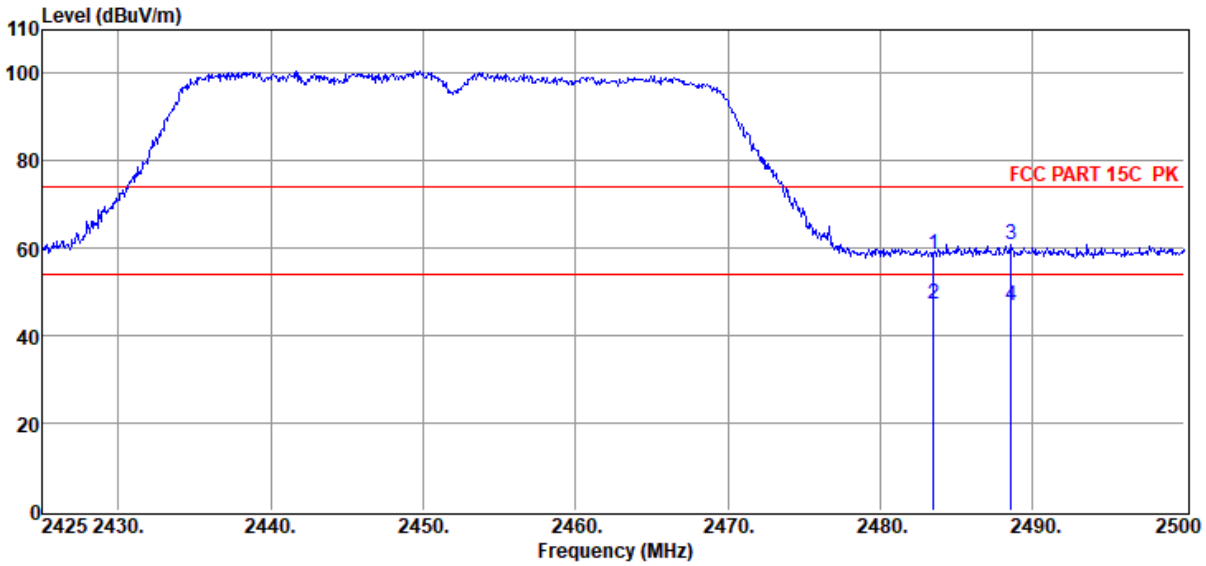
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	47.73	27.57	39.64	1.74	0.73	58.13	74.00	-15.87	Peak	HORIZONTAL
2	2483.50	36.46	27.57	39.64	1.74	0.73	46.86	54.00	-7.14	Average	HORIZONTAL
3	2486.80	49.74	27.58	39.64	1.74	0.73	60.15	74.00	-13.85	Peak	HORIZONTAL
4	2486.80	35.93	27.58	39.64	1.74	0.73	46.34	54.00	-7.66	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q22070625-2E AV-1327W-99\FCC ABOVE 1G 2.4G.EM6		
Test Date	:	2022-08-24	**Tested By**	:	James Gan
EUT	:	Car Audio	**Model Number**	:	AV-1327W-99
Power Supply	:	DC 12V	**Test Mode**	:	Tx Mode
Condition	:	Temp:23°C,Humi:59.4%,Press:100.1kPa	**Antenna/Distance**	:	2021 BBHA 9120D 3#/3m/VERTICAL
Memo	:	11N40 2452			

Data: 16

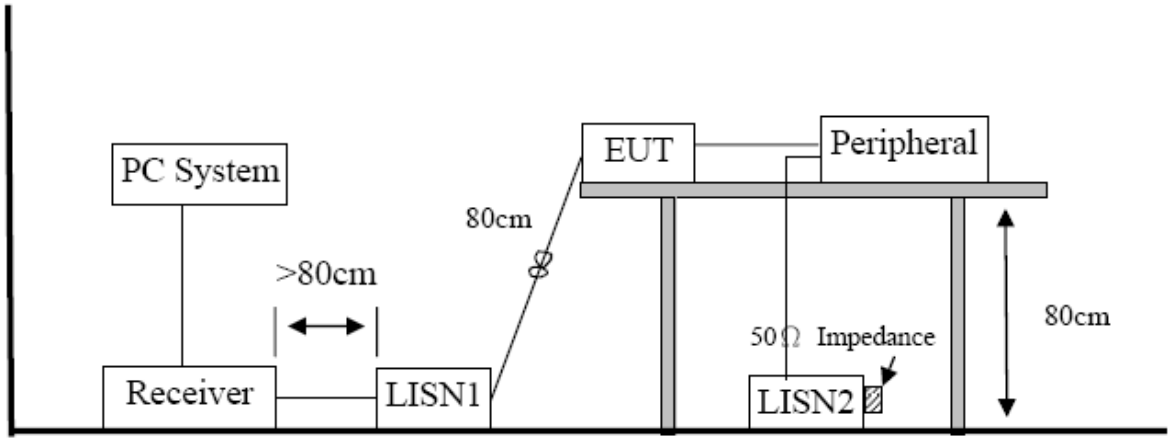


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.08	27.57	39.64	1.74	0.73	58.48	74.00	-15.52	Peak	VERTICAL
2	2483.50	36.95	27.57	39.64	1.74	0.73	47.35	54.00	-6.65	Average	VERTICAL
3	2488.60	50.49	27.58	39.64	1.74	0.73	60.90	74.00	-13.10	Peak	VERTICAL
4	2488.60	36.49	27.58	39.64	1.74	0.73	46.90	54.00	-7.10	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

12. Power Line Conducted Emission

12.1. Block diagram of test setup



12.2. Power Line Conducted Emission Limits (Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

12.3. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

12.4. Test Result

N/A
The EUT is powered by DC.

13. Antenna Requirements

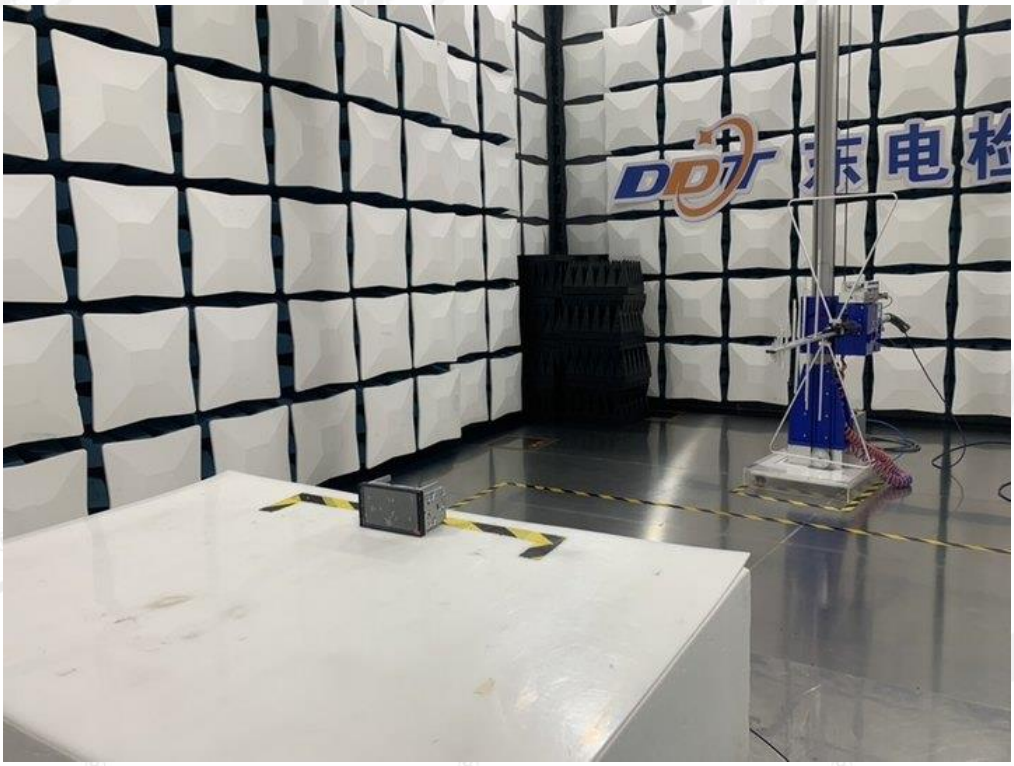
13.1. Limit

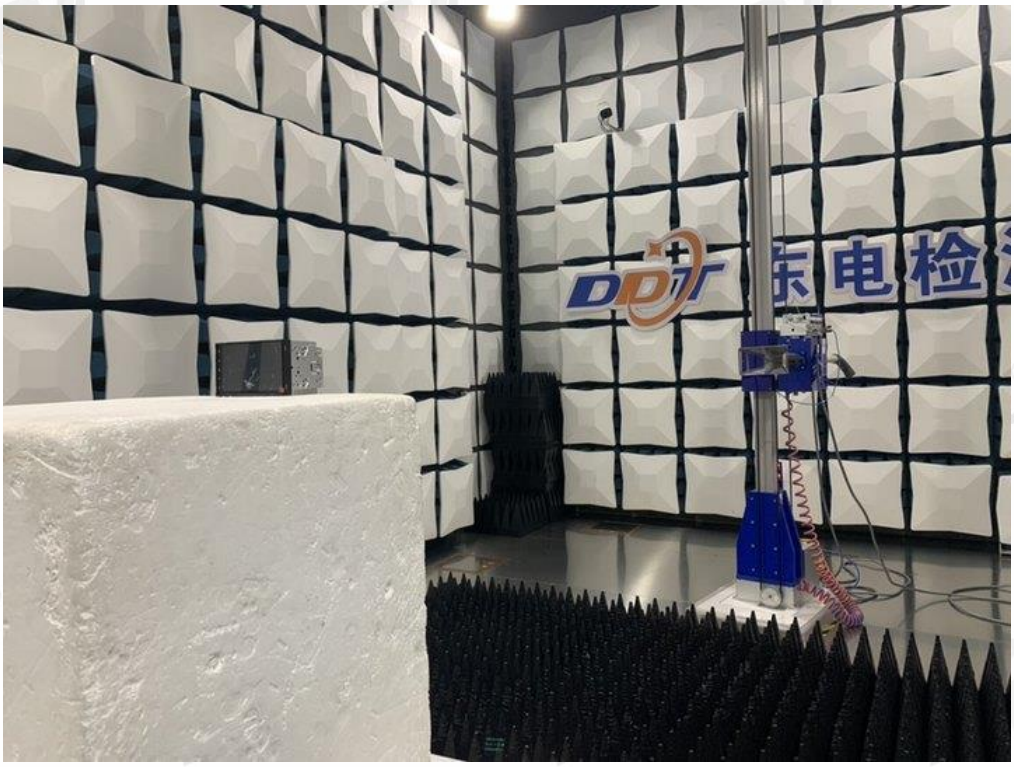
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

13.2. Result

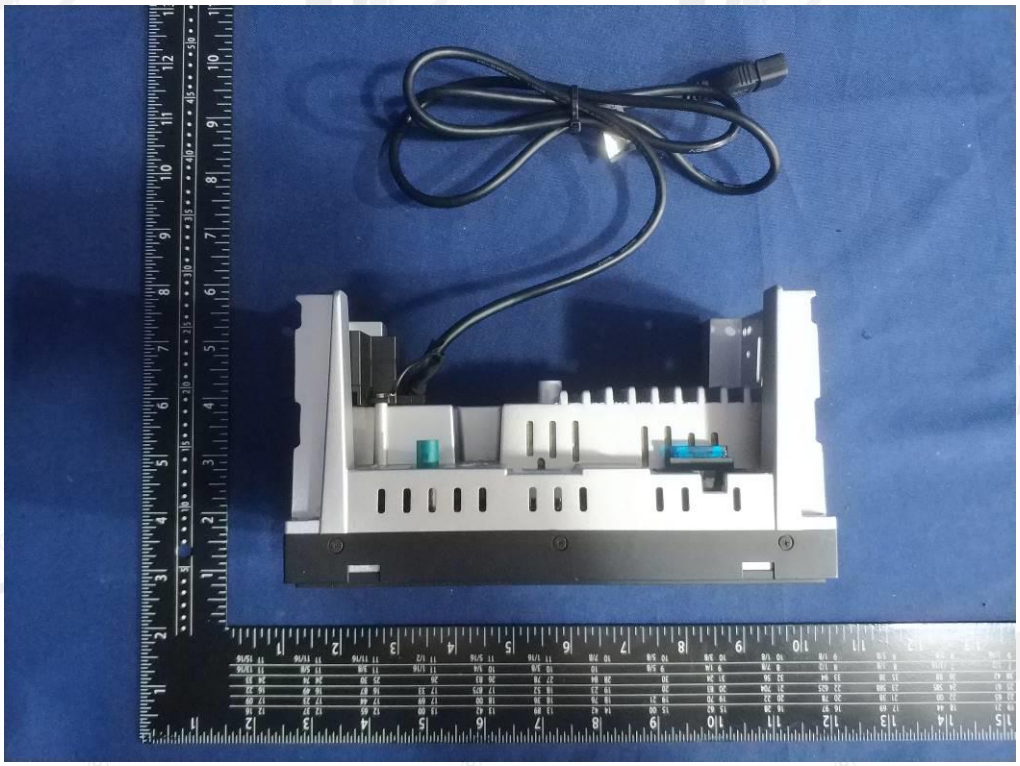
The product is that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 6.42 dBi.

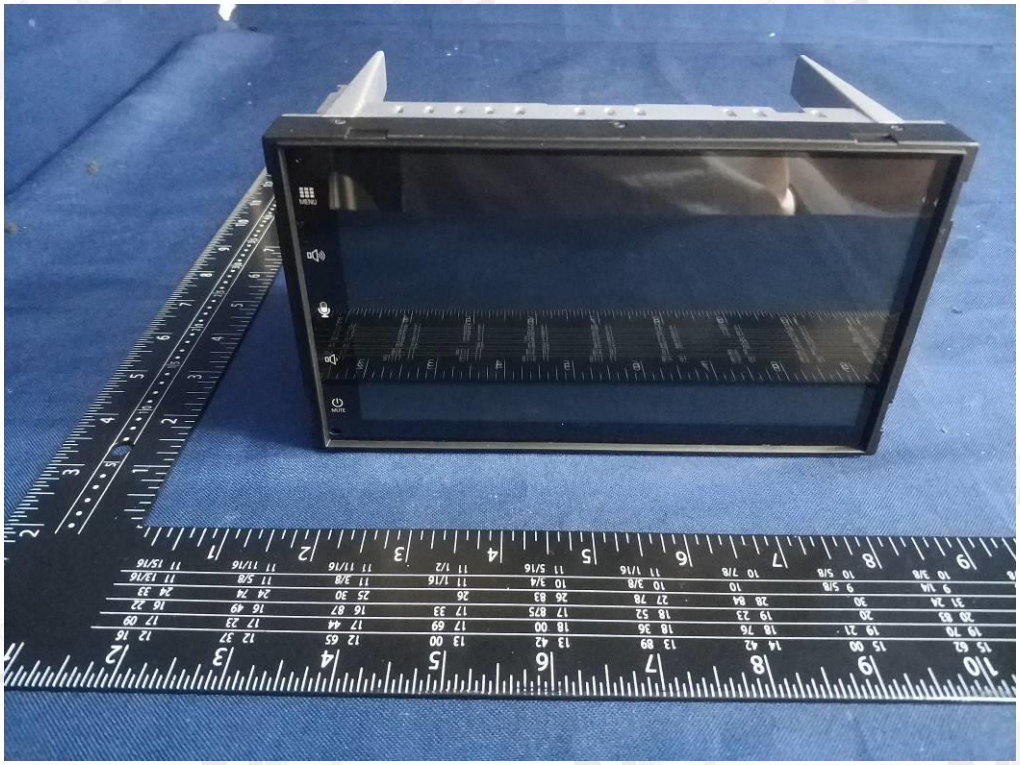
14. Test setup photograph

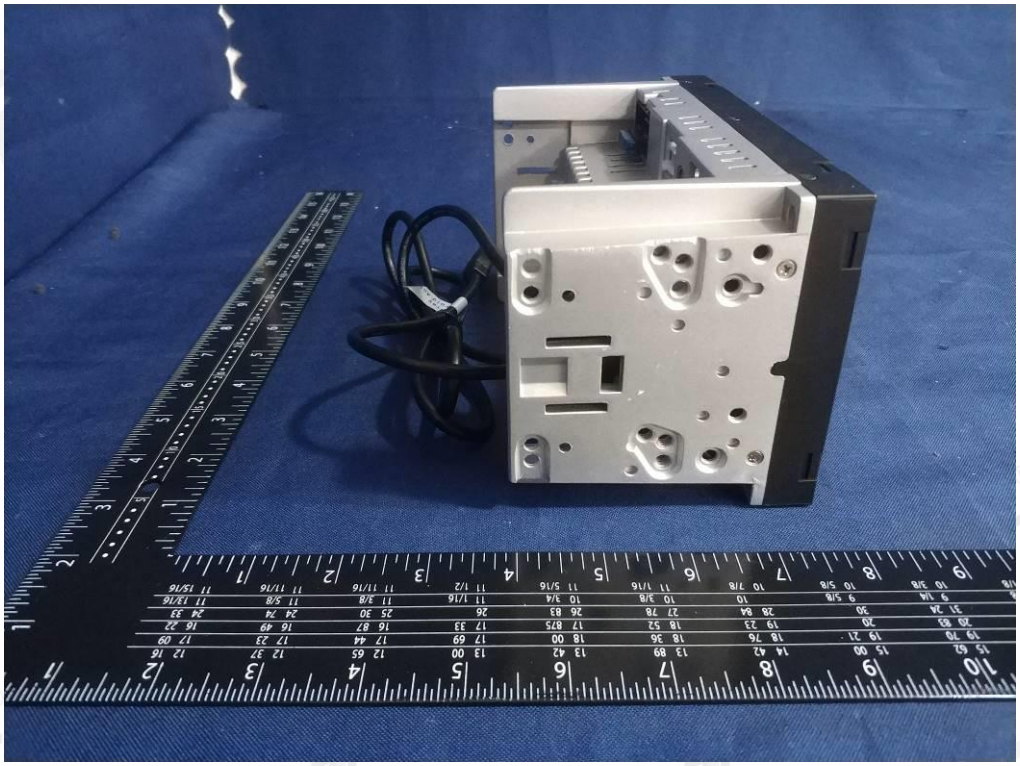


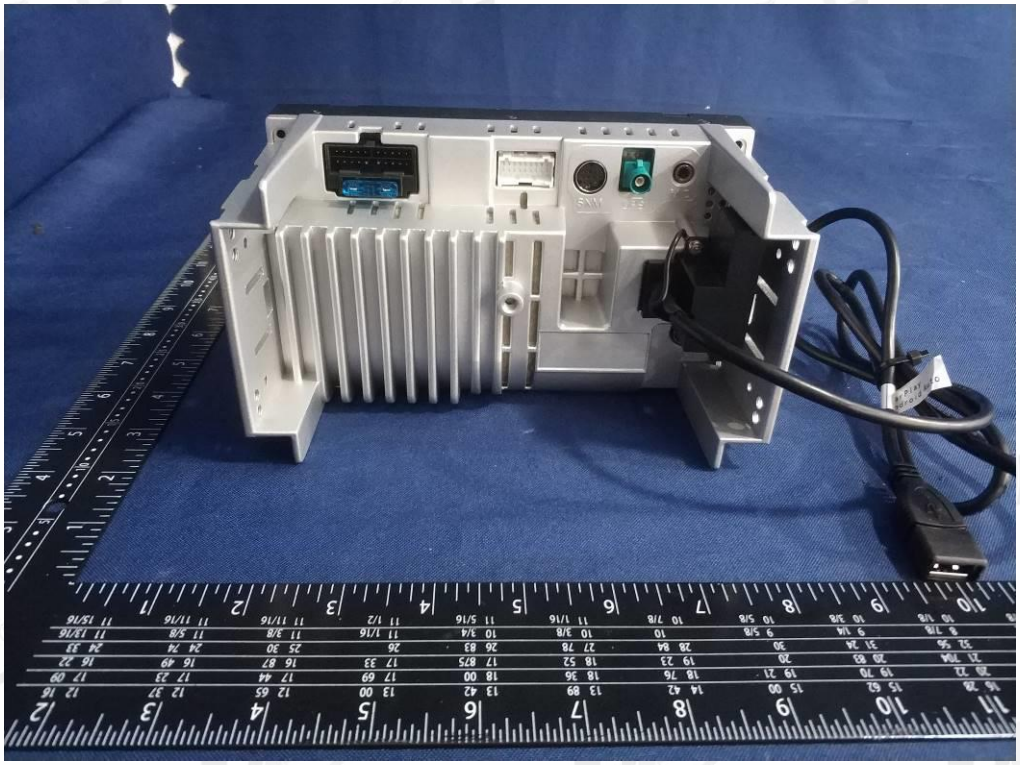


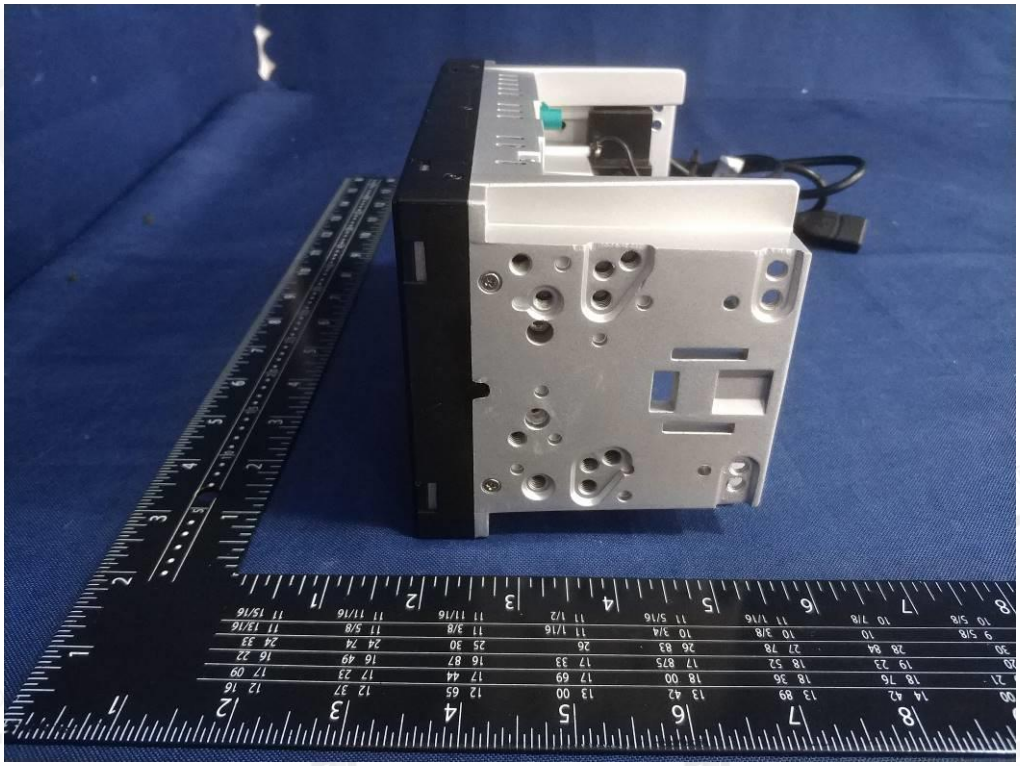
15. Photos of the EUT

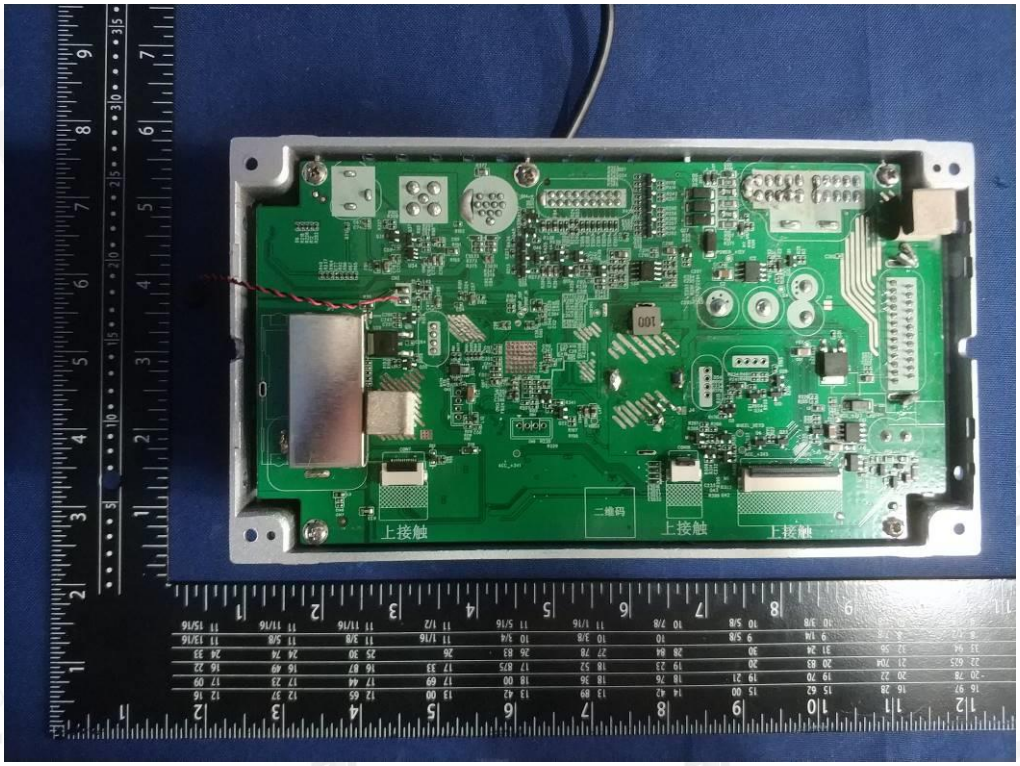








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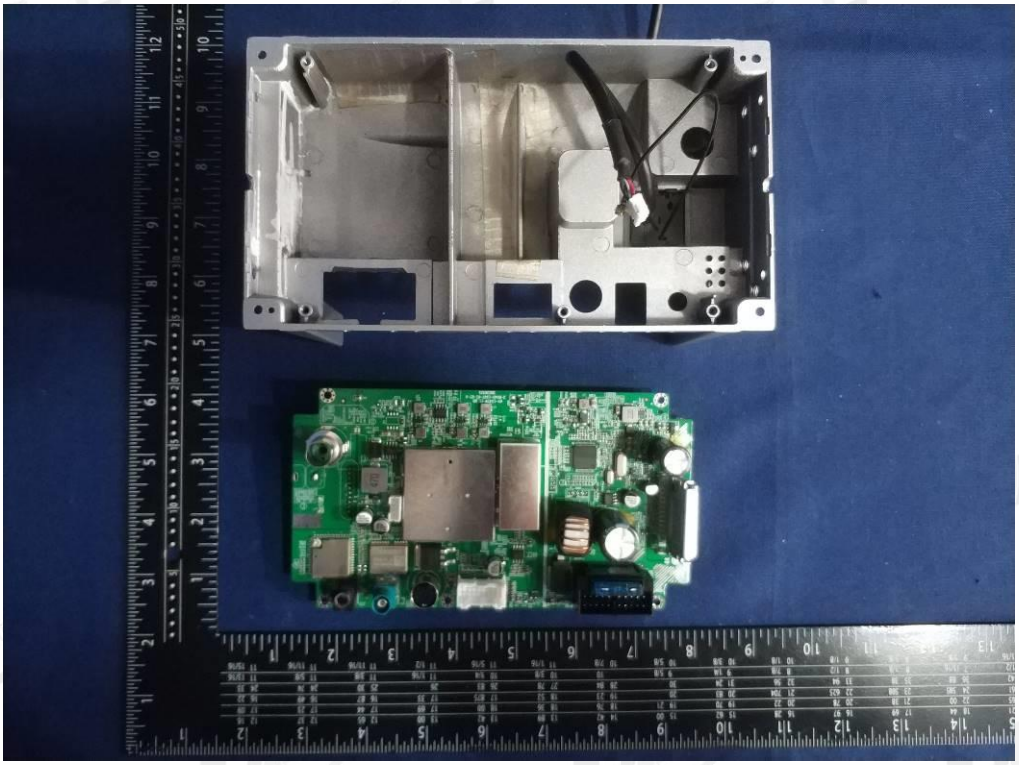

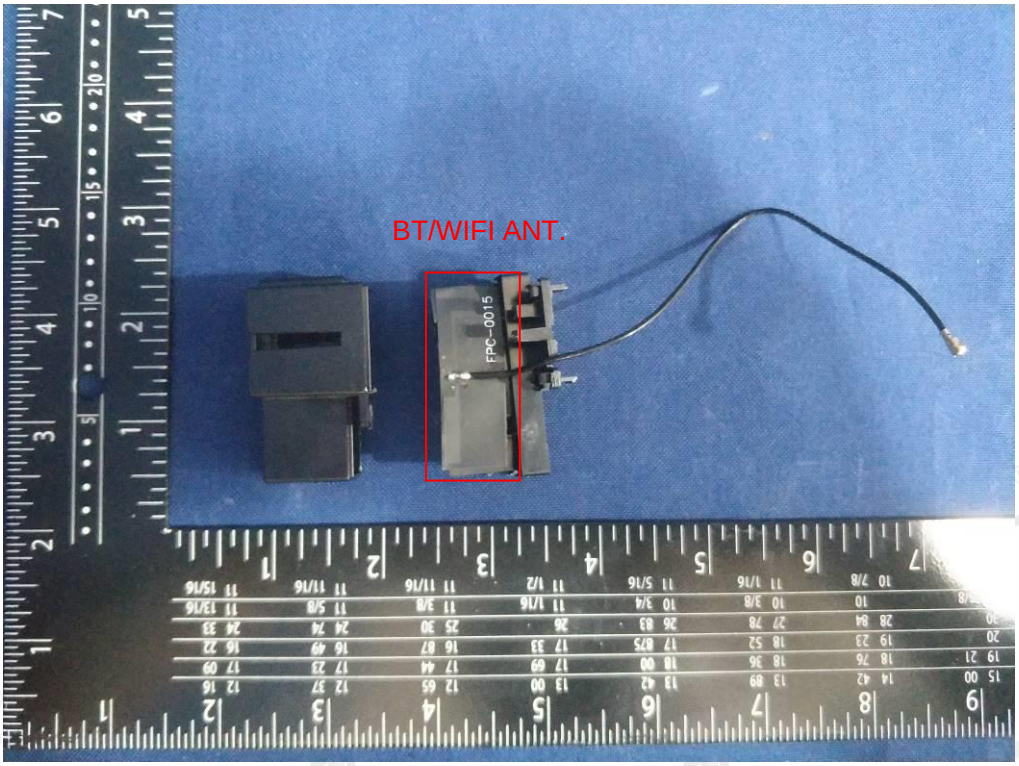
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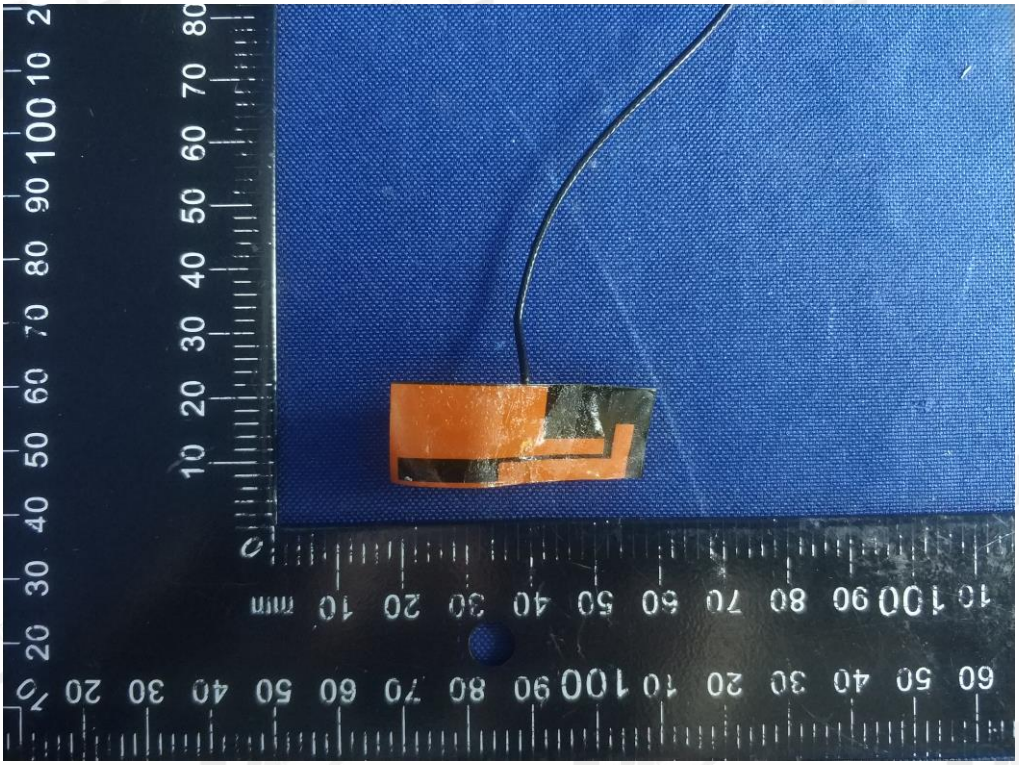

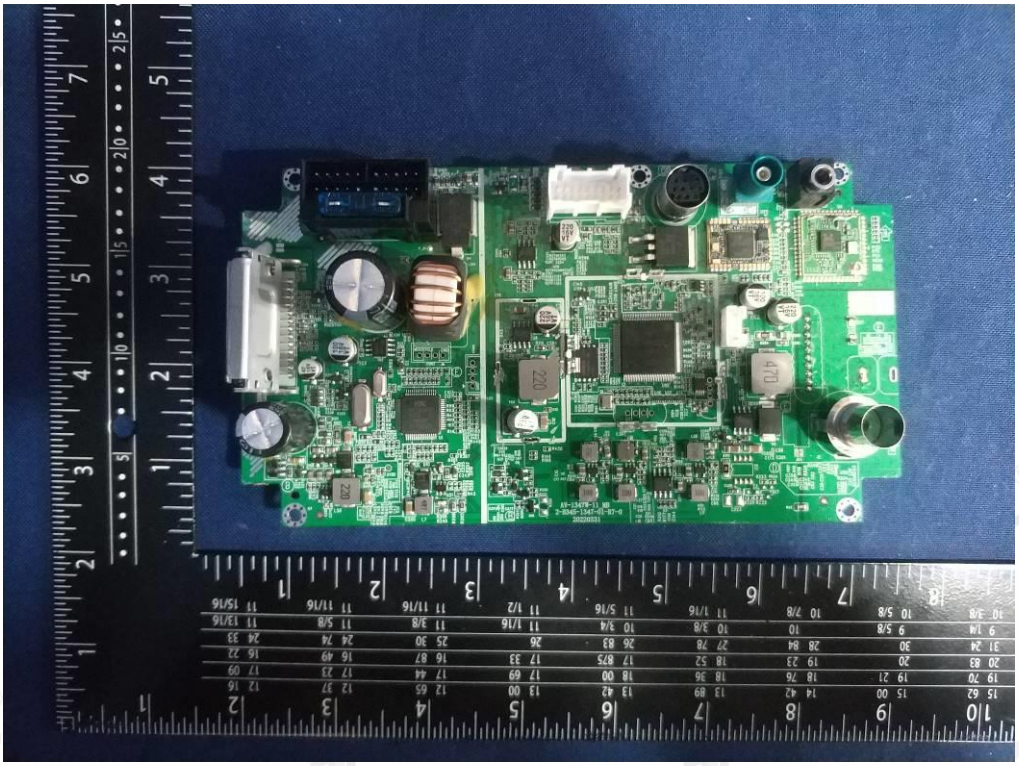

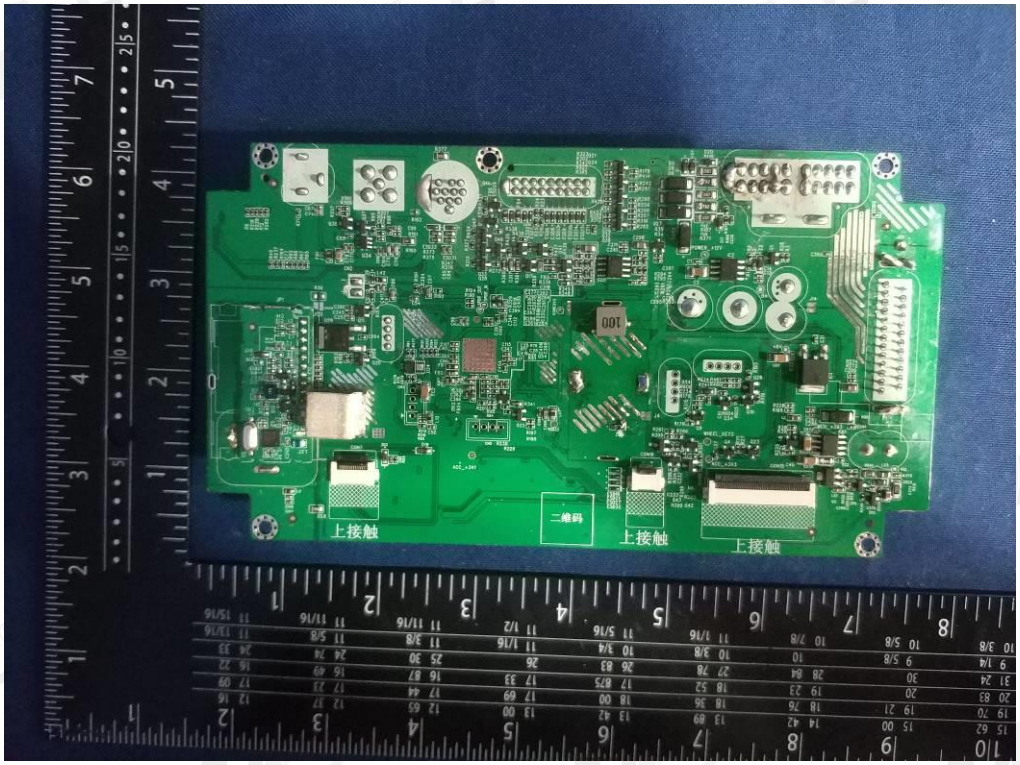
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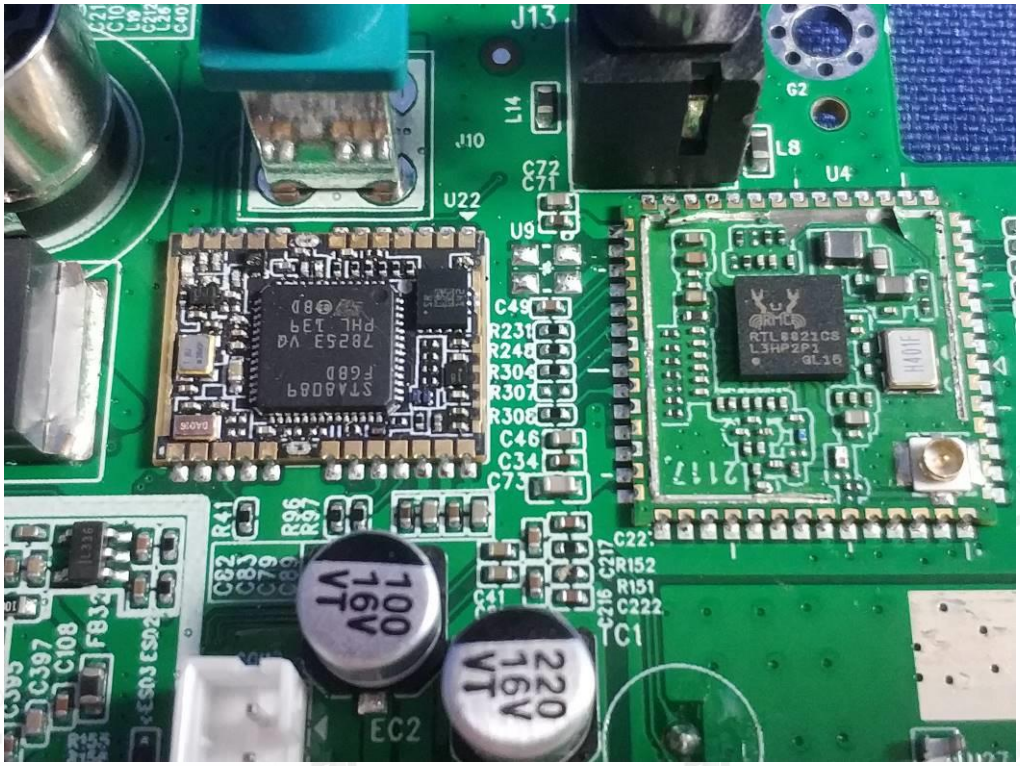
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C41
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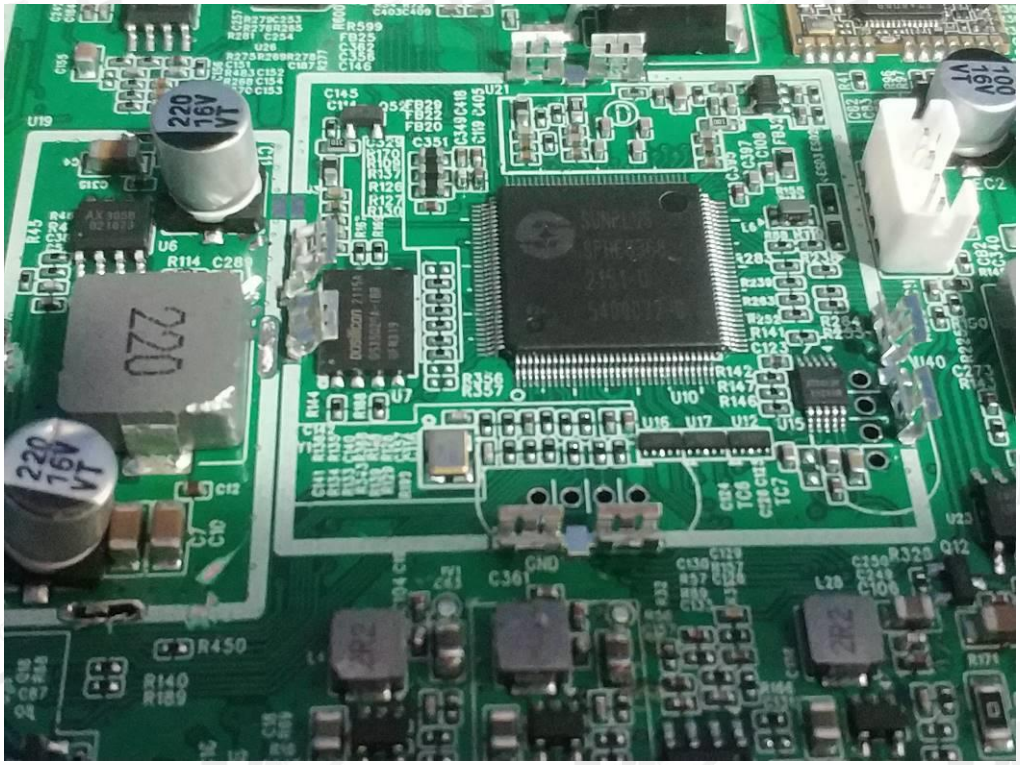

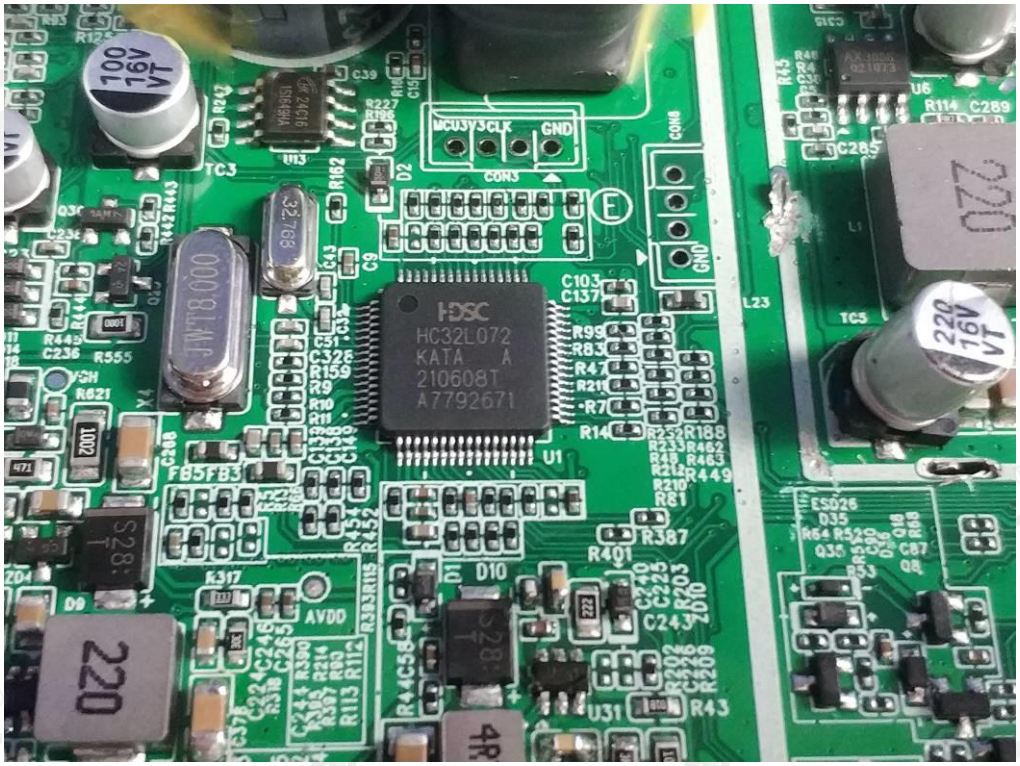

END OF REPORT