

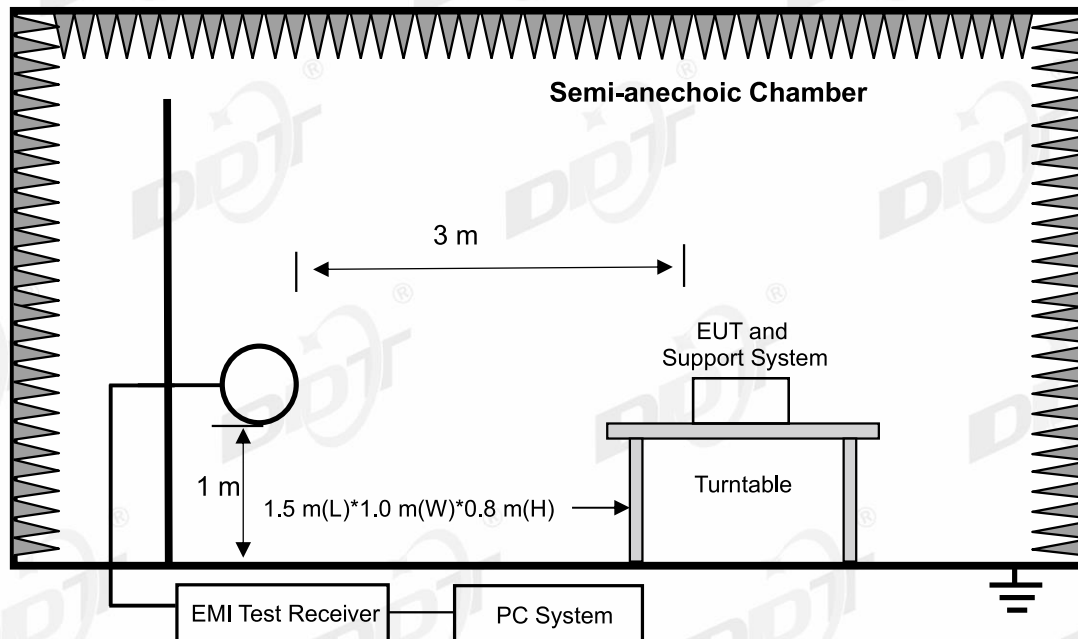
11. Radiated Spurious Emissions

11.1. Test equipment

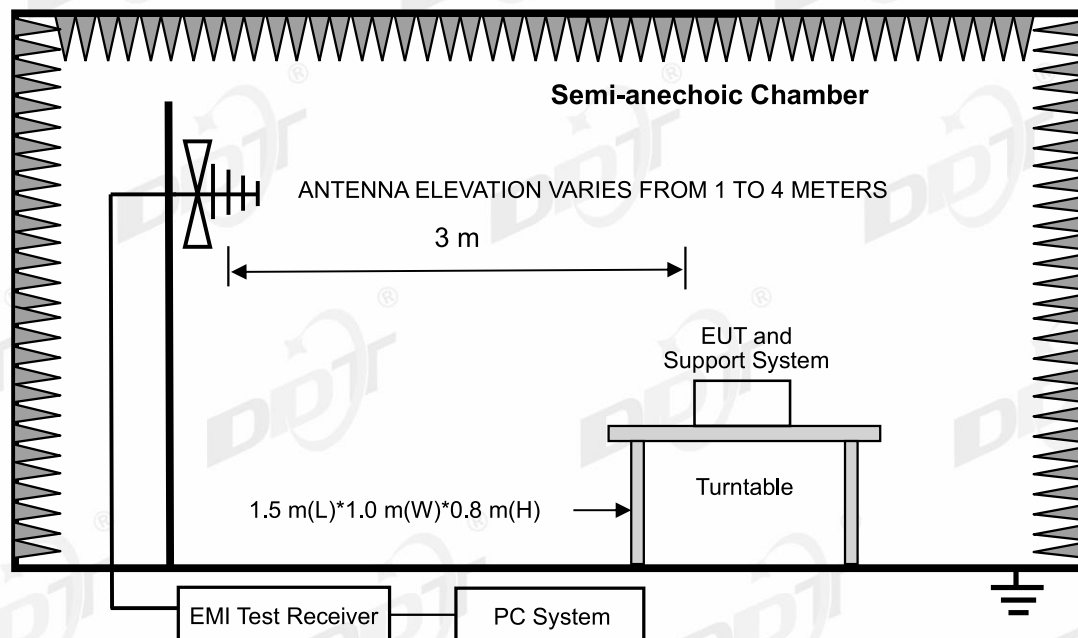
Equipment	Manufacturer	Model No.	Serial No.	Cal Due To	Cal. Interval
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31	1 Year
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22	1 Year
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/	/
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22	1 Year
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/	/
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11	2 Year
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26	1 Year
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/07/08	1 Year
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22	1 Year
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18	2 Year
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31	1 Year
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11	2 Year
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31	1 Year
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31	1 Year
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31	1 Year
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31	1 Year
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31	1 Year

11.2. Block diagram of test setup

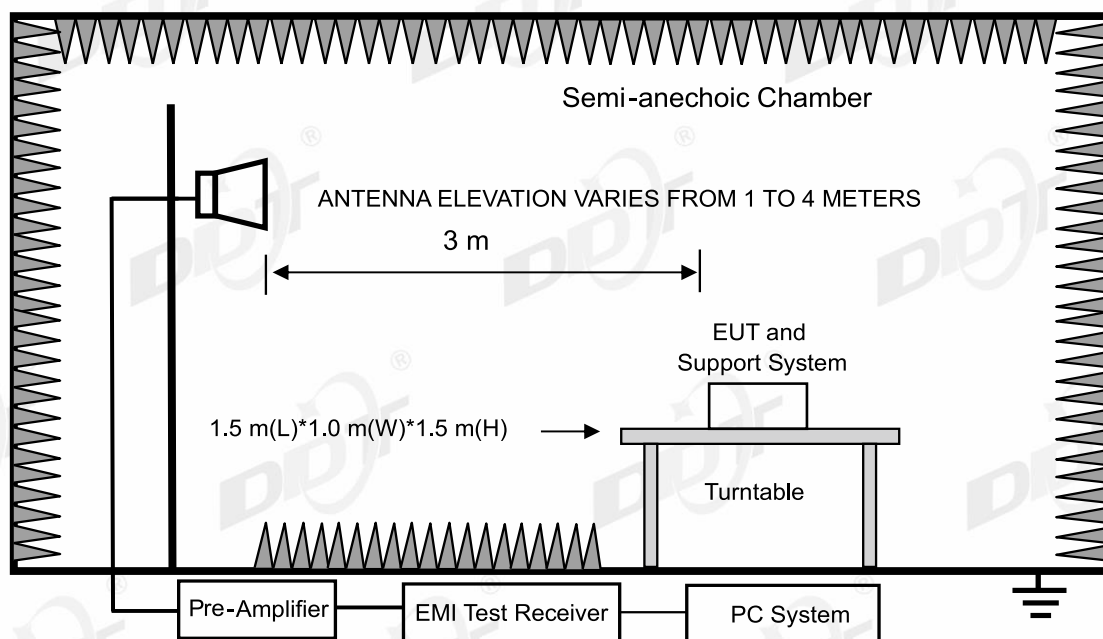
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



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.

11.3. 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			

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

²Above 38.6

(2) FCC 15.209 Limit.

Frequency (MHz)	Measurement distance (meters)	Field strength limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	$2400/\text{F}(\text{kHz})$	$67.6-20\log(\text{F})$
0.490 ~ 1.705	30	$24000/\text{F}(\text{kHz})$	$87.6-20\log(\text{F})$
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 $\text{dB}(\mu\text{V})/\text{m}$ (Peak), 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (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 9-90kHz, 110-490kHz and above 1000MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

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

formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\log(30\text{m}/3\text{m})$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, and the emissions appearing within RSS-Gen section 8.10 Restricted frequency bands shall not exceed the limits shown in RSS-Gen section 8.9, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits and RSS-Gen section 8.9 limits.

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

According ANSI C63.10:2020 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilob Broadband Antenna or Horn Antenna was located 3m 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 equipment 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 C63.10:2020 clause 4.2.3.2.3 procedure for average measure).

11.5. 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 and RSS-Gen section 8.9 limits.

Note 1: 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.

Note 2: 30 MHz ~ 25 GHz: (Scan with all mode, the worst case is 802.11b mode)

Note 3: 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 mode, Tx 2462 MHz.

Note 4: 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 Date:

2024-08-20

Tested By:

Gen Liu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

2.4GWIFI TX mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

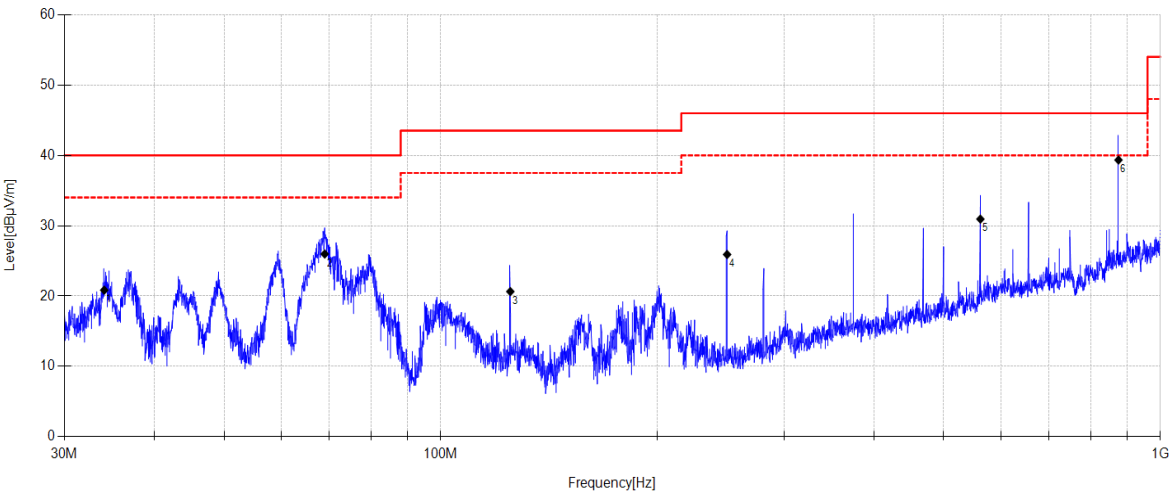
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24061713-2E\FCC BELOW 1G\20240820-195553_H

Memo:

Sample Number:S24061713-002 Power Setting:NA



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	34.083	36.45	11.55	3.78	20.84	40.00	19.16	QP	Horizontal
2	69.006	42.04	10.50	4.01	25.98	40.00	14.02	QP	Horizontal
3	124.971	38.21	8.91	4.35	20.64	43.50	22.86	QP	Horizontal
4	250.020	39.67	11.70	4.99	25.91	46.00	20.09	QP	Horizontal
5	562.333	36.7	17.91	6.23	30.94	46.00	15.06	QP	Horizontal
6	874.657	39.94	21.49	7.14	39.34	46.00	6.66	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-08-20

Tested By:

Gen Liu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

2.4GWIFI TX mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

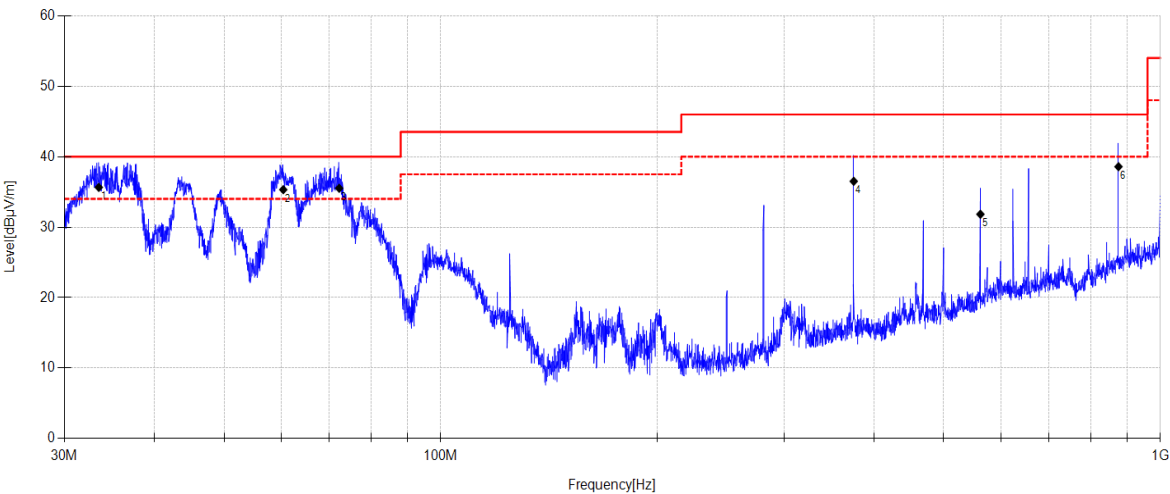
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24061713-2E\FCC BELOW 1G\20240820-195613_V

Memo:

Sample Number:S24061713-002 Power Setting:NA



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	33.491	51.6	11.22	3.78	35.65	40.00	4.35	QP	Vertical
2	60.441	49.37	12.62	3.96	35.32	40.00	4.68	QP	Vertical
3	72.274	52.54	9.49	4.04	35.52	40.00	4.48	QP	Vertical
4	374.959	45.74	15.40	5.52	36.51	46.00	9.49	QP	Vertical
5	562.333	37.59	17.91	6.23	31.83	46.00	14.17	QP	Vertical
6	874.657	39.18	21.49	7.14	38.58	46.00	7.42	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP

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 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22

Tested By: Genliu

EUT: Streaming Music Receiver

Model Number: F3081S

Test Mode: N20 TX 2412MHz mode

Power Supply: AC120V/60Hz

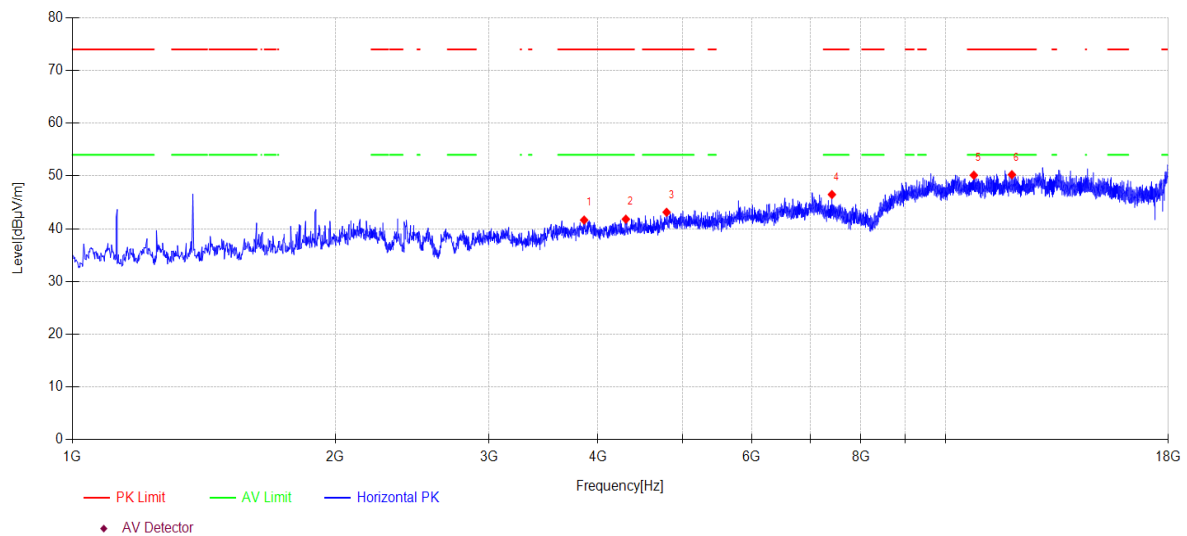
Condition: Temp:24.5°C;Humi:47.4%

Test Site: DDT 3# Chamber

File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\20

Memo: Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3856.000	45.99	30.94	5.07	-40.36	41.64	74.00	32.36	PK	Horizontal
2	4304.800	45.32	31.60	5.23	-40.34	41.81	74.00	32.19	PK	Horizontal
3	4792.700	45.29	32.47	5.53	-40.16	43.13	74.00	30.87	PK	Horizontal
4	7412.400	44.87	36.68	6.66	-41.73	46.48	74.00	27.52	PK	Horizontal
5	10776.700	41.73	39.40	8.02	-39.01	50.14	74.00	23.86	PK	Horizontal
6	11914.000	42.11	38.94	8.71	-39.52	50.24	74.00	23.76	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

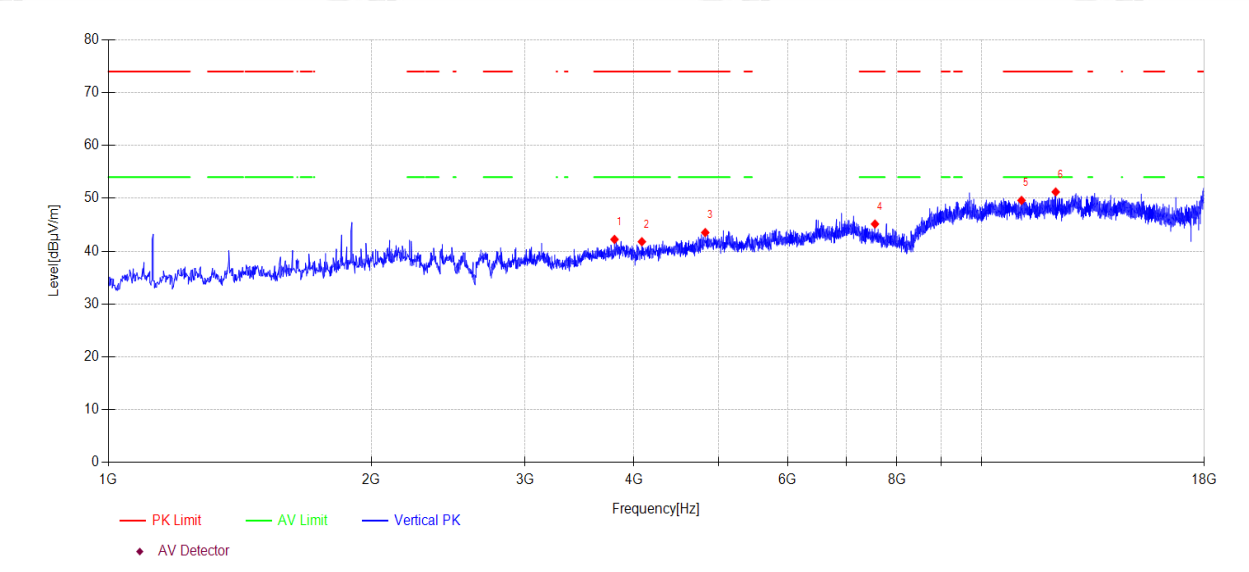
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\21

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3799.900	46.77	30.70	5.08	-40.33	42.22	74.00	31.78	PK	Vertical
2	4083.800	46.04	31.07	5.10	-40.42	41.79	74.00	32.21	PK	Vertical
3	4826.700	44.92	33.19	5.55	-40.14	43.52	74.00	30.48	PK	Vertical
4	7551.800	44.09	36.40	6.73	-42.08	45.14	74.00	28.86	PK	Vertical
5	11115.000	41.25	39.29	8.20	-39.14	49.60	74.00	24.40	PK	Vertical
6	12163.900	42.68	39.30	8.84	-39.62	51.20	74.00	22.80	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

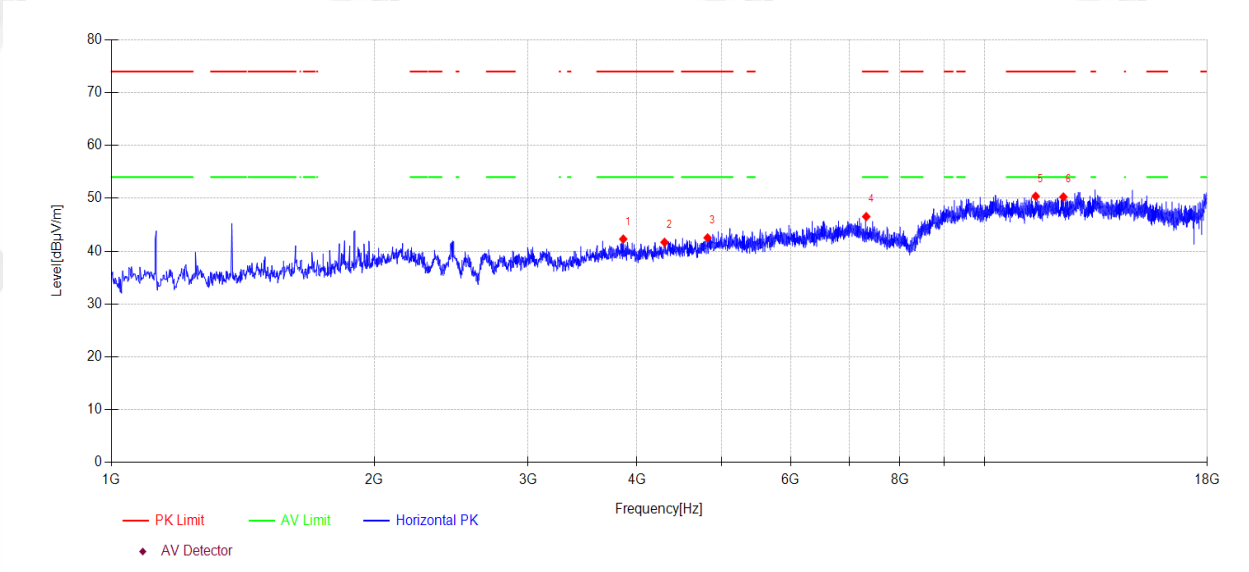
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\22

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3857.700	46.63	30.95	5.07	-40.36	42.29	74.00	31.71	PK	Horizontal
2	4301.400	45.19	31.60	5.23	-40.34	41.68	74.00	32.32	PK	Horizontal
3	4818.200	44.17	32.97	5.54	-40.15	42.53	74.00	31.47	PK	Horizontal
4	7322.300	44.58	36.86	6.61	-41.51	46.54	74.00	27.46	PK	Horizontal
5	11446.500	42.03	39.25	8.41	-39.30	50.39	74.00	23.61	PK	Horizontal
6	12313.500	41.72	39.30	8.92	-39.68	50.26	74.00	23.74	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

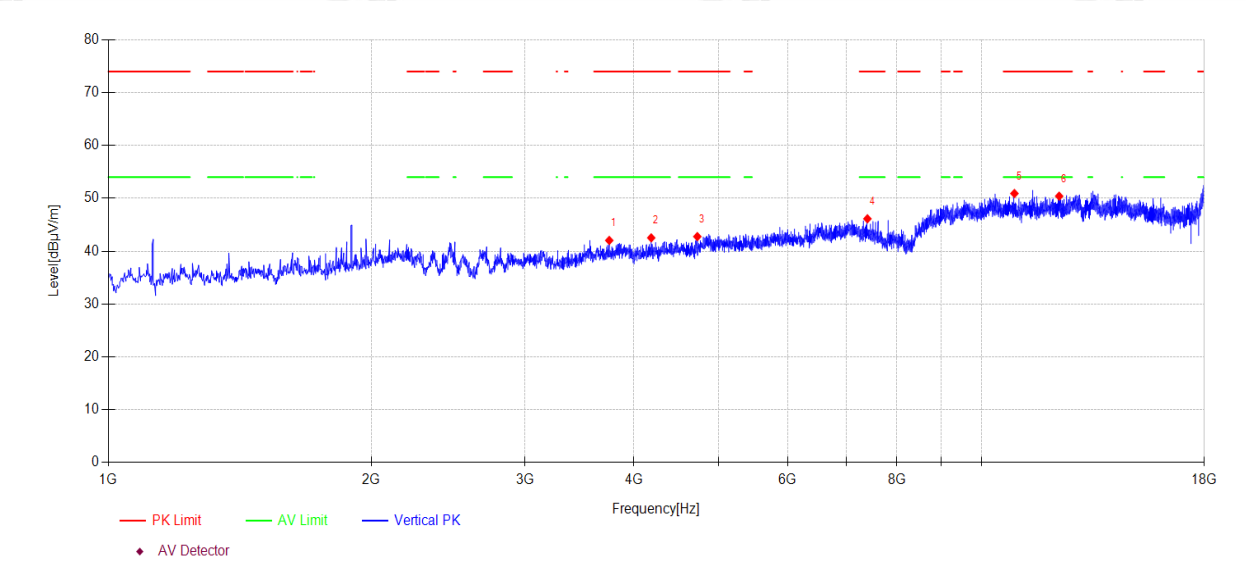
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\23

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3747.200	46.75	30.49	5.09	-40.30	42.03	74.00	31.97	PK	Vertical
2	4185.800	46.54	31.20	5.16	-40.38	42.52	74.00	31.48	PK	Vertical
3	4726.400	45.20	32.25	5.49	-40.18	42.76	74.00	31.24	PK	Vertical
4	7402.200	44.49	36.70	6.65	-41.71	46.13	74.00	27.87	PK	Vertical
5	10907.600	42.59	39.30	8.08	-39.06	50.91	74.00	23.09	PK	Vertical
6	12274.400	41.88	39.30	8.90	-39.67	50.41	74.00	23.59	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

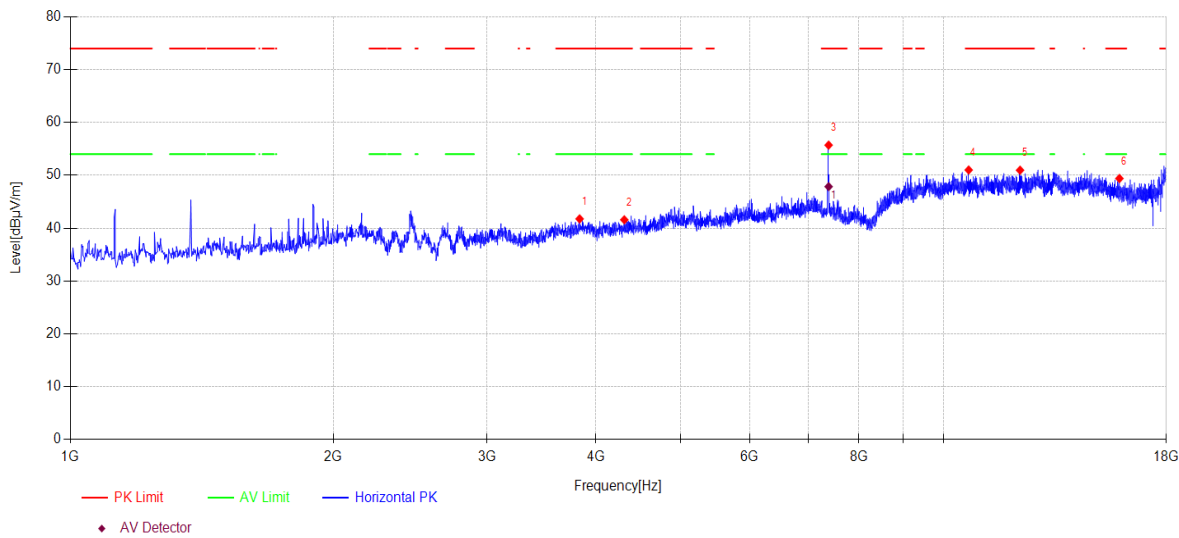
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22 Tested By: Genliu
EUT: Streaming Music Receiver Model Number: F3081S
Test Mode: 11G TX 2462MHz mode Power Supply: AC120V/60Hz
Condition: Temp:24.5°C;Humi:47.4% Test Site: DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABE1G-2.4GWIFI\24
Memo: Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3830.500	46.21	30.82	5.08	-40.35	41.76	74.00	32.24	PK	Horizontal
2	4309.900	45.08	31.60	5.24	-40.34	41.58	74.00	32.42	PK	Horizontal
3	7386.900	54.00	36.73	6.65	-41.67	55.71	74.00	18.29	PK	Horizontal
4	10688.300	42.63	39.38	7.97	-38.97	51.01	74.00	22.99	PK	Horizontal
5	12238.700	42.44	39.30	8.88	-39.65	50.97	74.00	23.03	PK	Horizontal
6	15905.600	40.52	38.09	10.09	-39.30	49.40	74.00	24.60	PK	Horizontal

Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	7387.545	46.15	36.73	6.65	-41.67	47.86	54.0	6.14	AV	Horizontal

- Note:
- 1. Level = Reading + Cable loss + Antenna Factor + AMP
 - 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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

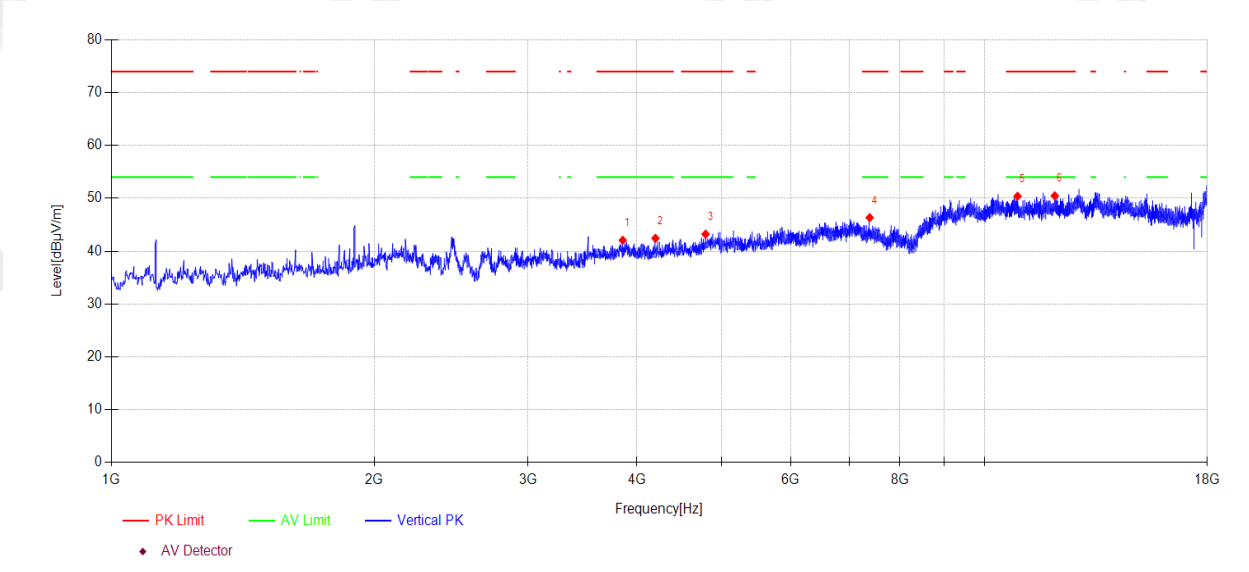
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABE1G-2.4GWIFI\25

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3852.600	46.42	30.92	5.08	-40.36	42.06	74.00	31.94	PK	Vertical
2	4199.400	46.45	31.20	5.17	-40.38	42.44	74.00	31.56	PK	Vertical
3	4792.700	45.38	32.47	5.53	-40.16	43.22	74.00	30.78	PK	Vertical
4	7388.600	44.64	36.72	6.65	-41.67	46.34	74.00	27.66	PK	Vertical
5	10911.000	42.05	39.30	8.09	-39.06	50.38	74.00	23.62	PK	Vertical
6	12038.100	42.03	39.24	8.78	-39.57	50.48	74.00	23.52	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

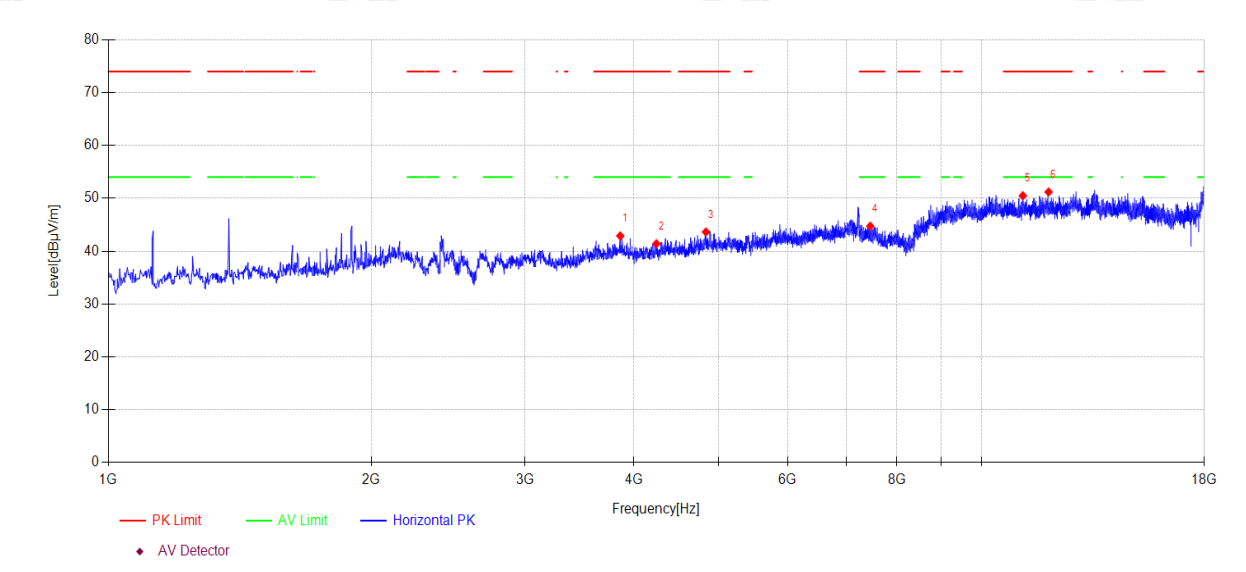
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\26

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3857.700	47.23	30.95	5.07	-40.36	42.89	74.00	31.11	PK	Horizontal
2	4243.600	45.20	31.37	5.20	-40.36	41.41	74.00	32.59	PK	Horizontal
3	4835.200	44.81	33.42	5.55	-40.14	43.64	74.00	30.36	PK	Horizontal
4	7458.300	43.32	36.58	6.68	-41.85	44.73	74.00	29.27	PK	Horizontal
5	11154.100	42.17	39.25	8.23	-39.16	50.49	74.00	23.51	PK	Horizontal
6	11936.100	43.00	39.01	8.72	-39.53	51.20	74.00	22.80	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

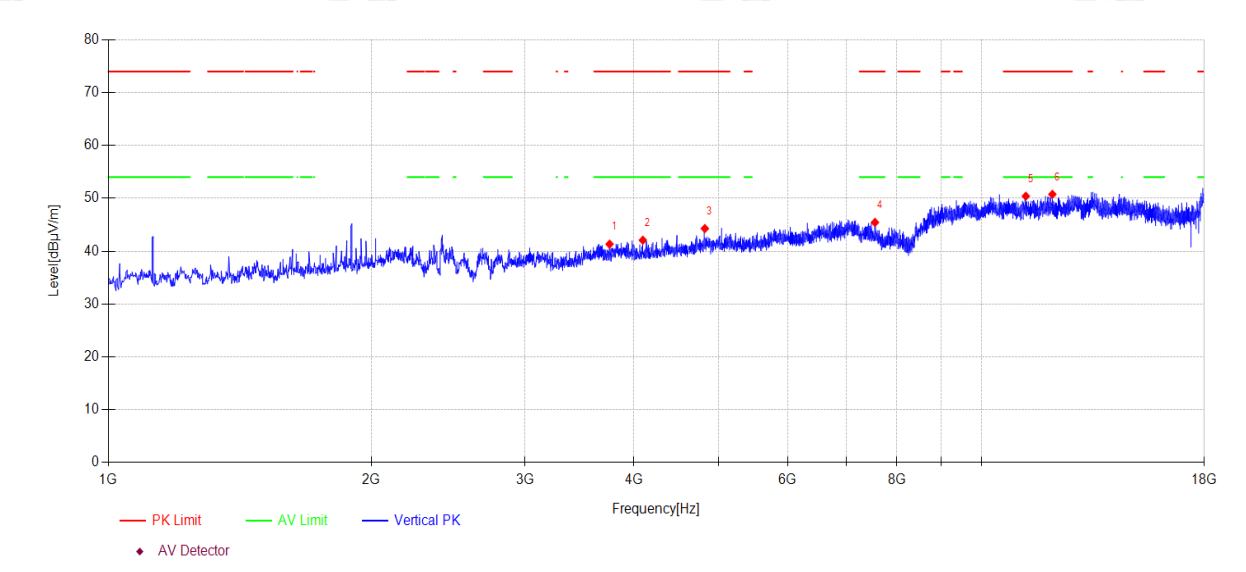
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\27

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3750.600	46.04	30.50	5.09	-40.30	41.33	74.00	32.67	PK	Vertical
2	4094.000	46.30	31.09	5.11	-40.42	42.08	74.00	31.92	PK	Vertical
3	4821.600	45.83	33.06	5.54	-40.15	44.28	74.00	29.72	PK	Vertical
4	7551.800	44.39	36.40	6.73	-42.08	45.44	74.00	28.56	PK	Vertical
5	11240.800	42.12	39.20	8.28	-39.20	50.40	74.00	23.60	PK	Vertical
6	12056.800	42.29	39.26	8.79	-39.58	50.76	74.00	23.24	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

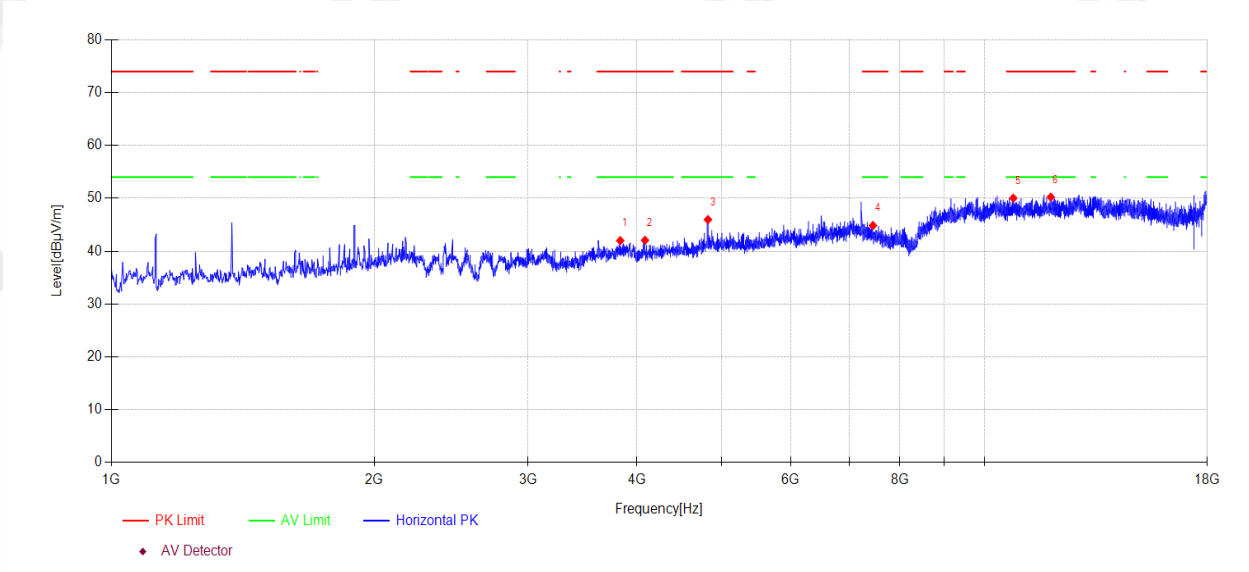
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\28

Memo:

Sample Number:S24061713-002 Power Setting:N/A

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3827.100	46.45	30.81	5.08	-40.34	42.00	74.00	32.00	PK	Horizontal
2	4085.500	46.31	31.07	5.10	-40.42	42.06	74.00	31.94	PK	Horizontal
3	4823.300	47.47	33.11	5.54	-40.15	45.97	74.00	28.03	PK	Horizontal
4	7451.500	43.40	36.60	6.68	-41.83	44.85	74.00	29.15	PK	Horizontal
5	10790.300	41.61	39.40	8.03	-39.01	50.03	74.00	23.97	PK	Horizontal
6	11910.600	42.12	38.93	8.70	-39.52	50.23	74.00	23.77	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:2024-07-22

Tested By:Genliu

EUT:Streaming Music Receiver

Model Number:F3081S

Test Mode:11B TX 2412MHz mode

Power Supply:AC120V/60Hz

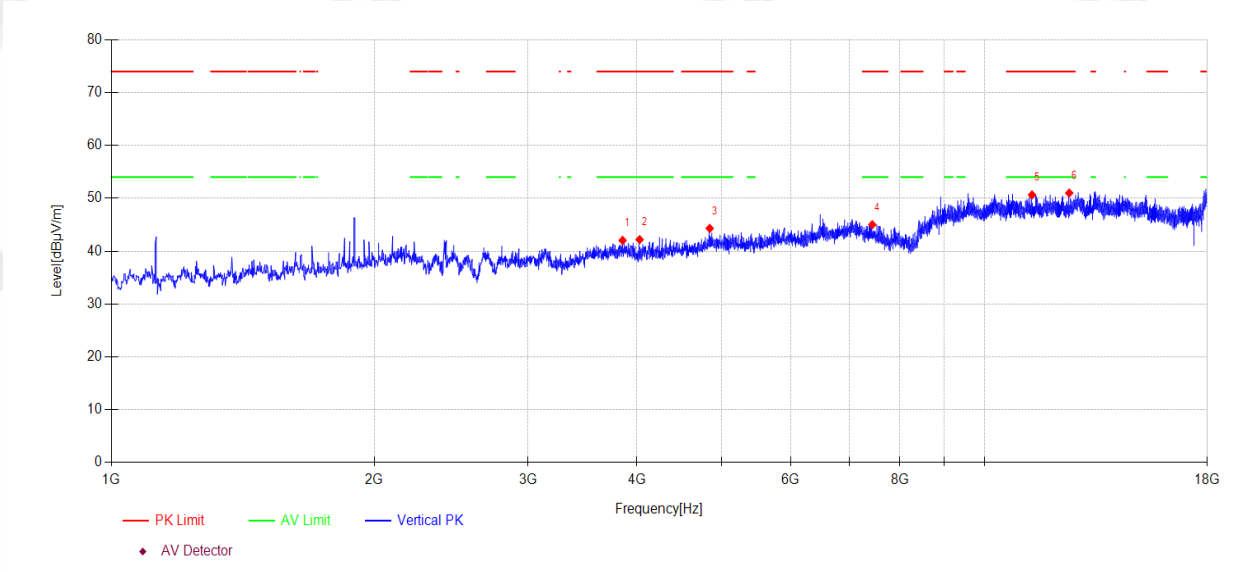
Condition:Temp:24.5°C;Humi:47.4%

Test Site:DDT 3# Chamber

File Path:d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\29

Memo:Sample Number:S24061713-002 Power Setting:N/A

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3850.900	46.41	30.91	5.08	-40.36	42.04	74.00	31.96	PK	Vertical
2	4027.700	46.60	30.96	5.07	-40.44	42.19	74.00	31.81	PK	Vertical
3	4845.400	45.21	33.68	5.56	-40.14	44.31	74.00	29.69	PK	Vertical
4	7439.600	43.52	36.62	6.67	-41.80	45.01	74.00	28.99	PK	Vertical
5	11336.000	42.32	39.24	8.34	-39.25	50.65	74.00	23.35	PK	Vertical
6	12505.600	42.34	39.40	9.02	-39.76	51.00	74.00	23.00	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
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 Date:2024-07-23

Tested By:Genliu

EUT:Streaming Music Receiver

Model Number:F3081S

Test Mode:11B TX 2462MHz mode

Power Supply:AC120V/60Hz

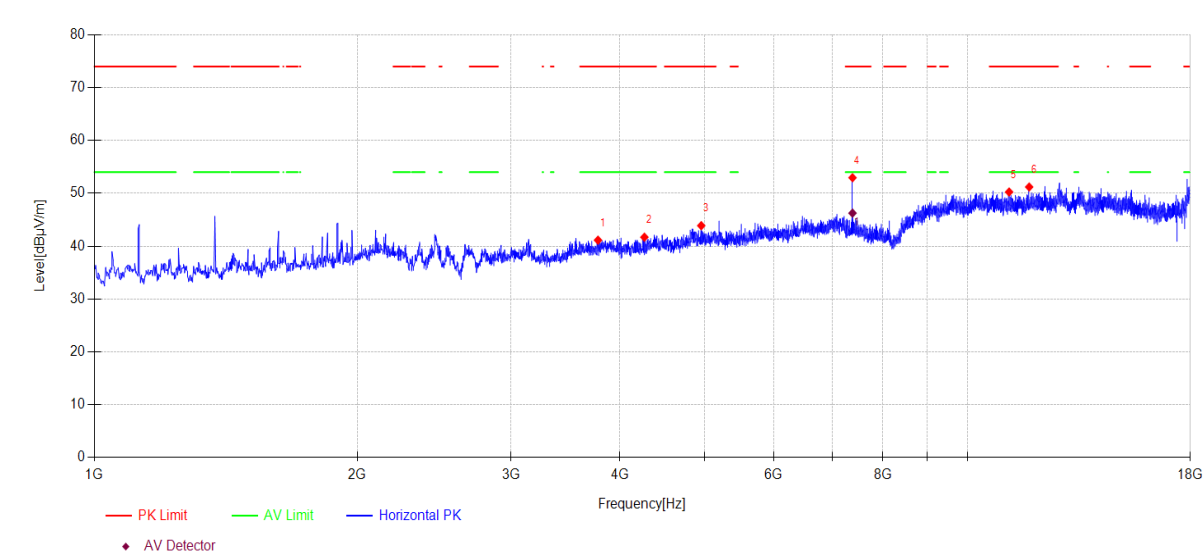
Condition:Temp:24.5°C;Humi:47.4%

Test Site:DDT 3# Chamber

File Path:d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\30

Memo:Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3774.400	45.75	30.60	5.09	-40.31	41.13	74.00	32.87	PK	Horizontal
2	4265.700	45.38	31.46	5.21	-40.35	41.70	74.00	32.30	PK	Horizontal
3	4955.900	45.25	33.11	5.62	-40.10	43.88	74.00	30.12	PK	Horizontal
4	7385.200	51.24	36.73	6.64	-41.66	52.95	74.00	21.05	PK	Horizontal
5	11160.900	41.95	39.24	8.23	-39.17	50.25	74.00	23.75	PK	Horizontal
6	11767.800	43.11	38.93	8.61	-39.45	51.20	74.00	22.80	PK	Horizontal

Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	7385.185	44.54	36.73	6.64	-41.66	46.25	54.0	7.75	AV	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

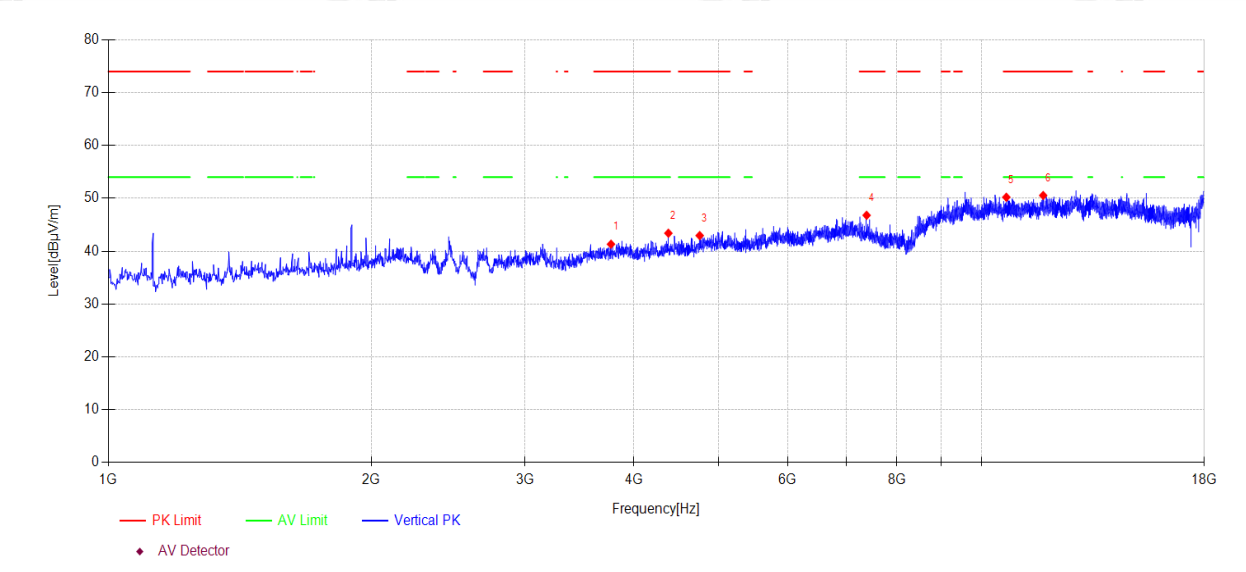
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\31

Memo:

Sample Number:S24061713-002 Power Setting:N/A

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3764.200	45.98	30.56	5.09	-40.31	41.32	74.00	32.68	PK	Vertical
2	4379.600	46.77	31.66	5.28	-40.31	43.40	74.00	30.60	PK	Vertical
3	4757.000	45.29	32.33	5.50	-40.17	42.95	74.00	31.05	PK	Vertical
4	7386.900	45.08	36.73	6.65	-41.67	46.79	74.00	27.21	PK	Vertical
5	10678.100	41.84	39.36	7.97	-38.97	50.20	74.00	23.80	PK	Vertical
6	11767.800	42.45	38.93	8.61	-39.45	50.54	74.00	23.46	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2437MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

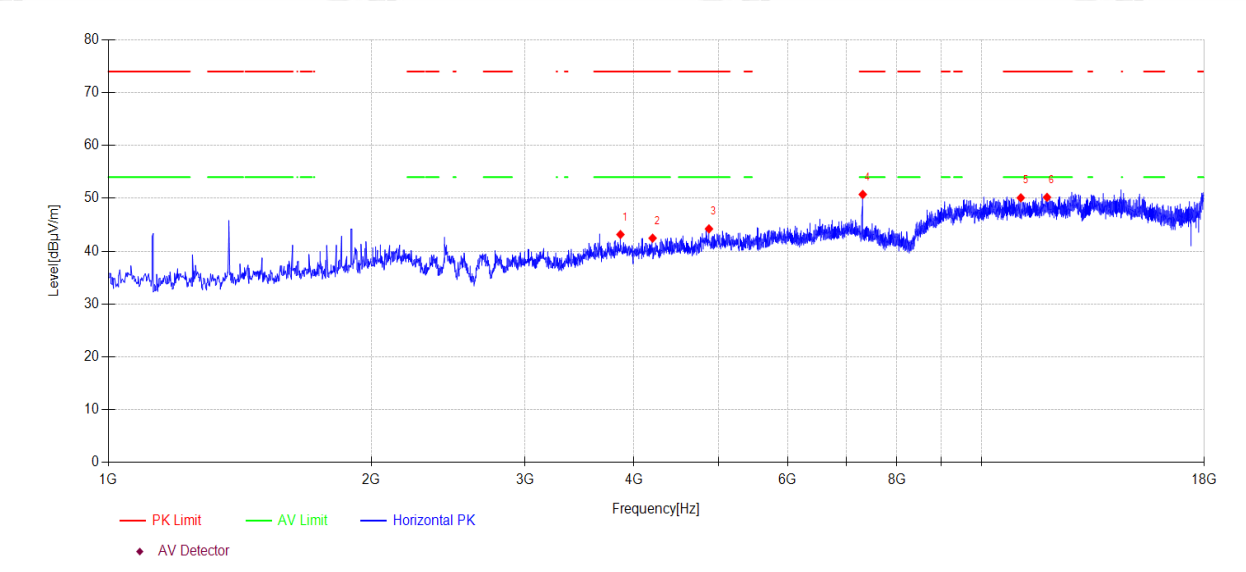
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\32

Memo:

Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3859.400	47.48	30.96	5.07	-40.36	43.15	74.00	30.85	PK	Horizontal
2	4201.100	46.47	31.20	5.17	-40.38	42.46	74.00	31.54	PK	Horizontal
3	4874.300	45.37	33.41	5.57	-40.13	44.22	74.00	29.78	PK	Horizontal
4	7312.100	48.72	36.88	6.61	-41.48	50.73	74.00	23.27	PK	Horizontal
5	11092.900	41.73	39.30	8.19	-39.13	50.09	74.00	23.91	PK	Horizontal
6	11888.500	42.11	38.90	8.69	-39.51	50.19	74.00	23.81	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2437MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

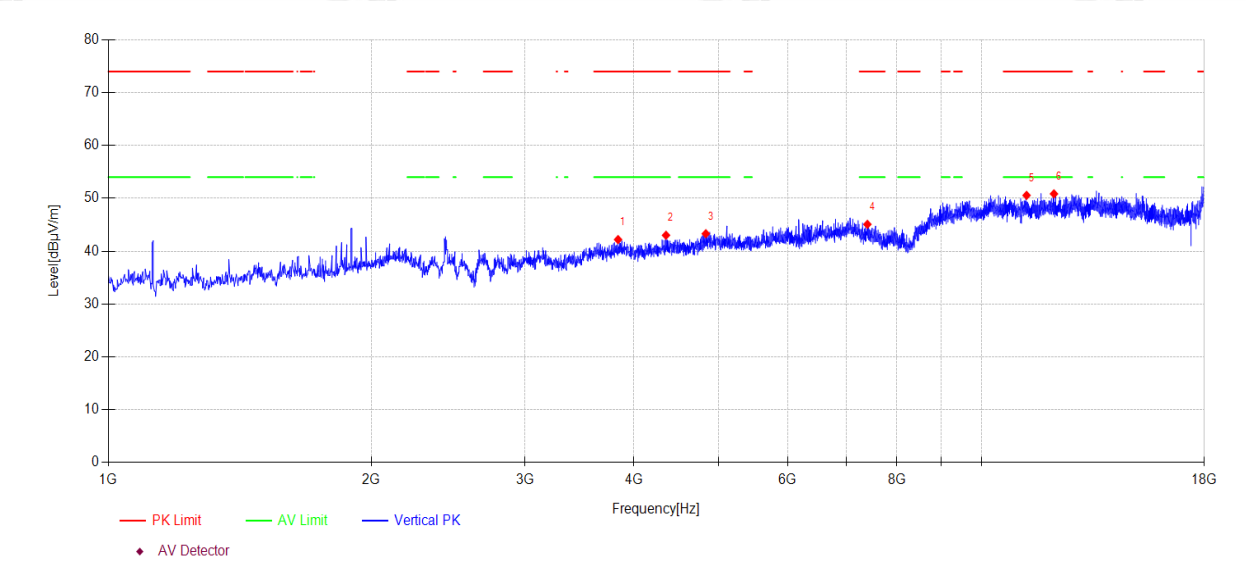
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\33

Memo:

Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3835.600	46.62	30.84	5.08	-40.35	42.19	74.00	31.81	PK	Vertical
2	4352.400	46.47	31.60	5.26	-40.32	43.01	74.00	30.99	PK	Vertical
3	4833.500	44.52	33.37	5.55	-40.14	43.30	74.00	30.70	PK	Vertical
4	7402.200	43.44	36.70	6.65	-41.71	45.08	74.00	28.92	PK	Vertical
5	11262.900	42.27	39.20	8.30	-39.21	50.56	74.00	23.44	PK	Vertical
6	12107.800	42.33	39.30	8.81	-39.60	50.84	74.00	23.16	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2437MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

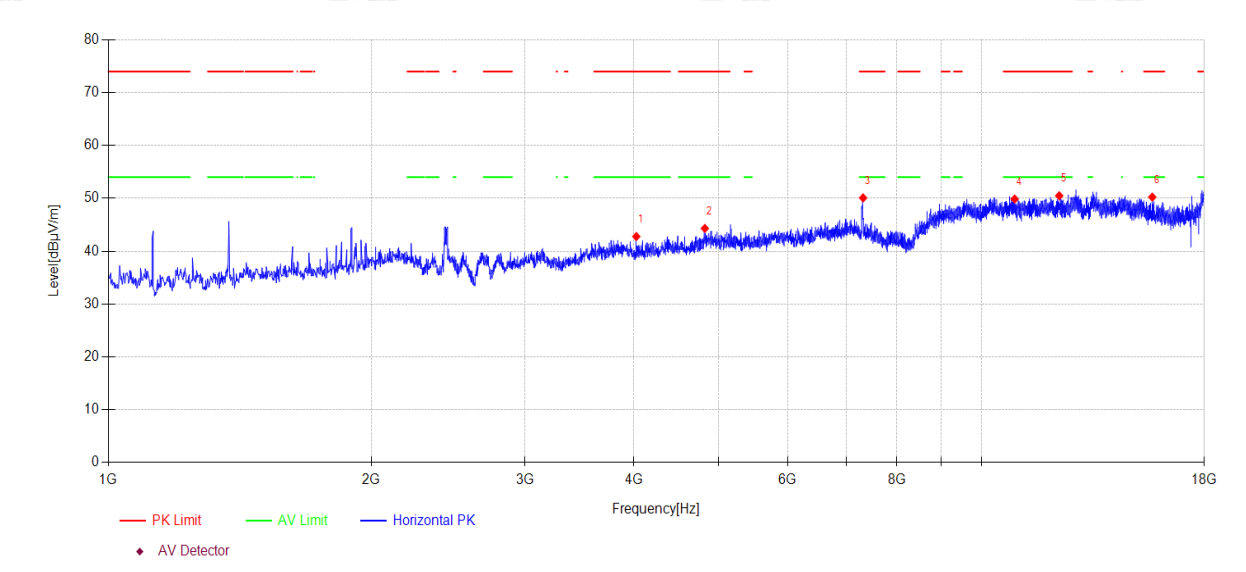
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\34

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4024.300	47.20	30.95	5.06	-40.44	42.77	74.00	31.23	PK	Horizontal
2	4821.600	45.86	33.06	5.54	-40.15	44.31	74.00	29.69	PK	Horizontal
3	7318.900	48.11	36.86	6.61	-41.50	50.08	74.00	23.92	PK	Horizontal
4	10914.400	41.53	39.30	8.09	-39.06	49.86	74.00	24.14	PK	Horizontal
5	12276.100	41.95	39.30	8.90	-39.67	50.48	74.00	23.52	PK	Horizontal
6	15691.400	40.95	38.51	9.94	-39.17	50.23	74.00	23.77	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:2024-07-23

Tested By:Genliu

EUT:Streaming Music Receiver

Model Number:F3081S

Test Mode:11G TX 2437MHz mode

Power Supply:AC120V/60Hz

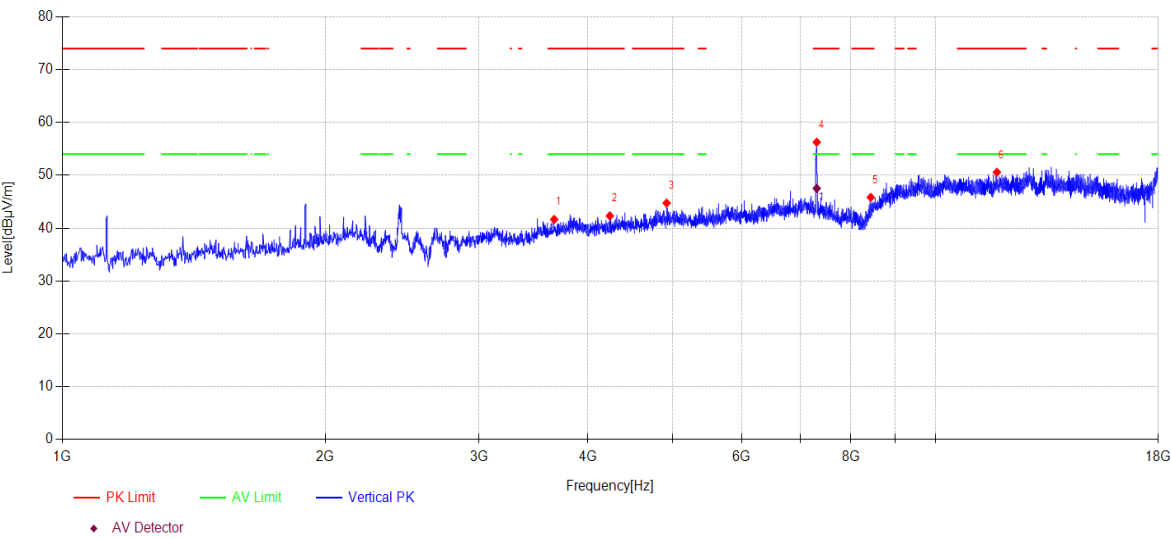
Condition:Temp:24.5°C;Humi:47.4%

Test Site:DDT 3# Chamber

File Path:d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\35

Memo:Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3658.800	46.54	30.24	5.11	-40.24	41.65	74.00	32.35	PK	Vertical
2	4236.800	46.15	31.35	5.19	-40.36	42.33	74.00	31.67	PK	Vertical
3	4921.900	46.21	33.04	5.60	-40.11	44.74	74.00	29.26	PK	Vertical
4	7312.100	54.26	36.88	6.61	-41.48	56.27	74.00	17.73	PK	Vertical
5	8430.700	42.52	37.50	7.11	-41.30	45.83	74.00	28.17	PK	Vertical
6	11759.300	42.47	38.94	8.61	-39.45	50.57	74.00	23.43	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	7312.043	45.51	36.88	6.61	-41.48	47.52	54.0	6.48	AV	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2437MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

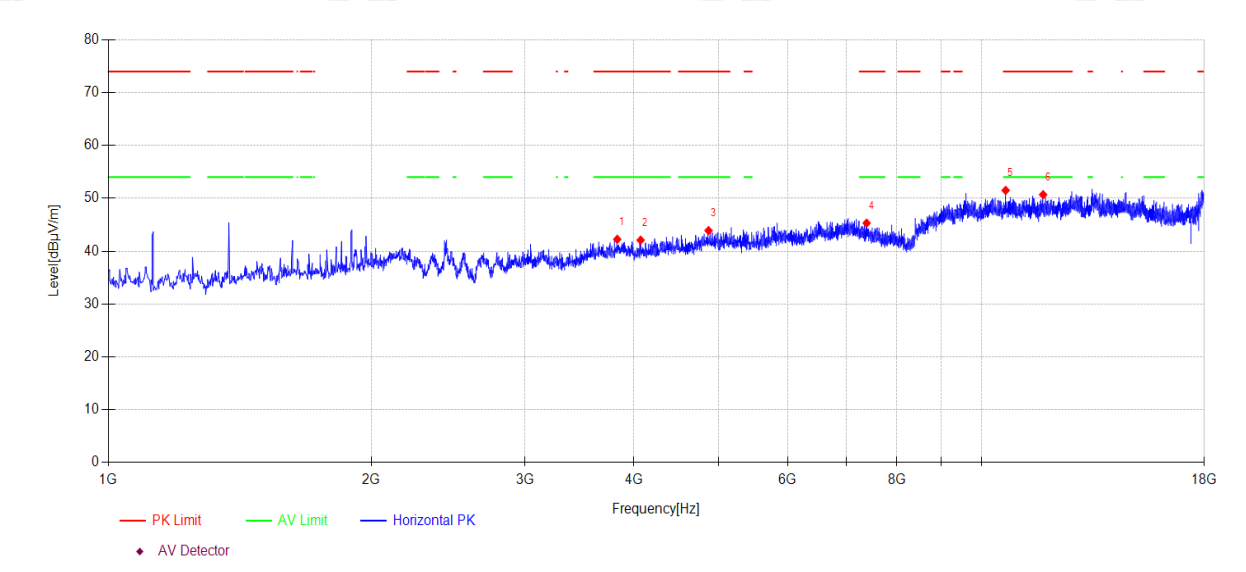
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\36

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3827.100	46.70	30.81	5.08	-40.34	42.25	74.00	31.75	PK	Horizontal
2	4070.200	46.38	31.04	5.09	-40.42	42.09	74.00	31.91	PK	Horizontal
3	4869.200	44.97	33.49	5.57	-40.13	43.90	74.00	30.10	PK	Horizontal
4	7386.900	43.60	36.73	6.65	-41.67	45.31	74.00	28.69	PK	Horizontal
5	10659.400	43.18	39.32	7.96	-38.96	51.50	74.00	22.50	PK	Horizontal
6	11766.100	42.60	38.93	8.61	-39.45	50.69	74.00	23.31	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-23

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2437MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

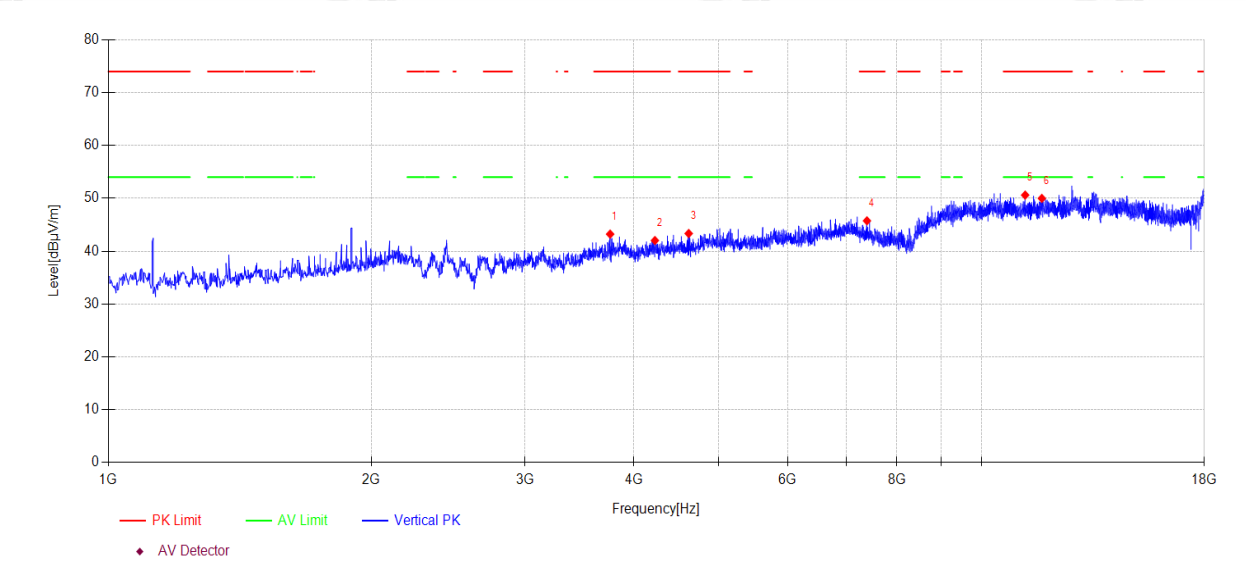
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\37

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3755.700	47.91	30.52	5.09	-40.30	43.22	74.00	30.78	PK	Vertical
2	4226.600	45.89	31.31	5.19	-40.37	42.02	74.00	31.98	PK	Vertical
3	4621.000	46.20	31.94	5.42	-40.22	43.34	74.00	30.66	PK	Vertical
4	7393.700	44.07	36.71	6.65	-41.68	45.75	74.00	28.25	PK	Vertical
5	11222.100	42.33	39.20	8.27	-39.19	50.61	74.00	23.39	PK	Vertical
6	11727.000	41.86	38.97	8.59	-39.43	49.99	74.00	24.01	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

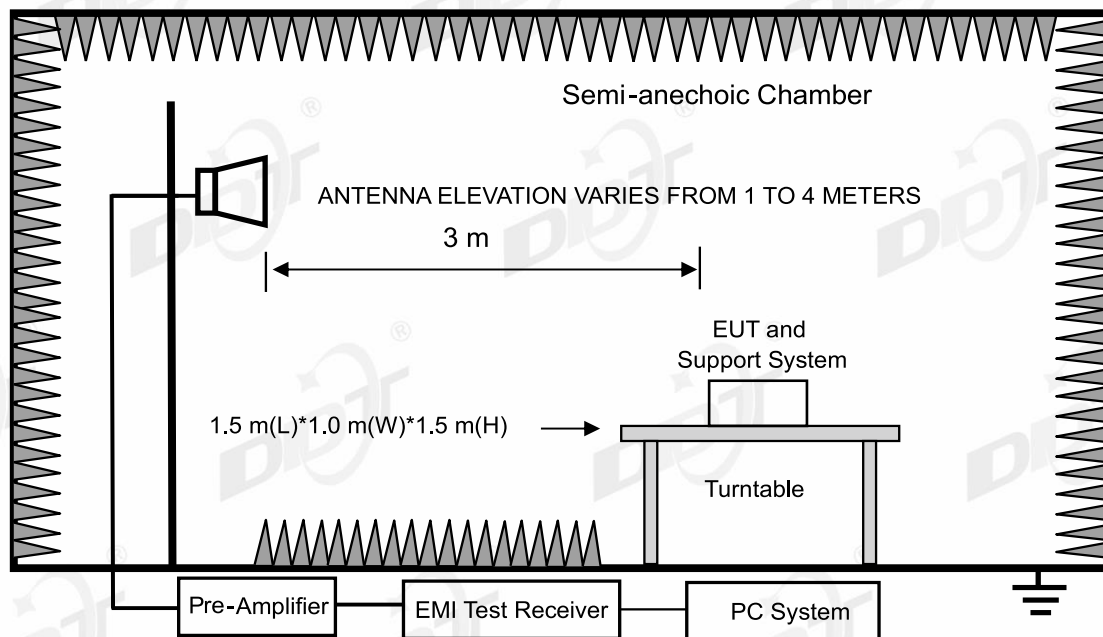
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

12. Radiated Band Edge Compliance

12.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To	Cal. Interval
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31	1 Year
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22	1 Year
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/	/
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22	1 Year
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/	/
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11	2 Year
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26	1 Year
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/07/08	1 Year
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22	1 Year
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18	2 Year
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31	1 Year
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11	2 Year
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31	1 Year
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31	1 Year
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31	1 Year
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31	1 Year
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31	1 Year

12.2. Block diagram of test setup



12.3. 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 RSS-Gen Issue 5 clause 6.13.2 (Same as FCC 15.209) limits.

12.4. Test procedure

Same with Radiated Spurious Emissions except change investigated frequency range from 2310 MHz to 2430 MHz and 2445 MHz to 2500 MHz.

12.5. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

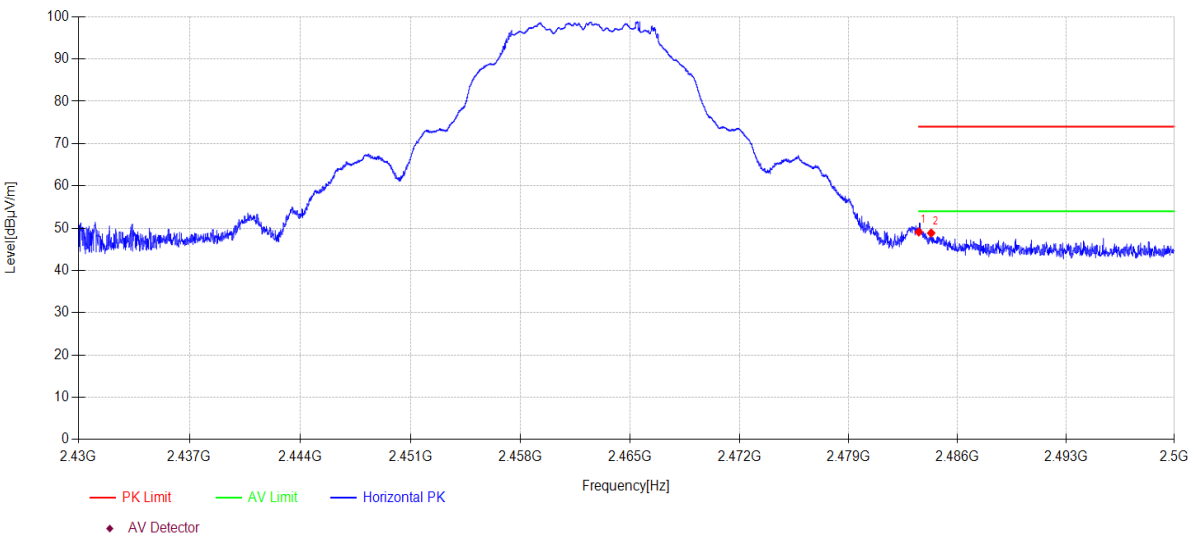
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\1

Memo:

Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	17.95	27.53	3.62	0.00	49.10	74.00	24.90	PK	Horizontal
2	2484.299	17.68	27.54	3.62	0.00	48.84	74.00	25.16	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

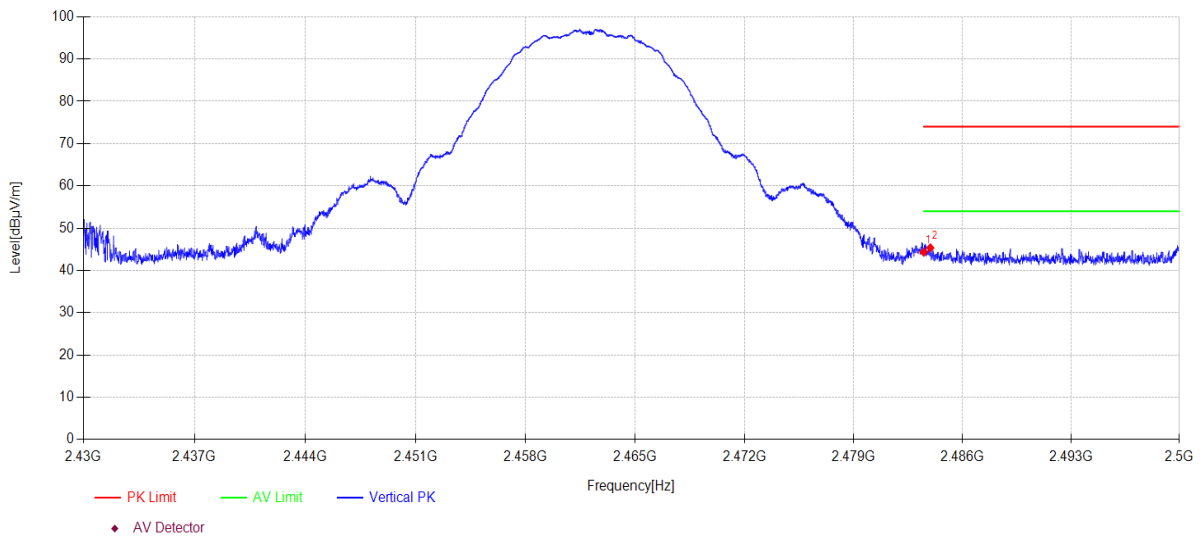
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22 **Tested By:** Genliu
EUT: Streaming Music Receiver **Model Number:** F3081S
Test Mode: 11B TX 2462MHz mode **Power Supply:** AC120V/60Hz
Condition: Temp:24.5°C;Humi:47.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\2
Memo: Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	13.16	27.53	3.62	0.00	44.31	74.00	29.69	PK	Vertical
2	2483.921	14.19	27.54	3.62	0.00	45.35	74.00	28.65	PK	Vertical

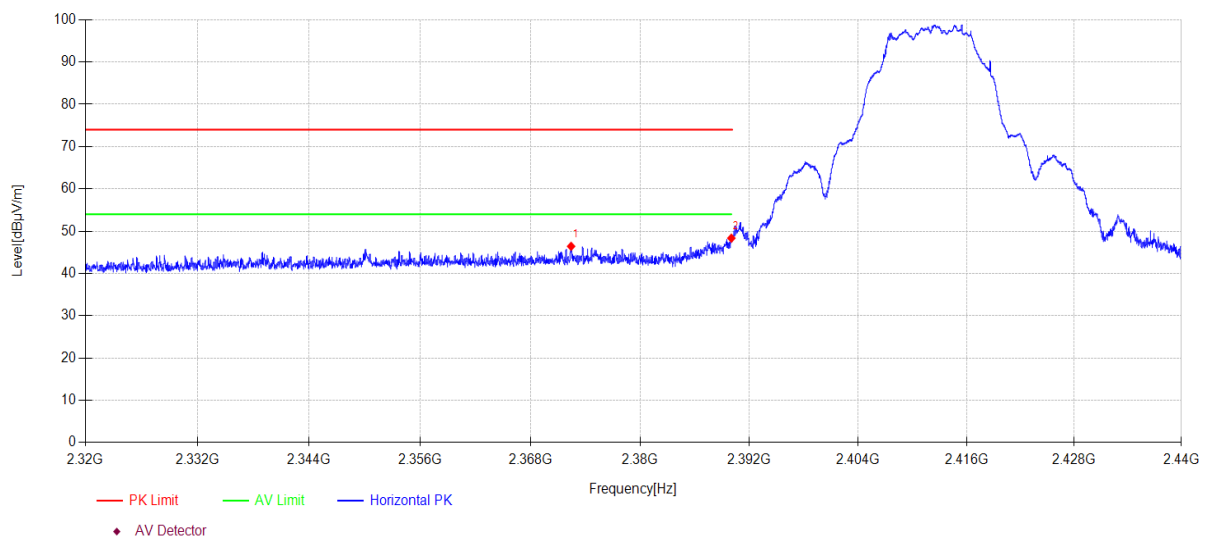
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22 **Tested By:** Genliu
EUT: Streaming Music Receiver **Model Number:** F3081S
Test Mode: 11B TX 2412MHz mode **Power Supply:** AC120V/60Hz
Condition: Temp:24.5°C;Humi:47.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\3
Memo: Sample Number:S24061713-002 Power Setting:NA

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2372.440	15.67	27.19	3.56	0.00	46.42	74.00	27.58	PK	Horizontal
2	2390.000	17.51	27.26	3.57	0.00	48.34	74.00	25.66	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11B TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

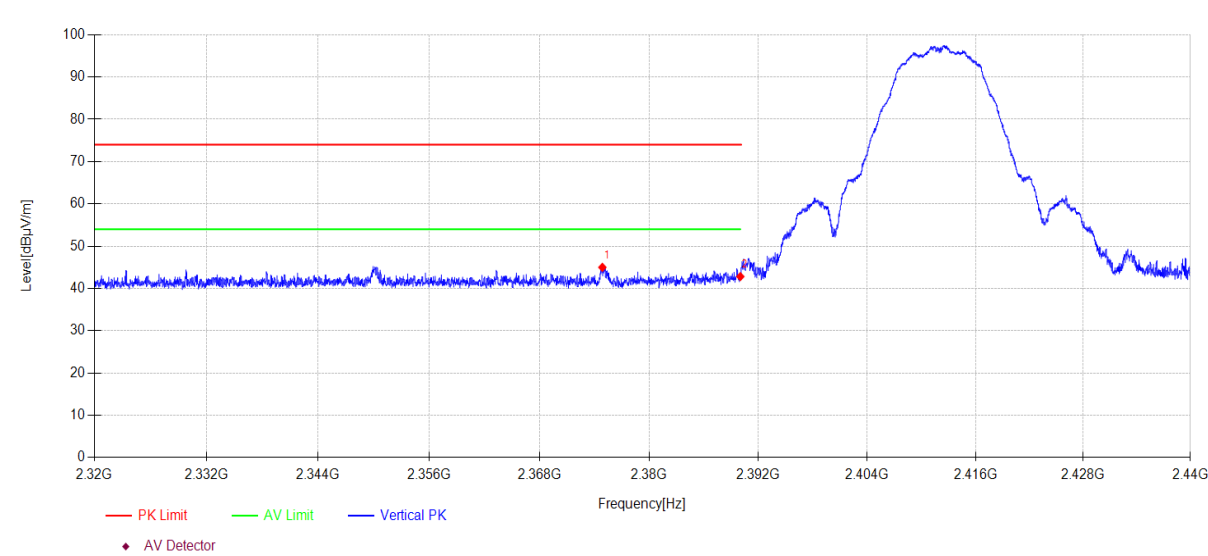
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\4

Memo:

Sample Number:S24061713-002 Power Setting:NA

Test Graph



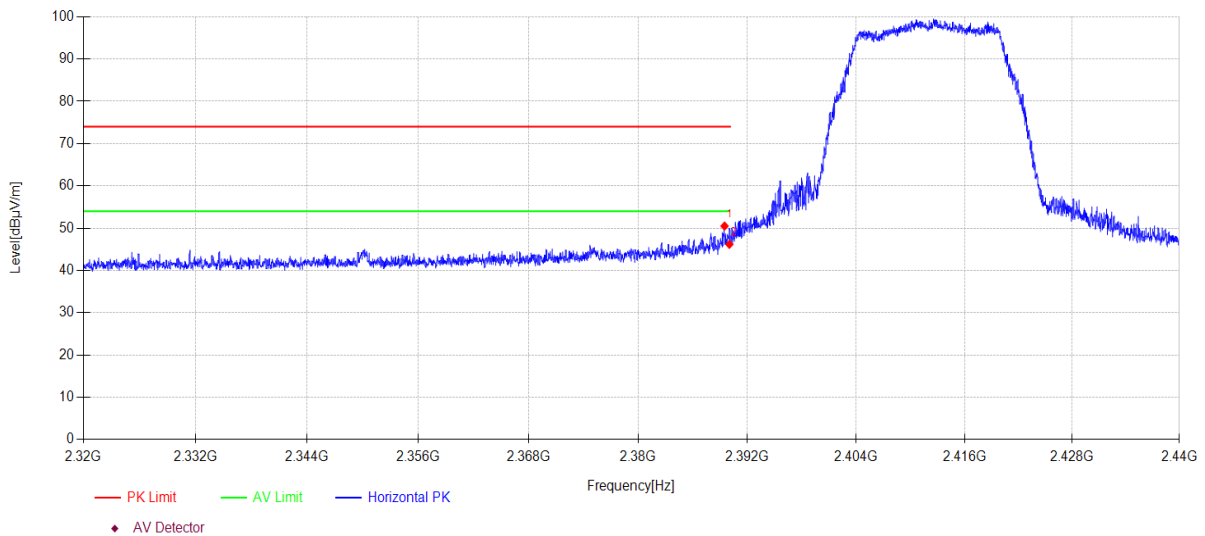
Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2374.876	14.23	27.20	3.56	0.00	44.99	74.00	29.01	PK	Vertical
2	2390.000	11.98	27.26	3.57	0.00	42.81	74.00	31.19	PK	Vertical

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22 **Tested By:** Genliu
EUT: Streaming Music Receiver **Model Number:** F3081S
Test Mode: 11G TX 2412MHz mode **Power Supply:** AC120V/60Hz
Condition: Temp:24.5°C;Humi:47.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\9
Memo: Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2389.468	19.67	27.26	3.57	0.00	50.50	74.00	23.50	PK	Horizontal
2	2390.000	15.34	27.26	3.57	0.00	46.17	74.00	27.83	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

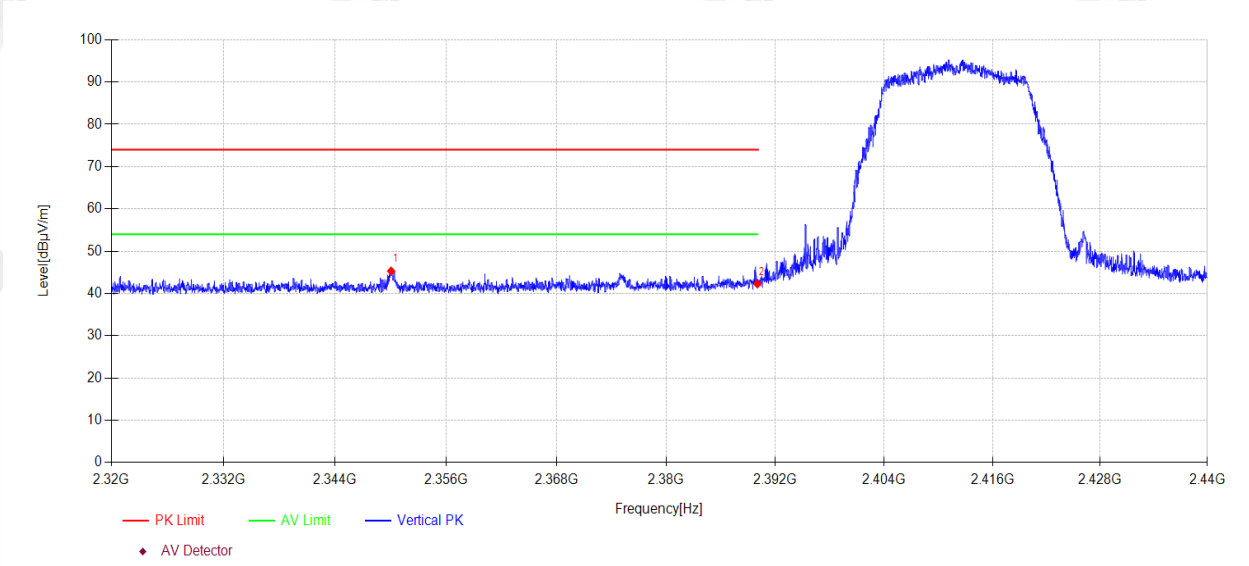
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\10

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2350.060	14.64	27.10	3.55	0.00	45.29	74.00	28.71	PK	Vertical
2	2390.000	11.44	27.26	3.57	0.00	42.27	74.00	31.73	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

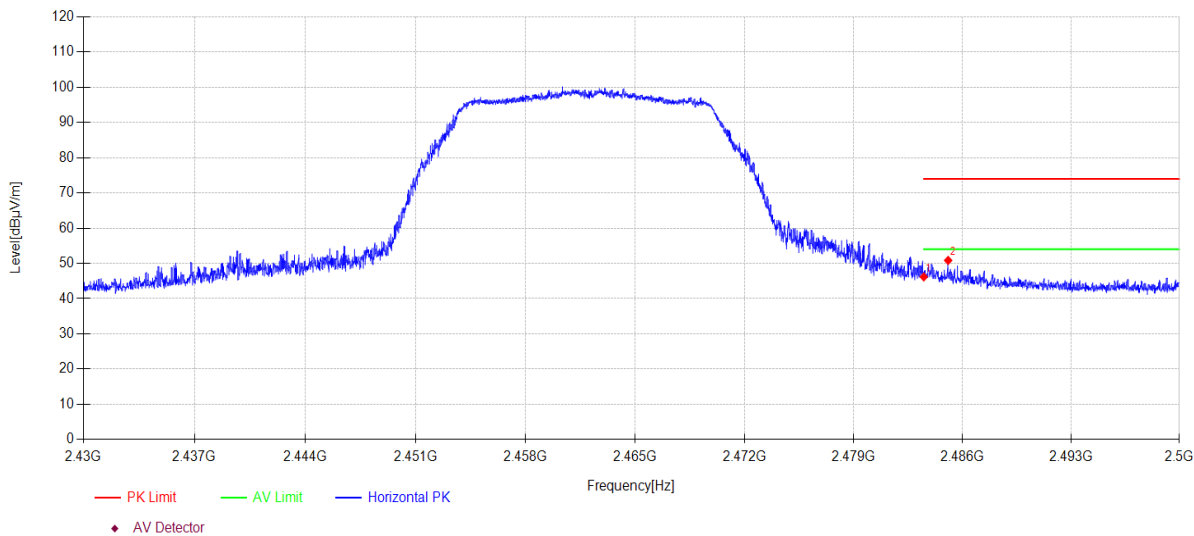
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\11

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	15.02	27.53	3.62	0.00	46.17	74.00	27.83	PK	Horizontal
2	2485.069	19.69	27.54	3.62	0.00	50.85	74.00	23.15	PK	Horizontal

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

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

11G TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

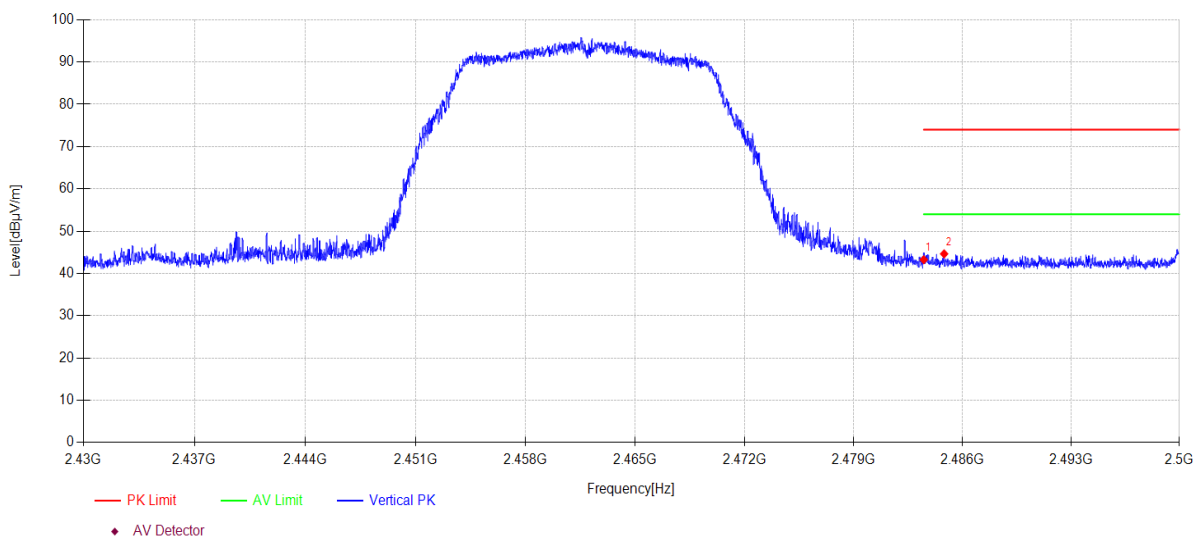
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\12

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	12.10	27.53	3.62	0.00	43.25	74.00	30.75	PK	Vertical
2	2484.810	13.47	27.54	3.62	0.00	44.63	74.00	29.37	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:2024-07-22

Tested By:Genliu

EUT:Streaming Music Receiver

Model Number:F3081S

Test Mode:N20 TX 2462MHz mode

Power Supply:AC120V/60Hz

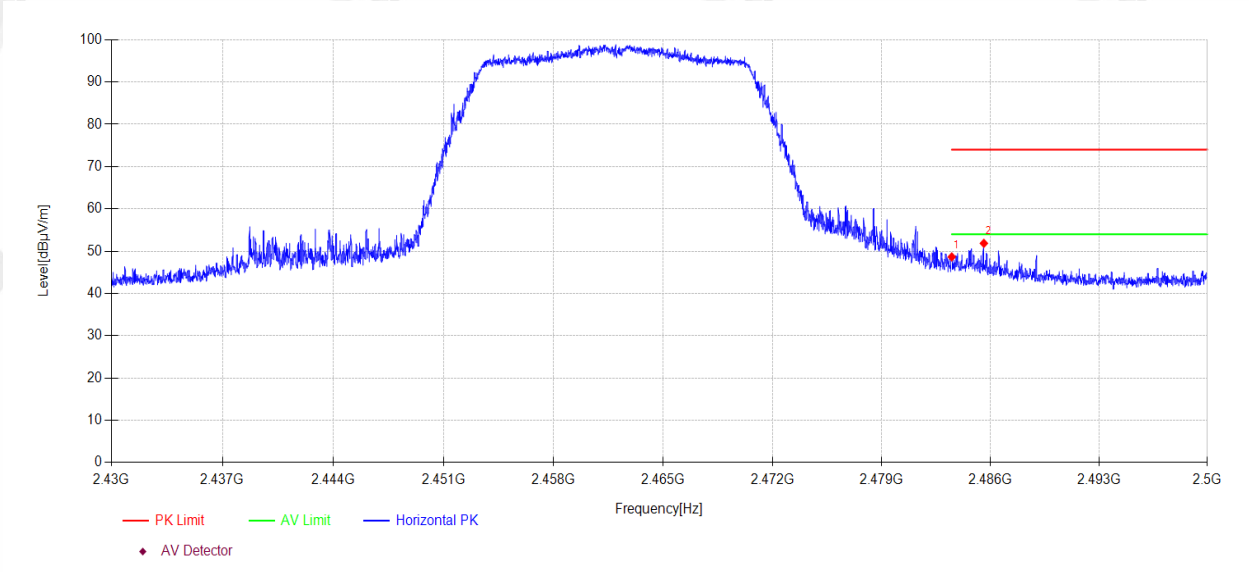
Condition:Temp:24.5°C;Humi:47.4%

Test Site:DDT 3# Chamber

File Path:d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\16

Memo:Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	17.49	27.53	3.62	0.00	48.64	74.00	25.36	PK	Horizontal
2	2485.566	20.69	27.54	3.62	0.00	51.85	74.00	22.15	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2462MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

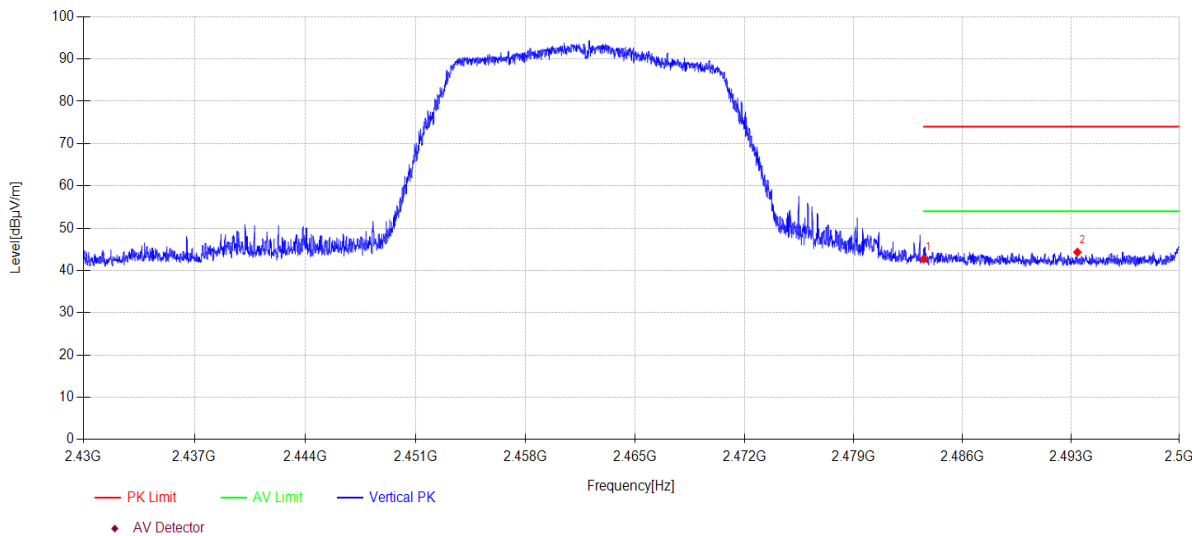
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\17

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.58	27.53	3.62	0.00	42.73	74.00	31.27	PK	Vertical
2	2493.406	13.12	27.57	3.63	0.00	44.32	74.00	29.68	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

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 Date:

2024-07-22

Tested By:

Genliu

EUT:

Streaming Music Receiver

Model Number:

F3081S

Test Mode:

N20 TX 2412MHz mode

Power Supply:

AC120V/60Hz

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

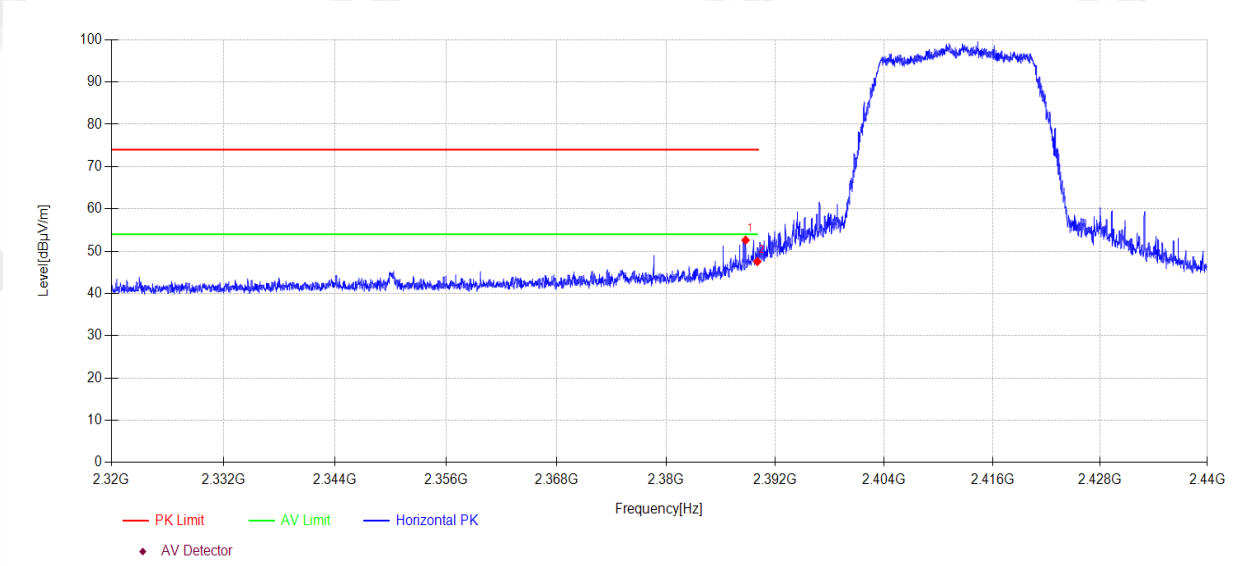
File Path:

d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\18

Memo:

Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2388.700	21.78	27.25	3.57	0.00	52.60	74.00	21.40	PK	Horizontal
2	2390.000	16.72	27.26	3.57	0.00	47.55	74.00	26.45	PK	Horizontal

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

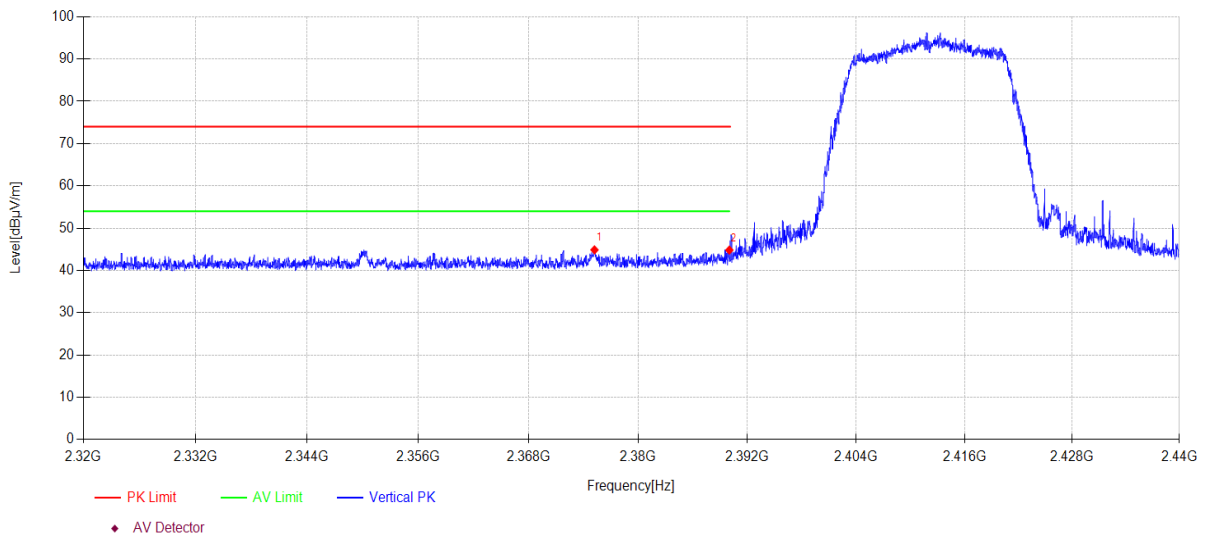
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-07-22 **Tested By:** Genliu
EUT: Streaming Music Receiver **Model Number:** F3081S
Test Mode: N20 TX 2412MHz mode **Power Supply:** AC120V/60Hz
Condition: Temp:24.5°C;Humi:47.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24061713-2E\FCC ABVE1G-2.4GWIFI\19
Memo: Sample Number:S24061713-002 Power Setting:10

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2375.212	14.10	27.20	3.56	0.00	44.86	74.00	29.14	PK	Vertical
2	2390.000	13.99	27.26	3.57	0.00	44.82	74.00	29.18	PK	Vertical

Note:

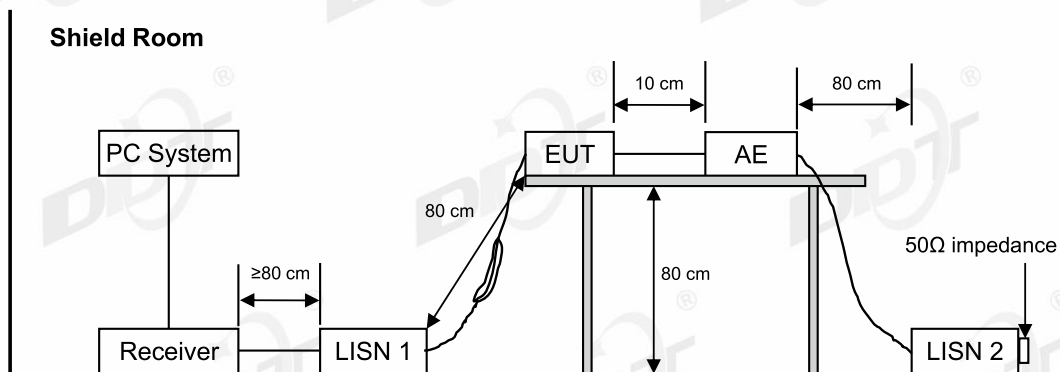
- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

13. Power Line Conducted Emission

13.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To	Cal. Interval
Conducted Radiated Software	Audix	E3	DDT-ZC00562	/	/
Three-phase artificial power network	SCHWARZBECK	NSLK 8163	DDT-ZC01572	2025/07/08	1 Year
Two Line V-Network	R&S	ENV216	DDT-ZC02059	2025/07/08	1 Year
RF Cable	Yuhu Technology	Z806-NJ-NJ-6M	DDT-ZC02004	2025/07/08	1 Year
Δ -shaped artificial power network	SCHWARZBECK	PVDC 8301	DDT-ZC03939	2025/03/31	1 Year
EMI Test Receiver	R&S	ESCI/E3	DDT-ZC01297	2025/07/08	1 Year
Pulse Limiter	SCHWARZBECK	VTSD 9561	DDT-ZC02128	2025/07/08	1 Year
Two Line V-Network	R&S	ENV216	DDT-ZC02056	2025/07/08	1 Year

13.2. Block diagram of test setup



13.3. Power Line Conducted Emission Limits

Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
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.

13.4. Test procedure

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

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 30 MHz for emissions in each of the test modes.

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

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

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.

13.5. Test result

Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “----” means peak detection; “----” means average detection

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/60Hz, recorded worse case.

TR-4-E-010 Conducted Emission Test Result

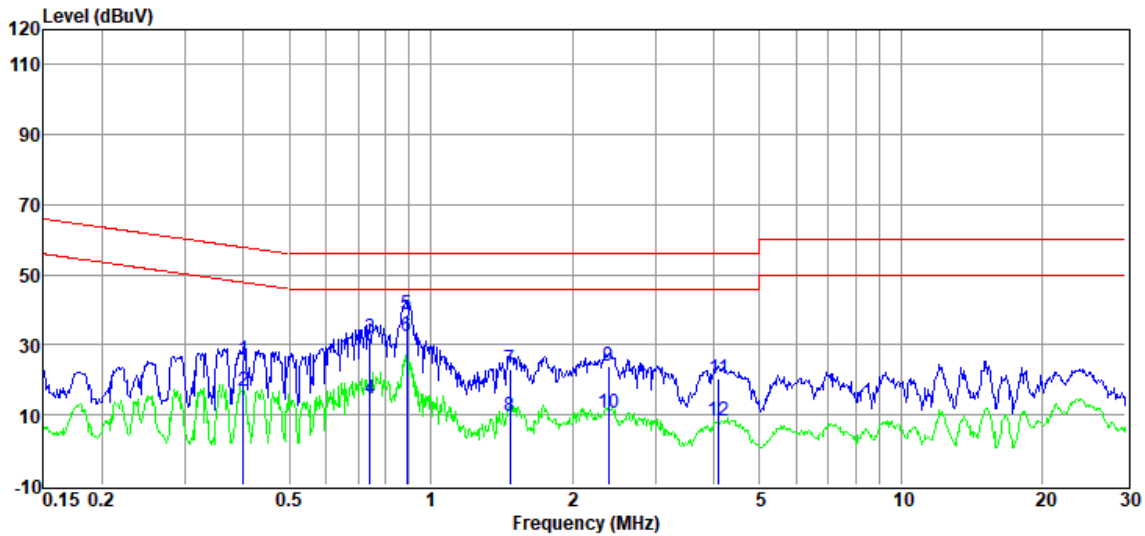
Test Site : DDT 6# Shield Room
Test Date : 2024-07-24
EUT : Streaming Music Receiver
Power Supply : AC 120V/60Hz
Condition : Temp:21.5°C,Humi:51.8%

D:\2024 Report Date\Q24061713-2E\FCC CE.EM6

Tested By : Genliu
Model Number : F3081S
Test Mode : 2.4G WIFI mode
LISN : 2023 ENV 216 3#/LINE

Memo :

Data: 14



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.40	5.80	10.00	0.13	9.95	25.88	57.86	-31.98	QP	LINE
2	0.40	-3.06	10.00	0.13	9.95	17.02	47.86	-30.84	Average	LINE
3	0.74	11.97	9.77	0.16	9.96	31.86	56.00	-24.14	QP	LINE
4	0.74	-5.50	9.77	0.16	9.96	14.39	46.00	-31.61	Average	LINE
5	0.89	18.91	9.72	0.21	9.97	38.81	56.00	-17.19	QP	LINE
6	0.89	12.42	9.72	0.21	9.97	32.32	46.00	-13.68	Average	LINE
7	1.47	3.22	9.47	0.26	9.98	22.93	56.00	-33.07	QP	LINE
8	1.47	-9.93	9.47	0.26	9.98	9.78	46.00	-36.22	Average	LINE
9	2.38	3.77	9.76	0.26	10.00	23.79	56.00	-32.21	QP	LINE
10	2.38	-9.31	9.76	0.26	10.00	10.71	46.00	-35.29	Average	LINE
11	4.09	0.08	9.80	0.27	10.01	20.16	56.00	-35.84	QP	LINE
12	4.09	-11.95	9.80	0.27	10.01	8.13	46.00	-37.87	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2024 Report Date\Q24061713-2E\FCC CE.EM6

Test Date : 2024-07-24

Tested By : Genliu

EUT : Streaming Music Receiver

Model Number : F3081S

Power Supply : AC 120V/60Hz

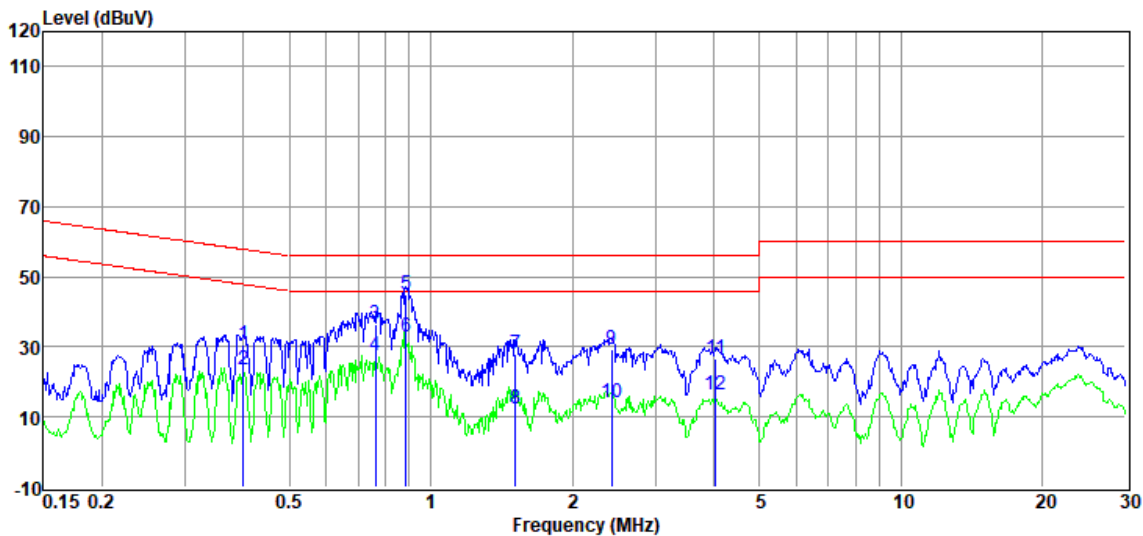
Test Mode : 2.4G WIFI mode

Condition : Temp:21.5°C,Humi:51.8%

LISN : 2023 ENV 216 3#/NEUTRAL

Memo :

Data: 16



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.40	10.64	9.98	0.13	9.95	30.70	57.86	-27.16	QP	NEUTRAL
2	0.40	3.39	9.98	0.13	9.95	23.45	47.86	-24.41	Average	NEUTRAL
3	0.76	16.52	9.88	0.17	9.97	36.54	56.00	-19.46	QP	NEUTRAL
4	0.76	7.46	9.88	0.17	9.97	27.48	46.00	-18.52	Average	NEUTRAL
5	0.88	24.51	10.04	0.21	9.97	44.73	56.00	-11.27	QP	NEUTRAL
6	0.88	12.57	10.04	0.21	9.97	32.79	46.00	-13.21	Average	NEUTRAL
7	1.51	7.88	10.03	0.26	9.98	28.15	56.00	-27.85	QP	NEUTRAL
8	1.51	-7.97	10.03	0.26	9.98	12.30	46.00	-33.70	Average	NEUTRAL
9	2.42	9.20	9.68	0.26	10.00	29.14	56.00	-26.86	QP	NEUTRAL
10	2.42	-5.97	9.68	0.26	10.00	13.97	46.00	-32.03	Average	NEUTRAL
11	4.03	6.66	9.50	0.27	10.01	26.44	56.00	-29.56	QP	NEUTRAL
12	4.03	-3.47	9.50	0.27	10.01	16.31	46.00	-29.69	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

14. Antenna Requirements

14.1. 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.

14.2. Result

The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.

16. Photos of the EUT

Please refer to appendix I.

END OF REPORT