

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2437MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

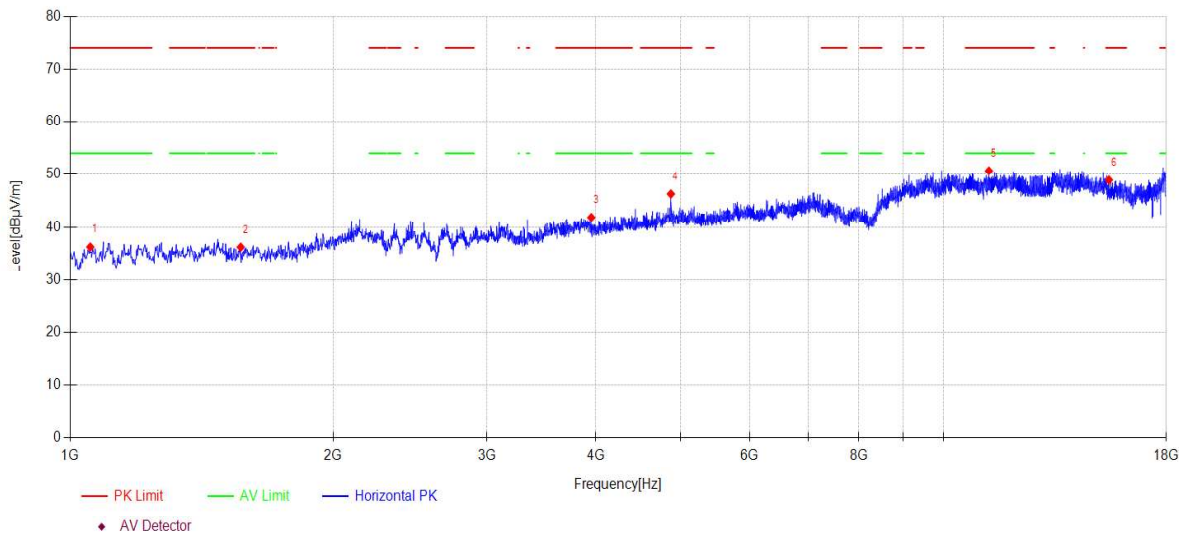
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	1054.400	45.76	24.41	2.96	-36.89	36.24	74.00	37.76	PK	Horizontal
2	1567.800	44.22	25.08	3.85	-36.95	36.20	74.00	37.80	PK	Horizontal
3	3951.200	46.12	31.10	5.06	-40.42	41.86	74.00	32.14	PK	Horizontal
4	4874.300	47.44	33.41	5.57	-40.13	46.29	74.00	27.71	PK	Horizontal
5	11274.800	42.41	39.20	8.30	-39.22	50.69	74.00	23.31	PK	Horizontal
6	15472.100	39.29	38.86	9.80	-39.04	48.91	74.00	25.09	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2437MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

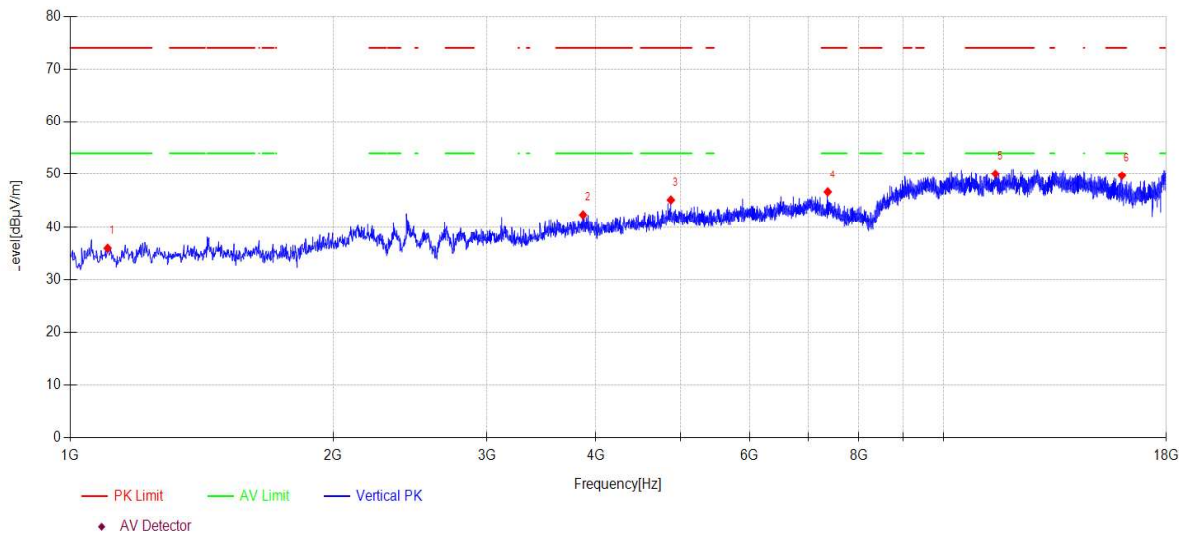
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	1103.700	45.33	24.52	3.05	-36.89	36.01	74.00	37.99	PK	Vertical
2	3866.200	46.68	31.00	5.07	-40.37	42.38	74.00	31.62	PK	Vertical
3	4874.300	46.30	33.41	5.57	-40.13	45.15	74.00	28.85	PK	Vertical
4	7371.600	44.90	36.76	6.64	-41.63	46.67	74.00	27.33	PK	Vertical
5	11468.600	41.76	39.23	8.43	-39.31	50.11	74.00	23.89	PK	Vertical
6	16012.700	40.99	37.99	10.15	-39.37	49.76	74.00	24.24	PK	Vertical

Note:

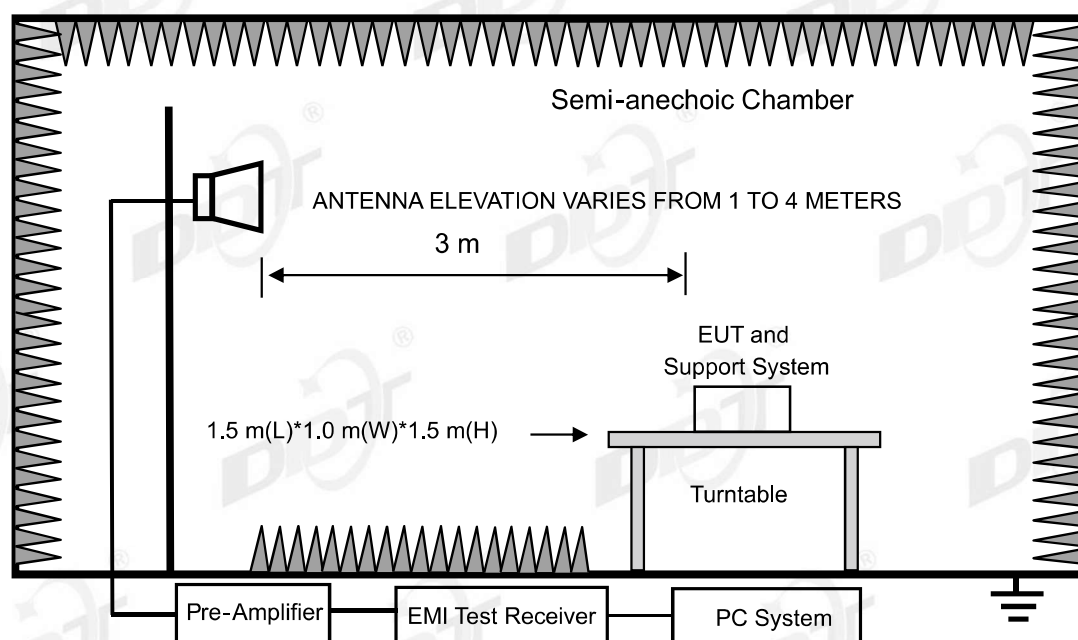
- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

13.Band Edge Compliance

13.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/04/01
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/04/01
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2024/07/12
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/04/01
ELECTRIC AND MAGNETIC FIELD ANALYZER	Narda	EHP-200A	DDT-ZC01401	2024/09/21
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/04/01
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/23
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/04/01
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/23
Hochgewinn-Hornantenne	SCHWARZBEC K	BBHA 9120 D	DDT-ZC02129	2025/09/18
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/04/01
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/23
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2024/07/15
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/04/01
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/04/01

13.2. Block diagram of test setup



13.3. Limits

All restriction band should comply with 15.209 and RSS-Gen section 8.9 limits, other emission should be at least 20 dB below the fundamental.

13.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
Laptop	Lenovo	00426-OEM-8992662-00006	Fixed frequency computer	N/A

13.5. Test procedure

Same with Radiated Emission except change investigated frequency range.

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

13.6. Test result

PASS. (See below detailed test result)

13.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2412MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

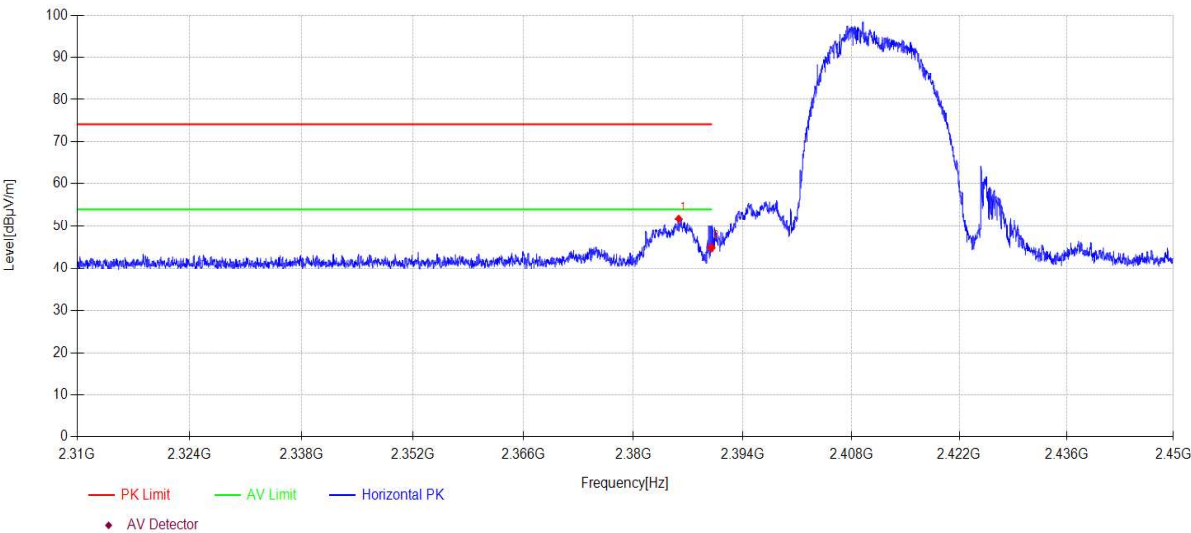
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	2385.810	20.90	27.24	3.57	0.00	51.71	74.00	22.29	PK	Horizontal
2	2390.000	14.05	27.26	3.57	0.00	44.88	74.00	29.12	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2412MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

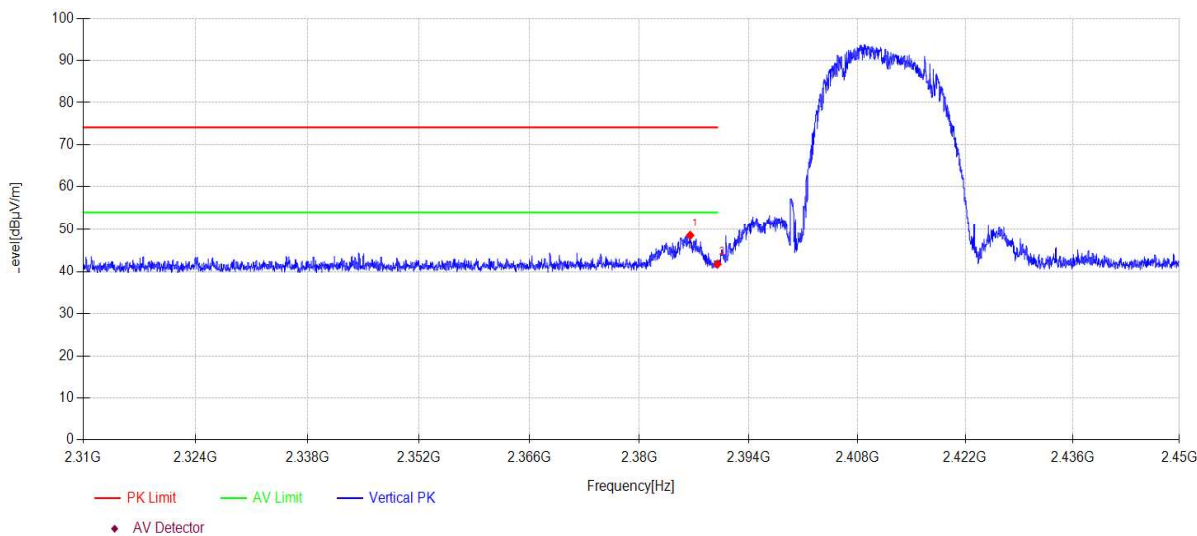
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	2386.510	17.65	27.25	3.57	0.00	48.47	74.00	25.53	PK	Vertical
2	2390.000	10.97	27.26	3.57	0.00	41.80	74.00	32.20	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2462MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

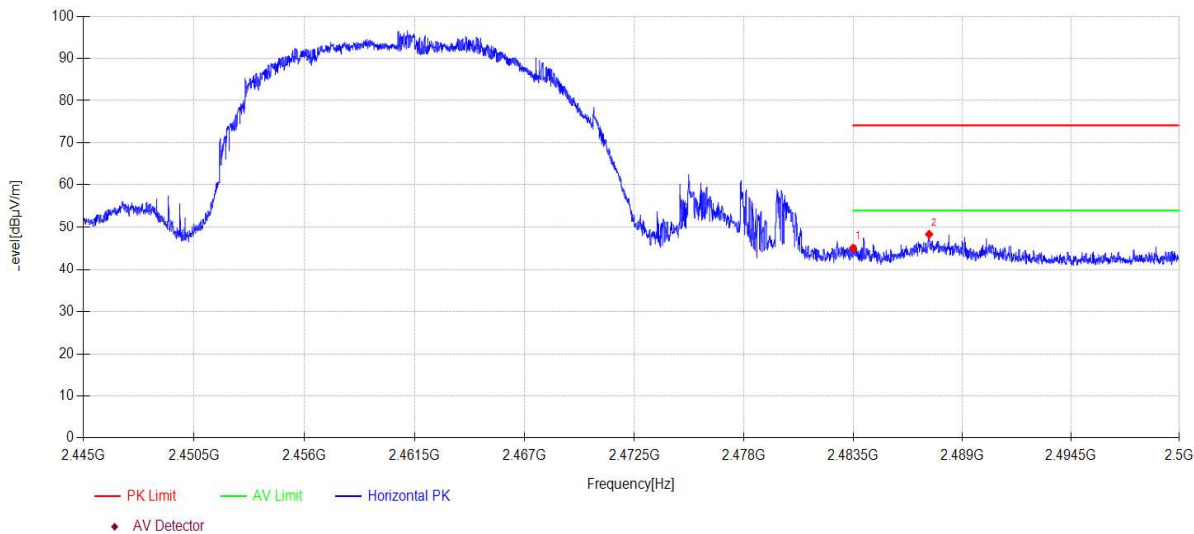
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	13.88	27.53	3.62	0.00	45.03	74.00	28.97	PK	Horizontal
2	2487.339	17.05	27.55	3.62	0.00	48.22	74.00	25.78	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11B TX 2462MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

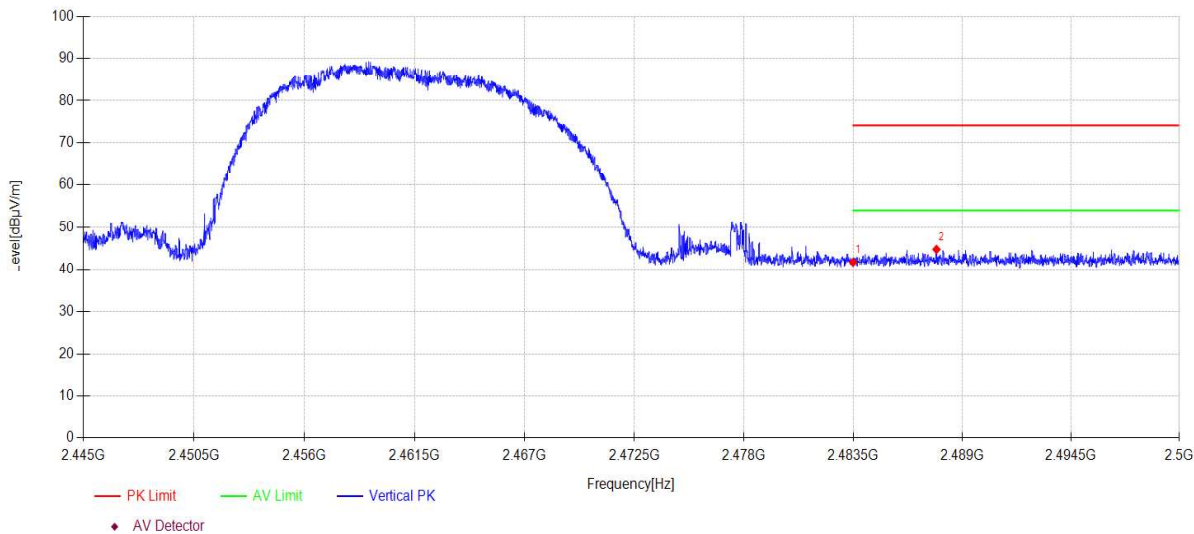
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Memo:

Side Sample Number:S24041013 Power Setting:22

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	10.57	27.53	3.62	0.00	41.72	74.00	32.28	PK	Vertical
2	2487.713	13.57	27.55	3.62	0.00	44.74	74.00	29.26	PK	Vertical

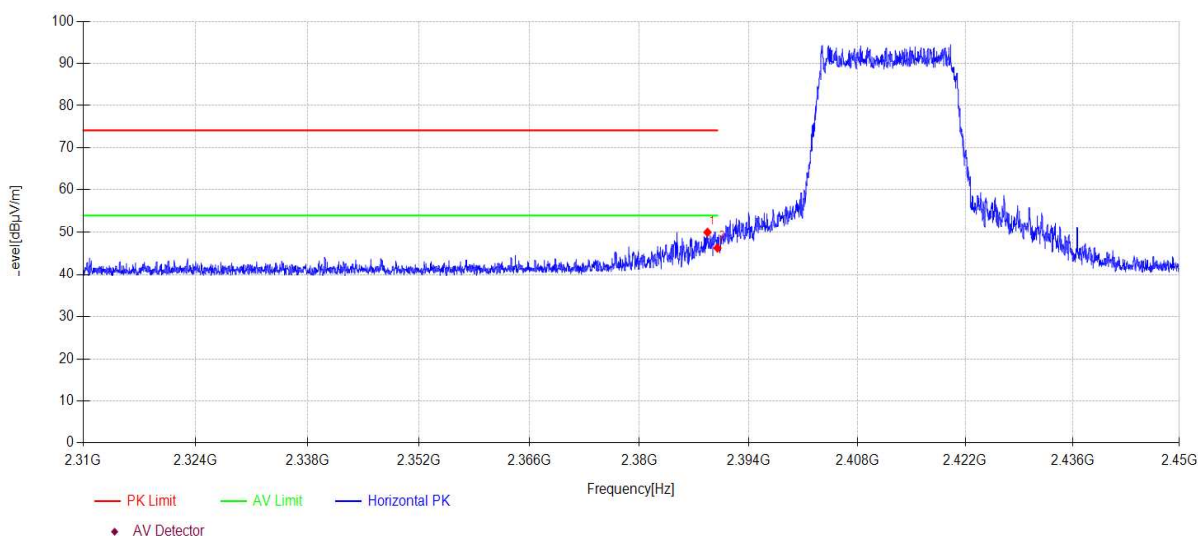
Note:

- 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: 2024-05-29 **Tested By:** Genliu
EUT: Ceiling fan **Model Number:** 37000063
Test Mode: 11G TX 2412MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:24.2°C;Humi:62.2% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24041013-2E\0509 FCC ABOVE 1G WIFI\11
Memo: Side Sample Number:S24041013 Power Setting:40

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	2388.722	19.05	27.25	3.57	0.00	49.87	74.00	24.13	PK	Horizontal
2	2390.000	15.39	27.26	3.57	0.00	46.22	74.00	27.78	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11G TX 2412MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

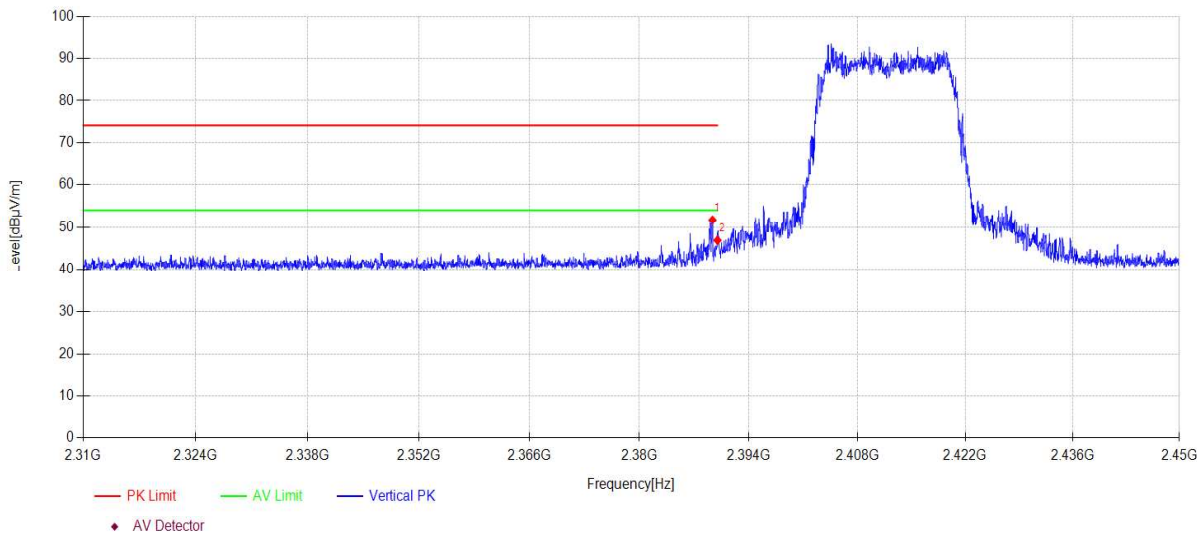
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	2389.366	20.89	27.26	3.57	0.00	51.72	74.00	22.28	PK	Vertical
2	2390.000	16.04	27.26	3.57	0.00	46.87	74.00	27.13	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11G TX 2462MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

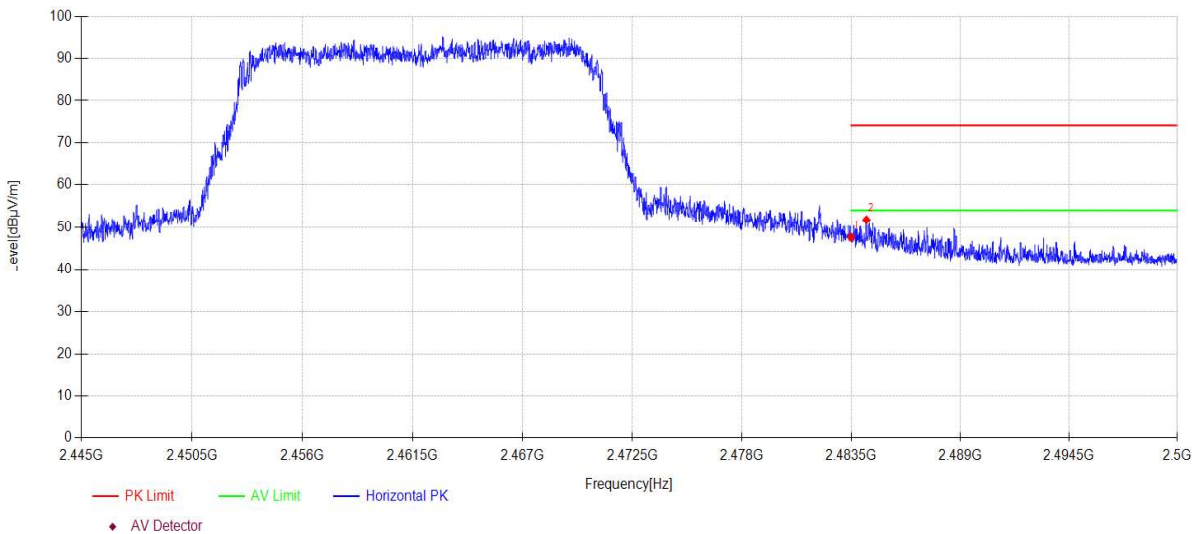
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	16.44	27.53	3.62	0.00	47.59	74.00	26.41	PK	Horizontal
2	2484.276	20.59	27.54	3.62	0.00	51.75	74.00	22.25	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11G TX 2462MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

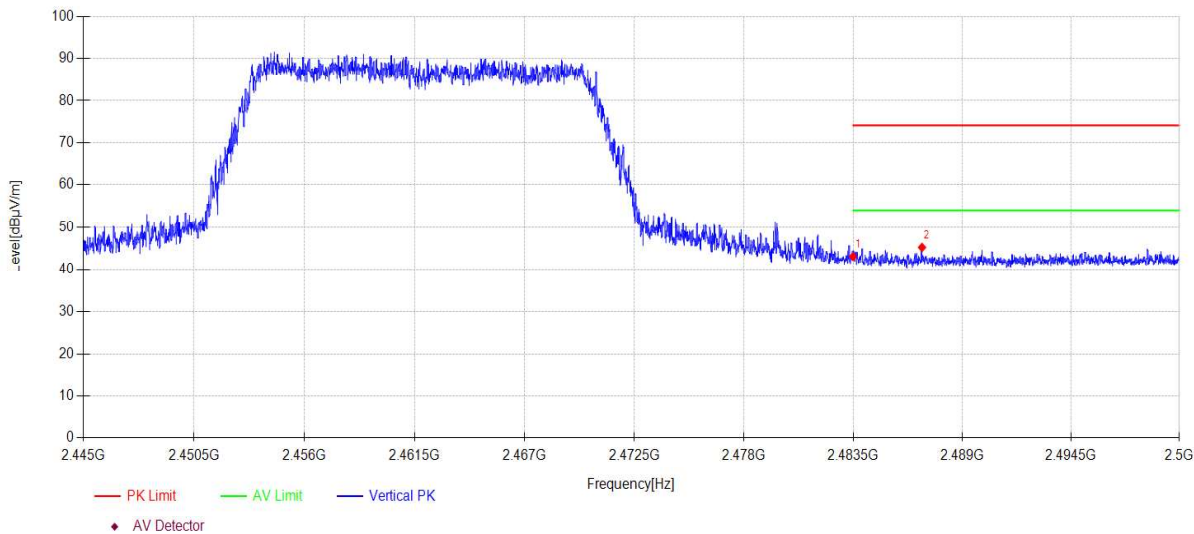
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	11.91	27.53	3.62	0.00	43.06	74.00	30.94	PK	Vertical
2	2486.982	14.03	27.55	3.62	0.00	45.20	74.00	28.80	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N20 TX 2462MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

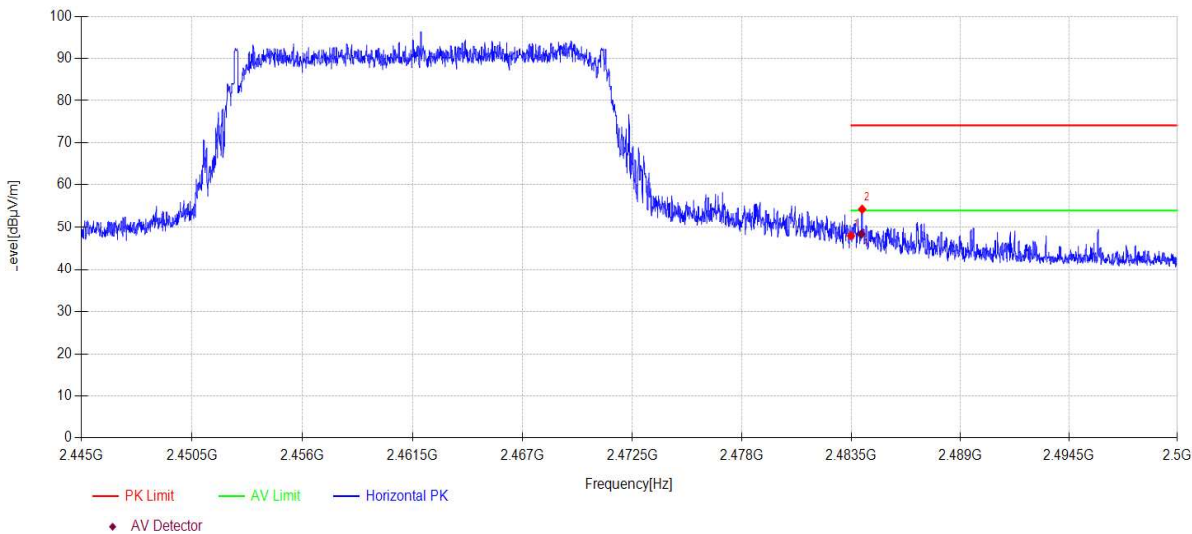
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	16.75	27.53	3.62	0.00	47.90	74.00	26.10	PK	Horizontal
2	2484.061	23.13	27.54	3.62	0.00	54.29	74.00	19.71	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	2484.023	15.86	27.54	4.89	0.00	48.29	54	5.71	AV	Horizontal

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

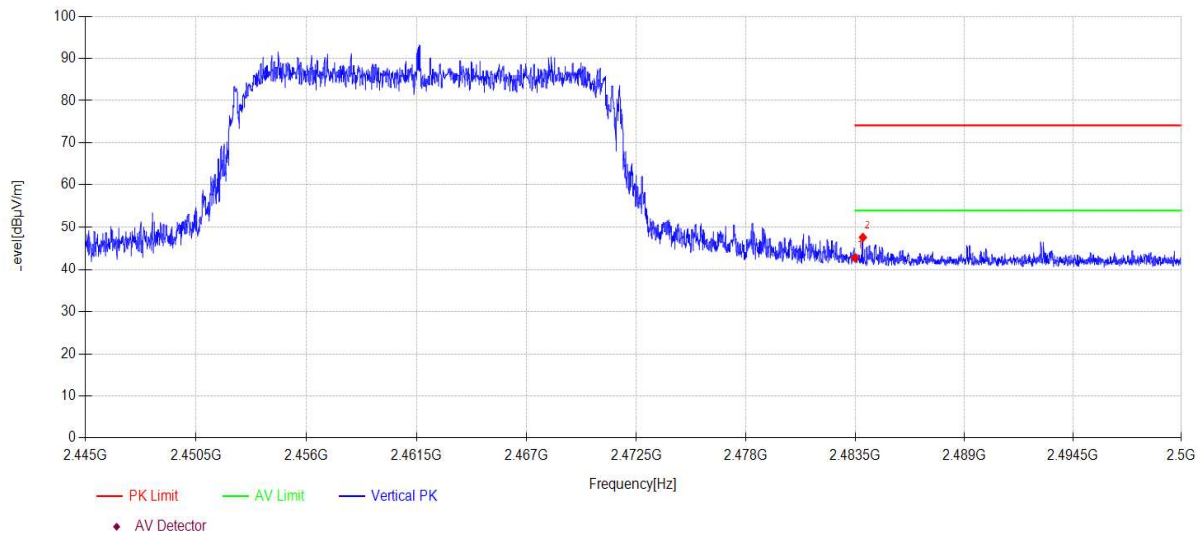
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-05-29 **Tested By:** Genliu
EUT: Ceiling fan **Model Number:** 37000063
Test Mode: 11N20 TX 2462MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:24.2°C;Humi:62.2% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24041013-2E\0509 FCC ABOVE 1G WIFI\16
Memo: Side Sample Number:S24041013 Power Setting:40

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	11.63	27.53	3.62	0.00	42.78	74.00	31.22	PK	Vertical
2	2483.896	16.36	27.54	3.62	0.00	47.52	74.00	26.48	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N20 TX 2412MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

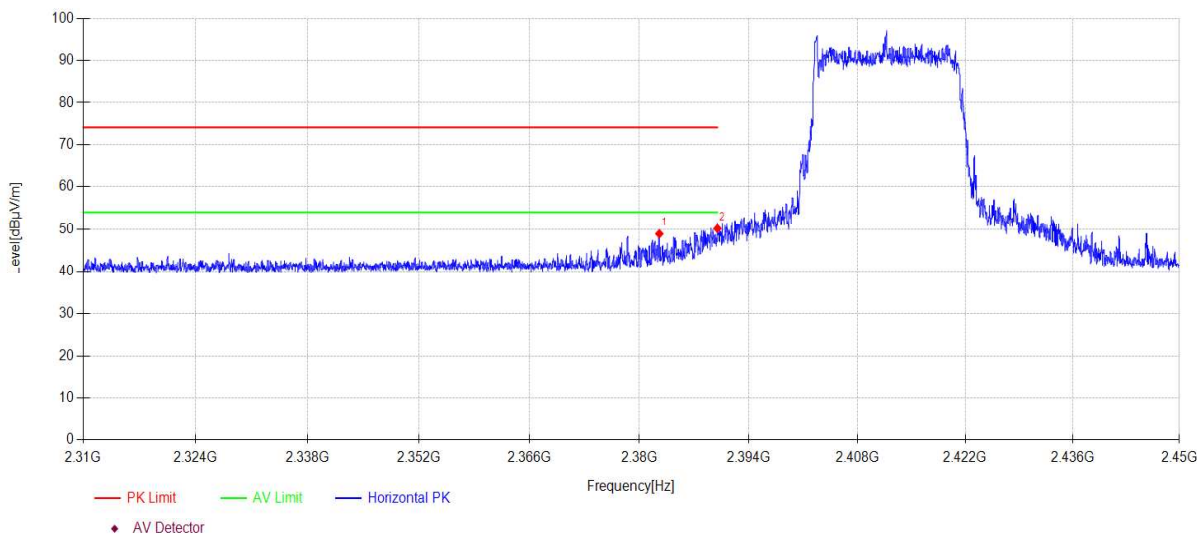
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	2382.562	18.07	27.23	3.56	0.00	48.86	74.00	25.14	PK	Horizontal
2	2390.000	19.25	27.26	3.57	0.00	50.08	74.00	23.92	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N20 TX 2412MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

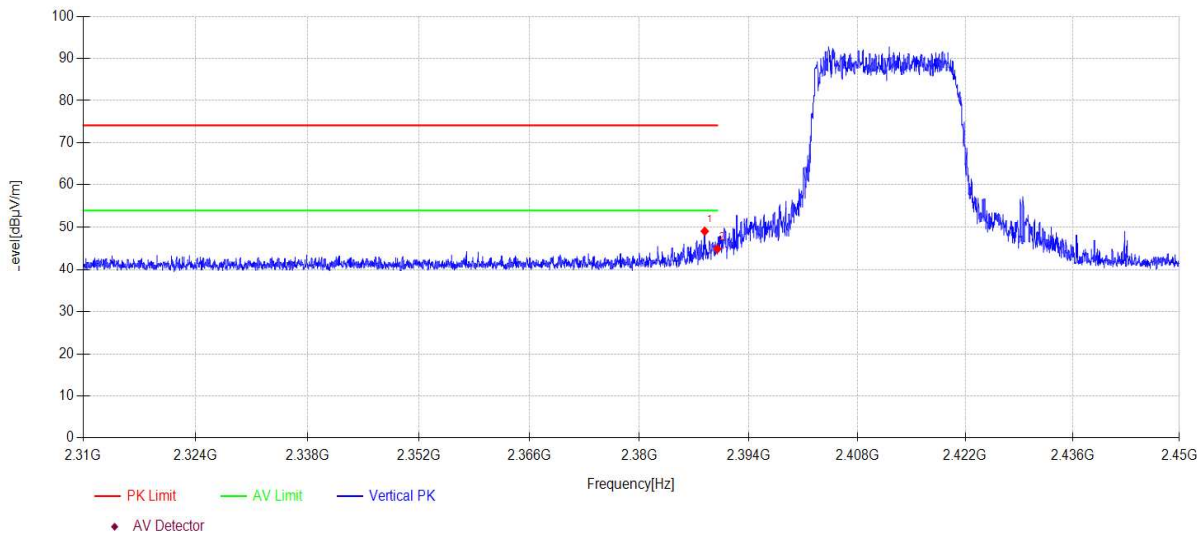
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	2388.372	18.13	27.25	3.57	0.00	48.95	74.00	25.05	PK	Vertical
2	2390.000	14.02	27.26	3.57	0.00	44.85	74.00	29.15	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N40 TX 2422MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

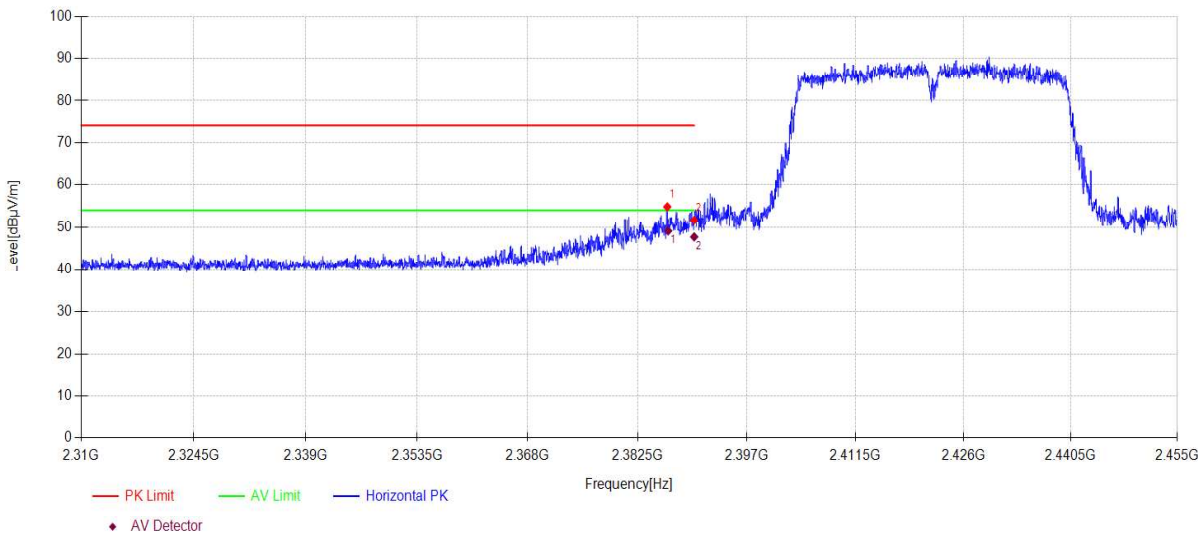
File Path:

d:\ts\2024 report data\Q24041013-2E\0509 FCC ABOVE 1G WIFI\19

Memo:

Side Sample Number:S24041013 Power Setting:40

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	2386.430	24.02	27.25	3.57	0.00	54.84	74.00	19.16	PK	Horizontal
2	2390.000	20.82	27.26	3.57	0.00	51.65	74.00	22.35	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	2386.552	16.97	27.25	4.83	0.00	49.05	54	4.95	AV	Horizontal
2	2390.000	16.83	27.26	3.57	0.00	47.66	54	6.34	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N40 TX 2422MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

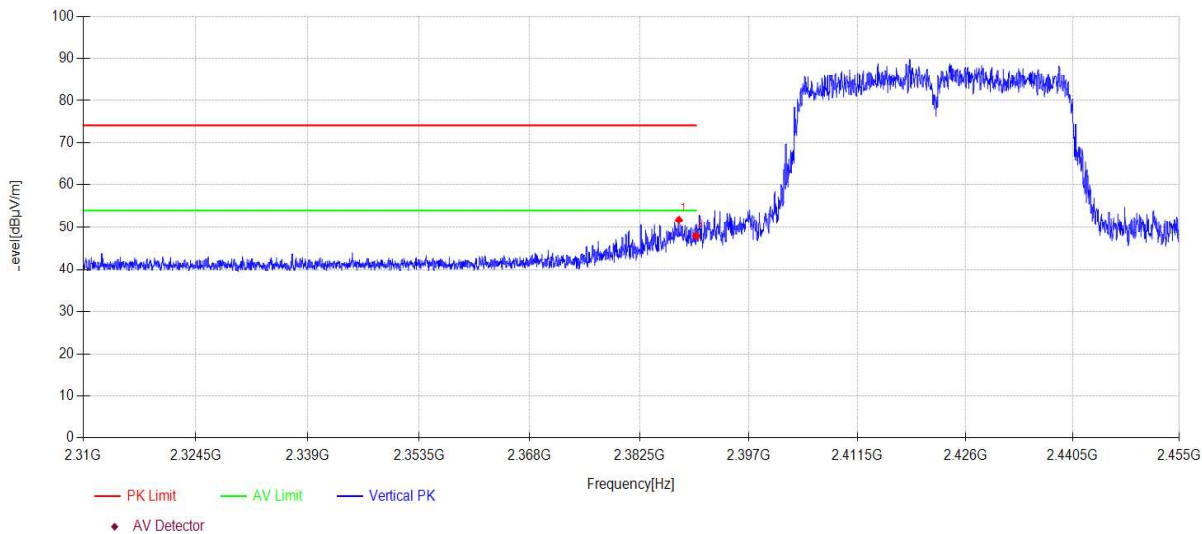
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	2387.706	20.92	27.25	3.57	0.00	51.74	74.00	22.26	PK	Vertical
2	2390.000	17.05	27.26	3.57	0.00	47.88	74.00	26.12	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: 2024-05-29

Tested By: Genliu

EUT: Ceiling fan

Model Number: 37000063

Test Mode: 11N40 TX 2452MHz

Power Supply: AC 120V/60Hz

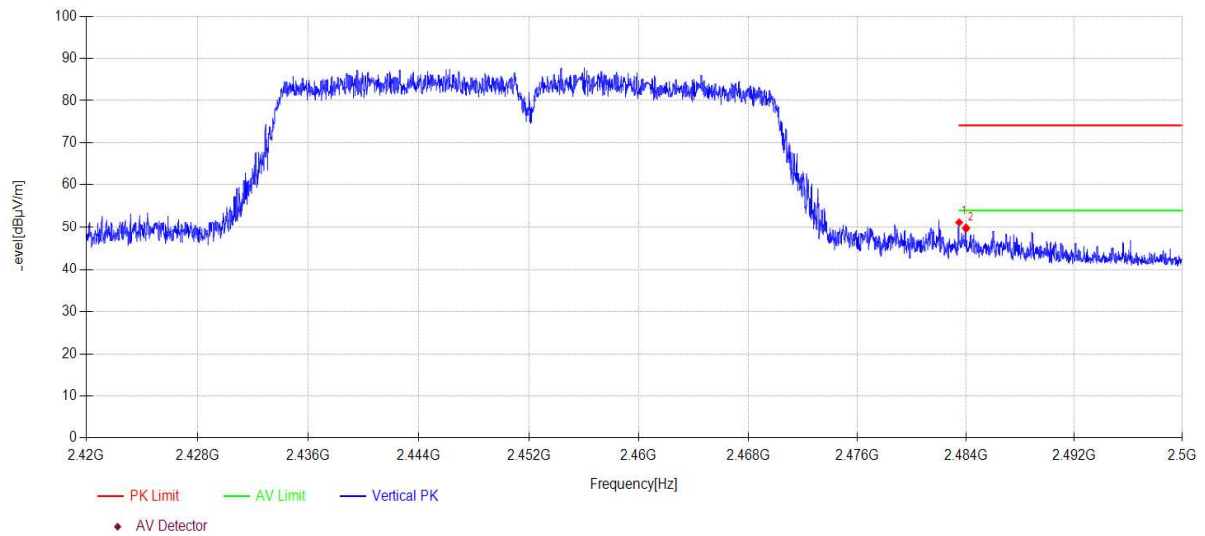
Condition: Temp:24.2°C;Humi:62.2%

Test Site: DDT 3# Chamber

File Path: d:\ts\2024 report data\Q24041013-2E\0509 FCC ABOVE 1G WIFI\21

Memo: Side Sample Number:S24041013 Power Setting:40

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	19.97	27.53	3.62	0.00	51.12	74.00	22.88	PK	Vertical
2	2484.008	18.51	27.54	3.62	0.00	49.67	74.00	24.33	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:

2024-05-29

Tested By:

Genliu

EUT:

Ceiling fan

Model Number:

37000063

Test Mode:

11N40 TX 2452MHz

Power Supply:

AC 120V/60Hz

Condition:

Temp:24.2°C;Humi:62.2%

Test Site:

DDT 3# Chamber

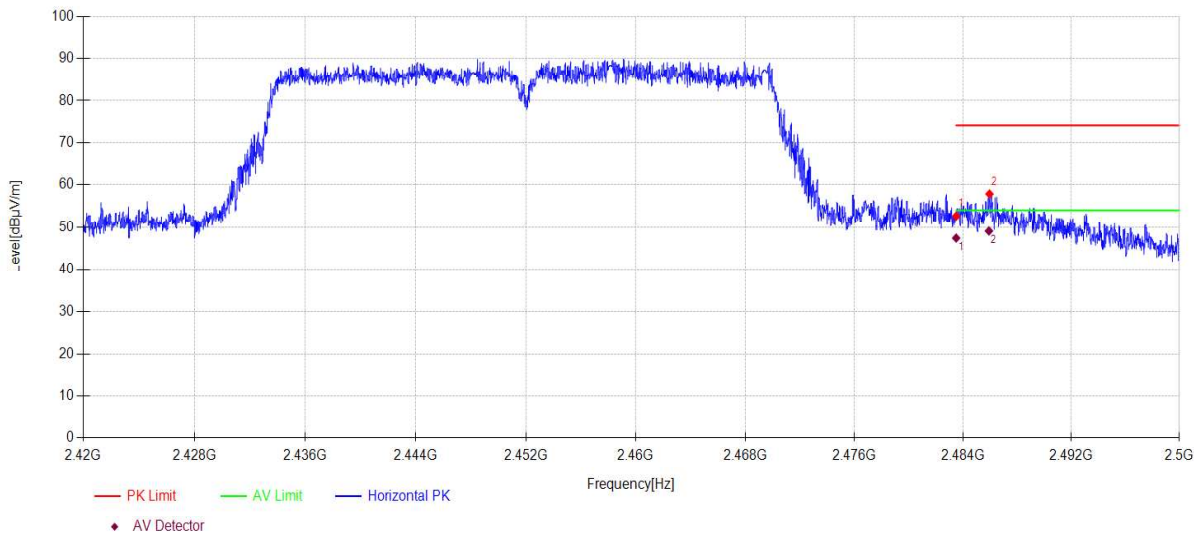
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Memo:

Side Sample Number:S24041013 Power Setting:40

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	21.52	27.53	3.62	0.00	52.67	74.00	21.33	PK	Horizontal
2	2485.960	26.68	27.54	3.62	0.00	57.84	74.00	16.16	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	2483.500	16.23	27.53	3.62	0.00	47.38	54	6.62	AV	Horizontal
2	2485.916	16.59	27.54	4.90	0.00	49.03	54	4.97	AV	Horizontal

Note:

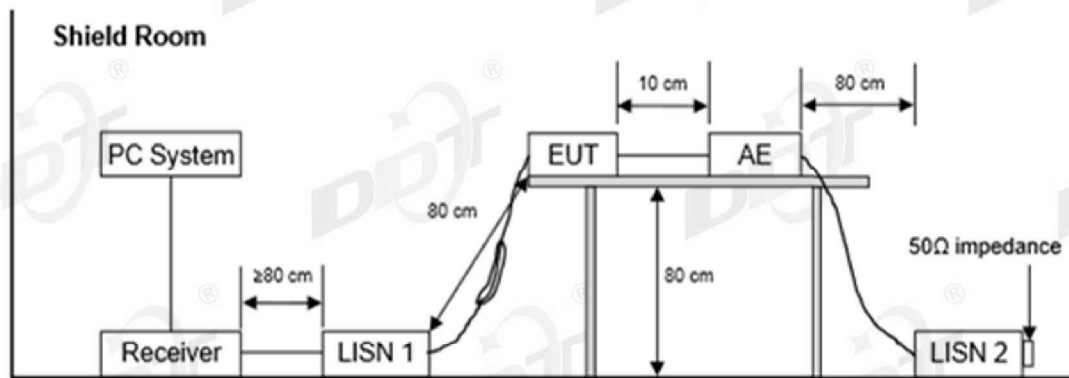
- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

14. Power Line Conducted Emissions

14.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Artificial mains	R&S	ESH2-Z5	DDT-ZC00538	2024/07/12
CE Cable 1	R&S	ESU8/RF2	DDT-ZC00566	2024/07/15
EMI Test Receiver	R&S	ESCI	DDT-ZC00235	2024/07/11
EMI Test Software	Audix/TW	e3	DDT-ZC01252	/
Pulse Limiter	SCHWARZBEC K	ESH3-Z2	DDT-ZC00539	2024/07/15
Two Line V-Network	R&S	ENV216	DDT-ZC00535	2024/07/11

14.2. Block diagram of test setup



14.3. Limits

Frequency	Quasi-Peak Level dB(mV)	Average Level dB(mV)
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.

14.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

14.5. 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.

14.6. 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.

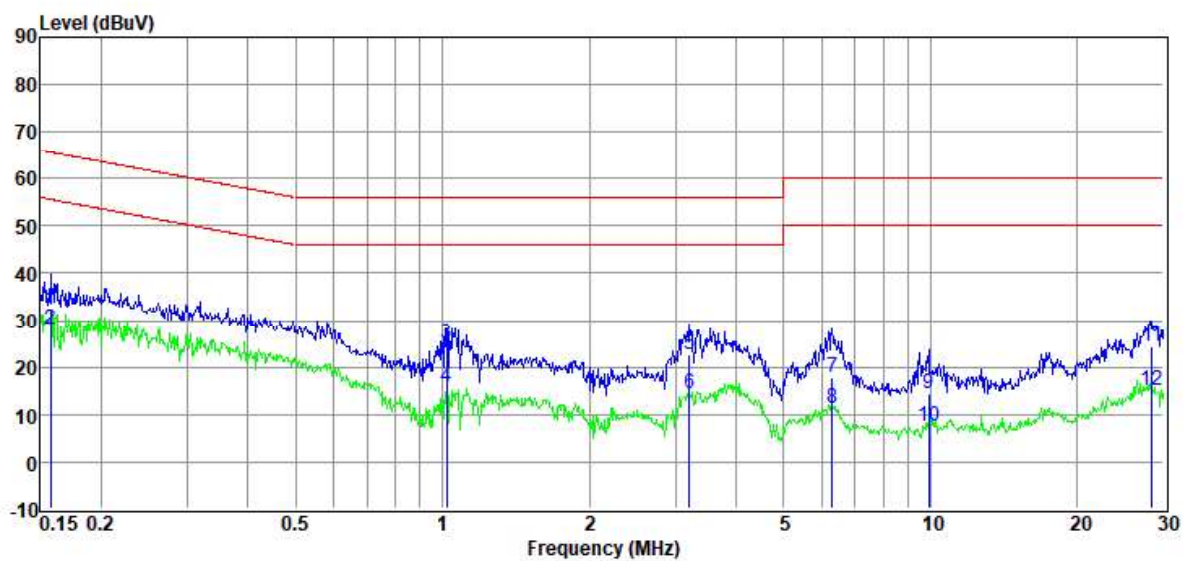
Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded the worst case, the worst case is 802.11b TX 2412MHz mode.

14.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2024 CE report data\Q24041013-2E\FCC.EM6**
Test Date : 2024-05-24 **Tested By** : Johnson Huang
EUT : Ceiling fan **Model Number** : 37000063
Power Supply : AC 120V/60Hz **Test Mode** : 2.4G WIFI TX mode
Condition : TEMP:22.2°C, RH:57.5% **LISN** : 2023 1# ENV216/LINE
Memo : Sample Number:S24041013-002

Data: 2



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	0.16	11.88	9.81	0.92	9.68	32.29	65.60	-33.31	QP	LINE
2	0.16	7.73	9.81	0.92	9.68	28.14	55.60	-27.46	Average	LINE
3	1.02	5.03	9.64	0.67	9.73	25.07	56.00	-30.93	QP	LINE
4	1.02	-4.27	9.64	0.67	9.73	15.77	46.00	-30.23	Average	LINE
5	3.21	2.78	9.63	0.58	9.78	22.77	56.00	-33.23	QP	LINE
6	3.21	-5.59	9.63	0.58	9.78	14.40	46.00	-31.60	Average	LINE
7	6.29	-2.13	9.69	0.47	9.80	17.83	60.00	-42.17	QP	LINE
8	6.29	-8.69	9.69	0.47	9.80	11.27	50.00	-38.73	Average	LINE
9	9.91	-5.50	9.82	0.21	9.82	14.35	60.00	-45.65	QP	LINE
10	9.91	-12.35	9.82	0.21	9.82	7.50	50.00	-42.50	Average	LINE
11	28.45	3.66	10.16	0.53	9.91	24.26	60.00	-35.74	QP	LINE
12	28.45	-5.47	10.16	0.53	9.91	15.13	50.00	-34.87	Average	LINE

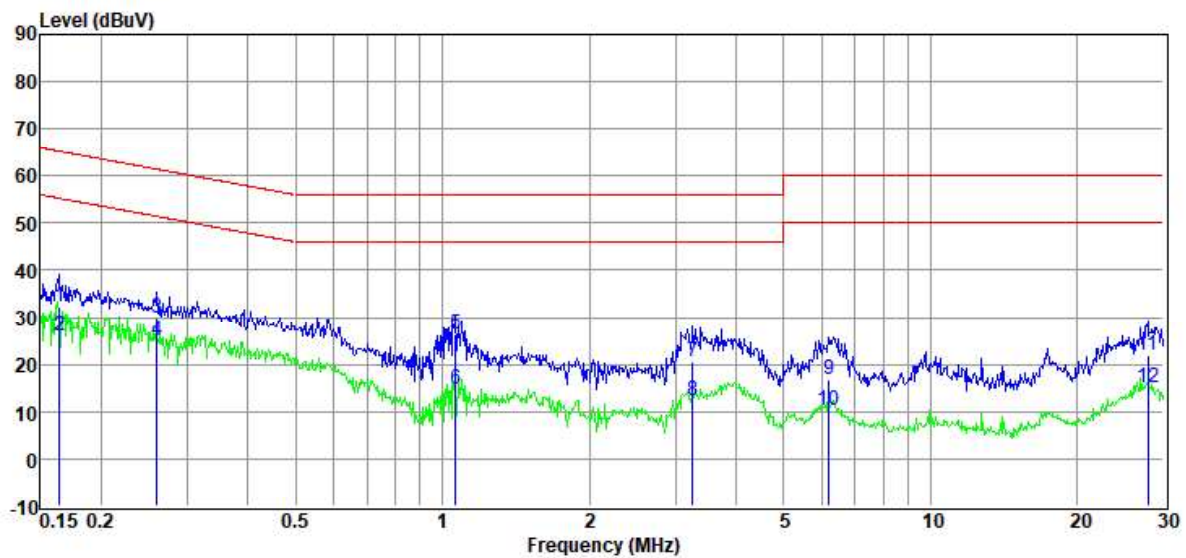
Note:

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 1# Shield Room D:\2024 CE report data\Q24041013-2E\FCC.EM6
Test Date : 2024-05-24 Tested By : Johnson Huang
EUT : Ceiling fan Model Number : 37000063
Power Supply : AC 120V/60Hz Test Mode : 2.4G WIFI TX mode
Condition : TEMP:22.2°C, RH:57.5% LISN : 2023 1# ENV216/NEUTRAL
Memo : Sample Number:S24041013-002

Data: 4



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	0.16	11.78	9.87	0.92	9.68	32.25	65.25	-33.00	QP	NEUTRAL
2	0.16	5.54	9.87	0.92	9.68	26.01	55.25	-29.24	Average	NEUTRAL
3	0.26	9.69	9.74	0.89	9.69	30.01	61.42	-31.41	QP	NEUTRAL
4	0.26	4.89	9.74	0.89	9.69	25.21	51.42	-26.21	Average	NEUTRAL
5	1.07	6.12	9.74	0.67	9.73	26.26	56.00	-29.74	QP	NEUTRAL
6	1.07	-5.52	9.74	0.67	9.73	14.62	46.00	-31.38	Average	NEUTRAL
7	3.26	0.51	9.72	0.58	9.78	20.59	56.00	-35.41	QP	NEUTRAL
8	3.26	-7.83	9.72	0.58	9.78	12.25	46.00	-33.75	Average	NEUTRAL
9	6.19	-3.29	9.79	0.47	9.80	16.77	60.00	-43.23	QP	NEUTRAL
10	6.19	-9.75	9.79	0.47	9.80	10.31	50.00	-39.69	Average	NEUTRAL
11	27.86	1.53	10.08	0.54	9.91	22.06	60.00	-37.94	QP	NEUTRAL
12	27.86	-5.40	10.08	0.54	9.91	15.13	50.00	-34.87	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.

TR-4-E-010 Conducted Emission Test Result

Test Site

: DDT 1# Shield Room

Test Date

: 2024-05-25

EUT

: Ceiling fan

Power Supply

: AC 120V/60Hz

Condition

: TEMP:22.2°C, RH:57.5%

Memo

: Sample Number:S24041013-002

D:\2024 CE report data\Q24041013-2E\FCC.EM6

Tested By

: Johnson Huang

Model Number

: 37000062

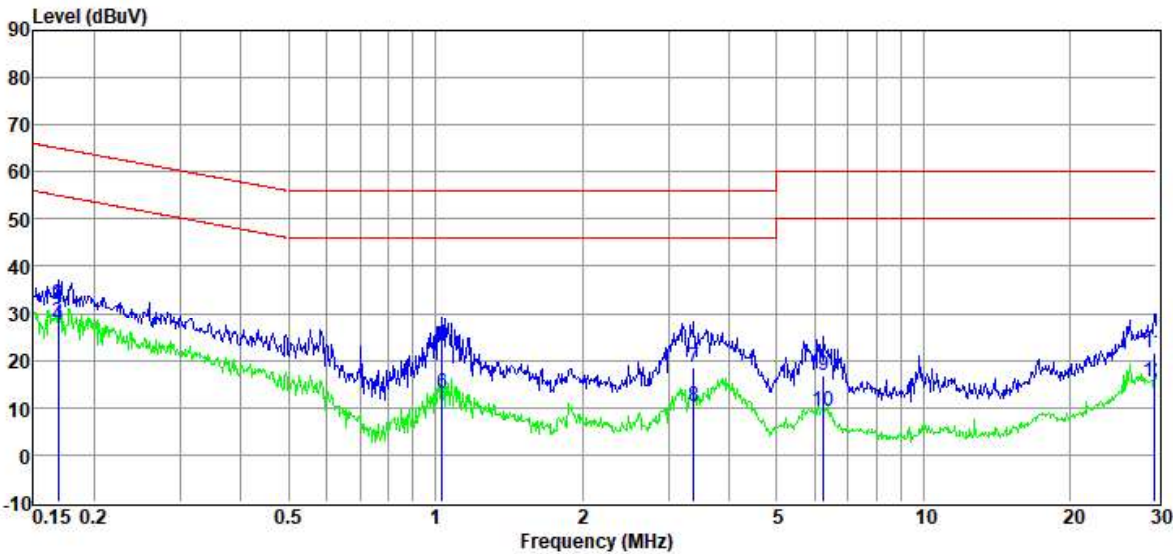
Test Mode

: 2.4G WIFI TX mode

LISN

: 2023 1# ENV216/LINE

Data: 10



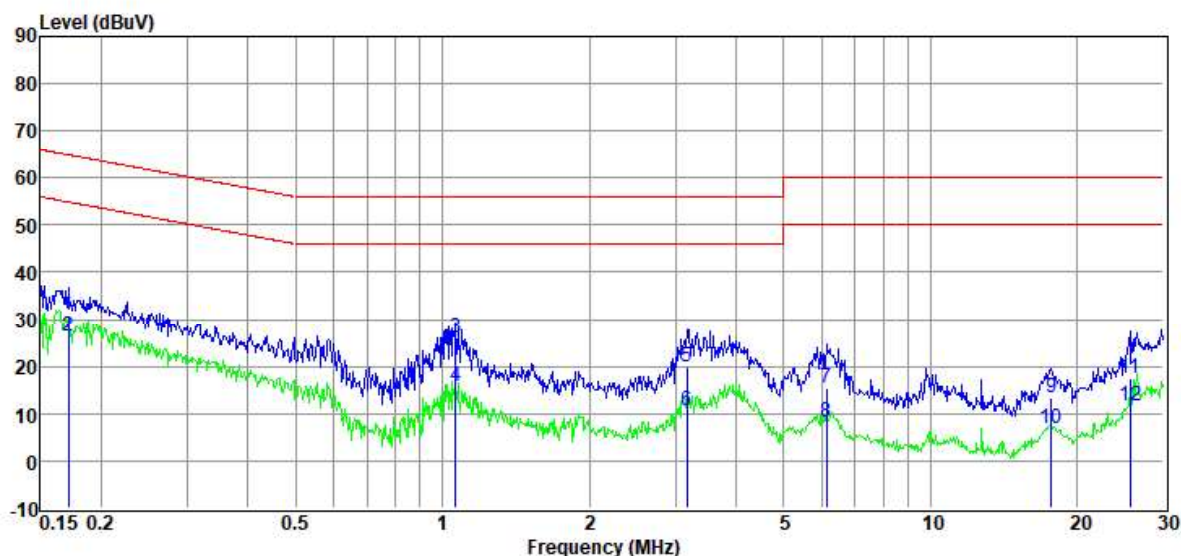
Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.17	11.66	9.75	0.92	9.68	32.01	65.03	-33.02	QP	LINE
2	0.17	11.53	9.75	0.92	9.68	31.88	65.03	-33.15	QP	LINE
3	0.17	7.74	9.75	0.92	9.68	28.09	55.03	-26.94	Average	LINE
4	0.17	7.01	9.75	0.92	9.68	27.36	55.03	-27.67	Average	LINE
5	1.03	3.06	9.64	0.67	9.73	23.10	56.00	-32.90	QP	LINE
6	1.03	-6.94	9.64	0.67	9.73	13.10	46.00	-32.90	Average	LINE
7	3.38	-1.44	9.64	0.58	9.78	18.56	56.00	-37.44	QP	LINE
8	3.38	-9.87	9.64	0.58	9.78	10.13	46.00	-35.87	Average	LINE
9	6.25	-3.02	9.69	0.47	9.80	16.94	60.00	-43.06	QP	LINE
10	6.25	-10.63	9.69	0.47	9.80	9.33	50.00	-40.67	Average	LINE
11	29.68	0.94	10.19	0.51	9.91	21.55	60.00	-38.45	QP	LINE
12	29.68	-5.33	10.19	0.51	9.91	15.28	50.00	-34.72	Average	LINE

- Note:
- Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
 - If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
 - Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
 - 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 1# Shield Room **D:\2024 CE report data\Q24041013-2E\FCC.EM6**
Test Date : 2024-05-25 **Tested By** : Johnson Huang
EUT : Ceiling fan **Model Number** : 37000062
Power Supply : AC 120V/60Hz **Test Mode** : 2.4G WIFI TX mode
Condition : TEMP:22.2°C, RH:57.5% **LISN** : 2023 1# ENV216/NEUTRAL
Memo : Sample Number:S24041013-002

Data: 12



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	0.17	10.58	9.88	0.92	9.68	31.06	64.90	-33.84	QP	NEUTRAL
2	0.17	5.89	9.88	0.92	9.68	26.37	54.90	-28.53	Average	NEUTRAL
3	1.07	6.11	9.74	0.67	9.73	26.25	56.00	-29.75	QP	NEUTRAL
4	1.07	-4.30	9.74	0.67	9.73	15.84	46.00	-30.16	Average	NEUTRAL
5	3.17	-0.35	9.72	0.58	9.78	19.73	56.00	-36.27	QP	NEUTRAL
6	3.17	-9.40	9.72	0.58	9.78	10.68	46.00	-35.32	Average	NEUTRAL
7	6.12	-4.59	9.78	0.48	9.80	15.47	60.00	-44.53	QP	NEUTRAL
8	6.12	-11.73	9.78	0.48	9.80	8.33	50.00	-41.67	Average	NEUTRAL
9	17.66	-6.85	9.84	0.33	9.90	13.22	60.00	-46.78	QP	NEUTRAL
10	17.66	-13.36	9.84	0.33	9.90	6.71	50.00	-43.29	Average	NEUTRAL
11	25.59	-2.83	10.03	0.51	9.91	17.62	60.00	-42.38	QP	NEUTRAL
12	25.59	-8.94	10.03	0.51	9.91	11.51	50.00	-38.49	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.

16. Photos of the EUT

Please refer to DDT-Q24041013-2E appendix I

-----End Report-----