FCC Test Report

Applicant	:	**Shenzhen Fine Intelli Technology Co., LTD**
Address	:	**201, Building D, No. 472-5, Jinbi Road, Biling Community, Pingshan District, Shenzhen**
Product Name	:	**FineIntelli Advanced Indoor Bike**
Report Date	:	**12. 25, 2023**

Shenzhen Tian Hai Test Technology Co., Ltd.

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TEST REPORT

Applicant	:	Shenzhen Fine Intelli Technology Co., LTD
Manufacturer	:	201, Building D, No. 472-5, Jinbi Road, Biling Community, Pingshan District, Shenzhen
Product Name	:	FineIntelli Advanced Indoor Bike
Model No.	:	FAB01
Trade Mark	:	Fine intelli
Rating(s)	:	Input: :100~240V 50-60Hz Output: 24V ⎓ 4A
Test Standard(s)	:	**FCC 47 CFR Part 15 Subpart B: 2022**
Test Method(s)	:	**ANSI C63.4-2014**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC 47 CFR Part 15 Subpart B limits both radiated and conducted emissions. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited Is assumed full responsibility for the accuracy and completeness of these measurements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited

Date of Receipt	:	Nov. 02, 2023
Date of Test	:	Nov. 02~Dec. 25, 2023
Tested by	:	Suny. zhou (Suny Zhuo)
Reviewed by	:	Blue Hu (Blue Hu)
Approved & Authorized Signer	:	Binglee (Binglee)

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1. General Information

1.1. Client Information

Applicant	:	Shenzhen Fine Intelli Technology Co., LTD
Address	:	201, Building D, No. 472-5, Jinbi Road, Biling Community, Pingshan District, Shenzhen
Manufacturer	:	Shenzhen Fine Intelli Technology Co., LTD
Address	:	201, Building D, No. 472-5, Jinbi Road, Biling Community, Pingshan District, Shenzhen
Factory	:	Shenzhen Fine Intelli Technology Co., LTD
Address	:	201, Building D, No. 472-5, Jinbi Road, Biling Community, Pingshan District, Shenzhen

1.2. Description of Device (EUT)

Product Name	:	FineIntelli Advanced Indoor Bike
Model No.	:	FAB01
Trade Mark	:	Fine intelli
Test Power Supply	:	Input: :100~240V 50-60Hz Output: 24V ⎓ 4A
Test Sample No.	:	1-2-1(Normal Sample)
Adapter	:	MODEL:SPF-2404 Input: :100~240V 50-60Hz Output: 24V ⎓ 4A
Remark: (1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

1.3. Auxiliary Equipment Used During Test

Description	Manufacturer
Mobile phone	XiaoMi
/	/
/	/

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1.4. Description of Test Mode

Pretest Mode	Description
Mode 1	On

For Mode 1 Block Diagram of Test Setup

1.5. Test Summary

Standard Section	Test Items	Test Mode	Status
§15.107	Power Line Conducted Emission Test	Mode 1	P
§15.109	Radiated Emission Test (Below 1 GHz)	Mode 1	P
§15.109	Radiated Emission Test (Above 1GHz)	Mode 1	P
P) Indicates “PASS”. F) Indicates “Fail”. N) Indicates “Not applicable”.			

1.6. Test Equipment List

Conducted Emission				
Kind of Equipment	Manufacturer	Type	S/N	Calibrate until
EMI Test Receiver	R&S	ESR7	102333	2024-11-13
L.I.S.N	Schwarzbeck	NNLK 8128	5089	2024-11-13
8-Wire ISN CAT6	Schwarzbeck	NTFM 8158	231	2024-11-13
Pulse Limiter	Schwarzbeck	VTSD 9561-F	847	2024-11-13
Test software	FALA	/	EMC-CON 3A1.1	/
Radiated Emission (3m)				
EMI Test Receiver	R&S	ESR7	102333	2024-11-13
MXA Signal Analyzer	Keysight	N9020A	MY51281805	2024-04-20
Bilog Antenna	Schwarzbeck	VULB 9168	01148	2024-11-13
Pre-Amplifier	Schwarzbeck	BBV 9718 B	00109	2024-11-13
Pre-Amplifier	Schwarzbeck	BBV 9743 B	00253	2024-11-13
Pre-Amplifier	GUANGGU ELECTRONIC	GLNA18-40GK-5 372	20210331001	2024-11-13
Active Loop Antenna	Schwarzbeck	FMZB 1519 B	00148	2024-11-13
Horn Antenna	Schwarzbeck	BBHA 9120	02379	2024-11-13
Horn Antenna	A-INFO	LB-180400-KF	J258792	2024-11-13
Test software	FALA	/	FA-03A2 RE	/

1.7. Measurement Uncertainty

Test Item	Test Items	Polarization	Uncertainty
Conducted Emission At Mains Terminals	150kHz to 30MHz	LINE/NEUTRAL	2.35 dB
Radiated Emission	30 MHz ~ 1,000 MHz	Horizontal	5.78 dB
	30 MHz ~ 1,000 MHz	Vertical	5.78 dB

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on theapparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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1.8 Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 6827.01

Shenzhen Tian Hai Test Technology Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 6827.01

Test Location

Shenzhen Tian Hai Test Technology Co., Ltd.

125-126, No.66, Zhangge Road, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, Guangdong, China

2. Power Line Conducted Emission Test

2.1. Test Standard and Limit

Test Standard:	FCC 47 CFR Part 15 Subpart B

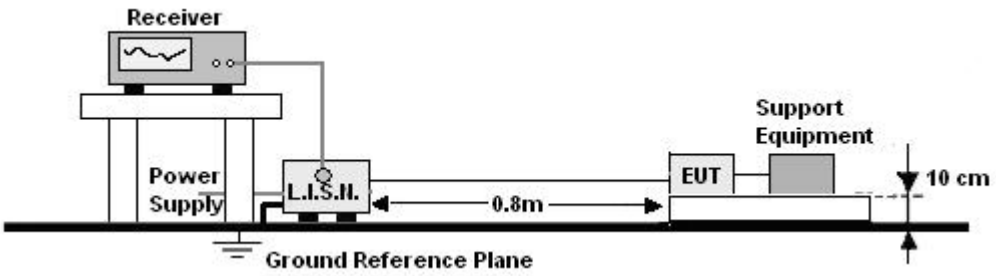
☐ **Limits for conducted emission at the AC mains power ports of Class A equipment**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	79.0	66.0
0.50 ~ 30.00	73.0	60.0
Remark: The lower limit shall apply at the transition frequencies.		

☒ **Limits for conducted emission at the AC mains power ports of Class B equipment**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0
Remark: (1) The lower limit shall apply at the transition frequencies. (2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

2.2. Test Setup



2.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and the back of the EUT is 0.4 m away from the vertical ground reference plane, and at least 0.8 m from any other metal surface or ground plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plate, at least 0.8 m away from other metal objects.

Connect EUT to the power mains through an LISN. Where the mains cable supplied by the manufacturer is longer than 1 m, the excess should be folded at the center into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. All the peripherals are connecting to the other LISN.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest disturbance with respect to the limit was found by investigating disturbances at a number of significant frequencies. The probable frequency of maximum disturbance had been found and that the associated cable and EUT configuration and mode of operation had been identified.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the conducted emissions values.

2.4. Test Results

PASS

During the test, pre-scan all modes, only the worst case is recorded in the report.

The test curves are shown in the following pages.

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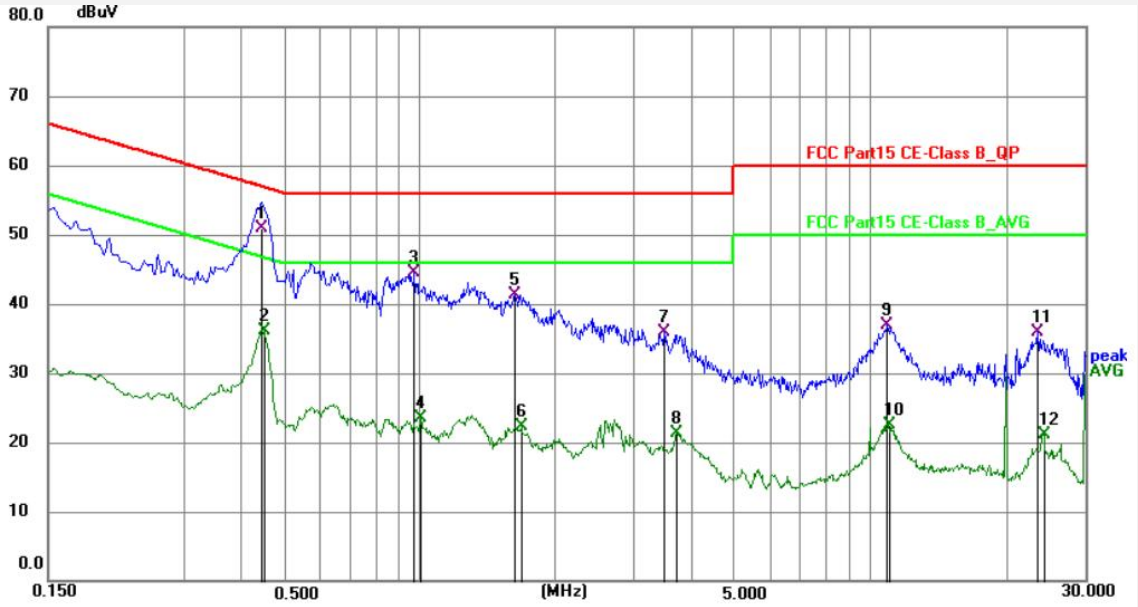
Power Line Conducted Test Data

Test Site:	1# Shielded Room
Operating Condition:	Mode 1
Test Specification:	AC 120V, 60Hz
Comment:	Live Line
	Temp.: 25℃ Hum.: 54%

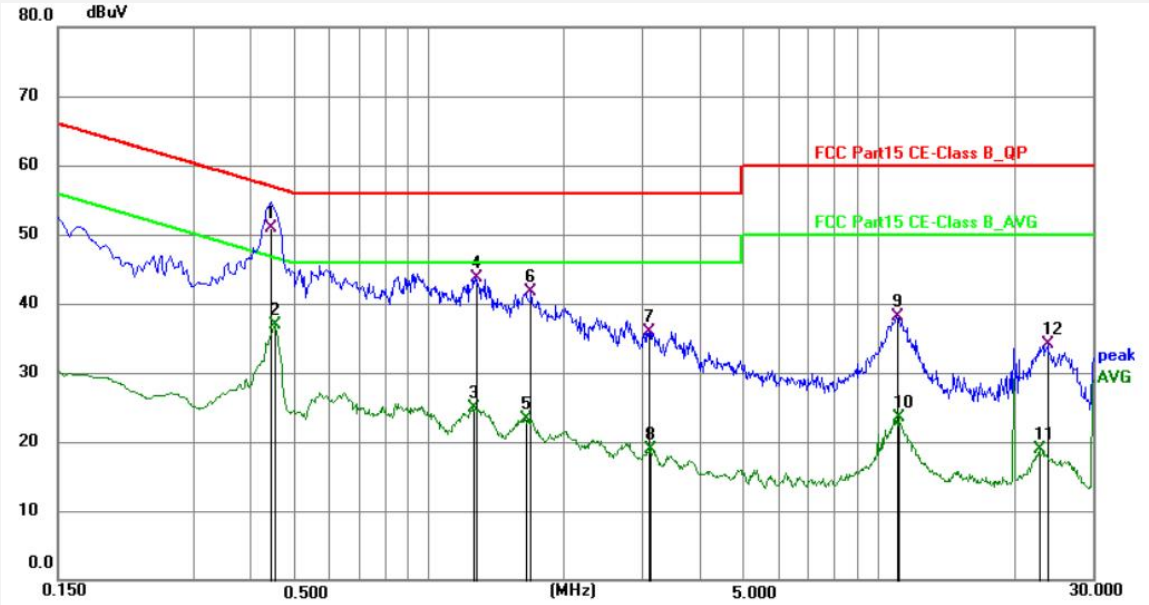


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.4470	40.38	10.62	51.00	56.93	-5.93	QP
2	0.4515	25.47	10.62	36.09	46.85	-10.76	AVG
3	0.9778	33.77	10.66	44.43	56.00	-11.57	QP
4	1.0095	12.81	10.66	23.47	46.00	-22.53	AVG
5	1.6350	30.71	10.68	41.39	56.00	-14.61	QP
6	1.6890	11.57	10.68	22.25	46.00	-23.75	AVG
7	3.5070	25.11	10.70	35.81	56.00	-20.19	QP
8	3.7364	10.55	10.70	21.25	46.00	-24.75	AVG
9	10.9313	26.08	10.77	36.85	60.00	-23.15	QP
10	11.0077	11.69	10.77	22.46	50.00	-27.54	AVG
11	23.5315	24.96	10.93	35.89	60.00	-24.11	QP
12	24.3730	10.26	10.93	21.19	50.00	-28.81	AVG

Note: Result = Reading + Factor Over Limit = Result - Limit

Power Line Conducted Test Data

Test Site:	1# Shielded Room
Operating Condition:	Mode 1
Test Specification:	AC 120V, 60Hz
Comment:	Neutral Line
	Temp.: 25℃ Hum.: 54%



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.4470	40.38	10.62	51.00	56.93	-5.93	QP
2	0.4560	26.21	10.62	36.83	46.77	-9.94	AVG
3	1.2567	14.34	10.66	25.00	46.00	-21.00	AVG
4	1.2748	33.08	10.66	43.74	56.00	-12.26	QP
5	1.6438	12.55	10.68	23.23	46.00	-22.77	AVG
6	1.6935	30.98	10.68	41.66	56.00	-14.34	QP
7	3.1065	25.15	10.69	35.84	56.00	-20.16	QP
8	3.1154	8.22	10.69	18.91	46.00	-27.09	AVG
9	11.0168	27.20	10.85	38.05	60.00	-21.95	QP
10	11.1068	12.70	10.85	23.55	50.00	-26.45	AVG
11	22.8520	7.91	10.93	18.84	50.00	-31.16	AVG
12	23.8418	23.26	10.93	34.19	60.00	-25.81	QP

Note: Result = Reading + Factor Over Limit = Result - Limit

3. Radiated Emission Test (Below 1 GHz)

3.1. Test Standard and Limit

Test Standard	FCC 47 CFR Part 15 Subpart B

☐ **Limit for radiated emissions at frequencies up to 1 GHz for class A equipment**

	Frequency (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT	
			μV/m	(dBμV/m)
Test Limit	30 ~ 88	3	300	49.5
	88 ~ 216	3	500	54.0
	216 ~ 960	3	700	56.9
	Above 960	3	1000	60.0

Remark: (1) Emission level (dB)μV = 20 log Emission level μV/m
(2) The smaller limit shall apply at the cross point between two frequency bands.
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

☒ **Limit for radiated emissions at frequencies up to 1 GHz for class B equipment**

	Frequency (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT	
			μV/m	(dBμV/m)
Test Limit	30 ~ 88	3	100	40.0
	88 ~ 216	3	150	43.5
	216 ~ 960	3	200	46.0
	Above 960	3	501	54.0

Remark: (1) Emission level (dB)μV = 20 log Emission level μV/m
(2) The smaller limit shall apply at the cross point between two frequency bands.
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
(4) Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission foundexcept system noise foor in 9 KHz to 30MHz and not recorded in this report.

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3.2. Test Setup

Figure 1. Below 30MHz

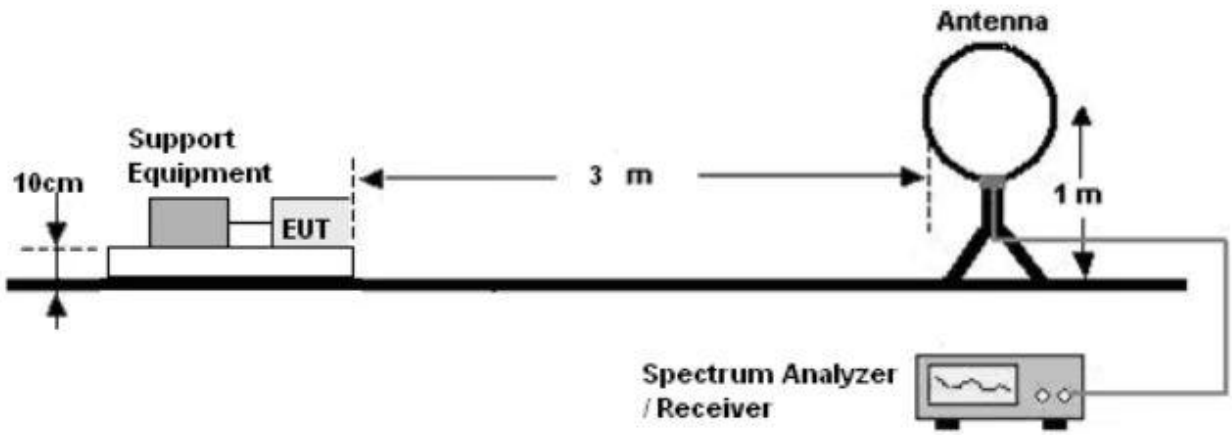
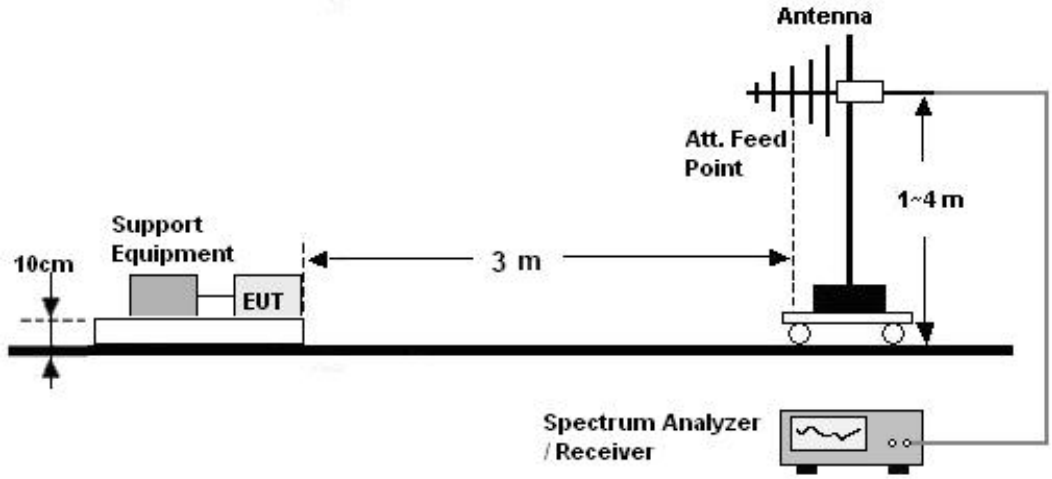


Figure 2. 30MHz to 1GHz



3.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

The bandwidth of the Receiver is set at 120 kHz.

3.4. Test Results

PASS

During the test, pre-scan all modes, only the worst case is recorded in the report.

The test curves are shown in the following pages.

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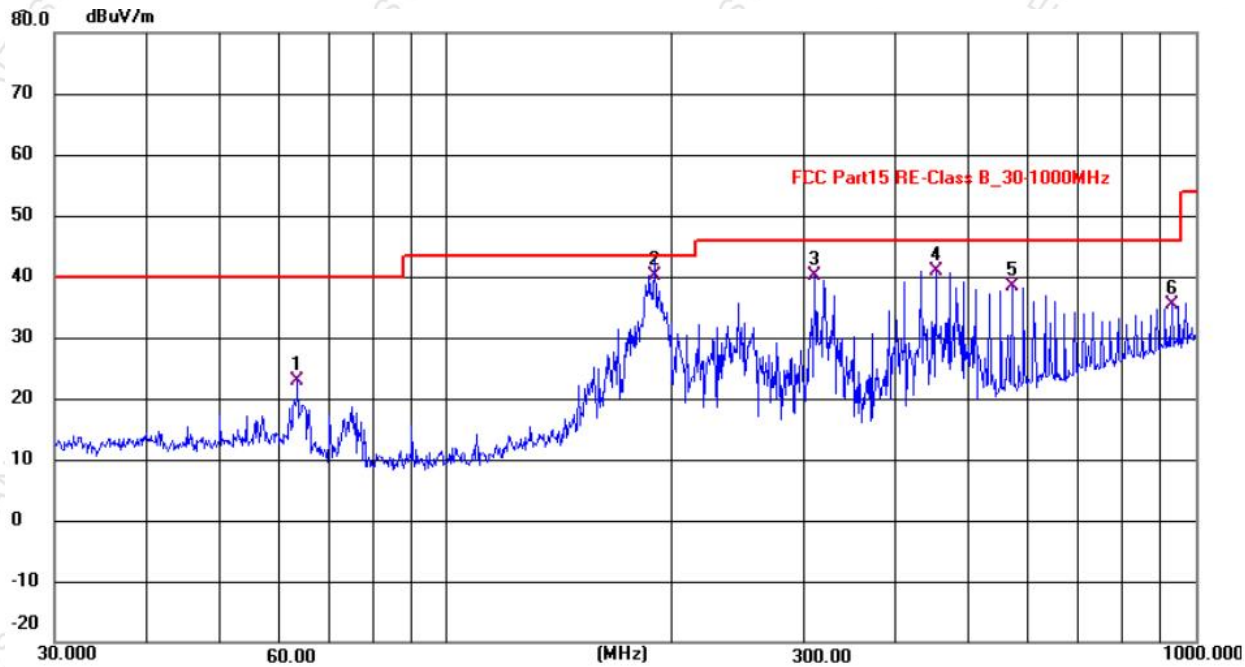
Test item:	Radiation Test	Polarization:	Horizontal
Standard:	(RE)FCC 47 CFR Part 15 Subpart B	Power Source:	AC 120V, 60Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/55%RH
Distance:	3m	Test Mode:	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	63.3132	39.42	-16.42	23.00	40.00	-17.00	QP
2 *	190.0714	58.11	-17.89	40.22	43.50	-3.28	QP
3	309.9977	54.67	-14.55	40.12	46.00	-5.88	QP
4	450.3446	51.85	-11.03	40.82	46.00	-5.18	QP
5	570.6100	47.01	-8.56	38.45	46.00	-7.55	QP
6	930.6384	37.90	-2.63	35.27	46.00	-10.73	QP

Note: Result= Reading + Factor Over Limit=Result-Limit

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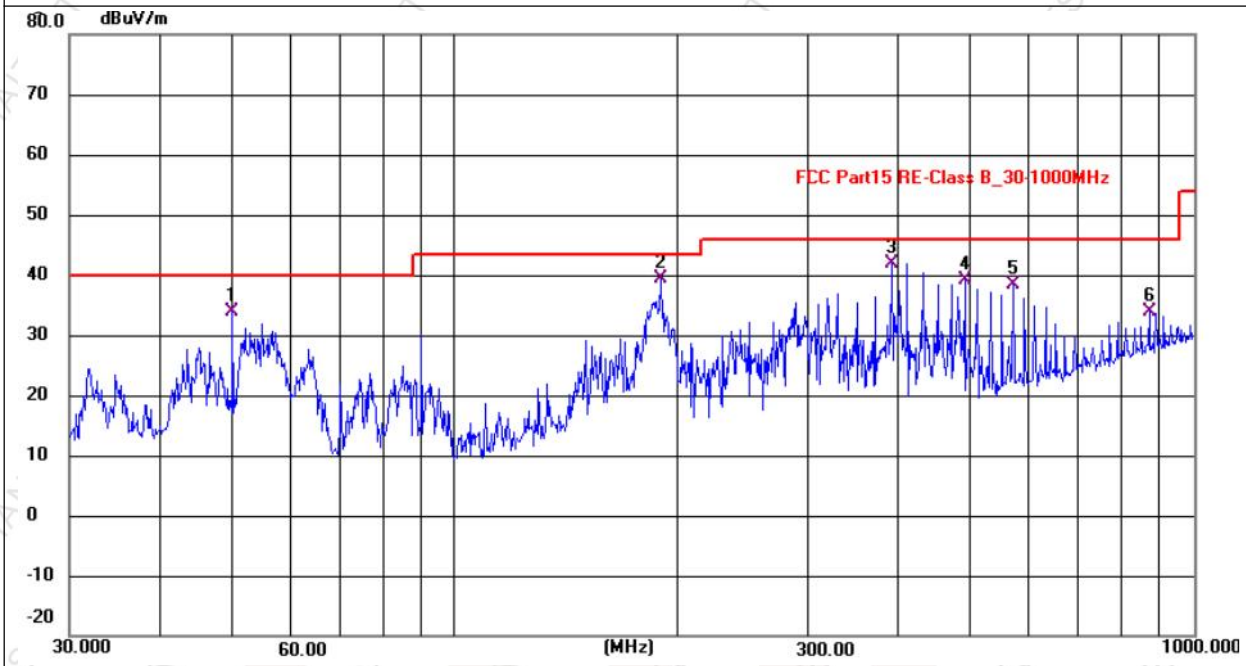
Test item:	Radiation Test	Polarization:	Vertical
Standard:	(RE)FCC 47 CFR Part 15 Subpart B	Power Source:	AC 120V, 60Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/55%RH
Distance:	3m	Test Mode:	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	49.9689	49.02	-15.21	33.81	40.00	-6.19	QP
2	190.0714	57.31	-17.89	39.42	43.50	-4.08	QP
3 *	390.0381	55.11	-13.12	41.99	46.00	-4.01	QP
4	489.8850	49.61	-10.48	39.13	46.00	-6.87	QP
5	570.6100	46.88	-8.56	38.32	46.00	-7.68	QP
6	870.6553	37.39	-3.60	33.79	46.00	-12.21	QP

Note: Result= Reading + Factor Over Limit=Result-Limit

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4. Radiated Emission Test (Above 1GHz)

4.1. Test Standard and Limit

Test Standard	FCC 47 CFR Part 15 Subpart B

☐ **Limit for radiated emissions at frequencies above 1 GHz for class A equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)	
		Peak	Average
Above 960	3	80	60
Remark: N/A			

☒ **Limit for radiated emissions at frequencies above 1 GHz for class B equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)	
		Peak	Average
Above 960	3	74	54
Remark: N/A			

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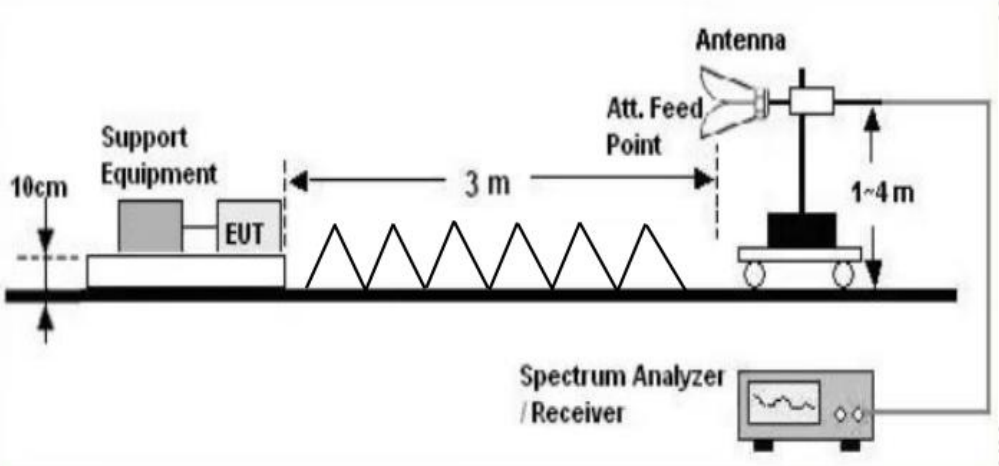
4.2. Test Setup



4.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

The test receiver is set to peak and average detects function.

The bandwidth of the test receiver is set at 1MHz.

4.4. Test Results

PASS

During the test, pre-scan all modes, only the worst case is recorded in the report.

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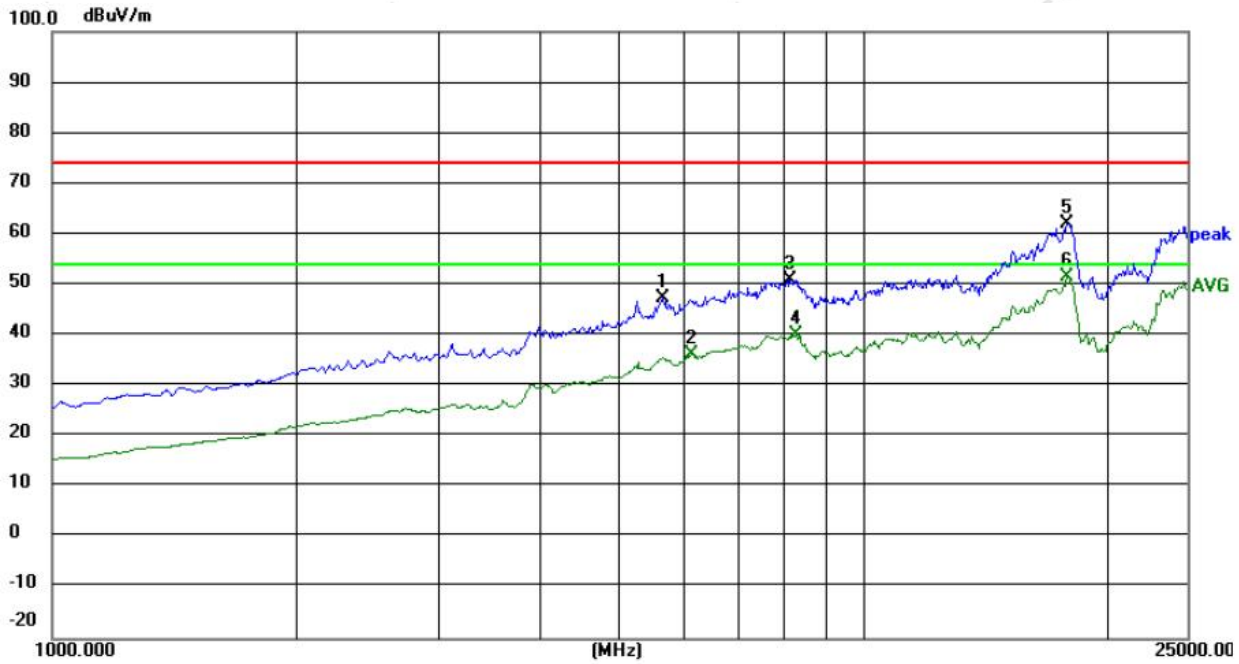
Test Results (1GHz-25GHz)

Test item:	Radiation Test	Polarization:	Horizontal
Standard:	(RE)FCC 47 CFR Part 15 Subpart B	Power Source:	AC 120V, 60Hz
Frequency Range:	1GHz-25GHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/55%RH
Distance:	3m	Test Mode:	11B 2412



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5656.000	42.06	5.39	47.45	74.00	-26.55	peak
2	6136.000	29.42	6.85	36.27	54.00	-17.73	AVG
3	8128.000	38.39	12.60	50.99	74.00	-23.01	peak
4	8248.000	27.33	12.68	40.01	54.00	-13.99	AVG
5	17824.000	34.85	27.25	62.10	74.00	-11.90	peak
6 *	17824.000	24.39	27.25	51.64	54.00	-2.36	AVG

Note: Result= Reading + Factor Over Limit=Result-Limit

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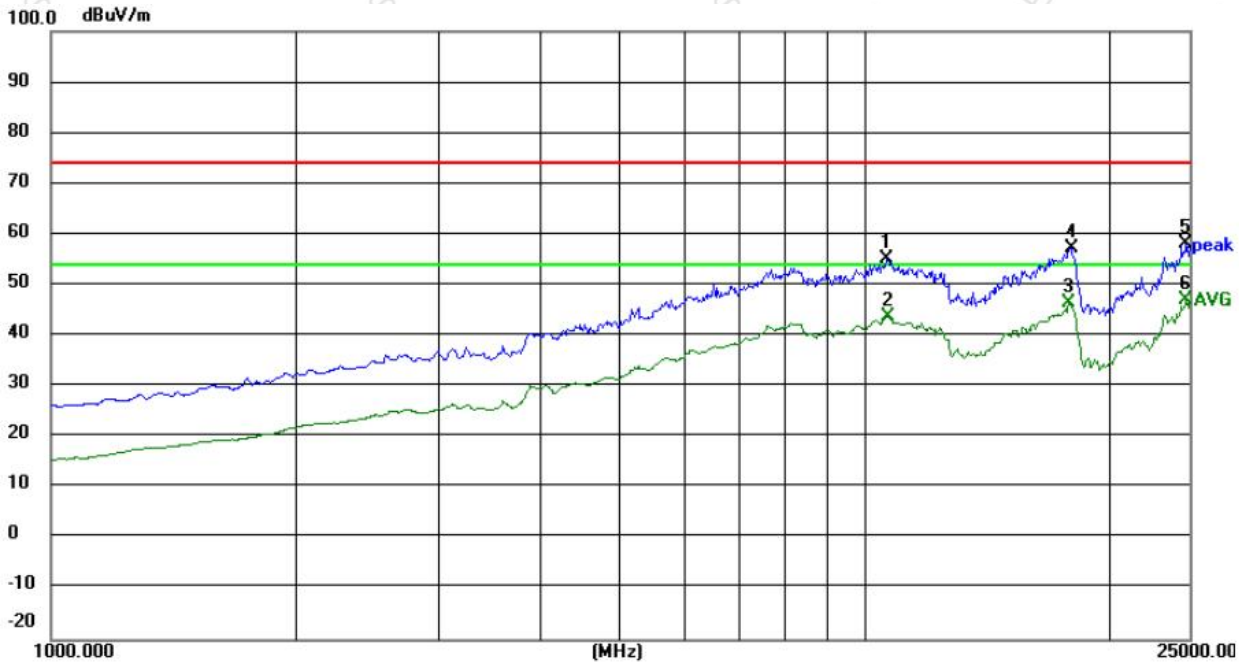
Test item:	Radiation Test	Polarization:	Vertical
Standard:	(RE)FCC 47 CFR Part 15 Subpart B	Power Source:	AC 120V, 60Hz
Frequency Range:	1GHz-25GHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/55%RH
Distance:	3m	Test Mode:	11B 2412



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10648.000	38.60	16.41	55.01	74.00	-18.99	peak
2	10672.000	27.43	16.47	43.90	54.00	-10.10	AVG
3	17824.000	20.97	25.59	46.56	54.00	-7.44	AVG
4	17896.000	31.29	26.10	57.39	74.00	-16.61	peak
5	24832.000	41.92	16.36	58.28	74.00	-15.72	peak
6 *	24832.000	30.66	16.36	47.02	54.00	-6.98	AVG

Note: Result= Reading + Factor Over Limit=Result-Limit

APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

---------- End of Report ----------

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