FCC Part 15, Subpart B, Class B

ARTIKA FOR LIVING INC.

LED Luminaire

Test Model: FM-VYC

Additional Model No.: FM-VYC-XXXXXX

("XXXXXX" can be A to Z and/or 0 to 9 and/or blank (commercial code))

Prepared for	:	ARTIKA FOR LIVING INC.
Address	:	1756 50th avenue, Lachine, Qc, CanadaH8T 2V5 Lachine Canada
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
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Date of receipt of test sample	:	July 28, 2022
Number of tested samples	:	2
Sample No.	:	A071822262
Serial number	:	Prototype
Date of Test	:	July 28, 2022 ~ August 01, 2022
Date of Report	:	August 01, 2022

FCC Part 15, Subpart B, Class B
FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014

Report Reference No.	:	**LCSA071822262E**
Date Of Issue	:	August 01, 2022
Testing Laboratory Name	:	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address	:	101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Testing Location/ Procedure...	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name.....	:	**ARTIKA FOR LIVING INC.**
Address	:	1756 50th avenue, Lachine, Qc, CanadaH8T 2V5 Lachine Canada
Test Specification		
Standard.....	:	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014
Test Report Form No.....	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF.....	:	Dated 2011-03

Test Item Description.	:	**LED Luminaire**
Test Model	:	FM-VYC
Trade Mark.....	:	ARTIKA
Ratings	:	Input: AC 120V, 60Hz, 25W
Result	:	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Vera Deng/ Administrator	Cary Luo/ Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCSA071822262E	August 01, 2022 Date of issue

Test Model	:	FM-VYC
EUT.....	:	LED Luminaire
Applicant.....	**:**	**ARTIKA FOR LIVING INC.**
Address.....	:	1756 50th avenue, Lachine, Qc, CanadaH8T 2V5 Lachine Canada
Telephone.....	:	/
Fax.....	:	/
Manufacturer.....	**:**	**RISING-SUN LIGHTING Co.,Ltd**
Address.....	:	“San Shi Liu Lang” Industrial Area, Shilong Village Group, Langxin Village, Danzao Town, Nanhai District, Foshan Guangdong 528216 China
Telephone.....	:	/
Fax.....	:	/
Factory.....	:	**ARTIKA FOR LIVING INC.**
Address.....	:	1756 50th avenue, Lachine, Qc, CanadaH8T 2V5 Lachine Canada
Telephone.....	:	/
Fax.....	:	/

Test Result according to the standards on page 6: Positive

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Report Version	Issue Date	Revision Content	Revised By
000	August 01, 2022	Initial Issue	--

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1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
Radiated disturbance	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
N/A is an abbreviation for Not Applicable.			

Test mode:		
Mode	Lighting	Record
***Note: All test modes were tested, but we only recorded the worst case in this report.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	LED Luminaire
Trade Mark	:	ARTIKA
Test Model	:	FM-VYC
Additional Model	:	FM-VYC-XXXXXX (“XXXXXX” can be A to Z and/or 0 to 9 and/or blank (commercial code))
Model Declaration	:	PCB board, structure and internal of these model(s) are the same, So no additional models were tested
Power Supply	:	Input: AC 120V, 60Hz, 25W
Highest internal frequency (Fx)	:	Fx ≤ 108 MHz

Highest internal frequency (Fx)	Highest measured frequency
Fx ≤ 108 MHz 108 MHz < Fx ≤ 500 MHz 500 MHz < Fx ≤ 1 GHz Fx > 1 GHz	1 GHz 2 GHz 5 GHz 5 × Fx up to a maximum of 6 GHz
NOTE 1 For FM and TV broadcast receivers, Fx is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. Where Fx is unknown, the radiated emission measurements shall be performed up to 6 GHz.	

2.2. Support Equipment List

Name	Manufacturers	M/N	S/N
--	--	--	--

2.3. Description of Test Facility

Site Description

EMC Lab. : NVLAP Accreditation Code is 600167-0.
FCC Designation Number is CN5024.
CAB identifier is CN0071.
CNAS Registration Number is L4595.
FCC Test Firm Registration Number: 254912

2.4. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.5. Measurement Uncertainty

Test	Parameters	Expanded Uncertainty (Ulab)	Expanded Uncertainty (Ucispr)
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB

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

（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%.

3. TEST RESULTS

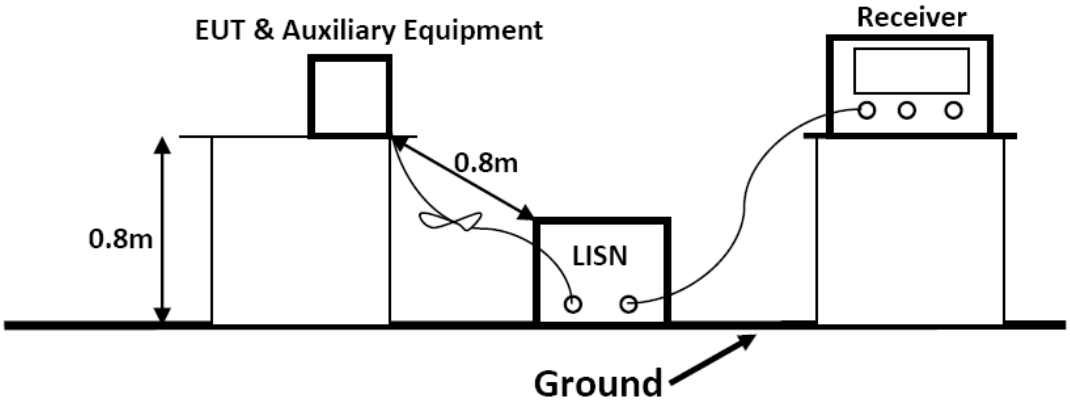
3.1. POWER LINE CONDUCTED EMISSION MEASUREMENT

3.1.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	AUDIX	E3	/	N/A	N/A
2	EMI Test Receiver	R&S	ESR3	102312	2022-02-16	2023-02-15
3	Artificial Mains	R&S	ENV216	101288	2022-06-16	2023-06-15
4	10dB Attenuator	SCHWARZBECK	MTS-IMP-136	261115-001-0032	2022-06-16	2023-06-15
5	Impedance Stabilization Network	TESEQ	ISN T800	45130	2021-11-16	2022-11-15

3.1.2.Block Diagram of Test Setup



3.1.3.Test Standard

Power Line Conducted Emission Limits (Class B)

Frequency (MHz)			Limit (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
NOTE1-The lower limit shall apply at the transition frequencies. NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.				

3.1.4.EUT Configuration on Test

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

3.1.5.Operating Condition of EUT

3.1.5.1.Setup the EUT as shown on Section 3.1.2

3.1.5.2.Turn on the power of all equipments.

3.1.5.3.Let the EUT work in measuring Lighting and measure it.

3.1.6.Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of the test receiver is set at 9kHz.

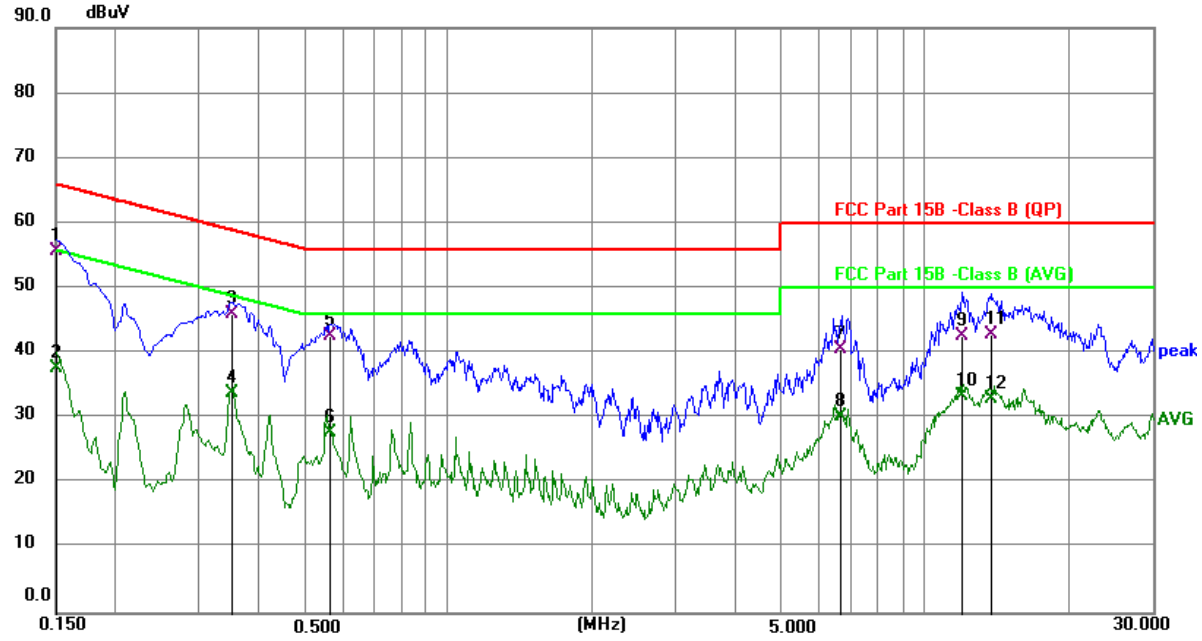
The frequency range from 150kHz to 30MHz is investigated

3.1.7.Test Results

PASS.

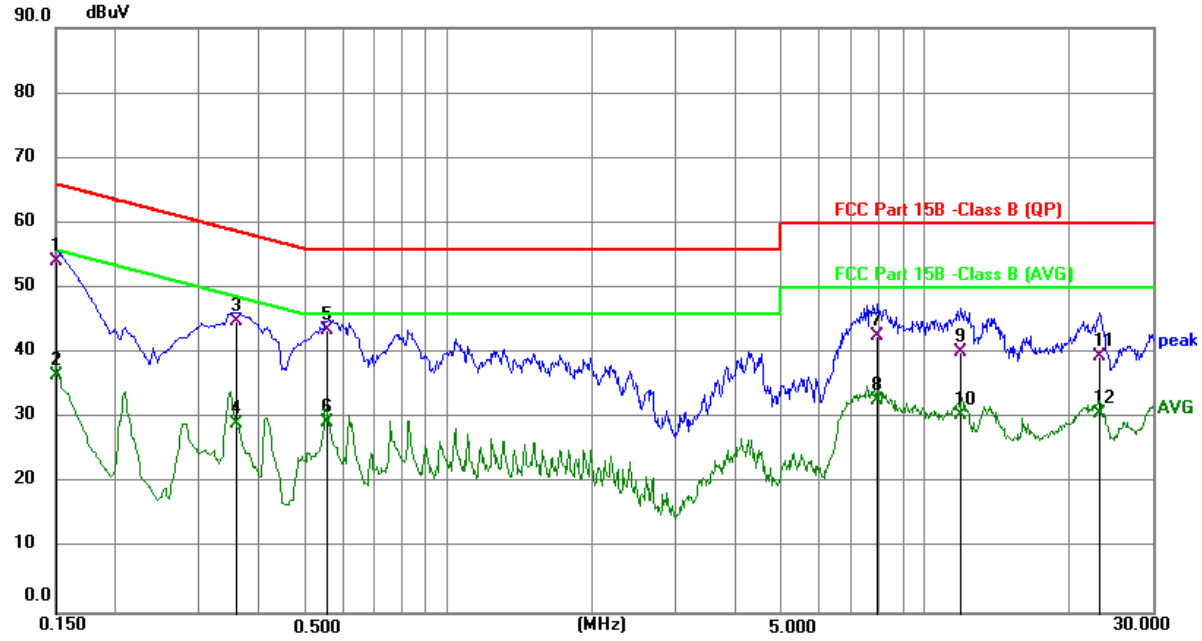
The test result please refer to the next page.

Test Model	FM-VYC	Test Mode	Lighting
Environmental Conditions	24.1℃, 55% RH	Test Engineer	Monkey Li
Pol	Line	Test Voltage	AC 120V/60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1502	45.35	10.24	55.59	65.99	-10.40	QP
2		0.1502	27.49	10.24	37.73	55.99	-18.26	AVG
3		0.3501	35.89	10.20	46.09	58.96	-12.87	QP
4		0.3501	23.68	10.20	33.88	48.96	-15.08	AVG
5		0.5644	32.38	10.20	42.58	56.00	-13.42	QP
6		0.5644	17.64	10.20	27.84	46.00	-18.16	AVG
7		6.6882	30.33	10.20	40.53	60.00	-19.47	QP
8		6.6882	20.05	10.20	30.25	50.00	-19.75	AVG
9		12.0104	32.51	10.20	42.71	60.00	-17.29	QP
10		12.0104	23.16	10.20	33.36	50.00	-16.64	AVG
11		13.7708	32.58	10.20	42.78	60.00	-17.22	QP
12		13.7708	22.85	10.20	33.05	50.00	-16.95	AVG

Test Model	FM-VYC	Test Mode	Lighting
Environmental Conditions	24.1℃, 55% RH	Test Engineer	Monkey Li
Pol	Neutral	Test Voltage	AC 120V/60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1502	43.84	10.24	54.08	65.99	-11.91	QP
2		0.1502	26.35	10.24	36.59	55.99	-19.40	AVG
3		0.3589	34.69	10.20	44.89	58.75	-13.86	QP
4		0.3589	18.95	10.20	29.15	48.75	-19.60	AVG
5		0.5589	33.26	10.20	43.46	56.00	-12.54	QP
6		0.5589	19.08	10.20	29.28	46.00	-16.72	AVG
7		7.9675	32.55	10.20	42.75	60.00	-17.25	QP
8		7.9675	22.51	10.20	32.71	50.00	-17.29	AVG
9		11.8612	30.03	10.20	40.23	60.00	-19.77	QP
10		11.8612	20.22	10.20	30.42	50.00	-19.58	AVG
11		23.1916	29.36	10.21	39.57	60.00	-20.43	QP
12		23.1916	20.61	10.21	30.82	50.00	-19.18	AVG

****Note: 1) Pre-scan all modes and recorded the worst case results in this report.*

2) Margin=Reading level + Correct - Limit

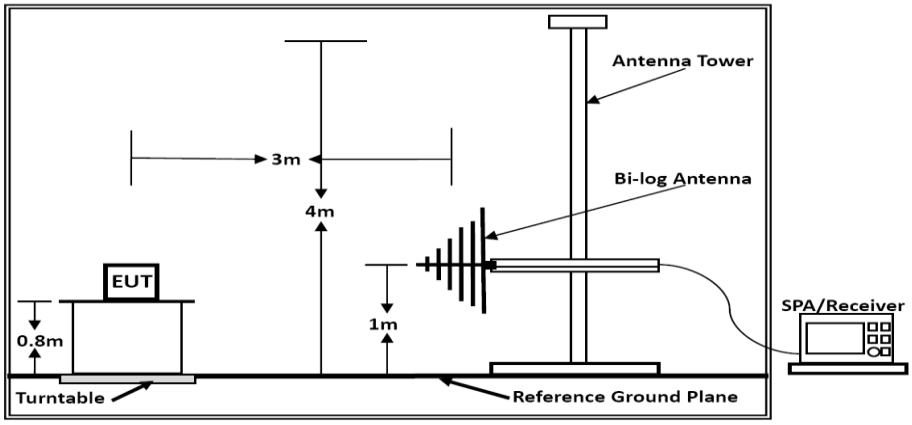
3.2. Radiated emission Measurement

3.2.1. Test Equipment

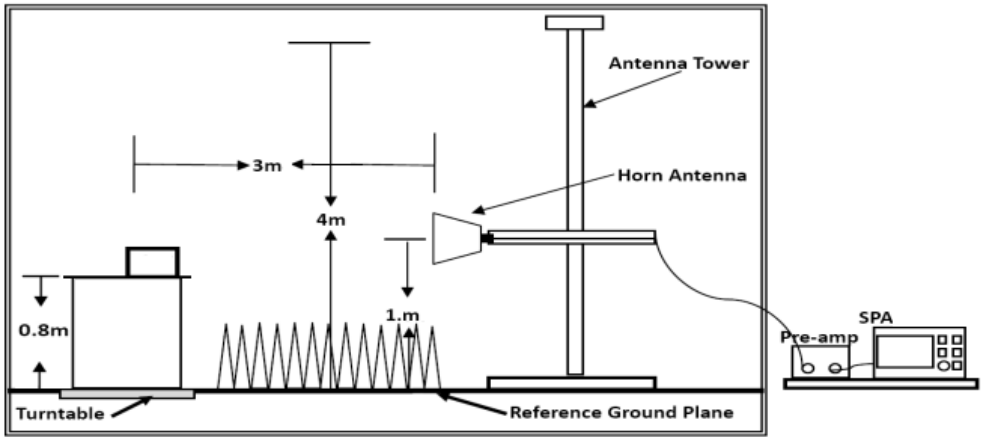
The following test equipments are used during the radiated emission measurement:

Item	Test equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	AUDIX	E3	/	N/A	N/A
2	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2022-06-16	2023-06-15
3	Positioning Controller	MF	MF7082	MF78020803	2022-06-16	2023-06-15
4	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-07-25	2024-07-24
5	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-07-01	2024-06-30
6	EMI Test Receiver	R&S	ESR7	102311	2021-08-19	2022-08-18
7	RS SPECTRUM ANALYZER	R&S	FSP40	100503	2021-11-16	2022-11-15
8	Broadband Preamplifier	/	BP-01M18G	P190501	2022-06-16	2023-06-15

3.2.2. Block Diagram of Test Setup



Below 1GHz



Above 1GHz

3.2.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54
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.			

Limits for Radiated Emission Above 1GHz

Frequency (MHz)	Distance (Meters)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)
Above 1000	3	74	54
***Note: The lower limit applies at the transition frequency.			

3.2.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.2.5. Operating Condition of EUT

3.2.5.1.Setup the EUT as shown in Section 3.2.2.

3.2.5.2.Let the EUT work in test Lighting and measure it.

3.2.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

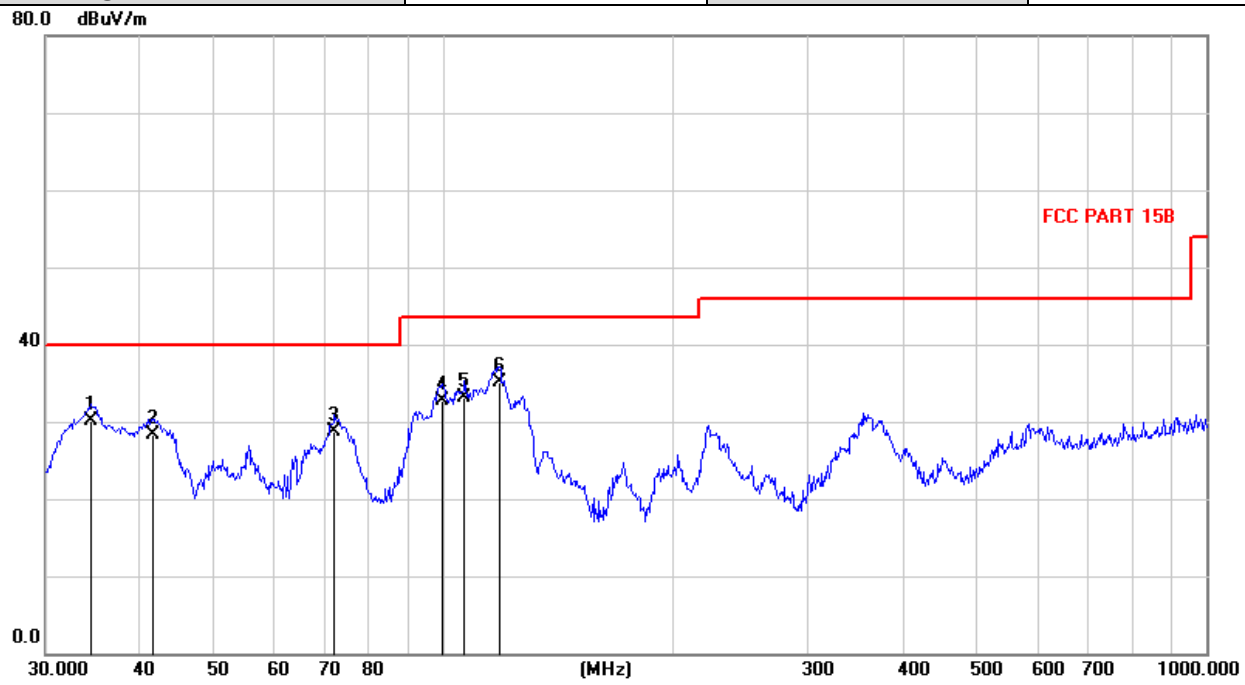
The bandwidth of the EMI test receiver is set at 120kHz, 300kHz.
The frequency range from 30MHz to 1000MHz is checked.

3.2.7. Radiated Emission Noise Measurement Result

PASS.

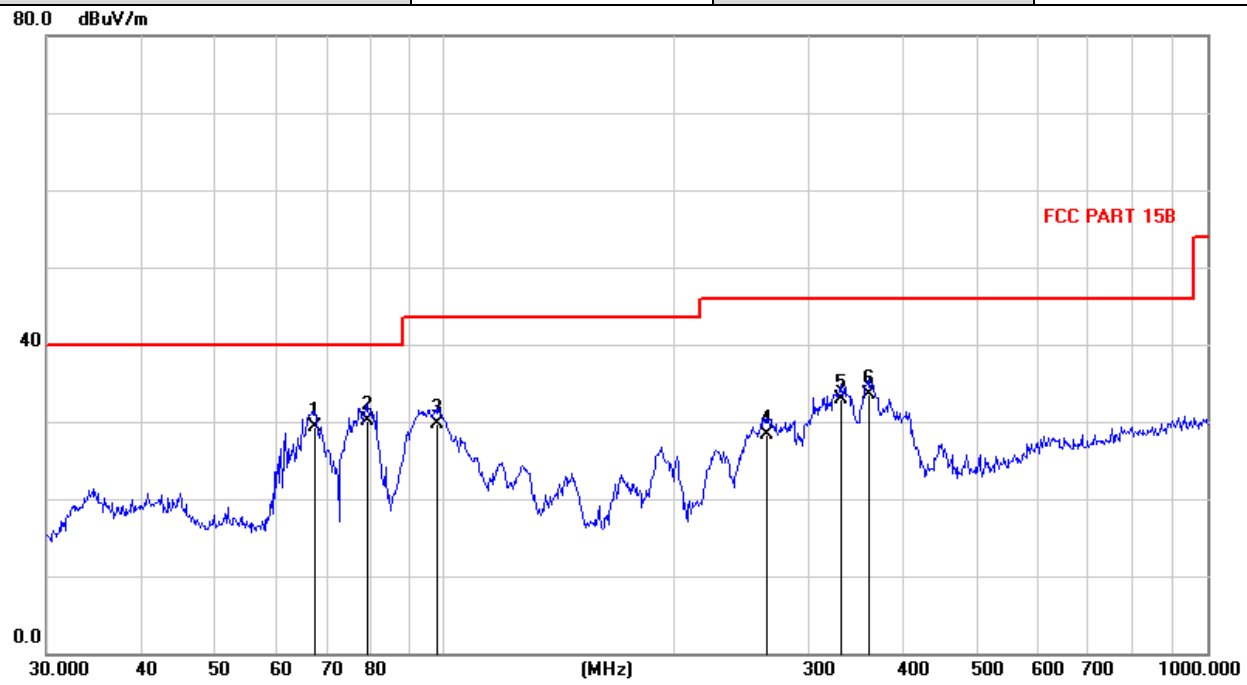
The scanning waveforms please refer to the next page.

Test Model	FM-VYC	Test Mode	Lighting
Environmental Conditions	23.1℃, 53% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Monkey Li	Test Voltage	AC 120V/60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		34.5173	19.08	11.12	30.20	40.00	-9.80	QP
2		41.6400	16.22	12.08	28.30	40.00	-11.70	QP
3		71.9581	18.70	10.10	28.80	40.00	-11.20	QP
4		99.5281	21.30	11.50	32.80	43.50	-10.70	QP
5		106.4317	21.17	12.03	33.20	43.50	-10.30	QP
6	*	118.4455	24.33	10.77	35.10	43.50	-8.40	QP

Test Model	FM-VYC	Test Mode	Lighting
Environmental Conditions	23.1℃, 53% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Monkey Li	Test Voltage	AC 120V/60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		67.6455	18.69	10.71	29.40	40.00	-10.60	QP
2	*	79.1038	21.04	9.16	30.20	40.00	-9.80	QP
3		97.8840	18.63	11.17	29.80	43.50	-13.70	QP
4		264.6297	15.42	12.98	28.40	46.00	-17.60	QP
5		331.6454	17.85	15.05	32.90	46.00	-13.10	QP
6		359.3435	17.76	15.84	33.60	46.00	-12.40	QP

Note:1).Pre-Scan all mode, Thus record worse case mode result in this report.

2) Margin=Reading level + Correct - Limit

4. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separated files for Test Setup Photos of the EUT.

5. EXTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

6. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

----------THE END OF TEST REPORT----------