

# TEST REPORT

**Reference No.**..... : WTX22X06119517W  
**FCC ID**..... : 2AUHG-OUT-LOC  
**Applicant** ..... : ARTIKA FOR LIVING INC  
**Address**..... : 1756, 50th Avenue Montréal (Lachine), Québec Canada H8T 2V5  
**Manufacturer** ..... : Zhejiang Future Lighting Co., Ltd.  
**Address**..... : No.99, Jing Feng Road, jinbian Industrial Zone, Haining, 314419 Zhejiang, China.  
**Product Name** ..... : lamp  
**Model No.** ..... : OUT-LOC-MB  
**Standards** ..... : **FCC PART15 SUBPART B**  
**Date of Receipt sample** ... : 2022-06-14  
**Date of Test**..... : 2022-06-14 to 2022-06-21  
**Date of Issue** ..... : 2022-06-21  
**Test Report Form No.** ..... : WTX\_FCC PART15B\_001  
**Test Result**..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

**Prepared By:**

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**TABLE OF CONTENTS**

**1. GENERAL INFORMATION.....4**  
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....4  
1.2 TEST STANDARDS.....5  
1.3 TEST METHODOLOGY.....5  
1.4 TEST FACILITY.....5  
1.5 EUT SETUP AND OPERATION MODE.....6  
1.6 MEASUREMENT UNCERTAINTY.....7  
1.7 TEST EQUIPMENT LIST AND DETAILS.....8

**2. SUMMARY OF TEST RESULTS.....9**

**3. CONDUCTED EMISSIONS.....10**  
3.1 TEST PROCEDURE.....10  
3.2 BASIC TEST SETUP BLOCK DIAGRAM.....10  
3.3 ENVIRONMENTAL CONDITIONS.....10  
3.4 SUMMARY OF TEST RESULTS.....10

**4. RADIATED EMISSION.....13**  
4.1 TEST PROCEDURE.....13  
4.2 BLOCK DIAGRAM OF TEST SETUP.....13  
4.3 TEST RECEIVER SETUP.....13  
4.4 CORRECTED AMPLITUDE & MARGIN CALCULATION.....14  
4.5 ENVIRONMENTAL CONDITIONS.....14  
4.6 SUMMARY OF TEST RESULTS.....14

**APPENDIX PHOTOGRAPHS.....17**

**Report version**

Version No.	Date of issue	Description
Rev.00	2022-06-21	Original
/	/	/

## 1. GENERAL INFORMATION

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### 1.1 Product Description for Equipment Under Test (EUT)

<b>General Description of EUT</b>	
Product Name:	lamp
Trade Name:	Artika
Model No.:	OUT-LOC-MB
Adding Model(s):	OUT-LOC-XXXXXX ("X" can be 0 to 9 and/or A to Z and/or Blank, for commercial code)
<p><i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model OUT-LOC-MB, but the circuit and the electronic construction do not change, declared by the manufacturer.</i></p>	

<b>Technical Characteristics of EUT</b>	
Rated Voltage:	AC 120V
Rated Current:	/
Rated Power:	10W
Power Adapter Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class B

## 1.2 Test Standards

The tests were performed according to following standards:

**FCC Rules Part 15 Subpart B:** Unintentional Radiators.

**ANSI C63.4-2014:** American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

**Maintenance of compliance** is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

## 1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

## 1.4 Test Facility

### **Address of the test laboratory**

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

### **FCC – Registration No.: 125990**

Waltek Testing Group (Shenzhen) 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. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

### **Industry Canada (IC) Registration No.: 11464A**

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

### 1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark	Power Supply Mode
TM1	Normal Working	Connect to the AC Plug;	AC120V 60Hz for AC Plug

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
AC Cable	0.20	Unshielded	Without Ferrite

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

### 1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz $\pm 3.74\text{dB}$
		0.15-30MHz $\pm 3.34\text{dB}$
Radiated Emissions	Radiated	30-200MHz $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-18GHz $\pm 3.92\text{dB}$

**1.7 Test Equipment List and Details**

Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
<input checked="" type="checkbox"/> Chamber A: Below 1GHz					
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2022-03-22	2023-03-21
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21
Amplifier	Agilent	8447F	3113A06717	2022-01-07	2023-01-06
Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2023-03-19
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-20	2023-03-19
<input type="checkbox"/> Chamber A: Above 1GHz					
Amplifier	C&D	PAP-1G18	2002	2022-03-22	2023-03-21
Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
<input type="checkbox"/> Chamber B: Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2022-03-25	2023-03-24
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2023-04-08
Amplifier	Agilent	8447D	2944A10179	2022-03-22	2023-03-21
<input type="checkbox"/> Chamber C: Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2022-01-07	2023-01-06
Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2023-05-27
Amplifier	HP	8447F	2944A03869	2022-03-22	2023-03-21
<input checked="" type="checkbox"/> Conducted Room 1#					
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2022-03-25	2023-03-24
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2022-03-22	2023-03-21
AC LISN	Schwarz beck	NSLK8126	8126-224	2022-03-22	2023-03-21
<input type="checkbox"/> Conducted Room 2#					
EMI Test Receiver	Rohde & Schwarz	ESPI	10129	2022-03-22	2023-03-21
LISN	Rohde & Schwarz	ENV 216	100097	2022-03-22	2023-03-21

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

\*Remark: indicates software version used in the compliance certification testing.



## 2. SUMMARY OF TEST RESULTS

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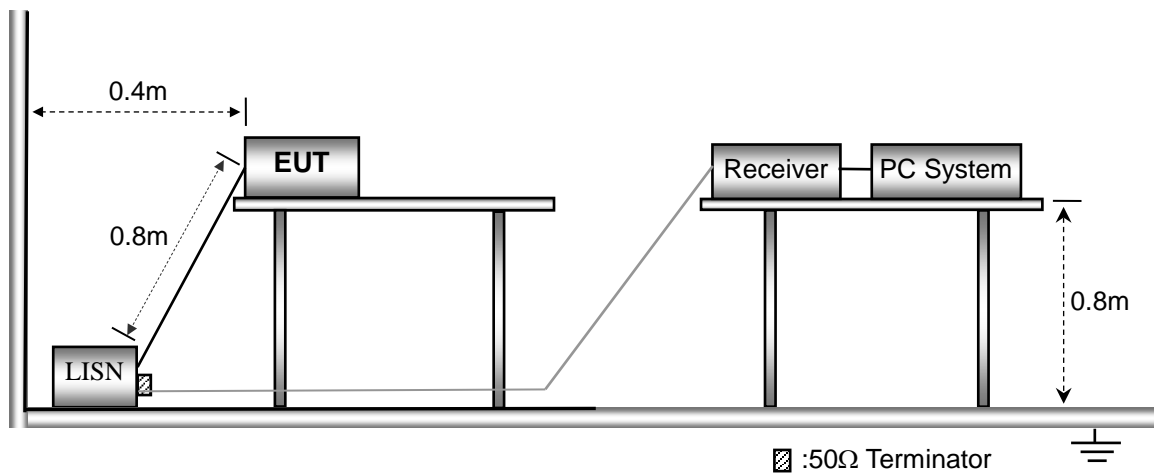
Description of Test	Result
§15.107(a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

### 3. Conducted Emissions

#### 3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

#### 3.2 Basic Test Setup Block Diagram



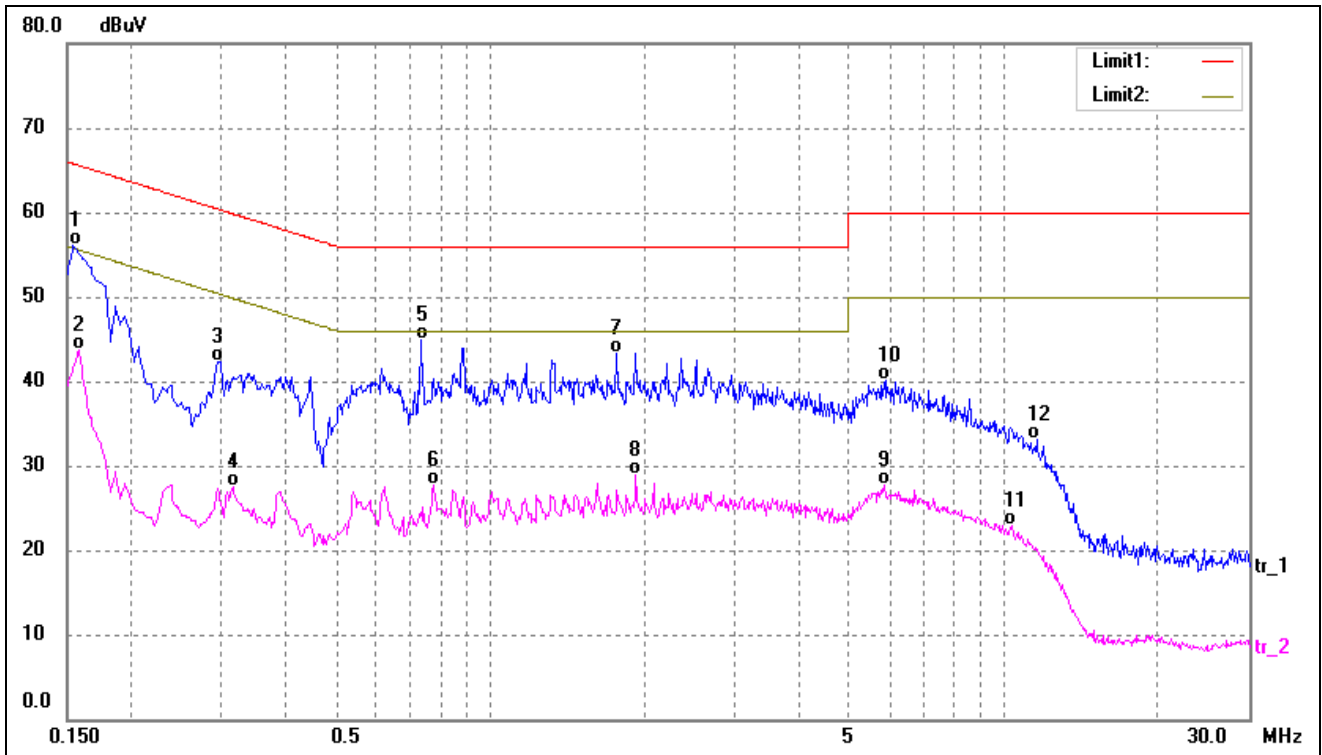
#### 3.3 Environmental Conditions

Temperature:	22.5 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

#### 3.4 Summary of Test Results

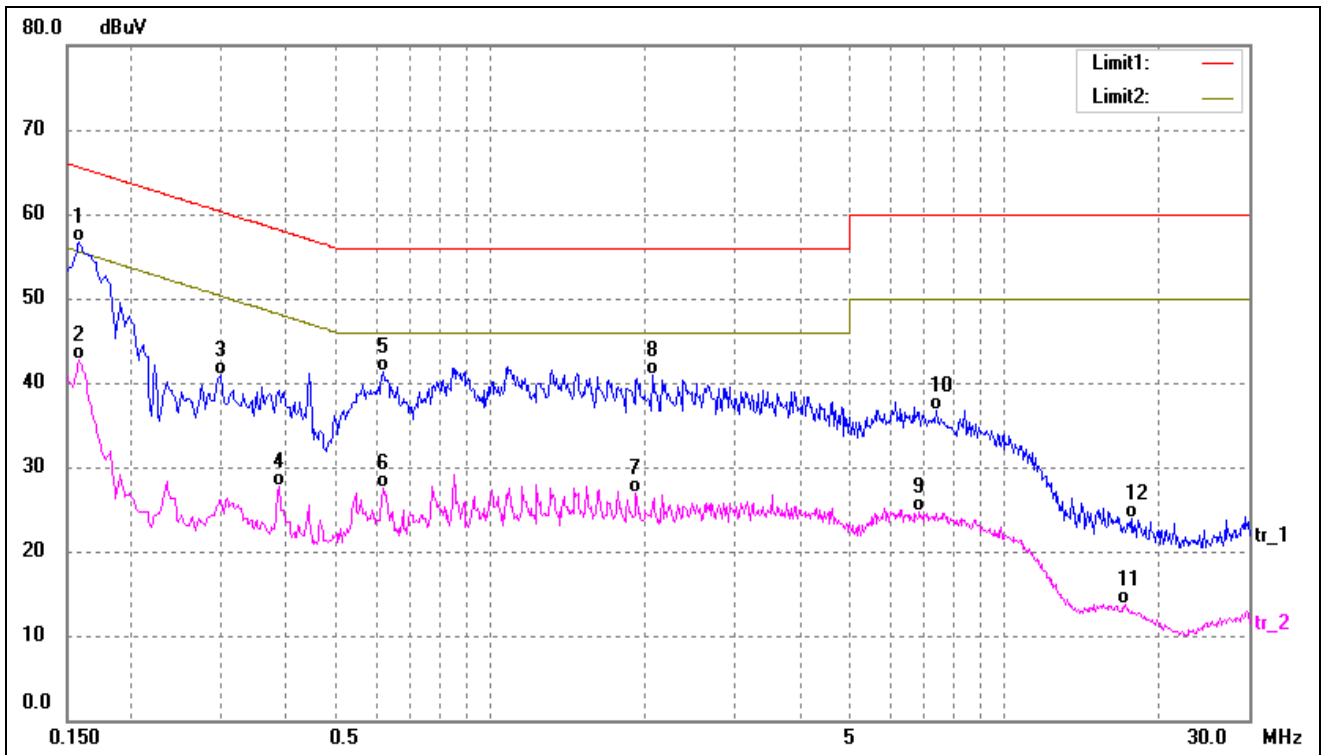
Look at the graphs and data below:

Test mode:	TM1	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1540	45.76	10.37	56.13	65.78	-9.65	QP
2	0.1580	33.40	10.37	43.77	55.57	-11.80	AVG
3	0.2940	31.99	10.34	42.33	60.41	-18.08	QP
4	0.3140	17.19	10.33	27.52	49.86	-22.34	AVG
5	0.7340	34.51	10.40	44.91	56.00	-11.09	QP
6	0.7780	17.23	10.43	27.66	46.00	-18.34	AVG
7	1.7700	33.16	10.23	43.39	56.00	-12.61	QP
8	1.9260	18.67	10.16	28.83	46.00	-17.17	AVG
9	5.8500	17.83	9.97	27.80	50.00	-22.20	AVG
10	5.9140	30.09	9.97	40.06	60.00	-19.94	QP
11	10.3700	12.97	9.89	22.86	50.00	-27.14	AVG
12	11.5980	23.15	9.96	33.11	60.00	-26.89	QP

Test mode:	TM1	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1580	46.36	10.37	56.73	65.56	-8.83	QP
2	0.1580	32.40	10.37	42.77	55.56	-12.79	AVG
3	0.2980	30.50	10.34	40.84	60.30	-19.46	QP
4	0.3860	17.42	10.30	27.72	48.15	-20.43	AVG
5	0.6180	30.95	10.33	41.28	56.00	-14.72	QP
6	0.6180	17.20	10.33	27.53	46.00	-18.47	AVG
7	1.9260	16.68	10.16	26.84	46.00	-19.16	AVG
8	2.0740	30.73	10.13	40.86	56.00	-15.14	QP
9	6.8580	14.69	9.95	24.64	50.00	-25.36	AVG
10	7.3860	26.68	9.94	36.62	60.00	-23.38	QP
11	17.2300	3.49	10.19	13.68	50.00	-36.32	AVG
12	17.7939	13.67	10.21	23.88	60.00	-36.12	QP

## 4. RADIATED EMISSION

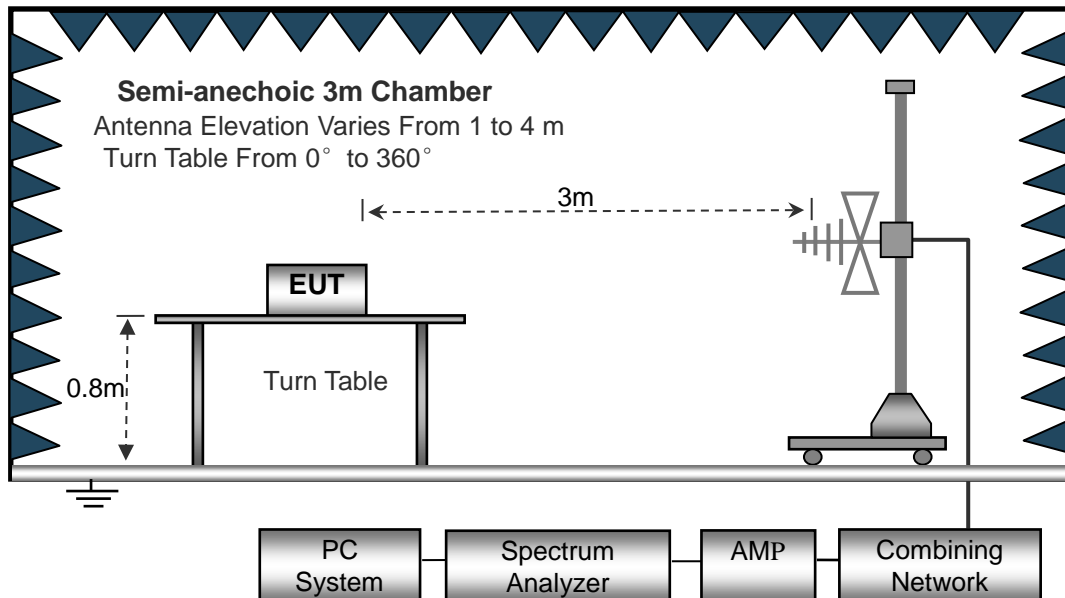
### 4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

### 4.2 Block Diagram of Test Setup



### 4.3 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

#### 4.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\begin{aligned} \text{Corr. Ampl.} &= \text{Indicated Reading} + \text{Correct} \\ \text{Correct} &= \text{Ant.Factor} + \text{Cable Loss} - \text{Ampl.Gain} \end{aligned}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB $\mu$ V means the emission is 6dB $\mu$ V below the maximum limit for a Class B device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

#### 4.5 Environmental Conditions

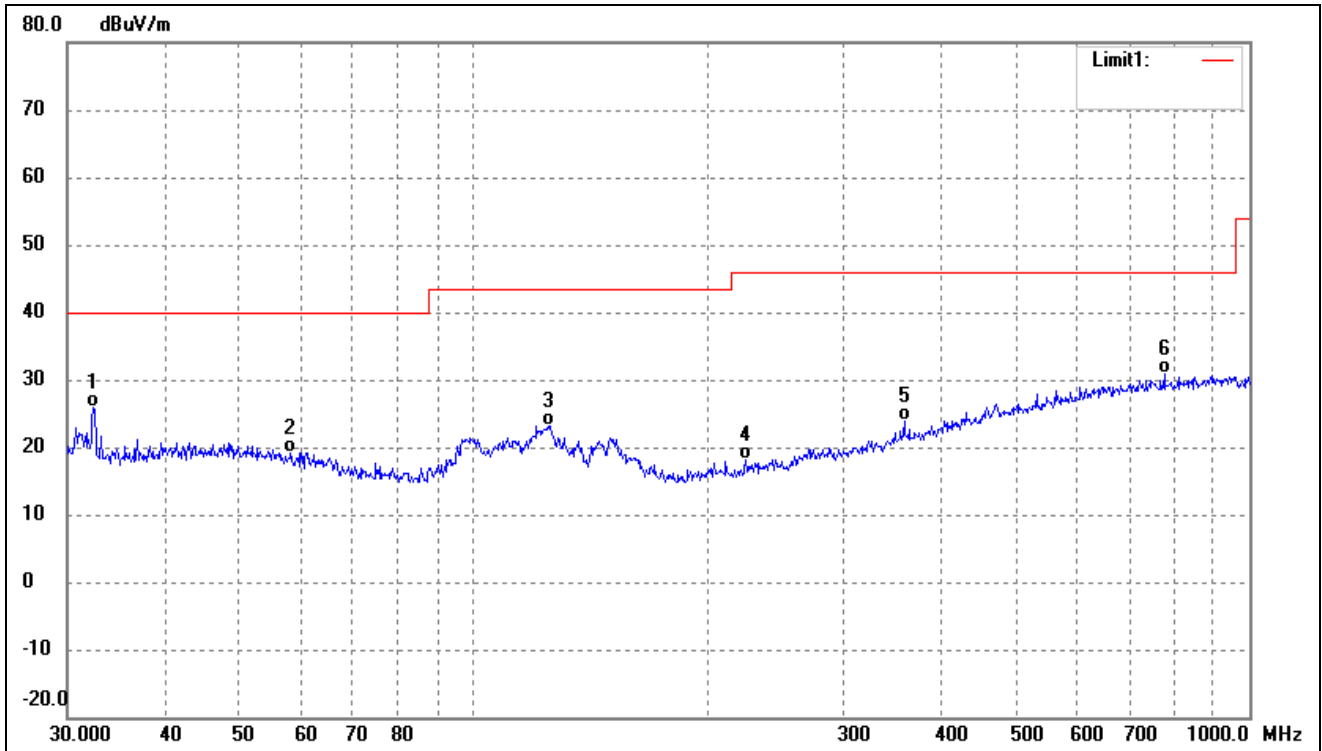
Temperature:	22.5 °C
Relative Humidity:	54 %
ATM Pressure:	1011 mbar

#### 4.6 Summary of Test Results

Look at the graphs and data below:

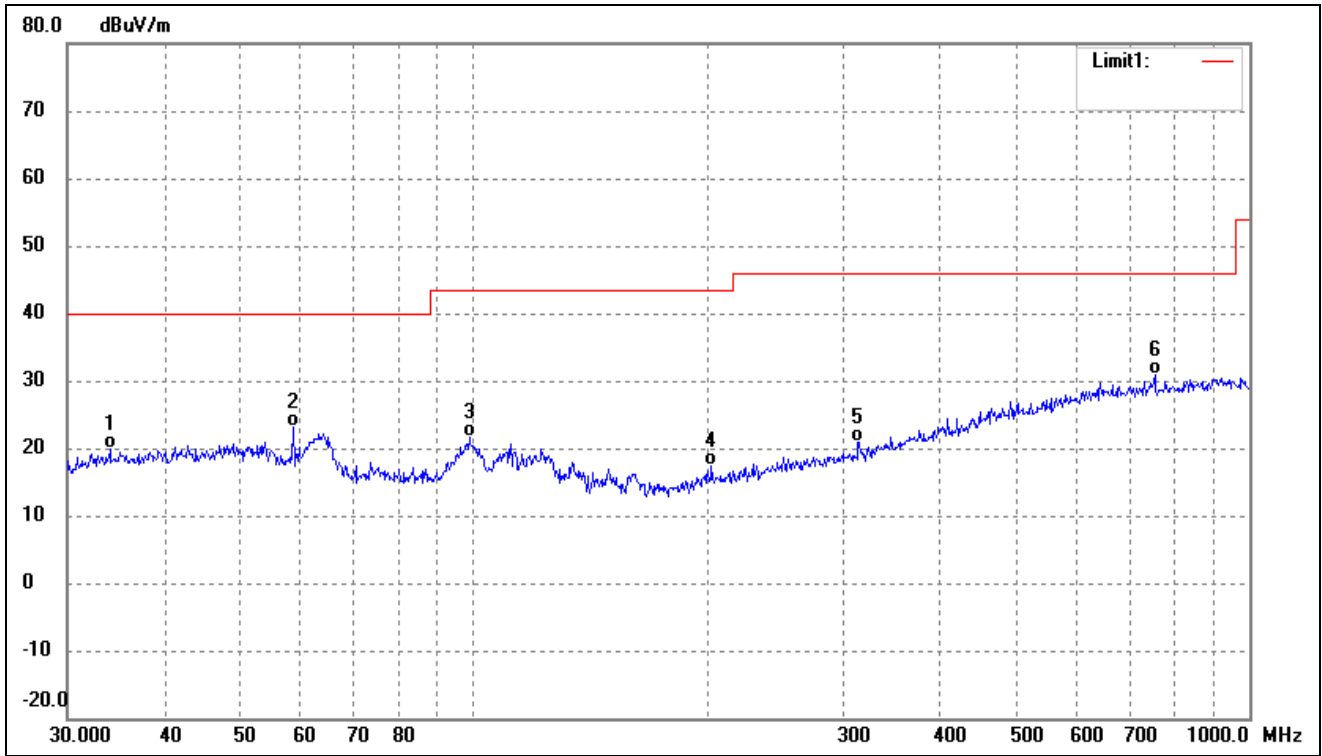
➤ Below 1GHz

Test mode:	TM1	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	32.4059	34.77	-8.85	25.92	40.00	-14.08	-	-	QP
2	58.2030	27.37	-8.17	19.20	40.00	-20.80	-	-	QP
3	125.0066	33.74	-10.51	23.23	43.50	-20.27	-	-	QP
4	224.5193	27.22	-9.02	18.20	46.00	-27.80	-	-	QP
5	359.1860	29.04	-5.12	23.92	46.00	-22.08	-	-	QP
6	776.8778	28.85	1.94	30.79	46.00	-15.21	-	-	QP

Test mode:	TM1	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	34.0365	28.42	-8.46	19.96	40.00	-20.04	-	-	QP
2	58.6126	31.25	-8.22	23.03	40.00	-16.97	-	-	QP
3	98.8326	30.46	-8.94	21.52	43.50	-21.98	-	-	QP
4	202.8104	26.98	-9.62	17.36	43.50	-26.14	-	-	QP
5	313.2760	27.52	-6.54	20.98	46.00	-25.02	-	-	QP
6	755.3873	29.09	1.80	30.89	46.00	-15.11	-	-	QP

Remark: '- 'Means' the test Degree and Height are not recorded by the test software and only show the worst case in the test report.



Reference No.: WTX22X06119517W

## **APPENDIX PHOTOGRAPHS**

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**Please refer to “ANNEX”**

**\*\*\*\*\* END OF REPORT \*\*\*\*\***