

TEST REPORT

Applicant: Neo-Neon (Viet Nam) Development Co.,Ltd.

Address of Applicant: GIA LE INDUSTRIAL ZONE, DONG XUAN COMMUNAL ,
DONG HUNG DISTRICT, THAI BINH PROVINCE, VIETNAM

Manufacturer/Factory: Neo-Neon (Viet Nam) Development Co.,Ltd.

**Address of
Manufacturer/Factory:** GIA LE INDUSTRIAL ZONE, DONG XUAN COMMUNAL ,
DONG HUNG DISTRICT, THAI BINH PROVINCE, VIETNAM

Equipment Under Test (EUT)

Product Name: 7Ft Video Tree Light

Model No.: FCB-XM-3D-MS0109

Trade Mark: N/A

FCC ID: 2AWEL-FCBXM3DMS0109

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: April 27, 2021

Date of Test: April 27~ April 29, 2021

Date of report issued: April 29, 2021

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Luo
Laboratory Manager

This 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 compiler and approver.

2 Version

Version No.	Date	Description
00	2021-04-29	Original

Prepared By:

Date:

April 29, 2021

Project Engineer

Check By:

Date:

April 29, 2021

Reviewer

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4 Test Summary

Test Item	Test Requirement	Test Method	Class / Severity	Result
Conducted Emission	FCC Part15.107	ANSI C63.4	Class B	PASS
Radiated Emissions #	FCC Part15.109 &15.31	ANSI C63.4	Class B	PASS

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. # Refer to FCC Part 15.33 (b)(1) conditional testing procedure :

The highest frequency generated or used in the EUT	Test frequency range of Radiated emission
<108MHz	30MHz ~ 1GHz
108MHz ~ 500MHz	30MHz ~ 2GHz
500MHz ~ 1GHz	30MHz ~ 5GHz
>1GHz	30MHz ~ 5th harmonic of the highest frequency or 40 GHz, whichever is lower.

Note: the EUT Internal clock frequency above 108MHz.

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	7Ft Video Tree Light
Model No.:	FCB-XM-3D-MS0109
Test sample(s) ID:	GTSL202104000289
Sample(s) Status:	Normal sample
Rated Voltage:	AC 120V/60Hz
AC/DC Adapter:	Manufacturer: Dongguan Rico Electronic Co.,Ltd Model: RKPO-UL1201500IP44-3 Input: 100-240V 50/60Hz 0.5A Output:12V/1500mA 18W

5.2 Test mode and Test voltage

Test mode:	Keep the EUT in On mode.
Test voltage	AC 120V/60Hz

5.3 Description of Support Units

Manufacturer	Description	Model	Serial Number
N/A	N/A	N/A	N/A

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

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

- **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 381383.

- **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

The test was performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

6 Test Instruments list

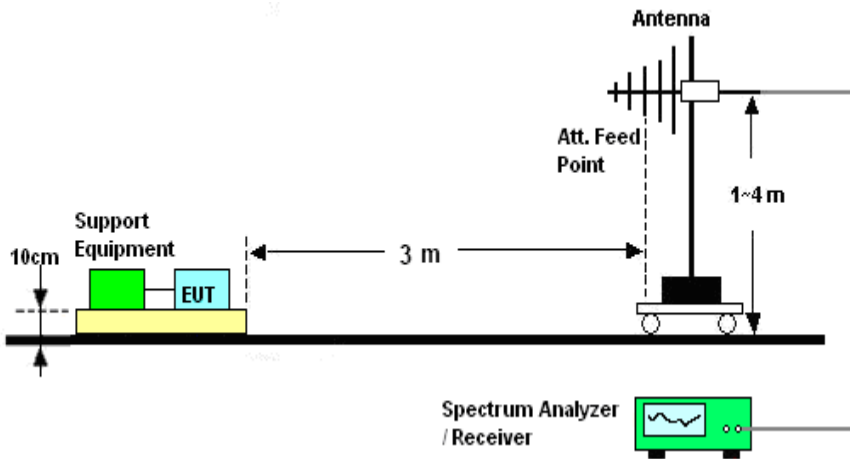
Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021
4	ENV216 2-L-V-NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

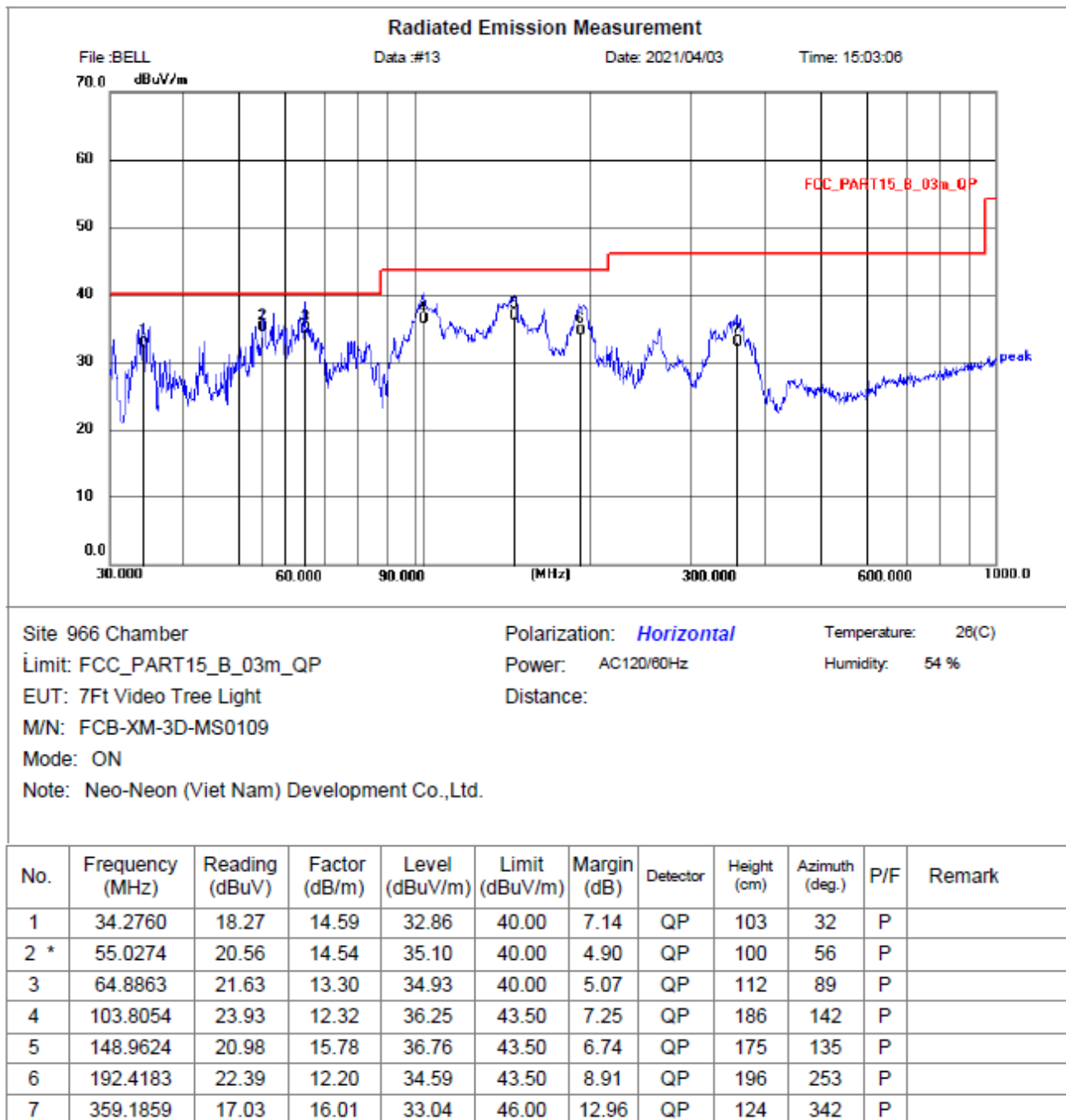
7 Test Results and Measurement Data

7.1 Radiated Emission

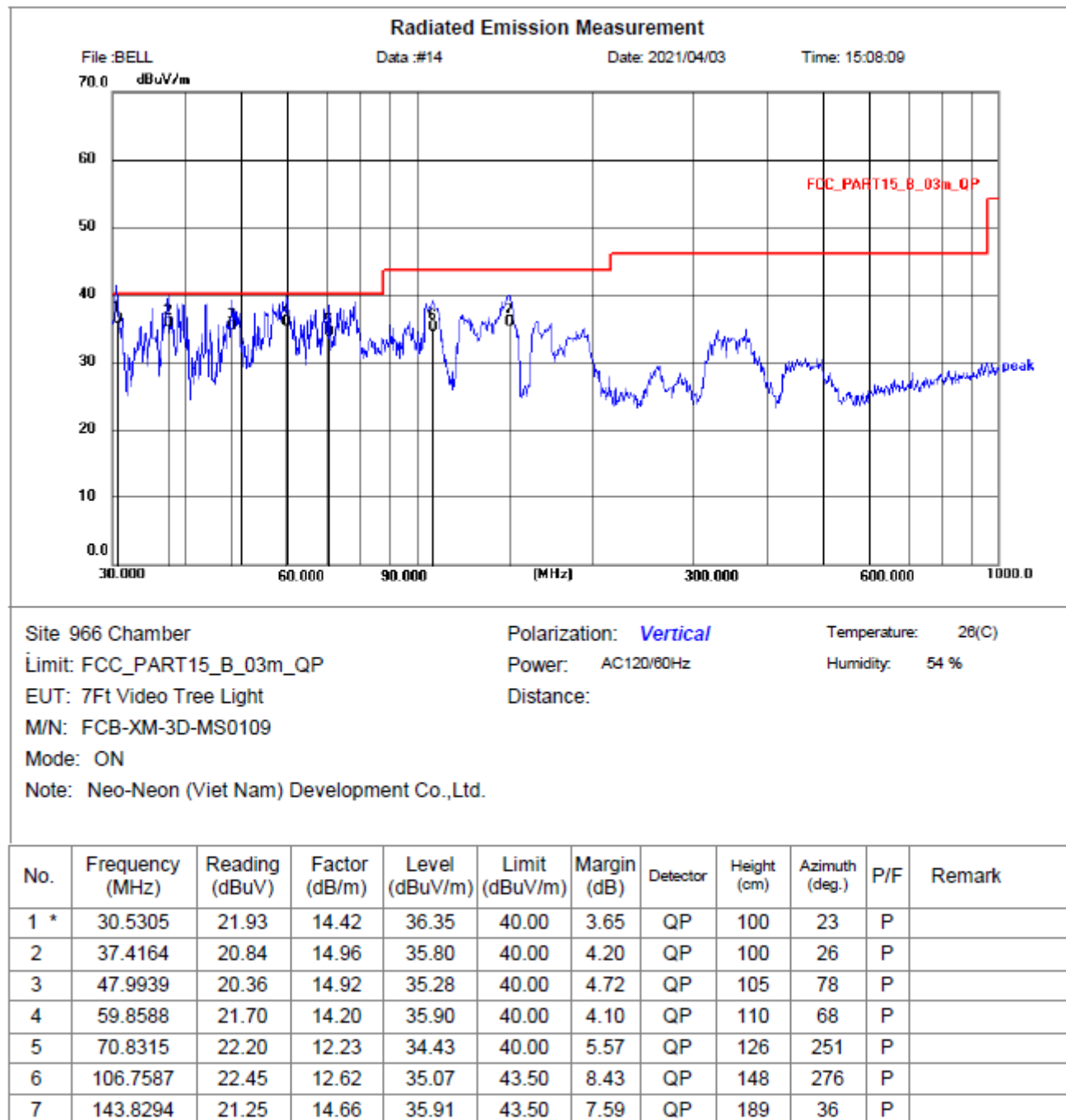
Test Requirement:	FCC Part15 B Section 15.109					
Test Method:	ANSI C63.4:2014					
Test Frequency Range:	30MHz to 6000MHz					
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)					
Receiver setup:	Frequency	Detector	RBW	VBW	Remark	
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
		Peak	1MHz	10Hz	Average Value	
Limit:	Frequency		Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz		40.00		Quasi-peak Value	
	88MHz-216MHz		43.50		Quasi-peak Value	
	216MHz-960MHz		46.00		Quasi-peak Value	
	960MHz-1GHz		54.00		Quasi-peak Value	
	Above 1GHz		54.00		Average Value	
			74.00		Peak Value	
Test setup:	For radiated emissions from 30MHz to1GHz 					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.2 for details and only show the worst case.					
Test results:	Pass					

Measurement Data

Test mode:	On mode	Antenna Polarity:	Horizontal
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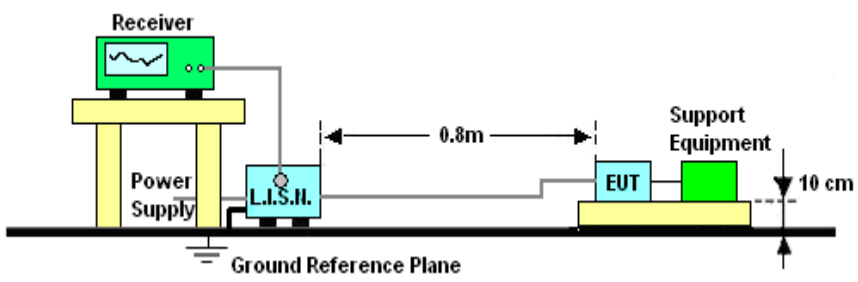
Test mode:	On mode	Antenna Polarity:	Vertical
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Note:

- The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
- Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

7.2 Conducted Emissions

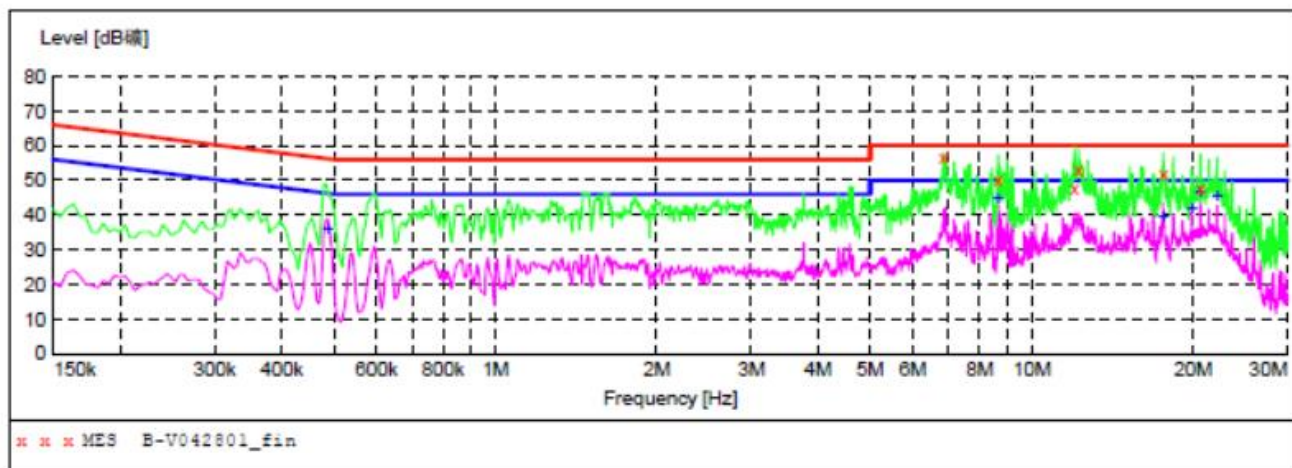
Test Requirement:	FCC Part15 B Section 15.107																			
Test Method:	ANSI C63.4:2014																			
Test Frequency Range:	150kHz to 30MHz																			
Class / Severity:	Class B																			
Receiver setup:	RBW=9kHz, VBW=30kHz																			
Limit:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>0.5-30</td><td>60</td><td>50</td></tr></table>						Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	0.5-30	60	50
Frequency range (MHz)	Limit (dBμV)																			
	Quasi-peak	Average																		
0.15-0.5	66 to 56*	56 to 46*																		
0.5-5	56	46																		
0.5-30	60	50																		
Test setup:																				
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar														
Test Instruments:	Refer to section 6 for details																			
Test mode:	Refer to section 5.2 for details and only show the worst case.																			
Test results:	Pass																			

Measurement Data

Test mode:	On mode	Phase Polarity:	Line
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SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "B-V042801_fin"

2021-4-28 14:47

Frequency MHz	Level dB	Transd dB	Limit dB	Margin dB	Detector	Line	PE
6.850000	56.70	9.4	60	3.3	QP	L1	GND
8.660000	50.30	9.6	60	9.7	QP	L1	GND
12.020000	47.50	9.8	60	12.5	QP	L1	GND
12.230000	52.90	9.8	60	7.1	QP	L1	GND
17.580000	52.20	10.1	60	7.8	QP	L1	GND
20.650000	48.00	10.3	60	12.0	QP	L1	GND

MEASUREMENT RESULT: "B-V042801_fin2"

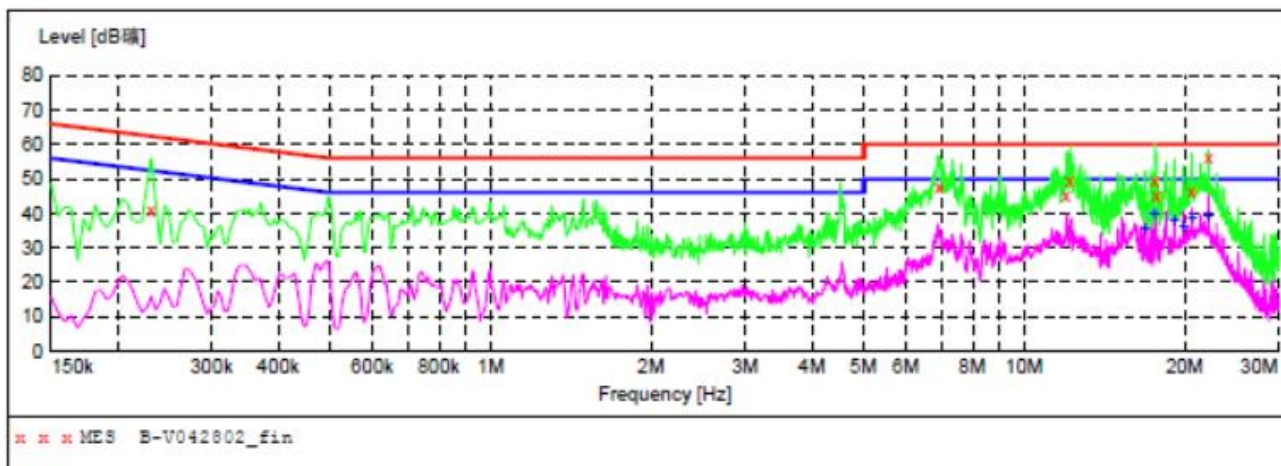
2021-4-28 14:47

Frequency MHz	Level dB	Transd dB	Limit dB	Margin dB	Detector	Line	PE
0.487500	36.10	8.6	46	10.1	AV	L1	GND
8.650000	44.90	9.6	50	5.1	AV	L1	GND
17.580000	39.20	10.1	50	10.8	AV	L1	GND
19.880000	42.10	10.3	50	7.9	AV	L1	GND
20.630000	46.70	10.3	50	3.3	AV	L1	GND
22.150000	45.60	10.5	50	4.4	AV	L1	GND

Test mode:	On mode	Phase Polarity:	Neutral
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SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "B-V042802_fin"

2021-4-28 14:56

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.231000	40.80	8.2	62	21.6	QP	N	GND
6.920000	47.80	9.4	60	12.2	QP	N	GND
11.990000	45.30	9.8	60	14.7	QP	N	GND
12.190000	49.30	9.8	60	10.7	QP	N	GND
17.570000	49.50	10.1	60	10.5	QP	N	GND
17.680000	45.10	10.1	60	14.9	QP	N	GND
20.630000	46.70	10.3	60	13.3	QP	N	GND
22.150000	56.50	10.5	60	3.5	QP	N	GND

MEASUREMENT RESULT: "B-V042802_fin2"

2021-4-28 14:55

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
16.820000	36.20	10.1	50	13.8	AV	N	GND
17.570000	40.20	10.1	50	9.8	AV	N	GND
19.120000	38.60	10.2	50	11.4	AV	N	GND
19.880000	36.60	10.3	50	13.4	AV	N	GND
20.620000	39.00	10.3	50	11.0	AV	N	GND
22.150000	45.60	10.5	50	4.4	AV	N	GND

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

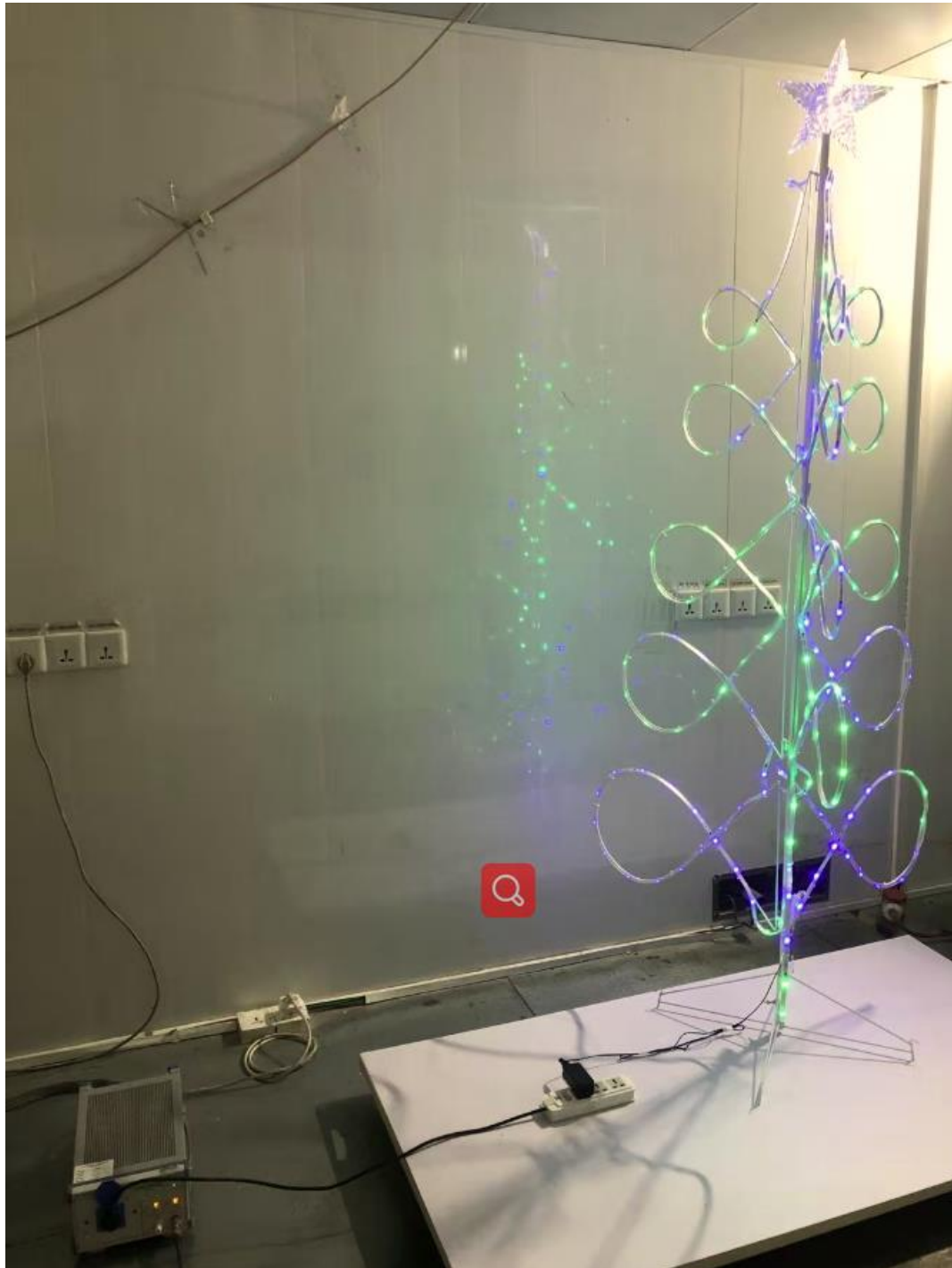
Global United Technology Services Co., Ltd.

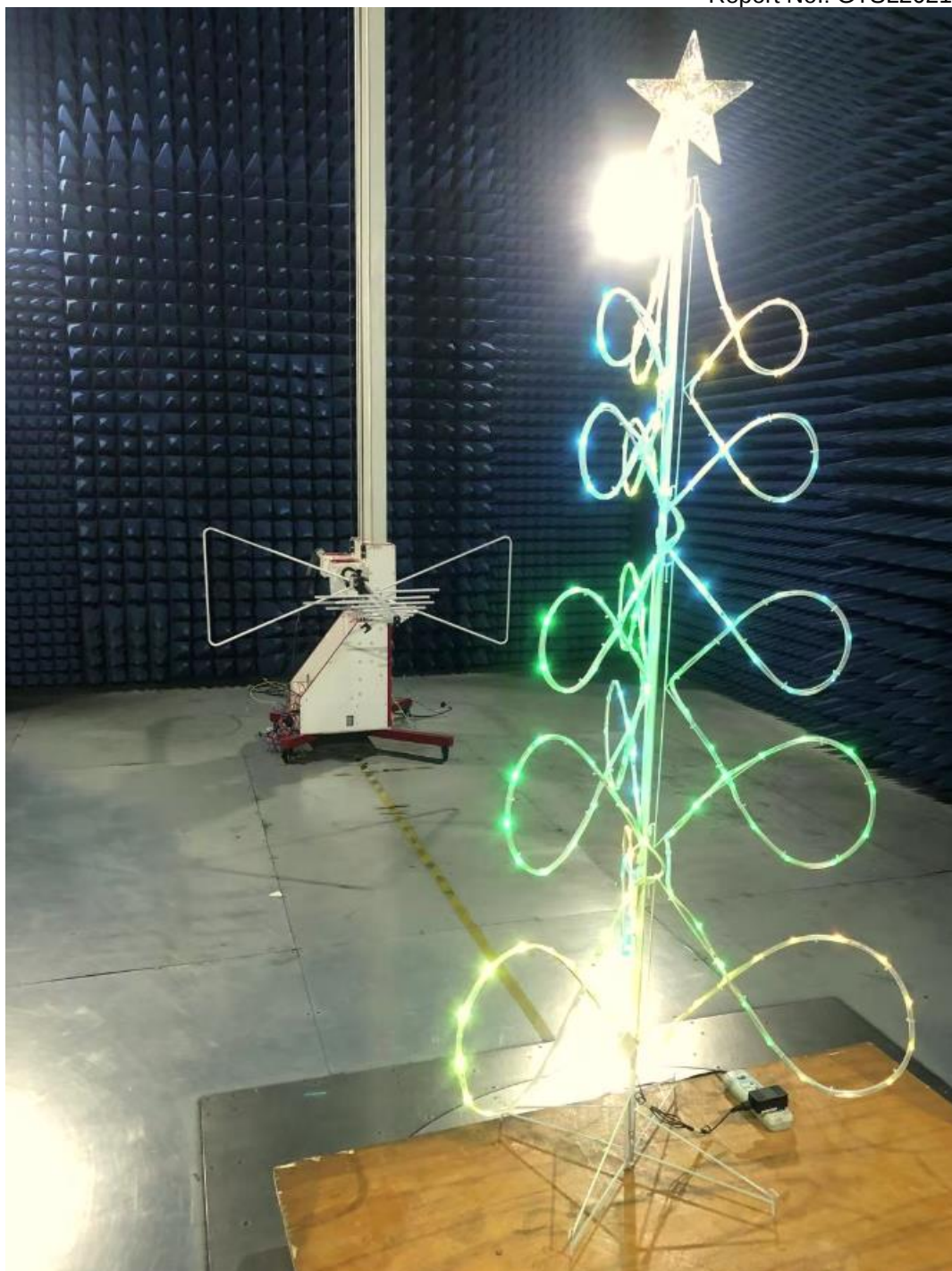
No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,
Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

8 Test Setup Photo

Reference to the **appendix I** for details.

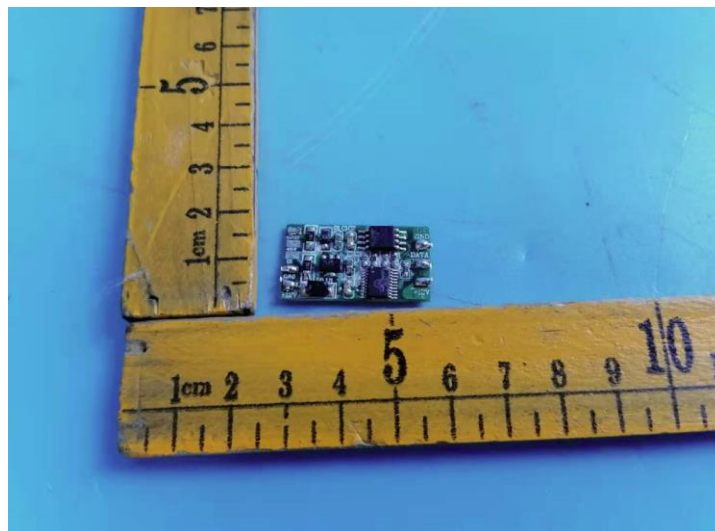
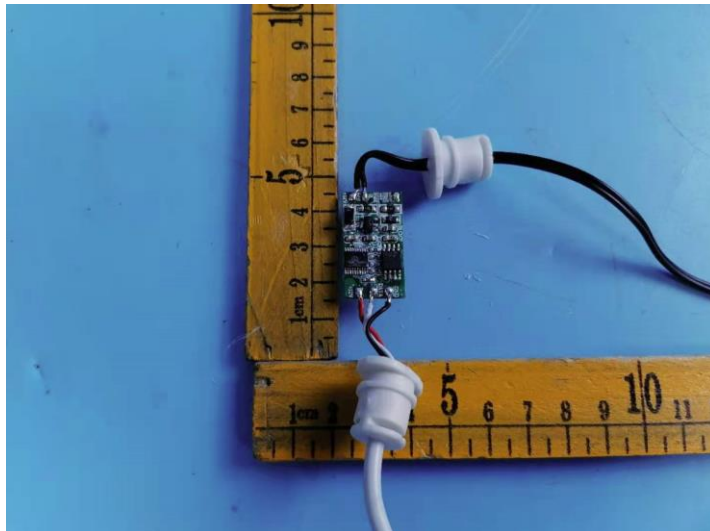


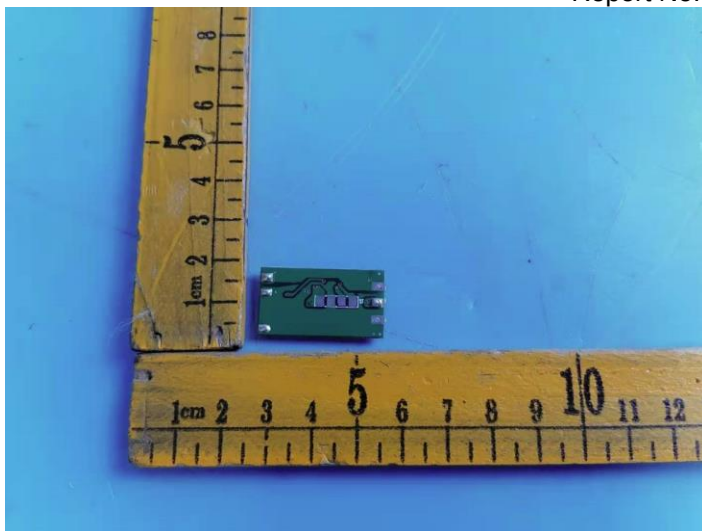


9 EUT Constructional Details

Reference to the **appendix II** for details.









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