

TEST REPORT

Applicant: ARTIKA FOR LIVING INC

Address of Applicant: 1756 50th avenue, Lachine, Qc, Canada H8T 2V5

Manufacturer: ZHONGSHAN ODEER ELECTRONICS LIGHTING CO.,LTD

Address of Manufacturer: No.4,North Industrial Road,Xiaolan Town, Zhongshan City, G.D. China

Equipment Under Test (EUT)

Product Name: Alton flat panel 0.5x4 5CCT

Model No.: FLP04-AL5C-XXXXXX
("X" can be any letter A to Z and/or 0 to 9 and/or Black, represents commercial code.)

Trade Mark: Artika

FCC ID: 2AUHG-FLP04-AL5C

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: December 28, 2023

Date of Test: December 28, 2023-January 09, 2024

Date of report issued: January 09, 2024

Test Result : Pass *

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

Authorized Signature:



Robinson Luo

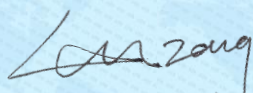
Laboratory Manager

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

<i>Version No.</i>	<i>Date</i>	<i>Description</i>
00	January 09, 2024	Original

Prepared by:

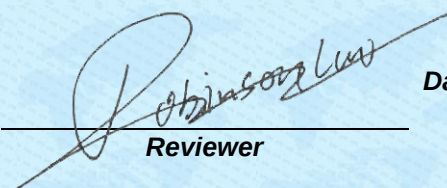


Date:

January 09, 2024

Project Engineer

Reviewed by:



Date:

January 09, 2024

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	ANSI C63.4	Class B	PASS

Remark:

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

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

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:	Alton flat panel 0.5x4 5CCT
Model No.:	FLP04-AL5C-XXXXXX ("X" can be any letter A to Z and/or 0 to 9 and/or Black, represents commercial code.)
Power supply:	AC 120V, 60Hz

Remark: The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.

5.2 Test mode and Test voltage

Test mode:	
Operation mode	Keep the EUT in the operation status.
Test voltage:	
AC 120V/60Hz	

5.3 Description of Support Units

None.

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**

Designation Number: CN5029

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.

- **ISED —Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing.

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

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

5.7 Test Location

Tests were 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

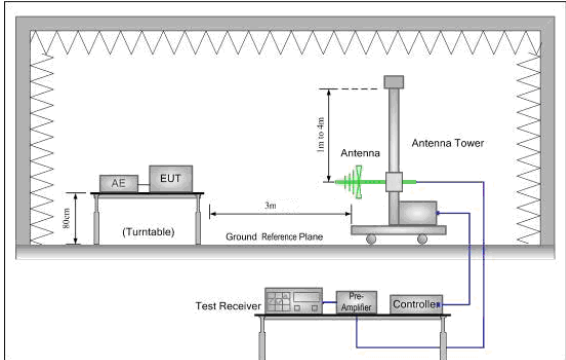
Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	June 23, 2021	June 22, 2024
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	April 14, 2023	April 13, 2024
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	GTS640	March 19, 2023	March 18, 2025
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	April 17, 2023	April 16, 2025
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	April 14, 2023	April 13, 2024
8	Loop Antenna	ZHINAN	ZN30900A	GTS534	Nov. 13, 2023	Nov.12, 2024
9	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	April 14, 2023	April 13, 2024
10	Amplifier(1GHz-26.5GHz)	HP	8449B	GTS601	April 14, 2023	April 13, 2024
11	Horn Antenna (18-26.5GHz)	/	UG-598A/U	GTS664	Oct. 29, 2023	Oct. 28, 2024
12	Horn Antenna (26.5-40GHz)	A.H Systems	SAS-573	GTS665	Oct. 29, 2023	Oct. 28, 2024
13	FSV·Signal Analyzer (10Hz-40GHz)	Keysight	FSV-40-N	GTS666	March 13, 2023	March 12, 2024
14	Amplifier	/	LNA-1000-30S	GTS650	April 14, 2023	April 13, 2024
15	CDNE M2+M3-16A	HCT	30MHz-300MHz	GTS692	Nov. 08, 2023	Nov.07, 2024
16	Wideband Amplifier	/	WDA-01004000-15P35	GTS602	April 14, 2023	April 13, 2024
17	Thermo meter	JINCHUANG	GSP-8A	GTS643	April 19, 2023	April 18, 2024
18	RE cable 1	GTS	N/A	GTS675	July 31. 2023	July 30. 2024
19	RE cable 2	GTS	N/A	GTS676	July 31. 2023	July 30. 2024
20	RE cable 3	GTS	N/A	GTS677	July 31. 2023	July 30. 2024
21	RE cable 4	GTS	N/A	GTS678	July 31. 2023	July 30. 2024
22	RE cable 5	GTS	N/A	GTS679	July 31. 2023	July 30. 2024
23	RE cable 6	GTS	N/A	GTS680	July 31. 2023	July 30. 2024
24	RE cable 7	GTS	N/A	GTS681	July 31. 2023	July 30. 2024
25	RE cable 8	GTS	N/A	GTS682	July 31. 2023	July 30. 2024

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	July 12, 2022	July 11, 2027
2	EMI Test Receiver	R&S	ESCI 7	GTS552	April 14, 2023	April 13, 2024
3	LISN	ROHDE & SCHWARZ	ENV216	GTS226	April 14, 2023	April 13, 2024
4	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Thermo meter	JINCHUANG	GSP-8A	GTS642	April 19, 2023	April 18, 2024
7	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	April 14, 2023	April 13, 2024
8	ISN	SCHWARZBECK	NTFM 8158	GTS565	April 14, 2023	April 13, 2024
9	High voltage probe	SCHWARZBECK	TK9420	GTS537	April 14, 2023	April 13, 2024
10	Antenna end assembly	Weinschel	1870A	GTS560	April 14, 2023	April 13, 2024

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	KUMAO	SF132	GTS647	April 19, 2023	April 18, 2024

7 Test Results and Measurement Data

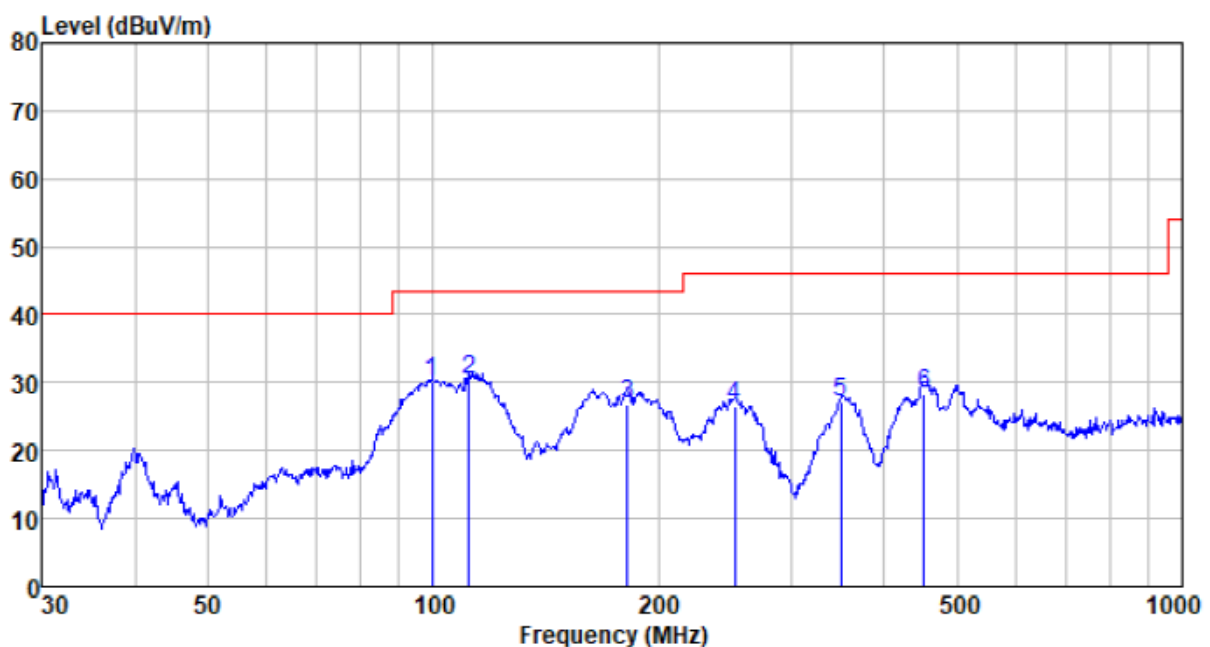
7.1 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109																			
Test Method:	ANSI C63.4:2014																			
Test Frequency Range:	30MHz to 1GHz																			
Class / Severity:	Class B																			
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)																			
Receiver setup:	<table><tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Value</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak</td></tr></table>					Frequency	Detector	RBW	VBW	Value	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak					
Frequency	Detector	RBW	VBW	Value																
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak																
Limit:	<table><tr><td>Frequency</td><td>Limit (dBμV/m @3m)</td><td>Value</td></tr><tr><td>30MHz-88MHz</td><td>40.00</td><td>Quasi-peak</td></tr><tr><td>88MHz-216MHz</td><td>43.50</td><td>Quasi-peak</td></tr><tr><td>216MHz-960MHz</td><td>46.00</td><td>Quasi-peak</td></tr><tr><td>960MHz-1GHz</td><td>54.00</td><td>Quasi-peak</td></tr></table>					Frequency	Limit (dBμV/m @3m)	Value	30MHz-88MHz	40.00	Quasi-peak	88MHz-216MHz	43.50	Quasi-peak	216MHz-960MHz	46.00	Quasi-peak	960MHz-1GHz	54.00	Quasi-peak
Frequency	Limit (dBμV/m @3m)	Value																		
30MHz-88MHz	40.00	Quasi-peak																		
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216MHz-960MHz	46.00	Quasi-peak																		
960MHz-1GHz	54.00	Quasi-peak																		
Test setup:																				
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.																			

	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
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

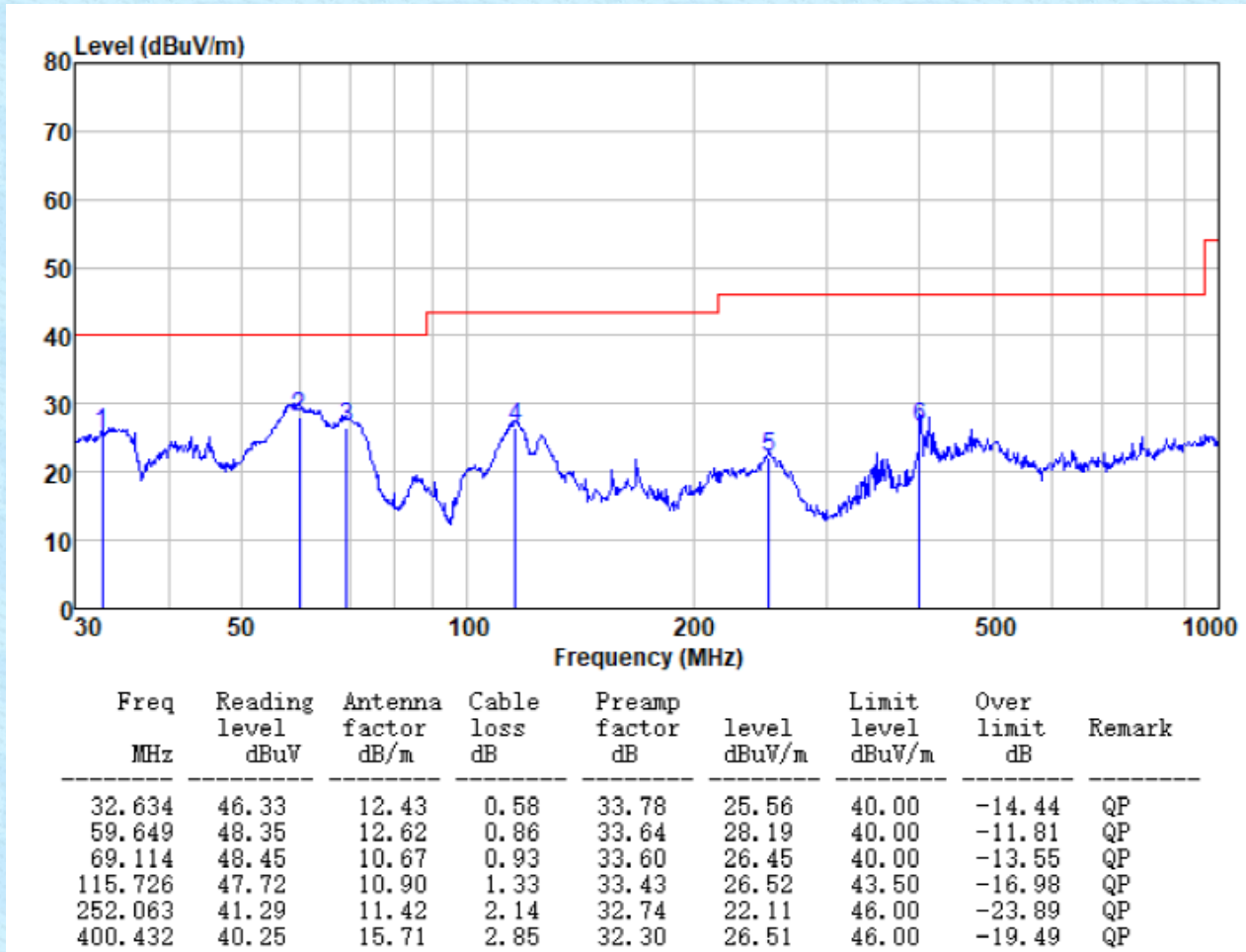
Measurement Data

Test mode:	Operation mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
99.528	52.73	9.65	1.19	33.60	29.97	43.50	-13.53	QP
111.738	52.08	10.61	1.29	33.47	30.51	43.50	-12.99	QP
181.920	47.87	10.19	1.75	32.91	26.90	43.50	-16.60	QP
252.948	45.83	11.40	2.14	32.74	26.63	46.00	-19.37	QP
350.477	42.71	14.18	2.62	32.49	27.02	46.00	-18.98	QP
452.720	40.51	16.75	3.10	32.14	28.22	46.00	-17.78	QP

Test mode:	Operation 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:

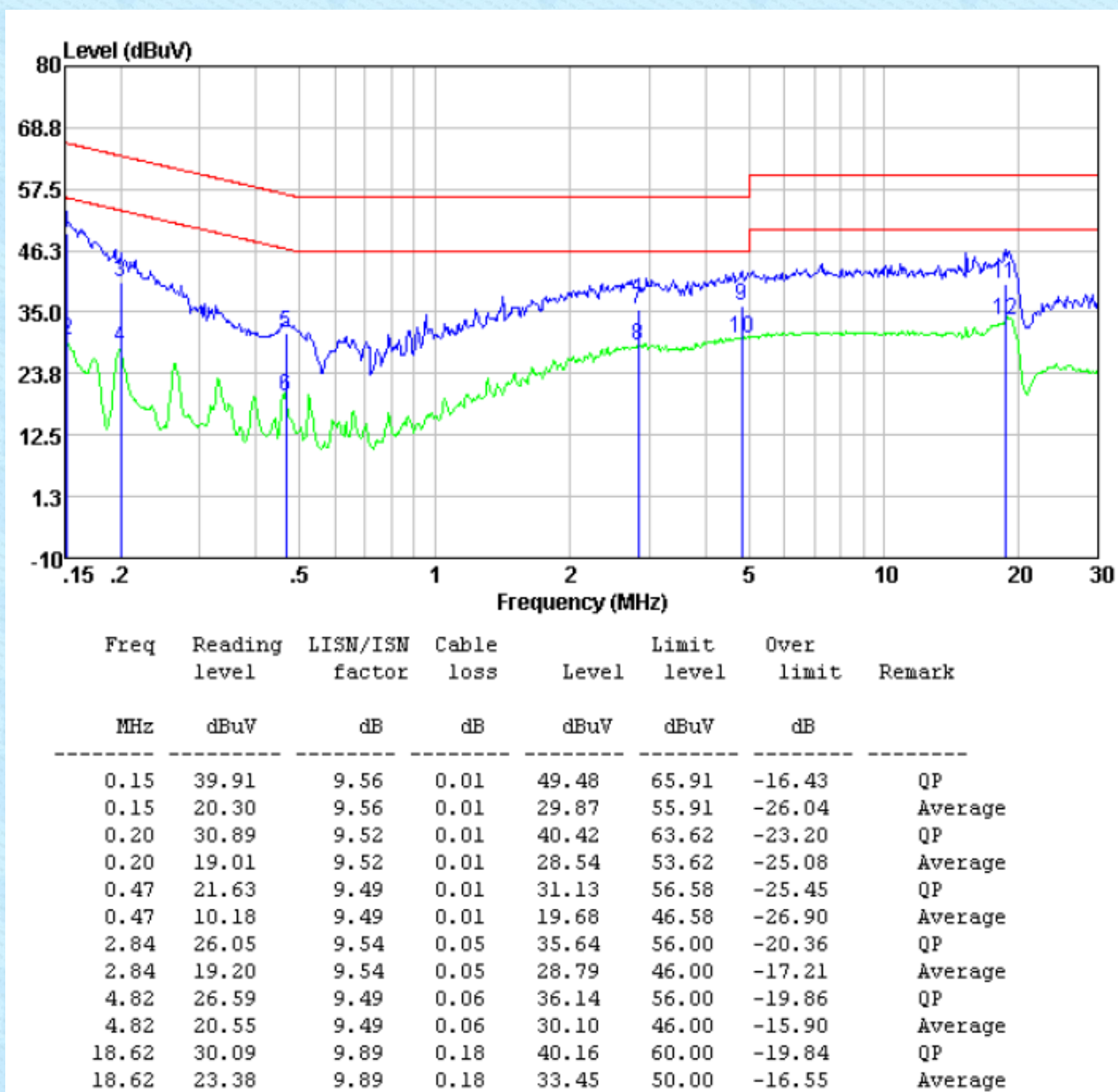
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

7.2 Conducted Emissions

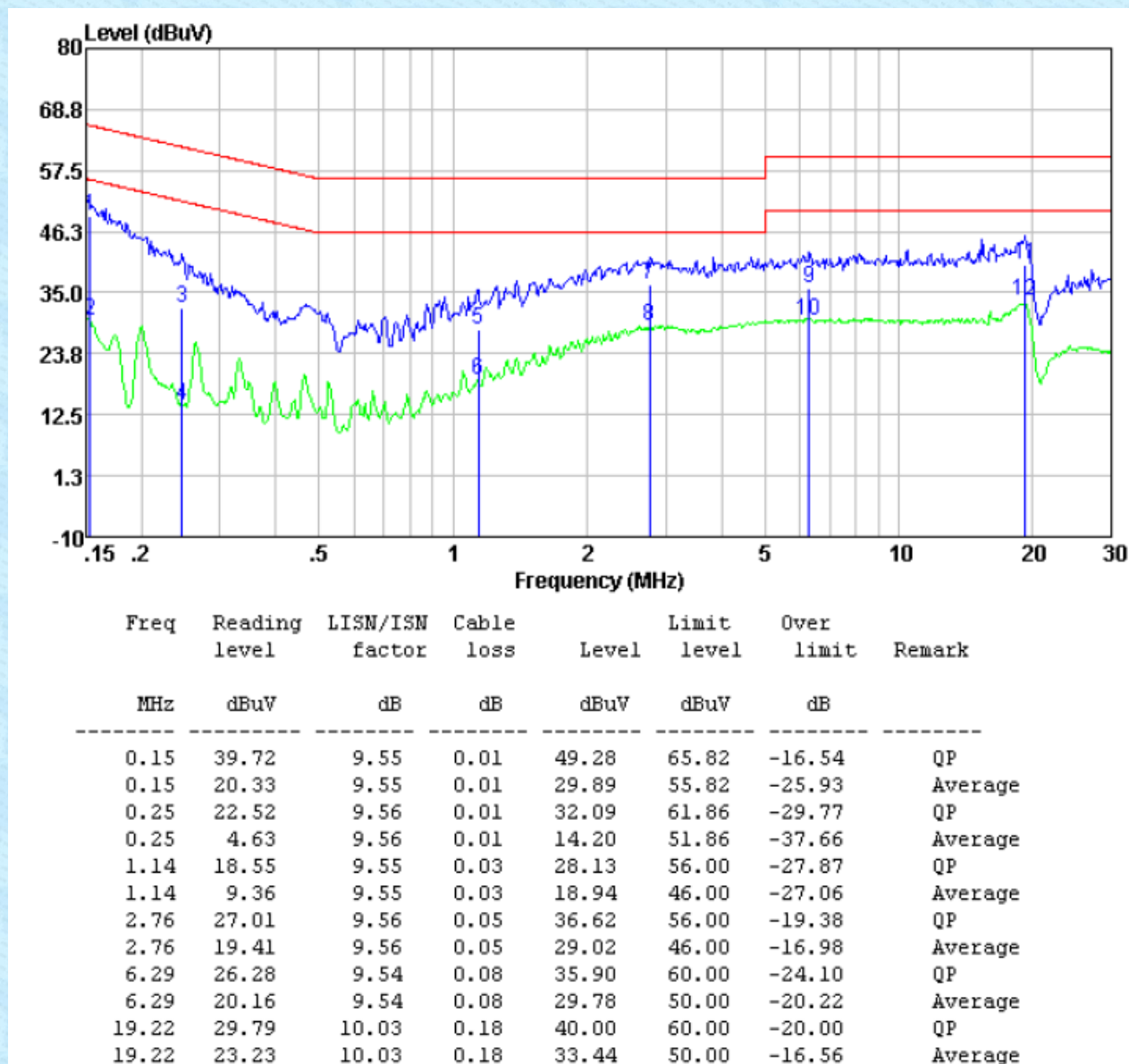
Test Requirement:	FCC Part15 B Section 15.107																			
Test Method:	ANSI C63.4:2014																			
Test Frequency Range:	150kHz to 30MHz																			
Class / Severity:	Class B																			
Receiver setup:	RBW=9kHz, VBW=30kHz																			
Limit:	<table><tr><th rowspan="2">Frequency 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>5-30</td><td>60</td><td>50</td></tr></table> * Decreases with the logarithm of the frequency.						Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	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																		
5-30	60	50																		
Test setup:	Reference Plane Remark: E.U.T.: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m																			
Test procedure	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.																			
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:	Operation mode	Phase Polarity:	Line
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Test mode:	Operation mode	Phase Polarity:	Neutral
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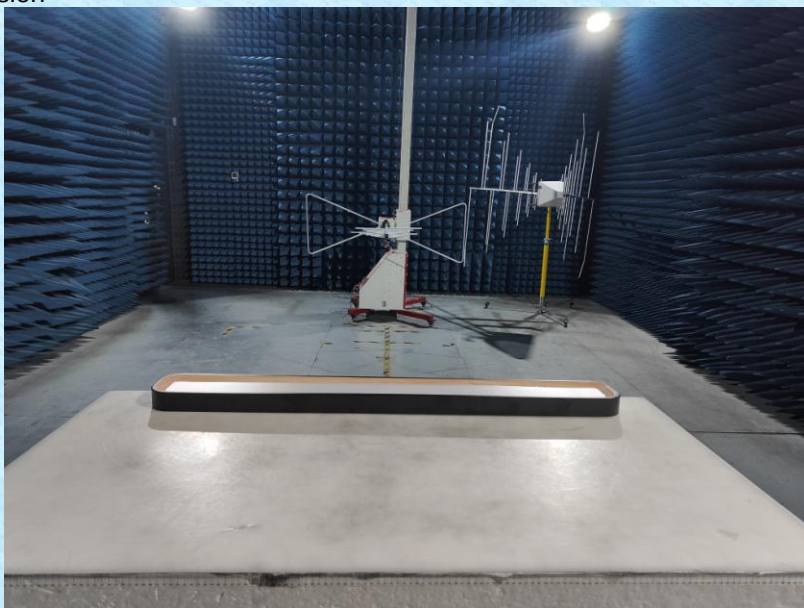


Notes:

1. An initial pre-scan was performed on the live and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

8 Test Setup Photo

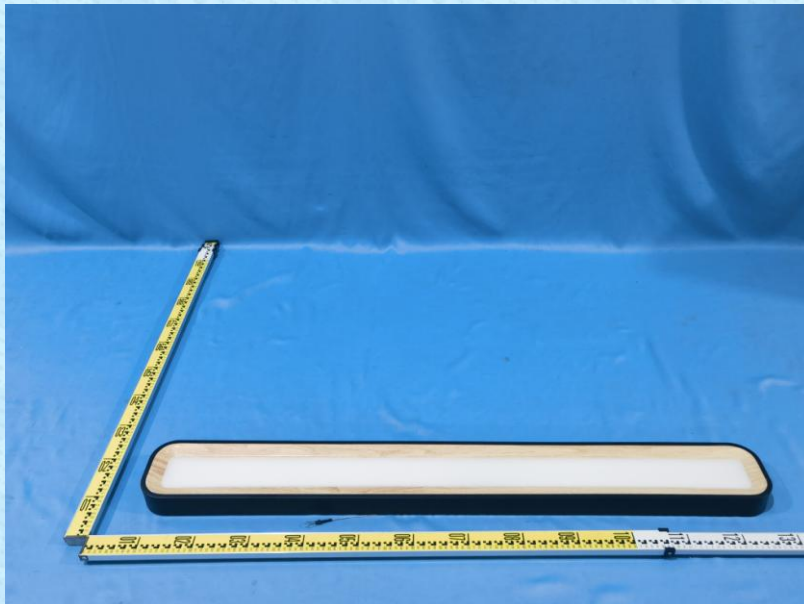
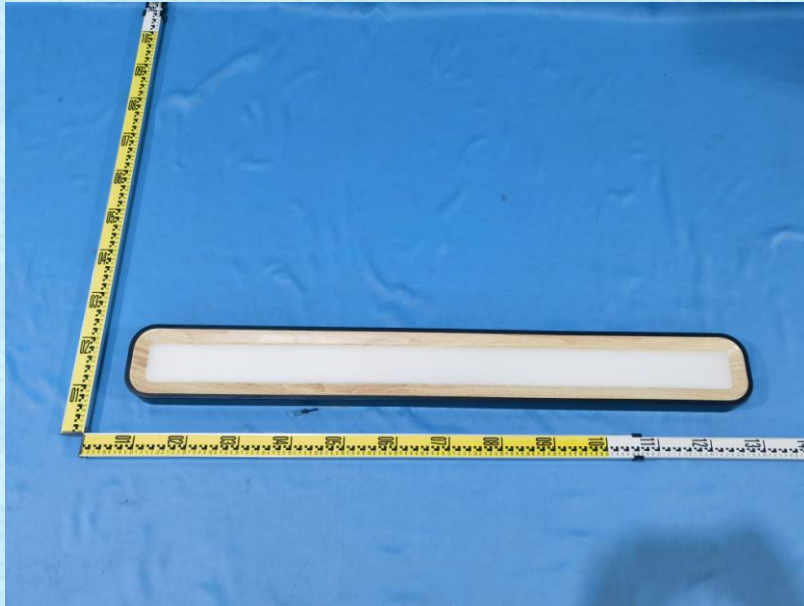
Radiated Emission

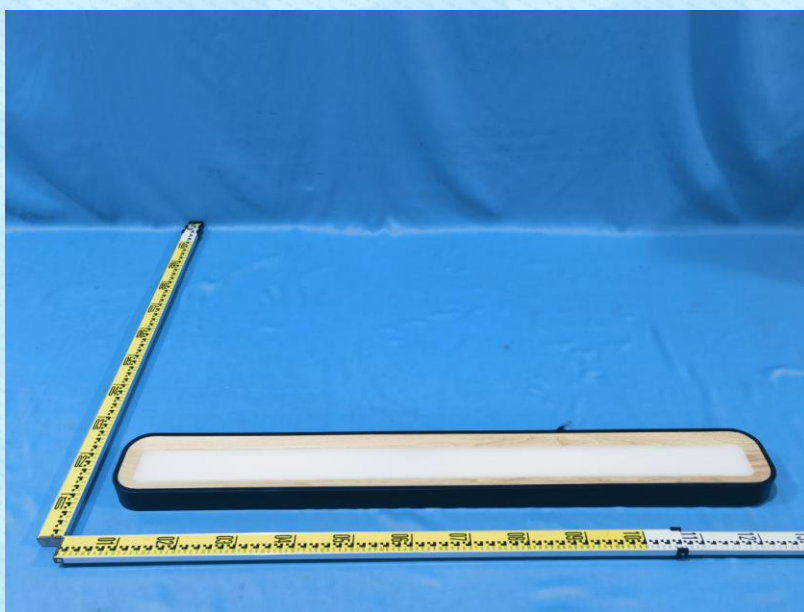
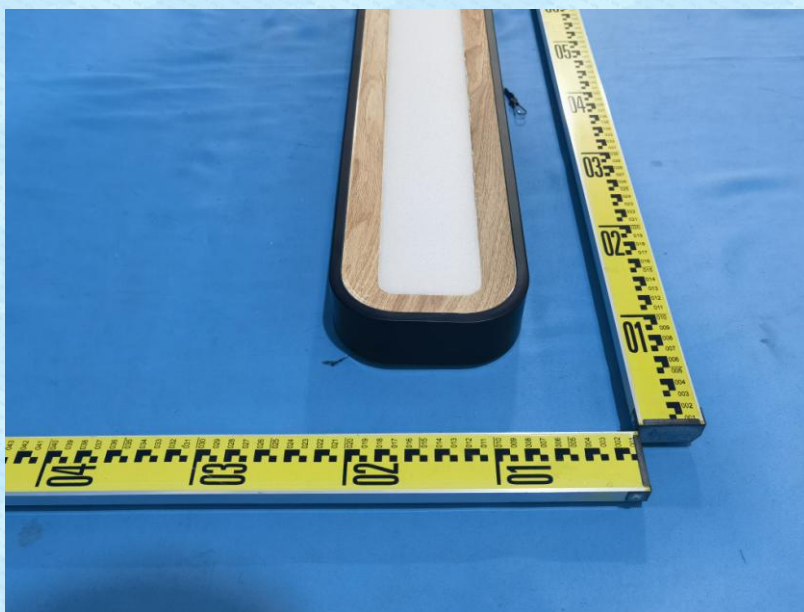


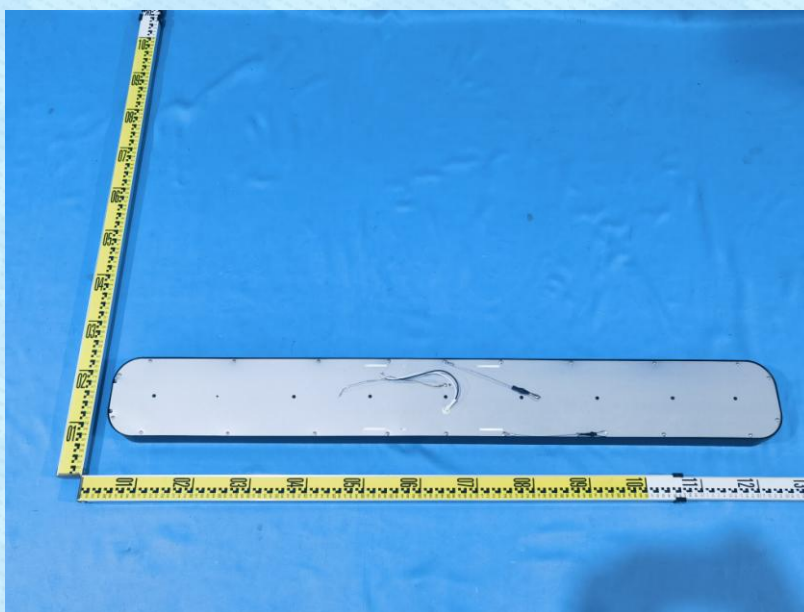
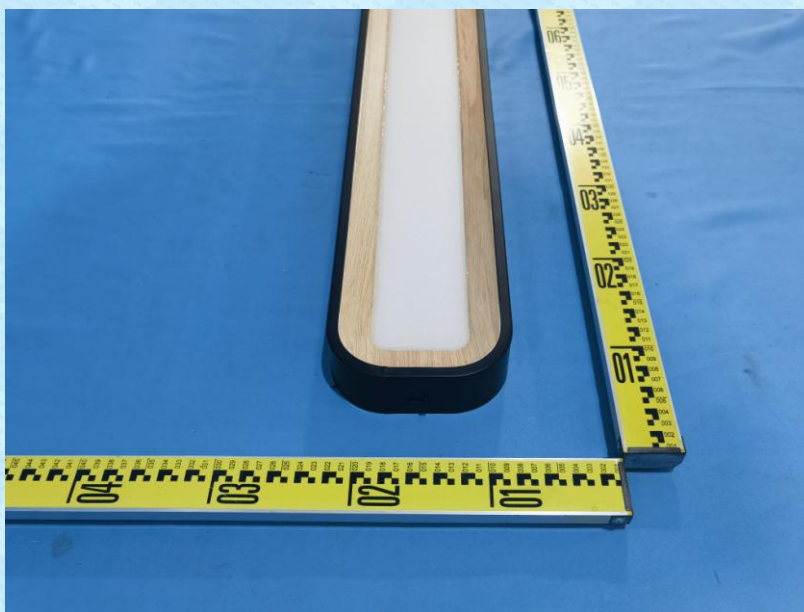
Conducted Emission

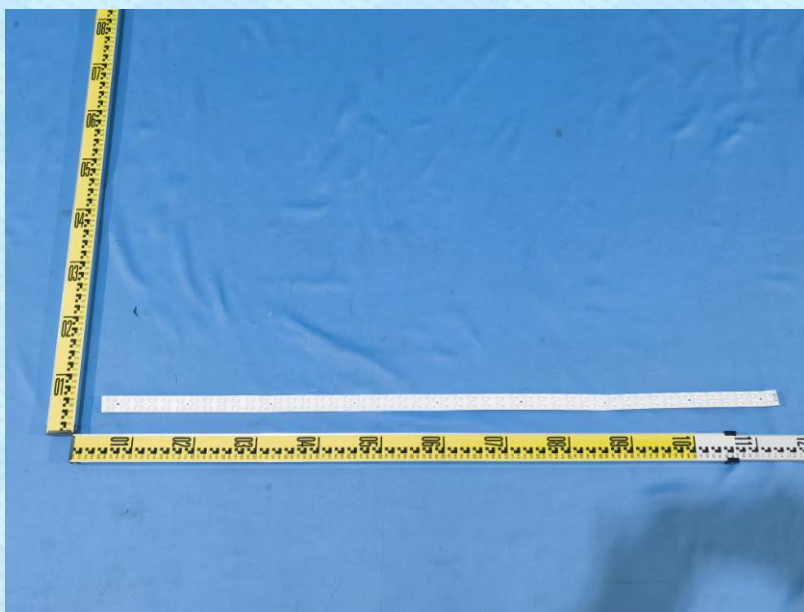


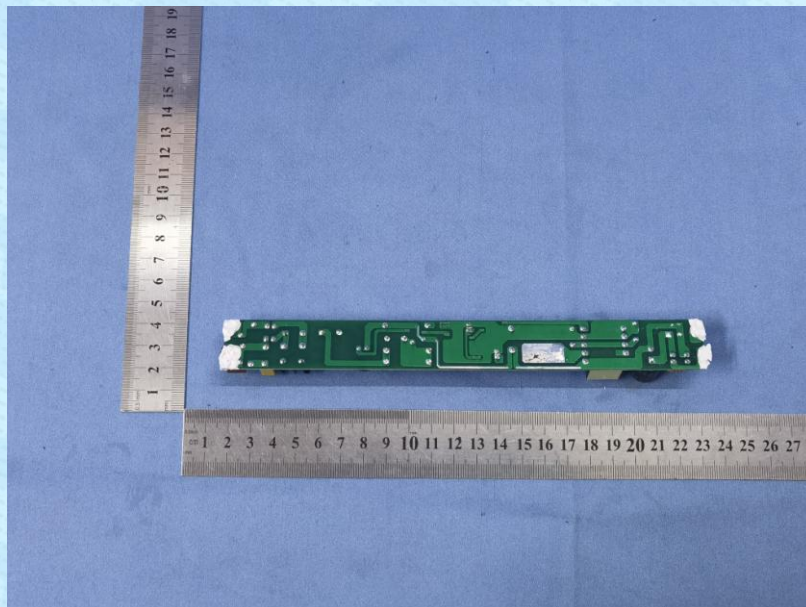
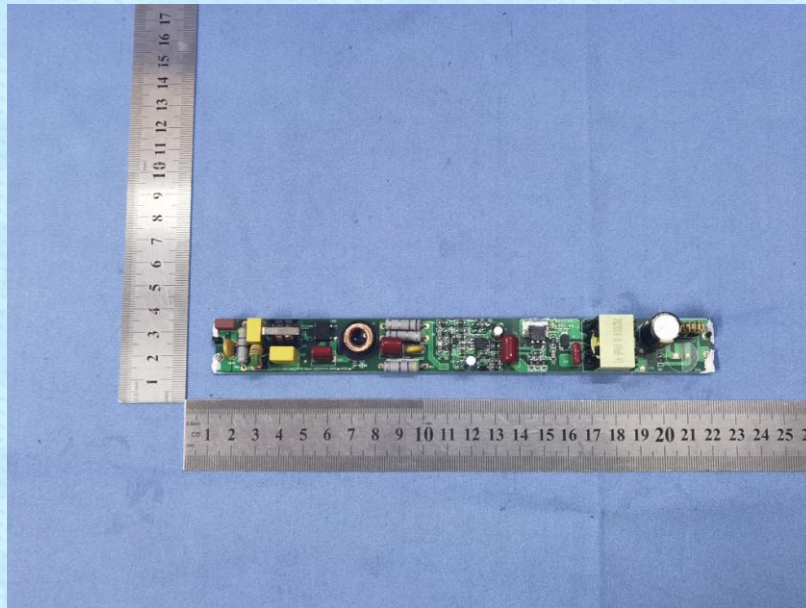
9 EUT Constructional Details

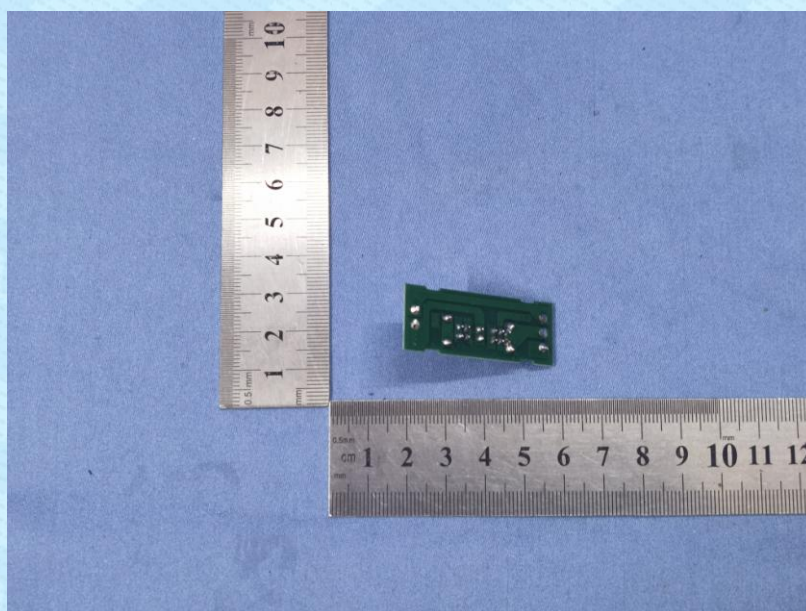
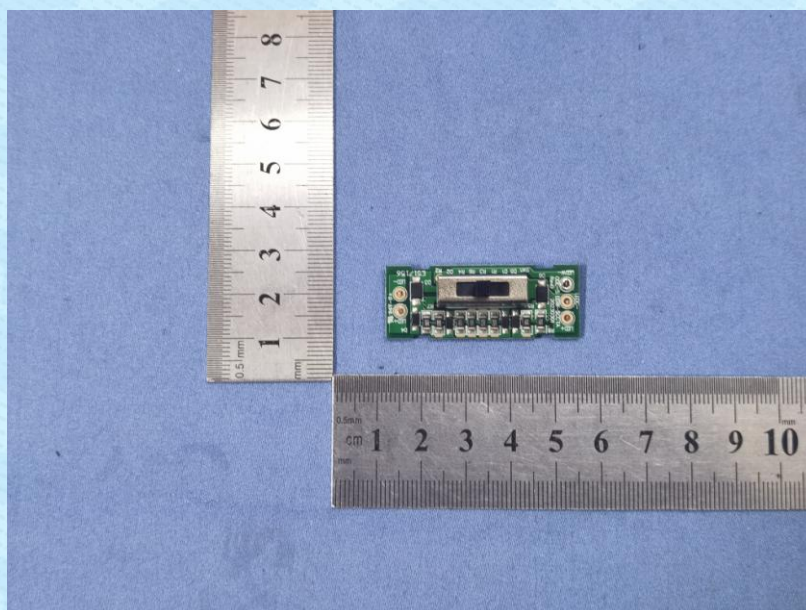












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