TEST REPORT

Report No.	CISER240402020
FCC-ID	2BFQC-A94T
Applicant	Chaozhou Xiangqiao Guangli Electronic Factory
Address	Woshi Industrial Park,Dongshan Road, Qiaodong, Xiangqiao, Chaozhou, Guangdong ,China
Manufacturer	Chaozhou Xiangqiao Guangli Electronic Factory
Address	Woshi Industrial Park,Dongshan Road, Qiaodong, Xiangqiao, Chaozhou, Guangdong ,China
Product Name	LED NIGHT LIGHT
Trade Mark	GUANGLI®
Model/Type reference	A94T
Listed Model(s)	A94D, A90, A90D, A92, A92D, A78B, A78D
Standard	FCC CFR Title 47 Part 15 Subpart B
Test date	April 02, 2024 ~ April 09, 2024
Issue date	April 09, 2024
Test result	**Complied**

Rory Huang

GenryLong

Prepared by: Rory Huang **Approved by: Genry Long**

The test results relate only to the tested samples.

The test report should not be reproduced except in full without the written approval of Shenzhen Bangce Testing Technology Co., Ltd.

Contents

1. REPORT VERSION

Version No.	Issue date	Description
00	April 09, 2024	Original

2. TEST DESCRIPTION

Report clause	Test Item	Standard Requirement	Result	Test Engineer
5.1	Conducted Emission	15.107(a)	PASS	Lucas Huang
5.2	Radiated Emission	15.109(a)	PASS	Lucas Huang

Note:

– The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Product Description

Main unit information:	
Product Name:	LED NIGHT LIGHT
Trade Mark:	GUANGLI®
Model No.:	A94T
Listed Model(s):	A94D, A90, A90D, A92, A92D, A78B, A78D
Power supply:	Input: AC 120V Output:5V2A for Type-C 5V2A for USB
Highest frequency	＜108MHz

3.2. Modification of EUT

No modifications are made to the EUT during all test items.

3.3. Testing Site

Laboratory Name	Shenzhen Bangce Testing Technology Co., Ltd.
Laboratory Location	101, building 10, Yunli Intelligent Park, Shutianpu community, Matian Street, Guangming District, Shenzhen， Guangdong, China
Contact information	Tel: 86-755-2319 6848, email: service@cis-cn.net Website: http://www.cis-cn.net/

3.4. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS (dBuV/m) = RA (dBuV) + AF (dB/m) + CL (dB) – AG (dB)

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

3.5. DISTURBANCE Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

CD (dBuV) = RA (dBuV) + PL (dB) + CL (dB)

Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor

4. TEST CONFIGURATION

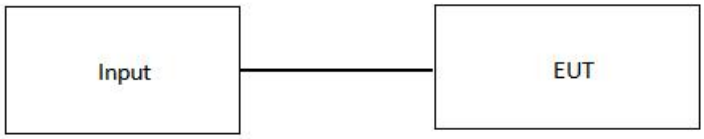
4.1. Descriptions of test mode

Test mode	Description
Full load mode	Keep the EUT in Full load mode
Half-load mode	Keep the EUT in Half-load mode
No-load mode	Keep the EUT in Half-load mode

Pre-scan above all test mode, found below test mode which it was worse case mode, so only show the test data for worse case mode on the test report

Test Item	Test mode for worse case
Conducted Emission	Full load mode
Radiated Emission	Full load mode

4.2. Configuration of Tested System

Test mode	Configuration
Full load mode	

4.3. Support unit used in test configuration

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Item	Equipment name	Trade Name	Model No.
--	--	--	--

4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.5. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	2.52dB

2	Radiated Emission	3.88dB for 30MHz-1GHz 4.96dB for above 1GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.6. Equipment Used during the Test

Radiated emission

Item	Equipment name	Equipment No.	Manufacturer	Model	Serial No.	Calibration date	Due date
1	Semi-Anechoic Chamber	CIS-EE001	Albatross projects	SAC-3m-02	-	2024/01/08	2025/01/07
2	EMI Test Receiver	CIS-EE016	Rohde&schwarz	ESCI7	100853	2024/01/08	2025/01/07
3	Broadband antenna	CIS-EE018	schwarabeck	VULB9163	9163-1436	2024/01/08	2025/01/07
4	Horn antenna	CIS-EE019	schwarabeck	BBHA9120D	9120D-2487	2024/01/08	2025/01/07
5	amplifier	CIS-EE021	Tonscend	TAP9K3G32	AP21G806153	2024/01/08	2025/01/07
6	prime amplifier	CIS-EE022	Tonscend	TAP01018050	AP22E806229	2024/01/08	2025/01/07
7	Test Software	N/A	N/A	JS32-RE	N/A	N/A	N/A

Conduction emission

Item	Equipment name	Equipment No.	Manufacturer	Model	Serial No.	Calibration date	Due date
1	Artificial power network	CIS-EE044	Schwarzbeck	NSLK8127	8127-01096	2024/01/08	2025/01/07
2	EMI Test Receiver	CIS-EE016	Rohde&schwarz	ESCI7	100853	2024/01/08	2025/01/07
3	8-wire Impedance Stabilization Network	CIS-EE045	Schwarzbeck	NTFM 8158	8158-00337	2024/01/08	2025/01/07
4	Artificial power network	CIS-EE075	Schwarzbeck	ENV216	/	2024/01/08	2025/01/07

5. TEST RESULTS

5.1. Conducted Emission

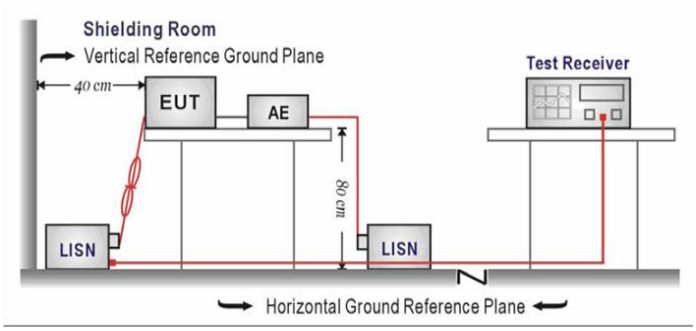
Limit:

FCC CFR Title 47 Part 15 Subpart B Section 15.107

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test configuration:



Test procedure:

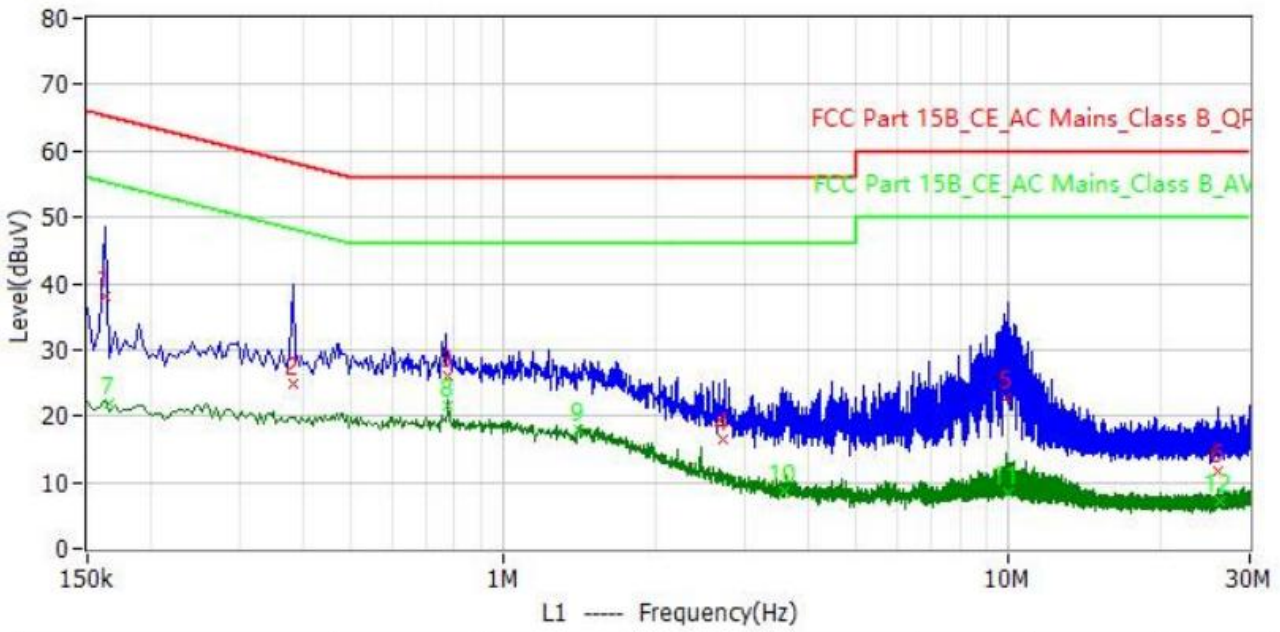
1. The EUT was setup according to ANSI C63.4:2014
2. The EUT was placed on a plat form of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50ohm / 50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

Test mode: Refer to the clause 4.1

Result: **Passed**

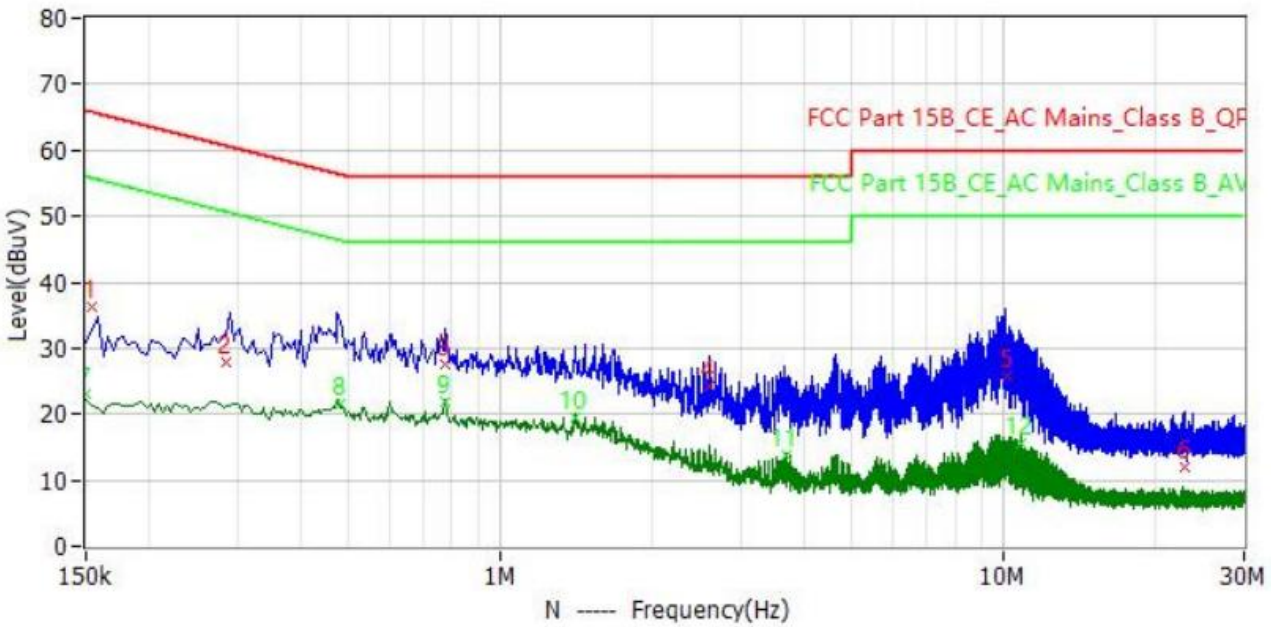
Note:
1. Factor = LISN Factor + Cable Factor
2. Level= Reading + Factor
3. Delta= Level – Limit

Test Line:	L



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	162.000kHz	65.4	38.2	-27.2	38.1	0.1	QP	L1
2	382.000kHz	58.2	25.0	-33.2	24.9	0.1	QP	L1
3	774.000kHz	56.0	26.0	-30.0	25.9	0.1	QP	L1
4	2.722MHz	56.0	16.6	-39.4	16.5	0.1	QP	L1
5	9.914MHz	60.0	22.7	-37.3	22.4	0.3	QP	L1
6	25.934MHz	60.0	11.8	-48.2	11.2	0.6	QP	L1
7	166.000kHz	55.2	21.8	-33.4	21.8	0.0	CAV	L1
8	778.000kHz	46.0	21.5	-24.5	21.4	0.1	CAV	L1
9	1.402MHz	46.0	17.9	-28.1	17.8	0.1	CAV	L1
10	3.602MHz	46.0	8.8	-37.2	8.7	0.1	CAV	L1
11	9.946MHz	50.0	8.4	-41.6	8.1	0.3	CAV	L1
12	26.250MHz	50.0	7.2	-42.8	6.6	0.6	CAV	L1

Test Line:	N



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	154.000kHz	65.8	36.3	-29.5	36.3	0.0	QP	N
2	286.000kHz	60.6	27.8	-32.8	27.7	0.1	QP	N
3	774.000kHz	56.0	27.6	-28.4	27.5	0.1	QP	N
4	2.602MHz	56.0	24.4	-31.6	24.3	0.1	QP	N
5	10.130MHz	60.0	25.7	-34.3	25.4	0.3	QP	N
6	22.910MHz	60.0	11.9	-48.1	11.3	0.6	QP	N
7	150.000kHz	56.0	23.2	-32.8	23.2	0.0	CAV	N
8	482.000kHz	46.3	21.5	-24.8	21.4	0.1	CAV	N
9	774.000kHz	46.0	21.8	-24.2	21.7	0.1	CAV	N
10	1.402MHz	46.0	19.5	-26.5	19.4	0.1	CAV	N
11	3.682MHz	46.0	13.7	-32.3	13.5	0.2	CAV	N
12	10.838MHz	50.0	15.5	-34.5	15.2	0.3	CAV	N

5.2. Radiated Emission

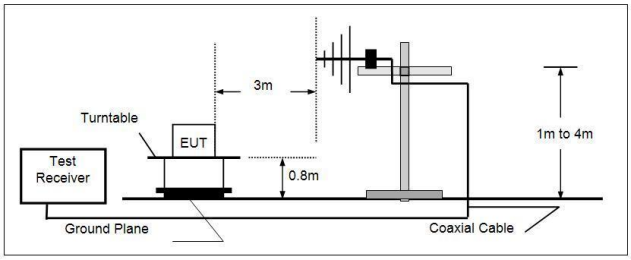
Limit:

FCC CFR Title 47 Part 15 Subpart B Section 15.109

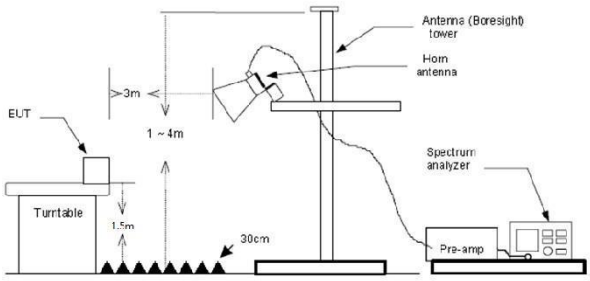
Frequency	Limit (dBuV/m @3m)	Value
30MHz~88MHz	40.00	Quasi-peak
88MHz~216MHz	43.50	Quasi-peak
216MHz~960MHz	46.00	Quasi-peak
960MHz~1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

Test configuration:

30 MHz ~ 1 GHz



Above 1 GHz



Test procedure:

1. The EUT was tested according to ANSI C63.4:2014.
2. The EUT is placed on a turn table which is 0.8 meter above ground.
3. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
4. The EUT waspositioned such that the distance from antenna to the EUT was 3 meters.
5. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. Thisis repeated for both horizontal and vertical polarization of the antenna.
6. Use the following spectrum analyzer settings
   a) Span shall wide enough to fully capture the emission being measured;
   b) Below 1GHz,
   RBW=120KHz, VBW=300KHz, Sweep=auto, Detector function=peak, Trace=max hold;
   If the emission level of the EUT measured by the peak detectoris 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, theemission measurement will be repeated using the quasi-peak detector and reported.
   c) From 1GHz to 5th harmonic, RBW=1MHz, VBW=3MHz

Test mode:

Refer to the clause 4.1

Result:

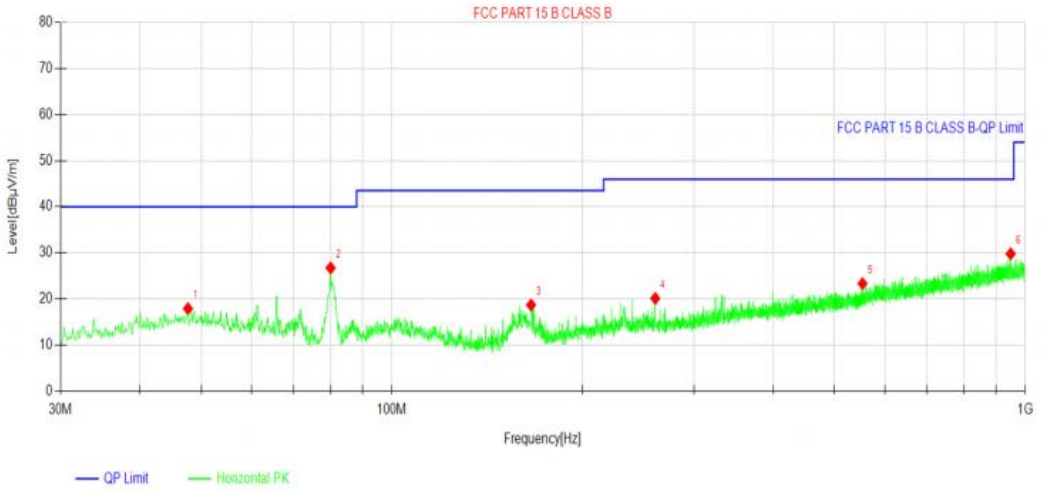
Passed

Note:

1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin= Limit - Level

For 30 MHz ~ 1000 MHz

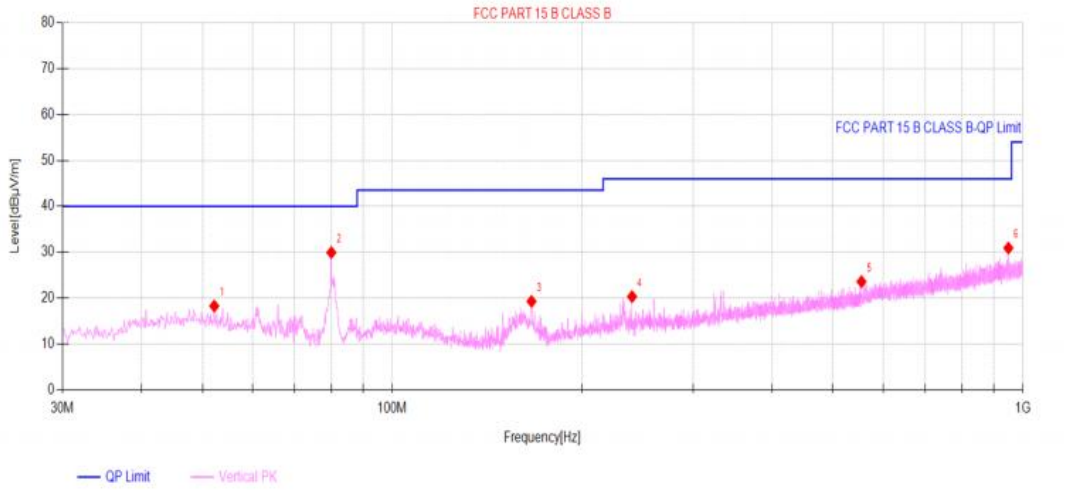
Polarization:	Horizontal



Suspected Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	47.654	17.92	15.52	40.00	22.08	Horizontal	PASS
2	80.052	26.75	9.69	40.00	13.25	Horizontal	PASS
3	165.897	18.71	11.04	43.50	24.79	Horizontal	PASS
4	260.569	20.14	14.84	46.00	25.86	Horizontal	PASS
5	553.606	23.34	20.73	46.00	22.66	Horizontal	PASS
6	948.687	29.81	25.82	46.00	16.19	Horizontal	PASS

Polarization:	Vertical

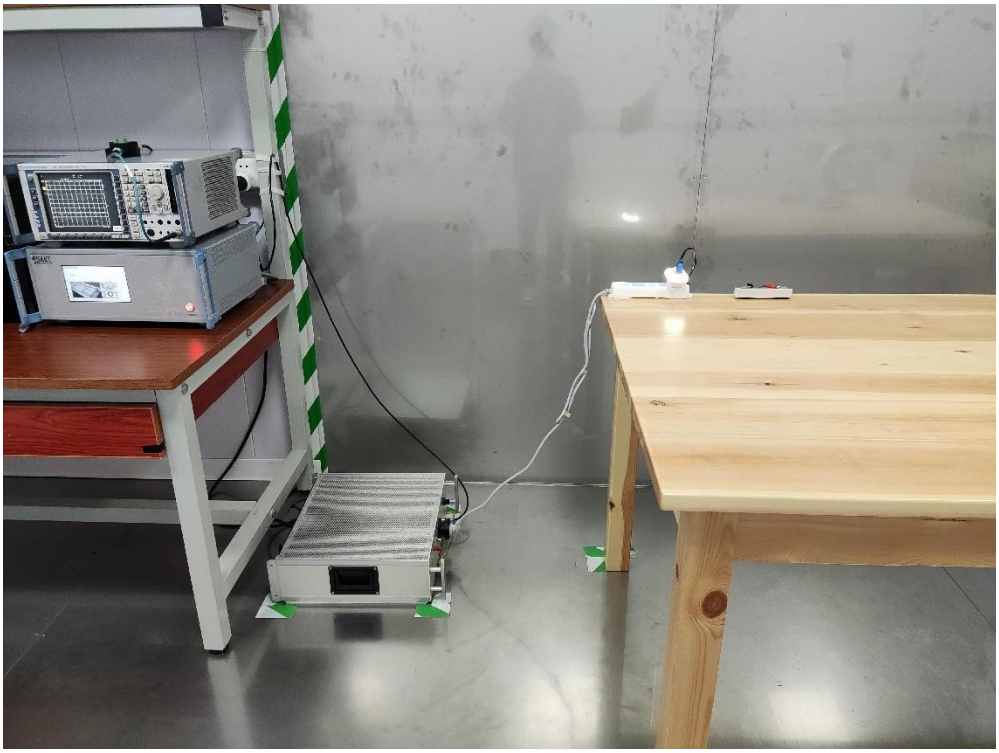


Suspected Data List

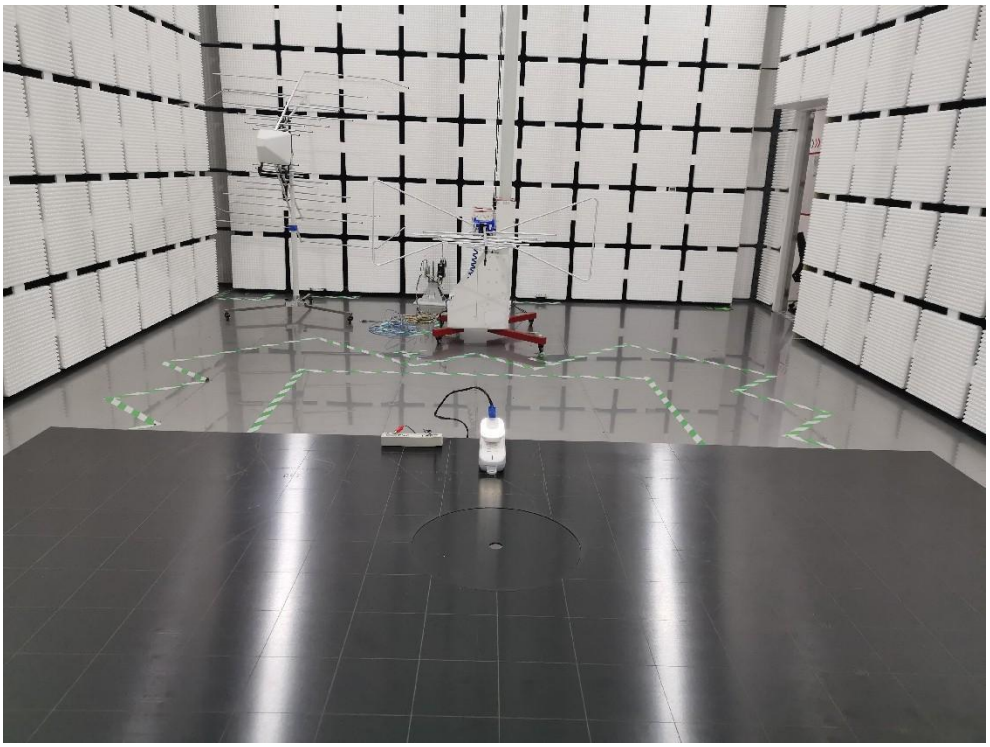
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	52.213	18.29	15.18	40.00	21.71	Vertical	PASS
2	80.052	29.94	9.69	40.00	10.06	Vertical	PASS
3	166.285	19.30	11.06	43.50	24.20	Vertical	PASS
4	240.005	20.33	14.40	46.00	25.67	Vertical	PASS
5	554.77	23.59	20.76	46.00	22.41	Vertical	PASS
6	948.59	30.92	25.82	46.00	15.08	Vertical	PASS

6. TEST SETUP PHOTOS

Conducted Emission

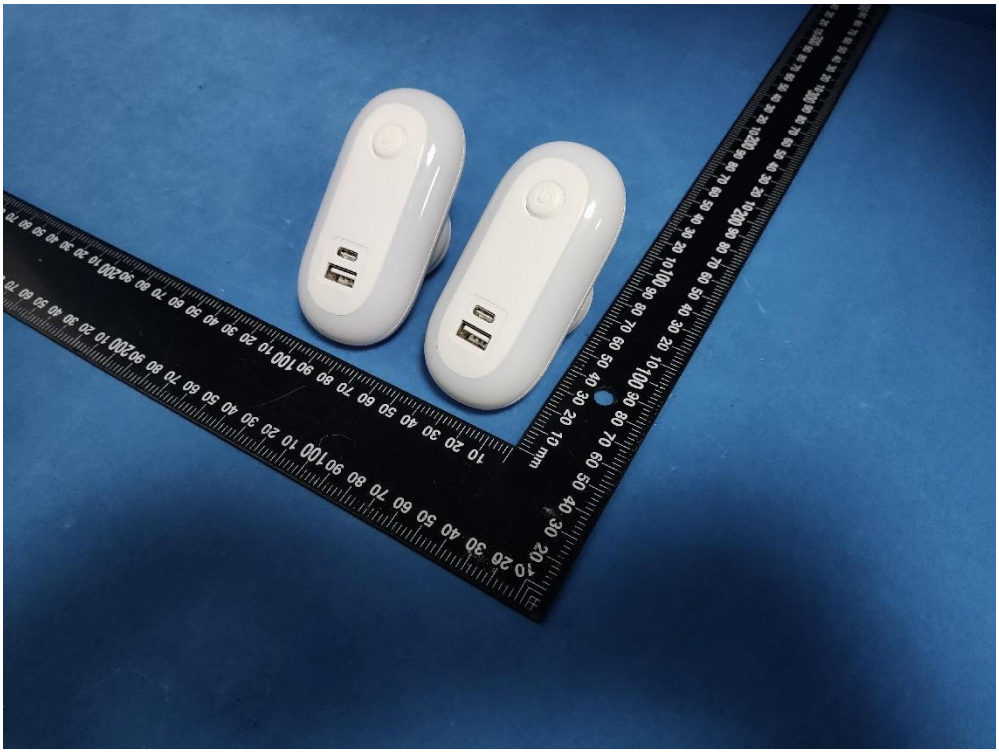


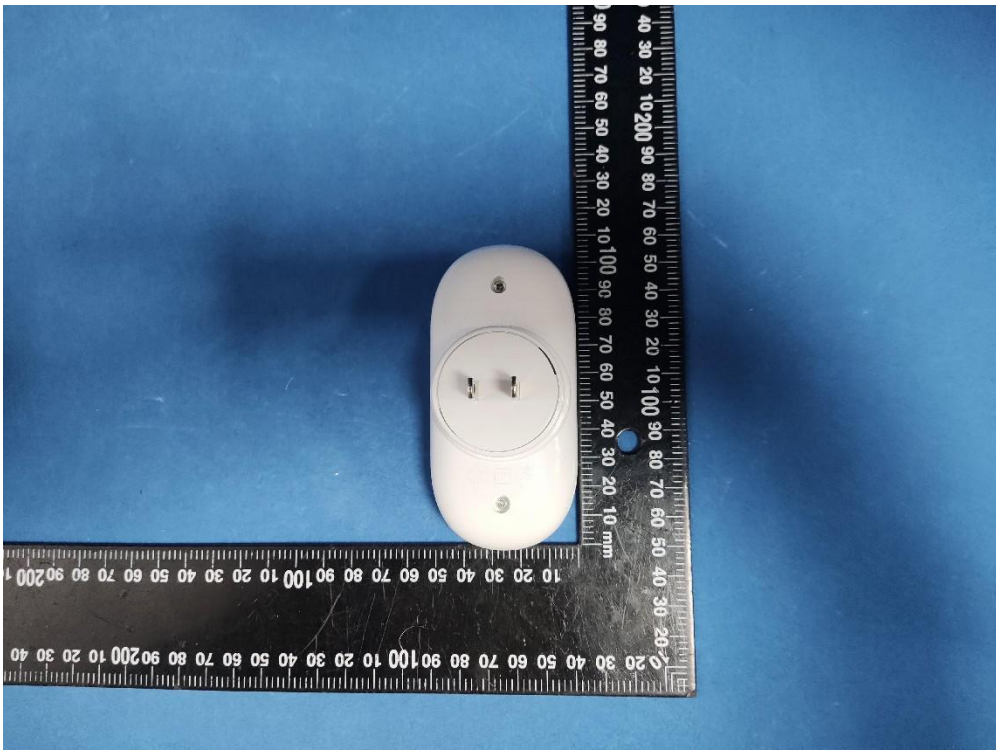
Radiated Emission

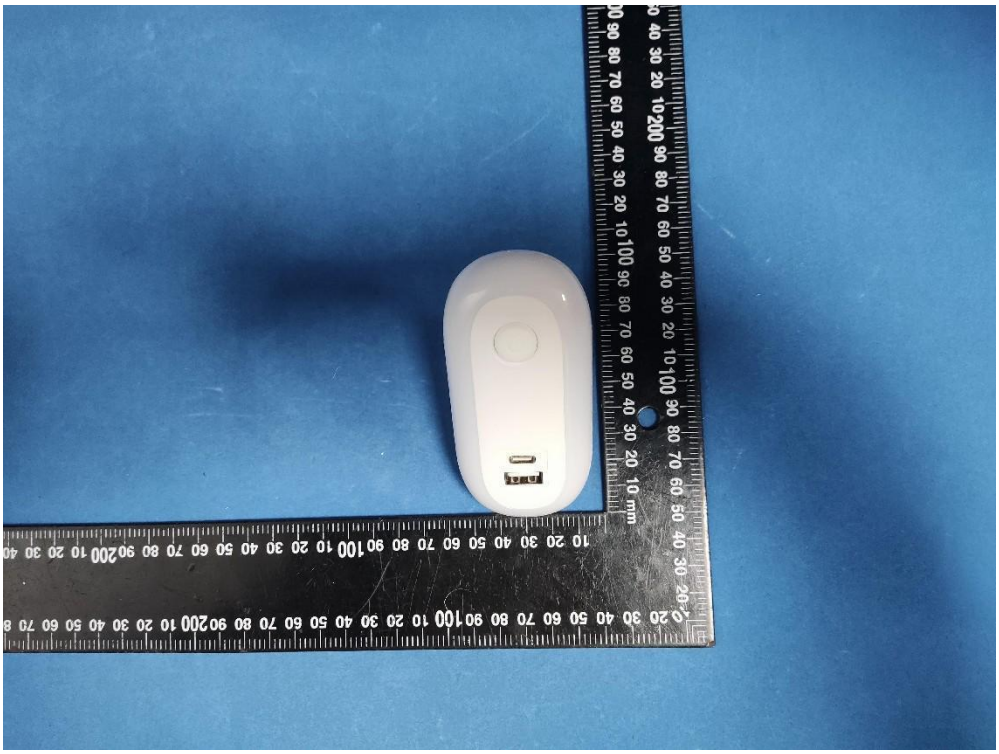


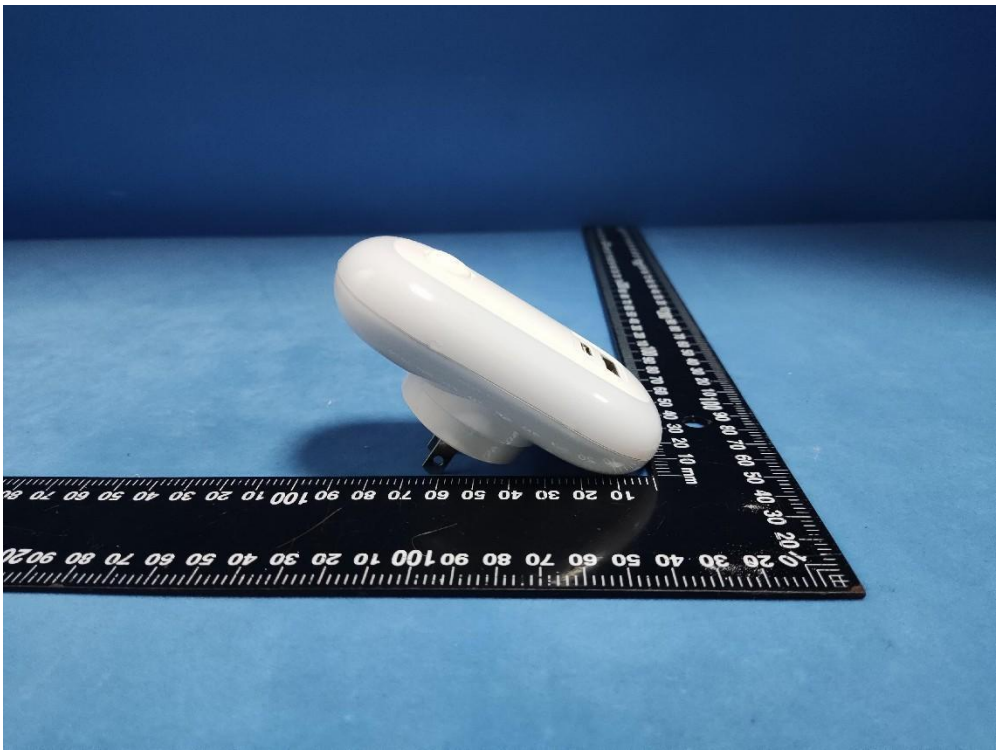
7. EXTERNAL AND INTERNAL PHOTOS

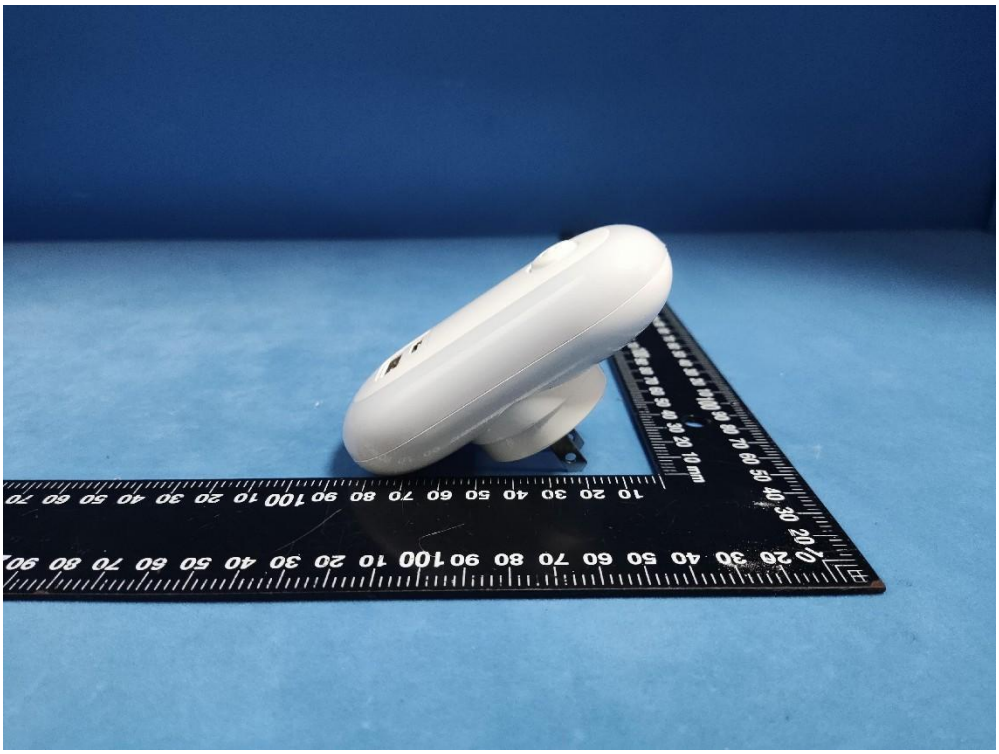
7.1. External Photos

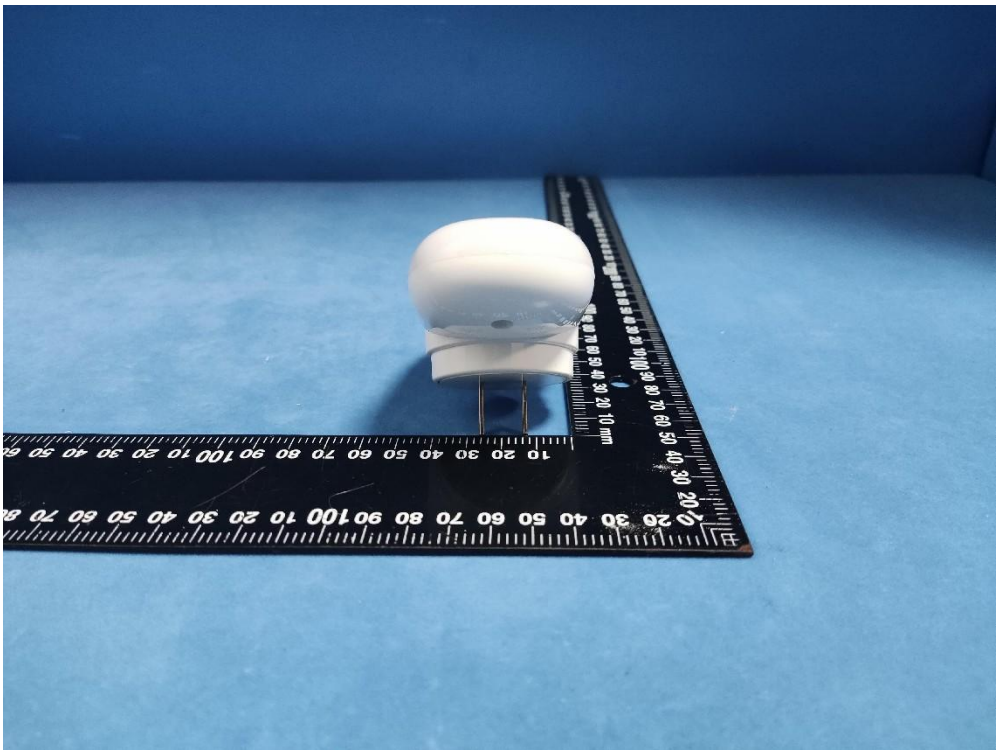




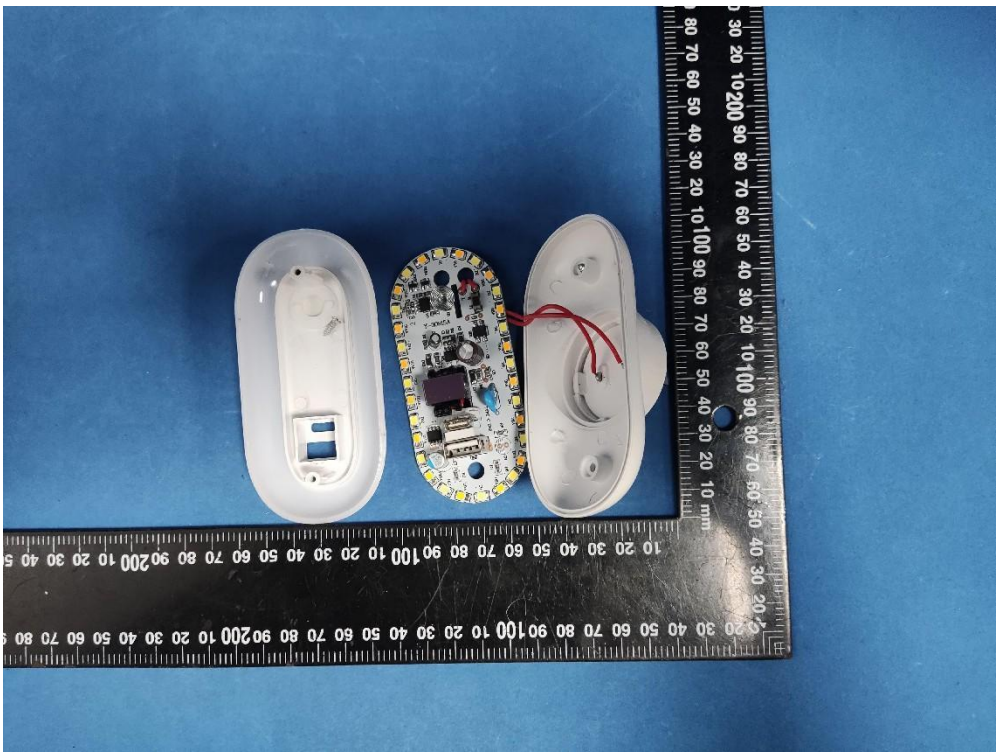


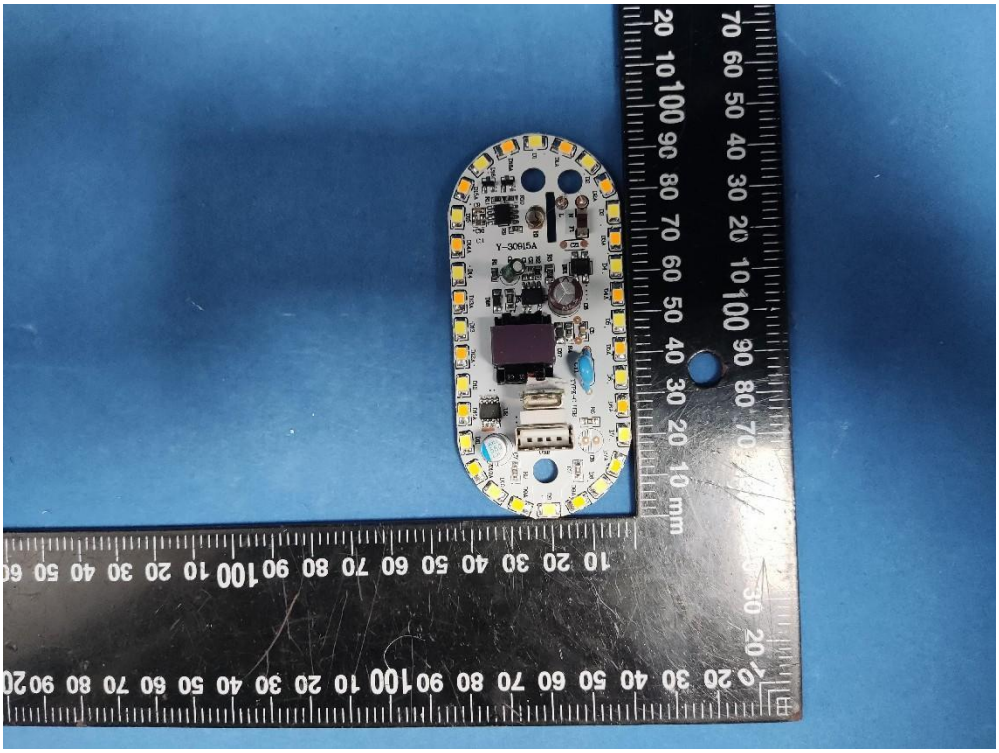


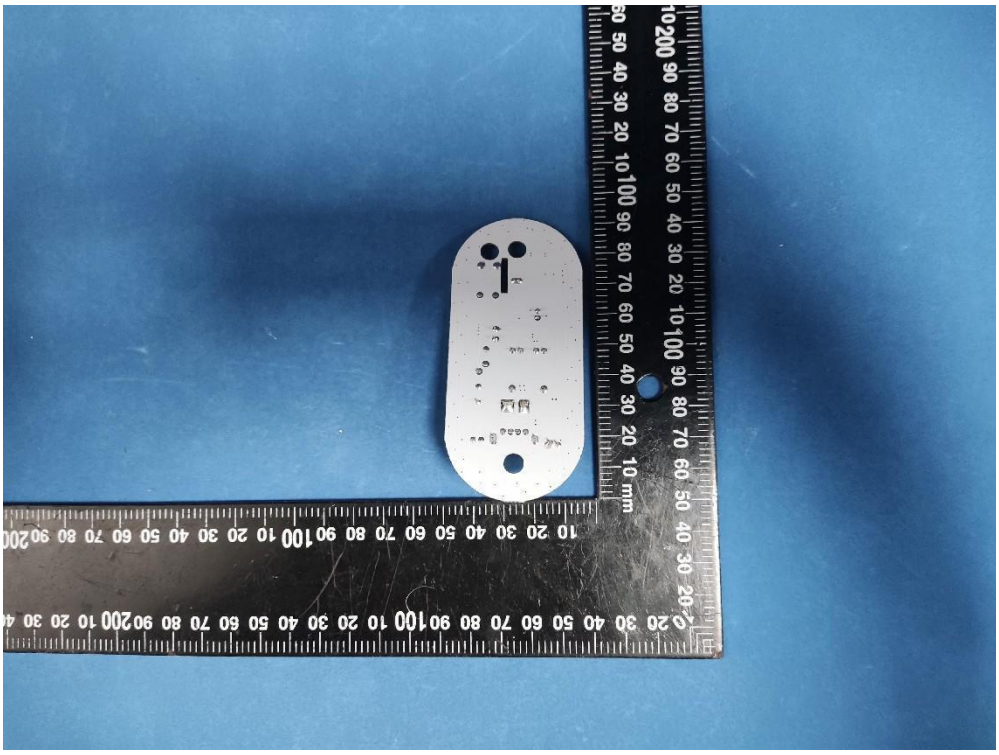




7.2. Internal Photos







------End of the report-----