Shenzhen GUOREN Certification Technology Service Co., Ltd.

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China

TEST REPORT

47 CFR FCC Part 15 Subpart B (Class B)

Radio Frequency Devices – Unintentional Radiators – Limits and methods of measurement

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

Report Reference No.....:	**GRCTR250302078**
FCC ID..... :	**2AIT9-PG-C01**
Compiled by (position+printed name+signature)..:	File administrators Jimmy Wang
Supervised by (position+printed name+signature)..:	Project Engineer Kelley Zhang
Approved by (position+printed name+signature)..:	Manager Sam Wang
Date of issue.....:	Apr. 18, 2025

Testing Laboratory Name.....:	**Shenzhen GUOREN Certification Technology Service Co., Ltd.**
Address.....:	101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China
Applicant's name.....:	**SZ PGST CO., LTD**
Address.....:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
Test specification.....:	
Standard.....:	**47 CFR FCC Part 15 Subpart B (Class B)** **ANSI C63.4: 2014**

Test item description.....:	Carbon monoxide alarm
Trade Mark.....:	/
Manufacturer.....:	SZ PGST CO., LTD
Model/Type reference.....:	PG-C01
List Model.....:	PG-C02,PG-C03,PG-C04,PG-C05
Ratings.....:	DC3.0V(1.5V*2 AA battery)
Result.....:	**PASS**

T E S T R E P O R T

Equipment under Test	:	Carbon monoxide alarm
Model /Type	:	PG-C01
Listed Models	:	PG-C02,PG-C03,PG-C04,PG-C05
Applicant	:	**SZ PGST CO., LTD**
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
Manufacturer	:	**SZ PGST CO., LTD**
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China

Test Result:	**PASS**

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.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

47 CFR FCC Part 15 Subpart B (Class B) Radio Frequency Devices – Unintentional Radiators – Limits and methods of measurement
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.

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Mar. 27, 2025
Testing commenced on	:	Mar. 27, 2025
Testing concluded on	:	Apr. 18, 2025

2.2. Product Description

Product Name:	Carbon monoxide alarm
Model/Type reference:	PG-C01
List Model:	PG-C02,PG-C03,PG-C04,PG-C05
Power supply:	DC3.0V(1.5V*2 AA battery)
Remark:The products are identical in interior structure, electrical circuits and components, just model names and shell holes different.	

2.3. EUT operation mode

As the function of the EUT, test mode selected to test as below to conform this standard:

Operation mode	Description
Mode 1	ON

Test item	Test mode
Radiated Emission	Mode 1
Conducted Emission	Mode 1

2.4. EUT configuration

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

Item	Manufacturer	Description	Model	Certificate	Note
1Note1	/	/	/	/	/
2Note1	/	/	/	/	/

Note1: This Auxiliary used during the test is provided by the test laboratory.

2.5. Modifications

No modifications were implemented to meet testing criteria

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen GUOREN Certification Technology Service Co., Ltd.

101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China

3.2. Test Facility

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

FCC-Registration No.: 920798 Designation Number: CN1304

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6202.01

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

ISED#: 27264 CAB identifier: CN0115

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

CNAS-Lab Code: L15631

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories for the Competence of Testing and Calibration Laboratories.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3. Environmental conditions

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

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Test Description

Emission Measurement		
Radiated Emission	47 CFR FCC Part 15 Subpart B Class B ANSI C63.4 2014	PASS
Conducted Emission	47 CFR FCC Part 15 Subpart B Class B ANSI C63.4 2014	N/A

Remark:1. N/A means “not applicable”.

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

3.5. 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 TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen GUOREN Certification Technology Service Co., Ltd.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.

Hereafter the best measurement capability for Shenzhen GUOREN Certification Technology Service Co., Ltd.:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6. Equipments Used during the Test

Radiated Emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	ULTRA-BROADBAND ANTENNA	Schwarzbeck	VULB9163	GRCTEE018	2023/09/28	2026/09/27
2	Horn Antenna	Schwarzbeck	BBHA 9120D	GRCTEE019	2023/09/28	2026/09/27
3	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	GRCTEE017	2024/09/19	2025/09/18
4	Spectrum Analyzer	Agilent	N9020A	GRCTEE002	2024/09/19	2025/09/18
5	Pre-Amplifier	Schwarzbeck	BBV 9743	GRCTEE021	2024/09/19	2025/09/18
6	Amplifier	Taiwan chengyi	EMC051845B	GRCTEE022	2024/09/19	2025/09/18

4. TEST CONDITIONS AND RESULTS

4.1. EMISSION

4.1.1. LIMITS OF DISTURBANCE (CLASS B)

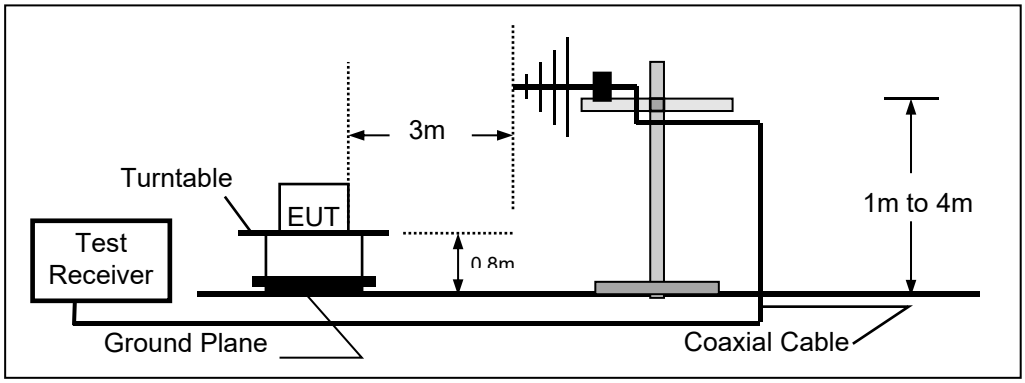
Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dBμV/m)
30 ~ 88	3	40
88~216	3	43.5
216 ~ 960	3	46
Above 960(AV)	3	54
Above 960(PK)	3	74

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

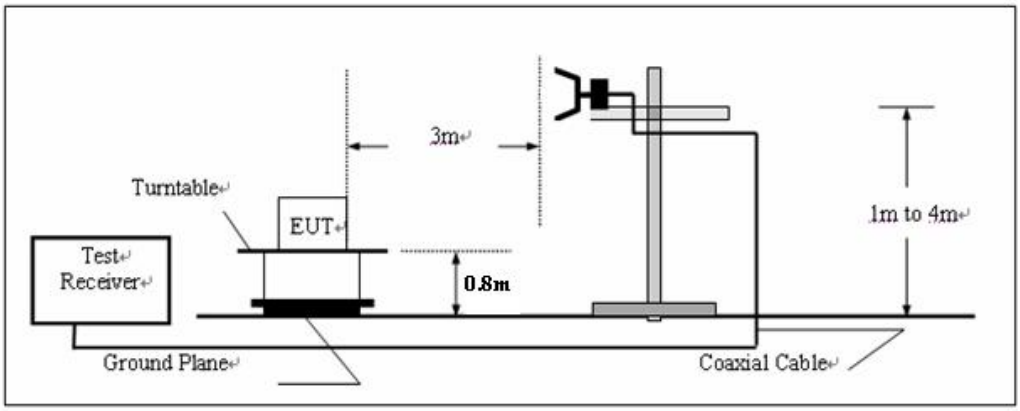
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

4.1.2. TEST CONFIGURATION

a) Radiated emission test set-up, frequency below 1000MHz:



b) Radiated emission test set-up, frequency above 1000MHz



4.1.3. TEST PROCEDURE

EUT is tested in Semi-Anechoic Chamber. EUT is placed on a nonmetal table which is 0.8 meter above a grounded turntable. The turntable can rotate 360 degrees to determine the azimuth of the maximum emission level. EUT is set 3 meters away from the center of receiving antenna. The antenna can move up and down from 1 to 4 meter to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna are set on the test.

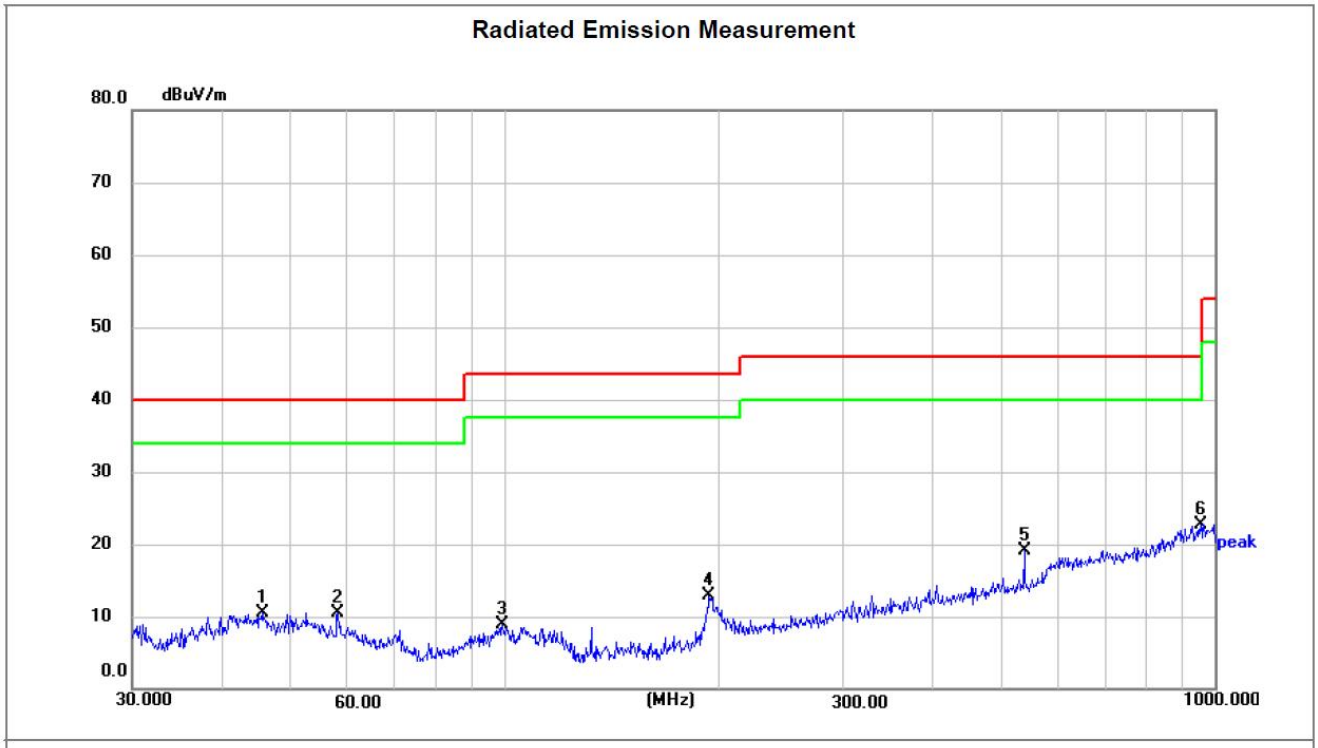
4.1.4. TEST RESULTS

Passed

Please refer to the below test data:

Remark: The highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1GHz.

Polarization:	Horizontal	Test mode:	Mode 1



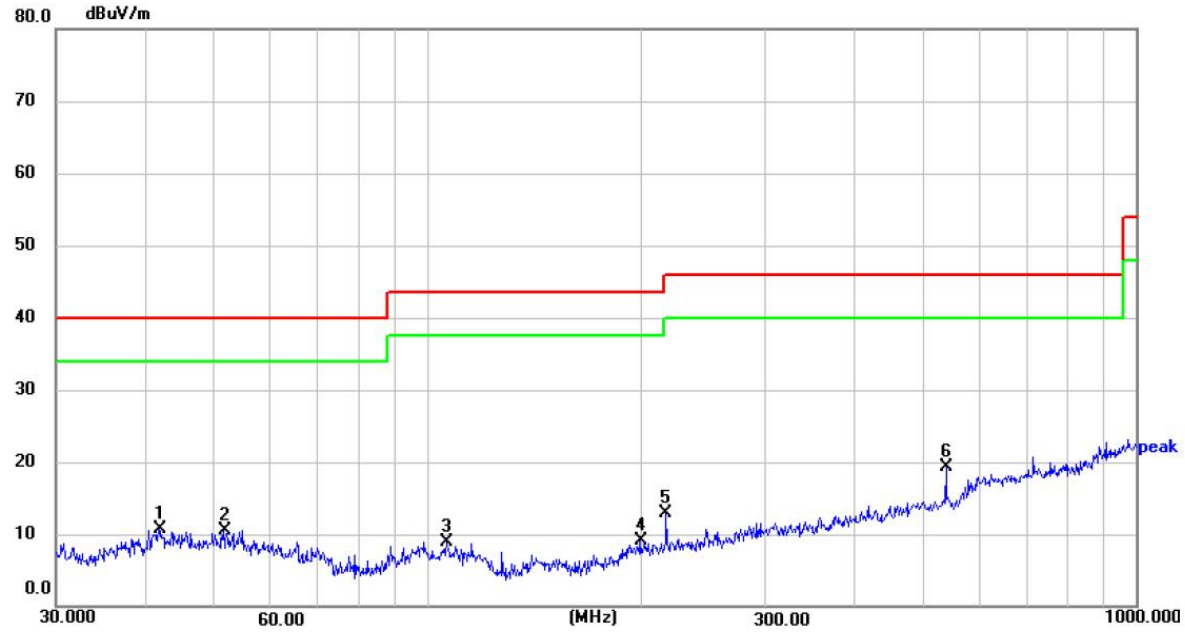
Site LAB
Limit: FCC Part15 RE-Class B_30-1000MHz
EUT:
M/N:
Mode:
Note:

Polarization: *Horizontal*
Power: Battery
Distance: 3m

Temperature: 18(C)
Humidity: 45 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	45.6948	28.03	-17.55	10.48	40.00	-29.52	peak	100	58	P	
2	58.4074	29.15	-18.56	10.59	40.00	-29.41	peak	100	351	P	
3	99.5281	27.99	-19.13	8.86	43.50	-34.64	peak	100	16	P	
4	194.4534	32.29	-19.45	12.84	43.50	-30.66	peak	100	334	P	
5	539.4775	33.27	-14.15	19.12	46.00	-26.88	peak	100	317	P	
6 *	955.4381	29.66	-6.94	22.72	46.00	-23.28	peak	100	188	P	

Polarization:	Vertical	Test mode:	Mode 1



Site LAB
Limit: FCC Part15 RE-Class B_30-1000MHz
EUT:
M/N:
Mode:
Note:

Polarization: *Vertical*
Power: Battery
Distance: 3m

Temperature: 18(C)
Humidity: 45 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	41.8596	28.49	-17.76	10.73	40.00	-29.27	peak	100	219	P	
2	51.6616	28.05	-17.56	10.49	40.00	-29.51	peak	100	131	P	
3	106.7587	28.20	-19.25	8.95	43.50	-34.55	peak	100	88	P	
4	199.9856	28.09	-19.02	9.07	43.50	-34.43	peak	100	79	P	
5	217.5443	31.65	-18.76	12.89	46.00	-33.11	peak	100	88	P	
6 *	539.4775	33.41	-14.15	19.26	46.00	-26.74	peak	100	44	P	

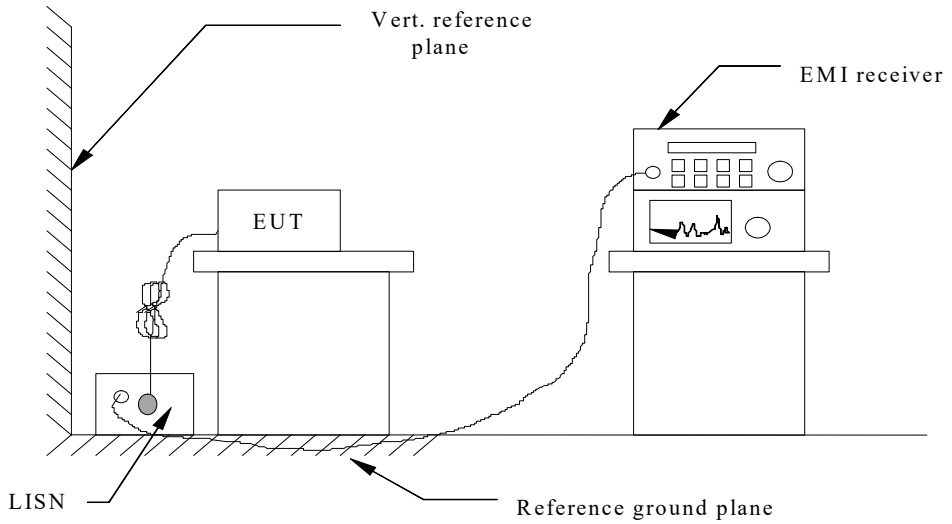
4.2. Conducted Emission

4.2.1. LIMITS OF DISTURBANCE (CLASS B)

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150～0.500	66~56	56~46
0.500～5.000	56	46
5.000~30.000	60	50

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

4.2.2. TEST CONFIGURATION



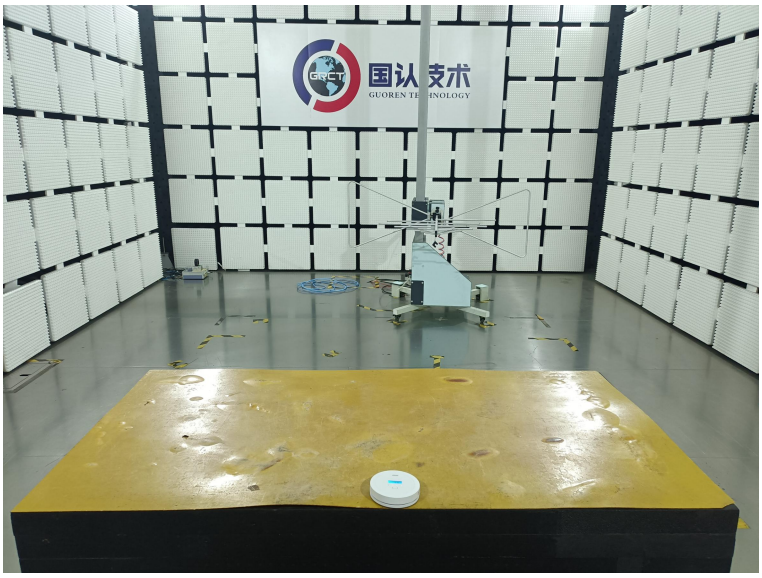
4.2.3. TEST PROCEDURE

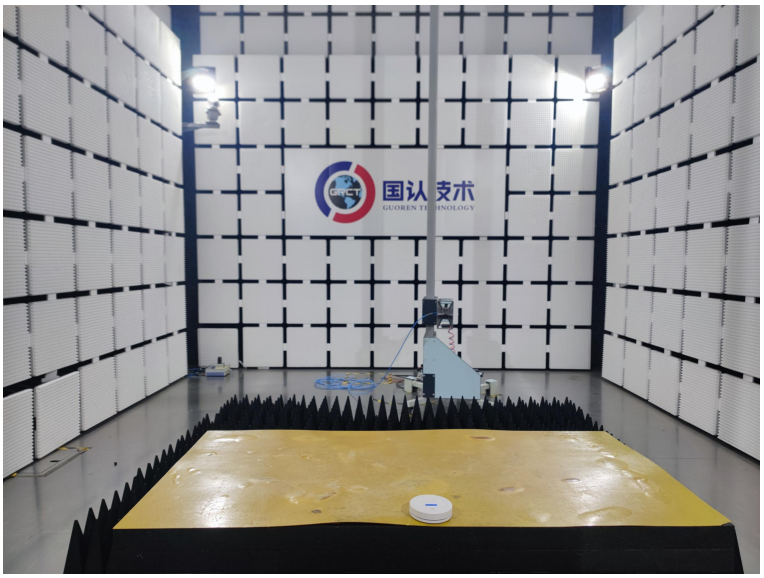
EUT is placed on a nonmetal table which is 0.8 meter (or 0.1 meter for floor-stood equipments) above the grounded reference plane. Connect the power line of the EUT to the LISN. Voltage of the power supply is varied over a range of 0.9 to 1.1 times of the rated voltage in order to check whether the level of disturbance varies considerably with the supply voltage at the selected frequency about 160KHz. Perform an initial measurement on each line with peak detector to identify the frequencies where the maximum disturbances may occur. Then measure and record the maximum disturbances with quasi-peak and average detector.

4.2.4. TEST RESULTS

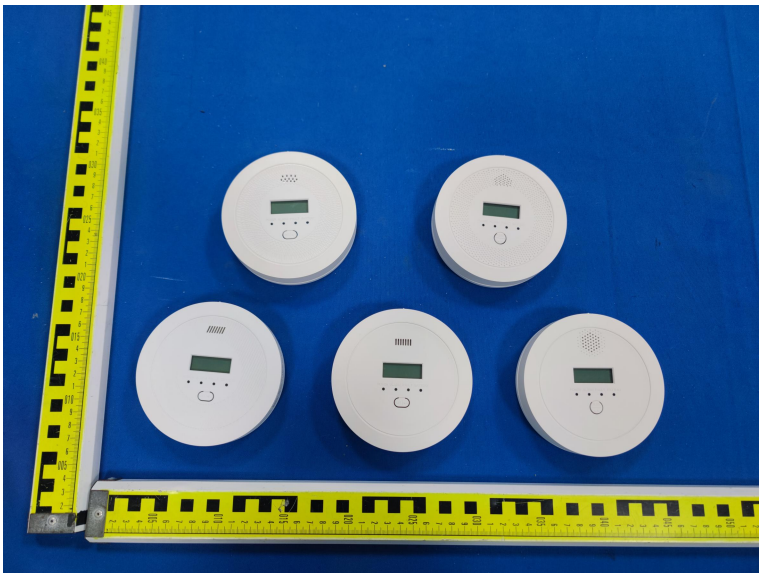
The EUT is powered by the Battery ,So this test item is not applicable for the EUT.

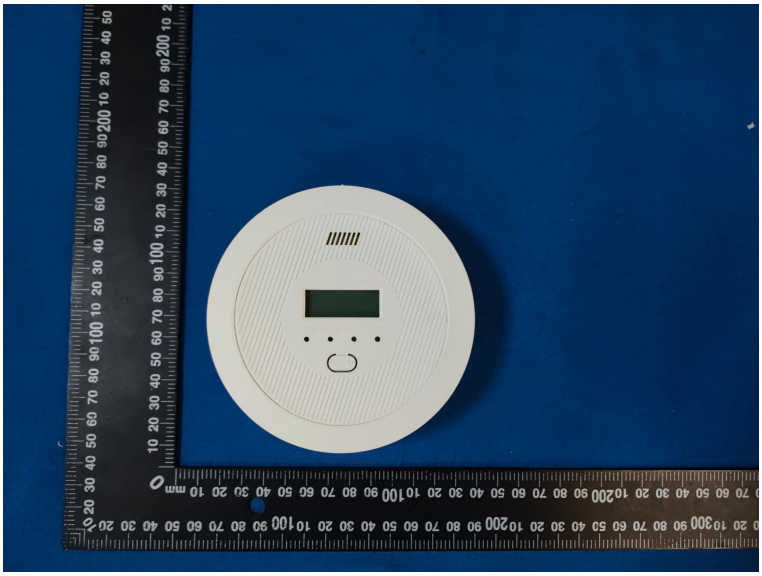
5. Test Set-up Photos of the EUT

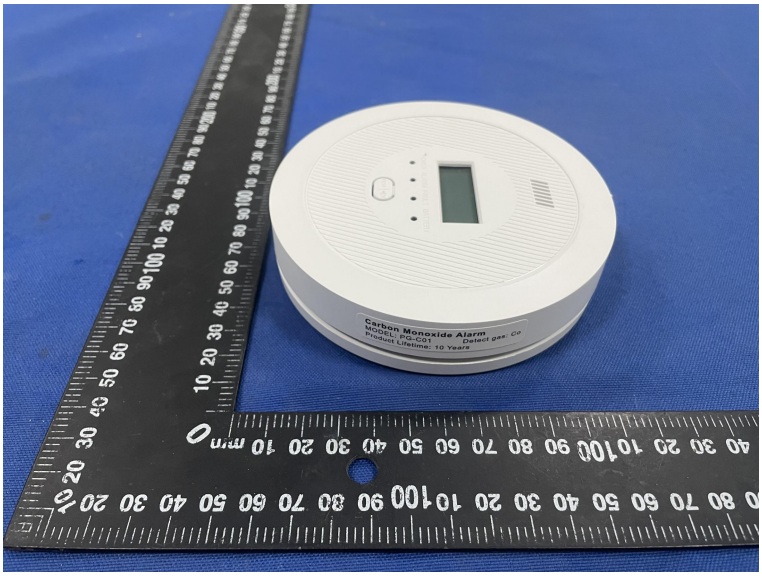


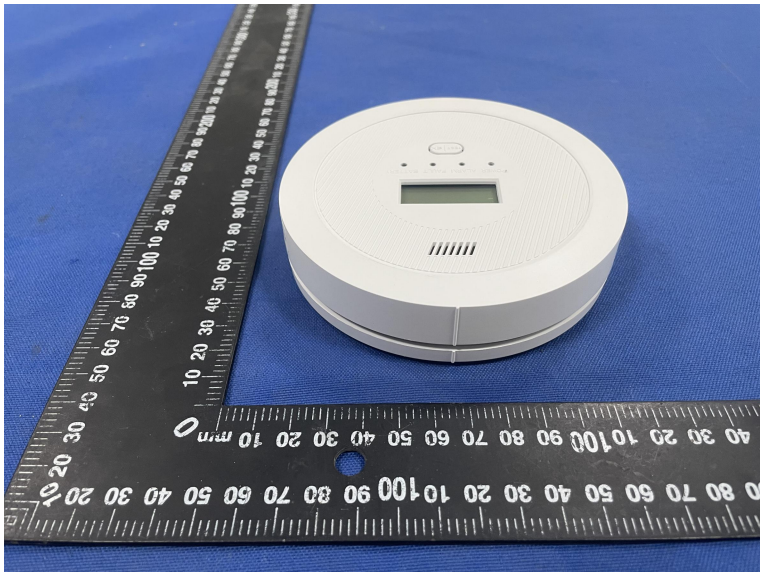


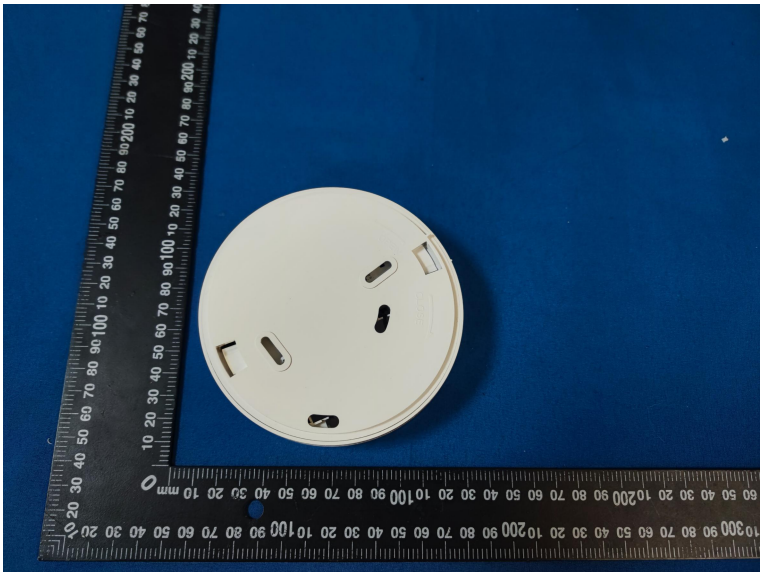
6. External and Internal Photos of the EUT

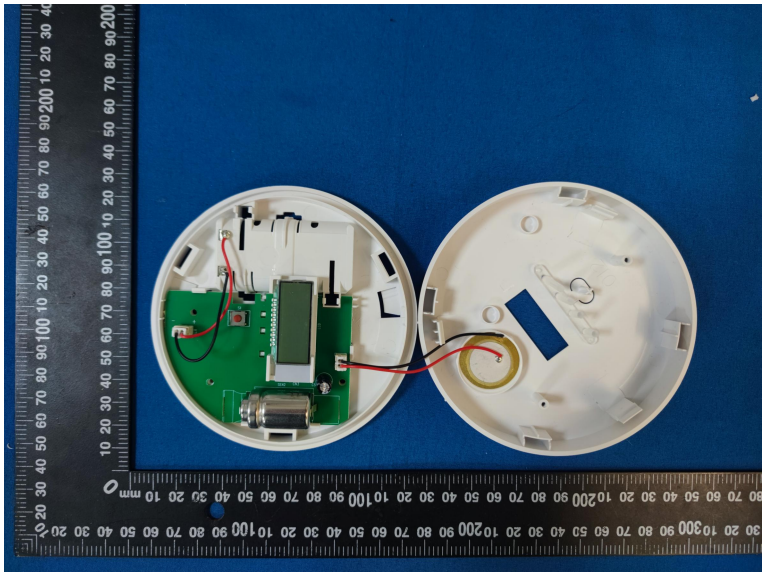


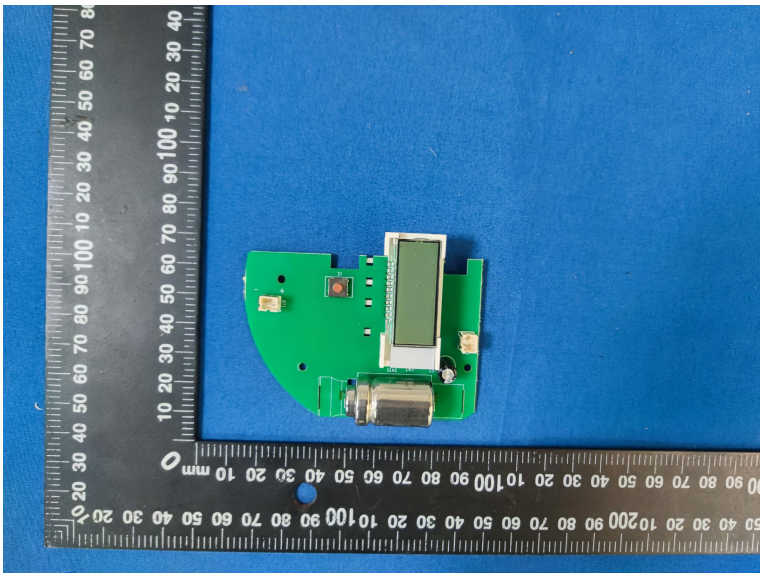


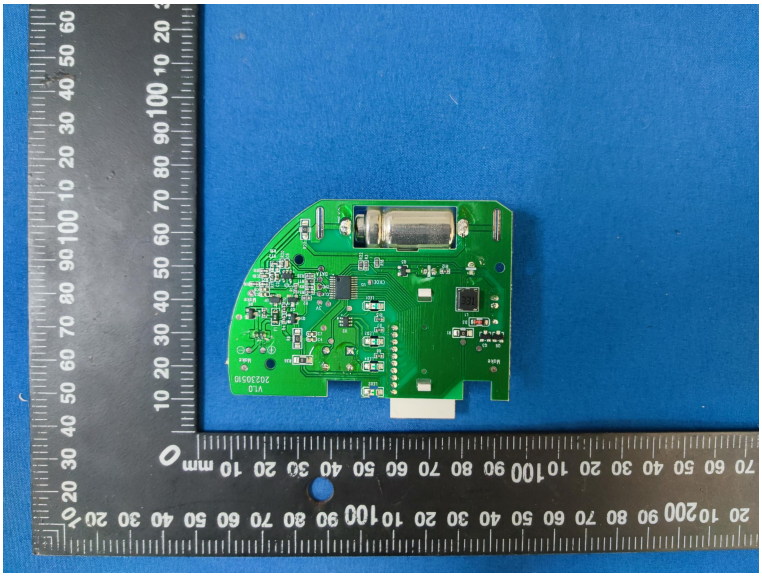

Carbon Monoxide Alarm
MODEL: PC-C01
Product Lifetime: 10 Years











********** End of Report **********