TEST REPORT

Report No.:	BCTC2101920630E
Applicant:	SHENZHEN YUANTE TECHNOLOGY CO., LTD.
Product Name:	Gas Detector
Model/Type reference:	SKY3000
Tested Date:	2021-02-01 to 2021-02-04
Issued Date:	2021-02-04

Shenzhen BCTC Testing Co., Ltd.

Product Name:	Gas Detector
Trademark:	SAFEGAS 元特
Model/Type Ref.:	SKY3000 SKY2000, SKY2000-M, YT-1200H, YT-1200H-S, YT-1200H-M, SKY6000, SKY6000-M, SKY8000, SKY8000-M, SKY3000-M, YT-95H, YT-95H-A, YT-95H-B, YT-98H, YT-98H-A, YT-1000H, YT-2000H, YT-3000H, YT-3000H-X.
Prepared For:	SHENZHEN YUANTE TECHNOLOGY CO., LTD.
Address:	Room 401, Bldg B No.7, Sanhe Village, Tongsheng Community, Dalang Street, Longhua District, Shenzhen, China
Manufacturer:	SHENZHEN YUANTE TECHNOLOGY CO., LTD.
Address:	Room 401, Bldg B No.7, Sanhe Village, Tongsheng Community, Dalang Street, Longhua District, Shenzhen, China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2021-02-01
Sample tested Date:	2021-02-01 to 2021-02-04
Issue Date:	2021-02-04
Report No.:	BCTC2101920630E
Test Standards	FCC PART 15B
Test Results	PASS

Tested by:

Adrew Zhu/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp.This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full.The tested sample(s) and the sample information are provided by the client.

TABLE OF CONTENT

(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
BCTC2101920630E	2021-02-04	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC PART 15B	Conducted Emission	N/A
FCC PART 15B	Radiated Emission	Pass

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Radiated Emission(30MHz~1GHz)	4.80
Radiated Emission(1GHz~6GHz)	4.90

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Ratings: DC 3.7V

The highest frequency of the internal sources of the EUT is (less than 108)MHz:

☒ less than 108 MHz, the measurement shall only be made up to 1 GHz.

☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

☐ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.

☐ above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

Model difference: All models are identical except for the appearance and color, the test model is SKY3000 and the test results are applicable to other tests.

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Data Cable	Power Cord
1.	---	---	---	---	---	---

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

Test item	Test Mode	Test Voltage
Disturbance voltages(150KHz-30MHz)	Working	DC 3.7V*
All test mode were tested and passed, only Disturbance shows (*) is the worst case mode which were recorded in this report.		

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

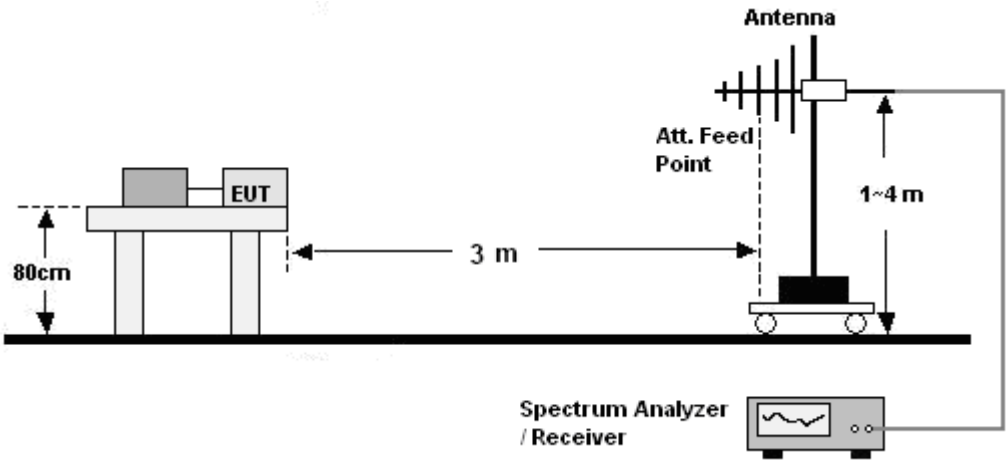
5.2 Test Instrument Used

Radiated emissions Test (966 chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	Jun. 08, 2020	Jun. 07, 2021
Receiver	R&S	ESRP	101154	Jun. 08, 2020	Jun. 07, 2021
Amplifier	Schwarzbeck	BBV9718	9718-309	Jun. 04, 2020	Jun. 03, 2021
Amplifier	Schwarzbeck	BBV9744	9744-0037	Jun. 04, 2020	Jun. 03, 2021
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	VULB9163-942	Jun. 08, 2020	Jun. 07, 2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1541	Jun. 10, 2020	Jun. 09, 2021
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

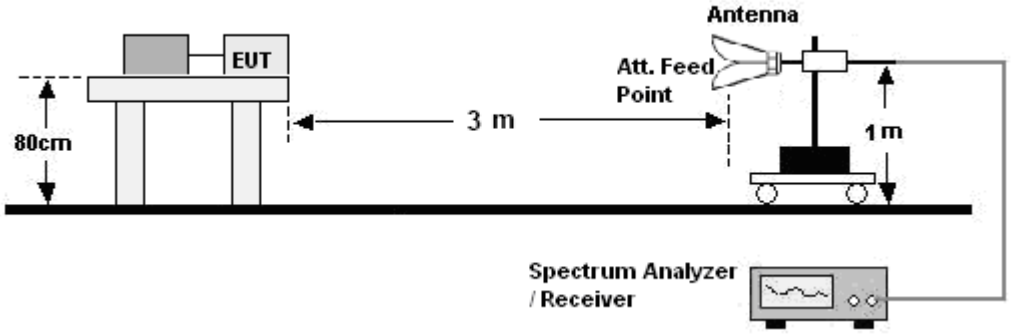
6. RADIATION EMISSION TEST

6.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



Above 1GHz:



6.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

Note: The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

30MHz ~ 1GHz:

a. The Product was placed on the nonconductive turntable 0.8 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:

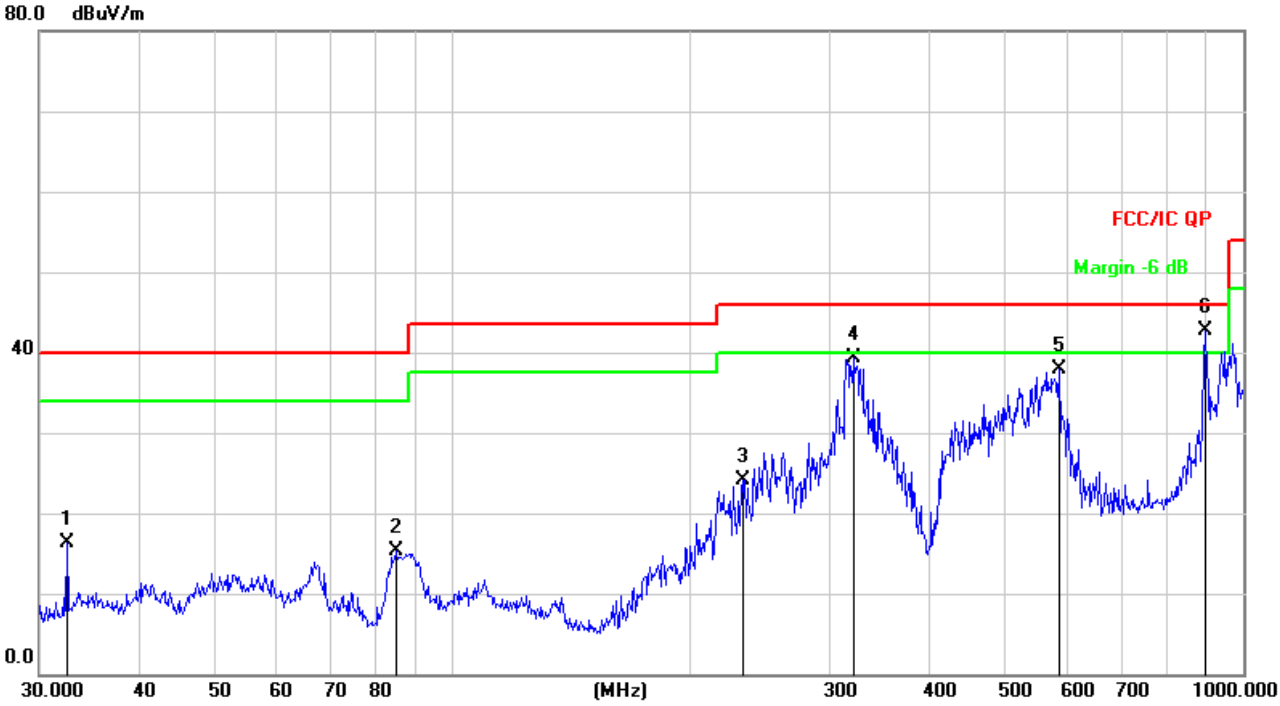
a. The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

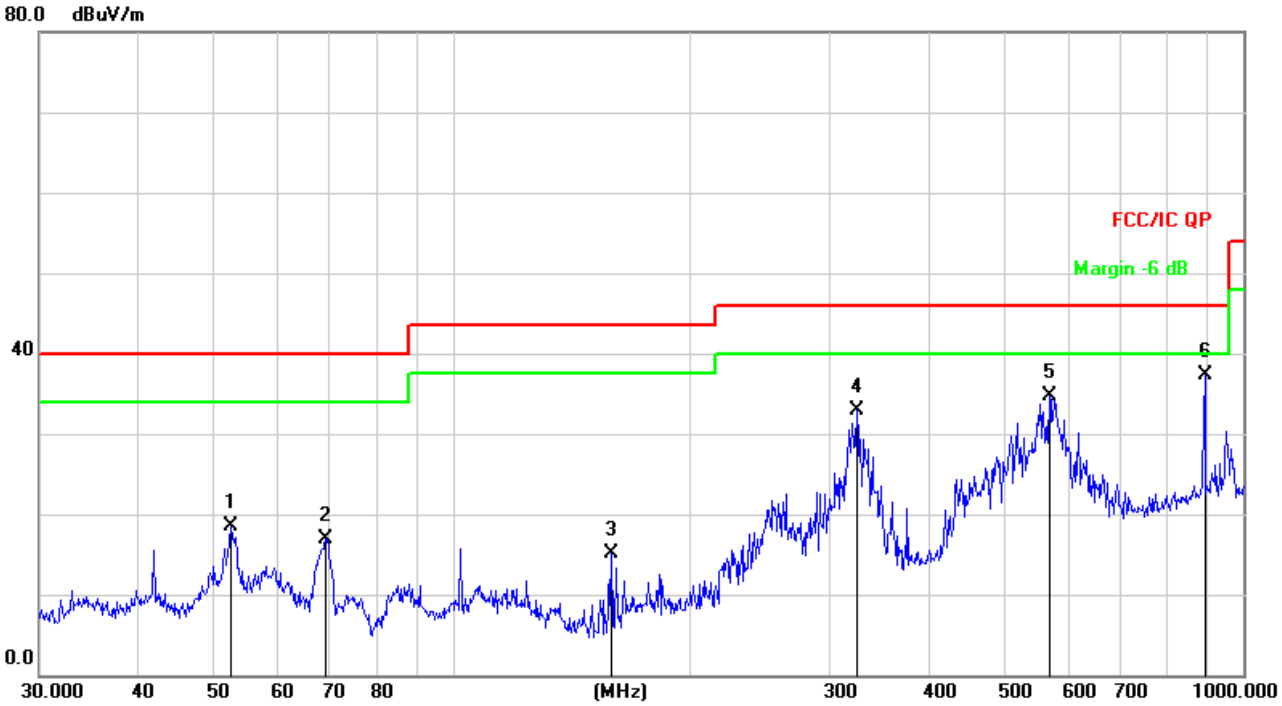
6.4 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Horizontal
Test Voltage :	DC 3.7V	Test Mode:	Working



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		32.5198	32.09	-15.82	16.27	40.00	-23.73	QP
2		84.7019	33.77	-18.56	15.21	40.00	-24.79	QP
3		233.3487	38.73	-14.57	24.16	46.00	-21.84	QP
4		321.0608	51.07	-11.84	39.23	46.00	-6.77	QP
5		584.7895	43.39	-5.43	37.96	46.00	-8.04	QP
6	*	893.8567	42.82	-0.14	42.68	46.00	-3.32	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Vertical
Test Voltage :	DC 3.7V	Test Mode:	Working



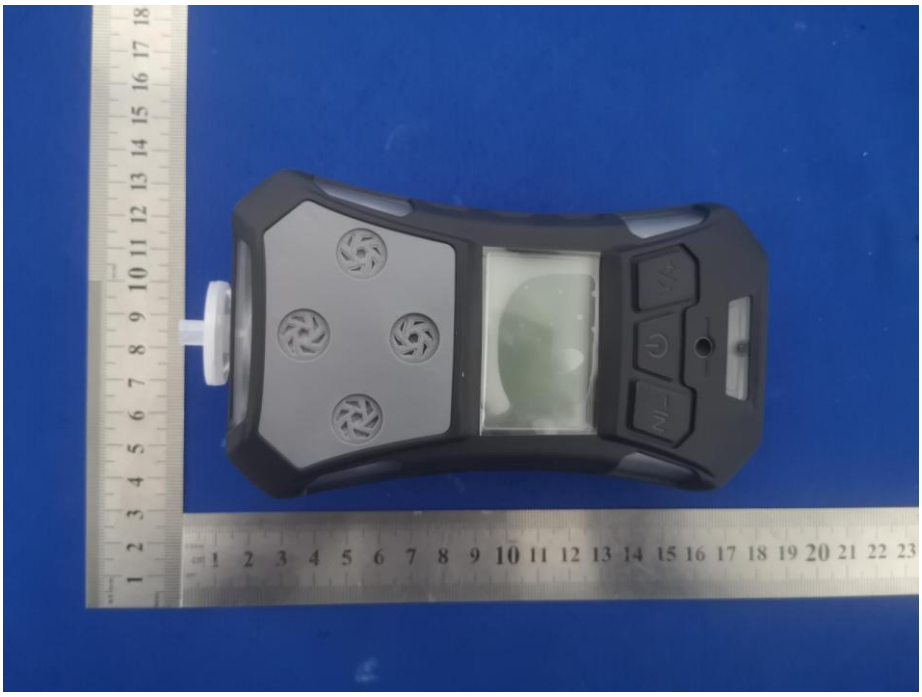
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		52.3912	32.78	-14.22	18.56	40.00	-21.44	QP
2		69.1141	34.00	-17.01	16.99	40.00	-23.01	QP
3		158.6677	33.25	-18.11	15.14	43.50	-28.36	QP
4		324.4561	44.68	-11.75	32.93	46.00	-13.07	QP
5		568.6127	40.62	-5.84	34.78	46.00	-11.22	QP
6	*	893.8567	37.50	-0.14	37.36	46.00	-8.64	QP

Above 1G
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

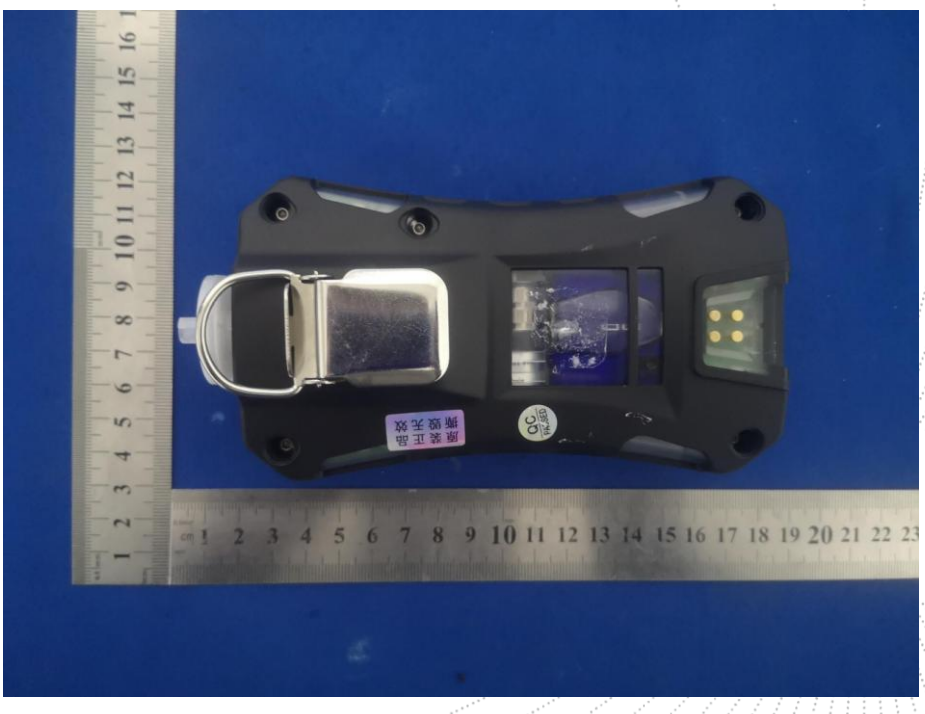
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

7. EUT PHOTOGRAPHS

EUT Photo 1



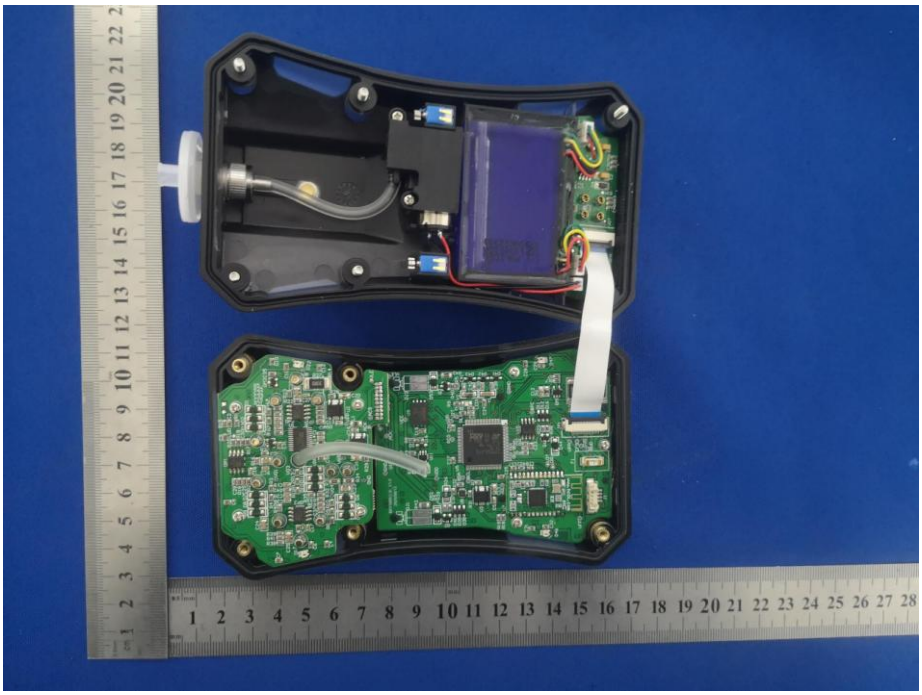
EUT Photo 2



EUT Photo 3

EUT Photo 4

EUT Photo 5



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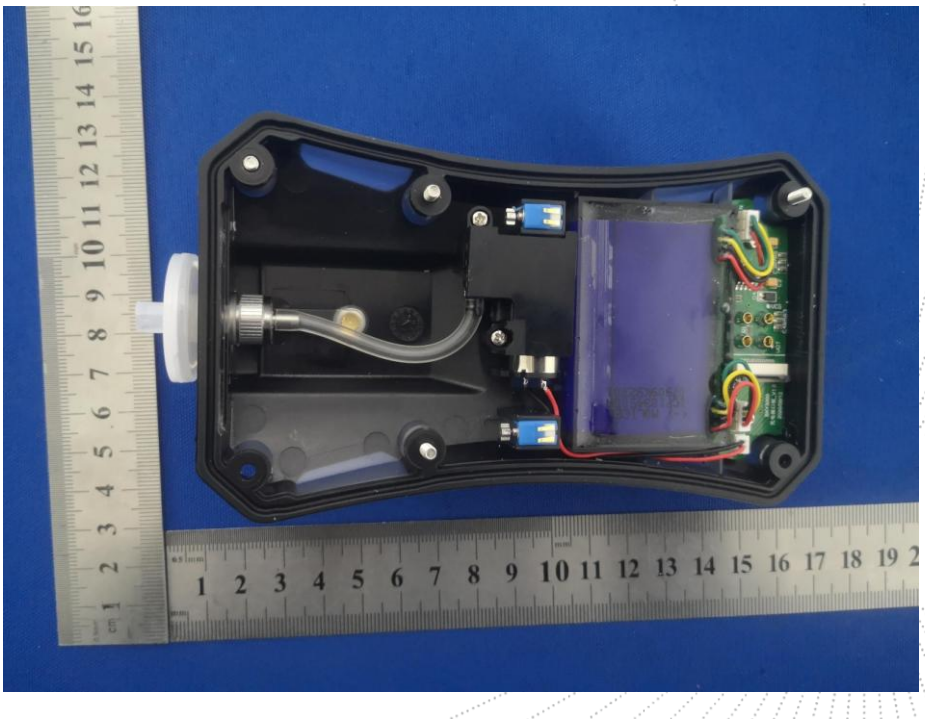
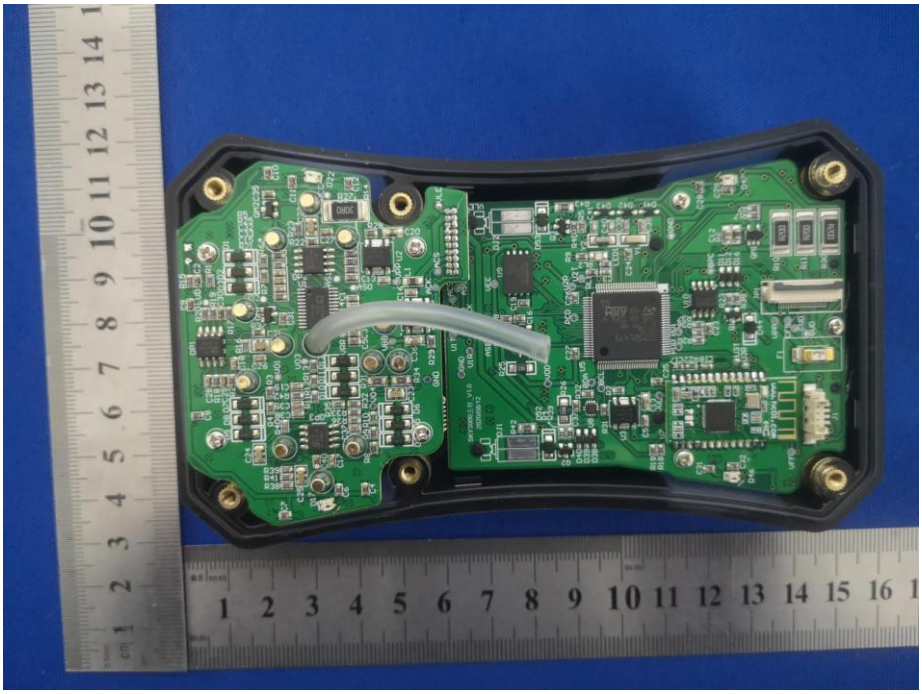
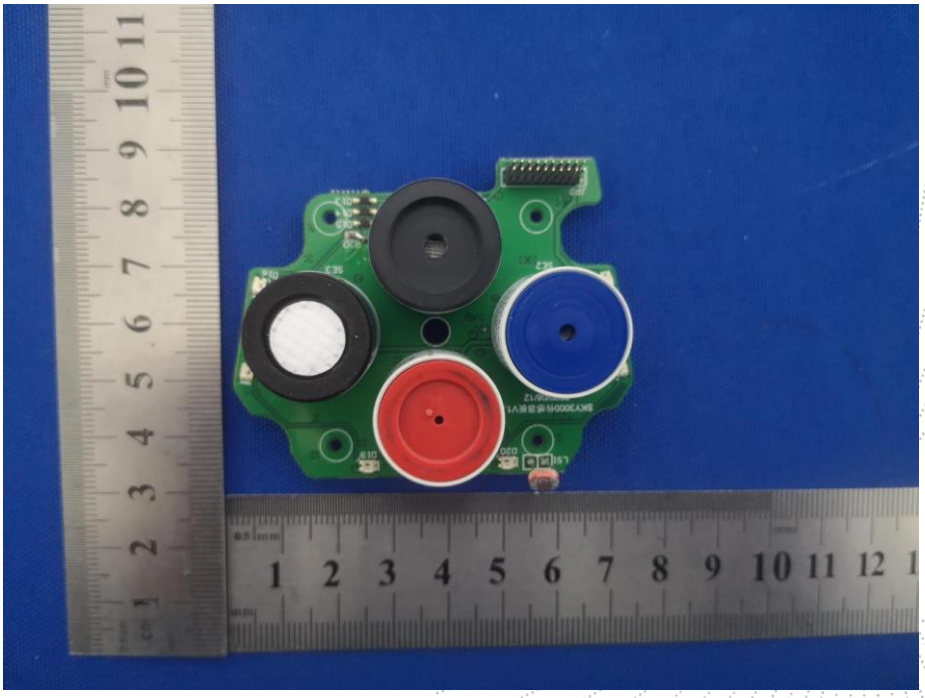


EUT Photo 7



EUT Photo 8



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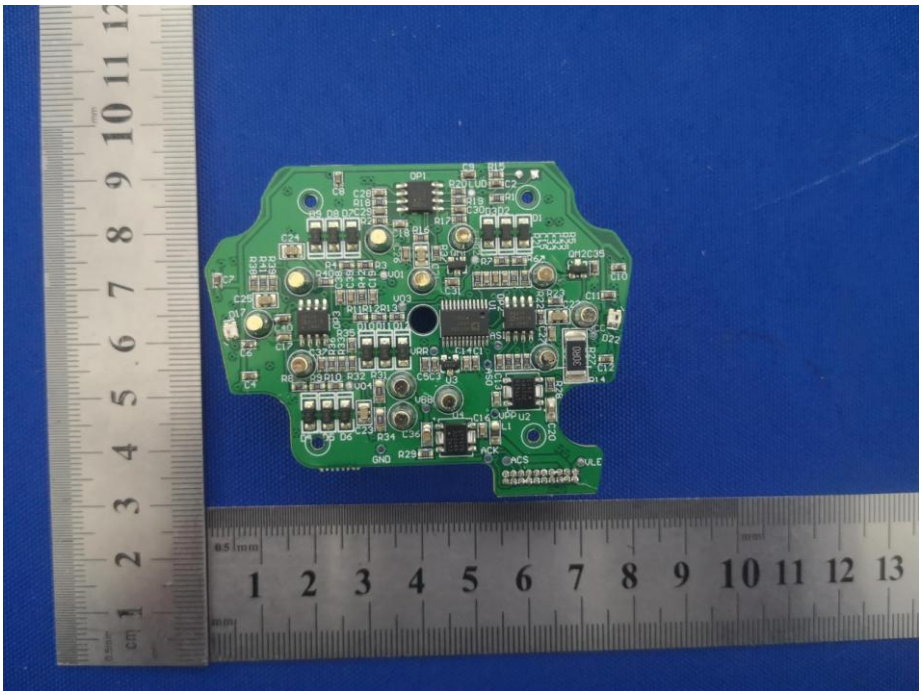
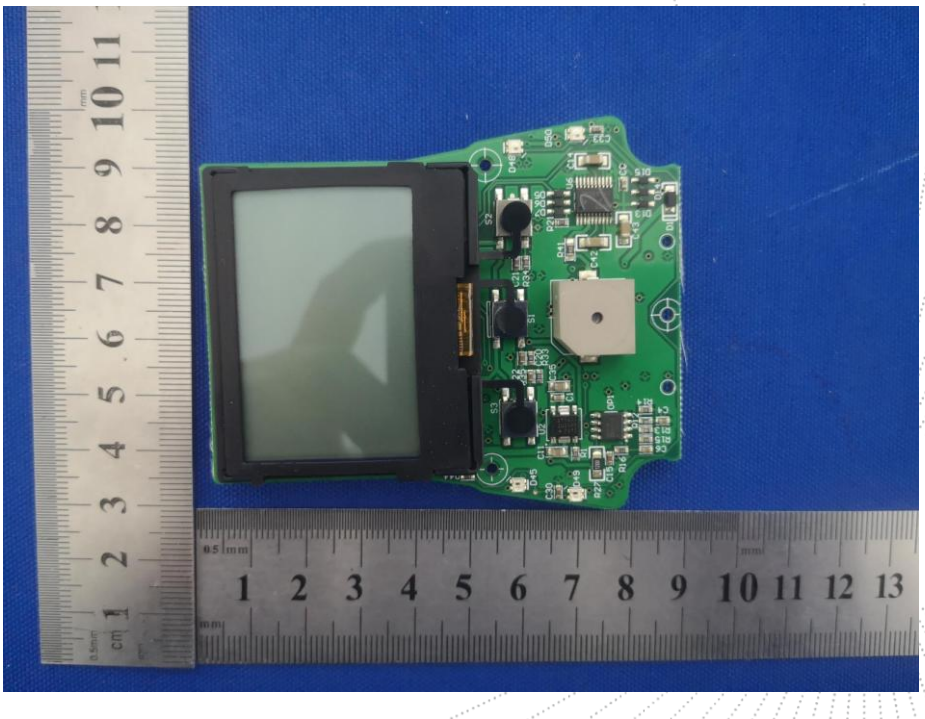


EUT Photo 10



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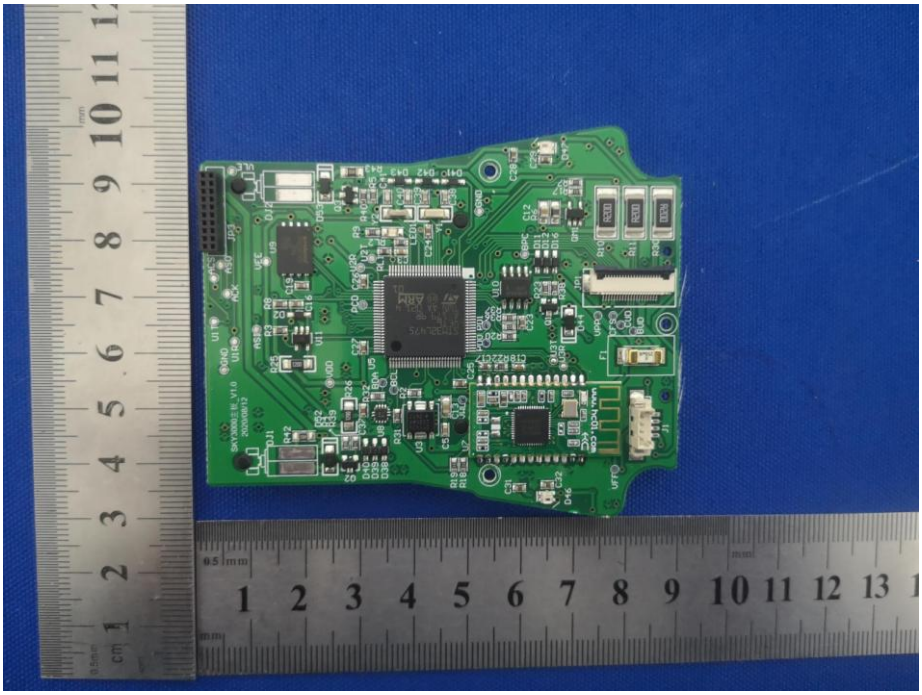
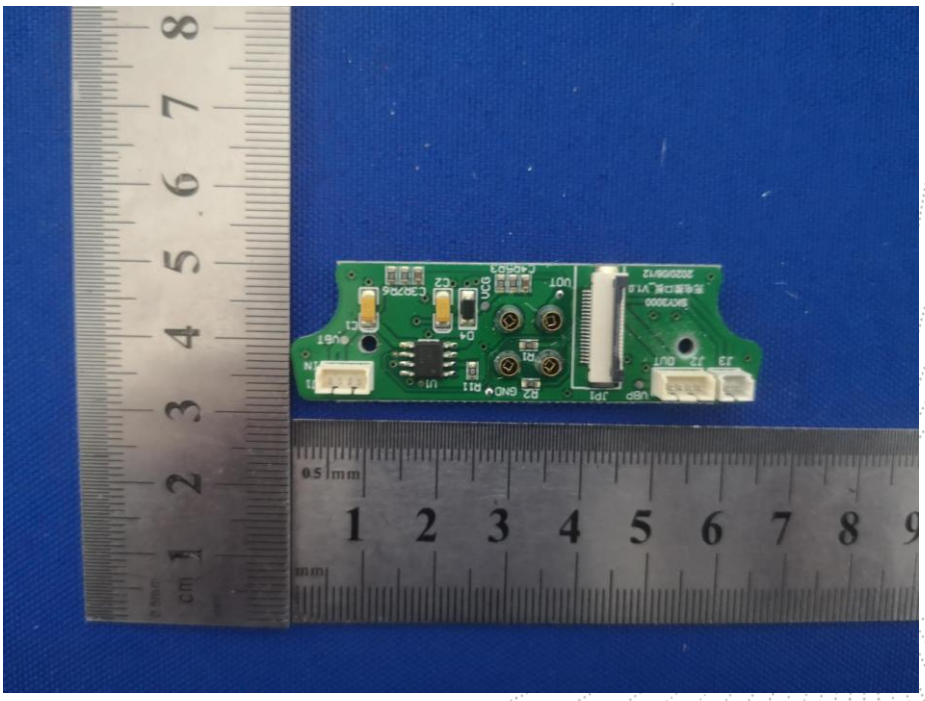
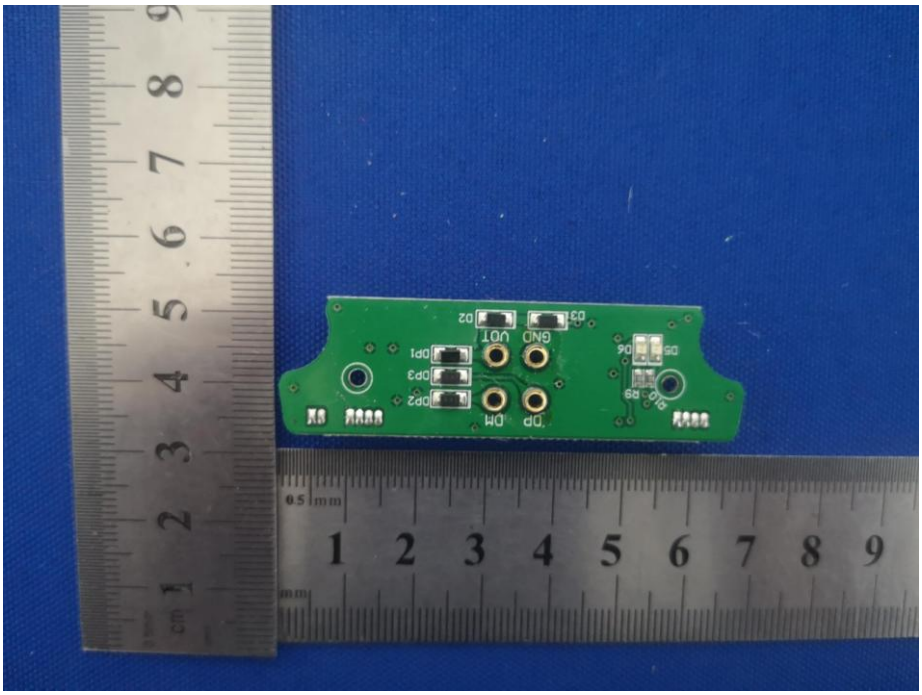


EUT Photo 12



EUT Photo 13



8. EUT TEST SETUP PHOTOGRAPHS

Radiated emission

STATEMENT

The equipment lists are traceable to the national reference standards.

The test report can not be partially copied unless prior written approval is issued from our lab.

The test report is invalid without stamp of laboratory.

The test report is invalid without signature of person(s) testing and authorizing.

The test process and test result is only related to the Unit Under Test.

The quality system of our laboratory is in accordance with ISO/IEC17025.

If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:
1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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※※※※※ **END** ※※※※※