FCC SDOC TEST REPORT

Sample： Table lamp

Trade Name： N/A

Main Model： BC961S

Additional Model： N/A

Report No.： UNIA21110121ER-42

Prepared for

Shenzhen Xinhaoli Electronic Co., Ltd.

201, 2nd Floor, Building 2, No. 92, Pinglong West Road, Shanxia Community, Pinghu Street, Longgang District, Shenzhen City, Guangdong Province, China

Prepared by

Shenzhen United Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant	:	Shenzhen Xinhaoli Electronic Co., Ltd.
Address	:	201, 2nd Floor, Building 2, No. 92, Pinglong West Road, Shanxia Community, Pinghu Street, Longgang District, Shenzhen City, Guangdong Province, China
Manufacturer	:	Shenzhen Xinhaoli Electronic Co., Ltd.
Address	:	201, 2nd Floor, Building 2, No. 92, Pinglong West Road, Shanxia Community, Pinghu Street, Longgang District, Shenzhen City, Guangdong Province, China

Product description

Product	:	Table lamp
Trade Name	:	N/A
Model Name	:	BC961S
Standards	:	FCC Part 15 Subpart B ANSI C63.4:2014

Remark: This certificate replaces the certificate numbered UNIA21110121ER-41 and the certificate numbered UNIA21110121ER-41 is invalid.

Date of Test	:	
Date (s) of performance of tests	:	Nov. 01, 2021 ~ Nov. 08, 2021
Date of Issue	:	Nov. 17, 2021
Test Result	:	Pass

Prepared by: kahn.yang

Kahn yang/Editor

Reviewer: Sky dong

Sky dong/Supervisor

Approved & Authorized Signer: liuze

Liuze/Manager

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

EMC Emission			
Standard	Test Item	Limit	Result
FCC Part 15 Subpart B ANSI C63.4: 2014	Conducted Emission	Class B	PASS
	Radiated Emission	Class B	PASS

Note: 1. “N/A” denotes test is not applicable in this test report.
2. For client’s request and manual description, the test will not be executed.

1.2 TEST LOCATION

Test Laboratory : Shenzhen United Testing Technology Co., Ltd.

Address : 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k = 2, providing a level of confidence of approximately 95%.

A. Conducted Measurement:

Test Site	Measurement Frequency Range	U, (dB)	NOTE
UNI	9kHz ~ 150kHz	2.96	
	150kHz ~ 30MHz	2.44	

B. Radiated Measurement:

Test Site	Measurement Frequency Range	U, (dB)	NOTE
UNI	9kHz ~ 30MHz	2.50	
	30MHz ~ 1000MHz	4.80	
	1000MHz ~ 6000MHz	4.13	

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

The following information of EUT submitted and identified by applicant:

Product:	Table lamp
Trade Name:	N/A
Main Model:	BC961S
Additional Model:	N/A
Model Difference:	N/A
Power Source:	DC 3.7V by battery
Product Description:	The EUT is a Table lamp. Based on the application, features, or specification exhibited in User's Manual, more details of EUT technical specification, please refer to the User's Manual.

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port Type	Number
DC	1

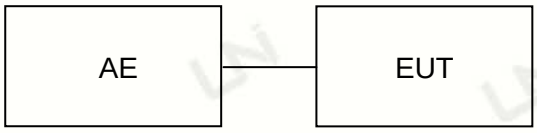
2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Mode	Description
Mode 1	Running

Note: The test modes were carried out for all operation modes (include link and idle).

2.3 DESCRIPTION OF TEST SETUP



Note: The EUT tested system was configured as upper figure, unless otherwise a special operating condition is specified in the following during the testing.

2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	Table lamp	N/A	BC961S	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. For detachable type I/O cable should be specified the length in cm in『Length』column.
3. “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
Conduction Emissions Measurement					
1	Conducted Emission Test Software	EZ-EMC	Ver.CCS-3A1-CE	N/A	N/A
2	AMN	Schwarzbeck	NNLK8121	8121370	2022.09.22
3	AAN	TESEQ	T8-Cat6	38888	2022.09.22
4	Pulse Limiter	CYBRTEK	EM5010	E115010056	2022.05.17
5	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2022.09.22
Radiated Emissions Measurement					
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2023.09.27
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2022.03.01
4	PREAMP	HP	8449B	3008A00160	2022.09.22
5	PREAMP	HP	8447D	2944A07999	2022.05.17
6	EMI Test Receiver	Rohde&Schwarz	ESR3	101891	2022.09.22
7	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2022.09.22
8	Active Loop Antenna	Com-Power	AL-310R	10160009	2022.07.25
9	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2022.05.23
10	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2022.09.27
11	Loop Antenna	Beijing daze Technology	ZN30401	13015	2022.09.22
12	EM Clamp	Schwarzbeck	MDS21	03350	2022.09.27

3 CONDUCTED EMISSIONS MEASUREMENT

3.1 TEST LIMIT

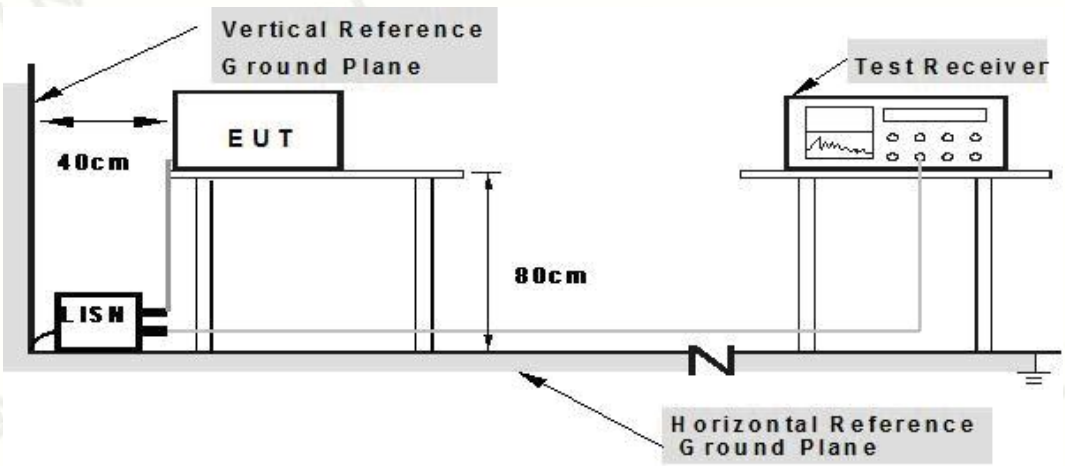
Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15~0.50	79	66	66~56*	56~46*
0.50~5.00	73	60	56	46
5.00~30.0	73	60	60	50

Note:
1. The tighter limit applies at the band edges.
2. The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver:

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.2 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.3 TEST PROCEDURE

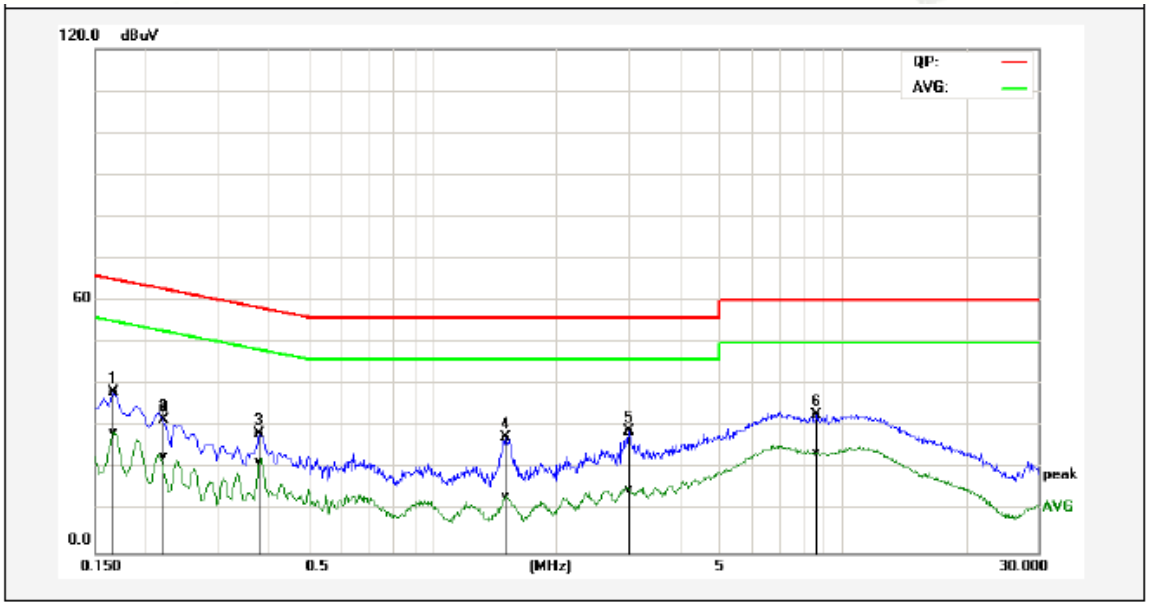
1. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
2. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
3. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
4. For the actual test configuration, please refer to the related Item EUT Test Photos.

3.4 TEST RESULT

PASS

Note: All modes were tested at AC 120V and 240V, only the worst result of AC 120V was reported.

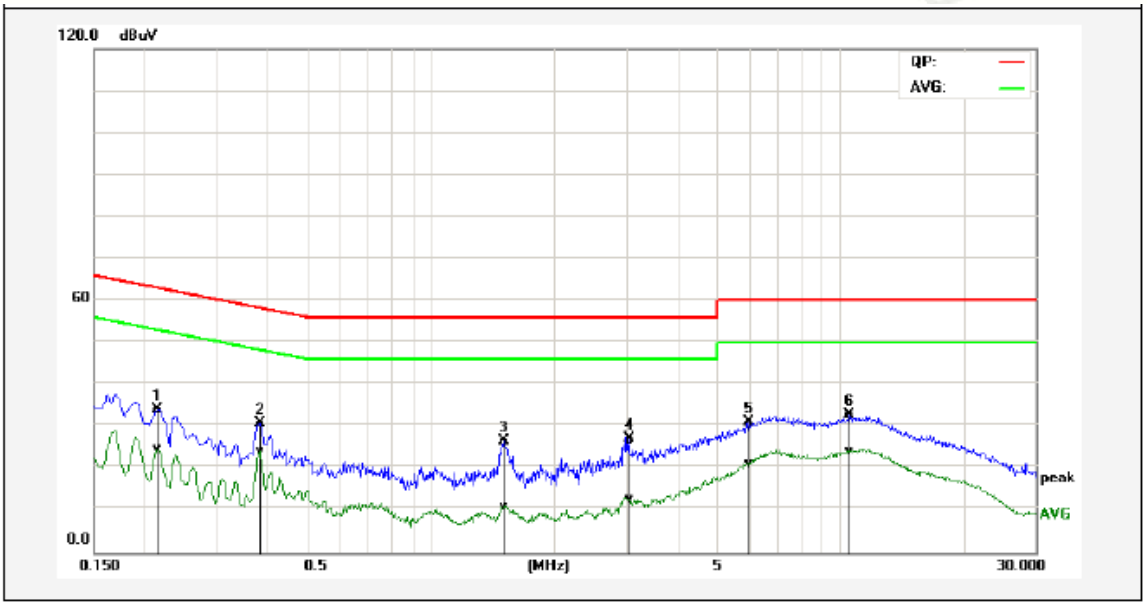
Temperature:	24℃	Relative Humidity:	48%
Test Voltage:	DC 3.7V	Pressure:	1010hPa
Test Mode:	Mode 1	Phase:	Line



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1P	0.1660	28.55	19.08	9.56	38.11	28.64	65.16	55.16	-27.05	-26.52	Pass
2P	0.2220	25.15	13.27	9.64	34.79	22.91	62.74	52.74	-27.95	-29.83	Pass
3P	0.3780	18.71	12.17	9.71	28.42	21.88	58.32	48.32	-29.90	-26.44	Pass
4P	1.5100	17.70	3.48	9.76	27.46	13.24	56.00	46.00	-28.54	-32.76	Pass
5P	3.0220	19.11	5.40	9.84	28.95	15.24	56.00	46.00	-27.05	-30.76	Pass
6*	8.6780	22.93	13.98	9.85	32.78	23.83	60.00	50.00	-27.22	-26.17	Pass

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

Temperature:	24℃	Relative Humidity:	48%
Test Voltage:	DC 3.7V	Pressure:	1010hPa
Test Mode:	Mode 1	Phase:	Neutral



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1P	0.2140	24.52	15.07	9.64	34.16	24.71	63.05	53.05	-28.89	-28.34	Pass
2*	0.3820	21.01	14.49	9.71	30.72	24.20	58.24	48.24	-27.52	-24.04	Pass
3P	1.5060	16.68	1.06	9.76	26.44	10.82	56.00	46.00	-29.56	-35.18	Pass
4P	3.0420	17.15	2.84	9.85	27.00	12.69	56.00	46.00	-29.00	-33.31	Pass
5P	5.8780	20.98	11.31	9.85	30.83	21.16	60.00	50.00	-29.17	-28.84	Pass
6P	10.5180	22.86	14.26	9.88	32.74	24.14	60.00	50.00	-27.26	-25.86	Pass

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

4 RADIATED EMISSION MEASUREMENT

4.1 TEST LIMIT

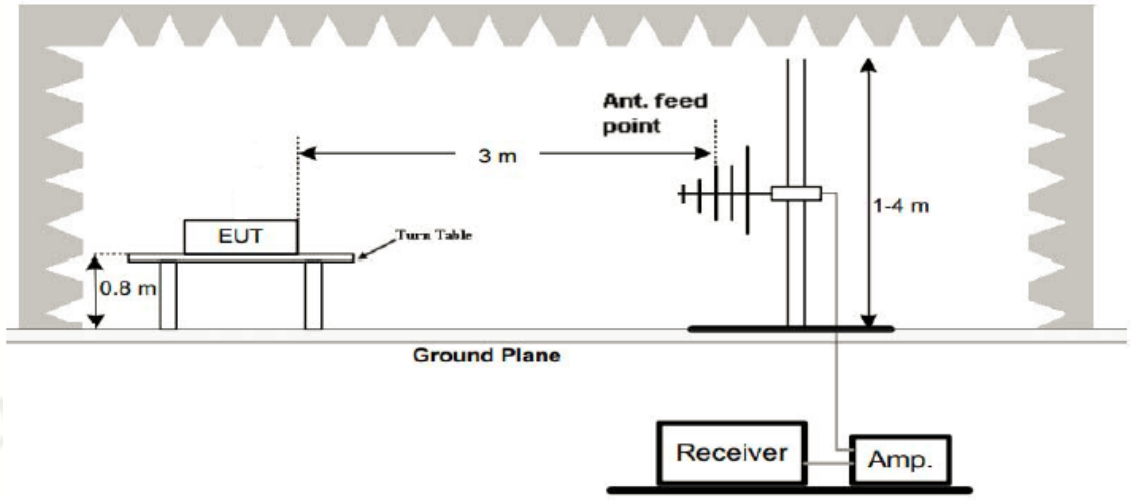
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30-88	39.0	40.0
88-216	43.5	43.5
216-960	46.5	46.0
Above 960	49.5	54.0

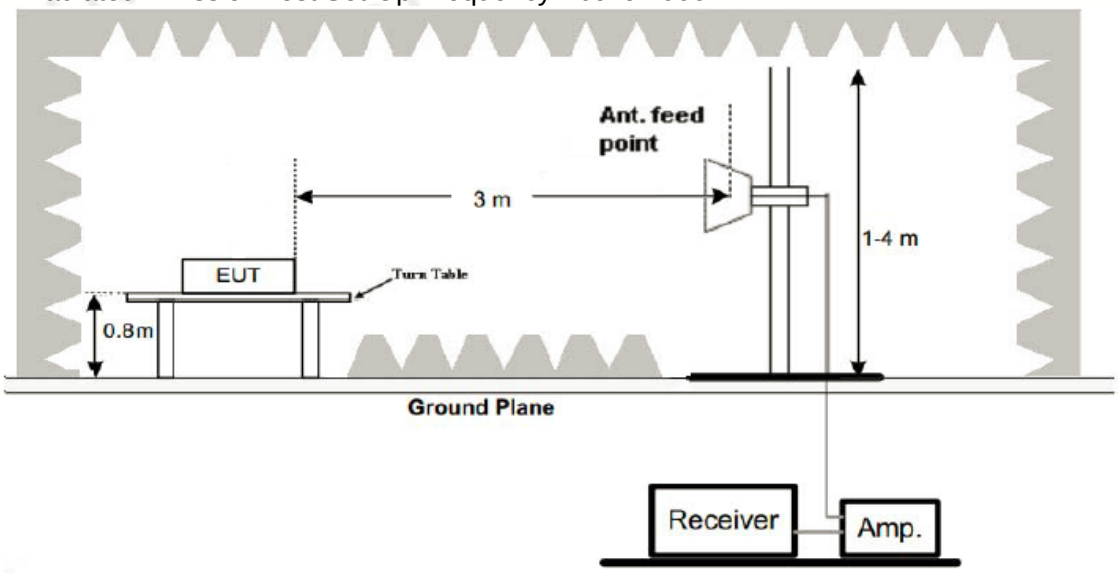
Notes:
1. The limit for radiated test was performed according to as following: FCC PART 15B / ICES-003.
2. The tighter limit applies at the band edges.
3. Emission level (dBuV/m) = 20log Emission level (uV/m).

4.2 TEST SETUP

1. Radiated Emission Test Set-Up Frequency Below 1000MHz



2. Radiated Emission Test Set-Up Frequency Above 1000MHz



4.3 TEST PROCEDURE

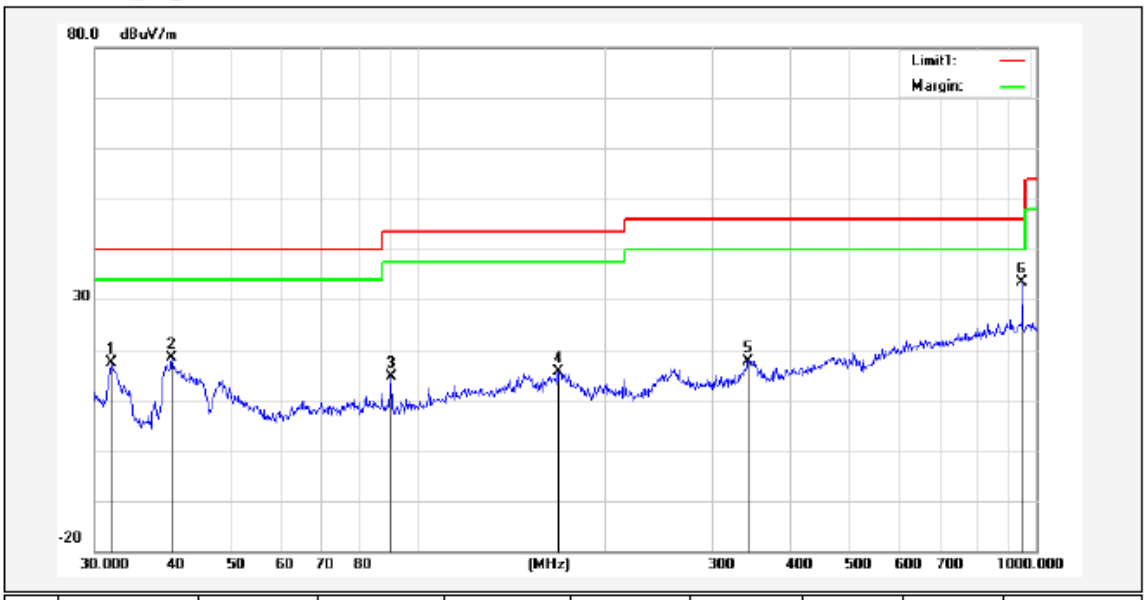
1. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
2. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
3. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
5. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
6. For the actual test configuration, please refer to the related Item EUT Test Photos.

4.4 TEST RESULT

PASS

Below 1000MHz Test Results:

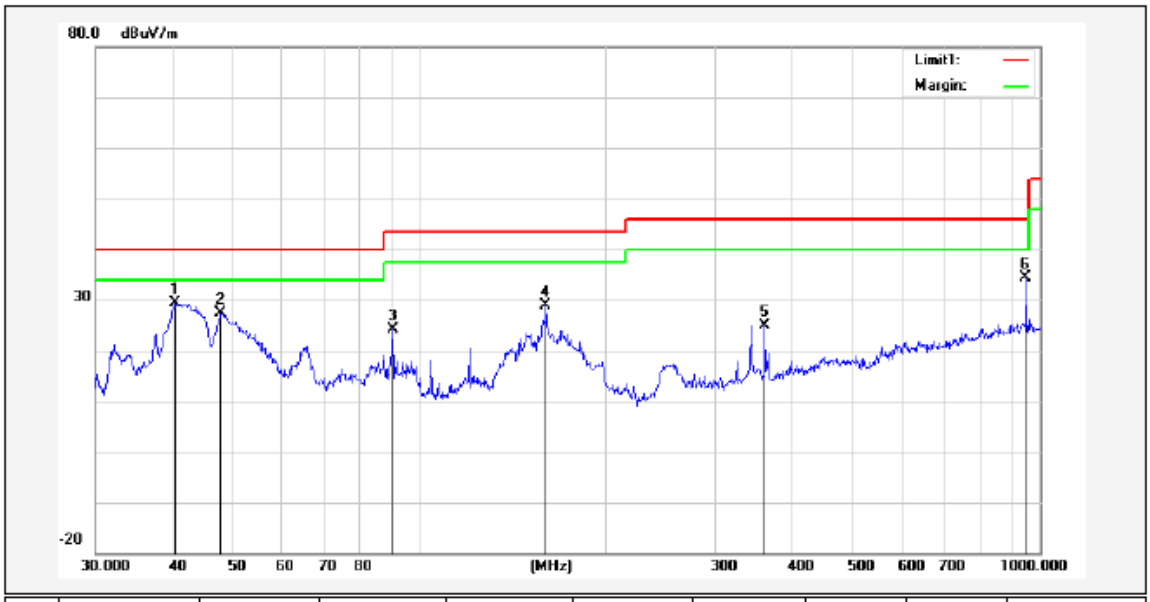
Temperature:	24℃	Relative Humidity:	48%
Test Voltage:	DC 3.7V	Pressure:	1010hPa
Test Mode:	Mode 1	Polarization:	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	31.9546	28.31	-10.94	17.37	40.00	-22.63			peak
2	39.9942	33.36	-15.07	18.29	40.00	-21.71			peak
3	90.5374	34.35	-19.73	14.62	43.50	-28.88			peak
4	169.0054	31.15	-15.53	15.62	43.50	-27.88			peak
5	341.9787	29.93	-12.25	17.68	46.00	-28.32			peak
6*	948.7610	35.18	-1.76	33.42	46.00	-12.58			peak

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

Temperature:	24℃	Relative Humidity:	48%
Test Voltage:	DC 3.7V	Pressure:	1010hPa
Test Mode:	Mode 1	Polarization:	Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	40.2757	44.71	-15.21	29.50	40.00	-10.50			peak
2	47.8260	47.09	-19.68	27.41	40.00	-12.59			peak
3	90.5374	43.88	-19.73	24.15	43.50	-19.35			peak
4	159.7844	44.12	-15.36	28.76	43.50	-14.74			peak
5	360.4477	36.86	-11.87	24.99	46.00	-21.01			peak
6	948.7610	36.04	-1.76	34.28	46.00	-11.72			peak

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

Above 1 GHz Test Results:

Temperature:	24℃	Relative Humidity:	48%
Test Voltage:	N/A	Pressure:	1010hPa
Test Mode:	N/A	Polarization:	N/A

Note: 1. N/A denotes test is not applicable in this test report.
2. There was not any unintentional transmission in standby mode.

5 PHOTO OF EUT

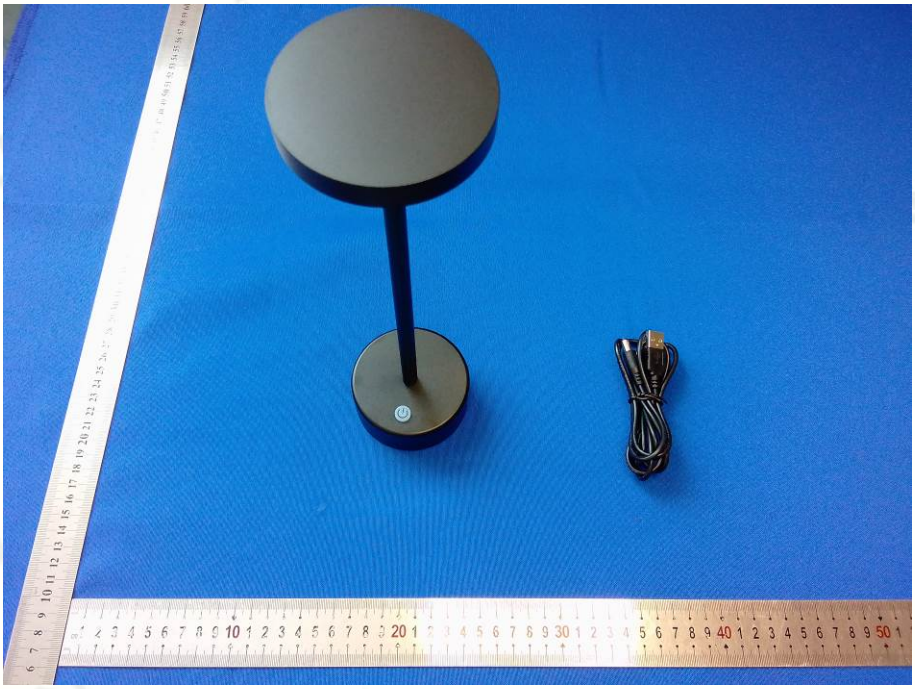
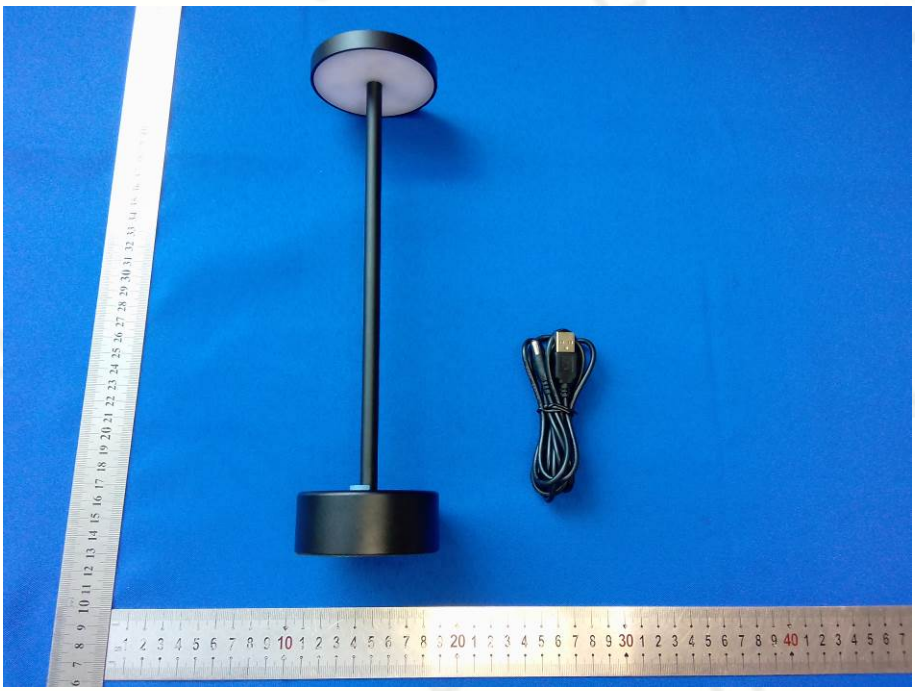


PHOTO 01



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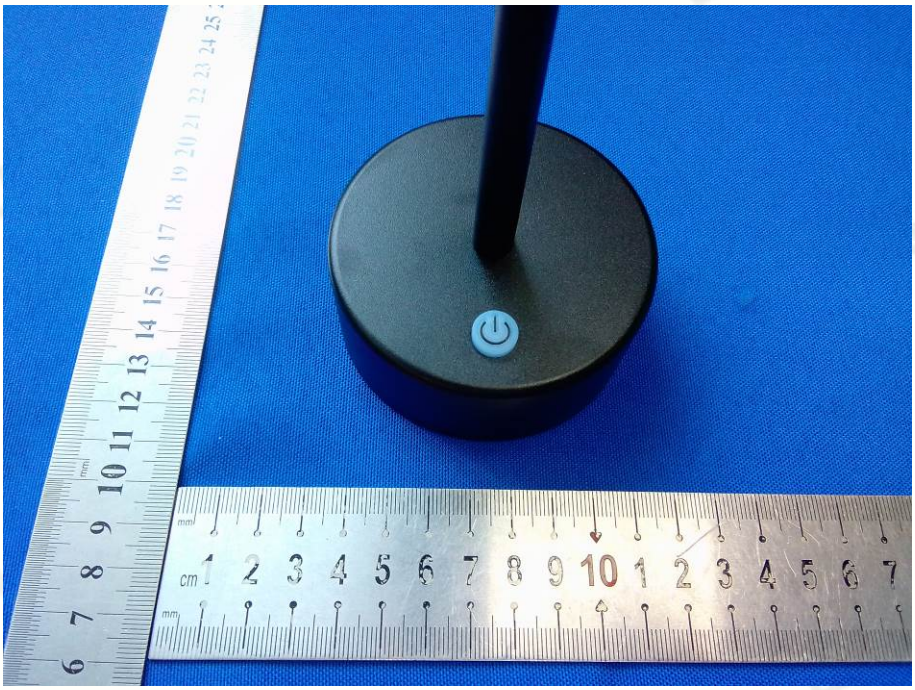

PHOTO 03

PHOTO 04

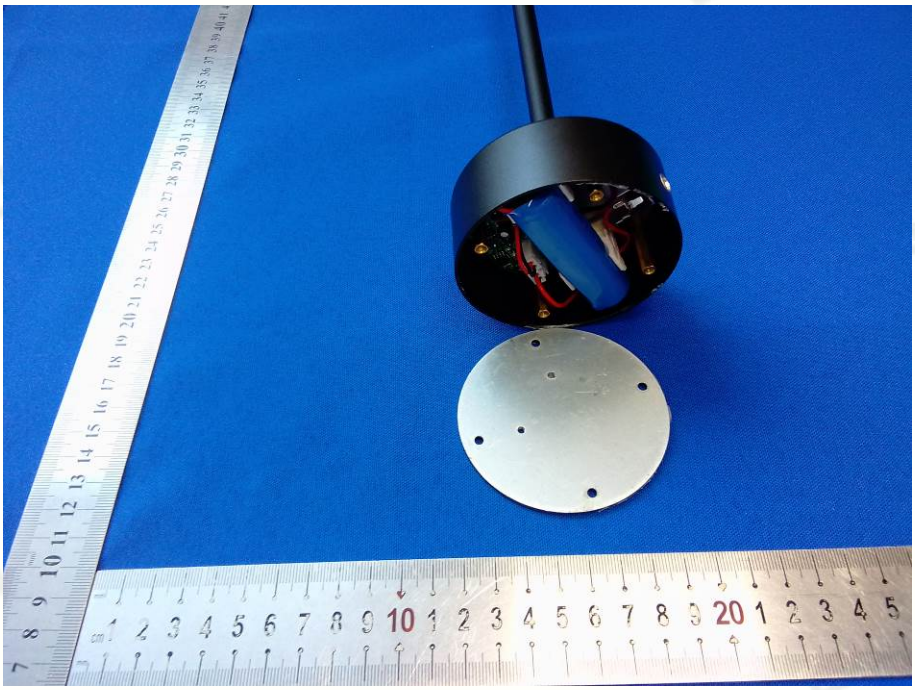

PHOTO 05

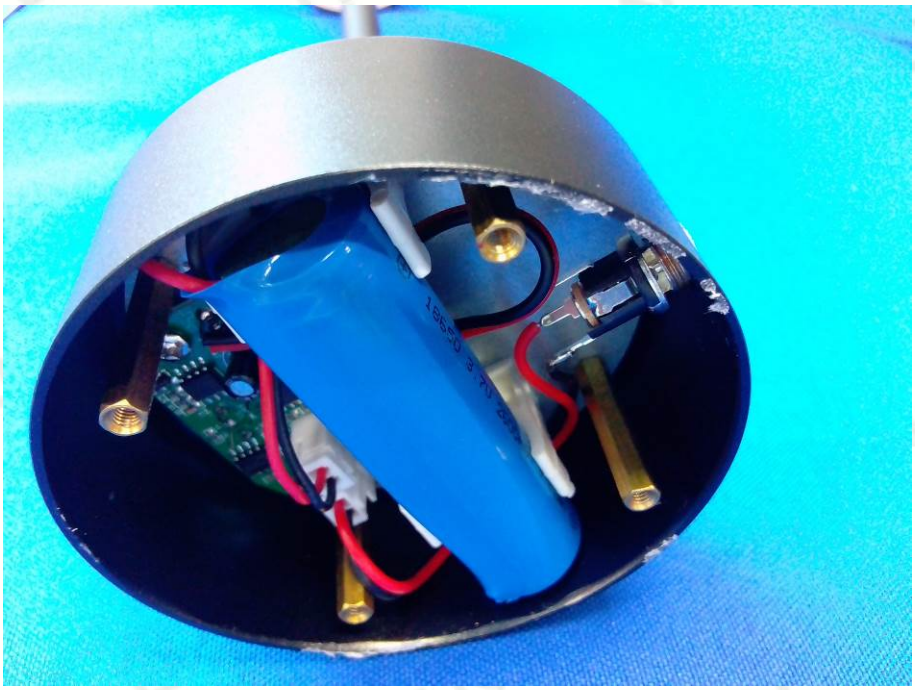

PHOTO 06

PHOTO 07

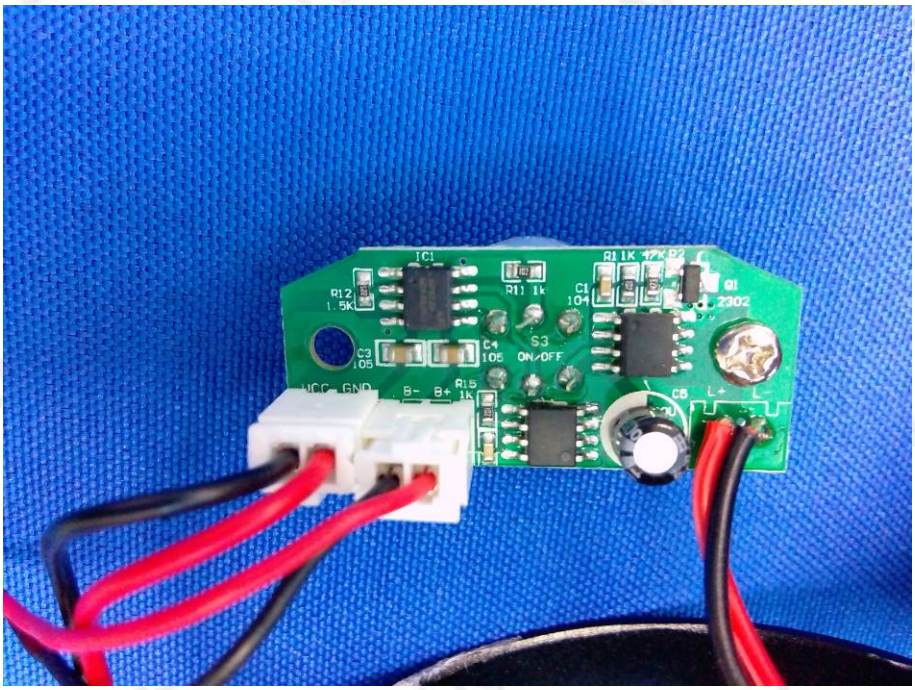

PHOTO 08

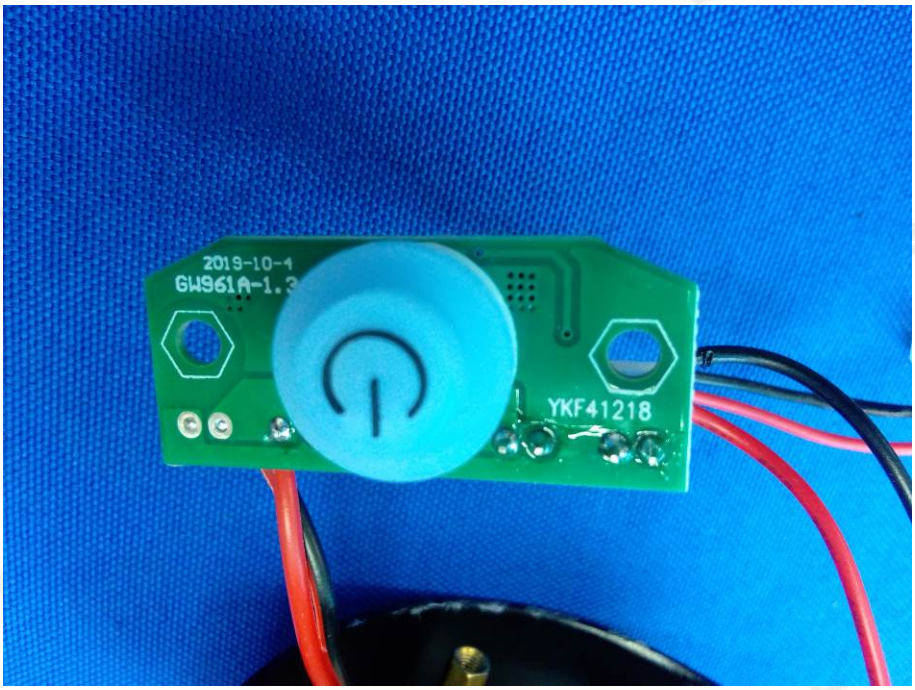

PHOTO 09

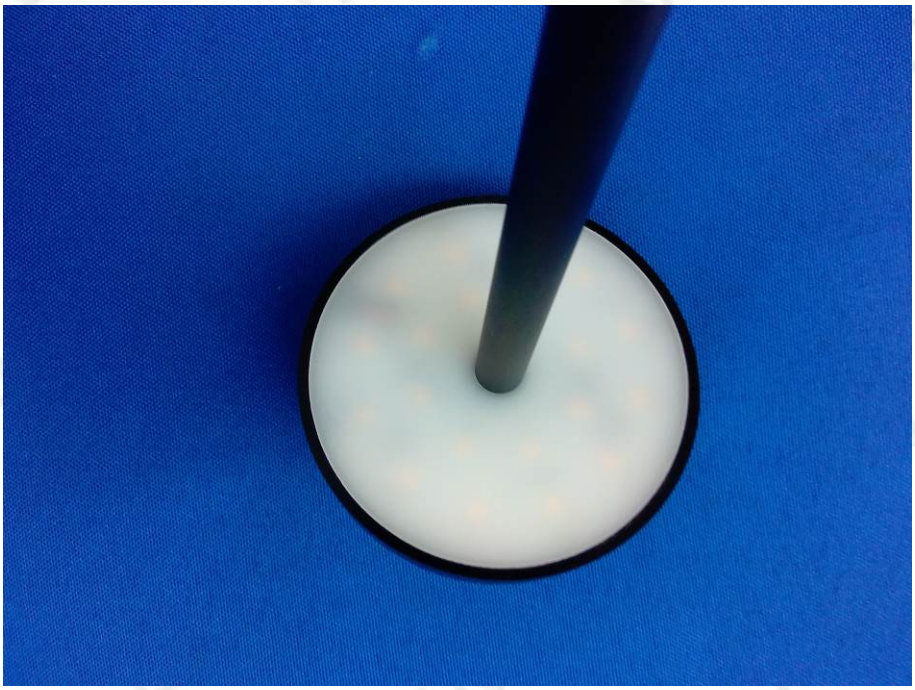

PHOTO 10

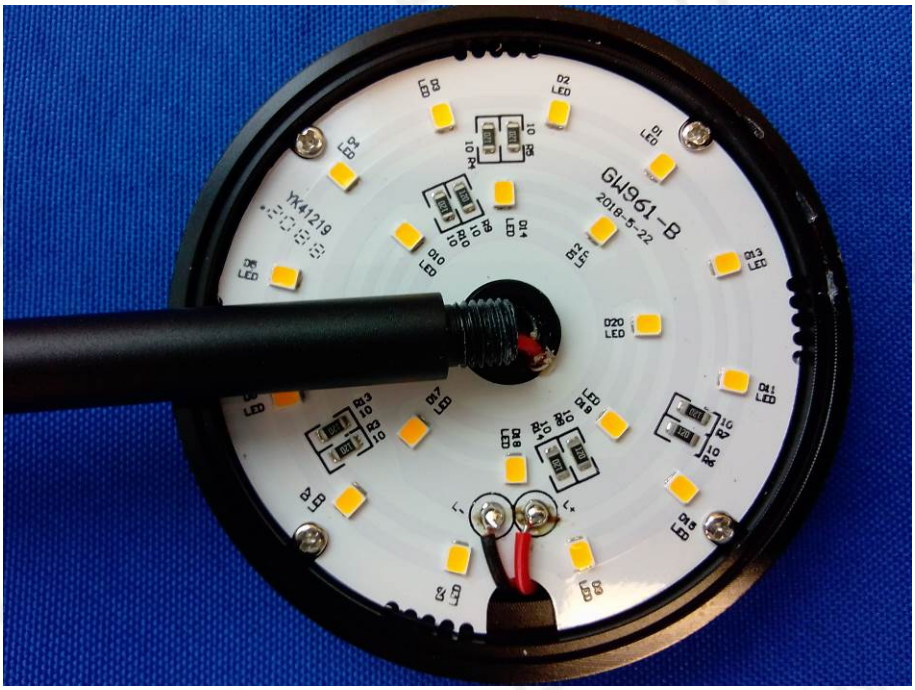

PHOTO 11

6 PHOTO OF TEST

PHOTO 01

PHOTO 02

End of Report

Statement

1.This report must have the signature of the authorized signatory and the special seal of the report, otherwise it will be considered invalid. If there is no anti-counterfeiting electronic seal of the laboratory in the report in PDF format or it is displayed as "×", the report is invalid.

2.This report shall not be modified, added or deleted without authorization.

3.The results of this report are only valid for the EUT provided by Applicant to our laboratory for inspection (That is,EUT received by our laboratory.Without special explanation, it refers to the samples presented in the report " PHOTO OF EUT ").

4.If there is any objection to the test data and conclusions of this report, please submit it in writing within 10 working days after the date of issuance of the report.

5.Without the written consent of the laboratory, this report shall not be copied (except for full copy), nor shall it be used as publicity materials or advertising.

6.The cover of the report is for decoration only, not included in the body of the report.

7.The paper report issued by our laboratory has the same effect as the electronic report. In case of any difference between the two, the electronic report shall prevail.

8.The Chinese and English reports issued by our laboratory have the same effect. In case of any difference in understanding, the Chinese version shall prevail.

9.Please provide the complete report documents issued by our laboratory when inquiring the report.

10.For cases where compliance is determined based on test values, when relevant specifications, standards, documents, and customers have no relevant requirements and no other special instructions, the test report issued by this laboratory is carried out in full value and adopts ILAC-G8:09 /2019 "Simple Acceptance Rule" for judgment.

11.In the People's Republic of China, when there is no CMA Accredited Symbol in this report, the report is only for scientific research, teaching or internal quality control activities