

FCC Test Report

Report No.: AGC07434220102FE03

FCC ID	÷	2ARXB-B18
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Label Printer
BRAND NAME		NIIMBOT
MODEL NAME	:	NIIMBOT B18
APPLICANT	:	Wuhan Jingchen Intelligent Identification Technology Co., Ltd.
DATE OF ISSUE	:	Mar. 03, 2022
STANDARD(S)	:	FCC Rules and Regulations Part 15 Subpart C Section 15.225
REPORT VERSION	:	V1.0





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestro/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGE the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



Report No.: AGC07434220102FE03 Page 2 of 27

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0		Mar. 03, 2022	Valid	Initial Release

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festive/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issue of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



TABLE OF CONTENTS

	1. VERIFICATION OF COMPLIANCE	5
	2. GENERAL INFORMATION	6
	2.1. PRODUCT DESCRIPTION	6
	2.2. TABLE OF CARRIER FREQUENCYS	
	2.3. RELATED SUBMITTAL(S)/GRANT(S)	7
	2.4. TEST METHODOLOGY	
	2.5. SPECIAL ACCESSORIES	7
	2.6. EQUIPMENT MODIFICATIONS	7
	2.7. ANTENNA REQUIREMENT	
	3. MEASUREMENT UNCERTAINTY	8
	4. DESCRIPTION OF TEST MODES	
	5. SYSTEM TEST CONFIGURATION	9
	5.1. CONFIGURATION OF TESTED SYSTEM	9
	5.2. EQUIPMENT USED IN TESTED SYSTEM	
	5.3. SUMMARY OF TEST RESULTS	9
	6. TEST FACILITY	10
	7.RADIATED EMISSION	11
	7.1. TEST LIMIT	11
	7.2. MEASUREMENT PROCEDURE	12
	7.3. TEST SETUP	
	7.4. TEST RESULT	15
	8. FREQUENCY STABILITY	19
	8.1. TEST LIMIT	19
	8.2. MEASUREMENT PROCEDURE	
	8.3. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	19
	8.4. MEASUREMENT RESULTS	
	9. 20 DB SPECTRUM BANDWIDTH	21
	9.1. TEST LIMIT	21
	9.2. MEASUREMENT PROCEDURE	
	9.3. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
Sf pr	Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the section of AGE the test report is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGE the test report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report apply only to the test report should be addressed to AGC by agc@agc-cert.com.	esults
٨	Attestation of Clobal Compliance (Shanzhan) Co. 1 td	



Report No.: AGC07434220102FE03 Page 4 of 27

9.4. MEASUREMENT RESULTS	
10. AC LINE CONDUCTED EMISSION TEST	
10.1. LIMITS OF LINE CONDUCTED EMISSION TEST	
10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	
10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	
10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	
10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	27
APPENDIX B: PHOTOGRAPHS OF EUT	

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written approver, and the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

1. VERIFICATION OF COMPLIANCE

Applicant	Wuhan Jingchen Intelligent Identification Technology Co., Ltd.	
Address	Creative Workshop No. 5, Creative World, Yezhihu West Road, Hongshan District, Wuhan, China	
Manufacturer	Wuhan Jingchen Intelligent Identification Technology Co., Ltd.	
Address	Creative Workshop No. 5, Creative World, Yezhihu West Road, Hongshan District, Wuhan, China	
Factory	Huangpi branch of Wuhan Jingchen Intelligent Identification Technology Co., Ltd.	
Address	4th Floor, Block 6, Hui Qiang Technology Park, No. 1 Tianyang Road, Chuanlong Av. Hengdian street, Huangpi District, Wuhan, China	
Product Designation	Label Printer	
Brand Name	NIIMBOT	
Test Model	NIIMBOT B18	
Date of test	Jan. 18, 2022 to Mar. 02, 2022	
Deviation	No any deviation from the test method	
Condition of Test Sample	Normal	
Test Result	Pass	
Report Template	AGCRT-US-SRD/RF	

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.225.

Prepared By

Cool chen

Cool Cheng (Project Engineer)

Mar. 03, 2022

Reviewed By

asin

Calvin Liu (Reviewer)

Mar. 03, 2022

Approved By

Max Zhan

Max Zhang (Authorized Officer)

Mar. 03, 2022

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand of the report is not permitted without the written authorization of AGE the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day and a test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/



2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as a "Label Printer". It is designed by way of utilizing the ASK/FSK technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	13.56MHz
Max field strength	55.38
Modulation	ASK/FSK
Number of channels	1 Channel
Antenna Designation	Coil Antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	2dBi
Hardware Version	2.01
Software Version	2.10
Power Supply	DC 7.4V by battery or DC 5V by adapter

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
13.110MHz~14.010MHz	01	13.56 MHz

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter explorization of AGC the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



2.3. RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for FCC ID: 2ARXB-B18 filing to comply with the FCC Part 15.247 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device. For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand of t

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

Web: http://cn.agc-cert.com/



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%.

- Uncertainty of Conducted Emission, Uc = ±2.9 dB
- Uncertainty of Radiated Emission below 1GHz, $Uc = \pm 4.9 \text{ dB}$
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.4 dB
- Uncertainty of total RF power, conducted, $Uc = \pm 0.8 dB$
- Uncertainty of RF power density, conducted, Uc = ±2.6 dB
- Uncertainty of spurious emissions, conducted, $Uc = \pm 2.7 dB$
- Uncertainty of Occupied Channel Bandwidth: $Uc = \pm 2 \%$

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION		
1	Transmitting(13.56MHz)		
Mater			

Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.
- 4. For battery operated equipment, the equipment tests are performed using a new battery.
- 5. The test software is not applicable which can set the EUT into the individual test modes.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day Safter the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:

EUT

Radiated Emission Configure:

AE

5.2. EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Label Printer	NIIMBOT B18	2ARXB-B18	EUT
2	Charger line	N/A	0.223m unshielded	Accessory
3	Adapter	XCMS03-0510	DC 5V	AE

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.215(c)	20dB Spectrum Bandwidth	Compliant
15.225(e)	Frequency Stability	Compliant
15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Compliant
15.225(d)&15.209	Radiated Emission	Compliant
15.207	AC Power Line Conducted Emissions	Compliant

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesture/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15da (Safter the issue) of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd		
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China		
Designation Number	CN1259		
FCC Test Firm Registration Number	975832		
A2LA Cert. No.	5054.02		
Description	Attestation of Global Compliance (Shenzhen) Co., Ltd is accredited by A2LA		

TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
Test Receiver	R&S	ESPI	101206	May.11, 2021	May.10, 2022
Artificial power network	R&S	ESH2-Z5	100086	Jun. 09, 2021	Jun. 08, 2022
Test Software	FARA	EZ-EMC(Ver. AGC-CON03A1)	N/A	N/A	N/A

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
Test Receiver	R&S	ESCI	10096	Apr. 14, 2021	Apr. 13, 2022
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Nov. 17, 2021	Nov. 16, 2022
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn Antenna	SCHWARZBECK	BBHA9170	768	Oct. 31, 2021	Oct. 30, 2023
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
preamplifier	ChengYi	EMC184045SE	980508	Oct. 29, 2021	Oct. 28, 2023
Double-Ridged Waveguide Horn	ETS	3117	00034609	Apr. 23, 2021	Apr. 22, 2023
Preamplifier Assembly	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
Wideband Antenna	SCHWARZBECK	VULB9168	D69250	Apr. 28, 2021	Apr. 27, 2023
Test Software	FARA	EZ-EMC(Ver.RA-0 3A)	N/A	N/A	N/A

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



7.RADIATED EMISSION

7.1. TEST LIMIT

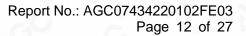
Rules and specifications	FCC CFR 47 Part 15 section 15.225 Compliance with the spectrum mask is tested with RBW set to 9kHz.				
Description					
Freq. of Emission (MHz)	Field Strength (µV/m) at 30m	Field Strength (dBµV/m) at 30m	Field Strength (dBµV/m) at 10m	Field Strength (dBµV/m) at 3m	
1.705~13.110	30	29.5	48.58	69.5	
13.110~13.410	106	40.5	59.58	80.5	
13.410~13.553	334	50.5	69.58	90.5	
13.553~13.567	15848	84.0	103.08	124.0	
13.567~13.710	334	50.5	69.58	90.5	
13.710~14.010	106	40.5	59.58	80.5	
14.010~30.000	30	29.5	48.58	69.5	

According to 15.35, on any frequency or frequencies below or equal to 1000 MHz, the limits Shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test.

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

Frequencies	Field Strength	Measurement Distance
(MHz)	(µV/m)	(meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stead of the test results stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter aphorization of AGE in the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





7.2. MEASUREMENT PROCEDURE

- 1. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated Partico/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/1MHz for Peak, 1MHz/10Hz for Average

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter explorization of AGC the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

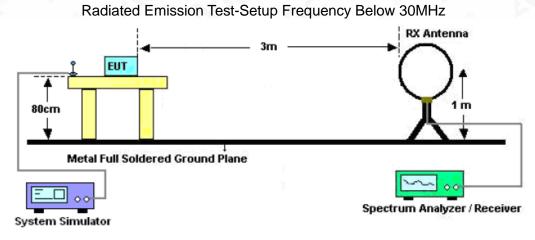
 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

Web: http://cn.agc-cert.com/

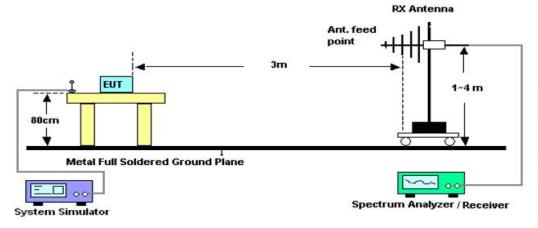


Report No.: AGC07434220102FE03 Page 14 of 27

7.3. TEST SETUP



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written aphrorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day Safter the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

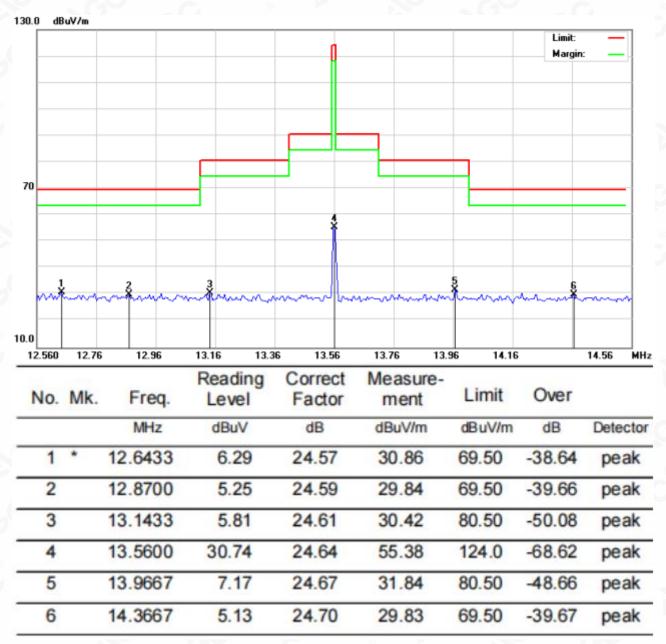


Report No.: AGC07434220102FE03 Page 15 of 27

7.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

EUT	Label Printer	Model Name	NIIMBOT B18
Temperature	21.8°C	Relative Humidity	58%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Polarization	Face



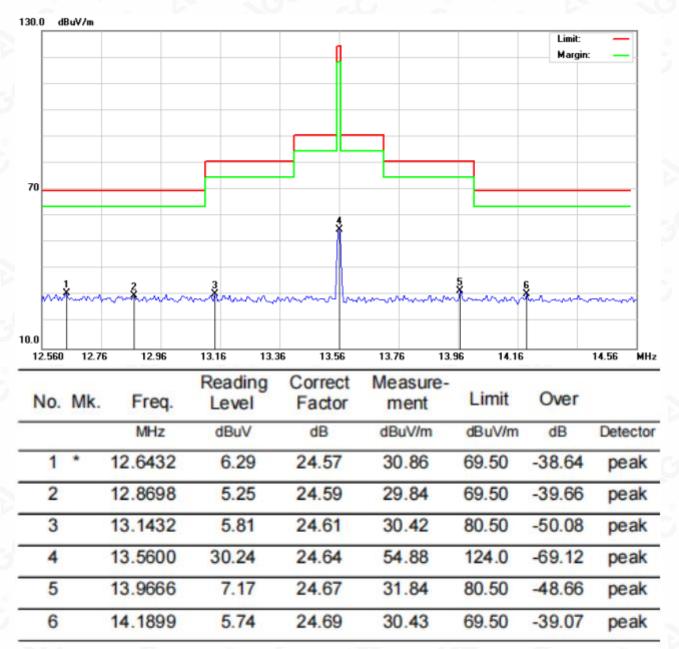
RESULT: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written approver, be test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC07434220102FE03 Page 16 of 27

EUT	Label Printer	Model Name	NIIMBOT B18	
Temperature	21.8°C	Relative Humidity	58%	
Pressure	985hPa	Test Voltage	Normal Voltage	
Test Mode	Mode 1	Polarization	Side	



RESULT: PASS

Note: Other emissions from 9 kHz to 30 MHz are considered as ambient noise. No recording in the test report.

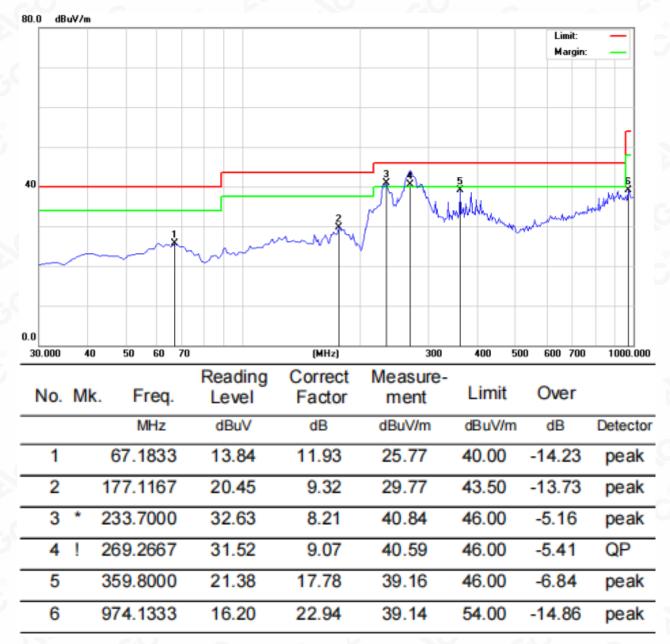
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/



RADIATED EMISSION 30	0MHz-1GHZ
-----------------------------	-----------

EUT	Label Printer	Model Name	NIIMBOT B18
Temperature	21.8°C	Relative Humidity	58%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Polarization	Horizontal



RESULT: PASS

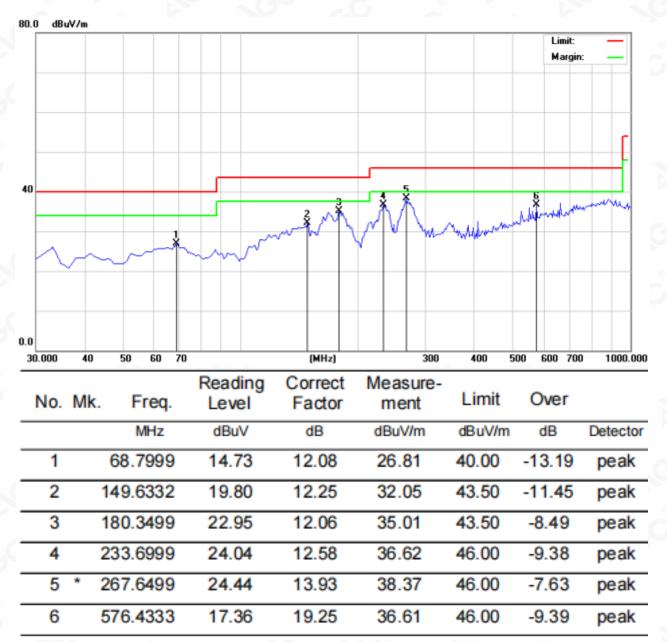
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGE" the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/



Report No.: AGC07434220102FE03 Page 18 of 27

EUT	Label Printer	Model Name	NIIMBOT B18
Temperature	21.8°C	Relative Humidity	58%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Polarization	Vertical



RESULT: PASS Note:

Factor=Antenna Factor + Cable loss, Over=Measurement-Limit. The "Factor" value can be calculated automatically by software of measurement system. The mode 1 is the worst case, and only the data of the worst case recorded in this test report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



AGC®

8. FREQUENCY STABILITY

8.1. TEST LIMIT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

8.2. MEASUREMENT PROCEDURE

1. The spectrum analyzer connected via a receive antenna placed near the EUT.

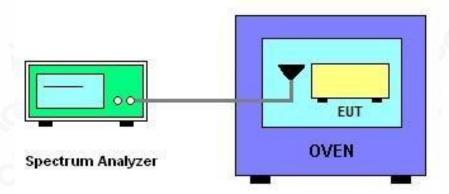
- 2.EUT have transmitted signal and fixed channelize.
- 3.Set the spectrum analyzer span to view the entire emissions bandwidth.

4.Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.

5. The fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/fc \times 106$ ppm and the limit is less than ± 100 ppm.

6.Extreme temperature rule is -20°C~50°C.

8.3. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand in spectrum of the stand in the report is not permitted without the written authorization of AGE in the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day authorization of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



8.4. MEASUREMENT RESULTS

Operating frequency: 13.56MHz

Voltage vs. Frequency Stability (Test Temperature: 20°C)

Voltage(V)	Measurement Frequency (MHz)	Max. Deviation (MHz)	Limit(MHz)	Conclusion
7.4	13.56067		GU C	8
6.66	13.56070	0.00078	0.001356	PASS
8.14	13.56078	0		G G

Temperature vs. Frequency Stability (Test Voltage: 7.4V)

Temperature	Measurement Frequency (MHz)	Max. Deviation (MHz)	Limit(MHz)	Conclusion	
◎ -20 °C	13.56078	8			
-10 ℃	13.56080		\odot		
0°C	13.56085				
10 ℃	13.56081	0.00088	0.001356	PASS	
20 ℃	13.56088	0			
30 ℃	13.56080		0		
40 ℃	13.56086		- C		

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written approver, and the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

Web: http://cn.agc-cert.com/



9. 20 dB SPECTRUM BANDWIDTH

9.1. TEST LIMIT

Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz

9.2. MEASUREMENT PROCEDURE

- 1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
- 2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
- 3. Measured the spectrum width with power higher than 20dB below carrier.
- 4. Measured the 99% OBW.

9.3. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



Spectrum Analyzer

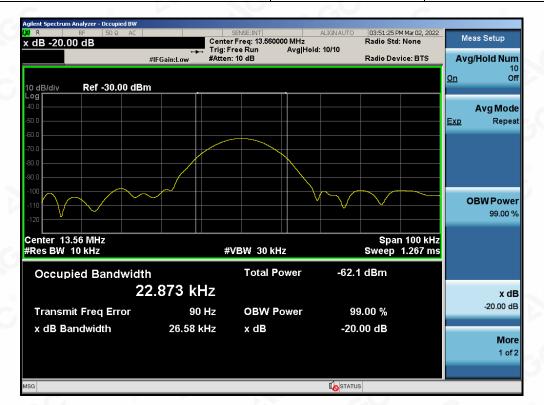
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the strend in the stamp of the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issue of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



9.4. MEASUREMENT RESULTS

TEST ITEM	BANDWIDTH	
TEST MODE	Mode1	
8		

Test Data (kHz)	Criteria	
Occupied Bandwidth	22.873	PASS
-20dB Bandwidth	26.58	PASS



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restriction of Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter aphorization of AGE the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

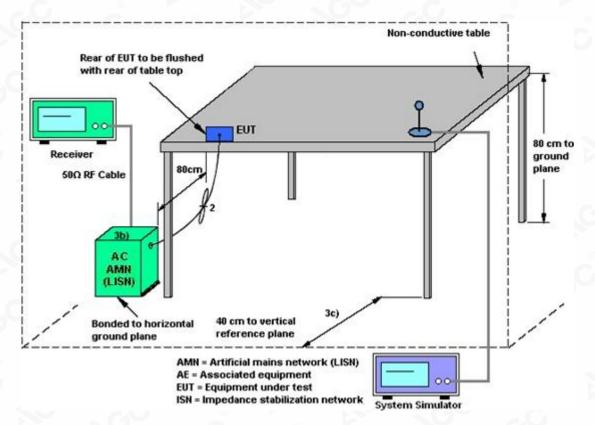
10. AC LINE CONDUCTED EMISSION TEST 10.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Francisco	Maximum RF Line Voltage					
Frequency	Q.P.(dBuV)	Average(dBuV)				
150kHz~500kHz	66-56	56-46				
500kHz~5MHz	56	46				
5MHz~30MHz	60	50				

Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated frame/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC in the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15da/Castra the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

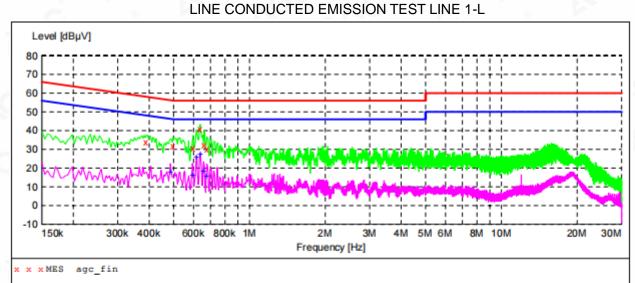
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written aphorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.





10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

MEASUREMENT RESULT: "agc fin"

2022/2/26 15:3	37						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dBµV	dB			
0.390000	33.80	5.7	58	24.3	QP	L1	GND
0.498000	31.60	5.4	56	24.4	QP	L1	GND
0.598000	30.50	5.4	56	25.5	QP	L1	GND
0.638000	41.00	5.4	56	15.0	QP	L1	GND
0.662000	32.00	5.4	56	24.0	QP	L1	GND
0.678000	30.20	5.4	56	25.8	QP	L1	GND

MEASUREMENT RESULT: "agc fin2"

2022/2/26 15:	37						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dBµV	dB			
0.486000	17.70	5.4	46	28.5	AV	L1	GND
0.594000	16.10	5.4	46	29.9	AV	L1	GND
0.618000	25.60	5.4	46	20.4	AV	L1	GND
0.638000	27.50	5.4	46	18.5	AV	L1	GND
0.658000	18.50	5.4	46	27.5	AV	L1	GND
0.678000	15.40	5.4	46	30.6	AV	L1	GND

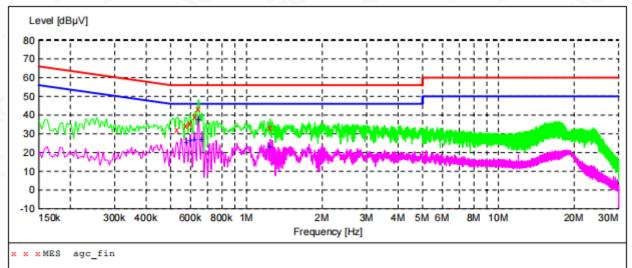
RESULT: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated for the formation of the stamp. Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/



Line Conducted Emission Test Line 2-N



MEASUREMENT RESULT: "agc fin"

2022/2/26 15:3	4						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dBµV	dB			
0.530000	32.20	5.4	56	23.8	QP	N	GND
0.578000	34.60	5.4	56	21.4	QP	N	GND
0.598000	35.40	5.4	56	20.6	QP	N	GND
0.626000	39.20	5.4	56	16.8	QP	N	GND
0.646000	43.20	5.4	56	12.8	QP	N	GND
1.242000	33.40	5.8	56	22.6	QP	N	GND
					~		

MEASUREMENT RESULT: "agc fin2"

	2022/2/26 15:	34						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dBµV	dB	dBµV	dB			
	0.578000	25.10	5.4	46	20.9	AV	N	GND
	0.598000	26.20	5.4	46	19.8	AV	N	GND
	0.622000	27.10	5.4	46	18.9	AV	N	GND
	0.646000	37.30	5.4	46	8.7	AV	N	GND
	0.666000	26.90	5.4	46	19.1	AV	N	GND
	1.242000	22.90	5.8	46	23.1	AV	N	GND
RES	SULT: PASS							

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



Report No.: AGC07434220102FE03 Page 27 of 27

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC07434220102AP02 APPENDIX B: PHOTOGRAPHS OF EUT Refer to the Report No.: AGC07434220102AP02 ----END OF REPORT----

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Pestho/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter apploration of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the solution of a stamp of the test results for the test results and the test of the test of the test results of the test results of the test report is not permitted without the writter apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.