

---

# FCC Test Report

---

Report No.: AGC03923230801FR01A

**FCC ID** : 2BCGH-IPM004  
**APPLICATION PURPOSE** : Class II Equipment  
**PRODUCT DESIGNATION** : WIFI Camera  
**BRAND NAME** : E-Song  
**MODEL NAME** : IPM004  
**APPLICANT** : E-Song Digital Limited  
**DATE OF ISSUE** : Nov. 09, 2023  
**STANDARD(S)** : FCC Part 15.247  
**TEST PROCEDURE(S)** :  
**REPORT VERSION** : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>



**REPORT REVISE RECORD**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Nov. 09, 2023	Valid	Initial Release

Note: The original test report AGC03923230801FR01 (dated Aug. 24, 2023 and tested from Aug. 07, 2023 to Aug. 24, 2023) was modified on Nov. 09, 2023, including the following changes and additions:

-Remove NTC

Based on the above changes, updated the EUT photos, additional tests for radiation emission and line conducted emission are required..

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

**TABLE OF CONTENTS**

<b>1. VERIFICATION OF CONFORMITY .....</b>	<b>4</b>
<b>2. GENERAL INFORMATION .....</b>	<b>5</b>
2.1. PRODUCT DESCRIPTION .....	5
2.2. TABLE OF CARRIER FREQUENCYS .....	6
2.3. IEEE 802.11N MODULATION SCHEME .....	7
2.4. RELATED SUBMITTAL(S) / GRANT (S) .....	7
2.5. TEST METHODOLOGY .....	7
2.6. SPECIAL ACCESSORIES .....	7
2.7. EQUIPMENT MODIFICATIONS .....	7
2.8. ANTENNA REQUIREMENT .....	8
<b>3. MEASUREMENT UNCERTAINTY .....</b>	<b>9</b>
<b>4. DESCRIPTION OF TEST MODES .....</b>	<b>10</b>
<b>5. SYSTEM TEST CONFIGURATION .....</b>	<b>11</b>
5.1. CONFIGURATION OF EUT SYSTEM .....	11
5.2. EQUIPMENT USED IN EUT SYSTEM .....	11
5.3. SUMMARY OF TEST RESULTS .....	11
<b>6. TEST FACILITY .....</b>	<b>12</b>
<b>7. RADIATED EMISSION .....</b>	<b>13</b>
7.1. MEASUREMENT PROCEDURE .....	13
7.2. TEST SETUP .....	14
7.3. LIMITS AND MEASUREMENT RESULT .....	15
7.4. TEST RESULT .....	15
<b>8. LINE CONDUCTED EMISSION TEST .....</b>	<b>33</b>
8.1. LIMITS OF LINE CONDUCTED EMISSION TEST .....	33
8.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST .....	33
8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST .....	34
8.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST .....	34
8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST .....	35
<b>APPENDIX I: PHOTOGRAPHS OF TEST SETUP .....</b>	<b>37</b>
<b>APPENDIX II: PHOTOGRAPHS OF EUT .....</b>	<b>37</b>

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

**1. VERIFICATION OF CONFORMITY**

<b>Applicant</b>	E-Song Digital Limited
<b>Address</b>	6F, Block B, Jintai Industrial Park, Hangcheng Road, Gushu, Xixiang, Bao'an District, Shenzhen City, PRC
<b>manufacturer</b>	E-Song Digital Limited
<b>Address</b>	6F, Block B, Jintai Industrial Park, Hangcheng Road, Gushu, Xixiang, Bao'an District, Shenzhen City, PRC
<b>Factory</b>	E-Song Digital Limited
<b>Address</b>	6F, Block B, Jintai Industrial Park, Hangcheng Road, Gushu, Xixiang, Bao'an District, Shenzhen City, PRC
<b>Product Designation</b>	WIFI Camera
<b>Brand Name</b>	E-Song
<b>Test Model</b>	IPM004
<b>Date of receipt of test item</b>	Nov. 06, 2023
<b>Date of test</b>	Nov. 06, 2023 to Nov. 09, 2023
<b>Deviation</b>	No any deviation from the test method
<b>Condition of Test Sample</b>	Normal
<b>Test Result</b>	Pass
<b>Report Template</b>	AGCRT-US-BGN/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 Rules Part 15.247.

Prepared By



Cici Li  
(Project Engineer)

Nov. 09, 2023

Reviewed By



Calvin Liu  
(Reviewer)

Nov. 09, 2023

Approved By



Max Zhang  
(Authorized Officer)

Nov. 09, 2023

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## 2. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

The EUT is designed as "WIFI Camera". It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

<b>Equipment Type</b>	WLAN 2.4G
<b>Frequency Band</b>	2400MHz ~ 2483.5MHz
<b>Operation Frequency</b>	2412MHz ~ 2462MHz
<b>Output Power (Average)</b>	IEEE 802.11b: 12.65dBm; IEEE 802.11g: 10.77dBm; IEEE 802.11n(HT20): 11.15dBm;
<b>Output Power (Peak)</b>	IEEE 802.11b: 15.67dBm; IEEE 802.11g: 18.67dBm; IEEE 802.11n(HT20): 19.06dBm;
<b>Modulation</b>	802.11b:DQPSK, DBPSK, CCK 802.11g/n: 64-QAM, 16-QAM, QPSK, BPSK
<b>Data Rate</b>	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps
<b>Number of channels</b>	11
<b>Hardware Version</b>	V4
<b>Software Version</b>	11.4
<b>Antenna Designation</b>	FPC antenna (Comply with requirements of the FCC part 15.203)
<b>Antenna Gain</b>	3.31dBi
<b>Power Supply</b>	DC 3.7V by battery or DC 5V by adapter

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

**2.2. TABLE OF CARRIER FREQUENCIES****11 channels are provided for 802.11b/g/n(HT20):**

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz		

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

### 2.3. IEEE 802.11N MODULATION SCHEME

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Data rate(Mbps)	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0
6	1	64-QAM	3/4	6	312	648	234	489	58.5	121.5
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

### 2.4. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2BCGH-IPM004** filing to comply with the FCC Part 15 requirements.

### 2.5. TEST METHODOLOGY

KDB 558074 D01 15.247 Meas Guidance v05: Guidance for compliance measurements on Digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

ANSI C63.10:2013: American National Standard for Testing Unlicensed Wireless Devices

### 2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

### 2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## 2.8. 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 II: 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 "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

### 3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , 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%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	$U_c = \pm 2.7 \%$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel transmitting (TX)
2	Middle channel transmitting (TX)
3	High channel transmitting (TX)

## Note:

Transmit by 802.11b with Date rate (1/2/5.5/11)

Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54)

Transmit by 802.11n (20MHz) with Date rate (6.5/13/19.5/26/39/52/58.5/65)

The test channel for 20MHz bandwidth system is channel 1, 6 and 11.

### Note:

1. The EUT has been set to operate continuously on the lowest, middle and highest operation frequency individually, and the EUT is operating at its maximum duty cycle or equal 98%
2. All modes under which configuration applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

## Software Setting

```
Serial-COM2 - SecureCRT
文件(F) 调理(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
拆分合并 X
Serial-COM2
atbm_iot_c1f fw_cmd AT+WIFI ETF_STOP_TX
cmd_line: fw_cmd AT+WIFI ETF_STOP_TX
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+WIFI ETF_START_TX CH 1 RATE 6.5 LEN 0 4
OM 0 GREENFIELD 0
cmd_line: fw_cmd AT+WIFI ETF_START_TX CH 1 RATE 6.5 LEN 0 40M 0 GREENFIELD 0
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+TX_POWER -25
cmd_line: fw_cmd AT+TX_POWER -25
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+WIFI ETF_STOP_TX
cmd_line: fw_cmd AT+WIFI ETF_STOP_TX
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+WIFI ETF_START_TX CH 13 RATE 6.5 LEN 0
40M 0 GREENFIELD 0
cmd_line: fw_cmd AT+WIFI ETF_START_TX CH 13 RATE 6.5 LEN 0 40M 0 GREENFIELD 0
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+TX_POWER -25
cmd_line: fw_cmd AT+TX_POWER -25
[root@zeratul:~]# OK
atbm_iot_c1f fw_cmd AT+WIFI ETF_STOP_TX
cmd_line: fw_cmd AT+WIFI ETF_STOP_TX
[root@zeratul:~]# OK

Default - 1 2 3 4 5 6 7 reset show reboot
```

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by aqc01@accert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

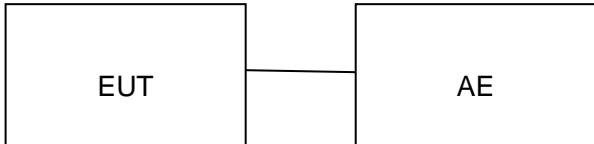
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## 5. SYSTEM TEST CONFIGURATION

### 5.1. CONFIGURATION OF EUT SYSTEM

Configure:



### 5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	WIFI Camera	IPM004	2BCGH-IPM004	EUT

### 5.3. SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Result
1	§15.209	Radiated Emission& Band Edge	Pass
2	§15.207	AC Power Line Conducted Emission	Pass

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.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	Jun. 03, 2023	Jun. 02, 2024
LISN	R&S	ESH2-Z5	100086	Jun. 03, 2023	Jun. 02, 2024
Test software	R&S	ES-K1(Ver.V1.71)	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	Feb. 18, 2023	Feb. 17, 2024
EXA Signal Analyzer	Agilent	N9010A	MY53470504	Jun. 01, 2023	May 31, 2024
2.4GHz Fliter	EM Electronics	2400-2500MHz	N/A	Jun. 01, 2023	May 31, 2024
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 24, 2023	Sep. 23, 2025
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	00034609	Mar. 12, 2022	Mar. 11, 2024
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2023	Apr. 22, 2024
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 01, 2022	Sep. 02, 2024
ANTENNA	SCHWARZBECK	VULB9168	VULB9168-494	Jan. 05, 2023	Jan. 04, 2025
Test software	Tonscend	JS32-RE (Ver.2.5)	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 "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## 7. RADIATED EMISSION

### 7.1. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 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 emission, 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 RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
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 "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

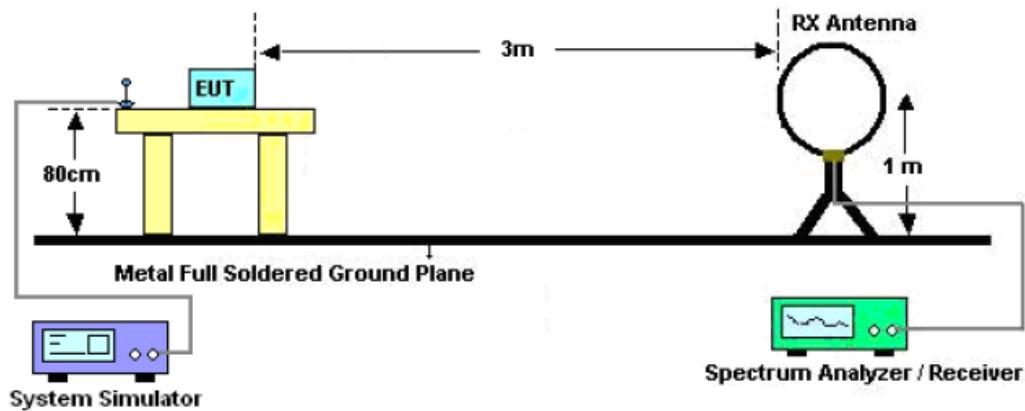
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

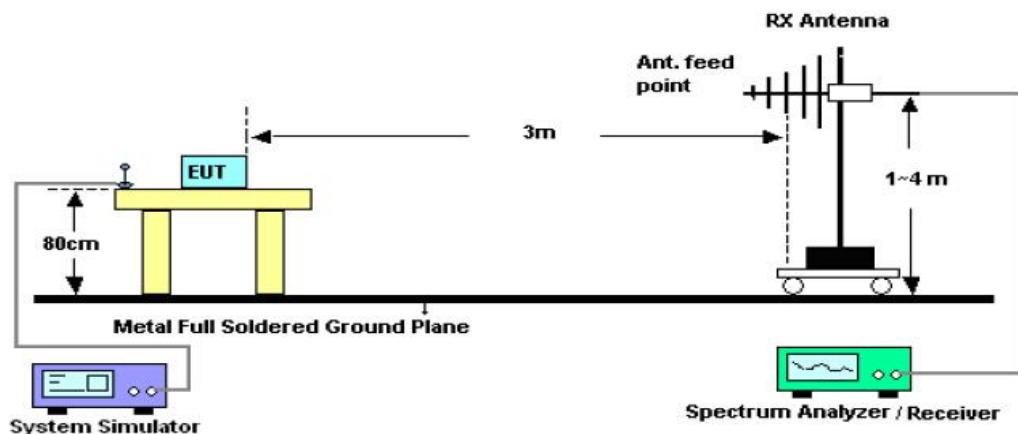
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## 7.2. TEST SETUP

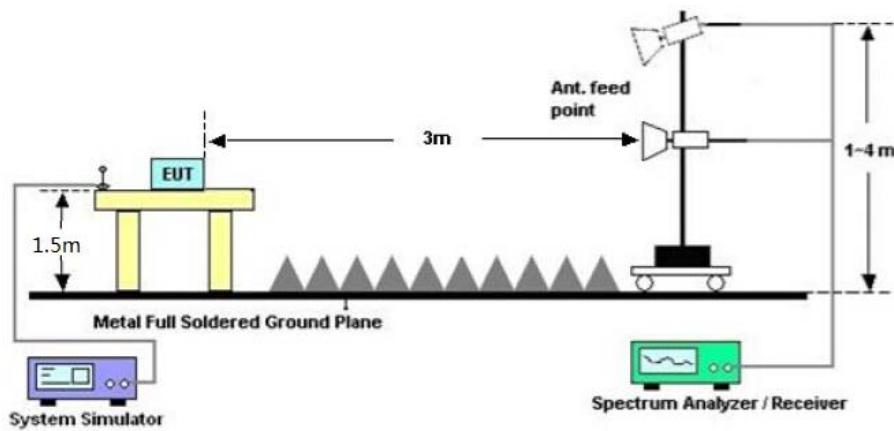
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

### 7.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

<b>Frequencies (MHz)</b>	<b>Field Strength (microvolts/meter)</b>	<b>Measurement Distance (meters)</b>
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

Note: All modes were tested for restricted band radiated emission,  
the test records reported below are the worst result compared to other modes.

### 7.4. TEST RESULT

#### **Radiated emission below 30MHz**

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

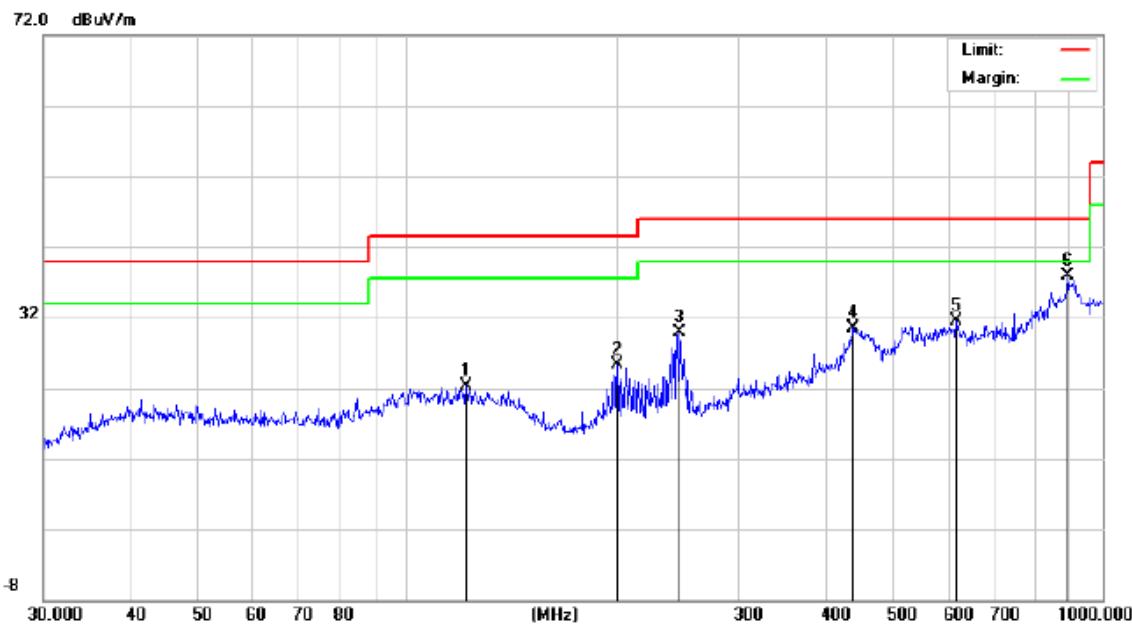
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## Radiated emission from 30MHz to 1000MHz

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2412MHz	<b>Antenna</b>	Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
			Level	Factor	ment		
		MHz	dBuV	dB	dBuV/m	dB/m	dB
1		121.5485	5.96	16.31	22.27	43.50	-21.23 peak
2		200.6880	10.75	14.50	25.25	43.50	-18.25 peak
3		246.8148	14.73	15.20	29.93	46.00	-16.07 peak
4		437.1198	5.99	24.48	30.47	46.00	-15.53 peak
5		616.3718	6.29	25.18	31.47	46.00	-14.53 peak
6	*	890.7278	7.35	30.64	37.99	46.00	-8.01 peak

## RESULT: PASS

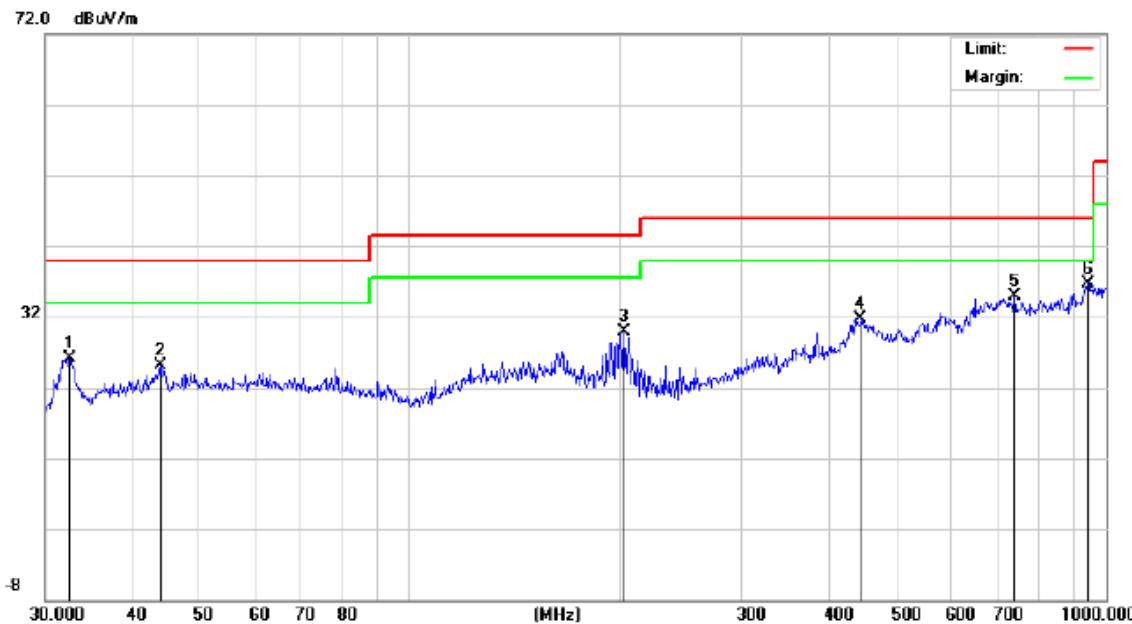
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

 Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2412MHz	<b>Antenna</b>	Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
			Level	Factor	ment		
		MHz	dBuV	dB	dBuV/m	dB/m	dB
1		32.5198	11.74	14.43	26.17	40.00	-13.83 peak
2		43.8119	8.18	16.94	25.12	40.00	-14.88 peak
3		203.5228	12.33	17.64	29.97	43.50	-13.53 peak
4		444.8514	5.92	25.88	31.80	46.00	-14.20 peak
5		739.6604	7.88	26.93	34.81	46.00	-11.19 peak
6	*	942.1305	5.89	30.91	36.80	46.00	-9.20 peak

## RESULT: PASS

**Note:** 1. Factor=Antenna Factor + Cable loss, Over=Measure-Limit.  
 2. The "Factor" value can be calculated automatically by software of measurement system.  
 3. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## Radiated emission above 1GHz

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2412MHz	<b>Antenna</b>	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4824.000	56.23	0.08	56.31	74	-17.69	peak
4824.000	47.67	0.08	47.75	54	-6.25	AVG
7236.000	50.32	2.21	52.53	74	-21.47	peak
7236.000	41.66	2.21	43.87	54	-10.13	AVG

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

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2412MHz	<b>Antenna</b>	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4824.000	56.82	0.08	56.9	74	-17.1	peak
4824.000	46.61	0.08	46.69	54	-7.31	AVG
7236.000	50.32	2.21	52.53	74	-21.47	peak
7236.000	41.22	2.21	43.43	54	-10.57	AVG

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

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2437MHz	<b>Antenna</b>	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4874.000	56.3	0.14	56.44	74	-17.56	peak
4874.000	46.42	0.14	46.56	54	-7.44	AVG
7311.000	51.66	2.36	54.02	74	-19.98	peak
7311.000	41.73	2.36	44.09	54	-9.91	AVG

Remark:

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

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2437MHz	<b>Antenna</b>	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4874.000	56.31	0.14	56.45	74	-17.55	peak
4874.000	46.19	0.14	46.33	54	-7.67	AVG
7311.000	50.42	2.36	52.78	74	-21.22	peak
7311.000	41.66	2.36	44.02	54	-9.98	AVG

Remark:

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

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

 Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2462MHz	<b>Antenna</b>	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4924.000	55.91	0.22	56.13	74	-17.87	peak
4924.000	46.69	0.22	46.91	54	-7.09	Avg
7386.000	50.41	2.64	53.05	74	-20.95	peak
7386.000	42.79	2.64	45.43	54	-8.57	Avg
<b>Remark:</b>						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	58%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with date rate 1 2462MHz	<b>Antenna</b>	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4924.000	56.43	0.22	56.65	74	-17.35	peak
4924.000	46.39	0.22	46.61	54	-7.39	Avg
7386.000	51.22	2.64	53.86	74	-20.14	peak
7386.000	42.07	2.64	44.71	54	-9.29	Avg
<b>Remark:</b>						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

## RESULT: PASS

### Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Emission Level-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

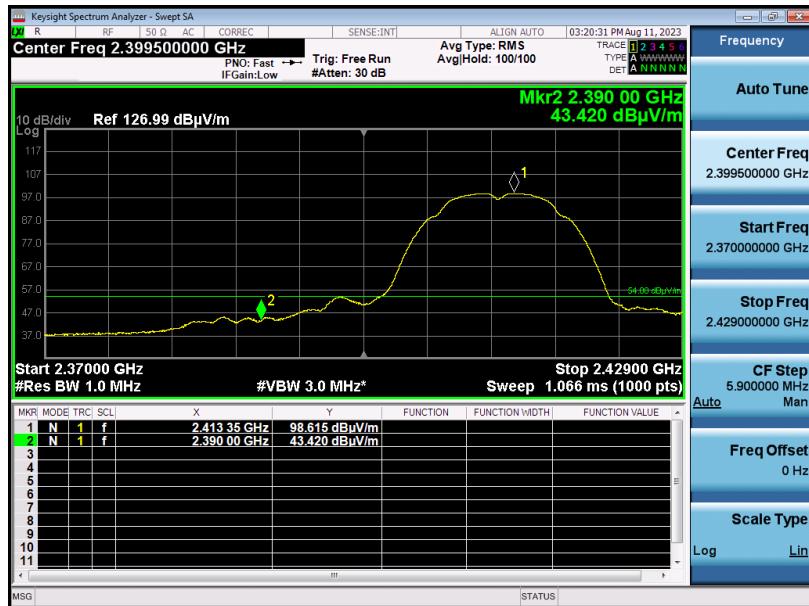
### Test result for band edge emission at restricted bands

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with data rate 1 2412MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



### 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

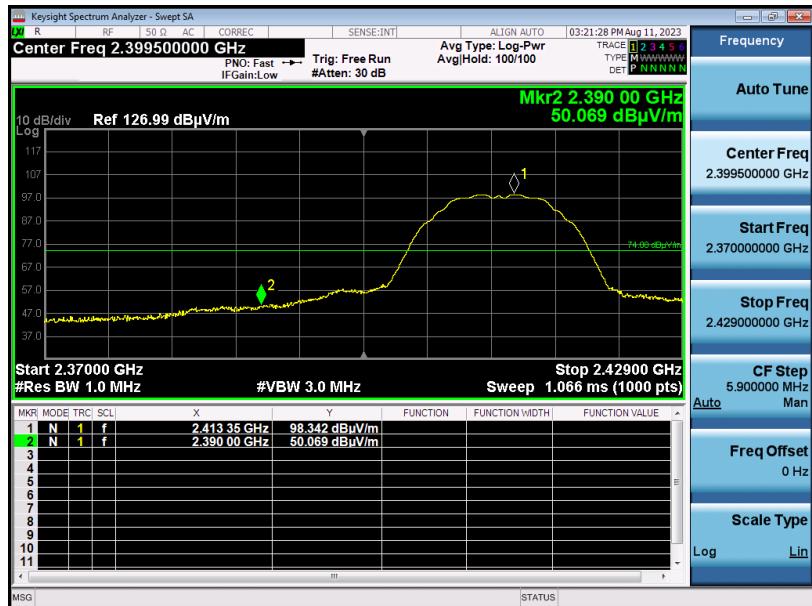
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

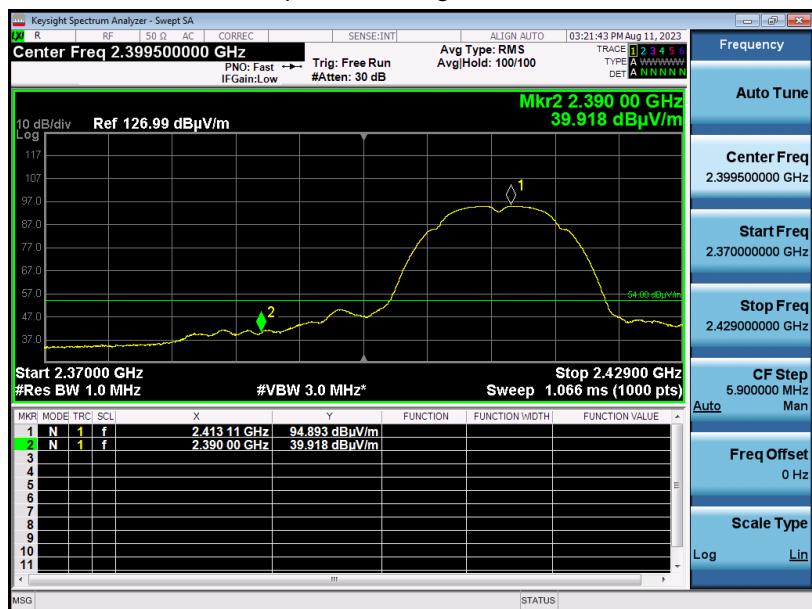
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with data rate 1 2412MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

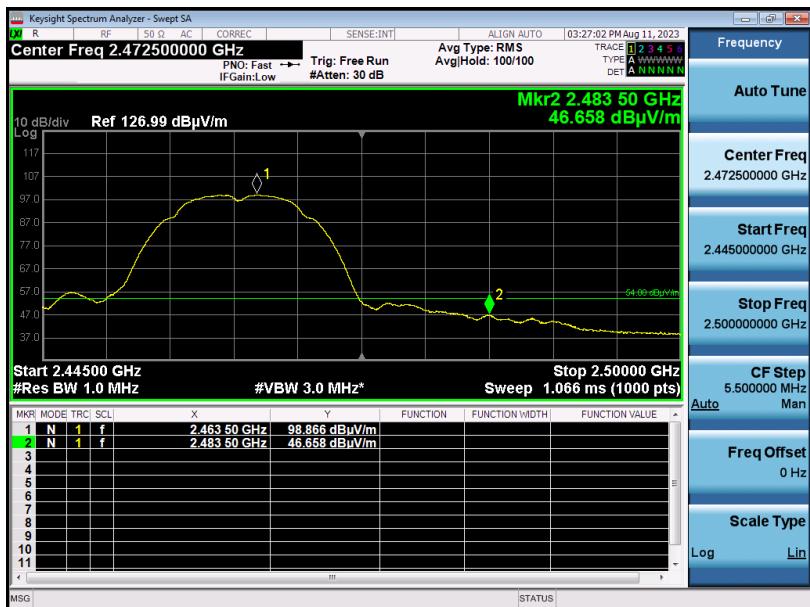
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with data rate 1 2462MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

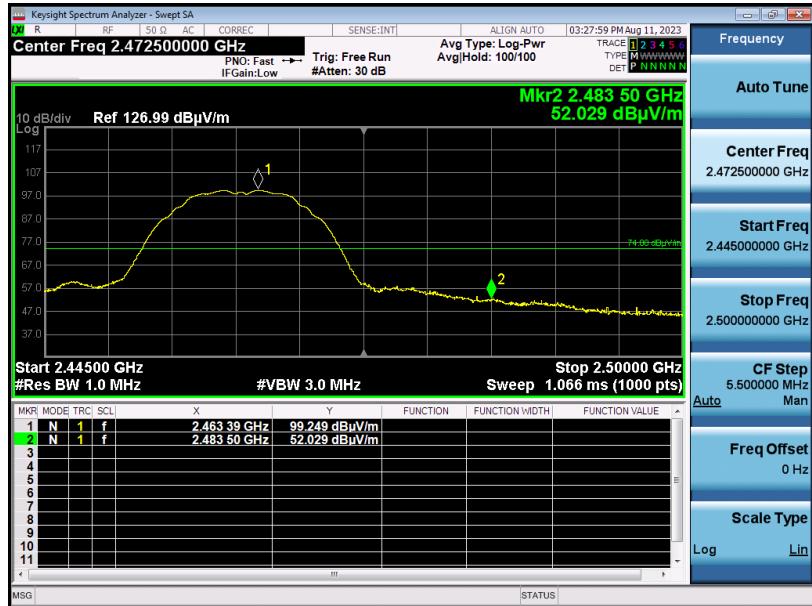
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

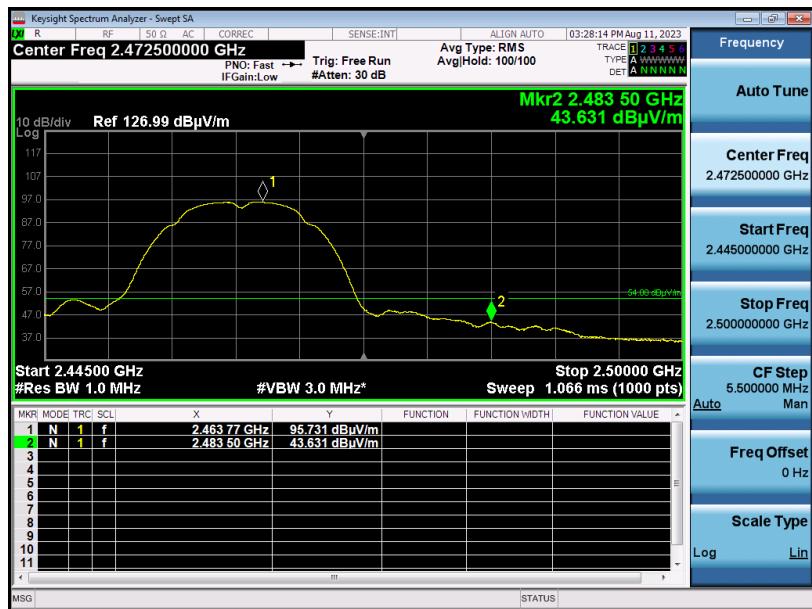
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11b with data rate 1 2462MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



### 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

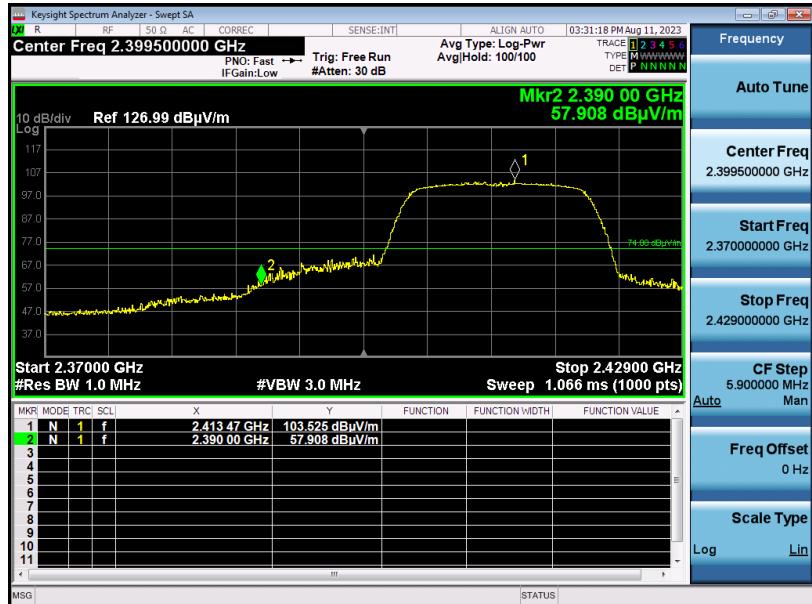
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

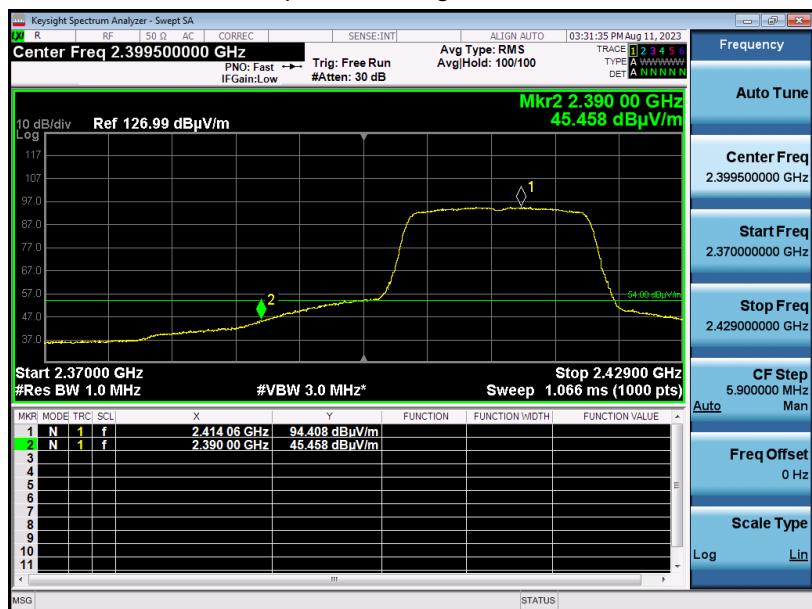
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11g with data rate 6 2412MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

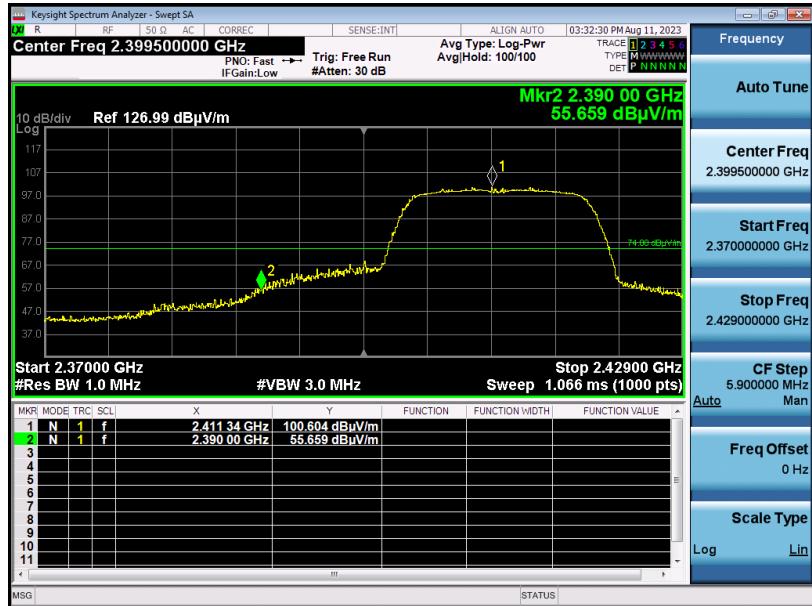
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

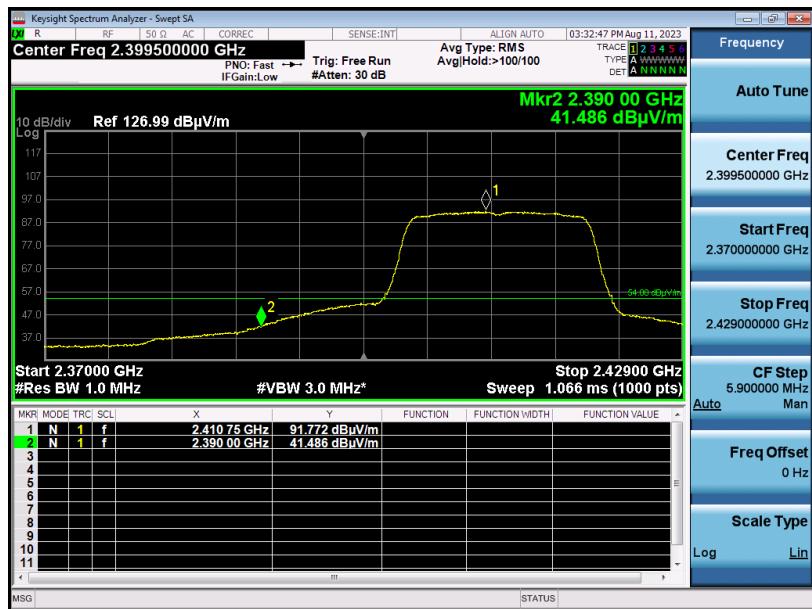
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11g with data rate 6 2412MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

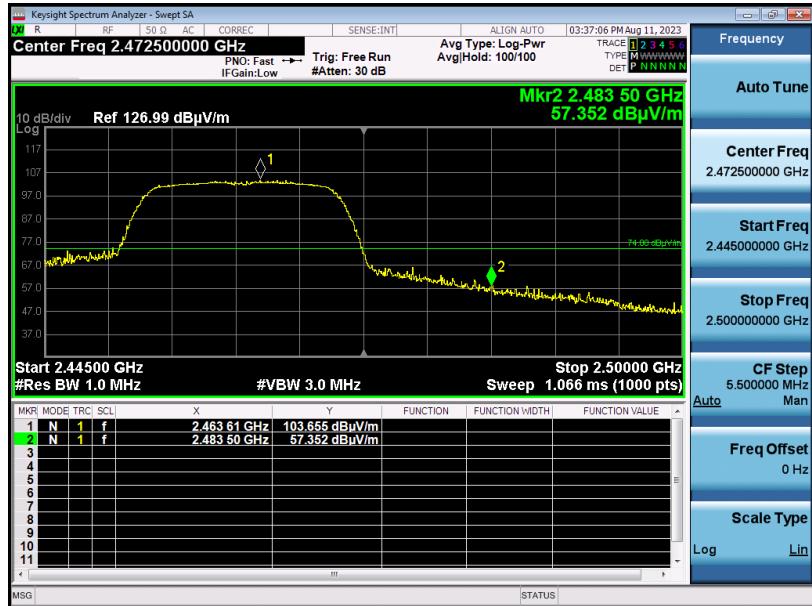
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

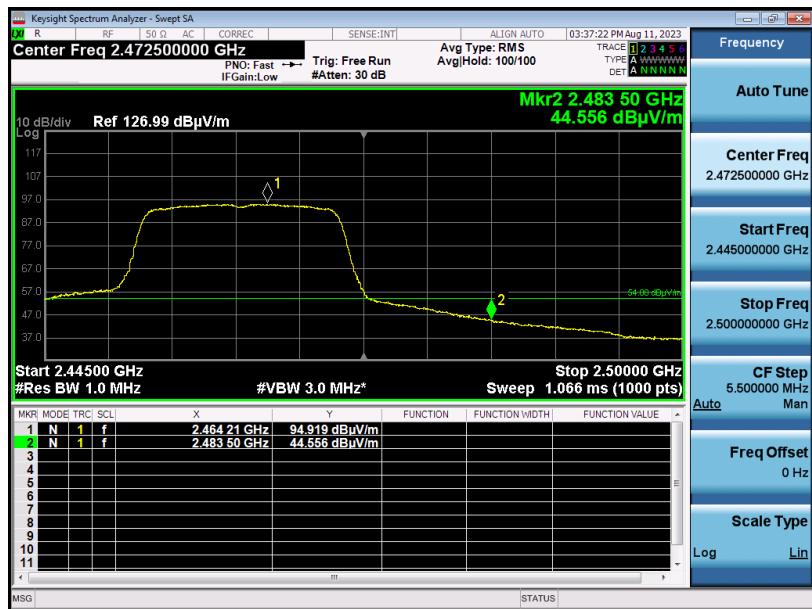
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11g with data rate 6 2462MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

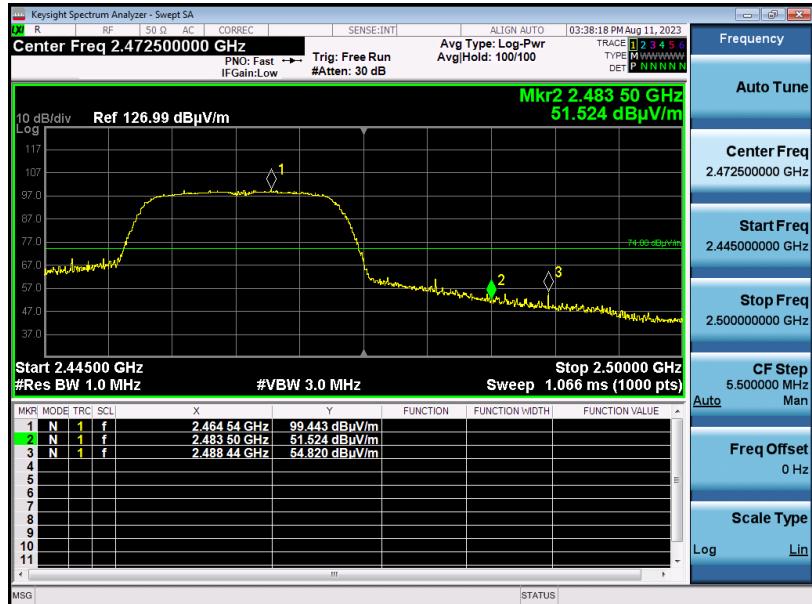
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

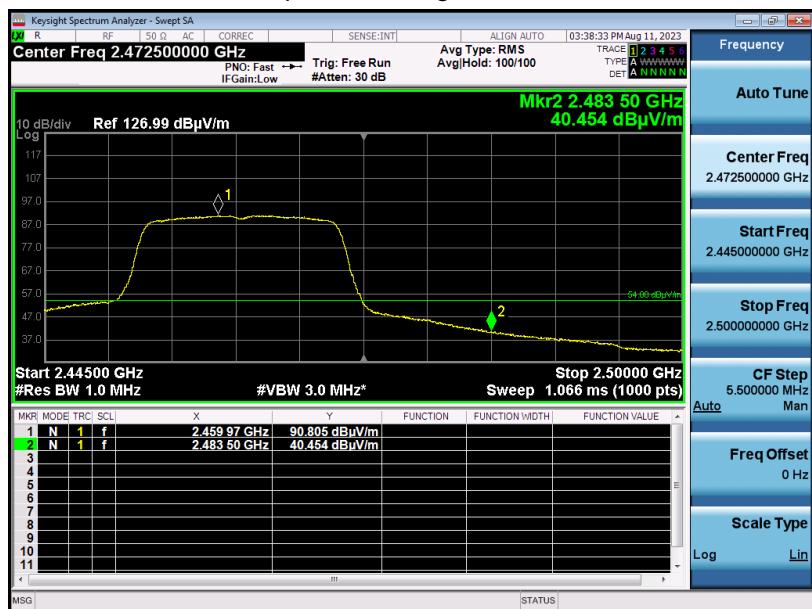
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11g with data rate 6 2462MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



### 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

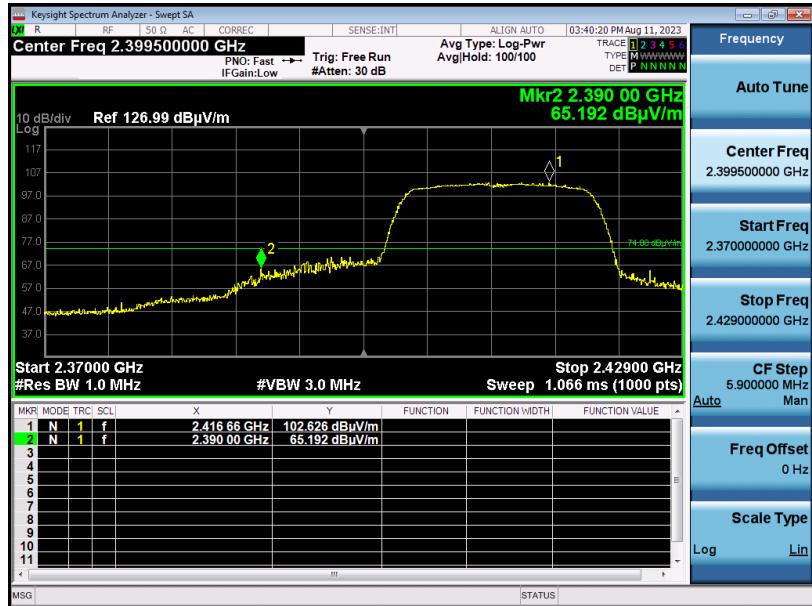
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

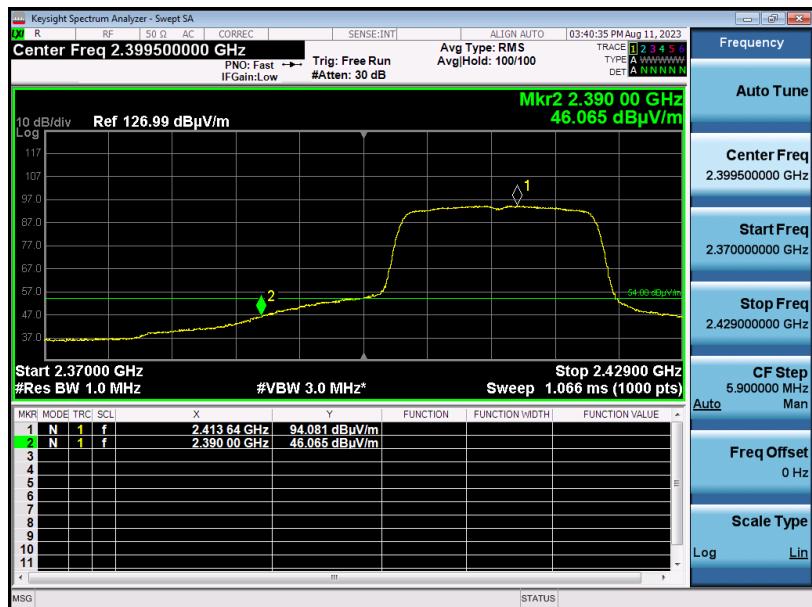
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11n20 with data rate 6.5 2412MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



**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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

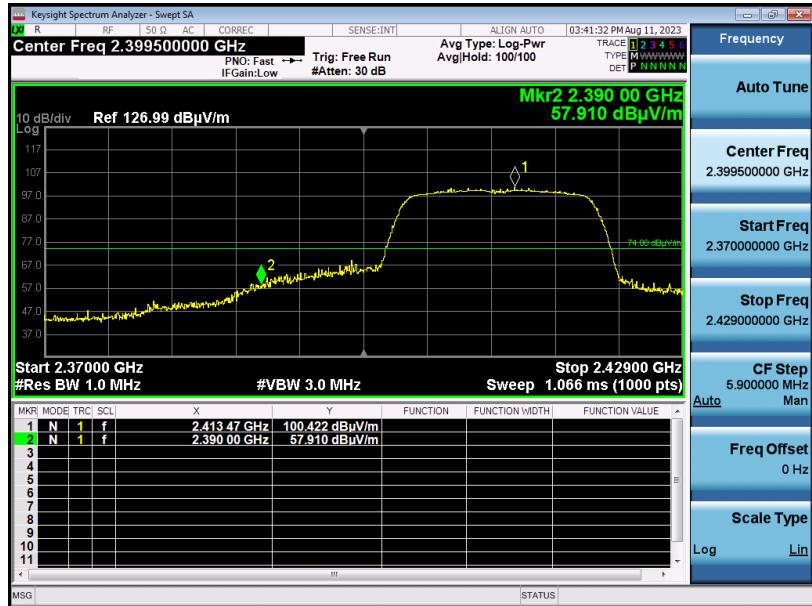
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

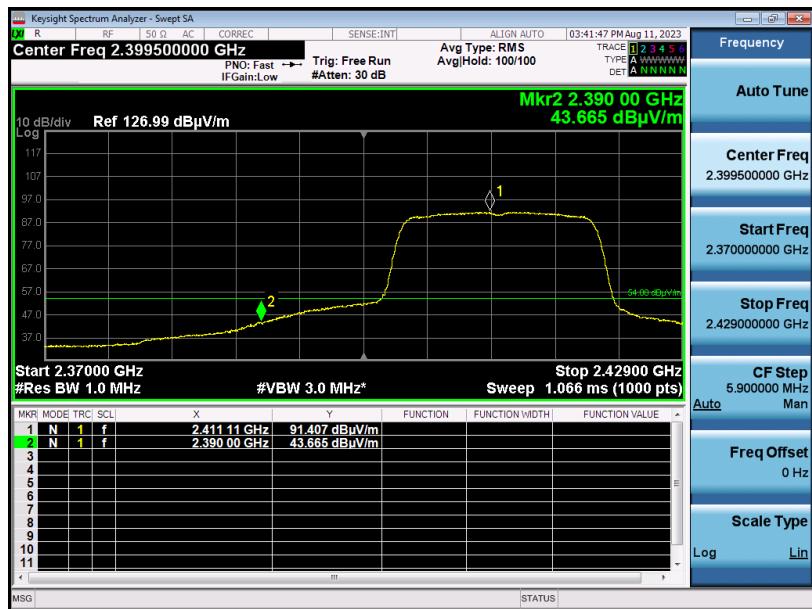
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11n20 with data rate 6.5 2412MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

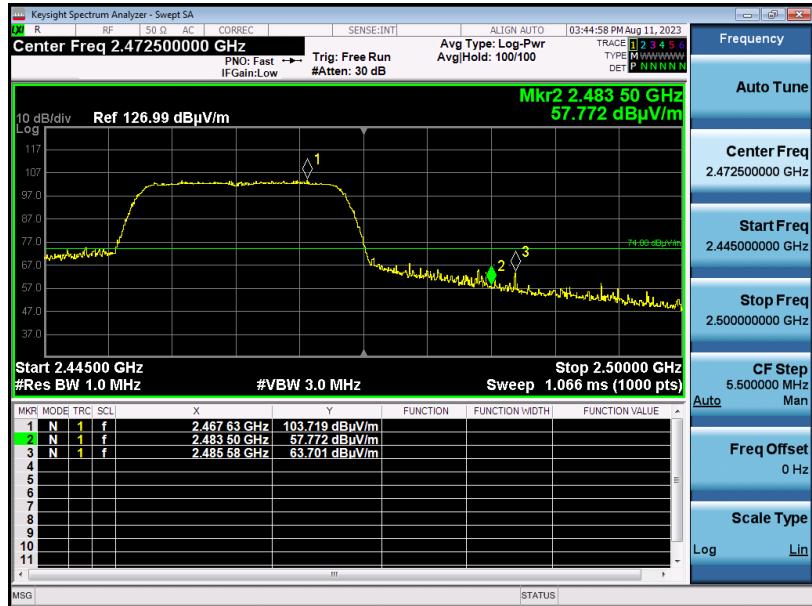
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

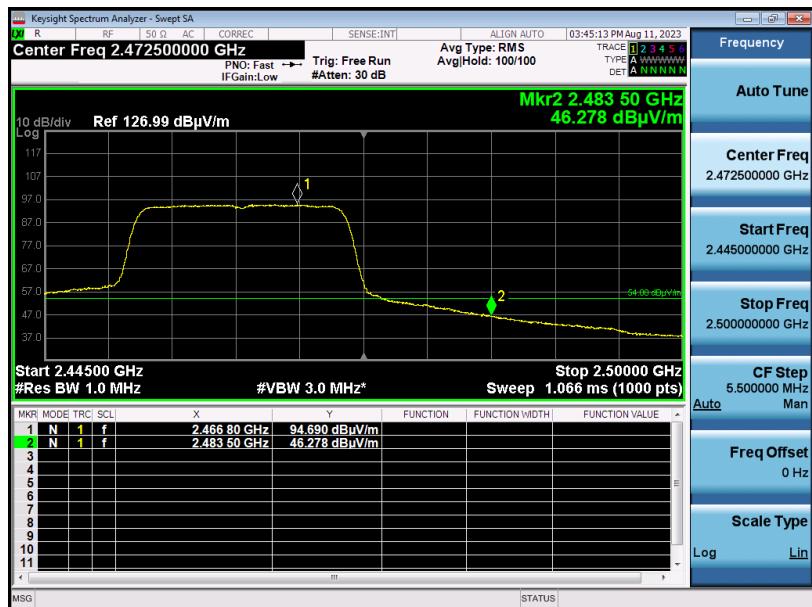
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11n20 with data rate 6.5 2462MHz	<b>Antenna</b>	Horizontal

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



## 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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

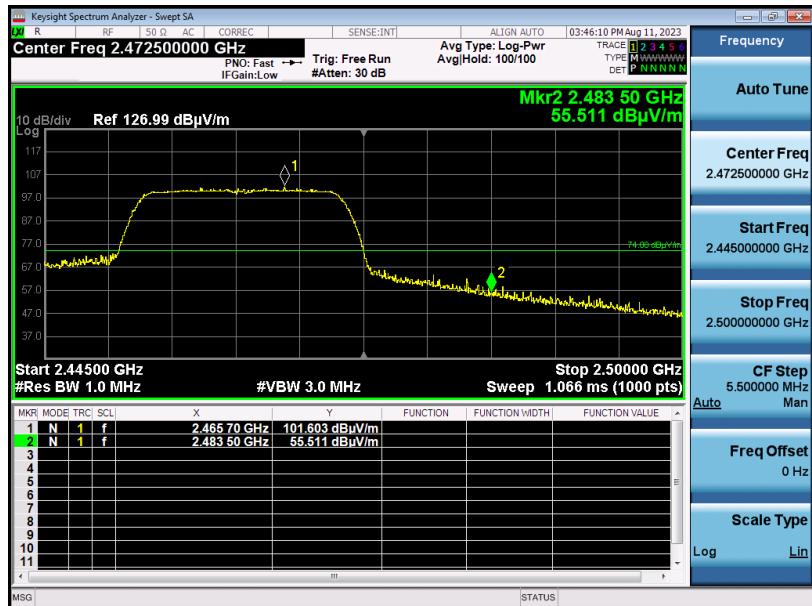
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

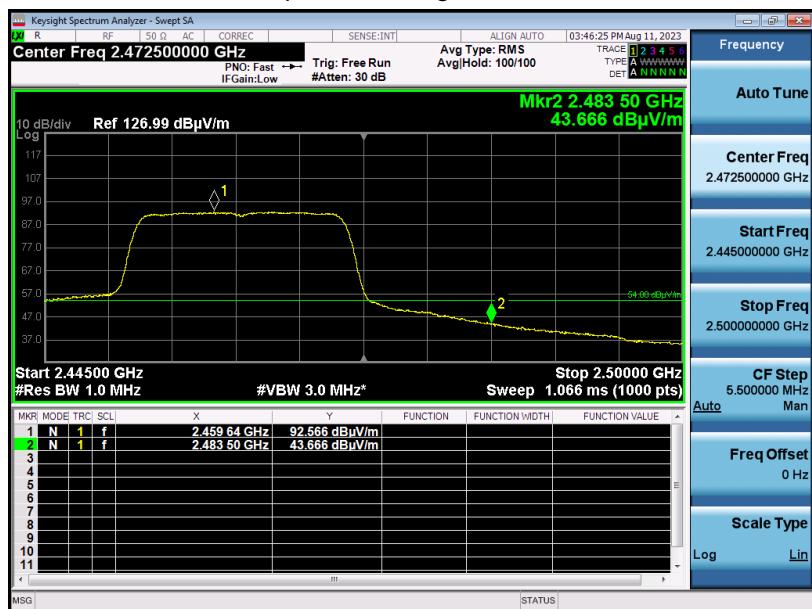
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

<b>EUT</b>	WIFI Camera	<b>Model Name</b>	IPM004
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	802.11n20 with data rate 6.5 2462MHz	<b>Antenna</b>	Vertical

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



**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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

## 8. LINE CONDUCTED EMISSION TEST

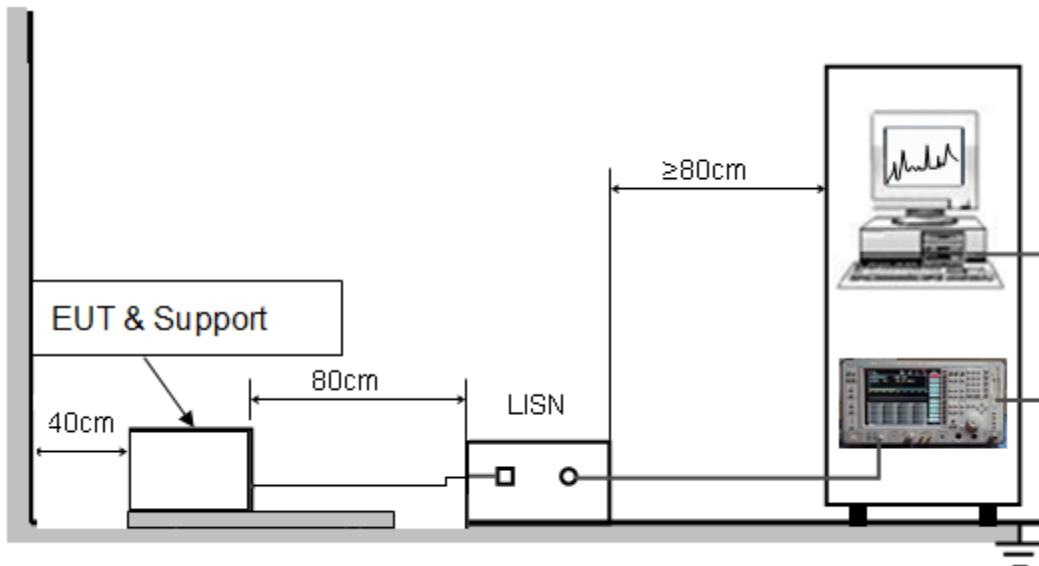
### 8.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P (dB $\mu$ V)	Average (dB $\mu$ V)
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.

### 8.2. 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 "Dedicated 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 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>

### 8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. 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 equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 16.1V power from adapter which received AC120V/60Hz power from 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.

### 8.4. 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.
2. 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 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 "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

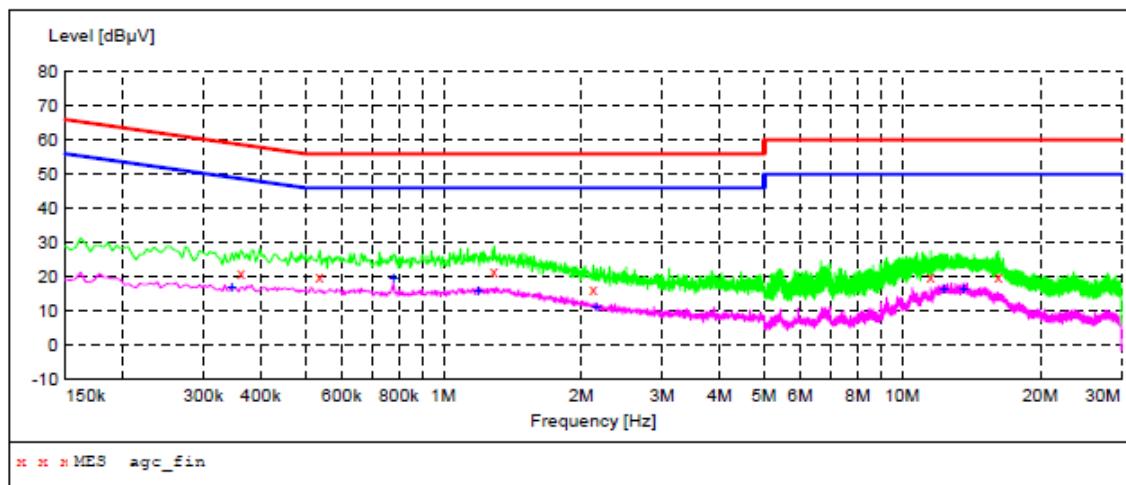
Attestation of Global Compliance(Shenzhen)Co., Ltd

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

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## 8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

### Line Conducted Emission Test Line 1-L



#### **MEASUREMENT RESULT: "agc\_fin"**

2023/11/7 9:57

Frequency MHz	Level dB $\mu$ V	Transd dB	Limit dB $\mu$ V	Margin dB	Detector	Line
0.362000	20.90	6.1	59	37.8	QP	L1
0.538000	19.90	6.2	56	36.1	QP	L1
1.290000	21.70	6.2	56	34.3	QP	L1
2.122000	16.40	6.2	56	39.6	QP	L1
11.530000	20.20	6.7	60	39.8	QP	L1
16.194000	20.10	6.9	60	39.9	QP	L1

#### **MEASUREMENT RESULT: "agc\_fin2"**

2023/11/7 9:57

Frequency MHz	Level dB $\mu$ V	Transd dB	Limit dB $\mu$ V	Margin dB	Detector	Line
0.346000	16.70	6.1	49	32.4	AV	L1
0.778000	19.50	6.2	46	26.5	AV	L1
1.190000	15.80	6.2	46	30.2	AV	L1
2.154000	11.30	6.2	46	34.7	AV	L1
12.290000	16.30	6.8	50	33.7	AV	L1
13.566000	16.30	6.8	50	33.7	AV	L1

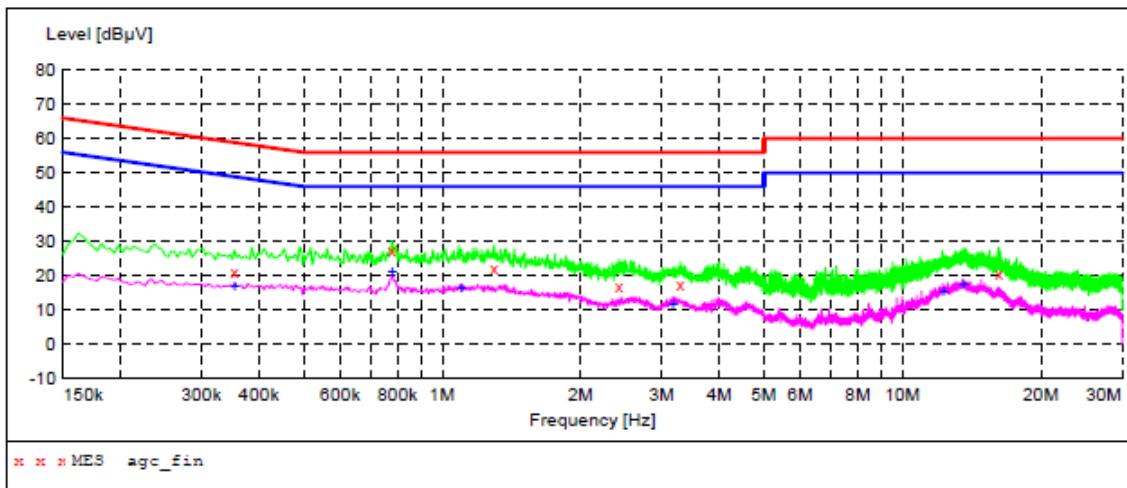
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

 Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## Line Conducted Emission Test Line 2-N


**MEASUREMENT RESULT: "agc\_fin"**

2023/11/7 10:00

Frequency MHz	Level dB $\mu$ V	Transd dB	Limit dB $\mu$ V	Margin dB	Detector	Line
0.354000	21.10	6.1	59	37.8	QP	N
0.778000	27.50	6.2	56	28.5	QP	N
1.298000	22.20	6.2	56	33.8	QP	N
2.422000	16.90	6.3	56	39.1	QP	N
3.294000	17.30	6.3	56	38.7	QP	N
16.182000	20.70	6.9	60	39.3	QP	N

**MEASUREMENT RESULT: "agc\_fin2"**

2023/11/7 10:00

Frequency MHz	Level dB $\mu$ V	Transd dB	Limit dB $\mu$ V	Margin dB	Detector	Line
0.354000	17.00	6.1	49	31.9	AV	N
0.778000	21.20	6.2	46	24.8	AV	N
1.102000	16.30	6.2	46	29.7	AV	N
3.170000	11.90	6.3	46	34.1	AV	N
12.266000	15.40	6.8	50	34.6	AV	N
13.538000	17.60	6.8	50	32.4	AV	N

**RESULT: PASS**

**Note:** All test modes had been pre-tested. The 802.11b at Middle channel is the worst case and recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

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

 Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

**APPENDIX I: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC03923230801AP02A

**APPENDIX II: PHOTOGRAPHS OF EUT**

Refer to the Report No.: AGC03923230801AP03A

**----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 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.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 or 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 "Dedicated 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.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@agccert.com Web: <http://www.agccert.com/>