1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHCR2109000298AT
FCC ID:	2AVYF-IPC-A4XL-D
Applicant:	Hangzhou Huacheng Network Technology Co.,Ltd.
Address of Applicant:	No.2930, Nanhuan Road, Binjiang District, Hangzhou, China
Manufacturer:	Hangzhou Huacheng Network Technology Co.,Ltd.
Address of Manufacturer:	No.2930, Nanhuan Road, Binjiang District, Hangzhou, China
Equipment Under Test (EUT):	
EUT Name:	CONSUMER CAMERA
Model No.:	IPC-A46LP-D
Add Model No:	IPC-A46LP-D-imou,IPC-A46LN-D-imou,IPC-A46LN-D,IPC-TA46L-D-LC,TP7S-4M-D,IPC-A46L-D-LC,LC-K26L-4M-D
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2021-09-24
Date of Test:	2021-09-26 to 2021-11-08
Date of Issue:	2021-11-10
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan

Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2021-11-10	/

Authorized for issue by:				
		Micheal Niu		
		Micheal Niu / Project Engineer		
		Parlam Zhan		
		Parlam Zhan / Reviewer		

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services(Shanghai) Co., Ltd.
Testing Center ENG Laboratory
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21)61915666 f(86-21)61915678 e sgs.china@sgs.com

2 Contents

Page

1 COVER PAGE 1
2 CONTENTS 3
3 GENERAL INFORMATION 4
3.1 GENERAL DESCRIPTION OF E.U.T 4
3.2 TECHNICAL SPECIFICATIONS 4
3.3 TEST LOCATION 5
3.4 TEST FACILITY 5
4 TEST STANDARDS AND LIMITS 6
4.1 FCC RADIOFREQUENCY RADIATION EXPOSURE LIMITS: 6
5 MEASUREMENT AND CALCULATION 7
5.1 MAXIMUM TRANSMIT POWER 7
5.2 MPE CALCULATION 8

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center EMC Laboratory
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 5V by adapter

3.2 Technical Specifications

2.4GHz

Antenna Gain:	2.46dBi (Provided by manufacturer)
Antenna Type:	Integral Antenna
Channel Spacing:	5MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center EMC Laboratory
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com
Member of the SGS Group (SGS SA)

3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

3.4 Test Facility

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

• CNAS (No. CNAS L4354)

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• A2LA (Certificate No. 2541.01)

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC (Designation Number: CN1172)

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED (CAB identifier: CN0072)

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

CAB Identifier: CN0072.

• VCCI (Member No.: 1938)

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600,C-11707, T-11499, G-10216 respectively.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center EMC Laboratory
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to§1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm^2)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com
Member of the SGS Group (SGS SA)

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHCR210900029801

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	15.44	34.99
11B	2437	Ant1	15.47	**35.24**
11B	2462	Ant1	15.44	34.99
11G	2412	Ant1	13.64	23.12
11G	2437	Ant1	13.27	21.23
11G	2462	Ant1	13.24	21.09
11N20SISO	2412	Ant1	13.05	20.18
11N20SISO	2437	Ant1	13.75	23.71
11N20SISO	2462	Ant1	13.14	20.61
11N40SISO	2422	Ant1	13.23	21.04
11N40SISO	2437	Ant1	13.31	21.43
11N40SISO	2452	Ant1	13.30	21.38

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

5.2 MPE Calculation

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

1) P (mW)
2) R = distance to the center of radiation of antenna (in meter) = 20cm
3) MPE limit = 1mW/cm²

For 2.4G WiFi:

The max. antenna gain is 2.46 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Result
35.24	1.762	20	0.01235	1	Pass

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test

--End of the Report--

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

NO.588 West Jindu Road,Songjiang District,Shanghai,China 201612 t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)