

1 Cover Page

RF Exposure Evaluation Report

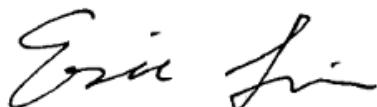
Application No.: KSCR2109000105AT
FCC ID: 2ADTD-K020103113
Applicant: Hangzhou Hikvision Digital Technology Co.,Ltd.
Address of Applicant: No. 555, Qianmo Road, Binjiang District, Hangzhou
Manufacturer: Hangzhou Hikvision Digital Technology Co.,Ltd.
Address of Manufacturer: No. 555, Qianmo Road, Binjiang District, Hangzhou
Factory:
 1. Hangzhou Hikvision Technology Co., Ltd.
 2. Hangzhou Hikvision Electronics Co.,Ltd.
 3. CHONGQING HIKVISION TECHNOLOGY CO.,LTD.
 1. No.700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang, 310052, China
 2. No.299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou, Zhejiang, 310052, China.
 3. Building 18, Louyu Area, C area, Jianqiao industrial park, Chongqing.

Address of Factory:

Equipment Under Test (EUT):
EUT Name: Wireless LED Keypad
Model No.: DS-PK1-E-WA
Add Model No.: DS-PK1-E-WAUHK,DS-PK1-E-WACKV,DS-PK1-E-WAUVS,DS-PK1-E-WAKVO,DS-PK1-E-WAHUN
Trade mark: HIKVISION
Standard(s) : FCC Rules 47 CFR §2.1091
Date of Receipt: 2021-09-27
Date of Test: 2021-10-01 to 2021-10-03
Date of Issue: 2021-10-03

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

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



Eric Lin

Laboratory 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.10, Weiyi Road, Innovation Park, Kunshan, Jiangsu, China 215300

t(86-512)57355888 f(86-512)57370818 www.sgsgroup.com.cn

中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

t(86-512)57355888 f(86-512)57370818 sgs.china@sgs.com

| Revision Record | | | |
|-----------------|-------------|------------|--------|
| Version | Description | Date | Remark |
| 00 | Original | 2021-10-03 | / |
| | | | |
| | | | |

| | | | | |
|--------------------------|--|-------------------------------|--|--|
| Authorized for issue by: | | | | |
| | | Damon Zhou | | |
| | | Damon Zhou / Project Engineer | | |
| | | Eric Lin | | |
| | | Eric Lin / 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

No.10, Weiyue Road, Innovation Park, Kunshan, Jiangsu, China 215300
 中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

|(86-512)57355888 f|(86-512)57370818 www.sgsgroup.com.cn
 |(86-512)57355888 f|(86-512)57370818 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 | 7 |



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed on demand, 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-Electronic.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.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300
中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

+(86-512)57355888 +(86-512)57370818 www.sgsgroup.com.cn
+(86-512)57355888 +(86-512)57370818 sgs.china@sgs.com

3 General Information

3.1 General Description of E.U.T.

| | |
|---------------|----------------------------|
| Power supply: | DC 1.5V, Four AA Batteries |
|---------------|----------------------------|

3.2 Technical Specifications

| | |
|----------------------|-------------------------------------|
| Operation Frequency: | 912.5MHz ~ 917.4MHz |
| Number of Channels: | 50 |
| Channel Spacing: | 100kHz |
| Modulation Type: | FSK |
| Antenna Gain: | -3.80dBi (Provided by manufacturer) |
| Antenna Type: | Helical Antenna |



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed on demand, 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-Electronic.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.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300
 中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

(86-512)57355888 (86-512)57370818 www.sgsgroup.com.cn
 (86-512)57355888 (86-512)57370818 sgs.china@sgs.com

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.

Company Number: 2324E

- **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 on demand, 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-Electronic.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.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300

中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

+(86-512)57355888 +(86-512)57370818 www.sgsgroup.com.cn

+(86-512)57355888 +(86-512)57370818 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 on demand, 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-Electronic.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.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300
中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

+(86-512)57355888 +(86-512)57370818 www.sgsgroup.com.cn
+(86-512)57355888 +(86-512)57370818 sgs.china@sgs.com

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR210900010501

| Test Mode | Channel | Antenna Power[dBm] | Antenna Power[mW] |
|-----------|---------|--------------------|-------------------|
| FSK | 912.5 | 11.84 | 15.28 |
| | 917.4 | 11.68 | 14.72 |

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) For 912.5MHz ~ 917.4MHz, the limit: 912.5MHz / 1500 = 0.608mW/cm².

The max. antenna gain is -3.8 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 |
|----------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------|--------|
| 15.28 | 0.417 | 20 | 0.00127 | 0.608 | 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 on demand, 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-Electronic.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 herein 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.10, Weiyi Road, Innovation Park, Kunshan, Jiangsu, China 215300
中国·江苏·昆山市留学生创业园伟业路10号 邮编 215300

+(86-512)57355888 +(86-512)57370818 www.sgsgroup.com.cn
+(86-512)57355888 +(86-512)57370818 sgs.china@sgs.com