



1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM2009007712CR
FCC ID: 2ADTD-K1T680DFG1
Applicant: Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Applicant: No.555 Qianmo Road,Binjiang District Hangzhou 310052,China
Manufacturer: Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Manufacturer: No.555 Qianmo Road,Binjiang District Hangzhou 310052,China
Factory: 1.Hangzhou Hikvision Technology Co., Ltd.
2.Hangzhou Hikvision Electronics Co.,Ltd.
3.Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Factory: 1.No.700,Dongliu Road,Binjiang District,Hangzhou
Ctiy,Zhejiang,310052,China
2.No.299,Qiushi Road,Tonglu Economic Development Zone,Tonglu
County,Hangzhou,Zhejiang,310052,China.
3.No.555 Qianmo Road, Binjiang District Hangzhou 310052,China

Equipment Under Test (EUT):
EUT Name: Face Recognition Terminal
Model No.: DS-K1T680DG1,DS-K1T680DFG1,DS-K1T680DFG1UHK,DS-
K1T680DFG1CKV,DS-K1T680DFG1UVS,DS-K1T680DFG1KVO,DS-
K1T680DFG1HUN,DS-K1T680DG1UHK,DS-K1T680DG1CKV,DS-
K1T680DG1UVS,DS-K1T680DG1KVO,DS-K1T680DG1HUN
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2020-09-12
Date of Test: 2020-09-12 to 2020-10-13
Date of Issue: 2020-10-26

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Parlan Zhan

Parlan Zhan
E&E Section Manager

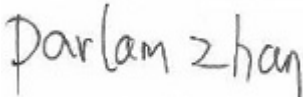
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Revision Record			
Version	Description	Date	Remark
00	Original	2020-10-26	/

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



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 12V-24V,3A by adapter
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3.2 Technical Specifications

13.56MHz

Antenna Type	Loop Antenna
Modulation Type	ASK
Number of Channels	1
Operation Frequency	13.56MHz

2G

GSM Operation Frequency Band:	GSM850,GSM1900
Modulation Type:	GMSK,8PSK
Antenna Type:	PIFA
Antenna Gain:	Band 850: 2.19dBi Band 1900:1.47dBi



3G

WCDMA Operation Frequency Band:	WCDMA Band II,Band V
Modulation Type:	QPSK, 16QAM
Antenna Type:	PIFA
Antenna Gain:	WCDMA Band II: 1.47dBi WCDMA Band V: 2.19dBi

4G

LTE Operation Frequency Band:	LTE FDD Band 2, 4, 5, 7
Modulation Type:	QPSK, 16QAM
Antenna Type:	PIFA
Antenna Gain:	Band 2: 1.47dBi Band 4: 2.12dBi Band 5: 2.19dBi Band 7: 1.75dBi

3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

All measurement facilities used to collect the measurement data are located at

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

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. Test Firm Registration Number: 995260.

- **Industry Canada (IC) – IC Assigned Code: 2324E**

The 10m and 3m Semi-anechoic chamber of Compliance Certification Services (Kunshan) Inc. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 2324E-1 for 10m chamber, 2324E-2 for 3m chamber.

- **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-1600, C-1707, T-1499, G-10216 respectively.

4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

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

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

5 Measurement and Calculation

5.1 Maximum transmit power

The power of 4G band base on the FCC certificate module of EC25-AU,

FCC ID is: XMR201805EC25AU, the average output power refer to test report: R1804A0154-R1;

R1804A0154-R2; R1804A0154-R3; R1804A0154-M1.

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



Band Information	Antenna Gain (dBi)	Gain in Linear Scale G	Operation Distance R(cm)	Max conducted power(dBm)	Max conducted power(mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
GSM 850	2.19	1.66	20	25.97	391.367	0.129	0.55	Pass
GSM 1900	1.47	1.40	20	22.97	198.153	0.055	1	Pass
WCDMA Band II	1.47	1.40	20	25.00	316.228	0.088	1	Pass
WCDMA Band V	2.19	1.66	20	25.00	316.228	0.104	0.55	Pass
LTE Band 2	1.47	1.40	20	25.00	316.228	0.088	1	Pass
LTE Band 4	2.12	1.63	20	25.00	316.228	0.103	1	Pass
LTE Band 5	2.19	1.66	20	25.70	371.535	0.122	0.55	Pass
LTE Band 7	1.75	1.50	20	25.00	316.228	0.094	1	Pass

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

--End of the Report--