

1 Cover Page

RF Exposure Evaluation Report

Application No.: KSCR2110000169AT
FCC ID: 2ADTD-AEC6S
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: Hangzhou HikAuto Technology Co., Ltd.
Address of Factory: No. 700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang Province
Equipment Under Test (EUT):
EUT Name: DashCam
Model No.: AE-DC5313-C6;AE-DC5313-C6+;AE-DC5313-C6PRO;AE-DC5313-C6P;AE-DC5313-C6S;AE-DC5313-C6A;AE-DC5313-C6B;AE-DC5313-C6C;AE-DC5313-C6D;AE-DC8312-C6S;AE-DCXXX2-CXX("X" =0-9, A-Z, a-z, -, + or blank)
Trade mark: HIKVISION
Standard(s) : FCC Rules 47 CFR §2.1091
 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-10-14
Date of Test: 2021-10-19 to 2021-11-08
Date of Issue: 2021-11-08

Test Result:	Pass*
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* 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.



Compliance Certification Services (Kunshan) Inc.
EMC Laboratory

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Revision Record			
Version	Description	Date	Remark
00	Original	2021-11-08	/

Authorized for issue by:			
		 <hr/> Damon Zhou / Project Engineer	
		 <hr/> Eric Lin / Reviewer	



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 5V by Car cigarette lighter transverter Car cigarette lighter transverter 1# information: Model: PYS-CAC20002-01 Input: DC 12V-24V 2.5A USB1 Output: 5V,2.1A USB2 Output: 5V,1.0A Car cigarette lighter transverter 2# information: Model: TC16A-0503100D Input: DC 12V-24V Output: 5V,3.1A
Cable:	Micro USB cable (Unshielded, 378cm)

3.2 Technical Specifications

2.4G

Antenna Gain:	1.5dBi (Provided by the manufacturer)
Antenna Type:	PCB 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



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5G

Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	UNII Band I	802.11a/n(HT20)	5180-5240	4
		802.11n(HT40)	5190-5230	2
	UNII Band III	802.11a/n(HT20)	5745-5825	5
		802.11n(HT40)	5755-5795	2
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps 802.11n: MCS0-MCS7			
Channel Spacing:	802.11a/n(HT20): 20MHz 802.11n(HT40): 40MHz			
Antenna Gain:	2.50dBi (Provided by manufacturer)			
Antenna Type:	PCB Antenna			



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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 (ISED) Canada 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.



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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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR211000016901, KSCR211000016902

2.4GHz

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
11B	2412	19.70	93.33
11B	2437	19.84	96.38
11B	2462	19.84	96.38
11G	2412	23.69	233.88
11G	2437	23.79	239.33
11G	2462	23.73	236.05
11N20SISO	2412	23.47	222.33
11N20SISO	2437	23.57	227.51
11N20SISO	2462	23.52	224.91
11N40SISO	2422	24.08	255.86
11N40SISO	2437	23.97	249.46
11N40SISO	2452	23.98	250.03



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5GHz

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
11A	5180	15.07	32.14
11A	5200	15.11	32.43
11A	5240	15.15	32.73
11A	5745	14.55	28.51
11A	5785	13.97	24.95
11A	5825	13.80	23.99
11N20	5180	14.97	31.41
11N20	5220	14.93	31.12
11N20	5240	14.97	31.41
11N20	5745	14.42	27.67
11N20	5785	13.76	23.77
11N20	5825	13.65	23.17
11N40	5190	15.38	34.51
11N40	5230	15.49	35.40
11N40	5755	14.75	29.85
11N40	5795	14.13	25.88

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



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For 2.4G WiFi:

The max. antenna gain is		1.5	dB		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
255.86	1.413	20	0.07190	1	Pass

For 5G WiFi:

The max. antenna gain is		2.5	dB		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
35.4	1.778	20	0.01252	1	Pass

The 2.4G WiFi and 5G WiFi can't simultaneous transmitting. According to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

5.3 Conclusion

EUT complies with FCC Rules 47 CFR §2.1091 requirement.

--End of the Report--



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