

1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM1808006449CR
Applicant:	ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
FCC ID:	SVNDH-PFWB5
Equipment Under Test (EUT):	
NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Wireless Transmission Device
Model No.:	DH-PFWB5-10n
Add Model No.:	DH-PFWB2-60n, DH-PFWB2-30n, DH-PFWB2-90n, DH-PFWB5-30n, DH-PFWB5-90n, DH-PFWB5-10ac, DH-PFWB5-30ac, DH-PFWB5-90ac, PFWB2-60n, PFWB2-30n, PFWB2-90n, PFWB5-10n, PFWB5-30n, PFWB5-90n, PFWB5-10ac, PFWB5-30ac, PFWB5-90ac
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2018-08-02
Date of Test:	2018-09-11 to 2018-09-11
Date of Issue:	2018-10-09
Test Result:	Pass*

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




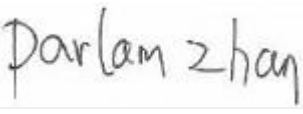
Parlam Zhan
E&E Section Manager

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.

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Revision Record			
Version	Description	Date	Remark
00	Original	2018-10-09	/

Authorized for issue by:				
				
		<hr/>		
		Vincent Zhu /Project Engineer		
				
		<hr/>		
		Parlam Zhan /Reviewer		



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3 General Information

3.1 Client Information

Applicant:	ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Applicant:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Manufacturer:	ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Manufacturer:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Factory:	1,ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD. 2,ZHEJIANG DAHUA ZHILIAN CO.,LTD.
Address of Factory:	1,No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China 2,No.28, Dongqiao Road, Dongzhou Street, Fuyang District, Hangzhou, P.R. China

3.2 General Description of E.U.T.

Power supply:	DC 24V, 0.5A by POE MODEL: G0549A-240-050 INPUT:100-240V~50/60Hz 0.5A MAX OUTPUT:24V-0.5A
Test voltage:	AC 120V
Cable:	AC Cable 70cm for adapter
Antenna Gain	20dBi
Antenna Type	Integral Antenna



3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

3.4 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 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.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 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	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 SHEM180800644901

Test Mode	Test Channel	Level [dBm]		10log(1/x) Factor [dB]		Power [dBm]			Power [mW]		
		Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	MIMO	Ant1	Ant2	MIMO
11A	5180	12.24	10.63	0.11	0.10	12.35	10.73	N/A	17.18	11.83	N/A
11A	5220	11.99	10.53	0.11	0.11	12.10	10.64	N/A	16.22	11.59	N/A
11A	5240	12.68	11.39	0.11	0.11	12.79	11.5	N/A	19.01	14.13	N/A
11A	5745	8.13	8.6	0.10	0.11	8.23	8.71	N/A	6.65	7.43	N/A
11A	5785	7.29	8.58	0.11	0.10	7.40	8.68	N/A	5.50	7.38	N/A
11A	5825	5.6	8.38	0.10	0.10	5.70	8.48	N/A	3.72	7.05	N/A
11N20	5180	9.23	8.96	0.22	0.21	9.45	9.17	12.32	8.81	8.26	17.06
11N20	5220	10.11	9.28	0.21	0.21	10.32	9.49	12.94	10.76	8.89	19.68
11N20	5240	9.73	9.45	0.22	0.00	9.95	9.45	12.71	9.89	8.81	18.70
11N20	5745	6.37	6.66	0.21	0.21	6.58	6.87	9.74	4.55	4.86	9.42
11N20	5785	5.15	7.14	0.21	0.21	5.36	7.35	9.48	3.44	5.43	8.87
11N20	5825	3.39	6.88	0.21	0.21	3.60	7.09	8.70	2.29	5.12	7.41
11N40	5190	8.92	7.94	0.31	0.31	9.23	8.25	11.78	8.38	6.68	15.07
11N40	5230	9.92	8.65	0.33	0.33	10.25	8.98	12.67	10.59	7.91	18.50
11N40	5755	6.08	6.51	0.31	0.33	6.39	6.84	9.63	4.36	4.83	9.18
11N40	5795	5.3	6.87	0.33	0.33	5.63	7.2	9.50	3.66	5.25	8.91



5.2 MPE Calculation

The Max Conducted Peak Output Power is 19.68mW;

The best case gain of the each antenna is 20dBi. The two antennas completely correlated with each other, so the best case gain of the two antenna in MIMO mode is 23dBi, 23dBi logarithmic terms convert to numeric result is nearly 200

For FCC:

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

- 1) P (Watts)
- 2) G (Antenna gain in numeric)
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm²

$$S = \frac{PG}{4R^2\pi} = \frac{19.68 \times 200}{4 \times 400 \times 3.14} = 0.78 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

--End of the Report--