REPORT No. : SZ17080059S01

RF EXPOSURE EVALUATION REPORT

APPLICANT	:	ShenZhen Gospell Smarthome Electronic Co., Ltd.
PRODUCT NAME	:	HD WiFi Camera
MODEL NAME	:	T5880HAA
TRADE NAME	:	N/A
BRAND NAME	:	N/A
FCC ID	:	TW5T5880HAA
STANDARD(S)	:	47CFR 2.1091 KDB 447498 D01 General RF Exposure Guidance v06
ISSUE DATE	:	2017-09-26

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

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DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	2017-09-26	First edition

TEST REPORT DECLARATION

Applicant	ShenZhen Gospell Smarthome Electronic Co., Ltd.
Applicant Address	5Floor/Block 2, Vision (SZ) Park, Hi-Tech Industrial Park, Shenzhen, China
Manufacturer	ShenZhen Gospell Smarthome Electronic Co., Ltd.
Manufacturer Address	East of 01st-04st Floor,Block A,No.1 Industrial park,Fenghuanggang,South of No.1 Baotian Road,Xixiang street,Bao'an District,Shenzhen City,Guangdong Province 518126,P.R.China
Product Name	HD WiFi Camera
Model Name	T5880HAA
Brand Name	N/A
HW Version	T5881Y_M03
SW Version	E_900.T5880Y.009.119
Test Standards	47CFR 2.1091; KDB 447498 D01 General RF Exposure Guidance v06
Issue Date	2017-09-26
SAR Evaluation	Not Required

Tested by : Peng Fuwei

Peng Fuwei (Test engineer)

Approved by : Peng Huarui

Peng Huarui (Supervisor)

1. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

1.1. Identification of Applicant

Company Name:	ShenZhen Gospell Smarthome Electronic Co., Ltd.
Address:	5Floor/Block 2, Vision (SZ) Park, Hi-Tech Industrial Park, Shenzhen, China

1.2. Identification of Manufacturer

Company Name:	ShenZhen Gospell Smarthome Electronic Co., Ltd.
Address:	East of 01st-04st Floor,Block A,No.1 Industrial park,Fenghuanggang,South of No.1 Baotian Road,Xixiang street,Bao'an District,Shenzhen City,Guangdong Province 518126,P.R.China

1.3. Equipment Under Test (EUT)

Model Name:	T5880HAA
Trade Name:	N/A
Brand Name:	N/A
Hardware Version:	T5881Y_M03
Software Version:	E_900.T5880Y.009.119
Frequency Bands:	802.11.b/g/n20/n40
Modulation Mode:	802.11b:DSSS; 802.11g/n20/n40:OFDM
Antenna type:	Wire Antenna
Development Stage:	Identical prototype

1.3.1. Photographs of the EUT

1. EUT view

1.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	T5881Y_M03	E_900.T5880Y.009.119

1.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	**47 CFR§2.1091**	Radiofrequency Radiation Exposure Evaluation: mobile devices
2	**KDB 447498 D01v06**	General RF Exposure Guidance

2. DEVICE CATEGORY AND RF EXPOSURE LIMIT

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(B) 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

f = frequency in MHz * = Plane-wave equivalent power density

3. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER

1. 2.4G Wifi Average output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			802.11B	802.11G	802.11N 20
Wifi	1	2412	16.73	12.47	12.52
	6	2437	16.78	15.08	15.08
	11	2462	17.22	13.41	13.20

Band	Channel	Frequency (MHz)	Output Power(dBm)
			802.11n40
Wifi	3	2422	10.15
	6	2437	14.26
	9	2452	10.54

4 RF EXPOSURE EVALUATION

Standalone transmission MPE evaluation

Bands	Frequency (MHz)	Antenna Gain (dBi)	Conducted Average Power (dBm)	Time-averaging EIRP (mW)	Power density (mW/cm²)	Limit for MPE (mW/cm²)
2.4GHz	2462	1.0	17.22	66.37	0.013	2.722

1. MPE calculation method

Power Density = EIRP/4πR²

Where: EIRP = P·G

P = Peak out power

G = Antenna gain

R = Separation distance (20cm)

ANNEX C GENERAL INFORMATION

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

***** END OF REPORT *****