

RFEXPOSURE EVALUATION REPORT

APPLICANT : ShenZhen Gospell Smarthome Electronic Co., Ltd.

PRODUCT NAME : HD WiFi Camera

MODEL NAME : T5886HCB

BRAND NAME : N/A

FCC ID : TW5T5886HCB

: 47CFR 2.1091 STANDARD(S)

KDB 447498

ISSUE DATE : 2018-11-03

Reviewed by:

Gan Yueming (Reviewer)

Approved by:

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Version No.	Date	Description
1.0	2018-11-03	Original

Tested By		
Test engineer:	Chen Hao	



Note: Provide by manufacturer.

1.1 Applicant and Manufacturer Information

Applicant:	ShenZhen Gospell Smarthome Electronic Co., Ltd.		
Applicant Address:	F/12 F518 Idea Land Baoyuan Road Baoan Central Area shenzhen City P.R China		
Manufacturer:	ShenZhen Gospell Smarthome Electronic Co., Ltd.		
	East of 01st-04st Floor,Block A,No.1 Industrial park, Fenghuanggang,		
Manufacturer Address:	South of No.1 Baotian Road, Xixiang street, Bao'an District, Shenzhen		
	City,Guangdong Province 518126,P.R.China		

1.2 Equipment Under Test (EUT) Description

EUT Type:	HD WiFi Camera	
Hardware Version:	T5886HCB_A01	
Software Version:	E_900.T5886HCB.010.323	
Frequency Bands:	WLAN2.4GHz: 2412 MHz ~2462 MHz	
Modulation Mode:	802.11b: DSSS	
Wodulation wode.	802.11g/n: OFDM	
Antenna Type:	Dipole Antenna	
Antenna Gain:	1.0dBi	



1.3 Photographs of the EUT

1. EUT Front View



2. EUT Back View





3. Bottom View



1.4 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#	T5886HCB_A01	E_900.T5886HCB.010.323		

1.5 Applied Reference Documents

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,

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/cm²)	Averaging time (minutes)
(E	3) Limits for General	Population/Uncontro	lled 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 RF Output Power

<WLAN2.4GHz Conducted Power>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit
	000 115	CH 1	2412	17.40	18.00
	802.11b 1Mbps	CH 6	2437	16.95	17.50
		CH 11	2462	16.85	17.50
2.4GHz	802.11g 6Mbps 802.11n-HT20 MCS0	CH 1	2412	17.42	18.00
WLAN		CH 6	2437	17.25	18.00
VVLAIN		CH 11	2462	16.93	17.50
		CH 1	2412	17.36	18.00
		CH 6	2437	17.18	18.00
		CH 11	2462	16.77	17.50
	802.11n-HT40 - MCS0 -	CH 3	2422	14.30	15.00
		CH 6	2437	16.54	17.00
		CH 9	2452	16.23	17.00



4. RF Exposure Evaluation

Standalone transmission MPE evaluation

	Frequency (MHz)	Maximum	Antenna	EIRP (mW)	Power	Limit for
Bands		Tune-up Limit	Gain		density	MPE
		(dBm)	(dBi)		(mW/cm²)	(mW/cm²)
WLAN2.4GHz	2412	18.0	1.00	79.43	0.016	1.0

Note:

1. MPE calculation method

Power Density = EIRP/ 4π R²

Where: EIRP = P+G

P = Output Power (dBm) G = Antenna Gain (dBi)

R = Separation Distance (20cm)





Annex A 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.		
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