

# MPE REPORT

FCC ID: 2AP56-B06W720HX

Date of issue: June 27, 2018

Report Number:	MTi180627E108
Sample Description:	Bullet Wireless IP camera
Model(s):	SV-B06W-720P-HX, SV-B01W-720P-HX, SV-B01W-960P-HX, SV-B01W-1080P-HX, SV-B06W-1080P-HX, SV-D02W-720P-HX, SV-D02W-1080P-HX, SV-B05W-720P-HX, SV-B05W-1080P-HX, SV-B07WVR-1080PS-HX
Applicant:	Shenzhen Zhaoyang Tianxia Technology CO., Ltd.
Address:	Room217, Building C1, Bantian International Center, Bantian Street, Longgang District, Shenzhen, PRC.
Date of Test:	June 12, 2018 to June 27, 2018

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

<b>TEST RESULT CERTIFICATION</b>	
Applicant's name:	Shenzhen Zhaoyang Tianxia Technology CO., Ltd.
Address:	Room217, Building C1, Bantian International Center, Bantian Street, Longgang District, Shenzhen, PRC.
Manufacture's name:	Shenzhen Zhaoyang Shidai Technology CO., Ltd
Address:	F6, Block F, JIN HENG RUN Industrial Park, Xintang, Fucheng Street, Longhua District, Shenzhen, PRC.
Product name:	Bullet Wireless IP camera
Trademark:	SV3C
Model name:	SV-B06W-720P-HX
Series model:	SV-B01W-720P-HX, SV-B01W-960P-HX, SV-B01W-1080P-HX, SV-B06W-1080P-HX, SV-D02W-720P-HX, SV-D02W-1080P-HX, SV-B05W-720P-HX, SV-B05W-1080P-HX, SV-B07WVR-1080PS-HX
Difference in series models:	The wireless module used in the product is the same, Just different appearance and pixels.
RF Exposure Procedures:	KDB 447498 D01 v06

*This device described above has been tested by Shenzhen Microtest Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.*

Tested by:




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Demi Mu

June 27, 2018

Reviewed by:




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Blue Zheng

June 27, 2018

Approved by:




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Smith Chen

June 27, 2018

## RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

### MPE Calculation Method

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

$P_d$  = Power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

$\pi$  = 3.14115926

R = distance between observation point and center of the radiator in cm (20cm)

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## Measurement Result

### WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

Power density limited: 1mW/ cm<sup>2</sup>

Antenna Type: Wifi Antenna: Integral Mounted Embedded Antenna;

WIFI antenna gain: 3dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(3/10)}=3$

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )
		Ant A	Ant A	(dBm)	(mW)	Numeric		
2412	802.11b	11.92	11±1	12	15.84893	3	0.00946	1
2437		11.84	11±1	12	15.84893	3	0.00946	1
2462		11.64	11±1	12	15.84893	3	0.00946	1
2412	802.11g	11.21	11±1	12	15.84893	3	0.00946	1
2437		11.08	11±1	12	15.84893	3	0.00946	1
2462		11.19	11±1	12	15.84893	3	0.00946	1
2412	802.11n H20	9.52	9±1	10	10	3	0.00597	1
2437		9.57	9±1	10	10	3	0.00597	1
2462		9.51	9±1	10	10	3	0.00597	1

### Conclusion:

For the max result:  $0.00946 \leq 1.0$  for 1g SAR, No SAR is required.

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