



Maximum Permissible Exposure Evaluation

FCC ID: 2A2DZ-WHD305

1. Client Information

Applicant	:	Shenzhen Hiseeu Technolgy Co., Ltd
Address	:	K411, Jinhetian Business Center, No. 329, Longhuan 3rd Road, Longhua District, Shenzhen, Guangdong, China
Manufacturer	:	Shenzhen Hiseeu Technolgy Co., Ltd
Address	:	K411, Jinhetian Business Center, No. 329, Longhuan 3rd Road, Longhua District, Shenzhen, Guangdong, China

2. General Description of EUT

EUT Name	Smart WiFi Camera
Models No.	WHD305, WHD305-6, WTDK05, WTD504, WTDS814, WHC905, WTD403, WHD405, WHD604, WHD205, TDK04U, WHD714, WTD714, WHD313, WHD312-5, WHD912B, WHD405B, WHDA03, WHD305-6, WTDK05-Q, TZ-HB315, TZ-HB615, TZ-HB615B, TZ-2HB613, WP04, US-TZ-HB315, US-TZ-HB613, US-TZ-HB615B, US-TZ-HB615, PS04, PS05, WSA18, WS318, WS418, WS718, WS03, WTDS814, WTDS80, WSF03, WSJ03, GWTDS814, GWS418, GWS418-B, WSA18, FJ5C, FH4C, C90B, FH3C, FH2C, K12, FH03, FH04, FJ3C, CA3, 2C90B, 4C90B, 3C90B, US-2WHD303, US-WHD103Z, US-WS02, US-2WTD403, US-2WTD504, US-2WHD405, US-2WTDK05, US-WHD303-6, US-WHD403, US-WHD405, US-WTDK05, US-WTD504, US-WS03, US-GWTDS814, US-SFWS318B, US-SFWS318-64G, US-2PS04, US-P03, US-2P03, US-2PS05, US-PS05, US-PS04, US-WTDA03, US-2FJ5C, US-DB2, US-FH4C, WK-4C40-AT-GM, US2WHD303, USWHD604, USWHC905, USWHD205, 2C90-SP-V-2, C90-SP-V-2, US-GWTDS814-2, WS03US, us2WS03, TZ-HB312-2, WTD403-3, SFWS318-2, 4SFWS318-3, GWTDS814-2, 2SFWHD313-2, SFWHD313-2, C90B-2, C90S-2, 2C90-2, 3C90-2, 4C90-2, WTDS114
Model Different	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance color.

TB-RF-074-1.0

Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11ax(HE20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz 802.11ax(HE40): 2422MHz~2452MHz U-NII-1: 5180MHz~5240MHz U-NII-3: 5745MHz~5825MHz
	:	Antenna Gain:	3.22dBi Dipole Antenna for 2.4G WIFI 2.58dBi Dipole Antenna for U-NII-1 2.53dBi Dipole Antenna for U-NII-3
Power Rating	:	Adapter(YDY-186) INPUT: AC100-240V~50/60Hz OUTPUT: 12V/1A	
Software Version	:	4.8.69.0	
Hardware Version	:	AK3918AV100	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the evaluation report used the EUT(HC-C-202407-0307-01-01-2#).	



Method of Measurement for FCC

1. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

3. Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

This means that:

$\sum$ of MPE ratios ≤ 1.0



4. Test Result:

2.4G WIFI Worst Maximum MPE Result								
Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
802.11b	1	2412	16.60	16±1	17	3.22	20	0.02093
		2437	16.79	16±1	17	3.22	20	0.02093
		2462	15.51	15±1	16	3.22	20	0.01662
802.11g	1	2412	14.87	14±1	15	3.22	20	0.01321
		2437	12.18	12±1	13	3.22	20	0.00833
		2462	11.89	11±1	12	3.22	20	0.00662
802.11n (HT20)	1	2412	12.29	12±1	13	3.22	20	0.00833
		2437	11.96	11±1	12	3.22	20	0.00662
		2462	11.42	11±1	12	3.22	20	0.00662
802.11n (HT40)	1	2422	11.85	11±1	12	3.22	20	0.00662
		2437	11.67	11±1	12	3.22	20	0.00662
		2452	11.98	11±1	12	3.22	20	0.00662
802.11ax (HE20)	1	2412	12.28	12±1	13	3.22	20	0.00833
		2437	11.96	11±1	12	3.22	20	0.00662
		2462	11.86	11±1	12	3.22	20	0.00662
802.11ax (HE40)	1	2422	11.57	11±1	12	3.22	20	0.00662
		2437	11.90	11±1	12	3.22	20	0.00662
		2452	11.61	11±1	12	3.22	20	0.00662
Note: N _{TX} = Number of Transmit Antennas RF Output power specifies that Maximum Conducted Output Power.								



5.2G WIFI Worst Maximum MPE Result

Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/cm ²) [S]
802.11a	1	5180	15.20	15±1	16	2.58	20	0.01435
		5200	15.75	15±1	16	2.58	20	0.01435
		5240	15.81	15±1	16	2.58	20	0.01435
802.11n20	1	5180	13.18	13±1	14	2.58	20	0.00905
		5200	13.20	13±1	14	2.58	20	0.00905
		5240	13.42	13±1	14	2.58	20	0.00905
802.11n40	1	5190	13.24	13±1	14	2.58	20	0.00905
		5230	14.13	14±1	15	2.58	20	0.01139
802.11ac20	1	5180	13.27	13±1	14	2.58	20	0.00905
		5200	13.15	13±1	14	2.58	20	0.00905
		5240	13.43	13±1	14	2.58	20	0.00905
802.11ac40	1	5190	13.48	13±1	14	2.58	20	0.00905
		5230	13.07	13±1	14	2.58	20	0.00905
802.11ax20	1	5180	11.09	11±1	12	2.58	20	0.00571
		5200	11.75	11±1	12	2.58	20	0.00571
		5240	12.13	12±1	13	2.58	20	0.00719
802.11ax40	1	5190	11.13	11±1	12	2.58	20	0.00571
		5230	11.89	11±1	12	2.58	20	0.00571

Note:

N_{TX}= Number of Transmit Antennas

RF Output power specifies that Maximum Conducted Output Power.



5.8G WIFI Worst Maximum MPE Result

Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/cm ²) [S]
802.11a	1	5745	18.18	18±1	19	2.53	20	0.02829
		5785	17.41	17±1	18	2.53	20	0.02247
		5825	16.85	16±1	17	2.53	20	0.01785
802.11n20	1	5745	17.68	17±1	18	2.53	20	0.02247
		5785	16.52	16±1	17	2.53	20	0.01785
		5825	15.82	15±1	16	2.53	20	0.01418
802.11n40	1	5755	16.64	16±1	17	2.53	20	0.01785
		5795	16.73	16±1	17	2.53	20	0.01785
802.11ac20	1	5745	16.95	16±1	17	2.53	20	0.01785
		5785	16.46	16±1	17	2.53	20	0.01785
		5825	15.83	15±1	16	2.53	20	0.01418
802.11ac40	1	5755	16.63	16±1	17	2.53	20	0.01785
		5795	16.16	16±1	17	2.53	20	0.01785
802.11ax20	1	5745	16.17	16±1	17	2.53	20	0.01785
		5785	15.78	15±1	16	2.53	20	0.01418
		5825	15.20	15±1	16	2.53	20	0.01418
802.11ax40	1	5755	16.22	16±1	17	2.53	20	0.01785
		5795	15.91	15±1	16	2.53	20	0.01418

Note:

N_{TX}= Number of Transmit Antennas

RF Output power specifies that Maximum Conducted Output Power.



5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For 2.4G WIFI&5G WIFI: 2412~2462MHz&5180~5825MHz

MPE limit S: 1mW/ cm²

The worst MPE is calculated as **0.02829mW/cm² < limit 1mW/cm²**. So, RF exposure limit warning or SAR test are not required. The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

For a more detailed features description, please refer to the RF Test Report.

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

The RF Exposure Information page from the manual is included here for reference.

For a more detailed features description, please refer to the RF Test Report.

-----END OF THE REPORT-----

