

# RF Exposure evaluation

Product Name : Zoom solar camera

Brand Name : DIDSeth

Model : P45-I

Series Model : Please Refer to Page 4

**FCC ID** : 2BR2N-P45-I

Applicant : Shenzhen Chensheng Semiconductor Electronics Co., Ltd

Address : B337, Wanyongda Building, Minzhi Avenue, Xinniu Community,

Minzhi Street, Longhua District, Shenzhen

Manufacturer : Shenzhen Chensheng Semiconductor Electronics Co., Ltd

Address

B337, Wanyongda Building, Minzhi Avenue, Xinniu Community,

Longbus District, Shonzhon

: Minzhi Street, Longhua District, Shenzhen

Standard(s) : 47CFR §1.1310, 47CFR §2.1091

KDB447498 D01 General RF Exposure Guidance v06

Date of Receipt: Sep. 02, 2025

**Date of Test** : Sep. 02, 2025~ Sep. 18, 2025

**Issued Date** : Sep. 18, 2025

Issued By: Guangdong Asia Hongke Test Technology Limited

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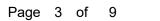
Allen Wang

Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.



**Report Revise Record** 

Report Version	Issued Date	Notes
M1	Sep. 18, 2025	Initial Release





# **Contents**

1	GEN	ERAL INFORMATION	4
	1.1	ENVIRONMENTAL CONDITIONS	4
	1.2	GENERAL DESCRIPTION OF EUT	
	1.3	TEST FACILITY	6
	1.4	MEASUREMENT UNCERTAINTY	6
2	MET	HOD OF MEASUREMENT	7
	2.1	Applicable Standard	7
	2.2	LIMIT	7
	2.3	MPE CALCULATION METHOD	8
	2.4	Antenna Information	8
	2.5	MANUFACTURING TOLERANCE	8
	2.6	STANDALONE MPE RESULT	9
	2.7	CONCLUSION	9

Report No.: AiTSZ-250902052FW3



1 GENERAL INFORMATION

# 1.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C	
Relative Humidity:	55 %	
Air Pressure:	101 kPa	

# 1.2 General Description of EUT

Product Name:	Zoom solar camera	
Model/Type reference:	P45-I	
Serial Model:	P45-IA,P45-IB,P45-IC,P45-ID,P45-IE,P45-IF,P45-IG,P45-IH, P45-II,P45-IK,P45-IJ,P45-IL,P45-IM,P45-IN,P45-IO,P45-IP, P45-IQ,P45-IR,P45-IS,P45-IT	
Model different:	All models are the same as the samples, except for the model names and colors. All models are electrically identical, and the mechanical structure and design are also the same.	
Power Supply:	DC 5V from external circuit	
Hardware Version:	V1.0	
Software Version:	V1.0	
Sample(s) Status:	AiTSZ-250902052-1(Normal sample) AiTSZ-250902052-2(Engineer sample)	
Bluetooth LE:		
Supported type:	Bluetooth LE 1M/2M	
Modulation:	GFSK	
Operation frequency:	2402MHz~2480MHz	
Channel number:	40	
Channel separation:	2MHz	
Antenna type:	Dipole antenna	
Antenna gain:	2.59 dBi	
2.4G WIFI:		
Supported type:	802.11b/802.11g /802.11n(HT20)/802.11n(HT40)	
Modulation:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM	
Operation frequency:	802.11b/802.11g/802.11n(H20): 2412MHz~2462MHz 802.11n(H40): 2422MHz~2452MHz	
Channel number:	802.11b/802.11g/802.11n(H20): 11 802.11n(H40): 7	
Channel separation:	5MHz	
Antenna type:	Dipole antenna	
Antenna gain:	2.59dBi	



## Remark:

The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Page 5 of



# 1.3 Test Facility

### **Test Laboratory:**

### **Guangdong Asia Hongke Test Technology Limited**

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Report No.: AiTSZ-250902052FW3

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

### FCC-Registration No.: 251906 Designation Number: CN1376

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

### IC —Registration No.: 31737 CAB identifier: CN0165

The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

### A2LA-Lab Cert. No.: 7133.01

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

## 1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods — Part 4: Uncertainty in EMC Measurements" and is documented in the Guangdong Asia Hongke Test Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	9KHz~30MHz ±1.20 dB	(1)
Radiated Emission	9KHz~30MHz ±3.10dB	(1)
Radiated Emission	30MHz~1GHz ±3.75dB	(1)
Radiated Emission	1GHz~18GHz ±3.88 dB	(1)
Radiated Emission	18GHz-40GHz ±3.88dB	(1)
RF power, conducted	30MHz~6GHz ±0.16dB	(1)
RF power density, conducted	±0.24dB	(1)
Spurious emissions, conducted	±0.21dB	(1)
Temperature	±1°C	(1)
Humidity	±3%	(1)
DC and low frequency voltages	±1.5%	(1)
Time	±2%	(1)
Duty cycle	±2%	(1)

The report uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.



# 2 Method of measurement

# 2.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures

### 2.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)			-	Averaging Time (minute)
0.3 - 3.0	614	1.63	(100) *	6
3.0 - 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	1	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)			Power Density (mW/cm²)	Averaging Time (minute)	
Limits for Occupational/Controlled Exposure					
0.3 - 3.0	614	1.63	(100) *	30	
3.0 - 30	824/f	2.19/f	(180/f)*	30	
30 - 300	27.5	0.073	0.2	30	
300 – 1500	/	1	f/1500	30	
1500 – 100,000	/	1	1.0	30	

F=frequency in MHz

<sup>\*=</sup>Plane-wave equivalent power density

Report No.: AiTSZ-250902052FW3



### 2.3 MPE Calculation Method

Predication of MPE limit at a given distance Equation from page 18 of OET Bulletin 65, Edition 97-01

#### S=PG/4πR<sup>2</sup>

Where: S=power density

P=power input to 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

## 2.4 Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

			j ····-	
Antenna	Model No. of antenna:	Type of antenna:	Gain of the antenna (Max.)	Frequency range:
WIFI/BT	/	Dipole antenna	3dBi@2.4G	2400-2500MHz

# 2.5 Manufacturing Tolerance

#### Bluetooth LE

=:0:0000 ===						
BLE 1M GFSK						
Channel Channel 0 Channel 19 Channel 3						
Target (dBm)	2	0	0.5			
Tolerance ±(dB) 1.0		1.0 1.0				
	BLE 2M	GFSK				
Channel	Channel 0	Channel 19	Channel 39			
Target (dBm)	2	0	0.5			
Tolerance ±(dB)	1.0	1.0	1.0			

#### 2 4GHz WI AN

IEEE 802.11b (AVG)					
Frequency (MHz)	2412	2437	2462		
Target (dBm)	15.0	15.0	16.0		
Tolerance ± (dB)	1.0	1.0	1.0		
	IEEE 802.1	1g(AVG)			
Frequency (MHz)	2412	2437	2462		
Target (dBm)	17.00	12.5	12.0		
Tolerance ± (dB)	1.0	1.0	1.0		
	IEEE 802.11n	HT20(AVG)			
Frequency (MHz)	2412	2437	2462		
Target (dBm)	16.0	12.0	13.0		
Tolerance ± (dB)	1.0	1.0	1.0		
IEEE 802.11n HT40 (AVG)					
Frequency (MHz)	2422	2437	2452		
Target (dBm)	12.5	12.0	12.5		
Tolerance ± (dB)	1.0	1.0	1.0		

### 2.6 Standalone MPE Result

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna is refer to section 2.4, the RF power density can be obtained.

9

Page 9 of

Modulation Type		Output power with tune_up Gain		Antenna Gain (linear)	MPE (mW/cm2)	MPE Limits
	dBm	mW	(dBi)	, ,	,	(mW/cm2)
ВТ	3	1.9953	3	1.9953	0.00079	1.0000
2.4G WLAN	18	63.0957	3	1.9953	0.02506	1.0000

#### Remark:

- 1. Output power including turn-up tolerance;
- 2. MPE evaluate distance is 20cm from user manual provide by manufacturer.
- 3.WIFI/BT do not support simultaneous transmission.

### 2.7 Conclusion

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

*******	<b>End</b>	of	Report	******
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