RF Exposure evaluation

Product Name	:	T3 Art Projector
Brand Name	:	Caydo
Model	:	T3
Series Model	:	N/A
FCC ID	:	2BKPL-T3
Applicant	:	**SKRIVER INTERNATIONAL TRADING LIMITED**
Address	:	19H MAXGRAND PLAZA NO 3 TAI YAU STREET SAN PO Kong KL, Hong Kong, China
Manufacturer	:	**SKRIVER INTERNATIONAL TRADING LIMITED**
Address	:	19H MAXGRAND PLAZA NO 3 TAI YAU STREET SAN PO Kong KL, Hong Kong, China
Standard(s)	:	47CFR §1.1310, 47CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt	:	Aug. 27, 2025
Date of Test	:	Aug. 28, 2025~ Sep. 07, 2025
Issued Date	:	Sep. 08, 2025

Issued By: **Guangdong Asia Hongke Test Technology Limited**
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Reviewed by: Aalen.Ye **Approved by:** Allen Wang

Report Revise Record

Report Version	Issued Date	Notes
M1	Sep. 08, 2025	Initial Release

Contents

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:	T3 Art Projector
Model/Type reference:	T3
Serial Model:	N/A
Power Supply:	DC 12V from adapter
Adapter Information:	Model: J301-1202000UX Input: 100-240V~50/60Hz 1.0A Output: 12.0V⎓2.0A 24.0W
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	AiTSZ-250827042-1(Normal sample) AiTSZ-250827042-2(Engineer sample)
Bluetooth :	
Supported type:	Bluetooth BR/EDR
Modulation:	GFSK, π/4DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	PCB antenna
Antenna gain:	1.12dBi
Bluetooth LE:	
Supported type:	Bluetooth LE 1M/2M
Modulation:	GFSK
Operation frequency:	2402MHz~2480MHz
Channel number:	40
Channel separation:	2MHz
Antenna type:	PCB antenna
Antenna gain:	1.12dBi
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:	FPC antenna			
Antenna gain:	2.55dBi			
5G WIFI:				
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system
	802.11a 802.11n 802.11ac	802.11n 802.11ac	802.11ac	N/A
Operation frequency:	5180-5240MHz 5745-5825MHz	5190-5230MHz 5755-5795MHz	5210MHz 5775MHz	N/A
Modulation:	OFDM	OFDM	OFDM	N/A
Channel number:	9	4	2	N/A
Channel separation:	20MHz	40MHz	80MHz	N/A
Antenna type:	FPC antenna			
Antenna gain:	U-NII 1: 2.56dBi U-NII 3: 3.43dBi			
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.				

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

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℃	(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)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
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	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	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	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

2.3 MPE Calculation Method

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

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

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;

Antenna	Model No. of antenna:	Type of antenna:	Gain of the antenna (Max.)	Frequency range:
BT	/	PCB antenna	1.12dBi@2.4G	2400-2500MHz
WIFI	/	FPC Antenna	2.55dBi@2.4G 2.56dBi@5.2G 3.43dBi@5.8G	2400-2500MHz 5150-5850MHz

2.5 Manufacturing Tolerance

Bluetooth

*GFSK (*Peak*)*			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	-1.0	2.0	2.0
Tolerance ±(dB)	1.0	1.0	1.0
*π/4DQPSK (*Peak*)*			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	1.0	3.0	3.0
Tolerance ±(dB)	1.0	1.0	1.0
*8-DPSK (*Peak*)*			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	1.0	3.0	3.0
Tolerance ±(dB)	1.0	1.0	1.0
BLE 1M GFSK			
Channel	Channel 0	Channel 19	Channel 39
Target (dBm)	2.0	2.0	2.0
Tolerance ±(dB)	1.0	1.0	1.0
BLE 2M GFSK			
Channel	Channel 0	Channel 19	Channel 39
Target (dBm)	2.0	2.0	2.0
Tolerance ±(dB)	1.0	1.0	1.0

2.4GHz WLAN

IEEE 802.11b (Peak)			
Frequency (MHz)	2412	2437	2462
Target (dBm)	15.0	15.0	15.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11g (Peak)			
Frequency (MHz)	2412	2437	2462
Target (dBm)	14.0	14.0	14.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT20 (Peak)			
Frequency (MHz)	2412	2437	2462
Target (dBm)	13.0	13.0	13.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT40 (Peak)			
Frequency (MHz)	2422	2437	2452
Target (dBm)	15.0	15.0	14.0
Tolerance ± (dB)	1.0	1.0	1.0

5GHz WLAN Band 1

IEEE 802.11a (Average)			
Frequency (MHz)	5180	5200	5240
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT20 (Average)			
Frequency (MHz)	5180	5200	5240
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11ac VHT20 (Average)			
Frequency	5180	5200	5240
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT40 (Average)			
Frequency (MHz)	5190		5230
Target (dBm)	9.0		9.0
Tolerance ± (dB)	1.0		1.0
IEEE 802.11ac VHT40 (Average)			
Frequency (MHz)	5190		5230
Target (dBm)	9.0		9.0
Tolerance ± (dB)	1.0		1.0
IEEE 802.11ac VHT80 (Average)			
Frequency (MHz)	5210		
Target (dBm)	9.0		
Tolerance ± (dB)	1.0		

5GHz WLAN Band 3

IEEE 802.11a (Average)			
Frequency (MHz)	5745	5785	5825
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT20 (Average)			
Frequency (MHz)	5745	5785	5825
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11ac VHT20 (Average)			
Frequency	5745	5785	5825
Target (dBm)	9.0	9.0	9.0
Tolerance ± (dB)	1.0	1.0	1.0
IEEE 802.11n HT40 (Average)			
Frequency (MHz)	5755		5795
Target (dBm)	9.0		9.0
Tolerance ± (dB)	1.0		1.0
IEEE 802.11ac VHT40 (Average)			
Frequency (MHz)	5755		5795
Target (dBm)	9.0		9.0
Tolerance ± (dB)	1.0		1.0
IEEE 802.11ac VHT80 (Average)			
Frequency (MHz)	5775		
Target (dBm)	9.0		
Tolerance ± (dB)	1.0		

2.6 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.

Standalone

Modulation Type	Output power with tune_up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm2)	MPE Limits (mW/cm2)	Ratio
	dBm	mW					
BT	4	2.5119	1.16	1.3062	0.00065	1.0000	0.0007
2.4G WLAN	16	39.8107	2.55	1.7989	0.01425	1.0000	0.0143
5.2G WLAN	10	10.0000	2.56	1.8030	0.00359	1.0000	0.0036
5.8G WLAN	10	10.0000	3.43	2.2029	0.00440	1.0000	0.0044

Remark:
1. Output power including turn-up tolerance;
2. MPE evaluate distance is 20cm from user manual provide by manufacturer.

simultaneous transmission Evaluation
In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is.

$$\sum_{i=1}^{n} \frac{S_i}{MPE_i} \leq 1$$

The product also has multiple transmitters The Simultaneous Transmission Possibilities are as below:

Simultaneous Tx Combination	Configuration
1	WLAN + BT

Simultaneous Combination	Mode	Max. Result Ratio WLAN	Max. Result Ratio BT	Total Ratio	Limit	Result
1	WLAN+BT	0.0143	0.0007	0.0150	1.0	Pass

2.7 Conclusion

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

********** **End of Report** **********