

RF Exposure Evaluation Report

Product : Smart Projector
Trade mark : OVO
Model/Type reference : OVO-U5
Serial Number : N/A
Report Number : EED32O80066305
FCC ID : 2AAUL-OVO-U5
Date of Issue : Mar. 08, 2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

OVOMEDIA CREATIVE INC.

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Hsinchu County, Taiwan

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Check No.: 4903140122



2 Version

Version No.	Date	Description
00	Mar. 08, 2022	Original

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4 General Information

4.1 Client Information

Applicant:	OVOMEDIA CREATIVE INC.
Address of Applicant:	3F., No. 151, Ziqiang 5th Rd., Zhubei City, Hsinchu County, Taiwan
Manufacturer:	Shenzhen WOWOTO Technology Co., Ltd.
Address of Manufacturer:	Room B508, Building B, Gao xinqi Industrial Park, Liuxian 1st Road, District 67, Bao'an, Shenzhen.
Factory:	Shenzhen WOWOTO Technology Co., Ltd.
Address of Factory:	South side of 2th Floor, Building C, Yingren Yingren shiwentao Science Park , Bao'an, Shenzhen, China

4.2 General Description of EUT

Product Name:	Smart Projector
Mode No.:	OVO-U5
Trade mark:	OVO
EUT Supports Radios application:	Bluetooth 5.0 dual mode: 2402-2480MHz 2.4GHz Wi-Fi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz 5GHz Wi-Fi: U-NII-1: 5180-5240MHz; U-NII-3: 5745-5825MHz

4.3 Product Specification subjective to this standard

Frequency Range:	Bluetooth : 2402-2480MHz 2.4GHz Wi-Fi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz 5GHz Wi-Fi: U-NII-1: 5180-5240MHz; U-NII-3: 5745-5825MHz
Modulation Type:	IEEE for 802.11b:DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g:OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20/HT40): OFDM (64QAM, 16QAM,QPSK,BPSK) IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11ac(HT20/HT40/HT80): OFDM (BPSK, QPSK, 16QAM, 64QAM) BT/BLE: GFSK, 8DPSK, $\pi/4$ DQPSK
Test Power Grade:	Default
Antenna Type (Bluetooth):	PCB Antenna
Antenna Gain (Bluetooth):	3.12dBi

Antenna Type (Wi-Fi):	FPC Antenna	
Antenna Gain (Wi-Fi):	Ant1 (2.4G): 2.24dBi; Ant1(5G): 3.01dBi; Ant2 (2.4G): 2.85dBi; Ant2 (5G): 3.23dBi;	
Function (Wi-Fi):	☒ SISO ☒ 2x2 MIMO ☐ 3x3 MIMO ☐ 4x4MIMO	
Power Supply:	Adapter	Model:PA1045-190HIB210 Input:100-240V~50/60Hz 1.0A Output:19V---2.1A 39.9W Max
Max Conducted Peak Output Power:	BLE:4.32dBm, BT: 4.89dBm, 2.4G WIFI:15.94dBm; 5G WIFI:15.97dBm	
	The Max Conducted Peak Output Power data refer to the report EED32O80066301, EED32O80066302, EED32O80066303, EED32O80066304	
Sample Received Date:	Jan. 14, 2022	
Sample tested Date:	Jan. 14, 2022 to Feb. 17, 2022	
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.		

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

BLE:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
0	2402	2.704	2.051	20	0.0011	1

BT Classic:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
0	2402	3.083	2.051	20	0.0013	1

2.4G WIFI:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
11	2462	39.264	1.68	20	0.0131	1

5G WIFI:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
157	5785	39.537	2.104	20	0.0166	1

1) For BT Classic and WIFI

BT and WIFI can not transmit simultaneously.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32O80066301 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***