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.
3F., No. 151, Ziqiang 5th Rd., Zhubei City,
Hsinchu County, Taiwan

Prepared by:

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Approved by: David Wang Date: Mar. 08, 2022

David Wang

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, π/4DQPSK
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 (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

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 / cm^2

BLE:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm	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.

*** End of Report ***