

RF Exposure Evaluation Report

Product : CREALITY BOX
Trade mark : CREALITY
Model/Type reference : WB-01
Serial Number : N/A
Report Number : EED32M00275002
FCC ID : 2AXH6CREALITY-BOX
Date of Issue : Sep. 24, 2020
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1091
KDB447498D01v06
Test result : PASS

Prepared for:

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Sep. 24, 2020



Check No.:2447672064

2 Version

Version No.	Date	Description
00	Sep. 24, 2020	Original

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4 General Information

4.1 Client Information

Applicant:	Shenzhen Creality 3D Technology Co., Ltd.
Address of Applicant:	11F & Room 1201, Block 3, JinChengYuan, Tongsheng Community, Dalang, Longhua District, Shenzhen, China
Manufacturer:	Shenzhen Creality 3D Technology Co., Ltd.
Address of Manufacturer:	11F & Room 1201, Block 3, JinChengYuan, Tongsheng Community, Dalang, Longhua District, Shenzhen, China
Factory:	Shenzhen Creality 3D Technology Co., Ltd.
Address of Factory:	1F & 4F Block F, Yujianfeng Industrial Area, No.289 Huafan Road, Tongsheng Community, Dalang, Longhua District, Shenzhen, China

4.2 General Description of EUT

Product Name:	CREALITY BOX
Model No.(EUT):	WB-01
Trade Mark:	CREALITY
EUT Supports Radios application	IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz		
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK)		
Number of Channels:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels		
Test Power Grade:	Default		
Test Software of EUT:	QATool_Dbg.exe		
Antenna Type:	PCB antenna		
Antenna Specification	2.4GHz	Antenna Gain :	2.00 dBi (Numeric gain: 1.58)
Maximum tune up power	IEEE 802.11b Mode:	13.00 dBm	(19.953 mW)
	IEEE 802.11g Mode:	14.00 dBm	(25.119 mW)
	IEEE 802.11n HT 20 Mode:	13.00 dBm	(19.953 mW)
	IEEE 802.11n HT 40 Mode:	12.50 dBm	(17.783 mW)
Power Supply:	DC 5V		
Sample Received Date:	Sep. 03, 2020		
Sample tested Date:	Sep. 03, 2020 to Sep. 17, 2020		
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:

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

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

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	21.83	1.58	20	0.0069	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
11	2462	22.86	1.58	20	0.0072	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
11	2462	21.78	1.58	20	0.0068	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
7	2452	18.49	1.58	20	0.0058	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00275001 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 ***