RF Exposure Evaluation Report

Product	:	Smart Sleep Light
Trade mark	:	N/A
Model/Type reference	:	TEW201
Serial Number	:	N/A
Report Number	:	EED32K00287204
FCC ID	:	2ADIOTEW201
Date of Issue	:	Nov. 09, 2018
Test Standards	:	47 CFR Part 1.1307(2015) 47 CFR Part 1.1310(2015) KDB 447498 D01v06
Test result	:	PASS

Prepared for:

Shenzhen Medica Technology Development Co., Ltd.
2F Building A, Tongfang Information Harbor, No.11, East Langshan Road, Nanshan District, Shenzhen, P.R. China

Prepared by:

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Reviewed by:	Kevin yang (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Nov. 09, 2018		Check No.:3096353610

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	Nov. 09, 2018	Original

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4 General Information

4.1 Client Information

Applicant:	Shenzhen Medica Technology Development Co., Ltd.
Address of Applicant:	2F Building A, Tongfang Information Harbor, No.11, East Langshan Road, Nanshan District, Shenzhen, P.R. China
Manufacturer:	Shenzhen Medica Technology Development Co., Ltd.
Address of Manufacturer:	2F Building A, Tongfang Information Harbor, No.11, East Langshan Road, Nanshan District, Shenzhen, P.R. China
Factory:	E-safe Technology Limited
Address of Factory:	Room 210, Block B, Baoyuan huafeng Economic Building, Xixiang Avenue, Bao'an District, Shenzhen, Guangdong, China

4.2 General Description of EUT

Product Name:	Smart Sleep Light
Model No.(EUT):	TEW201
Trade mark:	N/A
EUT Supports Radios application:	BT: 4.0 BT Dual mode, 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	BT: 4.0 BT Dual mode, 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Modulation Type:	BT: GFSK, π/4DQPSK, 8DPSK WiFi: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK)
Firmware version:	V0.51(manufacturer declare)
Hardware version:	V1.0(manufacturer declare)
Antenna Type:	BT: PCB Antenna, WiFi: PCB Antenna
Antenna Gain:	BT: 4dBi, WiFi: 2.5dBi
Power Supply:	Model: NLB100120W1A5S95 Input: 100-240V~50/60Hz, 0.35A Max Output: 12V⎓1A
Max Conducted Peak Output Power:	17.62dBm The Max Conducted Peak Output Power data refer to the report EED32K00287201, EED32K00287202, EED32K00287203
Sample Received Date:	Oct. 25, 2018
Sample tested Date:	Oct. 25, 2018 to Nov. 09, 2018
The tested sample(s) and the sample information are provided by the client.	

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.
CNAS-Lab Code: L1910
A2LA-Lab Cert. No. 3061.01
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

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*($900/f^2$)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*($180/f^2$)	30
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R= distance to the centre of radiation of the antenna

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limit S, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

Antenna Gain: BT: 4dBi, WiFi: 2.5dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm^2)	Limit (mW/cm^2)	Result
Highest	2462	17.62	2.5	20.12	102.80	20	0.02	1.0	Pass

Note: Refer to report No. EED32K00287201, EED32K00287202, EED32K00287203 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32K00287201 for EUT external and internal photos.

*** End of Report ***