RF Exposure Evaluation Report

Product	:	BLE MODULE
Trade mark	:	N/A
Model/Type reference	:	LH-8267M
Serial Number	:	N/A
Report Number	:	EED32K00091102
FCC ID	:	2APP2-LH8267M
Date of Issue	:	May 24, 2018
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498 D01 v06
Test result	:	PASS

Prepared for:

Longhorn Intelligent Tech Co., Ltd
Longhorn Hi-Tech Estate, Gongyeyuan rd., Dalang Street, 518109
Longhua New District, Shenzhen, Guangdong, P.R. China

Prepared by:

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Tested By:	Tom chen (Test Project)	Compiled by:	Kevin Lan (Project Engineer)
Reviewed by:	Kevin yang (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	May 24, 2018		Check No.:2447676659

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2 Version

Version No.	Date	Description
00	May 24, 2018	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	Longhorn Intelligent Tech Co., Ltd
Address of Applicant:	Longhorn Hi-Tech Estate, Gongyeyuan rd., Dalang Street, 518109 Longhua New District, Shenzhen, Guangdong, P.R. China
Manufacturer:	Longhorn Intelligent Tech Co., Ltd
Address of Manufacturer:	Longhorn Hi-Tech Estate, Gongyeyuan rd., Dalang Street, 518109 Longhua New District, Shenzhen, Guangdong, P.R. China
Factory:	Longhorn Intelligent Tech Co., Ltd
Address of Factory:	Longhorn Hi-Tech Estate, Gongyeyuan rd., Dalang Street, 518109 Longhua New District, Shenzhen, Guangdong, P.R. China

4.2 General Description of EUT

Product Name:	BLE MODULE
Model No.(EUT):	LH-8267M
Trade Mark:	N/A
EUT Supports Radios application	BT4.0 Signal mode, 2402-2480MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2402-2480MHz
Modulation Type:	GFSK
Hardware Version:	REV.B(manufacturer declare)
Firmware version:	V1.0(manufacturer declare)
Sample Type:	Mobile production
Hardware Version:	REV.B(manufacturer declare)
Firmware Version:	V1.0(manufacturer declare)
Test power grade:	N/A
Test software of EUT:	(manufacturer declare)wtcdb.exe
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Power Supply:	DC 3.3 V
Conduct Peak Power:	6.761dBm
	The Conduct Peak Power data refer to the report EED32K00091101
Sample Received Date:	Apr. 17, 2018
Sample tested Date:	Apr. 17, 2018 to May. 23, 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.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101
Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385
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

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: 0dBi

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	2480	6.761	0	6.761	4.74	20	0.001	1.0	Pass

Note: Refer to report No. EED32K00091101 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32K00091101 for EUT external and internal photos.

*** End of Report ***