



RF Exposure REPORT

No. I18Z60416-GPM01

for

Lightsaber Controller

Model Name: AAC-151B

FCC ID: O57AAC151B

IC number: 10407A-AAC151B

with

Hardware Version: R2

Software Version: V3.0.1.9

Issued Date: 2018-05-24



Note:

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The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Test Laboratory:

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1. Test Laboratory

1.1. Testing Location

Company Name: CTTL, Telecommunication Technology Labs, CAICT
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Postal Code: 100191
Telephone: +86(0)10-62304633
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1.2. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

1.3. Project data

Project Leader: Xue Zhen
Testing Start Date: 2018-05-07
Testing End Date: 2018-05-24

1.4. Signature



Miao Shengqi

(Prepared this test report)



Xue Zhen

(Reviewed this test report)



Li Bo

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: Lenovo(Shanghai) Electronics Technology Co., Ltd.
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2.2. Manufacturer Information

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3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Lightsaber Controller
Model Name	AAC-151B
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	0/19/39
Extreme Temperature	-10/+55°C
Normal Voltage	3.8V
Extreme Low Voltage	3.4V
Extreme High Voltage	4.35V
Peak antenna gain	1.78 dBi

Note1: Photographs of EUT are shown in ANNEX A of this test report.

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	R2	V3.0.1.9

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Battery	---

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
KDB447498	Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies	V06R01
RSS-102	Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)	Issue 5 2015-3

5. RF Exposure Compliance

According FCC KDB447498, and the maximum output power listed below, the device is exempt from the routine evaluation and is fulfill RF exposure compliance with FCC requirement.

The output power and operating frequency of the device are:

Frequency	Maximum Output Power	
	Conducted	Radiated
2402~2480MHz	-0.03dBm	1.75dBm

6. FCC-Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
			dBm	mW	
Bluetooth	2.441	9.60	1.75	1.50	Yes

7. IC-Standalone SAR Test Exclusion Considerations

According to the RSS-102, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table

SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Table: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
			dBm	mW	
Bluetooth	2.441	4	1.75	1.50	Yes

END OF REPORT