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Report No.: 2306RSU045-U4 Report Version: V01 Issue Date: 2023-10-24

RF Exposure Evaluation Declaration

FCC ID: 2ALS8-OP0002

Applicant: Ninebot (Changzhou) Tech Co., Ltd.

Product: Segway Gokart Game Kit

Model No.: PI1401

Brand Name: Segway

FCC Classification: Digital Transmission System (DTS)

Part 15 Low Power Communication Device Transmitter

(DXX)

FCC Rule Part(s): FCC Part 2.1093

Evaluation Date: 2023-10-17

Result: Complies

Approved By:

Reviewed By:

Vincent Yu

Robin Wu

Vincent Yu

ACCREDITED

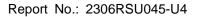
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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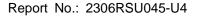
Revision History

Report No.	Version	Description	Issue Date	Note
2306RSU045-U4	V01	Initial Report	2023-10-24	Valid



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1. General Information

1.1. Applicant

Ninebot (Changzhou) Tech Co., Ltd.

16F-17F, Block A, Building 3, No.18, Changwu Mid Rd, Wujin Dist., Changzhou, Jiangsu, China.

1.2. Manufacturer

Ninebot (Changzhou) Tech Co., Ltd.

16F-17F, Block A, Building 3, No.18, Changwu Mid Rd, Wujin Dist., Changzhou, Jiangsu, China.

1.3. Testing Facility

\boxtimes	Test Site – MRT Suzhou Laboratory					
	Laboratory Location (Suzhou - Wuzhong)					
	D8 Building, No.2	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China				
	Laboratory Loca	tion (Suzhou - SIP))			
4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, C						
	Laboratory Accre	editations				
	A2LA: 3628.01		CNAS	S: L10551		
FCC: CN1166 ISED: CN0001						
	VOOL:	□R-20025	□G-20034	□C-20020	□T-20020	
	VCCI:	□R-20141	□G-20134	□C-20103	□T-20104	
	Test Site - MRT S	Shenzhen Laborat	ory			
	Laboratory Location (Shenzhen)					
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen,				strict, Shenzhen,	
	China					
	Laboratory Accreditations					
	A2LA: 3628.02		CNAS	: L10551		
	FCC: CN1284		ISED:	CN0105		
	Test Site – MRT Taiwan Laboratory					
	Laboratory Location (Taiwan)					
	No. 38, Fuxing 2nd	o. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accre	editations				
	TAF: 3261					
	FCC: 291082, TW	3261	ISED:	TW3261		



1.4. Product Information

Product Name	Segway Gokart Game Kit	
Model No.	PI1401	
SRD Specification	2402 ~ 2480MHz	
Bluetooth Specification	BLE (1Mbps only)	
Antenna Information	Refer to section 1.6	
Operating Temperature	-10°C ~ +50°C	
Accessories		
	Model: YJ123333D	
Rechargeable Li-ion Battery	Capacitance: 1500mAh / 5.55Wh	
	Rated Voltage: 3.7V	
Note: The information of EUT	was provided by the manufacturer, and the accuracy of the information shall	

be the responsibility of the manufacturer.

1.5. Radio Specification under Test

2.4G SRD		
Frequency Range	2402 ~ 2480 MHz	
Channel Number	79	
Type of Modulation	GFSK	
Bluetooth		
Frequency Range	2402 ~ 2480MHz	
Channel Number	40	
Type of Modulation	GFSK	
Data Rate	1Mbps	

1.6. Antenna Details

Antenna Type	Frequency Band	T _X Paths	Max Antenna Gain		
	(GHz)		(dBi)		
Bluetooth Antenna					
Onboard PCB Antenna	2402 ~ 2480	1	-1.26		
2.4GHz SRD Antenna					
Onboard PCB Antenna	2402 ~ 2480	1	2.88		

Note: The antenna gain is from antenna data sheet provided by the manufacturer.



1.7. Device Classification

According to the user manual, the antenna of this device is within 20cm from the body of the user, this device is classified as a Portable Device. So, the RF exposure evaluation requirements of § 2.1093 for portable device exposure conditions subject to SAR limits.

1.8. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

• FCC Part 2.1093 & KDB 447498 D04 Interim General RF Exposure Guidance v01



2. RF Exposure Evaluation

2.1. Test Limits

According to FCC §1.1310:

- (a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b) of this part within the frequency range of 100 kHz to 6 GHz (inclusive).
- (b) The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits.
- (c) The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.



2.2. SAR Exemptions

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph §1.1307(b)(2) of this section): A single RF source is exempt if:

(Option A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph §1.1307(b)(3)(ii)(A) of this section.

Medical implant devices may only use this exemption and that in paragraph §1.1307(b)(3)(ii)(A);

(Option B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P is given by:

$$P th(mW) = \{ERP_{20cm}(d / 20cm)^x d \le 20cm\}$$

$$P th(mW) = \{ERP_{20cm} 20cm < d \le 40cm\}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right)$$
 and f is in GHz;

and

$$ERP_{20cm}(mW) = \{2040f \ 0.3GHz \le f < 1.5GHz\}$$

$$ERP_{20cm}(mW) = \{3060 \ 1.5GHz \le f \le 6GHz \$$

(Option C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).



Table 1 to 91.1307 (b)(3)(1)(c) = Sitiale IX Sources Subject to Noutlife Elivirolification Evaluation	Table 1 to	§1.1307(b)(3)(i)(C)	- Single RF Sources Sub	ject to Routine Environmental Evaluation
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RF Source Frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1920R ²
1.34-30	3450R²/f²
30-300	3.83R ²
300-1,500	0.0128R ² f
1,500-100,000	19.2R ²

For multiple RF sources: Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those is paragraph §1.1307(b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph §1.1307(b)(3)(i)(A).

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \le 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(B) of this section for P_{th} , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph 1.1307(b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

 P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

 $P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph §1.1307(b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.

 ERP_j = the ERP of fixed, mobile, or portable RF source j.



 $ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph §1.1307(b)(3)(i)(C) of this section.

Evaluated_k = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limit_k = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from §1.1310 of this chapter.



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2.3. Calculated Result

Product	Segway Gokart Game Kit
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band	Max. EIRP	Max. EIRP
	(MHz)	(dBµV/m)@3m	(dBm)
2.4G SRD	2402 ~2480	74.3	-20.9

Note: Max. EIRP (dBm) = Max. EIRP (dB μ V/m)@3m - 95.2

Test Mode	Frequency Band	Max. Conducted	Antenna Gain	Max. EIRP
	(MHz)	Power (dBm)	(dBi)	(dBm)
BLE	2402 ~2480	-0.26	-1.26	-1.52

For single RF source, Option B

Test Mode	R (mm)	ERP (mW)	Thresholds ERP (mW)
2.4G SRD	5	0.005	2.80
BLE	5	0.430	2.80

Notes:

- 1. ERP (mW) = $10^{[EIRP (dBm) 2.15 (dB)]/10}$
- 2. The 2.4G SRD and BLE can transmit simultaneously.

Therefore, Exposure Ratio = (0.005 + 0.430) mW / 2.80 mW = 0.155 < 1

Conclusion:

The device qualifies for RF exposure test exemption.

— The End —	
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