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Report No.: 2204RSU045-U3 Report Version: V01 Issue Date: 2022-06-07

RF Exposure Evaluation Declaration

FCC ID: 2ALS8-KS0007

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

Product: Segway KickScooter

Model No.: P65U

FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s) FCC Part 2.1091

Test Procedure KDB 447498 D04 Interim General RF Exposure

Guidance v01

Approved By:

Reviewed By:

Vincent Yu

Robin Wu

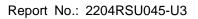
Robin Wu

Reviewed By:

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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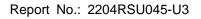
Revision History

Report No. Version		Description	Issue Date	Note	
2204RSU045-U3	Rev. 01	Initial Report	2022-06-07	Valid	



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1. General Information

1.1. Applicant

Ninebot (Changzhou) Tech Co., Ltd.

16F-17F, Block A, Building 3, Changwu Mid Road 18#, Wujin Dist., Changzhou, Jiangsu, China

1.2. Manufacturer

Ninebot (Changzhou) Tech Co., Ltd.

16F-17F, Block A, Building 3, Changwu Mid Road 18#, Wujin Dist., Changzhou, Jiangsu, China

1.3. Testing Facility

\boxtimes	Test Site - MRT	Suzhou Laborator	у				
	Laboratory Location (Suzhou - Wuzhong)						
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China						
	Laboratory Loca	tion (Suzhou - SIF	')				
	4b Building, Liand	do U Valley, No.200	Xingpu Rd., Shengpe	u Town, Suzhou Indu	ıstrial Park, China		
	Laboratory Accr	editations					
	A2LA: 3628.01		CNAS	S: L10551			
	FCC: CN1166		Du - Wuzhong) Rd., Wuzhong Economic Development Zone, Suzhou, China Du - SIP) No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China CNAS: L10551 ISED: CN0001 D25				
		□R-20025	□G-20034	□C-20020	□T-20020		
	VCCI:	□R-20141	□G-20134	□C-20103	□T-20104		
	Test Site - MRT	Shenzhen Laborat	ory				
	Laboratory Location (Shenzhen)						
	1G, Building A, Ju	ınxiangda Building,	Zhongshanyuan Roa	d West, Nanshan Di	strict, Shenzhen, China		
	Laboratory Accr	editations					
	A2LA: 3628.02		CNAS	: L10551			
	FCC: CN1284		ISED:	CN0105			
	Test Site - MRT	Taiwan Laboratory	1				
	Laboratory Location (Taiwan)						
	No. 38, Fuxing 2n	nd Rd., Guishan Dis	t., Taoyuan City 333,	Taiwan (R.O.C.)			
	Laboratory Accr	editations					
	TAF: L3261-1907	25					
	FCC: 291082, TW3261 ISED: TW3261						



1.4. Product Information

Product Name	Segway KickScooter			
Model No.	P65U			
FUT Identification No.	20220424Sample#05 (For Radiated Test)			
EUT Identification No.	20220424Sample#06 (For Conducted Test)			
Bluetooth Specification	V4.1 single mode for BLE			
NFC Specification	13.56MHz			
Antenna Information	Refer to Section 1.5			
Accessories				
Battery	Model No.: NCAF4813A / NCAF4812D			
	Nominal Voltage: 46.8VDC			
	Max. Charging Voltage: 54.6VDC			
	Nominal Energy: 561Wh			
	Nominal Capacity: 12 Ah			
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall				

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1.5. Radio Specification

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps
Antenna Type	PCB Antenna
Antenna Gain	-1.26dBi

1.6. Device Classification

According to the user manual, the antenna of this device is at least 20cm away from the body of the user, this device is classified as a **Mobile Device**. Therefore, the RF exposure evaluation requirements of FCC Part 2.1091 for mobile device exposure conditions subject to MPE limits.



2. RF Exposure Evaluation

2.1. Test Limits

According to FCC Part 2.1091, A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the RF source's radiating structure(s) and the body of the user or nearby persons.

According to FCC Part 1.1307(b)(3)(i)(C), 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.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency (MHz)	Threshold ERP (watts)			
0.3-1.34	1.920 R ²			
1.34-30	3.450 R ² /f ²			
30-300	3.83 R ² 0.0128 R ² f			
300-1500				
1500-100,000	19.2 R ²			
f = frequency in MHz, R = minimum separation distance in meters.				

According to FCC Part 1.1307(b)(3)(ii)(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.

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



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2.2. Test Result

Product	Segway KickScooter
Test Item	RF Exposure Evaluation

Test	Frequency Band	Max.	Max.	EIRP	ERP	Compliance	Threshold	Result
Mode	(MHz)	Conducted	Antenna	(dBm)	(W)	Distance (R)	ERP	
		Power	Gain			(m)	(W)	
		(dBm)	(dBi)					
BLE	2402 ~ 2480	-0.17	-1.26	-1.43	0.0004	0.2	0.768	Pass

Note:

1. EIRP (dBm) = Max. Conducted Power (dBm) + Max. Antenna Gain (dBi)

2. ERP (W) = $10^{[ERP (dBm) - 30]/10} = 10^{[EIRP (dBm) - 2.15 (dB) - 30]/10}$

3. Threshold ERP (W) = $19.2 * R^2$ (W) = $19.2 * 0.2^2$ (W) = 0.768 (W)

Test	Frequency	Max. EIRP	Max. EIRP	ERP	Compliance	Threshold	Result
Mode	Band	(dBµV/m)@3m	(dBm)	(W)	Distance (R)	ERP	
	(MHz)				(m)	(W)	
NFC	13.56	53.482	-41.718	0.00000004	0.2	0.0008	Pass

Note:

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

2. ERP (W) = $10^{[ERP (dBm) - 30]/10}$ = $10^{[EIRP (dBm) - 2.15 (dB) - 30]/10}$

3. Threshold ERP (W) = $3.45 * R^2 / f^2$ (W) = $3.45 * 0.2^2 / (13.56)^2$ (W) = 0.0008 (W)

The Bluetooth-LE can transmit simultaneously with NFC.

Exposure Ratio = 0.0004 / 0.768 + 0.00000004 / 0.0008 = 0.0006 < 1.

Therefore, this device meets the RF Exposure requirements when it is installed and operated with a minimum distance of 20cm between the radiator and user.