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Report No.: 2201RSU035-U2 Report Version: V01 Issue Date: 03-23-2022

# **RF Exposure Evaluation Declaration**

**FCC ID:** 2ALS8-KS0009

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

**Product:** Segway SuperScooter GT2

**Brand Name:** Segway

Model No.: GT2P

FCC Rule(s): FCC Part 2.1093

**Test Procedure** 447498 D04 Interim General RF Exposure Guidance v01

Approved By:

Reviewed By:

Vincent Yu

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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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.



# **Revision History**

Report No.	Version	Description	Issue Date	Note
2201RSU035-U2	Rev. 01	Initial Report	03-23-2022	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 Laboratory								
	Laboratory Location (Suzhou - Wuzhong)								
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China								
	Laboratory Location (Suzhou - SIP)								
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China								
	Laboratory Accre	editations							
	A2LA: 3628.01		CNAS	S: L10551					
	FCC: CN1166		ISED:	CN0001					
	VCCI	□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 Loca	tion (Shenzhen)							
	1G, Building A, Ju	nxiangda Building,	Zhongshanyuan Roa	nd West, Nanshan Dis	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 Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)								
	Laboratory Accre	editations							
	TAF: L3261-19072	 25							
	FCC: 291082, TW	/3261	ISED:	TW3261					



### 1.4. Product Information

Product Name	Segway SuperScooter GT2			
Model No.	GT2P			
S/N	S1GTB2146C0012			
Bluetooth Specification	V4.1 (BLE Only)			
Operating Temperature	-10 ~ 40°C			
Accessories	Accessories			
	Model: NBW58D802D0D			
AC/DC Adapter	Input: 100-240V~50/60Hz			
	Output: 57.8V, 2.0A, 115.6W			
Remark: 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

Frequency Range	2402~2480MHz
Channel Number	40
Channel Spacing	2MHz
Modulation	GFSK
Data Rate	1Mbps
Antenna Type	PCB Antenna
Antenna Gain	-1.26dBi



# 2. RF Exposure Evaluation

#### 2.1. Test Limits

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of  $\lambda/4$ .

As for devices with antennas of length greater than  $\lambda/4$  where the gain is not well defined, but always less than that of a half-wave dipole (length  $\lambda/2$ ), the available maximum time-averaged power generated by the device may be used in place of the maximum time-averaged ERP, where that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula (B.2).

$$P_{\text{th}} (\text{mW}) = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^{x} & d \le 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \le 40 \text{ cm} \end{cases}$$
(B. 2)

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\mathrm{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP<sub>20cm</sub> is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

$$P_{\text{th }}(\text{mW}) = ERP_{20 \text{ cm }}(\text{mW}) = \begin{cases} 2040f & 0.3 \text{ GHz} \le f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \le f \le 6 \text{ GHz} \end{cases}$$
(B. 1)



Table B.2 - Example Power Thresholds (mW)

	Distance (mm)									
MHz	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169



# 2.2. Test Result

Product	Segway SuperScooter GT2
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum Conducted Power (dBm)	Maximum Conducted Power	SAR Test Exclusion Threshold	Result
			(mW)	(mW)	
BLE	2402 ~ 2480	-1.82	0.66	3	Pass

Note: The minimum distance of antenna to user is 5mm.