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Test Report No.: FM180321N027





# RF EXPOSURE REPORT

Applicant	SHENZHEN OTTO INTELLIGENCE TECHNOLOGY CO LTD
Address	RM.101-102, BLDG, F13, F518 IDEA LAND, NO: 1065 BAOYUAN RD, XLXLANG AVENUE, BAO-AN, SHENZHEN, CHINA

Manufacturer or Supplier	Wuyi Chuangxin Metal Tools Co.,Ltd
Address	Jinyanshan Industry Area, Quanxi Town, Wuyi County, Jinhua City, Zhejiang
Product	ELECTRICAL SYSTEMS FOR SELF-BALANCING SCOOTERS
Brand Name	N/A
Model	T101636W
Additional Model & Model Difference	N/A
Date of tests	Mar. 21, 2018 ~ Apr. 25, 2018

- FCC Part 2 (Section 2.1093)
- KDB 447498 D01
- IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Breeze Jiang Project Engineer / EMC Department	Approved by Chris Chen Manager / EMC Department
	
Date: May 16, 2018	

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM180321N027	Original release	May 16, 2018

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## 1. CERTIFICATION

<b>FCC ID:</b>	2APO6OTTO1016
<b>PRODUCT:</b>	ELECTRICAL SYSTEMS FOR SELF-BALANCING SCOOTERS
<b>BRAND NAME:</b>	N/A
<b>MODEL NO.:</b>	T101636W
<b>ADDITIONAL NO.:</b>	N/A
<b>TEST SAMPLE:</b>	Engineering Sample
<b>APPLICANT:</b>	SHENZHEN OTTO INTELLIGENCE TECHNOLOGY CO LTD
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1093)
	KDB 447498 D01
	IEEE C95.1



## 2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  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 and  $\leq 7.5$  for 10-g extremity SAR, 16 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

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

- 2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:
- a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at  $> 1500$  MHz and  $\leq 6$  GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

## 3. CLASSIFICATION

The antenna of this product, under normal use condition, is at less than 20cm away from the body of the user. So, this device is classified as **Portable Device**.



### 4. SAR TEST EXCLUSION THRESHOLDS

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
GFSK	2402-2480	-2	+2	-4	0
$\pi/4$ DQPSK	2402-2480	-1	+2	-3	1

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
GFSK	2441	-1.04
$\pi/4$ DQPSK	2480	-1.06

#### SAR Test Exclusion Thresholds

Frequency (MHz)	Maximum source-based time averaged conducted output power (dBm)	Minimum separation distance (mm)	Result of Eq. 1	Limit for 1-g SAR	Limit for 10-g extremity SAR	Verdict
2402-2480	1	5	0.315	3.0	7.5	Exempt from SAR

#### Conclusion

Therefore this device complies with FCC’s RF radiation exposure limits for general population without SAR evaluation.