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# RF Exposure Evaluation Report

**Product** : RollerMouse mobile

: CONTOUR Trade mark Model/Type reference : RM-Mobile

**Series Model Number** : RM-Mobile2, RM-Mobile-Mini, RM-Mobile-CN

**Report Number** : EED32M80145501

FCC ID : 2AG6O-RMOB : Jan. 26, 2021 Date of Issue

**Test Standards** : 47 CFR Part 15 Subpart C

Test result **PASS** 

Prepared for:

CONTOUR (GUANGZHOU) DESIGN, INC. Building B21-2F, Huachuang Animation Park, Panyu, GZ, China

Prepared by:

Centre Testing International Group Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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(en. ca)

Reviewed by:

Ken Cai

David Wang

**David Wang** 

Date:

Aaron Ma

Jan. 26, 2021

Check No.:7025241220





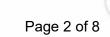












#### Version 2

Version No.	Date	10	Description	9	
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## **General Information**

## 4.1 Client Information

Applicant:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Applicant:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China
Manufacturer:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Manufacturer:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China
Factory:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Factory:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China

## 4.2 General Description of EUT

Product Name:	RollerMouse mobile	(0)
Model No.(EUT):	RM-Mobile	
Series Model Number	RM-Mobile2, RM-Mobile-Mini, RM-Mobile-CN	
Trade Mark:	CONTOUR	
EUT Supports Radios application:	5.1(BLE)+2.4G	

## **Product Specification subjective to this standard**

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Power Grade:	Default	
Test Software of EUT:	BLE:nRFgo Studio	
	2.4G:Default	
Antenna Type:	PCB Antenna	
Antenna Gain:	0dBi	
Power Supply:	Battery:Lithium Battery 3.7V	
	BLE:-2.46dBm	
Max Conducted Peak Output Power:	2.4G:-5.00dBm	
	The Max Conducted Peak Output Power data refer to the report EED32M80145501/EED32M80145502	
Sample Received Date:	Dec. 25, 2020	
Sample tested Date:	Dec. 25, 2020 to Jan. 27, 2021	

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.





















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#### 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted. FCC Designation No.: CN1164

#### 4.5 Deviation from Standards

None.

#### 4.6 Abnormalities from Standard Conditions

None.

# 4.7 Other Information Requested by the Customer































































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### 5 SAR Evaluation

## 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

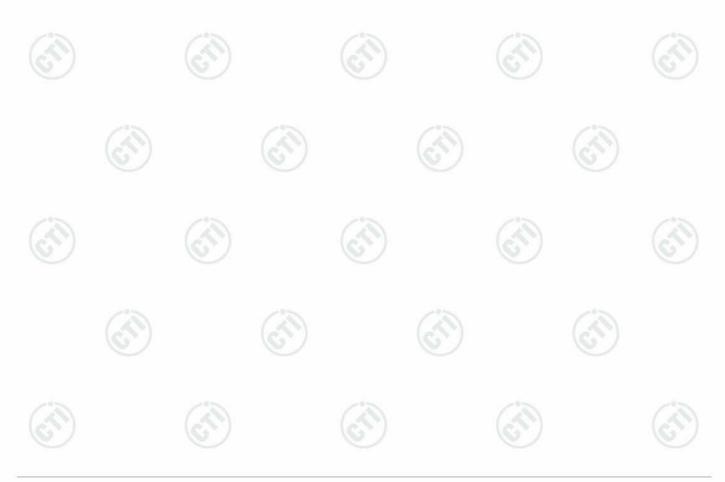
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\sqrt[4]{f(GHz)} \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

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  $\leq$  5 mm, a distance of 5 mm is applied to determine SAR test exclusion



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#### 5.1.2 EUT RF Exposure

The BLE tune-up power is -2.5 dBm +/- 0.5dB, therefore the highest tune-up power is -2.0 dBm (0.63 mW) @ 2480 MHz

When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

So,

 $(0.63 \text{mW} / 5 \text{mm}) * (2.480 \text{GHz} ^0.5) = 0.2$ 

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] \* [ $\sqrt{f(GHz)}$ ] = 0.2 < 3.0

The 2.4G Max Conducted Peak Output Power is 90.2dBuV/m in lowest channel(2.402GHz);

The best case gain of the antenna is 0dBi.

EIRP= 90.2 -95.2= -5.00dBm

-5.00dBm logarithmic terms convert to numeric result is nearly 0.32mW

According to the formula. calculate the EIRP test result:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}]$ 

General RF Exposure =  $(0.32 \text{mW} / 5 \text{ mm}) \text{ x } \sqrt{2.402 \text{GHz}} = 0.098 < 3.0$ 

So the SAR report is not required.



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## **PHOTOGRAPHS OF EUT Constructional Details**

Refer to Report No. EED32M80145501 for EUT external and internal photos.

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