

# EMF TEST REPORT

**For CE-RED**

**Report No.** : SSP24070038-3H

**Applicant** : SHENZHEN HANGPIN INDUSTRIAL LIMITED COMPANY

**Product Name** : Mouse

**Model Name** : V16

**Test Standard** : EN 50663:2017

**Date of Issue** : 2024-07-08



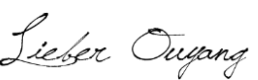



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This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.

**Test Report Basic Information**

<b>Applicant</b> .....:	SHENZHEN HANGPIN INDUSTRIAL LIMITED COMPANY	
Address of Applicant.....:	Room 303, Ju de Building, No 15, zhengfeng south road, huaide community, fu yong street, BAOAN DISTRICT, SHENZHEN, CHINA	
<b>Manufacturer</b> .....:	SHENZHEN HANGPIN INDUSTRIAL LIMITED COMPANY	
Address of Manufacturer.....:	Room 303, Ju de Building, No 15, zhengfeng south road, huaide community, fu yong street, BAOAN DISTRICT, SHENZHEN, CHINA	
<b>Product Name</b> .....:	Mouse	
<b>Brand Name</b> .....:	-	
<b>Main Model</b> .....:	V16	
<b>Series Models</b> .....:	See section 1.1(page 5)	
<b>Test Standard</b> .....:	EN 50663:2017	
<b>Date of Test</b> .....	2023-04-03 to 2023-04-12	
<b>Test Result</b> .....:	PASS	
<b>Tested By</b> .....	 _____ (Walker Wu)	
<b>Reviewed By</b> .....:	 _____ (Lieber Ouyang)	
<b>Authorized Signatory</b> .....:	 _____ (Lahm Peng)	
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Revision History

Revision	Issue Date	Description	Revised By
V1.0	2024-07-08	Initial Release	Lahm Peng

## 1. General Information

### 1.1 Product Information

Product Name:	Mouse
Trade Name:	-
Main Model:	V16
Series Models:	V62, V6, V100, V30, V28, V96, V97, V83, V80, V34, V43, V7, V61, V41, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, D22, D97, D37, D51, D66, D60, D61, D62, D63, D64, D65, D66, D67, D68
Radio Technology:	2.4GHz
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Hardware Version:	V1.2
Software Version:	V1.0
Note 1: The test data is gathered from a production sample, provided by the manufacturer.	
Note 2: The color of appearance and model name of series models listed are different from the main model, but the circuit and the electronic construction are the same, declared by the manufacturer.	

### 1.2 Compliance Standards

Compliance Standards	
EN 50663:2017	Generic standard for assessment of low power electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (10MHz to 300GHz)
EN 62479:2010	Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
All measurements contained in this report were conducted with all above standards	
According to standards for test methodology	
EN 50663:2017	Generic standard for assessment of low power electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (10MHz to 300GHz)
EN 62479:2010	Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which result is lowering the emission, should be checked to ensure compliance has been maintained.	

## 2. Human Exposure to Electromagnetic Fields

### 2.1 Standard and Limit

According to EN 50663:2017 Clause 6, Limit as below:

According to EN 62479:2010, Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz).

#### Low-power exclusion level $P_{\max}$ based on considerations of SAR

When SAR is the basic restriction, a conservative minimum value for  $P_{\max}$  can be derived, equal to the localized SAR limit ( $SAR_{\max}$ ) multiplied by the averaging mass ( $m$ ):

$$P_{\max} = SAR_{\max} m \quad (A.1)$$

Example values of  $P_{\max}$  according to Equation (A.1) are provided in Table A.1 for cases described by the ICNIRP guidelines [1], IEEE Std C95.1-1999 [2] and IEEE Std C95.1-2005 [3] where SAR limits are defined. Other exposure guidelines or standards may be applicable depending on national regulations.

**Table A.1 – Example values of SAR-based  $P_{\max}$  for some cases described by ICNIRP, IEEE Std C95.1-1999 and IEEE Std C95.1-2005**

Guideline / Standard	SAR limit, $SAR_{\max}$ W/kg	Averaging mass, $m$ g	$P_{\max}$ mW	Exposure tier <sup>a</sup>	Region of body <sup>a</sup>
ICNIRP [1]	2	10	20	General public	Head and trunk
	4	10	40	General public	Limbs
	10	10	100	Occupational	Head and trunk
	20	10	200	Occupational	Limbs
IEEE Std C95.1-1999 [2]	1,6	1	1,6	Uncontrolled environment	Head, trunk, arms, legs
	4	10	40	Uncontrolled environment	Hands, wrists, feet and ankles
	8	1	8	Controlled environment	Head, trunk, arms, legs
	20	10	200	Controlled environment	Hands, wrists, feet and ankles
IEEE Std C95.1-2005 [3]	2	10	20	Action level	Body except extremities and pinnae
	4	10	40	Action level	Extremities and pinnae
	10	10	100	Controlled environment	Body except extremities and pinnae
	20	10	200	Controlled environment	Extremities and pinnae
<sup>a</sup> Consult the appropriate standard for more information and definitions of terms.					

## 2.2 Evaluation Methods

Based on the above standard limit, the basic restriction at frequency between 10MHz to 300GHz is on localized SAR in the head. Any device with output power below 20mW cannot produce an exposure exceeding this restriction under the most pessimistic exposure conditions.

The basic restriction is 2W/Kg for general public device, so any unit which supplies less than 20mW from it's antenna port, averaged over 6 minutes, will meet the basic restriction.

## 2.3 Evaluation Results

Maximum Average Output Power				
Test Modes	ERP/EIRP	ERP/EIRP	Limit	Result
	dBm	mW	mW	Pass/Fail
2.4GHz				
2402	-4.74	0.336	20	Pass
2440	-4.60	0.347	20	Pass
2480	-4.85	0.327	20	Pass

Since average output power at worse case is: 0.347mW which cannot exceed the exempt condition, 20mW specified in EN 62479. It is deemed to full fit the requirement of RF exposure basic restriction specified in EC Council Recommendation (1999/519/EC).

**\*\*\*\*\* END OF REPORT \*\*\*\*\***