

**MPE** Report

Report No.: STS2504029H03

Issued for

Shenzhen NuPhy Technology Co., LTD

Room 215, Internet of Things Demonstration Park, No. 6 Minhuan Road, Longhua District, Shenzhen, China

Product Name: Keyboard

Brand Name: NuPhy

Model Name: KICK75

Series Model(s): N/A

FCC ID: 2BE3O-KICK75

Test Standards: FCC 47CFR §2.1093

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.



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### **TEST REPORT**

Applicant's Name	Shenzhen NuPhy	/ Technology Co.	LTD
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Address ...... Room 215, Internet of Things Demonstration Park, No. 6 Minhuan

Road, Longhua District, Shenzhen, China

Manufacturer's Name.....: SHENZHEN ARBITER TECHNOLOGY CO., LTD

Address ...... Floor 2, 3 and 4, Bldg. A, Meisheng Industrial Park, Chongqing Rd.,

Fuhai St., Baoan Dist., Shenzhen, Guangdong, China

**Product Description** 

Product Name .....: Keyboard
Brand Name .....: NuPhy
Model Name ....: KICK75

Series Model(s)..... N/A

Test Standards ..... FCC 47CFR §2.1093

447498 D04 Interim General RF Exposure Guidance v01

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Date of Test .....:

Test Result..... Pass

Testing Engineer : / Jahrn 13 u

(Aaron Bu)

Technical Manager

(Skylar Li)

Authorized Signatory:

(Bovey Yang)

TESTING APPROV



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# **Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	21 Apr. 2025	STS2504029H03	ALL	Initial Issue



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## 1. GENERAL INFORMATION

## 1.1 GENERAL DESCRIPTION OF THE EUT

Keyboard					
NuPhy					
KICK75	KICK75				
N/A					
N/A					
The EUT is Keyboard  Operation Frequency:  Modulation Type:  Antenna gain:  Designation:  BT: 2402~2480 MHz  2.4G: 2402~2480 MHz  BLE: GFSK  2.4G: GFSK  2.82dBi  FPC Antenna					
Input: DC 5V 1.0A					
N/A					
Rated Voltage: 3.85V Charge Limit Voltage: 4.4V Capacity: 2500mAH					
VER1.1					
V1.0.1					
	NuPhy KICK75 N/A N/A The EUT is Keybo Operation Frequency: Modulation Type: Antenna gain: Antenna Designation: Input: DC 5V 1.0 N/A Rated Voltage: 3.8 Charge Limit Volta Capacity: 2500mA VER1.1	NuPhy  KICK75  N/A  N/A  The EUT is Keyboard  Operation BT: 2402~2480 MHz Frequency: 2.4G: 2402~2480 MHz  Modulation Type: BLE: GFSK 2.4G: GFSK Antenna gain: 2.82dBi Antenna Designation: FPC Antenna  Input: DC 5V 1.0A  N/A  Rated Voltage: 3.85V Charge Limit Voltage: 4.4V Capacity: 2500mAH  VER1.1			

### 1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add.: 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai

Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

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# 2. FCC 47CFR §2.1093 REQUIREMENT

#### 2.1 TEST STANDARDS

Follow the maximum permissible exposure (MPE) limits specified in 447498 D04 Interim General Radio Frequency Exposure Guidelines v01. The gain of the antenna used in the product was extracted from the supplied antenna data sheet and the maximum total power input to the antenna was also measured. Calculate the distance from the product to the MPE limit by the formula.

#### 2.2 LIMIT

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

- (A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);
- (B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

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

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right)$$
 and  $f$  is in GHz;

and

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

d = the separation distance (cm);



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(C) Or using below table and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least  $\lambda/2\pi$ , where  $\lambda$  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 (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP(watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R².



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For multiple RF sources: Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those is paragraph (b)(3)(i)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(i)(A).

(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.

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

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of Part 1.1307 for Pth, including existing exempt transmitters and those being added. b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of Part 1.1307 for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

Pi = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

Pth,i = the exemption threshold power (Pth) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.

ERPj = the ERP of fixed, mobile, or portable RF source j.

ERPth,j = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least  $\lambda/2\pi$  according to the applicable formula of paragraph (b)(3)(i)(C) of Part 1.1307.

Evaluatedk = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure. Exposure Limitk = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as

applicable from § 1.1310.



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## 2.3 TEST RESULT

Tune up

RF Function	Tune Up Power (dBm)	Tune Up Power (dBm)			
2.4G	0±1	1			
BLE	0±1	1			

RF Function	Frequency (GHz)	Separation distance (cm)	Tune Up Power (dBm)	ANT Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Ratio	Result
2.4G	2.48	0.5	1	2.82	3.82	1.67	1.469	2.717	0.541	Pass
BLE	2.48	0.5	1	2.82	3.82	1.67	1.469	2.717	0.541	Pass

Note: 1. The Maxinum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

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