



# MPE Report

Report No.:STS2601273H01

Issued for

Remote Tech LLC

310 ALDER RD, DOVER DE 19904 USA

Product Name: Smart Key

Brand Name: N/A

Model Name: RT-KR5T4X

Series Model(s): N/A

FCC ID: 2AOKM-HD13

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.

**TEST REPORT****Applicant's Name**.....: Remote Tech LLC

Address .....: 310 ALDER RD, DOVER DE 19904 USA

**Manufacturer's Name**.....: Remote Tech LLC

Address .....: 310 ALDER RD, DOVER DE 19904 USA

**Product Description**

Product Name.....: Smart Key

Brand Name .....: N/A

Model Name .....: RT-KR5T4X

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

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

447498 D01 Interim General RF Exposure Guidance v06

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.

**Date of Test** .....:

Date of receipt of test item.....: 18 Aug., 2025

Date (s) of performance of tests .....: 19 Aug., to 26 Jan., 2026

Date of Issue.....: 26 Jan., 2026

Test Result.....: **Pass**

Testing Engineer :

*Aaron Bu*

(Aaron Bu)

Technical Manager :

*Skylar Li*

(Skylar Li)

Authorized Signatory :

*Bovey Yang*

(Bovey Yang)



## TABLE OF CONTENTS

|                                         |          |
|-----------------------------------------|----------|
| <b>1. GENERAL INFORMATION</b>           | <b>5</b> |
| 1.1 GENERAL DESCRIPTION OF THE EUT      | 5        |
| 1.2 TEST FACTORY                        | 5        |
| <b>2. FCC 47CFR §2.1093 REQUIREMENT</b> | <b>6</b> |
| 2.1 TEST STANDARDS                      | 6        |
| 2.2 LIMIT                               | 6        |
| 2.3 TEST RESULT                         | 8        |
| <b>Evaluation Result</b>                | <b>8</b> |

**Revision History**

| Rev. | Issue Date    | Report No.    | Effect Page | Contents      |
|------|---------------|---------------|-------------|---------------|
| 00   | 26 Jan., 2026 | STS2601273H01 | ALL         | Initial Issue |
|      |               |               |             |               |

## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

|                     |                          |                                   |
|---------------------|--------------------------|-----------------------------------|
| Product Name        | Smart Key                |                                   |
| Brand Name          | N/A                      |                                   |
| Model Name          | RT-KR5T4X                |                                   |
| Series Model(s)     | N/A                      |                                   |
| Model Difference    | N/A                      |                                   |
| Product Description | The EUT is Smart Key     |                                   |
|                     | Operation Frequency:     | 433.92MHz                         |
|                     | Modulation Type:         | FSK                               |
|                     | Antenna gain:            | -12.88 dBi (declare by Applicant) |
|                     | Antenna Designation:     | PCB Antenna                       |
| Power Rating        | DC 3.0V                  |                                   |
| Adapter             | N/A                      |                                   |
| Battery             | DC 3.0V (CR2032 battery) |                                   |
| Hardware Version    | N/A                      |                                   |
| Software Version    | N/A                      |                                   |

### 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

FCC test Firm Designation Number: CN1203

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

## 2. FCC 47CFR §2.1093 REQUIREMENT

### 2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in KDB 447498 D01 General RF Exposure Guidance v06 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

### 2.2 LIMIT

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

| MHz  | 5   | 10  | 15  | 20  | 25  | mm                                      |
|------|-----|-----|-----|-----|-----|-----------------------------------------|
| 150  | 39  | 77  | 116 | 155 | 194 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 27  | 55  | 82  | 110 | 137 |                                         |
| 450  | 22  | 45  | 67  | 89  | 112 |                                         |
| 835  | 16  | 33  | 49  | 66  | 82  |                                         |
| 900  | 16  | 32  | 47  | 63  | 79  |                                         |
| 1500 | 12  | 24  | 37  | 49  | 61  |                                         |
| 1900 | 11  | 22  | 33  | 44  | 54  |                                         |
| 2450 | 10  | 19  | 29  | 38  | 48  |                                         |
| 3600 | 8   | 16  | 24  | 32  | 40  |                                         |
| 5200 | 7   | 13  | 20  | 26  | 33  |                                         |
| 5400 | 6   | 13  | 19  | 26  | 32  |                                         |
| 5800 | 6   | 12  | 19  | 25  | 31  |                                         |
| MHz  | 30  | 35  | 40  | 45  | 50  | mm                                      |
| 150  | 232 | 271 | 310 | 349 | 387 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 164 | 192 | 219 | 246 | 274 |                                         |
| 450  | 134 | 157 | 179 | 201 | 224 |                                         |
| 835  | 98  | 115 | 131 | 148 | 164 |                                         |
| 900  | 95  | 111 | 126 | 142 | 158 |                                         |
| 1500 | 73  | 86  | 98  | 110 | 122 |                                         |
| 1900 | 65  | 76  | 87  | 98  | 109 |                                         |
| 2450 | 57  | 67  | 77  | 86  | 96  |                                         |
| 3600 | 47  | 55  | 63  | 71  | 79  |                                         |
| 5200 | 39  | 46  | 53  | 59  | 66  |                                         |
| 5400 | 39  | 45  | 52  | 58  | 65  |                                         |
| 5800 | 37  | 44  | 50  | 56  | 62  |                                         |

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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where } f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz.}$$

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.

## 2.3 TEST RESULT

Maximum measured transmitter power.

Worst Case

According to the calculation formula of power:

$$\text{EIRP} = P \cdot G = (E \cdot d)^2 / 30$$

Where:

P = transmitter output power in watts,

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator (unitless),

E = electric field strength in V/m, ---  $10^{((\text{dBuV/m})/20)/10^6}$ ,

d = measurement distance in meters (m)---3m,

So,

$$P = (E \cdot d)^2 / (30 \cdot G)$$

| Frequency (MHz) | Maximum field strength@3 m ( dBuV/m) | Maximum field strength@3m (V/m) | Antenna Gain (dBi) | Antenna Gain (numeric) | Distance (m) | Output power ( dBm ) |
|-----------------|--------------------------------------|---------------------------------|--------------------|------------------------|--------------|----------------------|
| 433.92          | 77.57                                | 0.0076                          | -12.88             | 0.05                   | 3            | -4.8                 |

## Evaluation Result

| Mode        | Frequency | Antenna Distance | RF output power including tune up (dBm) |      | SAR Test Exclusion Threshold | SAR Test Exclusion | Estimated SAR |
|-------------|-----------|------------------|-----------------------------------------|------|------------------------------|--------------------|---------------|
|             | GHz       | mm               | dBm                                     | mw   |                              |                    |               |
| 433.92(FSK) | 0.43392   | 5                | -4.8                                    | 0.33 | 0.04                         | Yes                | /             |

Note:

1. Remark: The worst case gain of the antenna is -12.88dBi.
2. Threshold at which no SAR required is  $0.04 \leq 7.5$  for 10-g SAR, Separation distance  $\leq 5\text{mm}$ .

※※※※※END OF THE REPORT※※※※※