

## FCC RF Exposure

FCC ID: 2AC6AR2

Applicant: Shenzhen Chainway Information Technology Co.,Ltd.

Exposure category: General population/uncontrolled environment

EUT Type: Production Unit

Device Type: UHF Swing Reader

This handheld device need to press the ‘SCAN’ button to scan the RFID terminal product. Then, the UHF antenna is far from the human body

When hold on the hand, the RFID antenna is about 10cm distance to the human hand. Please refer to the photo.

Assesment Standard:

1. KDB447498 D01 General RF Exposure Guidance v06

### Output power and tolerance

| Test mode | Channel | Frequency (MHz) | Peak Power(dBm) | AV Power(dBm) | AV Power Tolerance $\pm$ (dB) |
|-----------|---------|-----------------|-----------------|---------------|-------------------------------|
| UHF       | 1       | 902.75          | 28.75           | 22.67         | 22 $\pm$ 1                    |
|           | 26      | 915.25          | 28.58           | 22.48         | 22 $\pm$ 1                    |
|           | 50      | 927.25          | 28.20           | 22.10         | 22 $\pm$ 1                    |

Note: DutyCycle=24.6%,

| Test mode | Channel | Frequency (MHz) | Peak Power(dBm) | Peak Power Tolerance $\pm$ (dB) |
|-----------|---------|-----------------|-----------------|---------------------------------|
| BLE       | 00      | 2402            | -7.699          | -8.5 $\pm$ 1                    |
|           | 19      | 2440            | -8.189          | -8.5 $\pm$ 1                    |
|           | 39      | 2480            | -9.088          | -8.5 $\pm$ 1                    |

## For Handhold condition:

According to KDB447498 D01 General RF Exposure Guidance v06

A) For 100 MHz to 6 GHz and *test separation distances*  $\leq$  50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0$  for 1-g SAR, and  $\leq 7.5$  for 10-g extremity SAR,<sup>30</sup> where  $f_{(\text{GHz})}$  is the RF channel transmit frequency in GHz

B) For 100 MHz to 6 GHz and *test separation distances*  $>$  50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

- 1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a}]] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{(\text{MHz})}/150)]\}$  mW, for 100 MHz to 1500 MHz
- 2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a}]] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500 \text{ MHz}$  and  $\leq 6 \text{ GHz}$

| ANT  | ANT-Hand distance(mm) | Max. Tune Up Power | exclusion thresholds |
|------|-----------------------|--------------------|----------------------|
| RFID | 100                   | 23dBm (AV)         | 458mW(26.61dBm)      |
| BLE  | 30                    | -7.5dBm            | 57.2mW(21.55dBm)     |

*Note: No SAR required*

