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# RF Exposure Evaluation Report

**Report No.:** CQASZ20210600821E-02  
**Applicant:** Star Atmosphere Technology (Shenzhen) Co., LTD  
**Address of Applicant:** Room 2706A, Block A, Sunshine TDI Building, Nanshan District, Shenzhen 518000, China  
**Equipment Under Test (EUT):**  
**EUT Name:** WOLONOW Smart Dual-Mode Jumping Rope  
**Model No.:** SRS-3.0  
**Brand Name:** WOLONOW  
**FCC ID:** 2AZSZ-SRS-3  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2021-06-04  
**Date of Test:** 2021-06-04 to 2021-06-18  
**Date of Issue:** 2021-06-18  
**Test Result:** **PASS\***

\*In the configuration tested, the EUT complied with the standards specified above

**Tested By:**

*Lewis Zhou*

(Lewis Zhou)

**Reviewed By:**

*Jun Li*

(Jun Li)

**Approved By:**

*Jack Ai*

(Jack Ai)



## 1 Version

### Revision History Of Report

| Report No.           | Version | Description    | Issue Date |
|----------------------|---------|----------------|------------|
| CQASZ20210600821E-02 | Rev.01  | Initial report | 2021-06-18 |

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### 3 General Information

#### 3.1 Client Information

|                          |                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------|
| Applicant:               | Star Atmosphere Technology (Shenzhen) Co., LTD                                       |
| Address of Applicant:    | Room 2706A, Block A, Sunshine TDI Building, Nanshan District, Shenzhen 518000, China |
| Manufacturer:            | Star Atmosphere Technology (Shenzhen) Co., LTD                                       |
| Address of Manufacturer: | Room 2706A, Block A, Sunshine TDI Building, Nanshan District, Shenzhen 518000, China |
| Factory:                 | Star Atmosphere Technology (Shenzhen) Co., LTD                                       |
| Address of Factory:      | Room 2706A, Block A, Sunshine TDI Building, Nanshan District, Shenzhen 518000, China |

#### 3.2 General Description of EUT

|                       |                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| Product Name:         | WOLONOW Smart Dual-Mode Jumping Rope                                                                               |
| Model No.:            | SRS-3.0                                                                                                            |
| Trade Mark:           | WOLONOW                                                                                                            |
| Hardware Version:     | V1.2                                                                                                               |
| Software Version:     | V1.4                                                                                                               |
| Operation Frequency:  | 2402MHz~2480MHz                                                                                                    |
| Version:              | 2.4G custom                                                                                                        |
| Modulation Type:      | GFSK                                                                                                               |
| Transfer Rate:        | 1Mbps                                                                                                              |
| Number of Channel:    | 40                                                                                                                 |
| Product Type:         | <input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location |
| Test Software of EUT: | TG71XX Programmer                                                                                                  |
| Antenna Type:         | Chip antenna                                                                                                       |
| Antenna Gain:         | 0 dBi                                                                                                              |
| EUT Power Supply:     | lithium battery: DC3.7V, 500mAh, Charge by DC5V                                                                    |

## 4 SAR Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. 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.

#### 4.1.2 Limits

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:

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

$f(\text{GHz})$  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  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

### 4.1.3 EUT RF Exposure

#### 1) For BLE

##### Measurement Data

| GFSK mode        |                            |                            |                       |       |
|------------------|----------------------------|----------------------------|-----------------------|-------|
| Test channel     | Peak Output Power<br>(dBm) | Tune up tolerance<br>(dBm) | Maximum tune-up Power |       |
|                  |                            |                            | (dBm)                 | (mW)  |
| Lowest(2402MHz)  | 2.12                       | 1.5±1                      | 2.5                   | 1.778 |
| Middle(2440MHz)  | 1.03                       | 0.5±1                      | 1.5                   | 1.412 |
| Highest(2480MHz) | -1.46                      | -2±1                       | -1                    | 0.794 |

| Worst case: GFSK                                        |                                                    |                               |                           |       |                     |                        |
|---------------------------------------------------------|----------------------------------------------------|-------------------------------|---------------------------|-------|---------------------|------------------------|
| Channel                                                 | Maximum Peak<br>Conducted<br>Output Power<br>(dBm) | Tune up<br>tolerance<br>(dBm) | Maximum tune-<br>up Power |       | Calculated<br>value | Exclusion<br>threshold |
|                                                         |                                                    |                               | (dBm)                     | (mW)  |                     |                        |
| Lowest<br>(2402MHz)                                     | 2.12                                               | 1.5±1                         | 2.5                       | 1.778 | 0.551               | 3.0                    |
| Middle<br>(2440MHz)                                     | 1.03                                               | 0.5±1                         | 1.5                       | 1.412 | 0.441               |                        |
| Highest<br>(2480MHz)                                    | -1.46                                              | -2±1                          | -1                        | 0.794 | 0.250               |                        |
| Conclusion: the calculated value ≤3.0, SAR is exempted. |                                                    |                               |                           |       |                     |                        |

Remark: The Max Conducted Peak Output Power data refer to report Report No.:CQASZ20210600821E-01