



## MPE Test Report

**Report No.:** ARFR-19OC2067VTSHPB-3

**FCC ID:** 2ANDLTY-R8814

**Product:** Video Doorbell

**Model:** SC021-WR2

**Received Date:** Oct.24, 2019

**Test Date:** Nov.07 to Nov.17, 2019

**Issued Date:** Dec.10, 2019

**Applicant:** Hangzhou Tuya Information Technology Co., Ltd

**Address:** Room701, Building3, More Center,No.87 GuDun Road, Hangzhou,  
Zhejiang, China

**Manufacturer:** Hangzhou Tuya Information Technology Co., Ltd

**Address:** Room701, Building3, More Center,No.87 GuDun Road, Hangzhou,  
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**Issued By:** BUREAU VERITAS ADT (Shanghai) Corporation

**Lab Address:** No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)

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### Release Control Record

| Issue No.             | Description      | Date Issued  |
|-----------------------|------------------|--------------|
| ARFR-19OC2067VTSHPB-3 | Original release | Dec.10, 2019 |

## 1 Certificate of Conformity

**Product:** Video Doorbell

**Brand:** --

**Model:** SC021-WR2

**Applicant:** Hangzhou Tuya Information Technology Co., Ltd

**Test Date:** Nov.07 to Nov.17, 2019

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

The above equipment has been tested by **BUREAU VERITAS ADT (Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**



**, Date:**

Dec.10, 2019

Will YAN

Project Engineer

**Approved by :**



**, Date:**

Dec.10, 2019

Daniel SUN

RF Supervisor

### General Description of EUT

|                       |                                                                 |
|-----------------------|-----------------------------------------------------------------|
| Product               | Video Doorbell                                                  |
| Brand                 | --                                                              |
| Test Model            | SC021-WR2                                                       |
| Model Difference      | --                                                              |
| Power Rating          | 5VDC/1A with adaptor 100-240V~,50/60Hz                          |
| Modulation Type       | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM |
| Modulation Technology | DSSS, OFDM                                                      |
| Operating Frequency   | See clause 3.2                                                  |
| Number of Channel     | See clause 3.2                                                  |
| Antenna Type          | PCB Antenna                                                     |
| Antenna Connector     | --                                                              |
| Antenna Gain          | 3.63dBi                                                         |

Note: For more details, please refer to the User's manual of the EUT.

## 2 RF Exposure

### 2.1 Limits For Maximum Permissible Exposure (MPE)

| Frequency Range (MHz)                                 | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Average Time (minutes) |
|-------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| Limits For General Population / Uncontrolled Exposure |                               |                               |                                     |                        |
| 300-1,500                                             | -                             | -                             | F/1500                              | 30                     |
| 1,500-100,000                                         | -                             | -                             | 1.0                                 | 30                     |

F = Frequency in MHz

### 2.2 MPE Calculation Formula

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm<sup>2</sup>

P = transmit power in mW

G = numeric gain of transmit antenna (numeric gain=Log-1(dB antenna gain/10))

R = distance (cm)

### 2.3 MPE Calculation Formula

The antenna of this product, under normal use condition, is at least 20cm from the body of the user. So the device is classified as Mobile Device.

### 2.4 Calculation Result of Maximum Permissible Exposure

| Frequency Band (MHz) | Max. Conducted output power(dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------|----------------------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| WLAN 2.4GHz          |                                  |                    |               |                                     |                             |
| 2412-2462            | 12.95                            | 3.63               | 20            | 0.009056                            | 1                           |

**Conclusion:**

**The calculation result of MPE is less than the limit.**

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