



## RF Exposure Evaluation Declaration

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**FCC ID:** 2ANDLTY-R8816

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

**Application Type:** Certification

**Product:** Smart Camera

**Model No.:** SC114-WK2

**Brand Name:** TUYA

**FCC Classification:** Digital Transmission System (DTS)  
Unlicensed National Information Infrastructure (UNII)

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( Robin Wu )



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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### Revision History

Report No.	Version	Description	Issue Date	Note
2005RSU047-U3	Rev. 01	Initial Report	07-17-2020	Valid

## 1. PRODUCT INFORMATION

### 1.1. Equipment Description

Product Name	Smart Camera
Model No.	SC114-WK2
Brand Name	TUYA
Wi-Fi Specification	802.11a/b/g/n/ac
Antenna Type:	FPC Antenna
Antenna Gain:	3.00dBi

## 2. RF Exposure Evaluation

### 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### 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)
(A) Limits for Occupational / Control Exposures				
300-1500	--	--	f/300	6
1500-100000	--	--	5	6
(B) Limits for General Population / Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100000	--	--	1	30

f= Frequency in MHz

Calculation Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 2.2. Test Result of RF Exposure Evaluation

Product	Smart Camera
Test Item	RF Exposure Evaluation

Antenna Gain: 3.00dBi.

Test Mode	Frequency Band (MHz)	Max Conducted Power (dBm)	Max Conducted Power (mW)	Max EIRP (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
802.11b/g/n	2412 ~ 2462	13.38	21.78	43.45	0.0086	1
802.11a/ac	5180 ~ 5240	10.67	11.67	23.28	0.0046	1
	5745 ~ 5825					

### Conclusion:

2.4G Wi-Fi and 5G Wi-Fi can't transmit simultaneously.

Therefore, the Safety Distance is 20 cm.

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## **Appendix A - EUT Photograph**

Refer to "2005RSU047-UE" file.