

Hangzhou Tuya Information Technology Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

UFO-R1

REPORT NUMBER:

181102247SHA-002

ISSUE DATE:

December 14, 2018

DOCUMENT CONTROL NUMBER:

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Report no.: 181102247SHA-002

Applicant: Hangzhou Tuya Information Technology Co., Ltd.

Room701, Building3, More Center, No. 87 GuDun Road, Hangzhou,

Zhejiang, China

Manufacturer: Hangzhou Tuya Information Technology Co., Ltd.

Room701, Building3, More Center, No. 87 GuDun Road, Hangzhou,

Zhejiang, China

Manufacturing site: Hangzhou Tuya Information Technology Co., Ltd.

Room701, Building3, More Center, No. 87 GuDun Road, Hangzhou,

Zhejiang, China

FCC ID: 2ANDL-UFOR1

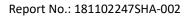
SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	KEVIEWED BY:	
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Project Engineer Eric Li	Reviewer Daniel Zhao	

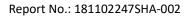
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Revision History

Report No.	Version	Description	Issued Date
181102247SHA-002	Rev. 01	Initial issue of report	December 14, 2018





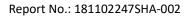
1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Universal Remote Control
Type/Model:	UFO-R1
	EUT is Universal Remote Control, which supports WiFi function, there is
Description of EUT:	only one model, we test it and list the worst results in this report.
Rating:	5VDC 1A
EUT type:	☐ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	2018.12.7
Date of test:	2018.12.8~2018.12.13

1.2 Technical Specification

Frequency Range:	2400MHz ~ 2483.5MHz		
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20		
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)		
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
Type of Modulation:	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)		
	IEEE 802.11b: 1Mbps		
	IEEE 802.11g: 6Mbps		
Data Rate:	IEEE 802.11n-HT20: MCS0		
Channel Separation:	5MHz		
Antenna Information:	3.23dBi, PCB antenna		

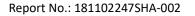




1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is	CNAS Accreditation Lab	
recognized,	Registration No. CNAS L0139	
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175	
organizacions.	IC Registration Lab Registration code No.: 2042B-1	
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252	
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0	
	A2LA Accreditation Lab Certificate Number: 3309.02	





2 MPE Assessment

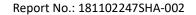
Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Woolie device expe	saic for stariation	e operations.		
Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave
	(V/m)	(A/m)	(uT)	power density
				S _{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^{4}	-
1-8 Hz	10 000	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	87/f ^{1/2}	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f ^{1/2}	0,0037 f ^{1/2}	0,0046 f ^{1/2}	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is \leq 1.0





TEST REPORT

2.2 Assessment Results

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

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

Where $S = power density in mW/cm^2$

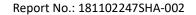
P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 181102247SHA-001: The maximum radiated power = 19.22dBm = 83.56mW; Here R is chosen to be 20cm,

 $S = P / (4\pi R^2) = 83.56 / (4 * 3.14 * 20 * 20) = 0.017 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$





Appendix I

Definition below must be outlined in the User Manual: