

TEST REPORT

Reference No.	:	WTN19S09066646W002
FCC ID.....	:	2AUPR-XJ-W1A
Applicant	:	Ningbo xiaojiang Internet of Things Technology Co.,Ltd
Address	:	Romm 2302-2303, Jiayin Building, No.455, keji Road,Yinzhou District, Ningbo, China
Manufacturer	:	Ningbo xiaojiang Internet of Things Technology Co.,Ltd
Address	:	Romm 2302-2303, Jiayin Building, No.455, keji Road,Yinzhou District, Ningbo, China
Product	:	XJ-W1A
Model(s).....	:	XJ-W1A
Standards	:	FCC CFR47 Part 1 Section 1.1037:2019 FCC CFR47 Part 2 Section 2.1091:2019
Date of Receipt sample....	:	2019-09-25
Date of Test	:	2019-09-26 to 2019-10-14
Date of Issue	:	2019-10-24
Test Result	:	Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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2 Revision History

Test report #	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTN19S09066644W002	2019-09-25	2019-09-26 to 2019-10-14	2019-10-24	original	-	Valid

3 General Information

3.1 General Description of E.U.T

Product:	XJ-W1A
Model(s):	XJ-W1A
Operation Frequency:	802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz~2452MHz
Antenna installation:	Integrated Antenna
Antenna Gain:	2.0dBi
Type of modulation:	IEEE 802.11b (CCK/QPSK/BPSK,11Mbps max.) IEEE 802.11g (BPSK/QPSK/16QAM/64QAM,54Mbps max.) IEEE 802.11n (BPSK/QPSK/16QAM/64QAM,HT20:72Mbps max., HT40:150Mbps max.)

3.2 Details of E.U.T

Ratings	DC 3.0V to 3.6V
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4 RF Exposure

Test Requirement: FCC Part 1.1307

Test Method: FCC Part 2.1091

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

4.2 Evaluation Result

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
2.0	1.585	17.56	57.02	0.0180	1

Result: Compliance

No SAR measurement is required.

=====End of Report=====