TEST REPORT

REPORT NUMBER: B17W00112-NFC

ON

Type of Equipment:	4G TLE mobile phone
Model Name:	A1-901
Manufacturer:	SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD

ACCORDING TO

FCC Part 15
15.225 General technical requirements.
ANSI C63.10-2013:American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

Chongqing Institute of Telecommunications

Month date, year
Jun, 5, 2017
Signature

Zhang Yan
Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Institute of Telecommunications.

FCC ID:	2AK9KA1
Report Date:	2017-06-05
Test Firm Name:	Chongqing Institute of Telecommunications
FCC Registration Number:	428018

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 15. The sample tested was found to comply with the requirements defined in the applied rules.

Test Report

CONTENTS

Test Report

1 General Information

1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 15.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex B.

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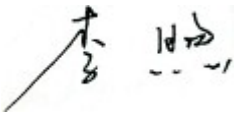
Test Report

1.2 Testers

Name:	Li Xu
Position:	Engineer
Department:	Department of RF test
Date:	2017-02-21 to 2017-06-05
Signature:	

Editor of this test report:

Name:	Zhou Jin
Position:	Engineer
Department:	Department of RF test
Date:	2017-06-05
Signature:	

Technical responsibility for area of testing:

Name:	Zhang Yan
Position:	Manager
Department:	Director of the laboratory
Date:	2017-06-05
Signature:	

Test report

1.3 Testing Laboratory information

1.3.1 Location

Name:	Chongqing Institute of Telecommunications
Address:	No. 8, Yuma Road, Chayuan New City, Nan'an District Chongqing P. R. CHINA, 401336
Tel:	0086 23 88069965
Fax:	0086 23 88608777
Email:	songweiwei@chinattl.com

1.3.2 Details of accreditation status

Accredited by:	------
Registration number:	------
Standard:	------

1.3.3 Test location, where different from section 1.3.1

Name:	------
Street:	------
City:	------
Country:	------
Telephone:	------
Fax:	------
Postcode:	------

Test Report

1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name:	Cloud Minds(Shenzhen) Holdings Co. Ltd
Address:	Room 201 Building A No.1 Qian hai shengang Corporation Zone Qian hai Road 1st Shenzhen（Stay by Shenzhen Qianhai Commerce Secretariat Co., Ltd ）
Country:	China
Telephone:	0086 13426155325
Fax:	------
Contact:	andy.xu
Email:	andy.xu@cloudminds.com

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name:	SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD
Address:	Office Address Floor 2.Building 3. Zone K1. Foxcon Technology park, 2ND DONGHUAN RD NO.2.LONGHUA Agency. LONGHUA NEW DISTRICT SHENZHEN
Country:	China
Telephone:	------
Fax:	------
Contact:	------
Email:	------

Test Report

2 Test Item

2.1 General Information

Manufacturer:	SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD
Type of Equipment:	4G TLE mobile phone
Model Name:	A1-901
Serial Number:	S7/18: 862851030000163/862851030020161 S15/18: 862851030000175/862851030020177
Production Status:	Product
Receipt date of test item:	2017-02-21

2.2 Outline of Equipment under Test

The A1-901, referred to as "EUT" hereafter, is a 4G TLE mobile phone, the EUT supports MIMO 2T2X, all transmit signals are completely uncorrelated. The table below shows the supported bands for the EUT.

Technology	Frequency (MHz)	Note
NFC	13.56	--

2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Adaptor	None	None	--	None

2.5 Other Information

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Test Report

3 Summary of Test Results

A brief summary of the tests carried out is shown as following.

FCC Rules	Name of Test	Result
2.1049	20dB Bandwidth	Pass
15.225 (a)(b)(c)	In-Band Emission	Pass
15.225 (d) 15.209	Out-of-Band Emission	Pass
15.225 (e)	Frequency Stability Tolerance	Pass
15.207	AC Conducted Emissions 150kHz-30MHz	Pass
Note :--		

Test Report

4 Test Equipments and Ancillaries Used For Tests

The test equipments and ancillaries used are as follows.

No.	Equipment	Model	SN	Manufacture	Cal. Due Date
1	EMI Test Receiver	ESU26	100367	R&S	2018-03-03
2	Trilog super broadband test antenna	VULB 9163	9163-544	R&S	2017-12-01
3	Loop antenna	6502	00143163	ETS	2017-12-01
4	Fully-Anechoic Chamber	11.8m×6.5 m×6.3m	--	ETS	2017-08-19
5	spectrum analyzer	FSQ 26	201137/026	R&S	2018-03-03
6	DC Power Supply	N6705B	MY50000919	Agilent	2017-12-06

Test Report

5 Test Results

5.1 20dB Bandwidth Measurement

Specifications:	2.1049
DUT Serial Number:	S15/18: 862851030000175/862851030020177
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

5.1.1 Test Result

Frequency (MHz)	20dB Bandwidth （KHz）
13.56	264.422

Test Report

5.2 In-Band Radiated Spurious Emission Measurements

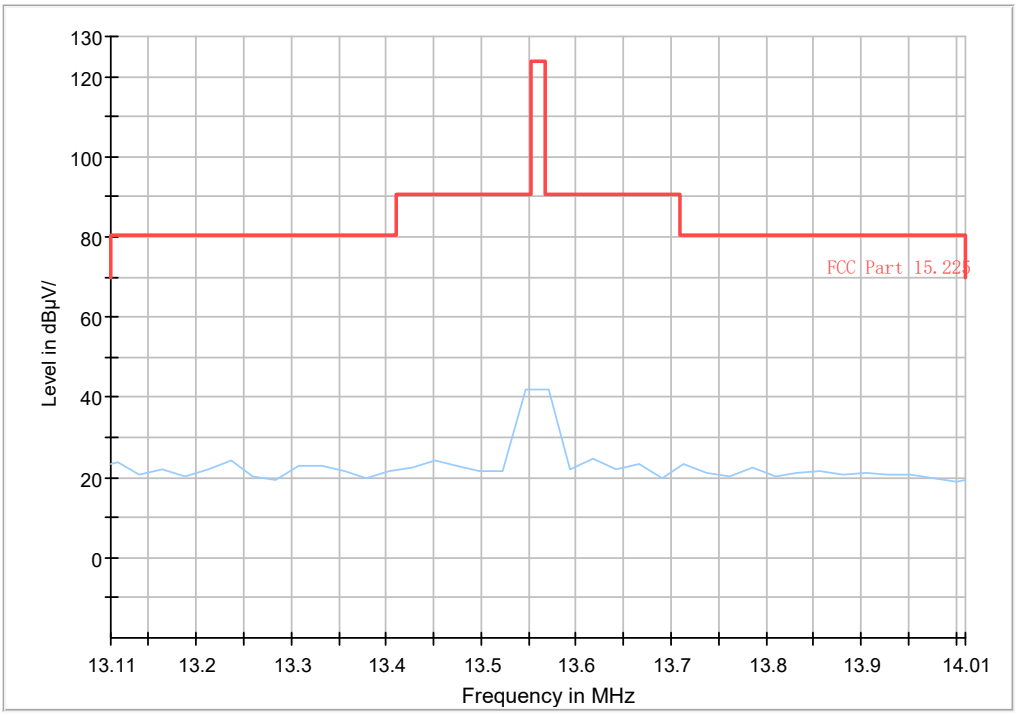
Specifications:	FCC Part 15.225 (a)(b)(c)
DUT Serial Number:	S15/18: 862851030000175/862851030020177
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit

Standard	Limit
FCC Part 15.225 (a)(b)(c)	15,848 μ V/m @30m,13.553-13.567 MHz 334 μ V/m @30m,13.410-13.553MHz;13.567-13.710 MHz 106 μ V/m @30m,13.110-13.410MHz;13.710-14.010 MHz

Test Report

5.2.1 Test Result



Test Report

5.3 Out-Of-Band Radiated Spurious Emission Measurements

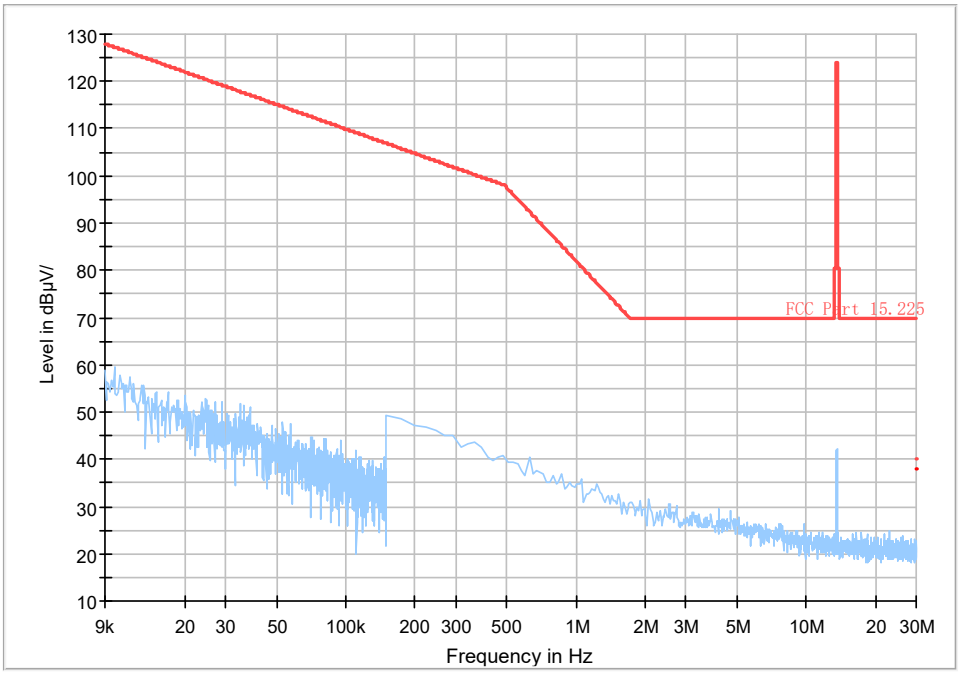
Specifications:	FCC Part 15.225 (d)
DUT Serial Number:	S15/18: 862851030000175/862851030020177
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit in restricted band:

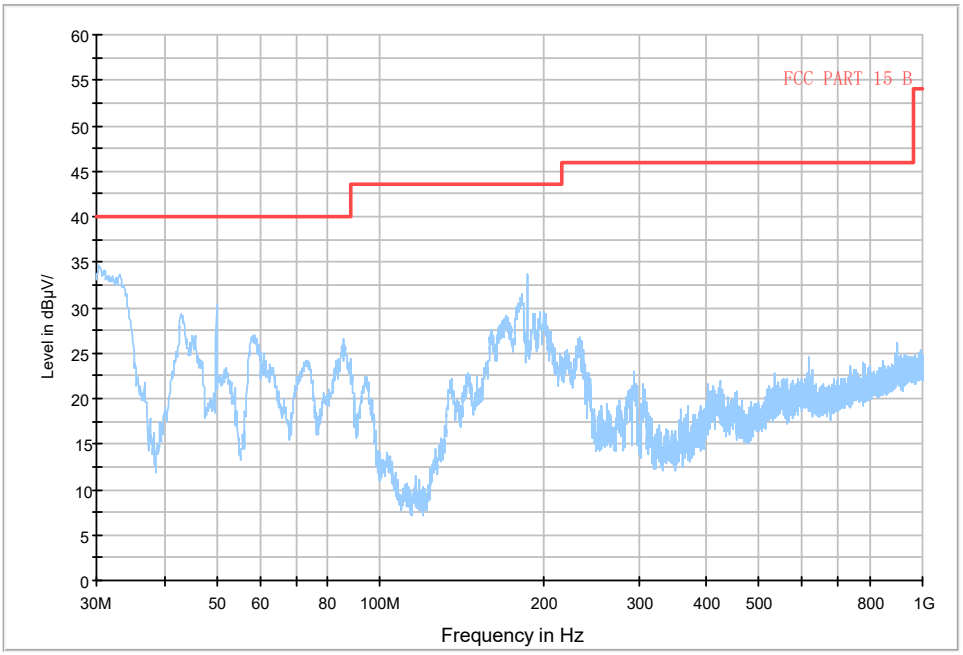
Frequency of emission (MHz)	Field strength (uV/m)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Test Report

5.3.1 Test Result



RE 30MHz-1GHz



Test photo

See the Pic1,2 in document" A1-901 _NFC_Test Setup Photos".

5.4 Frequency Stability

Specifications:	FCC Part 15.225 (e)
DUT Serial Number:	S15/18: 862851030000175/862851030020177
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

5.4.1 Test Result

VOLTAGE	Power Battery	TEMP(℃)	Freq.Dev.(Hz)	Deviation(%)	Conclusion
100%		-20	8Hz	0.589971×10^{-6}	Pass
100%		-10	13Hz	0.958702×10^{-6}	Pass
100%		0	-12Hz	-0.884956×10^{-6}	Pass
100%		10	-17Hz	-1.25369×10^{-6}	Pass
100%		20	6Hz	0.442478×10^{-6}	Pass
100%		30	12Hz	0.884956×10^{-6}	Pass
100%		40	-13Hz	-0.958702×10^{-6}	Pass
100%		50	-16Hz	-1.17994×10^{-6}	Pass
Battery End Point	3.5	20	19Hz	1.40118×10^{-6}	Pass
115%	4.35	20	12Hz	0.884956×10^{-6}	Pass

Test Report

5.5 Power line Conducted Emissions

Specifications:	FCC Part 15.207
DUT Serial Number:	S15/18: 862851030000175/862851030020177
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit

The EUT meets the requirement of having a peak to average ratio of less than 13dB.

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolt (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

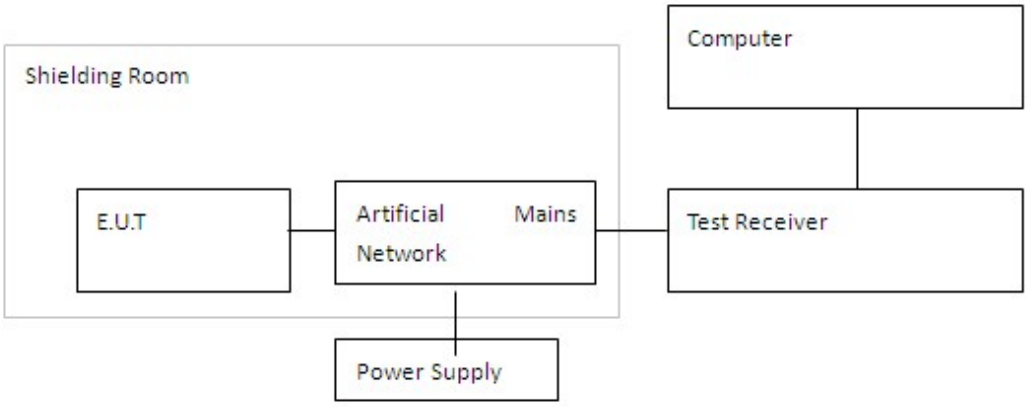
Limits of the conducted disturbance at the AC mains ports:

Frequency range	Limit(Quasi-peak)	Limit(Average)
0.15 MHz to 0.5 MHz	66 dBμV – 56 dBμV	56 dBμV – 46 dBμV
>0.5 MHz to 5MHz	56 dBμV	46 dBμV
>5 MHz to 30 MHz	60 dBμV	50 dBμV
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Setup

The EUT was placed in a shielding room. The WLAN TESTER was used to set the TX channel and power level. The ac adapter output is connected to Receiver through an AMN (Artificial Mains Network).



Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

The measurement is made according to Public notice FCC Public Notice DA 00-705, March 2000, and ANSI C63.4-2014.

Test Result:

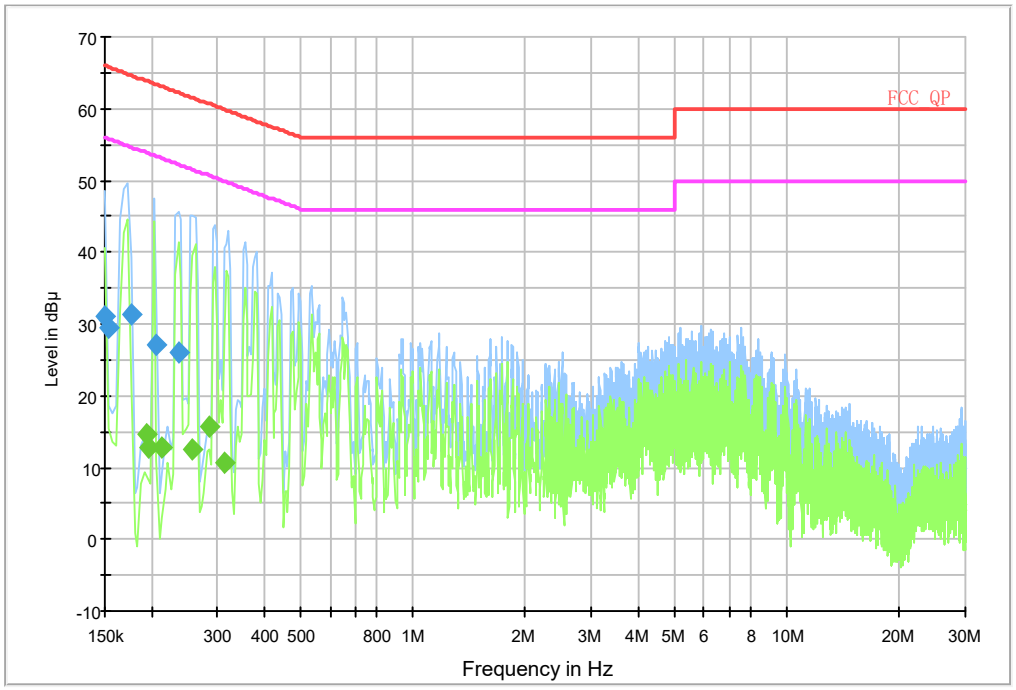
Line L&N					
Detector (QP)	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Line	PE
QP	0.150000	30.9	66.0	N	FLO
QP	0.154000	29.4	65.8	N	FLO
QP	0.176206	31.3	64.7	N	FLO
QP	0.205519	27.1	63.4	L1	FLO
QP	0.235638	26.1	62.2	N	FLO
QP	0.245672	26.1	62.2	N	FLO

Line L&N					
Detector (AV)	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Line	PE
AV	0.194000	14.7	53.9	N	FLO
AV	0.195938	12.9	53.8	L1	FLO
AV	0.213519	12.7	53.1	L1	FLO
AV	0.258000	12.4	51.5	L1	FLO
AV	0.286000	15.7	50.6	L1	FLO
AV	0.311906	10.7	49.9	L1	FLO

Conclusion: PASS

Test Report

CISPR N&L1 Voltage 150k to 30MHz-Class B



Line L &Line N

Test photo

See the Pic3 in document" A1-901 _NFC_Test Setup Photos".

Test Report

Annex A EUT Photos

See the document"A1-901-External Photos".
See the document"A1-901-Internal Photos".

Test Report

ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

*****End Of Report*****

Test Report