

# FCC PART 15 TEST REPORT

No. I17Z62005-IOT08

for

**TCL Communication Ltd.** 

**Mobile Phone** 

6062W

With

FCC ID: 2ACCJBT09

Hardware Version: 06

Software Version: v1A65

Issued Date: 2018-03-19



#### 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 CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

#### **Test Laboratory:**

CTTL, Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: <a href="mailto:cttl\_terminals@caict.ac.cn">cttl\_terminals@caict.ac.cn</a>, website: <a href="mailto:www.caict.ac.cn">www.caict.ac.cn</a>,



## **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I17Z62005-IOT08	Rev.0	1st edition	2018-03-19



## **CONTENTS**

CONTE	ENTS	3
1.	TEST LATORATORY	4
1.1.	TESTING LOCATION	4
1.2.	TESTING ENVIRONMENT	4
1.3.	PROJECT DATA	4
1.4.	SIGNATURE	4
2.	CLIENT INFORMATION	5
2.1.	APPLICANT INFORMATION	5
2.2.	MANUFACTURER INFORMATION	5
3.	EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)	6
3.1.	ABOUT EUT	
3.2.	INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	6
3.3.	GENERAL DESCRIPTION	6
4.	REFERENCE DOCUMENTS	
4.1.	DOCUMENTS SUPPLIED BY APPLICANT	
4.2.	REFERENCE DOCUMENTS FOR TESTING	
5.	LABORATORY ENVIRONMENT	
6.	SUMMARY OF TEST RESULTS	7
6.1.	SUMMARY OF TEST RESULTS	
6.2.	STATEMENTS	
7.	TEST EQUIPMENTS UTILIZED	
	X A: MEASUREMENT RESULTS	
	MEASUREMENT METHOD	
	CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME	
	VON-OCCUPANCY PERIOD	
	ASSOCIATED TEST	
	X B: PHOTOGRAPHS OF THE TEST SET-UP	
ANNEX	X C: ACCREDITATION CERTIFICATE	15



## 1. TEST LATORATORY

### 1.1. Testing Location

Location 1:CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,

P. R. China100191

Location 2:CTTL(Shouxiang)

Address: No. 51 Shouxiang Science Building, Xueyuan Road,

Haidian District, Beijing, P. R. China100191

## 1.2. <u>Testing Environment</u>

Normal Temperature: 15-35°C Extreme Temperature: -10/+60°C Relative Humidity: 20-75%

### 1.3. Project data

Testing Start Date: 2017-10-31
Testing End Date: 2018-03-19

### 1.4. Signature

Jiang Xue

( Prepared this test report )

Zheng Wei

(Reviewed this test report)

Lv Songdong

(Approved this test report)



## 2. CLIENT INFORMATION

### 2.1. Applicant Information

Company Name: TCL Communication Ltd.

7/F, Block F4, TCL Communication Technology Building, TCL

Address: International E City, Zhong Shan Yuan Road, Nanshan District,

Shenzhen, Guangdong, P.R. China 518052

City: Shenzhen

Postal Code: /

Country: China

Telephone: 0086-755-36611722

Fax: 0086-75536612000-81722

## 2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

7/F, Block F4, TCL Communication Technology Building, TCL

Address: International E City, Zhong Shan Yuan Road, Nanshan District,

Shenzhen, Guangdong, P.R. China 518052

City: Shenzhen

Postal Code: /

Country: China

Telephone: 0086-755-36611722

Fax: 0086-75536612000-81722

2016



## 3. <u>EQUIPMENT UNDER TEST (EUT) AND ANCILLARY</u>

## **EQUIPMENT(AE)**

### 3.1. About EUT

Description Mobile Phone

Model name 6062W

FCC ID 2ACCJBT09 WLAN Frequency Range ISM Band:

5250MHz~5350MHz

Type of modulation OFDM

Antenna Integral Antenna
Extreme vol. Limits 3.8V DC by Battery

Device Type (DFS)

Client without radar detection(only support client mode)

TPC mechanism Not support

### 3.2. Internal Identification of EUT used during the test

EUT ID*	S/N	HW Version	SW Version
EUT2	015126000205332	06	v1A65

<sup>\*</sup>EUT ID: is used to identify the test sample in the lab internally.

### 3.3. General Description

FCC Part15

The Equipment Under Test (EUT) is a model of A70A XL TMO with integrated antenna. It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test.

## 4. REFERENCE DOCUMENTS

### 4.1. <u>Documents supplied by applicant</u>

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation;

15.209 Radiated emission limits, general requirements;

15.247 Operation within the bands 902-928MHz,

2400-2483.5 MHz, and 5725-5850 MHz.

Revision of Parts 2 and 15 of the Commission's Rules to

FCC 06-96 Permit Unlicensed National Information Infrastructure 2006

(U-NII) devices in the 5 GHz band

## 5. LABORATORY ENVIRONMENT

Measurement is performed in shielding room.



## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Verdict
Channel move time and channel closing transmission time	15.407 (h)(2)(iii)	Р
Non-Occupancy Period	15.407 (h)(2) (iv)	Р

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

Р	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the
	standard

### 6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deal with the UNII DFS functions among the features described in section 3, and The EUT met all requirements of the reference documents.

The end user is not available to get and modify the parameters of the detected Radar Waveforms in this product.

### **Test Conditions**

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage
V min	Low Voltage
V max	High Voltage
H nom	Norm Humidity
A nom	Norm Air Pressure

For this report, all the test case listed above is tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

Temperature	T nom	26°C
Voltage	V nom	3.8V(By battery)
Humidity	H nom	44%
Air Pressure	A nom	1010hPa



## 7. TEST EQUIPMENTS UTILIZED

## **Conducted test system**

No.	Equipmen	.4	Model	Serial	Manufacturer	Calibration	Calibration
NO.	Equipmen	IL	wodei	Number	Manufacturer	Date	Due Date
1	Vector S	Signal	FSQ40	200089	Rohde &	2017-06-02	2018-06-01
I	Analyzer		F3Q40	Schwa	Schwarz	2017-06-02	2010-00-01
2	Vector S	Signal	SMU200A	103752	Rohde &	2017-06-02	2018-06-01
	General		SIVIUZUUA	103732	Schwarz	2017-06-02	2016-06-01
3	Shielding Roon	m	S81	/	ETS-Lindgren	/	/

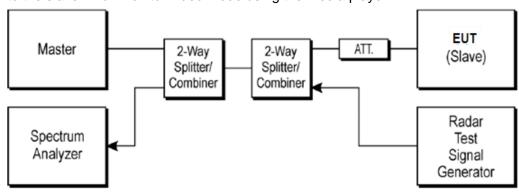


### ANNEX A: MEASUREMENT RESULTS

#### A.1. Measurement Method

#### A.1.1. Conducted Measurements

The below figure shows the DFS setup, where the EUT is a RLAN device operating in slave mode, without Radar Interference Detection function. This setup also contains a device operating in master mode. The radar test signals are injected into the master device. The EUT (slave device) is associated with the master device. WLAN traffic is generated by streaming the mpeg file from the master to the slave in full monitor video mode using the media player.



#### Note:

- 1) All Measurements are performed with the EUT's narrowest channel bandwidth.
- 2) The master device information is as follows

Vendor: Cisco

Model: AIR-AP1252AG-A-K9 FCC ID: LDK102061, 1DK102062

3) The software of radar signal generator (R&S SMU200A) is completely designed based on FCC-06-96A1/NTIA requirement.

#### A.1.2. Parameters of DFS test signal

1). Interference threshold values, master or client incorporation in service monitoring. For device power less than 23dBm (E.I.R.P.), the threshold level is -62 dBm at the antenna port after correction for antenna gain and procedural adjustments.

Because of conducted measurement performed, the calibration power from radar signal generator to antenna port of DFS test equipment is -62 dBm.

Maximum Transmit Power	Value
> 200 mW	-64 dBm
< 200 mW	-62 dBm



### 2). DFS requirement values

The required values are as the following table.

Parameter	Value	
Non-occupancy	> 1800 s	
Channel Availability Check Time	60 s	
Channel Move Time	10 s	
Channel Closing Transmission Time	200 ms + 60 ms	
LL NIII Detection Denducidth	Minimum 80% of the 99%	
U-NII Detection Bandwidth	transmission power bandwidth	

As the EUT is IP based system, the MPEG video file from NTIA website is used to steam to EUT via the Master device.

### A.1.3. Measurement Uncertainty

Item	Measurement Uncertainty
Time	0.70 ms
Power	0.75 dBm



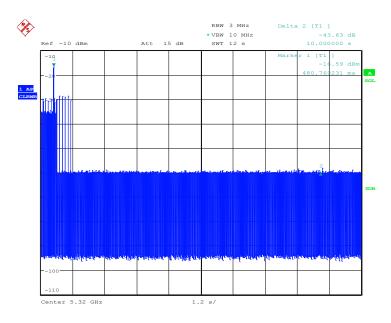
## A.2. Channel move time and channel closing transmission time

#### **Measurement Limit:**

Test Items	Limit
channel closing transmission time	< 200 ms + 60 ms
Channel move time	< 10 s

#### **Measurement Results:**

### Frequency Band: 5250MHz ~ 5350MHz

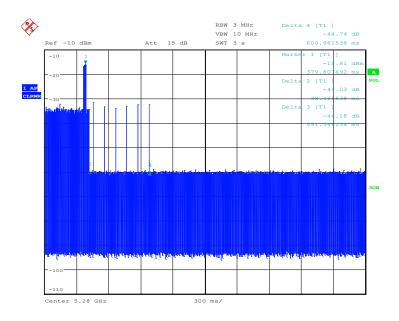


Date: 15.NOV.2017 16:12:18

The channel move time is as the figure. It shows the time of the radar and the client pulses. The figure shows that the client stops transmission within 10 seconds, and no transmissions occur after 10 seconds later of the radar burst signal.

Frequency Band: 5250MHz ~ 5350MHz





Date: 24.NOV.2017 15:23:32

The closing transmission time is as the figure, and the result is 96.12ms.

**Conclusion: PASS** 

### A.3.Non-Occupancy Period

#### **Measurement Limit:**

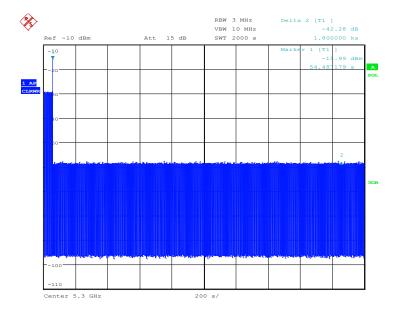
Test Items	Limit
Non-Occupancy Period	> 1800 s

### A3.1 Associated test

Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.

Frequency Band: 5250MHz ~ 5350MHz





Date: 24.NOV.2017 15:08:27

The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of "stop transmits" from the DFS master (access point).

**Conclusion: PASS** 



## ANNEX B: PHOTOGRAPHS OF THE TEST SET-UP

## **Layout of Conducted Test**





## **ANNEX C: Accreditation Certificate**

United States Department of Commerce National Institute of Standards and Technology



## Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

### Telecommunication Technology Labs, CAICT

Beijing China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

### **Electromagnetic Compatibility & Telecommunications**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2016-09-29 through 2017-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

\*\*\* END OF REPORT BODY \*\*\*