

FCC Test Report

APPLICANT : TCL Communication Ltd.
EQUIPMENT : Tablet PC
BRAND NAME : ALCATEL ONETOUCH
MODEL NAME : 9002W
MARKETING NAME : ALCATEL ONETOUCH PIXI 3 (7)
FCC ID : 2ACCJB040
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product testing was completed on Dec. 14, 2015. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.



Prepared by: Andy Yeh / Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL (SHENZHEN) INC.

**1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,
Nanshan District, Shenzhen, Guangdong, P. R. China**



TABLE OF CONTENTS

REVISION HISTORY.....	3
SUMMARY OF TEST RESULT	4
1. GENERAL DESCRIPTION	5
1.1. Applicant.....	5
1.2. Manufacturer	5
1.3. Product Feature of Equipment Under Test	5
1.4. Product Specification subjective to this standard.....	6
1.5. Specification of Accessory	7
1.6. Modification of EUT	8
1.7. Test Location.....	8
1.8. Applicable Standards	8
2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST	9
2.1. Test Mode	9
2.2. Connection Diagram of Test System	10
2.3. Support Unit used in test configuration and system.....	11
2.4. EUT Operation Test Setup.....	11
3. TEST RESULT.....	12
3.1. Test of Radiated Emission Measurement	12
4. LIST OF MEASURING EQUIPMENT	16
5. UNCERTAINTY OF EVALUATION	17
APPENDIX A. SETUP PHOTOGRAPHS	
APPENDIX B. PRODUCT EQUALITY DECLARATION	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC532002-03	Rev. 01	This is a variant product of 9002A. The product equality declaration could be referred to Appendix B. All the test cases were performed on original report which can be referred to Sporton Report Number FC532002 (Model name: 9002A; FCC ID: 2ACCJB009). Based on the original test report, only the worst cases of radiated emission were verified for the differences between 9002A and current 9002W.	Dec. 21, 2015



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 6.36 dB at 239.250 MHz



1. General Description

1.1. Applicant

TCL Communication Ltd.

5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203,
P. R. China

1.2. Manufacturer

TCL Communication Ltd.

5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203,
P. R. China

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Brand Name	ALCATEL ONETOUCH
Model Name	9002W
Marketing Name	ALCATEL ONETOUCH PIXI 3 (7)
FCC ID	2ACCJB040
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(16QAM uplink is not supported)/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
IMEI Code on the test	Radiation: 014472000882725
HW Version	V03
SW Version	BFO
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4. Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	GSM850 : 824.2 MHz ~ 848.8 MHz GSM1900 : 1850.2 MHz ~ 1909.8MHz WCDMA Band V : 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II : 1852.4 MHz ~ 1907.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	GSM850 : 869.2 MHz ~ 893.8 MHz GSM1900 : 1930.2 MHz ~ 1989.8 MHz WCDMA Band V : 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II : 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz
Antenna Type	WWAN : IFA Antenna WLAN : IFA Antenna Bluetooth : IFA Antenna GPS: IFA Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM(16QAM uplink is not supported) 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth v4.0 LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GPS : BPSK

1.5. Specification of Accessory

Specification of Accessory				
AC Adapter	Brand Name	ALCATEL onetouch	Model Name	UC11US
	Power Rating	I/P: 100-240Vac, 200mA, O/P: 5Vdc, 1000mA		
	P/N	CBA0058AG0C2		
Battery	Brand Name	ALCATEL onetouch	Model Name	TLp028B2
	Power Rating	3.75Vdc, 2820mAh		
	S/N	C2820012C2YF908HWSFP		
USB Cable	Brand Name	NA	Model Name	NA
	Signal Line Type	1.0m shielded without core		
Earphone	Brand Name	NA	Model Name	NA
	Signal Line Type	1.5m non-shielded without core		

1.6. Modification of EUT

No modifications are made to the EUT during all test items.

1.7. Test Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755- 3320-2398	
Test Site No.	Sporton Site No.	FCC Registration No.
	03CH01-SZ	831040

1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC 47 CFR FCC Part 15 Subpart B
- ♦ ANSI C63.4-2009

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

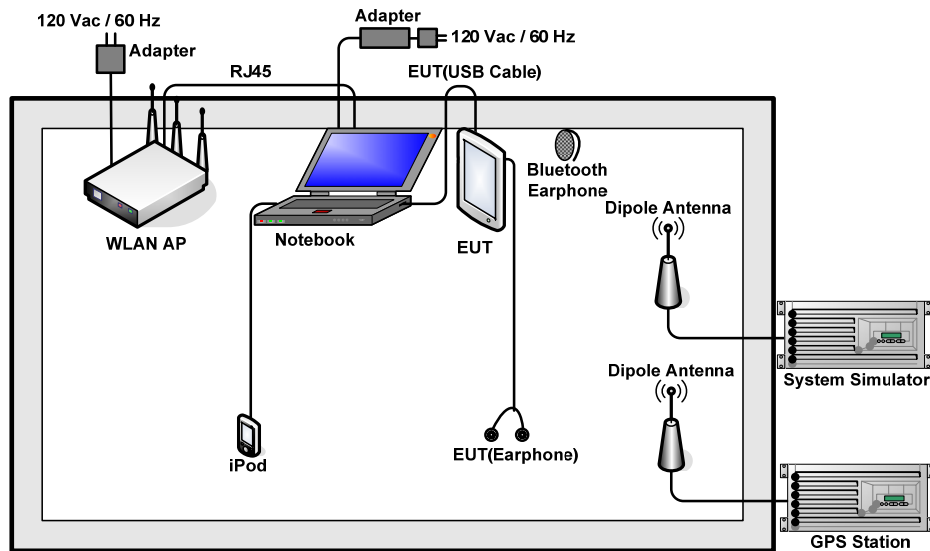
Item	EUT Configuration	Test Condition
		EMI RE
1.	Data application transferred mode (EUT connected with notebook)	☒

Abbreviations:

- EMI RE: EUT radiated emissions

Test Items	EUT Configure Mode	Function Type
Radiated Emissions $\geq 1\text{GHz}$	1	Mode 1: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + Battery + GPS Rx
Remark: Data Link with notebook means data application transferred mode between EUT and notebook.		

2.2. Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
6.	iPod	Apple	A1199	FCC DoC	Unshielded, 1.2 m	N/A

2.4. EUT Operation Test Setup

The EUT was in WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and was in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between Notebook and EUT via USB cable.
2. Turn on GPS function to make the EUT receive continuous signals from GPS station.

3. Test Result

3.1. Test of Radiated Emission Measurement

3.1.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.1.2. Measuring Instruments

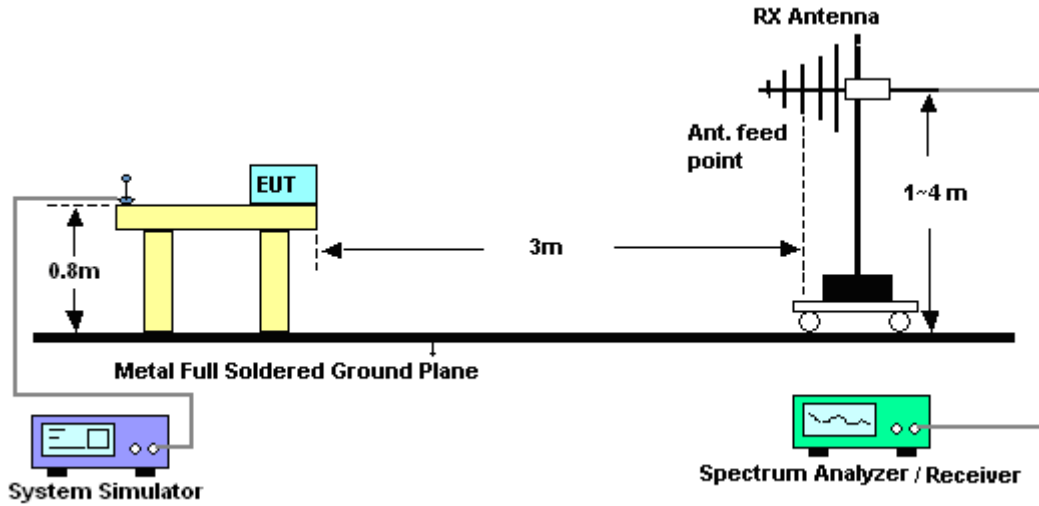
The measuring equipment is listed in the section 4 of this test report.

3.1.3. Test Procedures

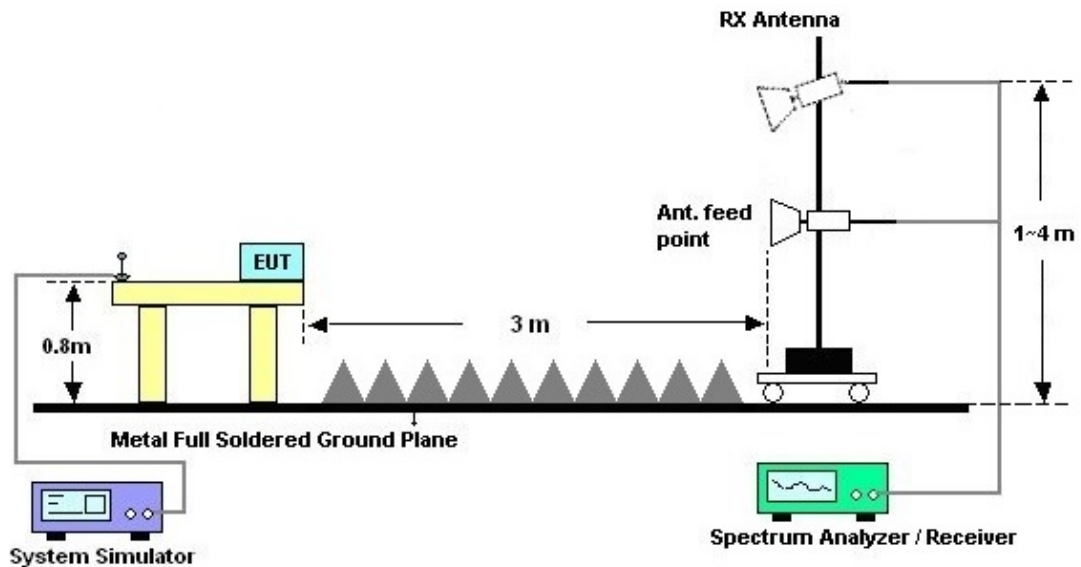
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBμV/m) = 20 log Emission level (μV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.1.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



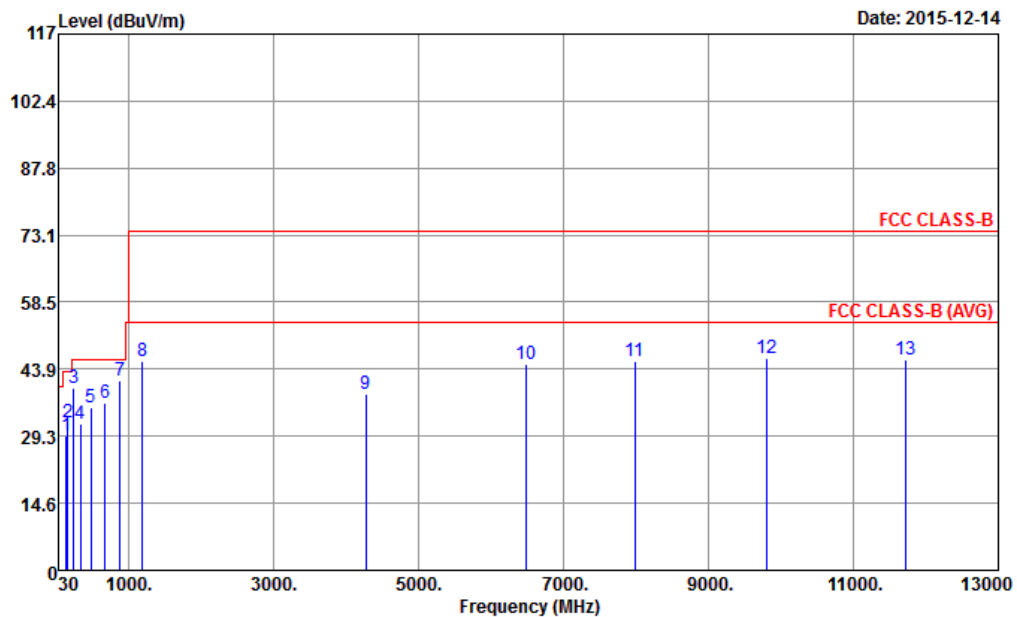
For radiated emissions above 1GHz





3.1.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	23~25°C
Test Engineer :	Jack Tian	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + Battery + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		



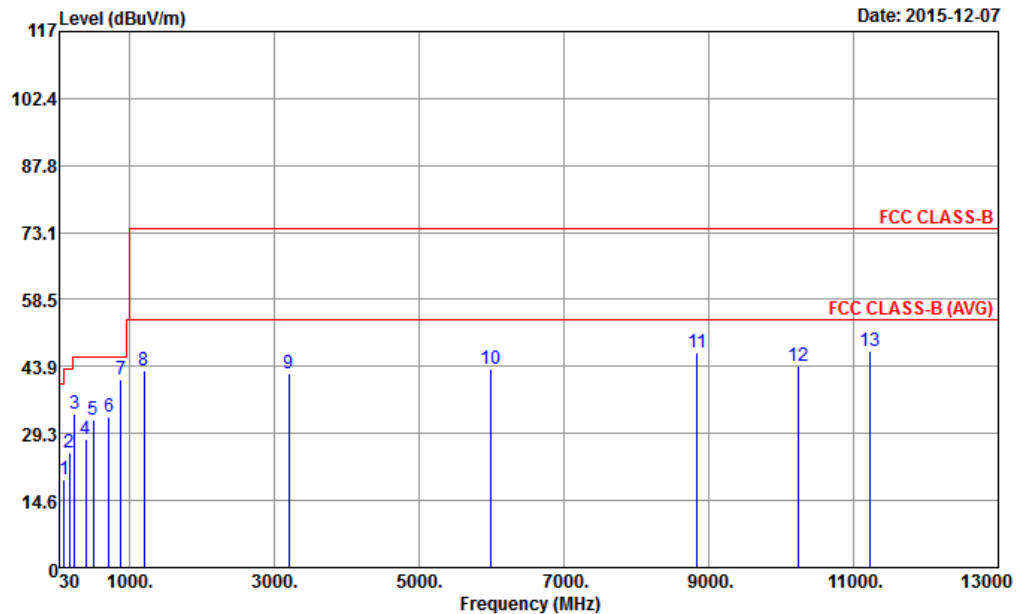
Condition : FCC CLASS-B 3m LF35408CBL6112D_0519 HORIZONTAL

Project : (FC)532002-03
 Mode : Mode 1
 IMEI : 014472000882725

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	135.03	29.31	-14.19	43.50	47.71	11.53	1.53	31.46	---	---	Peak
2	156.90	32.41	-11.09	43.50	51.23	11.04	1.53	31.39	---	---	Peak
3	239.25	39.64	-6.36	46.00	57.55	11.57	1.80	31.28	100	200	Peak
4	335.00	31.85	-14.15	46.00	46.37	14.74	2.04	31.30	---	---	Peak
5	479.90	35.54	-10.46	46.00	46.78	17.62	2.31	31.17	---	---	Peak
6	675.90	36.39	-9.61	46.00	45.57	19.33	2.71	31.22	---	---	Peak
7	881.40	41.36			48.67	20.93	3.03	31.27	---	---	Peak
8	1186.00	45.58	-28.42	74.00	76.31	24.39	3.44	58.56	---	---	Peak
9	4276.00	38.38	-35.62	74.00	61.54	30.21	6.53	59.90	---	---	Peak
10	6476.00	44.82	-29.18	74.00	61.08	34.08	7.94	58.28	---	---	Peak
11	7980.00	45.49	-28.51	74.00	57.85	36.97	8.63	57.96	---	---	Peak
12	9804.00	46.36	-27.64	74.00	57.31	37.97	9.95	58.87	150	200	Peak
13	11730.00	46.05	-27.95	74.00	56.26	38.84	10.93	59.98	---	---	Peak



Test Mode :	Mode 1	Temperature :	23~25°C
Test Engineer :	Jack Tian	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + Battery + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		



Condition : FCC CLASS-B 3m LF35408CBL6112D_0519 VERTICAL

Project : (FC)532002-03
 Mode : Mode 1
 IMEI : 014472000882725

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	99.93	19.26	-24.24	43.50	37.16	12.30	1.38	31.58	---	---	Peak
2	166.62	25.04	-18.46	43.50	44.04	10.83	1.53	31.36	---	---	Peak
3	238.44	33.73	-12.27	46.00	51.67	11.54	1.80	31.28	50	150	Peak
4	399.40	28.07	-17.93	46.00	40.69	16.50	2.12	31.24	---	---	Peak
5	499.50	32.26	-13.74	46.00	43.11	17.89	2.41	31.15	---	---	Peak
6	716.50	32.99	-13.01	46.00	41.84	19.62	2.75	31.22	---	---	Peak
7	881.40	41.21			48.52	20.93	3.03	31.27	---	---	Peak
8	1200.00	42.90	-31.10	74.00	73.61	24.40	3.44	58.55	---	---	Peak
9	3196.00	42.37	-31.63	74.00	67.92	28.31	5.53	59.39	---	---	Peak
10	5986.00	43.43	-30.57	74.00	62.72	32.77	7.59	59.65	---	---	Peak
11	8840.00	46.98	-27.02	74.00	58.06	37.33	9.50	57.91	---	---	Peak
12	10238.00	44.12	-29.88	74.00	54.66	38.43	9.99	58.96	---	---	Peak
13	11224.00	47.15	-26.85	74.00	56.57	39.30	10.93	59.65	100	200	Peak



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Dec. 14, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;Max 30dBm	Jun. 07, 2015	Dec. 14, 2015	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Oct. 17, 2015	Dec. 14, 2015	Oct. 16, 2016	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 20, 2015	Dec. 14, 2015	Jan. 19, 2016	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Dec. 14, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Jan. 28, 2015	Dec. 14, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Dec. 14, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Dec. 14, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Dec. 14, 2015	NCR	Radiation (03CH01-SZ)



5. Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8 dB
---	--------



Appendix B. product equality declaration

TCL Communication Ltd.

5F, C building, No. 232, Liang Jing Road
ZhangJiang High-Tech Park, Pudong Area
Shanghai, P.R. China. 201203
TEL: +86(0)21 61460666
FAX: +86(0)21 61460602

Declaration of changes from 9002A (initial) to 9002W (variant)

● SOFTWARE MODIFICATIONS:

- Protocol Stack changes: No
- MMS/STK/USAT/USIM changes: No
- DM/SUPL/VT/FUMO/SWP/HCI: No
- Other changes detailed: [SW Version changed](#)

● HARDWARE MODIFICATIONS:

- Band changes: [YES :UMTS Band1,2,5,8 change to UMTS Band2,4,5,8](#)
- PCB Layout changes: No
- Main components changes: [YES](#)

	Antenna	AP	Modem	Transceiver	Power Amplifier	Balun	Band pass filter	Duplexer
GSM	NO	NO	NO	NO	YES	NO	YES	NO
WCDMA	NO	NO	NO	NO	YES	NO	YES	NO
LTE	NA	NA	NA	NA	NA	NA	NA	NA

	Antenna	AP	Modem	Transceiver	Power Amplifier	Balun	Band pass filter	Duplexer
Bluetooth	NO	NO	NO	NO	Not support	NO	Not support	NO
Wi-Fi	NO	NO	NO	NO	Not support	NO	Not support	NO

	Antenna	AP	Modem	Transceiver	LNA	Rx SAW Filter	Duplexer
GPS	NO	NO	NO	NO	NO	NO	NO

- FM changes: no
- Other components changes:
[U804 PA SKY77761 change to SKY77764](#)
[FL802 Band pass filter SAYRF1G95HQ0F0A change to SAYRF1G73CE0F0AR05](#)
- Other changes detailed: NO

● MECHANICAL MODIFICATIONS:

- Use new metal front/back cover or keypad: No
- Mechanical shell changes: No ; Whole size of EUT: no
- Other changes detailed: print information on back cover changed.

APPROVED BY:

Project Manager:

Signature:

Date: 2015-10-27

