# **FCC Test Report**

APPLICANT : TCL Communication Ltd.

**EQUIPMENT**: LTE Tablet

BRAND NAME : AT&T

MODEL NAME : 9020A

MARKETING NAME : TINT

FCC ID : 2ACCJB003

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

**CLASSIFICATION**: Certification

The product was received on Dec. 08, 2014 and testing was completed on Jan. 12, 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.

Reviewed by: Louis Wu / Manager

Louis Wu

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

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: 2ACCJB003

TEL: 86-755-8637-9589

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Report Issued Date : Jan. 27, 2015

Testing Laboratory

Report No.: FC4D0805

Report Version : Rev. 01

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## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC4D0805	Rev. 01	Initial issue of report	Jan. 27, 2015

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## **SUMMARY OF TEST RESULT**

Report Section	FCC Rule	Description	Limit	Result	Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	13.47 dB at
					0.150 MHz
					Under limit
2.2	45 400	Dadiated Engineers	45 400 limita	DACC	3.01 dB at
3.2	15.109	15.109 Radiated Emission	< 15.109 limits	PASS	32.700 MHz for
					Quasi-Peak

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## 1. General Description

## 1.1. Applicant

#### **TCL Communication Ltd.**

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

## 1.2. Manufacturer

#### TCL Communication Ltd.

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

## 1.3. Product Feature of Equipment Under Test

	Product Feature
Equipment	LTE Tablet
Brand Name	AT&T
Model Name	9020A
Marketing Name	TINT
FCC ID	2ACCJB003
EUT supports Radios application	WCDMA/HSPA/HSPA+(Downlink Only)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/ WLAN 5GHz 802.11a/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
HW Version	V05
SW Version	B1F
EUT Stage	Production Unit

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

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## 1.4. Product Specification subjective to this standard

Draduct Charification out institute to this standard				
Product Specification subjective to this standard				
	WCDMA Band V : 826.4 MHz ~ 846.6 MHz			
	WCDMA Band II : 1852.4 MHz ~ 1907.6 MHz			
	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz			
	LTE Band 4: 1710.7 MHz ~ 1754.3 MHz			
	LTE Band 5 : 824.7 MHz ~ 848.3 MHz			
Tx Frequency	LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz			
	LTE Band 17 : 706.5 MHz ~ 713.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz;			
	5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz;			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	WCDMA Band V : 871.4 MHz ~ 891.6 MHz			
	WCDMA Band II : 1932.4 MHz ~ 1987.6 MHz			
	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz			
	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz			
	LTE Band 5 : 869.7 MHz ~ 893.3 MHz			
	LTE Band 7 : 2622.5 MHz ~ 2687.5 MHz			
Rx Frequency	LTE Band 17 : 736.5 MHz ~ 743.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz;			
	5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz;			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GPS: 1.57542 GHz			
	Glonass : 1602 MHz + nx 0.5625MHz (n=-7,-6,-5,0,,6)			
	WWAN : IFA Antenna			
	WLAN: IFA Antenna			
Antenna Type	Bluetooth: IFA Antenna			
	GPS: IFA Antenna			
	Glonass: IFA Antenna			
	WCDMA: QPSK (Uplink)			
	HSDPA: QPSK (Uplink)			
	HSUPA : QPSK (Uplink)			
	HSPA+ : 16QAM (Downlink Only)			
	LTE: QPSK / 16QAM			
	802.11b: DSSS (DBPSK / DQPSK / CCK)			
Type of Modulation	802.11a/g/n/: OFDM (BPSK / QPSK / 16QAM / 64QAM )			
	Bluetooth v4.0 LE : GFSK			
	Bluetooth (1Mbps) : GFSK			
	Bluetooth (2Mbps) : π /4-DQPSK			
	Bluetooth (3Mbps) : 8-DPSK			
	GPS: BPSK			
	Glonass : BPSK			

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### 1.5. Modification of EUT

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

### 1.6. Test Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.			
	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,			
	Nanshan District, Shenzhen, Guangdong, P. R. China			
Test Site Location	TEL: +86-755-8637-9589			
	FAX: +86-755-8637-9595			
Test Site No.	Sporton Site No.			
rest Site No.	CO01-SZ			

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			
Took Cita No	Sporton Site No. FCC Registration No.			
Test Site No.	03CH01-SZ	831040		

## 1.7. 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.

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## 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: conduction (150 kHz to 30 MHz), 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.

		Те	st Condition	on
Item	EUT Configuration	EMI	EMI	EMI
			RE<1G	RE≥1G
1.	Charging Mode (EUT with adapter)	$\boxtimes$	$\boxtimes$	$\boxtimes$
2.	Data application transferred mode		$\bowtie$	$\boxtimes$
	(EUT connected with notebook)			

#### Abbreviations:

EMI AC: AC conducted emissions

EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

EMI RE < 1G: EUT radiated emissions < 1GHz

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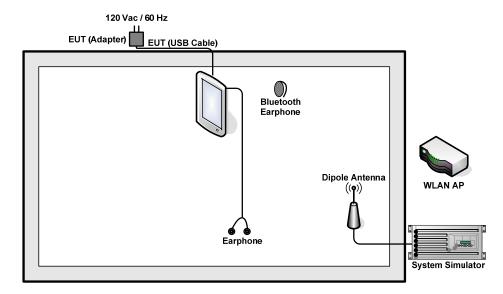
Test Items	EUT Configure Mode	Function Type
		Mode 1: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Charging from Adapter) + Camera + Battery + Earphone <fig.1></fig.1>
AC Conducted	1/2	Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable (Charging from Adapter) + MPEG4 + Battery + Earphone <fig.1></fig.1>
Emission	1/2	Mode 3: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone <fig.2></fig.2>
		Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + Glonass Rx + Earphone <fig.2></fig.2>
		Mode 1: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Charging from Adapter) + Camera + Battery + Earphone <fig.1></fig.1>
Radiated		Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable (Charging from Adapter) + MPEG4 + Battery + Earphone <fig.1></fig.1>
Emissions < 1GHz	1/2	Mode 3: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone <fig.2></fig.2>
		Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + Glonass Rx + Earphone <fig.2></fig.2>
Radiated	4/0	Mode 1: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Charging from Adapter) + Camera + Battery + Earphone <fig.1></fig.1>
Emissions ≥ 1GHz	1/2	Mode 2: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone <fig.2></fig.2>

#### Remark:

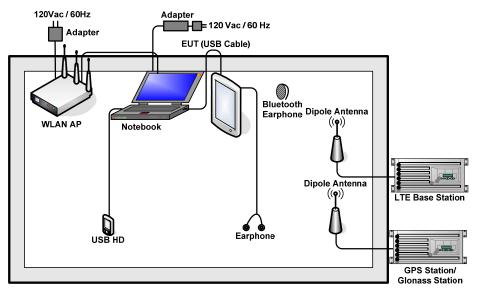
- 1. The worst case of AC is mode 4, the test data of these modes is reported.
- The worst case of RE < 1G is mode 1, and the USB Link mode of RE is mode 3, the test data of these modes are reported.
- 3. Link with notebook means data application transferred mode between EUT and notebook.

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## 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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## 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	CMU 200	N/A	N/A	Unshielded,1.8m
2.	System Simulator	Agilent	8960	N/A	N/A	Unshielded, 1.8 m
3.	LTE Base Station	Anitsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
4.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
5.	Glonass Station	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	lenovo	LBH 301	FCC DoC	N/A	N/A
7.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
8.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
9.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
10.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
11.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded,1.8m
12.	WLAN AP	D-link	DIR-815	KA2IR815A1	N/A	Unshielded, 1.8 m
13.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m
14.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
15.	iPod Earphone	Apple	MC690ZP/A	FCC DoC	Unshielded,1.6m	N/A

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## 2.4. EUT Operation Test Setup

The EUT was in WCDMA or LTE 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. Execute "GPS/Glonass Test" to make the EUT receive continuous signals from GPS/Glonass station.
- 3. Execute "Video Player" to play MPEG4 files.
- 4. Turn on camera to capture images.

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### 3. Test Result

### 3.1. Test of AC Conducted Emission Measurement

#### 3.1.1 Limits of AC Conducted Emission

For equipment that 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 the limits in the following table.

Frequency of emission	Conducted limit (dBuV)			
(MHz)	Quasi-peak	Average		
0.15-0.5	66 to 56*	56 to 46*		
0.5-5	56	46		
5-30	60	50		

<sup>\*</sup>Decreases with the logarithm of the frequency.

### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedure

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN). 2.
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 microhenry LISN should be used. 5.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

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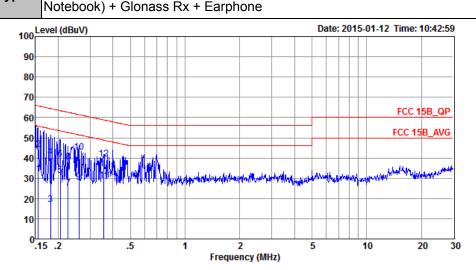
### 3.1.4 Test Setup



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### 3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 4	Temperature :	<b>21~22</b> ℃
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type	LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with		
Function Type:	Natabaalis . Olamaa Bii . B	1	



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_L\_20140304 LINE

Project : (FC)4D0805 Mode : Mode 4

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu₹	dB	dBu∇	dBu∀	dB	dB	
1	0.16	32.27	-23.42	55.69	21.70	0.22	10.35	Average
2	0.16	44.37	-21.32	65.69	33.80	0.22	10.35	QP
3	0.18	17.04	-37.38	54.42	6.50	0.22	10.32	Average
4	0.18	40.64	-23.78	64.42	30.10	0.22	10.32	QP
5	0.21	31.21	-22.19	53.40	20.70	0.22	10.29	Average
6	0.21	39.61	-23.79	63.40	29.10	0.22	10.29	QP
7	0.23	25.20	-27.37	52.57	14.71	0.23	10.26	Average
8	0.23	37.90	-24.67	62.57	27.41	0.23	10.26	QP
9	0.26	28.18	-23.24	51.42	17.71	0.24	10.23	Average
10 4	0.26	42.68	-18.74	61.42	32.21	0.24	10.23	QP
11	0.36	28.95	-19.83	48.78	18.50	0.27	10.18	Average
12	0.36	39.35	-19.43	58.78	28.90	0.27	10.18	QP

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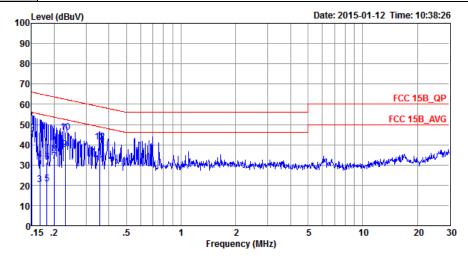


 Test Mode :
 Mode 4
 Temperature :
 21~22°C

 Test Engineer :
 Jack Tian
 Relative Humidity :
 41~42%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

 Function Type :
 LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with Notebook) + Glonass Rx + Earphone



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL

Project : (FC)4D0805 Mode : Mode 4

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
-	MHz	dBu₹	dB	dBuV	dBu₹	dB	dB	
1 *	0.15	42.49	-13.47	55.96	31.80	0.33	10.36	Average
2	0.15	45.89	-20.07	65.96	35.20	0.33	10.36	QP
3	0.17	20.36	-34.76	55.12	9.69	0.33	10.34	Average
4	0.17	32.36	-32.76	65.12	21.69	0.33	10.34	QP
5	0.18	20.64	-33.73	54.37	10.01	0.32	10.31	Average
6	0.18	31.44	-32.93	64.37	20.81	0.32	10.31	QP
7	0.20	31.81	-21.77	53.58	21.20	0.32	10.29	Average
8	0.20	35.31	-28.27	63.58	24.70	0.32	10.29	QP
9	0.23	37.80	-14.64	52.44	27.21	0.33	10.26	Average
10	0.23	46.20	-16.24	62.44	35.61	0.33	10.26	QP
11	0.36	30.16	-18.67	48.83	19.60	0.38	10.18	Average
12	0.36	41.46	-17.37	58.83	30.90	0.38	10.18	OP

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#### 3.2. Test of Radiated Emission Measurement

#### 3.2.1. Limit of Radiated Emission

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

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

### 3.2.2. Measuring Instruments

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

#### 3.2.3. 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 (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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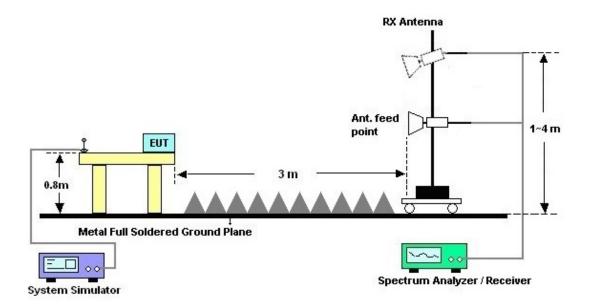
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## 3.2.4. Test Setup of Radiated Emission

### For radiated emissions from 30MHz to 1GHz

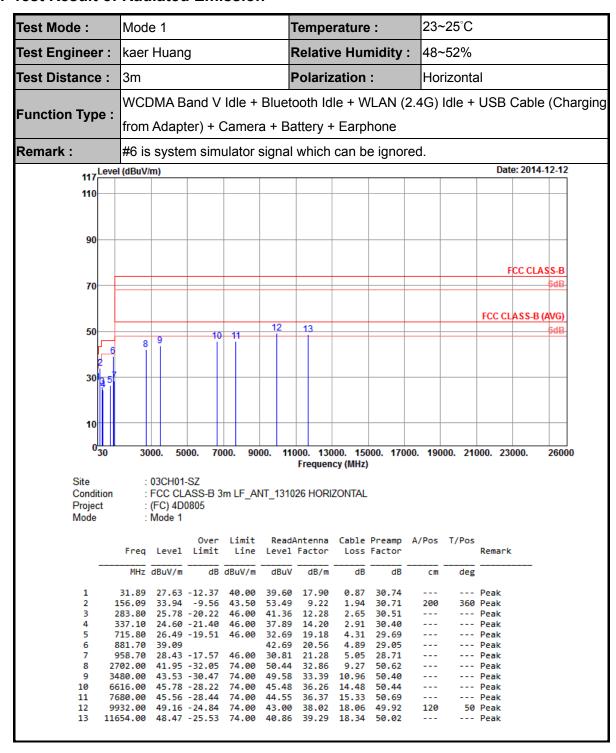


#### For radiated emissions above 1GHz



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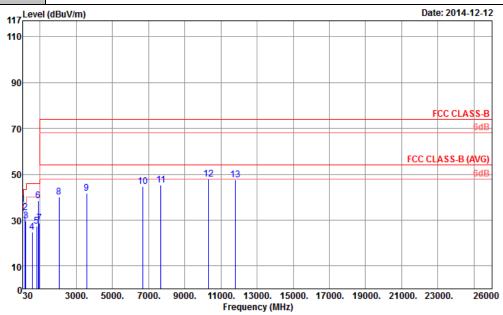
#### 3.2.5. Test Result of Radiated Emission



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Report No.: FC4D0805

Test Mode :	Mode 1	Temperature :	23~25°C					
Test Engineer :	kaer Huang	Relative Humidity :	48~52%					
Test Distance :	3m	Polarization :	Vertical					
Function Type:	WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Charging							
Function Type :	from Adapter) + Camera + Battery + Earphone							
Remark :	#6 is system simulator signal which can be ignored.							



Site : 03CH01-SZ

: FCC CLASS-B 3m LF\_ANT\_131026 VERTICAL : (FC) 4D0805 Condition

Project Mode : Mode 1

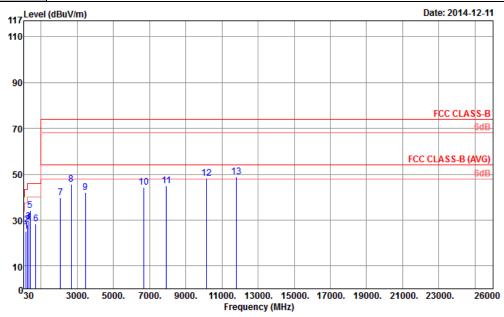
			Over	Limit	Read/	Antenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1 32.70	36.99	-3.01	40.00	49.55	17.30	0.88	30.74	200	360	QP
2	156.90	33.38	-10.12	43.50	53.01	9.14	1.94	30.71			Peak
3	206.04	29.73	-13.77	43.50	48.89	9.26	2.24	30.66			Peak
4	559.00	24.70	-21.30	46.00	32.87	17.92	3.80	29.89			Peak
5	806.10	27.38	-18.62	46.00	31.85	20.24	4.64	29.35			Peak
6	882.40	38.37			41.98	20.55	4.89	29.05			Peak
7	956.60	28.75	-17.25	46.00	31.16	21.26	5.04	28.71			Peak
8	2048.00	39.95	-34.05	74.00	50.60	32.25	8.07	50.97			Peak
9	3572.00	41.68	-32.32	74.00	47.60	33.47	11.19	50.58			Peak
10	6674.00	44.55	-29.45	74.00	44.33	36.23	14.50	50.51			Peak
11	7684.00	45.18	-28.82	74.00	44.17	36.37	15.33	50.69			Peak
12	10318.00	48.04	-25.96	74.00	42.47	38.35	17.46	50.24	152	74	Peak
13	11794.00	47.51	-26.49	74.00	39.39	39.38	18.73	49.99			Peak

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Test Mode :	Mode 3	Temperature :	23~25°C				
Test Engineer :	kaer Huang	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Horizontal				
Eurotion Type	LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with						
Function Type :	Notebook) + GPS Rx + Earphone						
Remark :	#8 is system simulator signal which can be ignored.						



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF\_ANT\_131026 HORIZONTAL

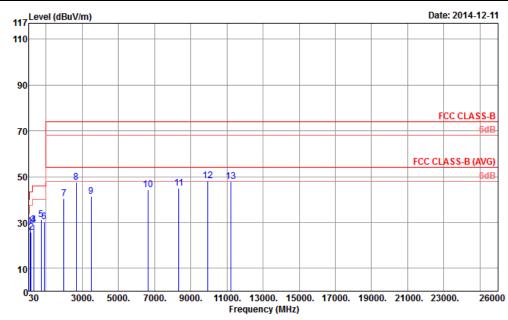
Project : (FC) 4D0805 Mode : Mode 3

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	166.62	24.97	-18.53	43.50	45.05	8.62	2.01	30.71			Peak
2	233.31	27.88	-18.12	46.00	45.32	10.76	2.39	30.59			Peak
3	298.65	29.44	-16.56	46.00	44.88	12.31	2.73	30.48			Peak
4	300.00	29.17	-16.83	46.00	44.62	12.30	2.73	30.48			Peak
5	391.00	34.13	-11.87	46.00	45.79	15.54	3.15	30.35	100	20	Peak
6	699.70	28.37	-17.63	46.00	34.66	18.95	4.27	29.51			Peak
7	2066.00	39.82	-34.18	74.00	50.43	32.27	8.07	50.95			Peak
8	2652.00	45.51			54.15	32.82	9.11	50.57			Peak
9	3446.00	41.90	-32.10	74.00	48.12	33.37	10.85	50.44			Peak
10	6684.00	44.46	-29.54	74.00	44.22	36.23	14.52	50.51			Peak
11	7928.00	44.85	-29.15	74.00	43.16	36.47	15.65	50.43			Peak
12	10128.00	48.11	-25.89	74.00	42.08	38.21	17.88	50.06			Peak
13	11788.00	48.97	-25.03	74.00	40.85	39.38	18.73	49.99	150	80	Peak

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FCC Test Report	Report No. : FC4D0805

Test Mode :	Mode 3	Temperature :	23~25°C					
Test Engineer :	kaer Huang	Relative Humidity :	48~52%					
Test Distance :	3m	Polarization :	Vertical					
Eunation Type I	LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable (Data Link with							
Function Type :	Notebook) + GPS Rx + Earphone							
Remark :	#8 is system simulator signal which can be ignored.							



: 03CH01-SZ : FCC CLASS-B 3m LF\_ANT\_131026 VERTICAL : (FC) 4D0805 : Mode 3 Site Condition

Project Mode

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	100.20	28.39	-15.11	43.50	46.40	11.20	1.55	30.76			Peak
2	166.62	25.89	-17.61	43.50	45.97	8.62	2.01	30.71			Peak
3	298.92	29.08	-16.92	46.00	44.52	12.31	2.73	30.48			Peak
4	300.00	28.98	-17.02	46.00	44.43	12.30	2.73	30.48			Peak
5	715.10	31.43	-14.57	46.00	37.67	19.15	4.30	29.69	125	80	Peak
6	896.40	30.29	-15.71	46.00	33.83	20.64	4.85	29.03			Peak
7	1972.00	40.28	-33.72	74.00	51.51	31.89	7.90	51.02			Peak
8	2652.00	47.52			56.16	32.82	9.11	50.57			Peak
9	3480.00	41.29	-32.71	74.00	47.34	33.39	10.96	50.40			Peak
10	6632.00	44.40	-29.60	74.00	44.13	36.25	14.48	50.46			Peak
11	8330.00	44.98	-29.02	74.00	42.15	36.30	16.23	49.70			Peak
12	9938.00	48.18	-25.82	74.00	42.00	38.04	18.06	49.92	110	20	Peak
13	11230.00	47.92	-26.08	74.00	40.93	38.99	18.44	50.44			Peak

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## 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Jan. 12, 2015	Feb. 20, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 04, 2014	Jan. 12, 2015	Mar. 03, 2015	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 04, 2014	Jan. 12, 2015	Mar. 03, 2015	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000 891	100Vac~250Vac	Sep. 29, 2014	Jan. 12, 2015	Sep. 28, 2015	Conduction (CO01-SZ)
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Dec. 11, 2014~ Dec. 12, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY522601 85	20Hz~26.5GHz	May 26, 2014	Dec. 11, 2014~ Dec. 12, 2014	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	37877	30MHz~2GHz	Oct. 15, 2014	Dec. 11, 2014~ Dec. 12, 2014	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Dec. 11, 2014~ Dec. 12, 2014	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridged Horn Antenna	COM-POWER	AH-840	101073	18GHz~40GHz	Jan. 27, 2014	Dec. 11, 2014~ Dec. 12, 2014	Jan. 26, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Dec. 11, 2014~ Dec. 12, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Dec. 11, 2014~ Dec. 12, 2014	May 07, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	616010001 985	100Vac~250Vac	Mar. 25, 2014	Dec. 11, 2014~ Dec. 12, 2014	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Dec. 11, 2014~ Dec. 12, 2014	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Dec. 11, 2014~ Dec. 12, 2014	NCR	Radiation (03CH01-SZ)

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## 5. Uncertainty of Evaluation

### <u>Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)</u>

Measuring Uncertainty for a Level of	2.3 dB
Confidence of 95% (U = 2Uc(y))	2.3 UB

### <u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of	0.0 ID
Confidence of 95% (U = 2Uc(y))	3.9 dB

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