



## 47 CFR PART 15 SUBPART B

# TEST REPORT

of

### CDMA 1X Digital mobile phone

Model Name: OT-E206C  
Brand Name: ALCATEL  
Report No.: SH08100027E01  
FCC ID: R5CE206C

*prepared for*

### TCL Mobile Communication Co., Ltd.

No.23 Zone, Zhongkai High-Technology Development Zone,  
Huizhou, Guangdong, P.R.China

Shenzhen Electronic Product Quality Testing Center

Morlab Laboratory

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## 1 TEST CERTIFICATION

Equipment under Test: CDMA1X Digital mobile phone

Brand Name: ALCATEL

Model Name: OT-E206C

FCC ID: R5CE206C

Applicant: TCL Mobile Communication Co., Ltd.

No.23 Zone, Zhongkai High-Technology Development Zone,  
Huizhou, Guangdong, P.R.China

Manufacturer: TCL Mobile Communication Co., Ltd.

No.23 Zone, Zhongkai High-Technology Development Zone,  
Huizhou, Guangdong, P.R.China

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): Oct.20.2008-Oct.21.2008

Test Result: PASS

### \* We Hereby Certify That:

The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by:

*LouQinchao*

Dated:

2008.11.12

Lou Qinchao

Reviewed by:

*ZhangJun*

Dated:

2008.11.12

Zhang Jun

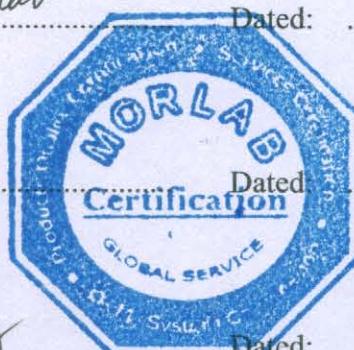
Approved by:

*SuFeng*

Dated:

2008.11.12

Su Feng



## 2 GENERAL INFORMATION

### 2.1 EUT Description

EUT Type.....: CDMA1X Digital mobile phone  
Model Name .....: OT-E206C  
Serial No.....: (n.a)  
IMEI .....: 0000000000000000  
Hardware Version .....: CS01\_V1.2  
Software Version .....: CS01\_PRIS\_V1.0  
Modulation Type.....: CDMA1X  
Power Supply.....: Battery  
Brand name: ALCATEL  
Mode no.: TB-05BA  
Capacitance: 750mAh  
Rated voltage: 3.7V  
Charge limited: 4.2V  
Manufacturer: BYD LITHIUM BATTERY CO., LTD.  
Manufacturer Address: Yan An Road, Kuichong  
Longgang, Shenzhen, Guangdong, P.R.China  
Ancillary Equipment 1 .....: AC Adapter (Charger for Battery)  
Model Name: S003HV0500050  
Brand Name: ALCATEL  
Serial No.: (n.a. marked #1 by test site)  
Rated Input: ~ 100/240V, 50/60Hz  
Rated Output: == 5+-0.3V, 500+-100mA  
Manufacturer: BYD (HUIZHOU) COMPANY LIMITED  
Wire Length: (n.a)

Note 1: The EUT is a model of CDMA1X mobile station operating in CDMA 800MHz band, CDMA 800MHz are tested in this report.

Note 2: The normal configuration for the EUT is the Mobile Phone (MS) associated with ancillary equipments e.g. the Battery and/or the AC Adapter(Charger).

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



## 2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

## 2.3 Facilities and Accreditations

### 2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Laboratories (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

### 2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 – 25
Relative Humidity (%):	40 – 60
Atmospheric Pressure (kPa):	960

### 3 TEST CONDITIONS SETTING

#### 3.1 Test Mode

1. The test modes of the EUT are showed as below:

- (1) Call mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

During the measurement, the lithium battery was installed into the EUT, and the charger was connected to the EUT. A communication link was established between the EUT and a System Simulator (SS).

- (2) Idle mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

Before the measurement, the lithium battery was completely discharge.

The EUT was registered to the base station simulator but no call was set up.

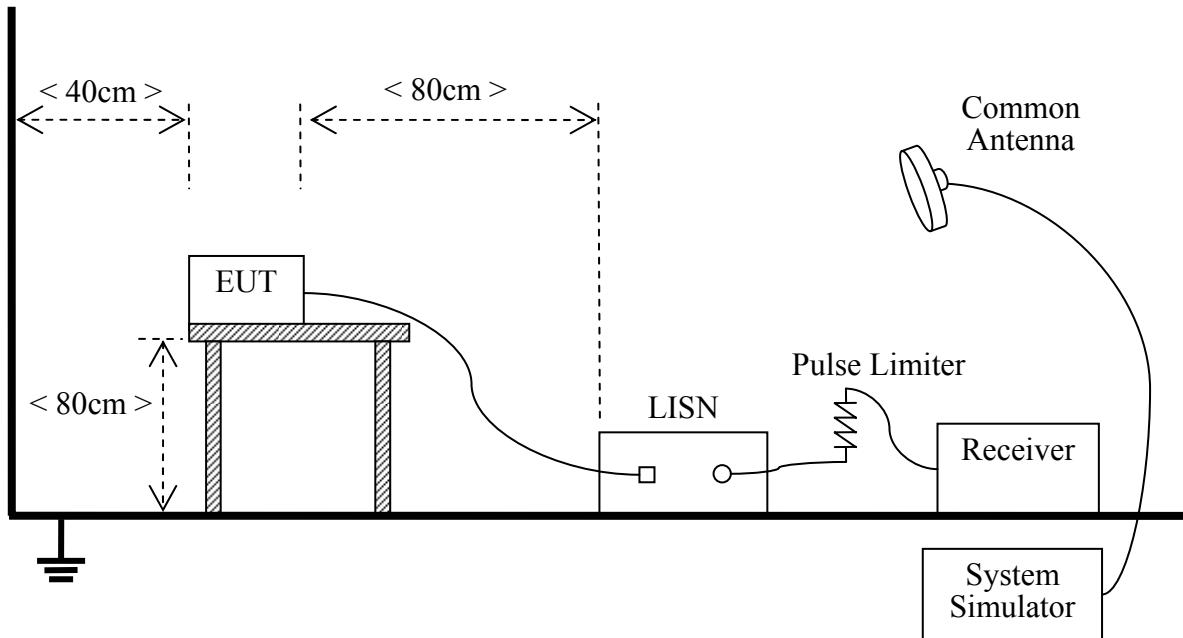
NOTE:

All test modes are performed, only the worst cases are recorded in this report.

## 3.2 Test Setup and Equipments List

### 3.2.1 Conducted Emission

#### A. Test Setup:



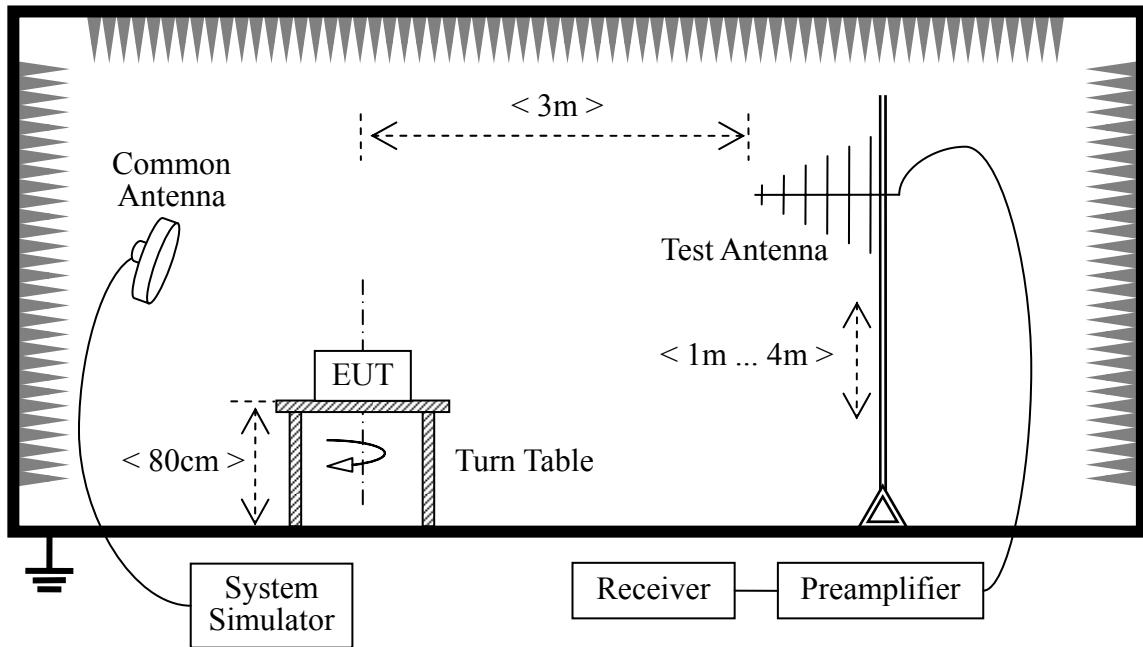
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides  $50\Omega/50\mu\text{H}$  of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

#### B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
LISN	Schwarzbeck	NSLK 8127	812744	2008.08	1year
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year
Personal Computer	HP	Pavilion ze2202	CNF5460DNL	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
Wireless Router	(n.a.)	D-Link	BN64448000052	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

### 3.2.2 Radiated Emission

#### C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

#### D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2008.08	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2008.07	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2008.07	1year
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year
Personal Computer	HP	Pavilion ze2202	CNF5460DNL	(n.a.)	(n.a.)
Wireless Router	(n.a.)	D-Link	BN64448000052	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

## 47 CFR PART 15B REQUIREMENTS

### 4 Conducted Emission

#### 4.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:

- a) The limit subjects to the Class B digital device.
- b) The lower limit shall apply at the band edges.
- c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

#### 4.2 Test Description

See section 3.2.1 of this report.

#### 4.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

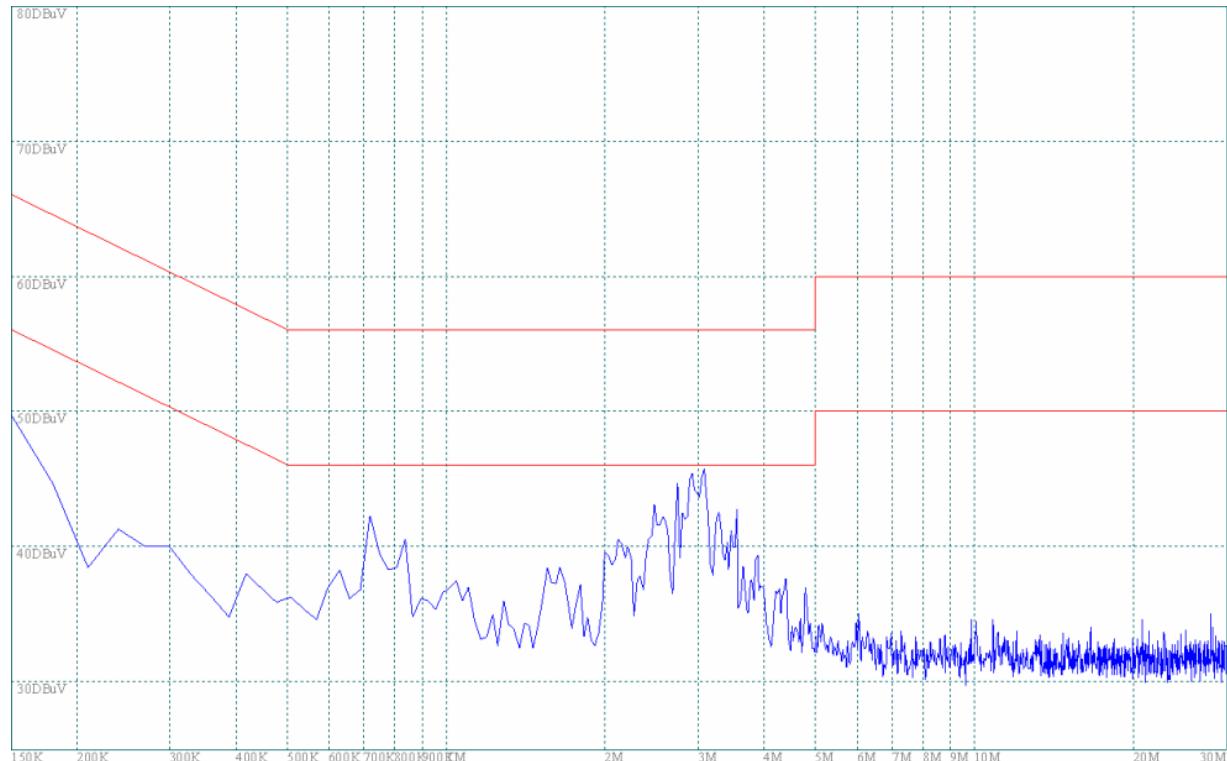
##### 4.3.1.1 CDMA Test Mode

###### 4.3.1.1.1 The test mode

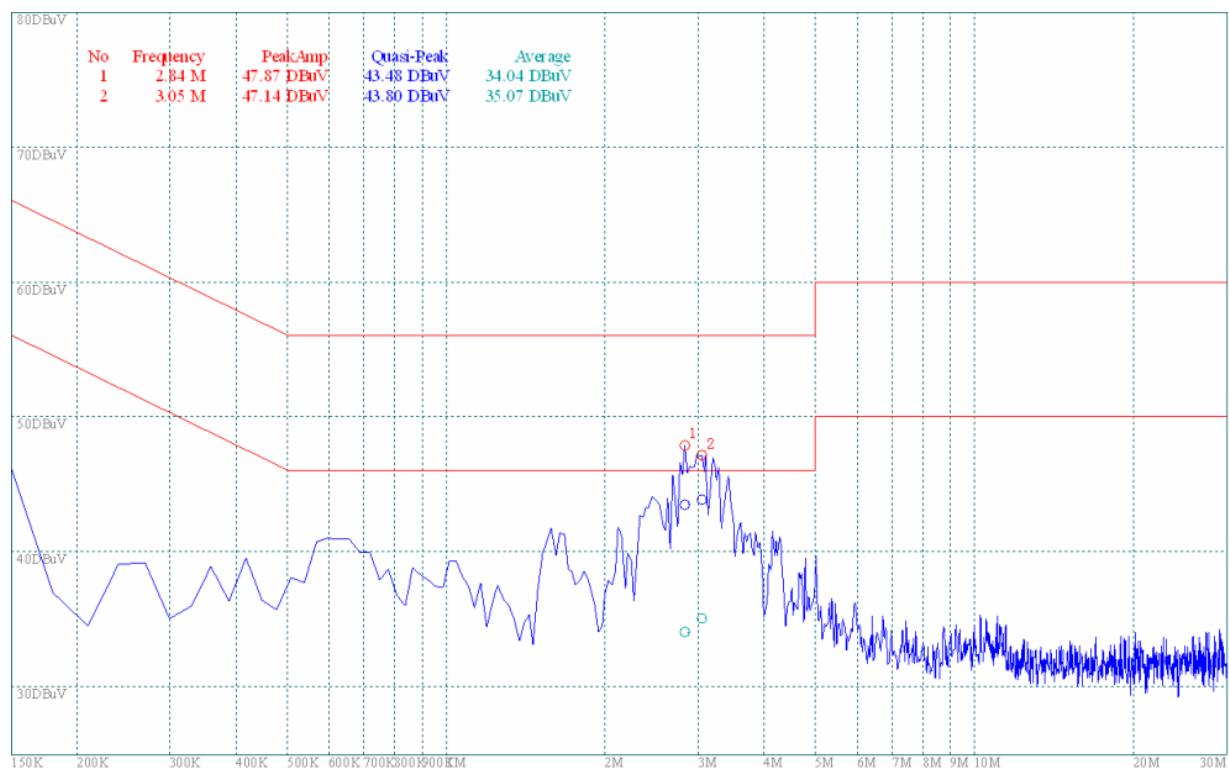
The EUT configuration of the emission tests is EUT + Battery + Charger.

###### A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Measured Emission Level (dB $\mu$ V)				Limit (dB $\mu$ V)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	2.84	47.87	43.48	34.04	N	56.0	46.0	PASS
2	3.05	47.14	43.80	35.07	N	56.0	46.0	PASS

**B. Test Plot:**


(Plot A: L Phase)



## 5 Radiated Emission

### 5.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- Field Strength ( $\text{dB}\mu\text{V/m}$ ) =  $20 \times \log[\text{Field Strength} (\mu\text{V/m})]$ .
- In the emission tables above, the tighter limit applies at the band edges.

### 5.2 Test Description

See section 0 of this report.

### 5.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

#### 5.3.1.1 CDMA test mode

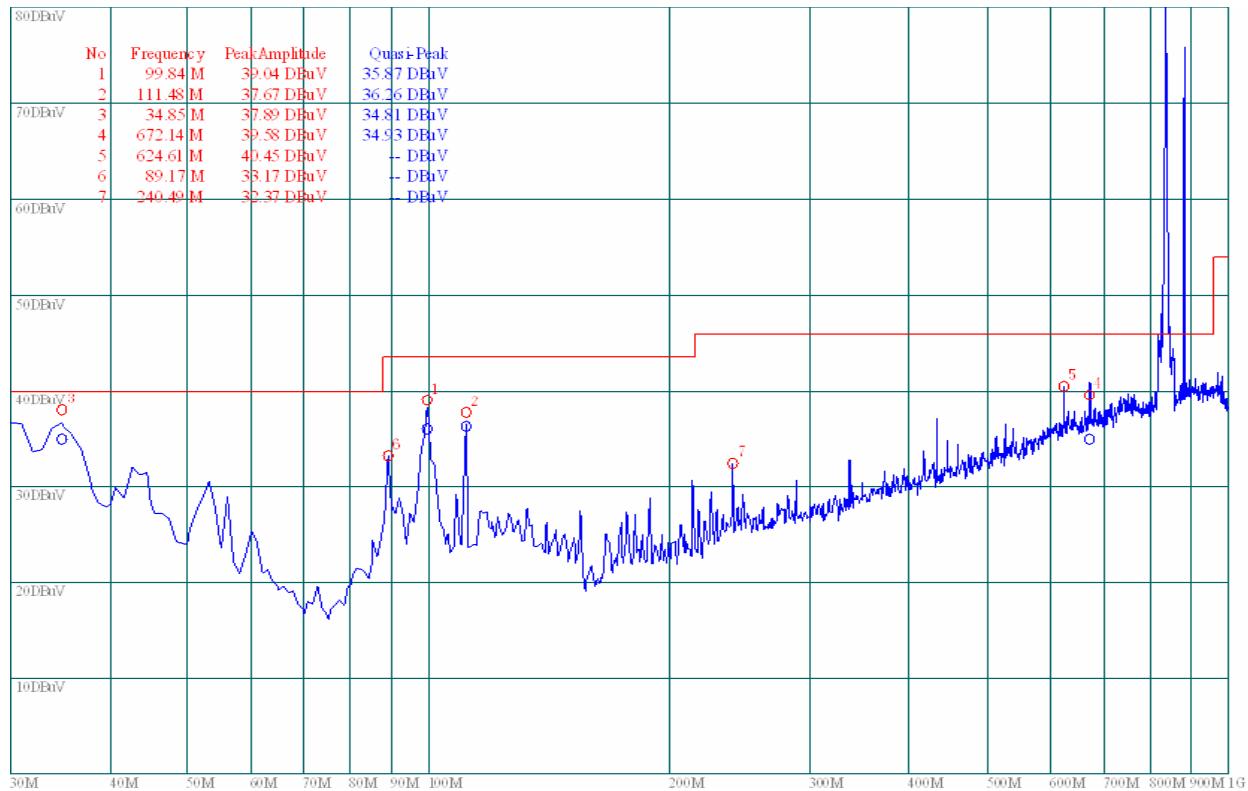
##### 5.3.1.1.1 The test mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

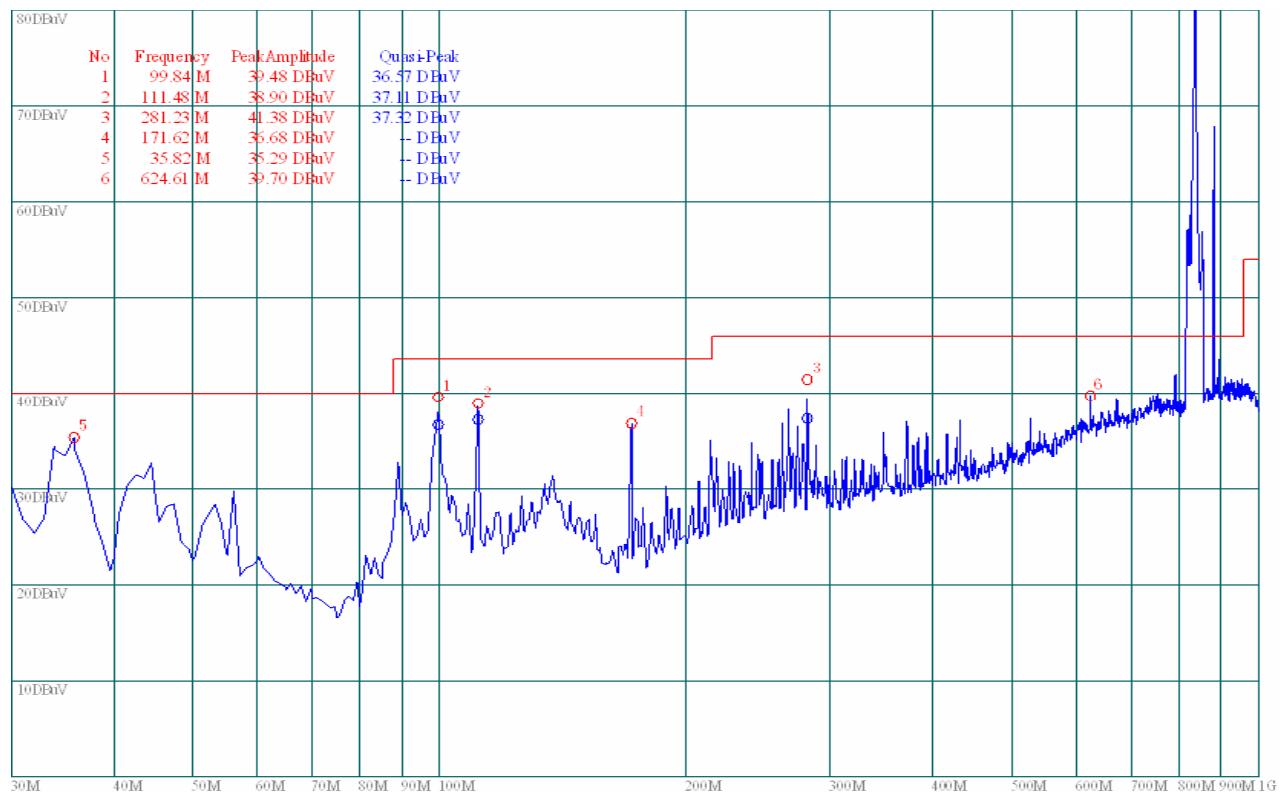
##### A. Test Plot:

Note: Following is the plots for emission measurement; please note that marked spikes with circle should be ignored because they are MS and SS carrier frequency.

No.	@Frequency (MHz)	Measured Emission Level (dB $\mu$ V)			Limit (dB $\mu$ V)	Verdict
		PK	QP	Polarity		
1	99.84	39.04	35.87	V	43.5	PASS
2	111.485	37.67	36.26	V	43.5	PASS
3	34.85	37.89	34.81	V	40.0	PASS
4	672.14	39.58	34.93	V	46.0	PASS
5	624.61	40.45	36.21	V	46.0	PASS
6	89.17	33.17	28.94	V	43.5	PASS
7	240.49	32.37	29.15	V	46.0	PASS
8	99.84	39.48	36.57	H	43.5	PASS
9	111.48	38.90	37.11	H	43.5	PASS
10	281.23	41.38	37.32	H	46.0	PASS
11	171.62	36.68	32.57	H	43.5	PASS
12	35.82	35.29	31.68	H	40.0	PASS
13	624.61	39.70	35.49	H	46.0	PASS



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

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