



47 CFR PART 15 SUBPART B

TEST REPORT

of

CDMA 1X digital mobile phone

Model Name: one touch 219C

Trade Name: ALCATEL

Brand Name: ALCATEL

Report No.: SH11100011E01

FCC ID: R5C219C

prepared for

Huizhou TCL Mobile Communication Co.,Ltd

No.23 Zone, Zhongkai High-Technology Development Zone

prepared by

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Bluetooth®

CTIA

Authorized Test Lab

LAB CODE 20081223-00

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1 TEST CERTIFICATION

Equipment under Test: CDMA 1X digital mobile phone
Trade Name: ALCATEL
Brand Name: ALCATEL
Model Name: one touch 219C
Applicant: Huizhou TCL Mobile Communication Co.,Ltd
Applicant Address: NO.23 Zone, ZhongKai High-Technology Development Zone
Manufacturer: Huizhou TCL Mobile Communication Co.,Ltd
Manufacturer Address: NO.23 Zone, ZhongKai High-Technology Development Zone

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): 2011.10.15-2011.10.20

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: Zhang Wenjie Dated: 2011.10.26
Zhang Wenjie

Reviewed by: Zhang Jun Dated: 2011.10.26
Zhang Jun

Approved by: Wei Bei Dated: 2011.10.26
Wei Bei



2 GENERAL INFORMATION

2.1 EUT Description

EUT Type : CDMA 1X digital mobile phone

Hardware Version..... : CS11_V1.2

Software Version : CS11_MTIM_V1.1(20110924)

Frequency..... : CDMA 800MHz

Power supply..... : Battery

Model No.: CAB23X0002C1

Brand Name: ACATEL

Capacitance: 1200mAh

Rated Voltage: 3.7V

Charge Limit: 4.2V

Manufacturer: Zhuhai suna Technology co.,LTD

Ancillary Equipment : Charger for Battery

Model No.: WIN350mA5V00_00

Brand Name: ACATEL

Rated Input: AC 110-240V 150mA 50/60Hz

Rated Output: DC 5V, 350mA

Manufacturer: BYD COMPANY LIMITED

NOTE:

1. 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
3	ANSI C63.4-2003	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):	106

3 TEST CONDITIONS SETTING

3.1 Test Mode

The test modes of the EUT are showed as below:

Mode 1. EUT+PC Mode

The EUT configuration of the emission test is EUT + Battery + +PC.

In this test mode, a connection was established between the EUT and a PC; data was transmitted between EUT and the PC, and maintained during the measurement.

3.2 Description Of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

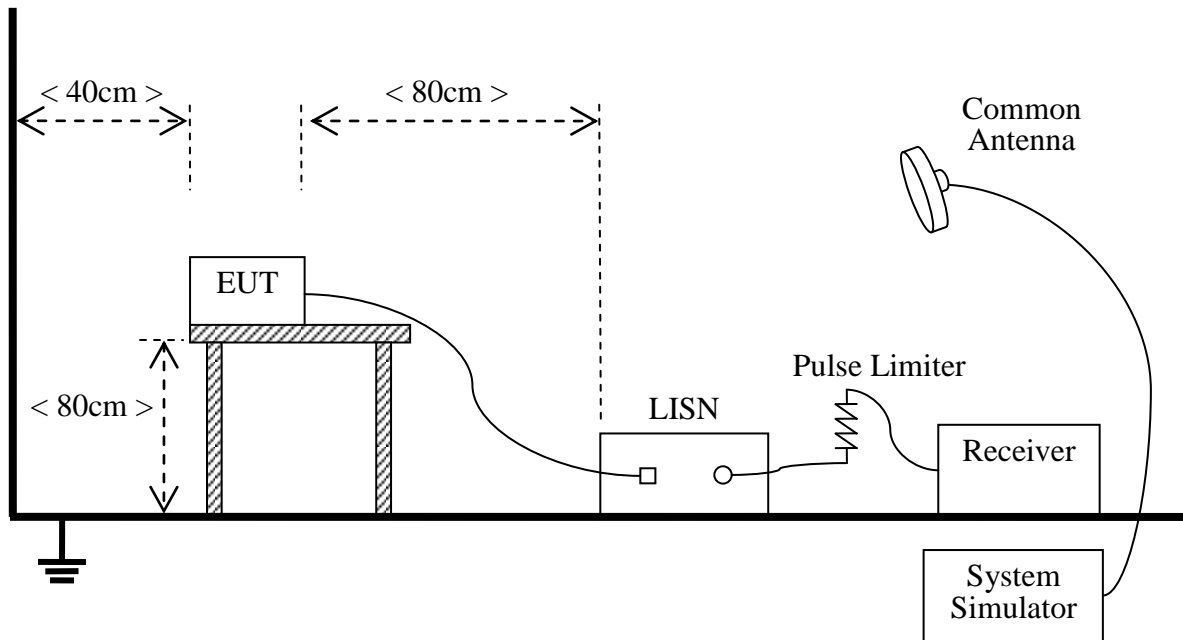
No.	Equipment	Model No.	Serial No.	Trade Name
1	PC	SL400	L3-BBB0A	LENOVO

Note: Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3.3 Test Setup and Equipments List

3.3.1 Conducted Emission

A. Test Setup:



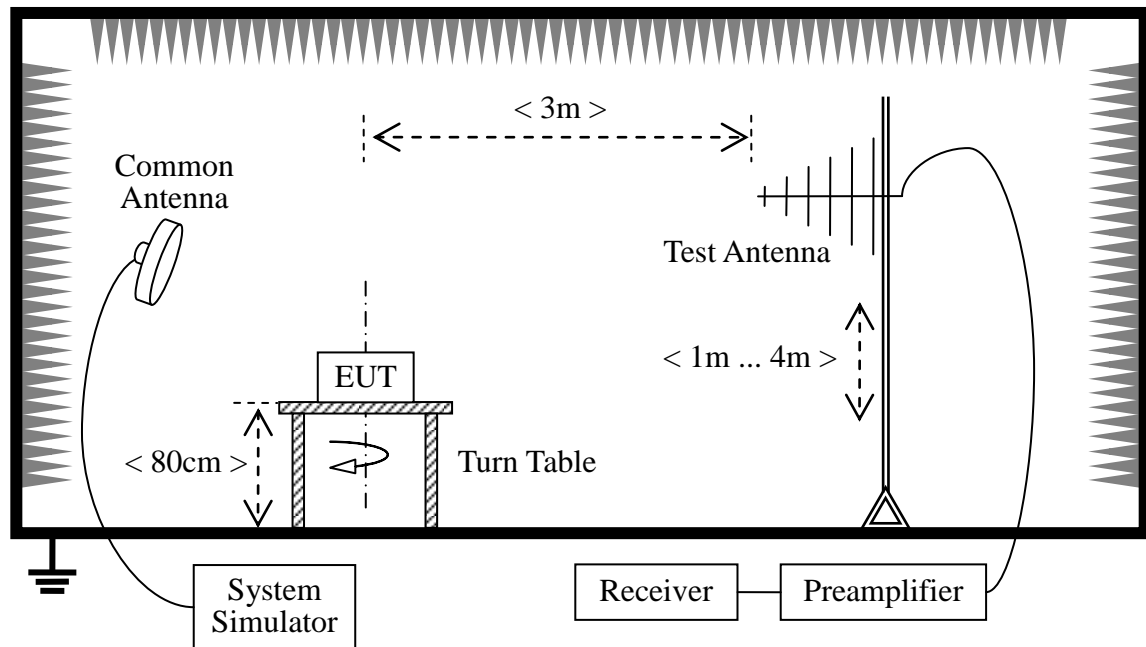
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50μH of coupling impedance for the measuring instrument. The Common Antenna 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	Rohde&Schwarz	ESCI3	100666	2011.09	1year
LISN	Rohde&Schwarz	ENV216	812744	2011.09	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2011.09	1year
Personal Computer	Lenovo	(n.a.)	(n.a.)	(n.a.)	(n.a.)

3.3.2 Radiated Emission

A. 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).

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Rohde&Schwarz	ESCI3	100666	2011.09	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2011.09	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2011.09	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2011.09	1year
Personal Computer	Lenovo	(n.a.)	(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 μ H/50 Ω line impedance stabilization network (LISN).

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE:

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

4.2 Test Description

See section 3.3.1 of this report.

4.3 Test Result

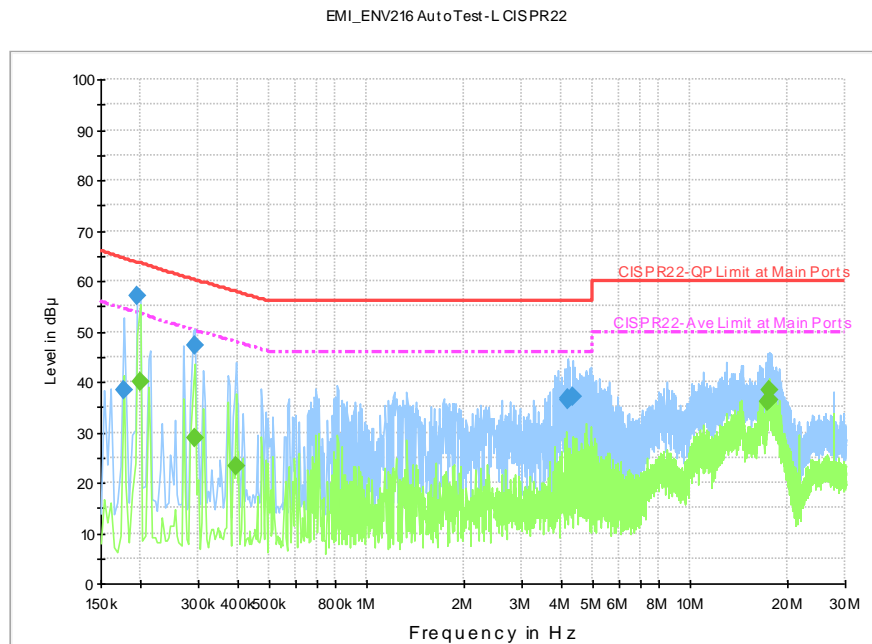
The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines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

A. Test Verdict Recorded for Suspicious Points:

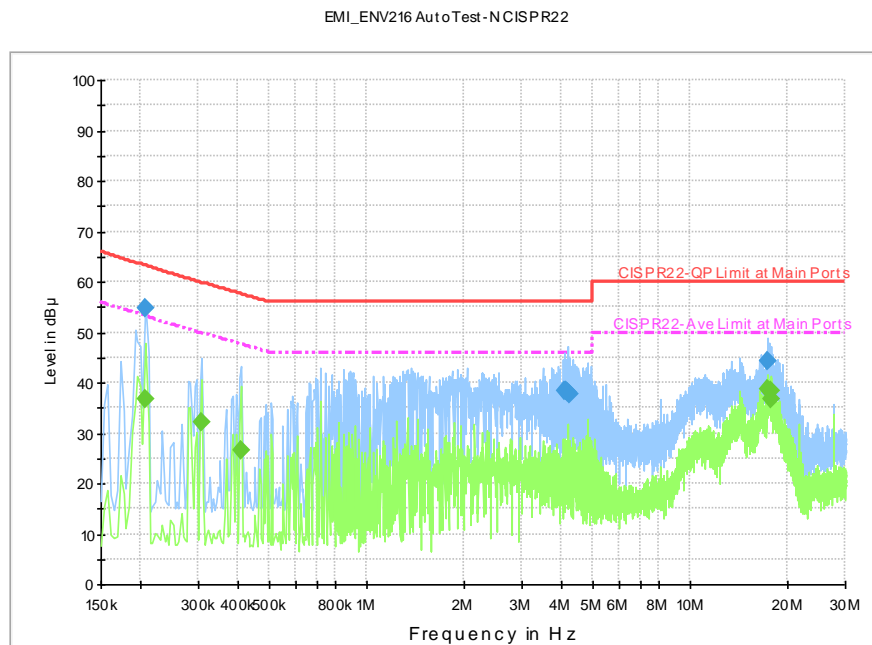
Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.205969	54.7	150.000	9.000	N	9.6	8.5	63.2	PASS
4.064081	38.3	150.000	9.000	N	9.9	17.7	56.0	PASS
4.101394	38.3	150.000	9.000	N	9.9	17.7	56.0	PASS
4.179750	37.9	150.000	9.000	N	9.9	18.1	56.0	PASS
4.220794	37.7	150.000	9.000	N	9.9	18.3	56.0	PASS
17.365988	44.2	150.000	9.000	N	10.3	15.8	60.0	PASS
0.176119	38.2	150.000	9.000	L	9.6	26.4	64.6	PASS
0.194775	57.1	150.000	9.000	L	9.7	6.6	63.7	PASS
0.291788	47.3	150.000	9.000	L	9.7	13.0	60.3	PASS
4.149900	36.5	150.000	9.000	L	9.9	19.5	56.0	PASS
4.190944	36.9	150.000	9.000	L	9.9	19.1	56.0	PASS
4.306612	37.0	150.000	9.000	L	9.9	19.0	56.0	PASS

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.205969	36.6	150.000	9.000	N	9.6	16.6	53.2	PASS
0.306712	32.2	150.000	9.000	N	9.6	17.6	49.8	PASS
0.407456	26.6	150.000	9.000	N	9.7	21.0	47.6	PASS
17.369719	38.8	150.000	9.000	N	10.3	11.2	50.0	PASS
17.586131	38.2	150.000	9.000	N	10.3	11.8	50.0	PASS
17.615981	36.6	150.000	9.000	N	10.3	13.4	50.0	PASS
0.198506	39.9	150.000	9.000	L	9.6	13.6	53.5	PASS
0.291788	28.9	150.000	9.000	L	9.7	21.3	50.2	PASS
0.392531	23.1	150.000	9.000	L	9.7	24.8	47.9	PASS
17.354794	36.1	150.000	9.000	L	10.3	13.9	50.0	PASS
17.425688	38.5	150.000	9.000	L	10.3	11.5	50.0	PASS
17.563744	36.2	150.000	9.000	L	10.3	13.8	50.0	PASS

B. Test Plot:



(Plot: L Phase)



(Plot: N Phase)

5 Radiated Emission

5.1 Requirement

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

Frequency range (MHz)	Field Strength CLASS B (at 3m)	
	$\mu\text{V/m}$	$\text{dB } \mu\text{V/m}$
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

Frequency range (MHz)	Field Strength CLASS A (at 10m)	
	$\mu\text{V/m}$	$\text{dB } \mu\text{V/m}$
30 - 88	90	39.0
88 - 216	150	43.5
216 - 960	210	46.4
Above 960	300	49.5

NOTE:

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

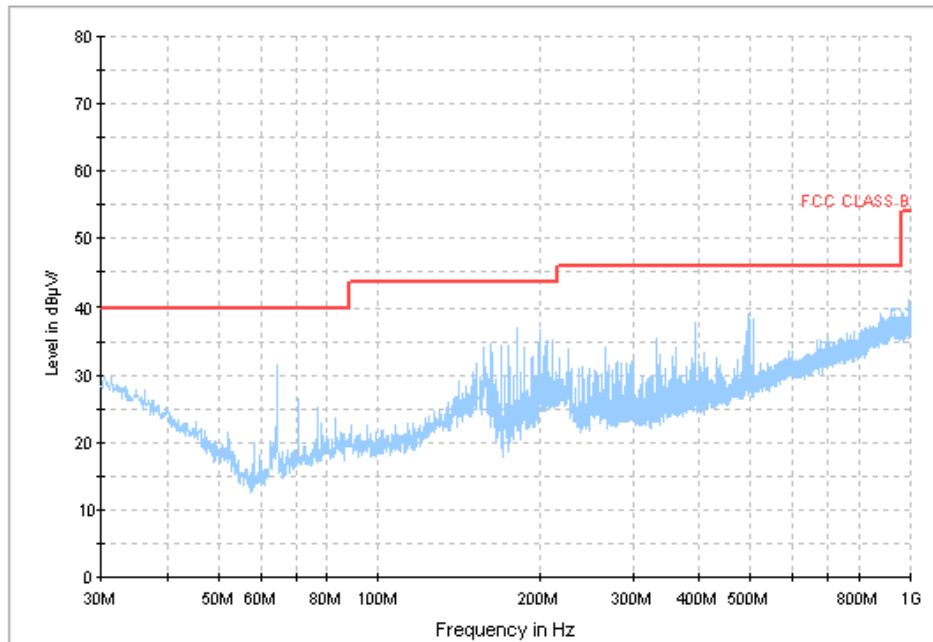
5.2 Test Description

See section 3.2.2 of this report.

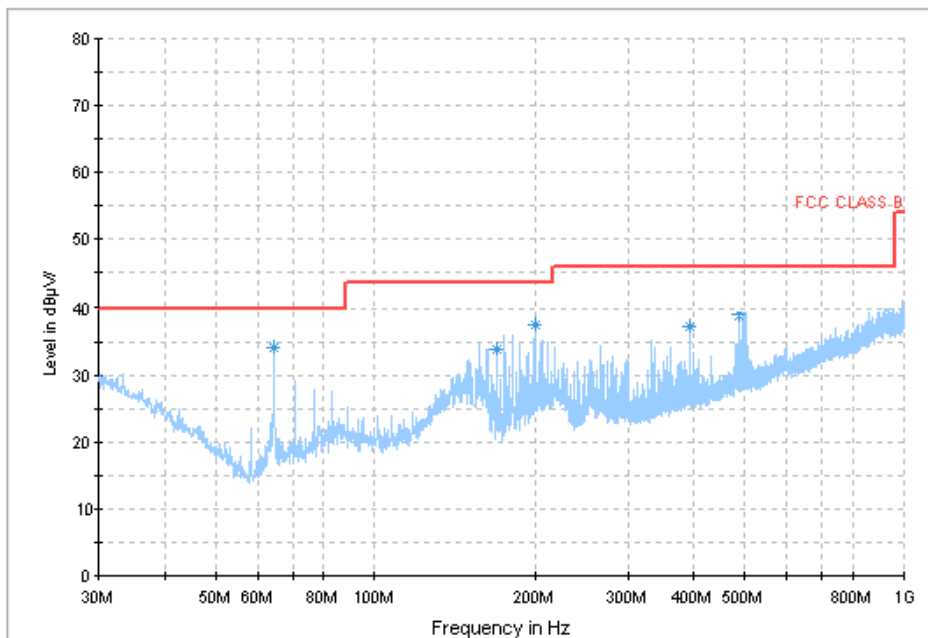
5.3 Test Result

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.

A. Test Plot:



(Plot: Test Antenna Vertical)



(Plot: Test Antenna Horizontal)

**** END OF REPORT ****