DAT-P-174/04-00

CNAS L0447

Registration No.612767

TEST REPORT

Report No.: SRMC2008-H024-E0047

Product Name: CDMA 1X Digital Mobile Phone

Product Model: RM-430

Applicant: Nokia Inc.

Manufacturer: BYD Company Limited

Specification: FCC Part 15B (Certification)

FCC ID: QMNRM-430

The State Radio Monitoring Center, Equipment Testing Division

The State Radio Spectrum Monitoring and Testing Center

No.80 Beilishi Road Xicheng District Beijing, China

Tel: 86-10-68009202 Fax: 86-10-68009205

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1. General information

1.1 Notes of the test report

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The test results relate only to individual items of the samples which have been tested.

1.2 Information about the testing laboratory

Company：	The State Radio Monitoring Center, Equipment Testing Division The State Radio Spectrum Monitoring and Testing Center
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Fax:	+86 10 68009195
Email:	Wangjf@srrc.org.cn

1.3 Applicant's details

Company:	Nokia Inc.
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Country or Region:	USA
Grantee Code:	QMN
Contacted person:	Mary Washington
Tel:	+1 858 831 5000
Fax:	+1 858 831 6500
Email:	mary.washington@Nokia.com

1.4 Manufacturer's details

Company:	BYD Company Limited
Address：	No.1 Yan an Road, Kuichong, Longgang, 518119
City:	Shenzhen
Country or Region:	P. R. China
Contacted person:	Konger Kong
Tel:	+86-021-61009669-2102
Fax:	+86-021-61009668
Email:	konger.kong@byd.com

1.5 Application details

Date of receipt of test sample: 12th June 2008
Date of test: 12th June 2008 to 19th June 2008

1.6 Reference specification

FCC Part 15B (Certification)

1.7 Information of EUT

1.7.1 General information

Name of EUT	CDMA 1X Digital Mobile Phone
FCC ID	QMNRM-430
Frequency range	Tx:1850~1910MHz Rx:1930~1990MHz
Rated output power	24.0dBm
Modulation type	OQPSK
Emission Designator	1M25F9W
Equipment Class	Class B
Duplex mode	FDD
Duplex spacing:	80MHz
Antenna type	Fixed Internal
Power Supply	Battery or charger
Rated Power Supply Voltage	3.7V
Extreme Temperature	-30°C~+50°C
Extreme Voltage	Minimum: 3.1V Maximum: 4.2V
HW Version	3100
SW Version	DN_2003B_N1900_BET

1.7.2 EUT details

Name	Model	Serial number
CDMA 1X Digital Mobile Phone	RM-430	MEID 268435456102527027

1.7.3 Auxiliary equipment details

Equipment	Charger
Manufacturer	Nokia Inc.
Model Number	AC-6U

Equipment	Battery
Manufacturer	Nokia Inc.
Model Number	BL-4C
Capacity	860 mAh
Rated Voltage	3.7V

Equipment	Headset
Manufacturer	Nokia Inc.
Model Number	HS-9

Equipment	USB Cable
Manufacturer	Nokia Inc.
Model Number	CA-101

Equipment	Laptop
Manufacturer	IBM
Model Number	X32

2. Test information:

2.1 Summary of the test results:

No.	Test case	FCC reference	Verdict
1	Conducted emissions	15.107	Pass
2	Radiated emissions	15.109	Pass

This Test Report Is Issued by: Mr. Kan Runtian, Director of the test lab	Checked by:
Tested by:	Issued date: 25th June 2008

Test report revision:

Revision	Report No.	Issue Date
0	SRMC2008-H024-E0027	19th June 2008
1	SRMC2008-H024-E0035	20th June 2008
2	SRMC2008-H024-E0043	23th June 2008
3	SRMC2008-H024-E0044	24th June 2008
4	SRMC2008-H024-E0047	25th June 2008

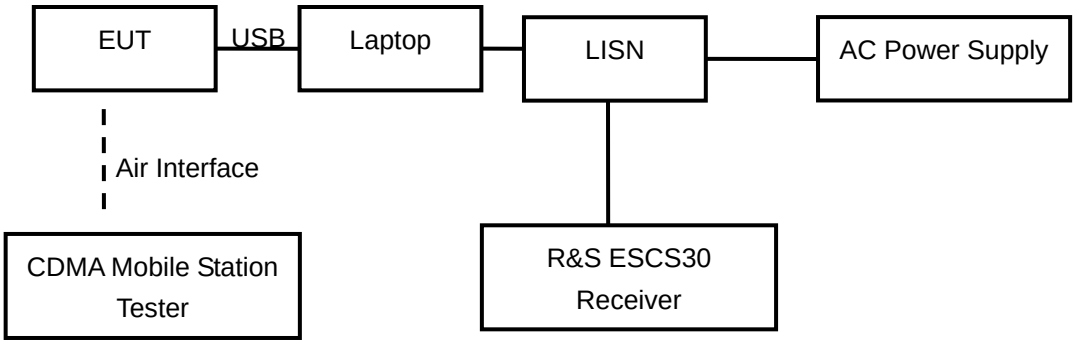
2.2 Test result

2.2.1 Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
21°C	45%	101.0kPa

Test Setup:



Test Procedure:

The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The EUT connect with a laptop via the USB cable. The phone modem drivers were installed on the laptop to be able to communicate with the EUT by continuously sending a querying text fele (AT Command) to the phone using Hyper Terminal during the test. The accessories of the EUT are connected with the EUT such as headset etc. The AC main power supply of the laptop is connected to LISN and LISN is connected to the reference ground. The test set-up and the test methods are performed according to ANSI C63.4:2003. The measurement should be done for both L line and N line. The receiver uses both average detector and Quasi-peak detector.

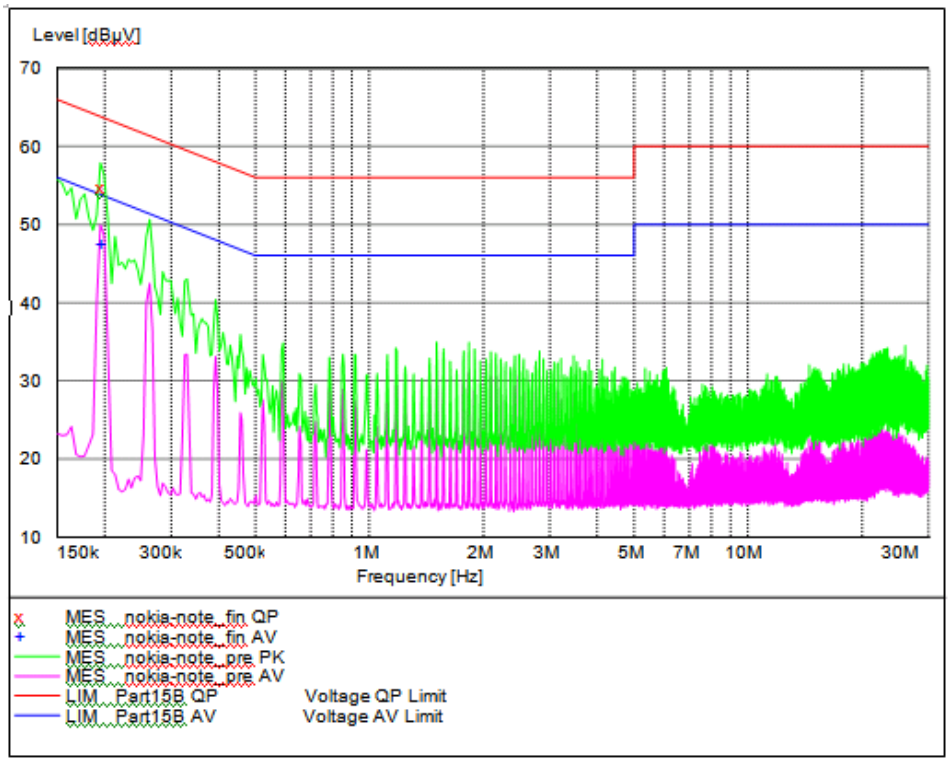
Limit:

Frequency of Emission(MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15～0.5	66 to 56*	56 to 46*
0.5～5	56	46
5～30	60	50

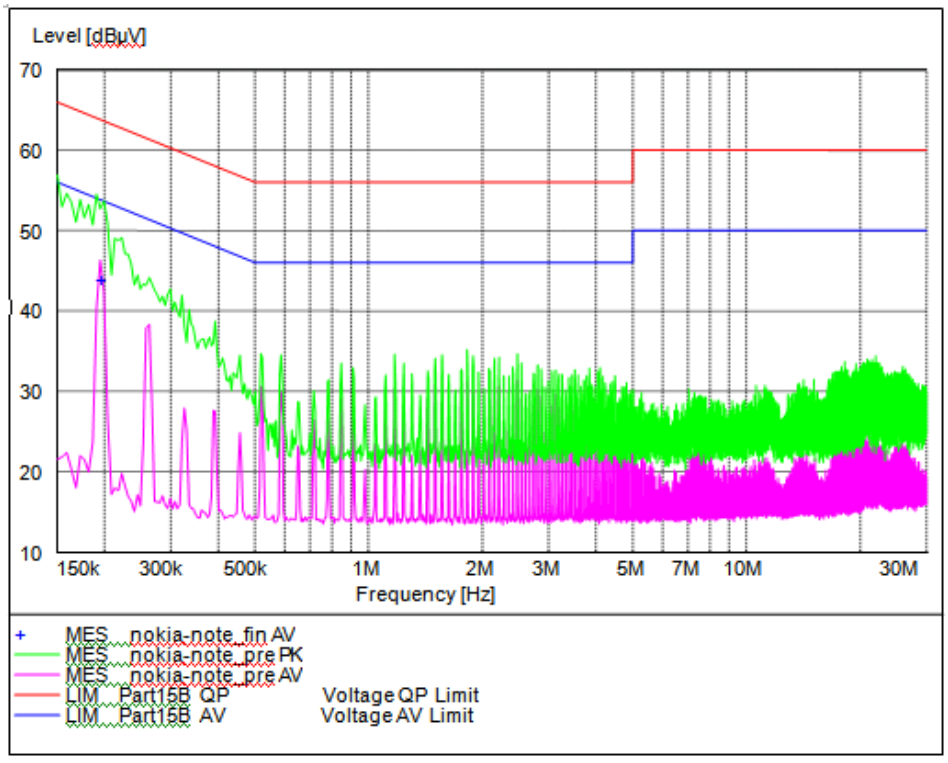
Note: * Decreases with the logarithm of the frequency

Test result:

Refer to the following figures.



L Line



N Line

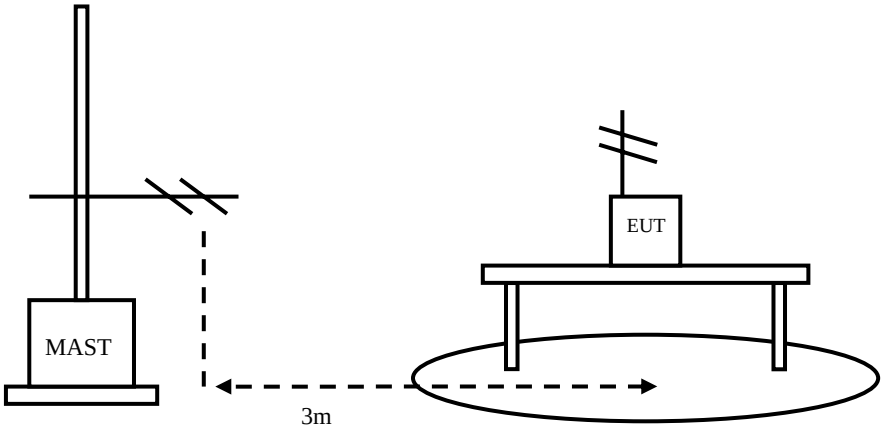
Frequency (MHz)	Detector	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)
0.195000	Average	L	47.40	54.7	7.6
0.195000	Average	N	44.00	54.7	10.0
0.262500	Average	L	42.45	52.8	10.35
0.262500	Average	N	38.33	52.8	14.47
0.393000	Average	L	33.07	49.0	15.93
0.456000	Average	L	25.90	47.2	21.3
0.195000	Quasi-peak	L	54.70	64.7	10.0
0.195000	Quasi-peak	N	54.49	64.7	10.21
0.262500	Quasi-peak	L	50.64	62.8	12.16
0.393000	Quasi-peak	L	40.38	59.0	18.62
0.262500	Quasi-peak	N	44.16	62.8	18.64
0.456000	Quasi-peak	L	35.90	57.2	21.3

2.2.2 Radiated Emissions -FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
21°C	45%	101.0kPa

Test Setup:



Test Procedure:
The EUT should be placed on a non-metallic table 80cm above the ground plane. The receive antennas shall be moved from 1 to 4 meters. The distance between EUT and receive antenna should be 3 meters.
The EUT connect with a laptop via the USB cable. The phone modem drivers were installed on the laptop to be able to communicate with the EUT by continuously sending a querying text fele (AT Command) to the phone using Hyper Terminal during the test. The accessories of the EUT are connected with the EUT such as headset etc. The test set-up and the test methods are performed according to ANSI C63.4:2003.
Then start the test software ES-K1 to sweep the whole frequency band required, using receive log period antenna HL562.
During the test, the height of receive antenna shall be moved from 1 to4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna.

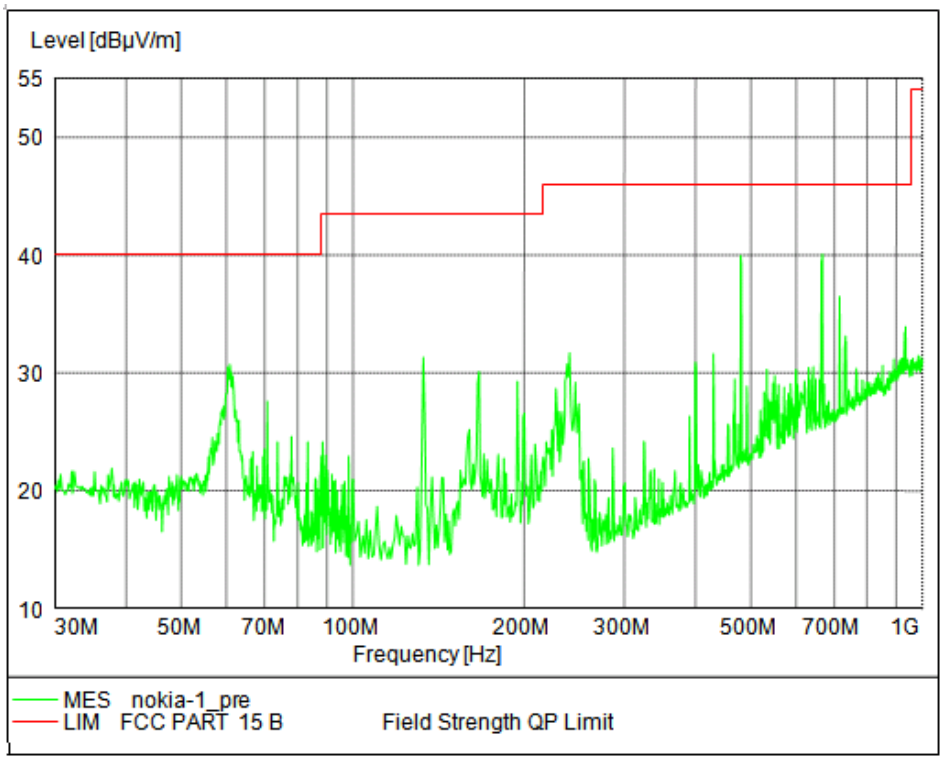
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Limit:

Frequency of Emission(MHz)	Limits	
	Detector	Unit (dBμV/m)
30～88	Quasi-peak	40
88～216	Quasi-peak	43.5
216～960	Quasi-peak	46
960～1000	Quasi-peak	54
1000～5th harmonic of the highest frequency or 40GHz, whichever is lower	Average Peak	54 74

Test result:

Refer to the following figures.



30MHz~1000MHz test figure

For measurement above 1GHz, all emissions level measured were more than 10dB below the limit.

Frequency (MHz)	Polarization	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
667.33	Vertical	40.05	46	5.95
479.96	Vertical	39.97	46	6.03
60.861723	Vertical	30.71	40	9.29
715.430862	Horizontal	36.48	46	9.52
166.533066	Vertical	30.11	43.5	13.39
237.875752	Horizontal	30.73	46	15.27

2.3. List of test equipments

No.	Name/Model	Manufacturer	S/N	Calibration Date
1	23.18m×16.88m×9.60m Semi-Anechoic Chamber	FRANKONIA	-----	19th Aug. 2007
2	ESI 40 EMI test receiver	R&S	100015	19th Aug. 2007
5	E5515C(8960) Mobile Station Tester	Agilent	GB44050904	19th Aug. 2007
6	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	19th Aug. 2007
7	ESCS30 EMI test receiver	R&S	100029	19th Aug. 2007
8	HL562 Ultra log test antenna	R&S	100016	19th Aug. 2007
9	ESH3-Z2 Pulse limiter	R&S	10002	19th Aug. 2007
10	ESH3-Z5 Attenuator	R&S	100020	19th Aug. 2007
11	ESH2Z11 LISN	R&S	50FH-020-10	19th Aug. 2007
12	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	19th Aug. 2007
13	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100029	19th Aug. 2007
14	PS2000 Turn Table	FRANKONIA	-----	19th Aug. 2007
15	MA260 Antenna Master	FRANKONIA	-----	19th Aug. 2007
16	ES-K1EMI test software	R&S	-----	19th Aug. 2007
17	HL562 Receive antenna	R&S	100167	19th Aug. 2007

Appendix