Report No.: RZA2009-1166BC-1

TESTING
No. L2264

Part 15B

TEST REPORT

Product Name	CDMA Mobile phone
FCC ID	QMNRM-583
Model	RM-583
Applicant	Nokia Inc.

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Product Name	CDMA Mobile phone	**Model**	RM-583
FCC ID	QMNRM-583	**Report No.**	RZA2009-1166BC-1
Client	Nokia Inc.		
Manufacturer	BYD Precision Manufacture Company Limited.		
Reference Standard(s)	**FCC Part 15 Subpart B** Radio frequency device. (V10.1.07) **ANSI C63.4** Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40GHz. (2003)		
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment : **Pass** **(Stamp)** **Date of issue: September 9th, 2009**		
Comment	The test result only responds to the measured sample.		

Approved by Yang Weizhong **Revised by** Song Ming **Performed by** Liu Wei

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1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report can not be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201210
Country:	P. R. China
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Website:	http://www.ta-shanghai.com
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1.3. Applicant Information

Company:	Nokia Inc.
Address:	12278 Scripps Summit Drive 92131
City:	San Diego, CA
Postal Code:	92131
Country:	USA
Telephone:	+1 858 831 5000
Fax:	+1 858 831 6500

1.4. Manufacturer Information

Company:	BYD Precision Manufacture Company Limited.
Address:	No.1, kechuang Dong 5 jie, Tongzhou District
City:	Beijing
Postal Code:	101111
Country:	China
Telephone:	+86 10 58018888 ext.71763
Fax:	+86 10 58018888 ext.73000

1.5. Information of EUT

General information

Device type:	Portable device		
Name of EUT:	CDMA Mobile phone		
Device operating configurations:			
MEID:	A00000017A5276		
Operating mode(s):	CDMA Cellular		
Test modulation:	OQPSK		
Emission Designator	1M25F9W		
Antenna type:	internal antenna		
Power supply:	Battery or Charger		
Rated Power Supply Voltage:	3.7V		
Extreme Voltage:	Minimum: 3.4V Maximum: 4.2V		
Extreme Temperature:	Lowest: -30°C Highest: +50°C		
Operating frequency range(s)	Band	Tx (MHz)	Rx (MHz)
	CDMA Cellular	824.7 ~ 848.31	869.7 ~ 893.31
Hardware version:	3500		
Software version:	BJ_2000B02_R800		
Used host products:	IBM T61 (Mode:8892-BAC; S/N:L3-C9644)		

Auxiliary equipment details

AE1: Battery

Model:	BL-4C
Manufacture:	Nokia Inc.
IMEI or SN:	0670389462040Q154D21817422

AE2: Travel Adaptor

Model:	AC-6U
Manufacture:	Nokia Inc.
IMEI or SN:	40904991139614028790675591

AE3:USB Cable

Model:	CA-101
IMEI or SN:	07306359124T1210504

AE4: Headset

Model:	WH-101 HS-105
IMEI or SN:	06942879184E2602758

AE5: Notebook

Model:	IBM T61 8892-BAC
IMEI or SN:	L3-C9644

Equipment Under Test (EUT) is CDMA Mobile phone with internal antenna. It consists of mobile phone, battery and adaptor and the detail about these is in chapter 1.5 in this report. The EUT supports CDMA Cellular.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is September 6, 2009 to September 8, 2009

1.7. Test Report Revision

Date	Report No	Revision	Description
Sept.10 ,2009	RZA2009-1166BC	0	First Revision
Sept.14 ,2009	RZA2009-1166BC-1	1	1.Note all emissions level measured above 1GHz was more than10dB below the limit of RE measurement. 2. Change the mmanufacture for BYD.

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC Rules	Verdict
1	Radiated Emission	15.109, ANSI C63.4-2003	PASS
2	Conducted Emission	15.107, ANSI C63.4-2003	PASS

2.2. Radiated Emission

Ambient condition

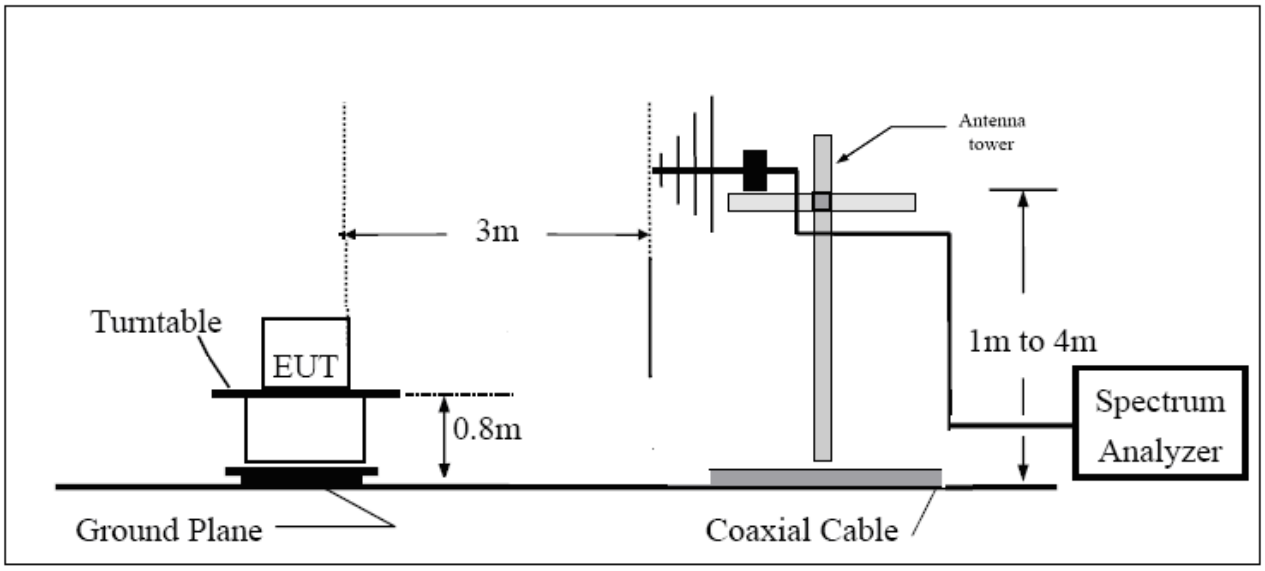
Temperature	Relative humidity	Pressure
25°C	50%	102.5kPa

Methods of Measurement

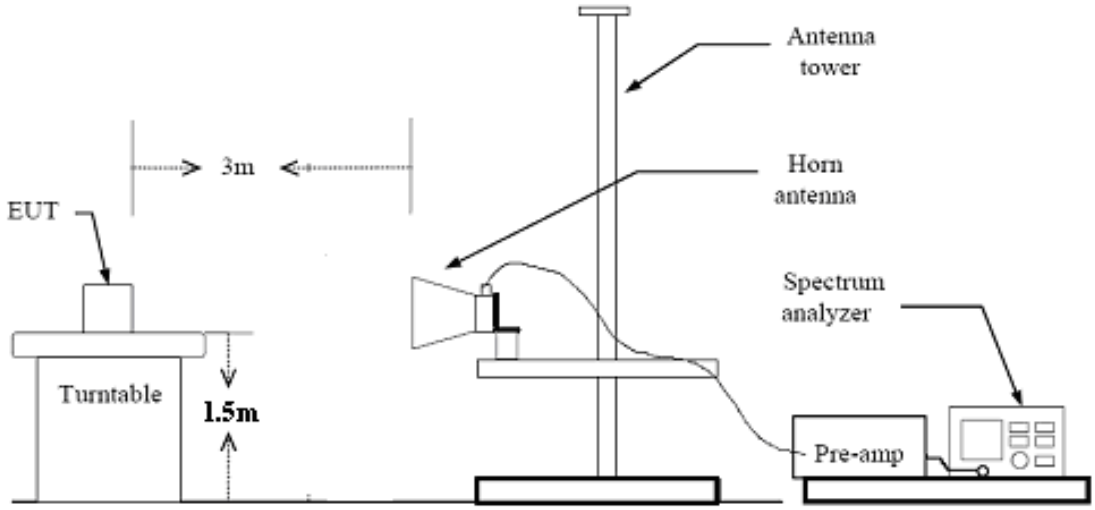
The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. Sweep the whole frequency band through the range from 30MHz to 6GHz. During the test, the height of receive antenna shall be moved from 1 to 4 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. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is IBM T61 8892-BAC and the serial number of laptop is L3-C9644. 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 data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Test Setup

Below 1GHz



Above 1GHz



Limits

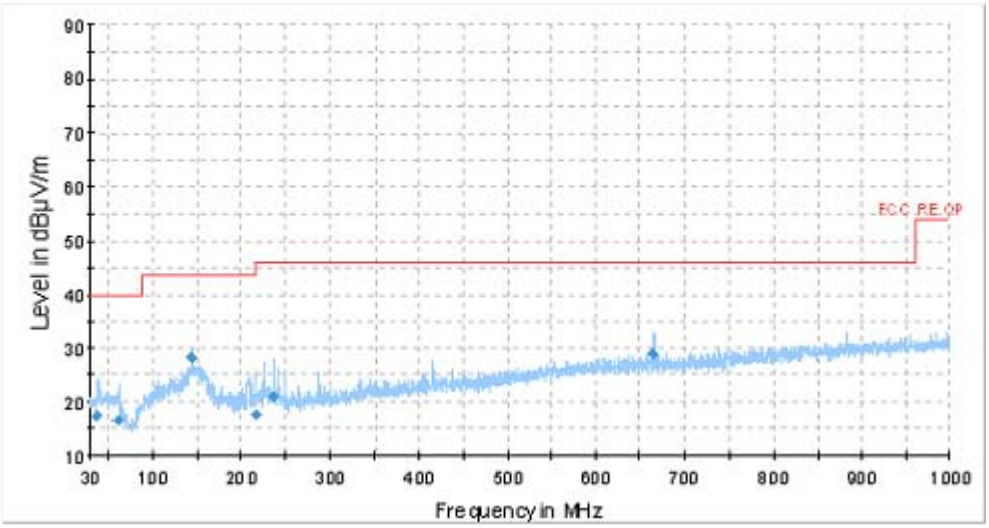
Frequency (MHz)	Field Strength (dBμV/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5th harmonic of the highest frequency or 40GHz,which is lower	54 74	Average Peak

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 3.92 dB.

Test Results

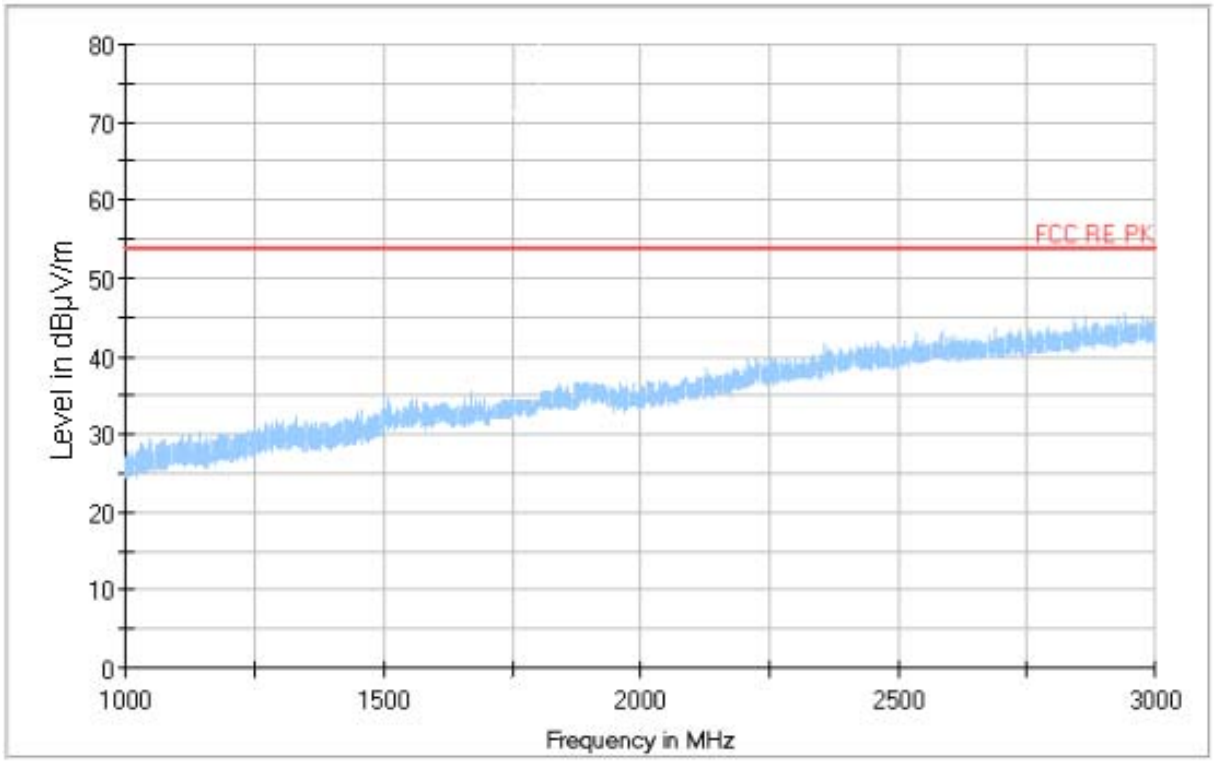
USB Mode



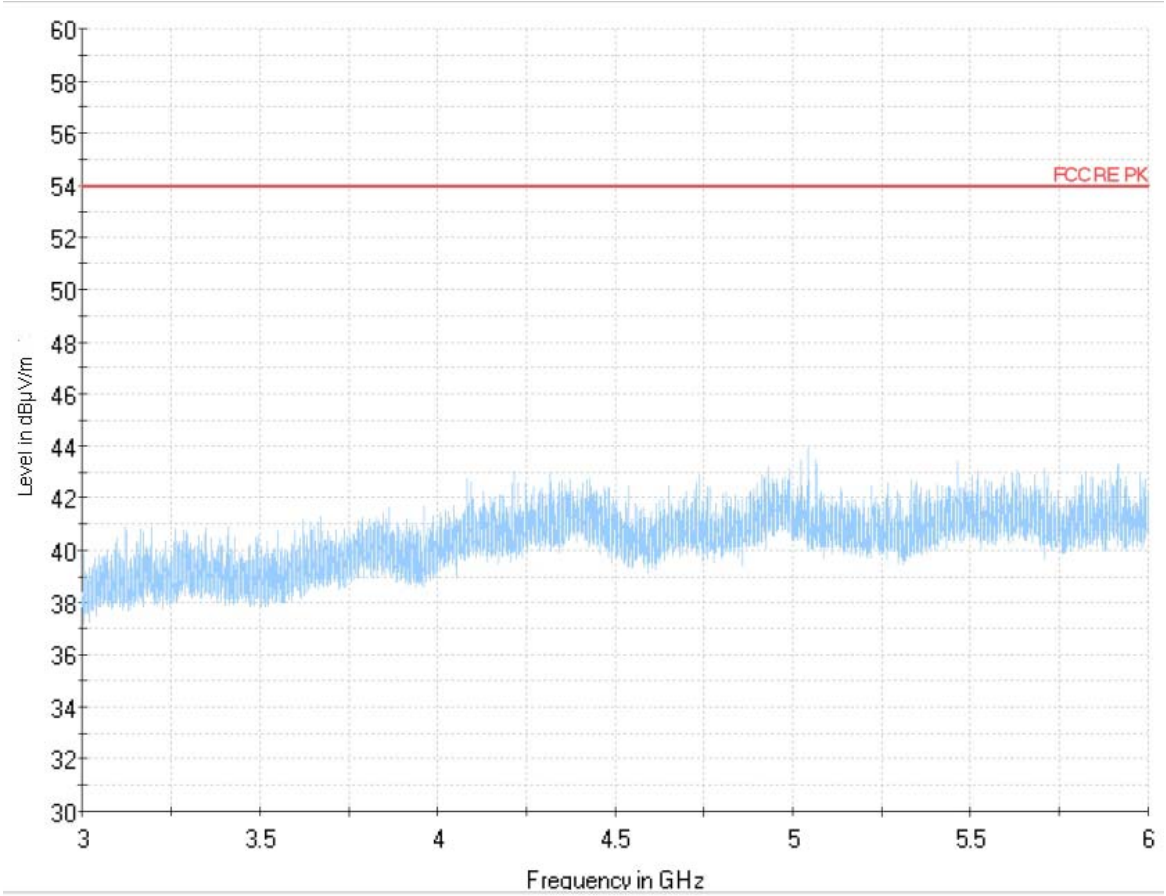
Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
37.707	17.4	121	V	0	22.6	40.0
61.54475	16.6	100	V	91	23.4	40.0
144.035	28.1	100	V	11	15.4	43.5
216.01275	17.6	250	H	45	28.4	46.0
235.8825	20.9	150	V	12	25.9	46.0
663.8265	28.7	100	V	191	17.3	46.0

Note: all emissions level measured above 1GHz was more than10dB below the limit



Radiated Emission from 1GHz to 3GHz



Radiated Emission from 3GHz to 6GHz

2.3. Conducted Emission

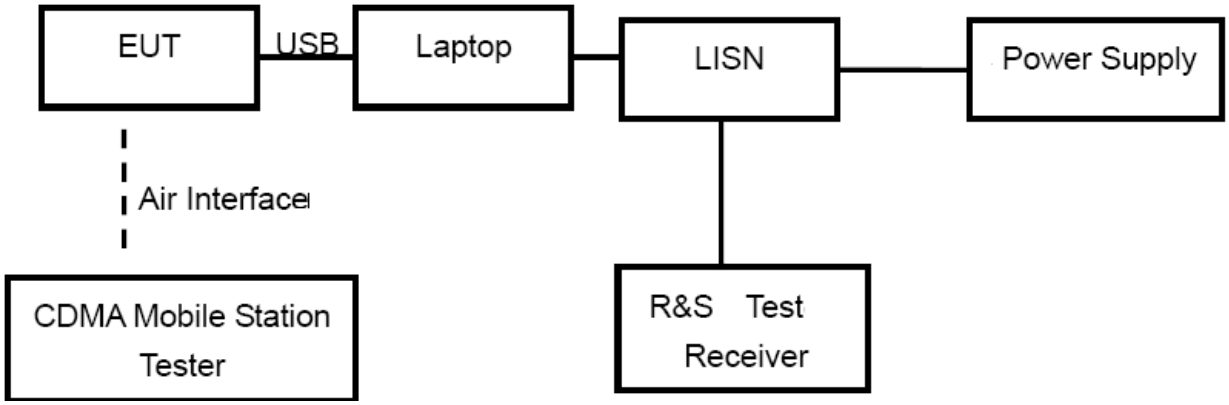
Ambient condition

Temperature	Relative humidity	Pressure
25°C	58%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. The measurement result should include both L line and N line. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is IBM T61 8892-BAC and the serial number of laptop is L3-C9644. The phone modem drivers were installed on the laptop to be able to communicate with the EUT by continuously sending a querying text file (AT Command) to the phone using Hyper Terminal during the test.

Test Setup



Limits

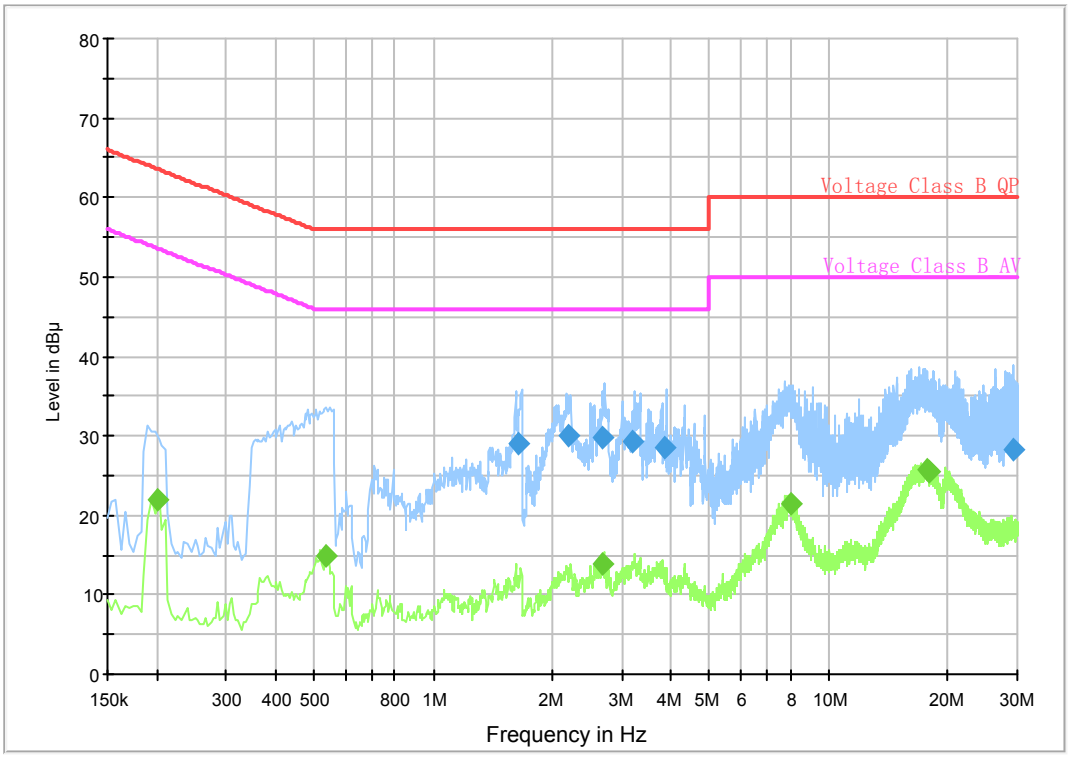
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

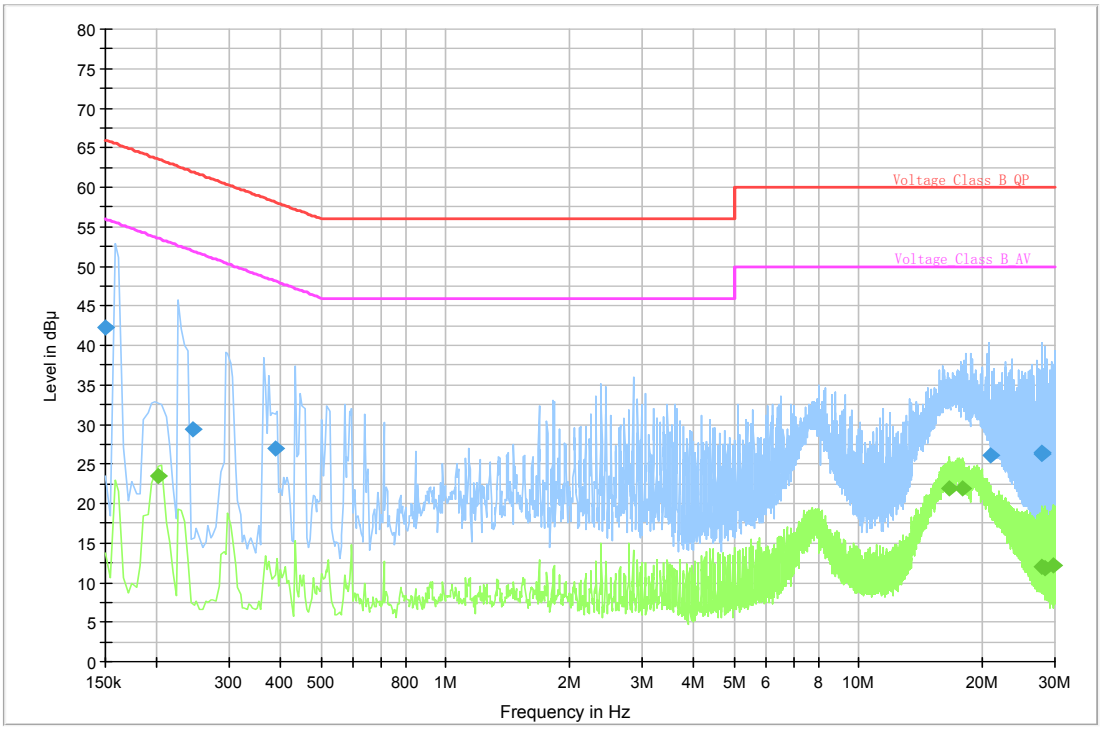
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 2.69 dB.

Test Results

USB Mode



L line



N line

Conducted Emission from 150 KHz to 30 MHz

Frequency (MHz)	Detector	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)
0.201	Average	N	23.4	53.6	30.2
8.005	Average	L	21.4	50	28.6
16.641	Average	N	21.9	50.0	28.1
17.665	Average	L	25.6	50	24.4
17.849	Average	N	21.9	50.0	28.1
17.897	Average	L	25.4	50	24.6
0.15	Quasi-peak	N	42.3	66.0	23.7
2.201	Quasi-peak	L	30	56	26
2.669	Quasi-peak	L	29.8	56	26.2
3.205	Quasi-peak	L	29.2	56	26.8
1.649	Quasi-peak	L	29.1	56	26.9
3.861	Quasi-peak	L	28.4	56	27.6

3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Valid Period
01	Base Station Simulator	CMU200	R&S	118133	2009-06-02	One year
02	Signal Analyzer	FSV	R&S	100815	2009-06-29	One year
03	Signal generator	SMR27	R&S	1606.6000.02	2009-06-29	One year
04	EMI Test Receiver	ESCI	R&S	100948	2009-07-02	One year
05	Trilog Antenna	VULB 9163	SCHWARZBECK	9163-391	2009-05-14	One year
06	Horn Antenna	HF907	R&S	100126	2009-05-20	One year
07	LISN	EMCO	3816/2	00084033	2007-12-26	two year
08	Semi-Anechoic Chamber	9.6*6.7*6.6m	ETS-Lindgren	NA	NA	NA
09	Shielding room	5*4*4m	ETS-Lindgren	NA	NA	NA
10	EMI test software	ES-K1	R&S	NA	NA	NA

*******END OF REPORT BODY*******

ANNEX A: EUT Test Setup