

FCC Test Report

EQUIPMENT : Internet Stick
BRAND NAME : Nokia
MODEL NAME : CS-10
FCC ID : PYARD-7
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Declaration of Conformity
APPLICANT : Nokia Corporation

Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

The product sample received on Dec. 16, 2008 and completely tested on Dec. 24, 2008. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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 INC., the test report shall not be reproduced except in full.



Reviewed by: Roy Wu / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	7.2.2	AC Conducted Emission	< 15.107 limits < RSS-Gen table 2 limits	PASS	Under limit 9.0 dB at 0.422 MHz
3.2	15.109	7.2.3.2	Radiated Emission	< 15.109 limits or < RSS-Gen table 1 limits (Section 6)	PASS	Under limit 14.13 dB at 8968.00 MHz



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FD8D1611	Rev. 01	Initial issue of report	Dec. 26, 2008

1. General Description

1.1 Applicant

Nokia Corporation

Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

1.2 Manufacturer

Nokia Corporation

Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Internet Stick
Brand Name	Nokia
Model Name	CS-10
Tx Frequency Range	GSM850 : 824 MHz ~ 849 MHz GSM1900 : 1850 MHz ~ 1910 MHz WCDMA Band V : 824 MHz ~ 849 MHz
Rx Frequency Range	GSM850 : 869 MHz ~ 894 MHz GSM1900 : 1930 MHz ~ 1990 MHz WCDMA Band V : 869 MHz ~ 894 MHz
Channel Spacing	GSM/WCDMA : 200 kHz
Antenna Type	Fixed Internal Antenna
Antenna Connector Type	N/A
HW Version	1.2
SW Version	2.2
Mechanical Version	2.0
GPRS / EGPRS Multislot class	10
Type of Modulation	GSM / GPRS : GMSK EDGE : 8PSK WCDMA : QPSK HSDPA : QPSK / 16QAM HSUPA : BPSK
EUT Stage	Production Unit

Accessories List:

Accessories Specification		
USB Cable	Brand Name	Nokia
	Model Name	CA-150D
	Signal Line Type	0.24 meter non-shielded cable with ferrite core

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. For accessories equipped with this EUT, please refer to the appendix of the external photo.

1.4 Test Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH06-HY	TW1022/4086B-1

1.5 Applied 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 C63.4-2003
- IC RSS-Gen Issue 2

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	GSM Base Station	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Vostro 1510	ICES-003	N/A	AC I/P: Unshielded, 1.82 m DC O/P: Shielded, 0.94 m
3.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	N/A	Unshielded, 1.8m
4.	i-pod	Apple	A1199	FCC DoC	Shielded, 1.2 m	N/A

2. Test Configuration of Equipment Under Test

2.1 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 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).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following tables are showing the test modes as the worst cases and recorded in this report.

EUT Configure Mode	Mode Description	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1	Operating Mode (EUT with USB Cable Mode)	✓	✓	✓

Abbreviations:

EMI AC: AC conducted emissions;

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

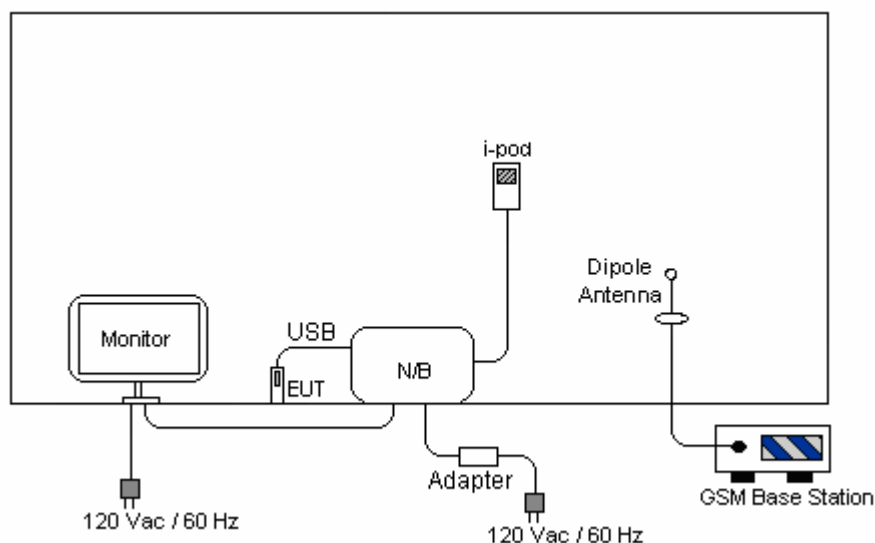
EMI RE < 1G: EUT radiated emissions < 1GHz ;

Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1	Mode 1: GPRS850 Idle + USB Cable with NB Mode 2: GPRS1900 Idle + USB Cable with NB Mode 3: EDGE1900 Idle + USB Cable with NB Mode 4: WCDMA850 Idle + USB Cable with NB
Radiated Emissions < 1GHz	1	Mode 1: GPRS850 Idle + USB Cable with NB Mode 2: GPRS1900 Idle + USB Cable with NB Mode 3: EDGE1900 Idle + USB Cable with NB Mode 4: WCDMA850 Idle + USB Cable with NB
Radiated Emissions ≥ 1GHz	1	Mode 1: GPRS1900 Idle + USB Cable with NB

Remark:

1. The worst case of radiated emission < 1GHz is mode 2.
2. The test mode of radiated emission ≥ 1GHz was chosen from the worst case of radiated emission < 1GHz.

2.2 Connection Diagram of Test System



2.3 Test Software

For associated equipment, the executive program, "EMCTEST.EXE" on notebook WINXP can generate a complete line of continuously repeating "H" pattern.

The programs were executed as follows:

- Turn on the power of all equipment.
- The notebook reads the test program from the hard disk drive and runs it.
- The notebook sends "H" messages to the panel, and the panel displays "H" patterns on the screen.
- The notebook sends "H" messages to the internal hard disk, and the hard disk reads and writes the message.
- Repeat the steps from b to d.

In GPRS or WCDMA or EDGE idle mode, the EUT is synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

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 (MHz)	Conducted limit (dBuV)	
	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.

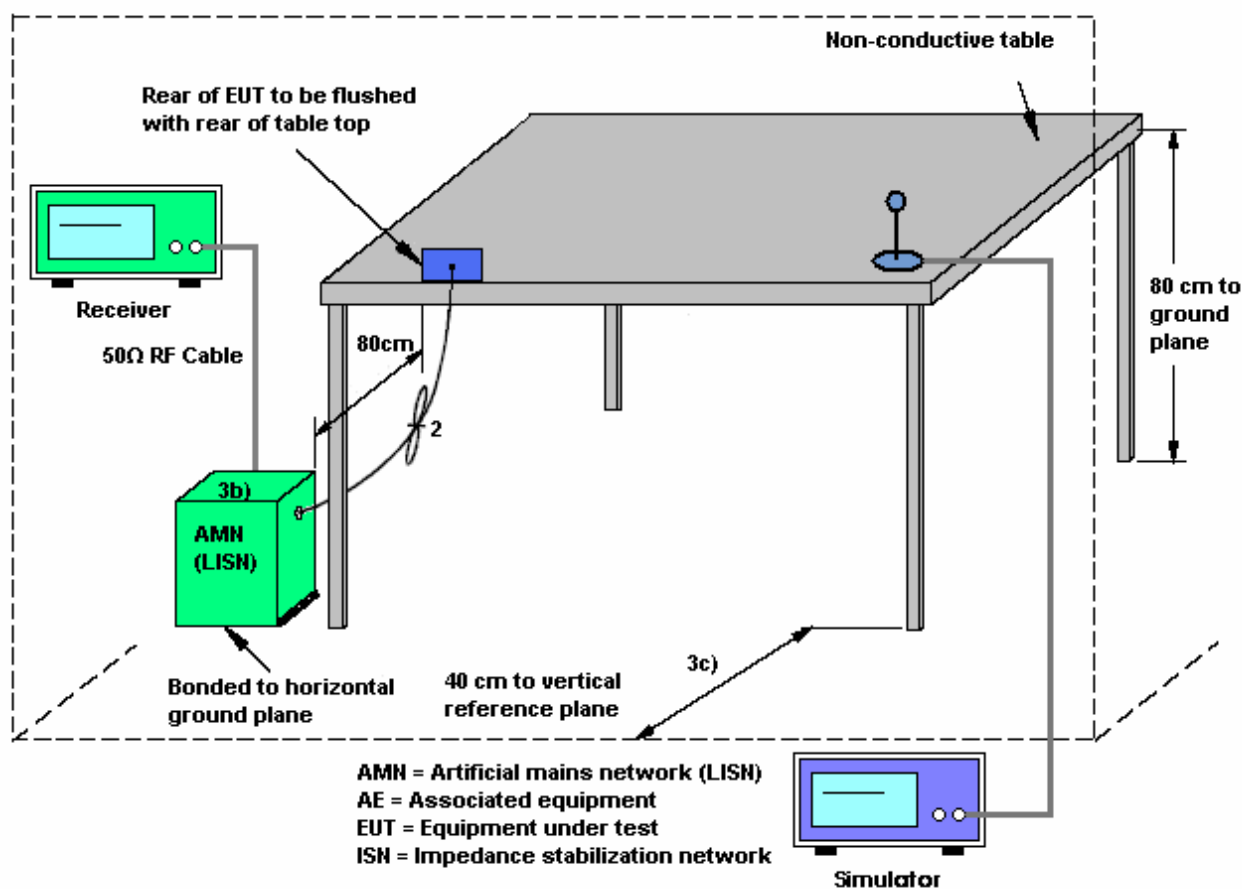
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedure

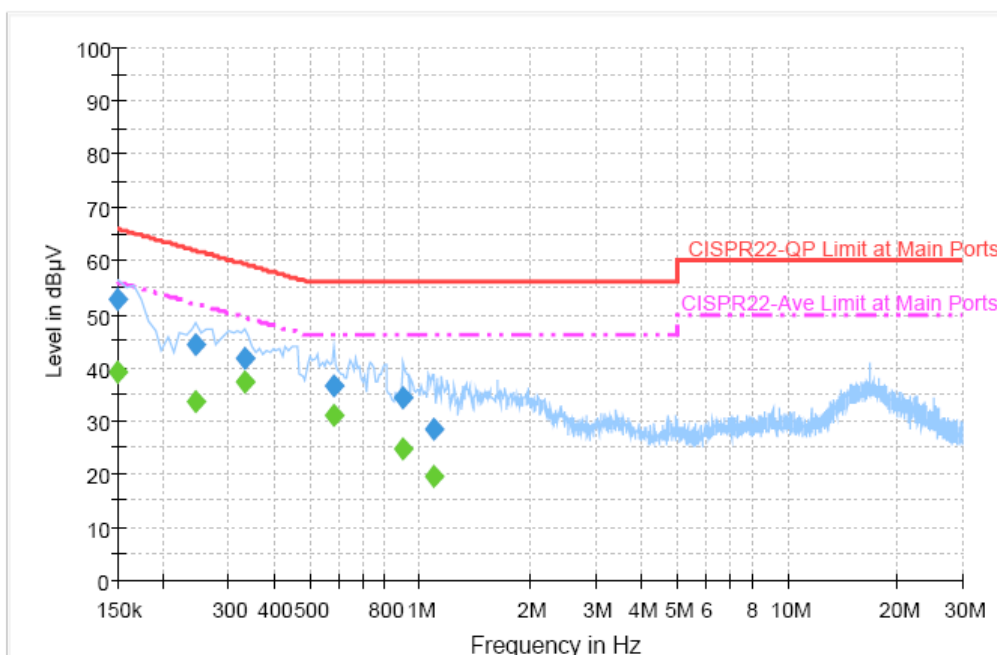
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
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 with Maximum Hold Mode.

3.1.4 Test Setup



3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	23~24℃
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Line
Function Type :	GPRS850 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



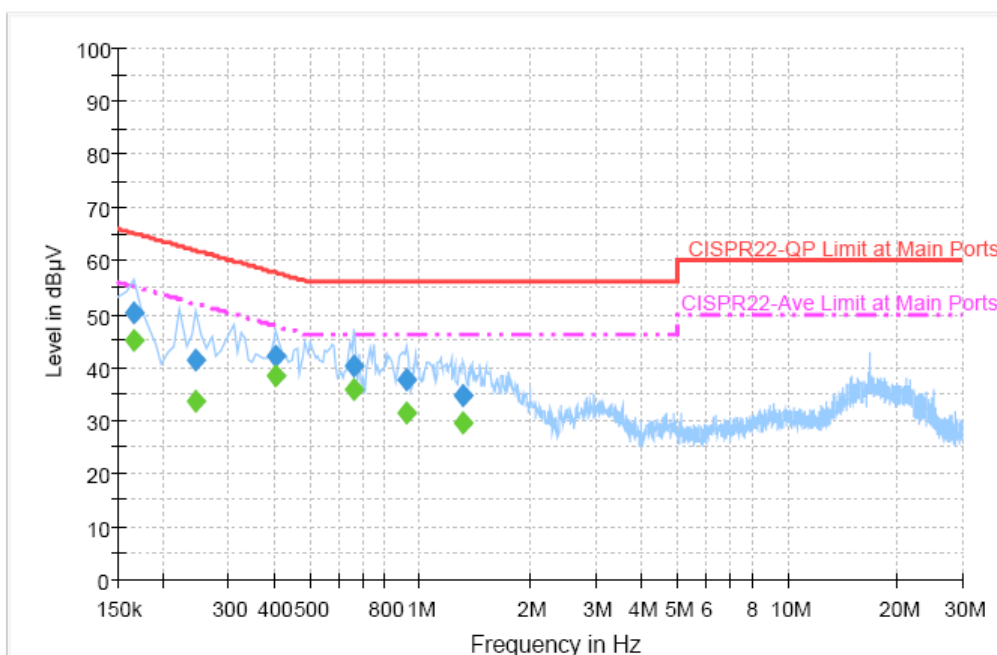
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	52.8	Off	L1	19.4	13.2	66.0
0.246000	44.3	Off	L1	19.4	17.6	61.9
0.334000	41.8	Off	L1	19.3	17.6	59.4
0.582000	36.4	Off	L1	19.3	19.6	56.0
0.902000	34.4	Off	L1	19.4	21.6	56.0
1.094000	28.2	Off	L1	19.4	27.8	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	39.1	Off	L1	19.4	16.9	56.0
0.246000	33.6	Off	L1	19.4	18.3	51.9
0.334000	37.2	Off	L1	19.3	12.2	49.4
0.582000	30.9	Off	L1	19.3	15.1	46.0
0.902000	24.9	Off	L1	19.4	21.1	46.0
1.094000	19.6	Off	L1	19.4	26.4	46.0

Test Mode :	Mode 1	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Neutral
Function Type :	GPRS850 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



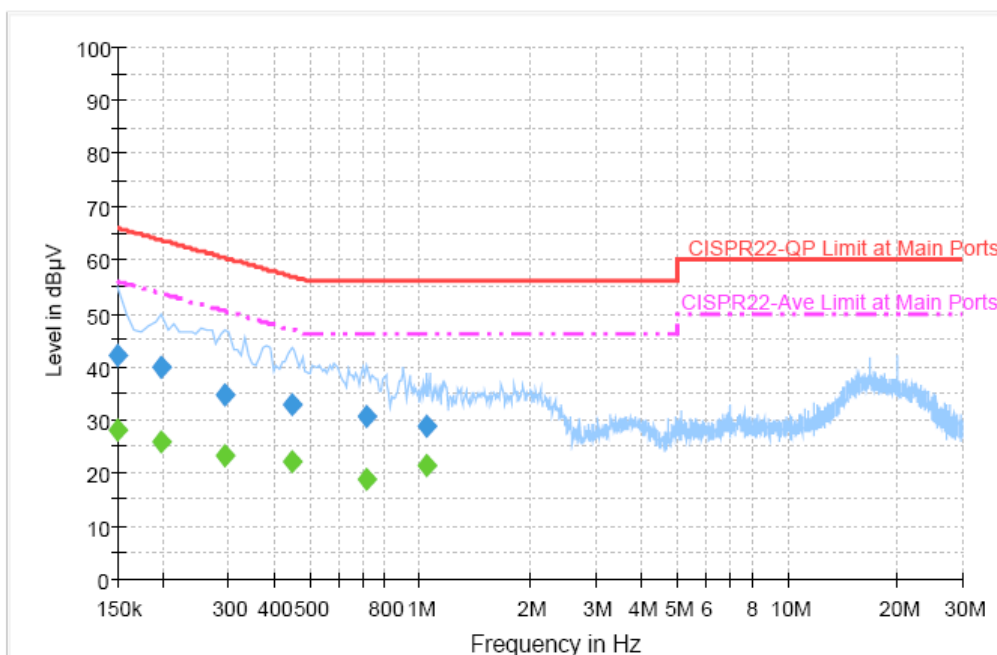
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	50.1	Off	N	19.3	15.1	65.2
0.246000	41.4	Off	N	19.4	20.5	61.9
0.406000	41.9	Off	N	19.4	15.8	57.7
0.662000	40.1	Off	N	19.4	15.9	56.0
0.918000	37.7	Off	N	19.4	18.3	56.0
1.310000	34.8	Off	N	19.5	21.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	45.1	Off	N	19.3	10.1	55.2
0.246000	33.5	Off	N	19.4	18.4	51.9
0.406000	38.5	Off	N	19.4	9.2	47.7
0.662000	35.7	Off	N	19.4	10.3	46.0
0.918000	31.5	Off	N	19.4	14.5	46.0
1.310000	29.6	Off	N	19.5	16.4	46.0

Test Mode :	Mode 2	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Line
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



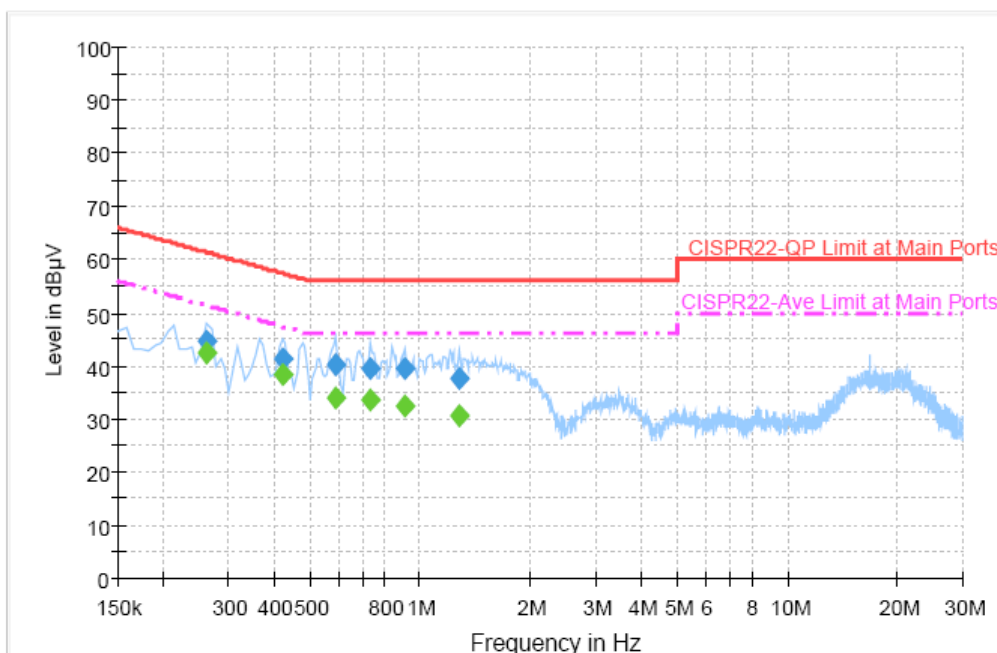
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	42.2	Off	L1	19.4	23.8	66.0
0.198000	39.7	Off	L1	19.3	24.0	63.7
0.294000	34.7	Off	L1	19.3	25.7	60.4
0.446000	32.7	Off	L1	19.3	24.2	56.9
0.718000	30.6	Off	L1	19.4	25.4	56.0
1.046000	28.8	Off	L1	19.4	27.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	28.0	Off	L1	19.4	27.0	56.0
0.198000	25.9	Off	L1	19.3	27.8	53.7
0.294000	23.1	Off	L1	19.3	27.3	50.4
0.446000	22.1	Off	L1	19.3	24.8	46.9
0.718000	18.9	Off	L1	19.4	27.1	46.0
1.046000	21.5	Off	L1	19.4	24.5	46.0

Test Mode :	Mode 2	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Neutral
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



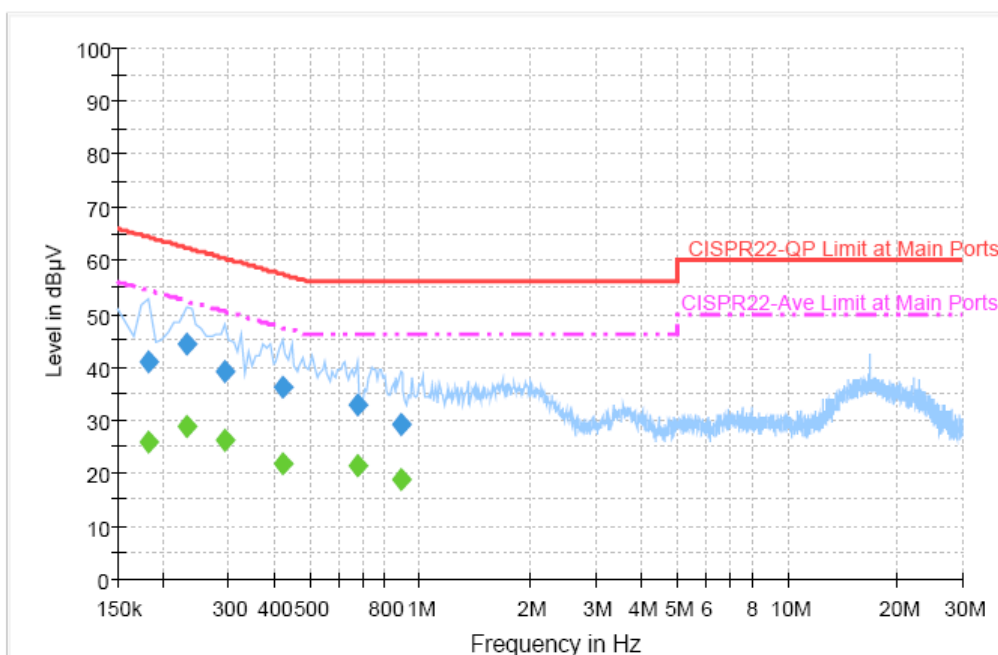
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.262000	44.7	Off	N	19.4	16.7	61.4
0.422000	41.4	Off	N	19.4	16.0	57.4
0.590000	40.3	Off	N	19.3	15.7	56.0
0.734000	39.6	Off	N	19.4	16.4	56.0
0.910000	39.6	Off	N	19.4	16.4	56.0
1.278000	37.8	Off	N	19.5	18.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.262000	42.3	Off	N	19.4	9.1	51.4
0.422000	38.4	Off	N	19.4	9.0	47.4
0.590000	33.8	Off	N	19.3	12.2	46.0
0.734000	33.7	Off	N	19.4	12.3	46.0
0.910000	32.5	Off	N	19.4	13.5	46.0
1.278000	30.8	Off	N	19.5	15.2	46.0

Test Mode :	Mode 3	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Line
Function Type :	EDGE1900 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



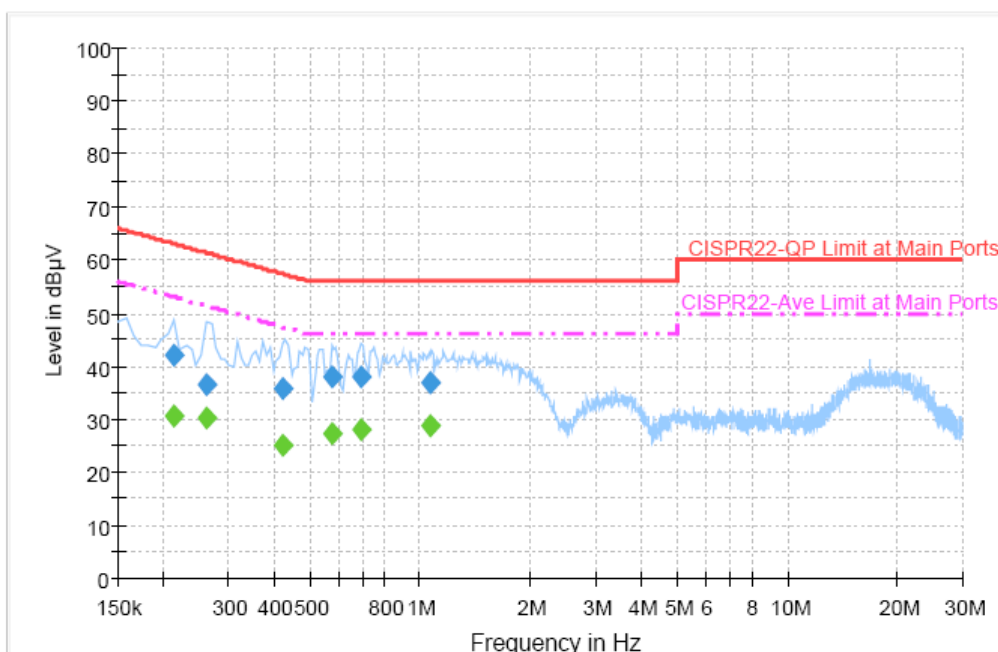
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	41.0	Off	L1	19.4	23.4	64.4
0.230000	44.1	Off	L1	19.4	18.3	62.4
0.294000	39.0	Off	L1	19.3	21.4	60.4
0.422000	36.1	Off	L1	19.4	21.3	57.4
0.678000	32.9	Off	L1	19.4	23.1	56.0
0.886000	29.3	Off	L1	19.4	26.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	25.8	Off	L1	19.4	28.6	54.4
0.230000	28.9	Off	L1	19.4	23.5	52.4
0.294000	26.3	Off	L1	19.3	24.1	50.4
0.422000	21.6	Off	L1	19.4	25.8	47.4
0.678000	21.3	Off	L1	19.4	24.7	46.0
0.886000	18.9	Off	L1	19.4	27.1	46.0

Test Mode :	Mode 3	Temperature :	23~24℃
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Neutral
Function Type :	EDGE1900 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



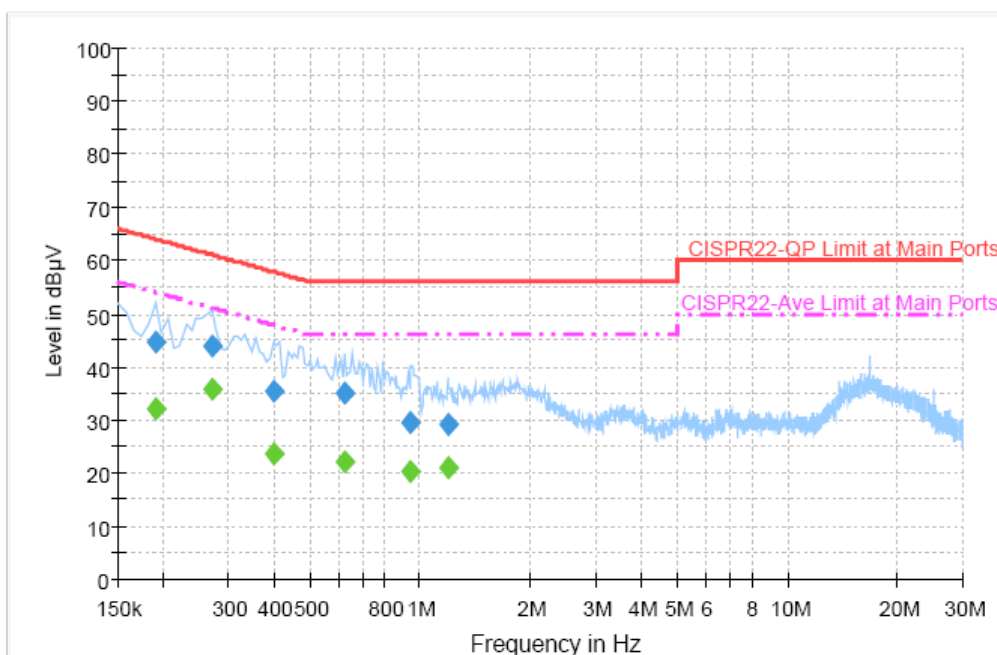
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.214000	42.2	Off	N	19.4	20.8	63.0
0.262000	36.5	Off	N	19.4	24.9	61.4
0.422000	35.7	Off	N	19.4	21.7	57.4
0.574000	37.8	Off	N	19.3	18.2	56.0
0.694000	37.8	Off	N	19.5	18.2	56.0
1.062000	37.0	Off	N	19.4	19.0	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.214000	30.5	Off	N	19.4	22.5	53.0
0.262000	30.2	Off	N	19.4	21.2	51.4
0.422000	25.1	Off	N	19.4	22.3	47.4
0.574000	27.5	Off	N	19.3	18.5	46.0
0.694000	27.9	Off	N	19.5	18.1	46.0
1.062000	28.7	Off	N	19.4	17.3	46.0

Test Mode :	Mode 4	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Line
Function Type :	WCDMA850 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



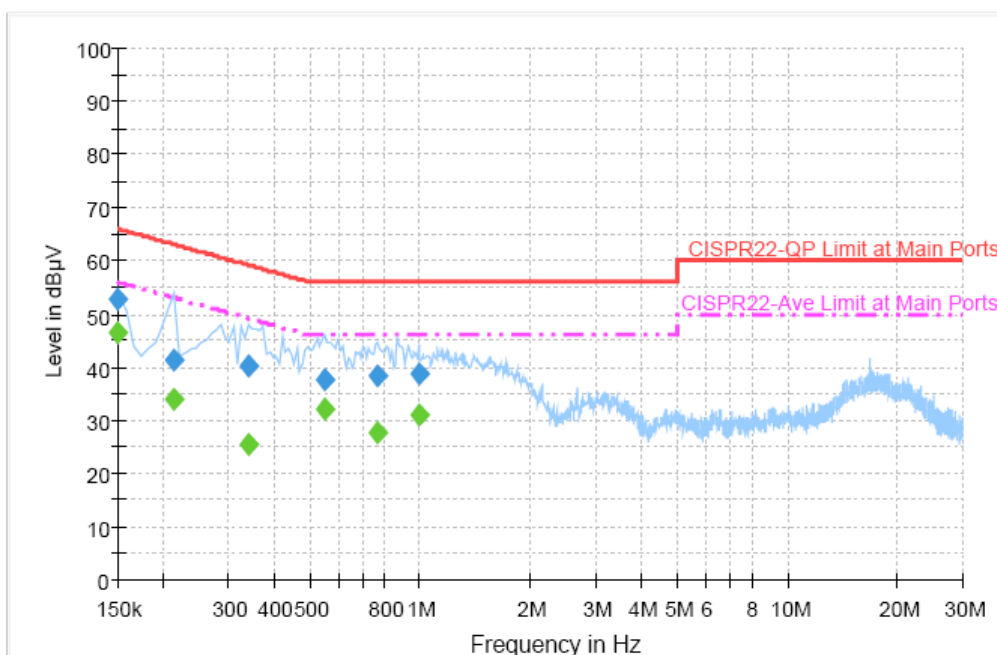
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190000	44.6	Off	L1	19.4	19.5	64.0
0.270000	43.8	Off	L1	19.3	17.3	61.1
0.398000	35.3	Off	L1	19.4	22.6	57.9
0.622000	35.1	Off	L1	19.3	20.9	56.0
0.942000	29.7	Off	L1	19.4	26.3	56.0
1.190000	29.1	Off	L1	19.4	26.9	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190000	32.3	Off	L1	19.4	21.7	54.0
0.270000	35.6	Off	L1	19.3	15.5	51.1
0.398000	23.6	Off	L1	19.4	24.3	47.9
0.622000	22.2	Off	L1	19.3	23.8	46.0
0.942000	20.2	Off	L1	19.4	25.8	46.0
1.190000	21.0	Off	L1	19.4	25.0	46.0

Test Mode :	Mode 4	Temperature :	23~24°C
Test Engineer :	Cona Huang	Relative Humidity :	40~41%
		Phase :	Neutral
Function Type :	WCDMA850 Idle + USB Cable with NB		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	52.8	Off	N	19.4	13.2	66.0
0.214000	41.5	Off	N	19.4	21.5	63.0
0.342000	40.4	Off	N	19.3	18.8	59.2
0.550000	37.6	Off	N	19.3	18.4	56.0
0.766000	38.3	Off	N	19.4	17.7	56.0
0.990000	38.8	Off	N	19.4	17.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	46.3	Off	N	19.4	9.7	56.0
0.214000	34.1	Off	N	19.4	18.9	53.0
0.342000	25.3	Off	N	19.3	23.9	49.2
0.550000	32.0	Off	N	19.3	14.0	46.0
0.766000	27.6	Off	N	19.4	18.4	46.0
0.990000	31.1	Off	N	19.4	14.9	46.0

3.2 Test of Radiated Emission Measurement

3.2.1 Limit of Radiated Emission

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

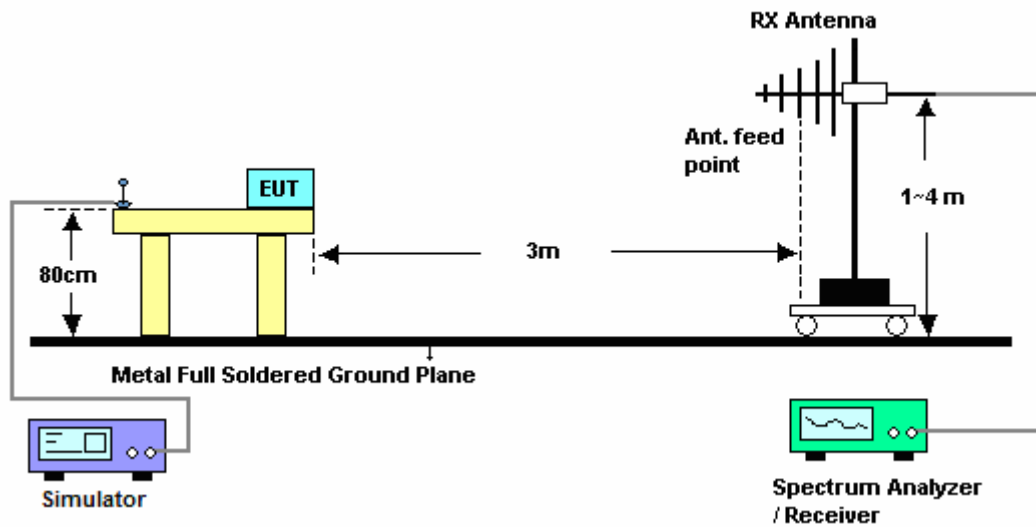
3.2.2 Measuring Instruments

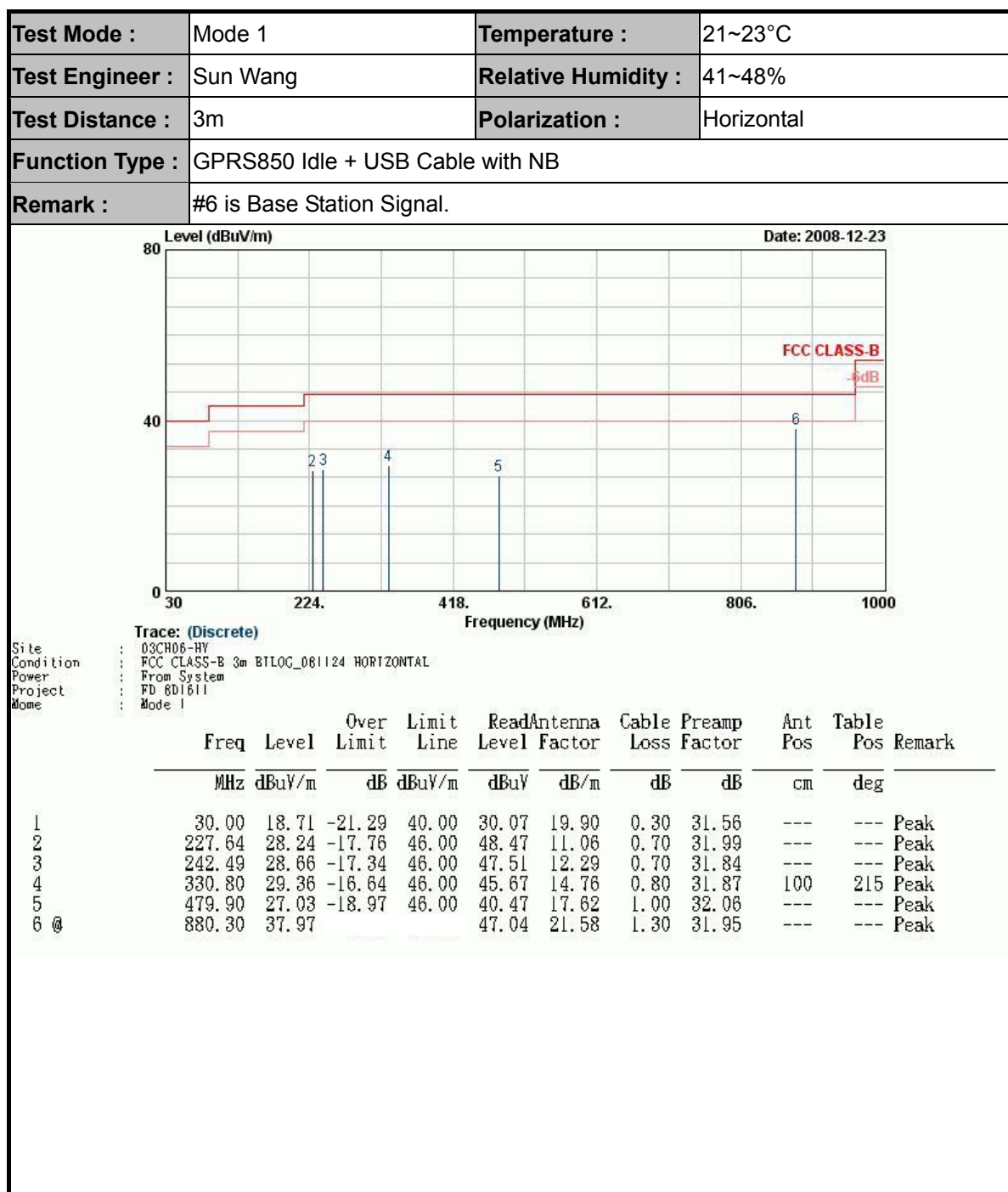
See list of measuring instruments of this test report.

3.2.3 Test Procedures

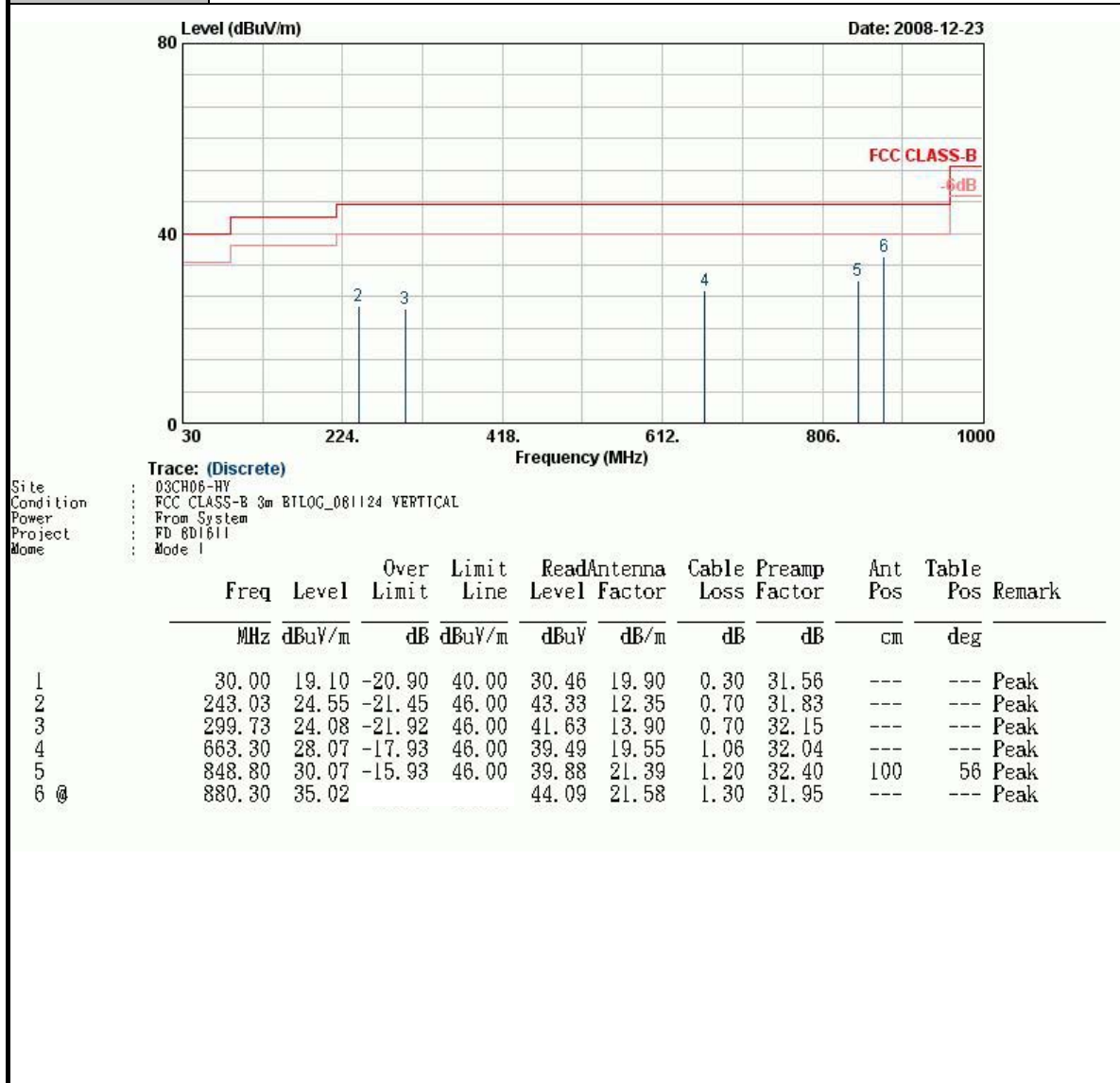
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one meter and 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.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported
8. Emission level (dBuV/m) = 20 log Emission level (uV/m)
9. Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

3.2.4 Test Setup of Radiated Emission

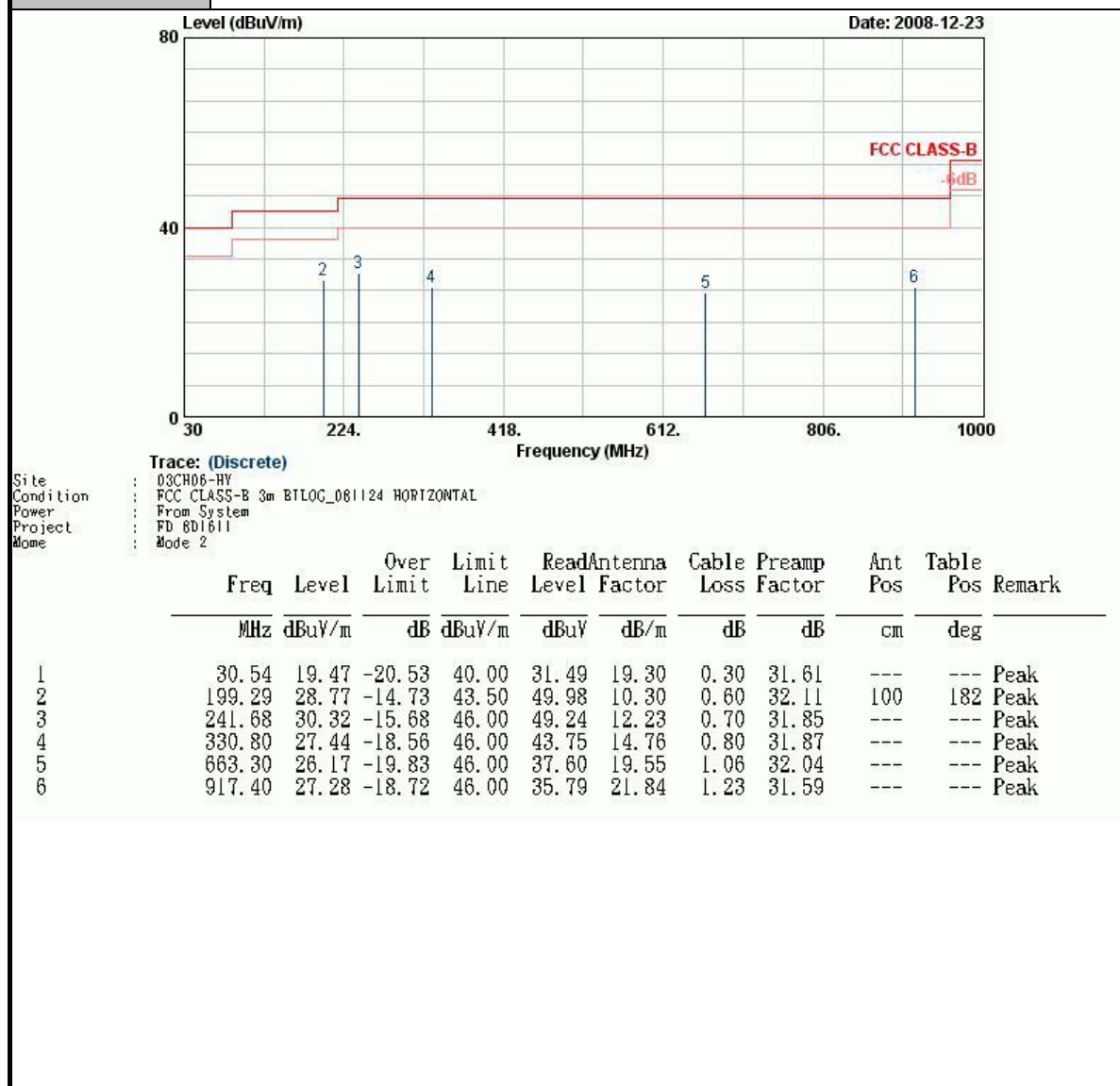


3.2.5 Test Result of Radiated Emission < 1GHz


Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Vertical
Function Type :	GPRS850 Idle + USB Cable with NB		
Remark :	#6 is Base Station Signal.		

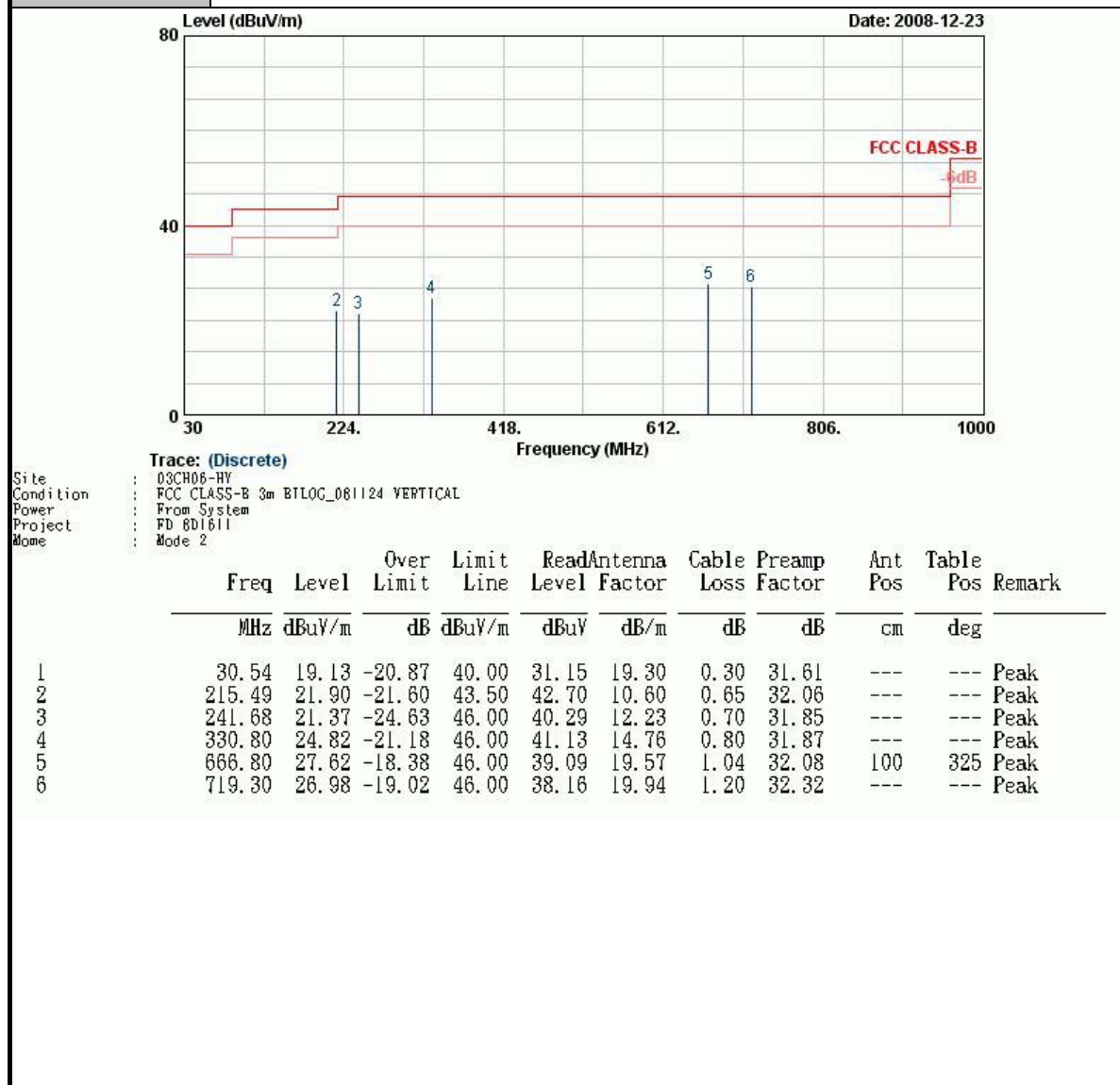


Test Mode :	Mode 2	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :			

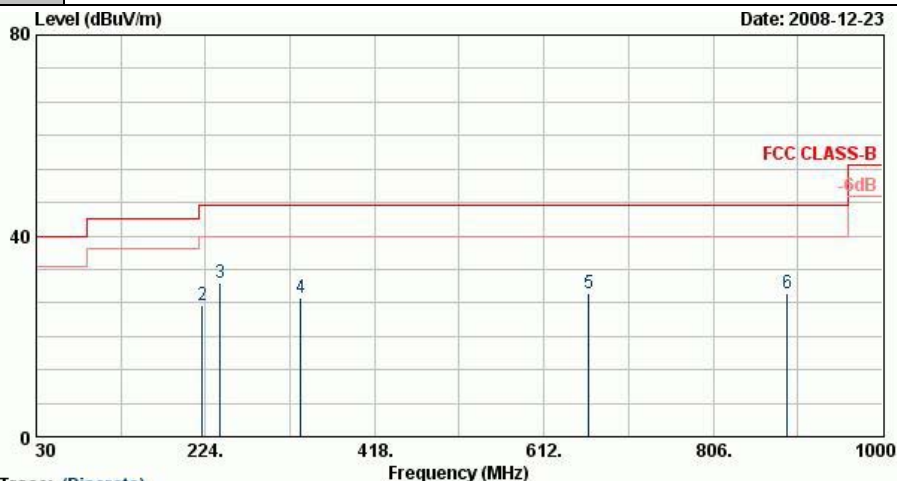




Test Mode :	Mode 2	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Vertical
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :			



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	EDGE1900 Idle + USB Cable with NB		
Remark :			

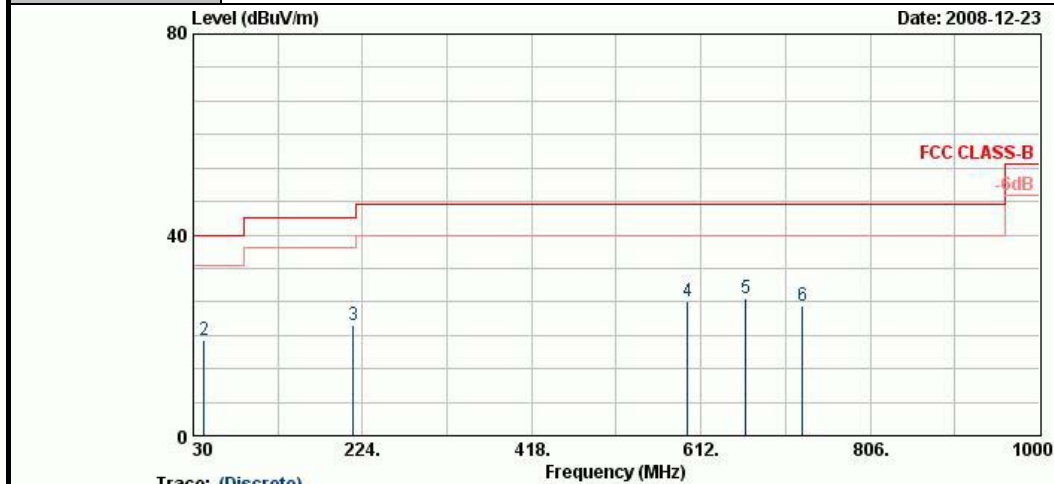


Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m B1LOG_081124 HORIZONTAL
Power : From System
Project : FD 801611
Name : Mode 3

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	19.26	-20.74	40.00	30.62	19.90	0.30	31.56	---	---	Peak
2	220.08	26.12	-19.88	46.00	46.81	10.50	0.70	31.89	---	---	Peak
3	241.14	30.74	-15.26	46.00	49.66	12.23	0.70	31.85	100	281	Peak
4	332.90	27.74	-18.26	46.00	43.98	14.82	0.80	31.85	---	---	Peak
5	663.30	28.68	-17.32	46.00	40.10	19.55	1.06	32.04	---	---	Peak
6	890.80	28.45	-17.55	46.00	37.32	21.64	1.30	31.81	---	---	Peak

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Vertical
Function Type :	EDGE1900 Idle + USB Cable with NB		
Remark :			



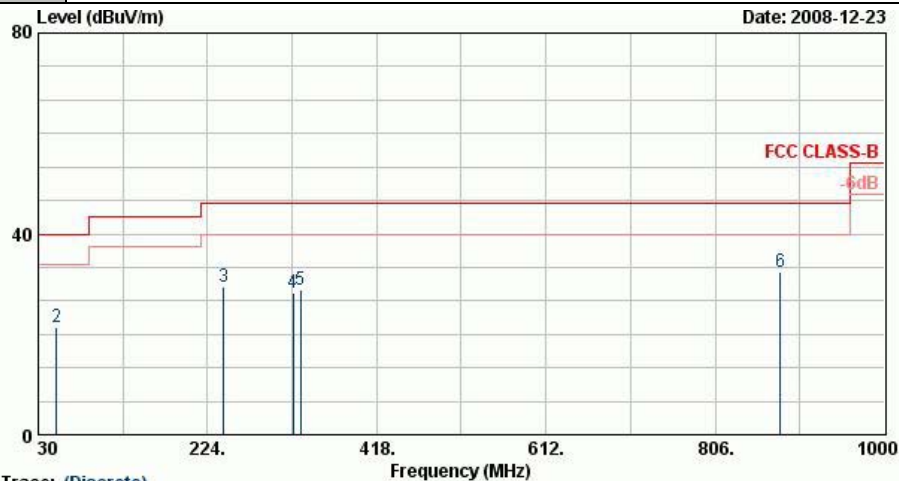
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BTLOC_081124 VERTICAL
Power : From System
Project : FD 8D1611
Name : Mode 3

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	30.00	19.16	-20.84	40.00	30.52	19.90	0.30	31.56	---	---	Peak
2	42.69	18.99	-21.01	40.00	38.24	12.16	0.30	31.71	---	---	Peak
3	213.33	22.14	-21.36	43.50	42.99	10.64	0.63	32.12	---	---	Peak
4	596.80	26.82	-19.18	46.00	38.91	19.08	1.00	32.18	---	---	Peak
5	663.30	27.43	-18.57	46.00	38.85	19.55	1.06	32.04	100	172	Peak
6	728.40	26.01	-19.99	46.00	37.09	20.04	1.12	32.24	---	---	Peak



Test Mode :	Mode 4	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA850 Idle + USB Cable with NB		
Remark :	#6 is Base Station Signal.		

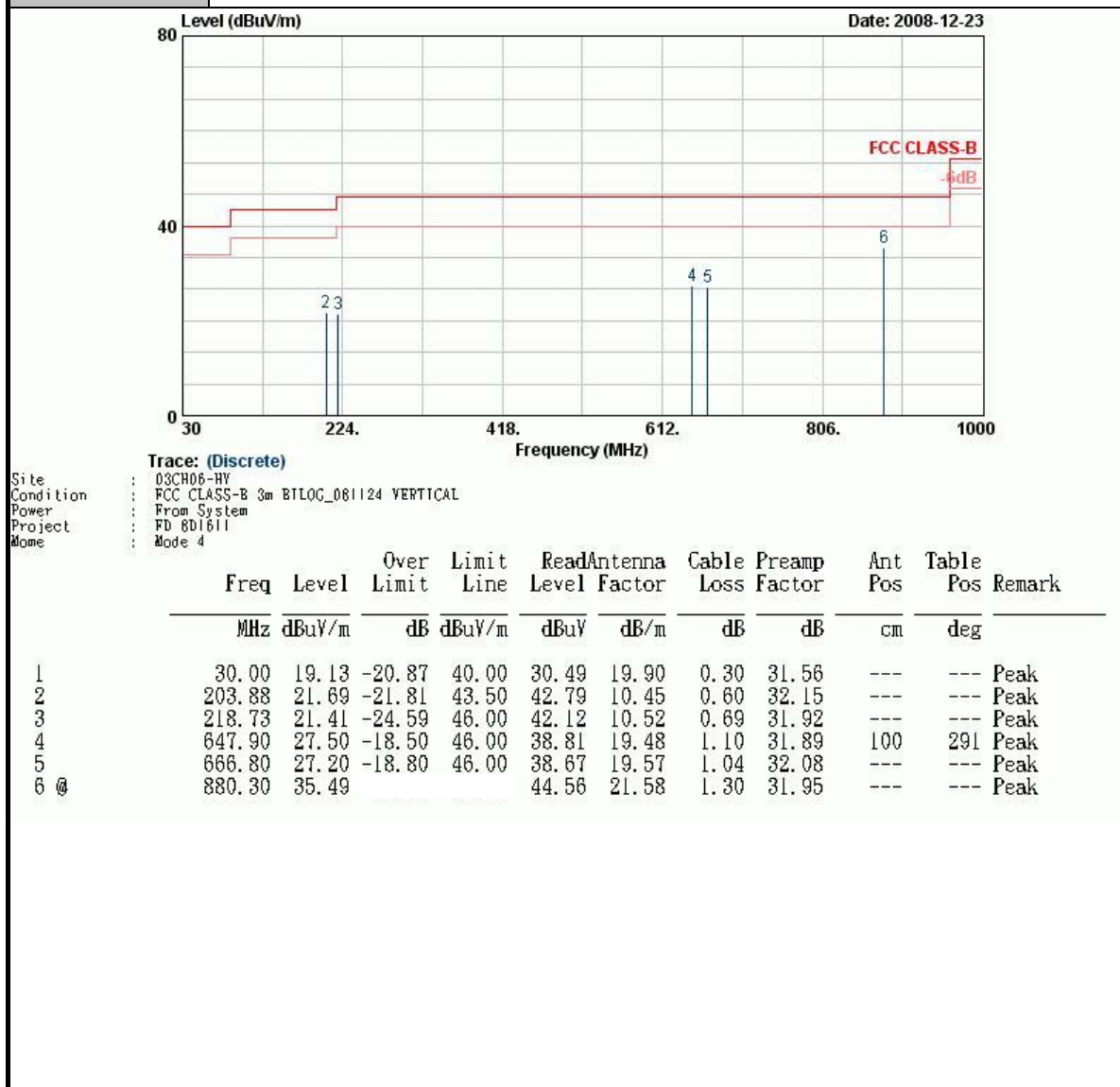


Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BTLOG_081124 HORIZONTAL
Power : From System
Project : FD 8D1611
Name : Mode 4

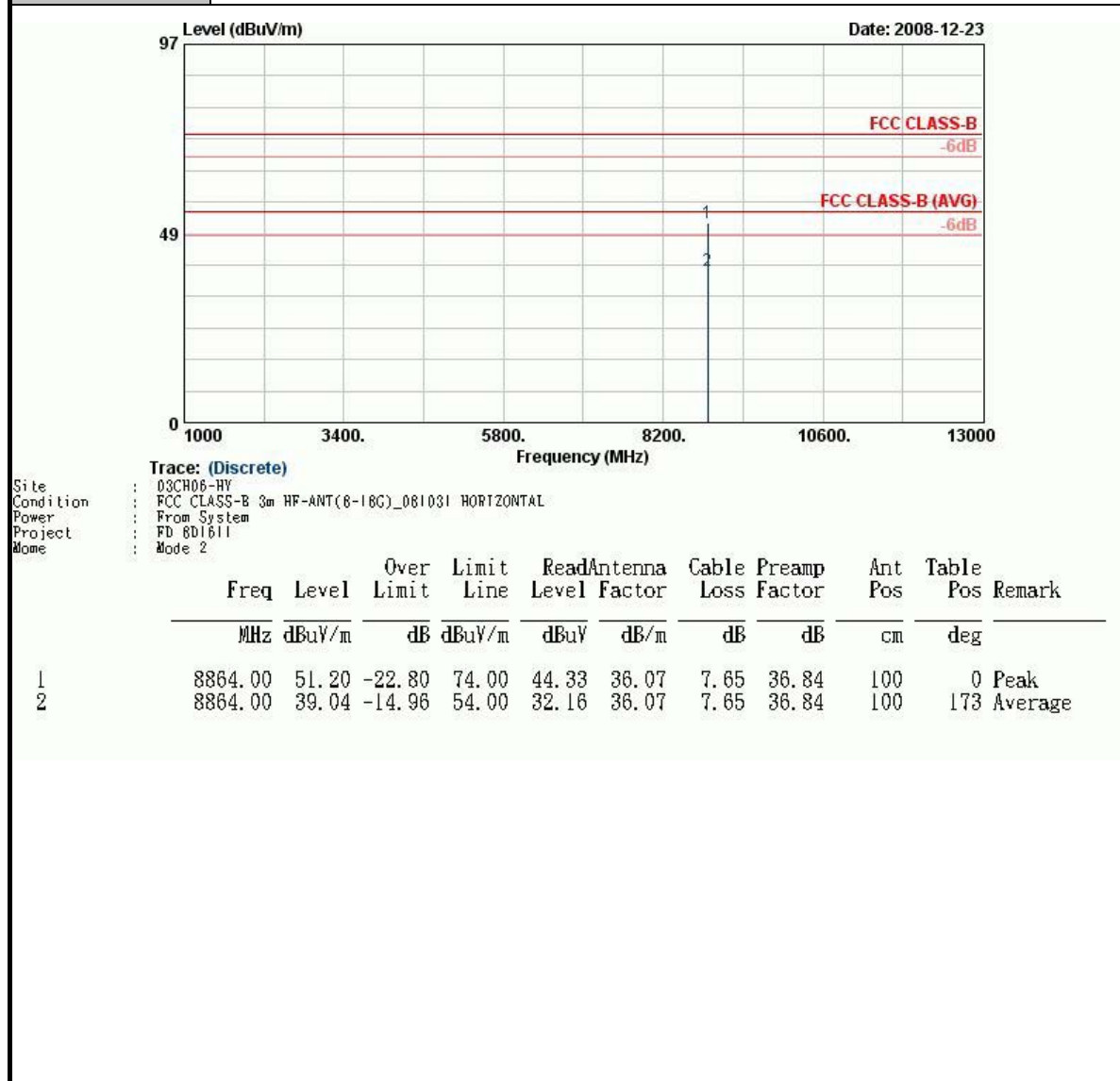
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	19.62	-20.38	40.00	31.63	19.30	0.30	31.61	---	---	Peak
2	50.79	21.46	-18.54	40.00	44.17	9.00	0.30	32.01	---	---	Peak
3	242.49	29.35	-16.65	46.00	48.20	12.29	0.70	31.84	100	139	Peak
4	322.40	28.40	-17.60	46.00	45.03	14.52	0.80	31.95	---	---	Peak
5	330.80	28.75	-17.25	46.00	45.05	14.76	0.80	31.87	---	---	Peak
6 @	880.30	32.51			41.57	21.58	1.30	31.95	---	---	Peak

Test Mode :	Mode 4	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA850 Idle + USB Cable with NB		
Remark :	#6 is Base Station Signal.		

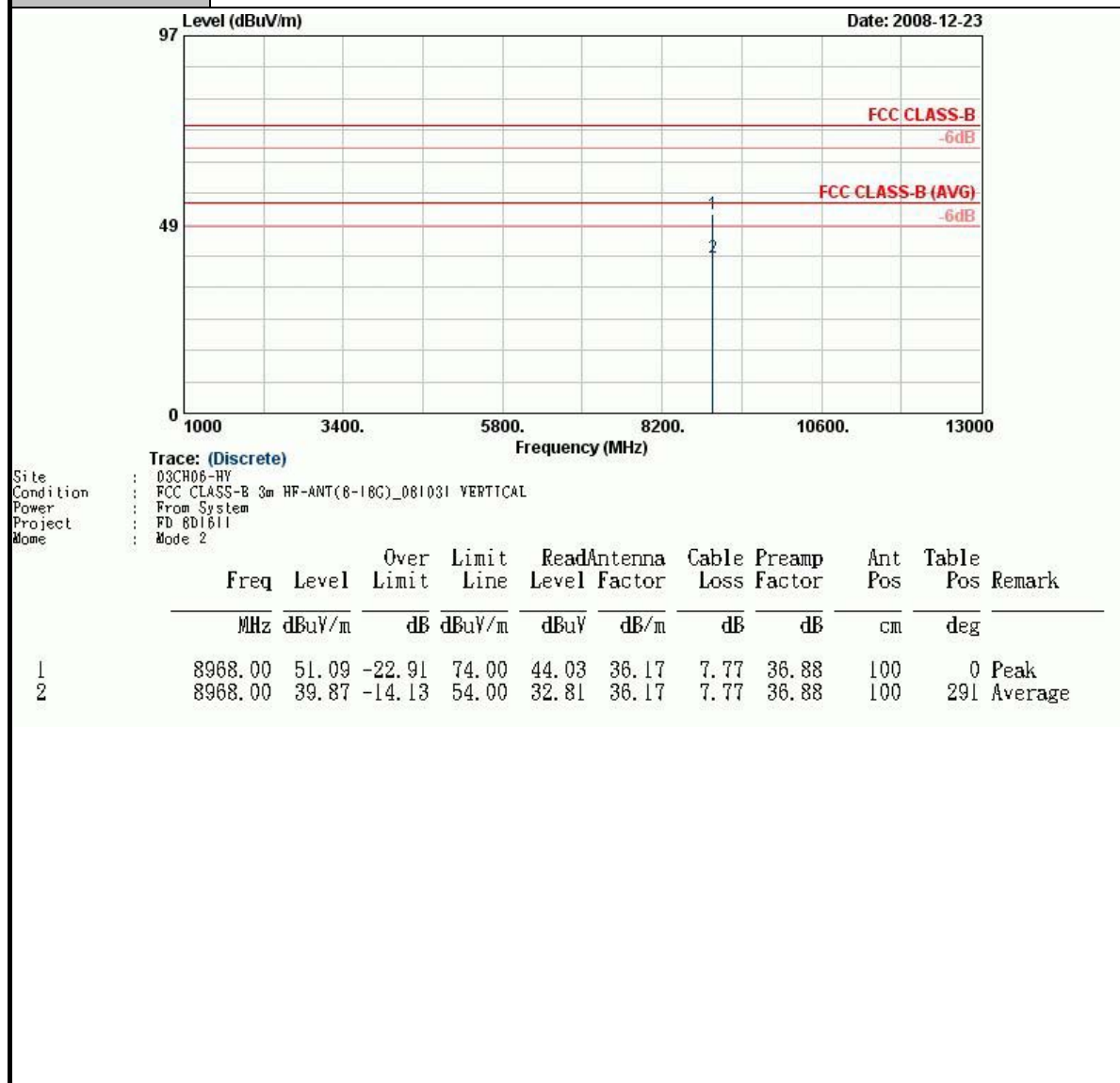


3.2.6 Test Result of Radiated Emission ≥ 1 GHz

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :			



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Sun Wang	Relative Humidity :	41~48%
Test Distance :	3m	Polarization :	Vertical
Function Type :	GPRS1900 Idle + USB Cable with NB		
Remark :			



4. List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Receiver	R&S	ESCS 30	100356	9kH~2.75GHz	Aug. 01, 2008	Jul. 31, 2009	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kH~30MHz	Nov. 26, 2008	Nov. 25, 2009	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 26, 2008	Nov. 25, 2009	Conduction (CO05-HY)
DC- LISN	R&S	ESH3-26	1000485	0.1MHz~200MHz	Feb. 04, 2008	Feb. 03, 2009	Conduction (CO05-HY)
DC- LISN	R&S	ESH3-26	1000484	0.1MHz~200MHz	Feb. 04, 2008	Feb. 03, 2009	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz~26.5GHz	Oct. 24, 2008	Oct. 23, 2009	Radiation (03CH06-HY)
Spectrum Analyzer	R&S	FSP40	100057	9kHz~40GHz	Oct. 16, 2008	Oct. 15, 2009	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz~1000MHz	Apr. 24, 2008	Apr. 23, 2009	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz~2GHz	Nov. 12, 2008	Nov. 11, 2009	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1G~18GHz	Aug. 18, 2008	Aug. 17, 2009	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Training Research	AF-0801	95119	8G~18G	Oct. 28, 2008	Oct. 27, 2009	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G~40GHz	Oct. 16, 2008	Oct. 15, 2009	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G~26.5GHz	Nov. 11, 2008	Nov. 10, 2009	Radiation (03CH06-HY)
Pre Amplifier	Agilent	310N	186713	9kHz~1GHz	Apr. 21, 2008	Apr. 20, 2009	Radiation (03CH06-HY)

5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
Combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
Combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	± 0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	± 1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	± 0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	± 2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	± 1.50	Rectangular	0.87	1	0.87
Site imperfection	± 2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 \Gamma_2)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				

6. Certification of NVLAP Accreditation

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200079-0

Sporton International, Inc. Hwa Ya EMC Laboratory
Tao Yuan Hsien 333
TAIWAN

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).*

2008-01-01 through 2008-12-31
Effective dates



Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)



Appendix A. Photographs of EUT

Please refer to Sporton report number EP8D1611 as below.