




A Test Lab Techno Corp.

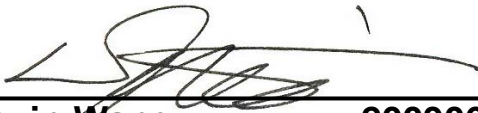
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P15B Measurement Report



Report No.	: 0905FE16-02
Applicant	: Elitegroup Computer Systems Co., LTD.
Trade Mark	: 
Product Model No.	: M320
Family Product Model No.	: M320A, M320B
Product Type	: HSDPA mini-PCle Modem Module
FCC ID	: WL6M320
Dates of Test	: May 15, 2009
Test Specification	: Part 15 Subpart B
Location of Test Lab.	: Chang-an Lab.

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.


Kevin Wang 20090618
Approve Signer


John Cheng 20090618
Testing Engineer



Declaration of Conformity


We hereby verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2003. All tests were conducted by *A Test Lab Techno Corp. No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)*. Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with Class B radiated and conducted emission limit of FCC Rules Part 15 Subpart B (15.107 & 15.109).

EUT : HSDPA mini-PCle Modem Module

Applicant : Elitegroup Computer Systems Co., LTD.
No. 239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan

Trade Mark : 

Product Model No. : M320

Family Product Model No. M320A, M320B

FCC ID : WL6M320

Approved by :


Kevin Wang 2009/06/18

Prepared by :


John Cheng 2009/06/18

A Test Lab Techno Corp.

*No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)
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1. GENERAL

1.1 Description of Equipment under Test (EUT)

Applicant :

Elitegroup Computer Systems Co., LTD.

No. 239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan

Manufacture	:	Elitegroup Computer Systems Co., LTD.
Manufacture Address	:	No. 239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan
Product Model No.	:	M320
Family Product Model No.	:	M320A, M320B
Product Type	:	HSDPA mini-PCle Modem Module
FCC ID	:	WL6M320
Hardware Version	:	M320-FTA (M320) M320A-FTA (M320A) M320B-FTA (M320B)
Software Version	:	M320-01.08.03
Frequency Range	:	824.2 - 848.8 MHz (GSM / GPRS / EGPRS 850) 1850.2 - 1909.8 MHz (PCS / GPRS / EGPRS 1900) 826.4 - 846.6 MHz (WCDMA / HSDPA Band V) 1852.4 - 1907.6 MHz (WCDMA / HSDPA Band II)
Type of Antenna	:	External Type
Antenna Gain (Max.)	:	GSM 850 1.78 dBi PCS 1900 1.92 dBi WCDMA Band V 1.78 dBi WCDMA Band II 1.92 dBi
RF Output Power (Max.) (Conducted Power)	:	GSM 850 31.40 dBm PCS 1900 28.90 dBm WCDMA Band V 23.87 dBm WCDMA Band II 23.26 dBm

During testing the EUT was operated at Tx or Rx mode for each emission measured. This was done in order to ensure that maximum emission levels were attained.



1.2 Introduction

The following measurement report is submitted on behalf of **Elitegroup Computer Systems Co., LTD.** In support of a Class B certification in accordance with Part2 Subpart J and Part 15 Subpart A and B of the Commissions and Regulations.

1.3 Family Model Application Description

Model Name	Application	Differences Description	Test comment
M320	Basic model	-----	Testing all request.
M320A	Family model	M320 combines the SIM pin and changes the model number to be M320A with FPC and SIM holder.	Testing all request.
M320B	Family model	M320 adds a connector and changes the model number.	Reference M320 result.

1.4 Summary of Tests

47 CFR Part 15 Subpart B			
Reference	Test	Results	Note
15.107	Conducted Emission Limits	N/A	
15.109	Radiated Emissions Limits	PASS	

1.5 Description of Support Equipment

Describe	Manufacturer	Model	Serial No.	FCC ID
Computer	DELL	PP20L	UF230 A03	E2KWM3945ABG
Keyboard	DELL	SK-8115	MY-0DJ325-71619-7113-1366	FCC DOC
Monitor	DELL	E177FPc	CN-0FJ179-64180-6BT-4LYS	FCC DOC
Mouse	DELL	M056U0A	F1F026E1	FCC DOC
Printer	EPSON	C60	DR3K041323	FCC DOC

1.6 Configuration of System under Test

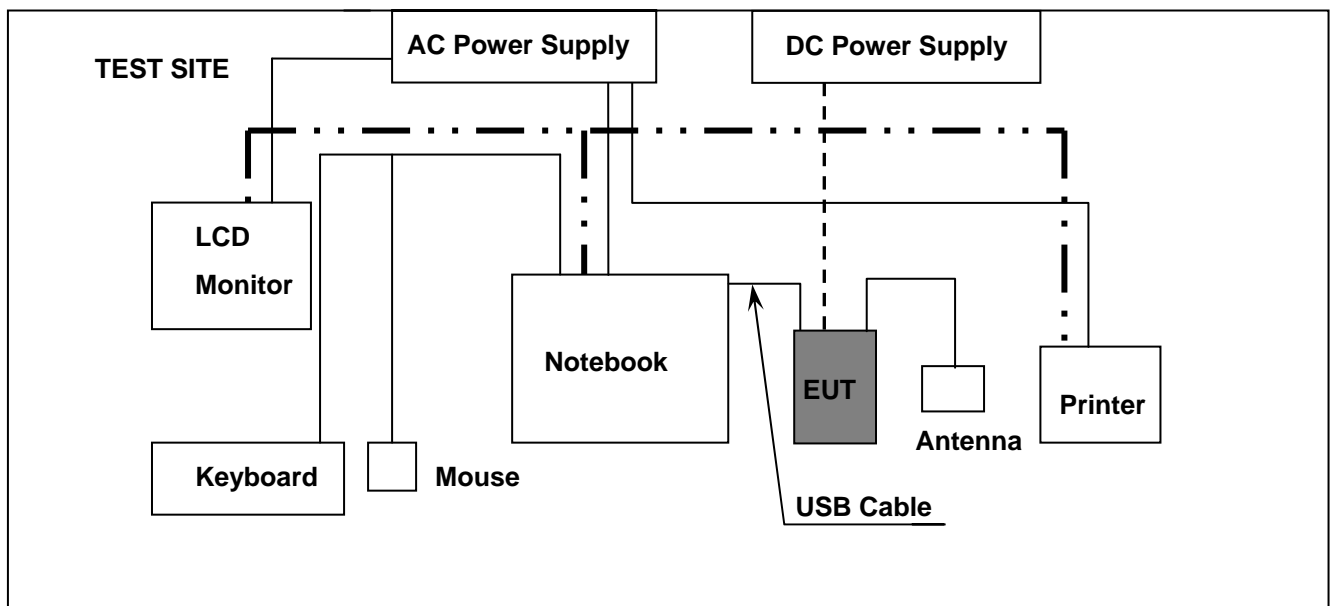


Figure 1. Configuration of System Under Test

During testing (Link Mode) the EUT's DC power part connected to the DC power supply and the EUT's antenna port connected to the antenna. The EUT's USB port connected to the Notebook, A mouse was connected to the USB port of Notebook. And a keyboard & printer were connected to the USB ports of Notebook. An external LCD monitor connected the VGA port on AE' Notebook.



1.7 Test Procedure

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4-2003 "Measurement of un-Intentional Radiators."

1.8 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated. The systems radiated and conducted emissions were investigated while the computer alternately transferred data to the EUT as well as to the monitor and printer. Using a test program which sent a continuous data and transferred data to and from the EUT was proven to worst case emissions. The system's physical layout and cabling was randomly arranged to ensure that maximum emission levels were attained.



2. Conducted Emissions Requirements

2.1 General & Setup:

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

2.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Advantest	R3132	160300103	Mar. 10, 2009	Mar. 10, 2010
Test Receiver	R&S	ESCI	100367	Jun. 05, 2008	Jun. 05, 2009
LISN	EMCO	3816/2 SH	00060110	Jun. 04, 2008	Jun. 04, 2009
LISN	EMCO	3816/2 SH	00060111	Jun. 13, 2008	Jun. 12, 2009
Transient Limiter	ELECTRO-METRICS	EM-7600	777	Jun. 26, 2007	Jun. 26, 2008

2.3 Test Configuration:

Do not need test. The EUT no have AC adapter.



2.4 Test condition:

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

2.5 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

2.6 Measurement Data of Conducted Emissions:

2.6.1 Conducted Emissions (Subpart B)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320, M320A, M320B
EUT : HSDPA mini-PCle Modem Module
Test Mode : N/A
Test Date : N/A

The HSDPA mini-PCle Modem Module is not AC power port.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.



3. Radiated Emissions Requirements

3.1 Final radiation measurements were made on a ten-meter:

Final radiation measurements were made on a ten-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to working & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (model VULB9163) at ten-meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 - 26.5 GHz at a distance of 3 or 1 meter. All test results were extrapolated to equivalent signal at ten-meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).



For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

$$(1) \text{ Amplitude (dBuV/m) = FI (dBuV) + AF (dBuV) + CL (dBuV) - Gain (dB)}$$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

$$(2) \text{ Actual Amplitude (dBuV/m) = Amplitude (dBuV) - Dis(dB)}$$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency :

Transmitter Output < +30dBm

(b) For spurious frequency :

Spurious emission limits = fundamental emission limit /10



3.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	Jun. 05, 2008	Jun. 05, 2009
Pre Amplifier	Agilent	8449B	3008A02237	Jun. 03, 2008	Jun. 03, 2009
Pre Amplifier	Agilent	8447D	2944A10961	Jun. 10, 2008	Jun. 10, 2009
Test Receiver	R&S	ESCI	100367	Jun. 05, 2008	Jun. 05, 2009
Biconilog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	Jun. 26, 2008	Jun. 26, 2009
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jun. 26, 2008	Jun. 26, 2009
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	Jun. 09, 2008	Jun. 09, 2009
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120E	0899	Jun. 26, 2008	Jun. 26, 2009



3.3 Test condition:

EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

3.4 Radiated Emissions Limits:

Frequency range (MHz)	Peak(dBuV)
30 to 230	30
230 to 1000	37

3.5 Measurement Data of Radiated Emissions:

3.5.1 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320, M320B
EUT : HSDPA mini-PCle Modem Module
Test Mode : GSM 850 _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



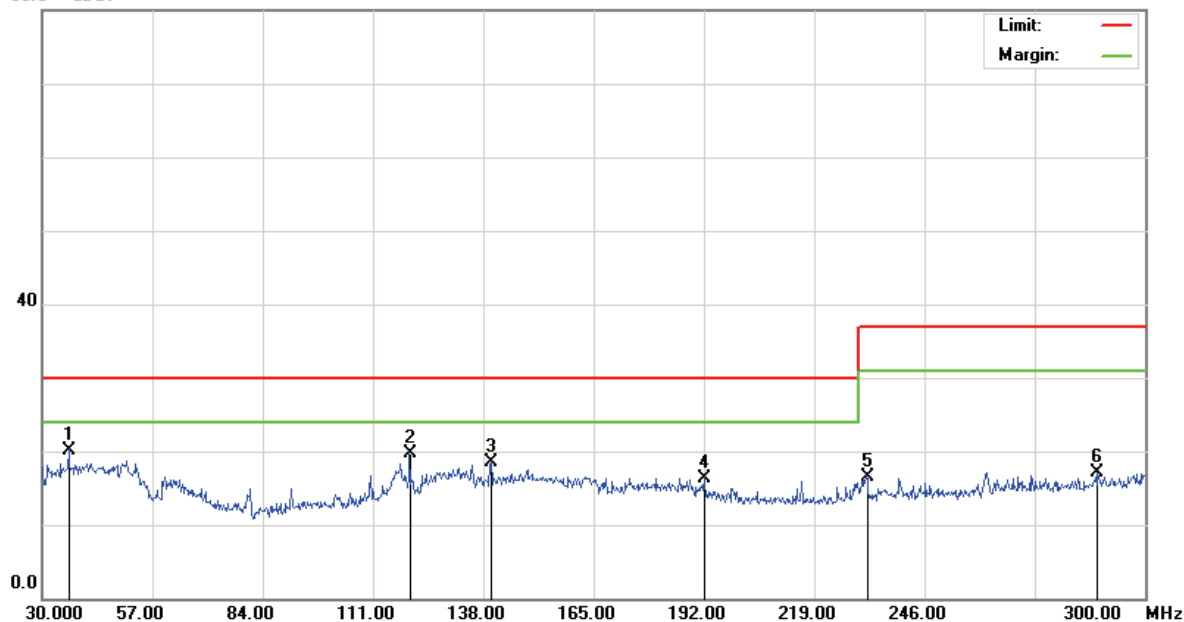
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Data :#1

Date: 2009/5/15

Time: 上午 10:32:16

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	36.6150	23.45	-3.32	20.13	30.00	-9.87	peak		
2		120.0450	30.29	-10.68	19.61	30.00	-10.39	peak		
3		139.8900	28.46	-9.92	18.54	30.00	-11.46	peak		
4		192.1350	29.17	-12.81	16.36	30.00	-13.64	peak		
5		231.8250	28.96	-12.44	16.52	37.00	-20.48	peak		
6		288.1200	27.80	-10.67	17.13	37.00	-19.87	peak		

*:Maximum data x:Over limit !:over margin

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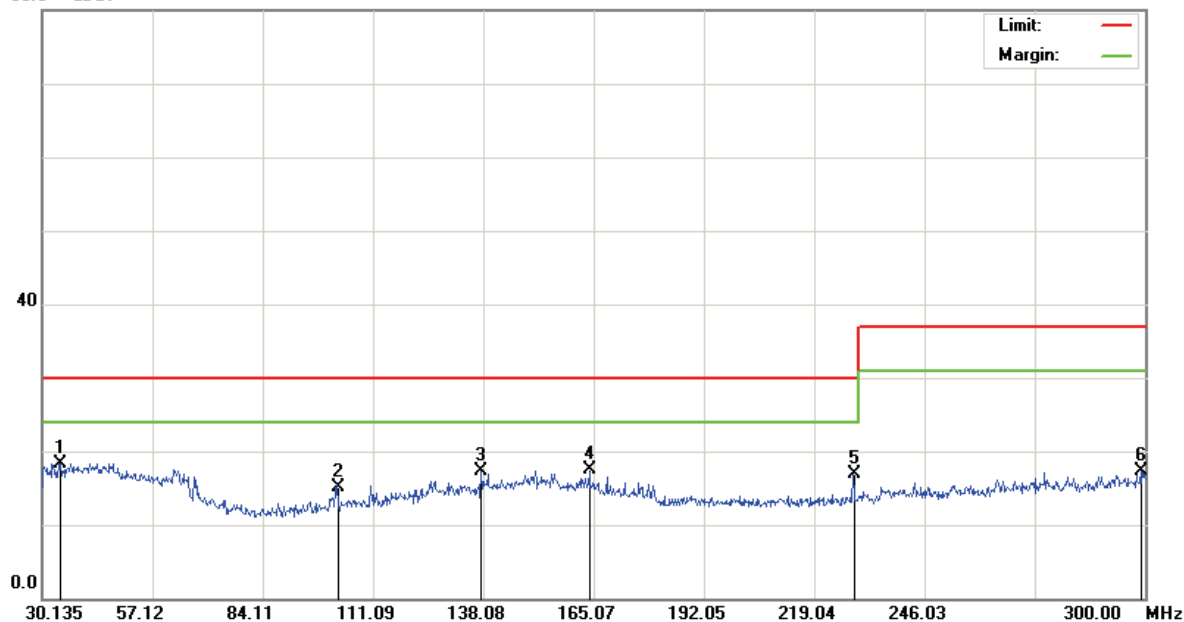
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Data :#3

Date: 2009/5/15

Time: 上午 10:41:19

80.0 dBuV



Site site#1

Polarization: *Horizontal*

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	34.3200	21.45	-3.06	18.39	30.00	-11.61	peak		
2		102.2250	27.18	-12.00	15.18	30.00	-14.82	peak		
3		137.4600	27.34	-10.03	17.31	30.00	-12.69	peak		
4		163.9200	27.69	-10.15	17.54	30.00	-12.46	peak		
5		228.5850	29.36	-12.55	16.81	30.00	-13.19	peak		
6		299.0550	27.64	-10.42	17.22	37.00	-19.78	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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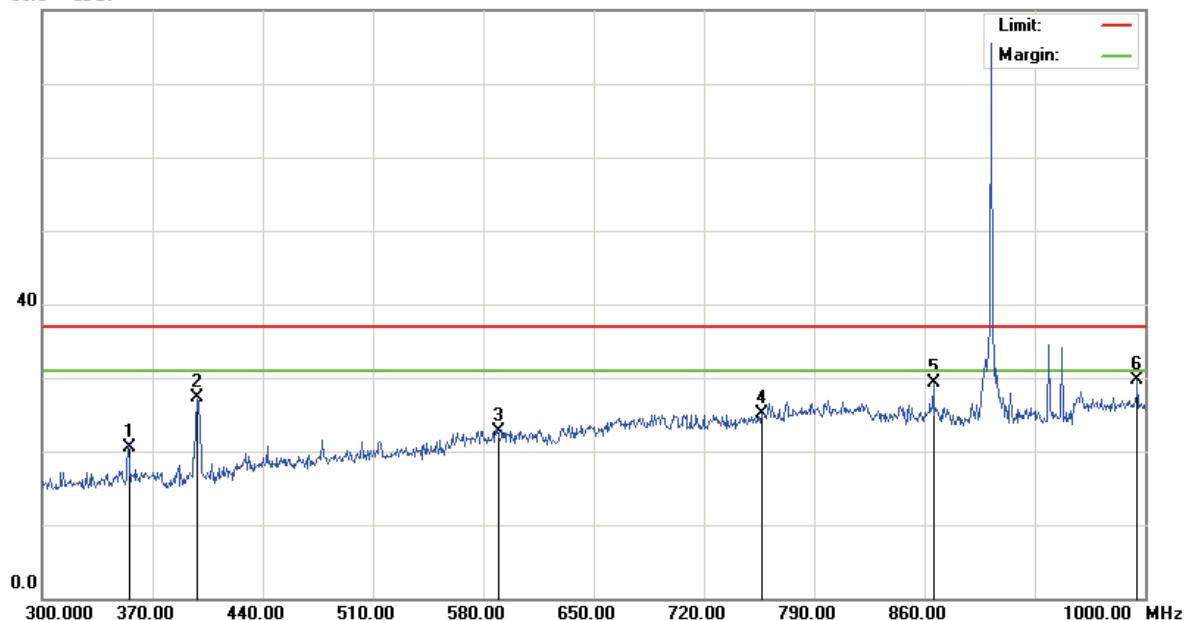
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Data :#2

Date: 2009/5/15

Time: 上午 10:37:51

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190 NO SIM

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		354.9500	30.33	-9.74	20.59	37.00	-16.41	peak		
2		398.3500	36.27	-8.93	27.34	37.00	-9.66	peak		
3		589.4500	27.70	-5.07	22.63	37.00	-14.37	peak		
4		756.7500	26.68	-1.53	25.15	37.00	-11.85	peak		
5		865.6000	29.84	-0.45	29.39	37.00	-7.61	peak		
6	*	995.1000	27.89	1.72	29.61	37.00	-7.39	peak		

*:Maximum data x:Over limit !:over margin

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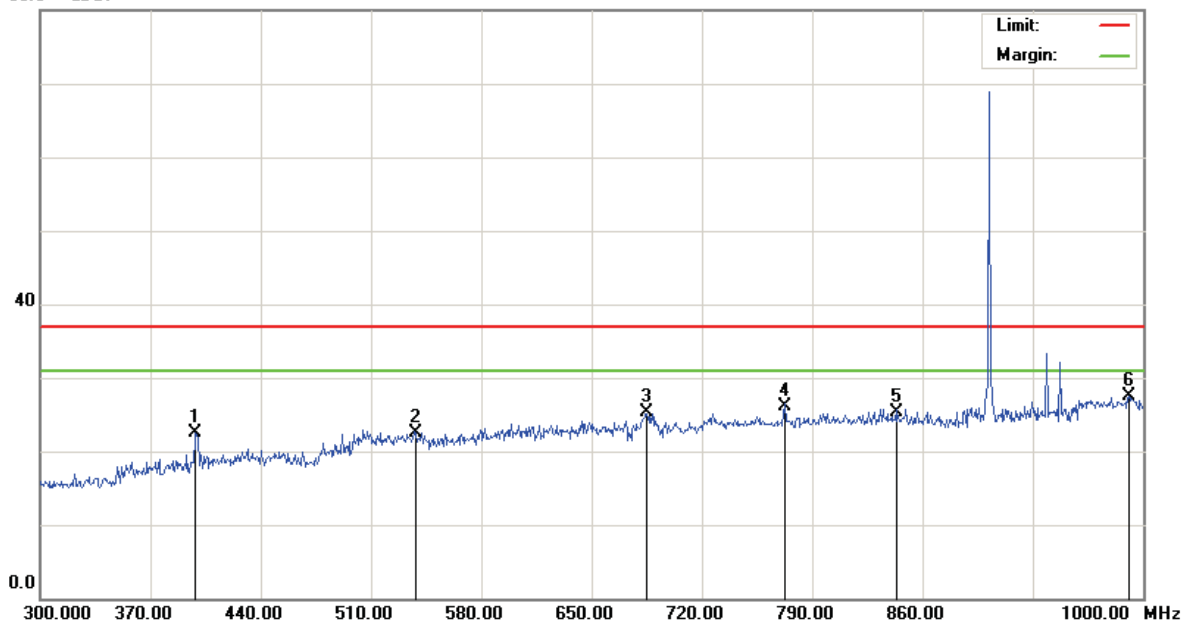
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Data :#4

Date: 2009/5/15

Time: 上午 10:45:34

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		398.7000	31.43	-8.92	22.51	37.00	-14.49	peak		
2		537.6500	29.08	-6.49	22.59	37.00	-14.41	peak		
3		685.0000	27.88	-2.56	25.32	37.00	-11.68	peak		
4		772.5000	27.75	-1.58	26.17	37.00	-10.83	peak		
5		843.5500	25.82	-0.43	25.39	37.00	-11.61	peak		
6	*	990.9000	25.73	1.69	27.42	37.00	-9.58	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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3.5.2 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320, M320B
EUT : HSDPA mini-PCle Modem Module
Test Mode : PCS 1900 _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



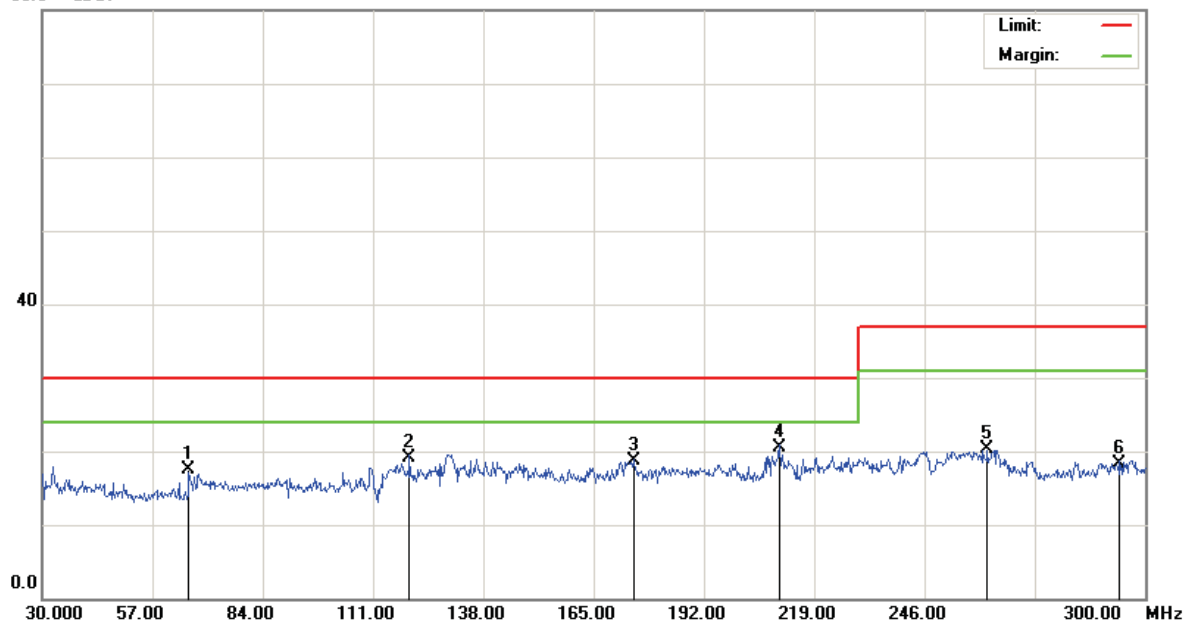
File :M320(PCS1900)

Data :#1

Date: 2009/5/15

Time: 上午 11:12:54

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		65.9100	32.08	-14.55	17.53	30.00	-12.47	peak		
2		119.9100	33.21	-14.05	19.16	30.00	-10.84	peak		
3		174.7200	30.93	-12.30	18.63	30.00	-11.37	peak		
4	*	210.3600	34.61	-14.07	20.54	30.00	-9.46	peak		
5		261.3900	31.97	-11.66	20.31	37.00	-16.69	peak		
6		293.7900	28.76	-10.50	18.26	37.00	-18.74	peak		

*:Maximum data x:Over limit !:over margin

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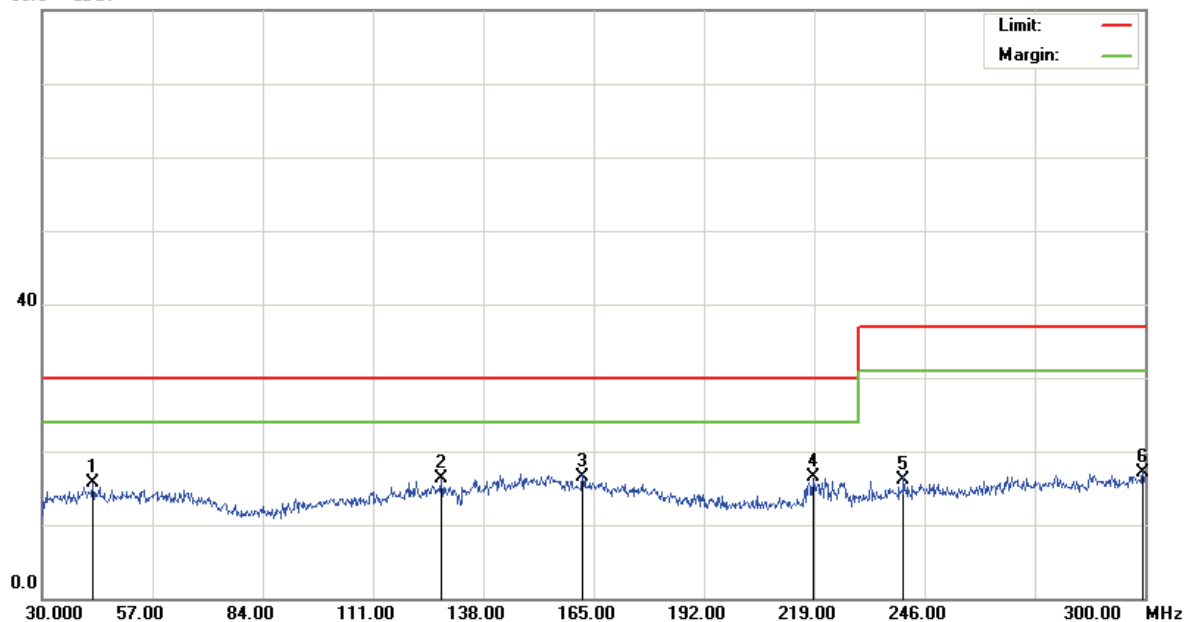
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Data :#2

Date: 2009/5/15

Time: 上午 11:16:17

80.0 dBuV



Site site#1

Polarization: *Horizontal*

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		42.4199	29.88	-14.27	15.61	30.00	-14.39	peak		
2		127.7400	29.99	-13.61	16.38	30.00	-13.62	peak		
3	*	162.3000	28.96	-12.37	16.59	30.00	-13.41	peak		
4		218.7300	31.02	-14.59	16.43	30.00	-13.57	peak		
5		240.8700	29.43	-13.25	16.18	37.00	-20.82	peak		
6		299.4600	28.51	-11.34	17.17	37.00	-19.83	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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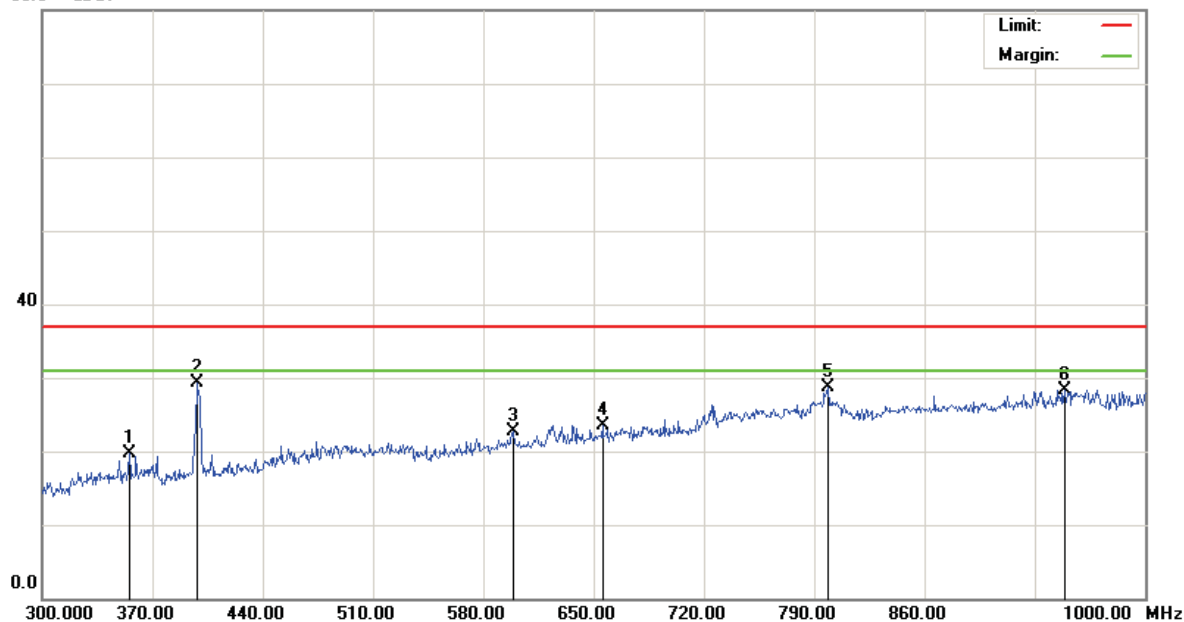
File :M320(PCS1900)

Data :#3

Date: 2009/5/15

Time: 上午 11:20:21

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661 NO SIM

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		355.3000	28.92	-9.22	19.70	37.00	-17.30	peak		
2	*	398.0000	37.60	-8.31	29.29	37.00	-7.71	peak		
3		598.9000	26.48	-3.82	22.66	37.00	-14.34	peak		
4		655.6000	26.42	-2.95	23.47	37.00	-13.53	peak		
5		798.4000	28.77	0.01	28.78	37.00	-8.22	peak		
6		948.9000	25.38	2.95	28.33	37.00	-8.67	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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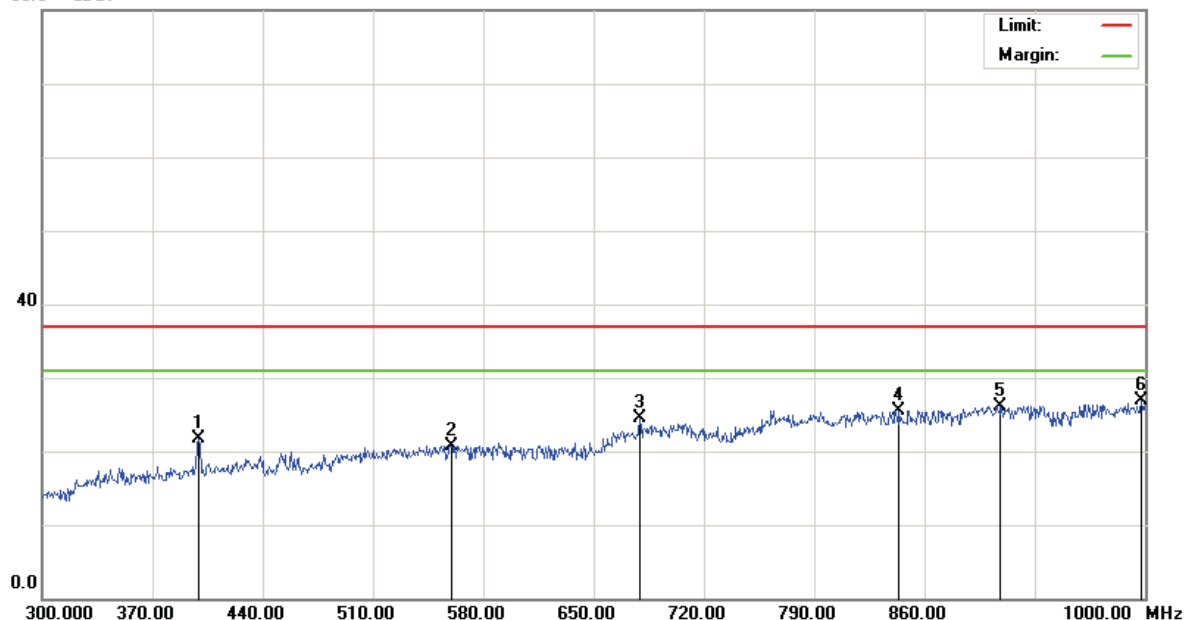
File :M320(PCS1900)

Data :#4

Date: 2009/5/15

Time: 上午 11:24:16

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661 NO SIM

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		399.4000	31.14	-9.40	21.74	37.00	-15.26	peak		
2		559.7000	27.18	-6.43	20.75	37.00	-16.25	peak		
3		679.4000	28.61	-4.14	24.47	37.00	-12.53	peak		
4		843.9000	26.47	-1.00	25.47	37.00	-11.53	peak		
5		908.3000	26.20	-0.07	26.13	37.00	-10.87	peak		
6	*	997.2000	25.68	1.14	26.82	37.00	-10.18	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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3.5.3 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320, M320B
EUT : HSDPA mini-PCle Modem Module
Test Mode : WCDMA Band V _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



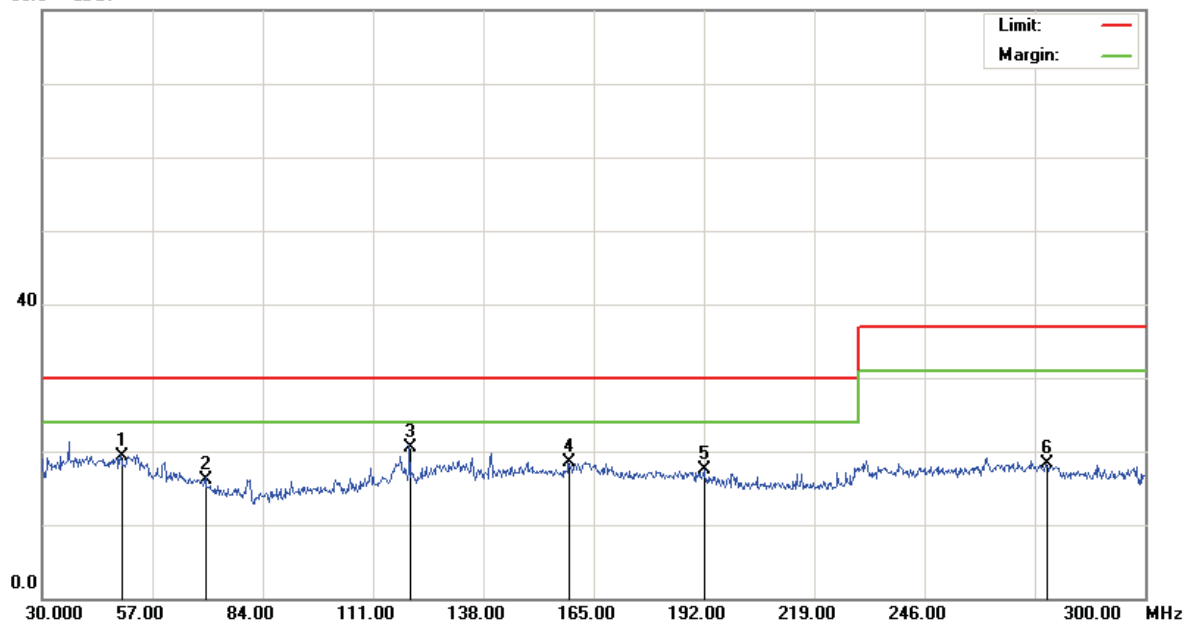
File :M320(WCDMA BAND V)

Data :#1

Date: 2009/5/15

Time: 下午 02:26:31

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND V

Note: CH 4183 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		49.3050	24.05	-4.70	19.35	30.00	-10.65	peak		
2		69.9600	25.45	-9.30	16.15	30.00	-13.85	peak		
3	*	120.0450	31.27	-10.68	20.59	30.00	-9.41	peak		
4		158.9250	28.08	-9.67	18.41	30.00	-11.59	peak		
5		192.1350	30.34	-12.81	17.53	30.00	-12.47	peak		
6		275.8350	29.26	-10.94	18.32	37.00	-18.68	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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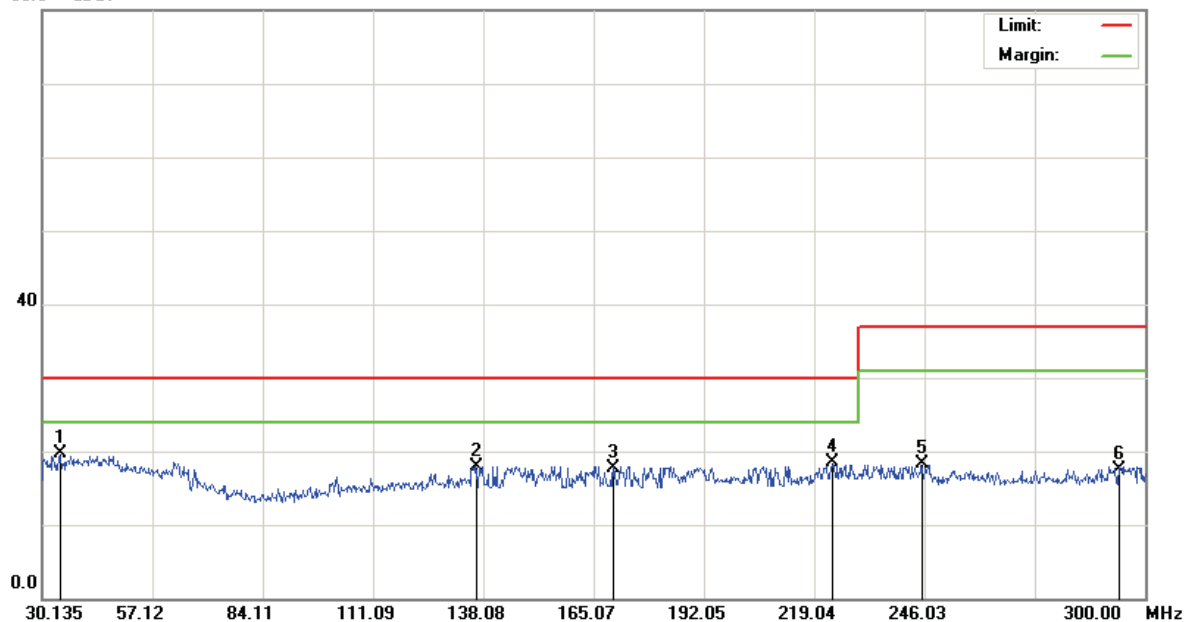
File :M320(WCDMA BAND V)

Data :#3

Date: 2009/5/15

Time: 下午 02:35:57

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND V

Note: CH 4183 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	34.3200	22.74	-3.06	19.68	30.00	-10.32	peak		
2		136.2450	27.98	-10.07	17.91	30.00	-12.09	peak		
3		169.8600	28.45	-10.82	17.63	30.00	-12.37	peak		
4		223.3200	31.26	-12.84	18.42	30.00	-11.58	peak		
5		245.3250	30.54	-12.17	18.37	37.00	-18.63	peak		
6		293.6550	28.04	-10.52	17.52	37.00	-19.48	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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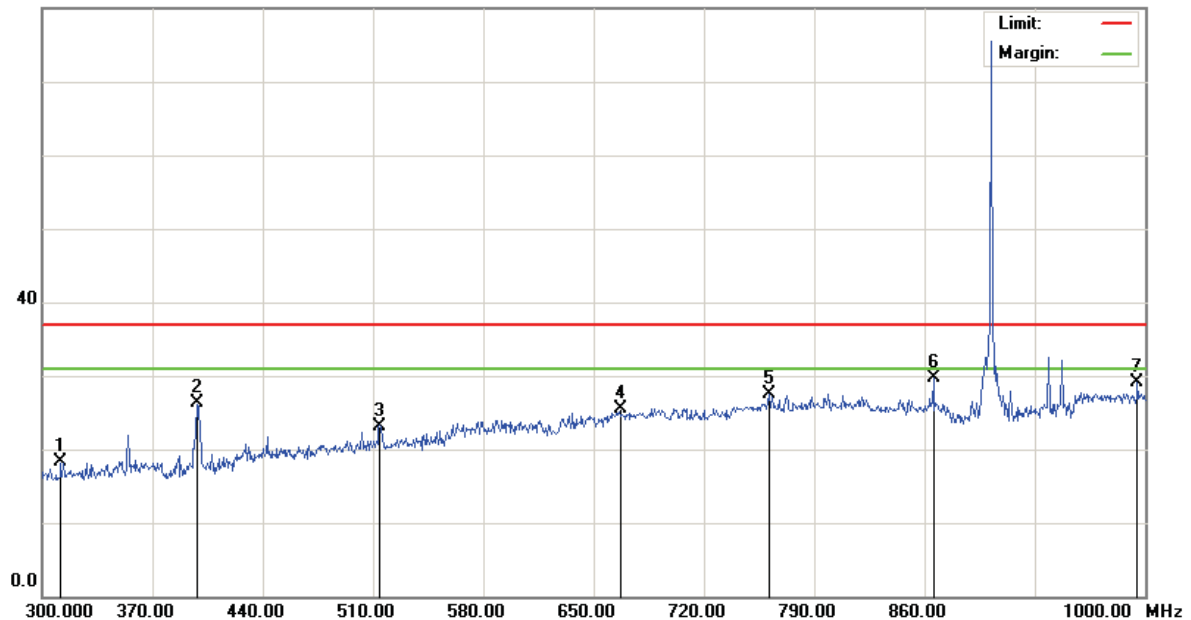
File :M320(WCDMA BAND V)

Data :#2

Date: 2009/5/15

Time: 下午 02:31:17

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND V

Note: CH 4183 NO SIM

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.9000	28.55	-10.29	18.26	37.00	-18.74	peak		
2		398.3500	35.30	-8.93	26.37	37.00	-10.63	peak		
3		514.2000	30.10	-6.94	23.16	37.00	-13.84	peak		
4		666.4500	29.75	-4.16	25.59	37.00	-11.41	peak		
5		761.3000	29.00	-1.59	27.41	37.00	-9.59	peak		
6	*	865.6000	30.07	-0.45	29.62	37.00	-7.38	peak		
7		995.1000	27.46	1.72	29.18	37.00	-7.82	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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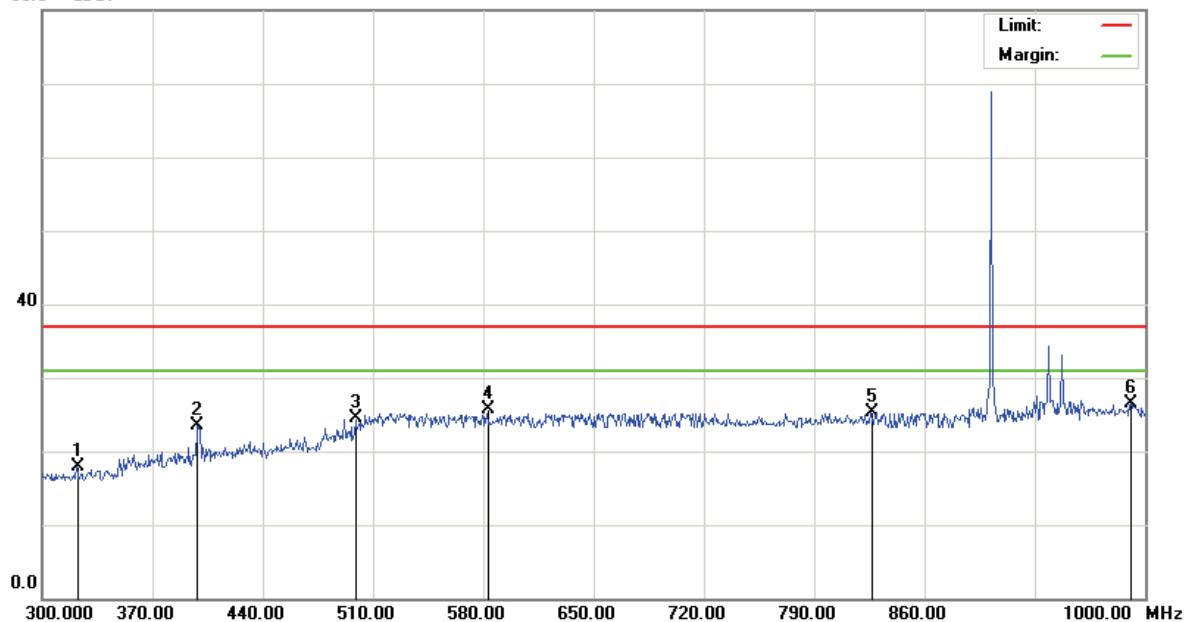
File :M320(WCDMA BAND V)

Data :#4

Date: 2009/5/15

Time: 下午 02:39:41

80.0 dBuV



Site site#1

Polarization: *Horizontal*

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND V

Note: CH 4183 NO SIM

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		322.0500	28.12	-10.21	17.91	37.00	-19.09	peak		
2		398.7000	32.34	-8.92	23.42	37.00	-13.58	peak		
3		499.1500	31.77	-7.20	24.57	37.00	-12.43	peak		
4		582.4500	30.99	-5.38	25.61	37.00	-11.39	peak		
5		826.0500	25.94	-0.71	25.23	37.00	-11.77	peak		
6	*	990.9000	24.80	1.69	26.49	37.00	-10.51	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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3.5.4 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320, M320B
EUT : HSDPA mini-PCle Modem Module
Test Mode : WCDMA Band II _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



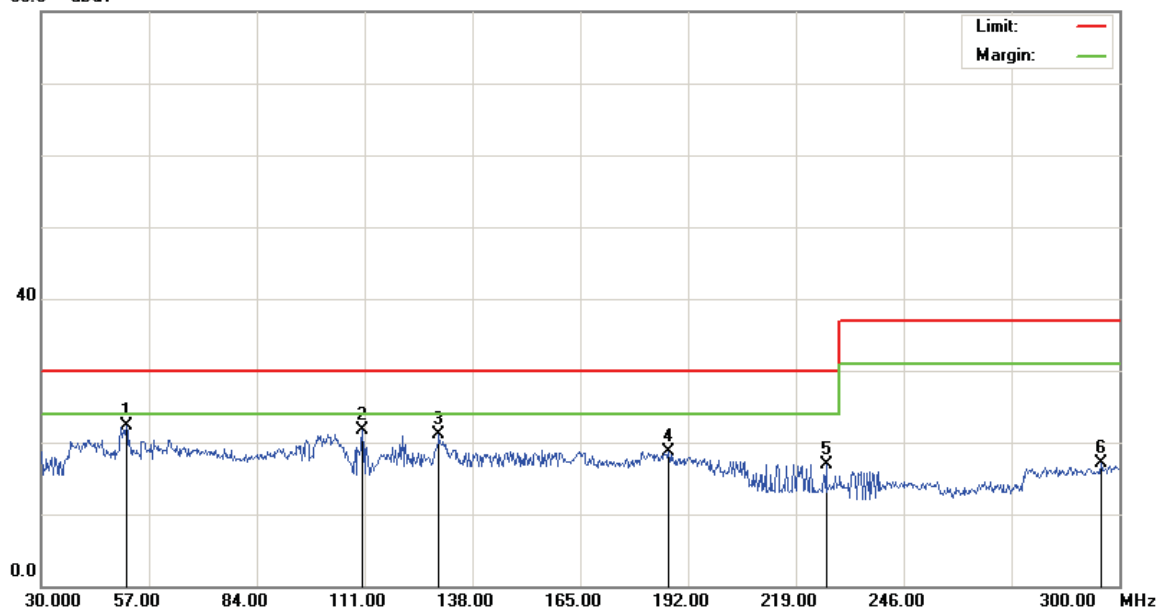
File :M320(WCAMA BAND II)(NO S

Data :#1

Date: 2009/5/15

Time: 上午 11:21:41

80.0 dBuV



Site site#1

Limit: CISPR22 ClassB 10m Radiation

EUT:

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

Polarization: *Vertical*

Power:

Distance: 10m

Temperature: 26 °C

Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	51.3300	36.64	-14.25	22.39	30.00	-7.61	peak		
2		110.4600	36.60	-14.97	21.63	30.00	-8.37	peak		
3		129.6300	34.30	-13.19	21.11	30.00	-8.89	peak		
4		187.1400	32.39	-13.63	18.76	30.00	-11.24	peak		
5		226.5600	30.23	-13.29	16.94	30.00	-13.06	peak		
6		295.4100	27.58	-10.45	17.13	37.00	-19.87	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

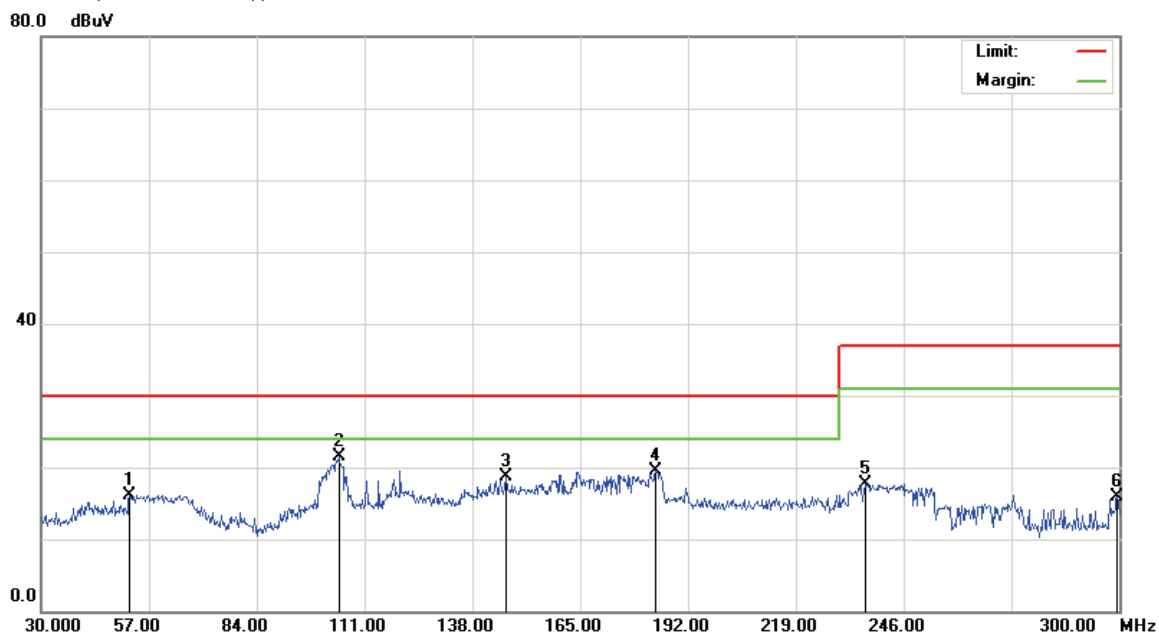


File :M320(WCAMA BAND II)(NO S

Data :#2

Date: 2009/5/15

Time: 上午 11:29:12



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		52.1400	30.57	-14.41	16.16	30.00	-13.84	peak		
2	*	104.5200	37.29	-15.86	21.43	30.00	-8.57	peak		
3		146.3700	31.20	-12.45	18.75	30.00	-11.25	peak		
4		183.9000	33.67	-14.14	19.53	30.00	-10.47	peak		
5		236.5500	31.18	-13.51	17.67	37.00	-19.33	peak		
6		299.4600	27.19	-11.34	15.85	37.00	-21.15	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



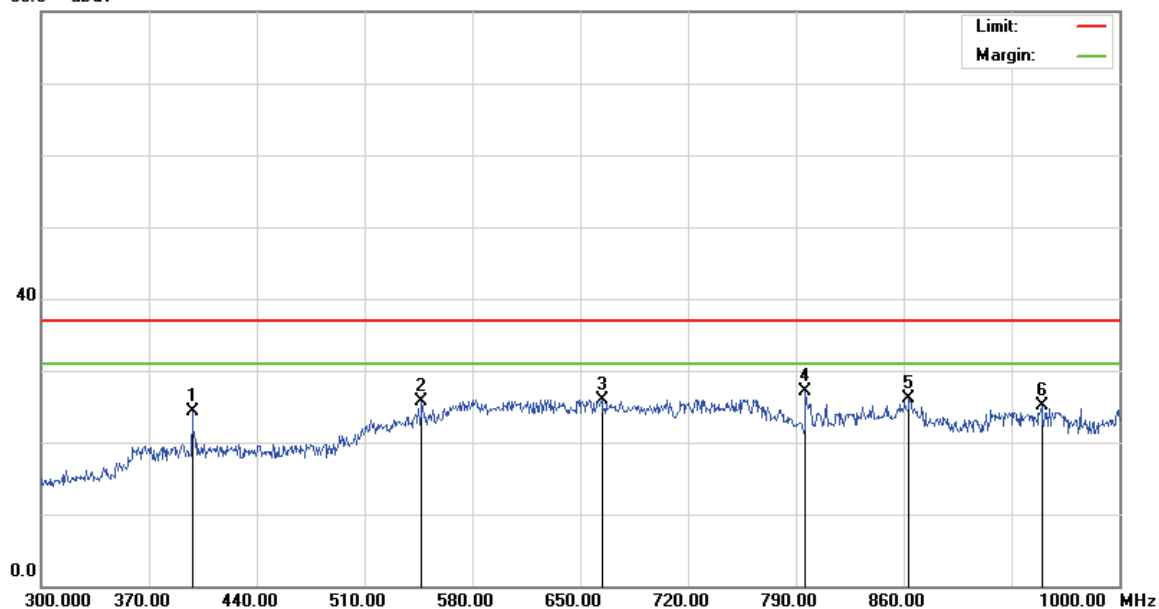
File :M320(WCAMA BAND II)(NO S

Data :#3

Date: 2009/5/15

Time: 上午 11:36:48

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		398.0000	32.69	-8.31	24.38	37.00	-12.62	peak		
2		547.1000	31.11	-5.43	25.68	37.00	-11.32	peak		
3		664.0000	28.84	-2.88	25.96	37.00	-11.04	peak		
4	*	796.3000	27.05	0.00	27.05	37.00	-9.95	peak		
5		863.5000	25.11	0.93	26.04	37.00	-10.96	peak		
6		949.6000	22.14	2.98	25.12	37.00	-11.88	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

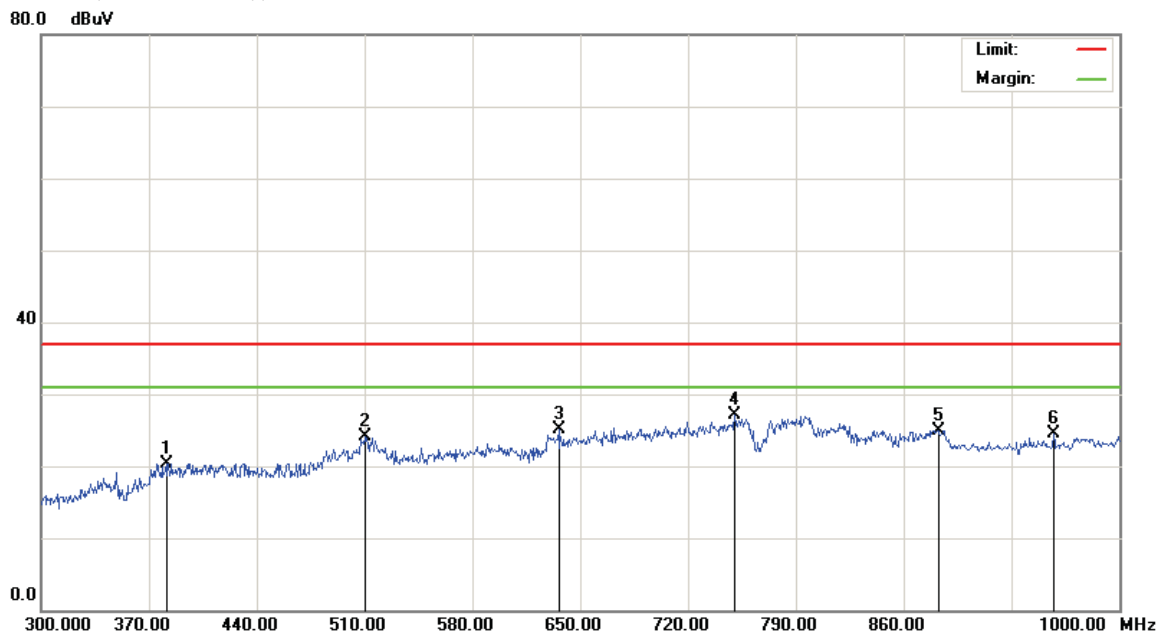


File :M320(WCAMA BAND II)(NO S

Data :#4

Date: 2009/5/15

Time: 上午 11:48:51



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		381.2000	30.01	-9.65	20.36	37.00	-16.64	peak		
2		510.0000	31.62	-7.44	24.18	37.00	-12.82	peak		
3		636.0000	30.10	-5.02	25.08	37.00	-11.92	peak		
4	*	750.1000	29.41	-2.35	27.06	37.00	-9.94	peak		
5		882.4000	25.66	-0.68	24.98	37.00	-12.02	peak		
6		957.3000	23.53	0.98	24.51	37.00	-12.49	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.5.5 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.

Model No : M320A

EUT : HSDPA mini-PCle Modem Module

Test Mode : GSM 850 _ Link Mode

Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



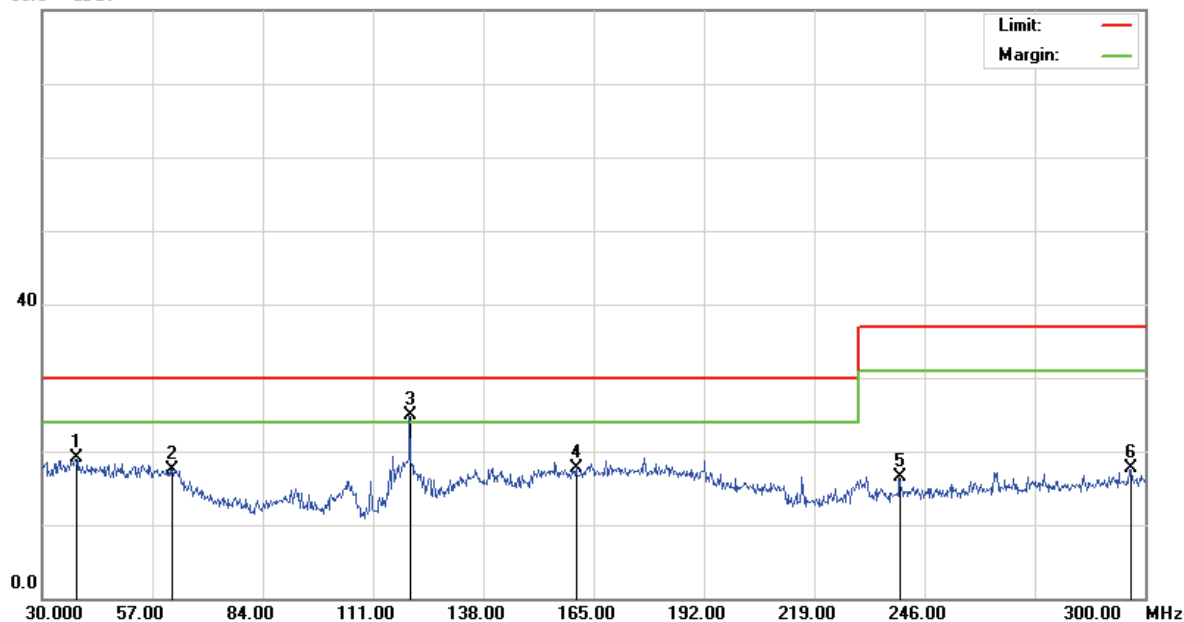
File :M320(GSM850)

Data :#1

Date: 2009/5/15

Time: 上午 09:39:57

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		38.2350	22.58	-3.47	19.11	30.00	-10.89	peak		
2		61.8600	24.31	-6.78	17.53	30.00	-12.47	peak		
3	*	120.0450	35.67	-10.68	24.99	30.00	-5.01	peak		
4		160.8150	27.62	-9.83	17.79	30.00	-12.21	peak		
5		239.9250	28.63	-12.17	16.46	37.00	-20.54	peak		
6		296.3550	28.09	-10.48	17.61	37.00	-19.39	peak		

*:Maximum data x:Over limit !:over margin

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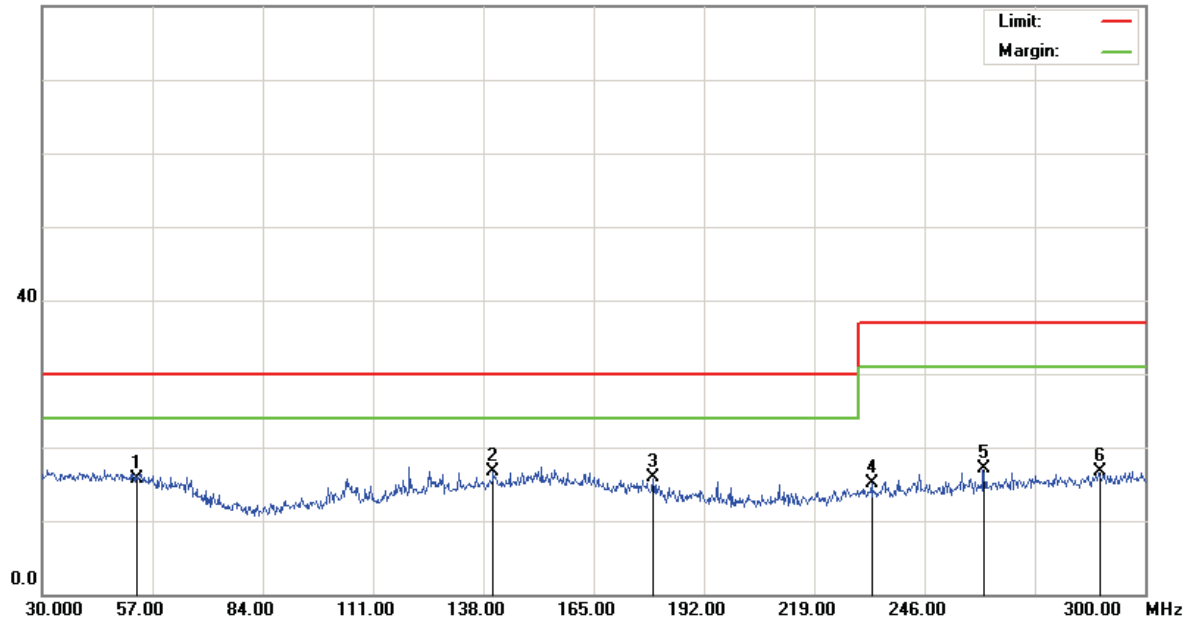
File :M320(GSM850)

Data :#3

Date: 2009/5/15

Time: 上午 09:47:52

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		53.0850	21.17	-5.48	15.69	30.00	-14.31	peak		
2	*	140.4299	26.63	-9.89	16.74	30.00	-13.26	peak		
3		179.5800	27.51	-11.59	15.92	30.00	-14.08	peak		
4		233.0400	27.58	-12.42	15.16	37.00	-21.84	peak		
5		260.4450	28.67	-11.63	17.04	37.00	-19.96	peak		
6		288.7950	27.33	-10.63	16.70	37.00	-20.30	peak		

*:Maximum data x:Over limit !:over margin

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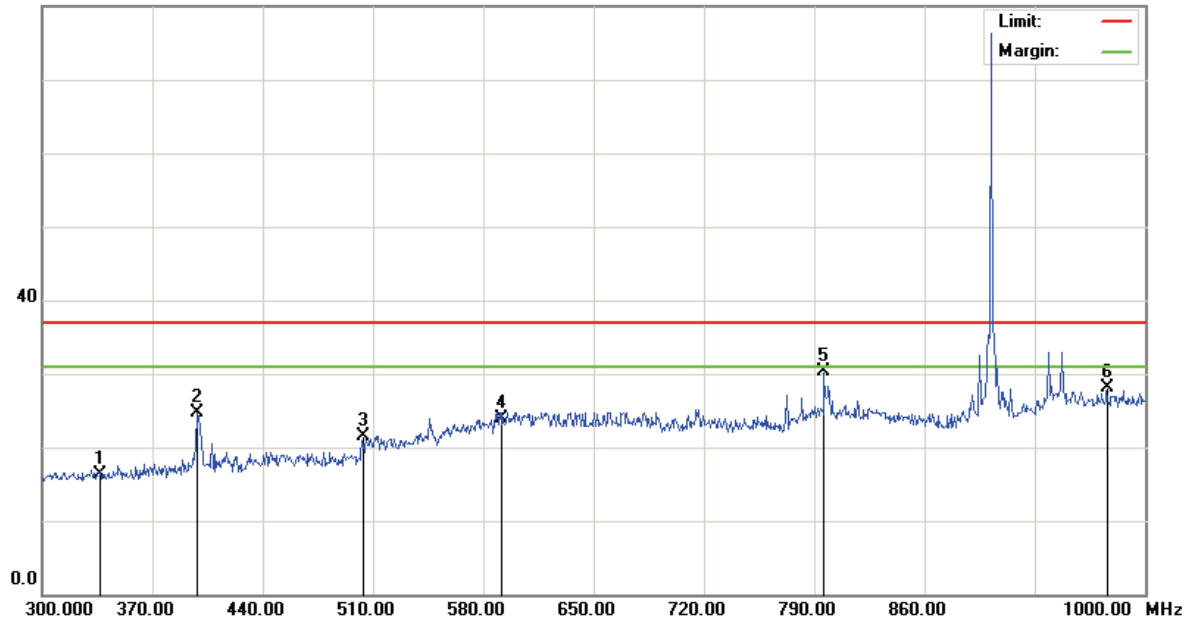
File :M320(GSM850)

Data :#2

Date: 2009/5/15

Time: 上午 09:43:13

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		337.1000	26.16	-9.79	16.37	37.00	-20.63	peak		
2		398.3500	33.57	-8.93	24.64	37.00	-12.36	peak		
3		503.3500	28.62	-7.11	21.51	37.00	-15.49	peak		
4		591.9000	28.96	-5.03	23.93	37.00	-13.07	peak		
5	*	796.3000	31.53	-1.20	30.33	37.00	-6.67	peak		
6		975.8500	26.64	1.53	28.17	37.00	-8.83	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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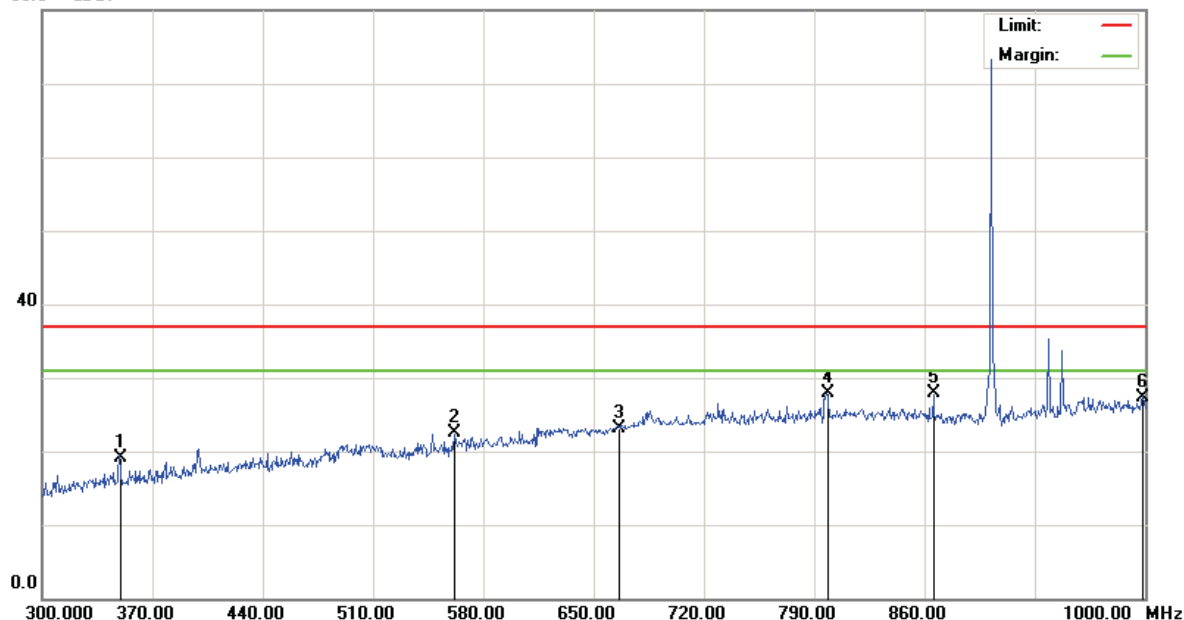
File :M320(GSM850)

Data :#4

Date: 2009/5/15

Time: 上午 09:51:15

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: GSM850

Note: CH 190

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		349.3500	28.61	-9.54	19.07	37.00	-17.93	peak		
2		561.8000	28.37	-5.89	22.48	37.00	-14.52	peak		
3		665.7500	27.41	-4.24	23.17	37.00	-13.83	peak		
4	*	798.0500	29.19	-1.20	27.99	37.00	-9.01	peak		
5		865.9500	28.36	-0.44	27.92	37.00	-9.08	peak		
6		998.6000	25.47	1.81	27.28	37.00	-9.72	peak		

*:Maximum data x:Over limit !:over margin

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3.5.6 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320A
EUT : HSDPA mini-PCle Modem Module
Test Mode : PCS 1900 _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



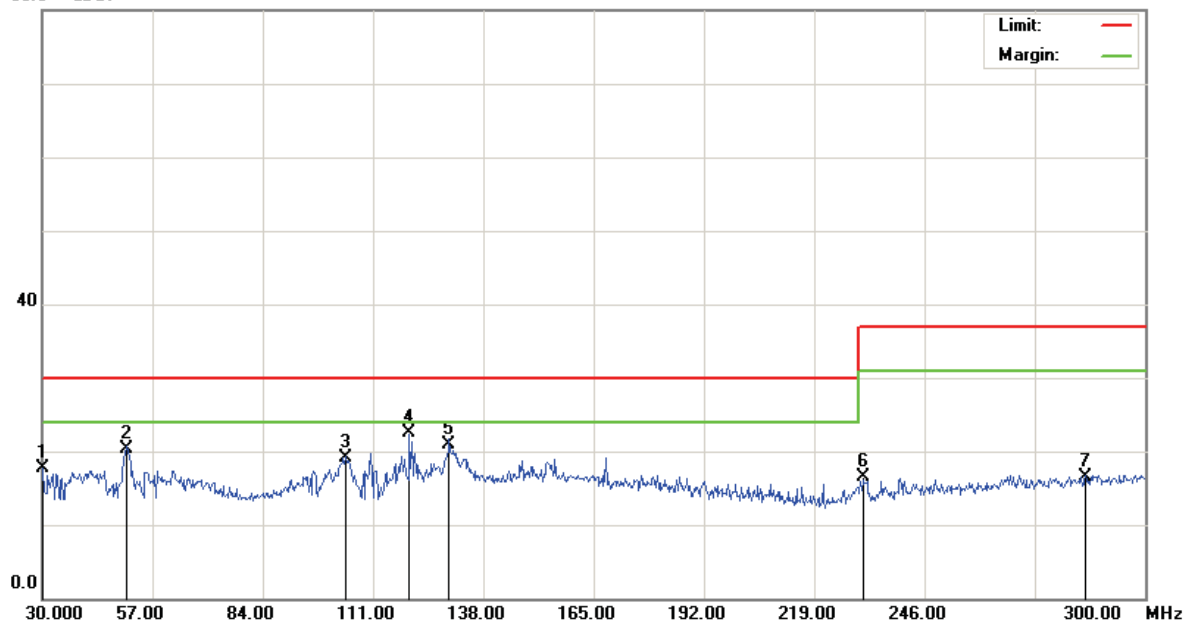
File :M320(DCS1900)

Data :#1

Date: 2009/5/15

Time: 上午 09:51:15

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		30.2700	32.60	-14.84	17.76	30.00	-12.24	peak		
2		50.7900	34.53	-14.23	20.30	30.00	-9.70	peak		
3		104.2500	34.71	-15.61	19.10	30.00	-10.90	peak		
4	*	119.9100	36.56	-14.05	22.51	30.00	-7.49	peak		
5		129.6300	34.13	-13.19	20.94	30.00	-9.06	peak		
6		230.8800	29.53	-12.98	16.55	37.00	-20.45	peak		
7		285.4200	27.26	-10.67	16.59	37.00	-20.41	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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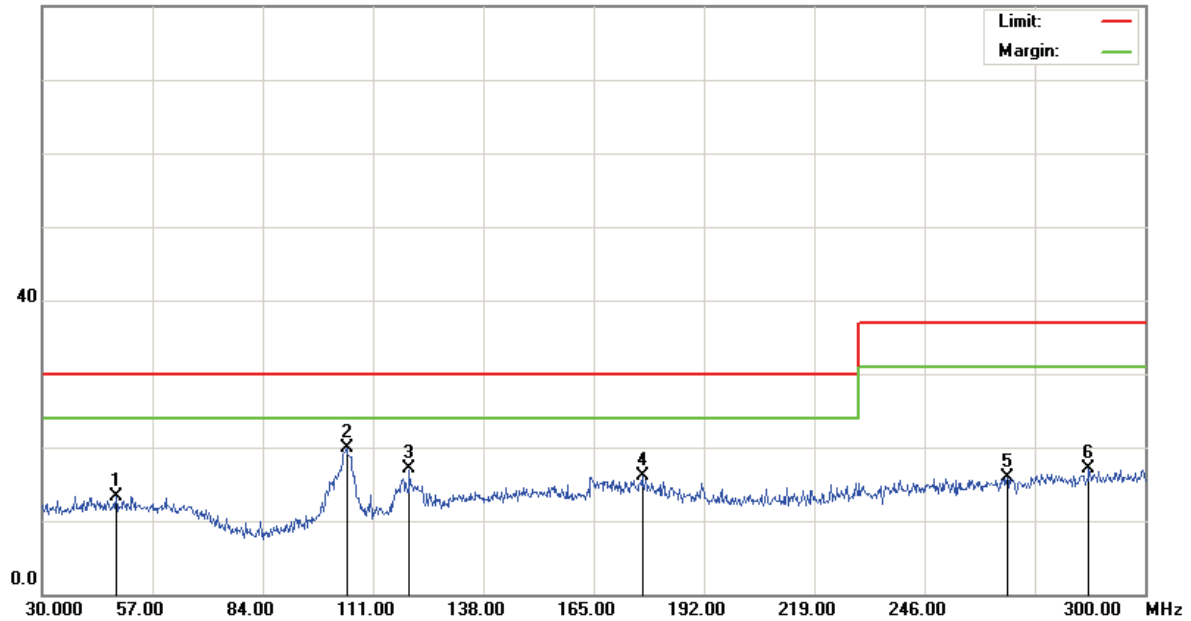
File :M320(DCS1900)

Data :#2

Date: 2009/5/15

Time: 上午 10:07:42

80.0 dBuV



Site site#1

Polarization: *Horizontal*

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		48.0900	27.51	-14.24	13.27	30.00	-16.73	peak		
2	*	104.5199	35.73	-15.86	19.87	30.00	-10.13	peak		
3		119.9100	31.45	-14.42	17.03	30.00	-12.97	peak		
4		176.8800	29.27	-13.21	16.06	30.00	-13.94	peak		
5		266.2500	28.13	-12.19	15.94	37.00	-21.06	peak		
6		286.2300	28.82	-11.71	17.11	37.00	-19.89	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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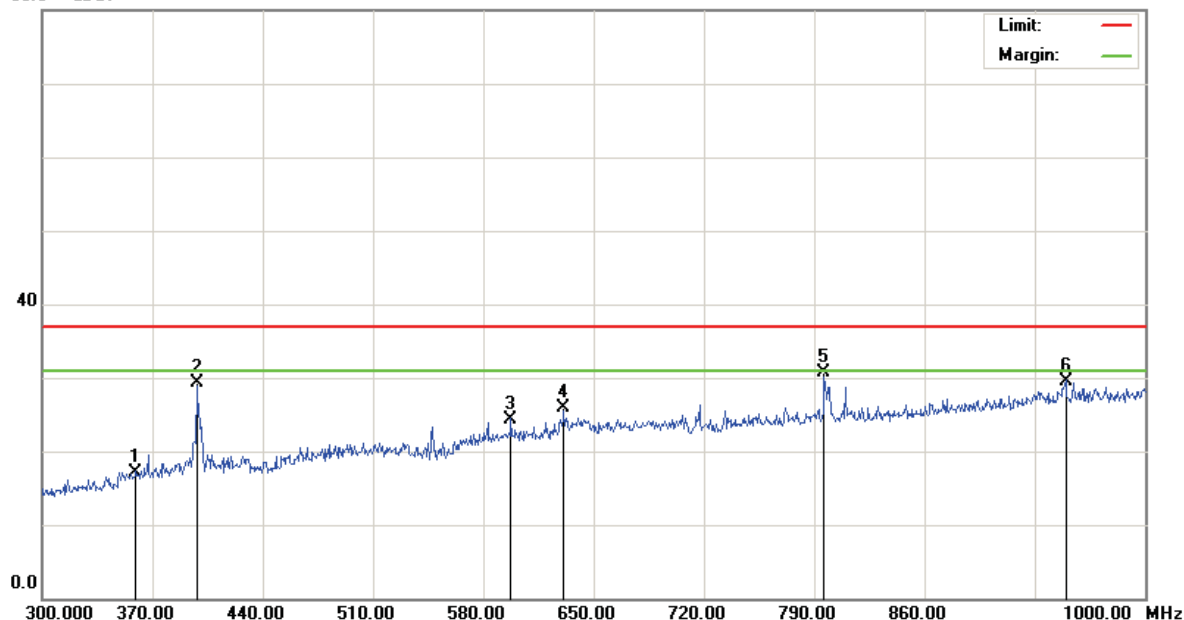
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Data :#3

Date: 2009/5/15

Time: 上午 10:12:25

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		359.5000	26.21	-9.04	17.17	37.00	-19.83	peak		
2		398.0000	37.53	-8.31	29.22	37.00	-7.78	peak		
3		597.5000	28.18	-3.90	24.28	37.00	-12.72	peak		
4		631.1000	29.35	-3.45	25.90	37.00	-11.10	peak		
5	*	796.3000	30.62	0.00	30.62	37.00	-6.38	peak		
6		949.6000	26.61	2.98	29.59	37.00	-7.41	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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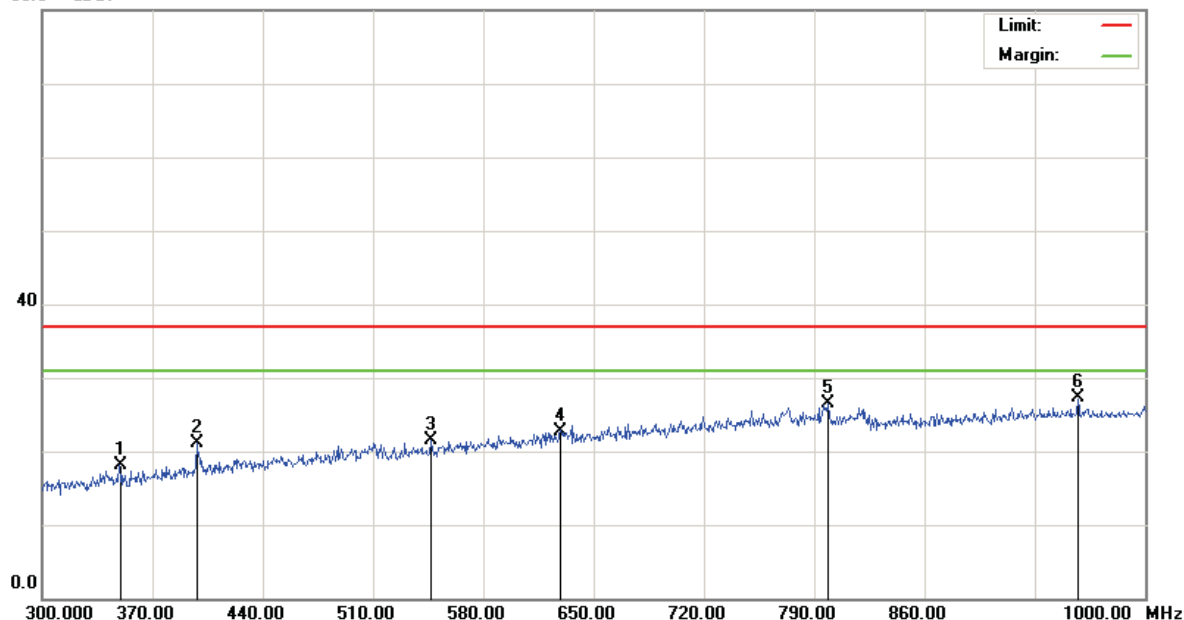
File :M320(DCS1900)

Data :#4

Date: 2009/5/15

Time: 上午 10:16:31

80.0 dBuV



Site site#1

Polarization: *Horizontal*

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: PCS1900

Note: CH 661

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		349.3500	28.26	-10.14	18.12	37.00	-18.88	peak		
2		398.3500	30.57	-9.43	21.14	37.00	-15.86	peak		
3		546.4000	28.32	-6.86	21.46	37.00	-15.54	peak		
4		629.0000	27.51	-4.88	22.63	37.00	-14.37	peak		
5		799.1000	28.38	-1.81	26.57	37.00	-10.43	peak		
6	*	957.3000	26.42	0.98	27.40	37.00	-9.60	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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3.5.7 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.

Model No : M320A

EUT : HSDPA mini-PCle Modem Module

Test Mode : WCDMA Band V _ Link Mode

Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)



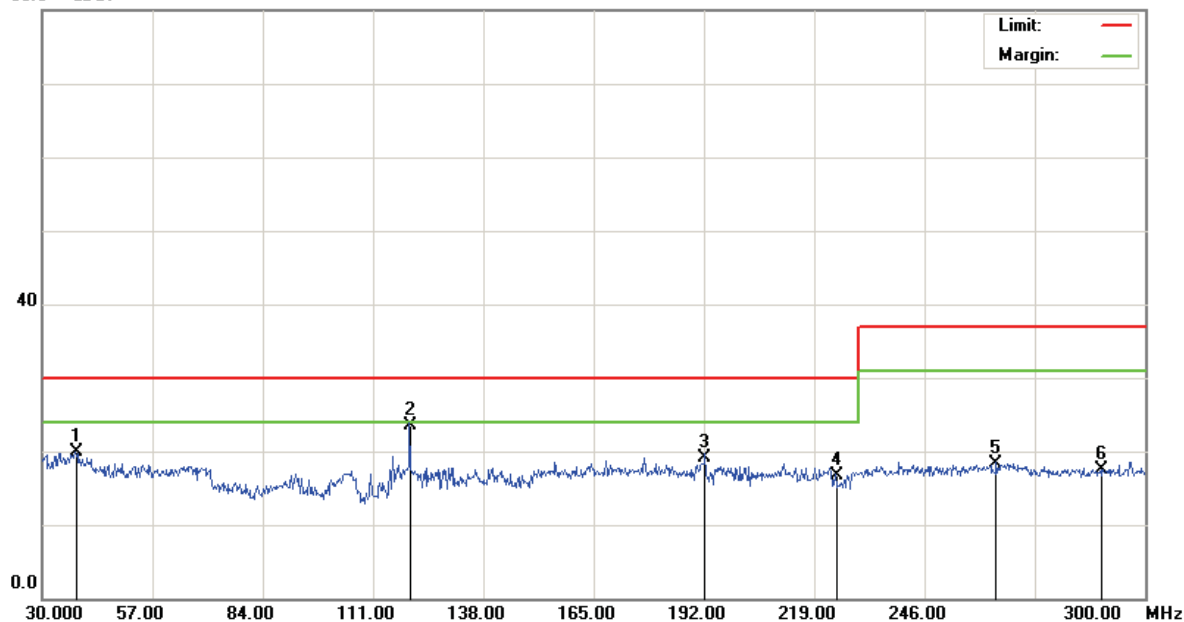
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Data :#1

Date: 2009/5/15

Time: 下午 02:07:13

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BandV

Note: CH4183

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		38.2350	23.41	-3.47	19.94	30.00	-10.06	peak		
2	*	120.0450	34.26	-10.68	23.58	30.00	-6.42	peak		
3		192.2700	31.98	-12.82	19.16	30.00	-10.84	peak		
4		224.2650	29.40	-12.77	16.63	30.00	-13.37	peak		
5		263.5500	29.68	-11.37	18.31	37.00	-18.69	peak		
6		289.4700	28.14	-10.62	17.52	37.00	-19.48	peak		

*:Maximum data x:Over limit !:over margin

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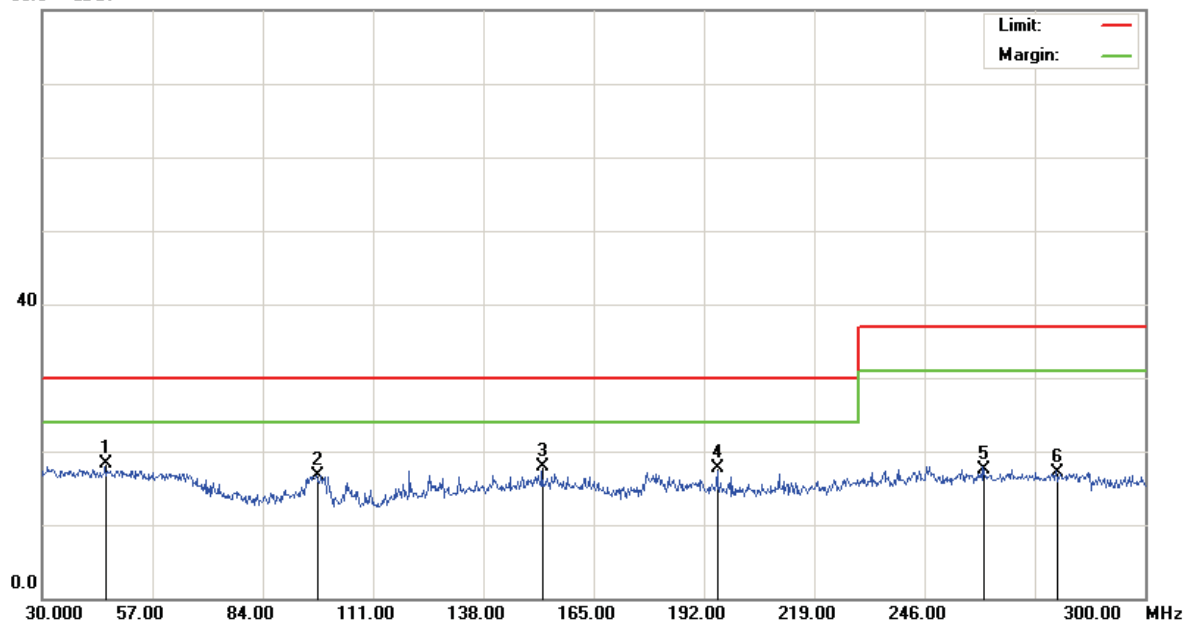
File :M320(WCDMA BandV)

Data :#3

Date: 2009/5/15

Time: 下午 02:15:03

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BandV

Note: CH4183

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	45.5250	22.55	-4.19	18.36	30.00	-11.64	peak		
2		97.3650	29.02	-12.28	16.74	30.00	-13.26	peak		
3		152.4450	27.32	-9.46	17.86	30.00	-12.14	peak		
4		195.3750	30.56	-12.95	17.61	30.00	-12.39	peak		
5		260.4450	29.17	-11.63	17.54	37.00	-19.46	peak		
6		278.2650	28.10	-10.93	17.17	37.00	-19.83	peak		

*:Maximum data x:Over limit !:over margin

Test Report No : 0905FE16-02

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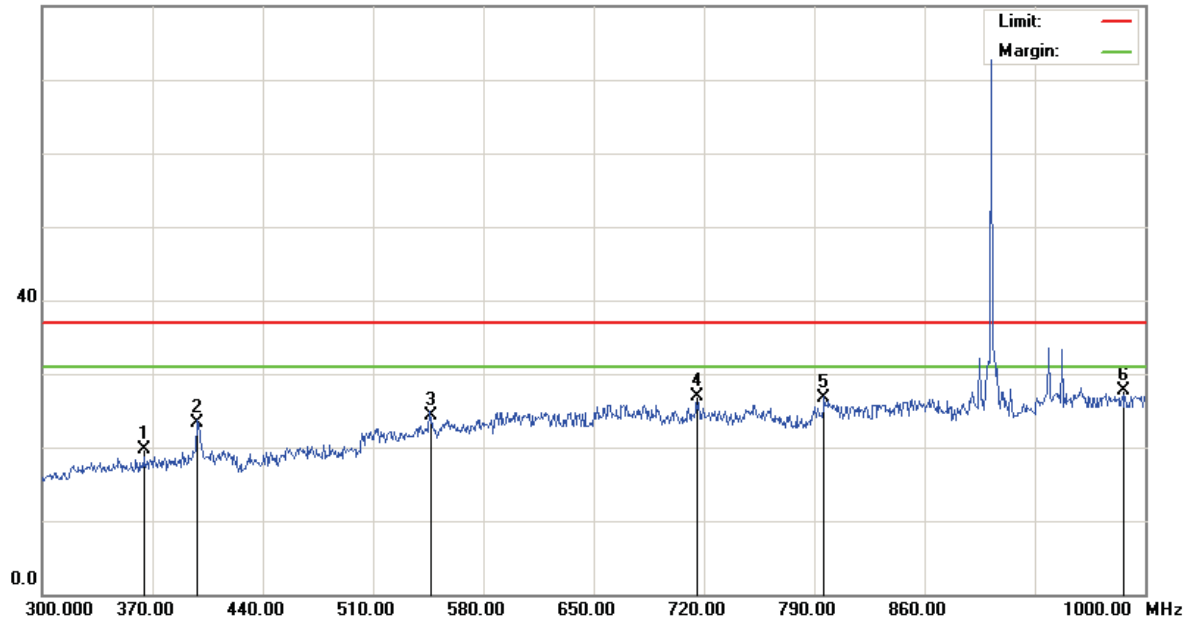
File :M320(WCDMA BandV)

Data :#2

Date: 2009/5/15

Time: 下午 02:11:56

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BandV

Note: CH4183

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		364.4000	28.89	-9.27	19.62	37.00	-17.38	peak		
2		398.3500	32.24	-8.93	23.31	37.00	-13.69	peak		
3		546.0500	30.80	-6.42	24.38	37.00	-12.62	peak		
4		715.4500	29.85	-3.01	26.84	37.00	-10.16	peak		
5		796.3000	27.83	-1.20	26.63	37.00	-10.37	peak		
6	*	986.0000	26.07	1.67	27.74	37.00	-9.26	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

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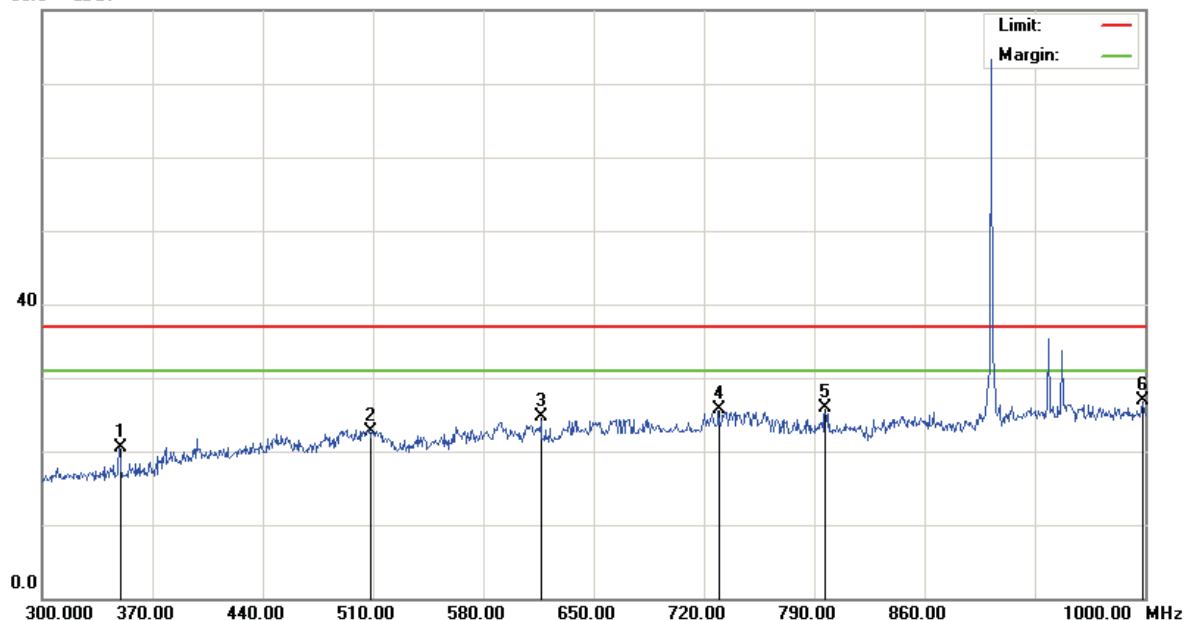
File :M320(WCDMA BandV)

Data :#4

Date: 2009/5/15

Time: 下午 02:20:19

80.0 dBuV



Site site#1

Polarization: **Horizontal**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BandV

Note: CH4183

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		349.3500	30.11	-9.54	20.57	37.00	-16.43	peak		
2		508.2500	29.67	-7.03	22.64	37.00	-14.36	peak		
3		616.7500	29.42	-4.71	24.71	37.00	-12.29	peak		
4		729.4500	27.42	-1.80	25.62	37.00	-11.38	peak		
5		797.0000	27.04	-1.20	25.84	37.00	-11.16	peak		
6	*	998.6000	25.12	1.81	26.93	37.00	-10.07	peak		

*:Maximum data x:Over limit !:over margin

Test Report No : 0905FE16-02

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3.5.8 Open Field Radiated Emissions (Subpart B)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Elitegroup Computer Systems Co., LTD.
Model No : M320A
EUT : HSDPA mini-PCle Modem Module
Test Mode : WCDMA Band II _ Link Mode
Test Date : 05/15/2009

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: ten-meter (30-1000MHz) & (1-10GHz), 3 or 1 meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)

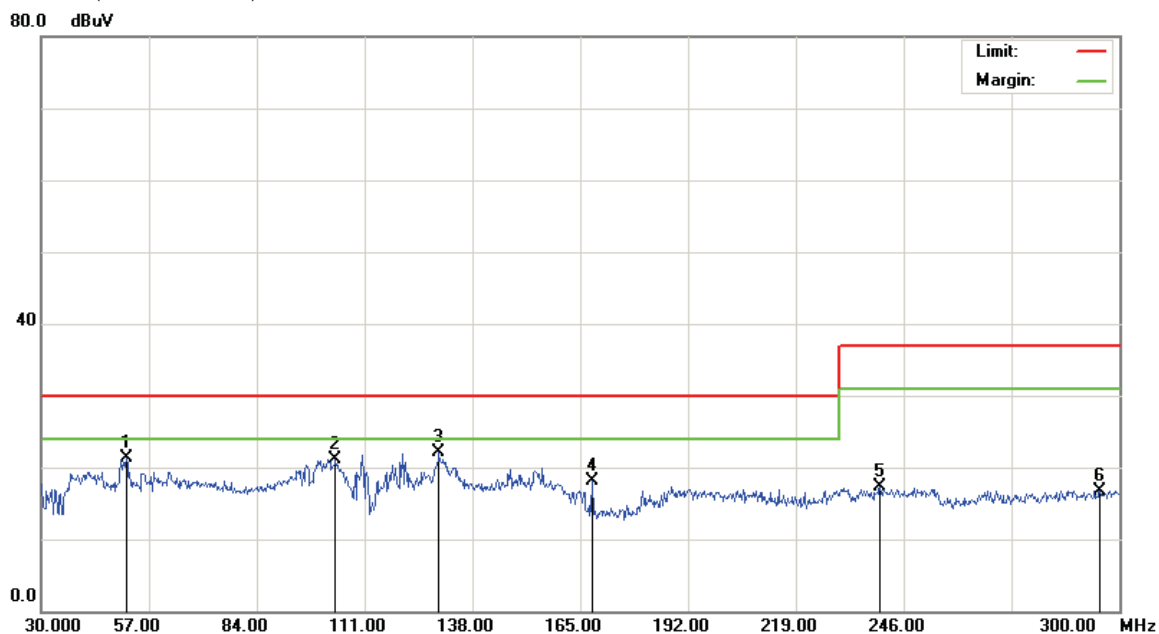


File :M320(WCAMA BAND II)

Data :#1

Date: 2009/5/15

Time: 上午 10:11:32



Site site#1

Limit: CISPR22 ClassB 10m Radiation

EUT:

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

Polarization: Vertical

Power:

Distance: 10m

Temperature: 26 °C

Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		51.3300	35.64	-14.25	21.39	30.00	-8.61	peak		
2		103.7100	36.86	-15.66	21.20	30.00	-8.80	peak		
3	*	129.6300	35.30	-13.19	22.11	30.00	-7.89	peak		
4		167.9700	30.13	-12.04	18.09	30.00	-11.91	peak		
5		240.0600	29.64	-12.38	17.26	37.00	-19.74	peak		
6		295.1400	27.24	-10.46	16.78	37.00	-20.22	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

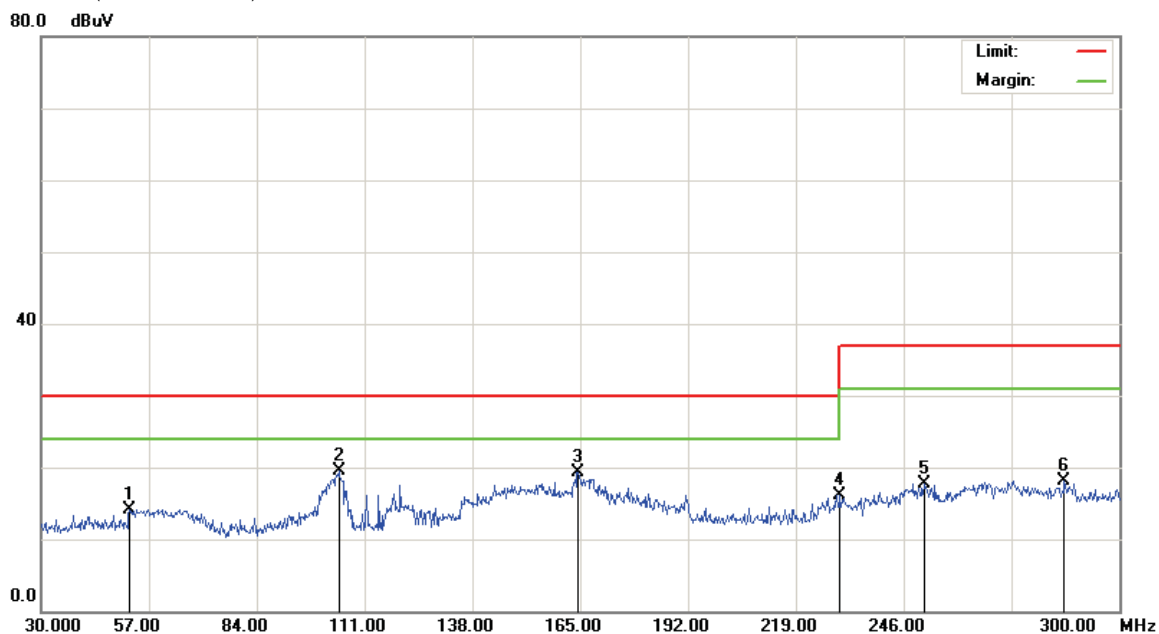


File :M320(WCAMA BAND II)

Data :#2

Date: 2009/5/15

Time: 上午 10:18:48



Site site#1

Limit: CISPR22 ClassB 10m Radiation

EUT:

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

Polarization: **Horizontal**

Power:

Distance: 10m

Temperature: 26 °C

Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		52.1400	28.57	-14.41	14.16	30.00	-15.84	peak		
2	*	104.5199	35.29	-15.86	19.43	30.00	-10.57	peak		
3		164.4600	31.86	-12.50	19.36	30.00	-10.64	peak		
4		230.0700	30.04	-13.85	16.19	37.00	-20.81	peak		
5		251.1300	30.71	-12.92	17.79	37.00	-19.21	peak		
6		286.2300	29.85	-11.71	18.14	37.00	-18.86	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



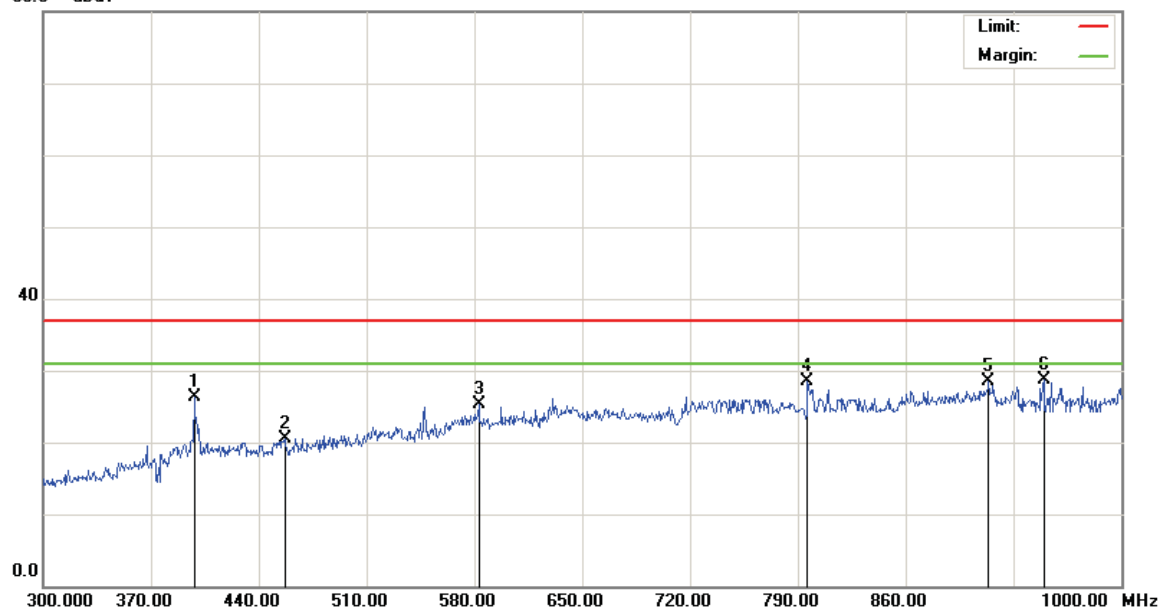
File :M320(WCAMA BAND II)

Data :#3

Date: 2009/5/15

Time: 上午 10:23:33

80.0 dBuV



Site site#1

Polarization: **Vertical**

Temperature: 26 °C

Limit: CISPR22 ClassB 10m Radiation

Power:

Humidity: 60 %

EUT:

Distance: 10m

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		398.0000	34.69	-8.31	26.38	37.00	-10.62	peak		
2		456.8000	27.61	-7.07	20.54	37.00	-16.46	peak		
3		582.8000	29.76	-4.39	25.37	37.00	-11.63	peak		
4		796.3000	28.55	0.00	28.55	37.00	-8.45	peak		
5		913.9000	26.47	2.00	28.47	37.00	-8.53	peak		
6	*	949.6000	25.64	2.98	28.62	37.00	-8.38	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



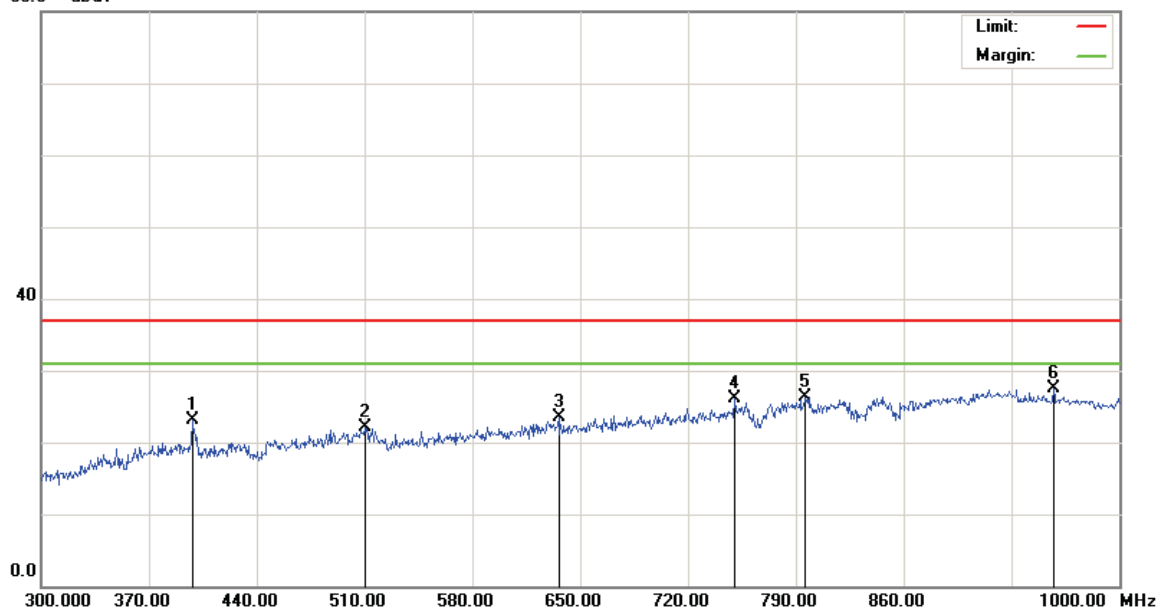
File :M320(WCAMA BAND II)

Data :#4

Date: 2009/5/15

Time: 上午 10:31:47

80.0 dBuV



Site site#1

Limit: CISPR22 ClassB 10m Radiation

EUT:

M/N: 09-0088-EO

Mode: WCDMA BAND II

Note:

Polarization: **Horizontal**

Power:

Distance: 10m

Temperature: 26 °C

Humidity: 60 %

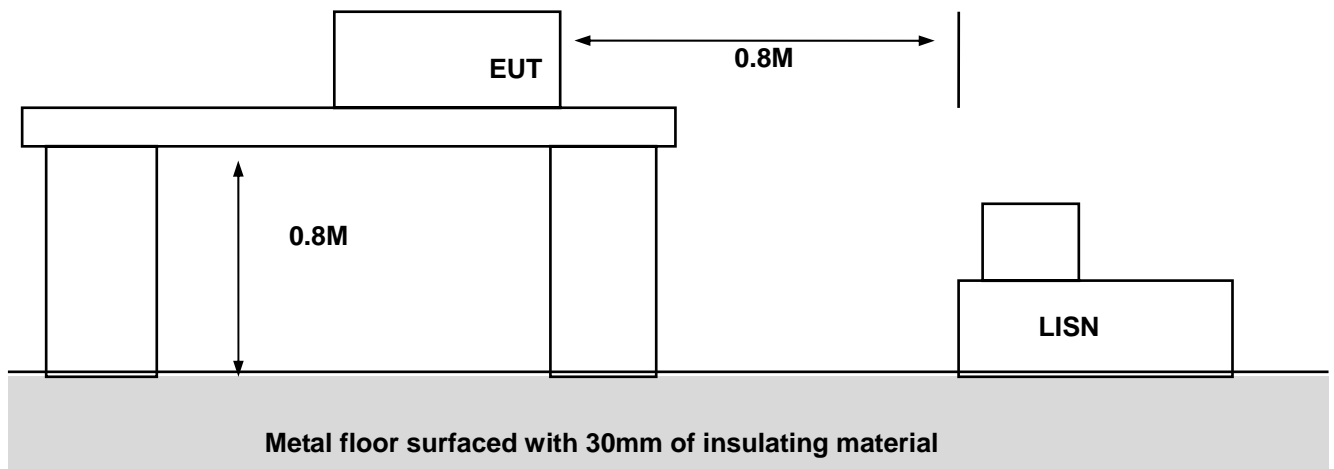
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		398.3500	32.49	-9.43	23.06	37.00	-13.94	peak		
2		510.0000	29.62	-7.44	22.18	37.00	-14.82	peak		
3		636.0000	28.60	-5.02	23.58	37.00	-13.42	peak		
4		750.1000	28.41	-2.35	26.06	37.00	-10.94	peak		
5		796.3000	28.13	-1.79	26.34	37.00	-10.66	peak		
6	*	957.3000	26.53	0.98	27.51	37.00	-9.49	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

Appendix A - EUT Test Setup

MEASUREMENT OF POWER LINE CONDUCTED RFI VOLTAGE



MEASUREMENT OF RADIATED EMISSION

