

## Radio Test Report FCC ID: NDD9562100910

This report concerns (check one) : Original Grant Class I Change

**Issued Date** : Jan. 19, 2010 **Project No.** : 0909C206

**Equipment**: 3G Portable Router with Battery

Model Name: 3G-6210N; 3G-210N

**Applicant**: EDIMAX TECHNOLOGY CO., LTD. **Address**: No. 3, Wu Chuan 3rd Road, Wu-Ku

Industrial Park. Taipei Hsien, Taiwan

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Test:

Nov. 13, 2009 ~ Nov. 24, 2009

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#### **Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.** 

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#### Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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#### 1. CERTIFICATION

Equipment: 3G Portable Router with Battery

Brand Name: EDIMAX

Model No.: 3G-6210N; 3G-210N

Applicant: EDIMAX TECHNOLOGY CO., LTD. Date of Test: Nov. 13, 2009 ~ Nov. 24, 2009

Standards: FCC Part15, Subpart C / ANCI C63.4: 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-0909C206) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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#### 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

	FCC Part15, Subpart C		
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (c)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS	

#### NOTE:

- (1)" N/A" denotes test is not applicable in this Test Report
- (2)This test report covers EUT radio function only. Its receive function testing is covered in another DOC test report: NEI-FCCE-1-0909C206.

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#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C01/CB08 (FCC R.N.: 95335)** C01 - at the location of No.132-1, Lane 329, Sec. 2, Palian Road, Shijr City, Taipei, Taiwan. CB08 - at the location of 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

#### 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expended uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k=2}$ , providing a level of confidence of approximately  $\mathbf{95}\%$   $\circ$ 

#### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U,(dB)
C01	ANSI	150 KHz ~ 30MHz	1.94

#### B. Radiated Measurement:

Test Site	Method Measurement Frequency Range		Ant. H / V	U,(dB)
		30MHz ~ 200MHz	V	3.22
		30MHz ~ 200MHz	Н	3.35
		200MHz ~ 1,000MHz	V	3.24
CBOS	CB08 ANSI	200MHz ~ 1,000MHz	Ι	3.11
СВОО		1000MHz ~ 1800MHz	V	4.05
		1000MHz ~ 18000MHz	Ι	3.97
		18000MHz ~ 40000MHz	V	4.04
		18000MHz ~ 40000MHz	Η	4.01

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#### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	3G Portable Router with Battery		
Brand Name	EDIMAX		
Model Name	3G-6210N; 3G-210N		
OEM Brand/Model No.	Airlive/Traveler 3G Intellinet/524803 PCI/ CQW-MRB		
Model Difference	Models' differences between each other only the changes of model name which do not affect the EMI performance. Model 3G-6210N was used for final testing and collecting test data included in this report.		
	The EUT is an 3G Portable Router with Battery.  Operation Frequency: 2412~2462MHz  Modulation Type: 802.11b:CCK, DQPSK, DBPSK 802.11g:OFDM		
	802.11n:OFDM( 1 TX & 1 RX )  Bit Rate of Transmitter: 802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to +150 Mbps		
Product Description	Number Of Channel: Please see Note 2.  Antenna Designation: Please see Note 3.  Antenna Gain(Peak): Please see Note 3.  Output Power(Max): 802.11b: 19.94dBm (Max.) 802.11g: 23.93dBm (Max.) 802.11n(20MHz): 23.66dBm (Max.) 802.11n(40MHz): 23.70dBm (Max.)		
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.		
Power Source	Battery supplied & DC Voltage supplied from AC/DC adapter.		
Power Rating	Battery: DC 3.7V, 1800mAh, 6.7Wh AC/DC adapter: I/P: AC 100-240V~300mA, 50-60Hz, 21-28VA / O/P: DC 5V, 2A MAX.		
Connecting I/O Port(s)	Please refer to the User's Manual		
Products Covered	Battery: TPZLIB-100 AC/DC adapter: PSAA10R-050(ED)-R		
EUT Modification(s)	N/A		

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#### Note:

1. CH 01 – CH 11 for 802.11b, 802.11g, 802.11n(20MHz)

CH 03 – CH 09 for 802.11n(40MHz)

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

#### 2. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Printed	N/A	3.48

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#### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

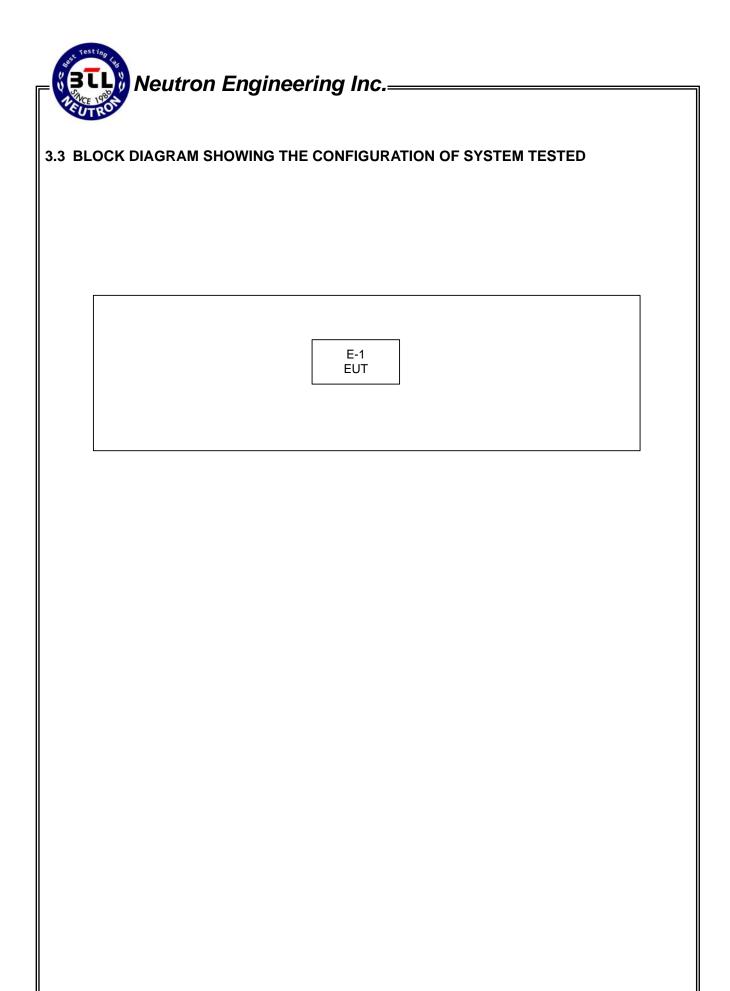
Pretest Test Mode	Description
Mode 1	802.11b/CH01, CH06, CH11
Mode 2	802.11g/CH01, CH06, CH11
Mode 3	802.11n/20M/CH01, CH06, CH11
Mode 4	802.11n/40M/CH03, CH06, CH09

For Conducted Test	
Final Test Mode Description	
Mode 1	802.11b/CH06

For Radiated Test (BETWEEN 30MHZ - 1000MHZ)		
Final Test Mode Description		
Mode 1	802.11b/CH06	

For Radiated Test (Above 1000 MHz)		
Final Test Mode Description		
Mode 1	802.11b/CH01, CH06, CH11	
Mode 2	802.11g/CH01, CH06, CH11	
Mode 3	802.11n/20M/CH01, CH06, CH11	
Mode 4	802.11n/40M/CH03, CH06, CH09	

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#### 3.4 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	3G Portable Router with Battery	EDIMAX	3G-6210N	NDD9562100910	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
	N/A	N/A	N/A	

#### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length\_"</code> column.

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#### 4. EMC EMISSION TEST

#### **4.1 CONDUCTED EMISSION MEASUREMENT**

#### **4.1.1 POWER LINE CONDUCTED EMISSION** (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A	(dBuV)	Class B (dBuV)	
TREQUENCT (MITZ)	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### **4.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00042991	Jan. 21, 2010
2	Test Cable	N/A	SR03_C_01&02	N/A	Aug. 19, 2010
3	Pulse Limiter	Electro-Metrics	EM-7600	112644	Dec. 27, 2010
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 17, 2010

Remark: "N/A" denotes No Model No., Serial No. or No Calibration specified.

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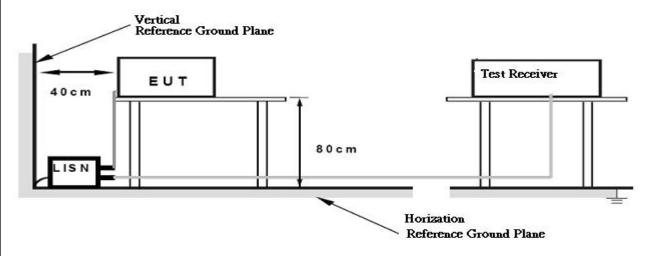
#### 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

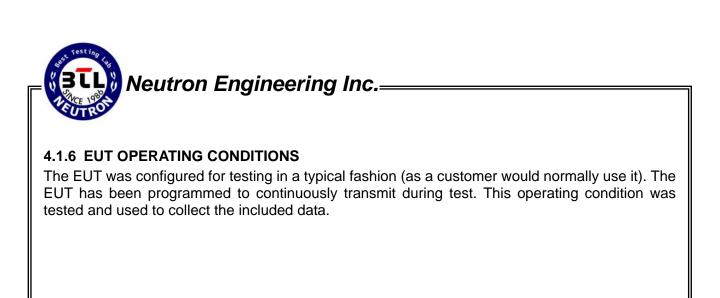
#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



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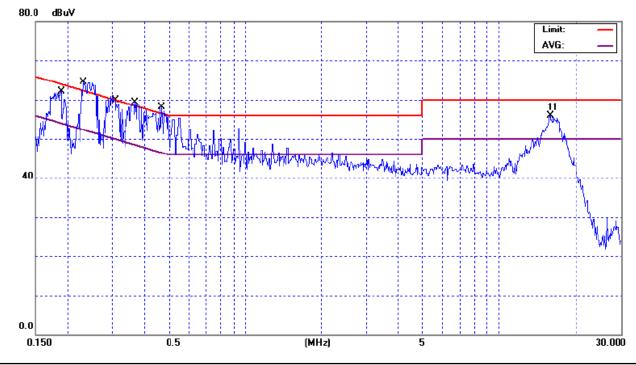
#### 4.1.7 TEST RESULTS

E.U.T:	3G Portable Router with Battery	Model Name :	3G-6210N
Temperature :	23°C	Relative Humidity:	50%
Test Voltage:	AC 120V/60Hz		
Test Mode:	802.11b/CH06		

Freq.	Terminal	Measured(dBuV)		Limits(dBuV)		Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	NOLE
0.17	Line	60.53	30.04	65.05	55.05	-4.52	(QP)
0.25	Line	59.66	44.03	61.89	51.89	-2.23	(QP)
0.31	Line	56.29	41.73	60.10	50.10	-3.81	(QP)
0.38	Line	55.54	33.63	58.18	48.18	-2.64	(QP)
0.52	Line	51.78	36.51	56.00	46.00	-4.22	(QP)
16.60	Line	56.85	45.22	60.00	50.00	-3.15	(QP)

#### Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz, VBW =10KHz, Swp. Time = 0.2 sec./MHz ∘ Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz, VBW=10KHz, Swp. Time =0.2 sec./MHz ∘
- (2) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform on this case, a " \* " marked in AVG Mode column of Interference Voltage Measured on the Note of Interference Voltage Measured on the Note
- (3) Measuring frequency range from 150KHz to 30MHz  $\circ$



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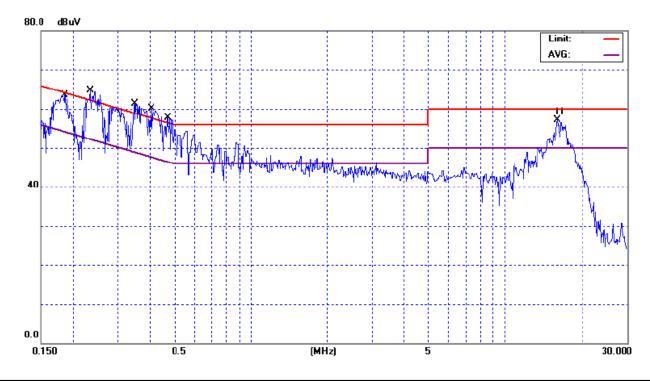
E.U.T :	3G Portable Router with Battery	Model Name :	3G-6210N
Temperature :	23°C	Relative Humidity:	50%
Test Voltage:	AC 120V/60Hz		
Test Mode:	802.11b/CH06		

Freq.	Terminal	Measured(dBuV)		Limits(dBuV)		Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	NOLE
0.18	Neutral	61.75	48.57	64.61	54.61	-2.86	(QP)
0.24	Neutral	59.64	42.46	62.11	52.11	-2.47	(QP)
0.38	Neutral	48.96	37.26	58.30	48.30	-9.34	(QP)
0.47	Neutral	54.32	34.25	56.50	46.50	-2.18	(QP)
0.82	Neutral	47.91	30.23	56.00	46.00	-8.09	(QP)
16.50	Neutral	57.12	45.44	60.00	50.00	-2.88	(QP)

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz, VBW =10KHz, Swp. Time = 0.2 sec./MHz 
  Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz, VBW=10KHz, Swp. Time =0.2 sec./MHz 

  Output

  Description:
- (2) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform In this case, a " \* " marked in AVG Mode column of Interference Voltage Measured •
- (3) Measuring frequency range from 150KHz to 30MHz o



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#### **4.2 RADIATED EMISSION MEASUREMENT**

#### 4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(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

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBu	IV/m) (at 3m)	Class B (dBuV/m) (at 3m)	
FREQUENCT (IVITIZ)	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

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#### 4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3173	Oct. 15, 2010
2	Pre-Amplifier	Anritsu	MH648A	M98457	Jan. 19, 2010
3	Test Cable	N/A	10M-OS01	N/A	Jun. 18, 2010
4	Test Cable	N/A	OS02	01	Jun. 23, 2010
5	EMI Test Receiver	R&S	ESCI	100082	Mar. 17, 2010
6	System Controller (OS02)	СТ	SC100	N/A	N/A
7	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
8	Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-546	Jun. 04, 2010
9	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 20, 2010
10	Microflex Cable	N/A	N/A	1m	May. 20, 2010
11	Microflex Cable	AISI	S104-SMAP-1	10m	Aug. 23, 2010
12	Microflex Cable	N/A	N/A	3m	Aug. 23, 2010
13	Spectrum Analyzer	R&S	FSP-40	100129	Sep. 10, 2010

Remark: "N/A" denotes No Model No. / Serial No. and No Calibration specified.

#### **4.2.3 TEST PROCEDURE**

- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.2.4 DEVIATION FROM TEST STANDARD

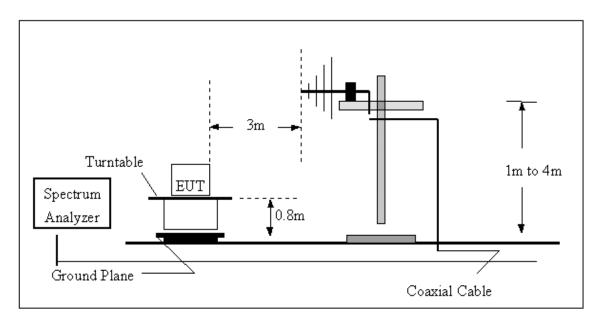
No deviation

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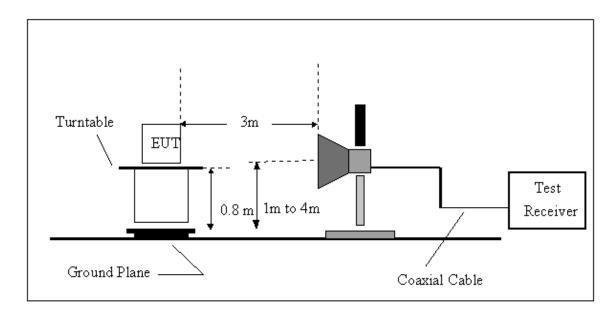


#### 4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



#### **4.2.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

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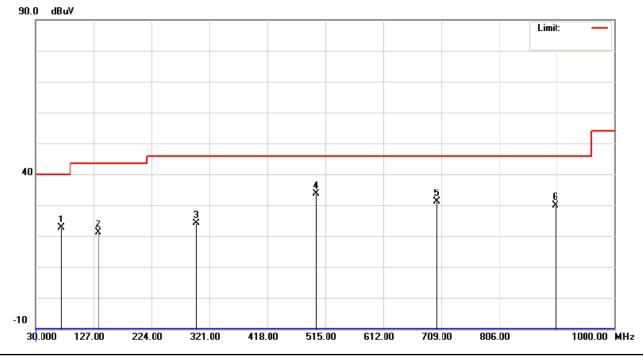
#### 4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ

FUI	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	24°C	Relative Humidity:	44%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH06		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
72.68	V	44.72	-22.12	22.60	40.00	- 17.40	
134.76	V	40.37	-19.28	21.09	43.50	- 22.41	
299.66	V	43.20	-18.98	24.22	46.00	- 21.78	
499.48	٧	48.20	-14.45	33.75	46.00	- 12.25	
701.24	V	41.97	-10.81	31.16	46.00	- 14.84	
901.06	V	37.96	-8.17	29.79	46.00	- 16.21	

#### Remark:

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}^{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

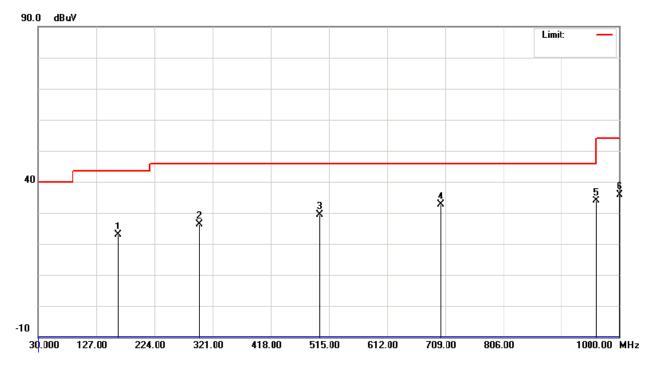


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IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	24°C	Relative Humidity:	44%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH06		

Гиол	Λnt	Dooding/DA)	Corr Footor(CF)	Magaurad/EC\	Limita (OD)	Morain	
Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	11010
163.86	Н	41.28	-18.47	22.81	43.50	- 20.69	
299.66	Н	45.25	-18.98	26.27	46.00	- 19.73	
499.48	Η	43.92	-14.45	29.47	46.00	- 16.53	
701.24	Н	43.44	-10.81	32.63	46.00	- 13.37	
961.20	Н	41.40	-7.49	33.91	54.00	- 20.09	
1000.00	Н	43.22	-7.32	35.90	54.00	- 18.10	

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### 4.2.8 TEST RESULTS - ABOVE 1000MHZ

I=U1	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	23.64	12.23	31.93	55.57	44.16	74.00	54.00	X/H
2409.20	V	60.04	56.30	32.00	92.04	88.30			X/F
4823.97	V	52.09	49.06	3.75	55.84	52.81	74.00	54.00	X/H
7235.94	V	44.78	31.65	9.02	53.80	40.67	74.00	54.00	X/H
9648.00	V	45.05	32.15	11.96	57.01	44.11	74.00	54.00	X/H

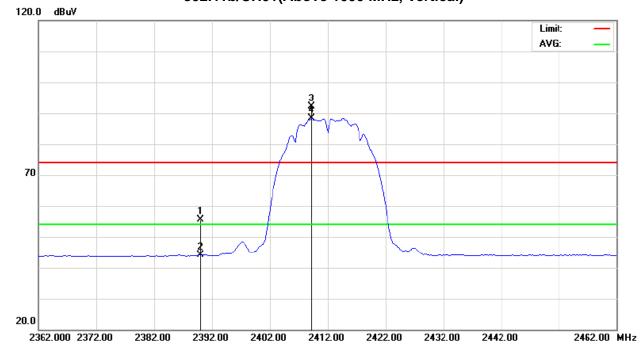
#### Remark:

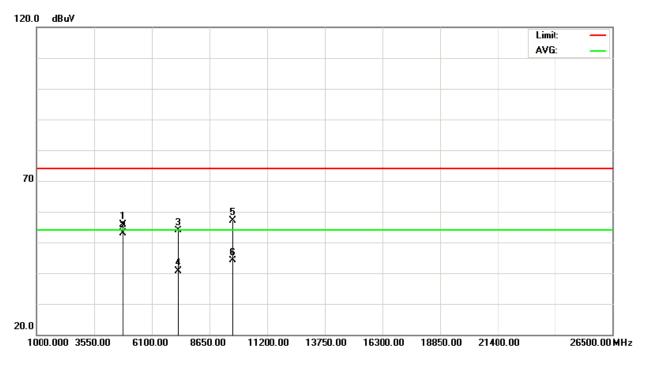
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}^{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of F' denotes fundamental frequency; "H' denotes spurious frequency. "E' denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11b/CH01(Above 1000 MHz, Vertical)





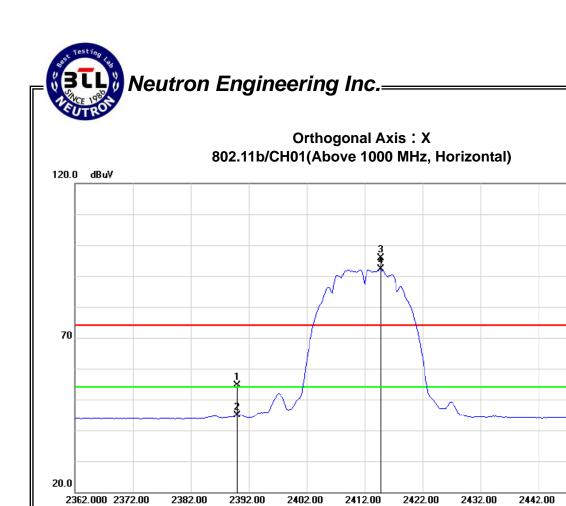
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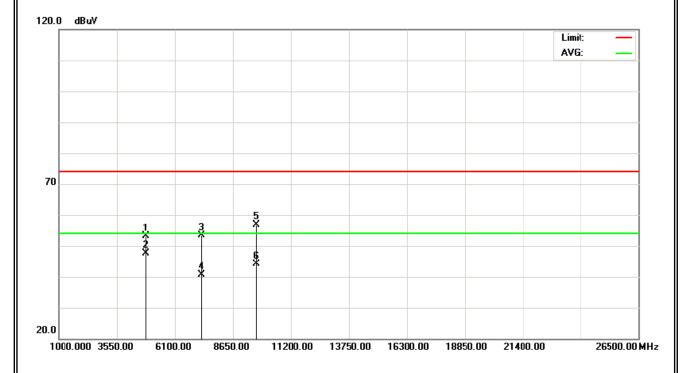
IFUI :	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	22.66	12.92	31.93	54.59	44.85	74.00	54.00	X/H
2414.80	Н	63.80	60.00	32.02	95.82	92.02			X/F
4824.04	Н	49.47	43.97	3.75	53.22	47.72	74.00	54.00	X/H
7235.94	Н	44.44	31.55	9.02	53.46	40.57	74.00	54.00	X/H
9648.01	Н	44.87	32.11	11.96	56.83	44.07	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of Fr denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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Limit: AVG:

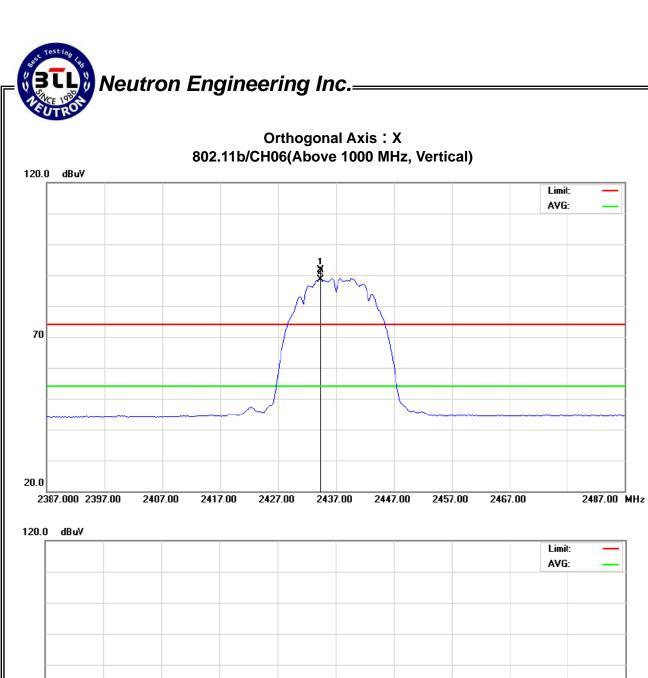
2462.00 MHz

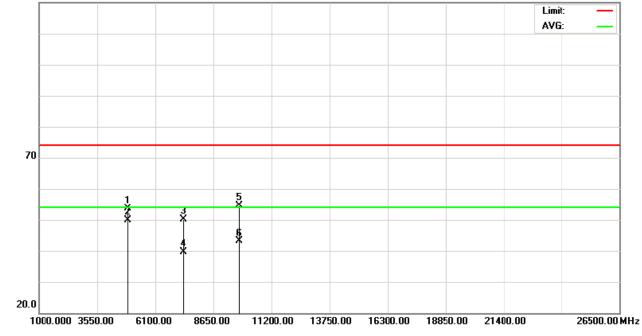
IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH06		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Lir	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.40	V	59.58	56.61	32.10	91.68	88.71			X/F
4873.96	V	49.69	46.07	3.90	53.59	49.97	74.00	54.00	X/H
7310.92	V	40.93	30.39	9.14	50.07	39.53	74.00	54.00	X/H
9747.91	V	42.47	30.91	12.11	54.58	43.02	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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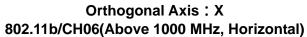
IFUI :	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH06		

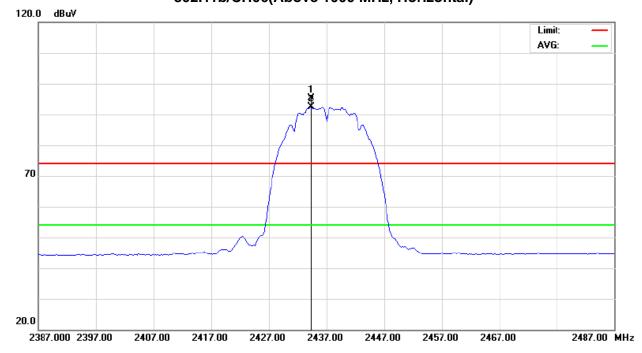
Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Li	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.40	Н	63.16	60.23	32.10	95.26	92.33			X/F
4873.97	Η	47.36	42.51	3.90	51.26	46.41	74.00	54.00	X/H
7310.89	Η	40.85	30.15	9.14	49.99	39.29	74.00	54.00	X/H
9747.91	Н	42.26	31.71	12.11	54.37	43.82	74.00	54.00	X/H

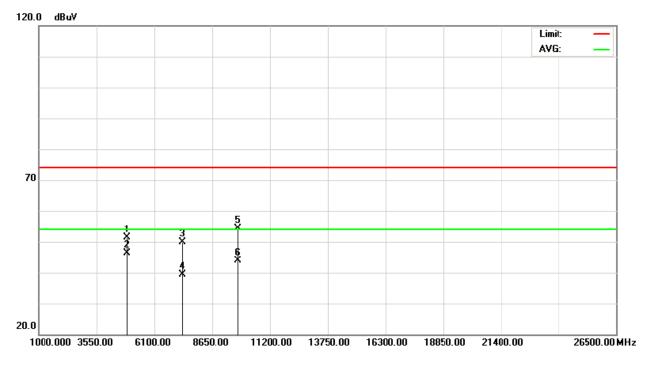
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH11		

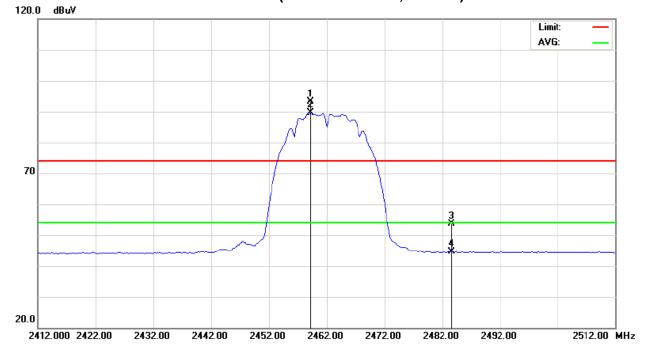
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2459.20	V	60.84	57.41	32.19	93.03	89.60			X/F
2483.50	V	21.34	12.30	32.29	53.63	44.59	74.00	54.00	X/H
4923.97	V	47.76	43.00	4.06	51.82	47.06	74.00	54.00	X/H
7385.87	V	42.09	31.55	9.27	51.36	40.82	74.00	54.00	X/H
9847.96	V	41.86	31.82	12.27	54.13	44.09	74.00	54.00	X/H

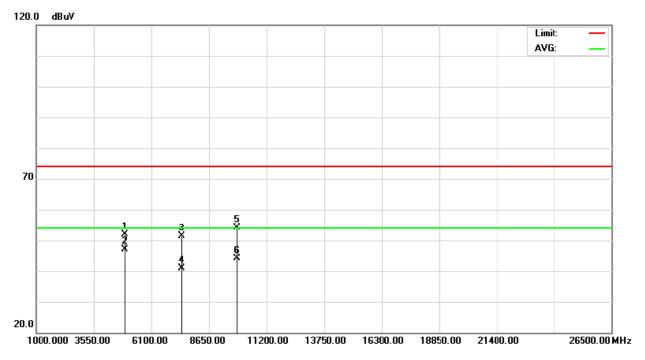
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11b/CH11(Above 1000 MHz, Vertical)





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EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH11		

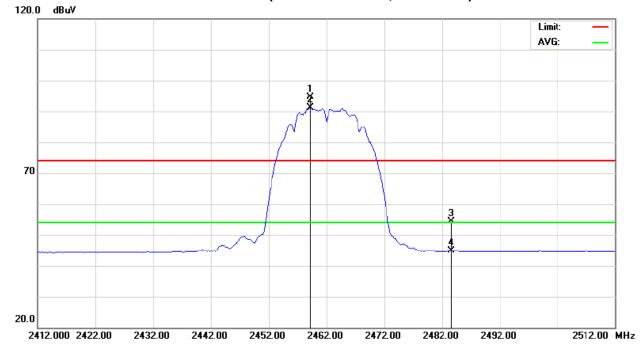
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2459.20	Н	62.32	58.92	32.19	94.51	91.11			X/F
2483.50	Η	21.97	12.62	32.29	54.26	44.91	74.00	54.00	X/H
4924.04	Η	46.62	42.13	4.06	50.68	46.19	74.00	54.00	X/H
7386.08	Η	42.56	31.66	9.27	51.83	40.93	74.00	54.00	X/H
9847.96	Η	42.62	31.91	12.27	54.89	44.18	74.00	54.00	X/H

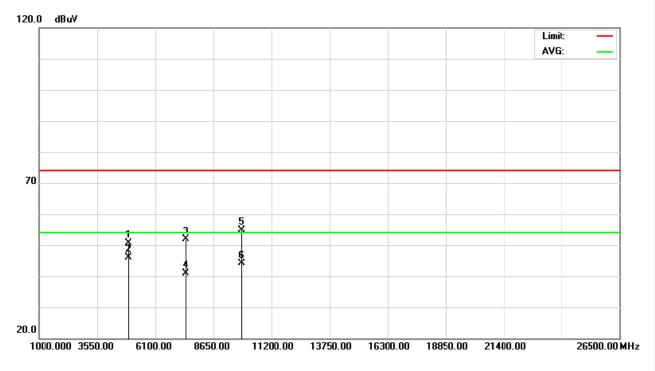
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc.— Orthogonal Axi

### Orthogonal Axis: X 802.11b/CH11(Above 1000 MHz, Horizontal)





EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01		

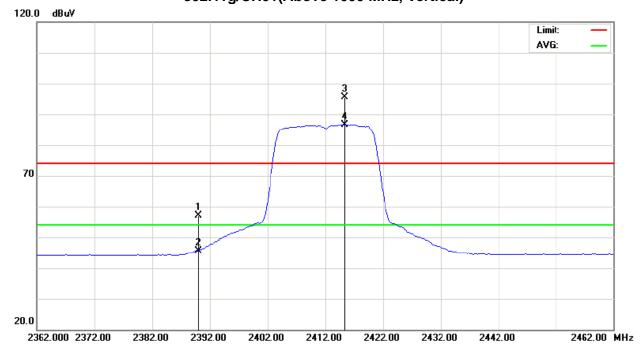
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	25.32	13.80	31.93	57.25	45.73	74.00	54.00	X/H
2415.40	V	63.60	54.69	32.03	95.63	86.72			X/F
4824.00	V	50.29	39.57	3.75	54.04	43.32	74.00	54.00	X/H
7235.00	V	42.88	31.75	9.02	51.90	40.77	74.00	54.00	X/H
9644.20	V	42.84	31.98	11.95	54.79	43.93	74.00	54.00	X/H

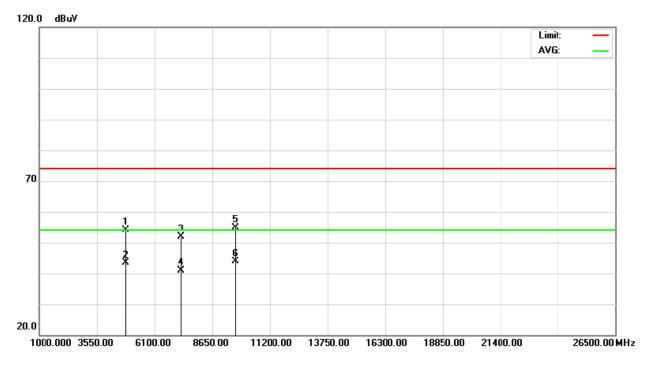
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11g/CH01(Above 1000 MHz, Vertical)





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FUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01		

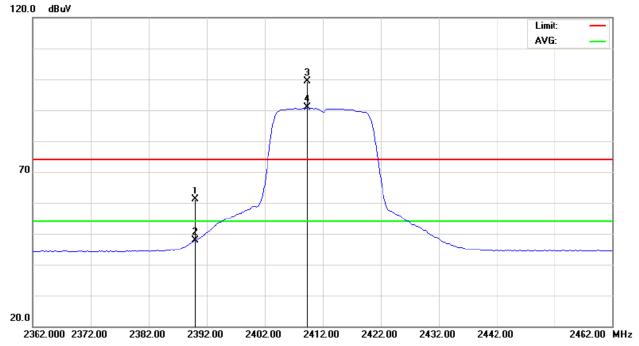
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	29.27	15.96	31.93	61.20	47.89	74.00	54.00	X/H
2409.40	Н	67.50	58.78	32.00	99.50	90.78			X/F
4823.80	Н	47.64	36.95	3.75	51.39	40.70	74.00	54.00	X/H
7239.00	Н	44.04	31.70	9.03	53.07	40.73	74.00	54.00	X/H
9649.80	Н	41.54	31.83	11.96	53.50	43.79	74.00	54.00	X/H

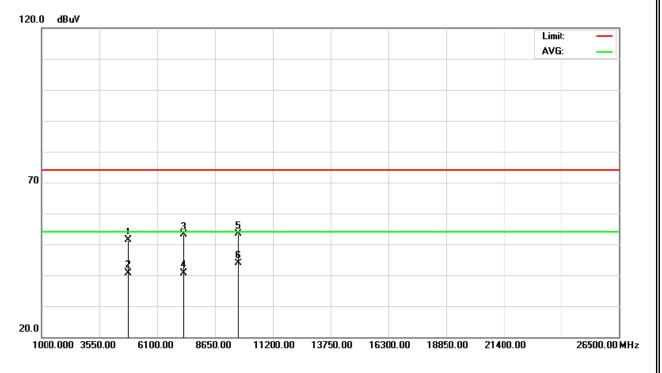
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Neutron Engineering Inc. 120.0 dBuV

## Orthogonal Axis: X 802.11g/CH01(Above 1000 MHz, Horizontal)





EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH06		

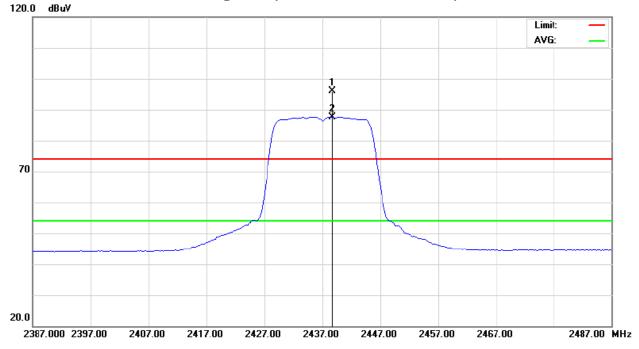
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2438.80	V	63.94	55.54	32.11	96.05	87.65			X/F
4873.80	V	48.28	37.49	3.90	52.18	41.39	74.00	54.00	X/H
7312.60	V	41.54	30.43	9.15	50.69	39.58	74.00	54.00	X/H
9746.20	V	41.52	31.87	12.11	53.63	43.98	74.00	54.00	X/H

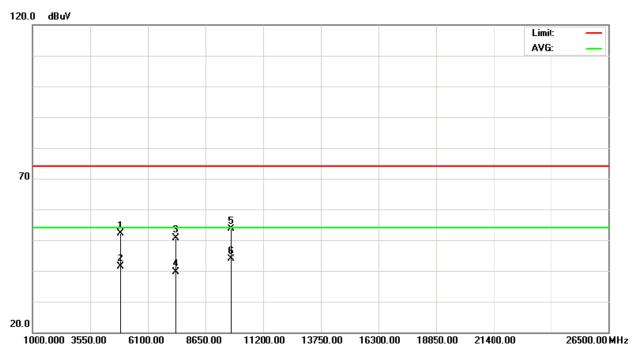
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc.

## Orthogonal Axis: X 802.11g/CH06(Above 1000 MHz, Vertical)





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HUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH06		

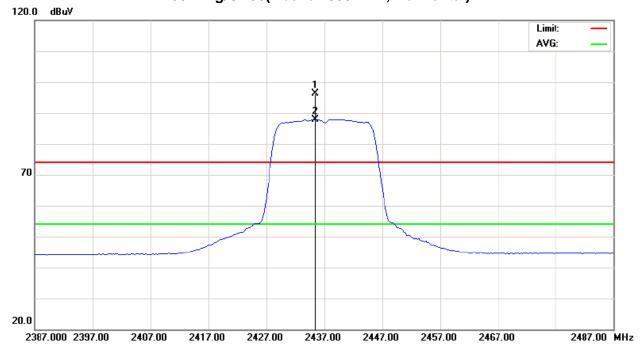
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2435.40	Н	64.32	55.87	32.10	96.42	87.97			X/F
4874.00	Н	46.13	35.28	3.90	50.03	39.18	74.00	54.00	X/H
7316.40	Н	40.05	30.35	9.15	49.20	39.50	74.00	54.00	X/H
9746.20	Н	43.14	31.91	12.11	55.25	44.02	74.00	54.00	X/H

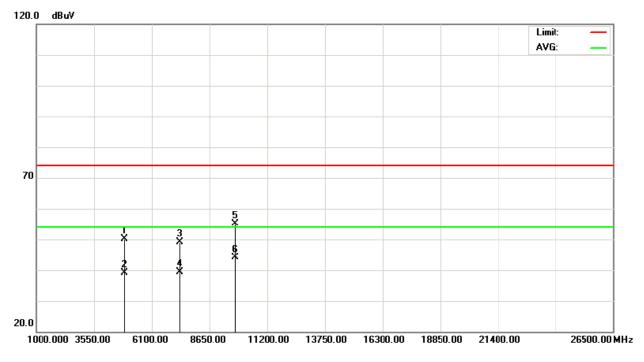
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of F' denotes fundamental frequency; "H' denotes spurious frequency. "E' denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11g/CH06(Above 1000 MHz, Horizontal)





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IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH11		

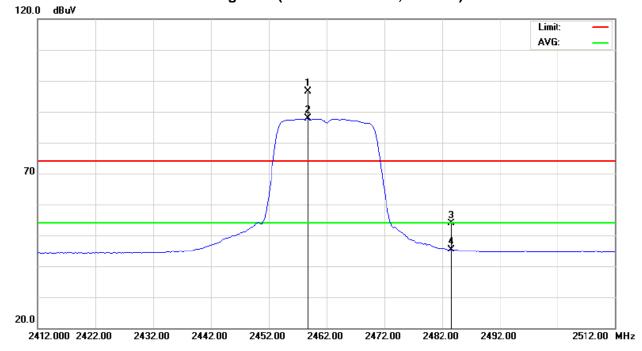
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2458.80	V	64.43	55.64	32.19	96.62	87.83			X/F
2483.50	V	21.67	12.99	32.29	53.96	45.28	74.00	54.00	X/H
4923.80	V	46.22	35.30	4.06	50.28	39.36	74.00	54.00	X/H
7384.00	V	41.72	31.70	9.26	50.98	40.96	74.00	54.00	X/H
9849.80	V	42.39	31.71	12.27	54.66	43.98	74.00	54.00	X/H

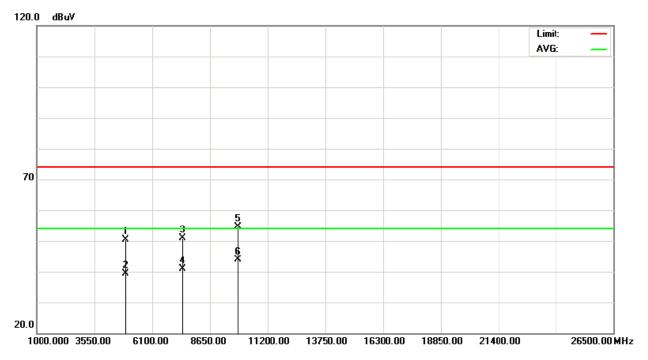
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Neutron Engineering Inc.

## Orthogonal Axis: X 802.11g/CH11(Above 1000 MHz, Vertical)





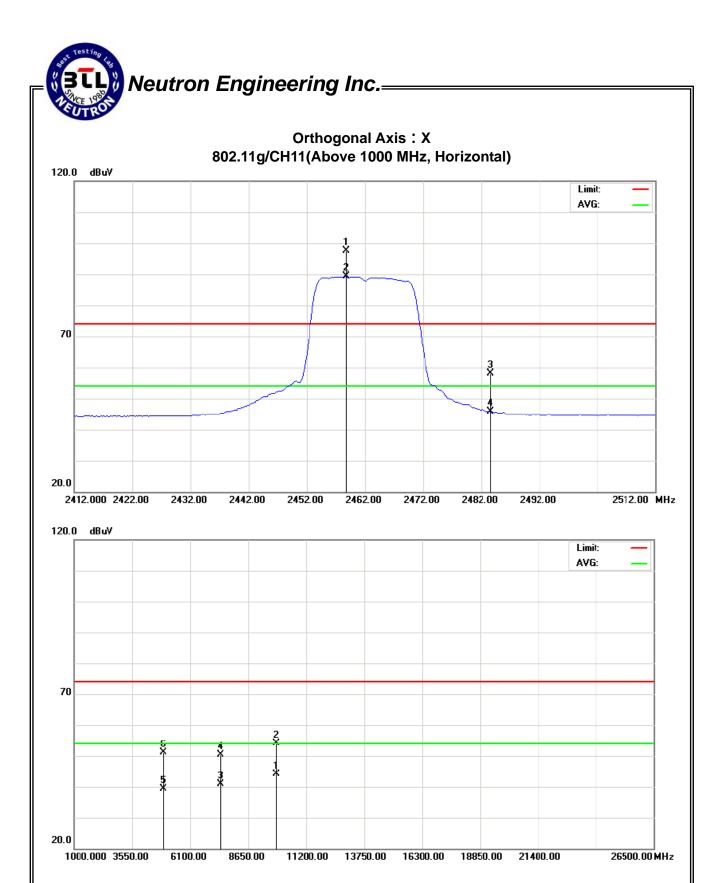
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HUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH11		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2458.80	Н	65.39	57.07	32.19	97.58	89.26			X/F
2483.50	Н	25.83	13.47	32.29	58.12	45.76	74.00	54.00	X/H
9849.80	Н	41.86	31.74	12.27	54.13	44.01	74.00	54.00	X/H
7389.20	Н	41.22	31.59	9.27	50.49	40.86	74.00	54.00	X/H
4924.00	Н	47.07	35.23	4.06	51.13	39.29	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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IFUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH01		

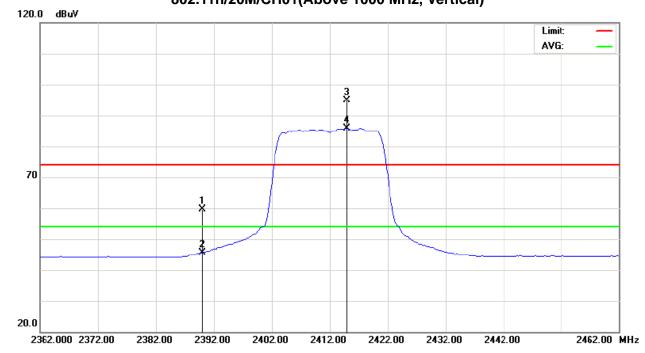
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	27.70	13.74	31.93	59.63	45.67	74.00	54.00	X/H
2415.00	V	62.89	53.82	32.02	94.91	85.84			X/F
4823.80	V	50.48	37.90	3.75	54.23	41.65	74.00	54.00	X/H
7237.20	V	41.82	31.45	9.02	50.84	40.47	74.00	54.00	X/H
9651.40	V	42.70	31.93	11.96	54.66	43.89	74.00	54.00	X/H

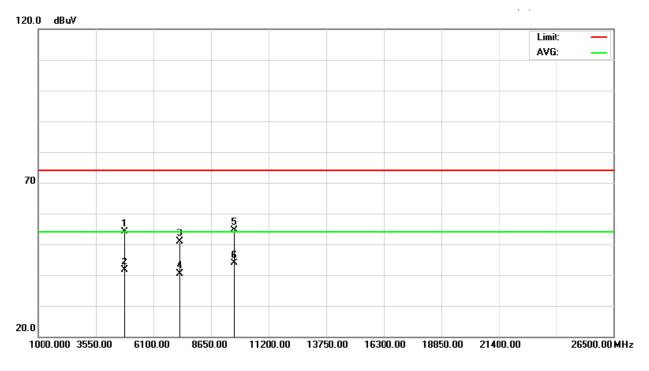
- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of F' denotes fundamental frequency; "H' denotes spurious frequency. "E' denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11n/20M/CH01(Above 1000 MHz, Vertical)





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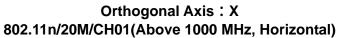
HUI:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH01		

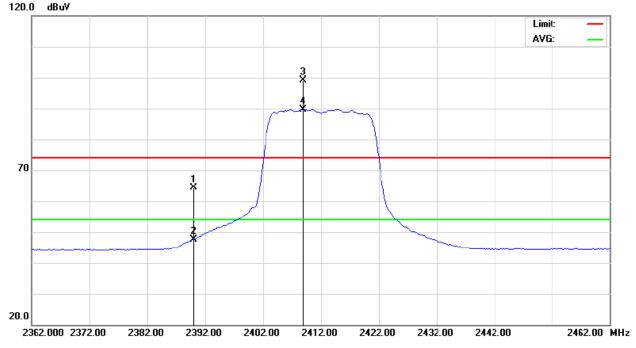
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	32.47	15.73	31.93	64.40	47.66	74.00	54.00	X/H
2409.00	Н	67.12	57.66	32.00	99.12	89.66			X/F
4824.60	Н	47.65	35.29	3.75	51.40	39.04	74.00	54.00	X/H
7232.80	Н	41.83	31.40	9.02	50.85	40.42	74.00	54.00	X/H
9651.40	Н	43.22	31.83	11.96	55.18	43.79	74.00	54.00	X/H

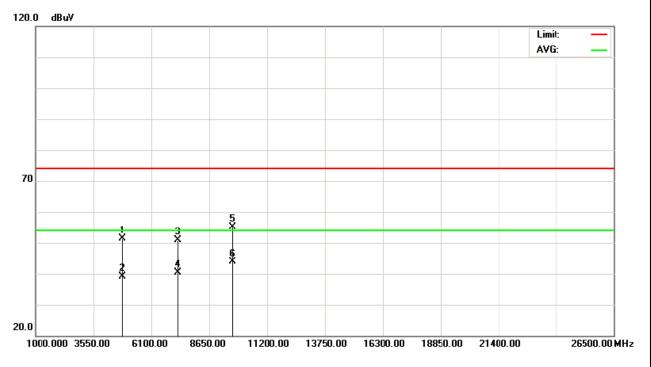
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Neutron Engineering Inc. 120.0 dBuV







IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH06		

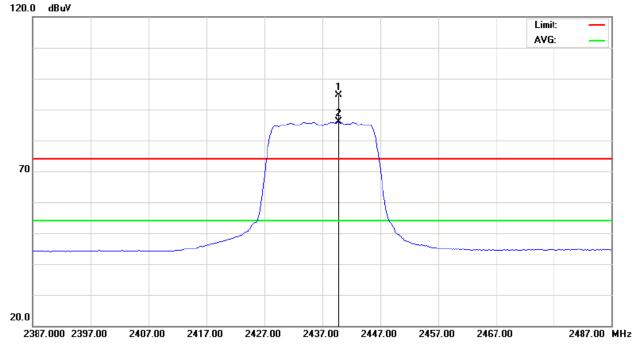
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2439.80	V	62.61	53.89	32.12	94.73	86.01			X/F
4873.60	V	46.36	35.02	3.90	50.26	38.92	74.00	54.00	X/H
7313.60	V	41.59	30.37	9.15	50.74	39.52	74.00	54.00	X/H
9750.00	V	41.79	31.94	12.12	53.91	44.06	74.00	54.00	X/H

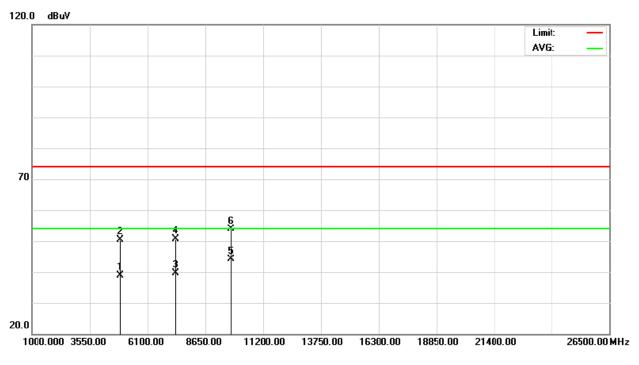
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc.

## Orthogonal Axis: X 802.11n/20M/CH06(Above 1000 MHz, Vertical)





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HUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH06		

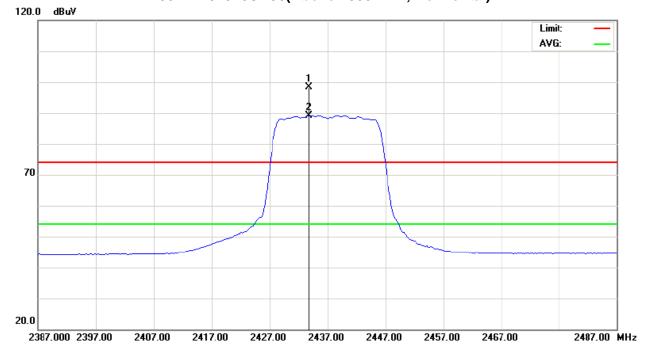
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2433.80	Н	66.39	57.13	32.10	98.49	89.23			X/F
4873.80	Η	46.36	35.08	3.90	50.26	38.98	74.00	54.00	X/H
7309.80	Η	40.74	30.18	9.14	49.88	39.32	74.00	54.00	X/H
9750.00	Н	42.19	31.90	12.12	54.31	44.02	74.00	54.00	X/H

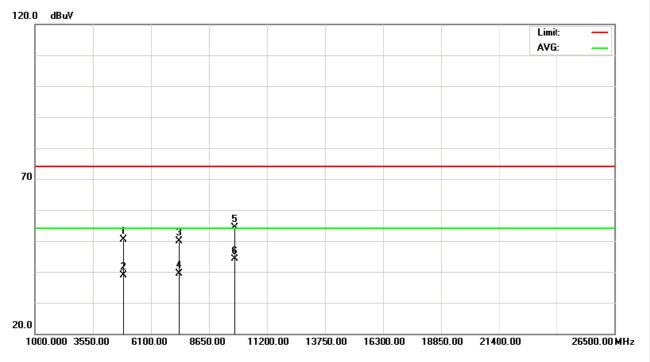
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11n/20M/CH06(Above 1000 MHz, Horizontal)





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IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH11		

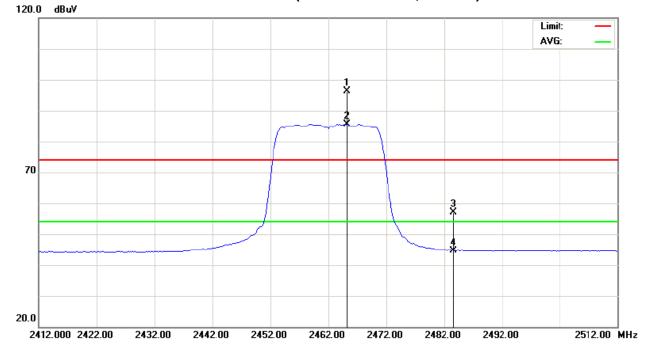
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2465.20	V	64.06	53.43	32.22	96.28	85.65			X/F
2483.50	V	24.96	12.32	32.29	57.25	44.61	74.00	54.00	X/H
4924.00	V	45.95	33.48	4.06	50.01	37.54	74.00	54.00	X/H
7384.40	V	42.86	31.63	9.26	52.12	40.89	74.00	54.00	X/H
9849.80	V	42.49	32.06	12.27	54.76	44.33	74.00	54.00	X/H

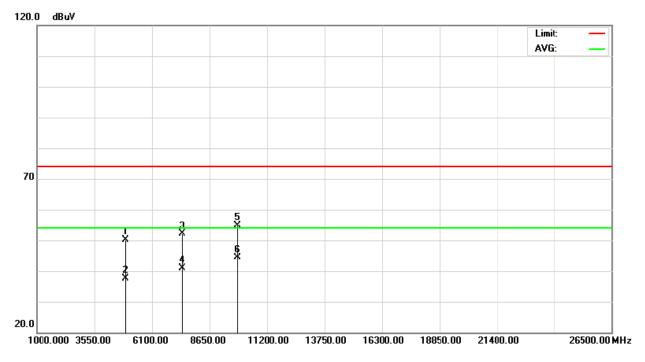
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11n/20M/CH11(Above 1000 MHz, Vertical)





EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH11		

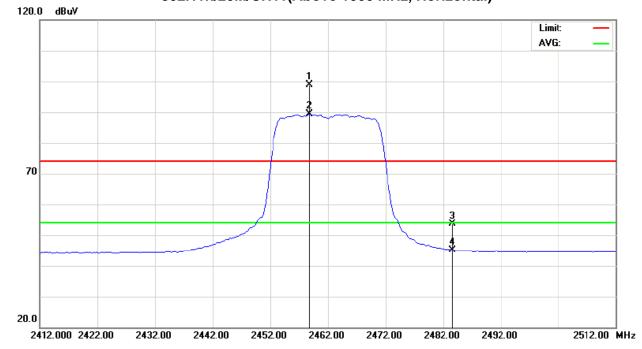
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2458.80	Н	66.71	57.07	32.19	98.90	89.26			X/F
2483.50	Η	21.46	12.79	32.29	53.75	45.08	74.00	54.00	X/H
4923.80	Η	45.54	33.17	4.06	49.60	37.23	74.00	54.00	X/H
7384.20	Η	41.20	31.31	9.26	50.46	40.57	74.00	54.00	X/H
9849.80	Η	42.44	31.83	12.27	54.71	44.10	74.00	54.00	X/H

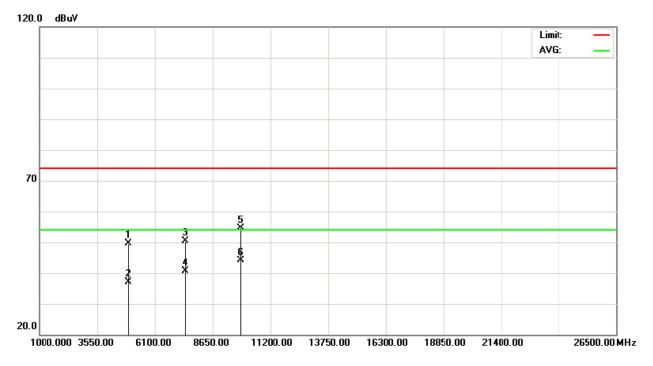
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11n/20M/CH11(Above 1000 MHz, Horizontal)





Report No.: NEI-FCCP-1-0909C206

IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH03		

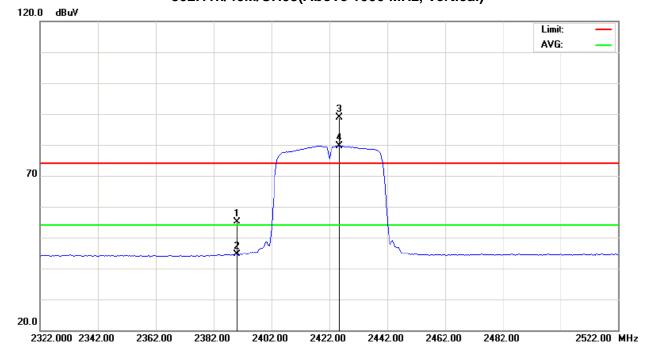
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	23.12	12.66	31.93	55.05	44.59	74.00	54.00	X/H
2425.60	V	56.82	47.59	32.06	88.88	79.65			X/F
4844.80	V	42.55	32.37	3.81	46.36	36.18	74.00	54.00	X/H
7262.00	V	42.55	31.63	9.06	51.61	40.69	74.00	54.00	X/H
9692.00	V	42.21	32.02	12.03	54.24	44.05	74.00	54.00	X/H

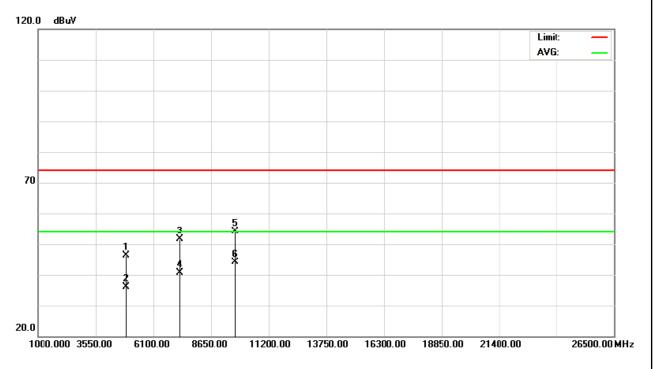
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11n/40M/CH03(Above 1000 MHz, Vertical)





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IFUI :	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH03		

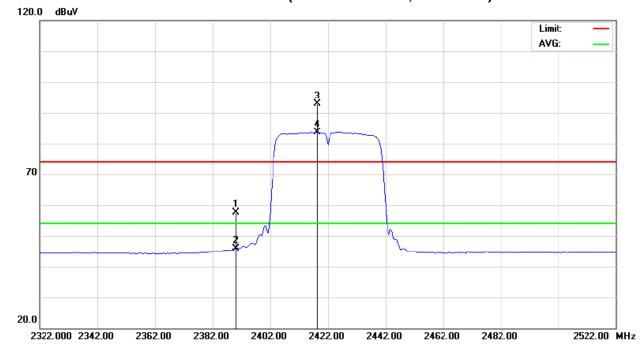
Freq.	Ant.Pol.	Read	Reading A		Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	25.67	13.98	31.93	57.60	45.91	74.00	54.00	X/H
2418.40	Н	60.93	51.61	32.04	92.97	83.65			X/F
4842.80	Н	39.78	30.76	3.81	43.59	34.57	74.00	54.00	X/H
7263.20	Н	41.05	31.38	9.07	50.12	40.45	74.00	54.00	X/H
9683.20	Н	42.20	31.84	12.01	54.21	43.85	74.00	54.00	X/H

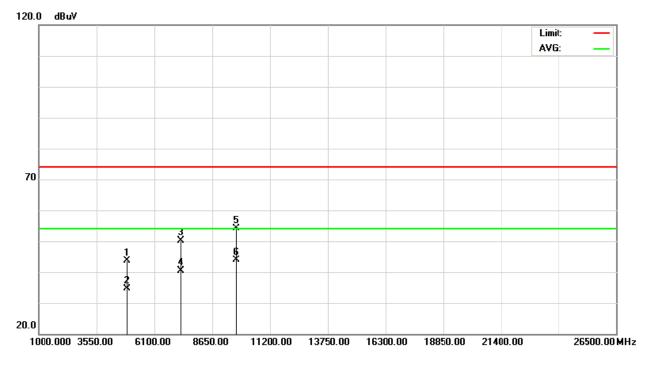
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc.— Orthogonal Axi

## Orthogonal Axis: X 802.11n/40M/CH03(Above 1000 MHz, Horizontal)





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EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH06		

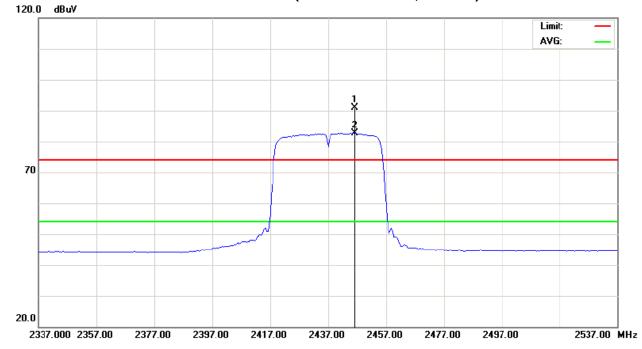
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2446.20	V	58.85	50.50	32.14	90.99	82.64			X/F
4874.00	V	42.63	32.36	3.90	46.53	36.26	74.00	54.00	X/H
7315.40	V	39.98	29.91	9.15	49.13	39.06	74.00	54.00	X/H
9743.60	V	42.95	31.63	12.11	55.06	43.74	74.00	54.00	X/H

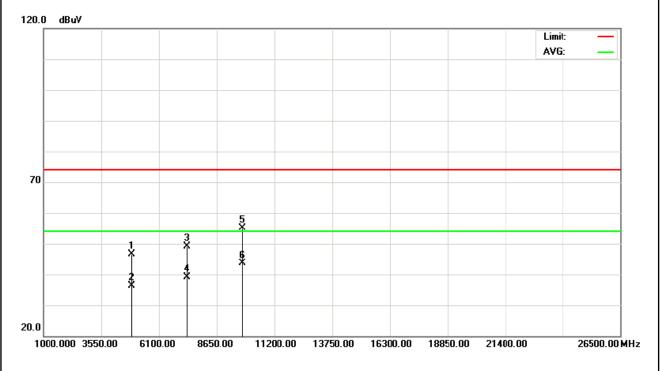
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Neutron Engineering Inc.

## Orthogonal Axis: X 802.11n/40M/CH06(Above 1000 MHz, Vertical)





EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH06		

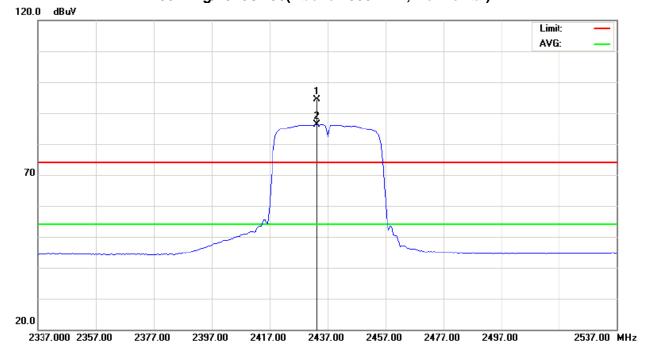
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2433.40	Н	62.34	54.35	32.09	94.43	86.44			X/F
4874.00	Η	40.00	33.18	3.90	43.90	37.08	74.00	54.00	X/H
7308.60	Η	40.50	29.90	9.14	49.64	39.04	74.00	54.00	X/H
9751.20	Н	41.41	31.42	12.12	53.53	43.54	74.00	54.00	X/H

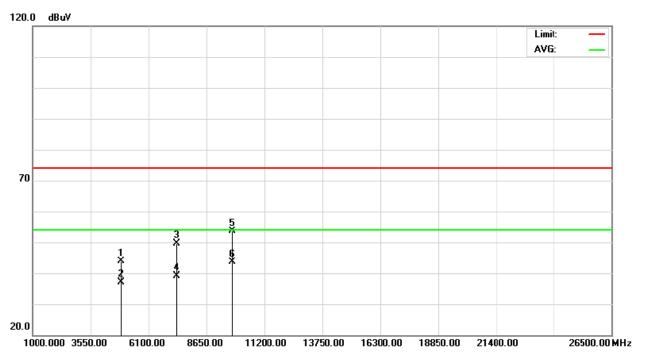
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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## Orthogonal Axis: X 802.11g/40M/CH06(Above 1000 MHz, Horizontal)





IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH09		

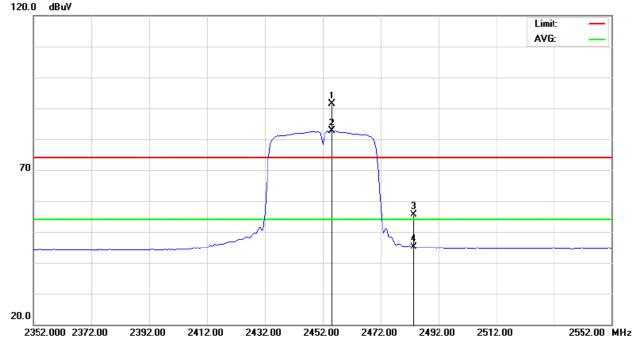
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2455.20	V	59.20	50.39	32.18	91.38	82.57			X/F
2483.50	V	23.29	12.83	32.29	55.58	45.12	74.00	54.00	X/H
4903.60	V	42.73	33.15	4.00	46.73	37.15	74.00	54.00	X/H
7354.00	V	41.17	31.29	9.21	50.38	40.50	74.00	54.00	X/H
9810.40	V	41.42	32.00	12.21	53.63	44.21	74.00	54.00	X/H

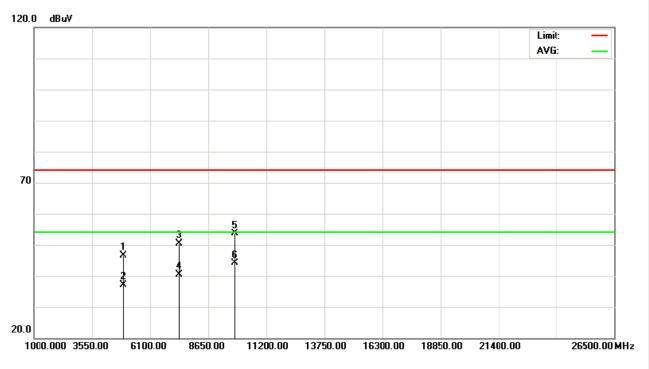
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc. 120.0 dBuV







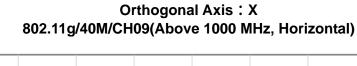
EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH09		

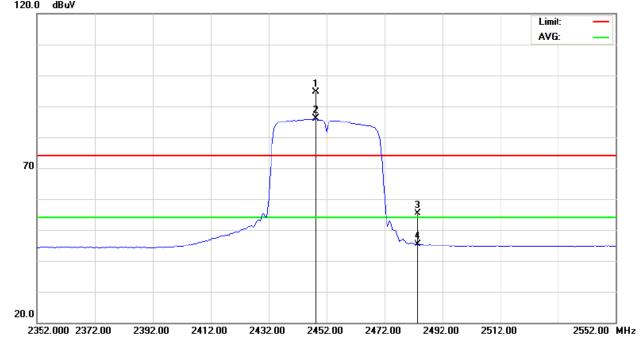
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2448.40	Н	62.51	53.89	32.15	94.66	86.04			X/F
2483.50	Η	23.02	13.14	32.29	55.31	45.43	74.00	54.00	X/H
4904.40	Η	42.33	31.27	4.00	46.33	35.27	74.00	54.00	X/H
7358.80	Η	41.48	31.18	9.22	50.70	40.40	74.00	54.00	X/H
9810.40	Н	41.47	31.94	12.21	53.68	44.15	74.00	54.00	X/H

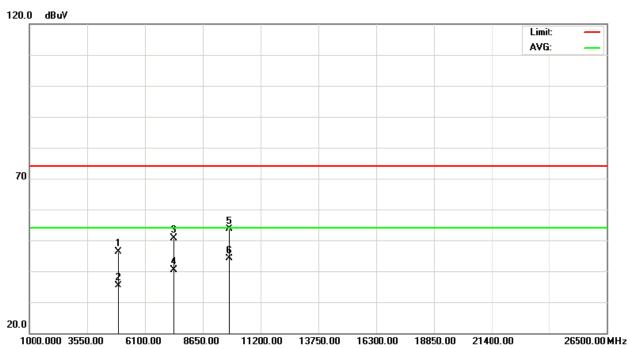
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# Neutron Engineering Inc. 120.0 dBuV







## 4.2.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS

EUT:	3G Portable Router with Battery	Model No. :	3G-6210N					
Temperature:	26°C	Relative Humidity:	47%					
Test Voltage:	AC 120V/60Hz							
Test Mode :	802.11b(Vertical)	802.11b(Vertical)						
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest chameasured at 2310-2390 MH  2. The transmitter was configur transmit at the highest channessured at 2483.5-2500 MH	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to					

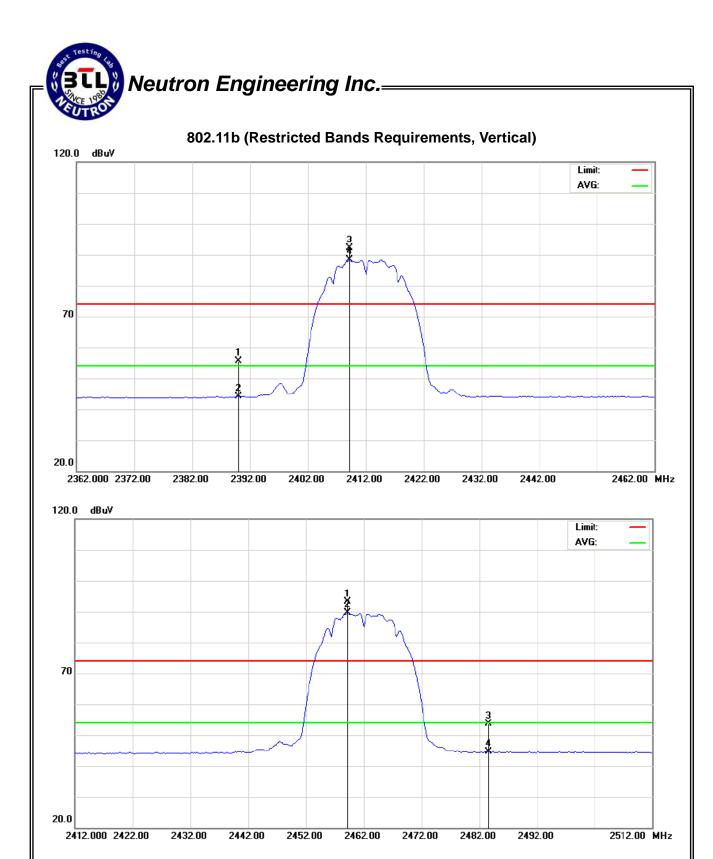
	Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
			Peak	AV		Peak	AV	Peak	AV	Note
	(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
ľ	2390.00	V	23.64	12.23	31.93	55.57	44.16	74.00	54.00	Χ
	2483.50	V	21.34	12.30	32.29	53.63	44.59	74.00	54.00	Х

## Remark:

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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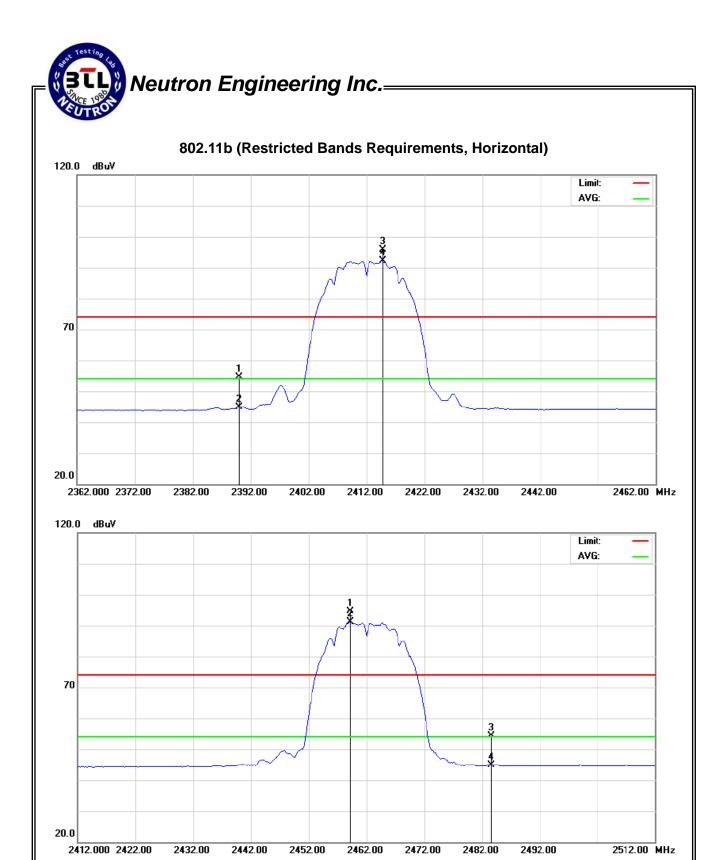


EUT:	3G Portable Router with Battery	Model No. :	3G-6210N			
Temperature:	Relative Humidity: 47%					
Test Voltage:	AC 120V/60Hz					
Test Mode :	802.11b(Horizontal)					
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to			

Ī	Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Limit		
			Peak	AV		Peak	AV	Peak	AV	Note
	(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
ľ	2390.00	Н	22.66	12.92	31.93	54.59	44.85	74.00	54.00	Х
	2483.50	Н	21.97	12.62	32.29	54.26	44.91	74.00	54.00	Х

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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EUT:	3G Portable Router with Battery	Model No. :	3G-6210N				
Temperature:	26°C	47%					
Test Voltage:	AC 120V/60Hz						
Test Mode :	802.11g(Vertical)						
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

	Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Limit		
			Peak	AV		Peak	AV	Peak	AV	Note
(	(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
23	390.00	V	25.32	13.80	31.93	57.25	45.73	74.00	54.00	Х
24	483.50	V	21.67	12.99	32.29	53.96	45.28	74.00	54.00	Х

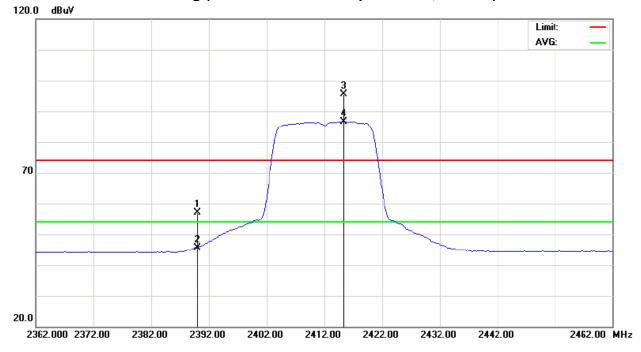
- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

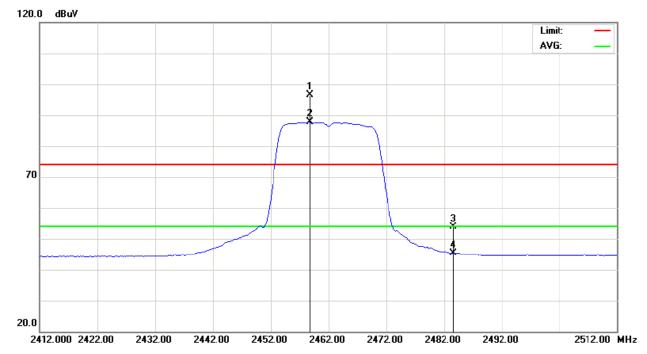
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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### Neutron Engineering Inc.=

### 802.11g (Restricted Bands Requirements, Vertical)





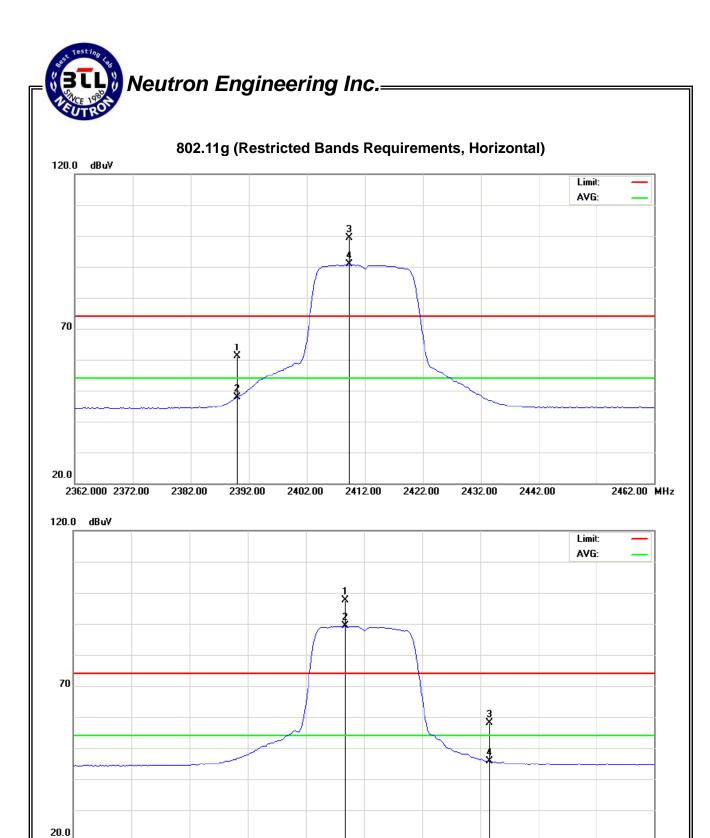
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EUT:	3G Portable Router with Battery	Model No. :	3G-6210N				
Temperature:	26°C	Relative Humidity:	47%				
Test Voltage:	AC 120V/60Hz						
Test Mode :	802.11g(Horizontal)						
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest charmeasured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest charmeasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

Freq.	Ant.Pol.	Rea	Reading		Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	29.27	5.96	31.93	61.20	37.89	74.00	54.00	Х
2483.50	Н	25.83	13.47	32.29	58.12	45.76	74.00	54.00	Х

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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2492.00

2512.00 MHz

2412.000 2422.00

2432.00

2442.00

2452.00

2462.00

2472.00

2482.00

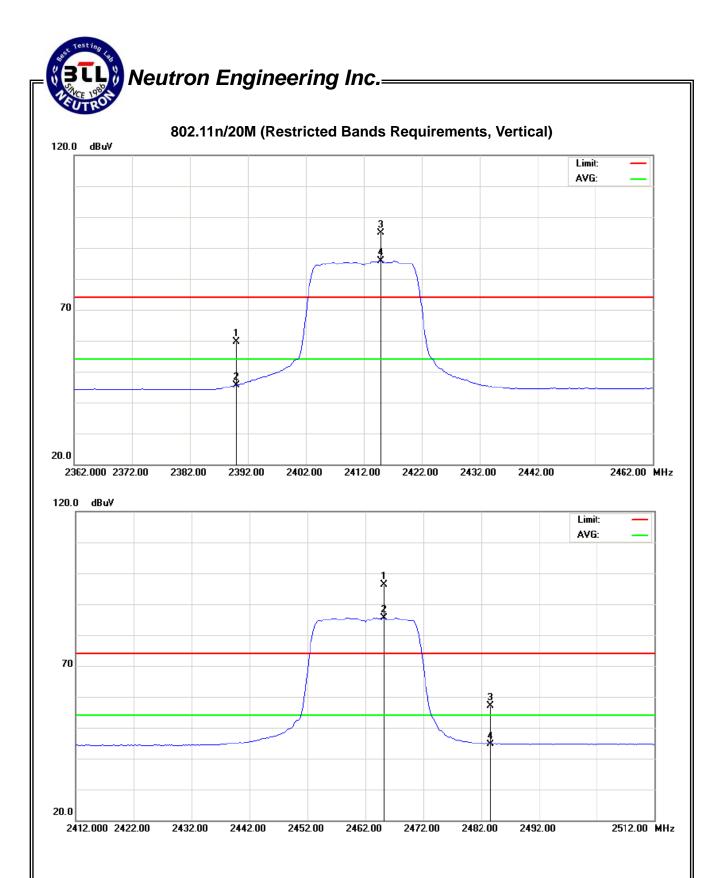
EUT:	3G Portable Router with Battery	Model No. :	3G-6210N				
Temperature:	26°C	Relative Humidity:	47%				
Test Voltage:	AC 120V/60Hz						
Test Mode :	802.11n/20M(Vertical)						
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then con to transmit at the lowest char measured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst ca nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	27.70	13.74	31.93	59.63	45.67	74.00	54.00	Х
2483.50	V	24.96	12.32	32.29	57.25	44.61	74.00	54.00	Х

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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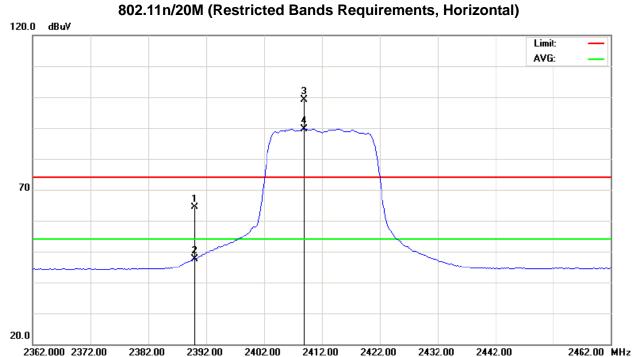
EUT:	3G Portable Router with Battery	Model No. :	3G-6210N			
Temperature:	26°C	6°C Relative Humidity: 47%				
Test Voltage:	AC 120V/60Hz					
Test Mode :	802.11n/20M(Horizontal)					
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH; 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to			

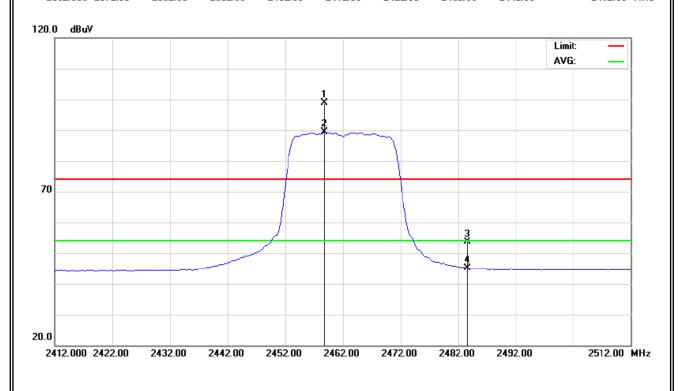
Freq.	Ant.Pol.	Rea	Reading		Α	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)		
2390.00	Н	32.47	15.73	31.93	64.40	47.66	74.00	54.00	Х	
2483.50	Н	21.46	12.79	32.29	53.75	45.08	74.00	54.00	Χ	

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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## Neutron Engineering Inc.= 802.11n/20M (Restricted Bands Re





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EUT:	3G Portable Router with Battery	Model No. :	3G-6210N				
Temperature:	26°C	Relative Humidity:	47%				
Test Voltage:	AC 120V/60Hz						
Test Mode :	802.11n/40M(Vertical)						
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest chameasured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanres measured at 2483.5-2500 M	nfigured with the wor nnel (CH03). Then the z. red with the worst can nel (CH09). Then the	st case antenna and setup ne field strength was se antenna and setup to				

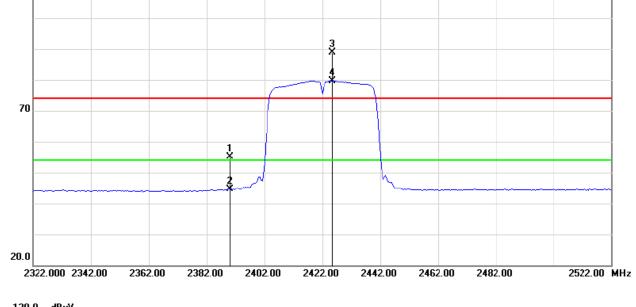
Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	23.12	12.66	31.93	55.05	44.59	74.00	54.00	Х
2483.50	V	23.29	12.83	32.29	55.58	45.12	74.00	54.00	Х

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

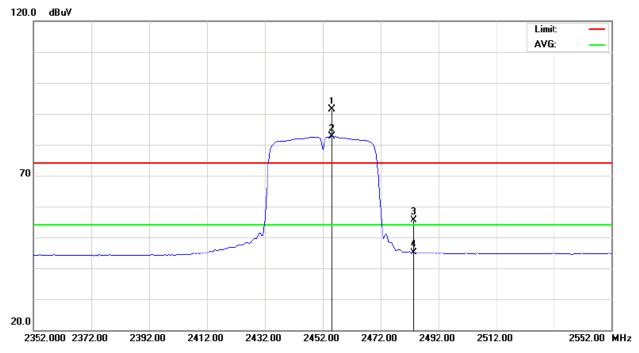
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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# Neutron Engineering Inc. 802.11n/40M (Restricted Bands Requirements, Vertical) 120.0 dBuV



Limit: AVG:



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EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M(Horizontal)		
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest charmeasured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest charmeasured at 2483.5-2500 M	nfigured with the wor nnel (CH03). Then th z. red with the worst can nel (CH09). Then the	st case antenna and setup ne field strength was se antenna and setup to

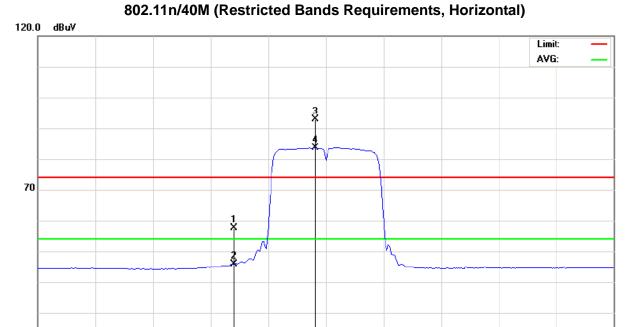
Freq.	Ant.Pol.	Rea	ding	Ant./CF	Α	ct.	Lir	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	25.67	13.98	31.93	57.60	45.91	74.00	54.00	Χ
2483.50	Н	23.02	13.14	32.29	55.31	45.43	74.00	54.00	X

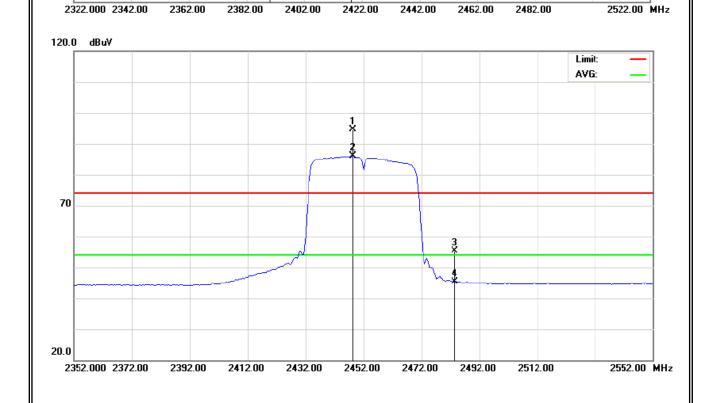
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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### Neutron Engineering Inc.= 802.11n/40M (Restricted Bands Re

20.0





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### 5. BANDWITH TEST

### 5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C				
Test Item	Limit	Frequency Range (MHz)	Result	
Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS	

### **5.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Sep. 10, 2010

Remark: "N/A" denotes No Model No., Serial No. or No Calibration specified.

### **5.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

### **5.1.3 DEVIATION FROM STANDARD**

No deviation.

### 5.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

### **5.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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### **5.1.6 TEST RESULTS**

IFUI:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	12.24	>=500KHz
CH06	2437	12.20	>=500KHz
CH11	2462	12.20	>=500KHz

### CH01



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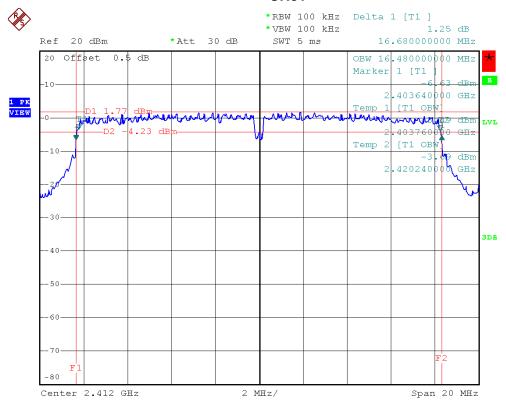
### Neutron Engineering Inc. **CH06** \*RBW 100 kHz Delta 1 [T1 ] \*RBW 100 ... \*VBW 100 kHz 12.200000000 MHz Ref 20 dBm \*Att 30 dB 20 Offset 0.5 dB OBW 15 080000000 MHz Marker 1 [T1] -10-2.430880000 GHz 1 PK VIEW [T1 OBW] mhahaha 129480000 GHz [T1 78W] 2.444560000 GHz 3DB Center 2.437 GHz 2 MHz/ Span 20 MHz **CH11** \*RBW 100 kHz Delta 1 [T1 ] \*VBW 100 kHz 0.59 dB Ref 20 dBm \*Att 30 dB SWT 5 ms 12.200000000 MHz 20 Offset 0.5 dB OBW 15 080000000 MHz Marker 1 [T1 -10-2.455880000 GHz 1 PK VIEW [T1 OBW] 754442000 GHz [T1 PBW] -854 dBm 3DB Center 2.462 GHz 2 MHz/ Span 20 MHz

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IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH06, CH11		

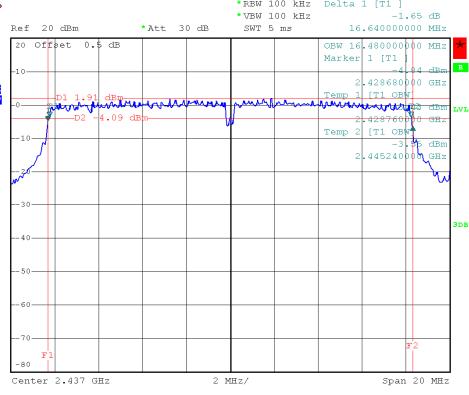
Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	16.68	>=500KHz
CH06	2437	16.64	>=500KHz
CH11	2462	16.64	>=500KHz

### CH01

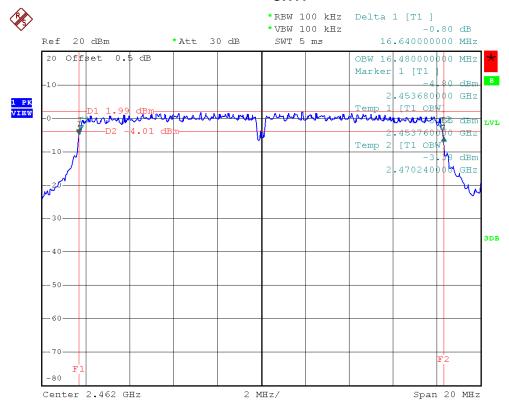


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# \*REW 100 kHz Delta 1 [T1] \*VEW 100 kHz Delta 1 [T1] \*VEW 100 kHz -1. \*Ref 20 dBm \*Att 30 dB SWT 5 ms 16.640000 20 Offset 0.5 dB OBW 16.480000 Marker 1 [T1] 1 FK VIEW D1 1.91 dBm H 400 M 40



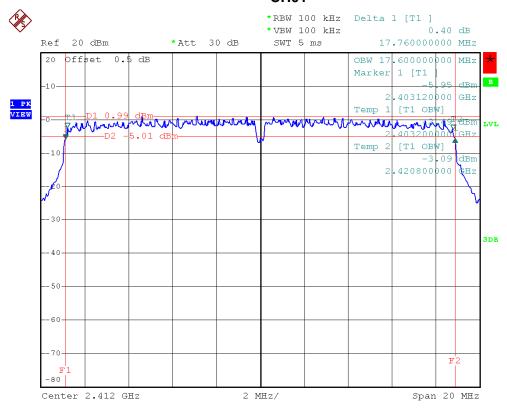
### **CH11**



IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N	
Temperature:	26°C	Relative Humidity:	47%	
Test Voltage:	AC 120V/60Hz			
Test Mode :	802.11n/20M/CH01, CH06, CH11			

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	17.76	>=500KHz
CH06	2437	17.72	>=500KHz
CH11	2462	17.76	>=500KHz

### CH01



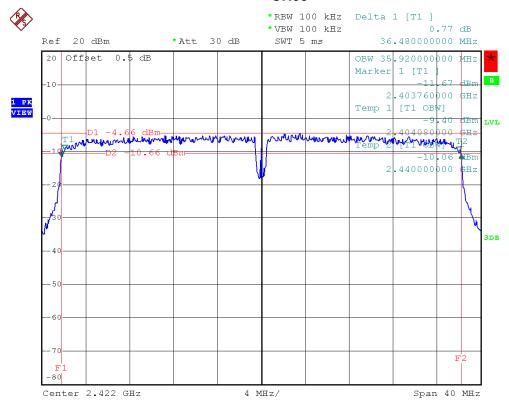
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### Neutron Engineering Inc. **CH06** \*RBW 100 kHz Delta 1 [T1 ] Ref 20 dBm \*Att 30 dB OBW 17 600000000 MHz Marker 1 [T1] 20 Offset 0.5 dB -10 2.428120000 GHz 1 PK VIEW Temp 1 [11 - 428200000] Temp 1 [T1 OBW] Wwwwwwwww. Temp 2 [T1 OBW] dBm 2.445800000 3DB Center 2.437 GHz 2 MHz/ Span 20 MHz CH11 \*RBW 100 kHz Delta 1 [T1 ] \*VRW 100 kHz 0.12 dB 17.760000000 MHz Ref 20 dBm SWT 5 ms \*Att 30 dB Offset 0.5 dB OBW 17.600000000 MHz Marker 1 [T1 2.453120000 GHz 1 PK VIEW Temp 1 [T1 OBW] D2 -4.49 dBm 2 453200000 dBm Temp 2 [T1 OBW] 2.470800000 3DB -50 Center 2.462 GHz 2 MHz/ Span 20 MHz

IFUI :	3G Portable Router with Battery	Model No. :	3G-6210N	
Temperature:	26°C	Relative Humidity:	47%	
Test Voltage:	AC 120V/60Hz			
Test Mode :	302.11n/40M/CH03, CH06, CH09			

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH03	2422	36.48	>=500KHz
CH06	2437	36.56	>=500KHz
CH09	2452	36.64	>=500KHz

### **CH03**



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### Neutron Engineering Inc. **CH06** \*RBW 100 kHz Delta 1 [T1 ] Ref 20 dBm \*Att 30 dB 20 Offset 0.5 dB OBW 35.920000000 MHz Marker 1 [T1] 2.418680000 GHz 1 PK VIEW Temp 1 [T1 OBW] THE WATER SOFT OF THE Temp 2 [T1 OBW] 2.455000000 3DB Center 2.437 GHz 4 MHz/ Span 40 MHz **CH09** \*RBW 100 kHz Delta 1 [T1 ] \*VBW 100 kHz 0.82 dB 36.640000000 MHz Ref 20 dBm SWT 5 ms \*Att 30 dB Offset 0.5 dB OBW 35.920000000 MHz Marker 1 [T1 2.433680000 GHz 1 PK VIEW Temp 1 [T1 OBW] ZEE WAR GOOD STANKE THE THE Temp 2 [T1 OBW] 2.470000000 GHz

4 MHz/

Span 40 MHz

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Center 2.452 GHz

### **6. PEAK OUTPUT POWER TEST**

### **6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart C				
Test Item	Limit	Frequency Range (MHz)	Result	
Peak Output Power 1 watt or 30dBm 2400-2483.5 PASS				

### **6.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model No., Serial No. or No Calibration specified.

### **6.1.2 TEST PROCEDURE**

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

### **6.1.3 DEVIATION FROM STANDARD**

No deviation.

### 6.1.4 TEST SETUP

EUT Power Meter

### **6.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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### 6.1.6 TEST RESULTS

EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	19.85	30	1
CH06	2437	19.86	30	1
CH11	2462	19.94	30	1

EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH06, CH11		

Test Channel	Frequency	Peak Output Power	LIMIT	LIMIT
root oriannor	(MHz)	(dBm)	(dBm)	(W)
CH01	2412	23.93	30	1
CH06	2437	23.92	30	1
CH11	2462	23.82	30	1

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IFUI '	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	23.63	30	1
CH06	2437	23.66	30	1
CH11	2462	23.60	30	1

EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH03, CH06, CH	09	

Test Channel	Frequency	Peak Output Power	LIMIT	LIMIT
rest orialine	(MHz)	(dBm)	(dBm)	(W)
CH03	2422	22.60	30	1
CH06	2437	23.65	30	1
CH09	2452	23.70	30	1

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### 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item Limit Frequency Range (MHz) Result					
Antenna conducted Spurious Emission	20dB less than the peak value of fundamental frequency	30-25000	PASS		

### 7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Sep. 10, 2010

Remark: "N/A" denotes No Model No., Serial No. or No Calibration specified.

### 7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

### 7.1.3 DEVIATION FROM STANDARD

No deviation.

### 7.1.4 TEST SETUP



### 7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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### 7.1.6 TEST RESULTS

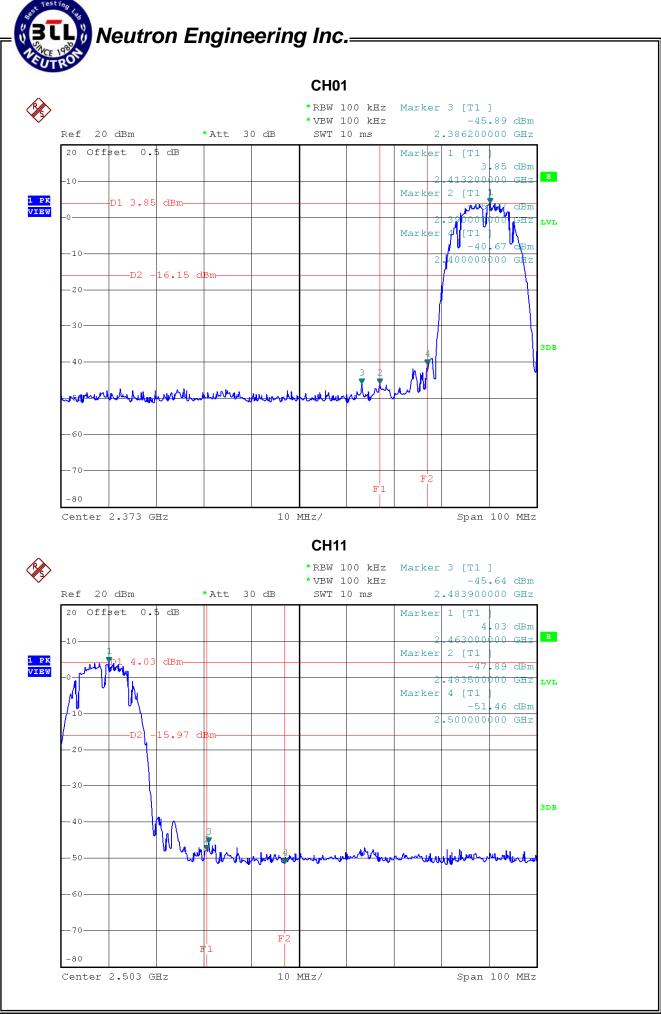
EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH11		

Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band  The max. radio frequency power in any 100 kHz bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2386.2 -45.89 2483.9 -45.64				
Result				

### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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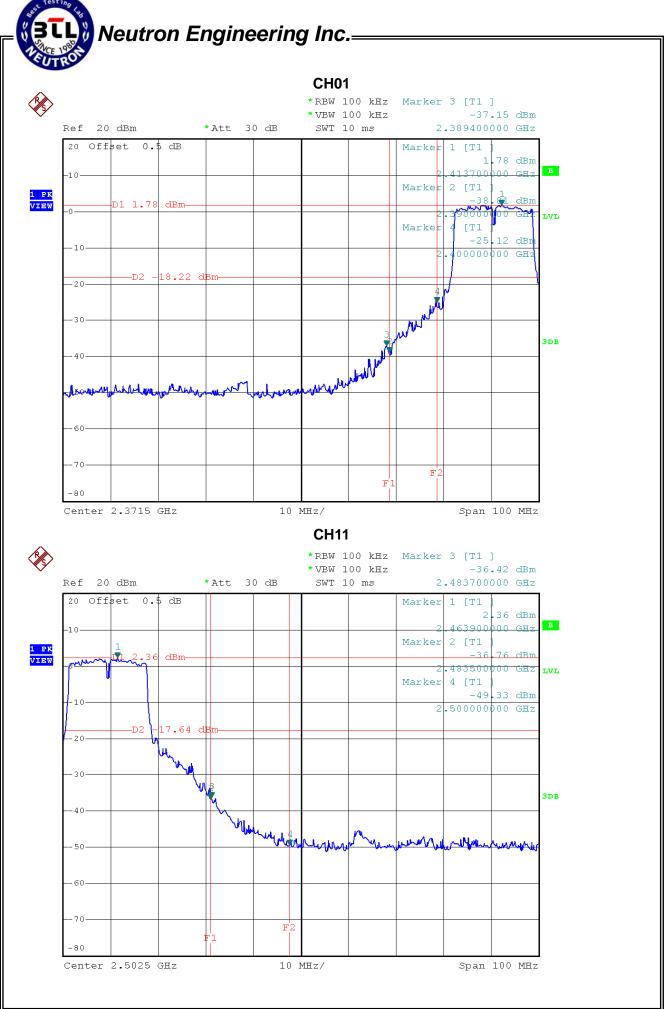
EUT:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH11		

Channel of Worst Data: CH1,CH11			
•	cy power in any 100kHz the frequency band	The max. radio frequence bandwidth within the	<i>y</i> .
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2389.4 -37.15 2483.7 -36.42			
Pocult			

### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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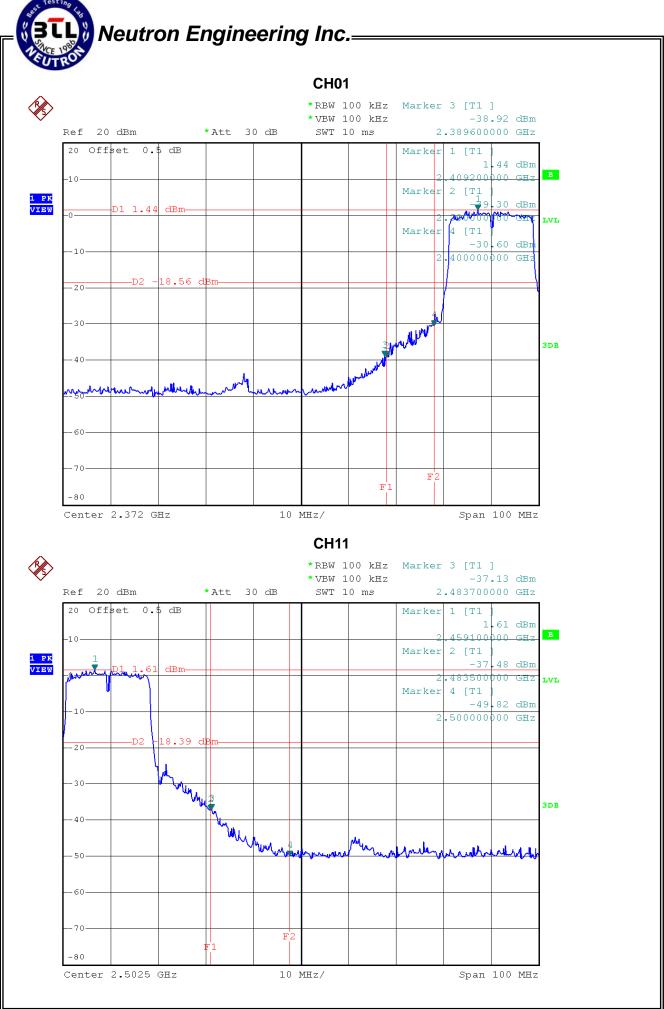


HUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH01, CH11		

Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2389.6 -38.92 2483.7 -37.13				
Result				

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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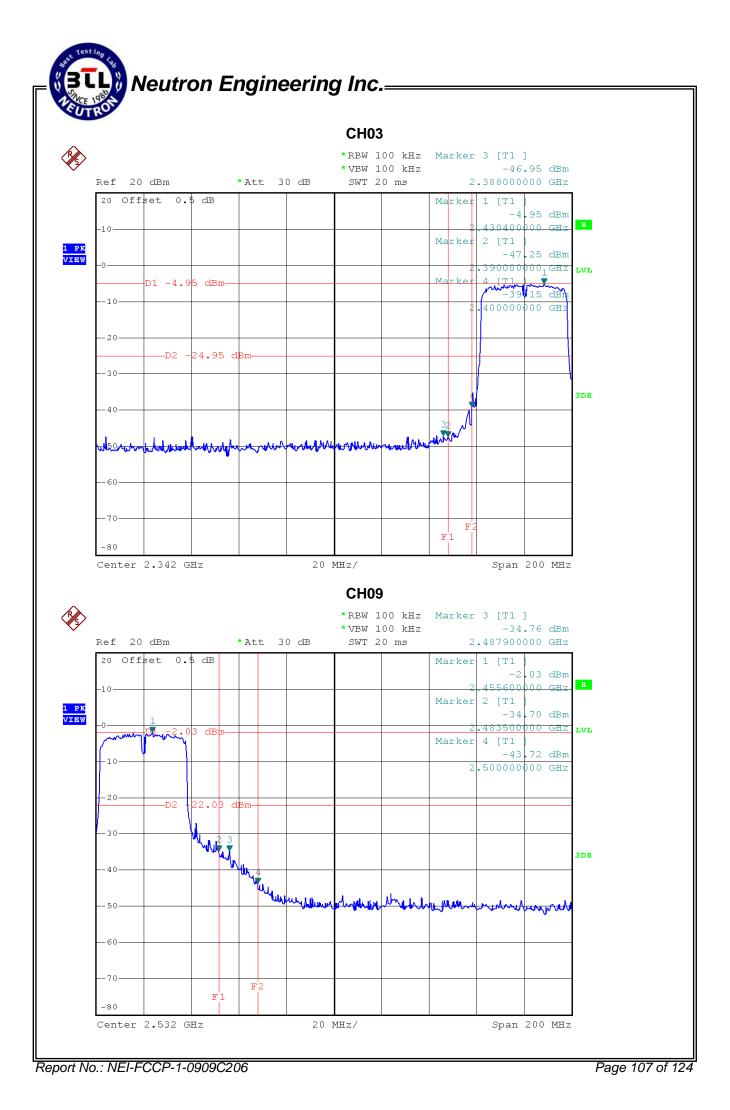


IFUI:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH03, CH09		

Channel of Worst Data: CH03,CH09				
•	cy power in any 100kHz the frequency band	The max. radio frequence bandwidth within the	, ,	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2388.0 -46.95 2487.9 -34.76				
Result				

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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### 8. POWER SPECTRAL DENSITY TEST

### 8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C				
Test Item	Limit	Frequency Range (MHz)	Result	
Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS	

### **8.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Sep. 10, 2010

Remark: "N/A" denotes No Model No., Serial No. or No Calibration specified.

### **8.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=30KHz, Sweep time = 500s.

### **8.1.3 DEVIATION FROM STANDARD**

No deviation.

### 8.1.4 TEST SETUP



### **8.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

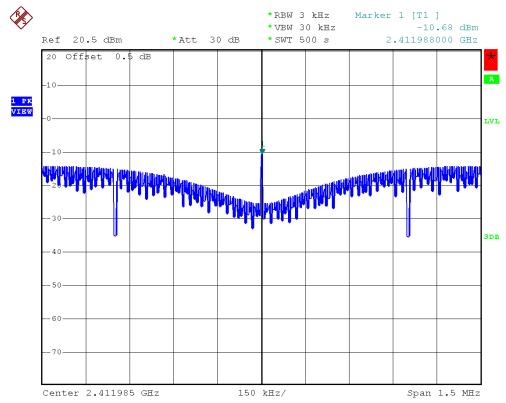
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# 8.1.6 TEST RESULTS

IFUI:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-10.68	8
CH06	2437	-10.40	8
CH11	2462	-10.43	8

#### **CH01**



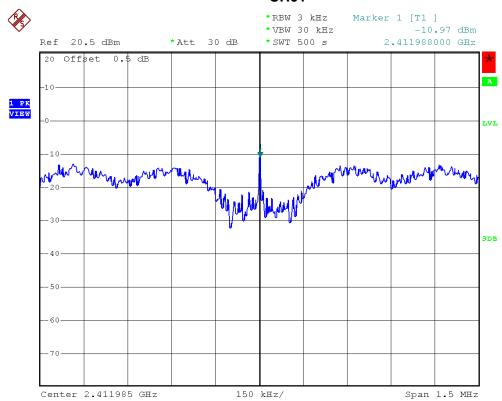
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# Neutron Engineering Inc. **CH06** \*RBW 3 kHz Marker 1 [T1 ] \*VBW 30 kHz -10.40 dBm \*Att 30 dB Ref 20.5 dBm \*SWT 500 s 2.436985000 GHz 20 Offset 0.5 dB 1 PK VIEW LVL 3DB Center 2.436985 GHz 150 kHz/ Span 1.5 MHz **CH11** \*RBW 3 kHz Marker 1 [T1 ] \*VBW 30 kHz -10.43 dBm Ref 20.5 dBm \*Att 30 dB \*SWT 500 s 2.461985000 GHz 20 Offset 0.5 dB 1 PK VIEW LVL 3DB Center 2.461985 GHz 150 kHz/ Span 1.5 MHz

IFUI:	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH06, CH11		

Test Channel	Frequency	Power Density	LIMIT
Test Offamile	(MHz)	(dBm)	(dBm)
CH01	2412	-10.97	8
CH06	2437	-10.91	8
CH11	2462	-10.90	8

#### CH01



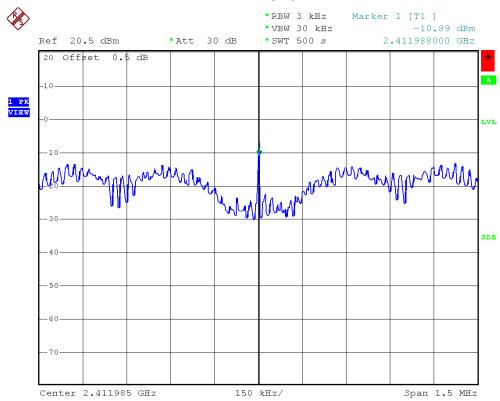
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IEUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/20M/CH01, CH06, CH11		

Test Channel	Frequency	Power Density	LIMIT
	(MHz)	(dBm)	(dBm)
CH01	2412	-10.89	8
CH06	2437	-10.74	8
CH11	2462	-10.54	8

# CH01



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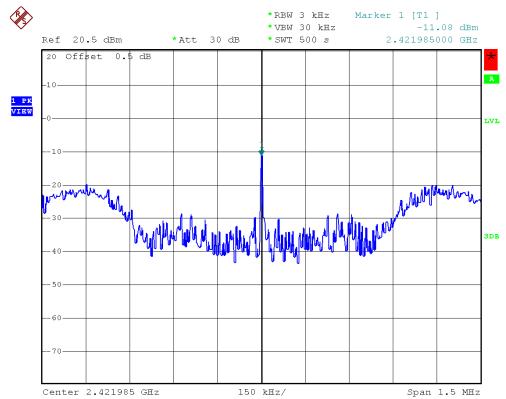
# Neutron Engineering Inc.= **CH06** \*RBW 3 kHz Marker 1 [T1 ] \*VBW 30 kHz -10.74 dBm Ref 20.5 dBm \*Att 30 dB \*SWT 500 s 2.436985000 GHz 20 Offset 0.5 dB A 1 PK VIEW LVL 3DB Center 2.436985 GHz 150 kHz/ Span 1.5 MHz **CH11** \*RBW 3 kHz Marker 1 [T1 ] \*VBW 30 kHz -10.54 dBm \*SWT 500 s 2.461985000 GHz Ref 20.5 dBm \*Att 30 dB Offset 1 PK VIEW 3DB Center 2.461985 GHz 150 kHz/ Span 1.5 MHz

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EUI.	3G Portable Router with Battery	Model No. :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n/40M/CH03, CH06, CH09		

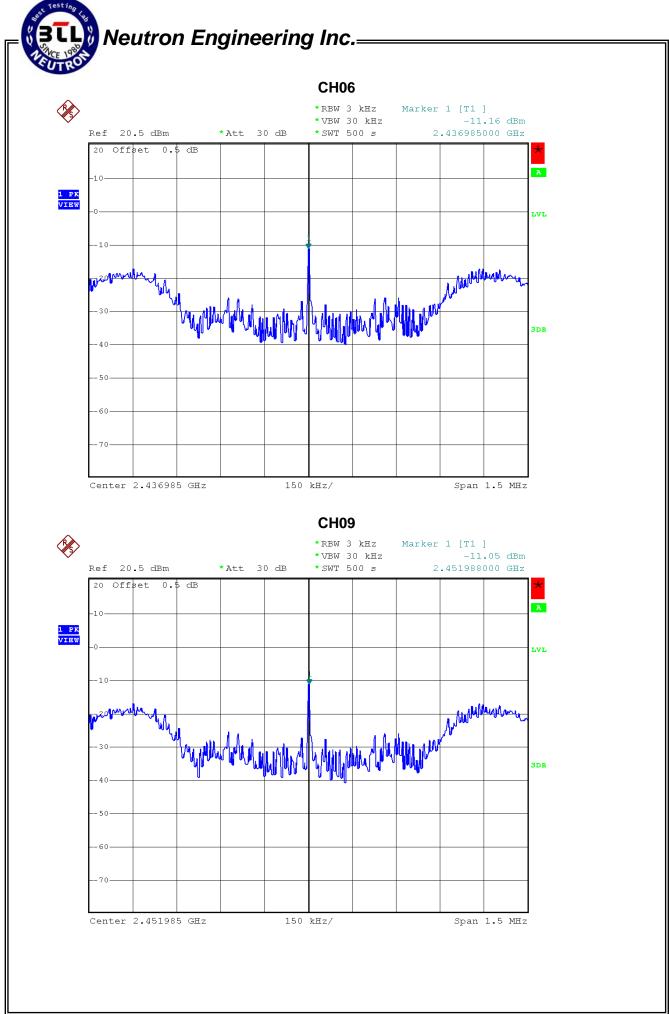
Test Channel	Frequency	Power Density	LIMIT
rest Chamilei	(MHz)	(dBm)	(dBm)
CH03	2422	-11.08	8
CH06	2437	-11.16	8
CH09	2452	-11.05	8

# **CH03**



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### 9. RF EXPOSURE TEST

#### 9.1 APPLIED PROCEDURES / LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency F (MHz)	lange	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time  E ², H ²or S (minutes)
0.3-3.0		614	1.63	(100)*	6
3.0-30		1842 / f	4.89 / f	(900 / f)*	6
30-300		61.4	0.163	1.0	6
300-150	0			F/300	6
1500-100,0	000			5	6

# (B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz; \*Plane-wave equivalent power density

# 9.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### 9.1.2 MPE CALCULATION METHOD

E (V/m) 
$$=\frac{\sqrt{30\times P\times G}}{d}$$
 Power Density:  $Pd$  (W/m²)  $=\frac{E^2}{377}$ 

**E** = Electric field (V/m)

**P** = Peak RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

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No deviation.

# 9.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

# 9.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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# 9.1.6 TEST RESULTS

EUI.	3G Portable Router with Battery	Model Name :	3G-6210N		
Temperature:	26°C	Relative Humidity:	47%		
Test Voltage:	AC 120V/60Hz				
Test Mode :	802.11b				

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	3.48	2.2284	19.8500	96.6051	0.042850	1
2437	3.48	2.2284	19.8600	96.8278	0.042949	1
2462	3.48	2.2284	19.9400	98.6279	0.043747	1

EUT:	IEEE 802.11 bgn Wireless Router	Model Name :	3G-6210N		
Temperature:	13 ℃	Relative Humidity:	47%		
Test Voltage:	AC 120V/60Hz				
Test Mode :	802.11g				

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	3.48	2.2284	23.9300	247.1724	0.109635	1
2437	3.48	2.2284	23.9200	246.6039	0.109383	1
2462	3.48	2.2284	23.8200	240.9905	0.106893	1

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IEUT :	3G Portable Router with Battery	Model Name :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n HT20		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	3.48	2.2284	23.6300	230.6747	0.102318	1
2437	3.48	2.2284	23.6600	232.2737	0.103027	1
2462	3.48	2.2284	23.6000	229.0868	0.101613	1

EUT:	3G Portable Router with Battery	Model Name :	3G-6210N
Temperature:	26°C	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Test Mode :	802.11n HT40		

Frequency (MHz)	Antenna Gain (dBi)		•	•	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	3.48	2.2284	22.6000	181.9701	0.080714	1
2437	3.48	2.2284	23.6500	231.7395	0.102790	1
2462	3.48	2.2284	23.7000	234.4229	0.103980	1

# Remark:

(1) The MIMO test requirement, MPE shall measure by using the total sum power of each transmitter chain.

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# 11. HISTORY

Original Issue Da	te:			
Report N	0.:			
No additional attachment				
		ied as following record:		
Attachment No.	Issue Date	Description		

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