

FCC TEST REPORT

According to

FCC Rules and Regulations Part 15 Subpart C

Applicant : AXIM Comunications

Address 1F., No.5, Aly. 12, Ln. 15, Sec. 6, Sinyi Rd., Sinyi

Dist., Taipei City 110, Taiwan (R.O.C.)

Equipment : Broadband Sharing Router

Model No. : X-108NX

FCC ID : ZXPX108NX

Trade Name: AXIMCom

- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of Cerpass Technology Corp. the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 1 of 119

Contents

Report No.: TEFI1110072

Issued Date: Nov. 10, 2011

Page No. : 2 of 119 FCC ID : ZXPX108NX

1.	Rep	ort of Measurements and Examinations	6
	1.1	List of Measurements and Examinations	6
2.	Test	Configuration of Equipment under Test	7
	2.1	Feature of Equipment under Test	7
	2.2	Carrier Frequency of Channels	8
	2.3	Test Mode and Test Software	8
	2.4	Description of Test System	8
	2.5	General Information of Test	9
	2.6	Measurement Uncertainty	9
3.	Ante	nna Requirements	10
	3.1	Standard Applicable	10
	3.2	Antenna Construction and Directional Gain	10
4.	Test	of Conducted Emission	11
	4.1	Test Limit	11
	4.2	Test Procedures	11
	4.3	Typical Test Setup	12
	4.4	Measurement equipment	12
	4.5	Test Result and Data	13
	4.6	Test Photographs	19
5.	Test	of Radiated Emission	20
	5.1	Test Limit	20
	5.2	Test Procedures	20
	5.3	Typical Test Setup	21
	5.4	Measurement equipment	21
	5.5	Test Result and Data	22
	5.6	Test Photographs	58
6.	6dB	Bandwidth Measurement Data	59
	6.1	Test Limit	59
	6.2	Test Procedures	59
	6.3	Test Setup Layout	59
	6.4	Measurement equipment	59
	6.5	Test Result and Data	59
7.	Maxi	imum Peak Output Power	72
	7.1	Test Limit	72
	7.2	Test Procedures	72
	7.3	Test Setup Layout	72
	7.4	Measurement equipment	72
	7.5	Test Result and Data	72
8.	Ban	d Edges Measurement	86
	8.1	Test Limit	86
	8.2	Test Procedure	86
	8.3	Test Setup Layout	86
	8.4	Measurement equipment	86



CERPASS TECHNOLOGY CORP.

	8.5	Test Result and Data	86
	8.6	Restrict Band Emission Measurement Data	103
9.	Pow	er Spectral Density	105
	9.1	Test Limit	105
	9.2	Test Procedures	105
	9.3	Test Setup Layout	105
	9.4	Measurement equipment	
	9.5	Test Result and Data	106
10.	Rest	tricted Bands of Operation	119
	10.1	Labeling Requirement	119
A 10.10	o n div	A Dhetegraphe of EUT	A4 A7

Issued Date : Nov. 10, 2011
Page No. : 3 of 119
FCC ID : ZXPX108NX

Report No.: TEFI1110072

History of this test report

■ ORIGINAL.

 $\hfill\square$ Additional attachment as following record:

Attachment No.	Issue Date	Description
TEFI1110072	Oct. 14, 2011	Original.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 4 of 119
FCC ID : ZXPX108NX

Report No.: TEFI1110072

CERTIFICATE OF COMPLIANCE

According to

FCC Rules and Regulations Part 15 Subpart C

Applicant : AXIM Comunications

Address 1F., No.5, Aly. 12, Ln. 15, Sec. 6, Sinyi Rd., Sinyi

Dist., Taipei City 110, Taiwan (R.O.C.)

Equipment : Broadband Sharing Router

Model No. : X-108NX

FCC ID : ZXPX108NX

I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was *passed* the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2010).**

The test was carried out on Nov. 09, 2011 at Cerpass Technology Corp.

Signature

Hill Chen

EMC/RF B.U. Assistant Manager

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 5 of 119
FCC ID : ZXPX108NX

1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

FCC Rule	. Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. Conducted Emission	Pass
15.209 15.247(d)	. Radiated Emission	Pass
15.247(a)(2)	. 6dB Bandwidth	Pass
15.247(b)	. Maximum Peak Output Power	Pass
15.247(d)	. 100kHz Bandwidth of Frequency Band Edges	Pass
15.247(e)	. Power Spectral Density	Pass
1.1307 1.1310 2.1091 2.1093	. RF Exposure Compliance	Pass

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 6 of 119

Report No.: TEFI1110072



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Frequency Band	2.400~2.484GHz.		
Modulation Technology	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, DBPSK, DQPSK, CCK		
Operation Channels	USA(FCC) 11 Channels: 2.412GHz~2.462GHz Europe(ETSI) 13 Channels: 2.412GHz~2.472GHz Japan 14 Channels: 2.412GHz~2.484GHz		
Wireless Mode	11n/11b/11g		
Transmission Rate	11n up to 300Mbps 11g up to 54 Mbps with automatic fallback to 48, 36, 24, 18, 9 and 6 Mbps 11b up to 11 Mbps with automatic fallback to 5.5, 2 and 1 Mbps		
Receive Sensitivity	11b 11Mbps(-91dBm) 11g 54Mbps(-76dBm)		
Transmit Power	11b 1~11Mbps, 16dBm 11g 6~9Mbps, 16dBm 12~18Mbps, 15dBm 24~36Mbps, 14dBm 48~54Mbps, 13dBm 11n MCS0~1/8~9, 16dBm MCS2~3/10~11, 15dBm MCS4~5/12~13, 14dBm MCS6~7/14~15, 13dBm		
Operating Temperature	0~50		
Operating Humidity	5%~98%(non-condensing)		
Storage Temperature	-10~65		
Storage Humidity	5%~98%(non-condensing)		
Operating Voltage	DC +12V/1A		
Dimensions	100.1(L) x 140(W) x 28(H)mm		

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 7 of 119
FCC ID : ZXPX108NX

Report No.: TEFI1110072

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n, HT20

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

Report No.: TEFI1110072

802.11n, HT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
		07	2442
		08	2447
03	2422	09	2452
04	2427		
05	2432		
06	2437		

2.3 Test Mode and Test Software

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. The complete test system included remote workstation, Printer, Notebook and EUT. The remote workstation includes Notebook.
- c. An executive program, "QA Test" under WIN XP was executed to transmit and receive data via wireless.
- d. The following test mode and test software was performed for conduction and radiation test:

Test mode1:

- 802.11b/g/n HT20: CH01: 2412MHz, CH06: 2437MHz, CH11: 2462MHz
- 802.11n HT40: CH03: 2422MHz, CH06: 2437MHz, CH09: 2452MHz

2.4 Description of Test System

Device	Manufacturer	Model No.	Description	
Printer	НР	D2260	USB Cable, Shielding, 1.6m Power Cable, Unshielding, 1.8m	
Notebook	ASUS	A8J	Power Cable, Adapter Unshielding 1.8 m	
Remote works	Remote workstation			
Notebook	ASUS	A8J	Power Cable, Adapter Unshielding 1.8 m	

FCC ID

: ZXPX108NX

Cerpass Technology Corp. Issued Date: Nov. 10, 2011 Tel:886-2-2655-8100 Fax:886-2-2655-8200 Page No. : 8 of 119

2.5 General Information of Test

Test Site :	Cerpass Technology Corp. 2F-11, No. 3, Yuan Qu St., (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location (OATS1-SD):	No. 68-1, Shibachong Si, Shihding Township, Taipei County, Taiwan, R.O.C.
FCC Registration Number :	TW1049, TW1056, TW1061, 390316, 488071, 982971
IC Registration Number :	4934B-1, 4934D-1
VCCI Registration Number :	T-1173 for Telecommunication Test C-4139 for Conducted emission test R-3428 for Radiated emission test G-97 for Radiated emission test above 1GHz
Test Voltage:	AC 120V
Test in Compliance with:	ANSI C63.4-2009 FCC Part 15 Subpart C
Frequency Range Investigated:	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 24620MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

2.6 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE/NEUTRAL	2.71 dB
D " I	00.1411 05.011	Vertical	4.11 dB
Radiated Emission	30 MHz ~ 25GHz	Horizontal	4.10 dB
6 dB Bandwidth			7500 Hz
Maximum Peak Output Power			1.4 dB
100kHz Bandwidth of Frequency Band Edges			2.2 dB
Power Spectral Density			2.2 dB

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 9 of 119
FCC ID : ZXPX108NX

Report No.: TEFI1110072



3. Antenna Requirements

3.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Report No.: TEFI1110072

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

3.2 Antenna Construction and Directional Gain

Antenna R:

Antenna type: Dipole Antenna Antenna Gain: 3.00 dBi

Antenna L:

Antenna type: Dipole Antenna Antenna Gain: 3.00 dBi

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011
Page No.: 10 of 119
FCC ID: ZXPX108NX

4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2009 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 - 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 – 30.0	60	50

^{*}Decreases with the logarithm of the frequency.

4.2 Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

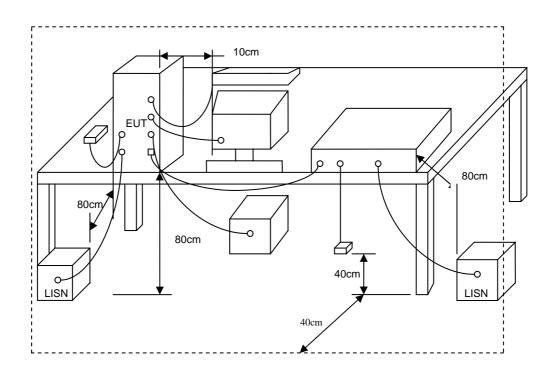
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 11 of 119
FCC ID : ZXPX108NX



4.3 Typical Test Setup



4.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
EMI Receiver	R&S	ESCI	100443	2011/02/08	2012/02/07
LISN	Schwarzbeck	NSLK 8127	8127-516	2011/05/05	2012/05/04
LISN	Schwarzbeck	NSLK 8127	8127-568	2011/08/24	2012/08/23

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

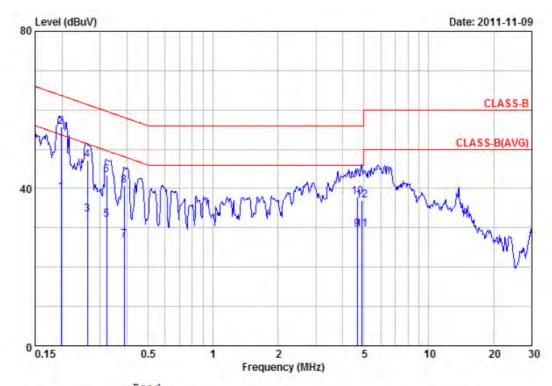
Issued Date : Nov. 10, 2011
Page No. : 12 of 119

Report No.: TEFI1110072

0

4.5 Test Result and Data

Power	:	AC 120V	Pol/Phase :	LINE
Test Mode 1		802.11g CH1	Temperature :	25 °C
Memo	:		Humidity :	65 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	20111111
1	0.20	38.93	0.12	39.05	63.68	-24.63	Average
2	0.20	55.69	0.12	55.81	63.68	-7.87	QP
3	0.26	33.31	0.12	33.43	61.35	-27.92	Average
4	0.26	47.20	0.12	47.32	61.35	-14.03	QP
5	0.32	31.89	0.13	32.02	59.64	-27.62	Average
6	0.32	43.40	0.13	43.53	59.64	-16.11	QP
7	0.39	26.88	0.13	27.01	58.12	-31.11	Average
8	0.39	40.55	0.13	40.68	58.12	-17.44	QP
9	4.67	29.37	0.38	29.75	56.00	-26.25	Average
10	4.67	37.46	0.38	37.84	56.00	-18.16	QP
11	4.87	29.18	0.38	29.56	56.00	-26.44	Average
12	4.87	36.69	0.38	37.07	56.00	-18.93	QP

Notes:

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

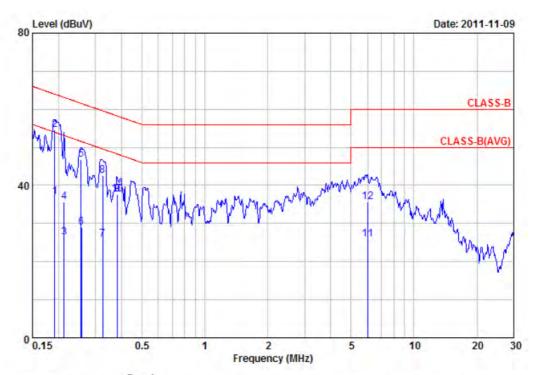
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 13 of 119

Report No.: TEFI1110072

Power	: AC 120V	Pol/Phase	:	NEUTRAL
Test Mode 1	: 802.11g CH1	Temperature	:	25 °C
Memo		Humidity		65 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.19	36.89	0.10	36.99	53.96	-16.97	Average
2	0.19	54.48	0.10	54.58	63.96	-9.38	QP
3	0.21	26.25	0.10	26.35	53.10	-26.75	Average
4	0.21	35,66	0.10	35.76	63.10	-27.34	QP
5	0.26	46.68	0.10	46.78	61.56	-14.78	QP
6	0.26	28.95	0.10	29.05	51.51	-22.46	Average
7	0.32	25.68	0.11	25.79	49.59	-23.80	Average
8	0.32	42.55	0.11	42.66	59.59	-16.93	QP
9	0.38	37.52	0.12	37.64	58.20	-20.56	QP
10	0.38	37.51	0.12	37.63	58.20	-20.57	QP
11	6.01	25.51	0.39	25.90	50.00	-24.10	Average
12	6.01	35.26	0.39	35.65	60.00	-24.35	QP

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

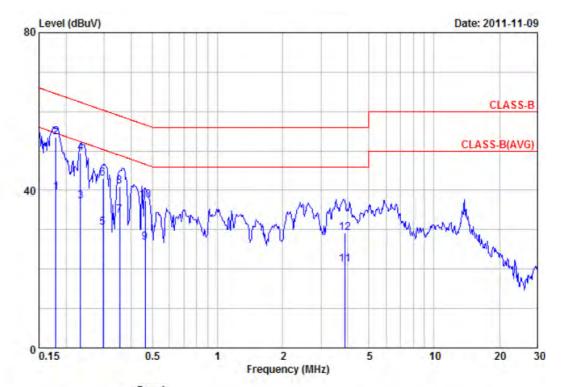
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011 Page No. : 14 of 119

Report No.: TEFI1110072

Power :	AC 120V	Pol/Phase :	LINE
Test Mode 1 :	802.11n, HT20 CH1	Temperature :	25 °C
Memo :		Humidity :	65 %



		Read					
Item	Freq	Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.18	39.26	0.12	39.38	54.50	-15.12	Average
2	0.18	53.32	0.12	53.44	64.50	-11.06	QP
3	0.23	37.02	0.12	37.14	52.35	-15.21	Average
4	0.23	49.26	0.12	49.38	62.35	-12.97	QP
5	0.30	30.47	0.12	30.59	50.34	-19.75	Average
6	0.30	42.95	0.12	43.07	60.34	-17.27	QP
7	0.35	33.47	0.13	33.60	48.86	-15.26	Average
8	0.35	40.97	0.13	41.10	58.86	-17.76	QP
9	0.46	26.62	0.13	26.75	46.63	-19.88	Average
10	0.46	37.24	0.13	37.37	56.63	-19.26	QP
11	3.87	20.83	0.34	21.17	46.00	-24.83	Average
12	3.87	28.81	0.34	29.15	56.00	-26.85	QP

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

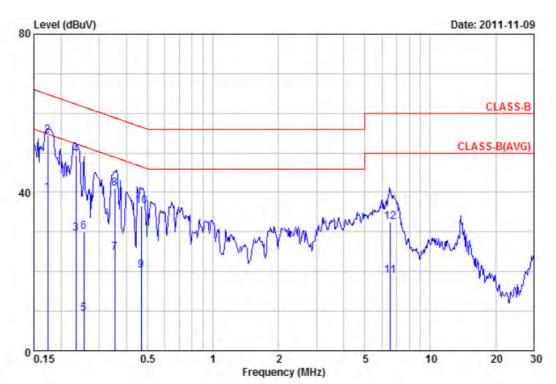
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 15 of 119

FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase :	NEUTRAL
Test Mode 1 :	802.11n, HT20 CH1	Temperature :	25 °C
Memo :		Humidity :	65 %



		Read					
Item	Freq	Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.17	39.70	0.10	39.80	54.79	-14.99	Average
2	0.17	54.22	0.10	54.32	64.79	-10.47	QP
3	0.23	29.62	0.10	29.72	52.28	-22.56	Average
4	0.23	49.41	0.10	49.51	62.28	-12.77	QP
5	0.25	9.22	0.10	9.32	51.60	-42.28	Average
6	0.25	30.06	0.10	30.16	61.60	-31.44	QP
7	0.35	24.71	0.11	24.82	48.87	-24.05	Average
8	0.35	40.89	0.11	41.00	58.87	-17.87	QP
9	0.47	20.13	0.12	20.25	46.57	-26.32	Average
10	0.47	36.41	0.12	36.53	56.57	-20.04	QP
11	6.53	18.47	0.41	18.88	50.00	-31.12	Average
12	6.53	32.08	0.41	32.49	60.00	-27.51	QP

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

Cerpass Technology Corp.

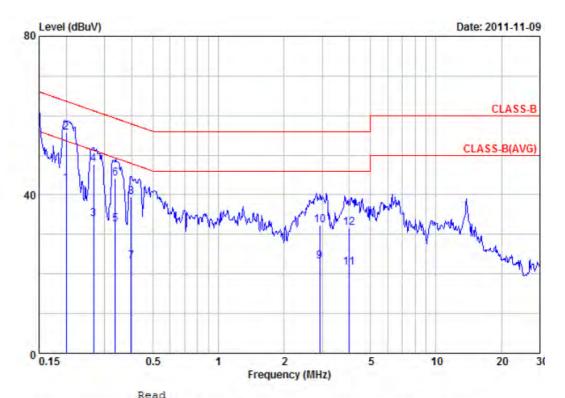
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 16 of 119
FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase :	LINE
Test Mode 1 :	802.11n HT40 CH3	Temperature :	25 °C
Test date :		Humidity :	65 %



		Read					
Item	Freq	Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.20	42.59	0.12	42.71	53.61	-10.90	Average
2	0.20	55.61	0.12	55.73	63.61	-7.88	QP
3	0.27	33.67	0.12	33.79	51.19	-17.40	Average
4	0.27	47.55	0.12	47.67	61.19	-13.52	QP
5	0.34	32.32	0.13	32.45	49.30	-16.85	Average
6	0.34	44.03	0.13	44.16	59.30	-15.14	QP
7	0.40	23.09	0.13	23.22	47.90	-24.68	Average
8	0.40	39.29	0.13	39.42	57.90	-18.48	QP
9	2.92	22.88	0.30	23.18	46.00	-22.82	Average
10	2.92	31.98	0.30	32.28	56.00	-23.72	QP
11	3.99	21.32	0.35	21.67	46.00	-24.33	Average
12	3.99	31.25	0.35	31.60	56.00	-24.40	QP

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

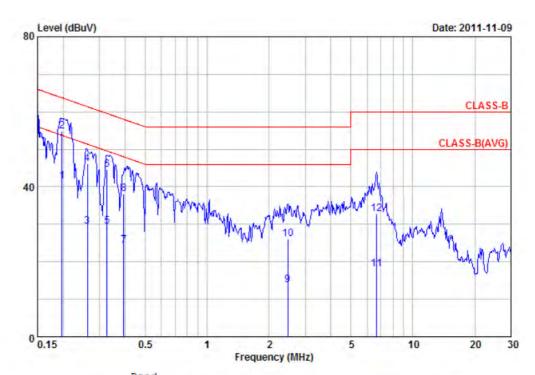
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 17 of 119
FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase :	NEUTRAL
Test Mode 1 :	802.11n HT40 CH3	Temperature :	25 °C
Memo :		Humidity :	65 %

Report No.: TEFI1110072



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
G	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.20	41.34	0.10	41.44	53.71	-12.27	Average
2	0.20	54.64	0.10	54.74	63.71	-8.97	QP
3	0.26	29.29	0.10	29.39	51.35	-21.96	Average
4	0.26	46.08	0.10	46.18	61.35	-15.17	QP
5	0.33	29.23	0.11	29.34	49.53	-20.19	Average
6	0.33	44.38	0.11	44.49	59.53	-15.04	QP
7	0.39	24.23	0.12	24.35	47.99	-23.64	Average
8	0.39	38.07	0.12	38.19	57.99	-19.80	QP
9	2.47	13.44	0.27	13.71	46.00	-32.29	Average
10	2.47	25.85	0.27	26.12	56.00	-29.88	QP
11	6.66	17.60	0.41	18.01	50.00	-31.99	Average
12	6.66	32.39	0.41	32.80	60.00	-27.20	QP

Notes:

- 1. Result = Read Value + Factor
- 2. Factor = LISN Factor + Cable Loss
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 5. The data is worse case.

Test engineer:

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Page No. : 18 of 119 FCC ID : ZXPX108NX

5. Test of Radiated Emission

5.1 Test Limit

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.4-2009. The EUT was placed, 0.8 meter above the ground plane, as shown in section 5.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Report No.: TEFI1110072

Frequency (MHz)	Distance Meters	Radiated (µ V / M)	Radiated (dB μ V/ M)	
30-88	3	100	40.0	
88-216	3	150	43.5	
216-960	3	200	46.0	
Above 960	3	500	54.0	

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

Frequency (MHz)	Distance Meters	Radiated (dB µ V/ M)
30-230	10	30
230-1000	10	37

5.2 Test Procedures

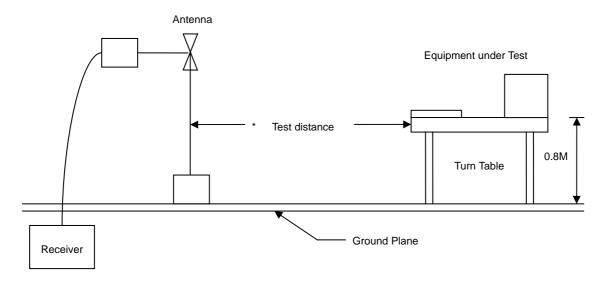
- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

 Cerpass Technology Corp.
 Issued Date
 : Nov. 10, 2011

 Tel:886-2-2655-8100
 Fax:886-2-2655-8200
 Page No.
 : 20 of 119



5.3 Typical Test Setup



5.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Amplifier	Agilent	8447D	2944A10531	2011/01/21	2012/01/20
Bilog Antenna	Schaffner	CBL6112D	22242	2011/02/09	2012/02/08
EMI Receiver	R&S	ESCI	101200	2011/07/26	2012/07/25
Spectrum Analyzer	R&S	FSP40	100047	2011/05/05	2012/05/04
HORN ANTENNA	EMCO	3115	31589	2011/05/02	2012/05/01
Preamplifier	Agilent	8449B	3008A01954	2011/03/02	2012/03/01

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011

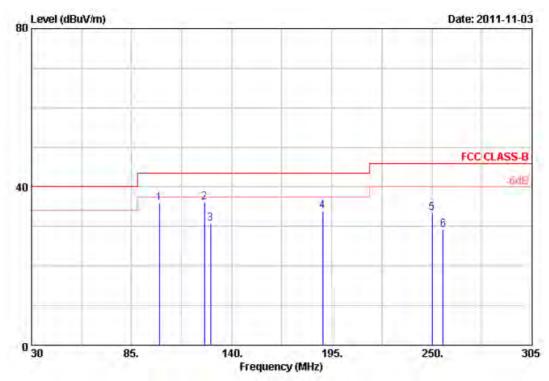
Page No. : 21 of 119

FCC ID : ZXPX108NX

Report No.: TEFI1110072

5.5 Test Result and Data

Power :	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1 :	Transmit / Receive	Temperature	:	28 °C
Operation Channel :	1	Humidity	:	51 %
Modulation Type :	802.11g	Atmospheric Pressure	:	1020 hPa
Memo :		Rate	:	6 Mbps



43.675	CARTO	Read	4/15/3/	Park Article	Pultinace	Speritor	200.000	Ant	Tab
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	100.13	35.12	0.84	35.96	43.50	-7.54	Peak	100	360
2	124.88	31.09	4.92	36.01	43.50	-7.49	Peak	100	3.60
3	128.45	27,49	3.20	30,69	43.50	-12.81	Peak	100	360
4	190.05	33.52	0.39	33.91	43.50	-9.59	Peak	100	360
5	250.00	39.10	-5.74	33.36	46.00	-12.64	Peak	100	360
6	256.05	33.76	-4.58	29.18	46.00	-16.82	Peak	100	360
	a salve a salve								10 A 10 A 10

Notes:

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

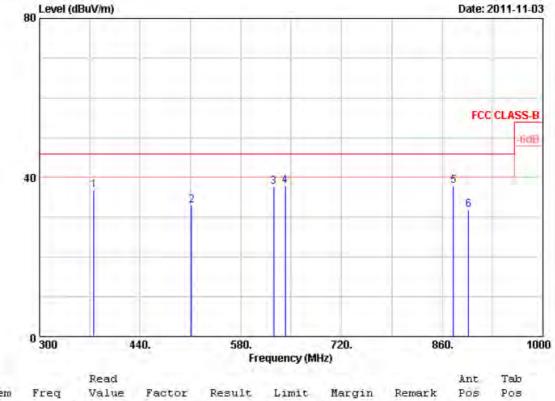
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 22 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11g	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	6 Mbps



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	375.60	39.72	-2.84	36.88	46.00	-9.12	Peak	100	D	
2	511.40	32.08	0.90	32.98	46.00	-13.02	Peak	100	0	
3	625.50	34.08	3.54	37.62	46.00	-8.38	Peak	100	0	
4	641.60	34.11	3.73	37.84	46.00	-8.16	Peak	100	O	
5	875.40	26,94	11.03	37.97	46.00	-8.03	Peak	100	0	
6	896.40	18.98	12.89	31.87	46.00	-14.13	Peak	100	0	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

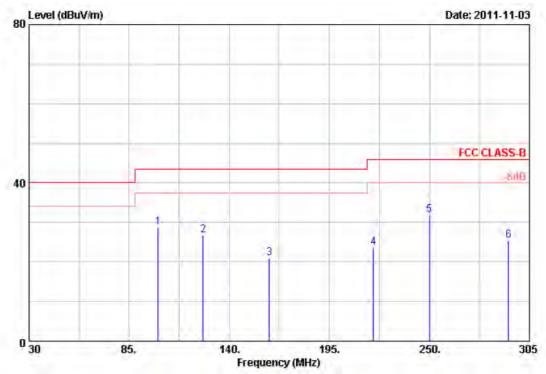
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 23 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11g	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	6 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	100.95	37.63	-8.91	28.72	43.50	-14.78	Peak	100	360	
2	125.70	36.27	-9.48	26.79	43.50	-16.71	Peak	100	360	
3	162.00	30.75	-9.77	20.98	43.50	-22.52	Peak	100	360	
4	219.20	31.48	-7.96	23.52	46.00	-22.48	Peak	100	360	
5	250.00	37.25	-5.38	31.87	46.00	-14.13	Peak	100	360	
6	293.45	31.28	-5.82	25.46	46.00	-20.54	Peak	100	360	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

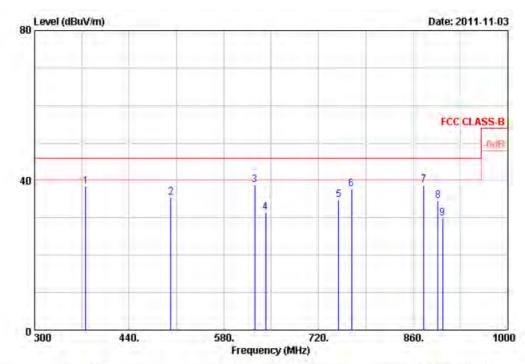
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 24 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1		Transmit / Receive	Temperature	:	28 °C
Operation Channel		1	Humidity	:	51 %
Modulation Type		802.11g	Atmospheric Pressure	:	1020 hPa
Memo			Rate	:	6 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	375.60	46.47	-8.17	38.30	46.00	-7.70	Peak	100	0
2	501.60	32.74	2.59	35.33	46.00	-10.67	Peak	100	0
3	625.50	32.21	6.56	38.77	46.00	-7.23	Peak	100	0
4	641.60	26.53	4.94	31.47	46.00	-14.53	Peak	100	0
5	749.40	27.08	7.75	34.83	46.00	-11.17	Peak	100	0
6	769.00	29.23	8.36	37.59	46.00	-8.41	Peak	100	0
7	875.40	29.52	9.20	38.72	46.00	-7.28	Peak	100	0
8	896.40	23.46	11.06	34.52	46.00	-11.48	Peak	100	0
9	903.40	18.19	11.62	29.81	46.00	-16.19	Peak	100	0

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

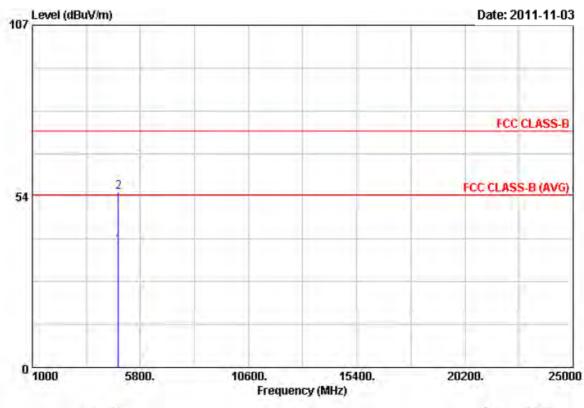
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 25 of 119

FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase	VERTICAL
Test Mode 1 :	Transmit / Receive	Temperature	28 °C
Operation Channel :	1	Humidity	51 %
Modulation Type :	802.11b	Atmospheric Pressure	1020 hPa
Memo :		Rate	11 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant	Tab Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4824.10	32.79	5.37	36.16	54.00	-15.84	Average	100	360	
	4824:15	49.49	5.37	54.86	74.00	-19.14	Peak	100	-	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz. and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

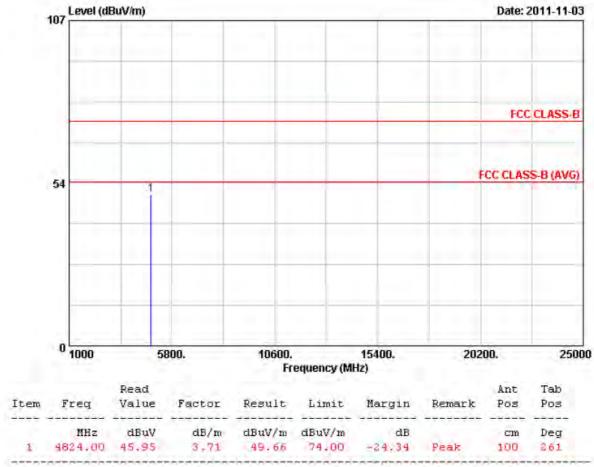
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 26 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel		1	Humidity	:	51 %
Modulation Type		802.11b	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	11 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

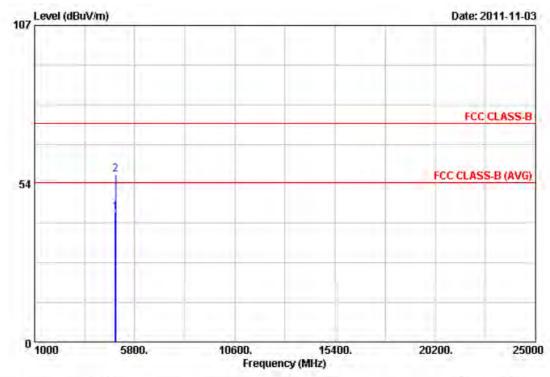
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 27 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	6	Humidity	:	51 %
Modulation Type	:	802.11b	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	11 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4870.50	37.46	6.29	43.75	54,00	-10.25	Average	100	0
2	4874.00	50.23	6.36	56.59	74.00	-17.41	Peak	100	107

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

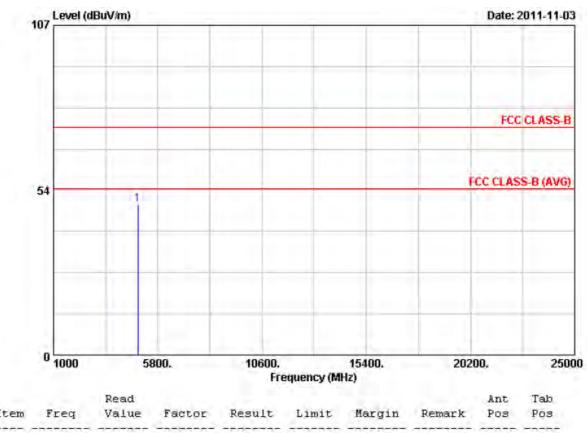
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 28 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	6	Humidity	:	51 %
Modulation Type	:	802.11b	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	11 Mbps



		Mead						WILL	1 (00)	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4874.00	44.49	4.50	48.99	74.00	-25.01	Peak	100	360	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
 - 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
 - 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
 - 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

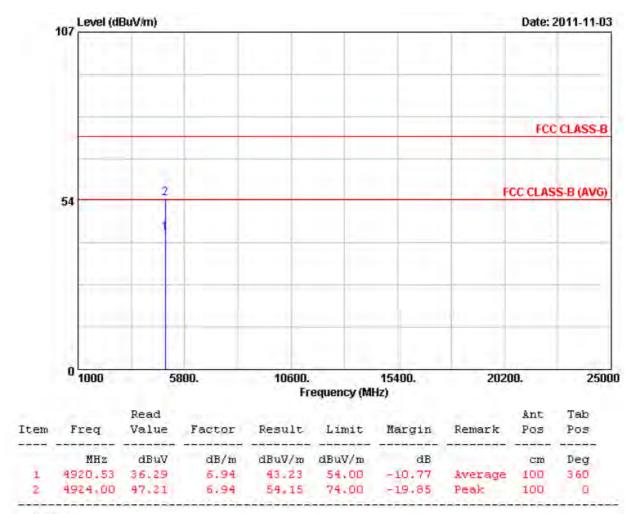
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 29 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1		Transmit / Receive	Temperature	:	28 °C
Operation Channel		11	Humidity	:	51 %
Modulation Type		802.11b	Atmospheric Pressure	:	1020 hPa
Memo			Rate	:	11 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above
 - 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

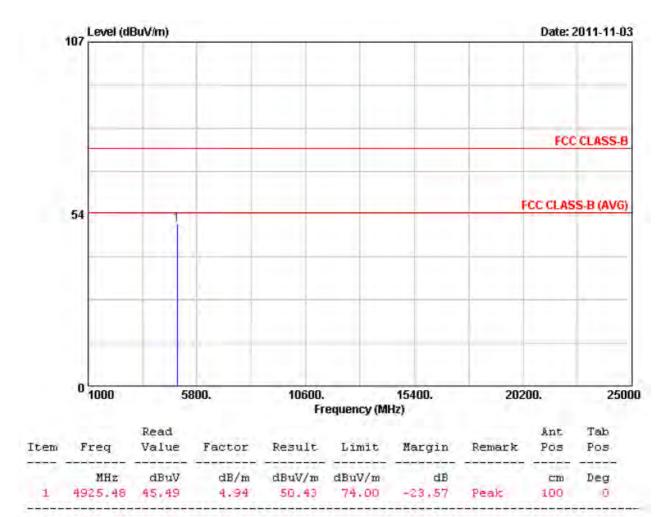
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 30 of 119 FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1 :	Transmit / Receive	Temperature	:	28 °C
Operation Channel :	11	Humidity	:	51 %
Modulation Type :	802.11b	Atmospheric Pressure	:	1020 hPa
Memo :		Rate	:	11 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 16Hz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

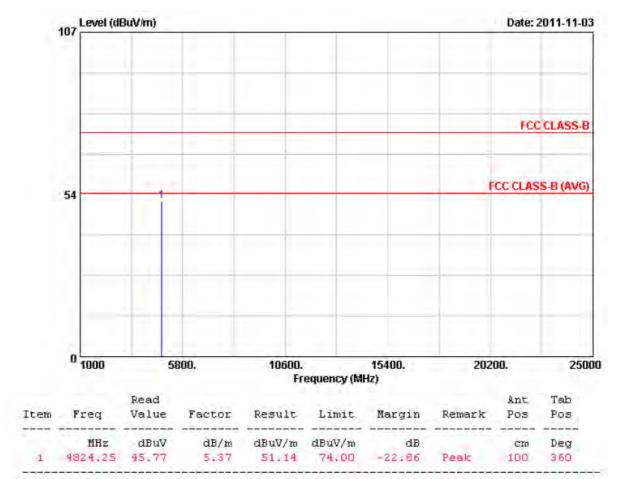
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 31 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11g	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
 - The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

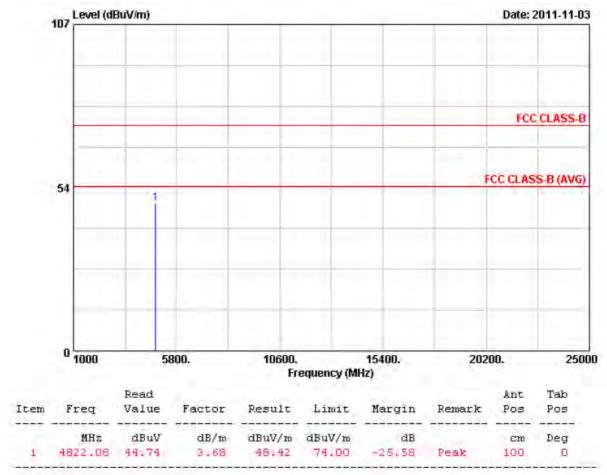
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 32 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11g	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

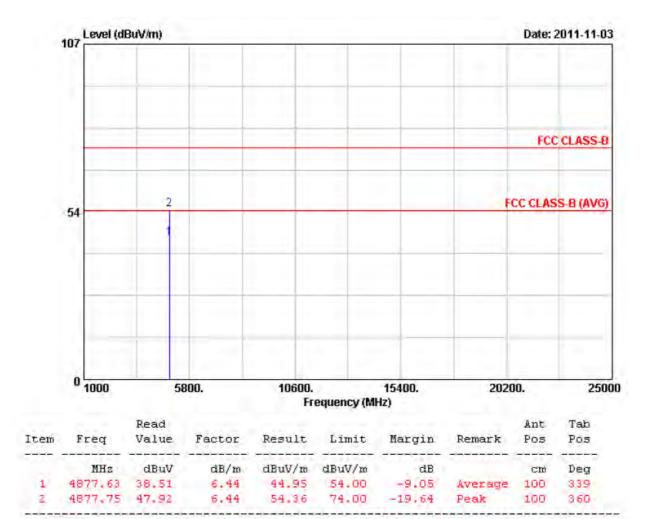
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 33 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel		6	Humidity :	51 %
Modulation Type		802.11g	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz
 - 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

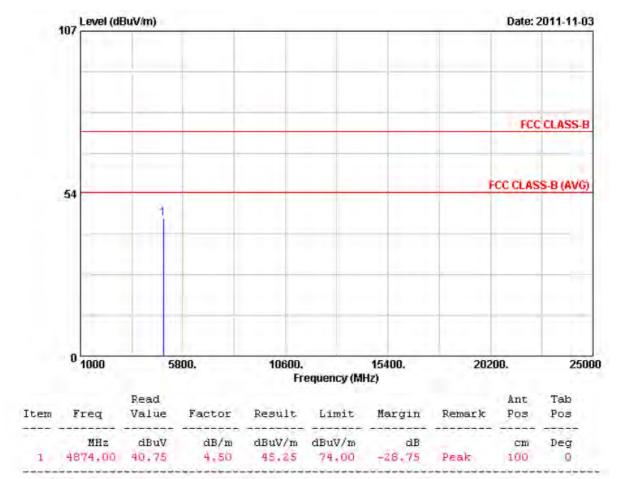
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 34 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	6	Humidity	:	51 %
Modulation Type	:	802.11g	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

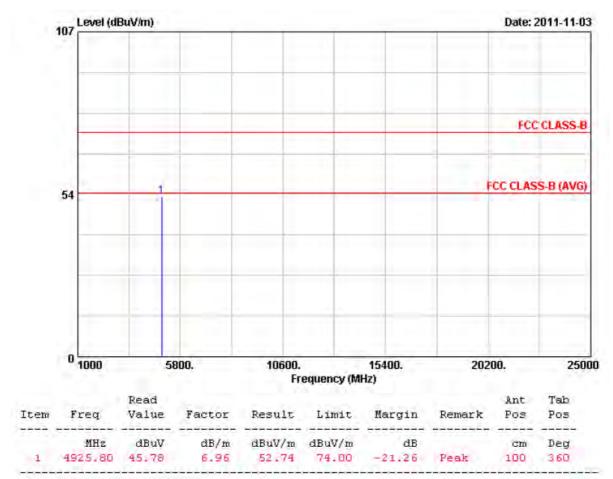
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 35 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1		Transmit / Receive	Temperature	:	28 °C
Operation Channel		11	Humidity	:	51 %
Modulation Type		802.11g	Atmospheric Pressure	:	1020 hPa
Memo			Rate	:	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

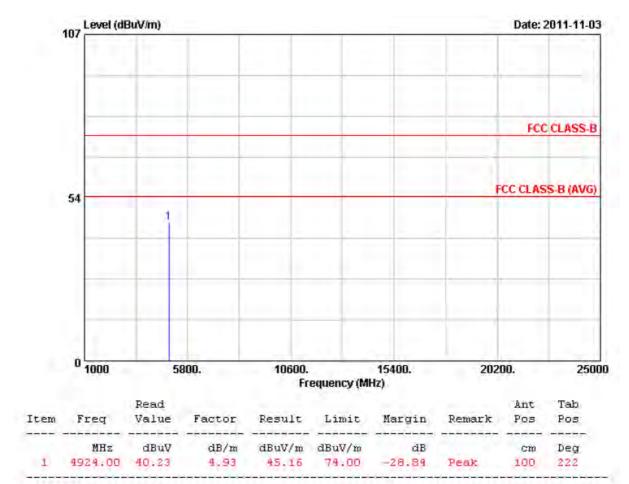
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 36 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase :	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel	:	11	Humidity :	51 %
Modulation Type	:	802.11g	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	6 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

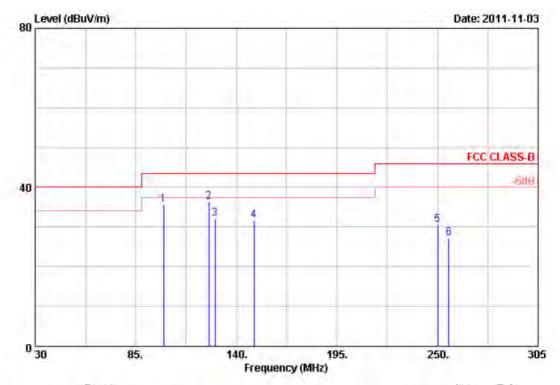
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 37 of 119

Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel	:	1	Humidity :	51 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	13 Mbps



		Read						Ant	Tab
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	100.13	34.87	0.84	35.71	43.50	-7.79	Peak	100	360
2	124.88	31.38	4.92	36.30	43.50	-7:20	Peak	100	360
3	128.45	28.96	3.20	32.16	43.50	-11.34	Peak	100	360
4	149.63	30.29	1.30	31.59	43.50	-11.91	Peak	100	360
5	250.00	36.35	-5.74	30.61	46.00	-15.39	Peak	100	360
6	256.05	31.72	-4.58	27.14	46.00	-18.86	Peak	100	360

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

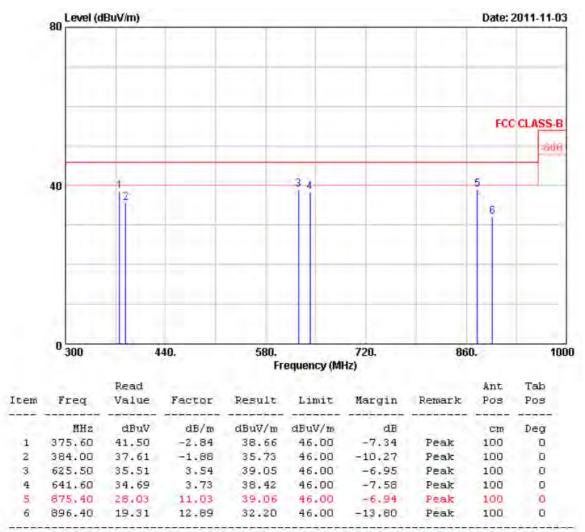
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 38 of 119
FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1 :	Transmit / Receive	Temperature	:	28 °C
Operation Channel :	1	Humidity	:	51 %
Modulation Type :	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo :		Rate	:	13 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

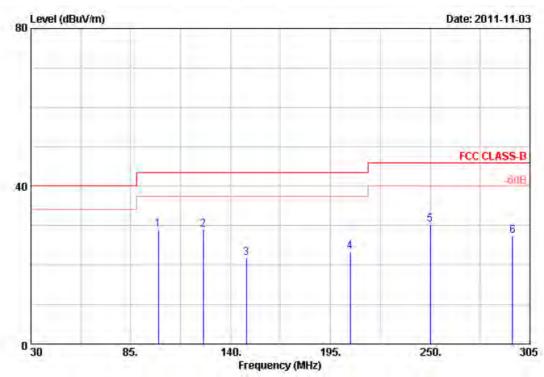
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 39 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel		1	Humidity	:	51 %
Modulation Type		802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo			Rate	:	13 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab
		1 1 1 1 1 1						10111	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	100.13	36.89	-8.02	28.87	43.50	-14.63	Peak	100	360
2	124.88	38.57	-9.65	26.92	43.50	-14.58	Peak	100	360
3	148.80	29.80	-7.93	21.87	43.50	-21.63	Peak	100	360
4	206.00	34.70	-11.30	23.40	43.50	-20.10	Peak	100	360
5	250.00	35.74	-5.38	30.36	46.00	-15.64	Peak	100	360
6	295.38	33.08	-5.61	27.47	46.00	-18.53	Peak	100	360

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

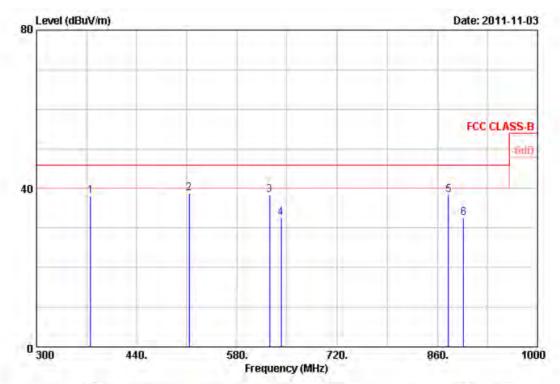
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 40 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	13 Mbps



	a.	Read	Trhe ye	4 herby	Lange	20000	20.00	Ant	Tab
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
2752	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	375.60	46.19	-8.17	38.02	46.00	-7.98	Peak	100	0
2	513.50	35.68	3.08	38.76	46.00	-7.24	Peak	100	0
3	625.50	31.74	6.56	38.30	46.00	-7.70	Peak	100	0
4	641.60	27.67	4.94	32.61	46.00	-13.39	Peak	100	0
5	875.40	29.07	9.20	38.27	46.00	-7.73	Peak	100	0
6	896.40	21.47	11.06	32.53	46.00	-13.47	Peak	100	0

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

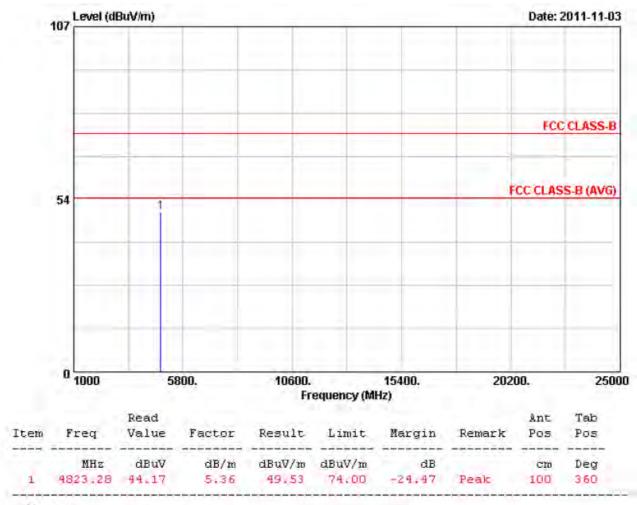
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 41 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	13 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

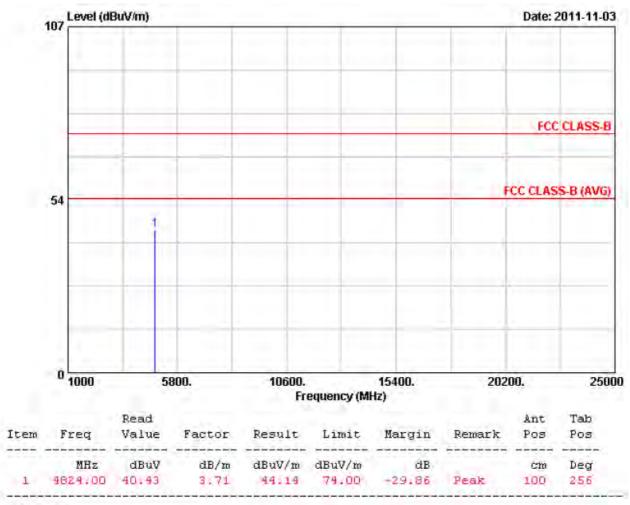
Cerpass Technology Corp.

Issued Date: Nov. 10, 2011

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Page No. : 42 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	1	Humidity	:	51 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	13 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

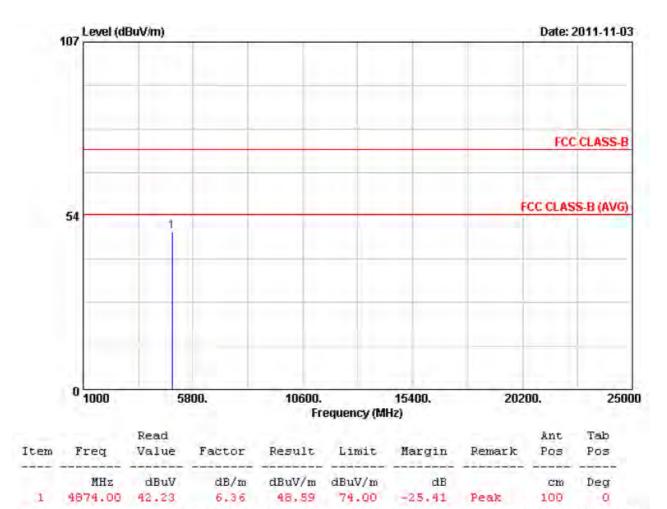
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 43 of 119
FCC ID : ZXPX108NX

Power :	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1 :	Transmit / Receive	Temperature :	28 °C
Operation Channel :	6	Humidity :	51 %
Modulation Type :	802.11n HT20	Atmospheric Pressure :	1020 hPa
Memo :		Rate :	13 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

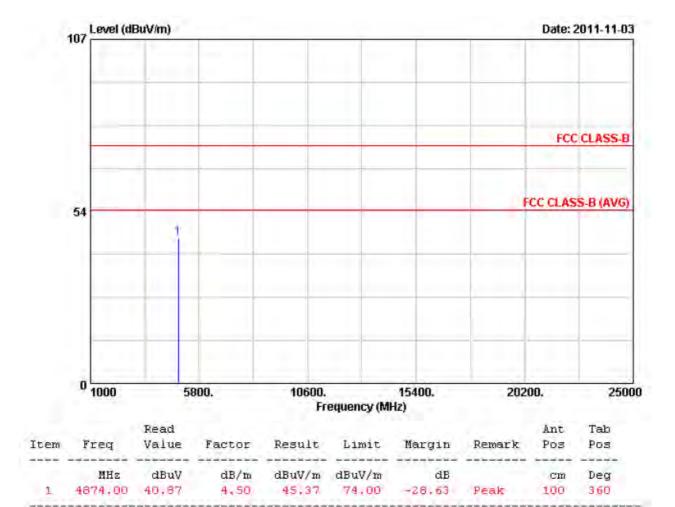
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 44 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	6	Humidity	:	51 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	13 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
 - The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
 - 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

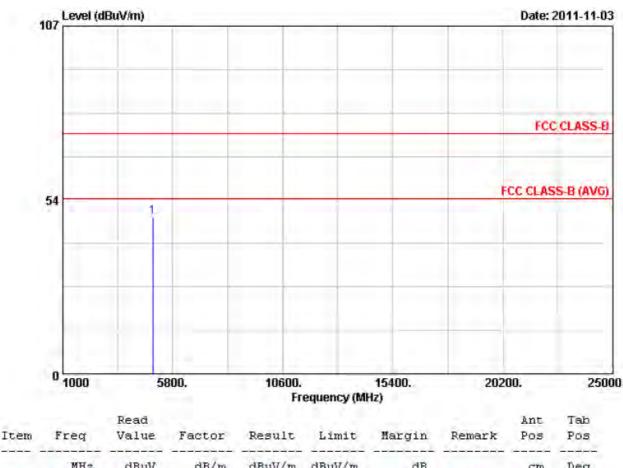
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 45 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	23 °C
Operation Channel	:	11	Humidity		65 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure		1020 hPa
Memo	:		Rate	:	130 Mbps



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4924.00	41.29	6.94	48.23	74.00	-25.77	Peak	100	0	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

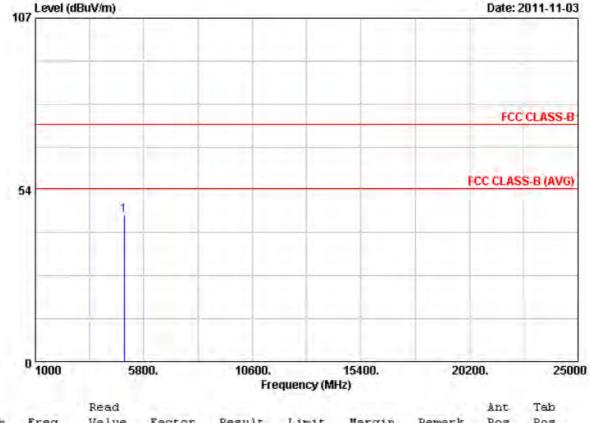
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 46 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	23 °C
Operation Channel	:	11	Humidity	:	65 %
Modulation Type	:	802.11n HT20	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	130 Mbps



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4924,00	40.68	4,93	45.61	74.00	-28,39	Peak	100	360	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
 - The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

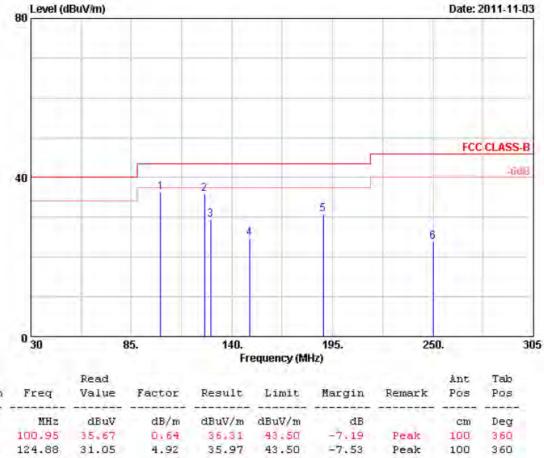
Cerpass Technology Corp.

Issued Date : Nov. 10, 2011

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Page No. : 47 of 119 FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	3	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
	ennanana.								****
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	100.95	35.67	0.64	36.31	43.50	-7.19	Peak	100	360
2	124.88	31.05	4.92	35.97	43.50	-7.53	Peak	100	360
3	128.45	26.32	3.20	29.52	43.50	-13.98	Peak	100	360
4	149.63	23.52	1.30	24.82	43,50	-18.68	Peak	100	360
5	190.05	30.26	0.39	30.65	43.50	-12.85	Peak	100	360
6	250.00	29.53	-5.74	23.79	46.00	-22.21	Peak	100	3.60

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3 (for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

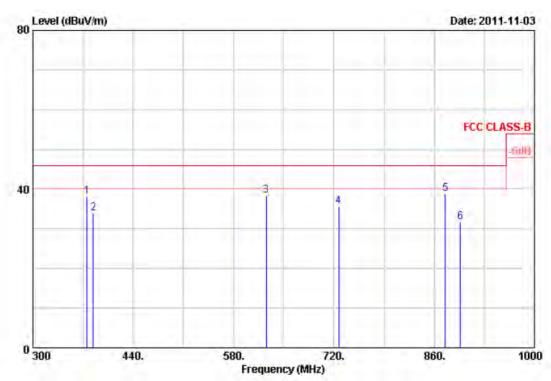
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 48 of 119 FCC ID : ZXPX108NX



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	3	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
2005	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	++++++	cm	Deg
1	375.60	40.94	-2.84	38.10	46.00	-7.90	Peak	100	o
2	384.00	35.81	-1.88	33.93	46.00	-12.07	Peak	100	0
3	625.50	34.86	3.54	38.40	46.00	-7.60	Peak	100	0
4	727.00	25.56	10,10	35.66	46.00	-10.34	Peak	100	0
5	875.40	27.69	11.03	38.72	46.00	-7.28	Peak	100	0
6	896.40	18.82	12.89	31.71	46.00	-14.29	Peak	100	0

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

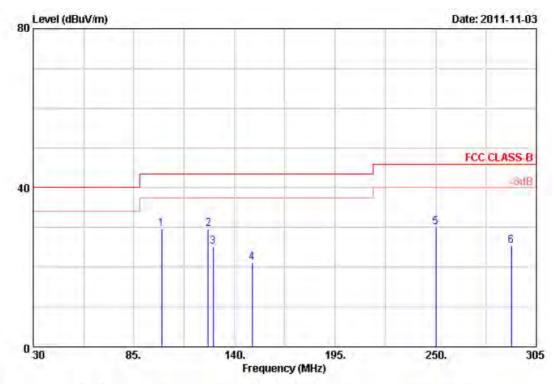
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011 Page No. : 49 of 119

Report No.: TEFI1110072

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	3	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



		Read						Ant	Tab
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(4	cm	Deg
1	100.13	37.56	-8.02	29.54	43.50	-13.96	Peak	100	360
2	125.70	39.04	-9,48	29.56	43.50	-13.94	Peak	100	360
3	128.45	34.12	-8.89	25.23	43.50	-18.27	Peak	100	360
4	149.63	29.02	-7.94	21.08	43.50	-22.42	Peak	100	360
5	250.00	35.54	-5.38	30.16	46.00	-15.84	Peak	100	360
6	291.25	31.52	-6.18	25.34	46.00	-20.66	Peak	100	360

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

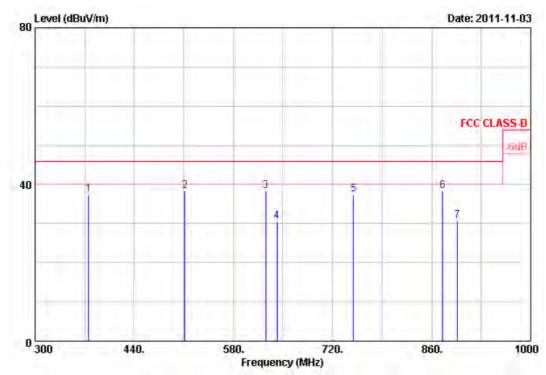
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 50 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	3	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			Deg
1	375.60	45.70	-8.17	37.53	46.00	-8.47	Peak	100	Deg
2	511.40	35.10	3.21	38.31	46.00	-7.69	Peak	100	0
3	625.50	31.66	6.56	38.22	46.00	-7.78	Peak	100	0
4	641,60	25.59	4.94	30.53	46.00	-15.47	Peak	100	0
5	749.40	29.65	7.75	37.40	46.00	-8.60	Peak	100	0
6	875,40	29,23	9,20	38,43	46.00	-7.57	Peak	100	0
7	896.40	19.69	11.06	30.75	46.00	-15.25	Peak	100	0

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
 - The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

Cerpass Technology Corp.

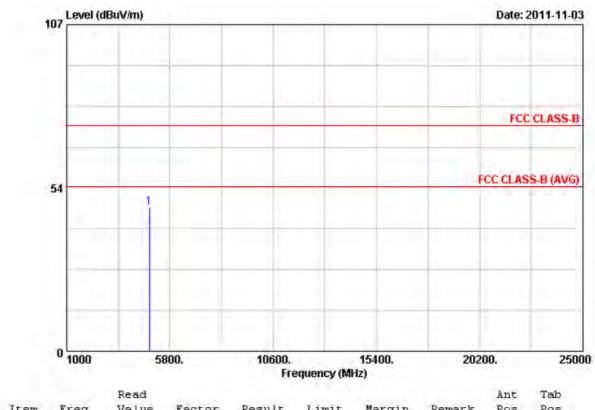
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 51 of 119
FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel	:	3	Humidity :	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	27 Mbps



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
									-	
	MHZ	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4844.00	41.33	5.77	47.10	74.00	-26.90	Peak	100.	0	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

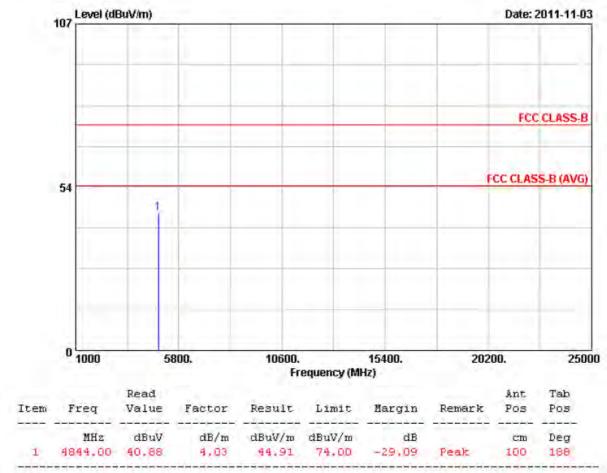
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 52 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	3	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

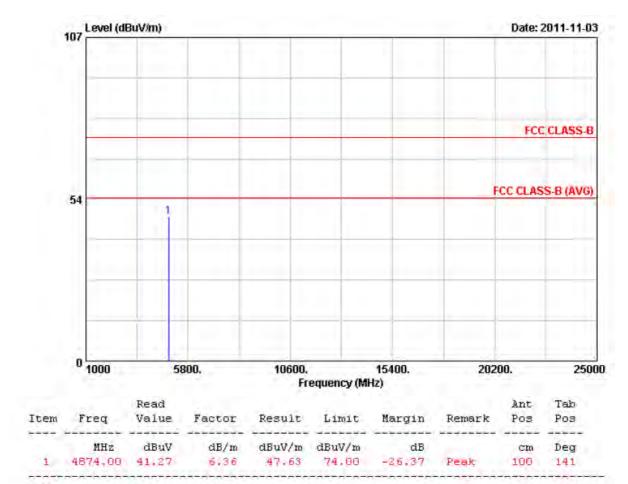
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 53 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel		6	Humidity	:	51 %
Modulation Type		802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
 - 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

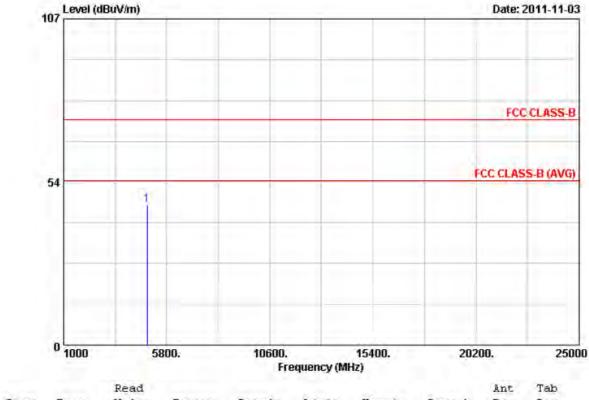
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 54 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase :	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel	:	6	Humidity :	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	27 Mbps



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4874.00	41,38	4.50	45.88	74,00	-28.12	Peak	100	24	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

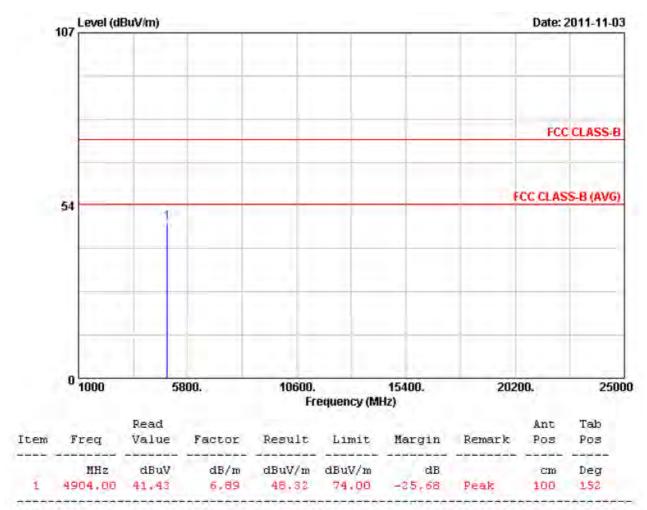
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 55 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	Transmit / Receive	Temperature	:	28 °C
Operation Channel	:	9	Humidity	:	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure	:	1020 hPa
Memo	:		Rate	:	27 Mbps



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

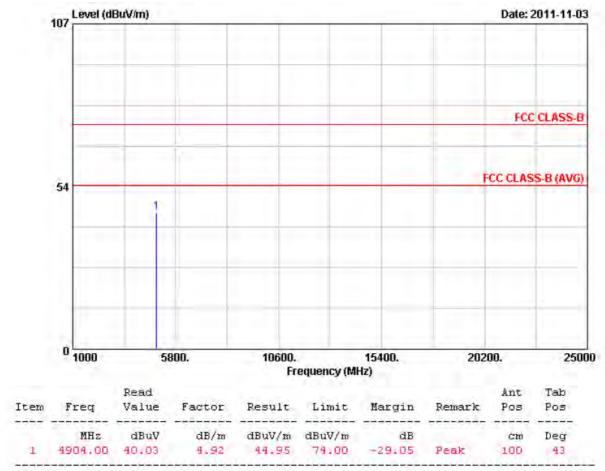
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 56 of 119

FCC ID : ZXPX108NX

Power	:	AC 120V	Pol/Phase :	HORIZONTAL
Test Mode 1	:	Transmit / Receive	Temperature :	28 °C
Operation Channel	:	9	Humidity :	51 %
Modulation Type	:	802.11n HT40	Atmospheric Pressure :	1020 hPa
Memo	:		Rate :	27 Mbps



- 1. Result = Read Value + Factor
 - 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
 - The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
 - 6. The other emissions is too low to be measured.
 - 7. The data is worse case.

Test engineer: Ben

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

Page No. : 57 of 119 FCC ID : ZXPX108NX

6. 6dB Bandwidth Measurement Data

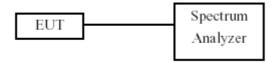
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
- c. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

6.3 Test Setup Layout



6.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2011/05/05	2012/05/04

6.5 Test Result and Data

Test Date: Nov. 04, 2011 Temperature: 25
Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		
		, ,	ANT R	ANT L	
	01	2412	12.1	11.9	
802.11b (11Mbps)	06	2437	12.1	12.1	
	11	2462	12.0	12.2	
	01	2412	16.1	15.7	
802.11g (6Mbps)	06	2437	15.4	16.3	
	11	2462	16.4	15.7	
000 11n UT00	01	2412	17.3	17.3	
802.11n HT20	06	2437	15.7	15.6	
(13Mbps)	11	2462	17.2	17.2	
000 44 n LIT40	03	2422	35.0	35.4	
802.11n HT40	06	2437	36.0	33.4	
(27Mbps)	09	2452	35.0	34.6	

Cerpass Technology Corp.Tel:886-2-2655-8100 Fax:886-2-2655-8200

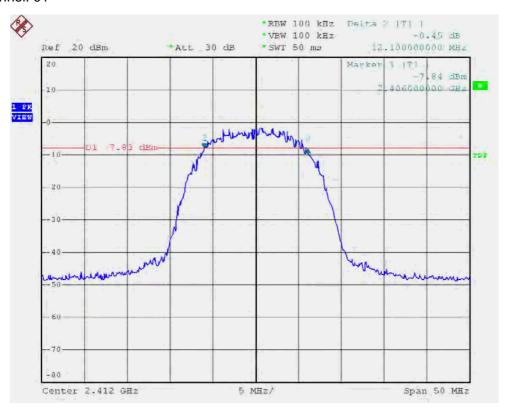
Issued Date: Nov. 10, 2011

Report No.: TEFI1110072

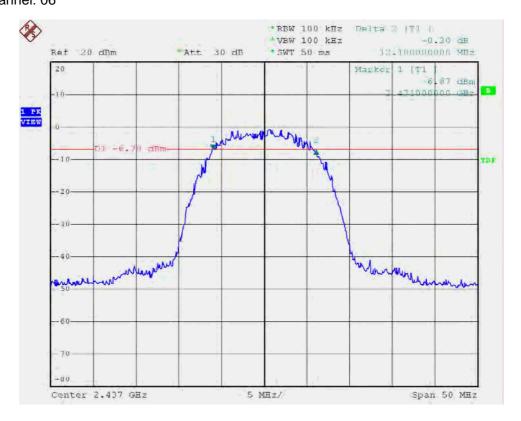
Page No. : 59 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 01



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 06



Tel:886-2-2655-8100 Fax:886-2-2655-8200

 Issued Date
 : Nov. 10, 2011

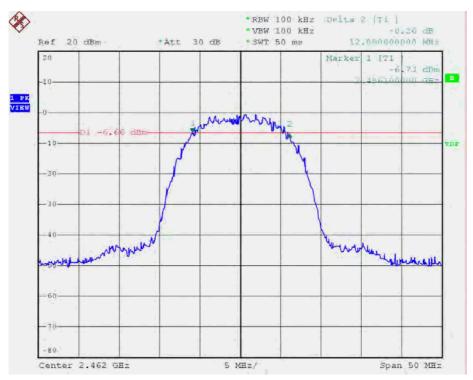
 Page No.
 : 60 of 119

 FCC ID
 : ZXPX108NX

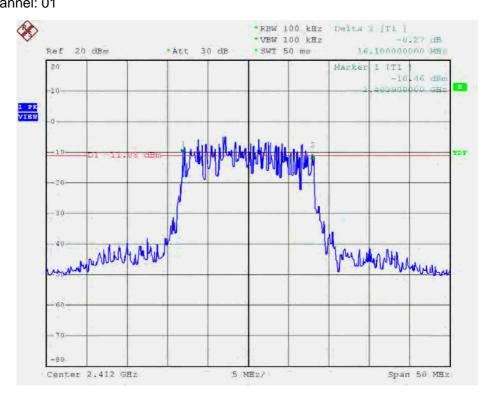


Modulation Standard: 802.11b (11Mbps), ANT R

Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 01



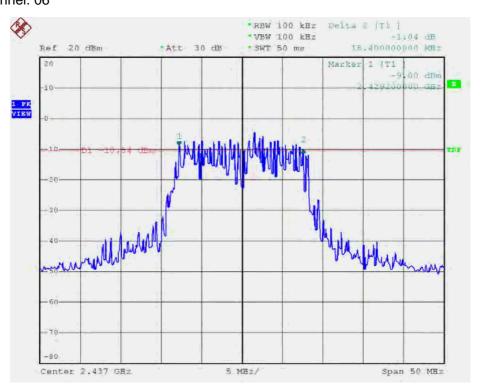
Issued Date : Nov. 10, 2011

Page No. : 61 of 119

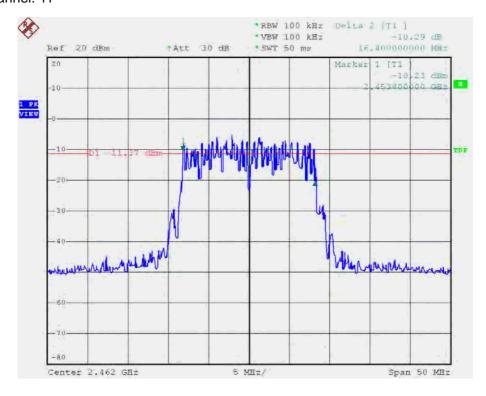
FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 11



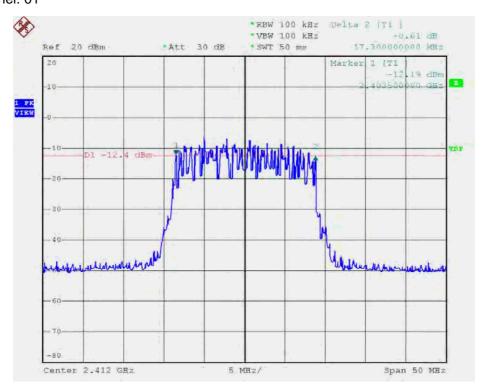
Issued Date : Nov. 10, 2011 Page No. : 62 of 119

Report No.: TEFI1110072

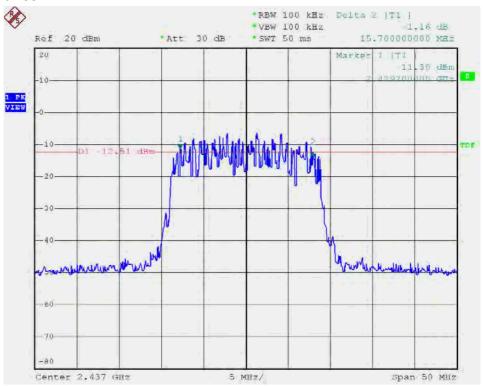
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 01



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 06



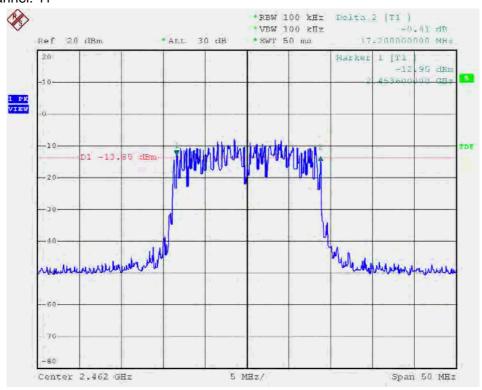
Issued Date : Nov. 10, 2011

Page No. : 63 of 119

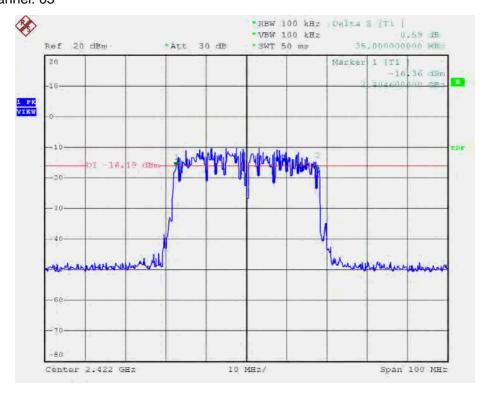
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 03



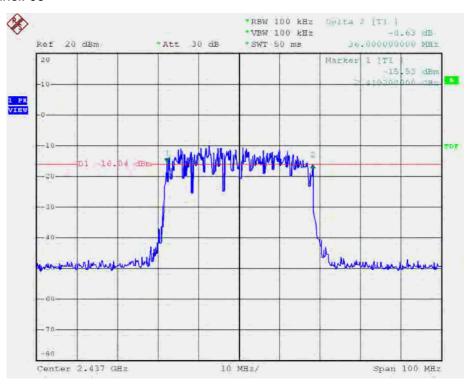
Issued Date : Nov. 10, 2011

Page No. : 64 of 119

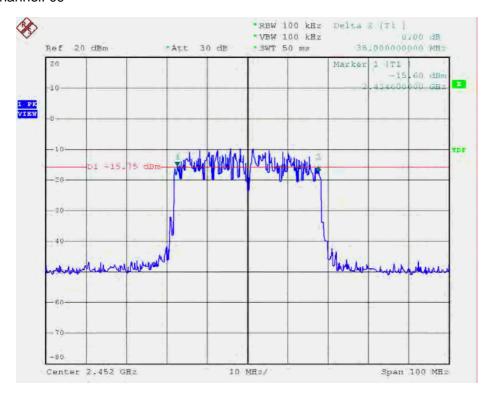
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 06



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 09



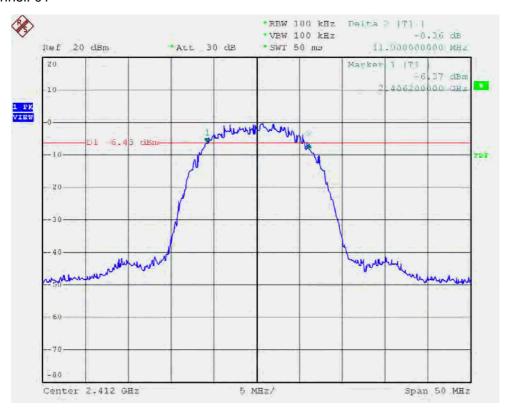
Issued Date : Nov. 10, 2011

Page No. : 65 of 119

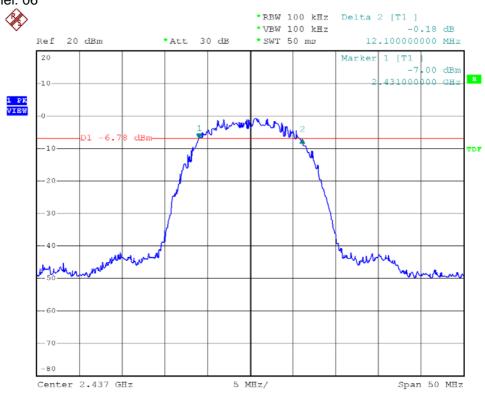
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 01



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 06

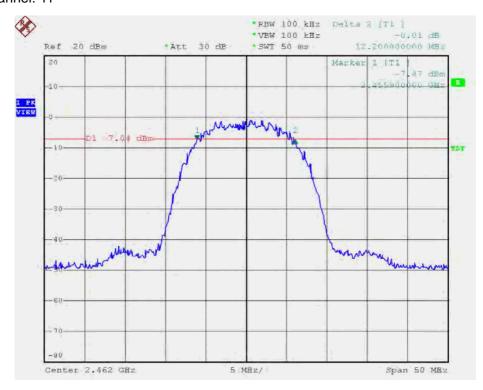


Tel:886-2-2655-8100 Fax:886-2-2655-8200

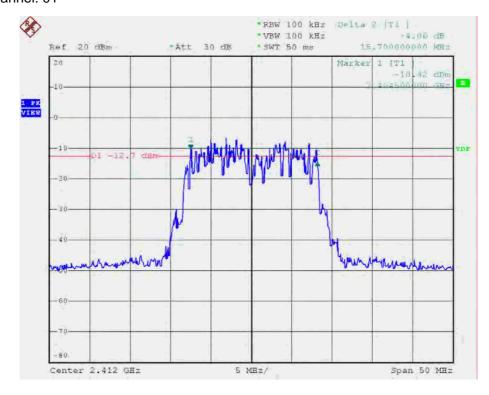
Issued Date : Nov. 10, 2011
Page No. : 66 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 01



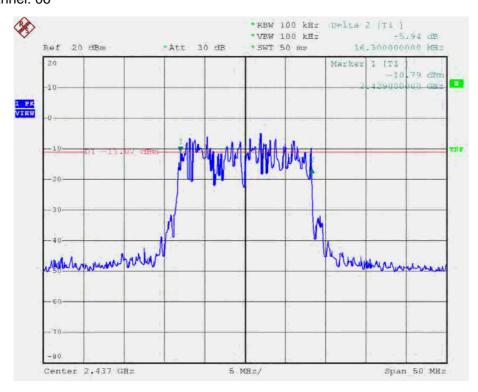
Issued Date : Nov. 10, 2011

Page No. : 67 of 119

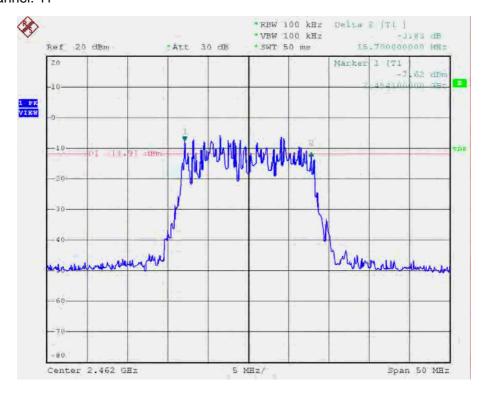
FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 11



Tel:886-2-2655-8100 Fax:886-2-2655-8200

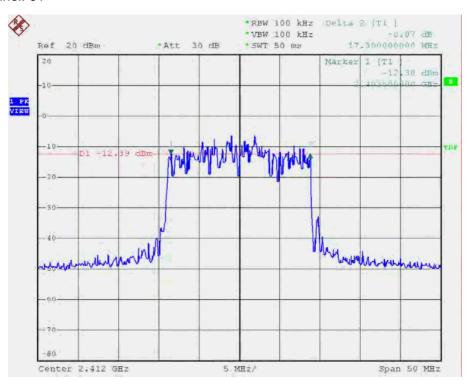
Issued Date : Nov. 10, 2011

Page No. : 68 of 119

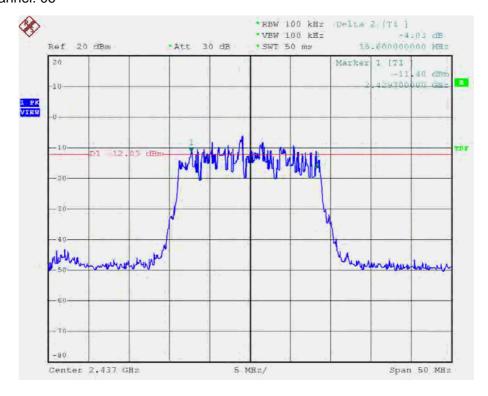
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 01



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 06



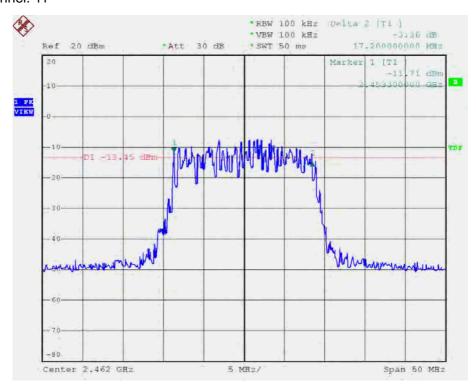
Issued Date : Nov. 10, 2011

Page No. : 69 of 119

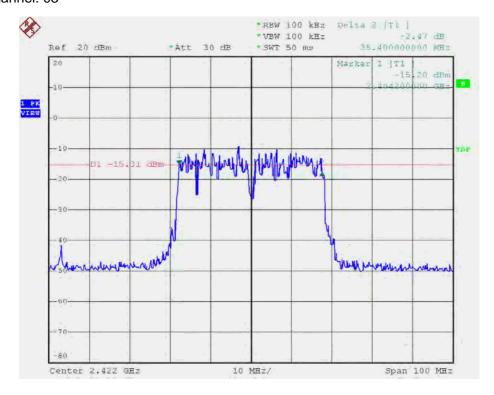
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 03



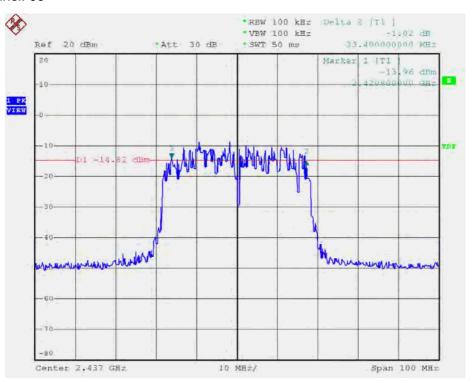
Issued Date : Nov. 10, 2011

Page No. : 70 of 119

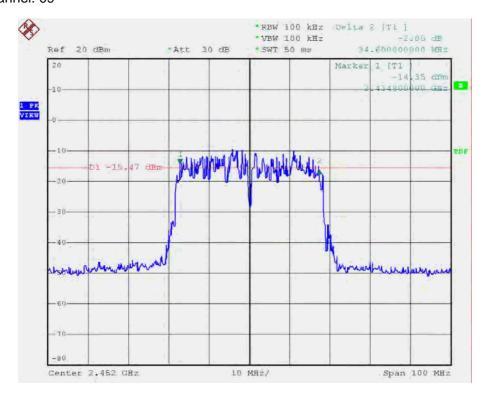
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 06



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 09



Issued Date : Nov. 10, 2011

Page No. : 71 of 119

FCC ID : ZXPX108NX

7. Maximum Peak Output Power

7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

7.2 Test Procedures

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

7.3 Test Setup Layout



7.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2011/05/05	2012/05/04

7.5 Test Result and Data

Test Date: Nov. 04, 2011 Temperature: 25
Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Pow (dB	•	Peak Power Output (mW)		
			ANT R ANT L		ANT R	ANT L	
	01	2412	17.47	17.28	55.8	53.5	
802.11b (11Mbps)	06	2437	17.29	17.29	53.6	53.6	
(11	2462	17.51	17.06	56.4	50.8	
	01	2412	14.13	14.35	25.9	27.2	
802.11g (6Mbps)	06	2437	14.04	14.64	25.4	29.1	
(3550)	11	2462	14.28	14.06	26.8	25.5	

 Cerpass Technology Corp.
 Issued Date :

 Tel:886-2-2655-8100
 Fax:886-2-2655-8200
 Page No. :

Issued Date : Nov. 10, 2011

Page No. : 72 of 119

FCC ID : ZXPX108NX



Test Date: Nov. 04, 2011 Temperature: 25
Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Po	wer Outpu	ıt (dBm)	Peak Power Output (mW)		
			ANT R	ANT L	R+L	R + L		
	01	2412	13.13	13.23	16.19	41.60		
802.11n HT20 (13Mbps)	06	2437	13.24	13.76	16.52	44.85		
(10.11.20)	11	2462	13.38	13.14	16.27	42.38		
	03	2422	13.44	13.06	16.26	42.31		
802.11n HT40 (27Mbps)	06	2437	13.43	13.23	16.34	43.07		
	09	2452	13.42	13.54	16.49	44.57		

Tel:886-2-2655-8100 Fax:886-2-2655-8200

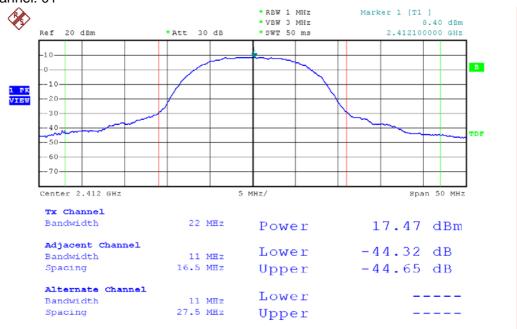
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 73 of 119

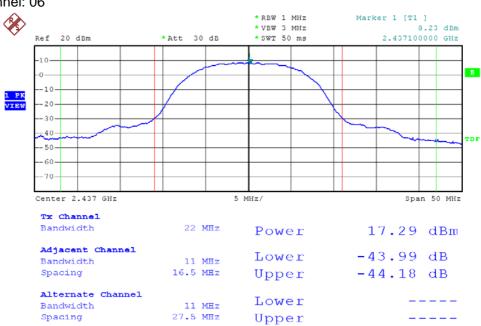
 FCC ID
 : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 01



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 06



Tel:886-2-2655-8100 Fax:886-2-2655-8200

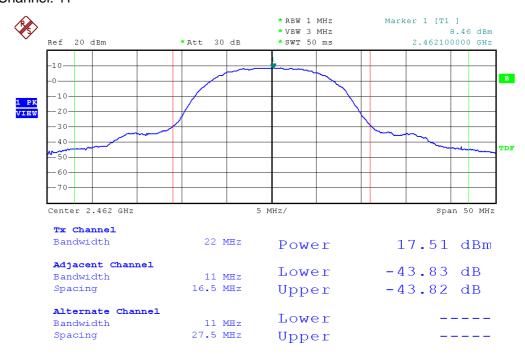
Issued Date : Nov. 10, 2011

Page No. : 74 of 119

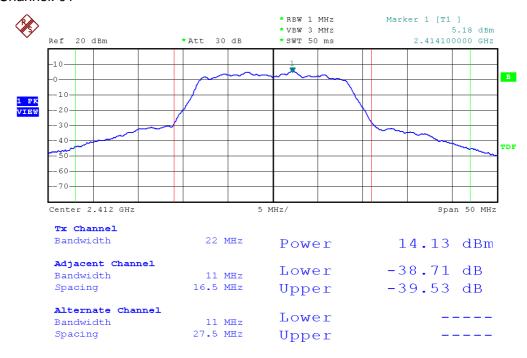
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 01



Tel:886-2-2655-8100 Fax:886-2-2655-8200

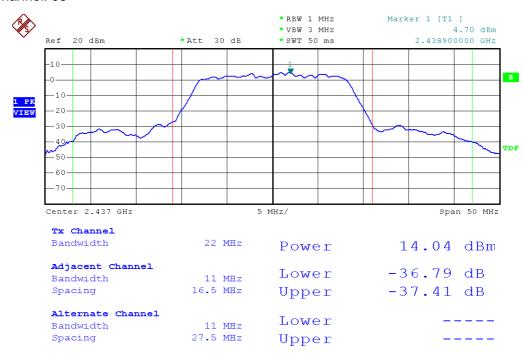
Issued Date : Nov. 10, 2011

Page No. : 75 of 119

FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 11



Tel:886-2-2655-8100 Fax:886-2-2655-8200

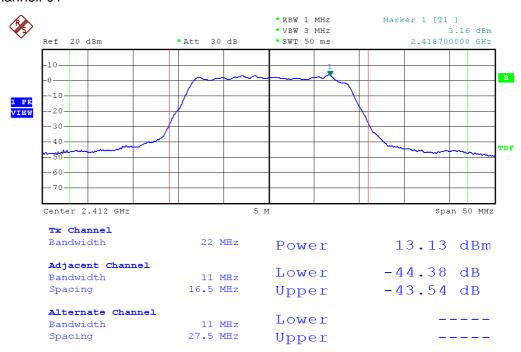
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 76 of 119

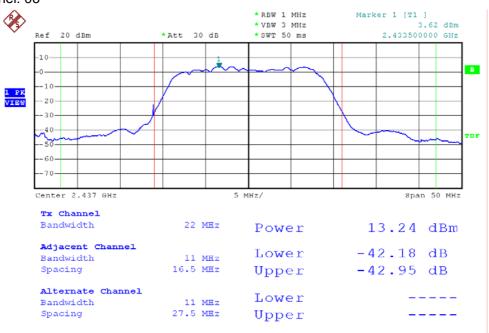
 FCC ID
 : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 01



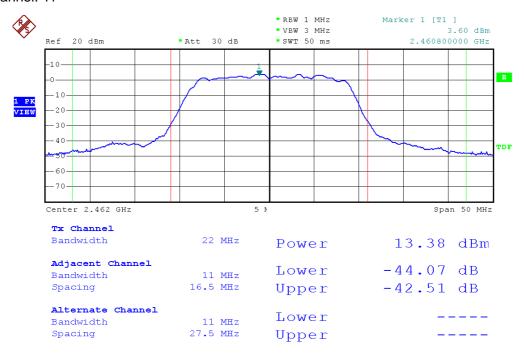
Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 06



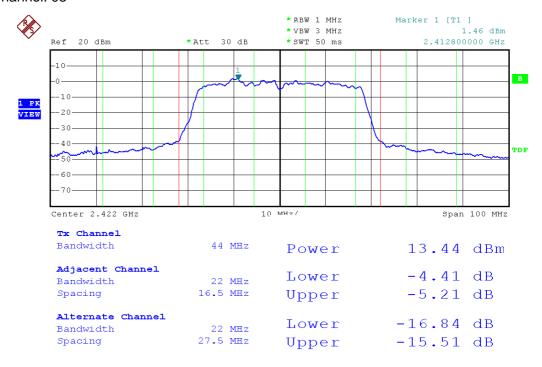
Issued Date : Nov. 10, 2011
Page No. : 77 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 03



Tel:886-2-2655-8100 Fax:886-2-2655-8200

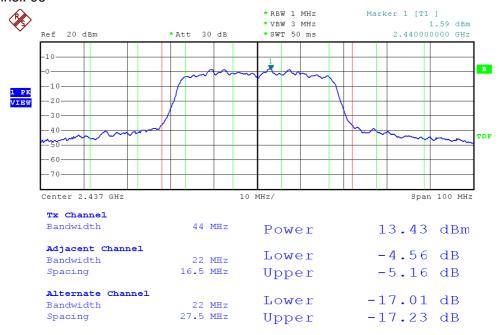
Issued Date : Nov. 10, 2011

Page No. : 78 of 119

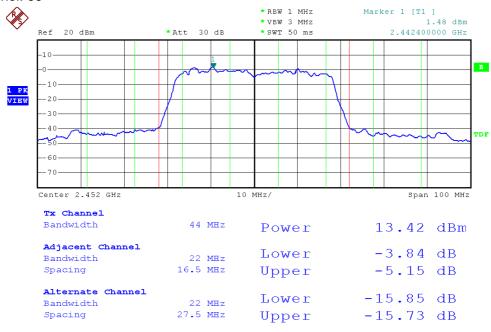
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 06



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 09

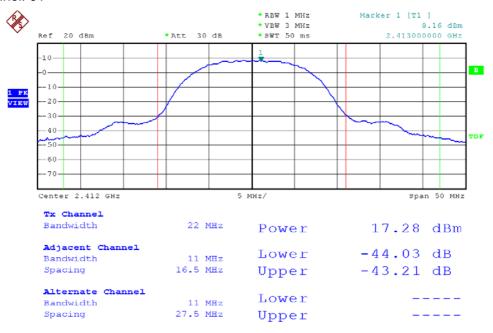


Tel:886-2-2655-8100 Fax:886-2-2655-8200

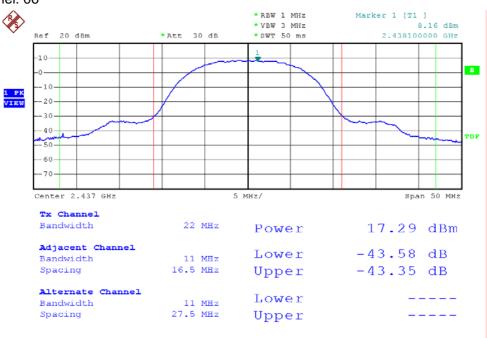
Issued Date : Nov. 10, 2011
Page No. : 79 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 01



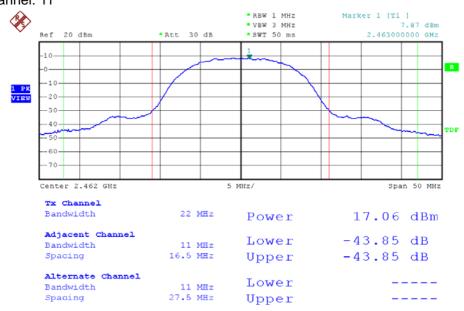
Modulation Standard: 802.11b (11Mbps), ANT L Channel: 06



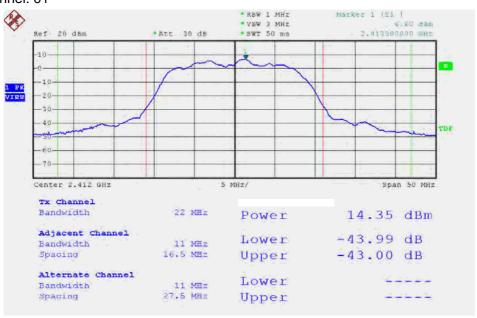
Issued Date : Nov. 10, 2011
Page No. : 80 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 01

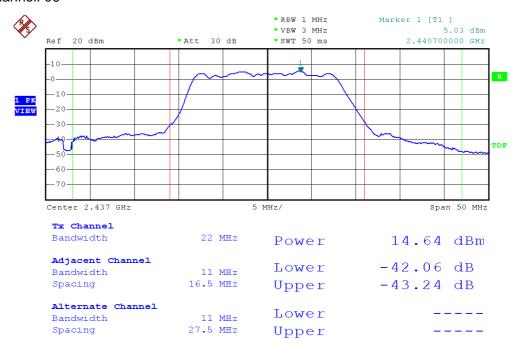


Tel:886-2-2655-8100 Fax:886-2-2655-8200

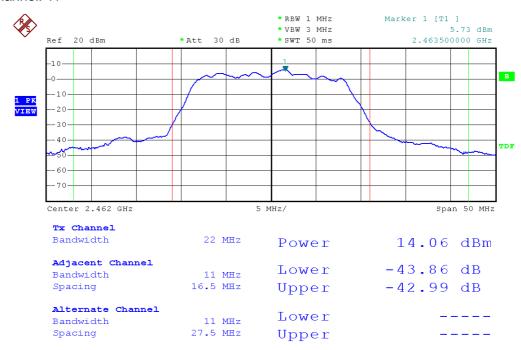
Issued Date : Nov. 10, 2011
Page No. : 81 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 11



Tel:886-2-2655-8100 Fax:886-2-2655-8200

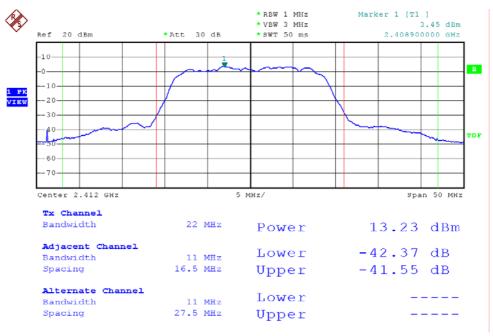
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 82 of 119

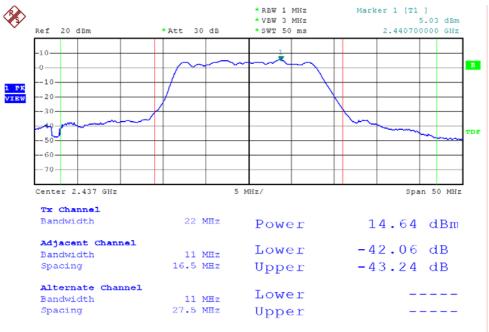
 FCC ID
 : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 01



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 06



Tel:886-2-2655-8100 Fax:886-2-2655-8200

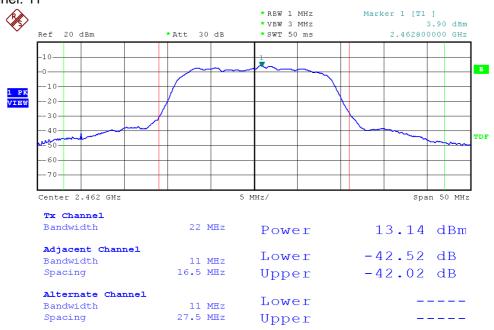
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 83 of 119

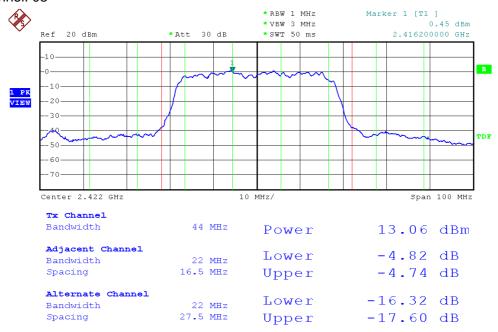
 FCC ID
 : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 03

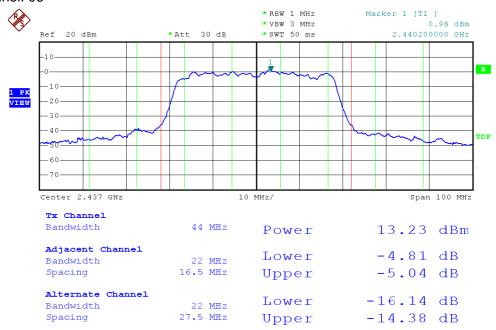


Tel:886-2-2655-8100 Fax:886-2-2655-8200

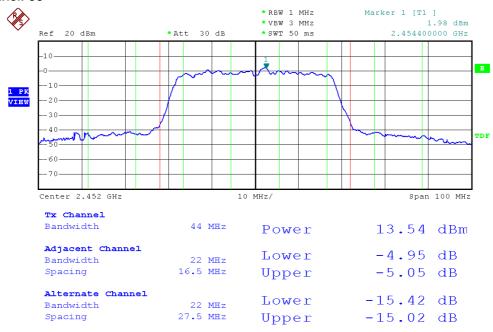
Issued Date : Nov. 10, 2011
Page No. : 84 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 06



Modulation Standard: 802.11n HT40 (270Mbps), ANT L Channel: 09



Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011

Page No. : 85 of 119

FCC ID : ZXPX108NX

8. Band Edges Measurement

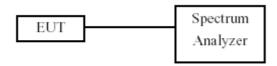
8.1 Test Limit

Below –20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

8.2 Test Procedure

- a. The transmitter output was connected to the spectrum analyzer via a low lose cable.
- b. Set both RBW and VBW of spectrum analyzer to 100 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- c. The band edges was measured and recorded.

8.3 Test Setup Layout



8.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2011/05/05	2012/05/04

8.5 Test Result and Data

Test Date: Nov. 07, 2011 Temperature: 25
Atmospheric pressure: 1020 hPa Humidity: 65 %

Modulation Standard	Channel	Frequency (MHz)	maximum frequenc		maximum value (dBm)	
0.0		()	ANT R	ANT L	ANT R	ANT L
802.11b	01	2412	2400.00	2375.00	-44.11	-42.71
(11Mbps)	11	2462	2483.50	2484.30	-53.47	-54.90
802.11g	01	2412	2396.40	2375.00	-37.56	-43.36
(6Mbps)	11	2462	2514.90	2520.10	-54.59	-55.03
802.11n HT20	01	2412	2400.00	2375.00	-46.06	-44.02
(13Mbps)	11	2462	2483.50	2520.10	-55.66	-55.48
802.11n HT40	03	2422	2400.00	2375.00	-51.19	-43.86
(27Mbps)	09	2452	2487.30	2487.50	-48.94	-53.45

Cerpass Technology Corp.Tel:886-2-2655-8100 Fax:886-2-2655-8200

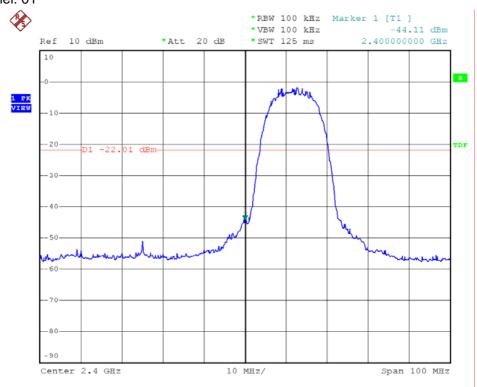
Issued Date: Nov. 10, 2011

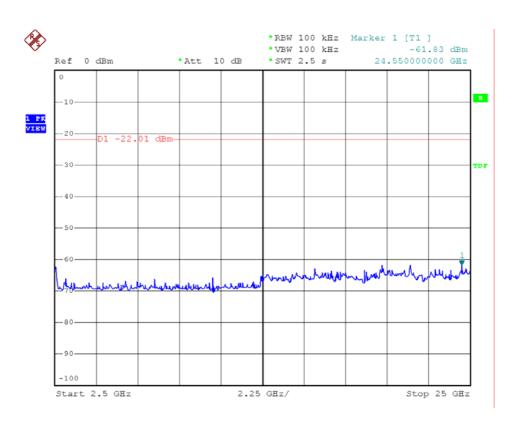
Report No.: TEFI1110072

Page No. : 86 of 119 FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 01





Tel:886-2-2655-8100 Fax:886-2-2655-8200

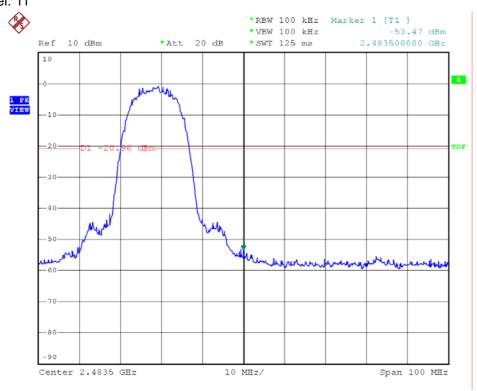
 Issued Date
 :
 Nov. 10, 2011

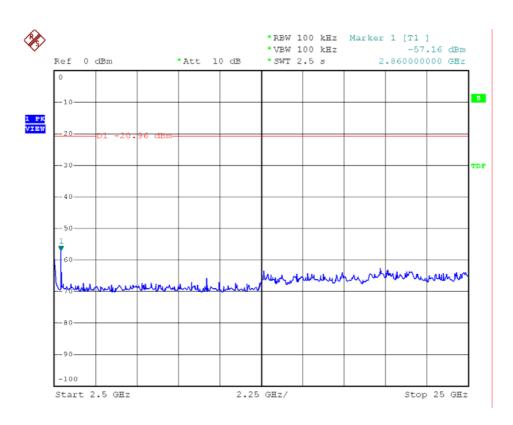
 Page No.
 :
 87 of 119

 FCC ID
 :
 ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 11





Tel:886-2-2655-8100 Fax:886-2-2655-8200

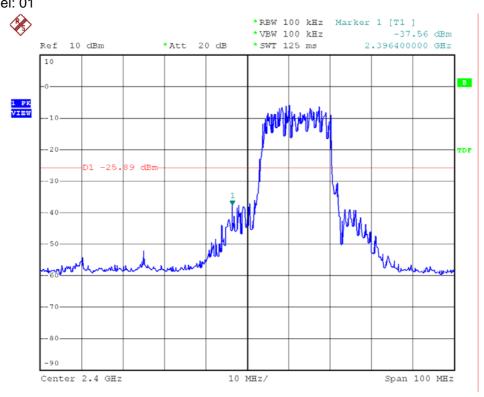
 Issued Date
 : Nov. 10, 2011

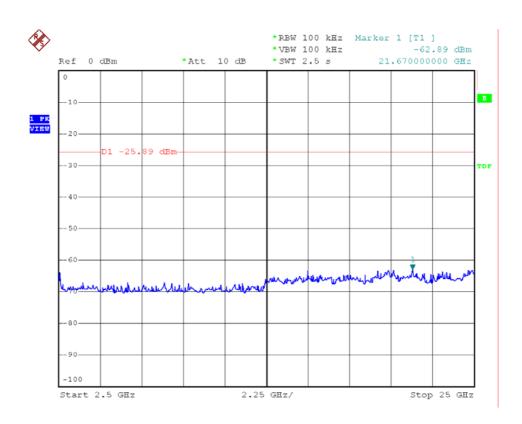
 Page No.
 : 88 of 119

 FCC ID
 : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 01





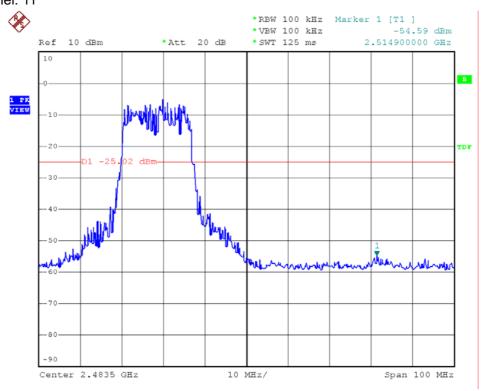
Tel:886-2-2655-8100 Fax:886-2-2655-8200

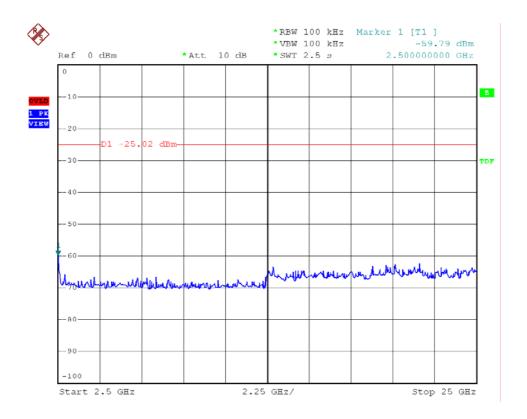
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 89 of 119

 FCC ID
 : ZXPX108NX

Modulation Standard: 802.11g (6Mbps), ANT R Channel: 11



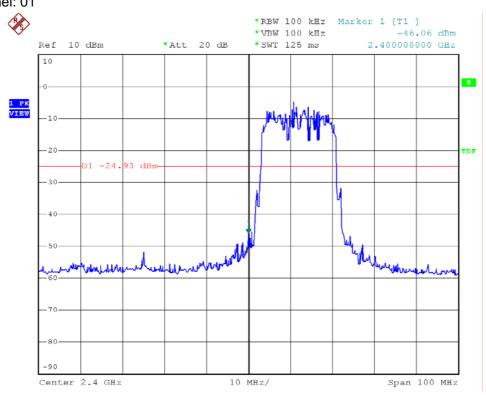


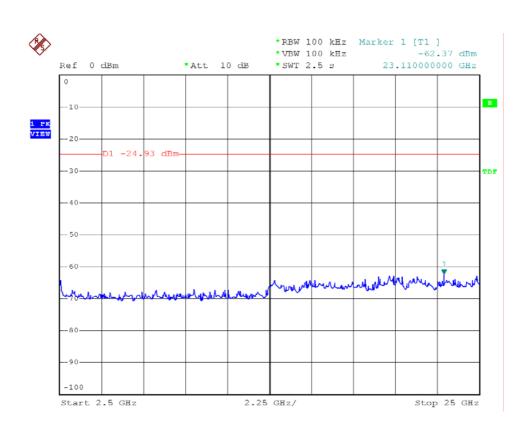
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 90 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 01



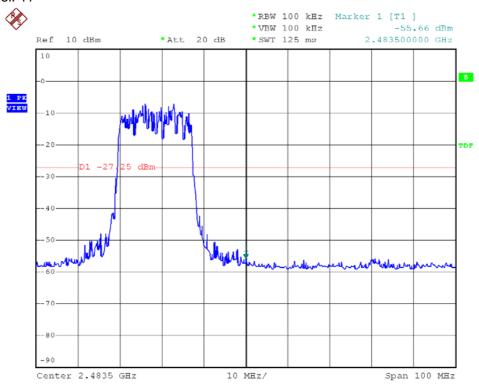


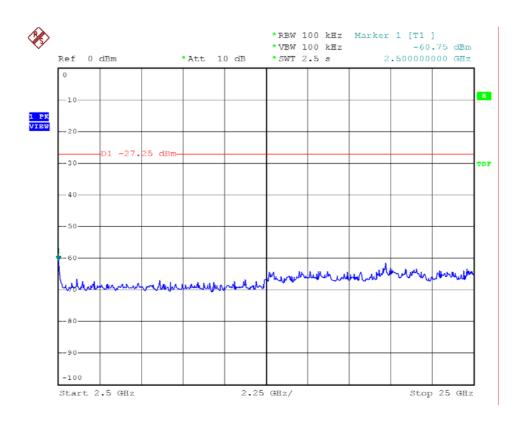
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 91 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 11



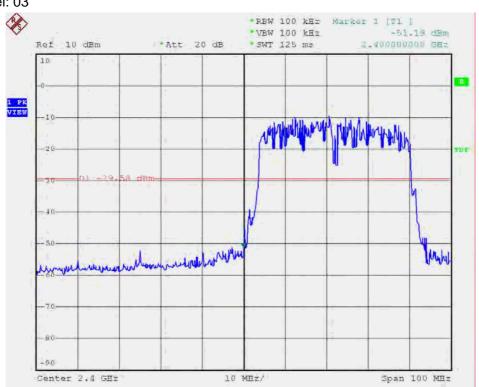


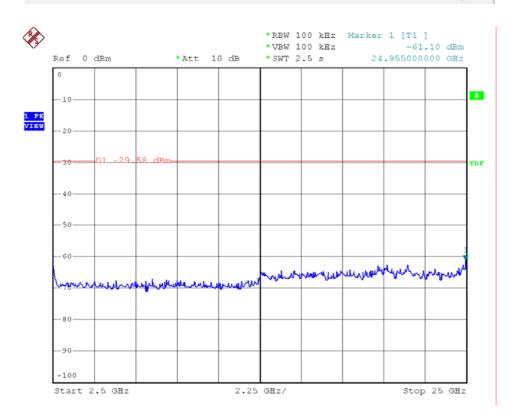
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 92 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 03



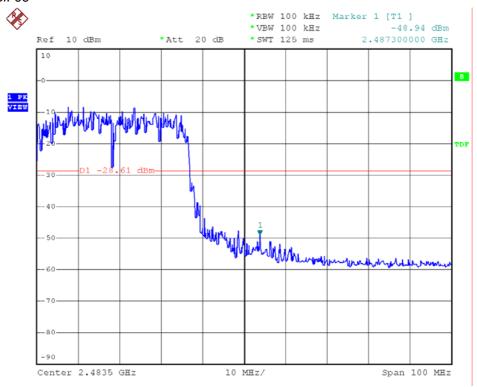


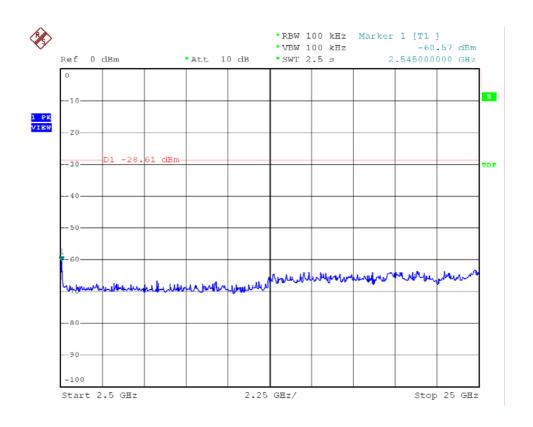
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 93 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (270Mbps), ANT R Channel: 09



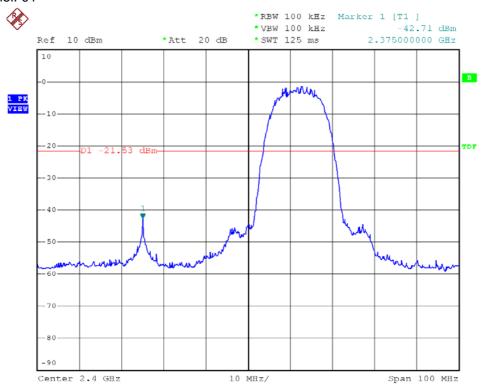


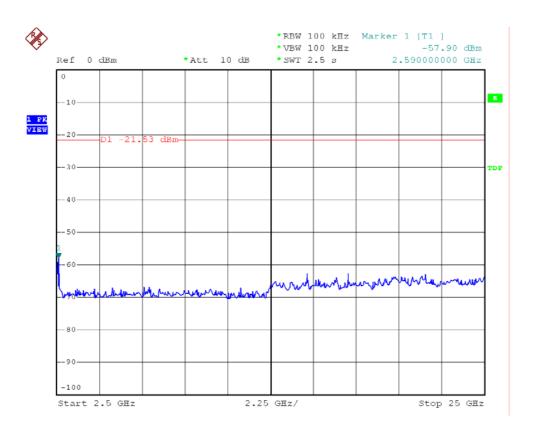
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 94 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 01





Tel:886-2-2655-8100 Fax:886-2-2655-8200

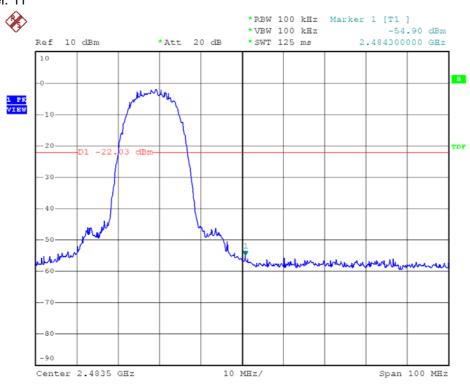
 Issued Date
 :
 Nov. 10, 2011

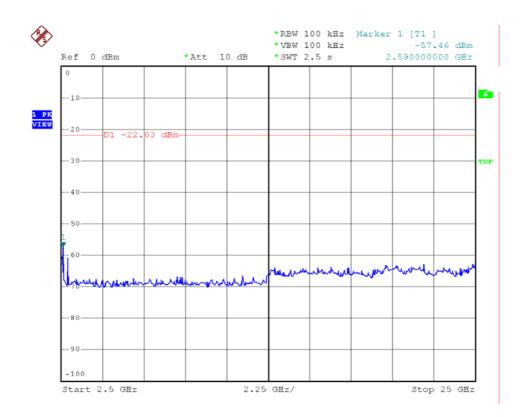
 Page No.
 :
 95 of 119

 FCC ID
 :
 ZXPX108NX

0

Modulation Standard: 802.11b (11Mbps), ANT L Channel: 11





Tel:886-2-2655-8100 Fax:886-2-2655-8200

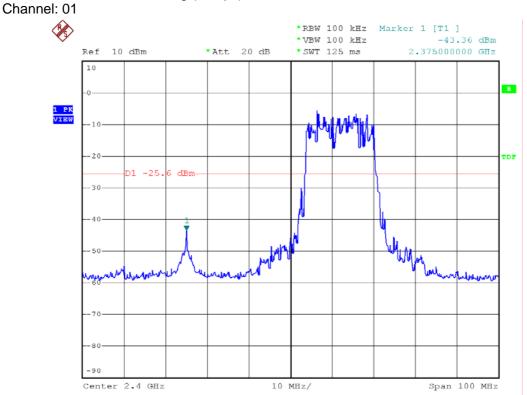
Issued Date : Nov. 10, 2011

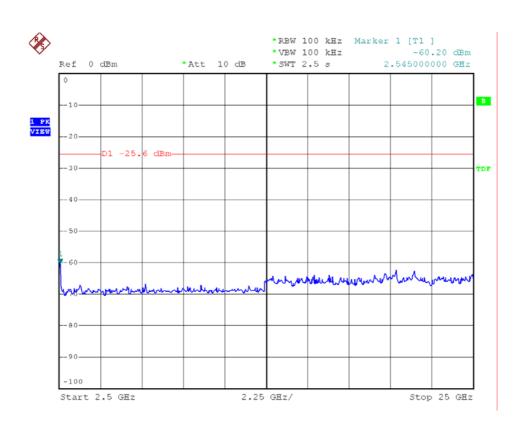
Page No. : 96 of 119

FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT L





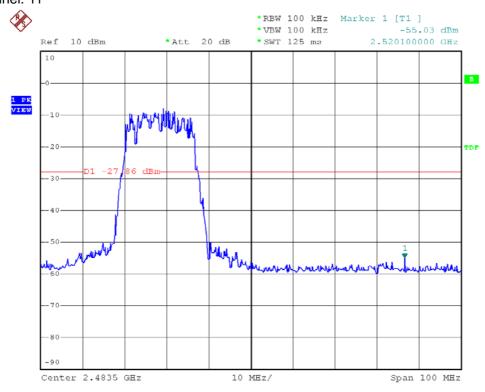
Issued Date : Nov. 10, 2011

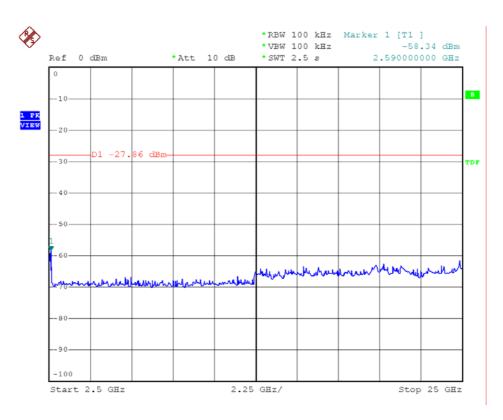
Page No. : 97 of 119

FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 11





Tel:886-2-2655-8100 Fax:886-2-2655-8200

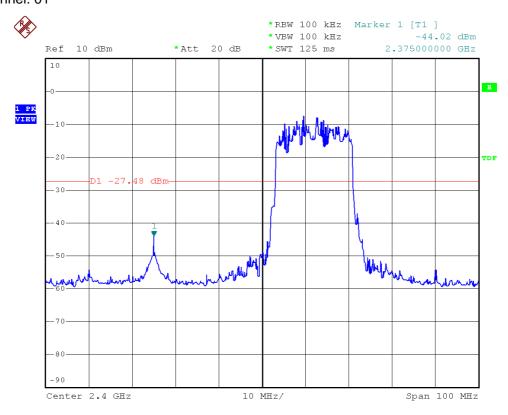
Issued Date : Nov. 10, 2011

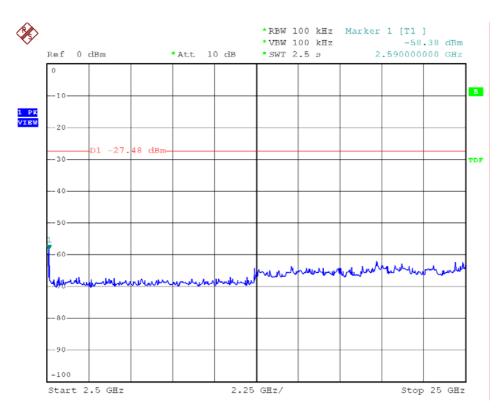
Page No. : 98 of 119

FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 01





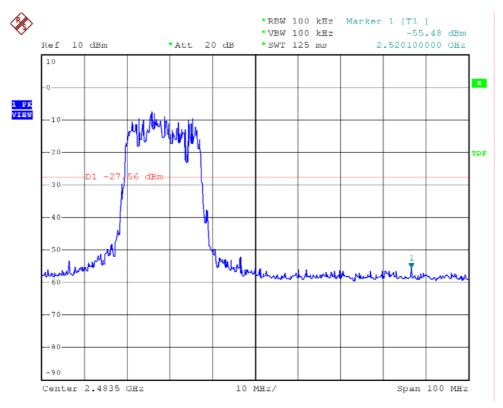
Tel:886-2-2655-8100 Fax:886-2-2655-8200

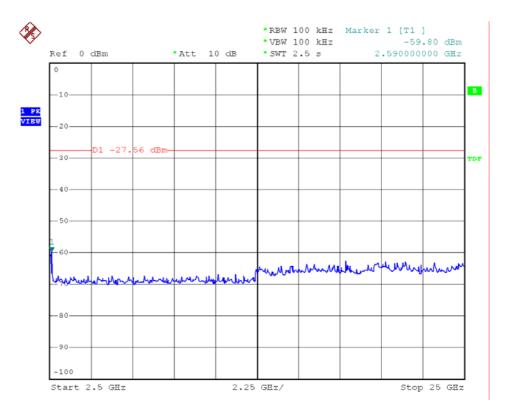
 Issued Date
 : Nov. 10, 2011

 Page No.
 : 99 of 119

 FCC ID
 : ZXPX108NX

Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 11





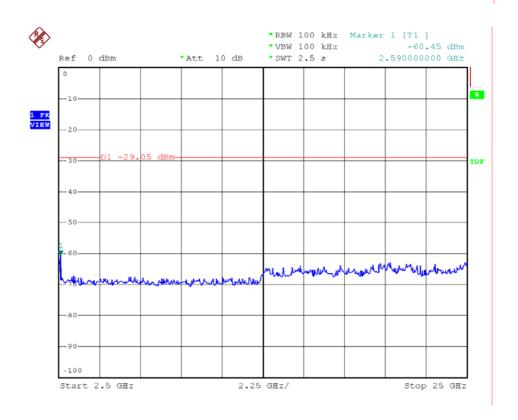
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 100 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 03



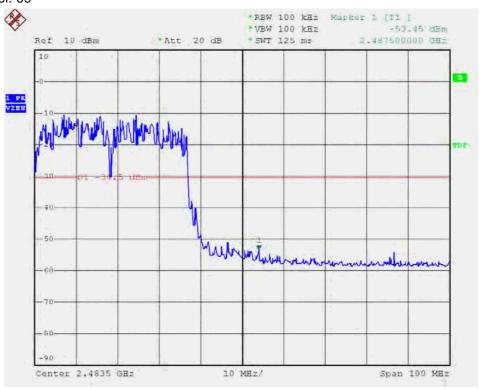


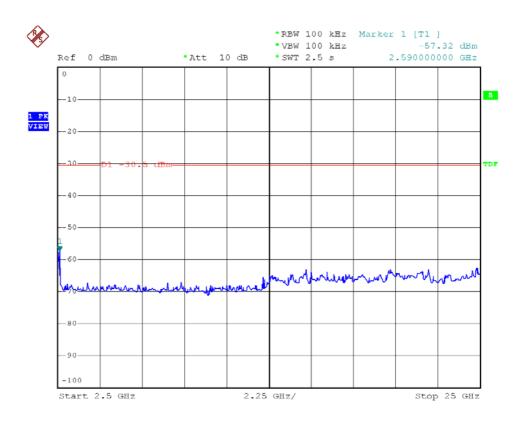
Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 101 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 09





Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 102 of 119
FCC ID : ZXPX108NX

8.6 Restrict Band Emission Measurement Data

Test Date : Nov. 03, 2011

Temperature : 25 Humidity : 65 % Atmospheric Pressure : 1023 hPa

Modulation Standard: IEEE 802.11b (11Mbps)

Channel 1						Fu	ındame	ntal Frequ	uency: 241	2 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m) Remark			nit@3m BuV/m) Margin (dB)		Table (Deg.)	Ant High
				,		Peak	Ave.	, ,	, ,	(m)
2326.12	Н	50.37	1.71	52.08	Peak	74	54	-21.92	0	1.00
	Н				Ave	74	54			1.00
2389.76	V	52.78	2.07	54.85	Peak	74	54	-19.15	85	1.00
2389.76	V	41.18	2.07	43.25	Ave	74	54	-10.75	264	1.00
Channel 11						Fu	ındame	ntal Frequ	uency: 246	2 MHz
2484.88	Н	50.54	0.08	50.62	Peak	74	54	-23.38	0	1.00
	Н				Ave	74	54			1.00
2483.85	V	51.44	-2.56	48.88	Peak	74	54	-25.12	360	1.00
	V				Ave	74	54			1.00

Modulation Standard: IEEE 802.11g (6Mbps)

Widdliation Standard. IEEE 802.119 (GWBPS)										
Channel 1 Fundamental Frequency: 2412 MHz										
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m Remark (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High
				,		Peak	Ave.			(m)
2361.82	Н	51.15	1.55	52.70	Peak	74	54	-21.30	360	1.00
	Н				Ave	74	54			1.00
2389.76	V	53.42	2.07	55.49	Peak	74	54	-18.51	360	1.00
2389.76	V	43.97	2.07	46.04	Ave	74	54	-7.96	0	1.00
Channel 11						Fι	ındame	ental Frequ	uency: 246	2 MHz
2483.74	Н	50.93	0.10	51.03	Peak	74	54	-22.97	0	1.00
	Н				Ave	74	54			1.00
2493.46	V	50.80	-3.07	47.73	Peak	74	54	-26.27	0	1.00
	V				Ave	74	54			1.00

Notes:

- 1. Result = Meter Reading + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Cerpass Technology Corp.Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011
Page No. : 103 of 119
FCC ID : ZXPX108NX



Test Date : Nov. 03, 2011

Temperature : 25
Humidity : 65 %
Atmospheric Pressure : 1023 hPa

Modulation Standard: IEEE 802.11n HT20 (13Mbps)

Channel 1						Fu	ındame	ntal Frequ	uency: 241	2 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark		Limit@3m (dBuV/m)		Table (Deg.)	Ant High
, ,		J		,		Peak	Ave.	(dB)	, 0,	(m)
2337.54	Н	50.65	1.67	52.32	Peak	74	54	-21.68	360	1.00
	Н				Ave	74	54			1.00
2317.14	V	49.78	3.29	53.07	Peak	74	54	-20.93	360	1.00
	V				Ave	74	54			1.00
Channel 11						Fu	ındame	ntal Frequ	uency: 246	2 MHz
2483.58	Н	50.40	0.11	50.51	Peak	74	54	-23.49	0	1.00
	Н				Ave	74	54			1.00
2483.58	V	51.46	-2.54	48.92	Peak	74	54	-25.08	0	1.00
	V				Ave	74	54			1.00

Modulation Standard: IEEE 802.11n HT40 (27Mbps)

Channel 3	Channel 3 Fundamental Frequency: 2422 MHz									
Frequency (MHz)	Ant-Pol H/V	Meter Reading	leter Corrected Result Remark (dBuV		Remark Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High	
						Peak	Ave.			(m)
2312.24	Н	51.08	1.77	52.85	Peak	74	54	-21.15	360	1.00
	Н				Ave	74	54			1.00
2387.72	V	52.30	2.12	54.42	Peak	74	54	-19.58	0	1.00
2387.72	V	41.30	2.12	43.42	Ave	74	54	-10.58	0	1.00
Channel 9						Fu	ındame	ntal Frequ	uency: 245	2 MHz
2487.27	Н	51.23	0.04	51.27	Peak	74	54	-22.73	0	1.00
	Н				Ave	74	54			1.00
2484.72	V	53.06	-2.61	50.45	Peak	74	54	-23.55	360	1.00
	V				Ave	74	54			1.00

Notes:

- 1. Result = Meter Reading + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.

Cerpass Technology Corp.Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011

Page No. : 104 of 119

FCC ID : ZXPX108NX

9. Power Spectral Density

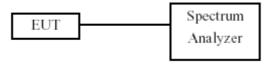
9.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2 Test Procedures

- a. The transmitter output was connected to spectrum analyzer.
- b. The spectrum analyzer's resolution bandwidth were set at 3KHz RBW and 30KHz VBW as that of the fundamental frequency. Set the sweep time=span/3KHz.
- c. The power spectral density was measured and recorded.
- d. The Sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

9.3 Test Setup Layout



9.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2011/05/05	2012/05/04

 Cerpass Technology Corp.
 Issued Date : Nov. 10, 2011

 Tel:886-2-2655-8100
 Fax:886-2-2655-8200

 Page No. : 105 of 119

Page No. : 105 of 119 FCC ID : ZXPX108NX

9.5 Test Result and Data

Test Date: Nov. 07, 2011 Temperature: 25
Atmospheric pressure: 1020 hPa Humidity: 65 %

Modulation Standard	Channel	Frequency (MHz)	Maximum Pow 3 kHz Bandv	•
			ANT R	ANT L
	01	2412	-13.30	-14.38
802.11b (11Mbps)	06	2437	-13.32	-15.59
	11	2462	-12.99	-15.75
	01	2412	-18.14	-19.02
802.11g (6Mbps)	06	2437	-16.95	-18.52
	11	2462	-16.57	-18.64

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)			
			ANT R	ANT L	R+L	
200 44 11700	01	2412	-16.62	-19.62	-14.86	
802.11n HT20 (13Mbps)	06	2437	-17.03	-19.39	-15.04	
(TOMBPS)	11	2462	-16.89	-19.83	-15.11	
	03	2422	-17.30	-25.56	-16.70	
802.11n HT40 (27Mbps)	06	2437	-18.10	-25.30	-17.34	
(27110003)	09	2452	-17.47	-25.36	-16.82	

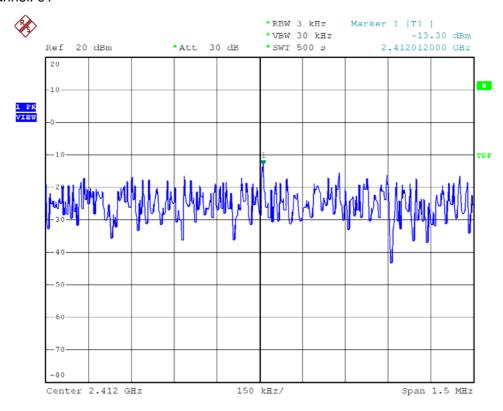
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

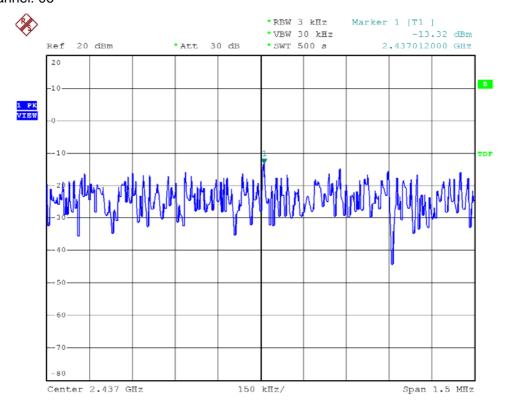
Issued Date : Nov. 10, 2011
Page No. : 106 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 01



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 06



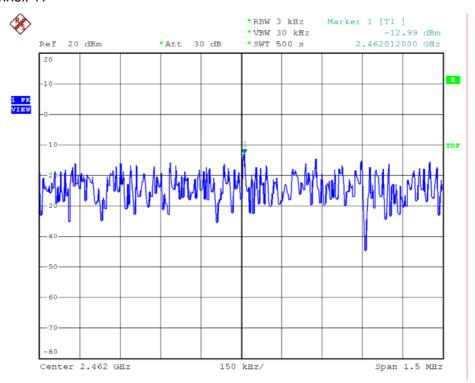
Issued Date : Nov. 10, 2011

Page No. : 107 of 119

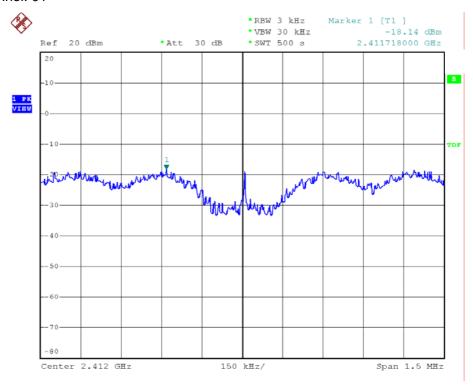
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT R Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 01

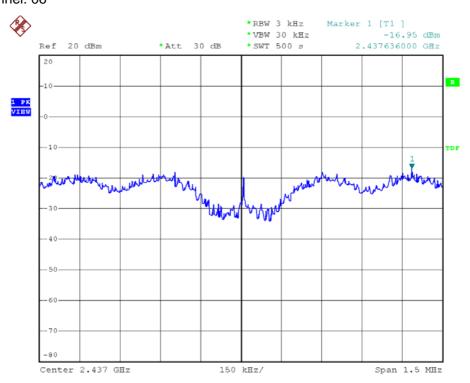


Tel:886-2-2655-8100 Fax:886-2-2655-8200

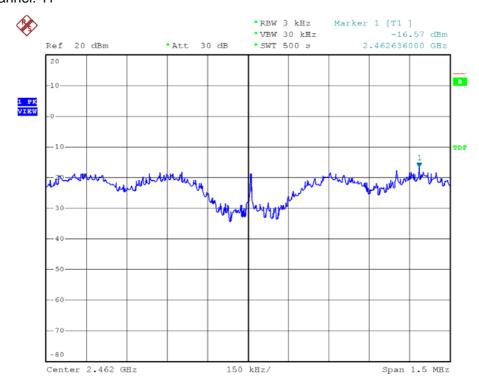
Issued Date : Nov. 10, 2011
Page No. : 108 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT R Channel: 11



Tel:886-2-2655-8100 Fax:886-2-2655-8200

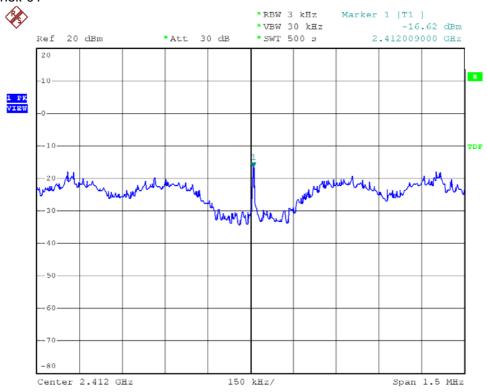
 Issued Date
 :
 Nov. 10, 2011

 Page No.
 :
 109 of 119

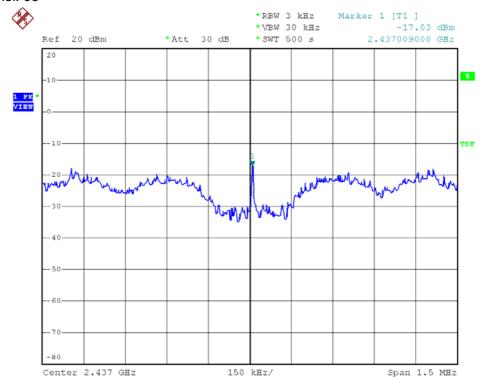
 FCC ID
 :
 ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 01



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 06



Tel:886-2-2655-8100 Fax:886-2-2655-8200

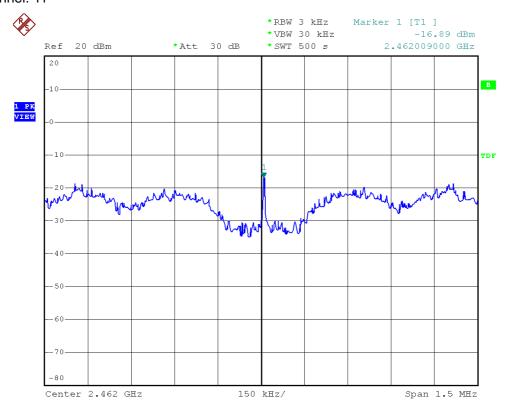
 Issued Date
 :
 Nov. 10, 2011

 Page No.
 :
 110 of 119

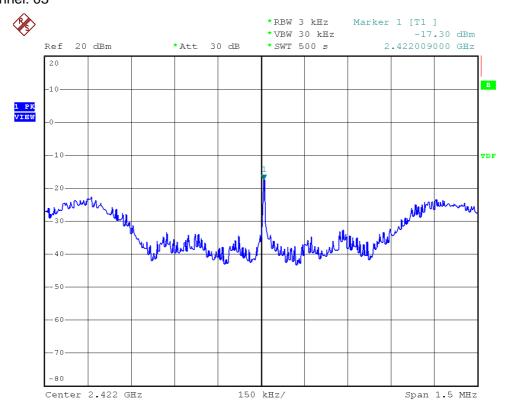
 FCC ID
 :
 ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT R Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 03



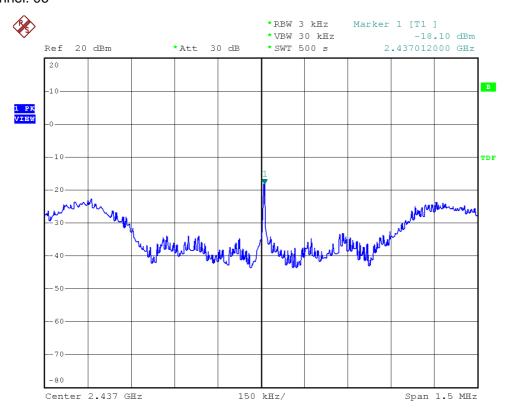
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

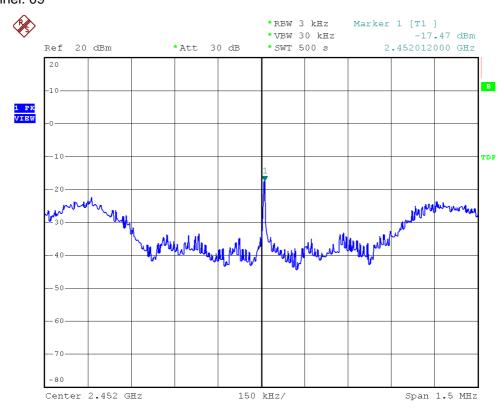
Issued Date : Nov. 10, 2011
Page No. : 111 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 06



Modulation Standard: 802.11n HT40 (27Mbps), ANT R Channel: 09



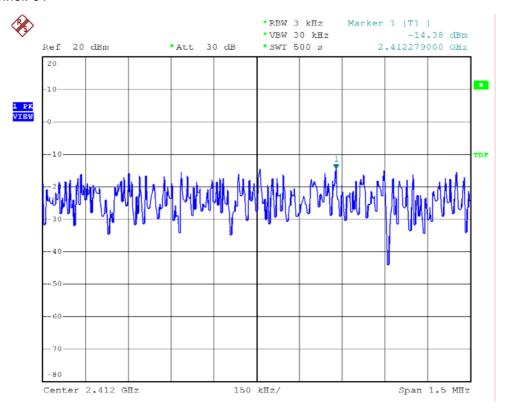
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

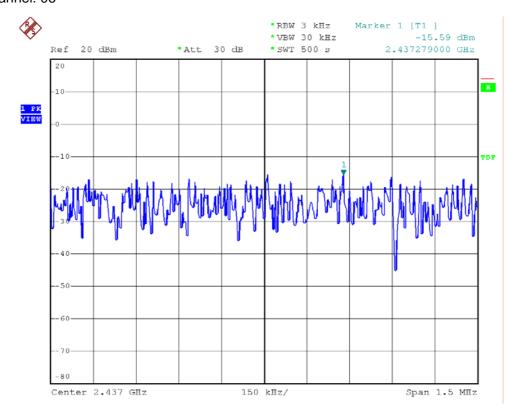
Issued Date : Nov. 10, 2011
Page No. : 112 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 01



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 06



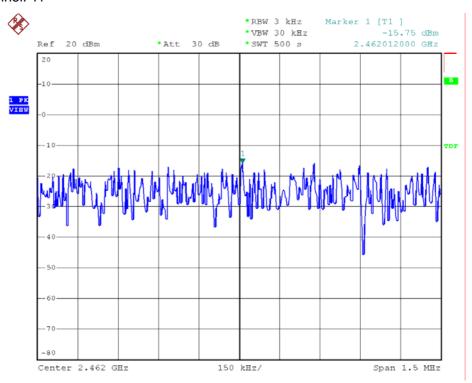
Issued Date : Nov. 10, 2011

Page No. : 113 of 119

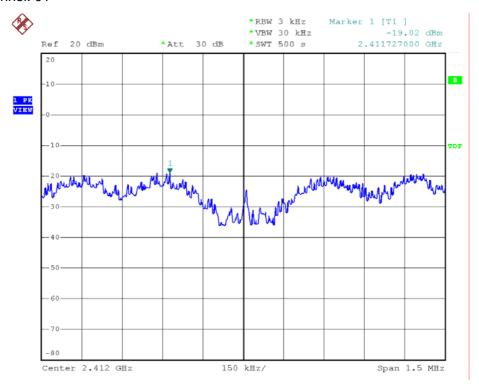
FCC ID : ZXPX108NX



Modulation Standard: 802.11b (11Mbps), ANT L Channel: 11



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 01



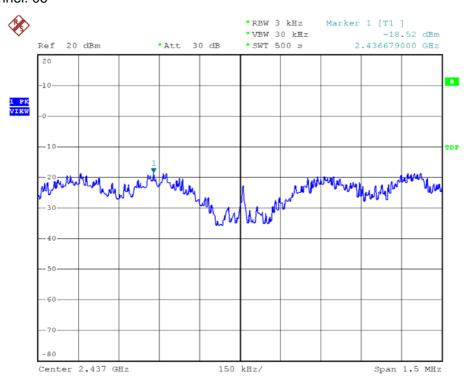
Issued Date : Nov. 10, 2011

Page No. : 114 of 119

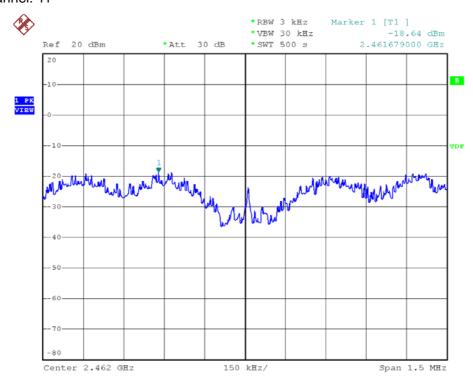
FCC ID : ZXPX108NX



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 06



Modulation Standard: 802.11g (6Mbps), ANT L Channel: 11

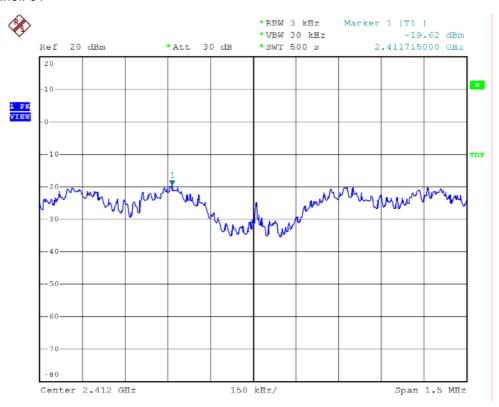


Tel:886-2-2655-8100 Fax:886-2-2655-8200

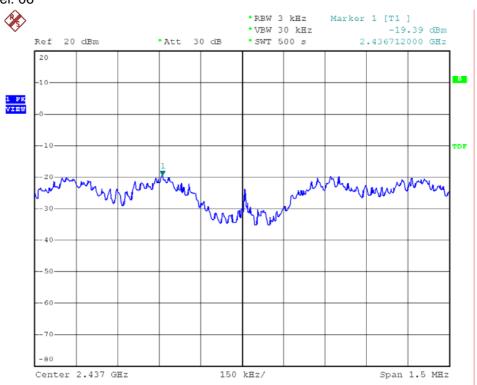
Issued Date : Nov. 10, 2011
Page No. : 115 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 01



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 06



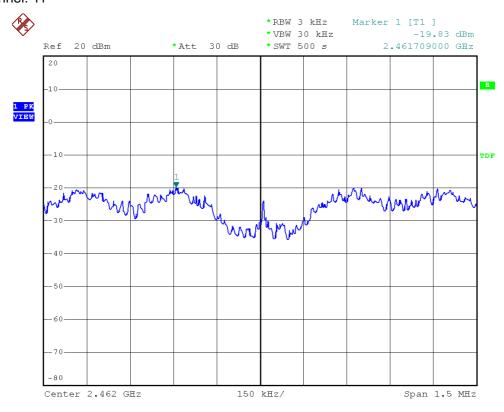
Issued Date : Nov. 10, 2011

Page No. : 116 of 119

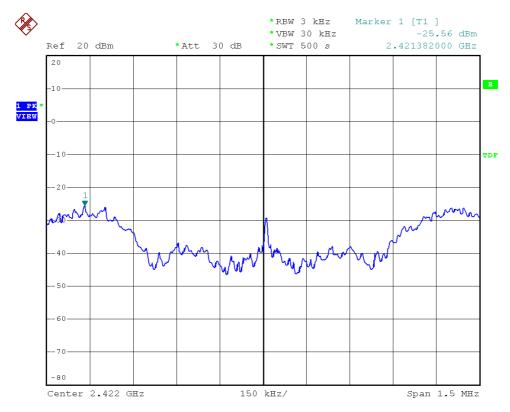
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT20 (13Mbps), ANT L Channel: 11



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 03

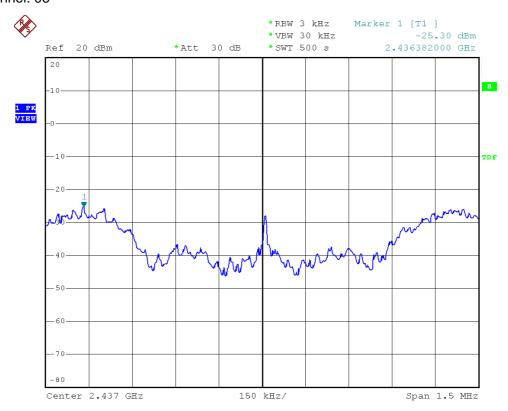


Tel:886-2-2655-8100 Fax:886-2-2655-8200

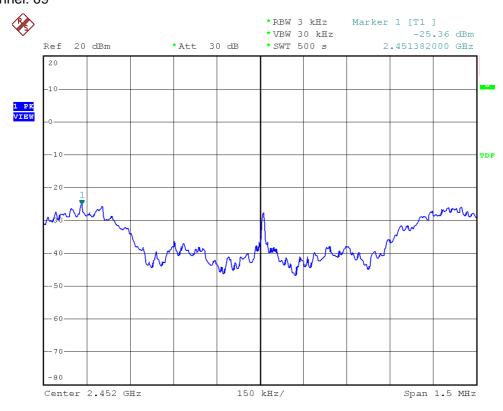
Issued Date : Nov. 10, 2011
Page No. : 117 of 119
FCC ID : ZXPX108NX



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 06



Modulation Standard: 802.11n HT40 (27Mbps), ANT L Channel: 09



Issued Date : Nov. 10, 2011

Page No. : 118 of 119

FCC ID : ZXPX108NX



10. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 - 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 - 5.250
0.49500 - 0.505**	16.69475 – 16.69525	608.0 - 614.0	5.350 - 5.460
2.17350 - 2.19050	16.80425 – 16.80475	960.0 - 1240.0	7.250 – 7.750
4.12500 - 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 - 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 - 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 - 9.500
6.21500 - 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 - 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 - 13.400
6.31175 - 6.31225	123.00000 – 138.00000	2200.0 - 2300.0	14.470 – 14.500
8.29100 - 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 - 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 - 8.38675	156.70000 – 156.90000	2655.0 - 2900.0	22.010 – 23.120
8.41425 - 8.41475	162.01250 – 167.17000	3260.0 - 3267.0	23.600 - 24.000
12.29000 - 12.29300	167.72000 – 173.20000	3332.0 - 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 - 3358.0	36.430 - 36.500
12.57675 – 12.57725	322.00000 - 335.40000	3600.0 - 4400.0	Above 38.6
13.36000 - 13.41000			

^{**:} Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

10.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

Issued Date : Nov. 10, 2011

Page No. : 119 of 119

FCC ID : ZXPX108NX