

FCC 47 CFR PART 15 SUBPART C AND ANSI C63.4:2003 TEST REPORT

For

3G / Wireless-N Dual WAN ADSL2+ Firewall Router

Model : BiPAC 7800NEXL

Data Applies To : BiPAC 7800NEL; BiPAC 7800NL; BiPAC 6800NEXL; BiPAC 6800NEL; BiPAC 6800NL; BEC 7800TNR2; BEC 6800NR2

Issued for

Billion Electric Co., Ltd.

8F., No.192, Sec.2, Chung -Hsing Road, Hsin-Tien City, Taipei Hsien, Taiwan, R.O.C.

Issued by

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Page 1 of 127



Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	10/27/2010	Initial Issue	All Page 127	Kate Shi



TABLE OF CONTENTS

TITLE	PAGE NO.
1. TEST REPORT CERTIFICATION	4
2. EUT DESCRIPTION	5
2.1 DESCRIPTION OF EUT & POWER	5-6
3. DESCRIPTION OF TEST MODES	7
4. TEST METHODOLOGY	7
5. FACILITIES AND ACCREDITATION	8
5.1 FACILITIES	8
5.2 ACCREDITATIONS	8
5.3 MEASUREMENT UNCERTAINTY	9
6. SETUP OF EQUIPMENT UNDER TEST	10-11
7. FCC PART 15.247 REQUIREMENTS	12
7.1 6dB BANDWIDTH	
7.2 MAXIMUM PEAK OUTPUT POWER	
7.3 AVERAGE POWER	29-31
7.4 POWER SPECTRAL DENSITY	32-51
7.5 CONDUCTED SPURIOUS EMISSION	
7.6 RADIATED EMISSION	77-111
7.7 CONDUCTED EMISSION	
APPENDIX I MAXIMUM PERMISSIBLE EXPOSURE	
APPENDIX II SETUP PHOTOS	



Report No.: T100603307-RP1

1. TEST REPORT CERTIFICATION

Applicant	:	Billion Electric Co., Ltd.
Address	:	8F., No.192, Sec.2, Chung -Hsing Road, Hsin-Tien City,
		Taipei Hsien, Taiwan, R.O.C.
Equipment Under Test	:	3G / Wireless-N Dual WAN ADSL2+ Firewall Router
Model	:	BIPAC 7800NEXL
Data Applies To	:	BiPAC 7800NEL; BiPAC 7800NL; BiPAC 6800NEXL; BiPAC 6800NEL; BiPAC 6800NL; BEC 7800TNR2; BEC 6800NR2
Tested Date	:	June 03 ~ October 26, 2010

APPLICABLE STANDARD			
Standard	Test Result		
FCC Part 15 Subpart C AND ANSI C63.4:2003	PASS		

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

les Chin

Alex Chiu Director

Reviewed by:

Gundam Lin Team Leader



2. EUT DESCRIPTION

2.1 DESCRIPTION OF EUT & POWER

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router		
Model Number	BIPAC 7800NEXL		
	BIPAC 7800NEL; BIPAC 7800NL; BIPAC 6800NEXL;		
Data Applies To	BIPAC 6800NEL; BIPAC 6800NL; BEC 7800TNR2;		
	BEC 6800NR2		
Received Date	June 03, 2010		
Fraguanay Panga	IEEE 802.11b/g, 802.11n HT20 : 2412MHz~2462MHz		
Frequency Range	IEEE 802.11n HT40 : 2422MHz~2452MHz		
	IEEE 802.11b : 18.98 dBm (0.0.791W)		
Transmit Dowor	IEEE 802.11g : 22.19 dBm (0.1656W)		
	IEEE 802.11n HT20 : 25.39 dBm (0.3461W)		
	IEEE 802.11n HT40 : 24.20 dBm (0.2628W)		
Channel Spacing	IEEE 802.11b/g, 802.11n HT20/HT40 : 5MHz		
Channel Number	IEEE 802.11b/g : 11 Channels		
	IEEE 802.11n HT40 : 7 Channels		
	IEEE 802.11b : 11, 5.5, 2, 1 Mbps		
Transmit Data Data	IEEE 802.11g : 54, 48, 36, 24, 18, 12, 9, 6 Mbps		
Transmit Data Rate	IEEE 802.11n HT20: 130, 117 ,104, 78, 65, 58.5, 52, 39, 26,		
	IEEE 802.11n HT40: 270, 243 ,216, 162, 135, 121.5, 108, 81,		
	IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK)		
Type of Medulation	IEEE 802.11g : OFDM (64QAM, 16QAM, QPSK, BPSK)		
Type of Modulation	IEEE 802.11n HT20/40 : OFDM (64QAM, 16QAM, QPSK,		
	BPSK)		
Frequency Selection	by software / firmware		
Antenna Type	Dipole Antenna × 2, Antenna Gain 2 dBi		
DC Power Cord Type Unshielded cable 1.5m (no detachable)			
Power Source 12VDC (From Power Adapter)			
I/O Port	DSLx 1, WAN port x 1, LAN port x 4, USB port x 1,		
	Power port × 1		

Power Adapter :

No.	Manufacturer	Model No.	Power Input	Power Output
1	EGB	PAW012A12UL	100-240VAC, 0.5A, 50/60Hz	12V, 1.0A
2	EGB	PAW018A12UL 8066	100-240VAC, 0.5A, 50/60Hz	12V, 1.2A
3	EGB	PAW018A12UL	100-240VAC, 0.5A, 50/60Hz	12V, 1.5A



The difference of the series model:

Model Different Item	BIPAC 7800NEXL	BiPAC 7800NEL	BiPAC 7800NL	BiPAC 6800NEXL		
	With WiFi Antenna	With WiFi Antenna	With WiFi Antenna	With WiFi Antenna		
External Feature	With RJ-45 EWAN	With RJ-45 EWAN	No RJ-45 EWAN	With RJ-45 EWAN		
	With USB 2.0 Host	No USB 2.0 Host	No USB 2.0 Host	With USB 2.0 Host		
	With RJ-11	With RJ-11	With RJ-11	No RJ-11		
External Color	white	white	white	white		
Housing Drawing	D3	D3	D3	D3		
Support 802.11n	0	0	0	0		
VPN	Х	Х	Х	Х		
ADSL function	0	0	0	Х		
Circuits Design	0	0	0	0		
	Flash 8MB	Flash 8MB	Flash 8MB	Flash 8MB		
Model Module	DDRII SDRAM 128MB	DDRII SDRAM 128MB	DDRII SDRAM 128MB	DDRII SDRAM 128MB		
Power Supply	DC12V/1.2A	DC12V/1A	DC12V/1A	DC12V/1.2A		
Note: "O" means all the same and "X" means the difference.						

The difference of the series model:

Model							
Different Item	BiPAC 6800NEL	BiPAC 6800NL	BEC 7800TNR2	BEC 6800NR2			
	With WiFi Antenna	With WiFi Antenna	With WiFi Antenna	With WiFi Antenna			
External Eastura	With RJ-45 EWAN	No RJ-45 EWAN	With RJ-45 EWAN	With RJ-45 EWAN			
External reature	No USB 2.0 Host						
	No RJ-11	No RJ-11	With RJ-11	No RJ-11			
External Color	white	white	Black	Black			
Housing Drawing	D3	D3	D3	D3			
Support 802.11n	0	0	0	0			
VPN	Х	Х	Х	Х			
ADSL function	Х	Х	0	Х			
Circuits Design	0	0	0	0			
	Flash 8MB	Flash 8MB	Flash 8MB	Flash 8MB			
Model Module	DDRII SDRAM 128MB	DDRII SDRAM 128MB	DDRII SDRAM 128MB	DDRII SDRAM 128MB			
			DC12V/1A	DC12V/1A			
Power Supply	ver Supply DC12V/1A	DC12V/1A	or	or			
			DC12V/1.5A	DC12V/1.5A			
Note: "O" means all the same and "X" means the difference							

Remark :

- 1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
- 2. For more details, please refer to the User's manual of the EUT.
- 3. This submittal(s) (test report) is intended for FCC ID: QI3BIL-7800NEX filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



3. DESCRIPTION OF TEST MODES

The EUT is an 802.11n MIMO transceiver in BiPAC 7800NEXL form factor. It has two transmitter chains and two receive chains (2×2 configurations).

11b mode, only Chain 0 transmitter.

11g mode, only Chain 1 transmitter.

IEEE 802.11b, 802.11g, 802.11n HT20 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)	
Low	2412	
Middle	2437	
High	2462	

IEEE 802.11b mode : 1Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11g mode : 6Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11n HT20 mode : 6.5Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11n HT40 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n HT40 mode : 13.5Mbps data rate (worst case) were chosen for full testing.

4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2003 and FCC CFR 47, 15.207, 15.209 and 15.247.



5. FACILITIES AND ACCREDITATION

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

NO. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

The sites are constructed in conformance with the requirements of ANSI C63.4 :2003 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan TAF

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

TaiwanBSMIUSAFCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com



5.3 MEASUREMENT UNCERTAINTY

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY	
Open Area Test Site (OATS No.3) /	. / . 2. 0.207	
Radiated Emission, 30 to 200 MHz	+/- 3.9207	
Open Area Test Site (OATS No.3) /	./ 2.6800	
Radiated Emission, 200 to 1000 MHz	+/- 3.0099	
Semi Anechoic Chamber (966 Chamber) /	+/- 3 6878	
Radiated Emission, 30 to 200 MHz	+/- 0.0070	
Semi Anechoic Chamber (966 Chamber) /	±/- 3 0885	
Radiated Emission, 200 to 1000 MHz	+/- 3.0005	
Semi Anechoic Chamber (966 Chamber) /	. / . 2. 2000	
Radiated Emission, 1 to 26.5GHz	+/- 3.2000	
Conducted Emission, 9kHz to 30MHz	+/- 1.7468	
Conducted Emission, 9kHz to 30MHz	+/- 1.7468	

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 22: 2006, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.



6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	Notebook PC	DELL	Latitude D610	CN-0C4708-48643 -625-5565	E2K24BNHM
2	Notebook PC	Lenovo ideaPad	S10e_4068- RZ1	L3CEV2D	HFS-FL
3	Notebook PC	IBM	ThinkPad T61 7663-AS6	L3F3864	DoC
4	Usb Flash disk	Transcend	Jet Flash V10(4G)	258909 0094	
5	Ethernet Switch	ASUS	GX1008B	90-Q872AN1N0NAM A0-88QSA1003522	
6	ADSL iDSLAM	TECOM	M801	HIL0017	
7	ADSL iDSLAM	ZyXEL	IES-1000	S2Z3322195	

No.	Signal Cable Description
1	Unshielded RJ-45 cable, 12m × 1
2	Unshielded RJ-45 cable, 1.2 m × 3
3	Unshielded RJ-11 cable, 12 m × 1

SETUP DIAGRAM FOR TESTS

EUT & peripherals setup diagram is shown in appendix setup photos.

EUT OPERATING CONDITION

RF Mode

1. Set up all computers like the setup diagram.

TX Mode:

⇒ **Tx Data Rate:** 1Mbps Bandwidth 20 (IEEE 802.11b mode)

6Mbps Bandwidth 20 (IEEE 802.11g mode)

6.5Mbps Bandwidth 20 (IEEE 802.11n HT20 mode)

13.5Mbps Bandwidth 40 (IEEE 802.11n HT40 mode)

⇒ Power control

IEEE 802.11b Channel Low (2412MHz) TX 0 Power=15 (only chain0 TX) IEEE 802.11b Channel Mid (2437MHz) TX 0 Power=15 (only chain0 TX) IEEE 802.11b Channel High (2462MHz) TX 0 Power=15 (only chain0 TX) IEEE 802.11g Channel Low (2412MHz) TX 1 Power=10 (only chain1 TX)

Page 10 of 127



Report No. : T100603307-RP1

IEEE 802.11g Channel Mid (2437MHz) TX 1 Power=12 (only chain1 TX) IEEE 802.11g Channel High (2462MHz) TX 1 Power=09 (only chain1 TX) IEEE 802.11n HT20 Channel Low (2412MHz) TX 0/1 Power=10 IEEE 802.11n HT20 Channel Mid (2437MHz) TX 0/1 Power=12 IEEE 802.11n HT20 Channel High (2462MHz) TX 0/1 Power=08 IEEE 802.11n HT40 Channel Low (2422MHz) TX 0/1 Power=09 IEEE 802.11n HT40 Channel Mid (2437MHz) TX 0/1 Power=11 IEEE 802.11n HT40 Channel High (2452MHz) TX 0/1 Power=08

- 2. All of the function are under run.
- 3. Start test.

Normal Mode

- 1. Setup whole system for test as shown on diagram.
- 2. Power on all equipments.
- 3. Notebook PC_ping EUT IP 192.168.0.100 through WAN connected by RJ45 cable.
- 4. Notebook PC_ping EUT IP 192.168.1.254 through LAN connected by RJ45 cable.
- 5. Notebook PC_ping EUT IP 192.168.1.254 through wireless LAN.
- 6. LAN 2~3 port link ethernet switch load.
- 7. USB port link USB flash disk load.
- 8. ADSL iDSLAM Link DSL.
- 9. All of the function are under run.
- 10. Start test.



7. FCC PART 15.247 REQUIREMENTS

7.1 6dB BANDWIDTH

<u>LIMITS</u>

§ 15.247(a) (2) For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	AGILENT	E4446A	MY43360132	06/20/2011
Spectrum Analyzer	AGILENT	E4446A	MY46180323	05/02/2011

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output was connected to a spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 300 KHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

TEST RESULTS

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	6.83	500	PASS
Middle	2437	8.58	500	PASS
High	2462	6.83	500	PASS

IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	15.92	500	PASS
Middle	2437	14.00	500	PASS
High	2462	15.08	500	PASS

IEEE 802.11n HT20 mode (Two TX)

Channel	Channel Frequency	6dB Bai (M	ndwidth Hz)	Minimum Limit	Pass / Fail	
	(MHz)	Chain 0	Chain 1	(kHz)		
Low	2412	14.67	13.33	500	PASS	
Middle	2437	15.67	15.08	500	PASS	
High	2462	13.42	17.25	500	PASS	

IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency	6dB Bai (M	ndwidth Hz)	Minimum Limit	Pass / Fail	
	(MHz)	Chain 0	Chain 1	(kHz)	/ I un	
Low	2422	36.33	35.83	500	PASS	
Middle	2437	36.25	36.00	500	PASS	
High	2452	36.42	36.33	500	PASS	



6dB BANDWIDTH

















































7.2 MAXIMUM PEAK OUTPUT POWER

<u>LIMITS</u>

§ 15.247(b) The maximum peak output power of the intentional radiator shall not exceed the following :

§ 15.247(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands : 1 watt.

§ 15.247(b) (4) Except as shown in paragraphs (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST EQUIPMENT

Name of Equipment	Name of Equipment Manufacturer		Serial Number	Calibration Due
Power Meter	Anritsu	ML2495A	1012009	03/28/2011
Power Sensor Agilent		E9327A	US40441097	09/16/2011

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.



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FCC ID : QI3BIL-7800NEX

TEST RESULTS

Total peak power calculation formula: 10 log (10[^] (Chain 0 Power / 10) + 10[^] (Chain 1 Power / 10)).

The maximum antenna gain is 2 dBi, therefore the limit is 30 dBm. In the legacy mode, the effective antenna gain is $2 + 10 \times \text{Log}(2) = 5.01$ dBi.

IEEE 802.11b Mode

Channol	Channel	Peak Power		Peak Pov	Pass / Fail	
Channel	(MHz)	(dBm)	(W)	(dBm)	(W)	F 455 / F 411
Low	2412	18.92	0.0780	30	1	PASS
Middle	2437	18.97	0.0789	30	1	PASS
High	2462	18.98	0.0791	30	1	PASS

Remark:

1. At finial test to get the worst-case emission at 1Mbps.

2. This test item is test by CCS- Wugu.

IEEE 802.11g Mode

Channel	Channel	Peak Power		Peak Pov	Bass / Eail	
Channer	(MHz)	(dBm)	(W)	(dBm)	(W)	Fa55 / Faii
Low	2412	19.89	0.0975	30	1	PASS
Middle	2437	22.19	0.1656	30	1	PASS
High	2462	18.78	0.0755	30	1	PASS

Remark:

1. At finial test to get the worst-case emission at 6Mbps.

2. This test item is test by CCS- Wugu.



IEEE 802.11n HT20 Mode (Two TX)

Channel	Channel Frequency	nnel Peak Power uency (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
	(MHz)	Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	1 400 / 1 411
Low	2412	19.36	19.21	22.30	0.1697	30	1	PASS
Middle	2437	22.51	22.25	25.39	0.3461	30	1	PASS
High	2462	17.06	16.66	19.87	0.0972	30	1	PASS

Remark:

1. At finial test to get the worst-case emission at 6.5Mbps.

2. This test item is test by CCS- Wugu.

IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency	el Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
	(MHz)	Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	,
Low	2422	18.46	17.89	21.19	0.1317	30	1	PASS
Middle	2437	21.26	21.11	24.20	0.2628	30	1	PASS
High	2452	15.97	16.77	19.40	0.0871	30	1	PASS

Remark:

1. At finial test to get the worst-case emission at 13.5Mbps.

2. This test item is test by CCS- Wugu.



7.3 AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

TEST EQUIPMENT

Name of Equipment	of Equipment Manufacturer Model		Serial Number	Calibration Due
Power Meter	Agilent	E4416A	GB41291611	06/27/2011
Power Sensor	Agilent	E9327A	US40441097	06/27/2011

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.



TEST RESULTS

Total avg power calculation formula: 10 log (10[^] (Chain 0 Power / 10) + 10[^] (Chain 1 Power / 10)).

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Average Power Output (dBm)
Low	2412	15.06
Middle	2437	15.18
High	2462	15.21

Remark:

1. At finial test to get the worst-case emission at 1Mbps.

2. This test item is test by CCS- Wugu.

IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	Average Power Output (dBm)
Low	2412	9.41
Middle	2437	12.24
High	2462	8.55

Remark:

1. At finial test to get the worst-case emission at 6Mbps.

2. This test item is test by CCS- Wugu.



IEEE 802.11n HT20 Mode (Two TX)

Channel	Channel Frequency	Average Po (dE	ower Output 3m)	Peak Power Total
	(MHz)	Chain 0	Chain 1	(dBm)
Low	2412	9.41	8.96	12.20
Middle	2437	11.97	11.68	14.84
High	2462	5.97	6.28	9.14

Remark:

1. At finial test to get the worst-case emission at 6.5Mbps.

2. This test item is test by CCS- Wugu.

IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency	Average Po (dE	ower Output 3m)	Peak Power Total
	(MHz)	Chain 0	Chain 1	(dBm)
Low	2422	7.40	6.89	10.16
Middle	2437	10.22	10.17	13.21
High	2452	5.06	6.54	8.87

Remark:

1. At finial test to get the worst-case emission at 13.5Mbps.

2. This test item is test by CCS- Wugu.



7.4 POWER SPECTRAL DENSITY

<u>LIMITS</u>

§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	AGILENT	E4446A	MY43360132	06/20/2011
Spectrum Analyzer	AGILENT	E4446A	MY46180323	05/02/2011

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using RBW = 3KHz and VBW RBW, set sweep time = span / 3KHz.

The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span / 3KHz for a full response of the mixer in the spectrum analyzer.



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FCC ID : QI3BIL-7800NEX

TEST RESULTS

Total power spectral density calculation formula:

10 log (10[^] (Chain 0 PPSD / 10) + 10[^] (Chain 1 PPSD / 10)).

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-6.98	8	PASS
Middle	2437	-4.05	8	PASS
High	2462	-5.78	8	PASS

Remark:

1. At finial test to get the worst-case emission at 1Mbps.

2. The cable assembly insertion loss of 11dB (including 10 dB pad and 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-11.73	8	PASS
Middle	2437	-10.54	8	PASS
High	2462	-12.91	8	PASS

Remark:

1. At finial test to get the worst-case emission at 6Mbps.

2. The cable assembly insertion loss of 11dB (including 10 dB pad and 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



IEEE 802.11n HT20 Mode (Two TX)

Channel	Channel	Final RF Po 3KHz B\	wer Level in N (dBm)	PPSD Total	Minimum	Pass / Fail
onamer	(MHz)	Chain 0	Chain 1	(dBm)	(dBm)	1 455 / 1 41
Low	2412	-11.26	-12.90	-8.99	8	PASS
Middle	2437	-8.99	-9.77	-6.35	8	PASS
High	2462	-13.81	-15.96	-11.74	8	PASS

Remark:

1. At finial test to get the worst-case emission at 6.5Mbps.

2. The cable assembly insertion loss of 11dB (including 10 dB pad and 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11n HT20 Combined Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-8.93	8	PASS
Middle	2437	-6.21	8	PASS
High	2462	-11.94	8	PASS

Remark:

1. At finial test to get the worst-case emission at 6.5Mbps.

2. The cable assembly insertion loss of 14.1dB (including 10 dB pad + Combiner 3.1 dB + 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel	Final RF Por 3KHz BV	wer Level in V (dBm)	PPSD Total	Minimum	Pass / Fail
onamer	(MHz)	Chain 0	Chain 1	(dBm)	(dBm)	1 455 / 1 41
Low	2422	-14.09	-6.57	-5.86	8	PASS
Middle	2437	-10.61	-15.62	-9.42	8	PASS
High	2452	-14.77	-17.87	-13.04	8	PASS

Remark:

1. At finial test to get the worst-case emission at 13.5Mbps.

2. The cable assembly insertion loss of 11dB (including 10 dB pad and 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11n HT40 Combined Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2422	-14.42	8	PASS
Middle	2437	-10.48	8	PASS
High	2452	-13.95	8	PASS

Remark:

1. At finial test to get the worst-case emission at 13.5Mbps.

2. The cable assembly insertion loss of 14.1dB (including 10 dB pad + Combiner 3.1 dB + 1 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



POWER SPECTRAL DENSITY

		CH LC	ow(IE	EE 80)2.11b) Mode	÷)		
ilent 11	L:26:44 0	ct 5,2010	0				RТ		
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ilent 12 wer Sp	400 0 GHz : 2:14:24 0 ectral Der	2 CH Mid ct 5, 2010 nsity, b Mo	idle (0 ode Mid C	•VBW 10 F EEE 8	кн _z 302.11	b Moc	#Swee le) RL Mkr1	p 100 s (59
ilent 12 wer Sp dBm	400 0 GH2 2 2:14:24 0 ectral Der	CH Mid ct 5, 2010 nsity, b Ma At	H Idle (I 0 ode Mid C ten 20 dl	*VBW 10 * EEE 8 Ch. B	кНz 802.11	b Moc	#Swee Ie) RL Mkr1	p 100 s (. 2.437 7	59 1.05
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ilent 12 wer Sp dBm	400 0 GH2	2 CH Mid ct 5, 2010 nsity, b Ma At	Idle (I 0 ode Mid C ten 20 d	•VBW 10 K EEE 8 Ch. B	KHz 302.11	b Moc	#Swee Ie) RL Mkr1	p 100 s (59
ilent 12 wer Sp dBm	400 0 GH2 2:14:24 0 ectral Der	CH Mid oct 5, 2010 nsity, b Mo At	Idle (0 ode Mid C ten 20 d	•VBW 10 K EEE 8 Ch. B	^{⟨Hz} 302.11	b Moc	*Swee Ie) RL Mkr1	p 100 s (59
ilent 12 wer Sp dBm	2:14:24 0	CH Mid	Idle (I 0 ode Mid C ten 20 dl	•VBW 10 k EEE 8 Ch. B	302.11	b Moc	*Swee	p 100 s (59
ilent 12 wer Sp dBm	2:14:24 0	CH Mid Ict 5, 2010 Insity, b Ma At	Idle (I 0 ode Mid C ten 20 dl	•VBW 10 F EEE 8 Ch. B	302.11	b Moc	#Swee	p 100 s (59
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ilent 12 wer Sp dBm	2:14:24 0	CH Mid ct 5, 2010 nsity, b Ma At	Idle (I 0 ode Mid C ten 20 dl	•VBW 10 F EEE 8	302.11	b Moc	*Swee	2.437 7 	59
ilent 12 wer Sp dBm	2:14:24 0	2 CH Mid Insity, b Ma At	Idle (I 0 ode Mid C ten 20 dl	•VBW 10 F EEE 8	302.11	b Moc	*Swee	2.437 7 	59
ilent 12 wer Sp dBm	2:14:24 0	2 CH Mid ct 5, 2010 At At	Idle (I 0 ode Mid C ten 20 dl	•VBW 10 F	302.11	b Moc	*Swee	2.437 7 	59
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ilent 12 wer Sp dBm	2:14:24 0	2 CH Mid ct 5, 2010 At	Idle (I Dode Mid C ten 20 dl	•VBW 10 F	302.11	b Moc	*Swee	2.437 7 	59
ilent 12 wer Sp dBm	2:14:24 0 eectral Der	2 CH Mid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Idle (I Dode Mid C ten 20 dl	•VBW 10 F	302.11	b Moc	*Swee	2.437 7 	59
ilent 12 wer Sp dBm	2:14:24 0 eectral Der	2 CH Mid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Idle (I Dode Mid C ten 20 dl	•VBW 10 F	302.11	b Moc	*Swee	2.437 7 	59
ilent 12 wer Sp dBm	2:14:24 0 ectral Der	CH Mid	Idle (I Dode Mid C ten 20 dl	•VBW 10 F	302.11	b Moc	*Swee	2.437 7	59
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		(CH Hig	gh (IE	EE 80)2.11b	Mode	e)		
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Her Spectral Density, g Mode Low Ch. JBm Atten 20 dB			~ *** 7	~~
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		(CH Hi	gh (IE	EE 80)2.11g	g Mode	e)		
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Lenter	2.463 25	50 0 GHZ							Span	300 kHz
#Kes B	W 3 kHz			+	⊧VBM 10 k	KHZ		#Sweep	i 100 s (K	501 pts)_



	Cł	H Low	(IEE	E 802.	.11n H	IT20 N	/lode /	Chair	10)	
ж А	gilent 17:	30:24 Oc	t 5,2010	9				RТ		
0_Powe	er Spectra	al Density	/, HT20 M	lode Low	Ch.			Mkr1	2.412 8	55 6 GHz
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* A	CH	Middl 50:12 Or	e (IEE at 5, 2010	EE 802	2.11n	HT20	Mode	/ Cha	in 0)	
₩ A 0_Powe	CH gilent 17: er Spectra	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 /, HT20 M	EE 80 2 0 1ode Mid 1	2.11n Ch.	HT20	Mode	/ Cha R T Mkr1	i in 0) 2.436 3	04 9 GHz
₩ A 0_Powe Ref 20	CH gilent 17: er Spectra	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 /, HT20 M At	EE 80 2 0 1ode Mid 1 ten 20 d	2.11n Ch.	HT20	Mode	/ Cha R T Mkr1	i in 0) 2.436 3 –8	04 9 GHz 3.99 dBm
₩ A 0_Powe Ref 20 #Peak	CH gilent 17: er Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 /, HT20 M At	EE 80 2 0 lode Mid ten 20 dl	2.11n ^{Ch.}	HT20	Mode	/ Cha R T Mkr1	i in 0) 2.436 3 –8	04 9 GHz 3.99 dBm
	CH gilent 17: er Spectri dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 80 2 D lode Mid U ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	i in 0) 2.436 3 –8	04 9 GHz 3.99 dBm
₩ A 0_Powe Ref 20 #Peak Log 10 dB/	CH gilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 80 2 D lode Mid I ten 20 d	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
★ A 0_Powe Ref 20 #Peak Log dB/ 0ffst 41	CH gilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEE tt 5, 2010 /, HT20 M At	EE 802 Node Mid I ten 20 di	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
∦ A 0_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB	CH agilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEI ct 5, 2010 /, HT20 M At	EE 802 Dode Mid I ten 20 di	2.11n ^{Ch.} B	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
★ A 0_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI	CH gilent 17: or Spectro dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 0 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
★ A 0_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0	CH gilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 0 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
* A 0_Powe Ref 20 #Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm	CH gilent 17: or Spectro dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz .99 dBm
★ A 0_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm LgAv	CH sgilent 17: or Spectric dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 -8	04 9 GHz 3.99 dBm
* A 0_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2	CH sgilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 -8	04 9 GHz 3.99 dBm
★ A 0_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 \$2 \$3 F\$	CH gilent 17: or Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 -8	04 9 GHz 3.99 dBm
★ A 0_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH gilent 17: of Spectra dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 -8	04 9 GHz 3.99 dBm
	CH gilent 17: or Spectro dBm	Middl 50:12 Oc al Density	e (IEE 5, 2010 7, HT20 M At	EE 802 lode Mid I ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz 3.99 dBm
	CH gilent 17: or Spectric dBm	Middl 50:12 Oc al Density	e (IEE t 5, 2010 , HT20 M At	EE 802	2.11n	HT20	Mode	/ Cha R T Mkr1	2.436 3 -8	04 9 GHz .99 dBm
★ A 0_Powe Ref 200 #Peak Log dB/ Offst 11 dB DI LgAv W1 S2 S3 FS \$3 FS £(f): f>50k Swp	CH sgilent 17: or Spectric dBm	Middl 50:12 Oc al Density	e (IEE	EE 802	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 8	04 9 GHz .99 dBm
# A 0_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv S3 \$X1 \$2\$ \$X2 \$1\$ \$X2 \$2\$	CH sgilent 17: dBm	Middl 50:12 Oc al Density	e (IEE	EE 802	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 8	04 9 GHz .99 dBm
✤ ▲ 0_Powe Ref 20 Ref 20 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 \$2 \$3 FS £(f): f>50k Swp .	CH gilent 17: dBm	Middl 50:12 Oc al Density	e (IEE ct 5, 2010 7, HT20 M At	EE 802	2.11n	HT20	Mode	/ Cha R T Mkr1	in 0) 2.436 3 	04 9 GHz 3.99 dBm
₩ A 0_Powe Ref 20 Ref 20 I 10 dB/ 0ffst I 11 dB 0B/ 0 0B/ 0 0B B 0DI 8.0 dBm LgAv W1 S2 f>50k Swp Center Center	CH gilent 17: dBm	Middl 50:12 Oc al Density	e (IEE 5, 2010 7, HT20 M At	EE 802	2.11n	HT20	Mode	/ Cha R T Mkr1	Lange Span	04 9 GHz 3.99 dBm



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ж А	gilent 18:0	07:50 Oc	t 5,2010)				RТ	,	
0_Powe	er Spectra	al Density	∕, HT20 M	ode High	Ch.			Mkr1	2.460 4	14 8 GHz
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£(1). f>50k										
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	C	H Low	ı (IEE	E 802	.11n H	IT20 N	/Iode	' Chaiı	n 1)	
₩ А	gilent 16:	02:45 Oc	t 5,2010)				RТ		
1_Powe	er Spectra	al Density	7, HT20 M	lode Low	Ch.			Mkr1	2.414 4	77 4 GHz
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dB					1					
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LaAv										
Light										
W1 S2										
S3 FS										
£ (f):										
f>50k										
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	CH	Midd	le (IE	EE 80	2.11n	HT20	Mode	/ Cha	ain 1)	
∦ A	CH gilent 16:	Midd	le (IE :t 5, 2010	EE 80	2.11n	HT20	Mode	/ Cha R T	ain 1)	
₩ A 1_Powe	CH Agilent 16: er Spectra	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M	EE 80) lode Mid (2.11n Ch.	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9	77 1 GHz
★ A 1_Powe Ref 20 *Pack	CH agilent 16: er Spectra dBm	l Midd 25:16 Oc al Density	l e (IE ct 5, 2010 /, HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch.	HT20	Mode	r / Cha R T Mkr1	ain 1) 2.437 9 _9	77 1 GHz 0.77 dBm
¥ A 1_Powe Ref 20 #Peak	CH agilent 16: er Spectra dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 /, HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n ^{Ch.} B	HT20	Mode	A Cha R T Mkr1	ain 1) 2.437 9 _9	77 1 GHz 9.77 dBm
¥¥ A 1_Powe Ref 20 #Peak Log 10	CH agilent 16: or Spectra dBm	Didd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 0 lode Mid (ten 20 dl	2.11n ^{Ch.}	HT20	Mode	r / Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
₩ A 1_Powe Ref 20 #Peak Log 10 dB/	CH Agilent 16: er Spectro dBm	Midd 25:16 Oc al Density	le (IE tt 5, 2010 7, HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n ^{Ch.}	HT20	Mode	r / Cha R T Mkr1	ain 1) 2.437 9 _9	77 1 GHz 9.77 dBm
	CH Agilent 16: er Spectra I dBm	Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 J lode Mid (ten 20 dl	2.11n	HT20	Mode	r / Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
* A 1_Powe Ref 20 #Peak Log dB/ dB/ Offst 11 dB	CH Agilent 16: or Spectra dBm	Density	le (IE t 5, 2010 7, HT20 M At	EE 80 J Iode Mid (ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
╈ A 1_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI	CH Agilent 16: or Spectra dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 /, HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz).77 dBm
	CH sgilent 16: or Spectric dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 , HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch. B		Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
* A Ref 20 #Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm LaQu	CH agilent 16: or Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 , HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv	CH Agilent 16: Pr Spectri dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 9	77 1 GHz 0.77 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2	CH sgilent 16: P Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH sgilent 16: or Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz).77 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS C(1):	CH sgilent 16: or Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 , HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
★ A 1_Powe Ref 20 Ref 20 I HPeak Log 10 dB/ 0ffst 11 dB Ol B 0 dB S3 FS S3 €(f): f>50k	CH sgilent 16: or Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 , HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
✤ ▲ 1_Powe Ref 20 #Peak Log 10 dB/ dB/ Offst 11 dB dB LgAv LgAv S3 K1 S2 S3 FS €(f): f>50k Swp Swp	CH agilent 16: Provide the second of the s	Midd 25:16 Oc al Density	le (IE t 5, 2010 , HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz 9.77 dBm
ℜ A 1_Powe Ref 20 Ref 20 I I Og 10 dB/ 0ffst I 11 dB DI 8.0 dBm LgAv W1 \$2 \$3 FS £(f): f>50k Swp Swp	CH agilent 16: Provide the second s	Midd 25:16 Oc al Density	le (IE ct 5, 2010 c, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 9	77 1 GHz
ℜ A 1_Powe Ref 20 Ref 20 I IO B 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv S3 ¥1 S2 S3 FS €(f): f>50k Swp .	CH Agilent 16: Provide the second s	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n	HT20	Mode	/ Cha R T Mkr1	ain 1) 2.437 9 	77 1 GHz
★ A 1_Powe Ref 20 Ref 20 I l0 I dB/ Offst 11 I dB DI BR LgAv W1 S2 S3 FS €(f): f>50k Swp	CH sgilent 16: P Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80) lode Mid (ten 20 dl	2.11n	HT20		/ Cha R T Mkr1	ain 1) 2.437 9 9	77 1 GHz
★ A 1_Powe Ref 20 Ref 20 I IO I dB/ Offst dB I dB I dB I dB S3 F F f>50k Swp Center Conter	CH sgilent 16: of Spectro dBm	Midd 25:16 Oc al Density	le (IE ct 5, 2010 7, HT20 M At	EE 80 lode Mid (ten 20 dl	2.11n			/ Cha R T Mkr1	Ain 1) 2.437 9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9	77 1 GHz .77 dBm



	Cł	H High	ı (IEE	E 802	.11n ł	HT20 I	Mode /	/ Chai	n 1)	
* A(gilent 16:	54:20 Oc	t 5,2010)				RТ		
1_Powe	r Spectra	al Density	∕, HT20 M	lode High	Ch.			Mkr1	2.462 6	02 0 GHz
Ref 20	dBm		At	ten 20 di	3				-15	.96 dBm
#Peak										
10										
dB/										
Offst										
11 dB										
						1				
8.0		AL.	magan	mm	mint	mon	mon	mon	han	
dBm	how when the co	14 Mar							اللغي الأقيم وريمي	\sim
LgAv										
111 00										
MI 321 83 ES										
55 T V										
£ (f):										
f>50k										
Swp										
·										1
Contor	2 462 60	10 0 CU-							Snan	300 F∏⇒
#Dae Ri	2.402 00 U 3 VU-	00 0 0112			URL 10 เ	/U¬		#Swaar	ັງµan 100 ຄ.((500 MIZ



	CF	Low	(IEEE	802.	11n H	T20 C	ombin	ed Mo	ode)	
ж А	gilent 22:	06:16 Oc	t 5,2010)				RТ		
ower	Spectral	Density, I	HT20 Low	Ch.				Mkr1	2.411 6	23 1 GHz
lef 20) dBm	_	At	ten 20 di	В				-8	3.93 dBm
Peak										
.0g										
.0 IR7										
iby Iffst										
4.1			1							
ΙB		de altro	An	mum	www	mount	- 10 Million 11	A.		
)	man	manua	~ ~~~	1.2.1.4.		* * **W	ANNAL STREET	New Your May	Annon	Ware
3.0 ID									H V	A MANAGER
1Din 										
.gHv										
11 52	,									
3 FS										
(f):										
>50k										
б₩р										
Center	2.411 70	00 0 GHz							Span	300 kHz
Res E	3W 3 kHz_			+	•VBW 10 K	(Hz		<u></u> #Sweep) 100 s (M	601 pts)_
	СН	Middle	e (IEE	E 802	2.11n ł	HT20 (Combi	ned M	lode)	
∦ A	CH Agilent 22:	Middle 17:03 00	e (IEE ct 5, 2010	E 802	2.11n l	HT20 (Combi	ned M R T	lode)	
₩ A 'ower	CH Agilent 22: Spectral	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid	E 802	2.11n ł	HT20 (Combi	ined N R T Mkr1	1ode) 2.435 9	77 6 GHz
₩ A Yower Ref 20	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid At	E 802) Ch. ten 20 d	2.11n ł	HT20 (Combi	ned N R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 5.21 dBm
₩ A Yower Ref 20 Peak	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid At	E 802 0 Ch. ten 20 d	2.11n H B	HT20 (Combi	ned N R T Mkr1	1ode) 2.435 9 6	77 6 GHz 3.21 dBm
े भ A Yower Ref 20 Peak .og	CH Agilent 22: Spectral O dBm	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n ł	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 6	77 6 GHz 5.21 dBm
<mark>₩</mark> A Power Ref 20 Peak .0g .0	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	8. 11n ł	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 6	77 6 GHz 5.21 dBm
∦ A Yower Ref 20 Peak .0g .0 IB∕ Dffst	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ct 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n l	HT20 (Combi	ned N R T Mkr1	1ode) 2.435 9 6	77 6 GHz 3.21 dBm
A Yower Ref 20 Peak .og .0 IB/ .1 Jffst .4.1	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE t 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n H	HT20 (Combi	ned N R T Mkr1	1ode) 2.435 9 –6	77 6 GHz 5.21 dBm
ower Ref 20 Peak .og .0 IB∕ IB∕ IB	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE t 5, 2010 HT20 Mid At	E 802 Ch. ten 20 dl	2.11n ł	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 6	77 6 GHz 5.21 dBm
w A Power Ref 20 Peak .0g .0 IB/ Dffst .4.1 IB	CH Agilent 22: Spectral dBm	Middle 17:03 0c Density, I	e (IEE t 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n H B	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 	77 6 GHz 3.21 dBm
* A Yower Ref 20 Peak .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE t 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 2.21 dBm
* A Power Ref 20 Peak .0 IB/ IB/ IB IB IB IB IB IB IB IB IB IB IB IB IB	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
A Yower Gef 20 Peak og 0 IB/ IB/ IB/ IB IB IB IB IB IB IB IB IB IB IB IB IB	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 HT20 Mid At	E 802) Ch. ten 20 dl	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
Acower Ref 20 Peak .og .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE hT20 Mid At	E 802	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
A Power Ref 20 Pogk Pogk BB/ BB/ BB/ BB/ BB/ BB/ BB/ BB/ BB/ BB	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE hT20 Mid At	E 802	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
ℜ A Power 20 OPeak 00 Power 4.1 BB/ 18 BB/ 3.0 BBm gAv V1 \$2.0 S3 FS	CH Agilent 22: Spectral d dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 HT20 Mid At	E 802	2.11n H	HT20 (Combi	ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm
ℜ A Power 20 OPeak 00 Peak 10 IB 11 IB 11 State 12 IB 11 State 12 State 13 FS 14 State 15 State 15	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 HT20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm
ℜ A Power 20 OPeak 00 Peak 18 00 18 01 18 02 18 03 18 04 10 13 10 14 52 15 15 16 15 17 10 18 10 19 10 10 10 11 52 12 15 13 15	CH Agilent 22: Spectral d dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 ht 20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm
ℜ A Power 20 OPeak 00 Peak 18 D 18 BB/ 18 BB 18 BB 20 BB 30 S0 50 \$2(f): >50 \$2(f): >50	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 ht 20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
ℜ A Power 20 OPeak 00 Peak 01 IB 01 IB 01 IB 01 IB 01 IB 01 S 01 S 02 Y 50 C(f): >50	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE ht 5, 2010 ht 20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm
ℜ A Power 20 OPeak 00 IB 16/54 IB 18 IB 18 IB 10 IB 13 FS 2(f): >50k 50k	CH Agilent 22: Spectral dBm	Middle 17:03 0c Density, I	e (IEE ht 5, 2010 ht 20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm
ℜ A Power 20 OPeak 00 Peak 10 IB 11 IB 11 IB 11 IB 12 IB 13 FS 2(f): >50k (f): >50k (f):	CH Agilent 22: Spectral dBm	Middle 17:03 Oc Density, I	e (IEE hT20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz 21 dBm
ℜ A Power 20 OPeak 00 IB 10 IB 11 SQ 11 SQ 11 SQ 150k SQ 150k SQ 150k SQ 150k	CH Agilent 22: Spectral of dBm	Middle 17:03 0c Density, I	e (IEE hT20 Mid At	E 802	2.11n H	HT20 (ned M R T Mkr1	1ode) 2.435 9 -6	77 6 GHz .21 dBm



	CH	High	(IEEE	802.	11n H	T20 C	ombin	ed Mo	ode)	
ж А	gilent 22:	24:33 Oc	t 5,2010)				RТ		
Power	Spectral	Density, H	HT20 High	ı Ch.				Mkr1	2.461 6	22 3 GHz
Ref 20	dBm		At	ten 20 dl	В				-11	.94 dBm
#Peak										
Log										
10										
dB/										
Uffst										
14.1 dB			1							
			. Å m	not not	Maria	and the A				
8.0	mutha	man	Arthur in the				m	mon	hum.	
dBm										mar and a low
LaAv										
-0										
W1 S2										
S3 FS										
£ (f):										
f>50k										
Swp										
Center	2.461 70	00 0 GHz							Span	300 kHz
#Res B	W 3 kHz			+	⊧VBW 10 k	κHz		#Sweep) 100 s (6	601 pts)



	Cł	H Low	(IEE	E 802.	.11n ⊢	IT40 N	/lode /	Chair	ו0)	
₩ А	gilent 18:	47 : 13 Oc	t 5,2010	0				RТ		
0_Powe	er Spectra	al Density	7, HT40 M	lode Low	Ch.			Mkr1	2.430 3	75 7 GHz
ĸer∠ø #Peak	abm		Ht	ten 20 ai	в 				-14	i.U9 dBm
Log										
10 JD7										
ab7 Offst										
11										
dR DI										
DI 8.0	human	MARAM	White March	WWW MAR	Maryalo	hanne	A. Mundhlar	Manager	6 marshall	houndary
dBm	halo in	'' ' '	0 -	1999 B.	1.1		l w	69° ' *	h a tha nhaile.	ta dina kudat
LgAv										
W1 S2										
S3 FS										
6 /D+										
£(†): f>50k										
Swp										
Contor	2 420 50								Snon	200 111-
uenter #Res B	2.430 30 30 3 kHz	00 0 GHZ		+	∗VBW 10 ⊮	(Hz		#Sweer	ວpan 1.100 ຣ.()	о00 кн∠ 601 nts)
	CH	Middl	e (IEE	EE 802	2.11n	HT40	Mode	/ Cha	in 0)	
* A	CH gilent 19:	Middl 18:32 0c	e (IEE :t 5, 2010	EE 802	2.11n	HT40	Mode	/ Cha к т	in 0)	
<u>ж</u> А 0_ Ром	CH gilent 19: ver Spect	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 ey, HT40	EE 802) Mode Mid	2.11n	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4	45 6 GHz
∦¥ A 0_ Pow Ref 20 #Peak	CH gilent 19: ver Spect	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 ey, HT40 At	EE 80 2) Mode Mid ten 20 di	2.11n Ch.	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 _10	45 6 GHz).61 dBm
¥¥ A 0_ Pow Ref 20 #Peak Log	CH gilent 19: ver Spect	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 ey, HT40 At	EE 80 2) Mode Mid ten 20 d	2.11n ^{Ch.} B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
	CH gilent 19: ver Specti dBm	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 y, HT40 At	EE 80 2 Mode Mid ten 20 di	2.11n ^{Ch.} B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
	CH gilent 19: ver Specti dBm	Middl 18:32 Oc ral Densit	e (IEE ct 5, 2010 :y, HT40 At	EE 802 Mode Mid ten 20 dl	Ch. B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
	CH agilent 19: ver Specti dBm	Middl 18:32 Oc ral Densit	e (IEE ct 5, 2010 y, HT40 At	EE 802 Mode Mid ten 20 di	2.11n ^{Ch.} B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
* A 0_ Pow Ref 20 #Peak Log dB/ Offst 11 dB	CH gilent 19: ver Specti dBm	Middl 18:32 Oc ral Densit	e (IEE ct 5, 2010 :y, HT40 At	EE 802 Mode Mid ten 20 d	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
ℜ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0	CH gilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE st 5, 2010 sy, HT40 At	EE 802 Mode Mid ten 20 dl	2.11n ^{Ch.} ////////////////////////////////////	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
★ A 0_ Pow Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm	CH gilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE ct 5, 2010 y, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv	CH sgilent 19: ver Spectr dBm	Middl 18:32 Oc ral Densit	e (IEE tt 5, 2010 y, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n ^{Ch.} 8	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv u1 <2	CH sgilent 19: rer Spectr dBm	Middl 18:32 Oc ral Densit	e (IEE 5, 2010 9, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n Ch. B	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE st 5, 2010 y, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n Ch. B	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE st 5, 2010 sy, HT40 At	EE 80; Mode Mid ten 20 dl	2.11n ^{Ch.} ////////////////////////////////////	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
ℜ A 0_ Pow Pow Ref 20 #Peak Log 10 dB/ Offst 11 dB dB DI 8.0 dBm LgAv \$\$3 \$\$3 \$\$5 £(f): \$\$50	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 y, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
ℜ A 0_ Pow Ref 20 wPeak Log 10 dB/ dB/ Offst 11 dB dB LgAv kl = 0 S3 FS S% point £(f): f>50k S% point S% point	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE t 5, 2010 y, HT40 At	EE 80. Mode Mid ten 20 dl	2.11n Ch. B	HT40		/ Cha R T Mkr1	in 0) 2.446 4 10	45 6 GHz
★ A 0_ Pow Ref 20 #Peak Log dB/ 0ffst 11 dB DI 8.0 dBm LgAv ¥1 \$2 \$3 F\$ £(f): f>50k \$wp	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE	EE 80. Mode Mid ten 20 dl	2.11n	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz).61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS €(f): f>50k Swp	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE	EE 80: Mode Mid ten 20 dl	2.11n Ch. B Wywwywww	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm
★ A 0_ Pow Ref 20 #Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k Swp	CH sgilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE et 5, 2010 y, HT40 At	EE 80: Mode Mid ten 20 dl	2.11n Ch. WY~~YV	HT40		/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz .61 dBm
ℜ A 0_ Pow Ref 20 Ref 20 I I0 J dB/ Offst 11 dB dB J dB S.0 dB S.0 dB S.0 dB S.0 dB S.0 dB S.0 SS3 FS £(f): f>50k Swp Center	CH gilent 19: dBm	Middl 18:32 Oc ral Densit	e (IEE	EE 802	2.11n			/ Cha R T Mkr1	in 0) 2.446 4 -10	45 6 GHz 0.61 dBm



CH High (IE	EEE 802.11n F	IT40 Mode /	[/] Chair	n 0)	
₩ Agilent 19:38:44 Oct 5, 2	2010		RТ		
0_Power Spectral Density, HT4	0 Mode High Ch.		Mkr1	2.460 9	78 4 GHz
Ref 20 dBm	Atten 20 dB			-14	.77 dBm
#Peak					
Log					
10					
dB/					
Offst					
NI COMPANY ALL ALL ALLA	no bear of such	Burn & a Maria de	Ash , Hickory	na di watar	Mandata
dBm Walker Way have a second	<u> A A Alfacert fra the dire alfatate</u>	n hattilisen hittilised	an abrille shifts	AMA Ada	A MARK MARK
		'			
W1 \$2					
S3 ES					
~~ ~~					
£ (f):					
f>50k					
Swp					
Center 2/61 100 0 GHz				Snan	300 647
#Res BW 3 kHz	#VBW 10	(H7	#Śween	100 s (6	601 nts)



	С	H Low	ı (IEE	E 802	.11n H	IT40 N	/Iode	' Chai	n 1)	
₩ А	gilent 20:	28 : 49 Oc	t 5,2010	9				RТ		
1_Powe	er Spectr	al Density	7, HT40 M	lode Low	Ch.			Mkr1	2.426 0	01 0 GHz
Ref 20	dBm		At	ten 20 di	В				-6	57 dBm
#Peak										
Log 10										
10 dBZ										
0ffst										
11					.	1 Ø				
dB										
DI										
8.0 dBm	0			and no	al present	Lowmon	handhand	Anno	www. Anno	and a contract of
ubiii La:0u	, month	mm	and the second							
LGHV										
W1 S2										
S3 FS										
£ (f):										
f>50k										
Swp										
										1
~										
Lenter	2.426 0	00 0 GHz							Span	300 kHz
#Kes B	WЗKHZ			#	ARM IN P	KHZ		#SWee	5 I 00 S (E	oUI pts)
					0.44		N.4. 1.			
	CH	Midd	le (IEl	EE 80	2.11n	HT40	Mode	/ Cha	ain 1)	
₩ A	CH gilent 20:	1 Midd	le (IE et 5, 2010	EE 80	2.11n	HT40	Mode	/ Cha R T	ain 1)	
₩ A 1_Powe	CH gilent 20: er Spectr	Midd 49:19 Oc al Density	le (IE :t 5, 2010 /, HT40 M	EE 80) lode Mid (2.11n	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0	65 9 GHz
∦ A 1_Powe Ref 20	CH gilent 20: ar Spectr dBm	l Midd 49:19 Oc al Density	le (IE ct 5, 2010 /, HT40 M At	EE 80) lode Mid (ten 20 dl	2.11n Ch.	HT40	Mode	r / Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz i.62 dBm
	CH gilent 20: er Spectr dBm	Midd 49:19 Oc al Density	le (IE ct 5, 2010 /, HT40 M At	EE 80) lode Mid (ten 20 dl	2.11n ^{Ch.} B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz .62 dBm
	CH gilent 20: er Spectr dBm	49:19 Oc al Density	le (IE ct 5, 2010 7, HT40 M At	EE 80) lode Mid (ten 20 dl	2.11n ^{Ch.}	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/	CH gilent 20: er Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 /, HT40 M At	EE 80 0 lode Mid (ten 20 dl	2.11n ^{Ch.} B	HT40	Mode	R T Mkr1	2.440 0 -15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 #Peak Log 10 dB/ Offst	CH gilent 20: or Spectr dBm	49:19 Oc al Density	le (IE) ct 5, 2010 /, HT40 M At	EE 80) lode Mid (ten 20 dl	2.11n ^{Ch.} B	HT40	Mode	r / Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 #Peak Log dB/ 0ffst 11	CH gilent 20: dBm	49:19 Oc al Density	le (IE) et 5, 2010 /, HT40 M At	EE 80 Jode Mid (ten 20 dl	2.11n ^{Ch.} B	HT40	Mode	R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz .62 dBm
★ A 1_Powe Ref 20 #Peak Log dB/ dB/ 0ffst 11 dB	CH gilent 20: er Spectr dBm	49:19 Oc al Density	le (IE) ct 5, 2010 /, HT40 M At	EE 80 Jode Mid (ten 20 dl	2.11n ^{Ch.} B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 #Peak Log dB/ 0ffst 11 dB DI 0 0	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 /, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 (, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm Lagu	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 /, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 (, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz .62 dBm
* A 1_Powe Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz
* A 1_Powe Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz
* A 1_Powe Ref 20 *Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 –15	65 9 GHz
** A 1_Powe Ref 20 Ref 20 *Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): ************************************	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
** A 1_Powe Ref 20 Ref 20 *Peak Log 10 dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
# A 1_Powe Ref 20 Ref 20 I l0 I dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k Swp Swp	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
# A 1_Powe Ref 20 Ref 20 I Log I dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k Swp Swp	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
# A 1_Powe Ref 20 Ref 20 Identify 10 dB/ 0ffst 11 dB DI 8.0 dBm LgAv S3 \$\$\mathcal{F}\$ \$\$\mathcal{F}\$ \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 a lode Mid (ten 20 dl	2.11n Ch. 3	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
# A 1_Powe Ref 20 Ref 20 I l0 B dB/ Offst 11 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k Swp	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 a lode Mid (ten 20 dl	2.11n Ch. B	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz
# A 1_Powe Ref 20 Ref 20 I I dB/ 0ffst 11 dB DI 8.0 dBm LgAv S3 #1 S2 \$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$\$\$\mathcal{L}\$ \$\$\mathcal{L}\$ \$	CH gilent 20: or Spectr dBm	Midd 49:19 Oc al Density	le (IE) ct 5, 2010 7, HT40 M At	EE 80 a lode Mid (ten 20 dl	2.11n	HT40	Mode	/ Cha R T Mkr1	ain 1) 2.440 0 -15	65 9 GHz



	Cl	H High	ı (IEE	E 802	.11n ł	HT40 I	Mode /	/ Chai	n 1)	
	gilent 21:	06:08 Oc	t 5,2010)				RТ		
1_Powe	r Spectr	al Density	, HT40 M	lode High	Ch.			Mkr1	2.452 6	29 1 GHz
Ref 20	dBm		At	ten 20 di	3				-17	.87 dBm
#Peak										
L09 10										
dB/										
Offst										
11 dB										
DI							 			
8.0 dBm			mm	month	A	hand	Mar Marine	www	National and and	a l
LaAv	mont	Mar and a start							AND A DAY OF	and the second
-0										
W1 S2										
33 FS										
£ (f):										
f>50k										
Swp										
·										1
l Center	2,452.60	1 00 0 GHz				1	1		Snan	300 kHz
#Res R	L 3 VH-2			+	URU 10 เ	/H-7		#Swaar	100 0 (6	601 nte)





	C⊢	Low	(IEEE	802.	11n H	T40 C	ombin	ed Mo	ode)	
∦к А	gilent 21:	36:07 Oc	t 5,2010)				RТ		
Power	Spectral I	Density, H	HT40 Mod	e Low Ch				Mkr1	2.423 1	98 9 GHz
Ref 20	dBm	_	At	ten 20 di	В				-14	.42 dBm
#Peak										
Log										
10 dB7										
Offst										
14.1										
dB				1						
DI			n.m	An	m	mm	m. marine			
ð.0 dBm	Malphan	WV VIII						and a Maria	munt Lanura	volt-NA orae
LaQu										
LYHV										
W1 S2										
S3 FS										
A/0										
£(†):										
1/30K										
Juh										
Center	2.423 25	50 0 GHz	1		I	1		I	Span	300 kHz
#Res B	W 3 kHz			#	∙VBW 10 k	(Hz		#Sweep) 100 s (6	601 pts)
	CH	Middle	e (IEE	E 802	2.11n ł	HT40 (Combi	ned M	lode)	
※ A	CH	Middle 47:51 00	e (IEE	E 802	2.11n ł	HT40 (Combi	ned N R T	lode)	
🔆 A Power	CH gilent 21: Spectral I	Middle 47:51 Oc Density, H	e (IEE :t 5, 2010 HT40 Mod	E 802	2.11n ł	HT40 (Combi	ned N R T Mkr1	1ode) 2.435_4	55 8 GHz
→ A Power Ref 20	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE ct 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 dl	2.11n ł	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 49 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 #Peak	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE ct 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 dl	2.11n H	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 49 _10	55 8 GHz .48 dBm
¥ A Power Ref 20 #Peak Log	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE ct 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 df	2.11n ł 	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 41 -10	55 8 GHz .48 dBm
★ A Power Ref 20 #Peak Log 10 JP /	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE tt 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 dl	2.11n H	HT40 (Combi	ned M R T Mkr1	1ode) 2.435 49 -10	55 8 GHz .48 dBm
	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE tt 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 df	2.11n ł	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 #Peak Log 10 dB/ Offst 14.1	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE t 5, 2010 HT40 Mod At	E 802) e Mid Ch. ten 20 dl	2.11n H	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
** A Power Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB dB	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE t 5, 2010 HT40 Mod At	E 802	2.11n ł	HT40 (Combi	ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
ℜ A Power Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, H	e (IEE tt 5, 2010 HT40 Mod At	E 802 e Mid Ch. ten 20 dl	2.11n H	HT40	Combi	ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI 8.0 4Pm	CH gilent 21:- dBm	Middle 47:51 Oc Density, H	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n Η B	HT40 (ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI B.0 dBm L=000	CH gilent 21:- dBm	Middle 47:51 Oc Density, H	e (IEE tt 5, 2010 HT40 Mod At	E 802 e Mid Ch. ten 20 dl	2.11n Η	HT40 (ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
* A Power Ref 20 *Peak Log dB/ Offst 14.1 dB DI B.0 dBm LgAv	CH gilent 21: dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n Η			ned M R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
* A Power Ref 20 *Peak Log dB/ 0ffst 14.1 dB DI 8.0 dBm LgAv W1 \$2	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n ł			ned M R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI 8.0 dBm LgAv W1 \$2 \$3 FS	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n ł			ned M R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 I HPeak I Log I dB/ 0ffst 14.1 dB DI 8.0 dBm LgAv W1 S2 S3 FS	CH gilent 21: Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802 e Mid Ch. ten 20 dl	2.11n H			ned M R T Mkr1	1ode) 2.435 49 -10	55 8 GHz .48 dBm
★ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI 8.0 dBm LgAv W1 \$2 \$3 FS £(f): ************************************	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802 e Mid Ch. ten 20 dl	2.11n H			ned M R T Mkr1	1ode) 2.435 49 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n H			ned M R T Mkr1	1ode) 2.435 49 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 I IO I dB/ 0 0ffst 14.1 dB 0 dB 0 dB 0 dB S.0 dBm LgAv W1 S2 S3 FS €(f): f>50k Swp Swp	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n H			ned M R T Mkr1	1ode) 2.435 4! -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 I IO I dB/ 0 0ffst 14.1 dB 0 dB 0 dB 0 dB S.0 dBm LgAv W1 S2 S3 FS €(f): f>50k Swp Swp	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE tt 5, 2010 HT40 Mod At	E 802	2.11n H			ned M R T Mkr1	1ode) 2.435 4! -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB dB 0 dB 8.0 dB S.0 dB Swp	CH gilent 21:- Spectral I dBm	Middle 47:51 Oc Density, I	e (IEE t 5, 2010 HT40 Mod At	E 802	2.11n H			ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz .48 dBm
₩ A Power Ref 20 Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB dB 0 dB S.0 f>S0 FS construct Swp	CH gilent 21:- Spectral I dBm	Middle 47:51 0c Density, I	e (IEE t 5, 2010 HT40 Mod At	E 802	2.11n Η			ned N R T Mkr1	1ode) 2.435 4 -10	55 8 GHz
₩ A Power Ref 20 #Peak Log 10 dB/ 0ffst 14.1 DI 8.0 dBm LgAv W1 S2 S3 FS £(f): f>50k Swp	CH gilent 21:- Spectral I dBm 	Middle 47:51 Oc Density, H	e (IEE t 5, 2010 HT40 Mod At	E 802	2.11n H	HT40 (ned N R T Mkr1	Span	55 8 GHz .48 dBm



	CH	High	(IEEE	802.	11n H	T40 C	ombin	ned	l Mo	ode)	
* A	gilent 21:	56:54 Oc	t 5,2010)				R	Т		
Power 🤇	- Spectral [Density, H	IT40 Mod	e High Ch	ı.				Mkr1	2.462 8	19 6 GHz
Ref 20	dBm		Att	ten 20 dE	3					-13	3.95 dBm
#Peak											
Log											
10											
QR/											
14.1											
dB						1					
ום						Š.					
8.0	mapping	e ssem the rule	March	Aled mon	Martillar	heller Vide	mature	Mpt.	Auto	mon	M.M. Mary
dBm		no, to de de	Υ. Υ .	u at Later at	1 1 1 F	lit a u.	· • •	·		· •	· · ·
LgAv											
W1 S2											
S3 FS											
~ 0.								<u> </u>			
L(T):											
TZOUK Swin											
Jub											
											1
Contor	2 462 96	}0 0 CU→								Spop	200 10-
tenter #Doc Bi	2.402 00 に 3 レロラ	00 0 0 0 12			URL 10 เ	/H-7		#¢	Jugar	ວµan 100 ຣ()	S00 KHZ 601 n+s)



FCC ID : QI3BIL-7800NEX

7.5 CONDUCTED SPURIOUS EMISSION

<u>LIMITS</u>

§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the and that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	AGILENT	E4446A	MY43360132	06/20/2011
Spectrum Analyzer	AGILENT	E4446A	MY46180323	05/02/2011

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.



FCC ID : QI3BIL-7800NEX

TEST RESULTS

OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT













































CH	l High ((30MH	lz ~ 30	GHz / I	EEE 8	802.11	n HT20) Mod	e / Cha	ain 1)
ж А	silent 16:	57:40 Oc	ct 5,2010)				RТ		
1_Spur	rious, HT2	0 Mode H	ligh Ch.					N	lkr4 2.54	8 56 GHz
Ref 20)_dBm		At	ten 20 di	3				-54	1.84 dBm
#Peak										
10									1	
dB/									Ĭ	
Offst										
11 dB										
ni										
-22.6										
dBm								2 0		
LgAv	- agree and grand	an all a second and a second and a	-top-and-adapted has	aler and bearing	non and a stand	A work where	a la calanda a calan	water and the second		
U1 \$2	, 									
Start 32	.∟ 30.00 MHz				1	1			Stop 3.000	1 0 00 GHz
#Res E	3W 100 kH	z		#	<u>VBW_30</u> 0	kHz	S	weep 28	3.9 ms (1	001 pts)
Mark	(er Tra	ce T	ype	X 1	Axis		Amplitu	ide		
1 2	(1)) F	-req Freq	2.462 6	00 БНZ 32 GHz		-2.57 0	18m 18m		
3	(1) F	req	2.379 2	27 GHz		-54.74 0	1Bm IDm		
4	(1.	, г	req	2.540 3	50 012		-54.04 (10111		
СН	l High ((3GHz	: ~ 26C	Hz / I	EEE 8	802.11	n HT20) Mod	e / Cha	ain 1)
CH ∦ A	High (Agilent 16:	(3GHz 59:44 00	: ~ 260 ct 5, 2010	GHz / II	EEE 8	802.11	า HT2() Mod r t	e / Cha	ain 1)
CH * A 1_Spur	I High (Agilent 16: rious, HT2	(3GHz 59:44 00 0 Mode H	: ~ 260 ct 5, 2010 ligh Ch.	GHz / II	EEE 8	802.11	n HT20) Mod r t	e / Cha Mkr1 25	ain 1) 5.471 GHz
CH	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 Od 0 Mode H	2 ~ 26C ct 5, 2010 High Ch. At	GHz /) ten 20 di	EEE 8	802.11	ח HT20) Mod r T	e / Cha Mkr1 25 -49	ain 1) 5.471 GHz 9.37 dBm
CH A 1_Spur Ref 20 #Peak	IHigh (Agilent 16: rious, HT2 dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 260 ct 5, 2010 High Ch. At	GHz /) ten 20 dE	BEE 8	802.11	n HT20) Mod R T	e / Cha Mkr1 25 -49	ain 1) 5.471 GHz 3.37 dBm
CH * A 1_Spur Ref 20 *Peak Log 10	I High (Agilent 16:! rious, HT2) dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 260 ct 5, 2010 ligh Ch. At	GHz /) ten 20 dE	BEE 8	802.11	n HT2() Mod R T	e / Cha Mkr1 25 -49	ain 1) 5.471 GHz 9.37 dBm
CH # A 1_Spur Ref 20 #Peak Log 10 dB/	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 26C ct 5, 2010 ligh Ch. At	GHz /) ten 20 dE	BEE 8	802.11	n HT20) Mod R T	e / Cha Mkr1 25 –49	ain 1) 5.471 GHz 9.37 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst	Agilent 16: rious, HT2 dBm	(3GHz 59:44 Od 0 Mode H	2 ~ 26C ct 5, 2010 ligh Ch. At	GHz / II) ten 20 dE	BEE 8		n HT20) Mod R T	e / Cha Mkr1 25 -49	ain 1) 5.471 GHz 9.37 dBm
CH # A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB	I High (Agilent 16: rious, HT2) dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 26C ct 5, 2010 ligh Ch. At	GHz / II) ten 20 dE	3 3	802.11	n HT2() Mod R T	e / Cha Mkr1 25 -49	ain 1) 5.471 GHz 9.37 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 26C ct 5, 2010 ligh Ch. At	GHz / I) ten 20 df	3 3	802.11	n HT2() Mod R T	e / Cha Mkr1 25 -49	ain 1) 6.471 GHz 0.37 dBm
CH	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 Oc 0 Mode H	2 ~ 26C ct 5, 2010 ligh Ch. At	GHz / I ten 20 df	3 3) Mod R T	e / Cha Mkr1 25 -49	ain 1) 6.471 GHz 0.37 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 00 0 Mode H	2 ~ 26C t 5, 2010 ligh Ch. At	6Hz / 1	3 	802.11) Mod R T	e / Cha Mkr1 25 49	ain 1) 5.471 GHz 0.37 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv	High (Agilent 16:) dBm	(3GHz 59:44 00 0 Mode F	2 ~ 26C at 5, 2010 ligh Ch. At At At At At At At At At At	SHZ / II	EEE 8	802.11	n HT20) Mod R T	e / Cha Mkr1 25 -45	ain 1) 5.471 GHz 0.37 dBm
CH # A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv M1 \$22	I High (Agilent 16: rious, HT2 dBm	(3GHz 59:44 0a 0 Mode F	2 ~ 26C ct 5, 2010 ligh Ch. At	SHZ / II	EEE 8	302.11ı	n HT20) Mod R T	e / Cha Mkr1 25 45	ain 1) 5.471 GHz 0.37 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB/ DI -22.6 dBm LgAv M1 S2 Start 3	Agilent 16: Agilent 16: dBm dBm agilent 16: dBm agilent 16: agilent 16: agi	(3GHz 59:44 0c 0 Mode F	2 ~ 26C at 5, 2010 digh Ch. At At	3Hz / II) ten 20 dl	3 	302.11	n HT20) Mod R T	e / Cha Mkr1 25 45	ain 1) 5.471 GHz 0.37 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1
CH ∦ A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB/ DI -22.6 dBm LgAv M1 S2 Start 3 #Res B	Agilent 16: Agilent 16: dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 59:44 00 0 Mode F	2 ~ 260 tt 5, 2010 ligh Ch. At	3Hz / I) ten 20 dl 	EEE 8	802.11	n HT20) Mod R T	e / Cha Mkr1 25 45	ain 1) 5.471 GHz 0.37 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv M1 S2 Start 3 *Res E Mark	Agilent 16: Agilent 16: dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 59:44 00 0 Mode F	2 ~ 260 tt 5, 2010 ligh Ch. At At YPP	BHz / II	EEE 8	802.11		Sweep 2	e / Cha Mkr1 25 -45 45 45 45 	ain 1) 5.471 GHz 0.37 dBm .000 GHz .000 GHz 001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv *Res E *Res E Mark 1	L High (Agilent 16: rious, HT2 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 59:44 00 0 Mode F	2 ~ 260 tt 5, 2010 ligh Ch. At At At At At At At At At At	BHz / II	EEE 8	802.11	Amplitt -49.37 of	Sweep 2	e / Cha Mkr1 25 45	Ain 1) 5.471 GHz 0.37 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv M1 S2 Start 3 *Res E Mark 1	L High (Agilent 16: rious, HT2 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 59:44 00 0 Mode H	2 ~ 260 tt 5, 2010 ligh Ch. At At At At At At At At At At	BHz / II ten 20 dl 	EEE 8	802.11ı	Amplite -49.37 of	Sweep 2	e / Cha Mkr1 25 45	Ain 1) 5.471 GHz 0.37 dBm 1 0.000 GHz 001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv M1 S2 Start 3 *Res E Mark 1	Agilent 16: rious, HT2 dBm dBm 3.000 GHz 3.000 GHz 3.000 KH cer Trai	(3GHz 59:44 00 0 Mode F	2 ~ 26C t 5, 2010 ligh Ch. At At At Preq	6Hz / II	EEE 8	802.11ı	Amplite -49.37 of) Mod R T	e / Cha Mkr1 25 45	Ain 1) 5.471 GHz 0.37 dBm .000 GHz 001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.6 dBm LgAv M1 S2 Start 3 *Res E Mark 1	I High (Agilent 16: rious, HT2 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 59:44 00 0 Mode F	2 ~ 26C	3Hz / II ten 20 dl 	EEE 8	802.11	Amplitu -49.37 c) Mod R T Sweep 2 Ide IBm	e / Cha Mkr1 25 45	ain 1) 5.471 GHz 9.37 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1
CH ∦ A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB DI −22.6 dBm LgAv M1 S2 Start 3 #Res E Mark 1	I High (Agilent 16: rious, HT2 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 59:44 00 0 Mode F	2 ~ 26C t 5, 2010 ligh Ch. At At YPP Freq	3Hz / II ten 20 dl 	EEE 8	802.11	Amplitt -49.37 o) Mod R T	e / Cha Mkr1 25 45	ain 1) 5.471 GHz 0.37 dBm 1 0 0 0 0 0 0 0 0 0 0 0 0 0



Compliance Certification Services Inc. FCC ID : QI3BIL-7800NEX

CH	l Low	(30MH	z ~ 3G	Hz / IE	EEE 80	2.11n	HT20 (Combii	ned N	lode)
∦к А	gilent 22	2:11:39 0	ct 5, 2010	9				RТ			
Spuriou	us, HT20	Low Ch.						м	kr4 2.5	569 35	GHz
Ref 20	dBm		At	ten 20 df	В				-	47.23 d	lBm
#Peak											
Log									1 N		
10									r		—
dB/											_
0††st 1711											_
14.1 dB									8		
								<	X		
-17.4			+					2	4-		\neg
dBm								- Ā -	how	h. n	_
LaAv					-			un lun		mar have a	mathewa
Lgriv											
V1 S2											
Start 3	RALAA ME	17						S	ton 3.0	00 00 1	GHz
#Res B	24 100 k	і2 Ц7		#'	VRW 300	<i>ν</i> μ→	S	⊌≙en 283	(up 5.5 ≷9 ms (100 00 . 1001 n	0112 1+e)
Mark	or Tr	п <u>и</u> 2004 — Т	luna	X (Avie	KHZ	Ampliti	меер 200 ида).J III \	Toor b	157
1	(1) I	ype Freq	2.412	00 GHz		2.61	dBm			
2	Ş	1)	Freq	2.251 5	56 GHz		-50.79 (dBm			
3	2	1)	Freq	2.399 t	00 GHz эс сцэ		-34.70 (dBm JDm			
- T	ì	1) .	req	2.305 .	35 UNZ		-47.20 0	20m			
CF	H Low	(3GHz	~ 26G	Hz / IE	EE 80	2.11n	HT20 (Combir	ned M	lode)
CH	H Low	(3GHz	~ 26G	Hz / IE	EE 80	2.11n	HT20 (Combir ¤ T	ned M	lode)
CH * A	H Low	(3GHz ::13:10 0	~ 26G ct 5, 2010	Hz / IE	EE 80	2.11n	HT20 (Combir R T	ned M	lode))
CH * A Spuriou	H Low Agilent 22 Js, HT20	(3GHz ::13:10 0: Low Ch.	~ 26G ct 5, 2010	Hz / IE	EE 80	2.11n	HT20 (Combir R T	n ed N Mkr1 :	1ode)) GHz
CH * A Spuriou Ref 20	H Low agilent 22 us, HT20 dBm	(3GHz ::13:10 0 Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	EE 80	2.11n	HT20 (Combir R T	ned N Mkr1 :	1ode) 17.329 48.35 d) GHz IBm
CH ** A Spuriou Ref 20 #Peak	H Low agilent 22 us, HT20 dBm	(3GHz 1:13:10 0: Low Ch.	~ 26G ct 5, 2010 At	Hz/IE) ten 20 df	B	2.11n	HT20 (Combir R T	ned M Mkr1 :	1ode 17.329 48.35 d) GHz IBm
CH ** A Spuriou Ref 20 #Peak Log 1.0	H Low gilent 22 us, HT20 dBm	(3GHz 13:10 0) Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 dE	B	2.11n	HT20 (Combir R T	ned N Mkr1 : 	1ode) 17.329 48.35 d) GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 	H Low agilent 22 us, HT20 dBm	(3GHz 13:10 0: Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	1ode) 17.329 48.35 d) GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 dB/ offet	H Low agilent 22 us, HT20 dBm	(3GHz 13:10 00 Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	10de) 17.329 48.35 d) GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 dB/ Offst 141	H Low gilent 22 us, HT20 dBm	(3GHz 13:10 0 Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	10de) 17.329 48.35 d) GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB	H Low Igilent 22 us, HT20 dBm	(3GHz 13:10 00 Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	10de) 17.329 48.35 d) GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI	H Low igilent 22 us, HT20 dBm	(3GHz 2:13:10 0: Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	17.329 48.35 d) GHz IBm
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17 4	H Low igilent 22 us, HT20 dBm	(3GHz 2:13:10 0: Low Ch.	~ 26G ct 5, 2010 At	Hz / IE) ten 20 df	B	2.11n	HT20 (Combir R T	Mkr1 :	17.329 48.35 d) GHz IBm
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm	H Low Agilent 22 us, HT20 dBm	(3GHz 2:13:10 0: Low Ch.	~ 26G ct 5, 2010 At	Hz / IE	B	2.11n	HT20 (Combir R T	Mkr1 :	10de) 17.329 48.35 d	GHz IBm
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm	H Low gilent 22 us, HT20 dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G ct 5, 2016 At	Hz / IE	B	2.11n	HT20 (Combir R T	Mkr1	10de) 17.329 48.35 d) GHz IBm
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ 0ffst 14.1 dB DI -17.4 dBm LgAv	H Low gilent 22 us, HT20 dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE	B	2.11n	HT20 (Combir R T	Mkr1	10de) 17.329 48.35 d	GHz IBm
CH * A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 \$2	H Low gilent 22 us, HT20 dBm dBm dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE	B	2.11n	HT20 (Combir R T	Mkr1	10de) 17.329 48.35 d	GHz IBm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3	H Low gilent 22 us, HT20 dBm dBm and and and and and and and and	(3GHz 1:13:10 0: Low Ch.	~ 26G	Hz / IE	B	2.11n	HT20 (Combir R T	Mkr1	10de) 17.329 48.35 d	GHz Bm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 Start 3	H Low gilent 22 us, HT20 dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE	B	2.11n	HT20 (Ned M Mkr1 :	17.329 48.35 d	GHz Bm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res 8 M3 start 3 M3 start 3 M3 start 3 M3 start 3 M4 start	H Low gilent 22 us, HT20 dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE	B 	2.11n		Combir R T	Ned M Mkr1 : 	10de) 17.329 48.35 d	GHz GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1 Mark 1	H Low gilent 22 us, HT20 dBm dBm dBm dBm dBm dBm dBm dBm	(3GHz 1:13:10 0) Low Ch.	~ 26G ct 5, 2016 At	Hz / IE 0 ten 20 dE	EE 80	2.11n	HT20 (Combir R T	Mkr1 :	10de) 17.329 48.35 d	GHz GHzs)
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1	H Low gilent 22 us, HT20 dBm dBm 3.000 GH 3.000 GH 3.000 GH 3.000 K 4.100 k 1.00 k	(3GHz 1:13:10 0) Low Ch.	~ 26G ct 5, 2016 At	Hz / IE 0 ten 20 dE 	EE 80	2.11n	HT20 (Sweep 2.	Ned M Mkr1 : 	10de 1 17.329 48.35 d	GHz GHz GHz tts)
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1	H Low gilent 22 us, HT20 dBm 3.000 GH 3.000 GH W 100 k er Tr ((3GHz 1:13:10 0) Low Ch.	~ 26G ct 5, 2010 At	Hz / IE 0 ten 20 db 	EE 80 B B B B B B B B B B B B B B B B B B B	2.11n	HT20 (Sweep 2.	Mkr1 :	10de) 17.329 48.35 d 26.000 (1001 p	GHz GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1	H Low gilent 22 us, HT20 dBm 3.000 GH 3.000 GH 3.000 GH W 100 k ter Tr ((3GHz 1:13:10 0) Low Ch.	~ 26G ct 5, 2016 At	Hz / IE 0 ten 20 dl 	EE 80	2.11n	HT20 (Combir R T Sweep 2.	Ned N Mkr1 : 	10de) 17.329 48.35 d	GHz GHz
CF ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 *Res B Mark 1	H Low gilent 22 us, HT20 dBm 3.000 GH 3.000 GH 3.000 GH W 100 k ter Tr ((3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE 0 ten 20 dl 	EE 80	2.11n	HT20 (Combir R T	Ned M Mkr1 : 	10de) 17.329 48.35 d	GHz Bm GHz GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1	H Low gilent 22 us, HT20 dBm 3.000 GH 3.000 GH 3.000 GH 3.000 K cer Tr ((3GHz 1:13:10 0) Low Ch.	~ 26G	Hz / IE 0 ten 20 dl 	EE 80	2.11n	HT20 (Combir R T	Ned M Mkr1 : 	10de) 17.329 48.35 d	GHz Bm GHz GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.4 dBm LgAv M1 S2 Start 3 #Res B Mark 1	H Low gilent 22 us, HT20 dBm 	(3GHz 1:13:10 0: Low Ch.	~ 26G At At Part 2016	Hz / IE 0 ten 20 dl 	EE 80	2.11n	HT20 (Combir R T	Ned M Mkr1 : 	17.329 48.35 d	GHz Bm GHz GHz



















CH	High (30MH	z ~ 3G	iHz / IE	EEE 8	02.11r	n HT40) Mo	de	/ Cha	ain 0)
₩ A	ailent 20:	11:23 00	ct 5, 2010)				RТ			
0_Spur	rious, HT4	0 Mode H	ligh Ch.						Mk	r4 2.76	8 34 GH
Ref 20	dBm		At	ten 20 dE	B					-55	5.79 dBm
#Реак Log									_		
LU9 10										1	
d₿/										Ϊ	
Offst										1	
11 JR											
ab Ni						1					
-22.0			-					,		3	
dBm								- Ž	1	W.A.	4 \$
LgAv	ard-4-1-7-4(+1.444)				and a start start start start and			and the second second		- 10 Mar	and the second
M1 S2									+		
Start 3	30.00 MHz	,							St	op 3.000	1 0 00 GHz
#Res B	3W 100 kH	z		#	VBW 300	kHz	S	weep 2	283.	9 ms (1	001 pts)
Mark	er Tra	ce T	ype	X 1	Axis		Amplitu	iqe			
1 2	(1) r) F	req Treq	2.462 2.299 (43 Бнг 08 GHz		-1.97 (-53.97 (dBm dBm			
3	(1) F	req	2.619 8	84 GHz		-52.79 (dBm			
"	(1) 1	req	2.700 .	34 Uhz		-55.79 (ЗВМ			
СН	High (3GHz	~ 26G	Hz / IE	EEE 8	02.11r	n HT40) Mo	de	/ Cha	in 0)
CH * A	High (3GHz	~ 26G :t 5, 2010	Hz/IE	EEE 8	02.11r	n HT40) Moo R T	de	/ Cha	in 0)
CH * A 0_Spur	High (Agilent 20: rious, HT4	3GHz 13:18 Oc 0 Mode H	~ 26G ∵t 5, 2010 ligh Ch.	iHz / IE	EEE 8	02.11r	n HT40) Moo R T	de	/ Cha Mkr1 S	i n 0) 0.325 GH
CH * A 0_Spur Ref 20	High (Agilent 20: rious, HT4	3GHz 13:18 Od 0 Mode H	~ 26G :t 5, 2010 ligh Ch. Ati	i Hz / 16) t <u>en 20 d</u> f	EEE 8	02.11r	n HT40) Moo R T	de	/ Cha Mkr1	i in 0) 0.325 GH
CH * A 0_Spur Ref 20 *Peak	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G :t 5, 2010 ligh Ch. Ati	i Hz / IE) ten 20 dE	BEE 8	02.11r	HT40) Moo R T	de	/ Cha Mkr1 9 -54	u in 0) 0.325 GH 1.32 dBm
CH ** A 0_Spur Ref 20 *Peak Log 10	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Od 0 Mode H	~ 26G tt 5, 2010 ligh Ch. Att	i Hz / IE) ten 20 dE	BEE 8	02.11r	hHT40) Moo R T	de	/ Cha Mkr1 -54	u in 0) 0.325 GH 1.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G ct 5, 2010 ligh Ch. Att	i Hz / IE) ten 20 dE	BEE 8	02.11r	n HT40) Moo R T	de	/ Cha Mkr1 9 _54	i in 0) 0.325 GH 1.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G t 5, 2010 ligh Ch. Att	i Hz / IE) ten 20 dE	BEE 8	02.11r		Moo R T	de	/ Cha Mkr1 % _54	in 0) 0.325 GH 1.32 dBm
CH ** A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 JD	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G :t 5, 2010 ligh Ch. At:	1 Hz / IE	BEE 8	02.11r	n HT40	Moo R T	de	/ Cha Mkr1	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G t 5, 2010 ligh Ch. Att	1 Hz / IE	BEE 8	02.11r) Moo		/ Cha Mkr1	in 0) 9.325 GH 1.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -22.0	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G tt 5, 2010 ligh Ch. At:	Hz / I	B B B B B B B B B B B B B B B B B B B	02.11r	n HT40	Moo R T	de	/ Cha Mkr1	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G t 5, 2010 ligh Ch. At: 1	6Hz / IE	B	02.11r		Moo R T		/ Cha Mkr1 § 	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G :t 5, 2010 ligh Ch. At: 	iHz / II) ten 20 dE	B B B B B B B B B B B B B B B B B B B	02.11r	hT40	P Moo		/ Cha Mkr1 § 54	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv 	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	- 26G	6Hz / 16	B	02.11r		0 Moo		/ Cha Mkr1 9 54	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Score 5	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	~ 26G	6Hz / If ten 20 df	B	02.11r				/ Cha Mkr1 9 -54	in 0) .325 GH 1.32 dBm
CH ** A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B	High (Agilent 20: rious, HT4 dBm	3GHz 13:18 Oc 0 Mode H	- 26G	6Hz / II	B B B B B B B B B B B B B B B B B B B	02.11r	hT40		2.1	/ Cha Mkr1 9 -54	in 0)
CH ** A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark	High (Agilent 20: rious, HT4 dBm dBm 3.000 GHz 3.000 GHz 3.400 KH ser Tra	3GHz 13:18 Ot 0 Mode H	- 26G t 5, 2010 ligh Ch. Att	Hz / II	EEE 8	02.11r	Amplite	Moo R T	2.1	/ Cha Mkr1 \$ 54	in 0) .325 GH 1.32 dBm
CH ** A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 13:18 Or 0 Mode H	- 26G	Hz / II	EEE 8 B U UBW 300 Axis 25 GHz	02.11r	Amplite -54.32	Sweep	2.1	/ Cha Mkr1 § 54	in 0) .325 GH 1.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 13:18 Oc 0 Mode H	~ 26G ligh Ch. At: 	Hz / II	EEE 8 B U UBW 300 Axis 25 GHz	02.11r	Amplita -54.32 of	Sweep ade	2.1	/ Cha Mkr1 § 54	in 0) .325 GH 1.32 dBm .000 GHz .000 GHz 001 pts)
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 13:18 Oc 0 Mode F	~ 26G ligh Ch. At: 	Hz / II	EEE 8 B U UBW 300 Axis 25 GHz	02.11r	Amplitu -54.32 of	Sweep ade	2.1	/ Cha Mkr1 § 54	in 0) .325 GH 1.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 13:18 00 0 Mode F	~ 26G igh Ch. At: 	Hz / II	EEE 8 B U UBW 300 Axis 25 GHz	02.11r	Amplitu -54.32	Sweep JBm	2.1	/ Cha Mkr1 § 54	in 0) .325 GH I.32 dBm
CH * A 0_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -22.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (Agilent 20: rious, HT4 d Bm d Bm d Bm d Bm d Bm d Bm d Bm d Bm	3GHz 13:18 00 0 Mode F	~ 26G ligh Ch. At: 	Hz / II	EEE 8 B WBW 300 Axis 25 GHz	02.11r	Amplitt -54.32	Sweep Jade	2.1	/ Cha Mkr1 § 54	in 0)



CH	l Low (30MH	z ~ 30	SHz / II	EEE 8	802.11r	n HT40) Mode	e / Ch	ain 1)
ЖА	gilent 20:	33:29 00	ct 5, 2010	0				RΤ		
1_Spur	rious, HT4	0 Mode L	ow Ch.					М	kr4 2.5	15 89 GHz
Ref 20	l_dBm		At	ten 20 di	B			1	-	53.23 dBm
#Peak Ing										_
10									1 k	
dB/									K	
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dB										
DI										
-23.6 JRm								2	4	
ubiii LaAy								21	harmon	
LYHV	and the second	,	Tody harring a few man	an a	apple and a second	alayed yelladira of a star and	and the state of the second	les/repr		B
V1 S2										
Start 3	30.00 MHz	!					-		Stop 3.0	00 00 GHz
#Kes D	3₩ 100 кн ∵~r Тга	Z T		# X	VBW 300 Avia	kHz	ک Annliti	weep zo:	3.9 ms (1001 pts/
1	(1)) F	ype Freq	2.422	00 GHz		-3.58 (dBm		
2 3	(1)	т (Э. Г	Freq Freq	2.272 : 2.399 (35 GHz 00 GHz		-56.49 (-35.93 (dBm dBm		
4	(1)) F	Freq	2.515 (89 GHz		-53.23 (dBm		
CH	LLow (3GHz	~ 260	H7 /	EEE 8	802.11r	HT40	Mode	ch / د	ain 1)
CH	Low (milent 20:	3GHz	~ 260	Hz / II	EEE 8	802.11r	HT40) Mode r t	e / Ch	ain 1)
CH * A 1_Spur	I Low (a gilent 20: ious, HT4	3GHz 35:16 0a 0 Mode L	- ~ 26C ct 5, 2010 .ow Ch.	Hz / II 0	EEE 8	802.11r	HT40) Mode r t	e / Ch Mkr1 1	ain 1) .0.866 GHz
CH	I Low (igilent 20: ious, HT4	3GHz 35:16 Od 0 Mode L	∼ 26C ct 5, 2010 .ow Ch. At	3Hz / 11 0 ten 20 di	EEE 8	302.11r	HT4C) Mode R T	e / Ch Mkr1 1 	ain 1) .0.866 GHz 53.63 dBm
CH * A 1_Spur Ref 20 *Peak	<mark>I Low (</mark> a gilent 20: rious, HT4 dBm	3GHz 35:16 Oc 0 Mode L	- ~ 26C ct 5, 2010 .ow Ch. At	GHz / II 0 .ten 20 dl	BEE 8	302.11r	1 HT40) Mode R T	e / Ch Mkr1 1 _9	ain 1) .0.866 GHz 53.63 dBm
CH # A 1_Spur Ref 20 #Peak Log 10	I Low (agilent 20: rious, HT4 dBm	3GHz 35:16 Oc 0 Mode L	-~ 26C ct 5, 2010 .ow Ch. At	Hz / II 0 :ten 20 dl	BEE 8	802.11r	1 HT40) Mode R T	e / Ch Mkr1 1 _5	ain 1) .0.866 GHz 53.63 dBm
CH ** A 1_Spur Ref 20 #Peak Log 10 dB/	I Low (agilent 20: ious, HT4 dBm	3GHz 35:16 Od 0 Mode L	~ 26C ct 5, 2010 .ow Ch. At	GHZ / II 0 :ten 20 dl	BEE 8	802.11r	1 HT40) Mode R T	e / Ch Mkr1 1 	ain 1) 0.866 GHz 53.63 dBm
CH I _Spur Ref 20 #Peak Log 10 dB/ Offst	I Low (Igilent 20: rious, HT4 dBm	3GHz 35:16 Oc 0 Mode L	~ 26С ct 5, 2010 .ow Ch. Аt	GHz / II 0 :ten 20 dl	BEE 8	802.11r	n HT40) Mode R T	e / Ch Mkr1 1 _5	ain 1) 0.866 GHz 53.63 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dR	Low (igilent 20:: rious, HT4 dBm	3GHz 35:16 00 0 Mode L	ст 26С ст 5, 2011 .оw Ch. Ат	GHz / II 0 :ten 20 dl	B B	802.11r	n HT40) Mode R T	e / Ch Mkr1 1 	ain 1) 0.866 GHz 53.63 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB NI	I Low (ugilent 20:1 rious, HT4 dBm	3GHz 35:16 00 0 Mode L	ст 26С ст 5, 2010 .оw Ch. Ат	GHz / II 0 :ten 20 di	B B	802.11r) Mode R T	e / Ch	ain 1) .0.866 GHz 53.63 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6	I Low (ugilent 20:1 rious, HT4 dBm	3GHz 35:16 0a 0 Mode L	с ~ 26С ст 5, 2010 .ow Ch. Ат	GHz / II 0 :ten 20 dl	B B 	802.11r) Mode R T	e / Ch	ain 1) .0.866 GHz 53.63 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm	H Low (Igilent 20: ious, HT4 dBm	3GHz 35:16 00 0 Mode L	- 26C ct 5, 2010 .ow Ch. At	GHz / II 0 :ten 20 dl	B B B B C C C C C C C C C C C C C C C C	802.11r) Mode R T	A / Ch Mkr1 1 -5	ain 1) .0.866 GHz 53.63 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv	H Low (agilent 20: rious, HT4 dBm	3GHz 35:16 00 0 Mode L	с ~ 26С ct 5, 2011 .ow Ch. Аt	GHz / II	B B B B C C C C C C C C C C C C C C C C	802.11r) Mode R T	e / Ch	ain 1) .0.866 GHz 53.63 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2	Low (Agilent 20: rious, HT4 dBm	3GHz 35:16 00 0 Mode L	с ~ 26С ct 5, 201 .ow Ch. Аt	GHz / II 0 :ten 20 dl	B B B B C C C C C C C C C C C C C C C C	802.11r) Mode	e / Ch Mkr1 1 	ain 1) .0.866 GHz 53.63 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3	Low (Agilent 20: rious, HT4 dBm	3GHz 35:16 0(0 Mode L	: ~ 26С ct 5, 201 .ow Ch. Аt	6Hz / II 0 :ten 20 dl	B B C C C C C C C C C C C C C C C C C C	802.11r	h HT40) Mode R T	e / Ch Mkr1 1 	ain 1) .0.866 GHz 53.63 dBm 6.000 GHz
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B	H Low (Agilent 20: rious, HT4 dBm dBm 3.000 GHz W 100 kH	3GHz 35:16 00 0 Mode L	с ~ 26С ct 5, 201 .ow Ch. Аt	GHz / II 0 :ten 20 dl	B B B B C C C C C C C C C C C C C C C C	802.11r	• HT40) Mode R T	e / Ch Mkr1 1 	ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark	Agilent 20: rious, HT4 dBm dBm 3.000 GHz 3.000 GHz W 100 kH rer Train (1)	3GHz 35:16 00 0 Mode L	с ~ 26С ct 5, 201 .ow Ch. Аt	SHz / II 0 :ten 20 dl 1 	B B VBW 300 Axis c c du	802.11r	Amplitu) Mode R T	A / Ch Mkr1 1	ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Low (sgilent 20: rious, HT4 dBm dBm 3.000 GHz W 100 kH er Train (1)	3GHz 35:16 00 0 Mode L	ст 5, 201 .ow Ch. Аt 	GHz / II 0 :ten 20 dl	EEE 8	802.11r	Amplita 53.63 () Mode R T	A / Ch Mkr1 1 Stop 2 Stop 2 198 s (ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH ** A 1_Spur Ref 20 *Peak Log dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Low (sgilent 20: rious, HT4 dBm dBm 3.000 GHz W 100 kH :er Trail (1)	3GHz 35:16 00 0 Mode L		GHz / II 0 :ten 20 dl	EEE 8	802.11r	Ampliti -53.63) Mode R T	/ Ch Mkr1 1 5 Stop 2 198 s (ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Low (sgilent 20: rious, HT4 dBm dBm 3.000 GHz W 100 kH :er Training (1)	3GHz 35:16 00 0 Mode L		6Hz / II 0 :ten 20 dl	EEE 8	802.11r	Amplitt -53.63) Mode R T	A / Ch Mkr1 1 -5 Stop 2 198 s (ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark 1	Low (agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 35:16 00 0 Mode L	с ~ 26С ct 5, 2011 .ow Ch. Аt	GHz / II 0 :ten 20 dl 1 	EEE 8	802.11r	Amplitt -53.63	Sweep 2.	A / Ch Mkr1 1 5 5 5 198 s (1)	ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -23.6 dBm LgAv M1 S2 Start 3 *Res B Mark 1	H Low (Agilent 20: rious, HT4 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 35:16 0(0 Mode L	: ~ 26С ct 5, 2011 .ow Ch. Аt	GHz / II 0 :ten 20 dl	EEE 8 B VBW 300 Axis 56 GHz	802.11r	Amplite -53.63 0	Sweep 2.	A Ch Mkr1 1 Stop 2 198 s (ain 1) .0.866 GHz 53.63 dBm 6.000 GHz 1001 pts)



CH	I Midd	le (30N	1Hz ~ 3	3GHz /	IEEE	802.11	n HT4	0 Mod	e/C	cha	in 1)
₩ А	gilent 20	:52:48 0	ct 5, 2010	0				RТ			
1_Spur	rious, HT4	40 Mode N	1id Ch.					٢	1kr4 2	2.72	0 82 GHz
Ref 20	∣dBm		At	ten 20 di	В					-54	.19 dBm
#Peak											
Log									1		
10	<u> </u>								X		
ab/ Affet	<u> </u>								f		
11											
dB											
DI									Ц		
-21.0								2		, j	4
dBm								\$		Mary	Ŷ
LgAv	- Approximate	phillippin	Martin march	a gales by any service of the service	www.	Annonement	eropolistic and the	and the second second			No. of Concession, Name
111 00											
VI 52 Store 3		7							Stop 2	000	00 00-
start 3 #Ree P	ว⊎.⊎⊍ ۳/Н ≷แ100 เ	∠ ⊣¬			URU 300	kH→	0	1000 20	υτυμ 3 3 G min	.000. . (16	בחט שש ל AA1 הוא
Mark	er Tra	ice T	VDe	# X	Axis	NHZ	ن Amrliti	inde nde	5.5 105	1 1 1 1	or pis)
1	(1	b i	Freq	2.437	00 GHz		-0.99	dBm			
2	(1		Freq Freq	2.281 2	26 GHz 17 GHマ		-54.02 (dBm dBm			
4	(1	ί, i	Freq	2.720 (B2 GHz		-54.19	dBm			
CH	l Midd	le (3Gł	Hz ~ 26	6GHz /	IEEE	802.11	n HT4	0 Mod	e/C	cha	in 1)
CH	I Midd I gilent 20	le (3GH :54:04_0	Hz ~ 26 ct 5, 2010	6GHz / º	IEEE	802.11	n HT4	0 Mod R T	e/C	cha	in 1)
CH * A 1_Spur	I Midd Agilent 20 rious, HT4	le (3GH :54:04 0 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch.	6GHz / º	IEEE	802.11	n HT4	0 Mod R T	e / C Mkr1	2 ha 18	in 1) .387 GHz
CH * A 1_Spur Ref 20	I Midd Agilent 20 rious, HT4 I dBm	le (3GH :54:04 04 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	GHz / 0 .ten 20 dl	IEEE :	802.11	n HT4	0 Mod R T	e / C	ha 18 -53	in 1) .387 GHz .08 dBm
CH	i Midd Igilent 20 rious, HT4 I dBm	le (3GH :54:04 00 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 .ten 20 df	IEEE :	802.11	n HT4	0 Mod R T	e / C	ha 18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log	I Midd Agilent 20 rious, HT4 I dBm	le (3GH :54:04 04 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	IEEE :	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH * A 1_Spur Ref 20 #Peak Log 10 dP /	I Midd agilent 20 rious, HT dBm	le (3GH :54:04 00 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6 GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 #Peak Log 10 dB/ Offet	I Midd agilent 20 rious, HT4 dBm	le (3GF :54:04 04 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	218 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11	I Midd Agilent 20 rious, HT4 dBm	le (3GF :54:04 04 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB	H Midd Agilent 20 ious, HT dBm	le (3GH :54:04 01 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ∦ A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB DI	I Midd gilent 20 ious, HT- dBm	le (3GH :54:04 01 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH	I Midd gilent 20 ious, HT- dBm	le (3GH :54:04 01 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ∦ A 1_Spur Ref 20 #Peak Log 10 dB/ Offst 11 dB DI −21.0 dBm	I Midd gilent 20 ious, HT- dBm	le (3GH :54:04 0 40 Mode M 	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C	18 -53	in 1) .387 GHz .08 dBm
CH * A 1_Spur Ref 20 HPeak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv	H Midd agilent 20 rious, HT dBm	le (3GH :54:04 01 40 Mode M 	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 \$20	I Midd agilent 20 rious, HT dBm	le (3GH :54:04 01 40 Mode M 	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB/ DI -21.0 dBm LgAv M1 S2 Start 3	I Midd agilent 20 rious, HT dBm	le (3GH :54:04 00 40 Mode M	Hz ~ 26 ct 5, 2010 Mid Ch. At	6GHz / 0 ten 20 dl	B	802.11	n HT4	0 Mod R T	e / C	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB/ DI -21.0 dBm LgAv M1 S2 Start 3 *Res B	H Midd gilent 20 rious, HT dBm dBm 3.000 GH	Ie (3GH :54:04 01 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	SGHz / 0 ten 20 dl		802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1Spur Ref 20 *Peak Log dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark	H Midd agilent 20 rious, HT d dBm d dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	Ie (3GH :54:04 01 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	SGHz / 0 ten 20 dl	IEEE	802.11	n HT4	0 Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT dBm dBm 3.000 GH 3.000 Kl W 100 kl rer Tra (1	Ie (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 fid Ch. At	SGHz / 0 ten 20 dl 	IEEE	802.11	n HT4	O Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT dBm dBm 3.000 GH 3.000 GH W 100 kl rer Tra (1	Ie (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 fid Ch. At	SGHz / 0 ten 20 dl 	IEEE	802.11	n HT4	O Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT d dBm d dBm agilent 20 rious, HT d dBm agilent 20 agilent 20 agi	Ie (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 Mid Ch. At	SGHz / 0 ten 20 dl 	VBH 300 Arxis 87 GHz	802.11	n HT4	O Mod R T	e / C Mkr1	18 -53 26.	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT dBm dBm 3.000 GH 3.000 GH 3.000 GH agilation of the second secon	Ie (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 fid Ch. At	6GHz / 0 ten 20 dl 	VBW 300 Axis 87 GHz	802.11	n HT4	O Mod R T	e / C Mkr1	18 53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT dBm dBm 3.000 GH 3.000 GH W 100 kl aer Tra (1	Ie (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 fid Ch. At	6GHz / 0 ten 20 dl 	VBW 300 Axis 87 GHz	802.11	n HT4	O Mod R T	e / C Mkr1	18 -53	in 1) .387 GHz .08 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -21.0 dBm LgAv M1 S2 Start 3 *Res B Mark 1	I Midd agilent 20 rious, HT- dBm dBm 3.000 GH 3.000 GH W 100 kl rer Tra (1	le (3GH :54:04 00 40 Mode N	Hz ~ 26 ct 5, 2010 fid Ch. At	6GHz / 0 ten 20 di 	VBW 300	802.11	n HT4	O Mod R T	e / C Mkr1	18 -53 26.	in 1) .387 GHz .08 dBm


CH	High (30MH	z ~ 30	GHz / II	EEE 8	02.11	n HT40) Mod	e / Cha	ain 1)
ж А	gilent 21:1	0:47 Oc	t 5,2010	9				RТ		
1_Spur	ious, HT40) Mode H	igh Ch.		_			М	kr4 2.61	3 90 GHz
Ref 20 #Pool	dBm		At	ten 20 dE	3	1	1		-55	5.15 dBm
#reak Log										
10									1	
dB/									X	
Offst 11										
dB										
DI									3	
-24.8								2	4	
dBm								Ś	1 mg	4
LgHv	and a state of the second	and a star of the		esternesternes	a had a go that he for	••••••••••••••••••••••••••••••••••••••	ar and a start of a start of the			1
V1 S2										
Start 3	30.00 MHz								Stop 3.00	0 00 GHz
#Res B	SW 100 kHz	2		#\	VBW 300	kHz	S	weep 283	3.9 ms (1	001 pts)
Mark	er Trac (1)	e Ty F	/pe rea	Х F 2,452 Ф	Axis AA GH⊽		Amplitu -4.78 /	ude 18m		
2	(1)	F	req	2.293 1	L4 GHz		-56.73 (3Bm		
3	(1)	F	req rea	2.492 1 2.613 9	L3 GHz 30 GHz		-41.21 (3Bm 3Bm		
			000			00.44				-in (1)
СН	High (3GHz	~ 260	GHz / II	EEE 8	02.11r	ר HT40) Mod	e / Cha	ain 1)
CH	High (gilent 21:1	3GHz 2:03 Oc	~ 260 t 5, 2010	GHz / II	EEE 8	i02.11r	n HT40) Mode R T	e / Cha	ain 1)
CH A 1_Spur Ref 20	High (gilent 21:1 rious, HT40	3GHz 2:03 Oc) Mode H	∼ 260 t 5, 2010 igh Ch.	GHz / II 0 ten 20 dE	EEE 8	602.11r	ר HT40) Mode R T	e / Cha Mkr1 14	ain 1) 1.592 GHz
CH A 1_Spur Ref 20 #Peak	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc) Mode H	~ 260 t 5, 2010 igh Ch. At	GHz/II 0 ten 20 dE	EEE 8	i02.11r	ר HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log	High (gilent 21:1 rious, HT40 dBm	3GHz 2:03 Oc) Mode H	~ 260 t 5, 2010 igh Ch. At	GHz/II 0 ten 20 dE	EEE 8	02.11r	n HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH # A 1_Spur Ref 20 #Peak Log 10	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc Mode H	~ 260 t 5, 2010 igh Ch. At	GHz/II 0 ten 20 dE	BEE 8	02.11r	n HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 #Peak Log 10 dB/ Offet	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc) Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II 0 ten 20 dE	EEE 8	02.11r	ח HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11	High (igilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II 0 ten 20 dE	3 3	302.11r	ר HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB	High (3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II o ten 20 dE	3 3	02.11ı	ר HT40) Mod R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI	High (igilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II a ten 20 dE	3 3	02.11ı	ר HT40) Mod(R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II	EEE 8	02.11ı	n HT40) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -24.8 dBm LaPu	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 gh Ch. At	GHz / II	3 	02.11r) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ 0ffst 11 dB DI -24.8 dBm LgAv	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 0c 1 Mode H	~ 260	GHz / II	3 	02.11r) Mode R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260	GHz / II 0 ten 20 dE	3 	302.11r) Mod R T	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3	High (gilent 21:1 ious, HT40 dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHz / II	EEE 8	02.11r) Mode	e / Cha Mkr1 14 -5:	ain 1) 1.592 GHz 1.46 dBm
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res 4	High (gilent 21:1 rious, HT40 dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	GHZ / II	EEE 8	502.11r) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1 1	High (gilent 21:1 rious, HT40 dBm dBm 3.000 GHz 3.000 GHz W 100 kHz rrac (1)	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	6Hz / II 0 ten 20 dE	EEE 8	602.11r	Amplitt 51.46 of) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz 001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (gilent 21:1 ious, HT40 dBm dBm 3.000 GHz W 100 kHz rrac (1)	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	BHz / II 0 ten 20 dE 	EEE 8	802.11r	Amplitu -51.46 o) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz 001 pts)
CH ** A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (gilent 21:1 ious, HT40 dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	6Hz / II 0 ten 20 dE 	EEE 8	802.11r	Amplitu -51.46 o) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz 001 pts)
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (gilent 21:1 ious, HT40 dBm dBm 3.000 GHz 3.000 GHz 3.000 GHz W 100 kHz rrac (1)	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	6Hz / II 0 ten 20 dE 	EEE 8	802.11r	Amplitu -51.46 c) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz 001 pts)
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (gilent 21:1 ious, HT40 dBm dBm 3.000 GHz 3.000 GHz W 100 kHz er Trac (1)	3GHz 2:03 Oc 1 Mode H	~ 260 t 5, 2010 igh Ch. At	6Hz / II ten 20 dE 	EEE 8	02.11r	Amplitu -51.46 c) Mode R T	e / Cha Mkr1 14 -5: 	ain 1) 1.592 GHz 1.46 dBm .000 GHz .000 GHz
CH * A 1_Spur Ref 20 *Peak Log 10 dB/ Offst 11 dB DI -24.8 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (igilent 21:1 ious, HT40 dBm dBm dBm dBm dBm dBm dBm dBm	3GHz 2:03 Oc 9 Mode H	~ 260 t 5, 2010 igh Ch. At	6Hz / II 0 ten 20 dE 	EEE 8	02.11r) Mode R T	e / Cha Mkr1 14 -5: Stop 26 198 s (1	ain 1) 1.592 GHz 1.46 dBm .000 GHz 001 pts)



CH	H Low	(30MH	z ~ 3G	Hz / IE	EE 80)2.11n	HT40 (Comb	inec	l Mc	ode)
₩ A	Agilent 21	:42:18 00	ct 5,2010)				RТ			
Spuriou	us, HT40	Mode Low	Ch.						Mkr4	2.57	8 26 GHz
Ref 20	∂dBm		At	ten 20 dl	В					-47	.74 dBm
#Peak											
Log									- <u>1</u>		
10	<u> </u>								Ť		
aB/											
14 1											
dB									3		
DI									Ĭ.		
-17.5									1 T	\$	
dBm								. Am	/ \ ~	m.	American
LgAv	and a second	an an an a she an a she an a she an a she a s	and the second	detrie the strength	940-75-439930-8-46 ³ 4		the state of the s				
V1 S2	2										
Start (30.00 MH	z							Stop	3.000	0 00 GHz
#Res E	3W 100 k	Hz		#	VBW 300	kHz	S	weep 28	33.9 m	ns (10	001 pts)
Mark	ker Tr	ace T	ype	Х	Axis		Amplit	ude			
	0	1) F 1) F	req	2.422	00 GHz 47 GHz		2.46	dBm dBm			
3	ò	1) F	req	2.399	00 GHz		-31.83	dBm			
4	C C	1) F	req	2.578	26 GHz		-47.74	dBm			
_											
								-			
CH	H Low	(3GHz	~ 26G	Hz / IE	EE 80)2.11n	HT40 (Comb	ined	l Mc	ode)
CH * #	H Low Agilent 21	(3GHz :43:35 00	~ 26G ct 5, 2010	Hz / IE	EE 80)2.11n	HT40 (Comb R T	ined	l Mc	ode)
CH ** A Spuriou	H Low Agilent 21 us, HT40	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch.	Hz / IE	EE 80)2.11n	HT40 (Comb R T	ined Mk	I Mc r1 9	o de) 1.578 GHz
CH * A Spuriou Ref 20	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 Oc Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 di	EE 80)2.11n	HT40 (Comb R T	ined Mk	I Mc r1 9 -50)de) 1.578 GHz 1.03 dBm
CH ** A Spuriou Ref 20 #Peak	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 d	EE 80)2.11n	HT40 (Comb R T	ined Mk	I Mc r1 9 -50	o de) 1.578 GHz 1.03 dBm
CH ** A Spuriou Ref 20 #Peak Log	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 Oc Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 di	B)2.11n	HT40 (Comb R T	ined Mk	I Mc r1 9 -50	o de) 1.578 GHz 0.03 dBm
CH ** A Spuriou Ref 20 #Peak Log 10	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 dl	B	02.11n	HT40 (Comb R T	Mk	I Mc r1 9 -50	ode) 1.578 GHz 1.03 dBm
CH ** A Spuriou Ref 20 #Peak Log 10 dB/ 0ffct	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz/IE) ten 20 di	B	02.11n	HT40 (Comb R T	Mk	r1 Mc -50	ode) 1.578 GHz 1.03 dBm
CH ** A Spuriou Ref 20 #Peak Log 10 dB/ Offst 141	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz/IE) ten 20 di	B	02.11n	HT40 (Comb R T	Mk	I Mc -50	ode) .578 GHz 0.03 dBm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB	H Low Agilent 21 us, HT40 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 di	B	02.11n	HT40 (Comb R T	Mk	r1 9 -50	ode) .578 GHz 0.03 dBm
CH ** A Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz/IE	B	02.11n	HT40 (Comb R T	Mk	I Mc -50	ode) 1.578 GHz 1.03 dBm
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB DI -17.5	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 Oc Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE	B	02.11n	HT40 (Comb R T	Mk	r1 9 -50	ode) 1.578 GHz 1.03 dBm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 0c Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 d	B)2.11n	HT40 (Comb	Mk	r1 9 -50	D de) 1.578 GHz 1.03 dBm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 d	B	02.11n	HT40 (Comb R T	Mk	r1 9 -50	D de) 1.578 GHz 1.03 dBm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv	H Low Agilent 21 us, HT40 0 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE) ten 20 d	B	02.11n	HT40 (Comb	Mk	r1 9 -50	Dde)
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -17.5 dBm LgAv M1 S2	Agilent 21 us, HT40 0 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE	B)2.11n	HT40 (Comb	Mk	I Mc	ode) .578 GHz .03 dBm
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (Agilent 21 us, HT40 0 dBm	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE)2.11n	HT40 (Mk	r1 9 -50	000 GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (start (H LOW Agilent 21 us, HT40 0 dBm 3 dBm 3.000 GH 3.000 GH	(3GHz :43:35 00 Mode Low	~ 26G ct 5, 2010 Ch. At	Hz / IE	EE 80	02.11n	HT40 (Sweep :	Mk	r1 9 -50	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (start (*Res E Mark 1	Agilent 21 Agilent 21 us, HT40 0 dBm 0 dBm 3.000 GH 3.000 GH 3.000 GH 3.000 GH 3.000 GH	(3GHz :43:35 00 Mode Low	- 26G Ch. At 	Hz / IE	EE 8C	02.11n	Ampliti 	Sweep :	Mk	r1 9 -50 -50 -50 -50 -50 -50 -50 -50 -50 -50	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (Start (1 *Res E Mark 1	Agilent 21 Agilent 21 us, HT40 0 dBm 3 dBm 3.000 GH 3.000 GH 3W 100 k ker Tr. ((3GHz :43:35 00 Mode Low	- 26G Ch. At	Hz / IE	EE 8C	02.11n	HT40 (Sweep :	Mk	r1 9 -50 -50 -50 -50 -50 -50 -50 -50 -50 -50	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (start (1 *Res E Mark 1	Agilent 21 us, HT40 0 dBm 3.000 GH 3.000 GH 3W 100 k ker Tr.	(3GHz :43:35 00 Mode Low	- 26G Ch. At	Hz / IE	EE 8C	02.11n	HT40 (Sweep :	Mk	r1 9 -50 -50 -50 -50 -50 -50 -50 -50 -50 -50	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (*Res E Mark 1	Agilent 21 us, HT40 0 dBm 3.000 GH 3.000 GH 3W 100 k ker Tr.	(3GHz :43:35 00 Mode Low	- 26G Ch. At	Hz / IE	EE 8C	02.11n	HT40 (Sweep :	Mk	r1 9 -50 -50 -50 -50 -50 -50 -50 -50 -50 -50	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (Start (1 *Res E Mark 1	H LOW Agilent 21 us, HT40 0 dBm 3 dBm 3.000 GH 3.000 GH 3W 100 k ker Tr. ((3GHz :43:35 00 Mode Low	- 26G Ch. At	Hz / IE	EE 8C	02.11n	Ampliti	Sweep :	Mk	r1 9 -50 -50 -50 -50 	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 001 pts)
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -17.5 dBm LgAv M1 S2 Start (start (1 *Res E Mark 1	H LOW Agilent 21 us, HT40 0 dBm 3 dBm 3.000 GH 3.000 GH 3.000 GH 3.000 GH 3.000 GH	(3GHz Hode Low	~ 26G Ch. At	Hz / IE	EE 8C	02.11n	Ampliti	Sweep :	Mk	r1 9 -50 	0 de) 0.03 dBm 0.03 dBm 0.000 GHz 001 pts)







CHI	High (30MHz	z ~ 3G	Hz / IE	EE 8	02.11n	HT40	Comb	bined	Mode	;)
ж А	gilent 21	:59:42 0	ct 5, 2010)				RT			
Spuriou	us, HT40	Mode Hig	h Ch.					М	kr4 2.6	13 90 0	ЭHz
Ref 20	dBm		At	ten 20 di	B				_!	50.66 dE	Зm
#Peak	<u> </u>							「 <u> </u>			
L09 10											
dB/									A		
Öffst							1				
14.1											_
aB							+				\neg
UI 								2	1 34		\neg
dBm								- È	100		\neg
LgAv	- Amarian Andrews		menne		and the second decision		- Martin Martin	where the service		and the second	ar-sole
-											_
V1 S2											
Start :	30.00 MH ≌⊑4.aa ⊔	z			000 000		~		Stop 3.0	00 00 G 4001	Ηz
#Kes B	3W 100 кі	HZ	·	#	VBM 300	kHz) Amplitu	weep 28.	3.9 ms (1001 pt	:s)
nark 1	er in C	ice i L) I	lype Freq	2.452	Hxis 00 GHz		1.03 c	ide iBm			
2	C C	R I	Freq	2.299 (08 GHz 44 GN⊐		-51.28 0	dBm dBm			
4	Ċ	L) I	Freq Freq	2.566	44 6H∠ 90 GHz		-50.67 c	3Bm 3Bm			
CH	High (3GHz	~ 26G	Hz / IE	EE 8	02.11n	HT40	Comb	oined	Mode	e)
CH * A	High (Agilent 22	3GHz :00:49 0:	~ 26G ct 5, 2010	Hz / IE	EE 8	02.11n	HT40	Comb R T	oined	Mode	e)
CH * A Spuriou	High (Agilent 22 us, HT40	3GHz :00:49 00 Mode Hig	~ 26G ct 5, 2010 h Ch.	Hz / IE	EE 8	02.11n	HT40	Comb R T	oined	Mode	;) GHz
CH * A Spuriou Ref 20	High (Agilent 22 us, HT40 dBm	3GHz :00:49 Or Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz/IE) ten 20 di	EE 8(02.11n	HT40	Comb R T	Mkr1 1	Mode 14.914 6 47.09 de	;) GHz 3m
CH Magneticu Spuriou Ref 20 #Peak	High (Agilent 22 us, HT40 dBm	3GHz :00:49 0; Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz / IE) ten 20 di	EE 80	02.11n	HT40	Comb R T	Mkr1 :	Mode 14.914 6 47.09 dE	;) GHz Bm
CH Spuriou Ref 20 #Peak Log 10	High (Agilent 22 us, HT40 dBm	3GHz :00:49 00 Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz/IE) ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 :	Mode 14.914 6 47.09 dE	;) GHz 3m
CH ** A Spuriou Ref 20 *Peak Log 10 dB/	High (Agilent 22 us, HT40 dBm	3GHz :00:49 00 Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz / IE 3 ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 1	Mode 14.914 (47.09 de	;) GHz Bm
CH * A Spuriol Ref 20 *Peak Log 10 dB/ Offst	High (Agilent 22 us, HT40 dBm	3GHz :00:49 00 Mode Hig	~ 26GI ct 5, 2010 h Ch. At	Hz/IE) ten 20 dl	BEE 8	02.11n	HT40	Comb R T	Mkr1 :	Mode	;) GHz 3m
CH ** A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 JP	High (Agilent 22 us, HT40 dBm	3GHz :00:49 00 Mode Hig	~ 26GI ct 5, 2010 h Ch. At	Hz / IE) ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 :	Mode	у) ЭНz Эт
CH * A Spuriou Ref 20 *Peak Log 10 dB/ Offst 14.1 dB	High (Agilent 22 us, HT40 dBm	3GHz :00:49 0: Mode Hig	~ 26GI ct 5, 2016 h Ch. At	Hz/IE) ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 :	Mode	э) ЭНz Эт
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2	High (Agilent 22 us, HT40 dBm	3GHz :00:49 01 Mode Hig	~ 26GI ct 5, 2010 h Ch. At	Hz / IE) ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 :	Mode	э) ЭНz Эт
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -18.2 dBm	High (Agilent 22 us, HT40 dBm	3GHz :00:49 01 Mode Hig	~ 26GI ct 5, 2010 h Ch. At	Hz / IE	B	02.11n		Comb R T	Mkr1 :	Mode	GHz GHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm I aAv	High (Agilent 22 us, HT40 dBm	3GHz :00:49 01 Mode Hig	~ 26GI	Hz / IE	B	02.11n	HT40	Comb R T	Mkr1 :	Mode	э́Нz Зт
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv	High (Agilent 22 us, HT40 dBm	3GHz :00:49 0i Mode Hig	~ 26GI	Hz / IE) ten 20 dl	B	02.11n	HT40	Comb R T	Mkr1 :	Mode	βHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2	High (Agilent 22 us, HT40 dBm	3GHz :00:49 01 Mode Hig	~ 26GI	Hz / IE	B B B B B B B B B B B B B B B B B B B	02.11n	HT40	Comb R T	Mkr1 :	Mode 47.09 dE	ЭHz Эm
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3	High (Agilent 22 us, HT40 dBm	3GHz :00:49 0i Mode Hig	~ 26GI	Hz / IE	B B B B B B B B B B B B B B B B B B B	02.11n	HT40	Comb R T	Mkr1 :	Mode 14.914 (6 47.09 dE 47.09 dE 47.00 dE	GHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ 0ffst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 #Res B	High (Agilent 22 us, HT40 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz :00:49 0i Mode Hig	~ 26GI	Hz / IE	EE 80	02.11n	• HT40	Comb R T	Mkr1 :	Mode 14.914 (0 47.09 dE 47.09 dE 6.000 G 1001 pt	βHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 #Res B Mark	High (Agilent 22 us, HT40 dBm dBm dBm dBm dBm dBm dBm dBm	3GHz :00:49 01 Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz / IE	EE 80	02.11n	Amplitu 47.99	Comb R T	Mkr1 : Stop 2 198 s (Mode 14.914 (0 47.09 dE 47.09 dE 6.000 G 1001 pt	GHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 #Res B Mark 1	High (agilent 22 us, HT40 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz :00:49 01 Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz / IE 0 ten 20 dl 	EE 80	02.11n	Amplitu -47.09 c	Comb R T	Mkr1	Mode 47.09 dE 47.09 dE	GHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (agilent 22 us, HT40 dBm dBm dBm dBm dBm dBm dBm dBm dBm dBm	3GHz :00:49 01 Mode Hig	~ 26G ct 5, 2010 h Ch. At	Hz / IE 0 ten 20 dl 	EE 80	02.11n	Amplitu -47.09 c	Comb R T	Mkr1	Mode 47.09 dE 47.09 dE	GHz 3m
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (sgilent 22 us, HT40 dBm dBm 3.000 GH 3.000 GH 3.000 GH 3.000 GH 3.000 GH	3GHz :00:49 Ou Mode Hig	~ 26Gi ct 5, 2010 h Ch. At	Hz / IE) ten 20 dl 	EE 80	02.11n	Amplitu -47.09 c	Comb R T	Mkr1 :	Mode 47.09 dE 47.09 dE	iHz
CH Spuriou Ref 20 #Peak Log 10 dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 *Res B Mark 1	High (sgilent 22 us, HT40 dBm dBm 3.000 GH 3.000 GH 3.000 GH 3.000 GH	3GHz :00:49 Ou Mode Hig	~ 26GI	Hz / IE) ten 20 dl 	EE 80	02.11n	Amplitu -47.09 c	Comb R T	Mkr1 :	Mode 47.09 dE	iHz is)
CH Spuriou Ref 20 #Peak Log dB/ Offst 14.1 dB DI -18.2 dBm LgAv M1 S2 Start 3 #Res B Mark 1	High (sgilent 22 us, HT40 dBm dBm 3.000 GH 3.000 GH 3.100 kl ser Training ()	3GHz :00:49 00 Mode Hig	~ 26Gi ct 5, 2010 h Ch. At	Hz / IE) ten 20 dl 	EE 80	02.11n	Amplitt -47.09 c	Comb R T	hined Mkr1 : 	Mode	GHz 3m



7.6 RADIATED EMISSION

LIMITS

(1) § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 -1710	10.6 -12.7
6.26775 - 6.26825	108 -121.94	1718.8 - 1722.2	13.25 -13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 – 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 -16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 -335.4	3600 - 4400	(²)
13.36 - 13.41			

Remark:

1.¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

2.² Above 38.6

(2) § 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



(3) According to § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

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

Remark: **Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

(4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST EQUIPMENT

966Chamber_A

Name of Equipment	ame of Equipment Manufacture		Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/20/2011
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100221	05/03/2011
Bilog Antenna	SCHWARZBECK	VULB 9168	9168-249	10/04/2011
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00078732	07/05/2011
Pre-Amplifier	Agilent	8449B	3008A01471	08/02/2011
Pre-Amplifier	HP	8447F	2944A03748	09/23/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	SN31347	07/21/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	SN31350	07/21/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	SN31355	07/21/2011
LOOP Antenna	EMCO	6502	8905-2356	06/09/2011
Notch Filters Band Reject	Micro-Tronics	BRM05702-01	009	N.C.R

Remark: 1. Each piece of equipment is scheduled for calibration once a year. 2. N.C.R = No Calibration Request.



TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission from below 1GHz.

9kHz ~ 30MHz



30MHz ~ 1GHz





The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



TEST PROCEDURE

- 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2. White measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. White measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna
- 3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
- 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Remark :

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

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FCC ID : QI3BIL-7800NEX

TEST RESULTS

Below 1 GHz (9kHz ~ 30MHz)

No emission found between lowest internal used/generated frequency to 30MHz.

Below 1 GHz (30MHz ~ 1GHz)

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Julon Liu
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW012A12UL	TEMP & Humidity	26 [°] C, 53%

966 Chamber_A at 3Meter / Horizontal									
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark			
125.06	44.80	-12.33	32.48	43.50	-11.02	Peak			
250.19	49.75	-11.46	38.29	46.00	-7.71	Peak			
500.45	50.10	-4.39	45.71	46.00	-0.29	QP			
624.61	43.80	-1.62	42.18	46.00	-3.82	QP			
749.74	40.80	0.28	41.08	46.00	-4.92	QP			
960.23	42.30	3.69	45.99	54.00	-8.01	Peak			

966 Chamber_A at 3Meter / Vertical									
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark			
59.10	46.20	-11.07	35.13	40.00	-4.87	QP			
68.80	48.20	-12.57	35.63	40.00	-4.37	QP			
90.14	53.11	-16.26	36.85	43.50	-6.65	Peak			
125.06	48.10	-12.33	35.77	43.50	-7.73	QP			
250.19	50.01	-11.46	38.55	46.00	-7.45	Peak			
500.45	46.60	-4.39	42.21	46.00	-3.79	QP			
624.61	40.40	-1.62	38.78	46.00	-7.22	QP			
960.23	38.92	3.69	42.61	54.00	-11.39	Peak			

Remark:

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.

2. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)

4. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

5. Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Julon Liu
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL 8066	TEMP & Humidity	26 [°] C, 53%

966 Chamber_A at 3Meter / Horizontal								
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark		
125.06	45.24	-12.33	32.91	43.50	-10.59	Peak		
250.19	49.09	-11.46	37.63	46.00	-8.37	Peak		
500.45	48.10	-4.39	43.71	46.00	-2.29	QP		
624.61	41.30	-1.62	39.68	46.00	-6.32	QP		
749.74	39.10	0.28	39.38	46.00	-6.62	QP		
874.87	35.10	2.57	37.67	46.00	-8.33	Peak		
960.23	39.41	3.69	43.10	54.00	-10.90	Peak		

966 Chamber_A at 3Meter / Vertical									
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark			
59.10	48.00	-11.07	36.93	40.00	-3.07	QP			
125.06	48.49	-12.33	36.16	43.50	-7.34	Peak			
191.99	49.33	-13.00	36.33	43.50	-7.17	Peak			
250.19	48.80	-11.46	37.34	46.00	-8.66	QP			
500.45	44.80	-4.39	40.41	46.00	-5.59	QP			
624.61	41.46	-1.62	39.83	46.00	-6.17	Peak			
749.74	39.51	0.28	39.78	46.00	-6.22	Peak			
960.23	40.31	3.69	44.01	54.00	-9.99	Peak			

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.

2. Data of measurement within this frequency range shown " ---- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)

4. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

5. Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).



Compliance Certification Services Inc.

FCC ID : QI3BIL-7800NEX

Report No. : T100603307-RP1

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Julon Liu
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL	TEMP & Humidity	26 [°] C, 53%

	ç	66 Chamber	A at 3Mete	r / Horizonta		
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result Limit (dBµV/m) (dBµV/m)		Margin (dB)	Remark
125.06	45.97	-12.33	33.65	43.50	-9.85	Peak
250.19	50.28	-11.46	38.82	46.00	-7.18	Peak
500.45	47.40	-4.39	43.01	46.00	-2.99	QP
624.61	44.20	-1.62	42.58	46.00	-3.42	QP
749.74	40.30	0.28	40.58	46.00	-5.42	QP
960.23	39.01	3.69	42.71	54.00	-11.29	Peak

966 Chamber_A at 3Meter / Vertical

Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark
59.10	46.60	-11.07	35.53	40.00	-4.47	QP
125.06	49.50	-12.33	37.17	43.50	-6.33	QP
250.19	51.04	-11.46	39.57	46.00	-6.43	Peak
500.45	47.50	-4.39	43.11	46.00	-2.89	QP
624.61	41.50	-1.62	39.88	46.00	-6.12	QP
749.74	39.10	0.28	39.37	46.00	-6.63	Peak
960.23	39.20	3.69	42.89	54.00	-11.11	Peak

Remark:

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.

2. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)

4. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

5. Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).

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Above 1 GHz

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BIPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11b TX / CH Low	TEMP & Humidity	25°C, 54%

966 Chamber_A at 3Meter / Horizontal												
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
1444.00	54.24		-3.13	51.10		74.00	54.00	-2.90	Peak			
1968.00	53.37	46.39	0.88	54.25	47.27	74.00	54.00	-6.73	AVG			
2412.00	100.91	97.37	1.96	102.87	99.33				Carrier			
2774.00	52.68	46.73	2.73	55.41	49.46	74.00	54.00	-4.54	AVG			
4642.50	41.26		6.36	47.62		74.00	54.00	-6.38	Peak			
6427.50	40.84		9.38	50.22		74.00	54.00	-3.78	Peak			
7687.50	41.96		10.33	52.28		74.00	54.00	-1.72	Peak			

966 Chamber_A at 3Meter / Vertical

Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
2412.00	107.84	104.43	1.96	109.80	106.39				Carrier		
2570.00	55.74	49.88	2.29	58.03	52.17	74.00	54.00	-1.83	AVG		
2652.00	56.29	50.03	2.47	58.76	52.50	74.00	54.00	-1.50	AVG		
2730.00	58.30	49.01	2.63	60.93	51.64	74.00	54.00	-2.36	AVG		
6450.00	41.07		9.45	50.52		74.00	54.00	-3.48	Peak		
7237.50	47.22	40.40	10.19	57.41	50.59	74.00	54.00	-3.41	AVG		
8617.50	42.38		10.56	52.94		74.00	54.00	-1.06	Peak		

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BiPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11b TX / CH Middle	TEMP & Humidity	25°C, 54%

966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1296.00	54.94		-3.59	51.35		74.00	54.00	-2.65	Peak		
1982.00	52.96	47.58	0.99	53.95	48.57	74.00	54.00	-5.43	AVG		
2437.00	98.59	95.22	2.01	100.60	97.23				Carrier		
2670.00	53.11	46.28	2.50	55.61	48.78	74.00	54.00	-5.22	AVG		
4402.50	41.39		6.25	47.64		74.00	54.00	-6.36	Peak		
5497.50	40.62		6.84	47.47		74.00	54.00	-6.53	Peak		
6862.50	41.11		10.17	51.29		74.00	54.00	-2.71	Peak		

	966 Chamber_A at 3Meter / Vertical											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
2274.00	54.48	50.25	1.69	56.17	51.94	74.00	54.00	-2.06	AVG			
2437.00	106.89	103.50	2.01	108.90	105.51				Carrier			
2600.00	56.89	50.12	2.35	59.24	52.47	74.00	54.00	-1.53	AVG			
2686.00	54.79	49.13	2.54	57.33	51.67	74.00	54.00	-2.33	AVG			
4455.00	41.26		6.42	47.68		74.00	54.00	-6.32	Peak			
5670.00	40.69		7.22	47.91		74.00	54.00	-6.09	Peak			
7305.00	42.54		10.13	52.67		74.00	54.00	-1.33	Peak			

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



FCC ID : QI3BIL-7800NEX

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BiPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11b TX / CH High	TEMP & Humidity	25°C, 54%

	966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
1448.00	55.06		-3.12	51.94		74.00	54.00	-2.06	Peak			
1734.00	54.49	48.58	-1.04	53.45	47.54	74.00	54.00	-6.46	AVG			
2462.00	97.25	94.27	2.07	99.32	96.34				Carrier			
2804.00	51.82	47.52	2.79	54.61	50.31	74.00	54.00	-3.69	AVG			
5977.50	41.76		7.90	49.66		74.00	54.00	-4.34	Peak			
7110.00	41.24		10.29	51.53		74.00	54.00	-2.47	Peak			
7740.00	42.00		10.43	52.42		74.00	54.00	-1.58	Peak			

	966 Chamber_A at 3Meter / Vertical												
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark				
1322.00	54.48		-3.51	50.98		74.00	54.00	-3.02	Peak				
2302.00	54.08	50.12	1.74	55.82	51.86	74.00	54.00	-2.14	AVG				
2462.00	103.76	100.62	2.06	105.82	102.68				Carrier				
2620.00	54.48	49.22	2.40	56.88	51.62	74.00	54.00	-2.38	AVG				
4590.00	41.07		6.44	47.50		74.00	54.00	-6.50	Peak				
7005.00	41.48		10.38	51.86		74.00	54.00	-2.14	Peak				
7387.50	43.21		10.06	53.27		74.00	54.00	-0.73	Peak				

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



......

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan	
Model	BiPAC 7800NEXL	Test Date	2010/10/02	
Test Mode	IEEE 802.11g TX / CH Low	TEMP & Humidity	25°C, 54%	

966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1314.00	53.75		-3.53	50.22		74.00	54.00	-3.78	Peak		
1752.00	53.32		-0.89	52.43		74.00	54.00	-1.57	Peak		
2412.00	94.81	82.70	1.96	96.77	84.66				Carrier		
2682.00	52.23	48.22	2.53	54.76	50.75	74.00	54.00	-3.25	AVG		
5175.00	41.01		6.19	47.20		74.00	54.00	-6.80	Peak		
6292.50	40.80		8.93	49.73		74.00	54.00	-4.27	Peak		
6885.00	41.37		10.21	51.57		74.00	54.00	-2.43	Peak		

966 Chamber_A at 3Meter / Vertical										
Reading-	Reading-	Correction	Result-PK	Result-AV	l imit-PK	l imit-∆\/	M			
PK	AV	Factor	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(

(MHz)	PK (dBuV)	AV (dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark
1482.00	53.43		-3.02	50.41		74.00	54.00	-3.59	Peak
1906.00	52.42		0.37	52.78		74.00	54.00	-1.22	Peak
2412.00	104.67	91.34	1.96	106.63	93.30				Carrier
2812.00	51.72	47.12	2.81	54.53	49.93	74.00	54.00	-4.07	AVG
5272.50	40.78		6.39	47.17		74.00	54.00	-6.83	Peak
6682.50	40.95		9.90	50.85		74.00	54.00	-3.15	Peak
7132.50	41.26		10.27	51.53		74.00	54.00	-2.47	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



FCC ID : QI3BIL-7800NEX

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan	
Model	BiPAC 7800NEXL	Test Date	2010/10/02	
Test Mode	IEEE 802.11g TX / CH Middle	TEMP & Humidity	25°C, 54%	

966 Chamber_A at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
1306.00	53.63		-3.56	50.07		74.00	54.00	-3.93	Peak	
2042.00	52.34		1.22	53.56		74.00	54.00	-0.44	Peak	
2437.00	96.71	85.34	2.02	98.73	87.36				Carrier	
2780.00	51.89	46.63	2.74	54.63	49.37	74.00	54.00	-4.63	AVG	
4717.50	40.78		6.25	47.03		74.00	54.00	-6.97	Peak	
5497.50	40.53		6.84	47.38		74.00	54.00	-6.62	Peak	
6270.00	39.80		8.85	48.65		74.00	54.00	-5.35	Peak	

	966 Chamber_A at 3Meter / Vertical										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1356.00	54.48		-3.40	51.08		74.00	54.00	-2.92	Peak		
1912.00	52.73		0.42	53.15		74.00	54.00	-0.85	Peak		
2437.00	105.65	94.41	2.02	107.67	96.43				Carrier		
2894.00	51.77	46.61	2.98	54.75	49.59	74.00	54.00	-4.41	AVG		
4470.00	41.41		6.47	47.88		74.00	54.00	-6.12	Peak		
4935.00	41.64		5.93	47.56		74.00	54.00	-6.44	Peak		
5977.50	41.35		7.90	49.25		74.00	54.00	-4.75	Peak		

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



FCC ID : QI3BIL-7800NEX

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BiPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11g TX / CH High	TEMP & Humidity	25°C, 54%

	966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
1398.00	53.49		-3.27	50.22		74.00	54.00	-3.78	Peak			
2054.00	52.45		1.25	53.69		74.00	54.00	-0.31	Peak			
2462.00	94.83	81.64	2.07	96.90	83.71				Carrier			
2808.00	51.73	46.26	2.80	54.53	49.06	74.00	54.00	-4.94	AVG			
4567.50	41.09		6.47	47.56		74.00	54.00	-6.44	Peak			
5647.50	40.77		7.17	47.94		74.00	54.00	-6.06	Peak			
6615.00	40.71		9.79	50.51		74.00	54.00	-3.49	Peak			

	966 Chamber_A at 3Meter / Vertical											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
1340.00	54.11		-3.45	50.66		74.00	54.00	-3.34	Peak			
1970.00	52.87		0.89	53.76		74.00	54.00	-0.24	Peak			
2462.00	102.36	89.04	2.06	104.42	91.10				Carrier			
2830.00	52.12	47.21	2.85	54.97	50.06	74.00	54.00	-3.94	AVG			
3885.00	42.11		4.57	46.68		74.00	54.00	-7.32	Peak			
4642.50	42.05		6.36	48.41		74.00	54.00	-5.59	Peak			
5580.00	40.26		7.03	47.29		74.00	54.00	-6.71	Peak			

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BIPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11n HT20 TX /	TEMP & Humidity	25°C, 54%

	966 Chamber_A at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1506.00	53.67		-2.91	50.76		74.00	54.00	-3.24	Peak
2108.00	51.79		1.36	53.15		74.00	54.00	-0.85	Peak
2412.00	98.90	83.93	1.96	100.86	85.89				Carrier
2750.00	52.02	45.63	2.68	54.70	48.31	74.00	54.00	-5.69	AVG
3907.50	42.27		4.64	46.91		74.00	54.00	-7.09	Peak
4725.00	41.38		6.24	47.62		74.00	54.00	-6.38	Peak
5505.00	40.85		6.86	47.71		74.00	54.00	-6.29	Peak

966 Chamber_A at 3Meter / Vertical

Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1440.00	53.12		-3.14	49.98		74.00	54.00	-4.02	Peak
2056.00	52.93	47.36	1.25	54.18	48.61	74.00	54.00	-5.39	AVG
2412.00	105.52	90.24	1.98	107.50	92.22				Carrier
2838.00	51.07	46.21	2.86	53.93	49.07	74.00	54.00	-4.93	AVG
4027.50	42.12		5.01	47.13		74.00	54.00	-6.87	Peak
4897.50	41.48		5.98	47.46		74.00	54.00	-6.54	Peak
6307.50	40.96		8.98	49.93		74.00	54.00	-4.07	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Compliance Certification Services Inc.

FCC ID : QI3BIL-7800NEX

Report No. : T100603307-RP1

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BIPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11n HT20 TX / CH Middle	TEMP & Humidity	25°C, 54%

966 Chamber_A at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1600.00	53.87		-2.14	51.73		74.00	54.00	-2.27	Peak
1974.00	52.32		0.93	53.25		74.00	54.00	-0.75	Peak
2437.00	100.00	84.55	2.01	102.01	86.56				Carrier
2738.00	51.92	45.23	2.65	54.57	47.88	74.00	54.00	-6.12	AVG
3660.00	42.43		3.87	46.30		74.00	54.00	-7.70	Peak
4492.50	41.29		6.55	47.84		74.00	54.00	-6.16	Peak
5587.50	40.35		7.04	47.39		74.00	54.00	-6.61	Peak

	966 Chamber_A at 3Meter / Vertical								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1530.00	53.26		-2.71	50.55		74.00	54.00	-3.45	Peak
2080.00	52.15		1.30	53.45		74.00	54.00	-0.55	Peak
2437.00	110.21	92.81	2.01	112.22	94.82				Carrier
2792.00	51.64	46.37	2.76	54.40	49.13	74.00	54.00	-4.87	AVG
3832.50	41.87		4.40	46.28		74.00	54.00	-7.72	Peak
4740.00	41.58		6.21	47.79		74.00	54.00	-6.21	Peak
5715.00	41.71		7.32	49.03		74.00	54.00	-4.97	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BIPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11n HT20 TX / CH High	TEMP & Humidity	25°C, 54%

	966 Chamber_A at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1592.00	53.49		-2.21	51.29		74.00	54.00	-2.71	Peak
2044.00	52.75	46.13	1.23	53.98	47.36	74.00	54.00	-6.64	AVG
2462.00	93.45	78.12	2.07	95.52	80.19				Carrier
2700.00	51.35	46.11	2.57	53.92	48.68	74.00	54.00	-5.32	AVG
4215.00	42.44		5.63	48.07		74.00	54.00	-5.93	Peak
4912.50	41.70		5.96	47.66		74.00	54.00	-6.34	Peak
5737.50	40.99		7.37	48.36		74.00	54.00	-5.64	Peak

Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1550.00	53.22		-2.55	50.67		74.00	54.00	-3.33	Peak
1990.00	52.18		1.06	53.23		74.00	54.00	-0.77	Peak
2462.00	104.35	87.29	2.06	106.41	89.35				Carrier
2778.00	52.05	46.70	2.73	54.78	49.43	74.00	54.00	-4.57	AVG
3660.00	41.82		3.87	45.69		74.00	54.00	-8.31	Peak
4792.50	41.67		6.14	47.80		74.00	54.00	-6.20	Peak
5625.00	41.56		7.12	48.69		74.00	54.00	-5.31	Peak

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



FCC ID : QI3BIL-7800NEX	

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan
Model	BIPAC 7800NEXL	Test Date	2010/10/02
Test Mode	IEEE 802.11n HT40 TX / CH Low	TEMP & Humidity	25°C, 54%

966 Chamber_A at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
1524.00	53.14		-2.76	50.38		74.00	54.00	-3.62	Peak	
1866.00	52.44		0.04	52.48		74.00	54.00	-1.52	Peak	
2422.00	93.22	74.55	2.01	95.23	76.56				Carrier	
2750.00	51.31	46.21	2.68	53.99	48.89	74.00	54.00	-5.11	AVG	
3832.50	42.03		4.40	46.43		74.00	54.00	-7.57	Peak	
4672.50	41.88		6.31	48.19		74.00	54.00	-5.81	Peak	
6135.00	40.78		8.40	49.18		74.00	54.00	-4.82	Peak	

966 Chamber	A at 3Meter	/ Vertical
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Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1320.00	53.43		-3.51	49.92		74.00	54.00	-4.08	Peak		
1896.00	52.51		0.29	52.80		74.00	54.00	-1.20	Peak		
2422.00	102.51	82.09	1.99	104.50	84.08				Carrier		
2886.00	51.47	45.99	2.97	54.44	48.96	74.00	54.00	-5.04	AVG		
3517.50	42.74		3.43	46.17		74.00	54.00	-7.83	Peak		
4732.50	41.20		6.23	47.43		74.00	54.00	-6.57	Peak		
6022.50	41.48		8.03	49.51		74.00	54.00	-4.49	Peak		

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan	
Model	BIPAC 7800NEXL	Test Date	2010/10/02	
Test Mode	IEEE 802.11n HT40 TX / CH Middle	TEMP & Humidity	25°C, 54%	

966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1244.00	53.88		-3.75	50.13		74.00	54.00	-3.87	Peak		
2008.00	52.17		1.16	53.33		74.00	54.00	-0.67	Peak		
2437.00	94.87	75.60	2.02	96.89	77.62				Carrier		
2848.00	52.59	46.33	2.88	55.47	49.21	74.00	54.00	-4.79	AVG		
4177.50	41.67		5.51	47.18		74.00	54.00	-6.82	Peak		
5520.00	40.66		6.89	47.55		74.00	54.00	-6.45	Peak		
6345.00	40.28		9.10	49.38		74.00	54.00	-4.62	Peak		

	966 Chamber	A at 3Meter	/ Vertical
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Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1394.00	53.37		-3.29	50.08		74.00	54.00	-3.92	Peak		
1716.00	52.80		-1.19	51.61		74.00	54.00	-2.39	Peak		
2437.00	105.52	83.60	2.04	107.56	85.64				Carrier		
2600.00	56.33	46.56	2.35	58.68	48.91	74.00	54.00	-5.09	AVG		
4530.00	41.00		6.53	47.53		74.00	54.00	-6.47	Peak		
5520.00	41.17		6.89	48.06		74.00	54.00	-5.94	Peak		
6382.50	40.47		9.23	49.70		74.00	54.00	-4.30	Peak		

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	WaterNil Guan	
Model	BIPAC 7800NEXL	Test Date	2010/10/02	
Test Mode	IEEE 802.11n HT40 TX / CH High	TEMP & Humidity	25°C, 54%	

966 Chamber_A at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1348.00	54.07		-3.43	50.64		74.00	54.00	-3.36	Peak		
2156.00	51.74		1.45	53.19		74.00	54.00	-0.81	Peak		
2452.00	91.28	72.50	2.05	93.33	74.55				Carrier		
2776.00	51.69	46.19	2.73	54.42	48.92	74.00	54.00	-5.08	AVG		
4057.50	41.90		5.11	47.01		74.00	54.00	-6.99	Peak		
4845.00	41.30		6.06	47.36		74.00	54.00	-6.64	Peak		
6120.00	40.98		8.35	49.33		74.00	54.00	-4.67	Peak		

966 Chamber A at 3Meter / Vertical

Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1436.00	53.72		-3.16	50.56		74.00	54.00	-3.44	Peak		
2114.00	52.51	47.03	1.37	53.88	48.40	74.00	54.00	-5.60	AVG		
2452.00	102.47	80.74	2.07	104.54	82.81				Carrier		
2852.00	51.52	46.01	2.89	54.41	48.90	74.00	54.00	-5.10	AVG		
4192.50	41.48		5.56	47.04		74.00	54.00	-6.96	Peak		
5415.00	40.38		6.68	47.06		74.00	54.00	-6.94	Peak		
6277.50	41.25		8.88	50.13		74.00	54.00	-3.87	Peak		

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2. Average test would be performed if the peak result were greater than the average limit.

- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.



Compliance Certification Services Inc. FCC ID : QI3BIL-7800NEX

Restricted Band Edges



Dete	ctor N	lode : Av		Polarity : Horizontal						
		CH	Low (IE	EE 80)2.11k	o Mode	;)			
₩ А	gilent 20:	00:00 Aug 25,	2010			I	RТ			
D (40			· · · · ·					Mkr3	2.3	90 0 GHz
Ret 12 Poak	/ dBhA		#Htten 20 dl	۲ ۱	1				48.	61 dB µ V
reak Loa										
109 10										
d₿/										
Offst									74	
10										
dВ								+		
DI E 4 Q										$-\lambda$
54.0 dB u V								<u> </u>		
LaAu						0	\sim			
Lariv										
M1 S2										
Start 2	2.310 0 G	Hz					~	Stop	2.42	25 0 GHz
#Res B	W 1 MHz			#VBW 10	Hz		Sweep	8.967	s (10	001 pts)
Mark	er Tra	ce Type	X 1	Axis		Amplitu	ude			
1 2	(1)) Freq) Frea	2.412	8 GHz Ø GHz		99.71 dE 63.08 dE	зµ∨ З⊔О			
3	(1)) Freq	2.390	0 GHz		48.61 dE	ΒμŲ			
L										




























































































7.7 CONDUCTED EMISSION

<u>LIMITS</u>

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range	Conducted Limit (dBµv)		
(MHz)	Quasi-peak	Average	
0.15 - 0.50	66 to 56	56 to 46	
0.50 - 5.00	56	46	
5.00 - 30.0	60	50	

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-465	08/08/2011
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-473	03/22/2011
EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	835418/008	10/24/2011
Pulse Limit	ROHDE & SCHWARZ	ESH3-Z2	100117	09/17/2011
N Type Coaxial Cable	BELDEN	8268 M17/164	003	07/09/2011

Remark: Each piece of equipment is scheduled for calibration once a year.



TEST SETUP





FCC ID : QI3BIL-7800NEX

TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4:2003.

The test procedure is performed in a $4m \times 3m \times 2.4m$ (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) \times 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.



TEST RESULTS

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW012A12UL	Temp. & Humidity	23.1°C, 53%



Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level - Limit value



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW012A12UL	Temp. & Humidity	23.1°C, 53%





Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level – Limit value



Compliance Certification Services Inc.

FCC ID : QI3BIL-7800NEX

Report No.: T100603307-RP1

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL 8066	Temp. & Humidity	23.1°C, 53%





Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level - Limit value



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL 8066	Temp. & Humidity	23.1°C, 53%





Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level - Limit value



Compliance Certification Services Inc.

FCC ID : QI3BIL-7800NEX

Report No.: T100603307-RP1

Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BiPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL	Temp. & Humidity	23.1°C, 53%





Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level - Limit value



Product Name	3G / Wireless-N Dual WAN ADSL2+ Firewall Router	Test By	Bell Huang
Model	BIPAC 7800NEXL	Test Date	2010/10/26
Test Mode	Normal operating / Adapter PAW018A12UL	Temp. & Humidity	23.1°C, 53%

NEUTRAL



Remark:

1. Correction Factor = Insertion loss + cable loss

2. Margin value = Emission level - Limit value



FCC ID : QI3BIL-7800NEX

APPENDIX I MAXIMUM PERMISSIBLE EXPOSURE

According to FCC 1.1310 : The criteria listed in the following table shall be used to evaluate theenvironment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic FieldPower DensityStrength (A/m)(mW/cm²)		Average Time	
	(A) Limits for C	Occupational / Con	trol Exposures		
300-1,500			F/300	6	
1,500-100,000			5	6	
	(B) Limits for General Population / Uncontrol Exposures				
300-1,500			F/1500	6	
1,500-100,000			1	30	

CALCULATIONS

Given

$$E = \frac{\sqrt{30 \times P \times G}}{d} \& S = \frac{E^2}{3770}$$

Where E = Field strength in Volts / meter P = Power in Watts G = Numeric antenna gain

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

$$P(mW) = P(W) / 1000$$
 and
 $d(cm) = d(m) / 100$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

Where
$$d = Distance$$
 in cm
 $P = Power$ in mW
 $G = Numeric$ antenna gain
 $S = Power$ density in $mW / cm2$



Compliance Certification Services Inc.

FCC ID : QI3BIL-7800NEX

<u>LIMIT</u>

Power Density Limit, S=1.0mW/cm²

TEST RESULTS

Mode	Antenna Gain (dBi)	Minimum separation distance (cm)	Output Power (dBm)	Numeric antenna gain (mW)	Power Density Limit (mW/cm ²)	Power Density at 20cm (mW/cm ²)
IEEE 802.11b	5.01	20.0	18.98	3.17	1.00	0.049856
IEEE 802.11g	5.01	20.0	22.19	3.17	1.00	0.104405
IEEE 802.11n HT20	5.01	20.0	25.39	3.17	1.00	0.218245
IEEE 802.11n HT40	5.01	20.0	24.20	3.17	1.00	0.165697

Remark: For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm² even if the calculation indicates that the power density would be larger.