



FCC 47 CFR PART 15 SUBPART C

TEST REPORT

For

Wireless Router

Model: WR750R

Trade Name: PRO-NETS; Speed Com+; Jet Com

Issued to

**PRO-NETS TECHNOLOGY CORPORATION
7F, No. 95, Li-De St., Chung Ho City 235, Taipei, Taiwan R.O.C.**

Issued by

**Compliance Certification Services Inc.
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Testing Laboratory
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Testing Laboratory
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Compliance Certification Services Inc.

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FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		September 8, 2010		Initial Issue	All	Sabrina Wang



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1. TEST RESULT CERTIFICATION

Applicant: PRO-NETS TECHNOLOGY CORPORATION
7F, No. 95, Li-De St., Chung Ho City 235, Taipei, Taiwan R.O.C.

Manufacturer: PRO-NETS TECHNOLOGY CORPORATION
7F, No. 95, Li-De St., Chung Ho City 235, Taipei, Taiwan R.O.C.

Equipment Under Test: Wireless Router

Trade Name: PRO-NETS; Speed Com+; Jet Com

Model: WR750R

Date of Test: August 23, ~ September 3, 2010


APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 15 Subpart C	No non-compliance noted

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2003 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

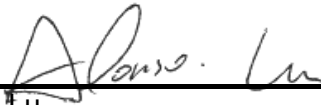
The test results of this report relate only to the tested sample EUT identified in this report.

Approved by:



Stan Lin
Supervisor

Reviewed by:



Alonso Lu
Engineer



2. EUT DESCRIPTION

Product	Wireless Router		
Trade Name	PRO-NETS; Speed Com+; Jet Com		
Model Number	WR750R		
Model Discrepancy	N/A		
EUT Power Rating	9VDC, 0.5A		
Power Adapter	GOE	Model	GOE
Power Adapter Power Rating	I/P: 100-240VAC, 60/50Hz, 0.3A O/P: 9VDC, 0.5A		
Operating Frequency Range	2412 ~ 2462 MHz		
Transmit Power	IEEE 802.11b mode: 16.10 dBm IEEE 802.11g mode: 20.24 dBm draft 802.11n 20 MHz Channel mode: 19.50 dBm draft 802.11n 40 MHz Channel mode: 18.58 dBm		
Modulation Technique	IEEE 802.11b mode: DSSS (1, 2, 5.5 and 11 Mbps) IEEE 802.11g mode: OFDM (6, 9, 12, 18, 24, 36, 48 and 54 Mbps) draft 802.11n 20 MHz Channel mode: OFDM (6.5, 7.2, 13, 14.4, 14.44, 19.5, 21.7, 26, 28.89, 28.9, 39, 43.3, 43.33 52, 57.78, 57.8, 58.5, 65.0, 72.2, 78, 86.67, 104, 115.56, 117, 130, 144.44 Mbps) draft 802.11n 40 MHz Channel mode: OFDM (13.5, 15, 27, 30, 40.5, 45, 54, 60, 81, 90, 108, 120, 121.5, 135, 150, 162, 180, 216, 240, 243, 270, 300 Mbps)		
Number of Channels	IEEE 802.11b/g mode: 11 Channels draft 802.11n 20 MHz Channel mode: 11 Channels draft 802.11n 40 MHz Channel mode: 7 Channels		
Antenna Specification	Dipole Antenna / Gain: 2.0 dBi		

Remark:

1. The sample selected for test was production product and was provided by manufacturer.
2. This submittal(s) (test report) is intended for FCC ID: **RXZ-WR750R** filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2003 and FCC CFR 47 Part 2, Part 15.207, 15.209 and 15.247.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2003 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4: 2003.



3.4 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

- (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 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

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

² Above 38.6

- (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 in 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.



3.5 DESCRIPTION OF TEST MODES

The EUT is a 1x1 SISO transmitter.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

The worst case data rate is determined as the data rate with highest output power.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz, which worst case was in normal link mode only.

IEEE 802.11b mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate was chosen for full testing.

IEEE 802.11g mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate was chosen for full testing.

draft 802.11n 20 MHz Channel mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 13.5Mbps data rate were chosen for full testing.

draft 802.11n 40 MHz Channel mode:

Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with 13.5Mbps data rate were chosen for full testing.



4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

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

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY48250064	11/05/2010
Spectrum Analyzer	R&S	FSEB	825829/011	11/02/2010

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY48250064	11/05/2010
Spectrum Analyzer	R&S	FSEB	825829/011	11/02/2010
Pre-Amplifier	Anritsu	MH648A	M89145	08/07/2011
Pre-Amplifier	Agilent	8449B	3008A01738	04/17/2011
EMI Test Receiver	SCHAFFNER	SCR 3501	436	01/26/2011
Loop Antenna	EMCO	6502	2356	06/11/2013
Bilog Antenna	FRANKONIA	BTA-M	030003M	05/28/2011
Horn Antenna	EMCO	3115	00022250	05/09/2011
Turn Table	HD	DT-K312	N/A	N.C.R
Antenna Tower	HD	AS620E	N/A	N.C.R
Controller	HD	HD100	N/A	N.C.R
Test S/W	LabVIEW 6.1 (Wugu Chamber EMI Test V1_4.5.3)			

Powerline Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
TEST RECEIVER	R&S	ESCI	100234	06/13/2011
LISN (EUT)	FCC	FCC-LISN-50-32-2	08009	03/25/2011
LISN	EMCO	3825/2	1382	01/11/2011
Test S/W	LabVIEW 6.1 (CCS Conduction Test SW Version_01)			

4.3 MEASUREMENT UNCERTAINTY

Parameter	Uncertainty
Powerline Conducted Emission	± 1.9280
3M Semi Anechoic Chamber / 30MHz ~ 1GHz	± 3.8856
3M Semi Anechoic Chamber / Above 1GHz	± 3.8721

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



5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

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

☒ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.

Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☐ No.11, Wugong 6th Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan

Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☒ No. 81-1, Lane 210, Pa-De 2nd Rd., Luchu Hsiang, Taoyuan Shien, (338) Taiwan, R.O.C.

Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4: 2003 and CISPR Publication 22.

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.





Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."



5.3 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	A2LA	CFR 47, FCC Part15/18, CISPR 22, EN 55022, ICES-003, AS/NZS CISPR 22, VCCI V-3, EN 55011, CISPR 11, IEC/EN 61000-4-2/3/4/5/6/8/11, EN 61000-6-1/2/3/4, EN 55024, CISPR 24, AS/NZS CISPR 24, AS/NZS 61000.6.2, EN 55014-1/-2, ETSI EN 300 386 v1.3.2/v1.3.3, IEC/EN 61000-3-2, AS/NZS 61000.3.2, IEC/EN 61000-3-3, AS/NZS 61000.3.3	 No. 0824-01
USA	FCC MRA	3/10 meter Open Area Test Sites to perform FCC Part 15/18 measurements	 TW1026
Japan	VCCI	3/10 meter Open Area Test Sites and conducted test sites to perform radiated/conducted measurements	VCCI R-2882/2541/2798/725/1868 C-402/747/912 T-321/1646
Taiwan	TAF	EN 55014-1, CISPR 14, CNS 13781-1, EN 55013, CISPR 13, CNS 13439, EN 55011, CISPR 11, CNS 13803, PLMN09, IS2045-0, LP0002 FCC Part 27/90, Part 15B/C/D/E, RSS-192/193/210/310 ETSI EN 300 328/ 300 220-1/ 300 220-2/ 301 893/ 301 489-01/ 301 489-03/ 301 489-07 / 301 489-17/ 300 440-1/ 300 440-2 AS/NZS 4268, AS/NZS 4771 CISPR 22, EN 55022, CNS 13438, AS/NZS CISPR 22, VCCI, IEC/EN 61000-4-2/3/4/5/6/8/11, CNS 14676-2/3/4/5/6/8, CNS 14934-2/3, CNS 13783-1, CNS 13439, CNS 13803	 Testing Laboratory 0363
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439, CNS 14115	SL2-IS-E-0014 / IN-E-0014 /A1-E-0014 /R1-E-0014 /R2-E-0014 /L1-E-0014
Canada	Industry Canada	RSS212, Issue 1	 IC 2324C-3 IC 2324C-5

Note: No part of this report may be used to claim or imply product endorsement by A2LA, TAF or other government agency.



6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

6.2 SUPPORT EQUIPMENT

For Radiated and Conducted Measurement Below 1GHz							
No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1	Notebook PC (Remote)	D400	0932RY	E2K24GBRL	DELL	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core

For Radiated and Conducted Measurement Above 1GHz							
No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
	N/A**						

****No any support equipment during the test.**

For Powerline Measurement							
No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1	LAN Cable	N/A	N/A	N/A	N/A	Unshielded, 3.0m x3	N/A
2	Server Notebook (Remote)	Compaq 2210b	CNU7472KDP	DOC	HP	Unshielded, 20m	Unshielded, 1.8m
3	Server Notebook (Remote)	2210B	CNV7472KG5	DOC	HP	Unshielded, 20m	Unshielded, 1.8m

Remark: Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.



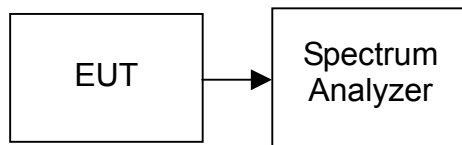
7. FCC PART 15.247 REQUIREMENTS

7.1 6dB BANDWIDTH

LIMIT

According to §15.247(a)(2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 100kHz, VBW = 300kHz, Span = 30MHz, Sweep = auto.
4. Mark the peak frequency and -6dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

TEST RESULTS

No non-compliance noted

**TEST DATA****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	10.20	>500	PASS
Mid	2437	10.20		PASS
High	2462	10.20		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.65	>500	PASS
Mid	2437	16.70		PASS
High	2462	16.65		PASS

Test mode: draft 802.11n 20 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	17.95	>500	PASS
Mid	2437	17.90		PASS
High	2462	17.85		PASS

Test mode: draft 802.11n 40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.60	>500	PASS
Mid	2437	36.60		PASS
High	2452	36.60		PASS



Test Plot

IEEE 802.11b mode

6dB Bandwidth (CH Low)

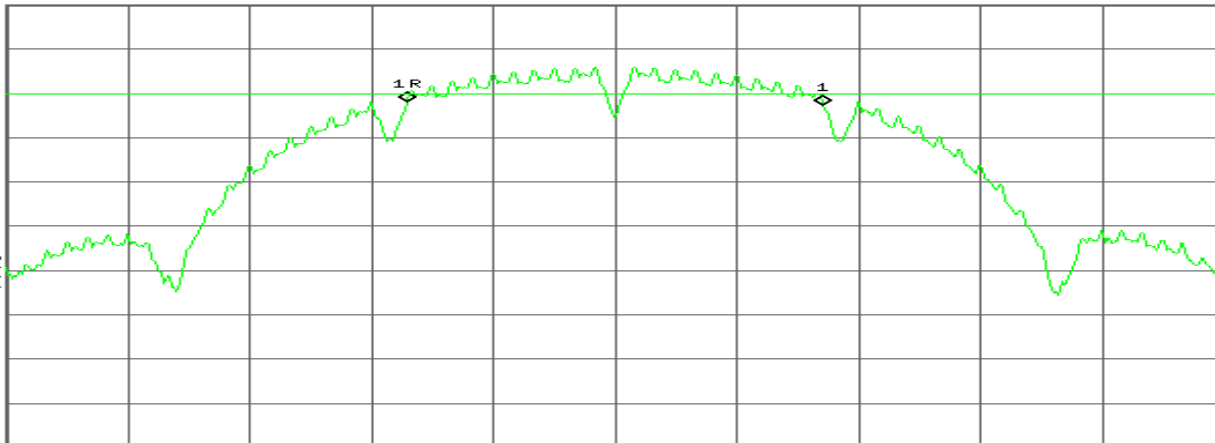
Agilent 14:16:56 Sep 3, 2010

R T

Mkr1 10.20 MHz
-0.75 dB

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
-2.6
dBm
LgAvM1 S2
S3 FC£(f):
FTun
Swp

Center 2.412 00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 30 MHz
Sweep 2.88 ms (601 pts)

6dB Bandwidth (CH Mid)

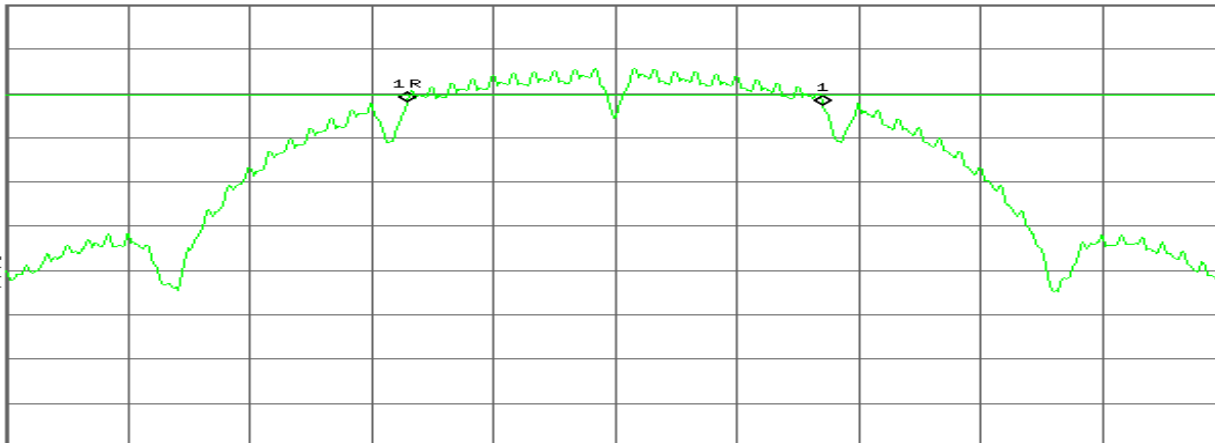
Agilent 14:18:23 Sep 3, 2010

R T

Mkr1 10.20 MHz
-0.77 dB

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
-2.9
dBm
LgAvM1 S2
S3 FC£(f):
FTun
Swp

Center 2.437 00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 30 MHz
Sweep 2.88 ms (601 pts)

6dB Bandwidth (CH High)

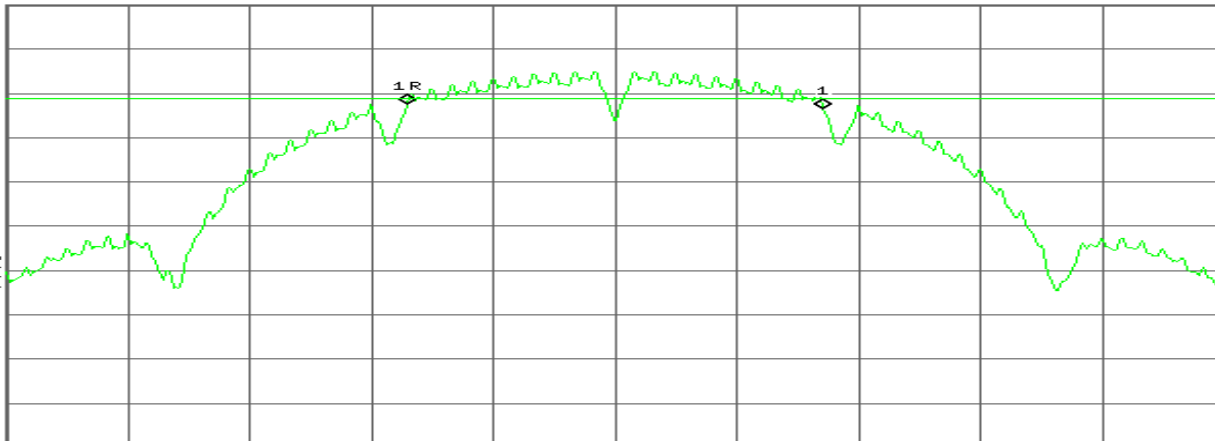
Agilent 14:21:33 Sep 3, 2010

R T

Mkr1 10.20 MHz
-0.92 dB

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
-3.5
dBm
LgAvM1 S2
S3 FC£(f):
FTun
Swp

Center 2.462 00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 30 MHz
Sweep 2.88 ms (601 pts)



IEEE 802.11g mode

6dB Bandwidth (CH Low)

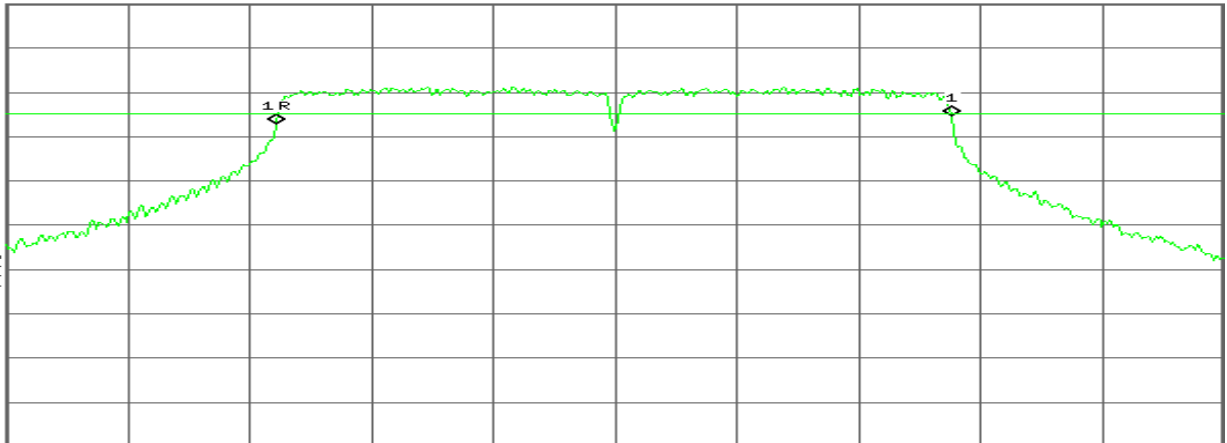
Agilent 14:15:38 Sep 3, 2010

R T

▲ Mkr1 16.65 MHz
1.78 dB

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
-7.2
dBm
LgAvM1 S2
S3 FCE(f):
FTun
Swp

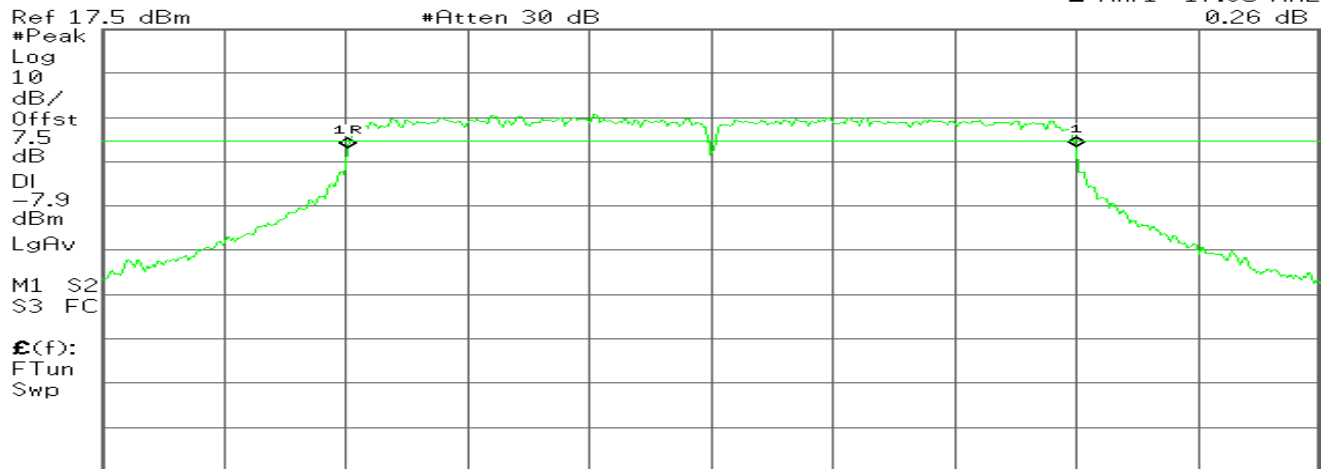


draft 802.11n 20 MHz Channel mode

6dB Bandwidth (CH Low)

Agilent 14:07:30 Sep 3, 2010

R T

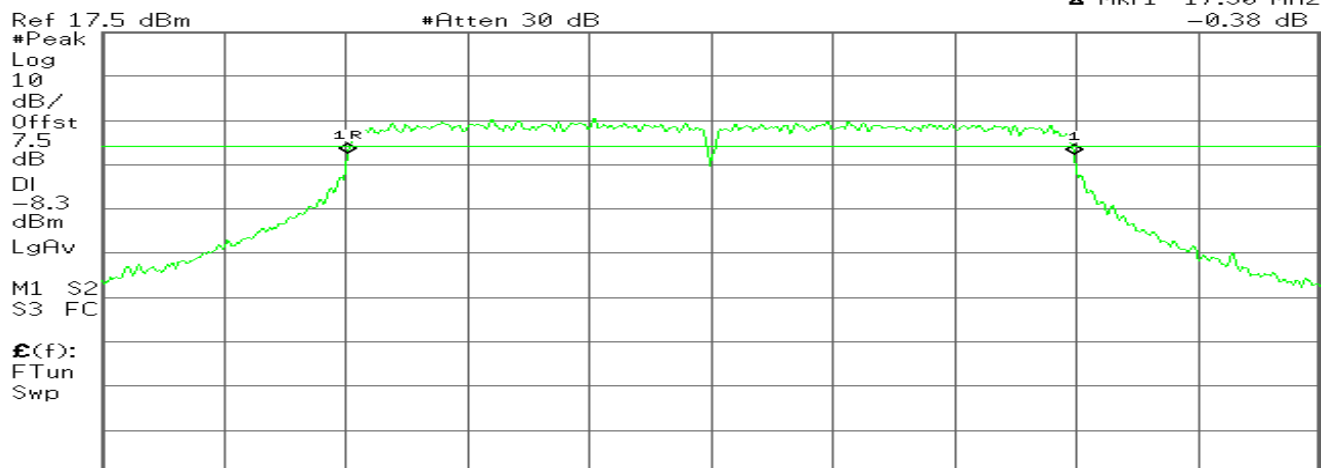
▲ Mkr1 17.95 MHz
0.26 dB

Center 2.412 00 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.88 ms (601 pts)

6dB Bandwidth (CH Mid)

Agilent 14:09:10 Sep 3, 2010

R T

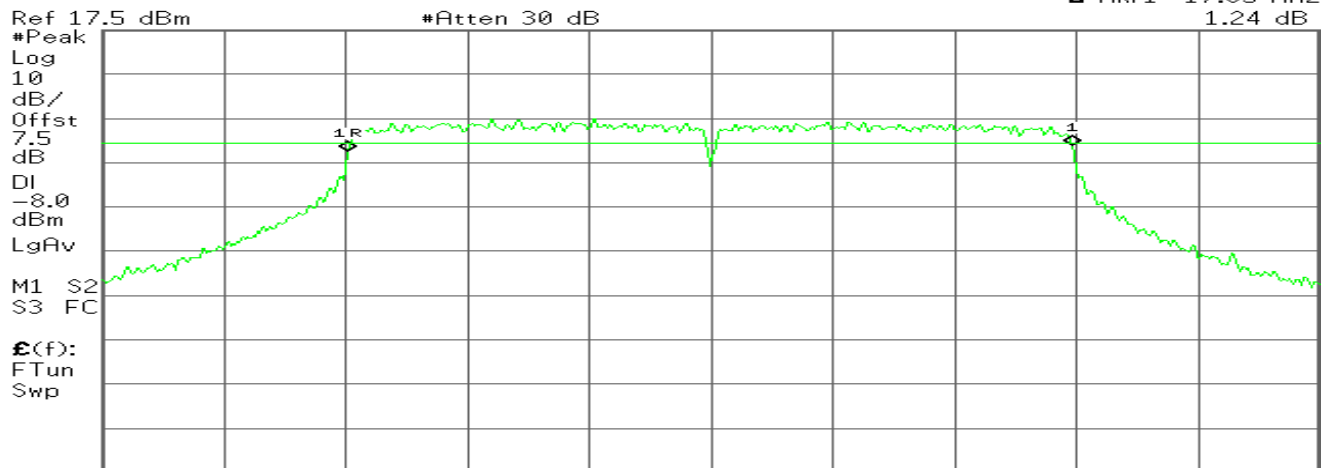
▲ Mkr1 17.90 MHz
-0.38 dB

Center 2.437 00 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.88 ms (601 pts)

6dB Bandwidth (CH High)

Agilent 14:10:59 Sep 3, 2010

R T

▲ Mkr1 17.85 MHz
1.24 dB

Center 2.462 00 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.88 ms (601 pts)

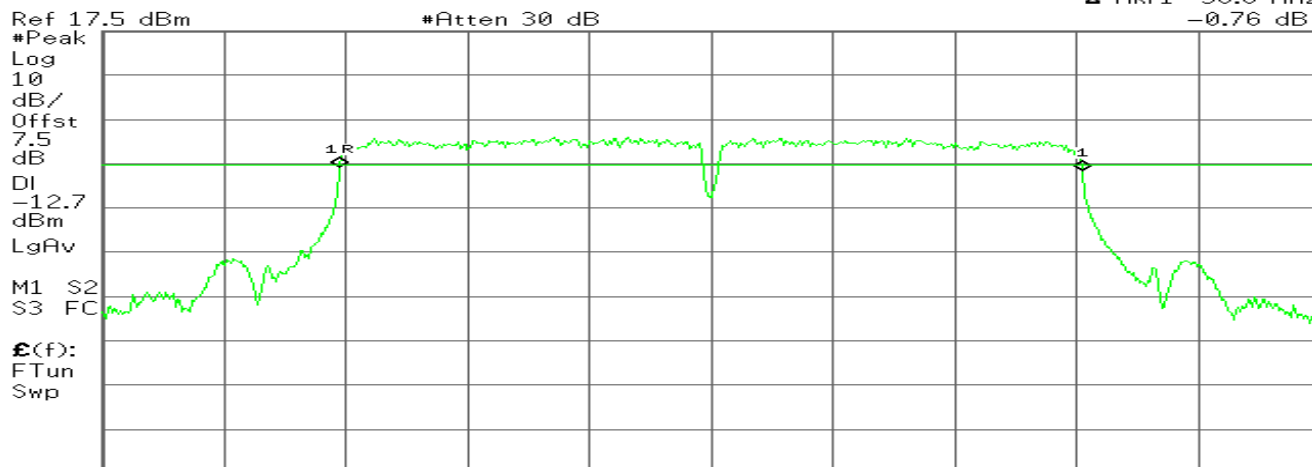


draft 802.11n 40 MHz Channel mode

6dB Bandwidth (CH Low)

Agilent 14:02:40 Sep 3, 2010

R T

▲ Mkr1 36.6 MHz
-0.76 dB

Center 2.422 0 GHz

#Res BW 100 kHz

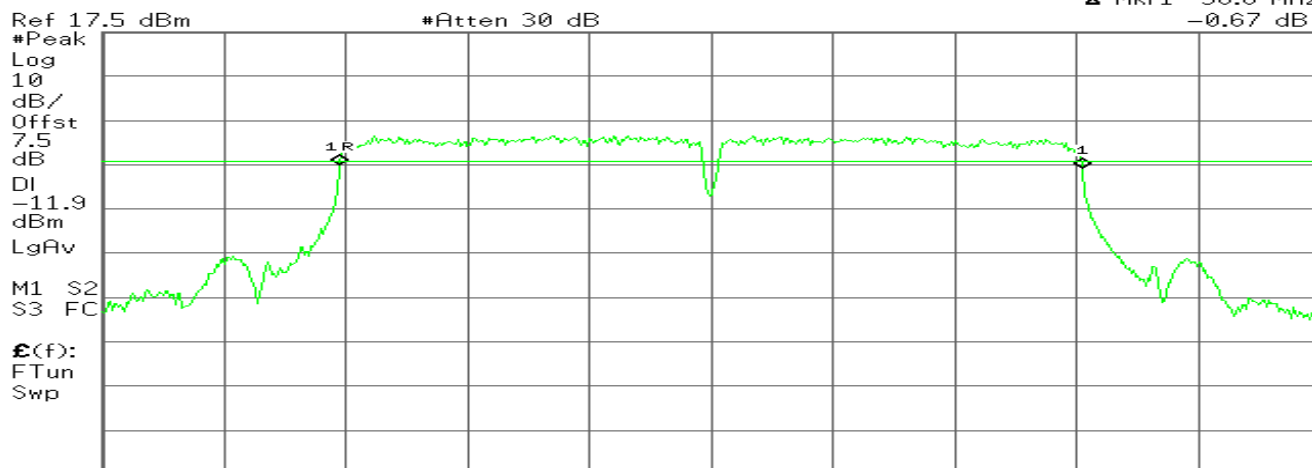
#VBW 300 kHz

Span 60 MHz
Sweep 5.76 ms (601 pts)

6dB Bandwidth (CH Mid)

Agilent 14:04:10 Sep 3, 2010

R T

▲ Mkr1 36.6 MHz
-0.67 dB

Start 2.407 0 GHz

#Res BW 100 kHz

#VBW 300 kHz

Stop 2.467 0 GHz
Sweep 5.76 ms (601 pts)

6dB Bandwidth (CH High)

Agilent 14:05:41 Sep 3, 2010

R T

▲ Mkr1 36.6 MHz
-0.84 dB

Center 2.452 0 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 60 MHz
Sweep 5.76 ms (601 pts)



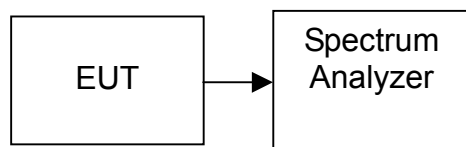
7.2 PEAK POWER

LIMIT

The maximum peak output power of the intentional radiator shall not exceed the following:

1. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.
2. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (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 CONFIGURATION



TEST PROCEDURE

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

TEST RESULTS

No non-compliance noted

**TEST DATA****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	16.10	0.04074	1.00	PASS
Mid	2437	15.75	0.03758		PASS
High	2462	15.32	0.03404		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	20.24	0.10568	1.00	PASS
Mid	2437	19.96	0.09908		PASS
High	2462	19.62	0.09162		PASS

Test mode: draft 802.11n 20 MHz Channel mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	19.50	0.08913	1.00	PASS
Mid	2437	19.16	0.08241		PASS
High	2462	18.70	0.07413		PASS

Test mode: draft 802.11n 40 MHz Channel mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2422	17.91	0.06180	1.00	PASS
Mid	2437	18.58	0.07211		PASS
High	2452	18.32	0.06792		PASS



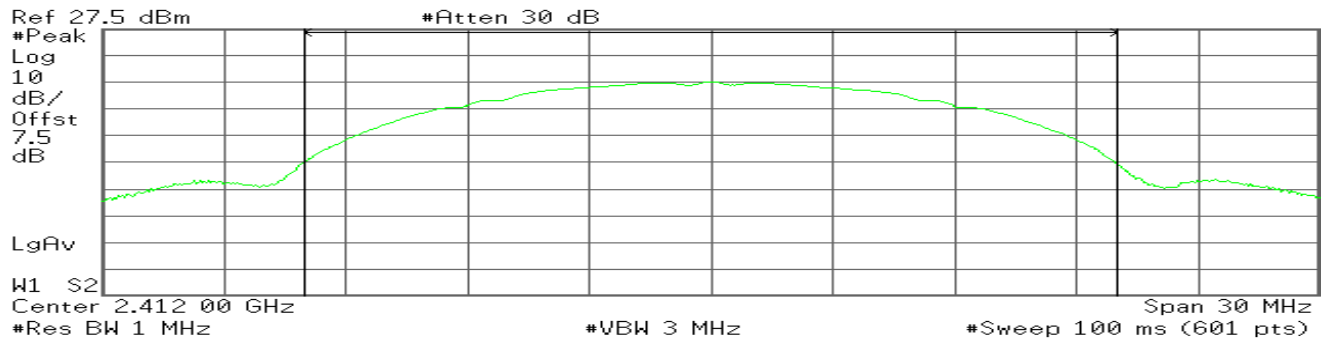
Test Plot

IEEE 802.11b mode

Peak Power (CH Low)

Agilent 13:20:20 Sep 3, 2010

R T



Channel Power

16.10 dBm /20.0000 MHz

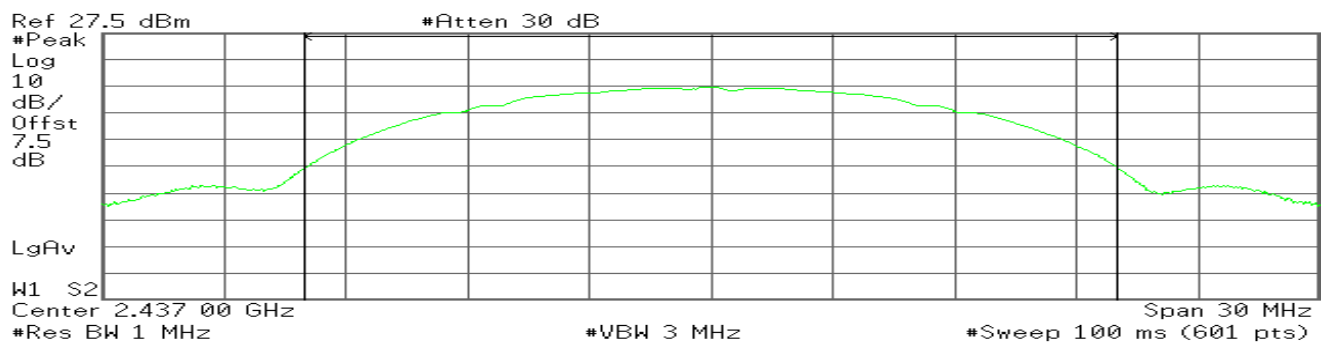
Power Spectral Density

-56.91 dBm/Hz

Peak Power (CH Mid)

Agilent 13:30:11 Sep 3, 2010

R T



Channel Power

15.75 dBm /20.0000 MHz

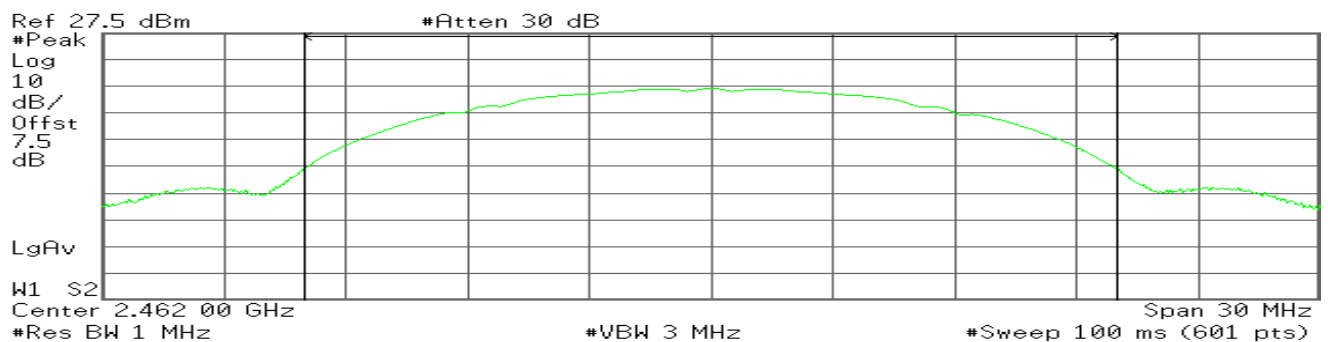
Power Spectral Density

-57.26 dBm/Hz

Peak Power (CH High)

Agilent 13:30:54 Sep 3, 2010

R T



Channel Power

15.32 dBm /20.0000 MHz

Power Spectral Density

-57.69 dBm/Hz

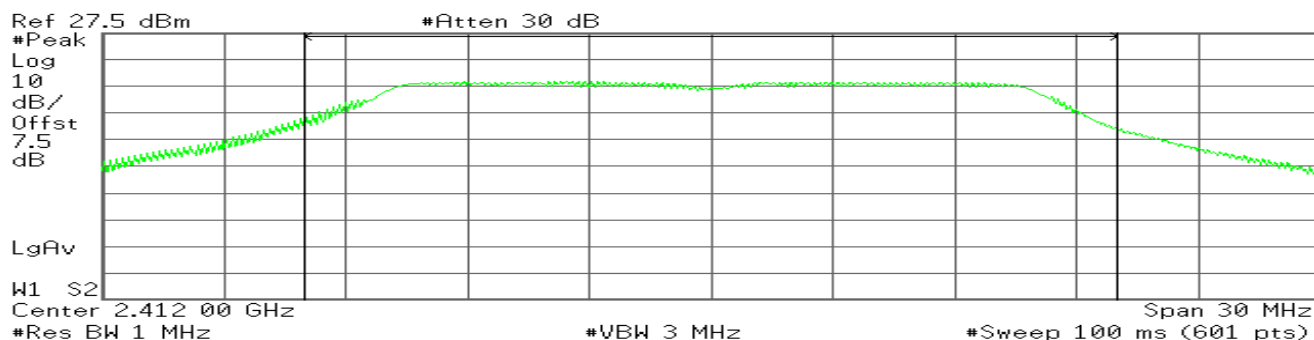


IEEE 802.11g mode

Peak Power (CH Low)

Agilent 13:40:12 Sep 3, 2010

R T



Channel Power

20.24 dBm /20.0000 MHz

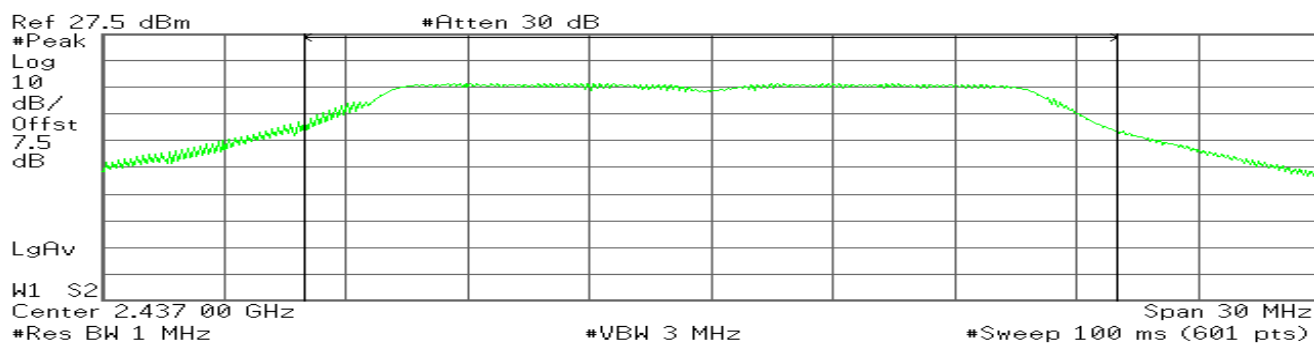
Power Spectral Density

-52.77 dBm/Hz

Peak Power (CH Mid)

Agilent 13:38:57 Sep 3, 2010

R T



Channel Power

19.96 dBm /20.0000 MHz

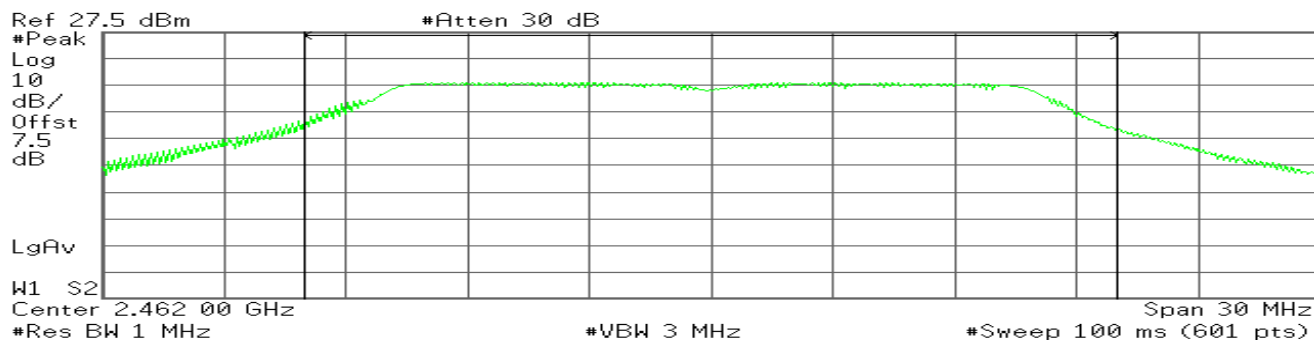
Power Spectral Density

-53.05 dBm/Hz

Peak Power (CH High)

Agilent 13:36:01 Sep 3, 2010

R T



Channel Power

19.62 dBm /20.0000 MHz

Power Spectral Density

-53.39 dBm/Hz

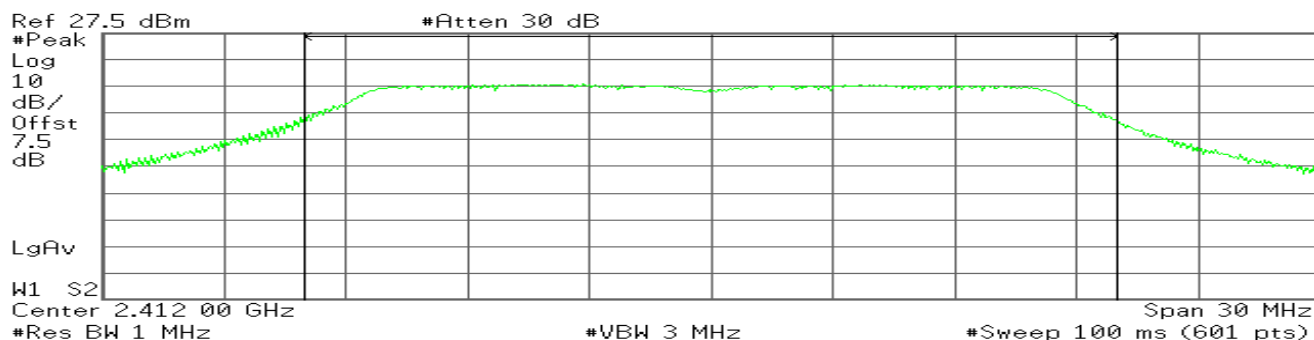


draft 802.11n 20 MHz Channel mode

Peak Power (CH Low)

Agilent 13:45:56 Sep 3, 2010

R T



Channel Power

19.50 dBm /20.0000 MHz

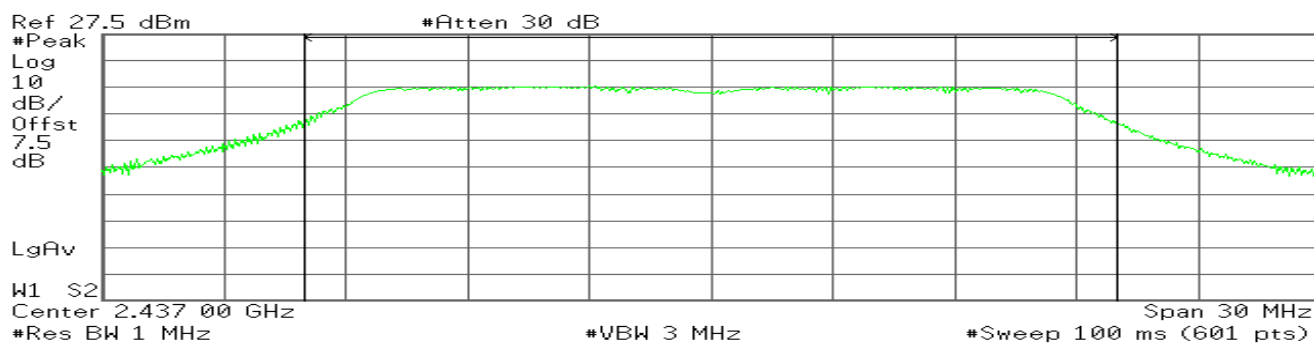
Power Spectral Density

-53.51 dBm/Hz

Peak Power (CH Mid)

Agilent 13:47:15 Sep 3, 2010

R T



Channel Power

19.16 dBm /20.0000 MHz

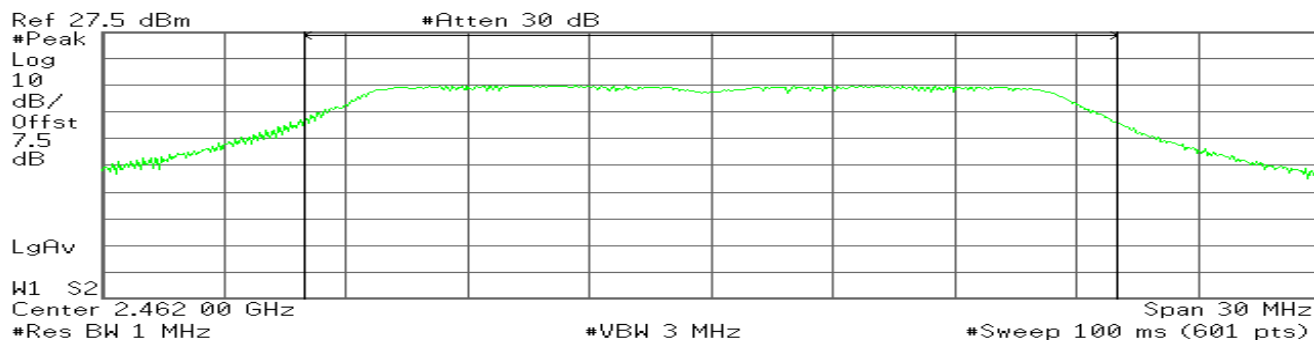
Power Spectral Density

-53.85 dBm/Hz

Peak Power (CH High)

Agilent 13:49:58 Sep 3, 2010

R T



Channel Power

18.70 dBm /20.0000 MHz

Power Spectral Density

-54.31 dBm/Hz

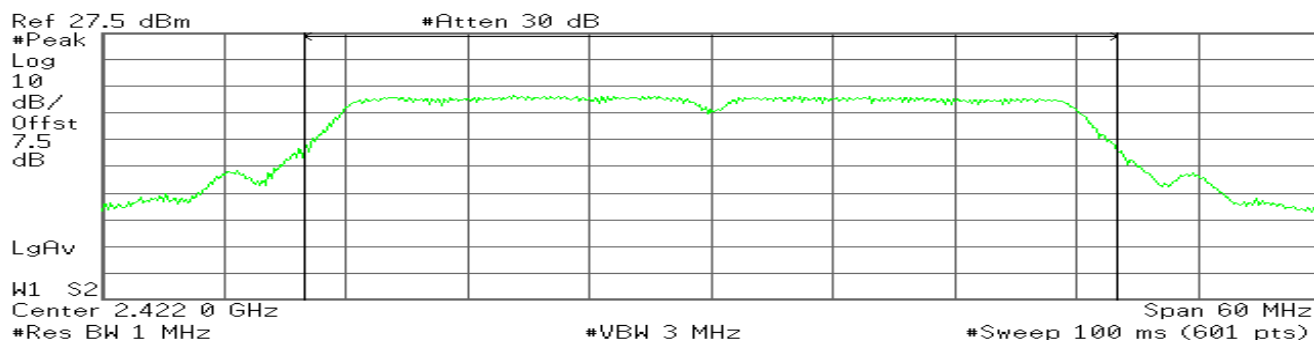


draft 802.11n 40 MHz Channel mode

Peak Power (CH Low)

Agilent 13:57:31 Sep 3, 2010

R T



Channel Power

17.91 dBm /40.0000 MHz

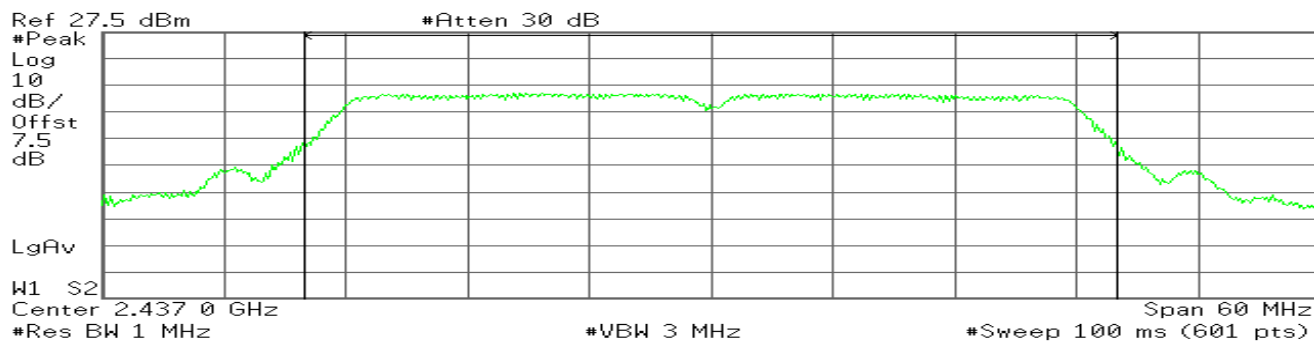
Power Spectral Density

-58.11 dBm/Hz

Peak Power (CH Mid)

Agilent 13:54:47 Sep 3, 2010

R T



Channel Power

18.58 dBm /40.0000 MHz

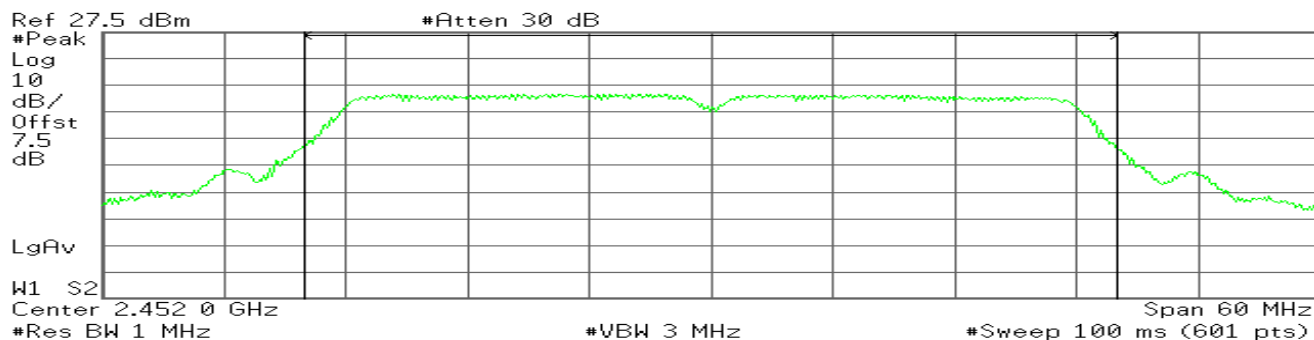
Power Spectral Density

-57.44 dBm/Hz

Peak Power (CH High)

Agilent 13:55:19 Sep 3, 2010

R T



Channel Power

18.32 dBm /40.0000 MHz

Power Spectral Density

-57.70 dBm/Hz

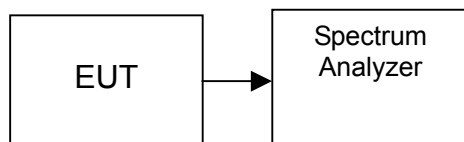


7.3 AVERAGE POWER

LIMIT

None; for reporting purposes only.

TEST CONFIGURATION



TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer. The Spectrum Analyzer is set to the average power detection.

TEST RESULTS

No non-compliance noted

**TEST DATA****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	13.03	0.02009
Mid	2437	12.89	0.01945
High	2462	12.33	0.01710

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	13.02	0.02004
Mid	2437	12.92	0.01959
High	2462	12.45	0.01758

Test mode: draft 802.11n 20 MHz Channel mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	12.78	0.01897
Mid	2437	12.31	0.01702
High	2462	11.71	0.1483

Test mode: draft 802.11n 40 MHz Channel mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2422	10.75	0.01189
Mid	2437	11.44	0.01393
High	2452	11.32	0.01355



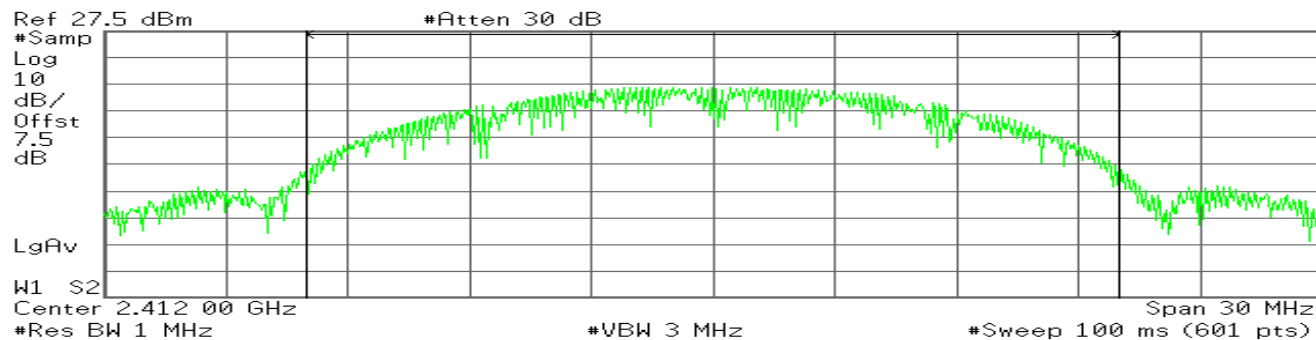
Test Plot

IEEE 802.11b mode

Average power (CH Low)

Agilent 13:26:50 Sep 3, 2010

R T



Channel Power

13.03 dBm /20.0000 MHz

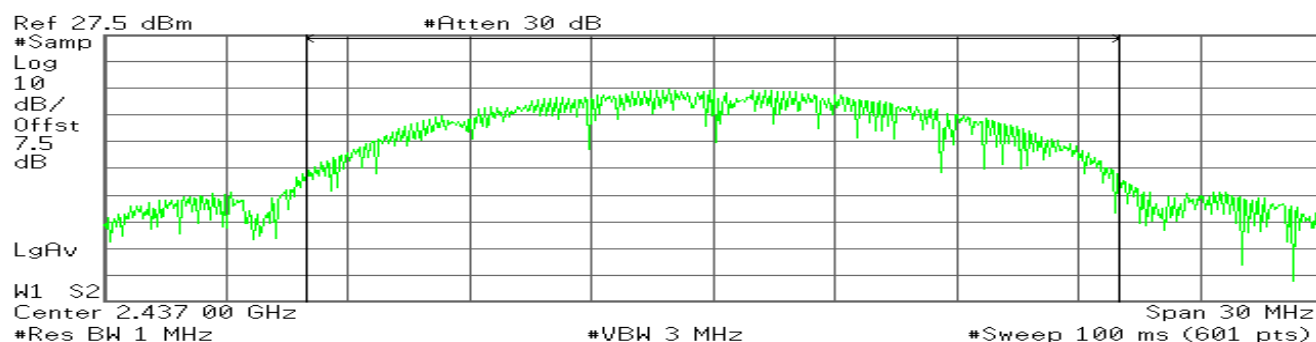
Power Spectral Density

-59.98 dBm/Hz

Average power (CH Mid)

Agilent 13:28:39 Sep 3, 2010

R T



Channel Power

12.89 dBm /20.0000 MHz

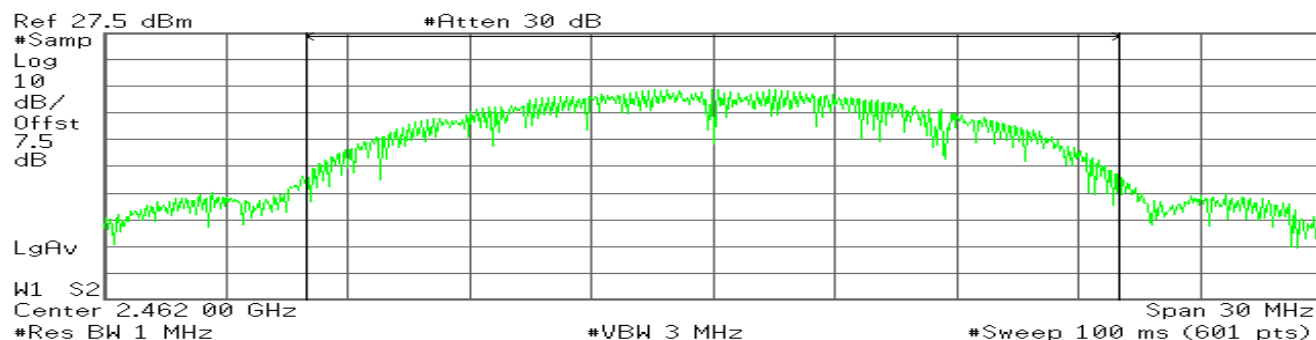
Power Spectral Density

-60.12 dBm/Hz

Average power (CH High)

Agilent 13:31:36 Sep 3, 2010

R T



Channel Power

12.33 dBm /20.0000 MHz

Power Spectral Density

-60.68 dBm/Hz

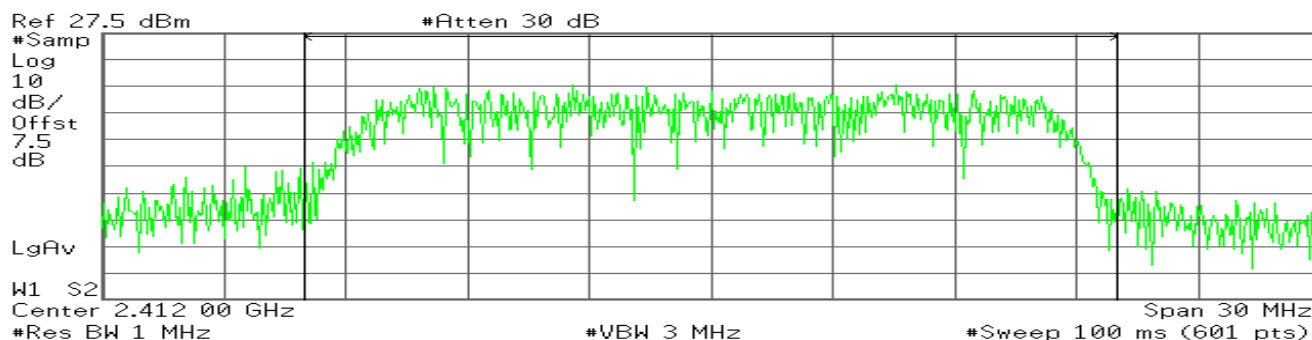


IEEE 802.11g mode

Average power (CH Low)

Agilent 13:41:32 Sep 3, 2010

R T



Channel Power

13.02 dBm /20.0000 MHz

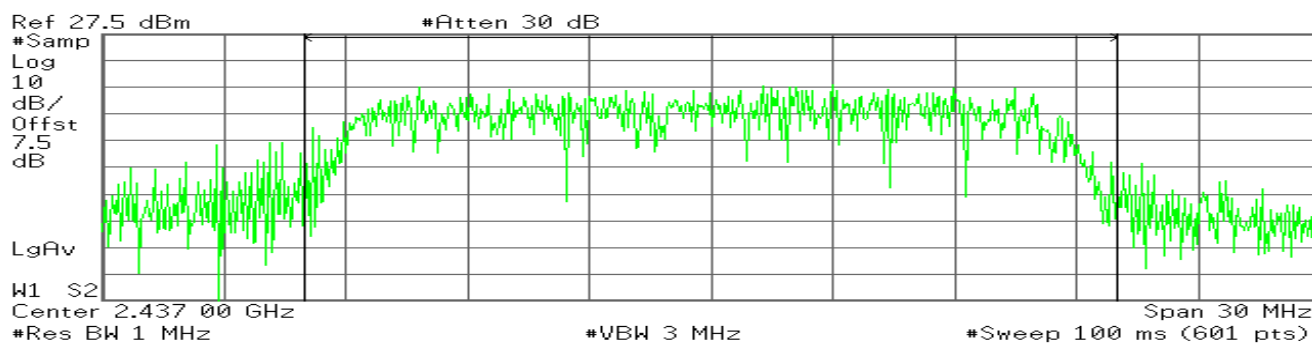
Power Spectral Density

-59.99 dBm/Hz

Average power (CH Mid)

Agilent 13:38:16 Sep 3, 2010

R T



Channel Power

12.92 dBm /20.0000 MHz

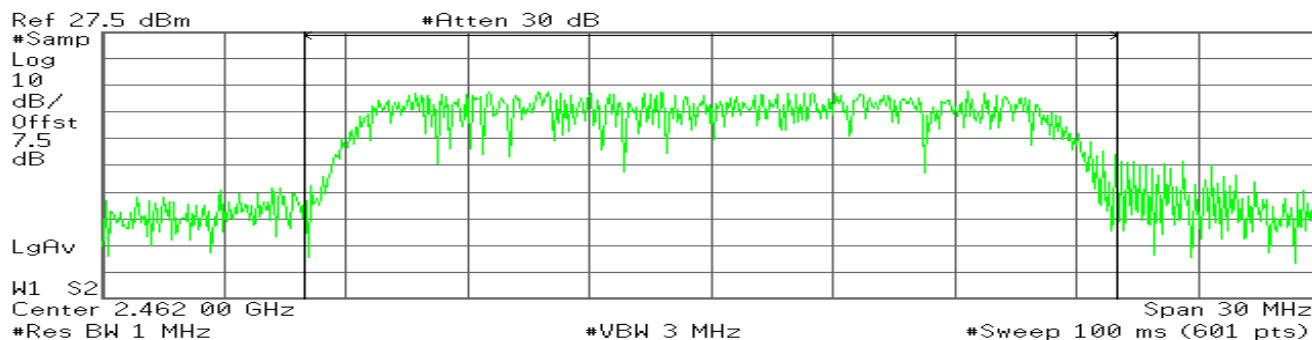
Power Spectral Density

-60.09 dBm/Hz

Average power (CH High)

Agilent 13:36:57 Sep 3, 2010

R T



Channel Power

12.45 dBm /20.0000 MHz

Power Spectral Density

-60.56 dBm/Hz

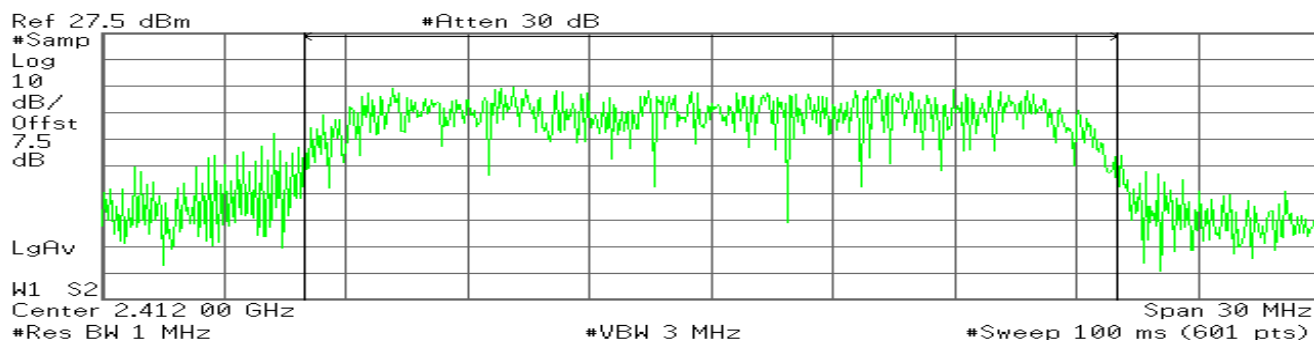


draft 802.11n 20 MHz Channel mode

Average power (CH Low)

* Agilent 13:45:08 Sep 3, 2010

R T



Channel Power

12.78 dBm /20.0000 MHz

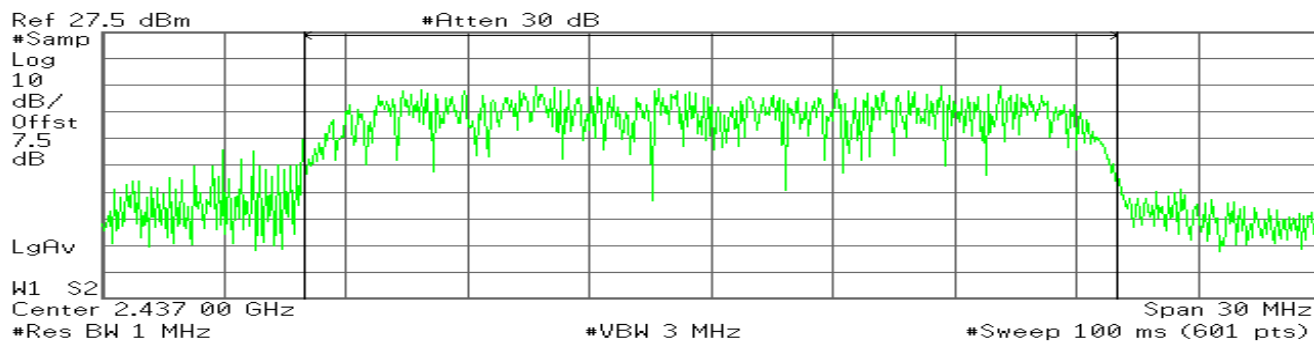
Power Spectral Density

-60.23 dBm/Hz

Average power (CH Mid)

* Agilent 13:48:00 Sep 3, 2010

R T



Channel Power

12.31 dBm /20.0000 MHz

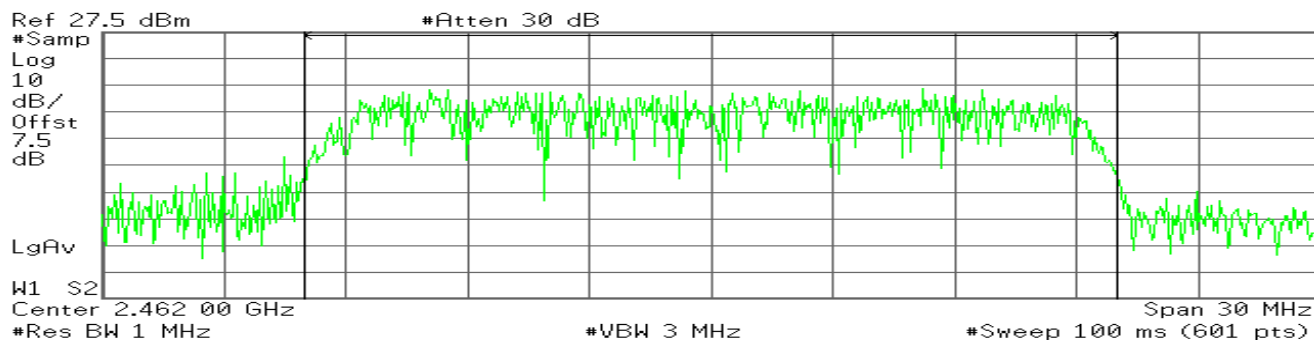
Power Spectral Density

-60.70 dBm/Hz

Average power (CH High)

* Agilent 13:49:40 Sep 3, 2010

R T



Channel Power

11.71 dBm /20.0000 MHz

Power Spectral Density

-61.30 dBm/Hz

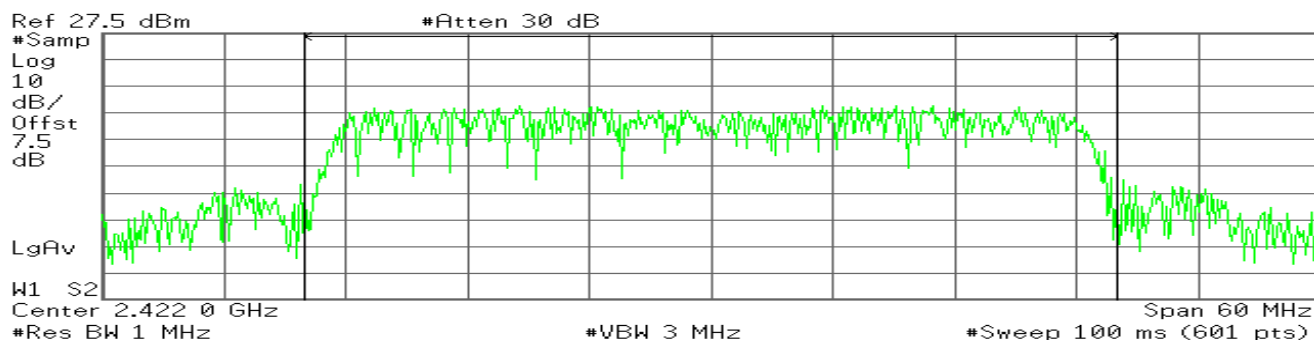


draft 802.11n 40 MHz Channel mode

Average power (CH Low)

* Agilent 13:57:13 Sep 3, 2010

R T



Channel Power

10.75 dBm /40.0000 MHz

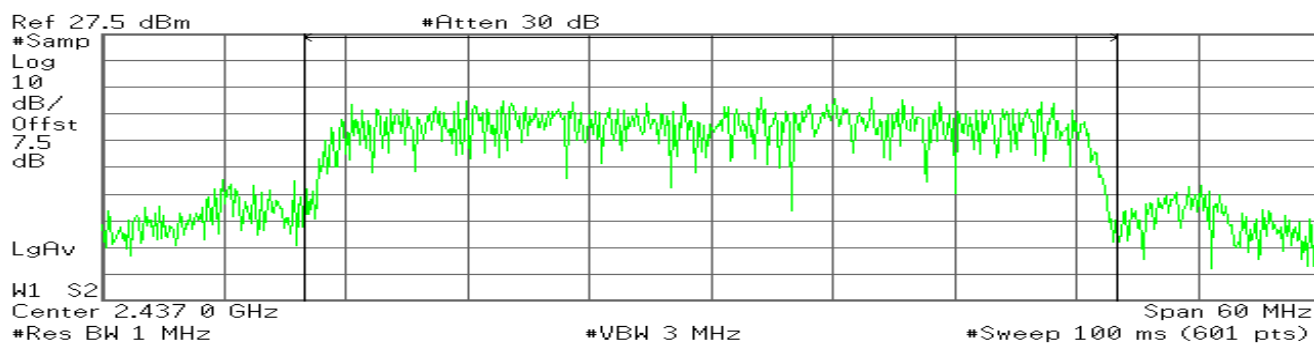
Power Spectral Density

-65.28 dBm/Hz

Average power (CH Mid)

* Agilent 13:54:29 Sep 3, 2010

R T



Channel Power

11.44 dBm /40.0000 MHz

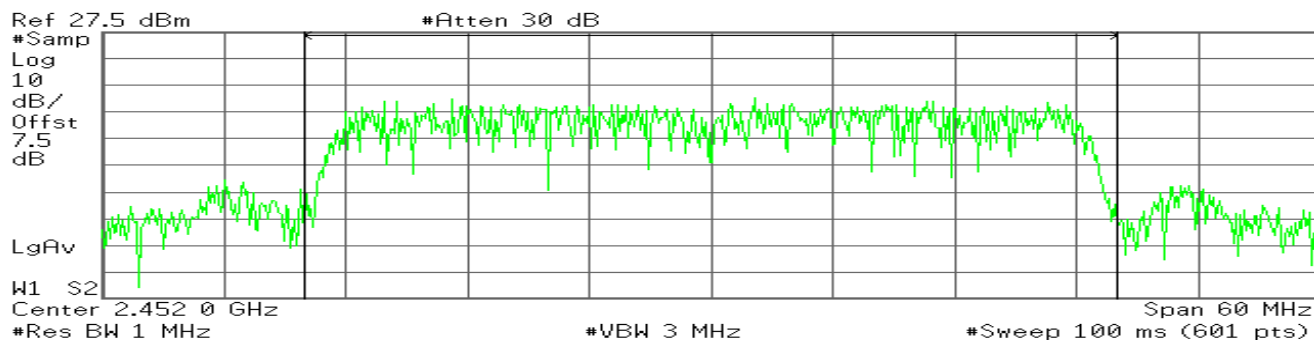
Power Spectral Density

-64.58 dBm/Hz

Average power (CH High)

* Agilent 13:55:49 Sep 3, 2010

R T



Channel Power

11.32 dBm /40.0000 MHz

Power Spectral Density

-64.70 dBm/Hz

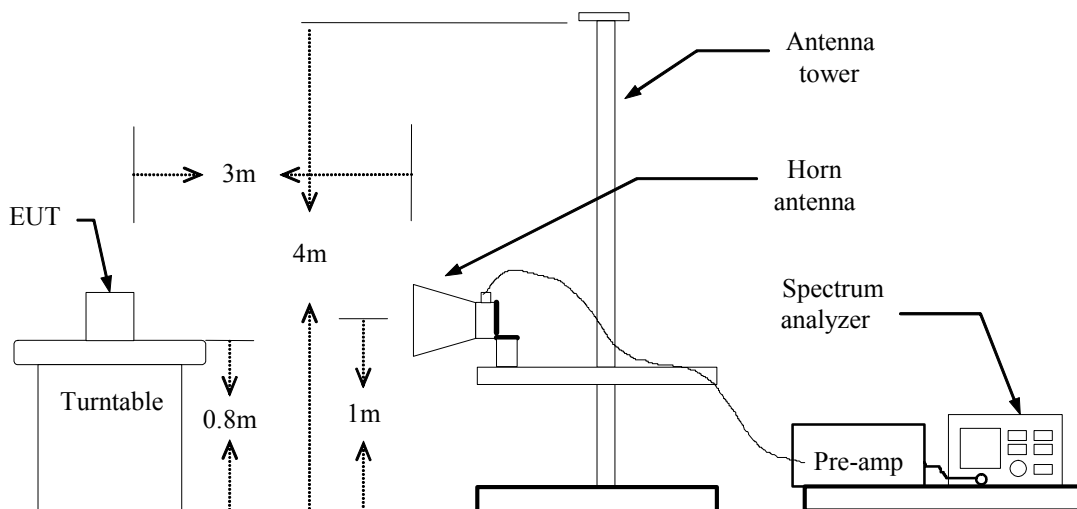


7.4 BAND EDGES MEASUREMENT

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands 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 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. 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 Section 15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

TEST RESULTS

Refer to attach spectrum analyzer data chart.



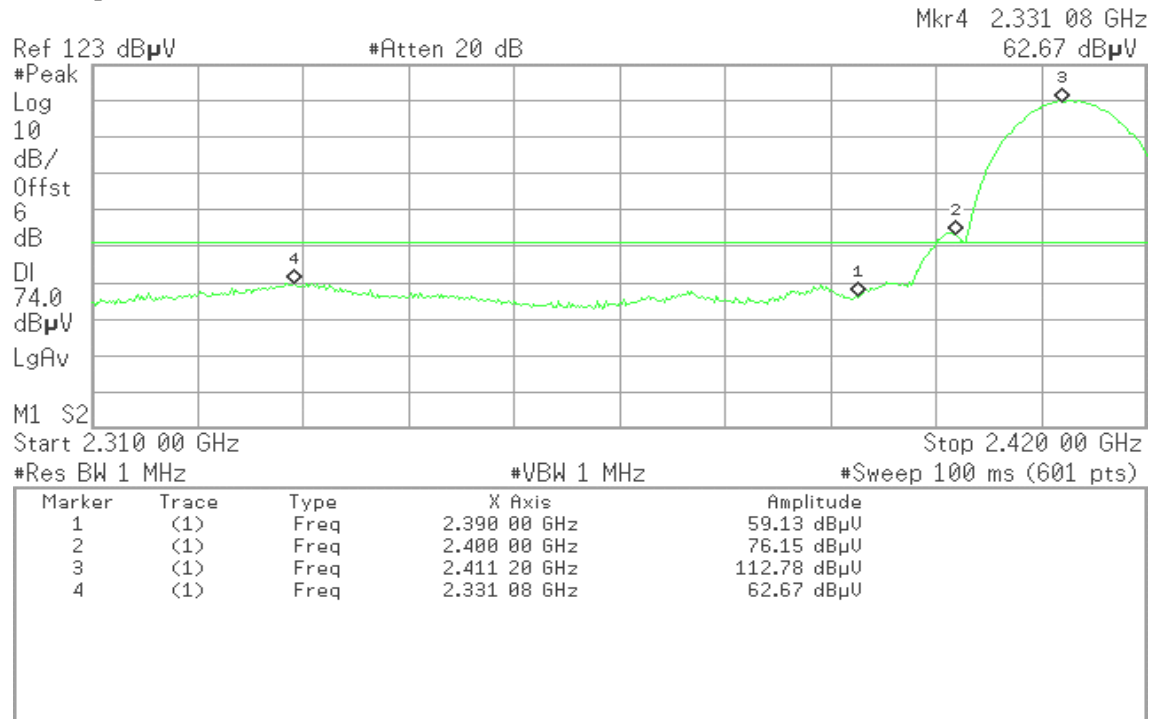
Test Plot

Band Edges (IEEE 802.11b mode / CH Low)

Detector mode: Peak**Polarity: Vertical**

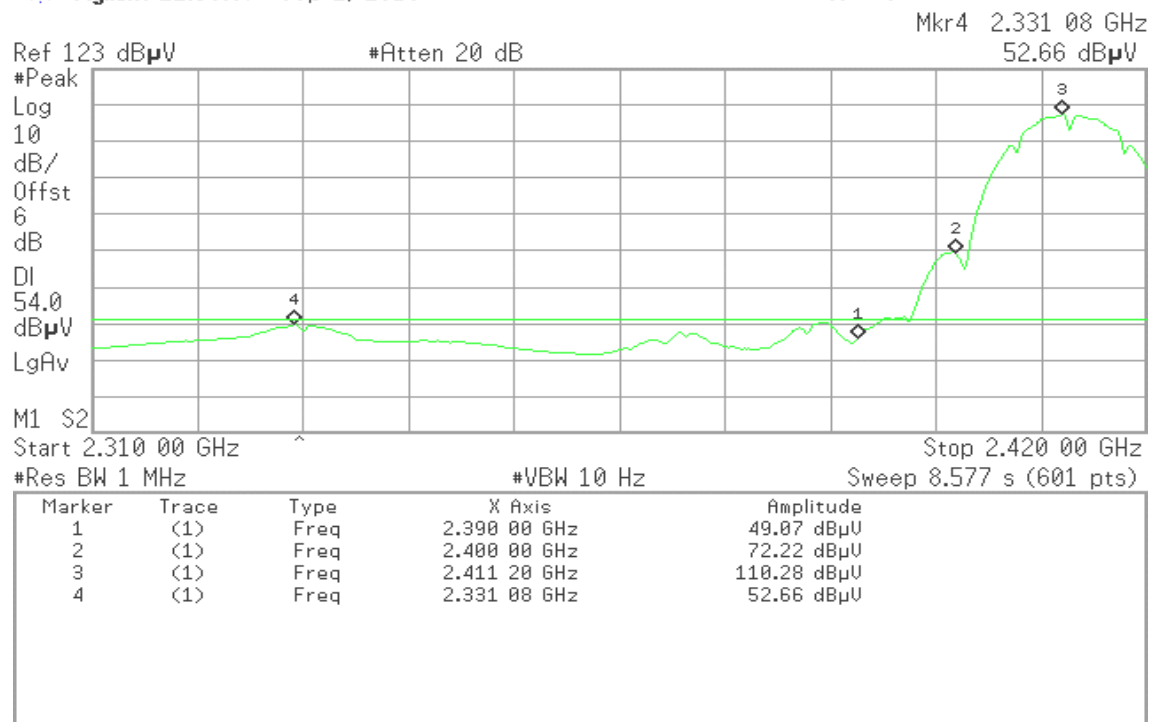
* Agilent 22:38:41 Sep 2, 2010

R T

**Detector mode: Average****Polarity: Vertical**

* Agilent 22:38:07 Sep 2, 2010

R T



**Detector mode: Peak****Polarity: Horizontal**

* Agilent 22:34:34 Sep 2, 2010

R T

Mkr3 2.411 93 GHz
98.88 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	54.19 dB μ V
2	(1)	Freq	2.400 00 GHz	63.18 dB μ V
3	(1)	Freq	2.411 93 GHz	98.88 dB μ V

Detector mode: Average**Polarity: Horizontal**

* Agilent 22:33:58 Sep 2, 2010

R T

Mkr3 2.411 20 GHz
96.18 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

Sweep 8.577 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	42.55 dB μ V
2	(1)	Freq	2.400 00 GHz	57.73 dB μ V
3	(1)	Freq	2.411 20 GHz	96.18 dB μ V

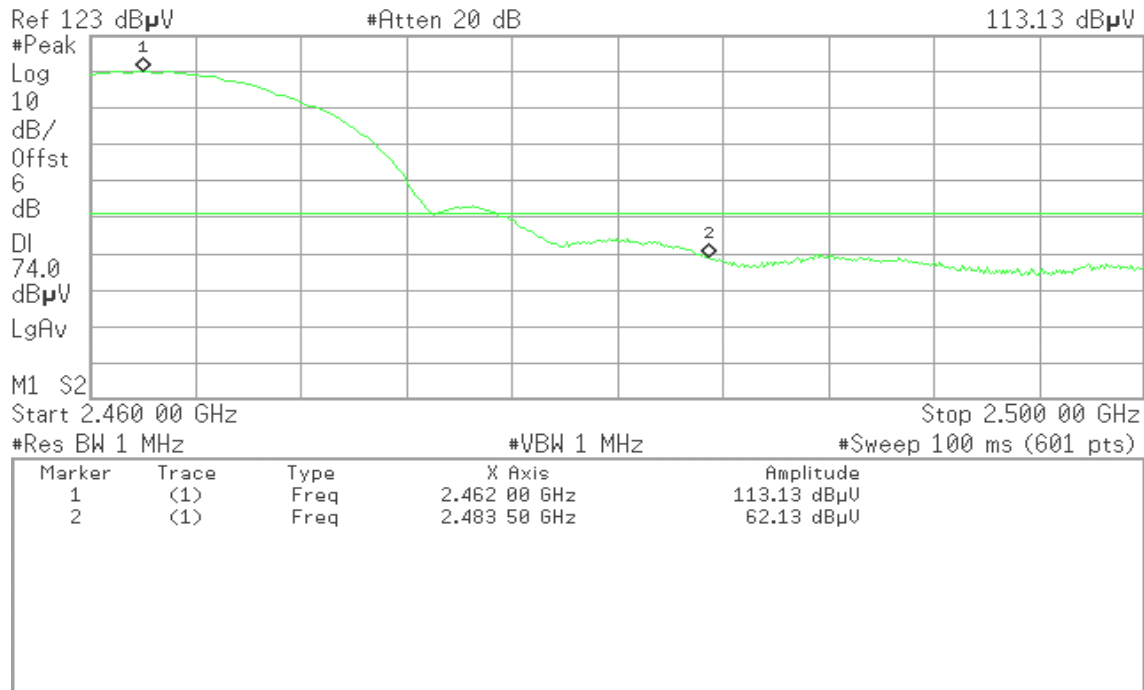


Band Edges (IEEE 802.11b mode / CH High)

Detector mode: Peak**Polarity: Vertical**

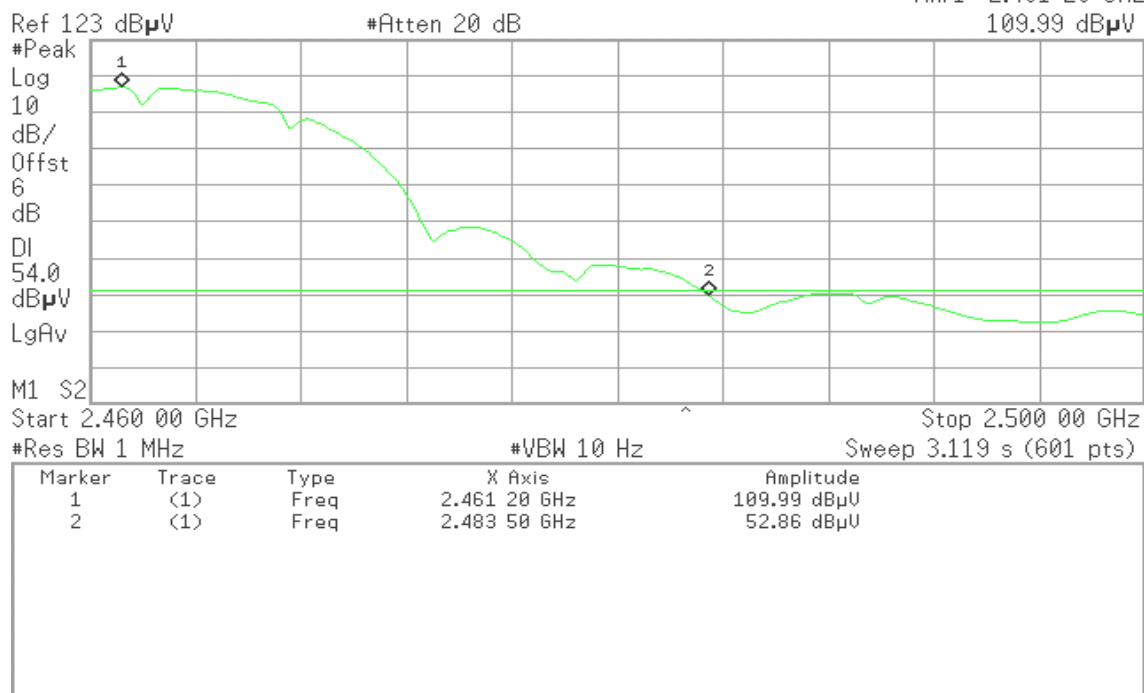
* Agilent 23:00:56 Sep 2, 2010

R T

Mkr1 2.462 00 GHz
113.13 dB μ V**Detector mode: Average****Polarity: Vertical**

* Agilent 23:02:15 Sep 2, 2010

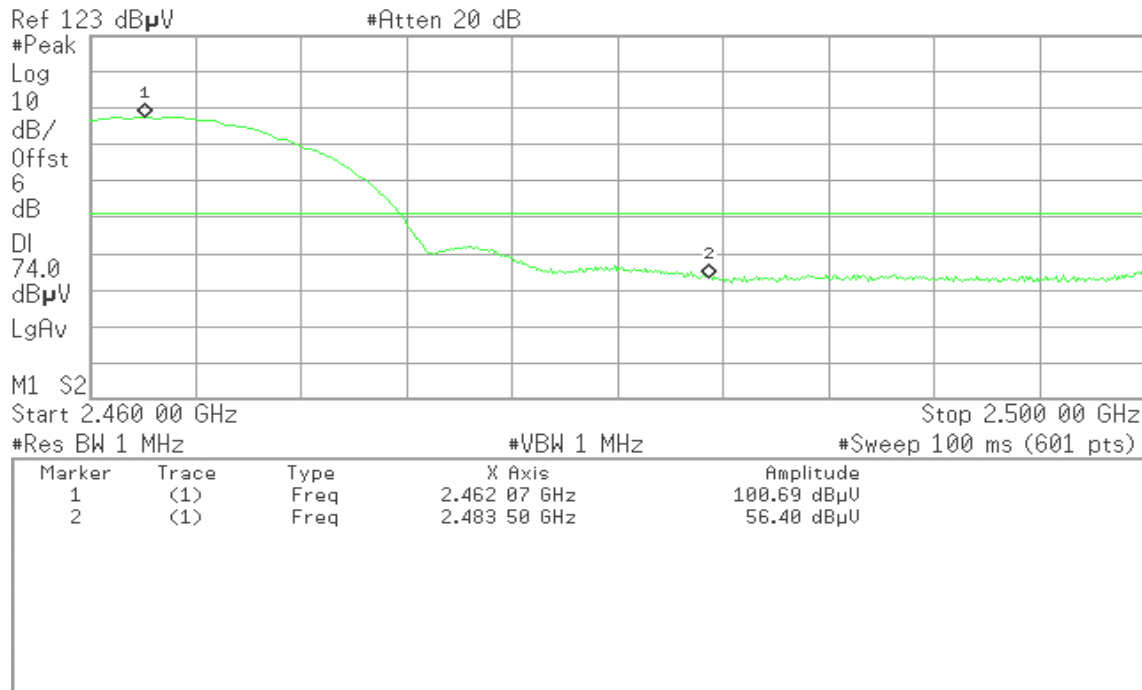
R L

Mkr1 2.461 20 GHz
109.99 dB μ V

**Detector mode: Peak****Polarity: Horizontal**

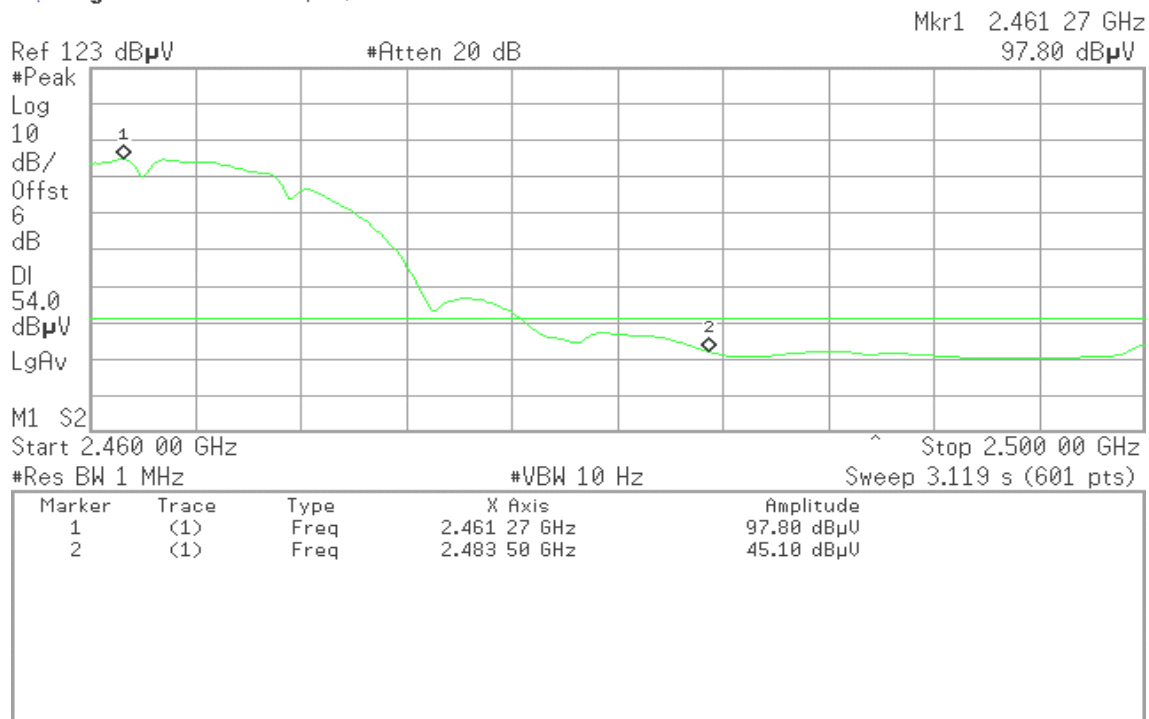
* Agilent 22:45:22 Sep 2, 2010

R T

**Detector mode: Average****Polarity: Horizontal**

* Agilent 22:57:44 Sep 2, 2010

R T



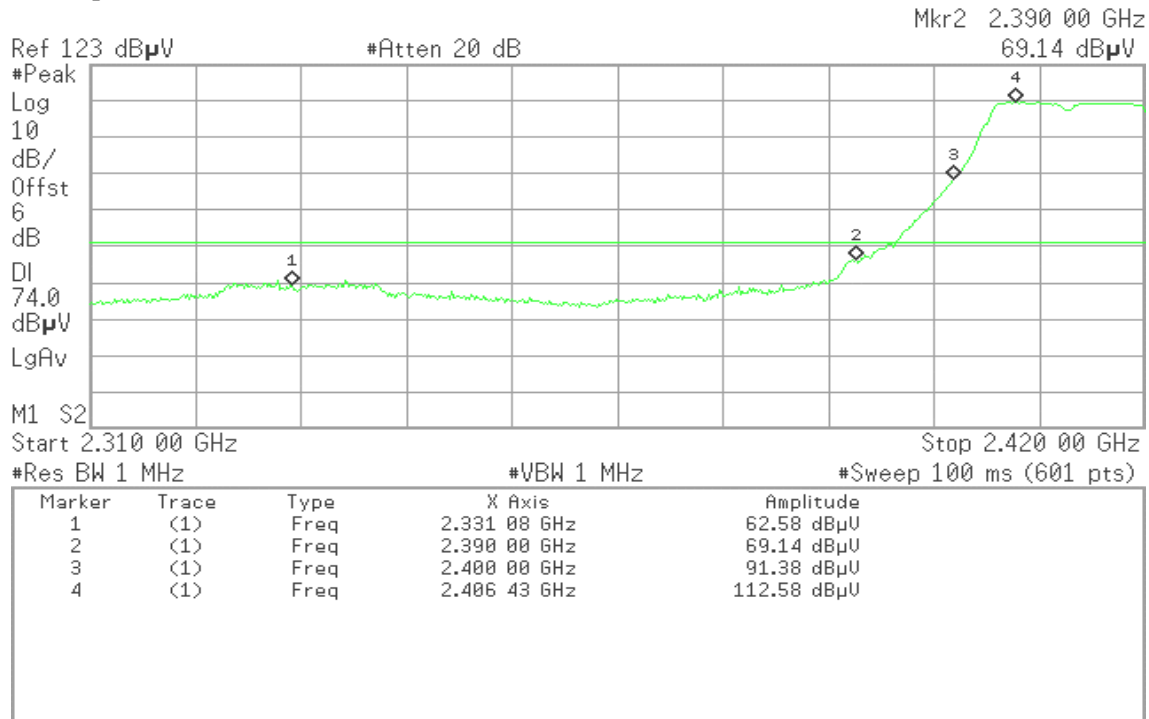


Band Edges (IEEE 802.11g mode / CH Low)

Detector mode: Peak**Polarity: Vertical**

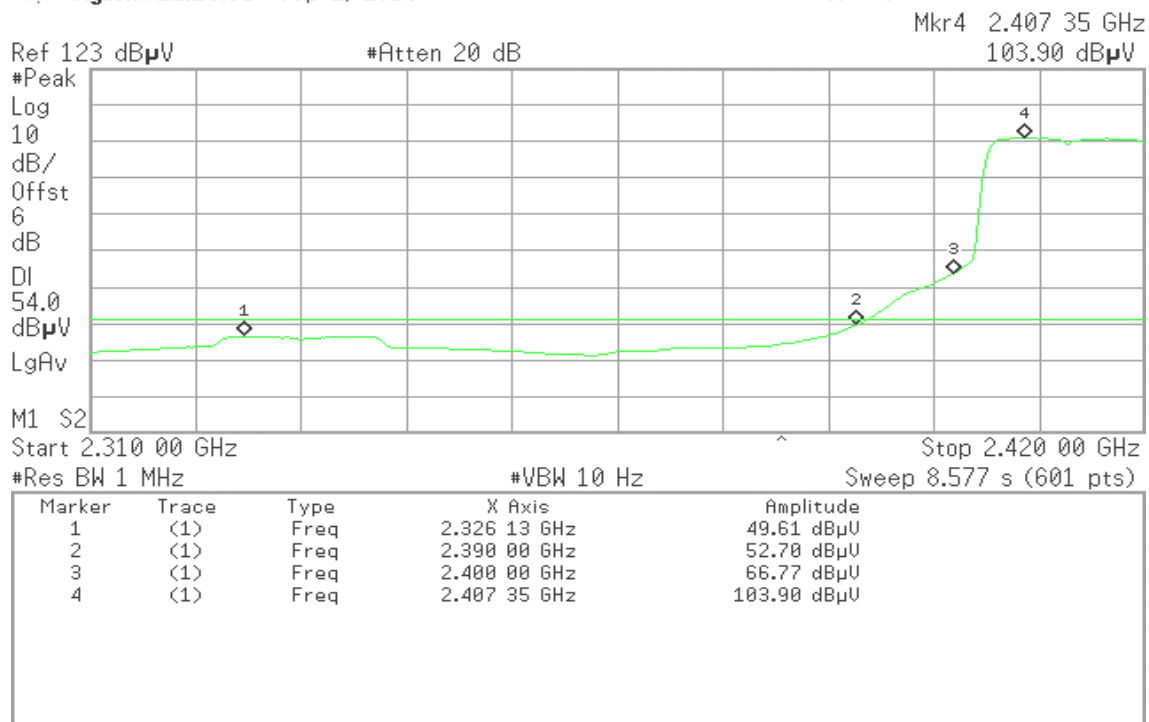
* Agilent 22:25:25 Sep 2, 2010

R T

**Detector mode: Average****Polarity: Vertical**

* Agilent 22:26:31 Sep 2, 2010

R T



**Detector mode: Peak****Polarity: Horizontal**

* Agilent 22:28:44 Sep 2, 2010

R T

Mkr3 2.405 52 GHz
98.73 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	56.33 dB μ V
2	(1)	Freq	2.400 00 GHz	77.80 dB μ V
3	(1)	Freq	2.405 52 GHz	98.73 dB μ V

Detector mode: Average**Polarity: Horizontal**

* Agilent 22:30:10 Sep 2, 2010

R T

Mkr3 2.417 25 GHz
90.19 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

Sweep 8.577 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	43.55 dB μ V
2	(1)	Freq	2.400 00 GHz	53.28 dB μ V
3	(1)	Freq	2.417 25 GHz	90.19 dB μ V

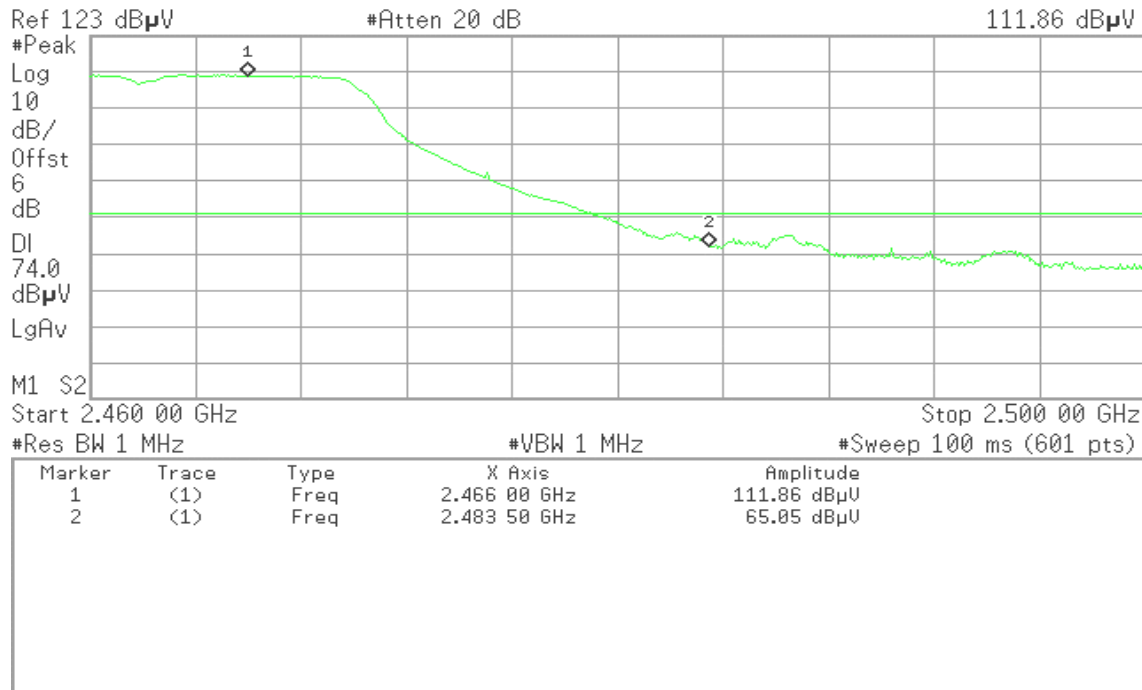


Band Edges (IEEE 802.11g mode / CH High)

Detector mode: Peak**Polarity: Vertical**

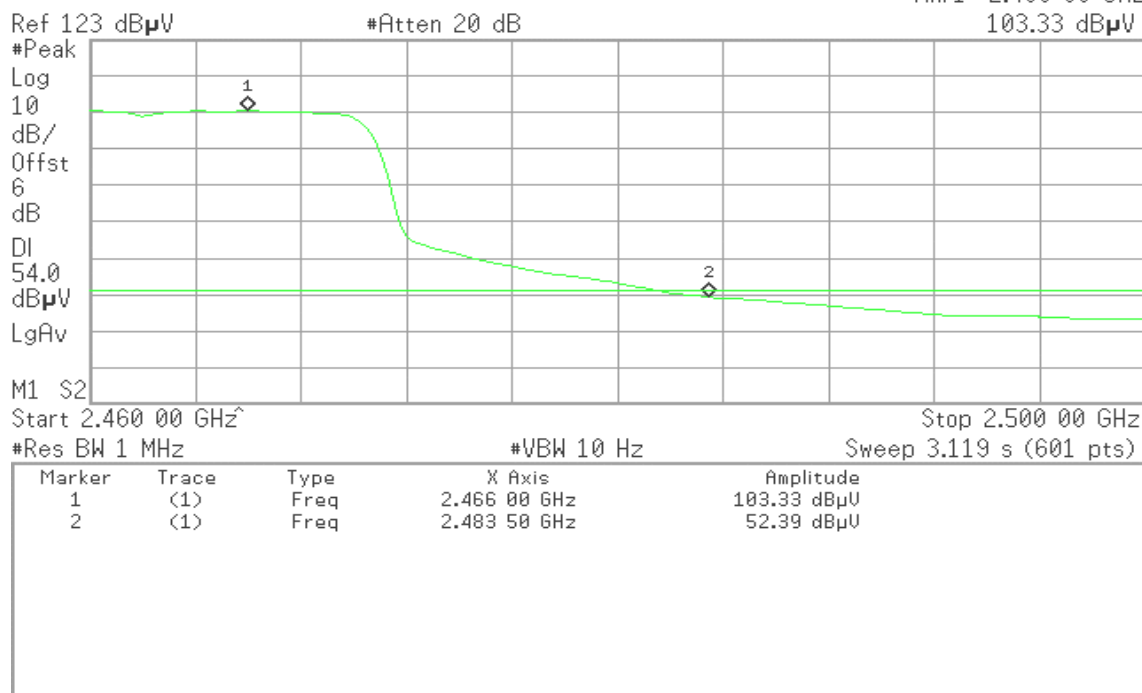
* Agilent 22:20:40 Sep 2, 2010

R T

Mkr1 2.466 00 GHz
111.86 dBμV**Detector mode: Average****Polarity: Vertical**

* Agilent 22:21:26 Sep 2, 2010

R T

Mkr1 2.466 00 GHz
103.33 dBμV

**Detector mode: Peak****Polarity: Horizontal**

* Agilent 22:17:46 Sep 2, 2010

R T

Mkr1 2.465 07 GHz

Ref 123 dB μ V

#Atten 20 dB

100.09 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.460 00 GHz

Stop 2.500 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.465 07 GHz	100.09 dB μ V
2	(1)	Freq	2.483 50 GHz	57.67 dB μ V

Detector mode: Average**Polarity: Horizontal**

* Agilent 22:18:34 Sep 2, 2010

R T

Mkr1 2.466 00 GHz

Ref 123 dB μ V

#Atten 20 dB

91.25 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.460 00 GHz

Stop 2.500 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

Sweep 3.119 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.466 00 GHz	91.25 dB μ V
2	(1)	Freq	2.483 50 GHz	44.77 dB μ V

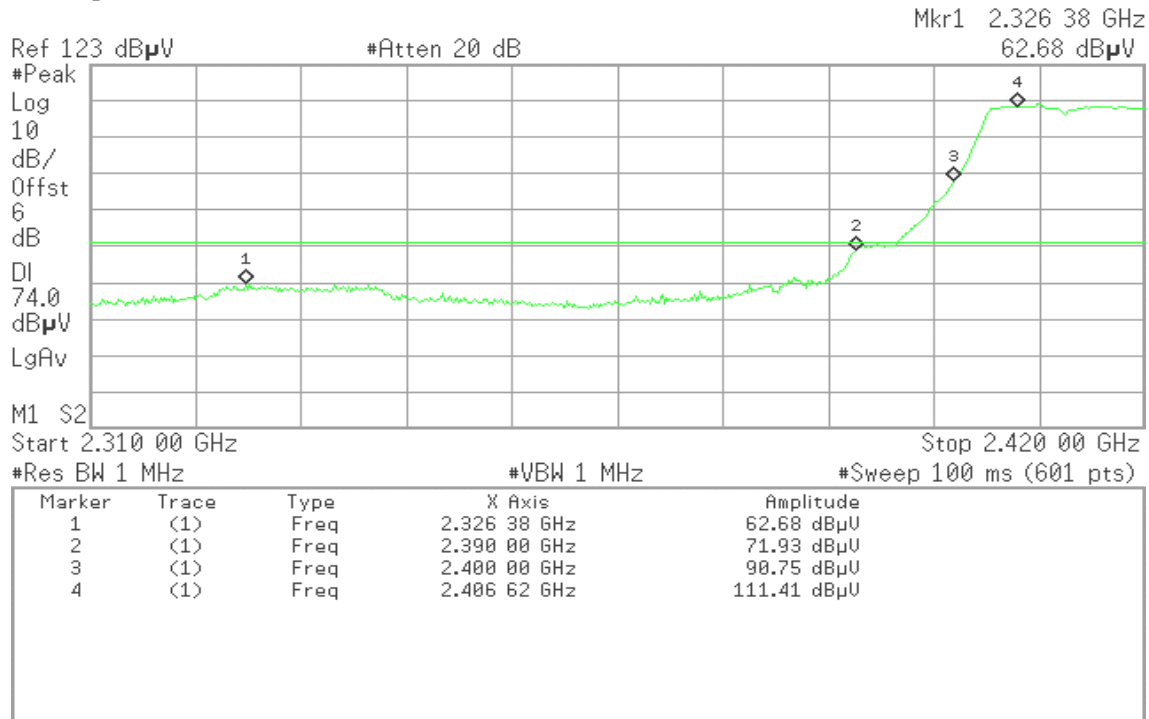


Band Edges (draft 802.11n 20 MHz Channel mode / CH Low)

Detector mode: Peak**Polarity: Vertical**

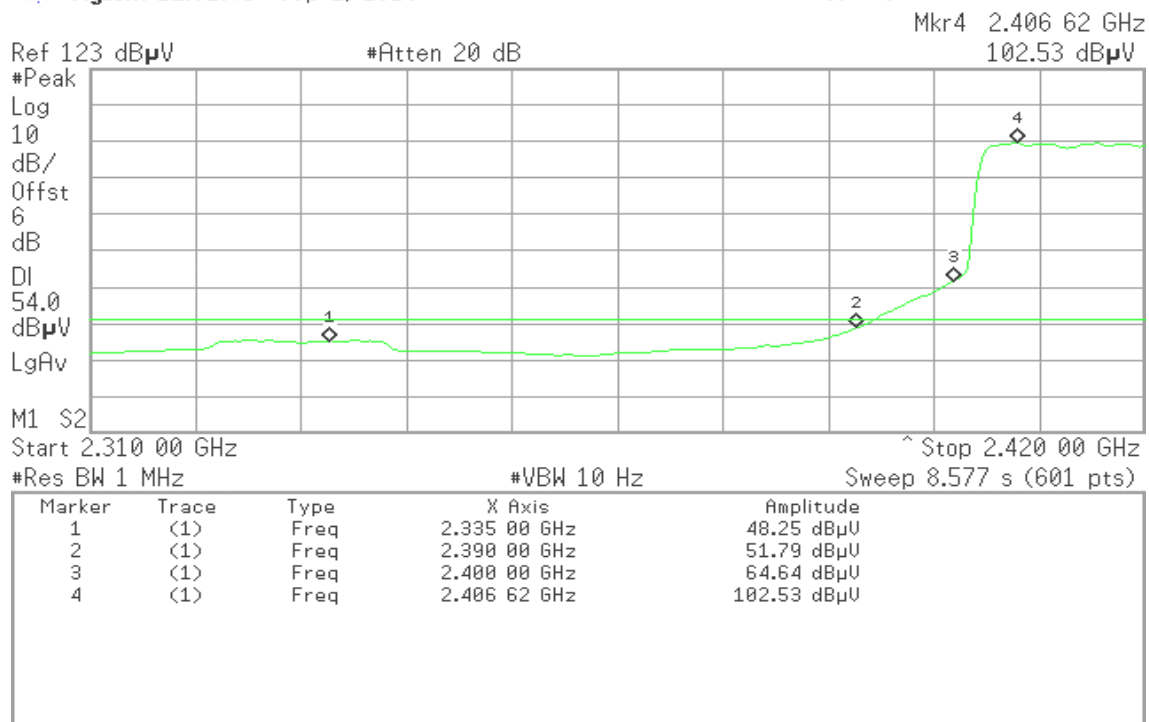
* Agilent 22:03:54 Sep 2, 2010

R T

**Detector mode: Average****Polarity: Vertical**

* Agilent 22:02:45 Sep 2, 2010

R T



**Detector mode: Peak****Polarity: Horizontal**

* Agilent 21:57:10 Sep 2, 2010

R T

Mkr3 2.408 82 GHz
99.56 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	60.92 dB μ V
2	(1)	Freq	2.400 00 GHz	77.74 dB μ V
3	(1)	Freq	2.408 82 GHz	99.56 dB μ V

Detector mode: Average**Polarity: Horizontal**

* Agilent 21:58:13 Sep 2, 2010

R T

Mkr3 2.408 82 GHz
89.52 dB μ VRef 123 dB μ V

#Atten 20 dB

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

Sweep 8.577 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	43.72 dB μ V
2	(1)	Freq	2.400 00 GHz	52.18 dB μ V
3	(1)	Freq	2.408 82 GHz	89.52 dB μ V

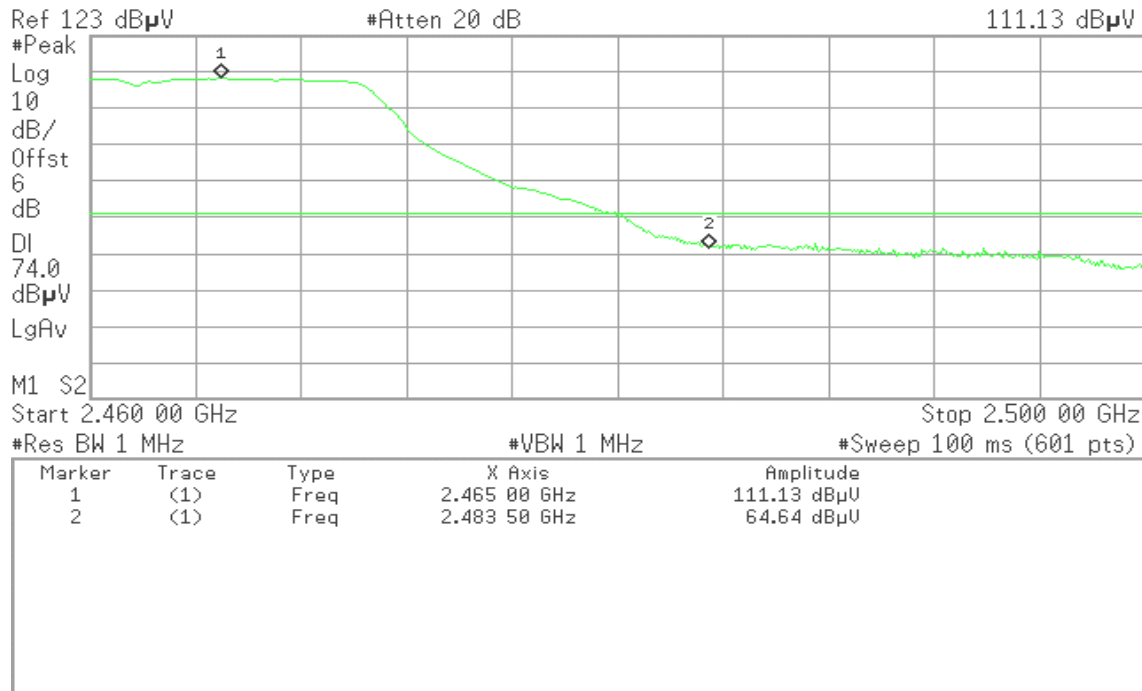


Band Edges (draft 802.11n 20 MHz Channel mode / CH High)

Detector mode: Peak**Polarity: Vertical**

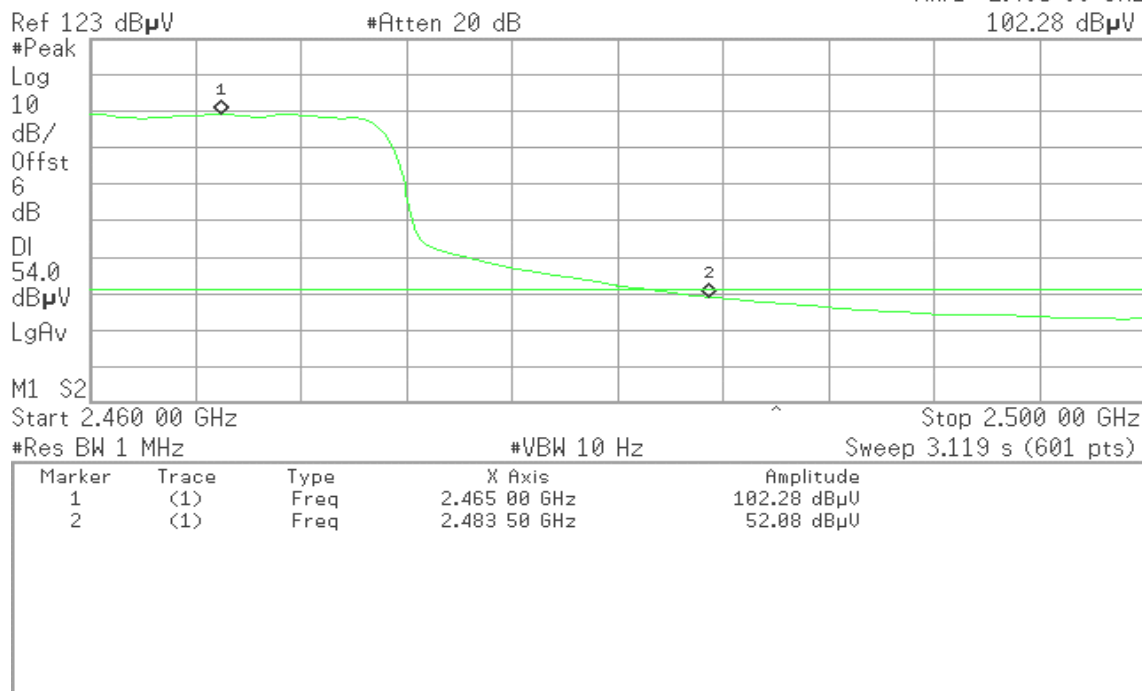
* Agilent 22:07:55 Sep 2, 2010

R T

Mkr1 2.465 00 GHz
111.13 dB μ V**Detector mode: Average****Polarity: Vertical**

* Agilent 22:08:47 Sep 2, 2010

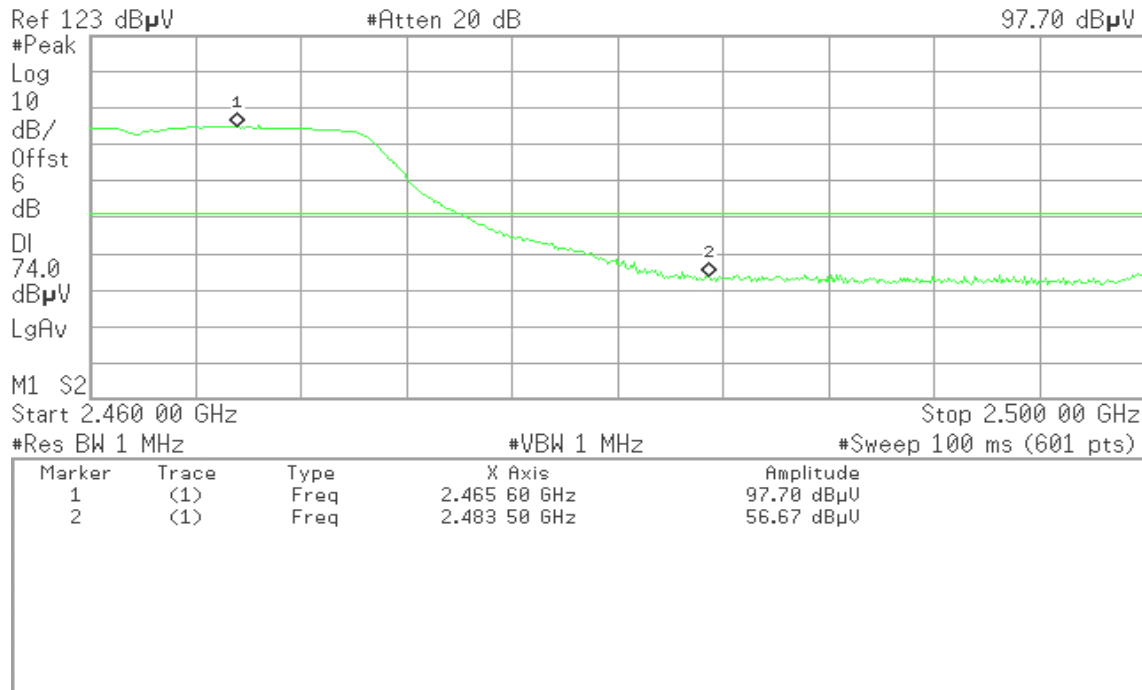
R T

Mkr1 2.465 00 GHz
102.28 dB μ V

**Detector mode: Peak****Polarity: Horizontal**

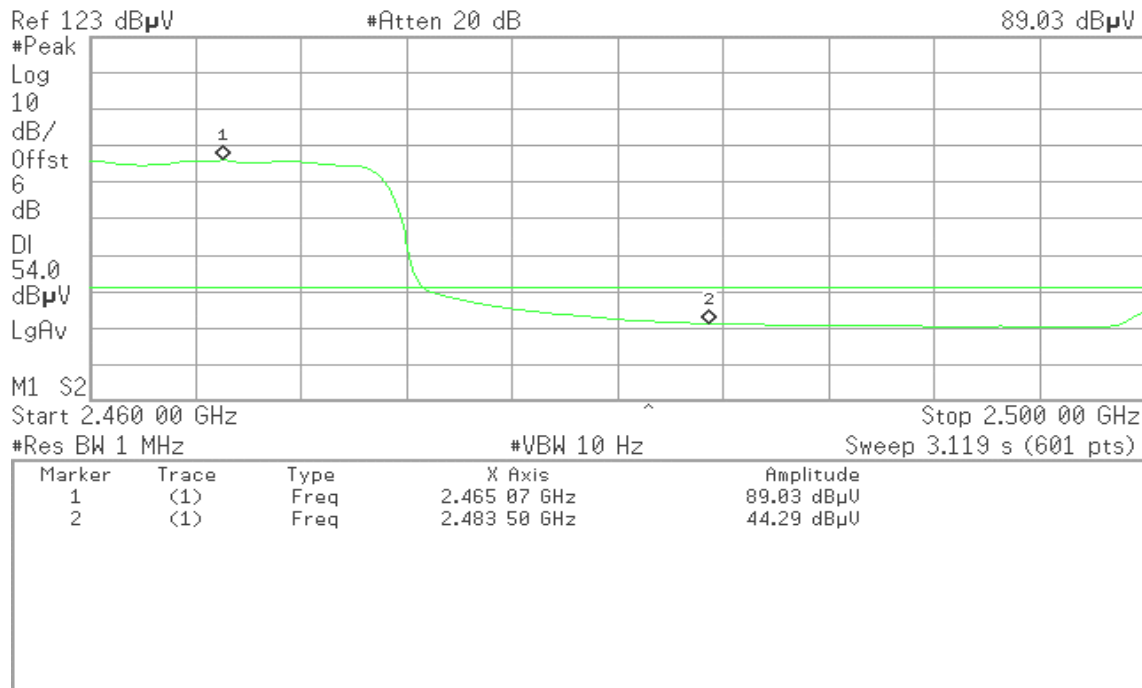
* Agilent 22:11:32 Sep 2, 2010

R T

Mkr1 2.465 60 GHz
97.70 dB μ V**Detector mode: Average****Polarity: Horizontal**

* Agilent 22:13:00 Sep 2, 2010

R T

Mkr1 2.465 07 GHz
89.03 dB μ V

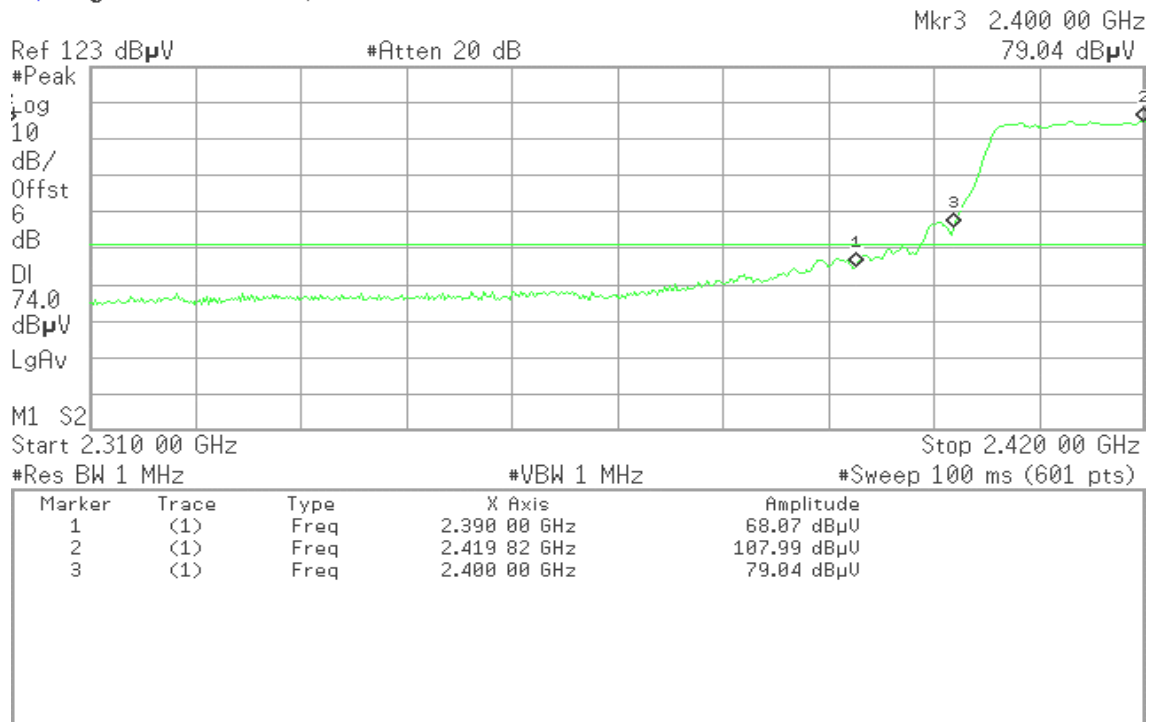


Band Edges (draft 802.11n 40 MHz Channel mode / CH Low)

Detector mode: Peak**Polarity: Vertical**

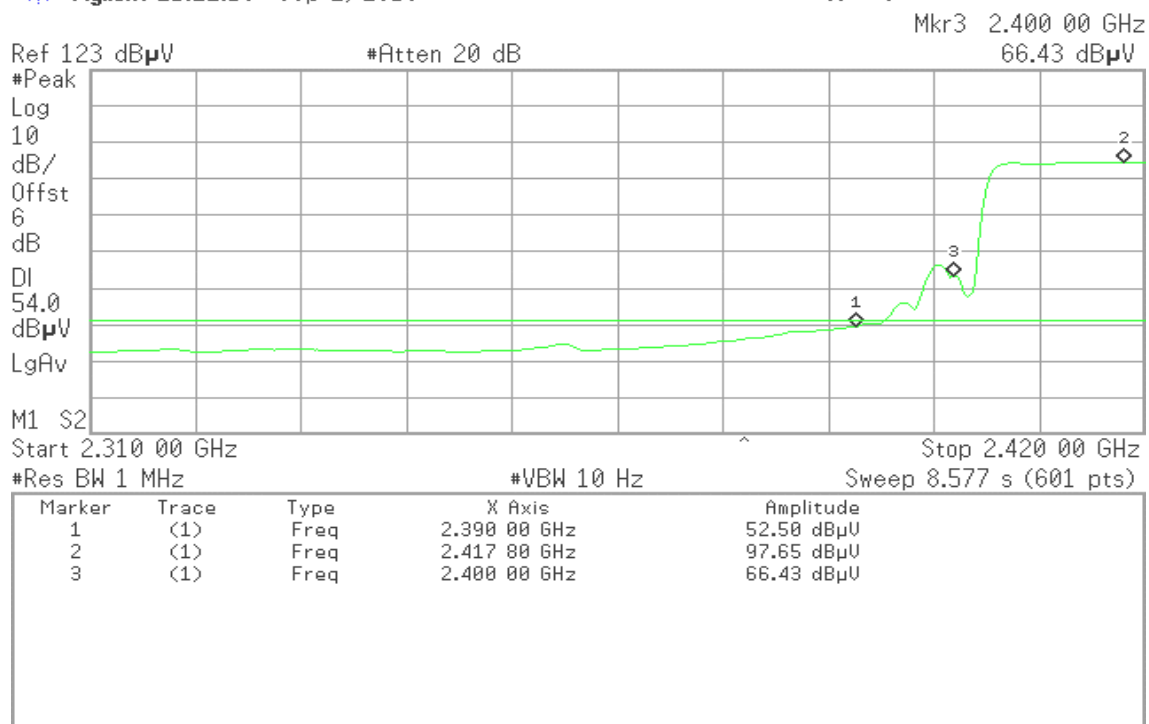
* Agilent 21:19:58 Sep 2, 2010

R T

**Detector mode: Average****Polarity: Vertical**

* Agilent 21:22:16 Sep 2, 2010

R T



**Detector mode: Peak****Polarity: Horizontal**

* Agilent 21:27:06 Sep 2, 2010

R T

Mkr2 2.419 82 GHz

Ref 123 dB μ V

#Atten 20 dB

94.53 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	55.81 dB μ V
2	(1)	Freq	2.419 82 GHz	94.53 dB μ V
3	(1)	Freq	2.400 00 GHz	65.52 dB μ V

Detector mode: Average**Polarity: Horizontal**

* Agilent 21:28:33 Sep 2, 2010

R T

Mkr2 2.420 00 GHz

Ref 123 dB μ V

#Atten 20 dB

84.97 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.310 00 GHz

Stop 2.420 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

Sweep 8.577 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.390 00 GHz	43.52 dB μ V
2	(1)	Freq	2.420 00 GHz	84.97 dB μ V
3	(1)	Freq	2.400 00 GHz	53.06 dB μ V



Band Edges (draft 802.11n 40 MHz Channel mode / CH High)

Detector mode: Peak**Polarity: Vertical**

* Agilent 20:39:54 Sep 2, 2010

R T

Mkr2 2.483 50 GHz

Ref 123 dB μ V

#Atten 20 dB

64.81 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

74.0

dB μ V

LgAv

M1 S2

Start 2.460 00 GHz

Stop 2.500 00 GHz

#Res BW 1 MHz

#VBW 1 MHz

#Sweep 100 ms (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.462 20 GHz	107.17 dB μ V
2	(1)	Freq	2.483 50 GHz	64.81 dB μ V

Detector mode: Average**Polarity: Vertical**

* Agilent 20:35:28 Sep 2, 2010

R T

Mkr1 2.461 20 GHz

Ref 123 dB μ V

#Atten 20 dB

97.78 dB μ V

#Peak

Log

10

dB/

Offst

6

dB

DI

54.0

dB μ V

LgAv

M1 S2

Start 2.460 00 GHz

Stop 2.500 00 GHz

#Res BW 1 MHz

#VBW 10 Hz

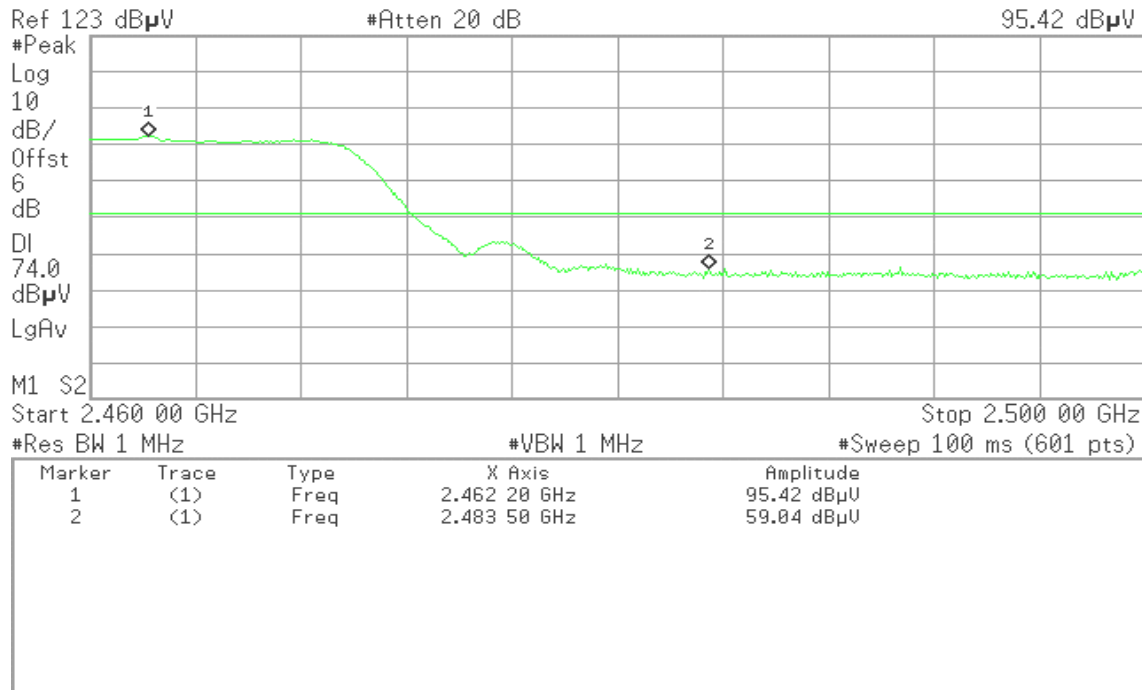
Sweep 3.119 s (601 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.461 20 GHz	97.78 dB μ V
2	(2)	Freq	2.483 50 GHz	53.09 dB μ V

**Detector mode: Peak****Polarity: Horizontal**

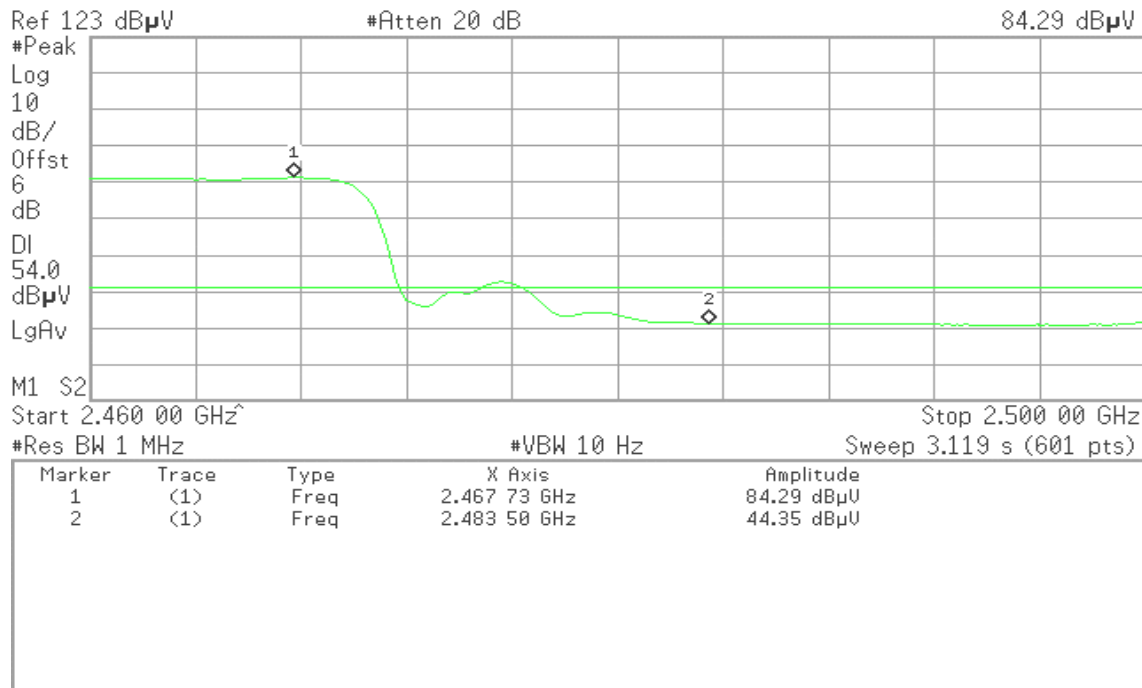
* Agilent 21:31:58 Sep 2, 2010

R T

Mkr1 2.462 20 GHz
95.42 dB μ V**Detector mode: Average****Polarity: Horizontal**

* Agilent 21:00:23 Sep 2, 2010

R T

Mkr1 2.467 73 GHz
84.29 dB μ V

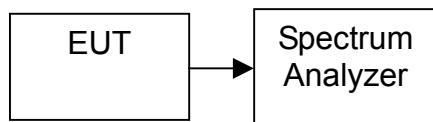


7.5 PEAK POWER SPECTRAL DENSITY

LIMIT

1. According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
2. According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

TEST CONFIGURATION



TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, Span = 300kHz, Sweep=100s
3. Record the max. reading.
4. Repeat the above procedure until the measurements for all frequencies are completed.

TEST RESULTS

No non-compliance noted

**TEST DATA****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-17.48	8.00	PASS
Mid	2437	-17.88		PASS
High	2462	-18.36		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-16.33	8.00	PASS
Mid	2437	-16.69		PASS
High	2462	-7.22		PASS

Test mode: draft 802.11n 20 MHz Channel mode

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-16.12	8.00	PASS
Mid	2437	-17.58		PASS
High	2462	-16.85		PASS

Test mode: draft 802.11n 40 MHz Channel mode

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2422	-17.93	8.00	PASS
Mid	2437	-17.58		PASS
High	2452	-17.50		PASS



Test Plot

IEEE 802.11b mode

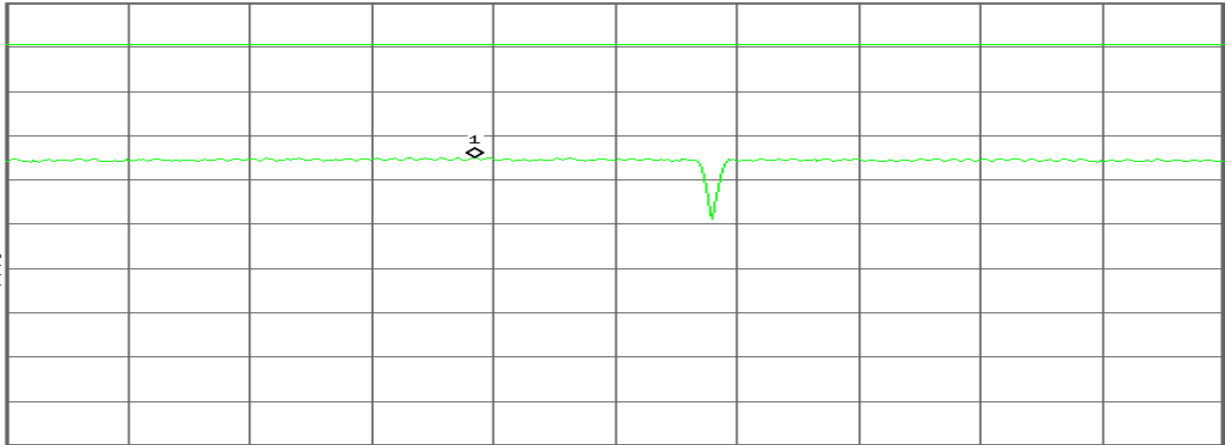
PPSD (CH Low)

Agilent 15:41:51 Sep 3, 2010

R T
Mkr1 2.412 681 8 GHz
-17.48 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.412 716 4 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

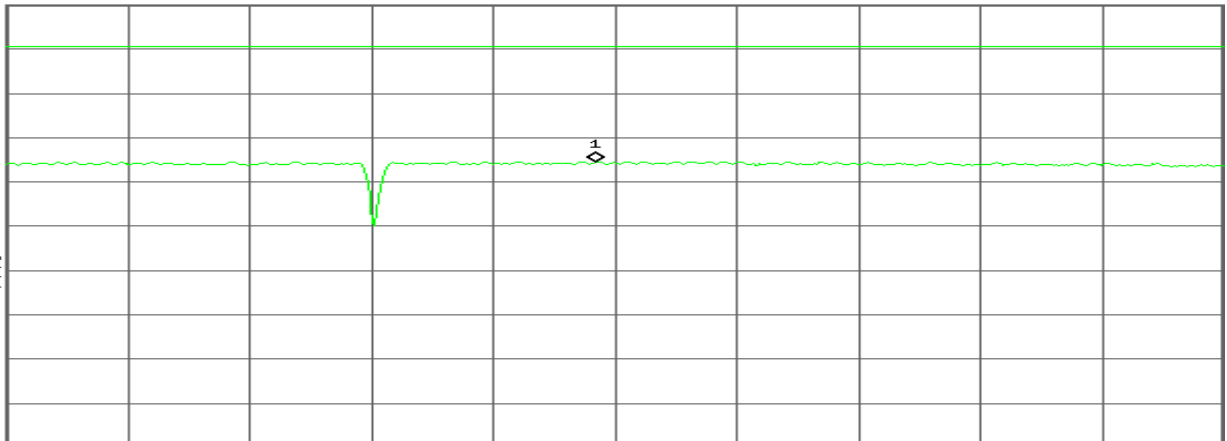
PPSD (CH Mid)

Agilent 15:36:31 Sep 3, 2010

R T
Mkr1 2.436 295 0 GHz
-17.88 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.436 300 0 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

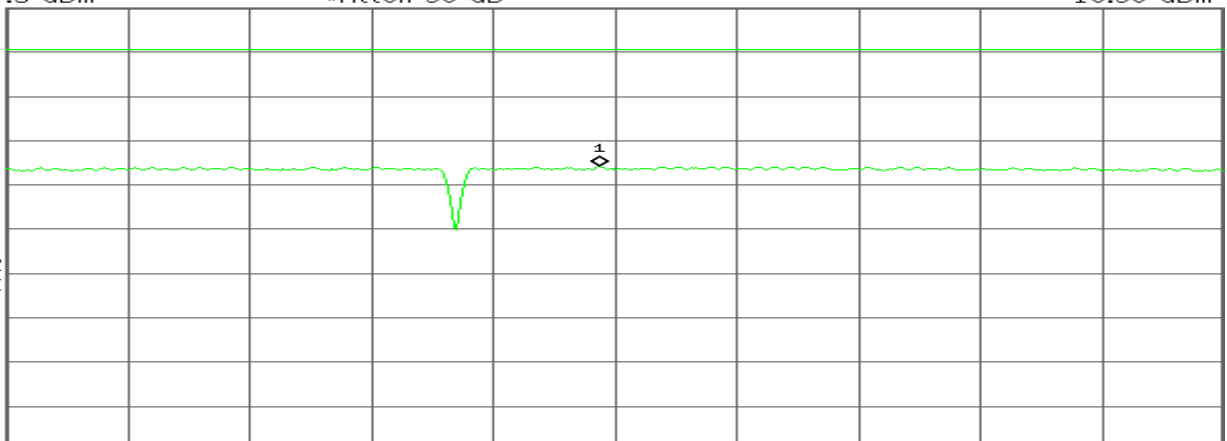
PPSD (CH High)

Agilent 15:33:14 Sep 3, 2010

R T
Mkr1 2.461 275 7 GHz
-18.36 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.461 279 7 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)



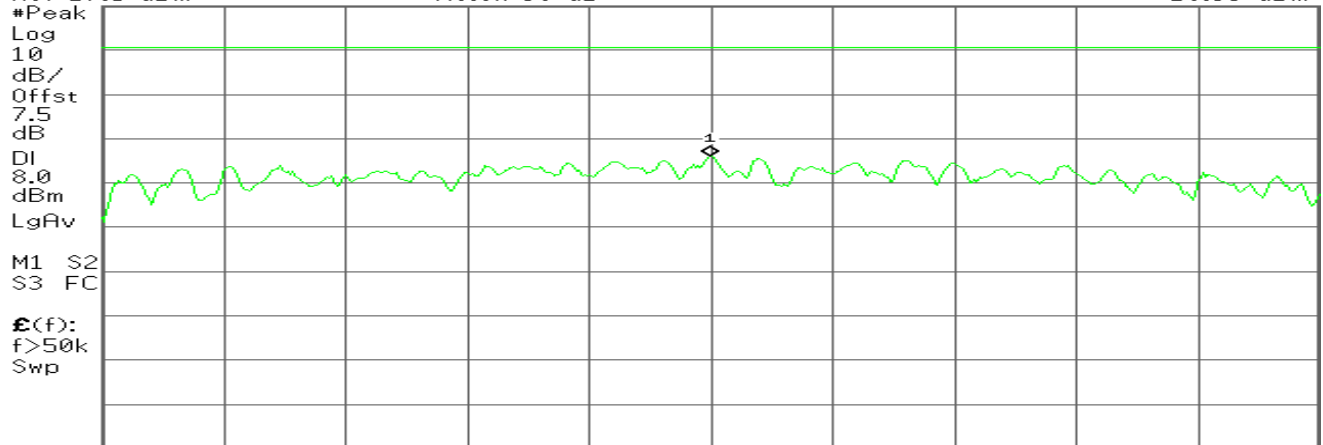
IEEE 802.11g mode

PPSD (CH Low)

Agilent 15:45:03 Sep 3, 2010

R T
Mkr1 2.411 055 6 GHz
-16.33 dBm

Ref 17.5 dBm #Atten 30 dB

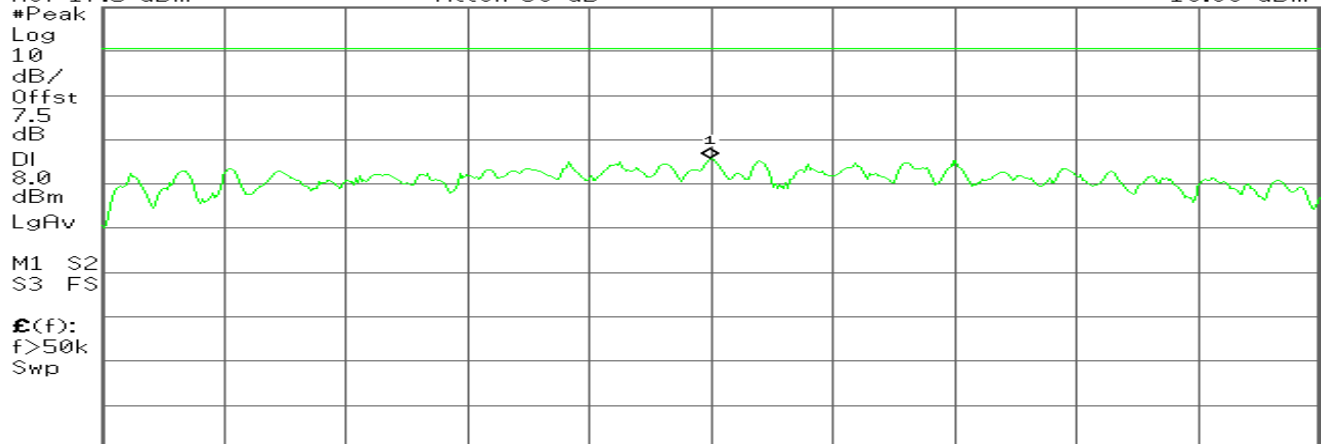
Center 2.411 055 6 GHz Span 300 kHz
#Res BW 3 kHz #VBW 10 kHz #Sweep 100 s (601 pts)

PPSD (CH Mid)

Agilent 15:48:27 Sep 3, 2010

R T
Mkr1 2.436 055 3 GHz
-16.69 dBm

Ref 17.5 dBm #Atten 30 dB

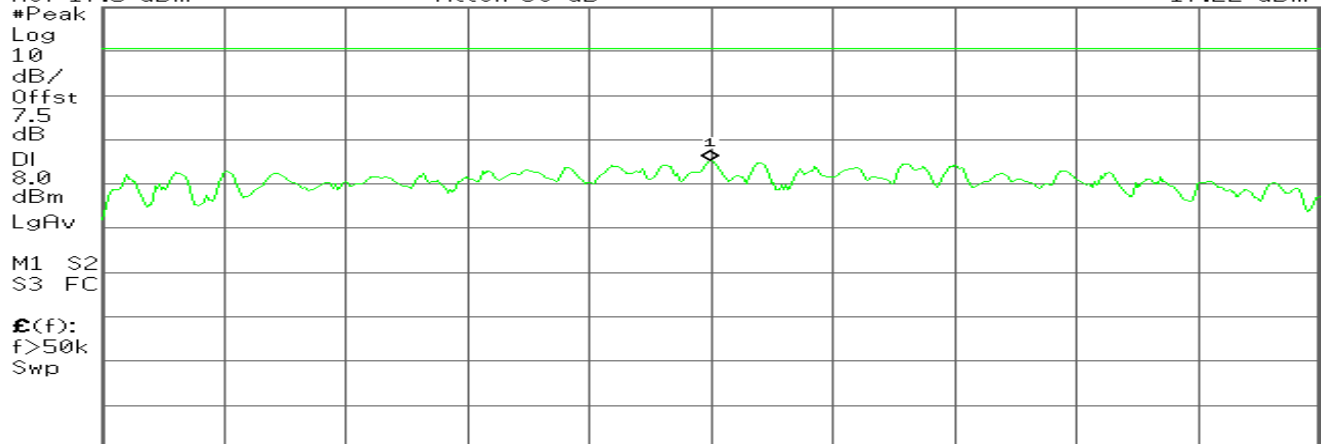
Center 2.436 055 3 GHz Span 300 kHz
#Res BW 3 kHz #VBW 10 kHz #Sweep 100 s (601 pts)

PPSD (CH High)

Agilent 15:51:26 Sep 3, 2010

R T
Mkr1 2.461 055 3 GHz
-17.22 dBm

Ref 17.5 dBm #Atten 30 dB

Center 2.461 055 3 GHz Span 300 kHz
#Res BW 3 kHz #VBW 10 kHz #Sweep 100 s (601 pts)



draft 802.11n 20 MHz Channel mode

PPSD (CH Low)

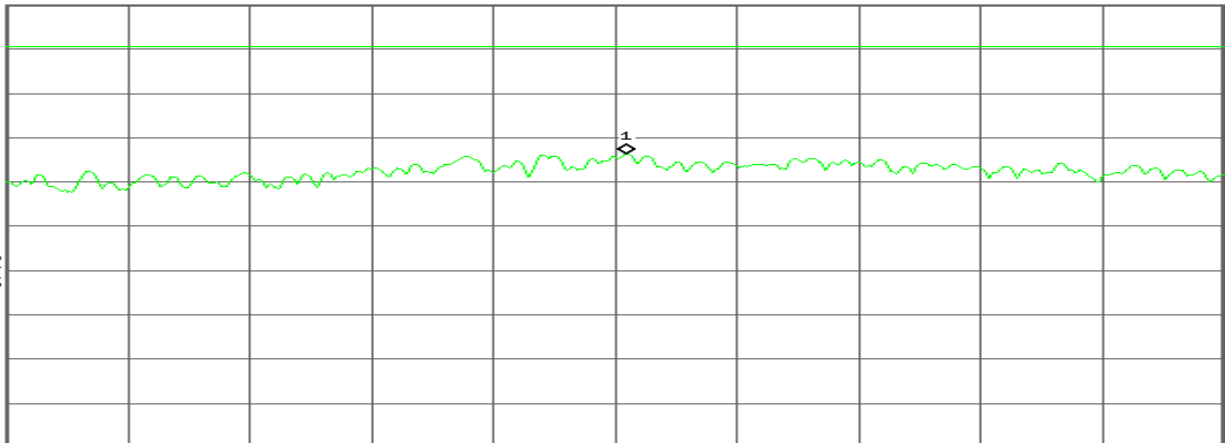
* Agilent 16:02:36 Sep 3, 2010

R T

Mkr1 2.405 407 3 GHz
-16.12 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FSE(f):
f>50k
Swp

Center 2.405 404 3 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

PPSD (CH Mid)

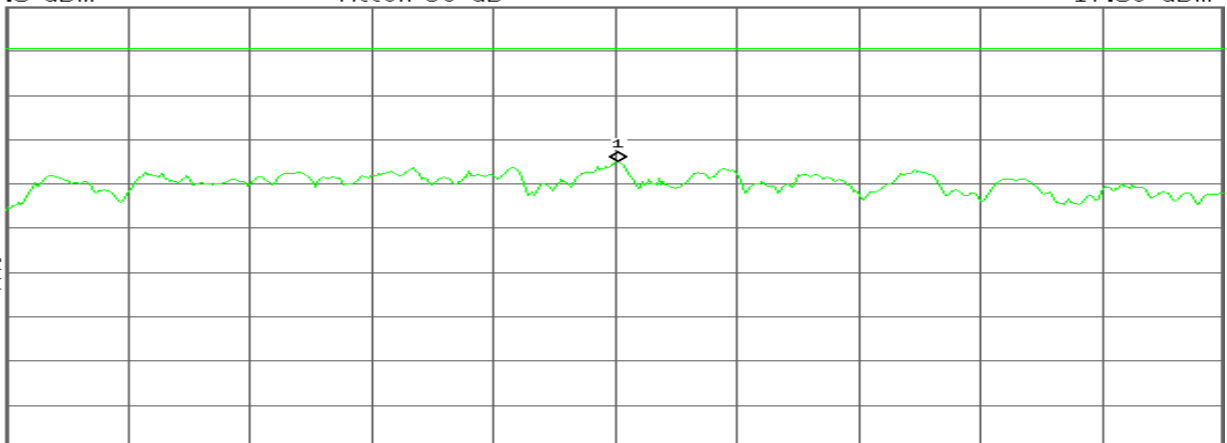
* Agilent 15:59:52 Sep 3, 2010

R T

Mkr1 2.435 762 9 GHz
-17.58 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.435 761 8 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

PPSD (CH High)

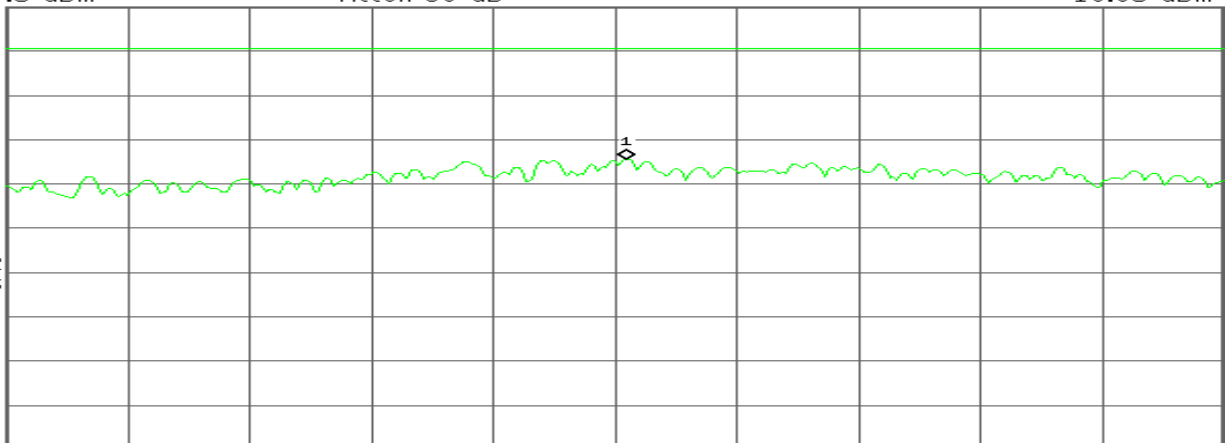
* Agilent 15:56:34 Sep 3, 2010

R T

Mkr1 2.455 407 3 GHz
-16.85 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FSE(f):
f>50k
Swp

Center 2.455 404 3 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)



draft 802.11n 40 MHz Channel mode

PPSD (CH Low)

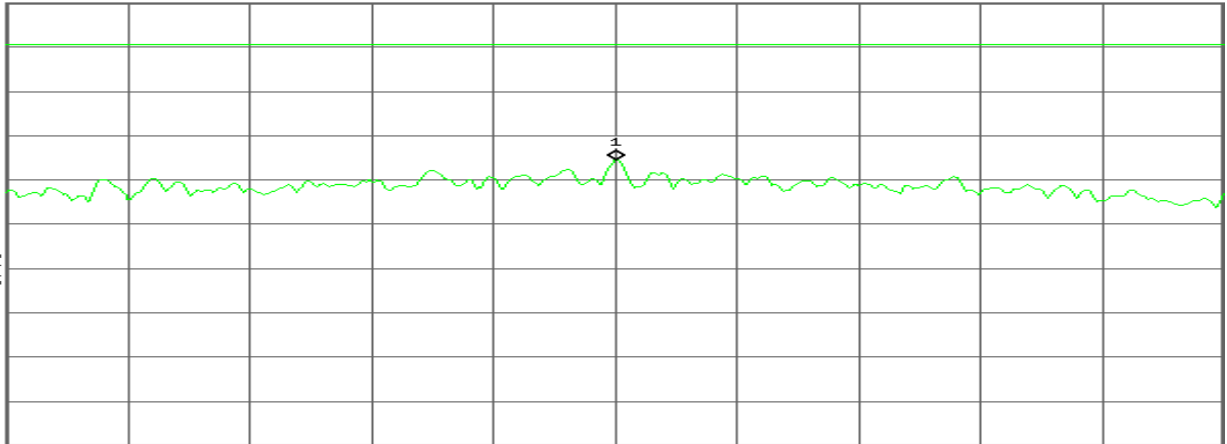
Agilent 16:05:49 Sep 3, 2010

R T

Mkr1 2.418 560 6 GHz
-17.93 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FSE(f):
f>50k
Swp

Center 2.418 560 1 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

PPSD (CH Mid)

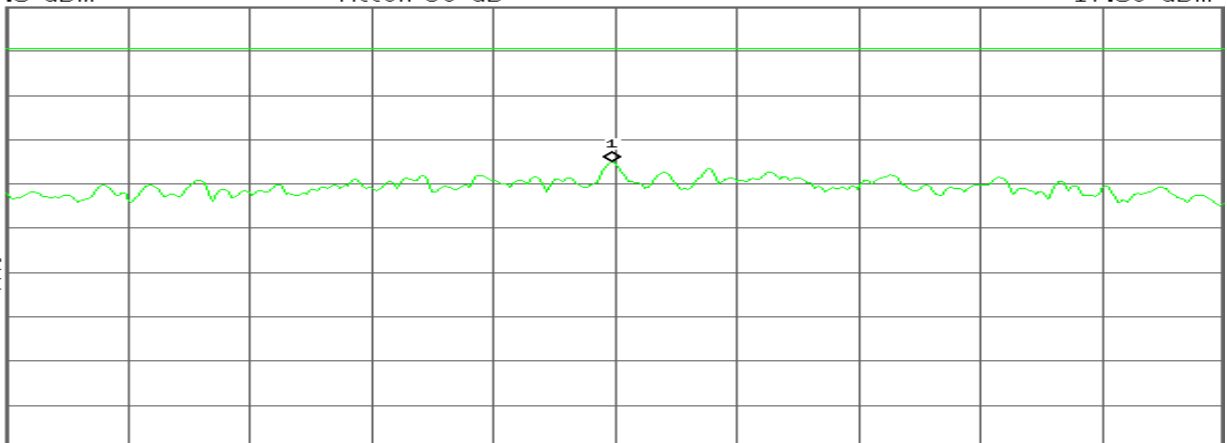
Agilent 16:09:03 Sep 3, 2010

R T

Mkr1 2.444 797 7 GHz
-17.58 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.444 798 7 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)

PPSD (CH High)

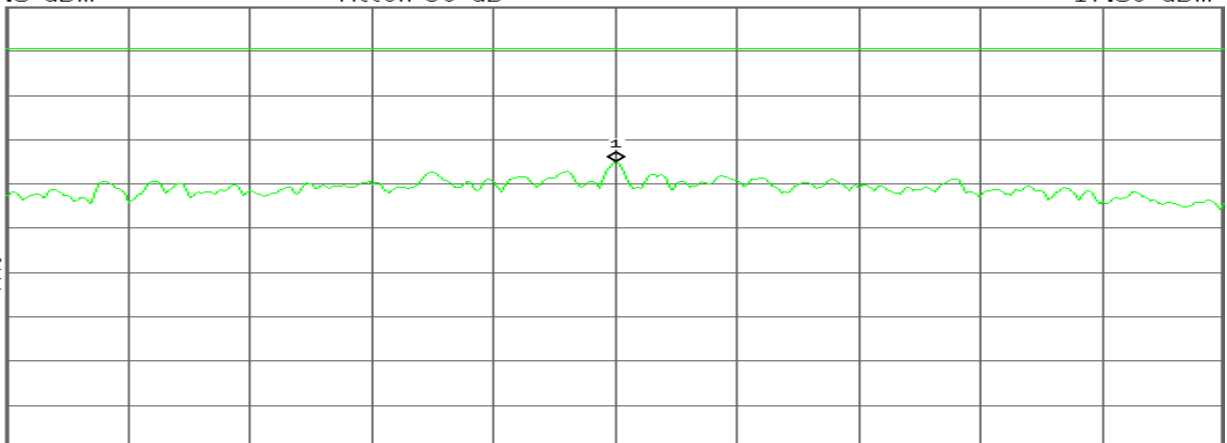
Agilent 16:12:02 Sep 3, 2010

R T

Mkr1 2.448 560 8 GHz
-17.50 dBm

Ref 17.5 dBm

#Atten 30 dB

#Peak
Log
10
dB/
Offst
7.5
dB
DI
8.0
dBm
LgAvM1 S2
S3 FCE(f):
f>50k
Swp

Center 2.448 560 3 GHz

Span 300 kHz

#Res BW 3 kHz

#VBW 10 kHz

#Sweep 100 s (601 pts)



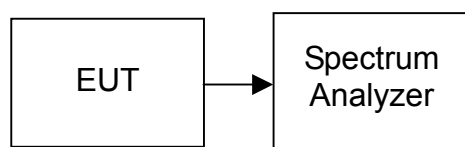
7.6 SPURIOUS EMISSIONS

7.6.1 CONDUCTED MEASUREMENT

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands 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 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. 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 Section 15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

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

Measurements are made over the 30MHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels.

TEST RESULTS

No non-compliance noted.



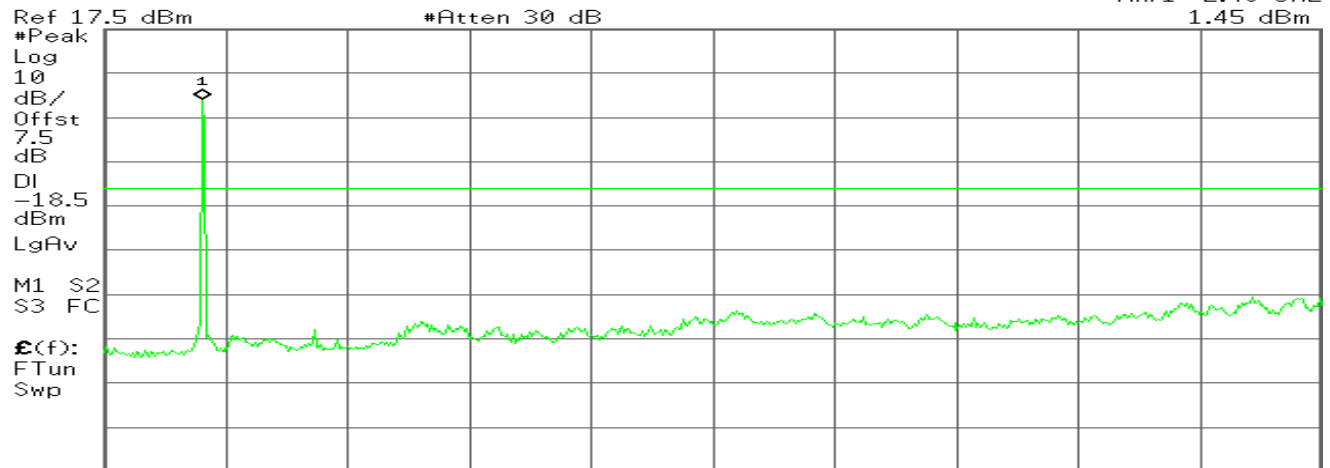
Test Plot

IEEE 802.11b mode

CH Low

Agilent 15:21:16 Sep 3, 2010

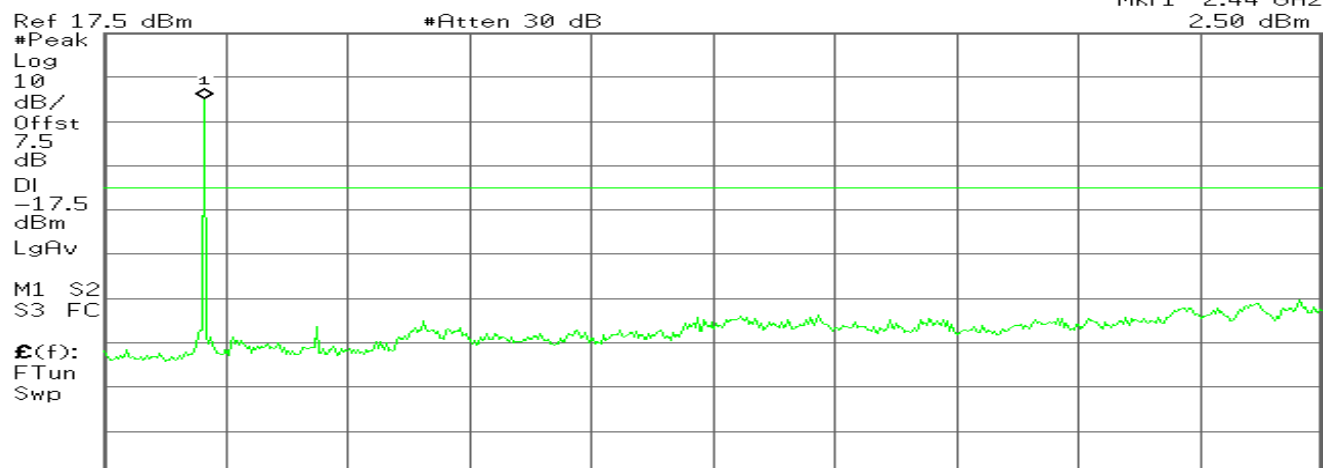
R T

Mkr1 2.40 GHz
1.45 dBmStart 300 MHz Stop 26.50 GHz
#Res BW 100 kHz #VBW 100 kHz Sweep 3.159 s (601 pts)

CH Mid

Agilent 15:23:08 Sep 3, 2010

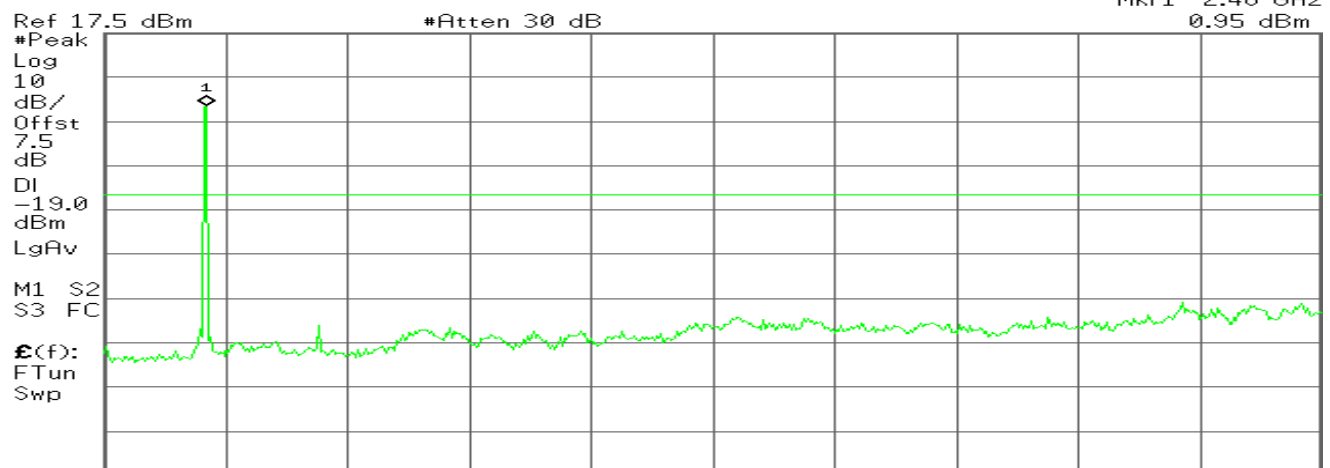
R T

Mkr1 2.44 GHz
2.50 dBmStart 300 MHz Stop 26.50 GHz
#Res BW 100 kHz #VBW 100 kHz Sweep 3.159 s (601 pts)

CH High

Agilent 15:26:50 Sep 3, 2010

R T

Mkr1 2.48 GHz
0.95 dBmStart 300 MHz Stop 26.50 GHz
#Res BW 100 kHz #VBW 100 kHz Sweep 3.159 s (601 pts)

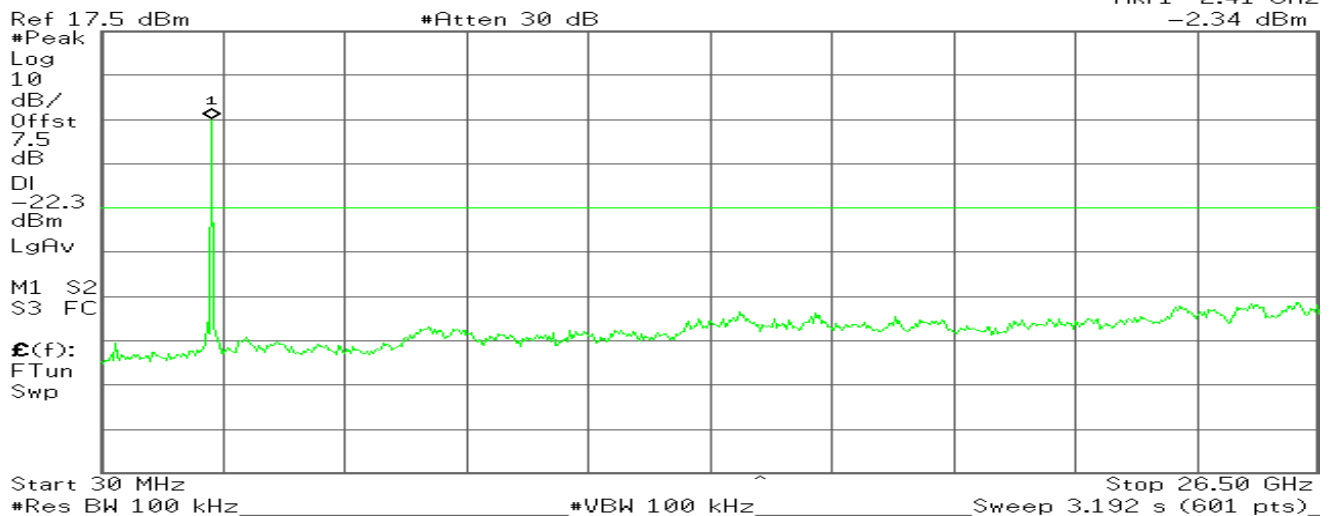


IEEE 802.11g mode

CH Low

* Agilent 15:14:56 Sep 3, 2010

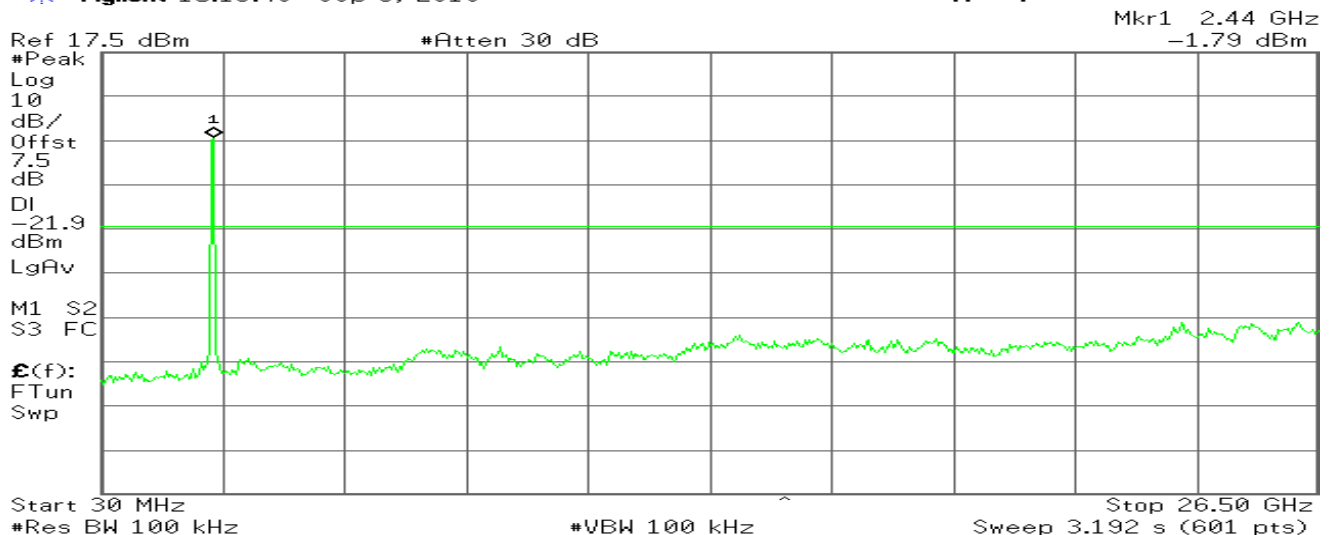
R T



CH Mid

* Agilent 15:13:46 Sep 3, 2010

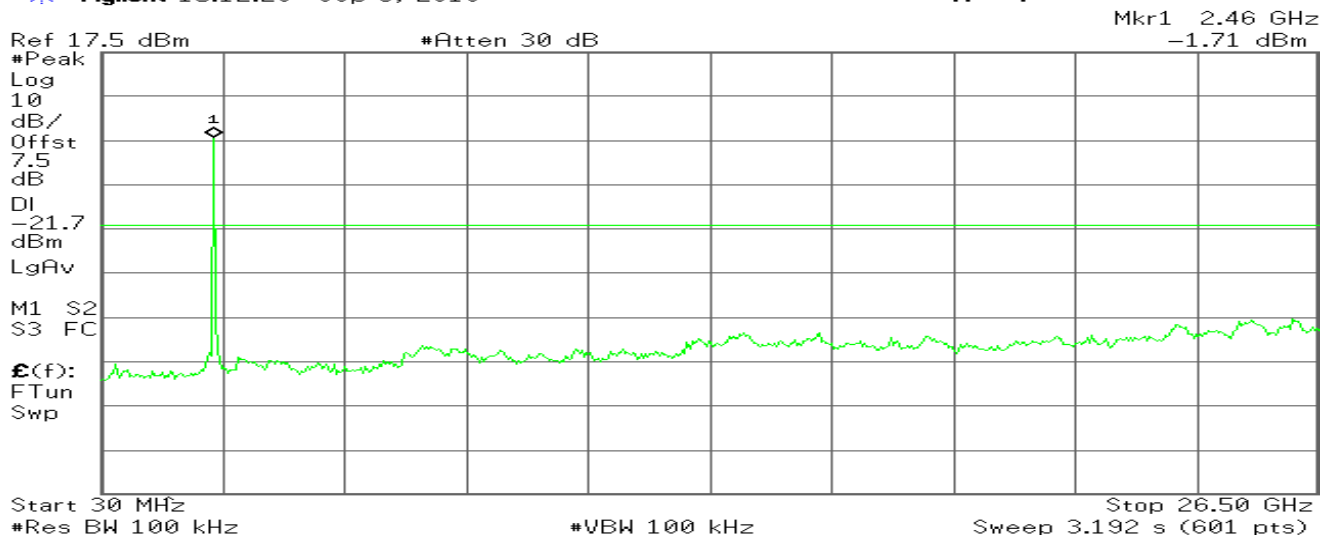
R T



CH High

* Agilent 15:12:26 Sep 3, 2010

R T



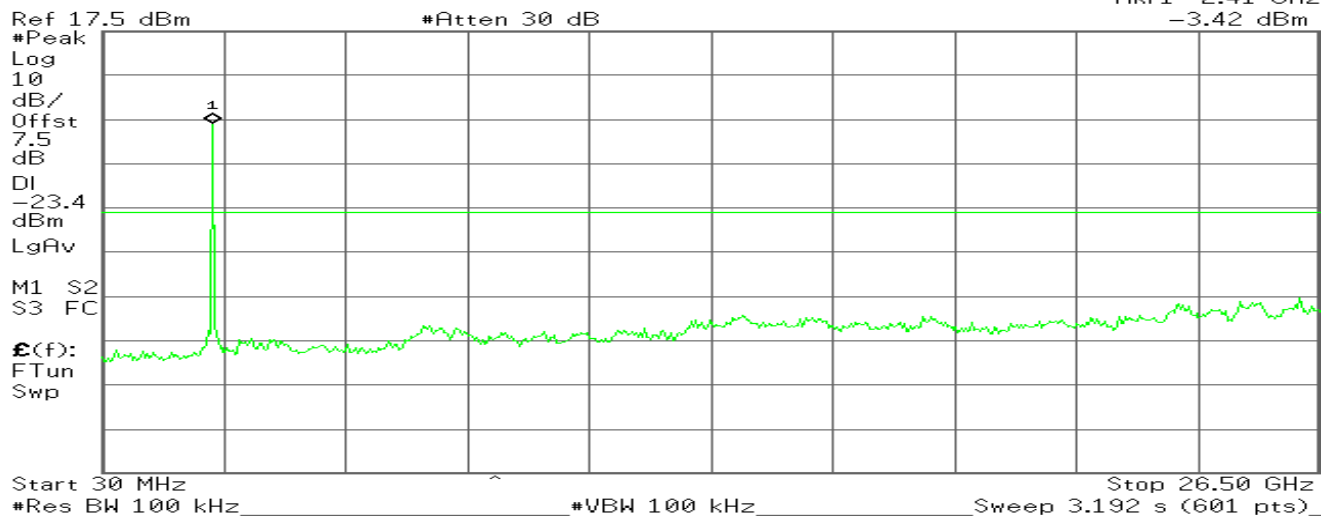


draft 802.11n 20 MHz Channel mode

CH Low

Agilent 15:05:42 Sep 3, 2010

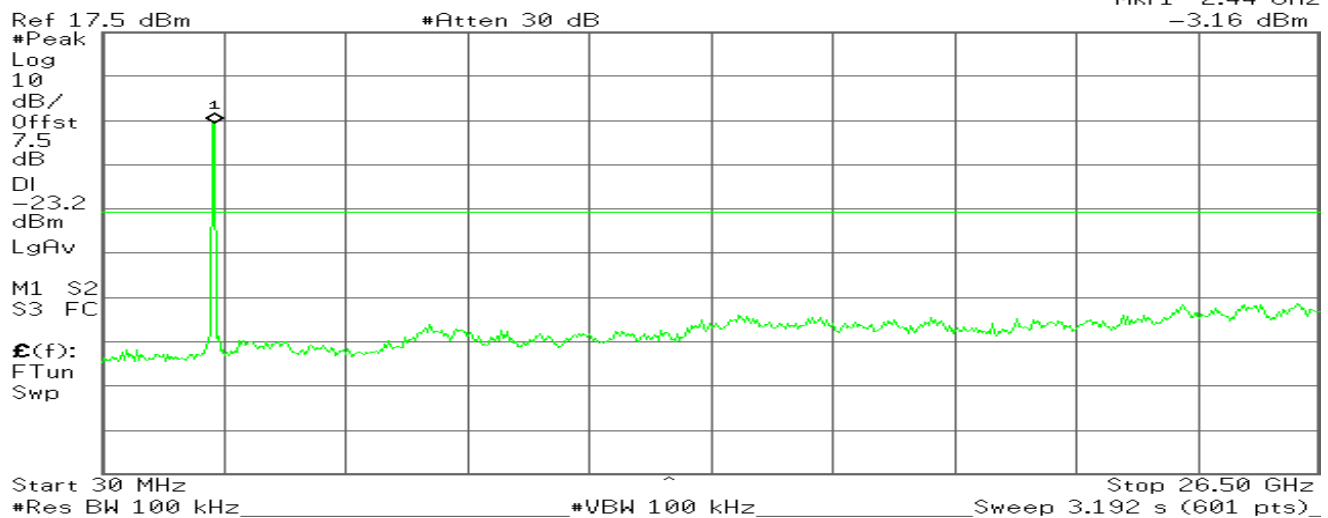
R T

Mkr1 2.41 GHz
-3.42 dBm

CH Mid

Agilent 15:06:55 Sep 3, 2010

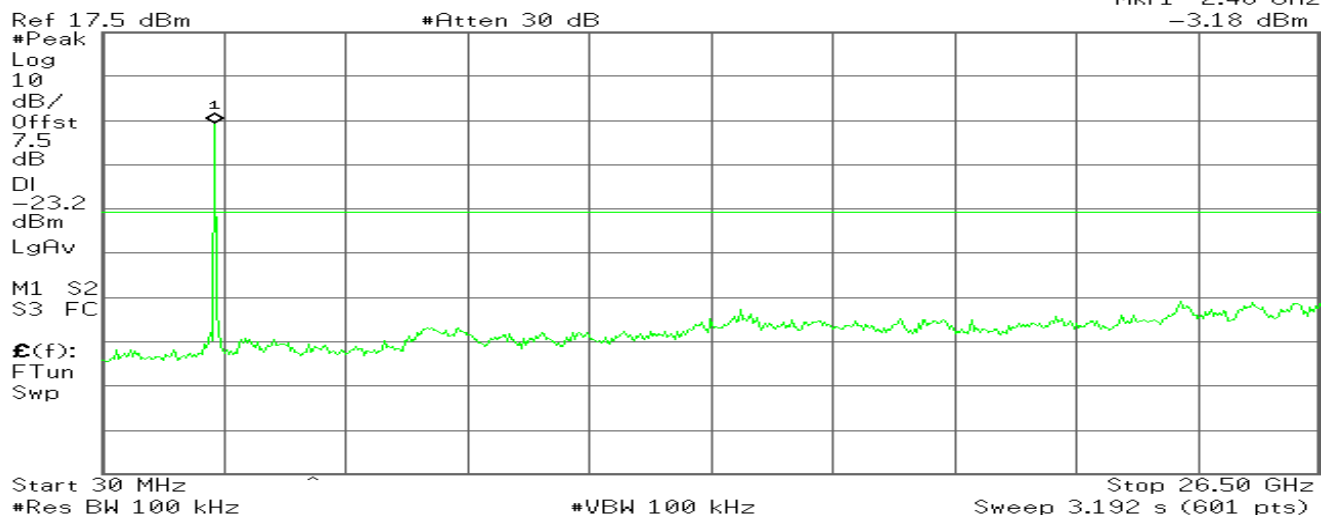
R T

Mkr1 2.44 GHz
-3.16 dBm

CH High

Agilent 15:08:13 Sep 3, 2010

R T

Mkr1 2.46 GHz
-3.18 dBm

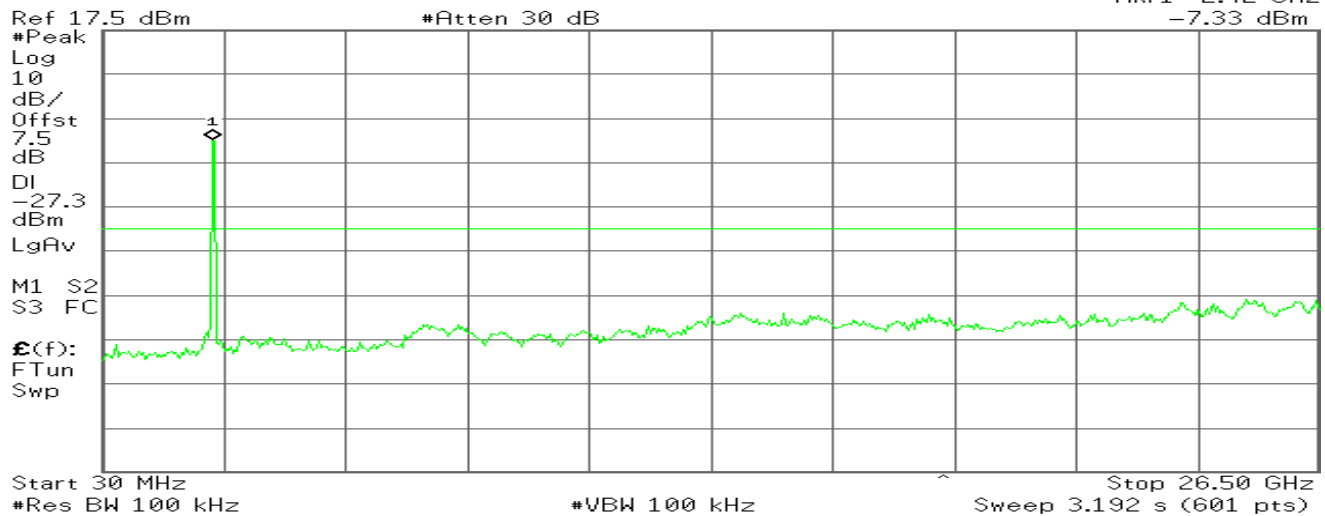


draft 802.11n 40 MHz Channel mode

CH Low

Agilent 14:53:16 Sep 3, 2010

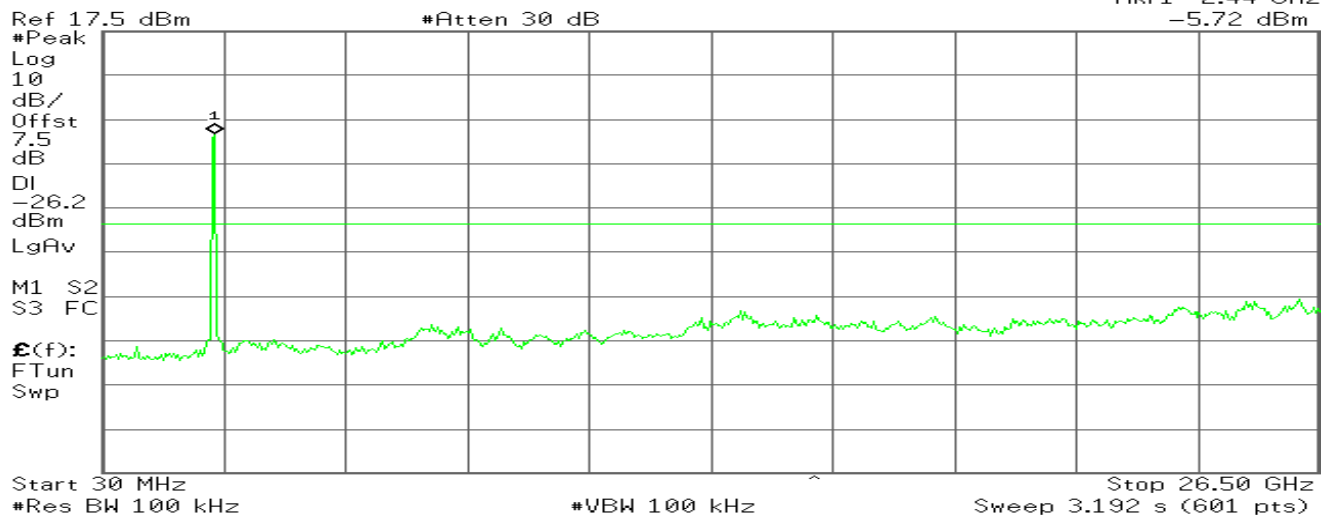
R T

Mkr1 2.42 GHz
-7.33 dBm

CH Mid

Agilent 14:50:52 Sep 3, 2010

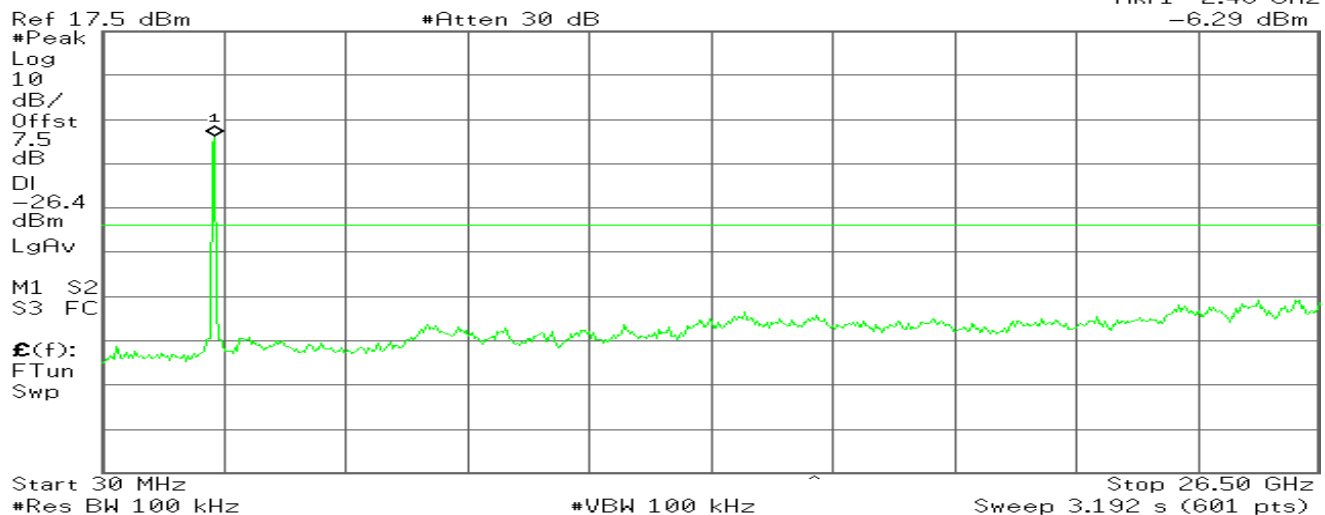
R T

Mkr1 2.44 GHz
-5.72 dBm

CH High

Agilent 14:49:13 Sep 3, 2010

R T

Mkr1 2.46 GHz
-6.29 dBm



7.6.2 RADIATED EMISSIONS

LIMIT

1. 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 (μV/m)	Measurement Distance (m)
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.

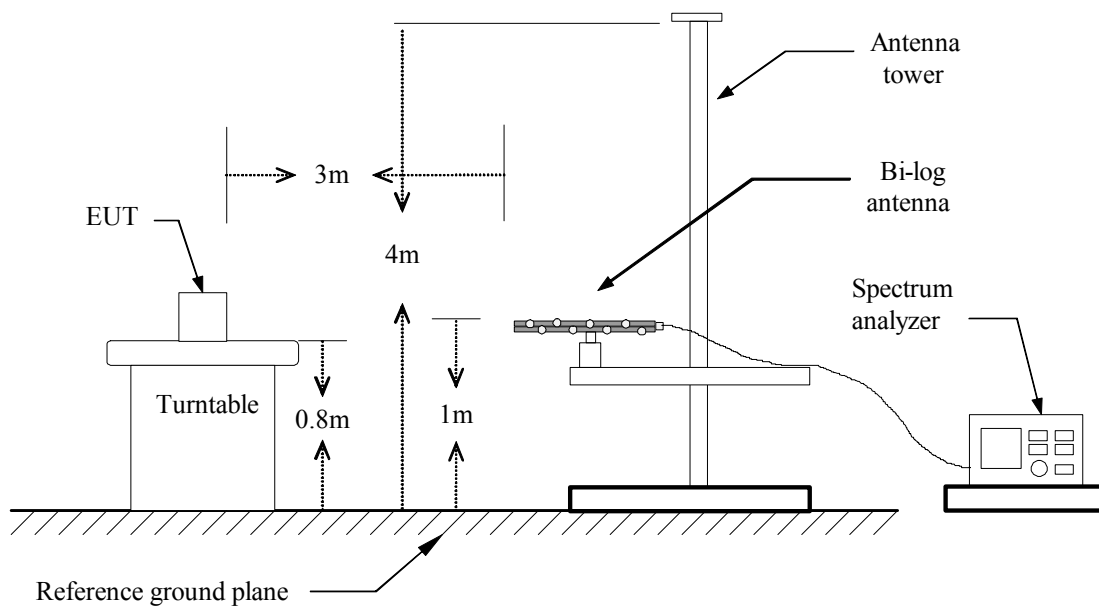
2. In the emission table above, the tighter limit applies at the band edges.

Frequency (MHz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

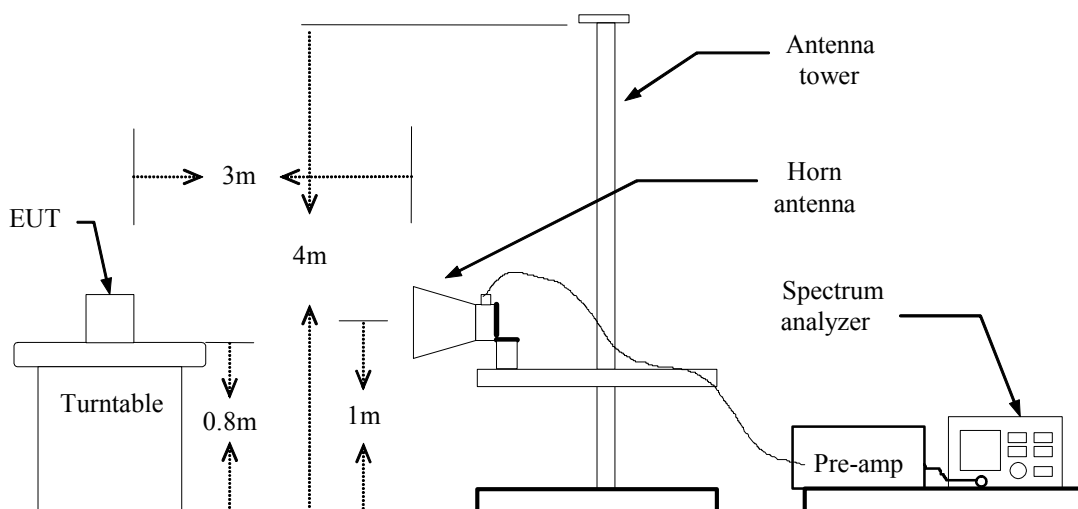


TEST CONFIGURATION

Below 1 GHz



Above 1 GHz





TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:
Below 1GHz:
RBW=100kHz / VBW=300kHz / Sweep=AUTO
Above 1GHz:
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

TEST RESULTS

No non-compliance noted.



TEST DATA

Below 1GHz

Operation Mode: TX **Test Date:** August 28, 2010
Temperature: 18°C **Tested by:** Stan Lin
Humidity: 60% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
74.6200	V	44.35	-18.88	25.47	40.00	-14.53	QP
82.3800	V	43.87	-19.29	24.58	40.00	-15.42	QP
156.1000	V	53.78	-12.81	40.97	43.50	-2.53	QP
260.8600	V	44.58	-12.26	32.32	46.00	-13.68	QP
311.3000	V	47.55	-10.79	36.76	46.00	-9.24	QP
468.4400	V	46.34	-7.83	38.51	46.00	-7.49	QP
499.4800	V	41.35	-7.08	34.27	46.00	-11.73	QP
625.5800	V	36.27	-4.48	31.79	46.00	-14.21	QP
782.7200	V	37.78	-2.16	35.62	46.00	-10.38	QP
59.1000	H	40.79	-15.48	25.31	40.00	-14.69	QP
101.7800	H	40.41	-17.45	22.96	43.50	-20.54	QP
156.1000	H	53.00	-12.81	40.19	43.50	-3.31	QP
231.7600	H	47.16	-14.17	32.99	46.00	-13.01	QP
313.2400	H	51.78	-10.74	41.04	46.00	-4.96	QP
468.4400	H	48.60	-7.83	40.77	46.00	-5.23	QP
499.4800	H	43.21	-7.08	36.13	46.00	-9.87	QP
782.7200	H	44.78	-2.16	42.62	46.00	-3.38	QP
937.9200	H	36.31	1.20	37.51	46.00	-8.49	QP

Remark:

1. No emission found between lowest internal used / generated frequency to 30 MHz. (9kHz ~ 30MHz)
2. Measuring frequencies from 9 kHz to the 1GHz.
3. Radiated emissions measured in the measured frequency range were made with an instrument using peak detector or quasi-peak detector mode.
4. 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.
5. The IF bandwidth of SPA between 30MHz to 1GHz was 100kHz.



Above 1 GHz

Operation Mode: TX / IEEE 802.11b / CH Low **Test Date:** September 2, 2010

Temperature: 18°C **Tested by:** Stan Lin

Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2290.00	V	57.39	50.06	0.47	57.86	50.53	74.00	54.00	-3.47	AVG
2330.00	V	60.34	51.55	0.69	61.02	52.24	74.00	54.00	-1.76	AVG
2493.33	V	58.70	48.08	2.35	61.06	50.43	74.00	54.00	-3.57	AVG
4825.00	V	45.61	---	6.51	52.13	---	74.00	54.00	-1.87	Peak
7233.33	V	45.35	38.82	13.67	59.02	52.49	74.00	54.00	-1.51	AVG
N/A										
1466.67	H	51.09	---	-6.20	44.88	---	74.00	54.00	-9.12	Peak
2500.00	H	52.48	---	-1.51	50.97	---	74.00	54.00	-3.03	Peak
4825.00	H	47.79	45.23	7.74	55.53	52.97	74.00	54.00	-1.03	AVG
5000.00	H	45.09	39.35	9.47	54.56	48.82	74.00	54.00	-5.18	AVG
7233.33	H	46.24	39.38	12.43	58.67	51.81	74.00	54.00	-2.19	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / IEEE 802.11b / CH Mid **Test Date:** September 2, 2010
Temperature: 18°C **Tested by:** Stan Lin
Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2276.67	V	53.58	45.75	0.52	54.10	46.27	74.00	54.00	-7.73	AVG
2316.67	V	57.50	49.65	0.57	58.07	50.22	74.00	54.00	-3.78	AVG
2360.00	V	59.46	51.25	0.94	60.40	52.19	74.00	54.00	-1.81	AVG
2526.67	V	58.15	47.29	2.09	60.25	49.38	74.00	54.00	-4.62	AVG
2556.67	V	57.44	49.43	1.72	59.16	51.15	74.00	54.00	-2.85	AVG
4875.00	V	48.86	44.27	7.30	56.17	51.57	74.00	54.00	-2.43	AVG
7316.67	V	48.45	38.96	12.98	61.43	51.94	74.00	54.00	-2.06	AVG
1703.33	H	50.09	---	-3.71	46.38	---	74.00	54.00	-7.62	Peak
2500.00	H	51.69	---	-1.51	50.18	---	74.00	54.00	-3.82	Peak
4875.00	H	43.87	---	7.74	51.61	---	74.00	54.00	-2.39	Peak
5000.00	H	44.71	38.18	9.47	54.18	47.65	74.00	54.00	-6.35	AVG
7308.33	H	40.50	34.07	12.48	52.98	46.55	74.00	54.00	-7.45	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / IEEE 802.11b / CH High **Test Date:** September 2, 2010
Temperature: 18°C **Tested by:** Stan Lin
Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2306.67	V	55.19	45.81	0.49	55.68	46.30	74.00	54.00	-7.70	AVG
2343.33	V	60.01	49.66	0.80	60.81	50.46	74.00	54.00	-3.54	AVG
2380.00	V	59.94	51.14	1.11	61.05	52.25	74.00	54.00	-1.75	AVG
2543.33	V	59.32	49.19	1.88	61.20	51.07	74.00	54.00	-2.93	AVG
4925.00	V	44.66	42.47	7.38	52.04	49.85	74.00	54.00	-4.15	AVG
7383.33	V	43.28	38.96	12.76	56.04	51.72	74.00	54.00	-2.28	AVG
2343.33	H	51.29	---	-1.42	49.88	---	74.00	54.00	-4.12	Peak
2836.67	H	50.01	---	-0.06	49.96	---	74.00	54.00	-4.04	Peak
4925.00	H	43.05	---	8.18	51.23	---	74.00	54.00	-2.77	Peak
5000.00	H	42.58	38.24	9.47	52.05	47.71	74.00	54.00	-6.29	AVG
7383.33	H	39.82	---	11.52	51.34	---	74.00	54.00	-2.66	Peak
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / IEEE 802.11g / CH Low **Test Date:** September 2, 2010

Temperature: 18°C **Tested by:** Stan Lin

Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2256.67	V	52.64	46.08	0.59	53.23	46.67	74.00	54.00	-7.33	AVG
2290.00	V	57.02	50.25	0.47	57.49	50.72	74.00	54.00	-3.28	AVG
2330.00	V	60.85	51.62	0.69	61.54	52.31	74.00	54.00	-1.69	AVG
2486.67	V	60.12	48.32	2.28	62.39	50.60	74.00	54.00	-3.40	AVG
2530.00	V	56.71	46.39	2.05	58.76	48.44	74.00	54.00	-5.56	AVG
2573.33	V	54.61	43.82	1.51	56.12	45.33	74.00	54.00	-8.67	AVG
4833.33	V	41.95	---	6.65	48.59	---	74.00	54.00	-5.41	Peak
7225.00	V	46.20	34.50	13.75	59.96	48.25	74.00	54.00	-5.75	AVG
2096.67	H	49.13	---	-1.63	47.50	---	74.00	54.00	-6.50	Peak
2883.33	H	48.63	---	0.85	49.49	---	74.00	54.00	-4.51	Peak
4825.00	H	42.37	---	7.74	50.10	---	74.00	54.00	-3.90	Peak
5000.00	H	44.87	38.21	9.47	54.34	47.68	74.00	54.00	-6.32	AVG
7233.33	H	44.82	32.04	12.43	57.25	44.47	74.00	54.00	-9.53	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / IEEE 802.11g / CH Mid **Test Date:** September 2, 2010

Temperature: 18°C **Tested by:** Stan Lin

Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2280.00	V	53.86	46.19	0.50	54.37	46.69	74.00	54.00	-7.31	AVG
2323.33	V	58.12	49.52	0.63	58.75	50.15	74.00	54.00	-3.85	AVG
2350.00	V	60.06	48.21	0.85	60.92	49.06	74.00	54.00	-4.94	AVG
2510.00	V	60.55	47.62	2.30	62.86	49.92	74.00	54.00	-4.08	AVG
2556.67	V	57.00	49.52	1.72	58.72	51.24	74.00	54.00	-2.76	AVG
2590.00	V	55.96	44.15	1.30	57.26	45.45	74.00	54.00	-8.55	AVG
4875.00	V	41.00	---	7.30	48.31	---	74.00	54.00	-5.69	Peak
7308.33	V	45.07	32.84	13.01	58.08	45.85	74.00	54.00	-8.15	AVG
1406.67	H	52.01	---	-6.34	45.68	---	74.00	54.00	-8.32	Peak
2523.33	H	50.42	---	-1.10	49.32	---	74.00	54.00	-4.68	Peak
4866.67	H	43.54	---	7.74	51.28	---	74.00	54.00	-2.72	Peak
5000.00	H	44.45	38.17	9.47	53.92	47.64	74.00	54.00	-6.36	AVG
7308.33	H	43.04	31.82	12.48	55.52	44.30	74.00	54.00	-9.70	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / IEEE 802.11g / CH High **Test Date:** September 2, 2010

Temperature: 18°C **Tested by:** Stan Lin

Humidity: 55% RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2303.33	V	54.67	45.73	0.46	55.12	46.19	74.00	54.00	-7.81	AVG
2340.00	V	58.85	48.67	0.77	59.62	49.44	74.00	54.00	-4.56	AVG
2380.00	V	58.63	46.51	1.11	59.74	47.62	74.00	54.00	-6.38	AVG
2533.33	V	58.94	46.89	2.01	60.95	48.90	74.00	54.00	-5.10	AVG
2583.33	V	55.47	44.38	1.38	56.85	45.76	74.00	54.00	-8.24	AVG
4925.00	V	42.45	---	7.38	49.84	---	74.00	54.00	-4.16	Peak
7383.33	V	44.79	33.84	12.76	57.55	46.60	74.00	54.00	-7.40	AVG
1436.67	H	53.22	---	-6.27	46.95	---	74.00	54.00	-7.05	Peak
2126.67	H	49.76	---	-1.72	48.03	---	74.00	54.00	-5.97	Peak
5000.00	H	43.26	38.32	9.47	52.73	47.79	74.00	54.00	-6.21	AVG
7383.33	H	41.68	29.94	11.52	53.20	41.46	74.00	54.00	-12.54	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 20 MHz Channel mode / CH Low

Test Date: September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2246.67	V	51.96	46.79	0.63	52.58	47.42	74.00	54.00	-1.42	Peak
2296.67	V	56.56	49.88	0.44	57.00	50.32	74.00	54.00	-3.68	AVG
2333.33	V	60.45	51.71	0.71	61.16	52.42	74.00	54.00	-1.58	AVG
2500.00	V	59.65	47.52	2.43	62.08	49.95	74.00	54.00	-4.05	AVG
2536.67	V	56.65	46.31	1.97	58.62	48.28	74.00	54.00	-5.72	AVG
2573.33	V	53.60	43.33	1.51	55.11	44.84	74.00	54.00	-9.16	AVG
7233.33	V	44.53	32.24	13.67	58.20	45.91	74.00	54.00	-8.09	AVG
1686.67	H	50.73	---	-4.01	46.71	---	74.00	54.00	-7.29	Peak
2500.00	H	52.40	---	-1.51	50.89	---	74.00	54.00	-3.11	Peak
5000.00	H	44.32	38.27	9.47	53.79	47.74	74.00	54.00	-6.26	AVG
7241.67	H	43.57	29.97	12.45	56.02	42.42	74.00	54.00	-11.58	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 20 MHz Channel mode / CH Mid

Test Date: September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2280.00	V	54.39	46.02	0.50	54.90	46.52	74.00	54.00	-7.48	AVG
2353.33	V	59.55	47.92	0.88	60.43	48.80	74.00	54.00	-5.20	AVG
2520.00	V	59.24	47.51	2.18	61.41	49.69	74.00	54.00	-4.31	AVG
2560.00	V	56.36	49.11	1.67	58.04	50.78	74.00	54.00	-3.22	AVG
2596.67	V	54.43	44.82	1.21	55.65	46.03	74.00	54.00	-7.97	AVG
4875.00	V	40.93	---	7.30	48.23	---	74.00	54.00	-5.77	Peak
7316.67	V	44.07	31.00	12.98	57.06	43.98	74.00	54.00	-10.02	AVG
1753.33	H	50.74	---	-4.05	46.70	---	74.00	54.00	-7.30	Peak
2556.67	H	50.43	---	-0.52	49.90	---	74.00	54.00	-4.10	Peak
5000.00	H	42.08	---	9.47	51.55	---	74.00	54.00	-2.45	Peak
7316.67	H	40.81	29.99	12.38	53.19	42.37	74.00	54.00	-11.63	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 20 MHz Channel mode / CH High **Test Date:** September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2293.33	V	54.92	50.11	0.45	55.37	50.56	74.00	54.00	-3.44	AVG
2336.67	V	59.16	46.18	0.74	59.90	46.92	74.00	54.00	-7.08	AVG
2386.67	V	59.01	46.29	1.17	60.17	47.46	74.00	54.00	-6.54	AVG
2536.67	V	59.17	46.59	1.97	61.14	48.56	74.00	54.00	-5.44	AVG
2576.67	V	56.30	44.31	1.46	57.76	45.77	74.00	54.00	-8.23	AVG
2623.33	V	54.04	44.29	1.25	55.29	45.54	74.00	54.00	-8.46	AVG
4925.00	V	42.71	---	7.38	50.09	---	74.00	54.00	-3.91	Peak
7383.33	V	43.76	31.24	12.76	56.52	44.00	74.00	54.00	-10.00	AVG
1663.33	H	51.20	---	-4.57	46.63	---	74.00	54.00	-7.37	Peak
2870.00	H	48.94	---	0.59	49.53	---	74.00	54.00	-4.47	Peak
5000.00	H	43.47	38.16	9.47	52.94	47.63	74.00	54.00	-6.37	AVG
7400.00	H	40.35	---	11.31	51.66	---	74.00	54.00	-2.34	Peak
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 40 MHz Channel mode / CH Low

Test Date: September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2270.00	V	53.66	44.17	0.54	54.20	44.71	74.00	54.00	-9.29	AVG
2336.67	V	57.37	44.47	0.74	58.11	45.21	74.00	54.00	-8.79	AVG
2503.33	V	58.31	45.55	2.39	60.70	47.94	74.00	54.00	-6.06	AVG
2580.00	V	57.45	45.84	1.42	58.87	47.26	74.00	54.00	-6.74	AVG
5825.00	V	39.21	---	8.81	48.02	---	74.00	54.00	-5.98	Peak
7266.67	V	40.02	28.47	13.36	53.37	41.83	74.00	54.00	-12.17	AVG
1093.33	H	53.47	---	-7.32	46.15	---	74.00	54.00	-7.85	Peak
2583.33	H	49.33	---	-0.06	49.27	---	74.00	54.00	-4.73	Peak
5000.00	H	45.56	38.42	9.47	55.03	47.89	74.00	54.00	-6.11	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 40 MHz Channel mode / CH Mid

Test Date: September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2286.67	V	55.96	45.25	0.48	56.44	45.73	74.00	54.00	-8.27	AVG
2326.67	V	56.81	46.51	0.66	57.47	47.17	74.00	54.00	-6.83	AVG
2503.33	V	58.61	47.11	2.39	61.00	49.50	74.00	54.00	-4.50	AVG
2590.00	V	56.83	44.29	1.30	58.12	45.59	74.00	54.00	-8.41	AVG
5600.00	V	39.30	---	9.17	48.47	---	74.00	54.00	-5.53	Peak
7291.67	V	38.55	---	13.12	51.67	---	74.00	54.00	-2.33	Peak
1093.33	H	54.03	---	-7.32	46.71	---	74.00	54.00	-7.29	Peak
2266.67	H	50.47	---	-1.61	48.86	---	74.00	54.00	-5.14	Peak
5000.00	H	44.56	38.36	9.47	54.03	47.83	74.00	54.00	-6.17	AVG
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Compliance Certification Services Inc.

Report No.: T100820204-RP1

FCC ID: RXZ-WR750R

Date of Issue: September 8, 2010

Operation Mode: TX / draft 802.11n 40 MHz Channel mode / CH High **Test Date:** September 3, 2010

Temperature: 25°C

Tested by: Stan Lin

Humidity: 55% RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
2306.67	V	56.93	49.33	0.49	57.42	49.82	74.00	54.00	-4.18	AVG
2340.00	V	57.51	46.28	0.77	58.28	47.05	74.00	54.00	-6.95	AVG
2513.33	V	59.23	47.92	2.26	61.49	50.18	74.00	54.00	-3.82	AVG
2600.00	V	56.35	44.62	1.17	57.52	45.79	74.00	54.00	-8.21	AVG
7375.00	V	40.55	29.23	12.78	53.33	42.01	74.00	54.00	-11.99	AVG
N/A										
1093.33	H	53.03	---	-7.32	45.72	---	74.00	54.00	-8.28	Peak
2713.33	H	48.94	---	-0.54	48.40	---	74.00	54.00	-5.60	Peak
5000.00	H	44.76	38.34	9.47	54.23	47.81	74.00	54.00	-6.19	AVG
7183.33	H	38.00	---	12.22	50.22	---	74.00	54.00	-3.78	Peak
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. 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.
5. 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.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



7.7 POWERLINE CONDUCTED EMISSIONS

LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of 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 (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.



TEST DATA

Operation Mode: Normal Link

Test Date: August 23, 2010

Temperature: 24°C

Tested by: Benson.Yang

Humidity: 60% RH

Freq. (MHz)	QP Reading	AV Reading	Corr. factor	QP Result	AV Result	QP Limit	AV Limit	QP Margin	AV Margin	Note
0.2220	37.58	25.24	10.80	48.38	36.04	62.74	52.74	-14.36	-16.70	L1
0.3660	35.77	26.53	10.72	46.49	37.25	58.50	48.50	-12.01	-11.25	L1
0.6340	34.44	25.50	10.70	45.14	36.20	56.00	46.00	-10.86	-9.80	L1
0.8820	30.99	22.78	10.68	41.67	33.46	56.00	46.00	-14.33	-12.54	L1
1.5859	35.00	26.08	10.67	45.67	36.75	56.00	46.00	-10.33	-9.25	L1
1.8220	36.25	27.02	10.68	46.93	37.70	56.00	46.00	-9.07	-8.30	L1
0.1500	41.91	35.03	10.62	52.53	45.65	65.99	55.99	-13.46	-10.34	L2
0.2180	39.47	30.19	10.65	50.12	40.84	62.89	52.89	-12.77	-12.05	L2
0.4020	34.26	24.14	10.60	44.86	34.74	57.81	47.81	-12.95	-13.07	L2
0.6660	35.86	24.72	10.61	46.47	35.33	56.00	46.00	-9.53	-10.67	L2
1.5700	35.86	26.97	10.61	46.47	37.58	56.00	46.00	-9.53	-8.42	L2
1.8060	36.50	27.85	10.61	47.11	38.46	56.00	46.00	-8.89	-7.54	L2

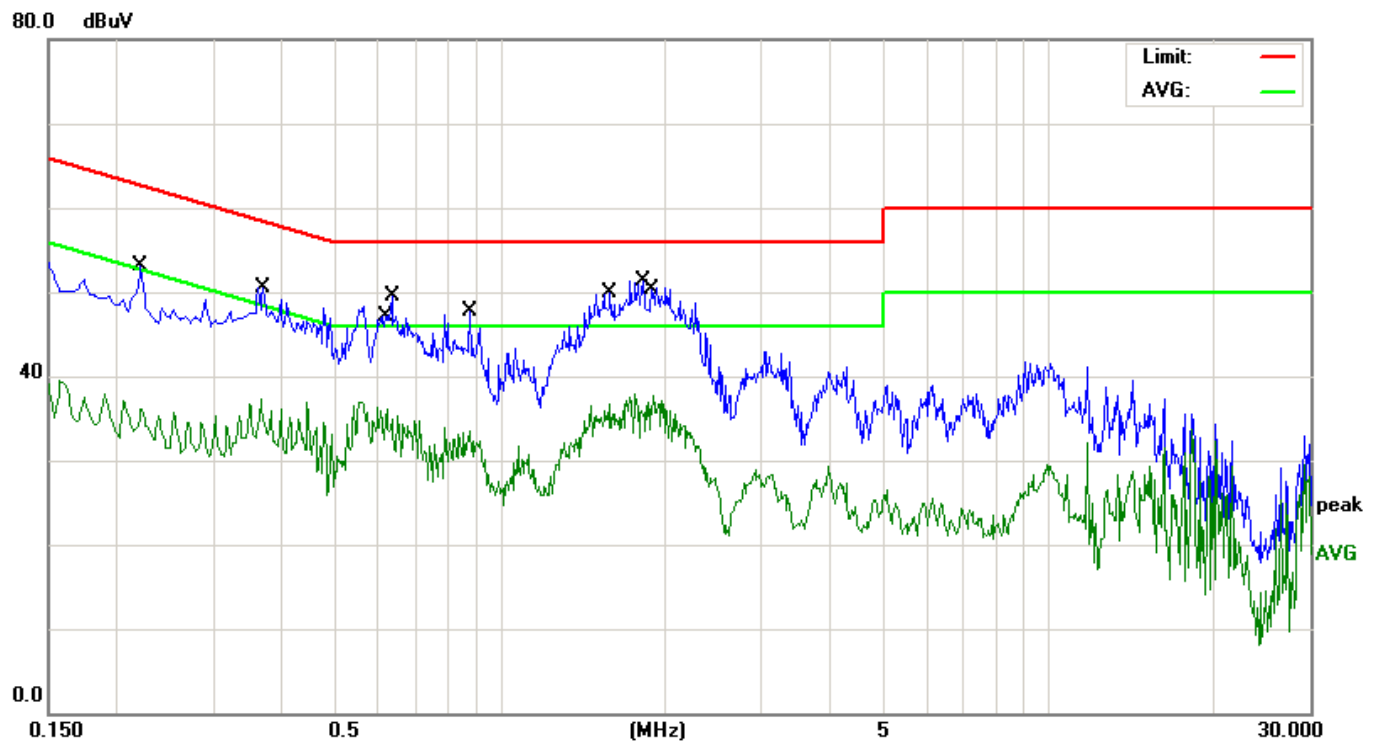
Remark:

1. The measuring frequencies range between 0.15 MHz and 30 MHz.
2. The emissions measured in the frequency range between 0.15 MHz and 30MHz were made with an instrument using Quasi-peak detector and Average detector.
3. The IF bandwidth of SPA between 0.15MHz and 30MHz was 10kHz. The IF bandwidth of Test Receiver between 0.15MHz and 30MHz was 9kHz.
4. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)

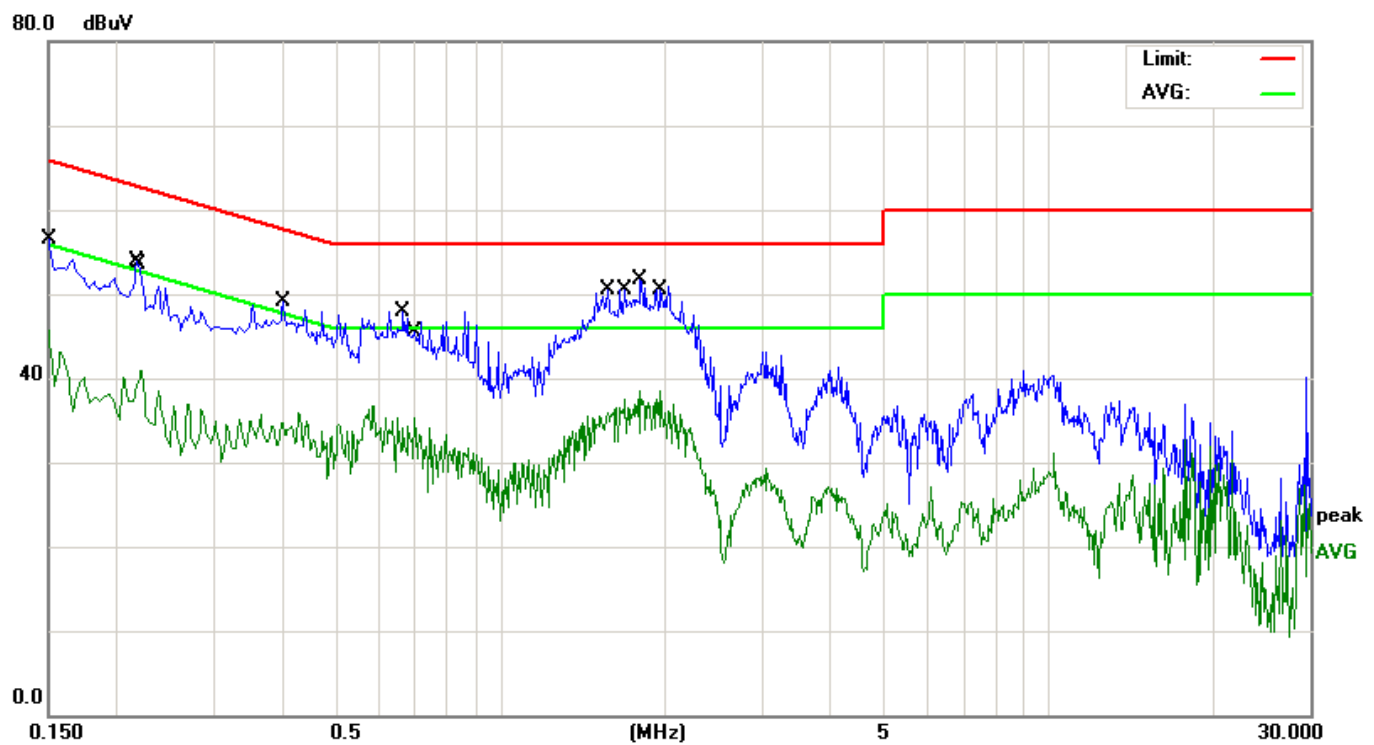


Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)





8. APPENDIX I RADIO FREQUENCY EXPOSURE

LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

EUT Specification

EUT	WIRELESS ROUTER
Frequency band (Operating)	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input type="checkbox"/> Others
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ($S = 5\text{mW/cm}^2$) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ($S=1\text{mW/cm}^2$)
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Max. output power	IEEE 802.11b mode: 16.10 dBm (40.74mW) IEEE 802.11g mode: 20.24 dBm (105.68mW) draft 802.11n 20 MHz Channel mode: 19.50 dBm (89.13mW) draft 802.11n 40 MHz Channel mode: 18.58 dBm (72.11mW)
Antenna gain (Max)	2.0dBi (including cable loss) (Numeric gain: 1.58)
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

Remark:

1. The maximum output power is 20.24dBm (105.68mW) at 2412MHz (with 1.58numeric antenna gain.)
2. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.

TEST RESULTS

No non-compliance noted.

**Calculation**

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

d = Distance in meters

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:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

Maximum Permissible Exposure

EUT output power = 105.68mW

Numeric Antenna gain = 1.58

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

Yields

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

→ Power density = 0.033mW / cm²

(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.)