

APPLICATION FOR CERTIFICATION

On Behalf of

KARBONSTREAM CORPORATION

Karbonpad

Model No. : 26380

FCC ID : N8A26380

Brand: Karbonpad

Prepared for : KARBONSTREAM CORPORATION
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Ontario Canada

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TEST REPORT CERTIFICATION

Applicant : KARBONSTREAM CORPORATION
Manufacturer : INVENTEC BESTA CO., LTD
EUT Description : Karbonpad
FCC ID : N8A26380
(A) Model No. : 26380
(B) Serial No. : N/A
(C) Brand : Karbonpad
(D) Power Supply : DC 3.7V
(E) Test Voltage : DC 3.7V (Via Battery)

Measurement Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART C, Oct. 2011
AND ANSI C63.4/2003

(FCC CFR 47 Part 15C, §15.207 and §15.209 and §15.247)

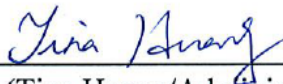
The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C limits.

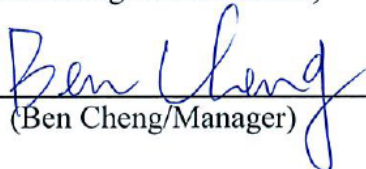
The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test : May 08 ~ 10, 2012

Date of Report : May 15, 2012

Producer : 
(Tina Huang/Administrator)

Signatory : 
(Ben Cheng/Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Karbonpad
Model Number	:	26380
Serial Number	:	N/A
FCC ID	:	N8A26380
Applicant	:	KARBONSTREAM CORPORATION 15 Toronto St., Ste. 400 Toronto M5C 2E3 Ontario Canada
Manufacturer	:	INVENTEC BESTA CO., LTD 10FL., No.36, Lane513, Rui Guang Road, Nei Hu Dist., Taipei114, Taiwan, R.O.C
Fundamental Range	:	2412MHz ~ 2462MHz
Radio Technology	:	802.11b: DSSS Modulation (DBPSK/DQPSK/CCK) 802.11g/n-HT20/n-HT40: OFDM Modulation 1T1R, (BPSK/QPSK/16QAM/64QAM)
Data Transfer Rate	:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/48/54Mbps 802.11n: up to 150Mbps
Antenna Gain	:	3.12dBi (Peak)
Battery	:	Crystal Power Technology Co., Ltd. M/N D556095Q01, 3.7V 3550mAh
Date of Receipt of Sample	:	Apr. 26, 2012
Date of Test	:	May 08 ~ 10, 2012

1.2. Data Rate Relative to Output Power

802.11b			
Channel	Modulation	Date Rate(Mbps)	Power(dBm)
1	DBPSK	1	17.90
1	DQPSK	2	17.75
1	CCK	5.5	17.85
1	CCK	11	17.89

802.11g			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)
1	BPSK	6	15.35
1	BPSK	9	15.30
1	QPSK	12	15.29
1	QPSK	18	15.31
1	16-QAM	24	15.26
1	16-QAM	36	15.33
1	64-QAM	48	15.28
1	64-QAM	54	15.29

802.11n-HT20			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)
1	BPSK	7.2 (MCS0)	15.23
1	QPSK	14.4 (MCS1)	15.16
1	QPSK	21.7 (MCS2)	15.20
1	16-QAM	28.9 (MCS3)	15.18
1	16-QAM	43.3 (MCS4)	15.20
1	64-QAM	57.8 (MCS5)	15.19
1	64-QAM	65.0 (MCS6)	15.14
1	64-QAM	72.2 (MCS7)	15.15

802.11g-HT40			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)
3	BPSK	15 (MCS0)	12.41
3	QPSK	30 (MCS1)	12.37
3	QPSK	45 (MCS2)	12.35
3	16-QAM	60 (MCS3)	12.37
3	16-QAM	90 (MCS4)	12.39
3	64-QAM	20 (MCS5)	12.31
3	64-QAM	135 (MCS6)	12.35
3	64-QAM	150 (MCS7)	12.37

1.3. Test Configuration for Each Test Item

Test Item	802.11b	802.11g	802.11n-HT20	802.11n-HT40
	Data Rate for Test(Mbps)			
6dB Bandwidth	1	6	7.2	15
Peak Power Spectral Density	1	6	7.2	15
Peak Output Power	1	6	7.2	15
Band Edge	1	6	7.2	15

1.4. Tested Supporting System Details

1.4.1. NOTEBOOK PC

Model Number : N20A Series
 Serial Number : WB200903001
 Manufacturer : ASUS
 USB to RS232 Cable : Non-Shielded, Detachable, 1.2m
 (with Jig board)
 AC Adapter : ASUS, M/N SADP-65NB BB
 DC Cord: Non-Shielded, Undetachable, 1.8m
 Bonded a ferrite core
 AC Power Cord : Non-Shielded, Detachable, 1.8m

1.5. Description of Test Facility

Name of Firm : **AUDIX Technology Corporation**
EMC Department
 No. 53-11, Dingfu, Linkou Dist.,
 New Taipei City 244, Taiwan, R.O.C.

Test Location & Facility (AC) : **Semi-Anechoic Chamber**
 No. 53-11, Dingfu, Linkou Dist.,
 New Taipei City 244, Taiwan, R.O.C.
 May 14, 2009 Renewal on
 Federal Communication Commission
 Registration Number: 90993

NVLAP Lab. Code : 200077-0

TAF Accreditation No : 1724

1.6. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Radiation Test (Distance: 3m)	30MHz~300MHz	$\pm 2.91\text{dB}$
	300MHz~1000MHz	$\pm 2.74\text{dB}$
	Above 1GHz	$\pm 5.02\text{dB}$

Remark: Uncertainty = $k u_c(y)$

Test Item	Uncertainty
6dB Bandwidth	$\pm 0.05\text{kHz}$
Maximum peak output power	$\pm 0.33\text{dBm}$
Emission Limitations	$\pm 0.13\text{dB}$
Band edges	$\pm 0.13\text{dB}$
Power spectral density	$\pm 0.13\text{dB}$

2. CONDUCTED EMISSION MEASUREMENT

【The EUT only employs battery power for operation, no conductive emission limits are required according to FCC Part 15 Section §15.207】

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

3.1.1. For Frequency Range 30MHz~1000MHz (at Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'
2.	Test Receiver	R & S	ESCS30	100339	Jun. 23, 11'	Jun. 22, 12'
3.	Amplifier	HP	8447D	2944A06305	Feb. 13, 12'	Feb. 12, 13'
4.	Log Periodic Antenna	Schwarzbeck	UHALP 9108-A	0810	Mar. 03, 12'	Mar. 02, 13'
5.	Biconical Antenna	CHASE	VBA6106A	1264	Mar. 03, 12'	Mar. 02, 13'

3.1.2. For Frequency Above 1GHz (at Semi-Anechoic Chamber)

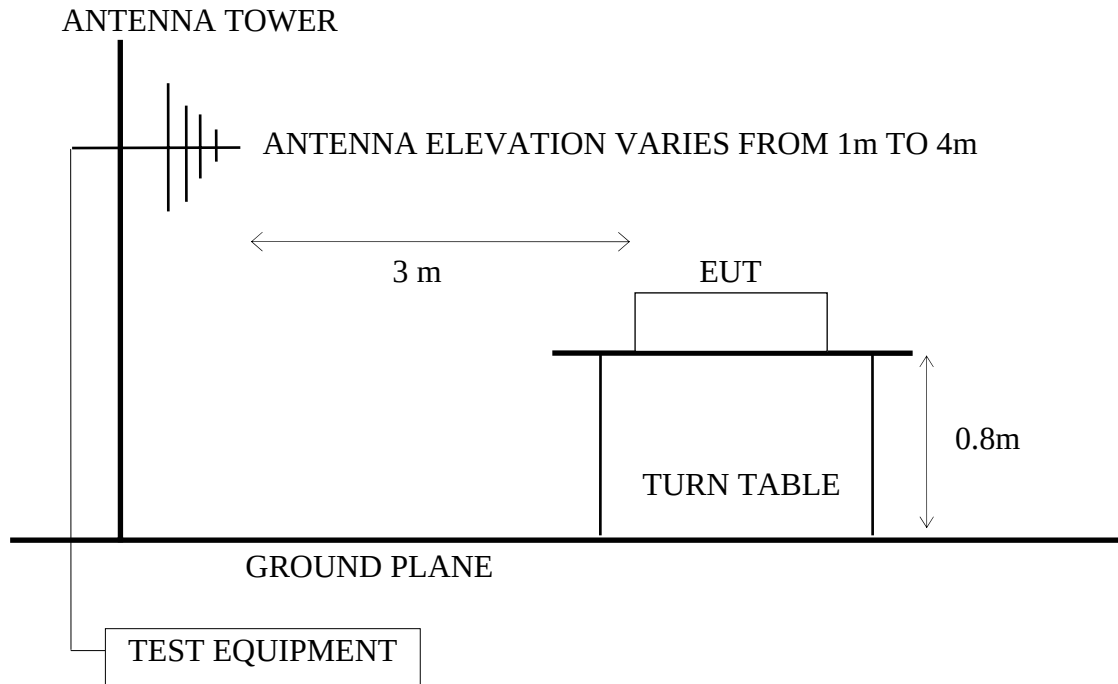
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'
2.	Test Receiver	R & S	ESCS30	100339	Jun. 23, 11'	Jun. 22, 12'
3.	Amplifier	HP	8449B	3008A00529	Dec. 09, 11'	Dec. 08, 12'
4.	Horn Antenna	EMCO	3115	9112-3775	May 09, 11'	May 08, 12'
5.	Horn Antenna	EMCO	3116	2653	Oct. 07, 11'	Oct. 06, 12'
6.	2.4GHz Notch Filter	EWT	EWT-14-007 0-R1	G2	Dec. 05, 11'	Dec. 04, 12'
7.	3.5GHz High Pass Filter	HP	84300-80038	005	Jan. 04, 12'	Jan. 03, 13'

3.2. Test Setup

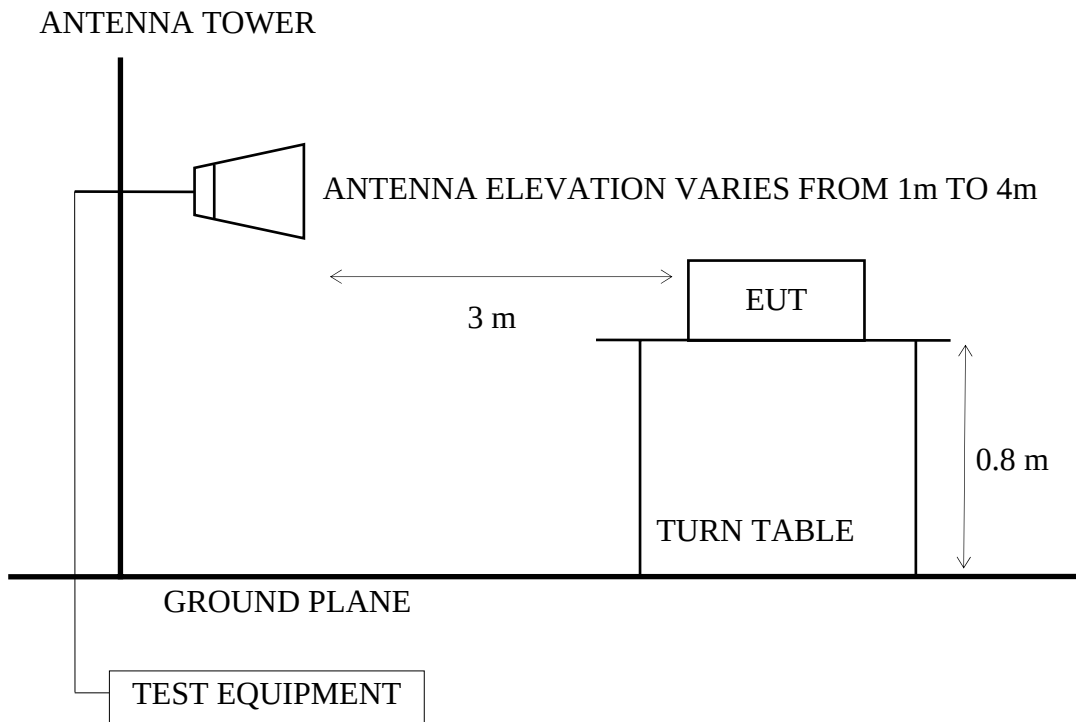
3.2.1. Block Diagram of connection between EUT and simulators

KARBONPAD (EUT)

3.2.2. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000MHz



3.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



3.3. Radiated Emission Limits (§15.209)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMITS	
		$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 $\text{dB}\mu\text{V/m}$ (Peak) 54.0 $\text{dB}\mu\text{V/m}$ (Average)	

- Remark :
- (1) Emission level ($\text{dB}\mu\text{V/m}$) = 20 log Emission level ($\mu\text{V/m}$)
 - (2) The tighter limit applies at the edge between two frequency bands.
 - (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 - (4) The limits in this table are based on CFR 47 Part 15.205(a)(b) and Part 15.209 (a).
 - (5) The over 1GHz limit, FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.205(b) & Part 15.209(e) and Part 15.207(c).

3.4. Operating Condition of EUT

- 3.4.1. Set up the EUT (Karbonpad) as shown on 3.2.
- 3.4.2. To turn on the power of all equipments.
- 3.4.3. The EUT was set the Notebook PC using test program “hyper terminal”.
- 3.4.4. The EUT supports 802.11b/g/n-HT20/n-HT40 modes, we performed pre-scan high, middle, low channels for each mode for spurious emission and listed the worst channel of each mode in test report.

The worst channel of each mode as following:

No.	Type of Network	Test Mode	Channel
1.	DTS 802.11b	Transmit	CH 1
2.	DTS 802.11g		CH 1
3.	DTS 802.11n-HT20		CH 1
4.	DTS 802.11n-HT40		CH 3

3.5. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna could be moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna such as calibrated biconical and log-periodical antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC ANSI C63.4-2003 regulation.

The bandwidth of the R&S Test Receiver ESCS30 was set at 120kHz. (For 30MHz to 1000MHz)

The resolution bandwidth and video bandwidth of test spectrum analyzer is 1MHz for peak detection (PK) at frequency above 1GHz.

The resolution bandwidth of test spectrum analyzer is 1MHz and the video bandwidth is 10Hz for average detection (AV) at frequency above 1GHz.

The frequency range from 30MHz to 25GHz (Up to 10th harmonics from fundamental frequency) was checked.

Above 1GHz was measured with peak and average detector. For frequency from 4GHz to 25GHz, we checked it in 1 meter distance and with a shorter cable 2 meter instead of original's. There is no signal exist.

Pursuant to ANSI C63.4 8.3.1.2, when peak value complies with the average limit, we didn't perform measurement in average detector.

3.6. Radiated Emission Measurement Results

PASSED.

(All emissions not reported below are too low against the prescribed limits.)

EUT : Karbonpad M/N : 26380

Test Date : May 10, 2012 Temperature : 26°C Humidity : 59%

The EUT emitted the fundamental frequency with data code at the stand, side and lie conditions.

For Frequency Range 30MHz~1000MHz:

The EUT select **worst position “lie”** and with following test modes was performed during this section testing and all the test results are listed in section 3.6.1.

Mode	Type of Network	Channel	Frequency	Test Mode	Reference Test Data	
					Horizontal	Vertical
1.	802.11b	CH 1	2412MHz	Transmit	# 1	# 2
2.	802.11g	CH 1	2412MHz		# 1	# 2
3.	802.11n-HT20	CH 1	2412MHz		# 1	# 2
4.	802.11n-HT40	CH 3	2422MHz		# 1	# 2

* Above all final readings were measured with Quasi-Peak detector.

For Frequency above 1GHz:

The EUT select **worst position “lie”** and with following test modes was performed during this section testing and all the test results are listed in section 3.6.2.

Mode	Type of Network	Channel	Frequency	Test Mode	Reference Test Data	
					Horizontal	Vertical
					Peak	Peak
1.	802.11b	CH 1	2412MHz	Transmit	# 3, # 6	# 4, # 5
2.	802.11g	CH 1	2412MHz		# 4, # 5	# 3, # 6
3.	802.11n-HT20	CH 1	2412MHz		# 4, # 5	# 3, # 6
4.	802.11n-HT40	CH 3	2422MHz		# 4, # 5	# 3, # 6

Note: 1. Above all final readings were measured with Peak and Average detector.

2. For measurements above 1GHz to 4GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement. (According to ANSI C63.4-2003 section 8.3.1.2)

3. The emissions (up to 25GHz) not reported are too low to be measured.

For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 3.6.3. (The restricted bands defined in part 15.205(a))

Mode	Type of Network	Channel	Frequency	Test Mode	Reference Test Data	
					Horizontal	Vertical
1.	802.11b	CH 6	2412MHz	Transmit	# 3, # 4	# 1, # 2
2.		CH 11	2462MHz		# 5, # 6	# 7, # 8
3.	802.11g	CH 6	2412MHz	Transmit	# 3, # 4	# 1, # 2
4.		CH 11	2462MHz		# 5, # 6	# 7, # 8
5.	802.11n-HT20	CH 6	2412MHz	Transmit	# 3, # 4	# 1, # 2
6.		CH 11	2462MHz		# 5, # 6	# 7, # 8
7.	802.11n-HT40	CH 3	2422MHz	Transmit	# 3, # 4	# 1, # 2
8.		CH 9	2452MHz		# 5, # 6	# 7, # 8

3.6.1. Frequency Range 30-1000MHz

802.11b, Transmit, Frequency: 2412MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	93.050	16.25	2.00	1.52	19.77	43.50	23.73	QP
2	240.490	23.10	3.40	7.38	33.88	46.00	12.12	QP
3	301.600	14.59	3.90	15.97	34.46	46.00	11.54	QP
4	390.840	17.50	4.80	11.89	34.19	46.00	11.81	QP
5	448.070	17.63	5.40	14.61	37.64	46.00	8.36	QP
6	717.730	22.57	6.55	0.44	29.56	46.00	16.44	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	54.250	14.79	1.50	7.38	23.67	40.00	16.33	QP
2	240.490	23.10	3.40	-0.85	25.66	46.00	20.34	QP
3	390.840	17.50	4.80	0.04	22.34	46.00	23.66	QP
4	445.160	17.60	5.40	3.16	26.16	46.00	19.84	QP
5	572.230	21.12	6.50	-2.18	25.43	46.00	20.57	QP
6	957.320	26.33	7.60	-3.23	30.70	46.00	15.30	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11g, Transmit, Frequency: 2412MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	93.050	16.25	2.00	1.13	19.38	43.50	24.12	QP
2	240.490	23.10	3.40	7.33	33.83	46.00	12.17	QP
3	301.600	14.59	3.90	15.56	34.05	46.00	11.95	QP
4	360.770	16.24	4.43	10.78	31.45	46.00	14.55	QP
5	450.010	17.65	5.40	13.96	37.00	46.00	9.00	QP
6	719.670	22.30	6.60	0.34	29.24	46.00	16.76	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	58.130	13.43	1.60	9.52	24.56	40.00	15.44	QP
2	237.580	22.86	3.40	-1.65	24.61	46.00	21.39	QP
3	443.220	17.62	5.33	3.20	26.15	46.00	19.85	QP
4	572.230	21.12	6.50	-1.92	25.69	46.00	20.31	QP
5	757.500	23.61	6.73	-2.66	27.68	46.00	18.32	QP
6	795.330	24.03	6.90	-2.36	28.56	46.00	17.44	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Transmit, Frequency: 2412MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	94.020	16.37	2.00	1.68	20.05	43.50	23.45	QP
2	241.460	23.16	3.40	7.44	34.00	46.00	12.00	QP
3	301.600	14.59	3.90	16.02	34.51	46.00	11.49	QP
4	390.840	17.50	4.80	11.36	33.66	46.00	12.34	QP
5	445.160	17.60	5.40	14.48	37.48	46.00	8.52	QP
6	715.790	22.74	6.55	0.10	29.40	46.00	16.60	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	54.250	14.79	1.50	8.68	24.97	40.00	15.03	QP
2	237.580	22.86	3.40	-0.94	25.32	46.00	20.68	QP
3	390.840	17.50	4.80	0.85	23.15	46.00	22.85	QP
4	441.280	17.63	5.30	3.30	26.23	46.00	19.77	QP
5	572.230	21.12	6.50	-2.67	24.94	46.00	21.06	QP
6	641.100	21.00	6.30	-1.86	25.43	46.00	20.57	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT40, Transmit, Frequency: 2422MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% ☐ Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	94.020	16.37	2.00	0.94	19.31	43.50	24.19	QP
2	241.460	23.16	3.40	7.76	34.32	46.00	11.68	QP
3	301.600	14.59	3.90	15.58	34.07	46.00	11.93	QP
4	390.840	17.50	4.80	12.06	34.36	46.00	11.64	QP
5	448.070	17.63	5.40	14.52	37.55	46.00	8.45	QP
6	721.610	22.21	6.50	0.54	29.25	46.00	16.75	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/59% ☐ Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	51.340	15.96	1.50	1.58	19.04	40.00	20.96	QP
2	247.280	23.61	3.50	-1.43	25.68	46.00	20.32	QP
3	360.770	16.24	4.43	0.61	21.28	46.00	24.72	QP
4	451.950	17.65	5.40	1.06	24.11	46.00	21.89	QP
5	572.230	21.12	6.50	-1.06	26.55	46.00	19.45	QP
6	780.780	24.11	6.80	-3.13	27.78	46.00	18.22	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3.6.2. Above 1GHz Frequency Range Measurement Results

802.11b Transmit, Frequency: 2412MHz

Site no.	: A/C Chamber	Data no.	: 3
Dis. / Ant.	: 3m 3115(4927)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART-15C (1G-AV)		
Env. / Ins.	: E4446A 26°C/59%		□Vic Fong
EUT	: 26380		
Power Rating	: DC 3.7V		
Test Mode	: TX2412MHz (802.11b)		

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1843.360	27.03	6.67	12.77	46.47	54.00	7.53	Peak
2	2090.320	27.79	5.97	15.15	48.91	54.00	5.09	Peak
3	2661.520	29.27	6.73	11.11	47.11	54.00	6.89	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no.	: A/C Chamber	Data no.	: 4
Dis. / Ant.	: 3m 3115(4927)	Ant. pol.	: VERTICAL
Limit	: FCC PART-15C (1G-AV)		
Env. / Ins.	: E4446A 26°C/59%		□Vic Fong
EUT	: 26380		
Power Rating	: DC 3.7V		
Test Mode	: TX2412MHz (802.11b)		

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1843.360	27.03	6.67	12.75	46.45	54.00	7.55	Peak
2	2254.960	28.17	6.17	13.40	47.74	54.00	6.26	Peak
3	2599.360	29.04	6.63	13.58	49.25	54.00	4.75	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11b)

Data no. : 6
 Ant. pol. : HORIZONTAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2705.080	29.38	6.79	14.52	50.69	54.00	3.31	Peak
2	3217.240	30.77	7.37	8.21	46.35	54.00	7.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11b)

Data no. : 5
 Ant. pol. : VERTICAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2722.240	29.44	6.82	10.31	46.57	54.00	7.43	Peak
2	3217.240	30.77	7.37	14.46	52.60	54.00	1.40	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11g, Transmit, Frequency: 2412MHz

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

Data no. : 4
 Ant. pol. : HORIZONTAL
 Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1608.160	26.14	6.21	15.89	48.24	54.00	5.76	Peak
2	1750.960	26.65	7.16	18.31	52.12	54.00	1.88	Peak
3	1843.360	27.03	6.67	13.35	47.05	54.00	6.95	Peak
4	2333.920	28.32	6.27	15.26	49.85	54.00	4.15	Peak
5	2666.560	29.27	6.73	15.89	51.88	54.00	2.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

Data no. : 3
 Ant. pol. : VERTICAL
 Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1611.520	26.14	6.21	14.42	46.77	54.00	7.23	Peak
2	1750.960	26.65	7.16	18.31	52.12	54.00	1.88	Peak
3	2359.120	28.40	6.30	15.66	50.36	54.00	3.64	Peak
4	2532.160	28.81	6.52	14.30	49.63	54.00	4.37	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

Data no. : 5
 Ant. pol. : HORIZONTAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2685.280	29.32	6.76	15.26	51.35	54.00	2.65	Peak
2	3217.240	30.77	7.37	9.01	47.15	54.00	6.85	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11g)

Data no. : 6
 Ant. pol. : VERTICAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2691.880	29.38	6.78	11.60	47.76	54.00	6.24	Peak
2	3219.880	30.80	7.37	13.51	51.68	54.00	2.32	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Transmit, Frequency: 2412MHz

Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1608.160	26.14	6.21	11.30	43.65	54.00	10.35	Peak
2	1843.360	27.03	6.67	12.31	46.01	54.00	7.99	Peak
3	2249.920	28.17	6.17	15.94	50.28	54.00	3.72	Peak
4	2632.960	29.15	6.68	16.12	51.95	54.00	2.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official
 limit are not reported.

Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1608.160	26.14	6.21	10.41	42.76	54.00	11.24	Peak
2	2258.320	28.17	6.17	16.38	50.72	54.00	3.28	Peak
3	2527.120	28.81	6.50	13.75	49.06	54.00	4.94	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official
 limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

Data no. : 5
 Ant. pol. : HORIZONTAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2705.080	29.38	6.79	16.42	52.59	54.00	1.41	Peak
2	3217.240	30.77	7.37	9.54	47.68	54.00	6.32	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2412MHz (802.11n HT-20)

Data no. : 6
 Ant. pol. : VERTICAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2728.840	29.49	6.83	10.31	46.63	54.00	7.37	Peak
2	3217.240	30.77	7.37	13.62	51.76	54.00	2.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT40, Transmit, Frequency: 2422MHz

Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1843.360	27.03	6.67	11.70	45.40	54.00	8.60	Peak
2	2325.520	28.32	6.26	15.49	50.07	54.00	3.93	Peak
3	2632.960	29.15	6.68	16.44	52.27	54.00	1.73	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59% □Vic Fong
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	1843.360	27.03	6.67	13.43	47.13	54.00	6.87	Peak
2	2350.720	28.36	6.29	13.69	48.34	54.00	5.66	Peak
3	2552.320	28.87	6.56	13.34	48.77	54.00	5.23	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

Data no. : 5
 Ant. pol. : HORIZONTAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2715.640	29.44	6.80	15.00	51.24	54.00	2.76	Peak
2	3233.080	30.80	7.38	10.43	48.61	54.00	5.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber
 Dis. / Ant. : 3m 3115(4927)
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/59%
 EUT : 26380
 Power Rating : DC 3.7V
 Test Mode : TX2422MHz (802.11n HT-40)

Data no. : 6
 Ant. pol. : VERTICAL
 □Vic Fong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2711.680	29.44	6.80	11.37	47.61	54.00	6.39	Peak
2	3233.080	30.80	7.38	13.83	52.01	54.00	1.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3.6.3. Restricted Bands Measurement Results

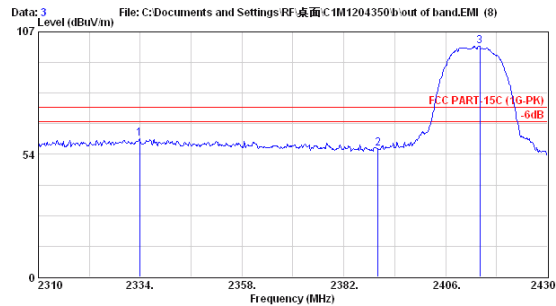
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11b, Transmit, Channel: 01, Frequency: 2412MHz



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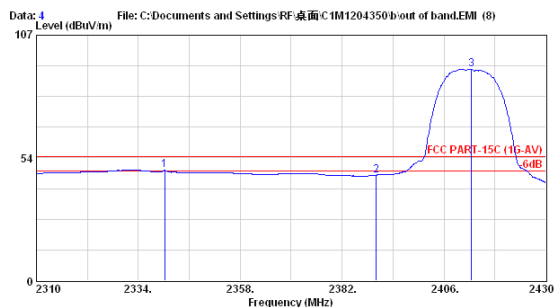
Site no. : A/C Chamber Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% Dvic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2333.880	28.32	6.27	25.65	60.24	74.00	13.76	Peak
2	2390.040	28.47	6.34	21.24	56.06	74.00	17.94	Peak
3	2414.040	28.51	6.36	65.93	100.80	74.00	-26.80	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% Dvic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2340.240	28.36	6.28	13.53	48.17	54.00	5.83	Average
2	2390.040	28.47	6.34	11.17	45.99	54.00	8.01	Average
3	2412.480	28.51	6.36	57.24	92.12	54.00	-38.12	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

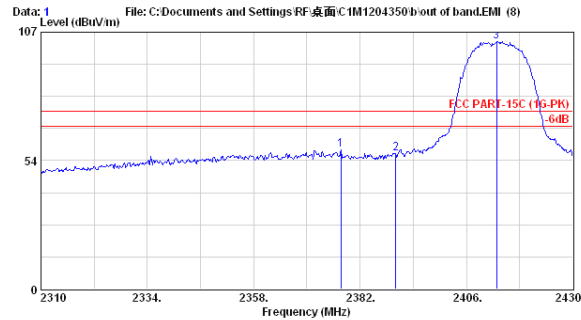
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11b, Transmit, Channel: 01, Frequency: 2412MHz



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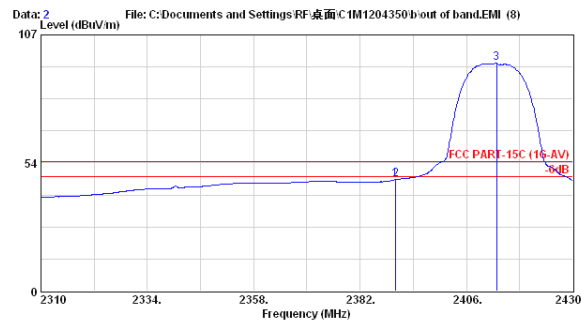
Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2377.680	28.43	6.32	23.44	58.20	74.00	15.80	Peak
2	2390.040	28.47	6.34	21.63	56.45	74.00	17.55	Peak
3	2412.840	28.51	6.36	68.15	103.03	74.00	-29.03	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 2
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11b)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.920	28.47	6.34	11.74	46.55	54.00	7.45	Average
2	2390.040	28.47	6.34	11.82	46.64	54.00	7.36	Average
3	2412.840	28.51	6.36	60.26	95.14	54.00	-41.14	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

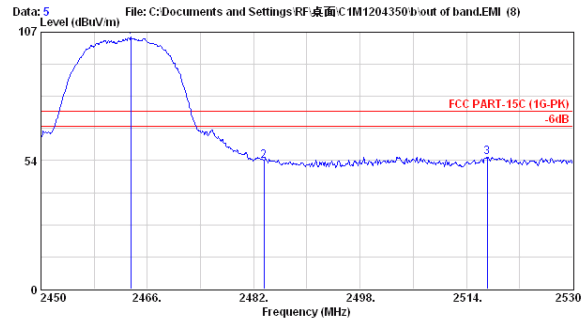
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11b, Transmit, Channel: 11, Frequency: 2462MHz



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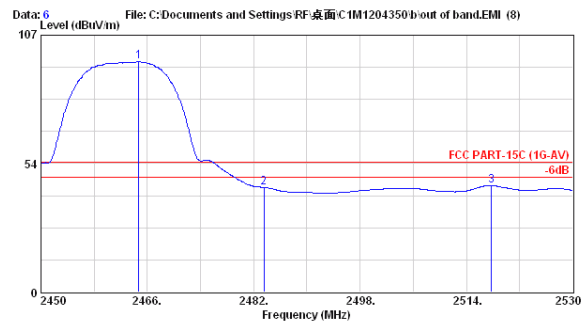
Site no. : A/C Chamber Data no. : 5
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% QVic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2463.520	28.62	6.42	69.80	104.85	74.00	-30.85	Peak
2 2483.520	28.66	6.45	18.25	53.37	74.00	20.63	Peak
3 2517.120	28.76	6.49	19.64	54.88	74.00	19.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 6
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% QVic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2464.720	28.62	6.42	60.94	95.99	54.00	-41.99	Average
2 2483.520	28.66	6.45	8.50	43.62	54.00	10.38	Average
3 2517.760	28.76	6.49	9.10	44.34	54.00	9.66	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

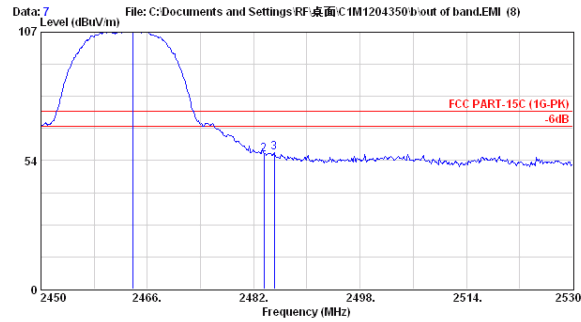
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11b, Transmit, Channel: 11, Frequency: 2462MHz



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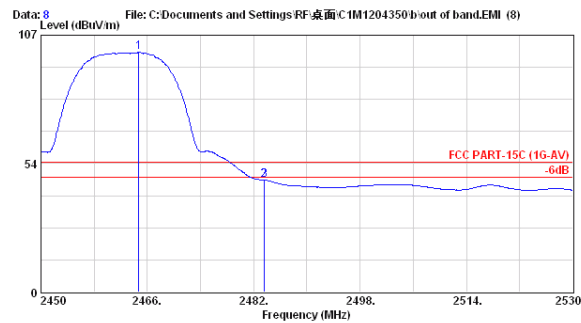
Site no. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11b)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2463.760	28.62	6.42	73.28	108.33	74.00	-34.33	Peak
2 2483.520	28.66	6.45	20.82	55.94	74.00	18.06	Peak
3 2485.120	28.66	6.45	21.87	56.98	74.00	17.02	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11b)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2464.720	28.62	6.42	64.84	99.89	54.00	-45.89	Average
2 2483.520	28.66	6.45	11.52	46.64	54.00	7.36	Average
3 2483.600	28.66	6.45	11.51	46.63	54.00	7.37	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

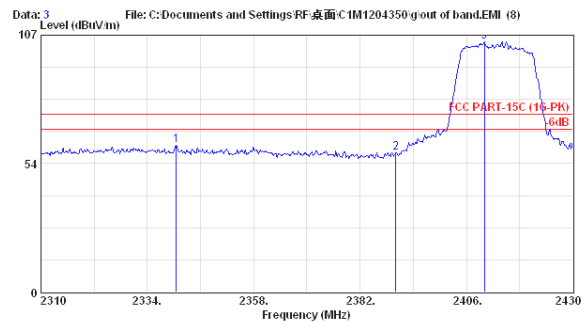
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11g, Transmit, Channel: 01, Frequency: 2412MHz



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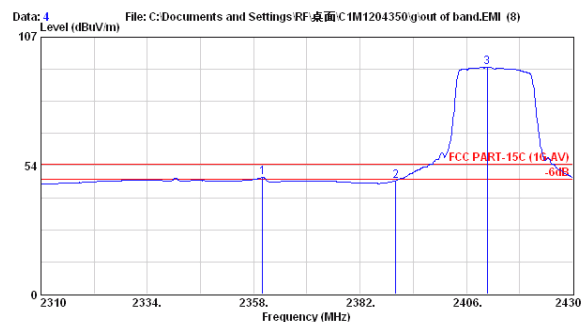
Site no. : A/C Chamber Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11g)

Freq. (MHz)	Ant. Cable			Emission			Margin	Remark
	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)			
1 2340.480	28.36	6.28	26.45	61.09	74.00	12.91	Peak	
2 2390.040	28.47	6.34	23.19	58.01	74.00	15.99	Peak	
3 2410.080	28.51	6.36	69.44	104.31	74.00	-30.31	Peak	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11g)

Freq. (MHz)	Ant. Cable			Emission			Margin	Remark
	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)			
1 2360.040	28.40	6.30	13.92	48.62	54.00	5.38	Average	
2 2390.040	28.47	6.34	12.39	47.21	54.00	6.79	Average	
3 2410.680	28.51	6.36	59.52	94.39	54.00	-40.39	Average	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

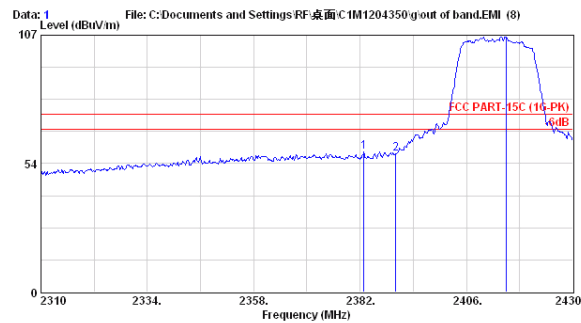
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11g, Transmit, Channel: 01, Frequency: 2412MHz



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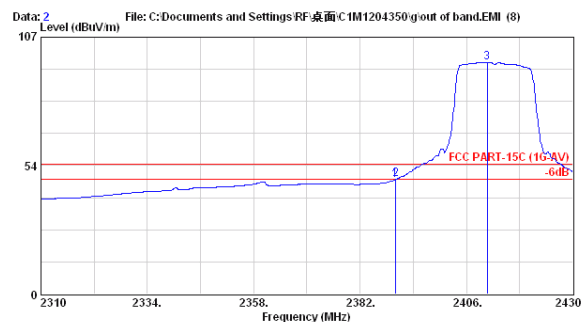
Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2382.840	28.43	6.33	23.55	58.31	74.00	15.69	Peak
2	2390.040	28.47	6.34	22.93	57.75	74.00	16.25	Peak
3	2414.880	28.51	6.36	71.32	106.20	74.00	-32.20	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 2
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.920	28.47	6.34	12.76	47.58	54.00	6.42	Average
2	2390.040	28.47	6.34	12.83	47.65	54.00	6.35	Average
3	2410.680	28.51	6.36	61.54	96.41	54.00	-42.41	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

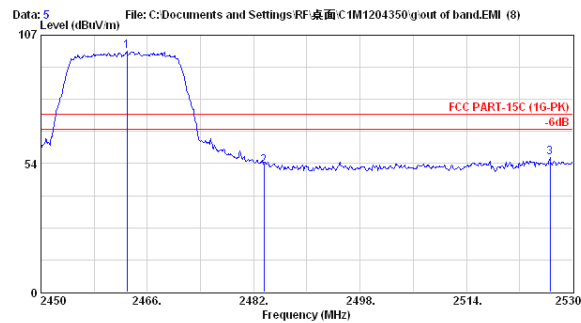
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11g, Transmit, Channel: 11, Frequency: 2462MHz



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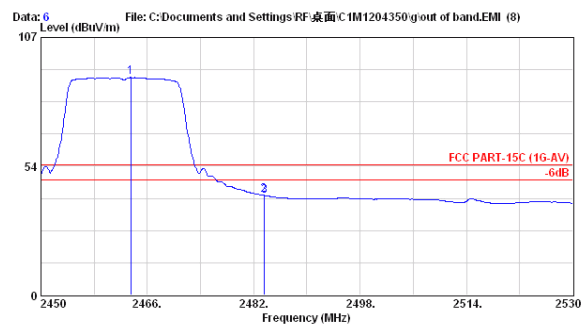
Site no. : A/C Chamber Data no. : 5
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11g)

Freq. (MHz)	Ant. Cable			Emission			Remark
	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1 2462.960	28.62	6.42	65.21	100.26	74.00	-26.26	Peak
2 2483.520	28.66	6.45	17.56	52.68	74.00	21.32	Peak
3 2526.560	28.81	6.50	20.59	55.90	74.00	18.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 6
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11g)

Freq. (MHz)	Ant. Cable			Emission			Remark
	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1 2463.520	28.62	6.42	55.31	90.36	54.00	-36.36	Average
2 2483.520	28.66	6.45	6.26	41.38	54.00	12.62	Average
3 2483.600	28.66	6.45	6.23	41.35	54.00	12.65	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

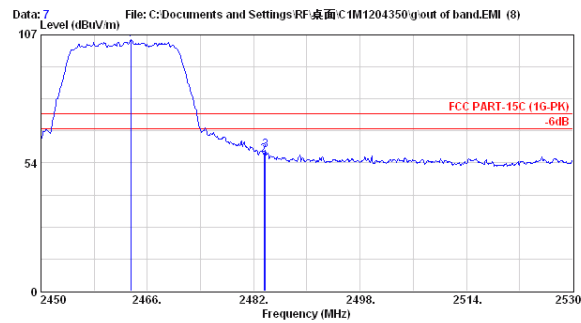
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11g, Transmit, Channel: 11, Frequency: 2462MHz



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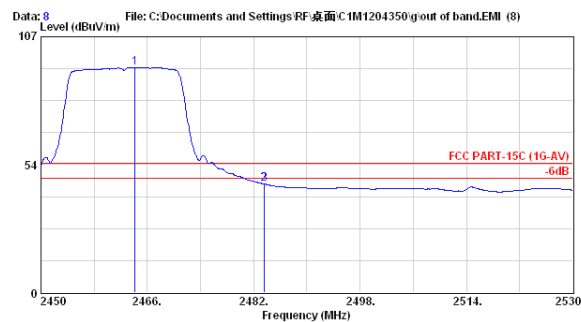
Site no. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.520	28.62	6.42	69.92	104.97	74.00	-30.97	Peak
2	2483.520	28.66	6.45	21.06	56.98	74.00	17.02	Peak
3	2483.760	28.66	6.45	23.61	59.73	74.00	15.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11g)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.160	28.62	6.42	59.17	94.21	54.00	-40.21	Average
2	2483.520	28.66	6.45	10.27	45.39	54.00	8.61	Average
3	2483.600	28.66	6.45	10.27	45.38	54.00	8.62	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

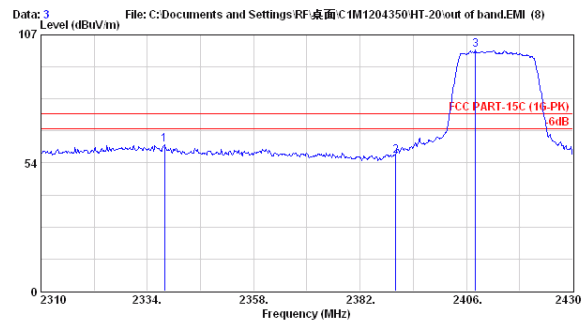
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 01, Frequency: 2412MHz



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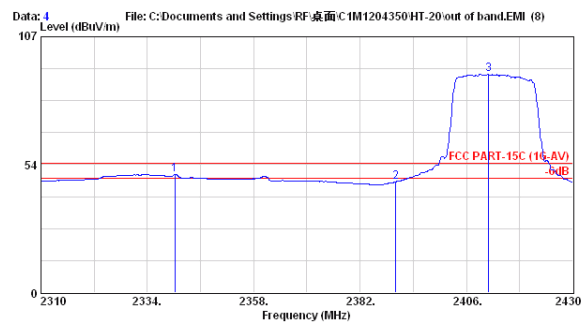
Site no. : A/C Chamber Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11n HT-20)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2337.840	28.36	6.27	26.52	61.15	74.00	12.85	Peak
2 2390.040	28.47	6.34	21.67	56.49	74.00	17.51	Peak
3 2409.040	28.51	6.36	65.74	100.61	74.00	-26.61	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11n HT-20)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2340.240	28.36	6.28	14.77	49.41	54.00	4.59	Average
2 2390.040	28.47	6.34	11.54	46.36	54.00	7.64	Average
3 2411.040	28.51	6.36	56.37	91.24	54.00	-37.24	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

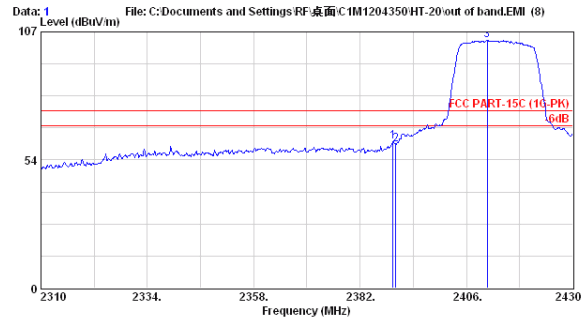
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 01, Frequency: 2412MHz



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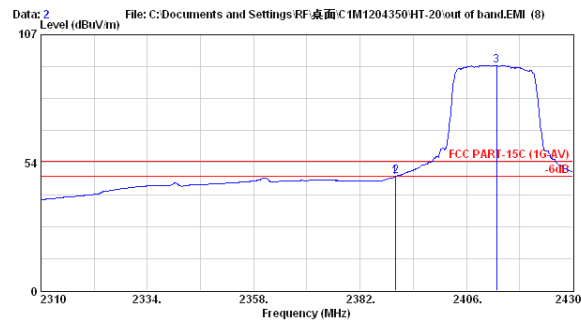
Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% JVIC Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11n HT-20)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2389.440	28.47	6.34	26.38	61.20	74.00	12.80	Peak
2 2390.040	28.47	6.34	25.01	59.83	74.00	14.17	Peak
3 2410.680	28.51	6.36	68.56	103.43	74.00	-29.43	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 2
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% JVIC Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2412MHz (802.11n HT-20)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2389.920	28.47	6.34	12.76	47.58	54.00	6.42	Average
2 2390.040	28.47	6.34	12.83	47.65	54.00	6.35	Average
3 2412.840	28.51	6.36	59.38	94.26	54.00	-40.26	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

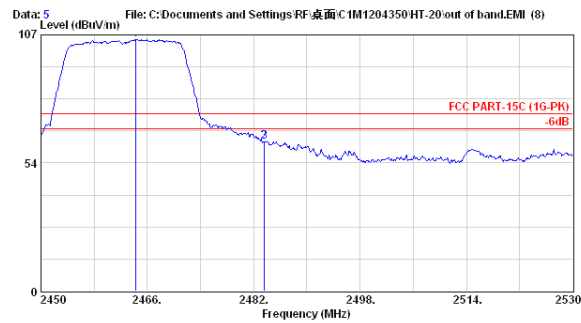
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 11, Frequency: 2462MHz



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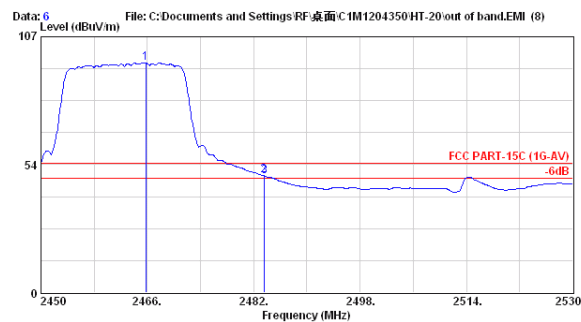
Site no. : A/C Chamber Data no. : 5
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.320	28.62	6.42	69.97	105.01	74.00	-31.01	Peak
2	2483.520	28.66	6.45	27.39	62.51	74.00	11.49	Peak
3	2483.600	28.66	6.45	27.31	62.42	74.00	11.58	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 6
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.760	28.62	6.42	60.87	95.92	54.00	-41.92	Average
2	2483.520	28.66	6.45	13.69	48.81	54.00	5.19	Average
3	2483.600	28.66	6.45	13.62	48.73	54.00	5.27	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

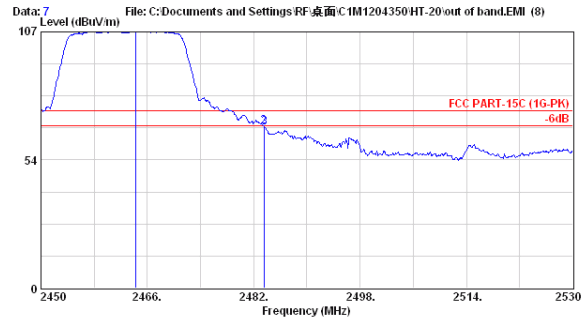
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 11, Frequency: 2462MHz



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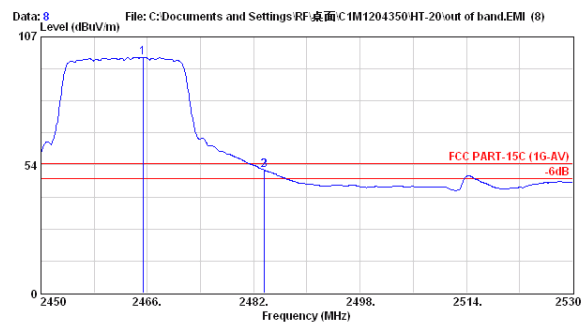
Site no. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.320	28.62	6.42	72.66	107.70	74.00	-33.70	Peak
2	2483.520	28.66	6.45	32.18	67.30	74.00	6.70	Peak
3	2483.600	28.66	6.45	32.05	67.17	74.00	6.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2462MHz (802.11n HT-20)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.360	28.62	6.42	63.29	98.34	54.00	-44.34	Average
2	2483.520	28.66	6.45	16.29	51.41	54.00	2.59	Average
3	2483.600	28.66	6.45	16.20	51.31	54.00	2.69	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

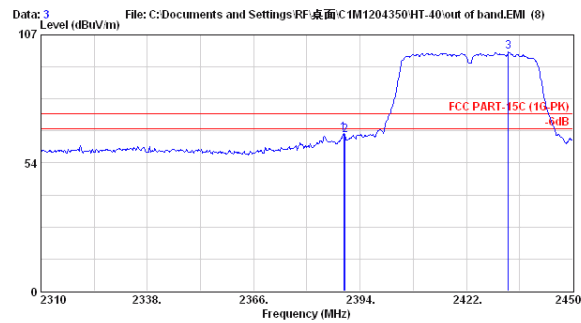
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT40, Transmit, Channel: 03, Frequency: 2422MHz



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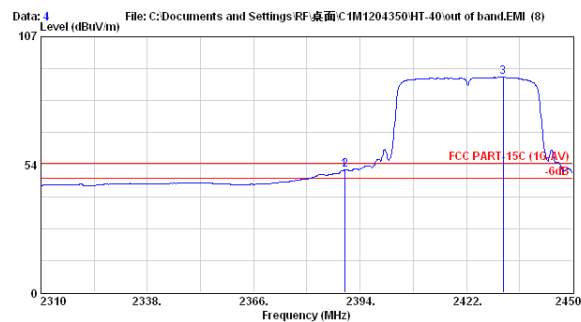
Site no. : A/C Chamber Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% QVic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.660	28.47	6.34	31.12	65.94	74.00	8.06	Peak
2	2390.080	28.47	6.34	30.37	65.19	74.00	8.81	Peak
3	2433.060	28.55	6.39	64.87	99.81	74.00	-25.81	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% QVic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.940	28.47	6.34	16.36	51.17	54.00	2.83	Average
2	2390.080	28.47	6.34	16.38	51.20	54.00	2.80	Average
3	2431.660	28.55	6.39	55.18	90.12	54.00	-36.12	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

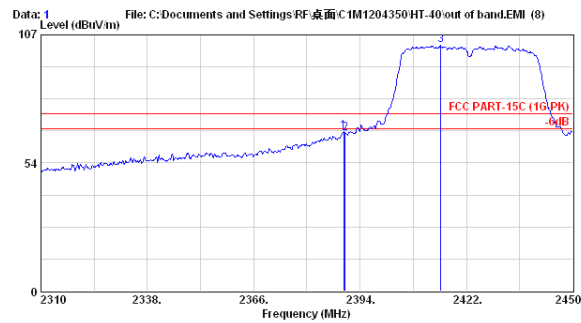
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT40, Transmit, Channel: 03, Frequency: 2422MHz



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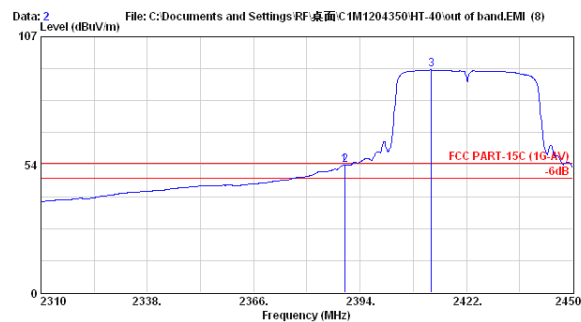
Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.660	28.47	6.34	31.99	66.81	74.00	7.19	Peak
2	2390.080	28.47	6.34	30.89	65.71	74.00	8.29	Peak
3	2415.280	28.51	6.36	67.64	102.52	74.00	-28.52	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 2
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2422MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.940	28.47	6.34	18.54	53.35	54.00	0.65	Average
2	2390.080	28.47	6.34	18.59	53.41	54.00	0.59	Average
3	2412.760	28.51	6.36	58.23	93.11	54.00	-39.11	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

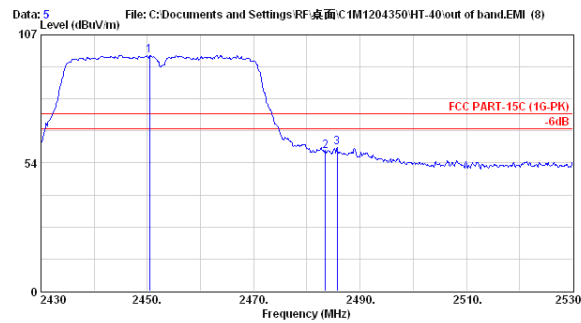
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT40, Transmit, Channel: 09, Frequency: 2452MHz



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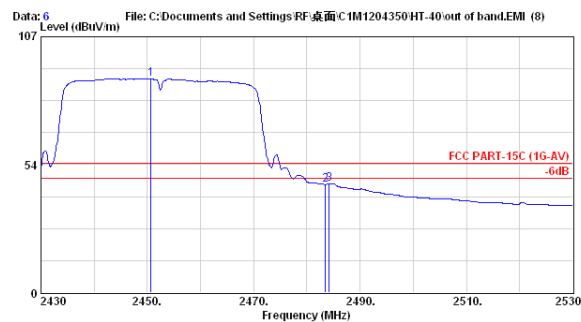
Site no. : A/C Chamber Data no. : 5
Dis. / Ant. : 3m 311.5(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2452MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2450.400	28.59	6.41	63.46	98.45	74.00	-24.45	Peak
2	2483.500	28.66	6.45	23.19	58.30	74.00	15.70	Peak
3	2485.700	28.66	6.45	24.81	59.92	74.00	14.08	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 6
Dis. / Ant. : 3m 311.5(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2452MHz (802.11n HT-40)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2450.700	28.59	6.41	54.49	89.48	54.00	-35.48	Average
2	2483.500	28.66	6.45	10.03	45.14	54.00	8.86	Average
3	2484.200	28.66	6.45	10.49	45.60	54.00	8.40	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

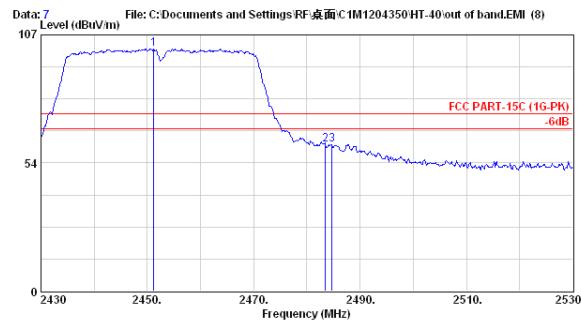
Date of Test : May 10, 2012 Temperature : 26°C

EUT : Karbonpad Humidity : 59%

Test Mode : 802.11n-HT40, Transmit, Channel: 09, Frequency: 2452MHz



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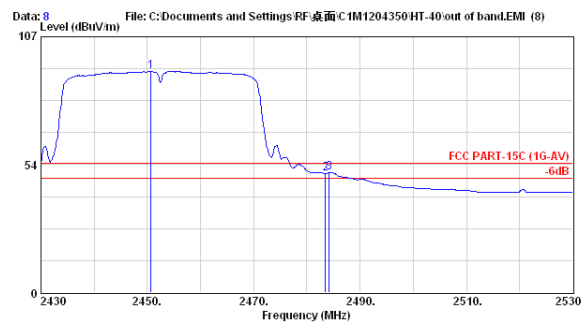
Site no. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2452MHz (802.11n HT-40)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2451.200	28.59	6.41	66.28	101.28	74.00	-27.28	Peak
2 2483.500	28.66	6.45	26.10	61.22	74.00	12.78	Peak
3 2484.700	28.66	6.45	26.16	61.27	74.00	12.73	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/59% □Vic Fong
EUT : 26380
Power Rating : DC 3.7V
Test Mode : TX2452MHz (802.11n HT-40)

	Ant.	Cable		Emission			
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2450.700	28.59	6.41	57.50	92.49	54.00	-38.49	Average
2 2483.500	28.66	6.45	14.57	49.68	54.00	4.32	Average
3 2484.200	28.66	6.45	15.01	50.12	54.00	3.88	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

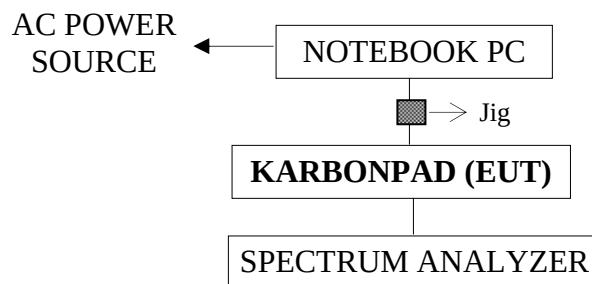
4. 6dB BANDWIDTH MEASUREMENT

4.1. Test Equipment

The following test equipment was used during the 20dB bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'

4.2. Block Diagram of Test Setup



4.3. Specification Limits (§15.247(a)(2))

The minimum 6dB bandwidth shall be at least 500kHz.

4.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

4.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer and RBW=1-5% of OBW and VBW > 3*RBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

The measurement guideline was according to KDB 558074 D01.

4.6. Test Results

PASSED. All the test results are attached in next pages.

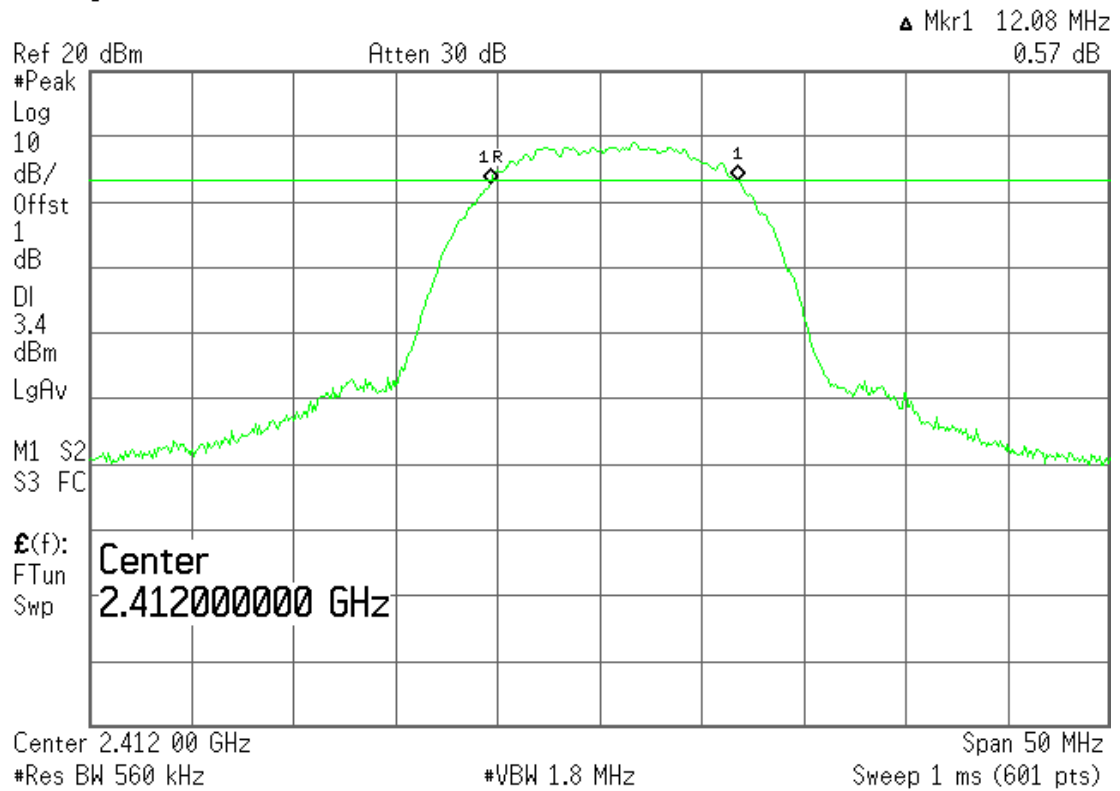
Test Date : May 08, 2012 Temperature : 24°C Humidity : 62%

Mode	Type of Network	Channel	Frequency	6dB Bandwidth
1.	802.11b	CH 1	2412MHz	12.08MHz
2.		CH 6	2437MHz	12.25MHz
3.		CH 11	2462MHz	12.25MHz
4.	802.11g	CH 1	2412MHz	16.33MHz
5.		CH 6	2437MHz	16.33MHz
6.		CH 11	2462MHz	16.25MHz
7.	802.11n-HT20	CH 1	2412MHz	17.50MHz
8.		CH 6	2437MHz	17.50MHz
9.		CH 11	2462MHz	17.50MHz
10.	802.11n-HT40	CH 3	2422MHz	35.87MHz
11.		CH 6	2437MHz	35.47MHz
12.		CH 9	2452MHz	35.60MHz

[Limit: least 500kHz]

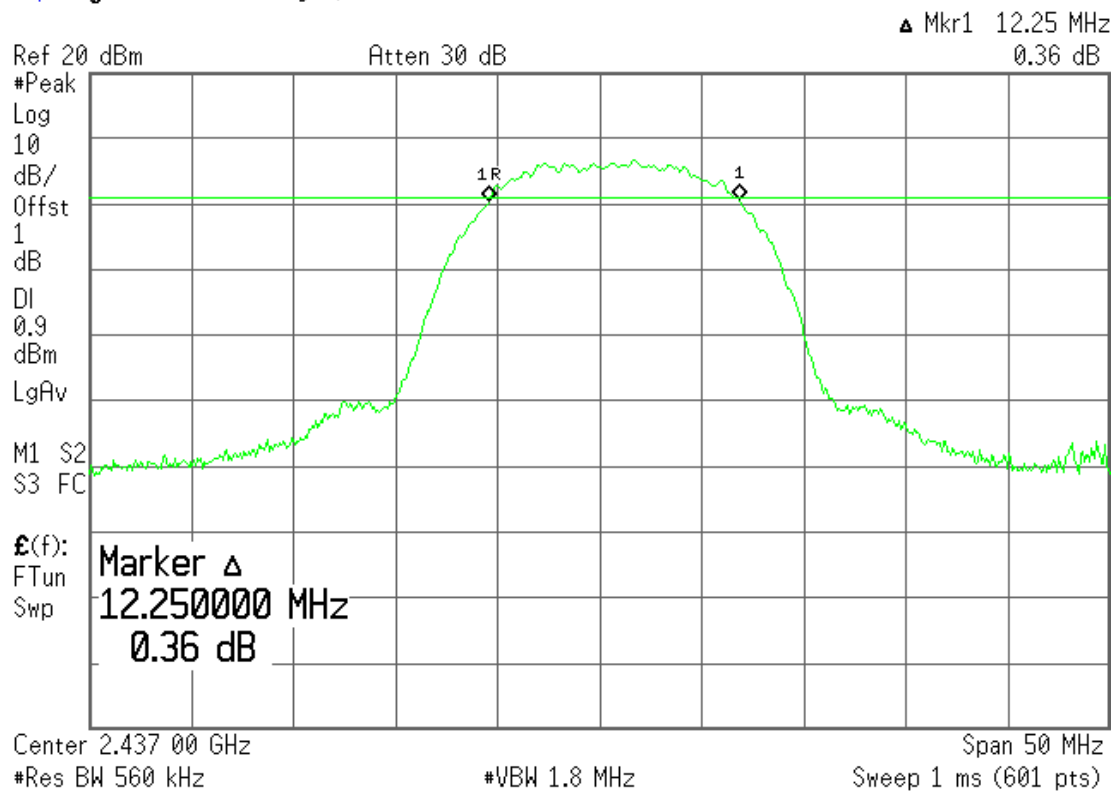
802.11b, Frequency: 2412MHz

Agilent 10:56:20 May 8, 2012



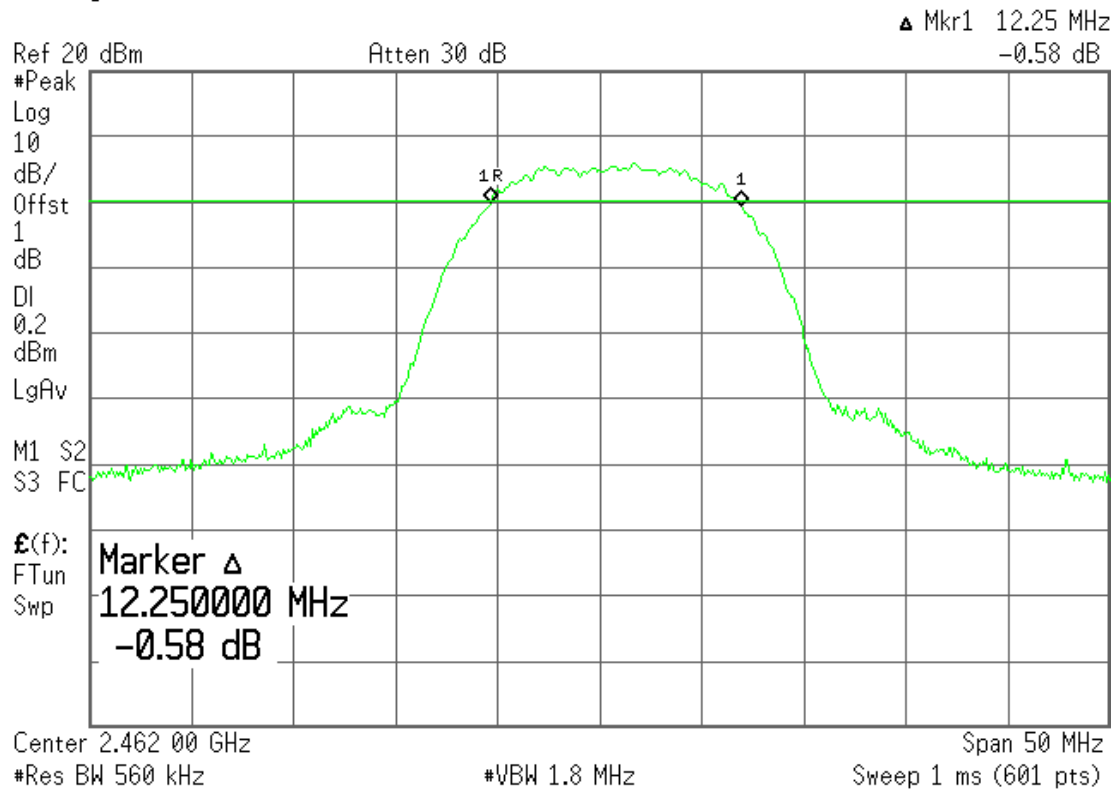
802.11b, Frequency: 2437MHz

Agilent 10:59:30 May 8, 2012

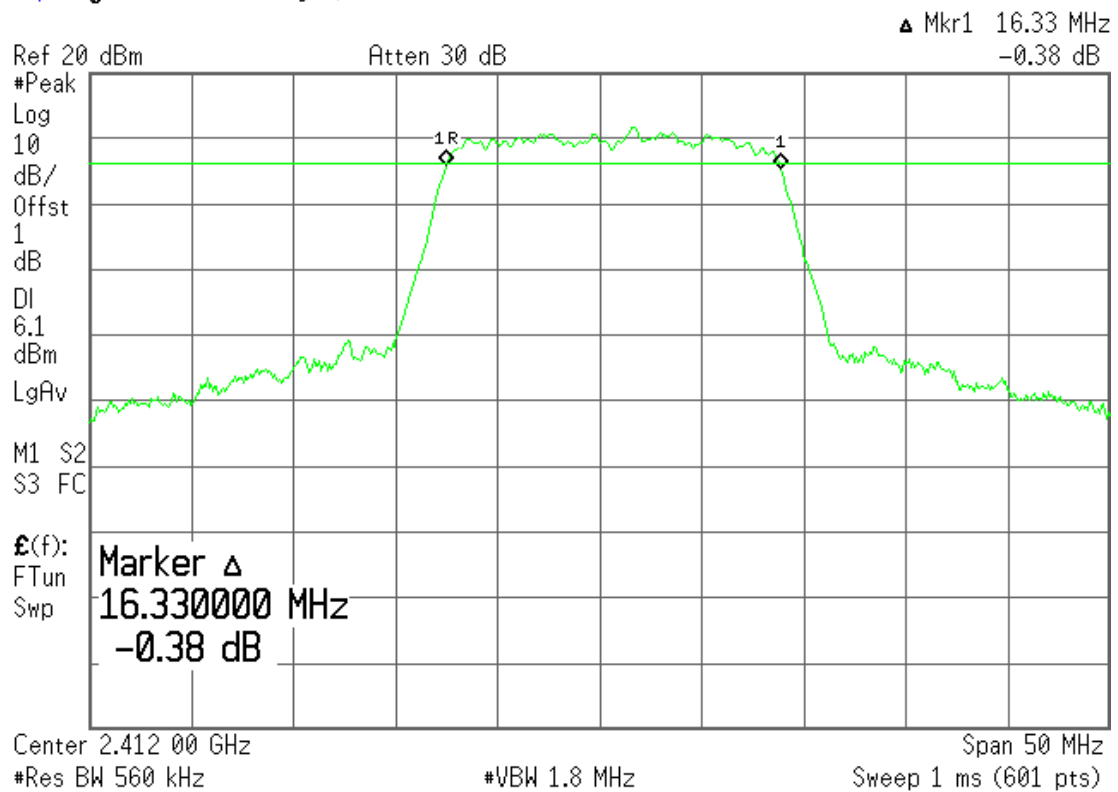


802.11b, Frequency: 2462MHz

Agilent 11:00:33 May 8, 2012

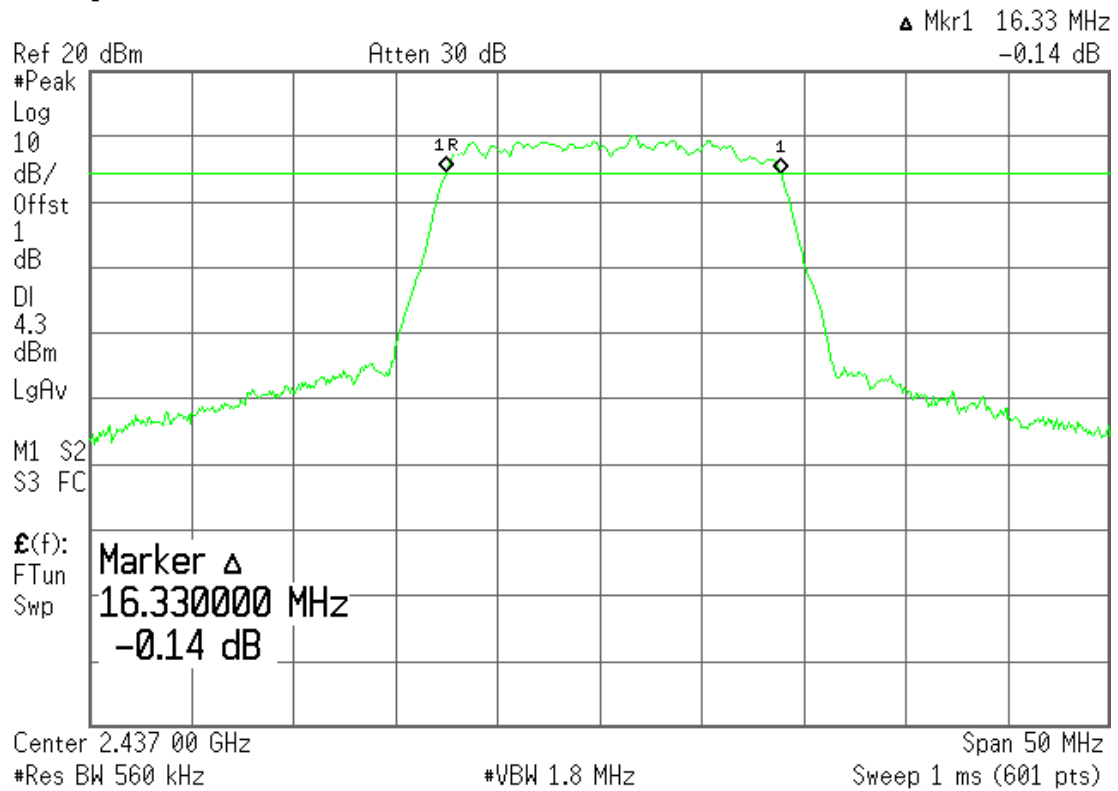
**802.11g, Frequency: 2412MHz**

Agilent 11:15:32 May 8, 2012

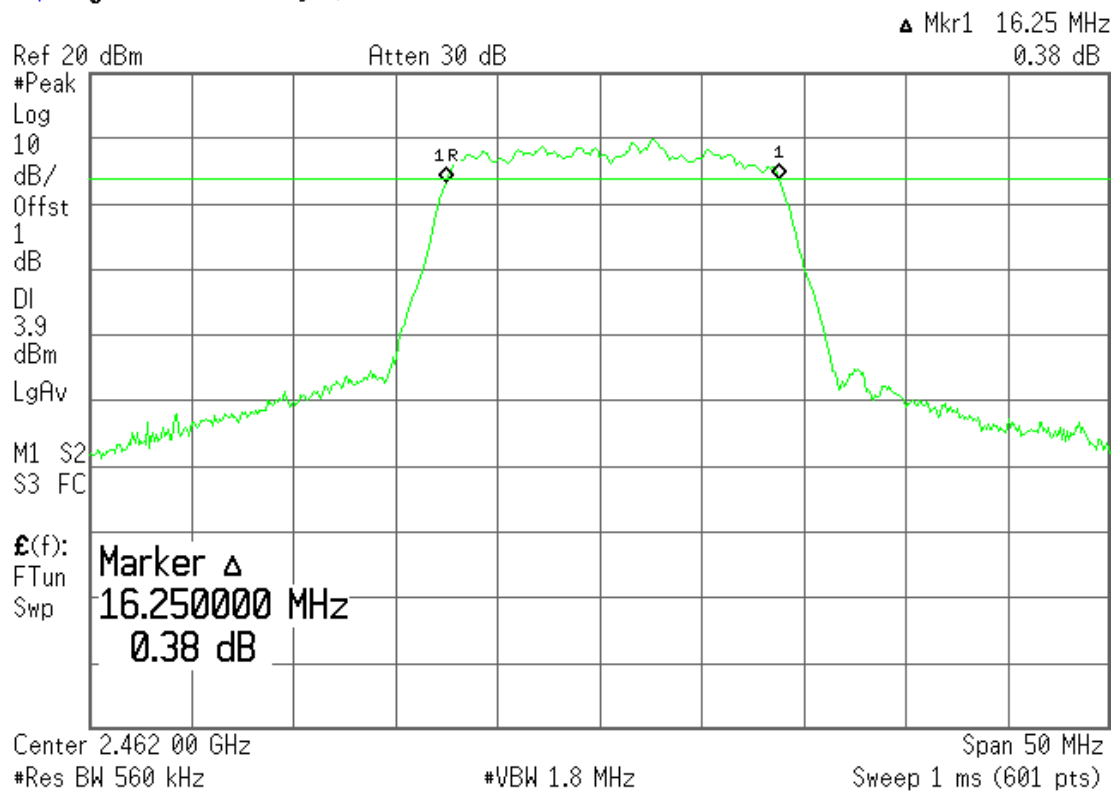


802.11g, Frequency: 2437MHz

Agilent 11:17:23 May 8, 2012

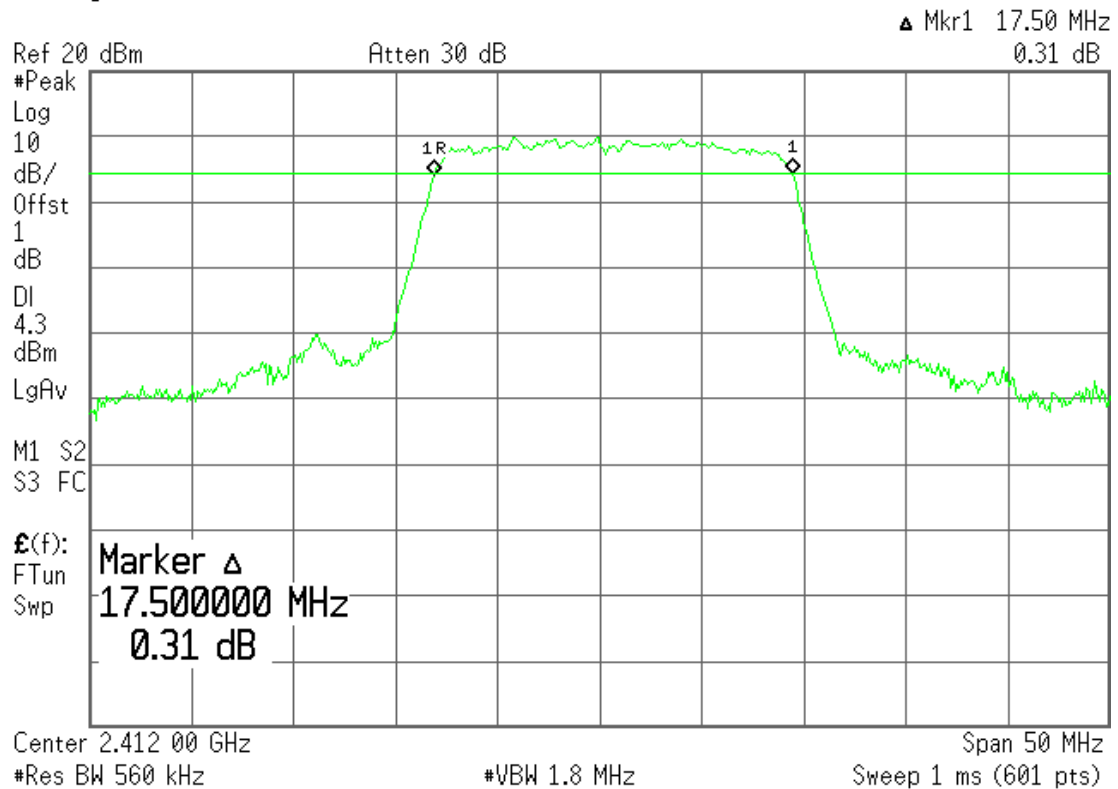
**802.11g, Frequency: 2462MHz**

Agilent 11:18:56 May 8, 2012

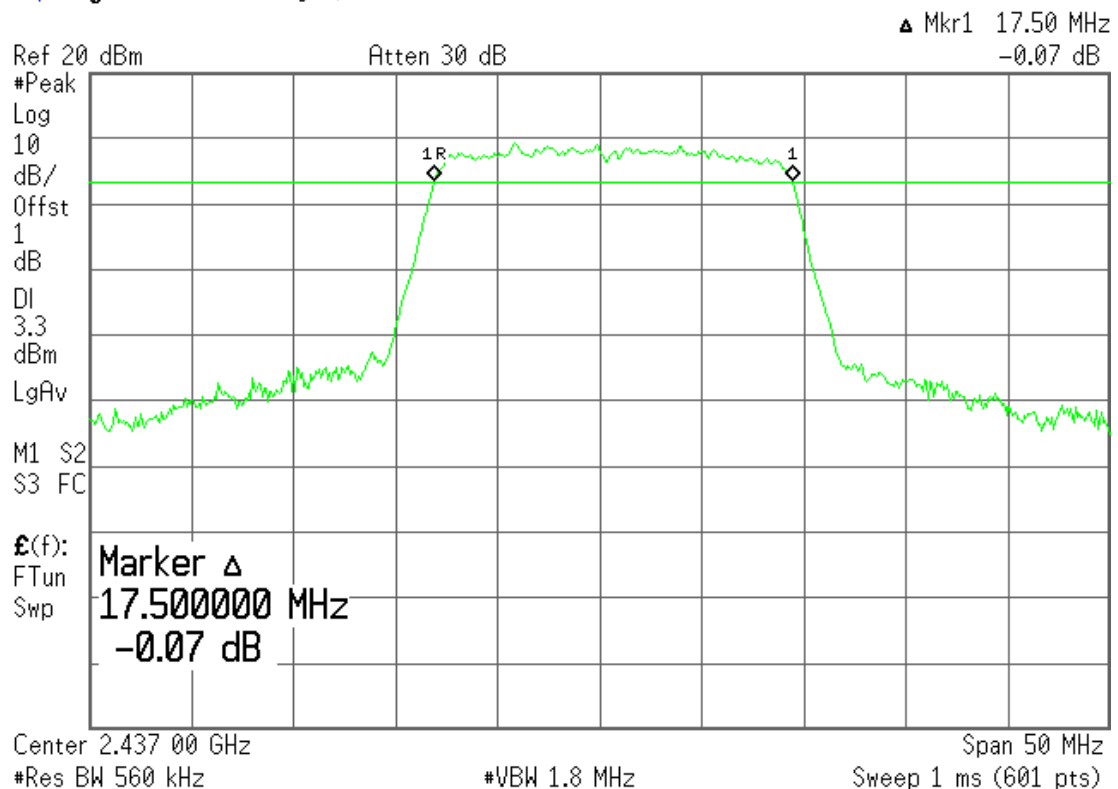


802.11n-HT20, Frequency: 2412MHz

Agilent 11:20:46 May 8, 2012

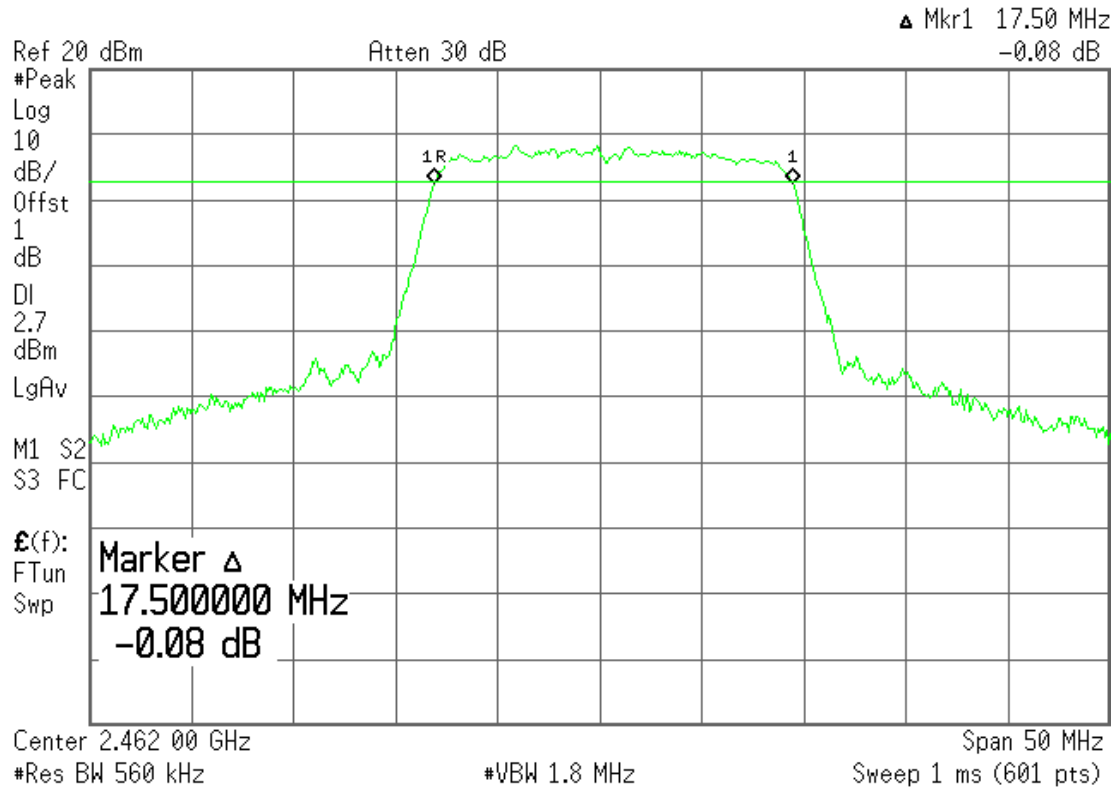
**802.11n-HT20, Frequency: 2437MHz**

Agilent 11:22:30 May 8, 2012

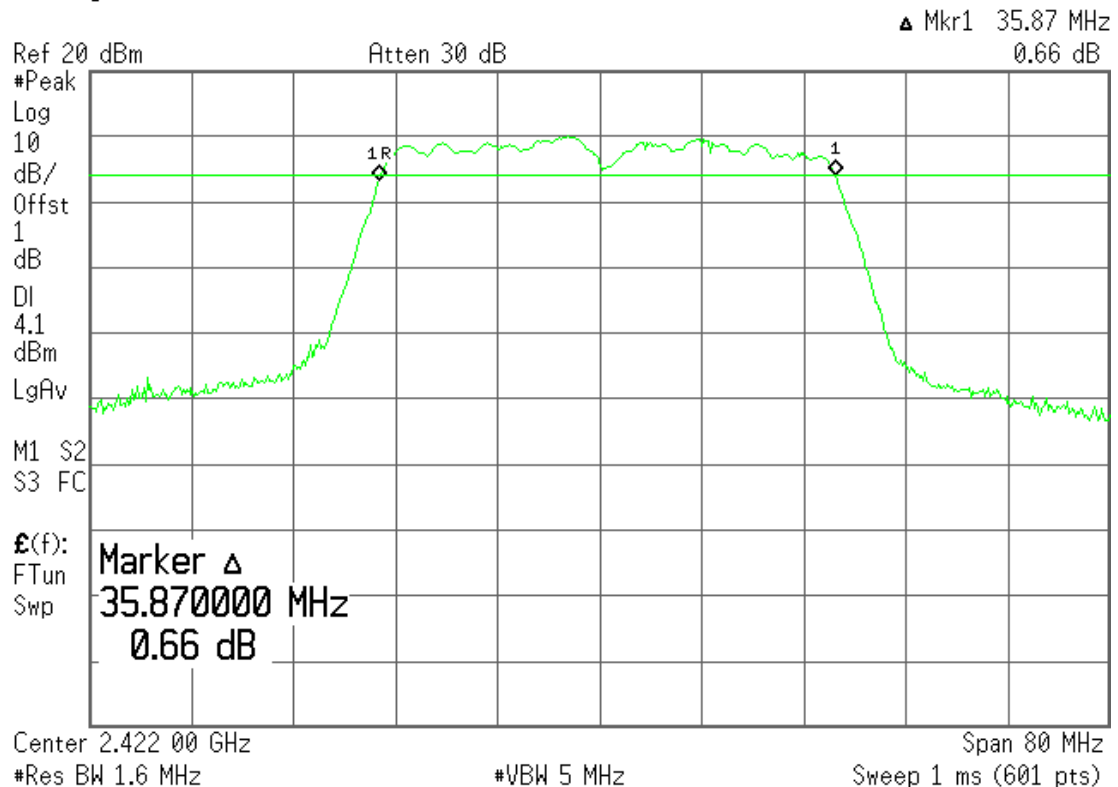


802.11n-HT20, Frequency: 2462MHz

Agilent 11:23:43 May 8, 2012

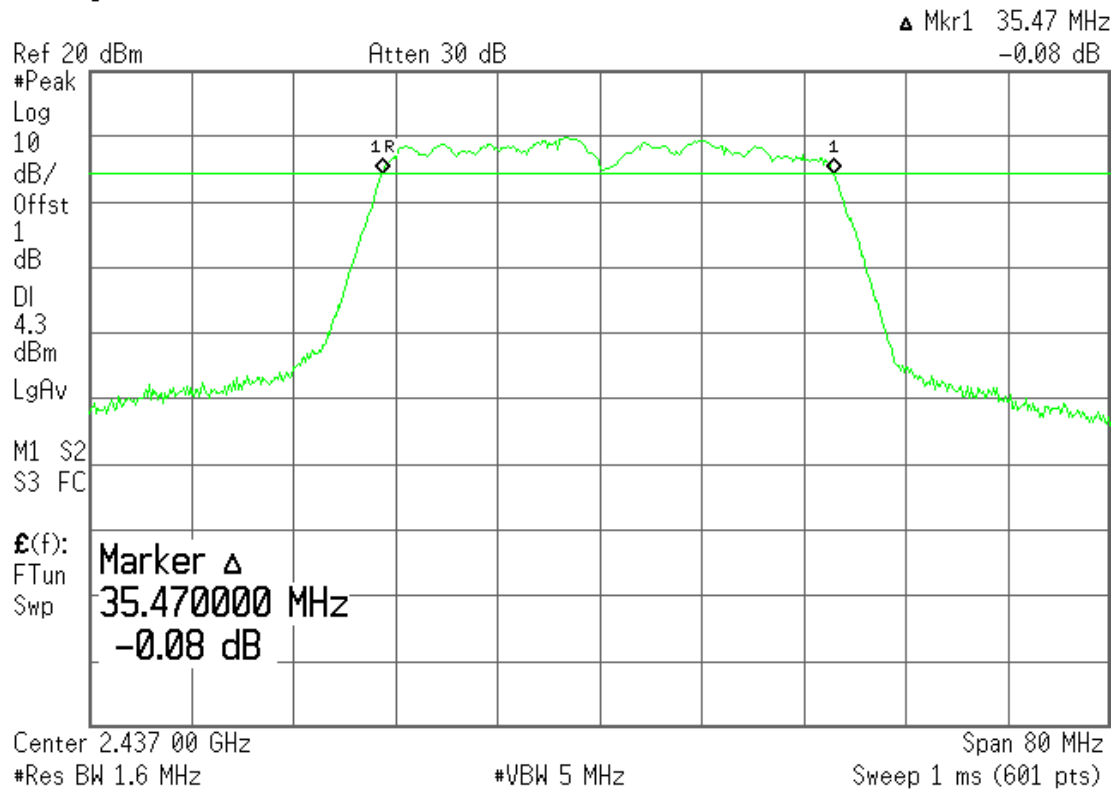
**802.11n-HT40, Frequency: 2422MHz**

Agilent 11:30:53 May 8, 2012

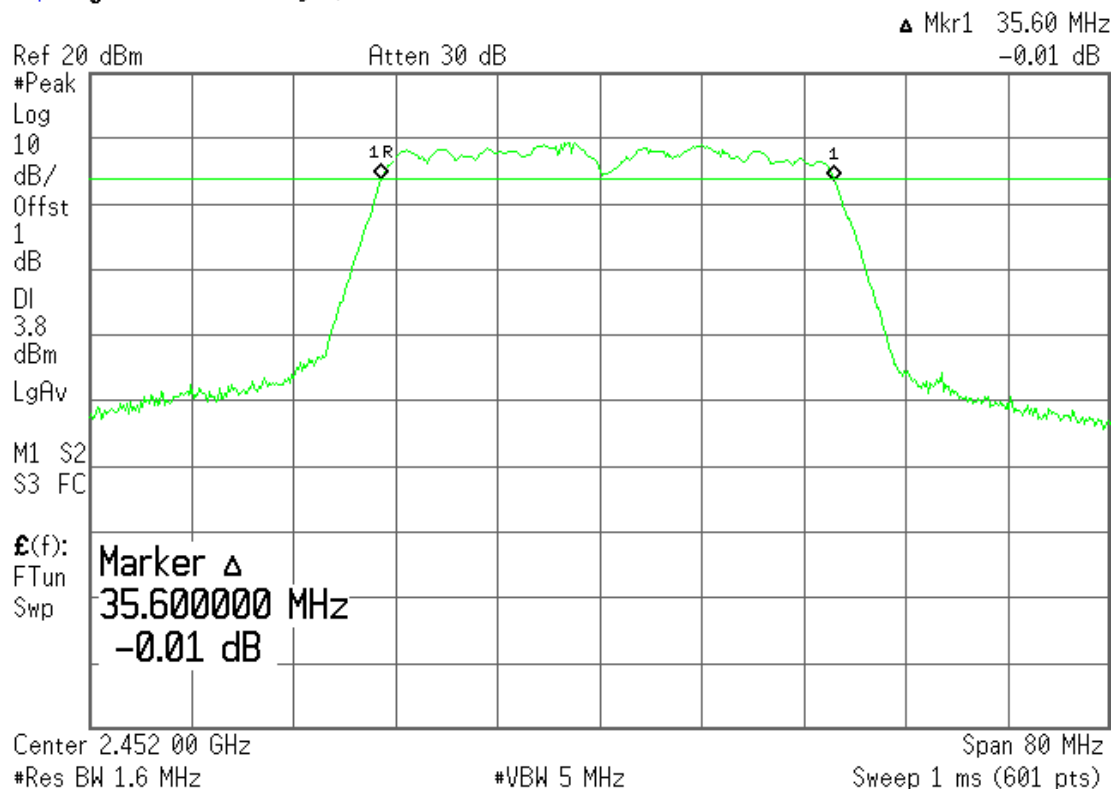


802.11n-HT40, Frequency: 2437MHz

Agilent 11:32:17 May 8, 2012

**802.11n-HT40, Frequency: 2452MHz**

Agilent 11:33:33 May 8, 2012



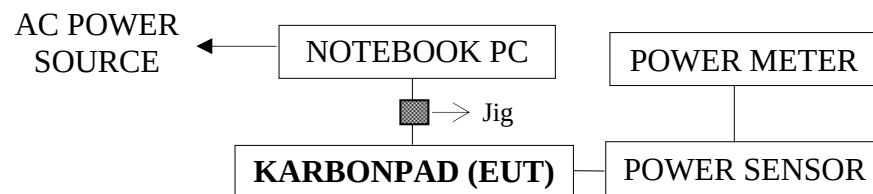
5. MAXIMUM OUTPUT POWER MEASUREMENT

5.1. Test Equipment

The following test equipment was used during the maximum peak output power measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Power Meter	Anritsu	ML2495A	1145008	Nov. 11, 11'	Nov. 10, 12'
2.	Power Sensor	Anritsu	MA2411B	1126096	Oct. 24, 11'	Oct. 23, 12'

5.2. Block Diagram of Test Setup



5.3. Specification Limits (§15.247(b)-(3))

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5MHz is : 1Watt. (30dBm)

5.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

5.5. Test Procedure

The transmitter output was connected to the power sensor and record the reading of power meter.

The measurement guideline was according to KDB 558074 D01.

5.6. Test Results

PASSED. All the test results are listed below.

Test Date: May 09, 2012 Temperature : 24°C Humidity : 62%

Mode	Type of Network	Channel	Frequency	Peak Output Power (dBm)	Average Output Power (dBm)	Limit (dBm)	Power Setting
1.	802.11b	CH 1	2412MHz	19.99	17.90	30	24
2.		CH 6	2437MHz	19.85	17.73	30	24
3.		CH 11	2462MHz	19.51	16.91	30	24
4.	802.11g	CH 1	2412MHz	24.73	15.35	30	31
5.		CH 6	2437MHz	24.69	15.10	30	31
6.		CH 11	2462MHz	24.04	14.37	30	31
7.	802.11n-HT20	CH 1	2412MHz	24.54	15.23	30	31
8.		CH 6	2437MHz	23.92	14.82	30	31
9.		CH 11	2462MHz	23.68	14.23	30	31
10.	802.11n-HT40	CH 3	2422MHz	21.86	12.41	30	24
11.		CH 6	2437MHz	21.78	12.24	30	24
12.		CH 9	2452MHz	21.39	11.52	30	24

Note: We presented both peak and average power value for compare with the power indicated in SAR report.

6. EMISSION LIMITATIONS MEASUREMENT

6.1. Test Equipment

The following test equipment was used during the emission limitations test:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'

6.2. Block Diagram of Test Setup

The same as section.4.2.

6.3. Specification Limits (§15.247(c))

6.3.1. In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).(※This test result attaching to §3.6.3)

6.3.2. The reference level for determining limit of emission limitations is according to the value measured indicated in plots at section 8.6.

6.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

6.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 100kHz RBW and 300kHz VBW.

The measurement guideline was according to KDB 558074 D01.

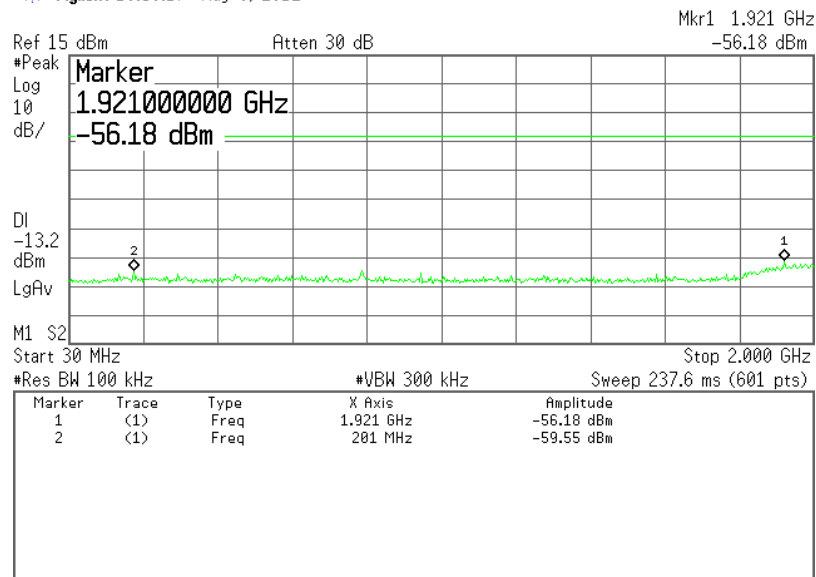
6.6. Test Results

PASSED. The testing data was attached in the next pages.

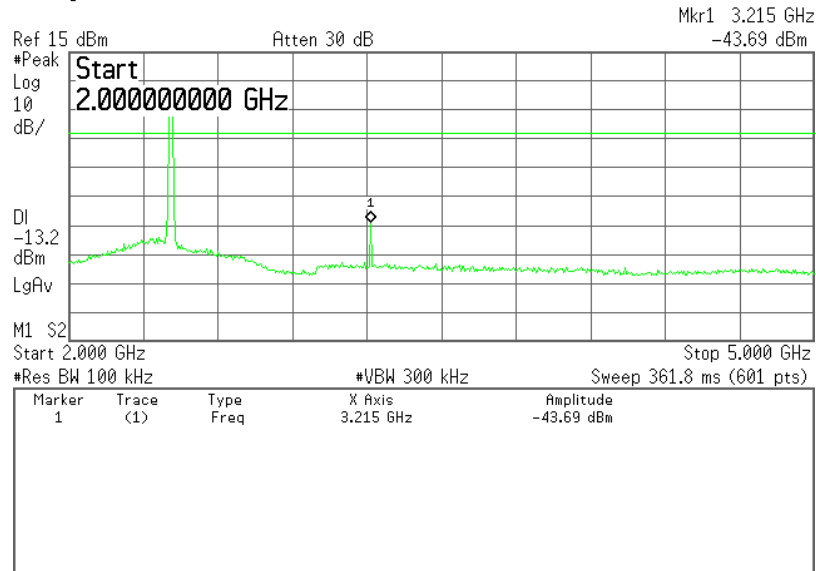
Test Date: May 09, 2012 Temperature : 24℃ Humidity : 62%

802.11b, Frequency: 2412MHz

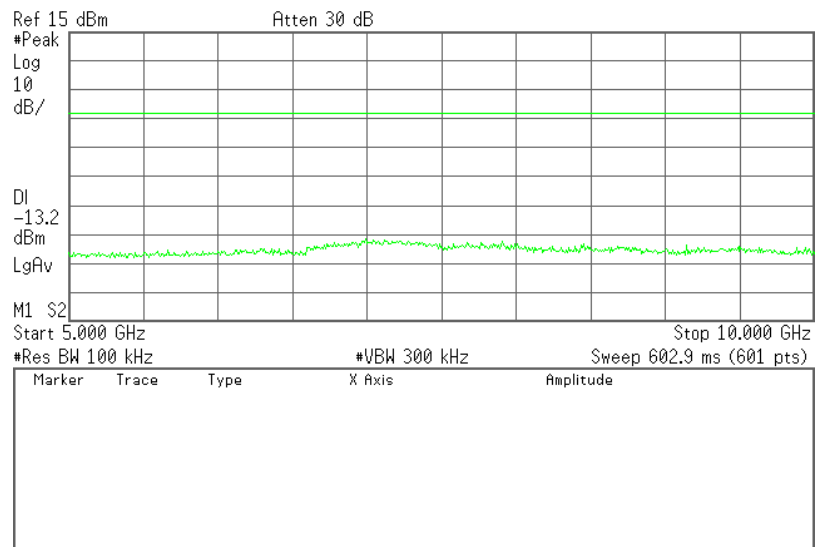
* Agilent 19:59:17 May 9, 2012



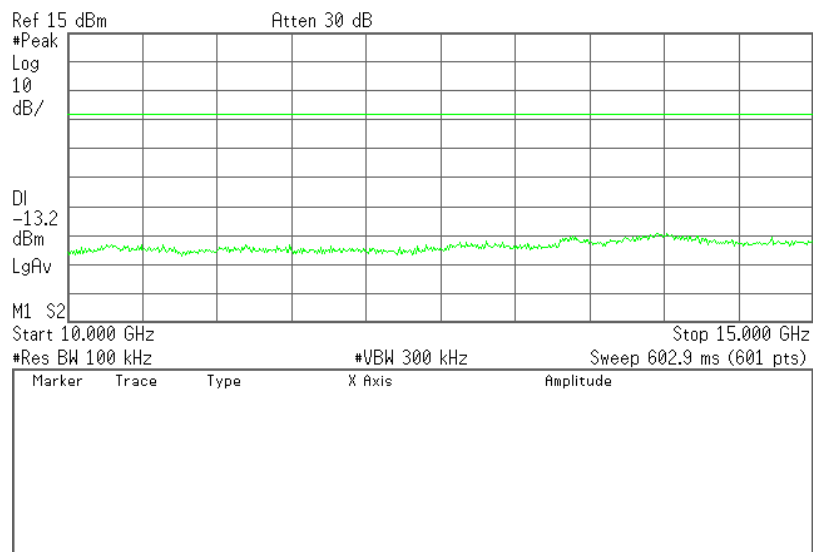
* Agilent 20:01:20 May 9, 2012



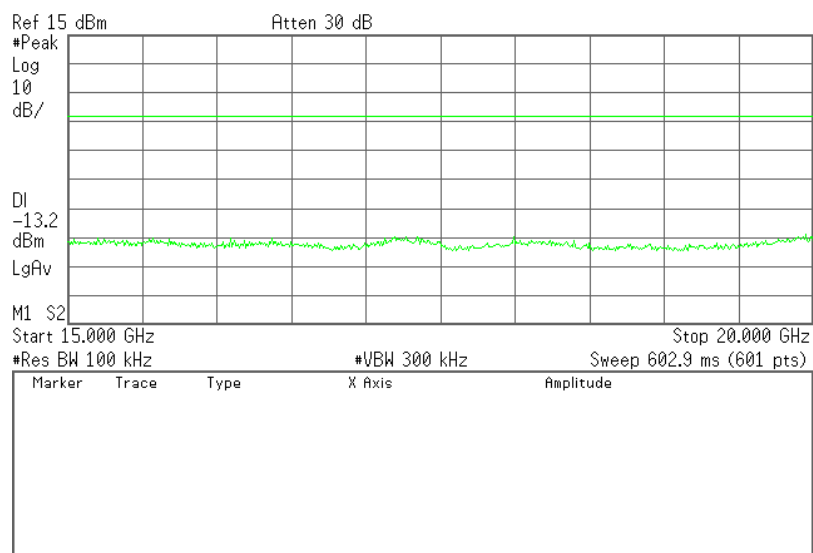
* Agilent 20:02:02 May 9, 2012



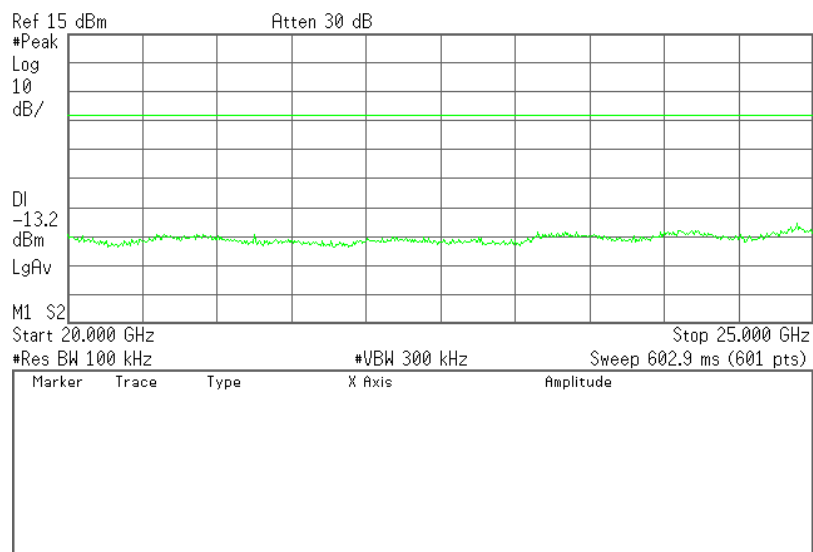
Agilent 20:02:46 May 9, 2012



❄ Agilent 20:03:35 May 9, 2012

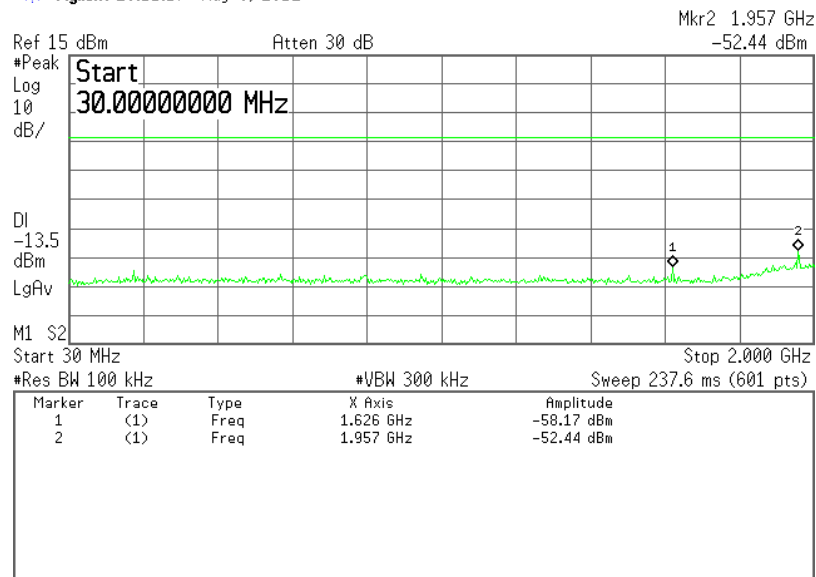


Agilent 20:04:27 May 9, 2012

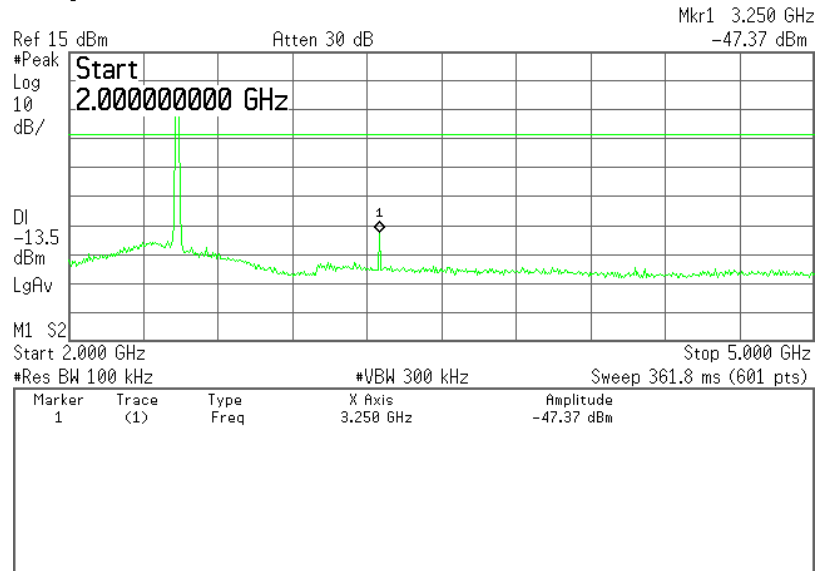


802.11b, Frequency: 2437MHz

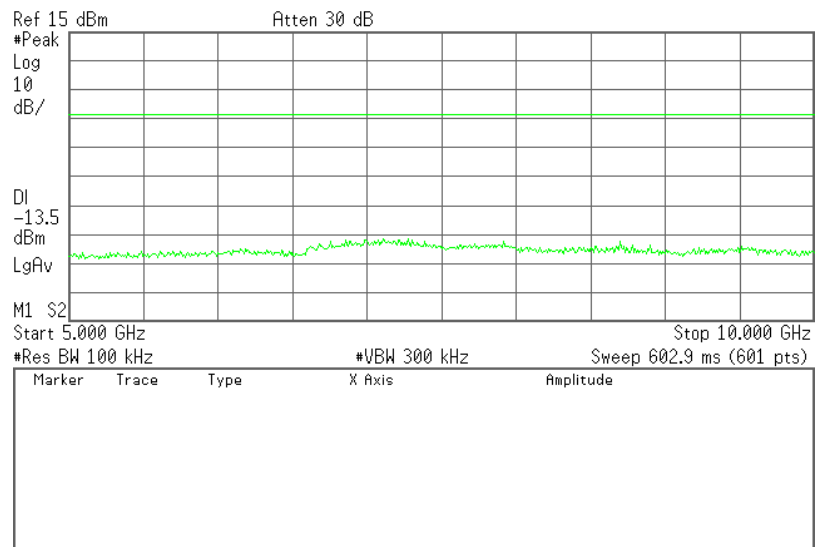
* Agilent 20:11:17 May 9, 2012



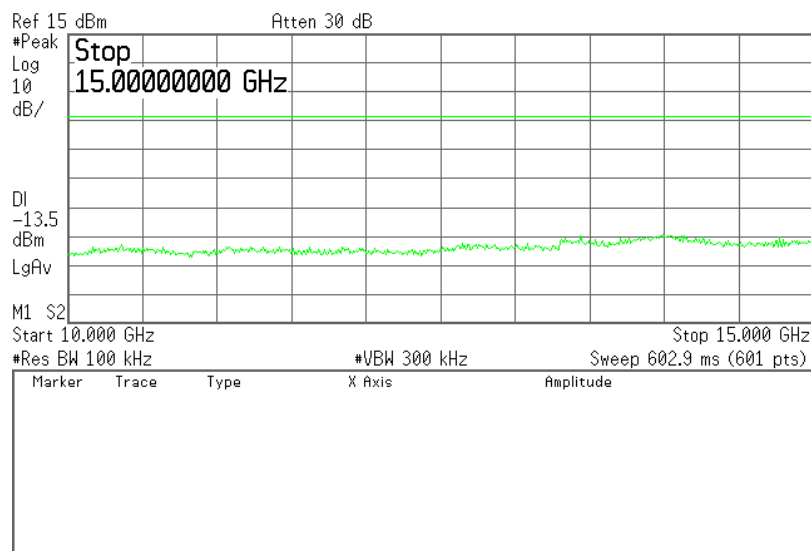
* Agilent 20:11:54 May 9, 2012



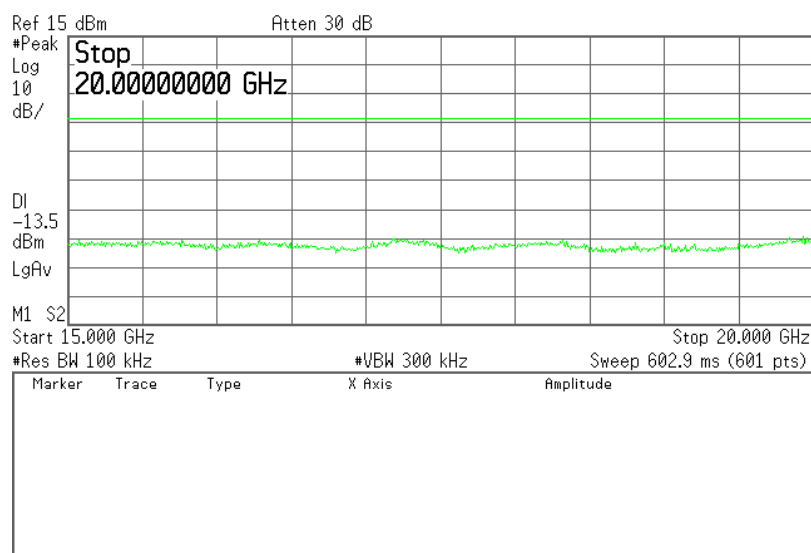
* Agilent 20:12:48 May 9, 2012



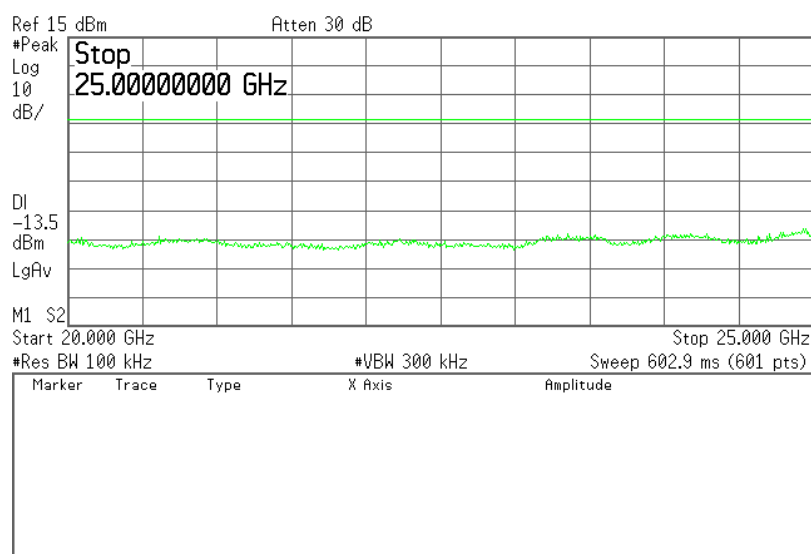
Agilent 20:13:20 May 9, 2012



Agilent 20:14:06 May 9, 2012

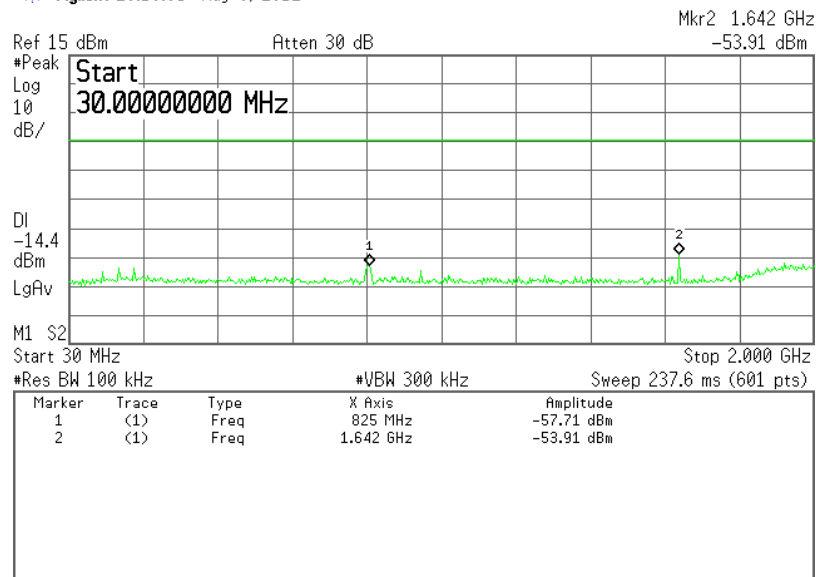


Agilent 20:14:50 May 9, 2012

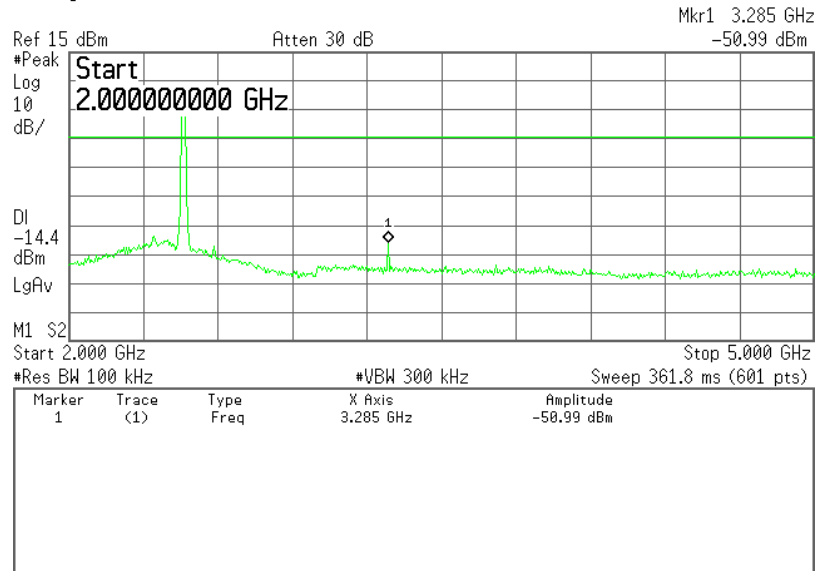


802.11b, Frequency: 2462MHz

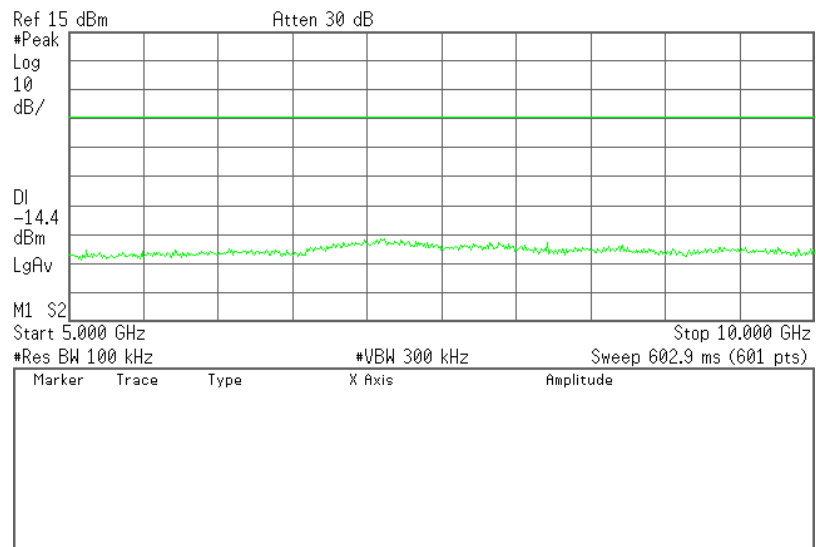
* Agilent 20:16:05 May 9, 2012



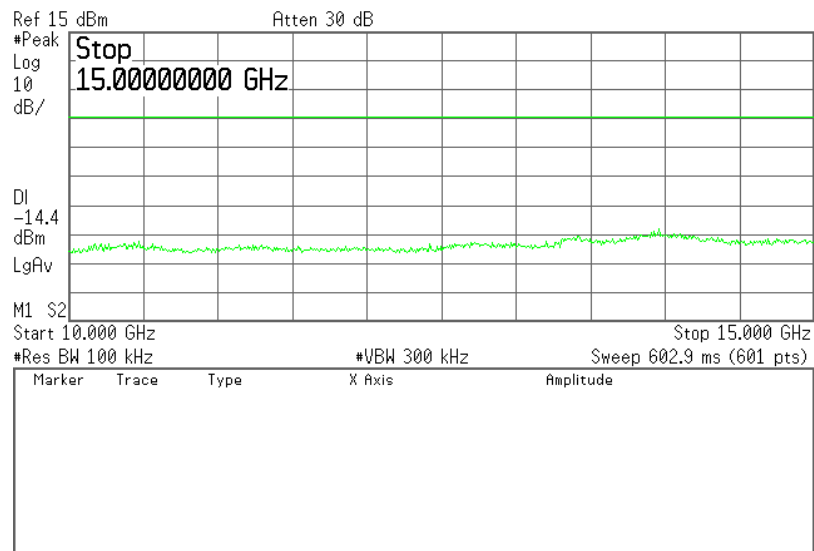
* Agilent 20:16:42 May 9, 2012



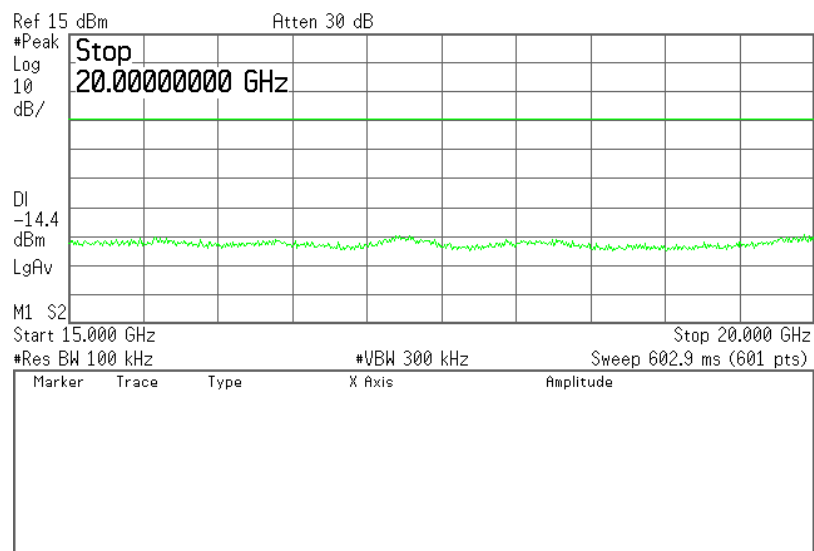
* Agilent 20:17:15 May 9, 2012



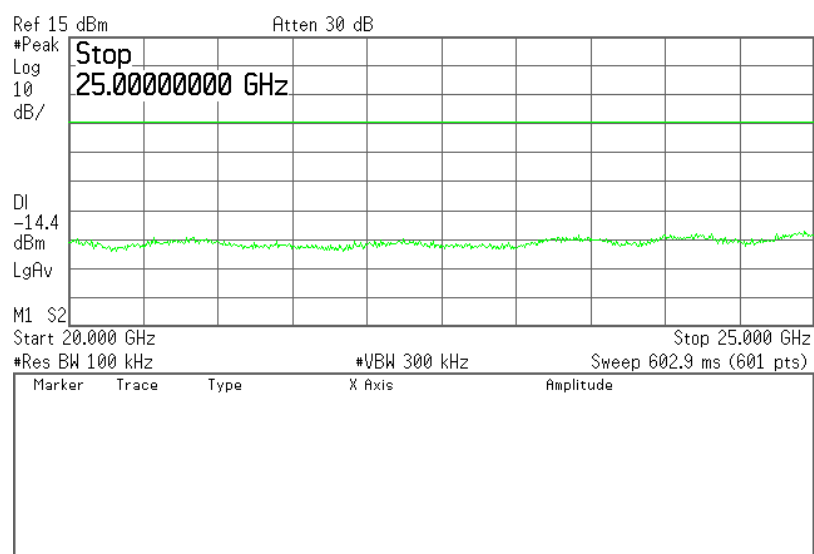
Agilent 20:17:51 May 9, 2012



Agilent 20:18:26 May 9, 2012

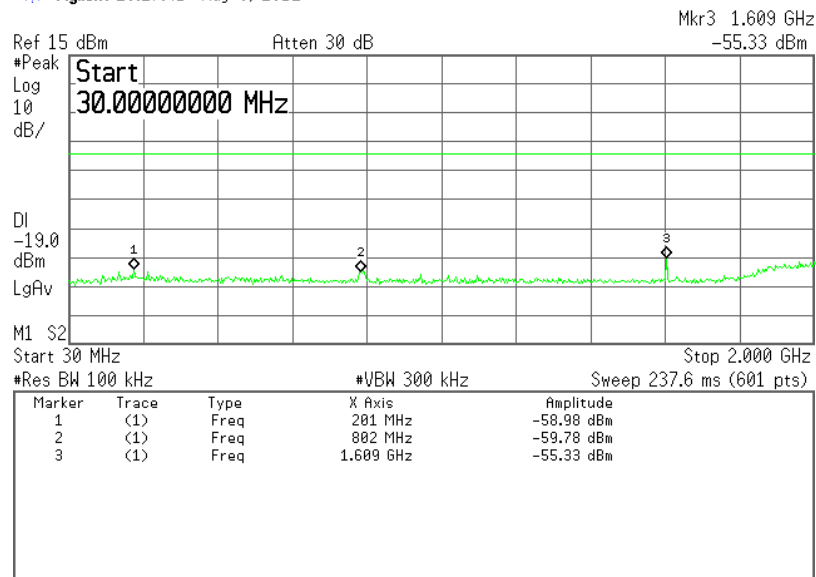


Agilent 20:19:01 May 9, 2012

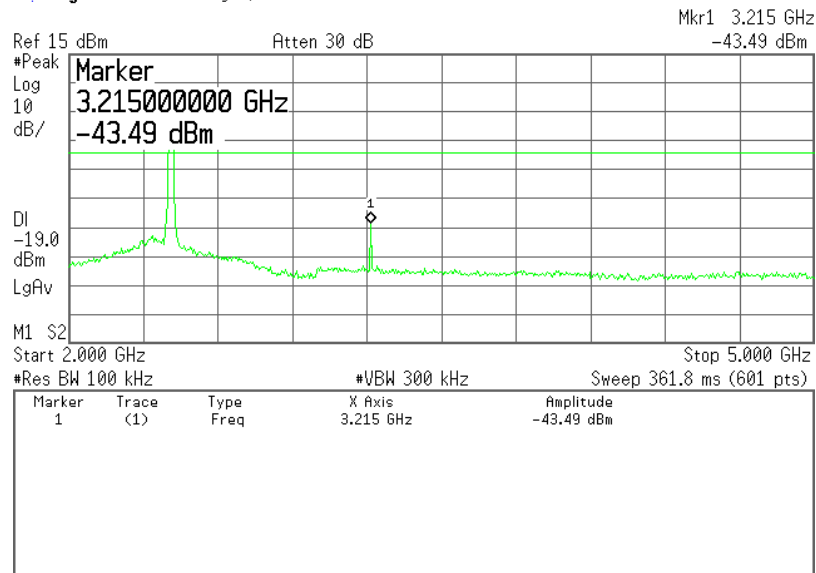


802.11g, Frequency: 2412MHz

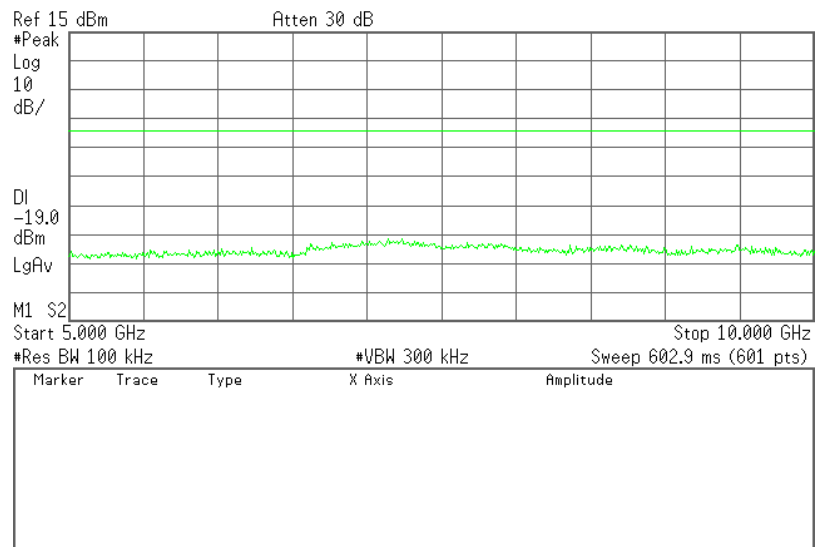
* Agilent 20:27:41 May 9, 2012



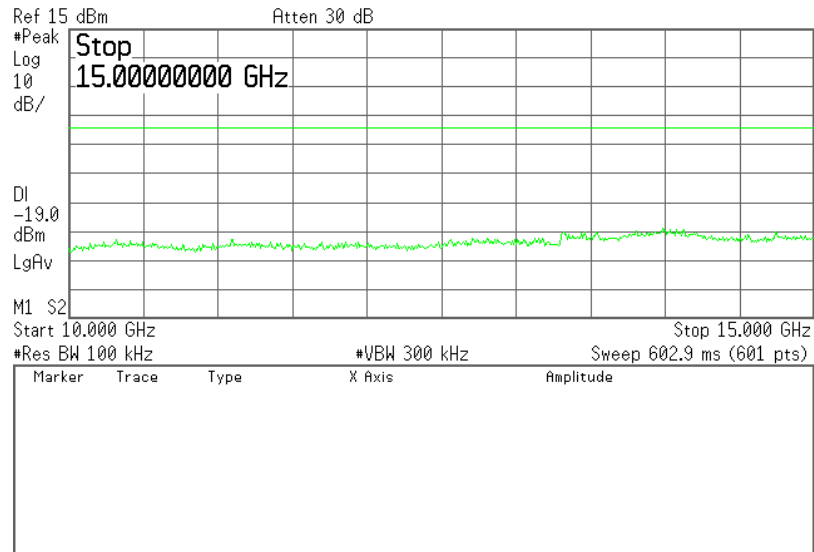
* Agilent 20:28:17 May 9, 2012



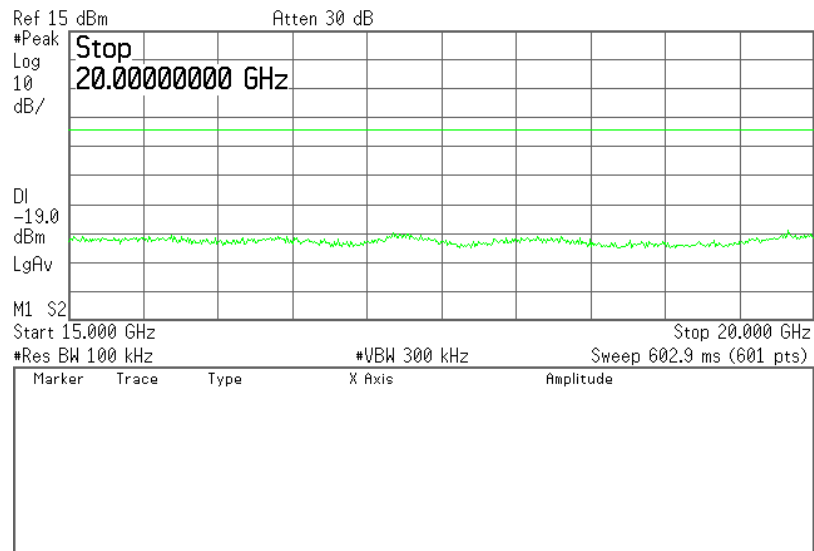
* Agilent 20:28:51 May 9, 2012



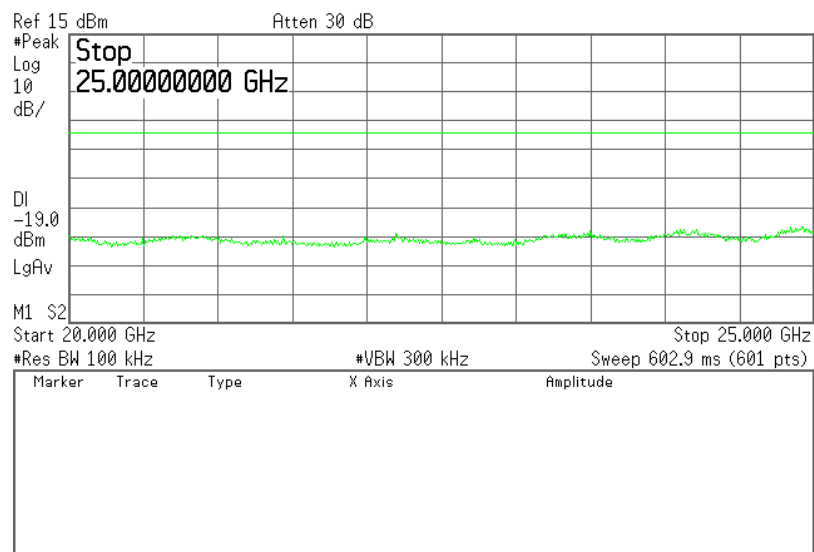
Agilent 20:29:19 May 9, 2012



Agilent 20:29:51 May 9, 2012

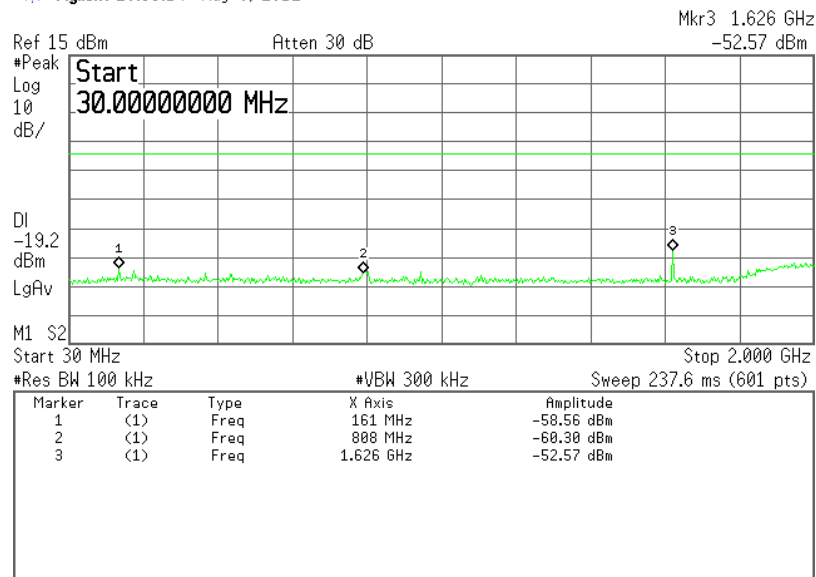


Agilent 20:30:31 May 9, 2012

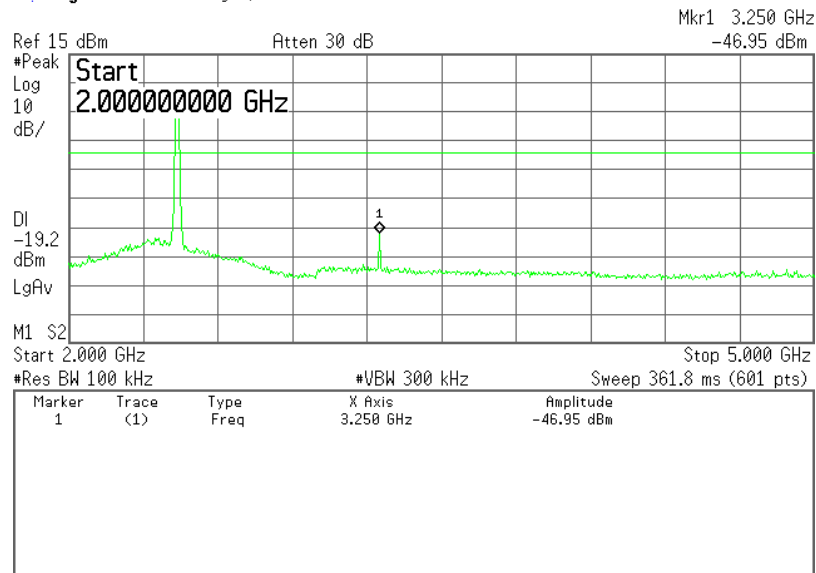


802.11g, Frequency: 2437MHz

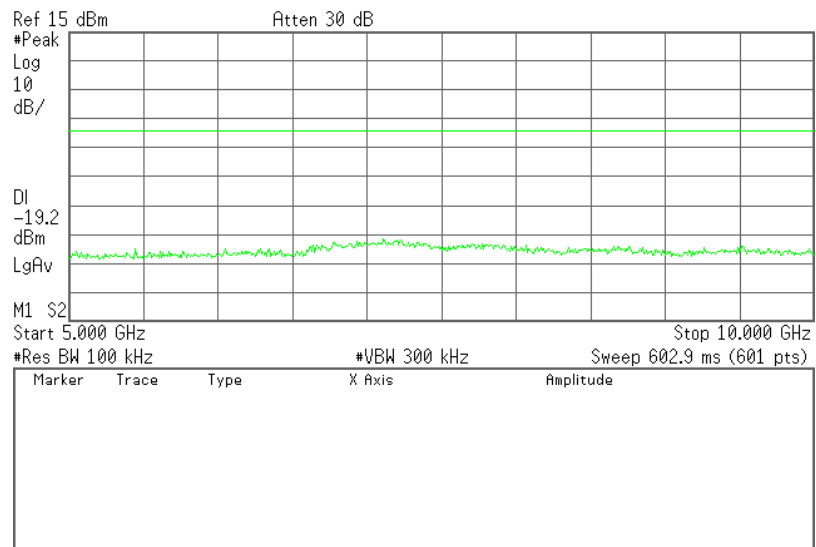
* Agilent 20:33:14 May 9, 2012



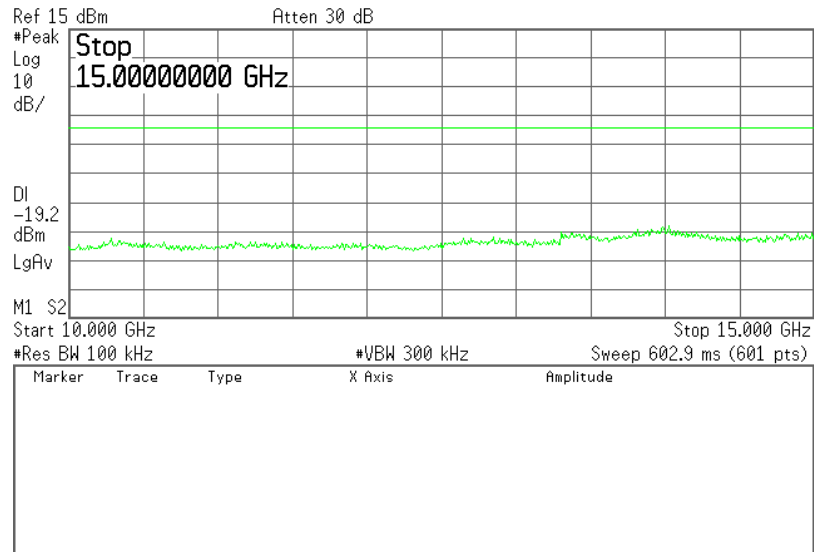
* Agilent 20:33:59 May 9, 2012



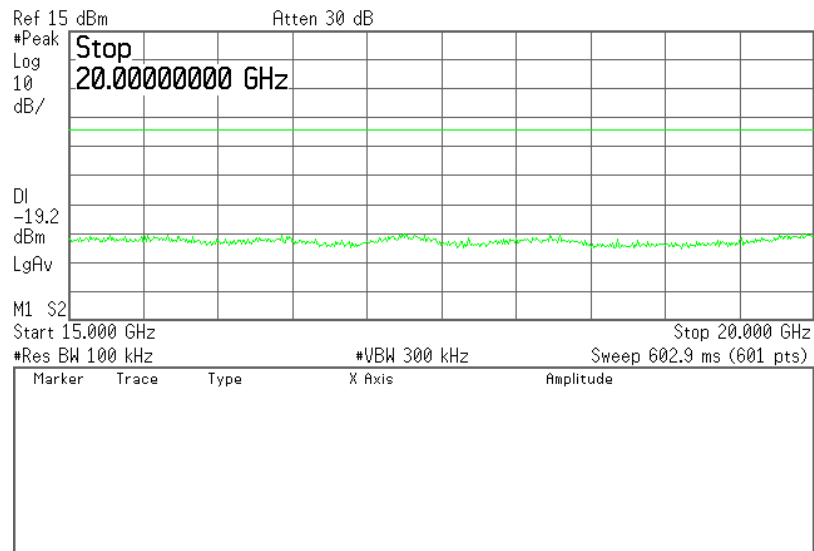
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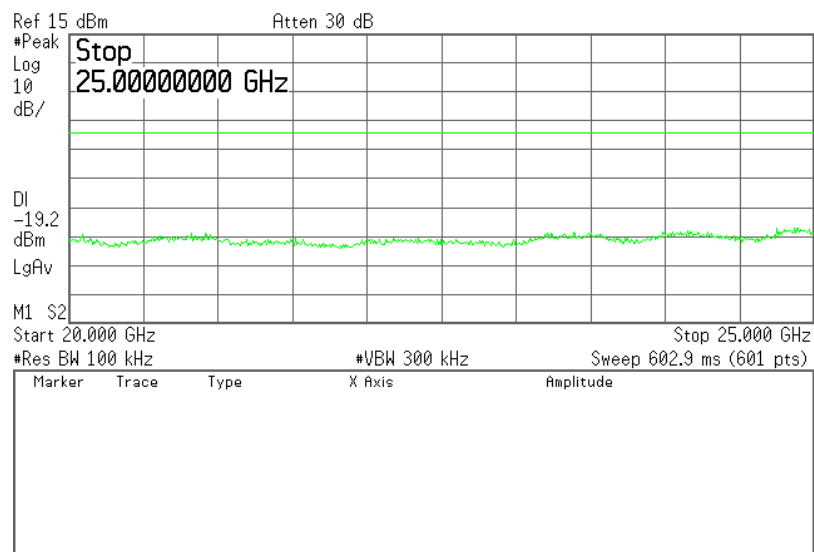
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Agilent 20:35:30 May 9, 2012

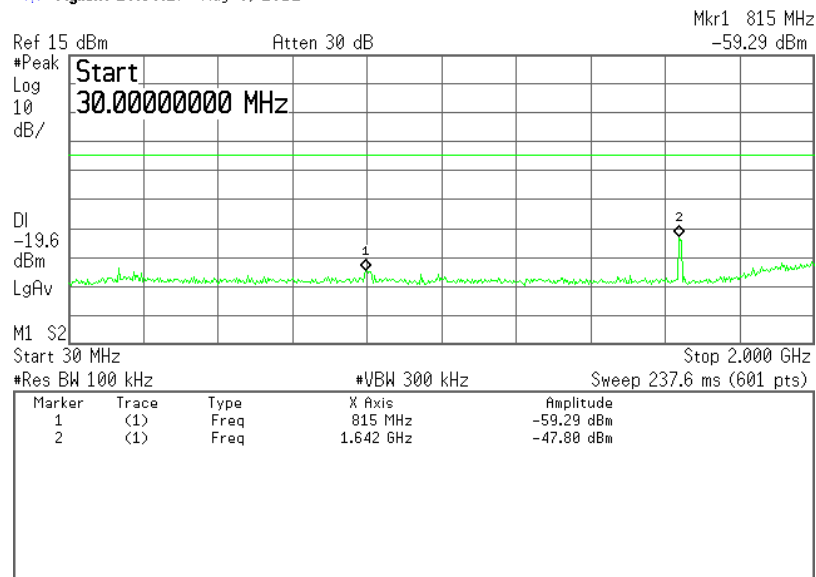


Agilent 20:36:01 May 9, 2012

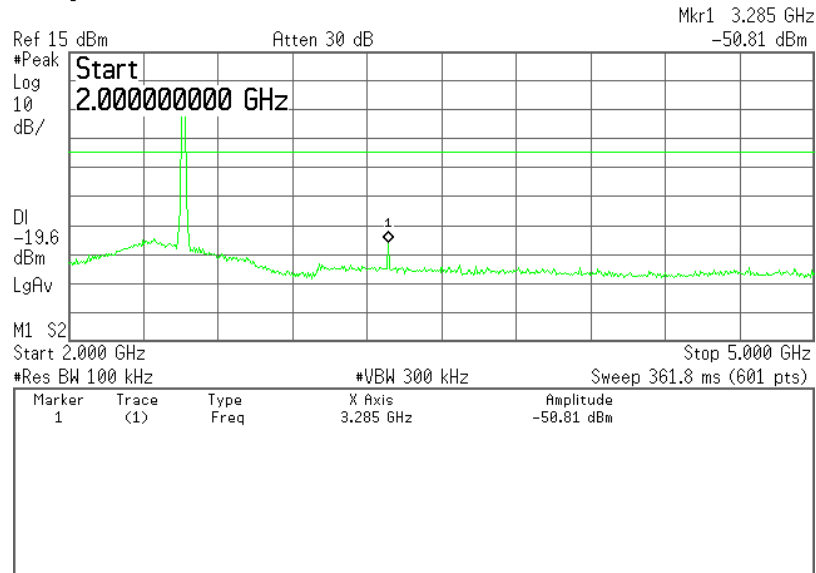


802.11g, Frequency: 2462MHz

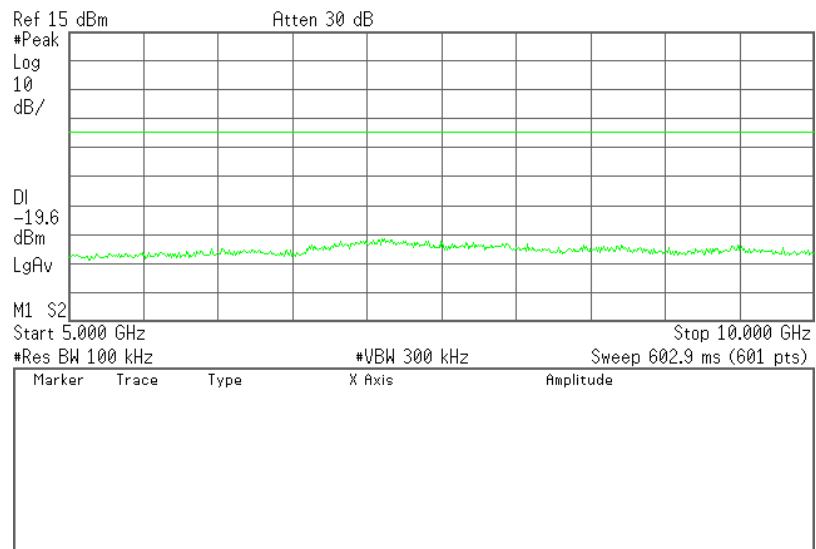
* Agilent 20:38:27 May 9, 2012



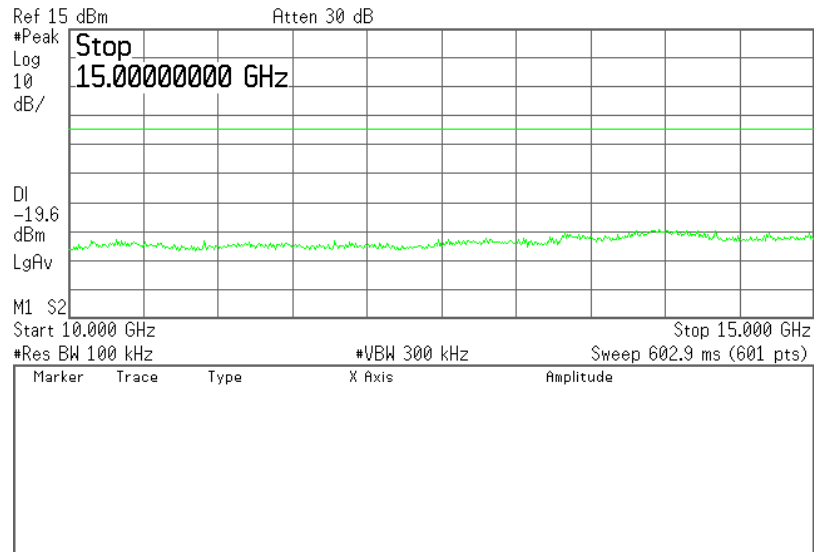
* Agilent 20:39:03 May 9, 2012



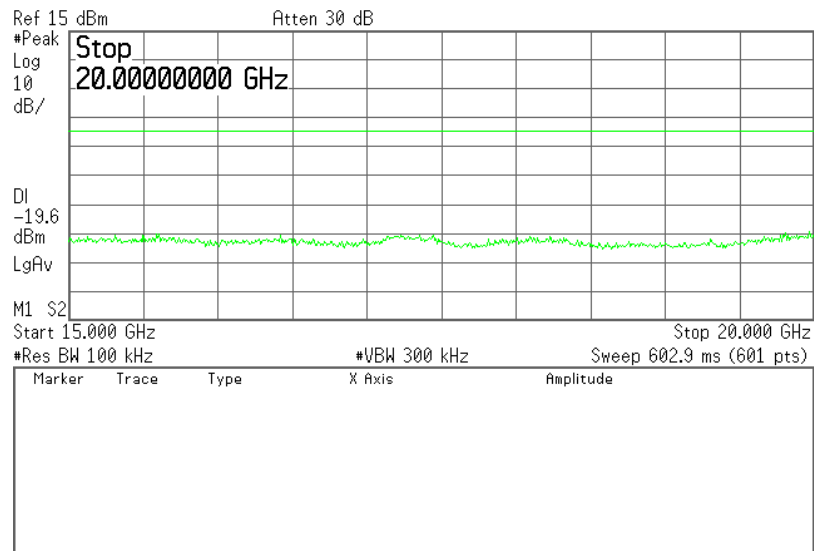
* Agilent 20:39:36 May 9, 2012



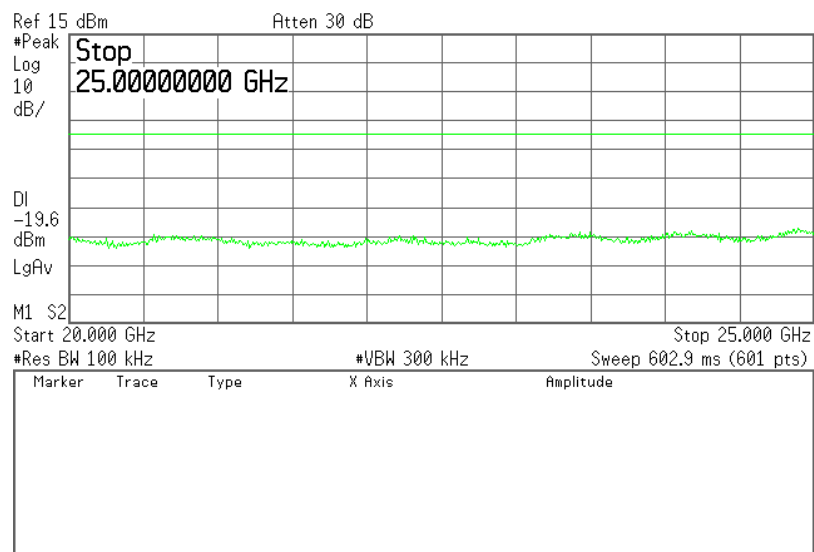
Agilent 20:40:12 May 9, 2012



Agilent 20:40:42 May 9, 2012

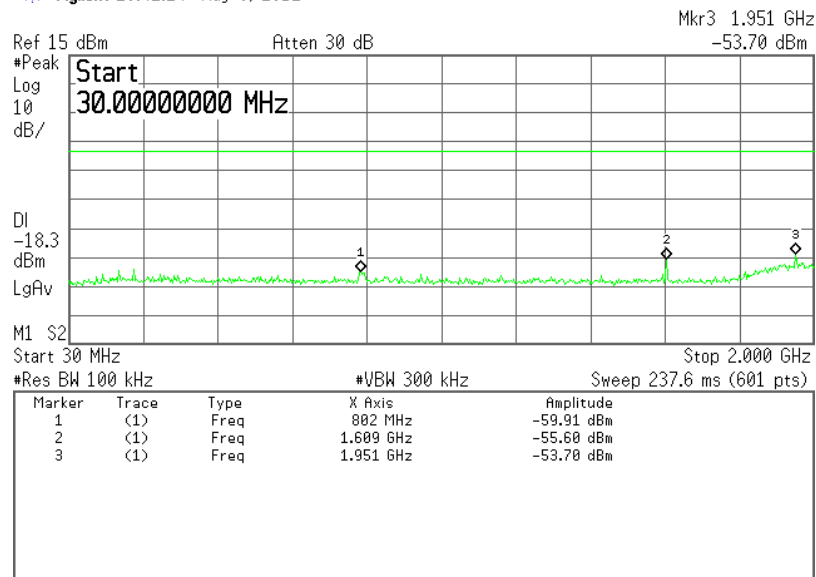


Agilent 20:41:12 May 9, 2012

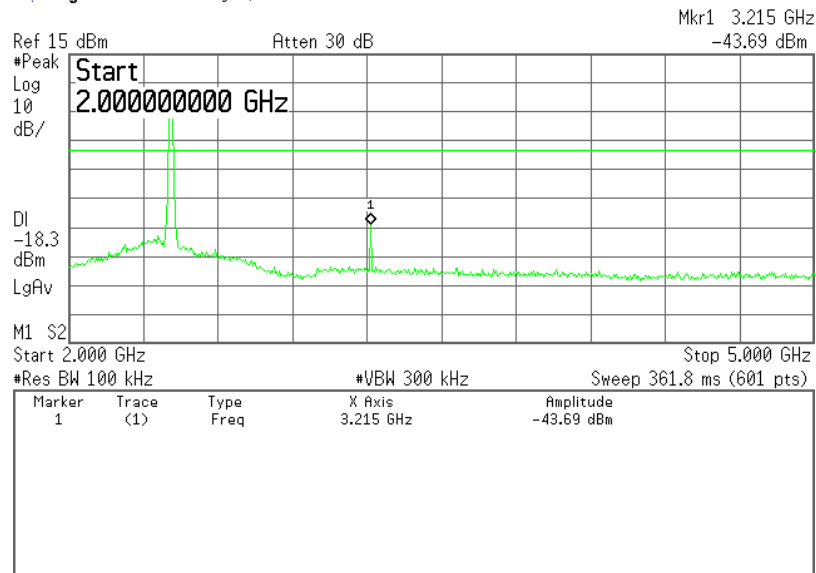


802.11n-HT20, Frequency: 2412MHz

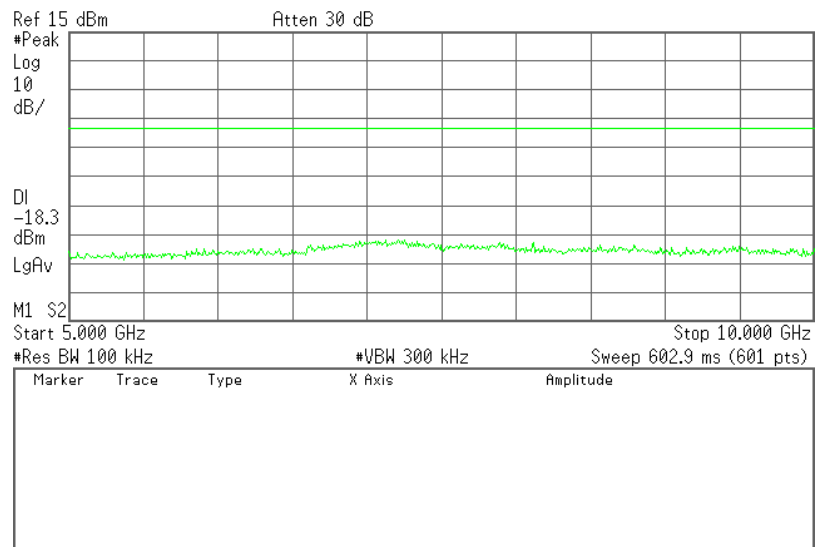
* Agilent 20:42:24 May 9, 2012



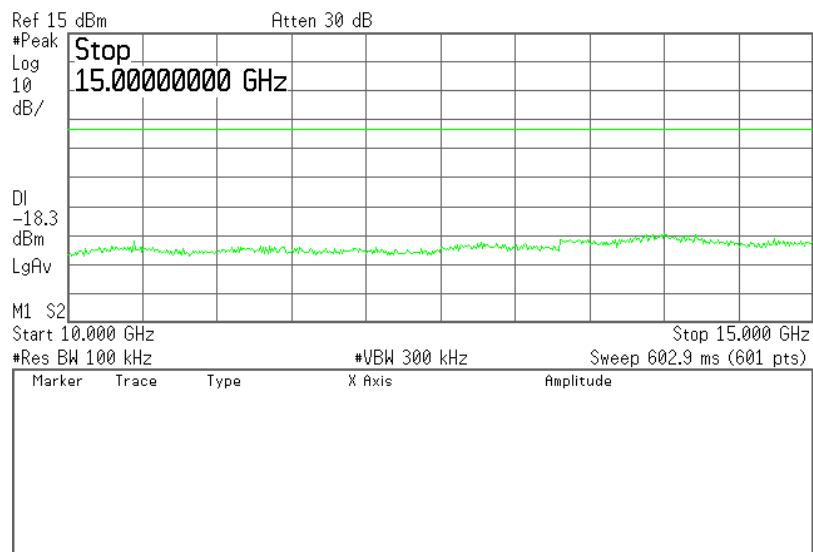
* Agilent 20:43:01 May 9, 2012



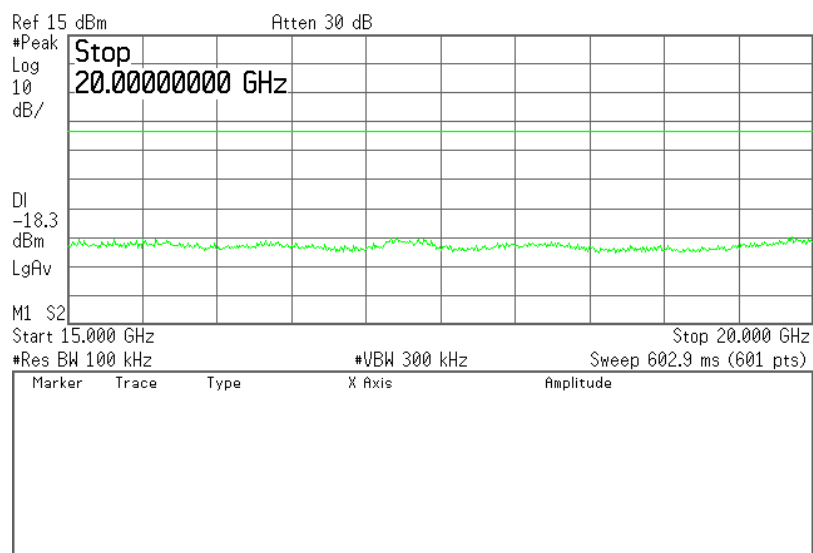
* Agilent 20:43:42 May 9, 2012



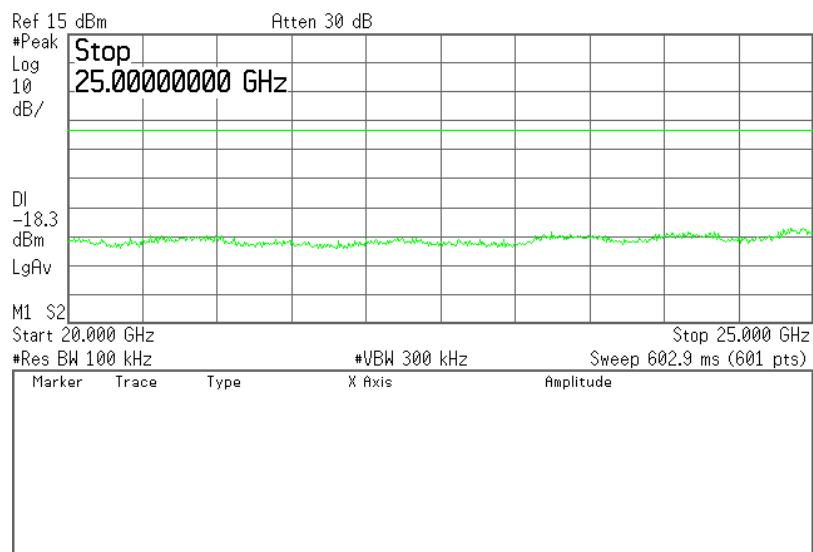
Agilent 20:44:10 May 9, 2012



❄ Agilent 20:44:39 May 9, 2012

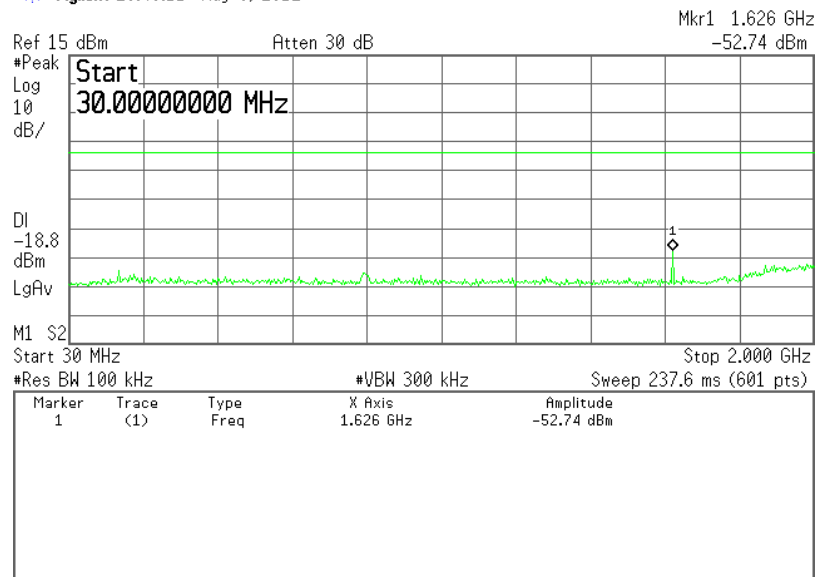


Agilent 20:45:03 May 9, 2012

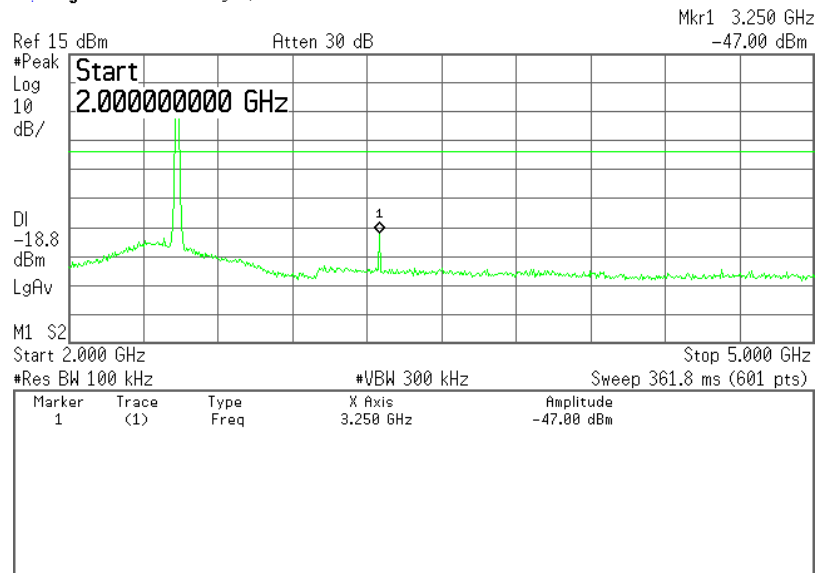


802.11n-HT20, Frequency: 2437MHz

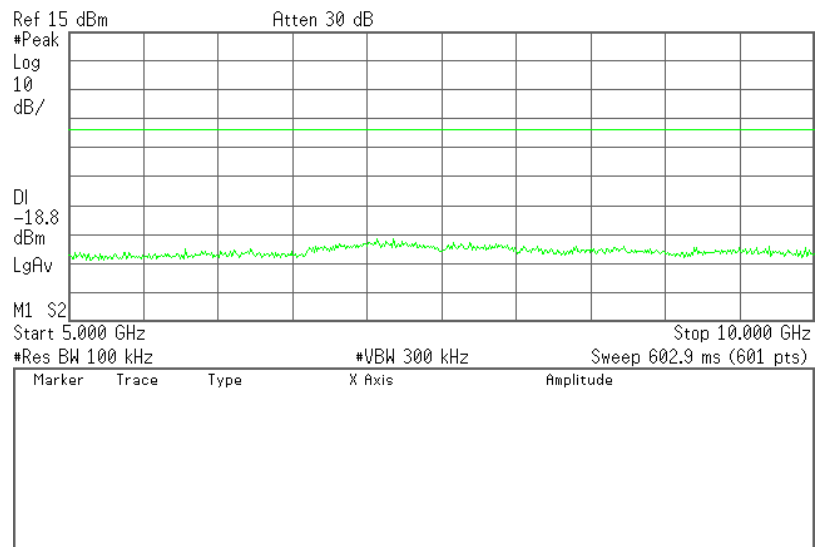
* Agilent 20:46:11 May 9, 2012



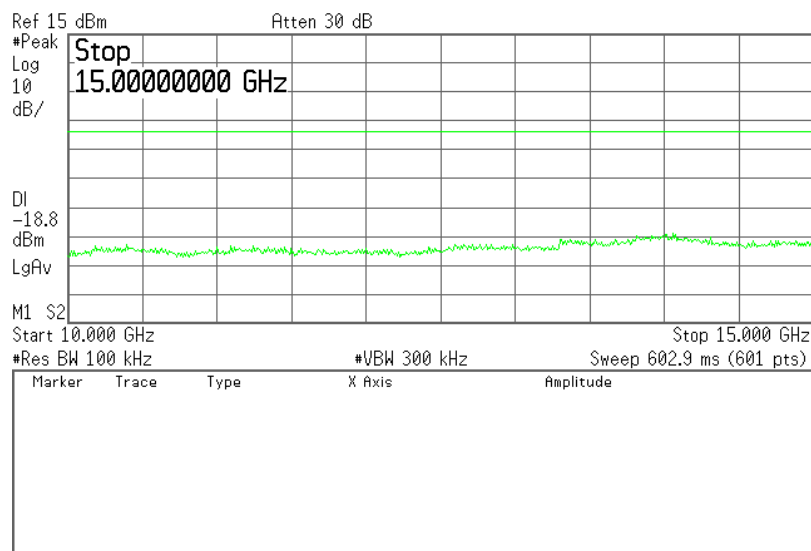
* Agilent 20:46:44 May 9, 2012



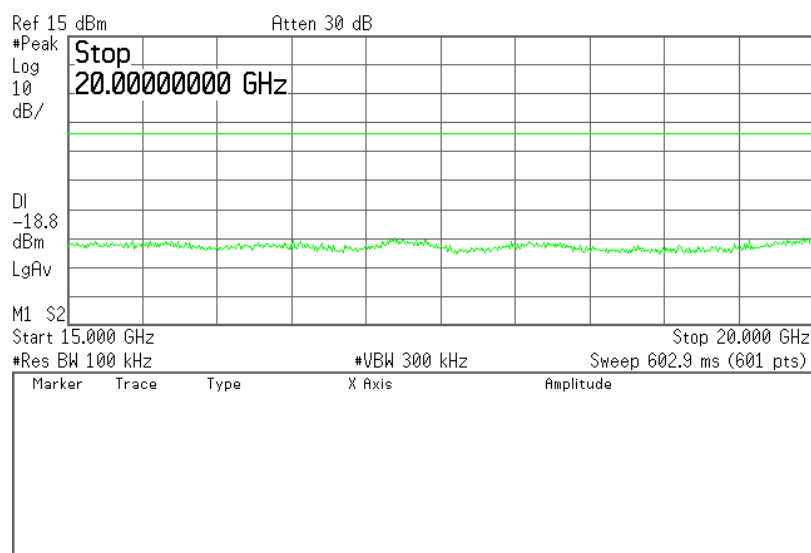
* Agilent 20:47:06 May 9, 2012



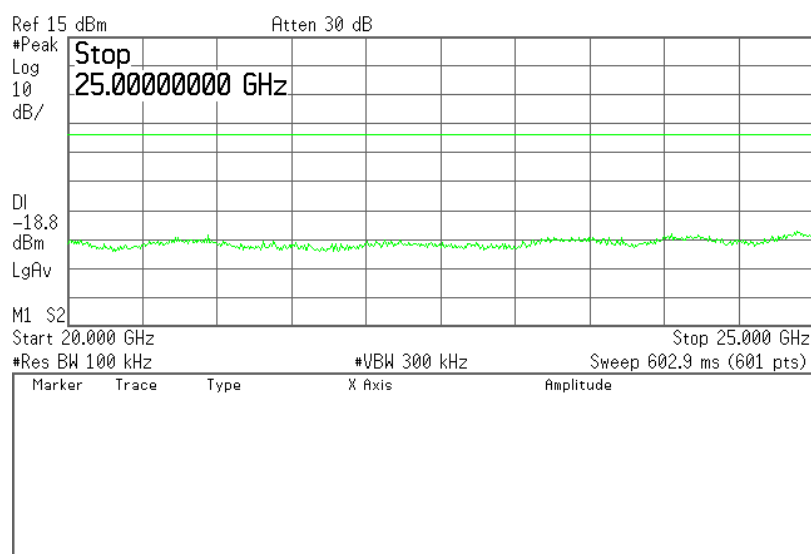
Agilent 20:47:34 May 9, 2012



Agilent 20:48:00 May 9, 2012

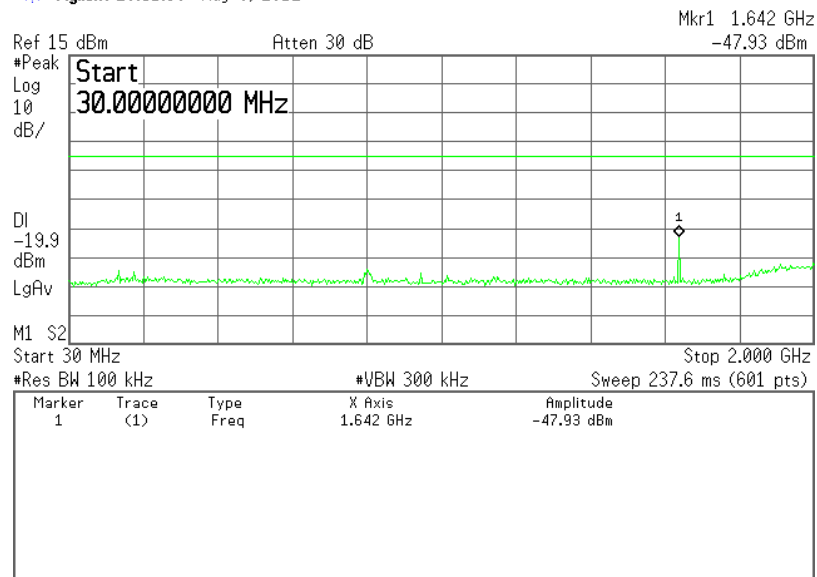


Agilent 20:50:27 May 9, 2012

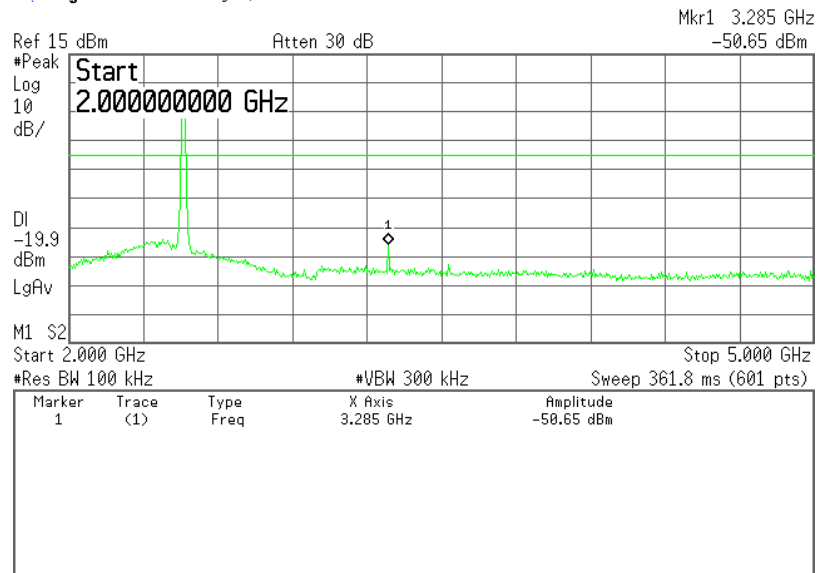


802.11n-HT20, Frequency: 2462MHz

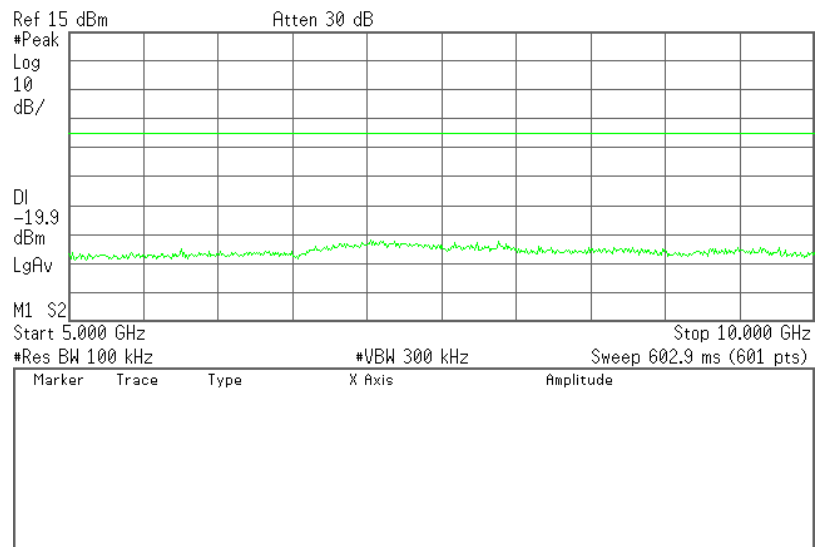
* Agilent 20:51:30 May 9, 2012



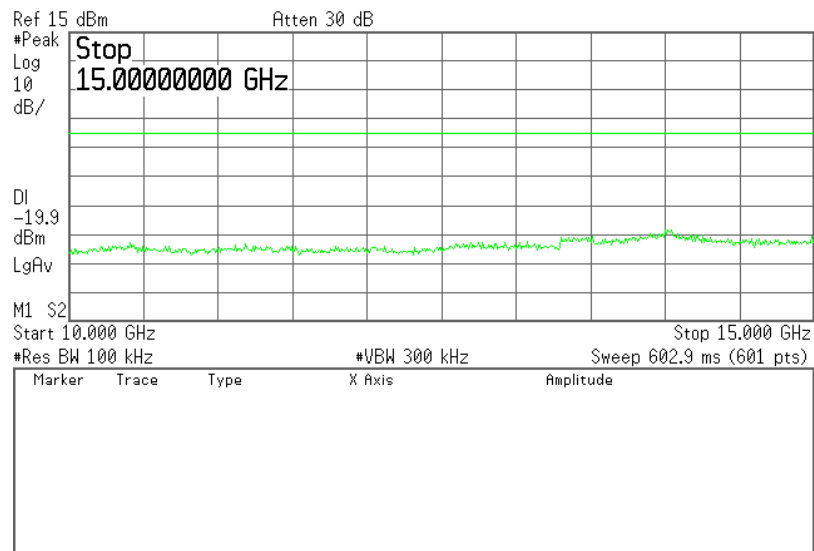
* Agilent 20:52:06 May 9, 2012



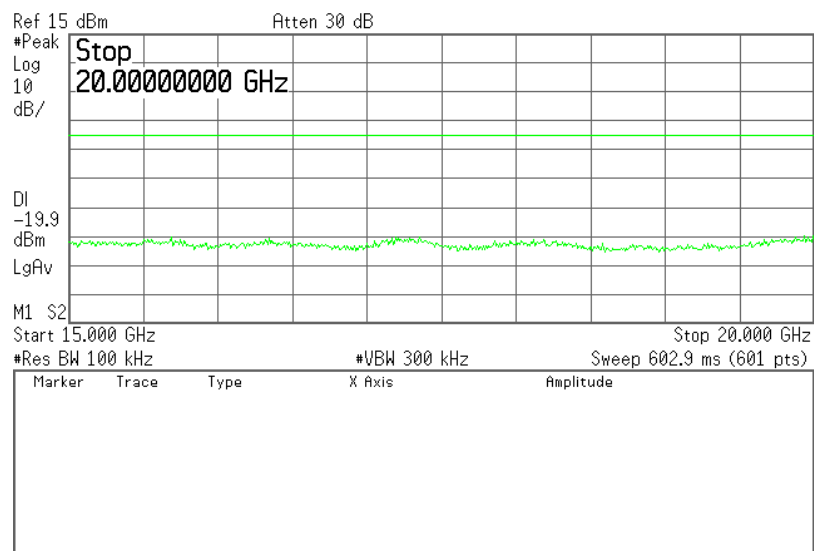
* Agilent 20:52:30 May 9, 2012



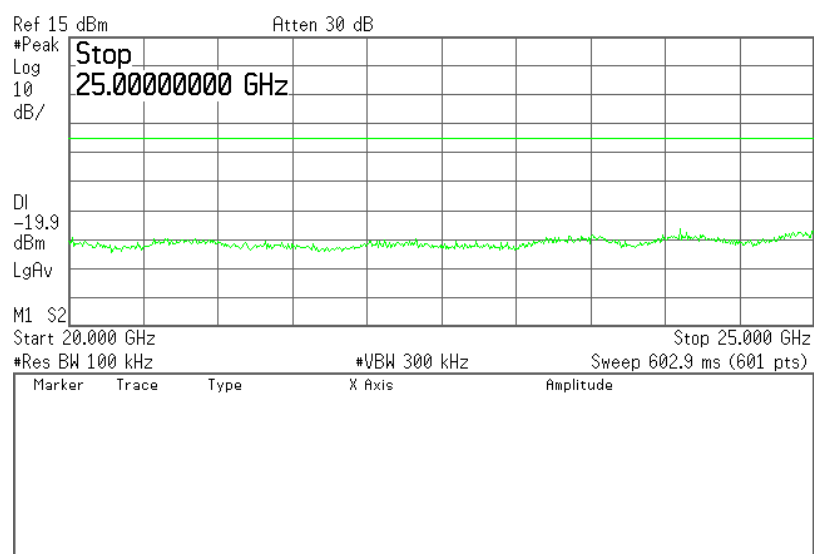
Agilent 20:52:55 May 9, 2012



Agilent 20:53:23 May 9, 2012

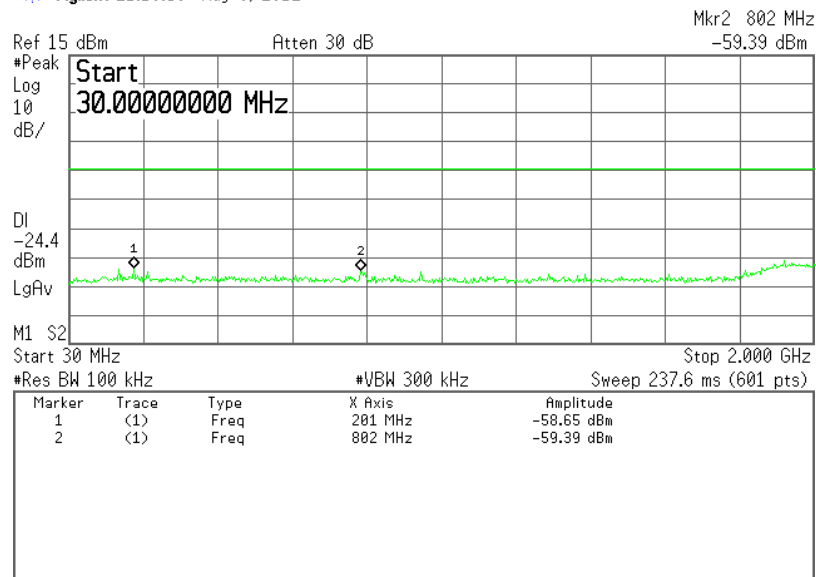


Agilent 20:53:50 May 9, 2012

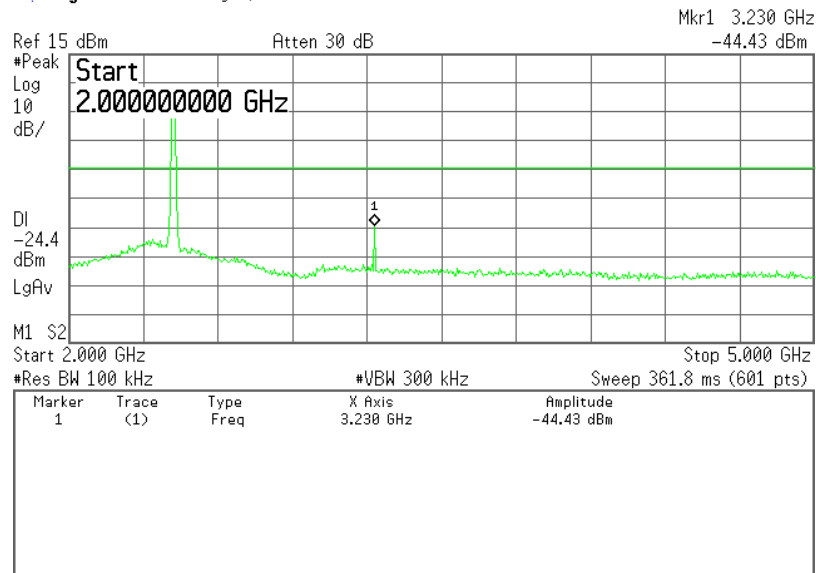


802.11n-HT40, Frequency: 2422MHz

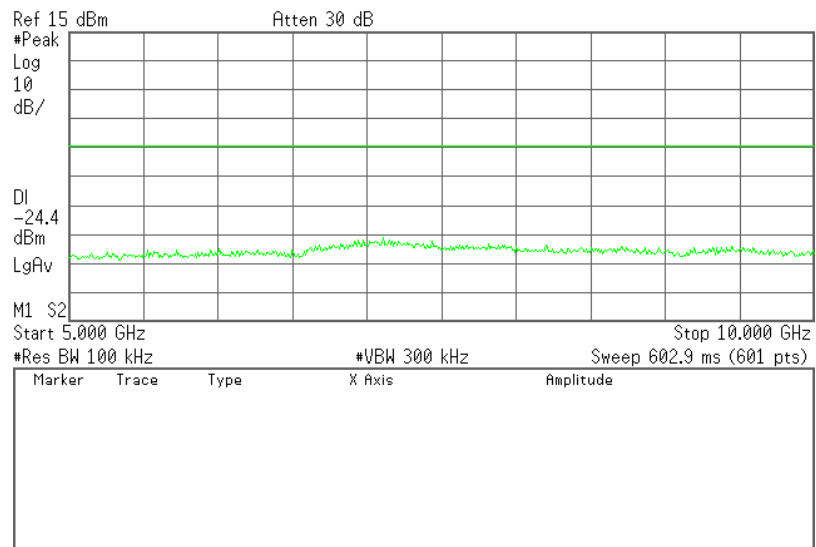
* Agilent 21:19:56 May 9, 2012



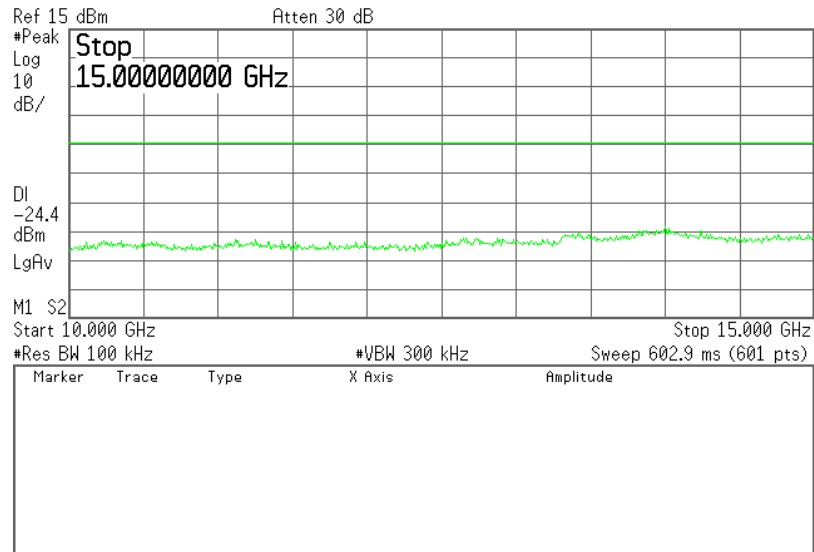
* Agilent 21:20:28 May 9, 2012



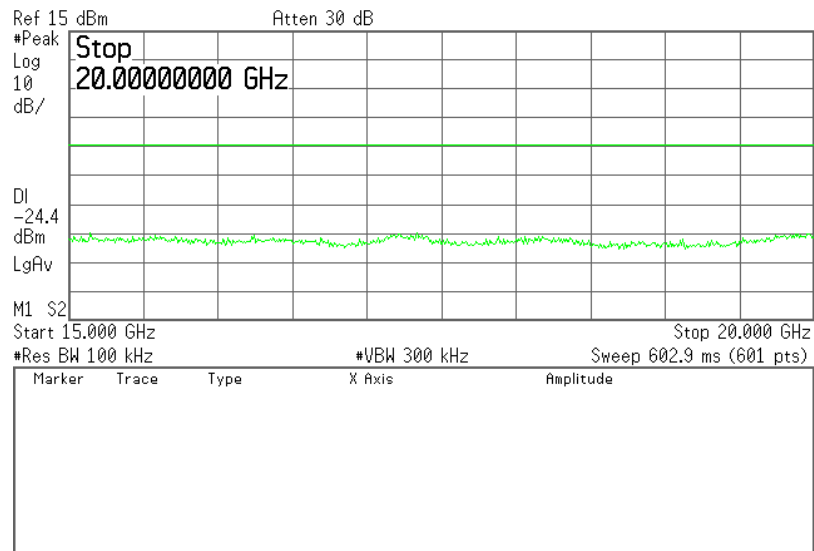
* Agilent 21:20:48 May 9, 2012



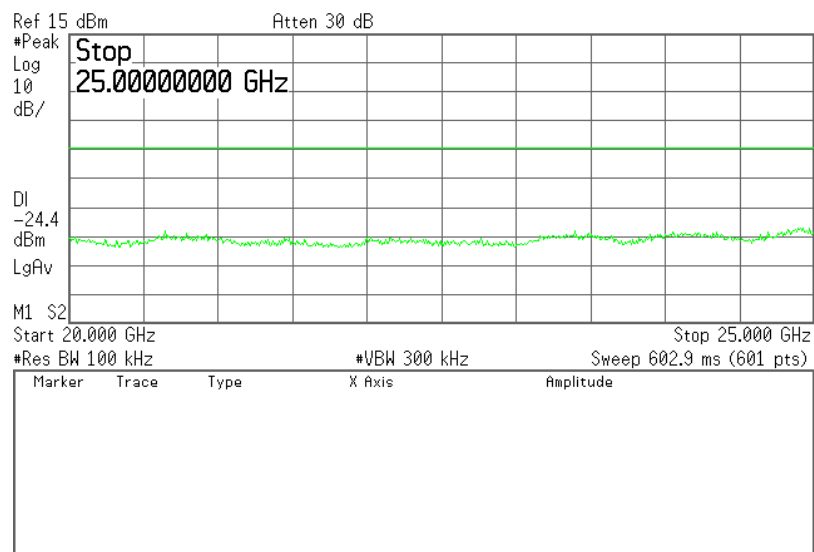
✱ Agilent 21:21:14 May 9, 2012



✱ Agilent 21:21:41 May 9, 2012

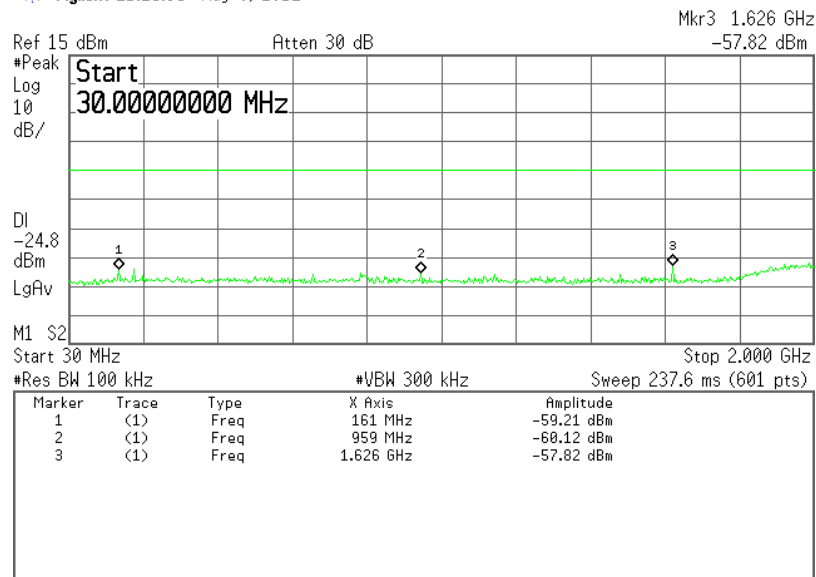


✱ Agilent 21:22:08 May 9, 2012

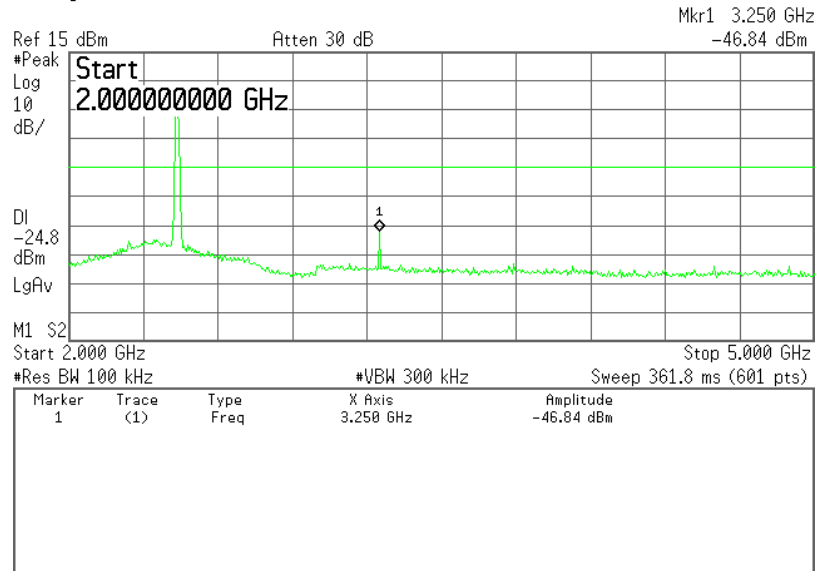


802.11n-HT40, Frequency: 2437MHz

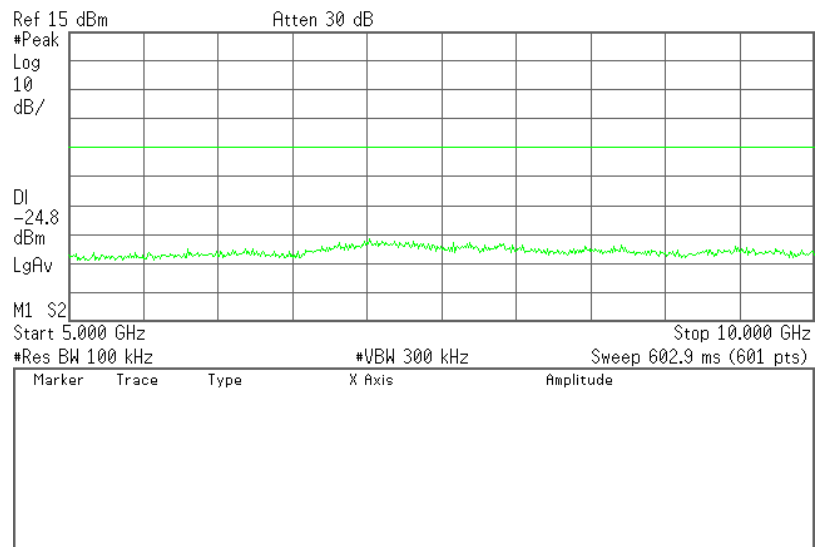
* Agilent 21:25:35 May 9, 2012



* Agilent 21:26:11 May 9, 2012

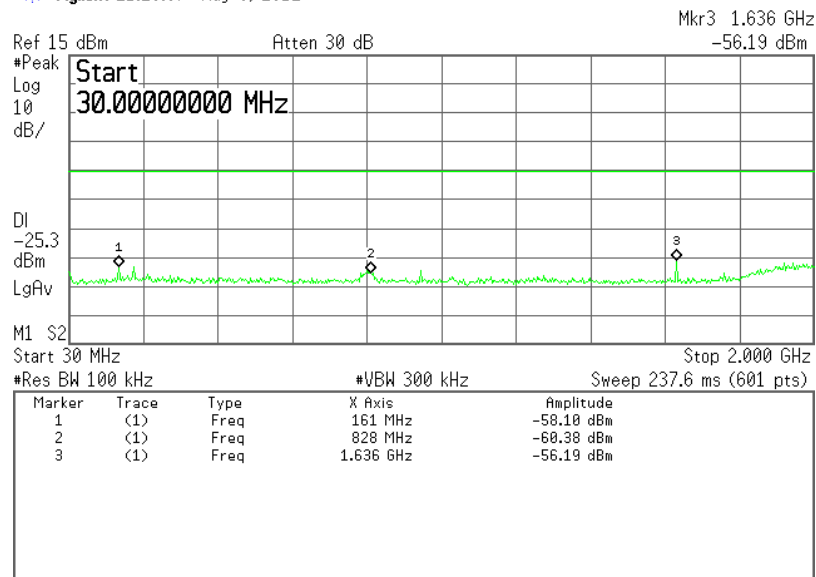


* Agilent 21:26:33 May 9, 2012

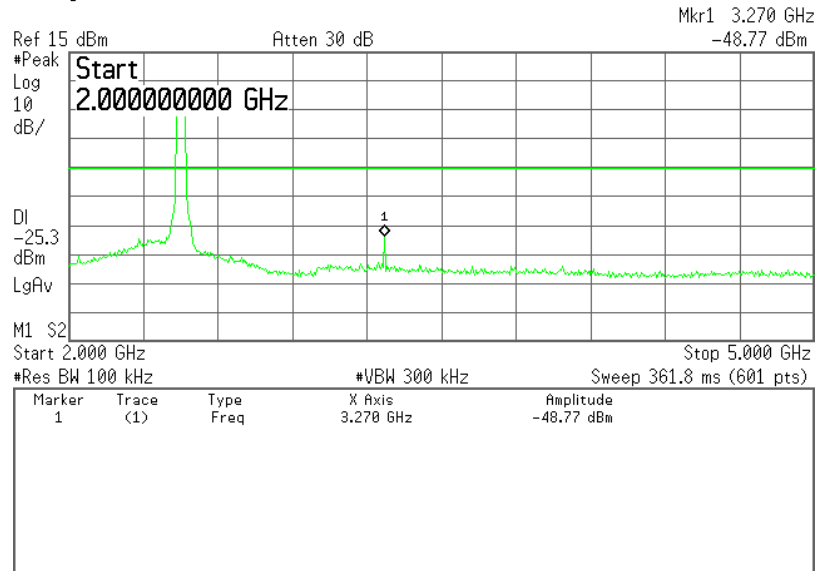


802.11n-HT40, Frequency: 2452MHz

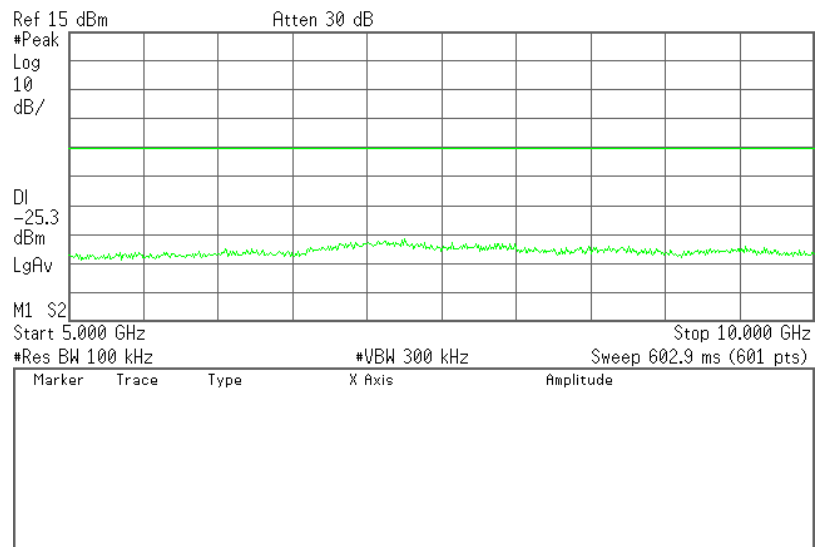
* Agilent 21:29:07 May 9, 2012



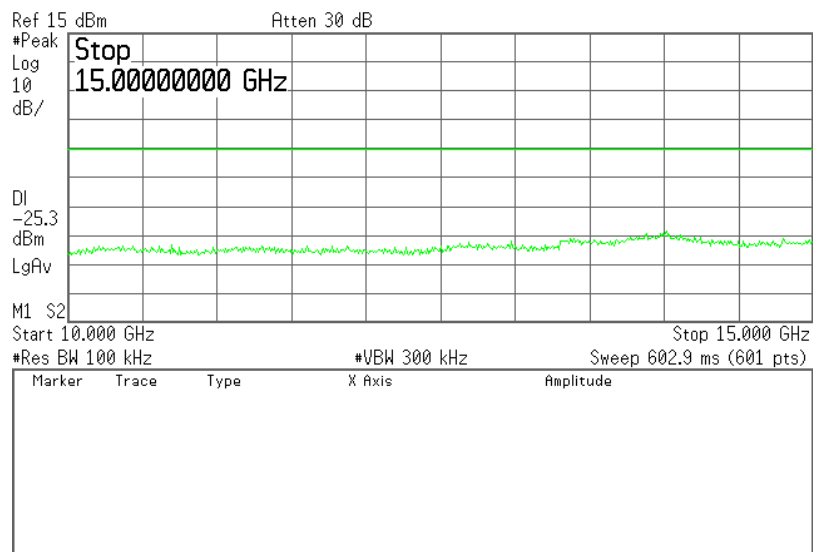
* Agilent 21:29:43 May 9, 2012



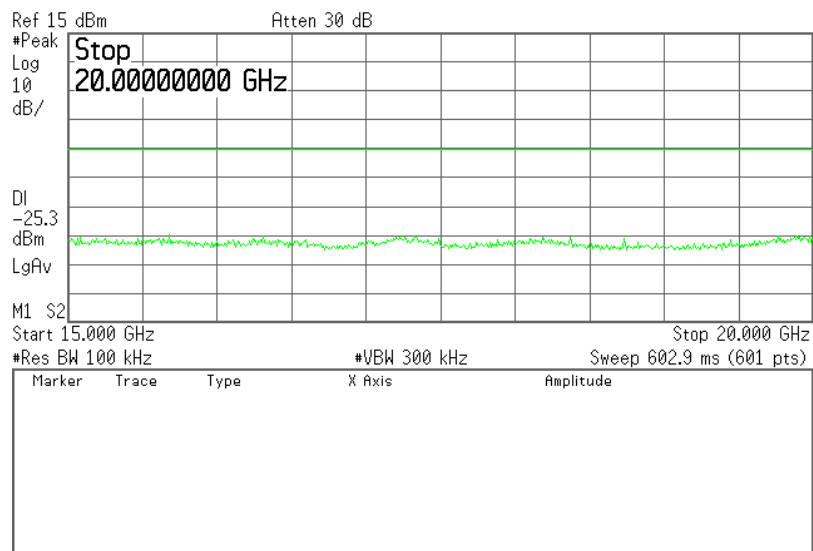
* Agilent 21:30:07 May 9, 2012



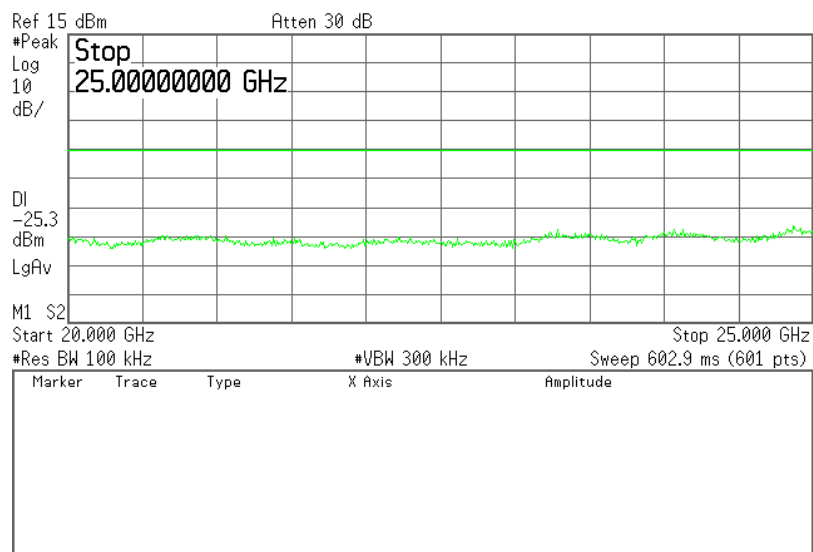
Agilent 21:30:37 May 9, 2012



Agilent 21:31:04 May 9, 2012



Agilent 21:31:39 May 9, 2012



7. BAND EDGES MEASUREMENT

7.1. Test Equipment

The following test equipment was used during the band edges measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'

7.2. Block Diagram of Test Setup

The same as section.4.2.

7.3. Specification Limits (§15.247(c))

7.3.1. The highest level should be at least 20 dB below that in the 100kHz bandwidth.

7.3.2. The reference level for determining limit of emission limitations is according to the value measured indicated in plots at section 8.6.

7.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

7.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. Set both RBW 100kHz and VBW of spectrum analyzer to 300kHz with suitable frequency span including 100kHz bandwidth from band edge.

The measurement guideline was according to KDB 558074 D01.

7.6. Test Results

PASSED. All the test results are attached in next pages.

Test Date: May 08, 2012 Temperature : 24°C Humidity : 62%

802.11b

Below Band edge: The highest emission level is -41.20dBm on 2.39992GHz ◦

Upper Band edge : The highest emission level is -49.88dBm on 2.48350GHz ◦

802.11g

Below Band edge: The highest emission level is -35.41dBm on 2.39992GHz ◦

Upper Band edge : The highest emission level is -50.27dBm on 2.48350GHz ◦

802.11n-HT20

Below Band edge: The highest emission level is -35.97dBm on 2.39992GHz ◦

Upper Band edge : The highest emission level is -48.35dBm on 2.48350GHz ◦

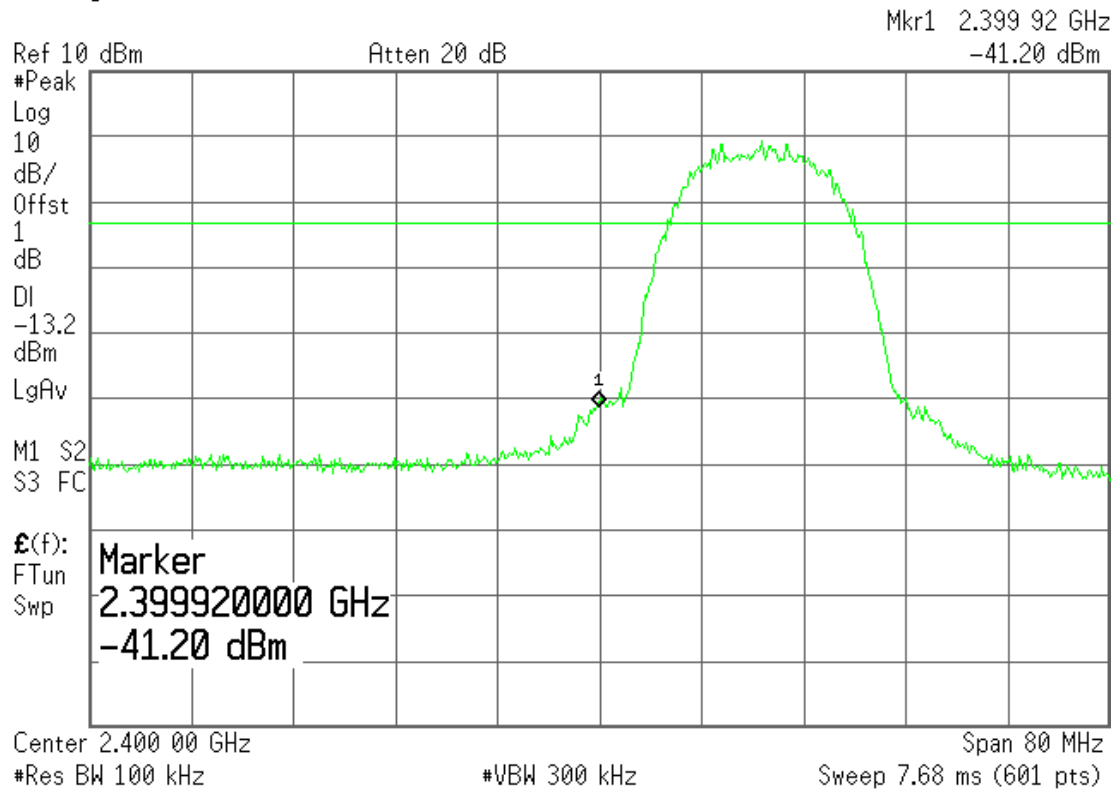
802.11n-HT40

Below Band edge: The highest emission level is -41.39dBm on 2.39990GHz ◦

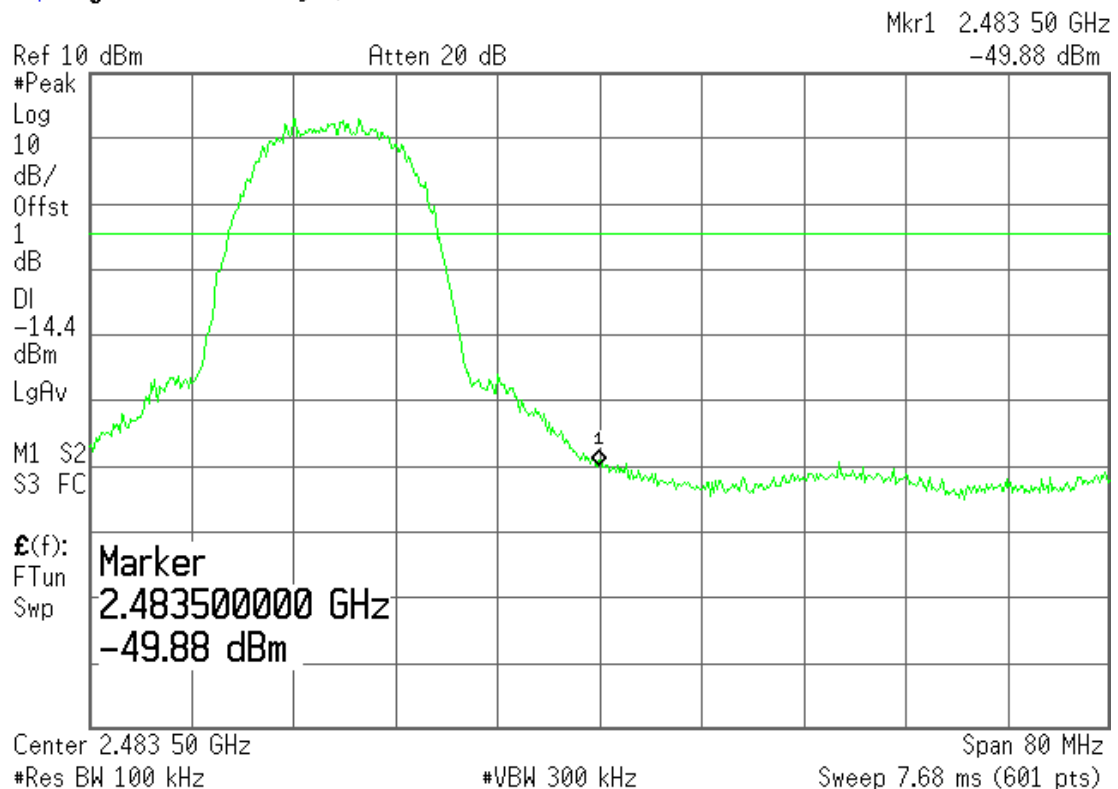
Upper Band edge : The highest emission level is -47.68dBm on 2.48350GHz ◦

802.11b**Below Band edge**

* Agilent 20:26:47 May 8, 2012

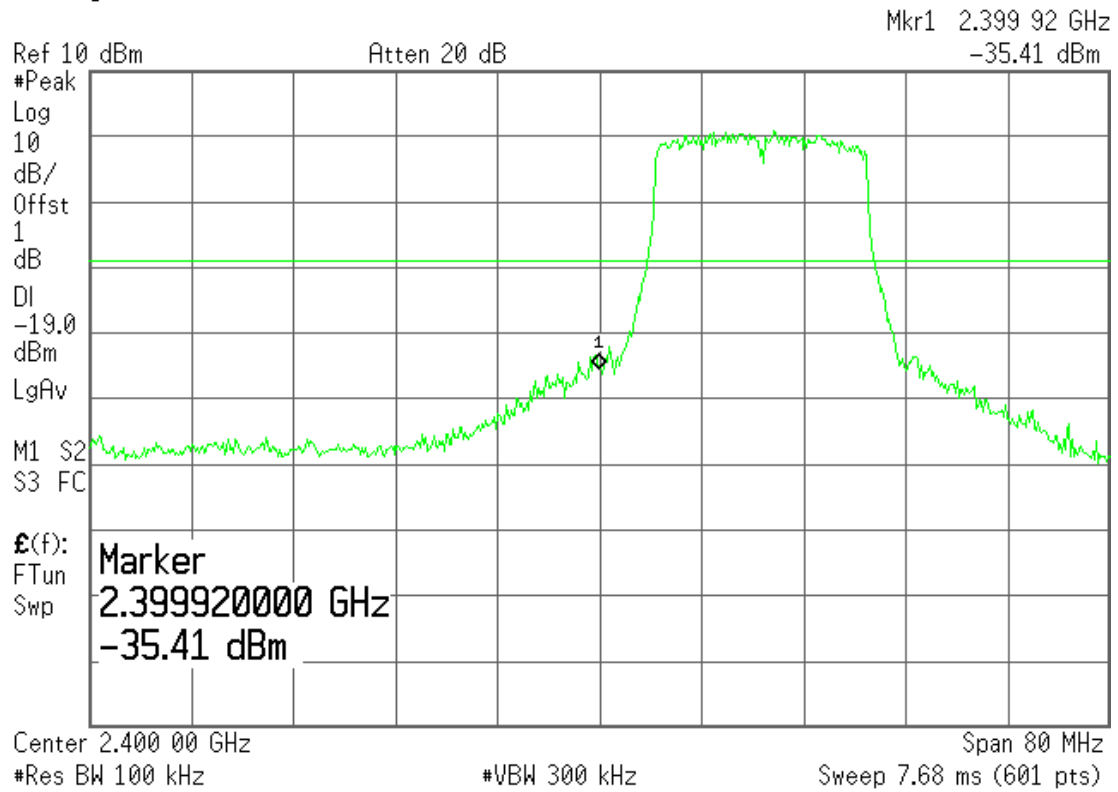
**Upper Band edge**

* Agilent 20:28:20 May 8, 2012

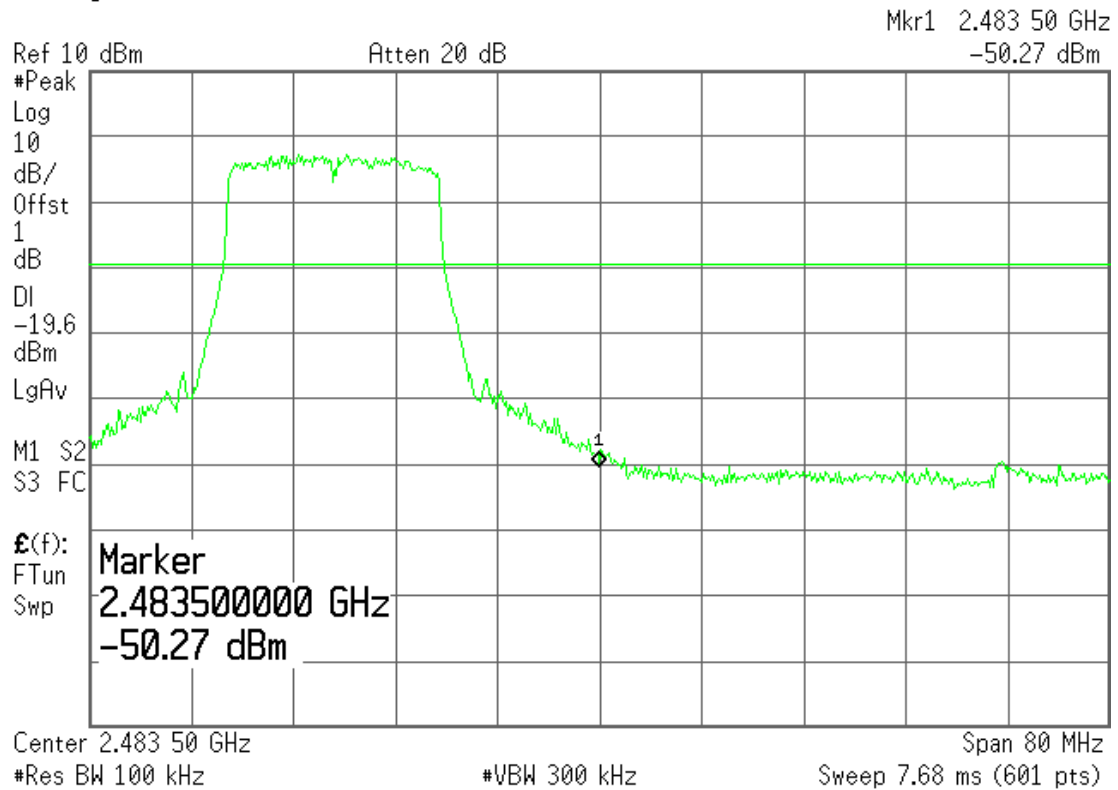


802.11g**Below Band edge**

* Agilent 20:41:24 May 8, 2012

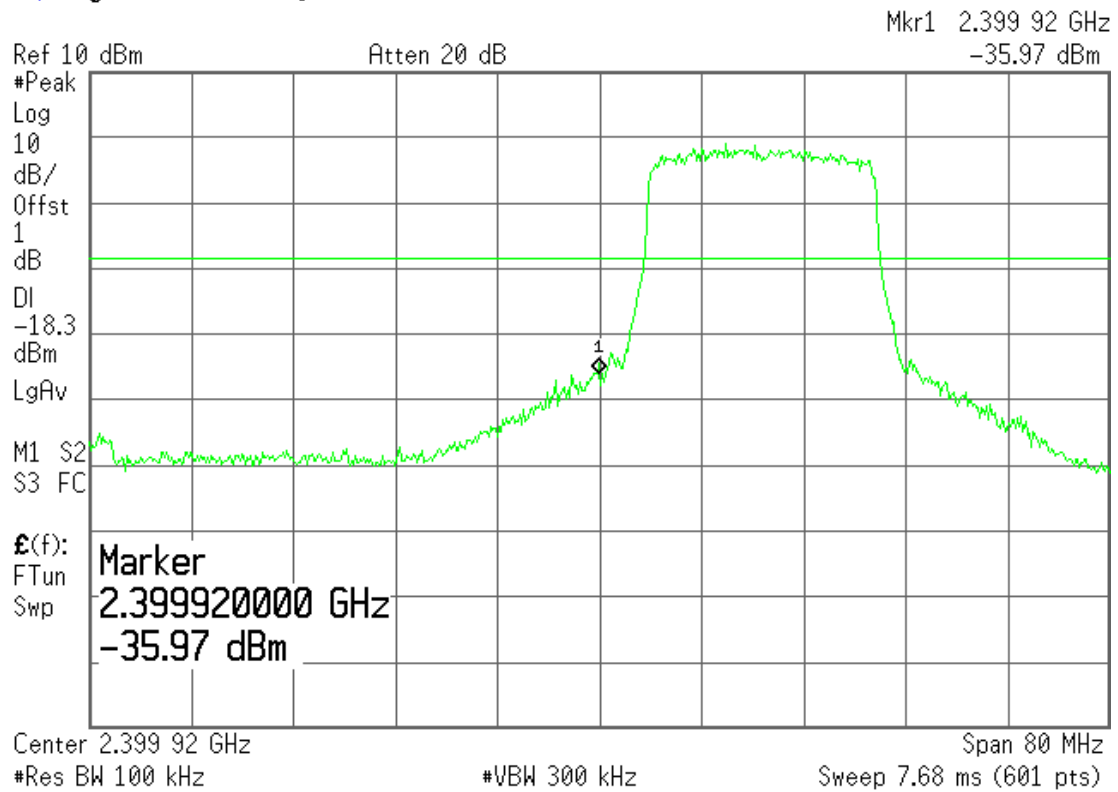
**Upper Band edge**

* Agilent 20:29:29 May 8, 2012

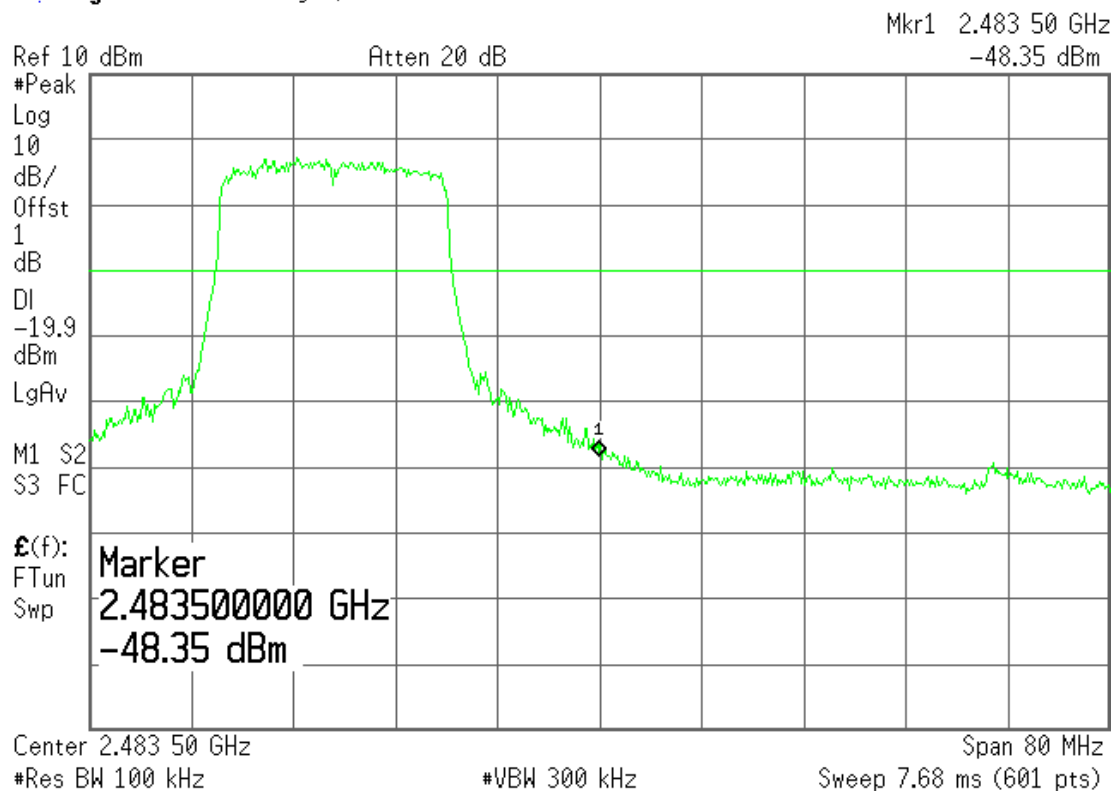


802.11n-HT20**Below Band edge**

Agilent 20:32:17 May 8, 2012

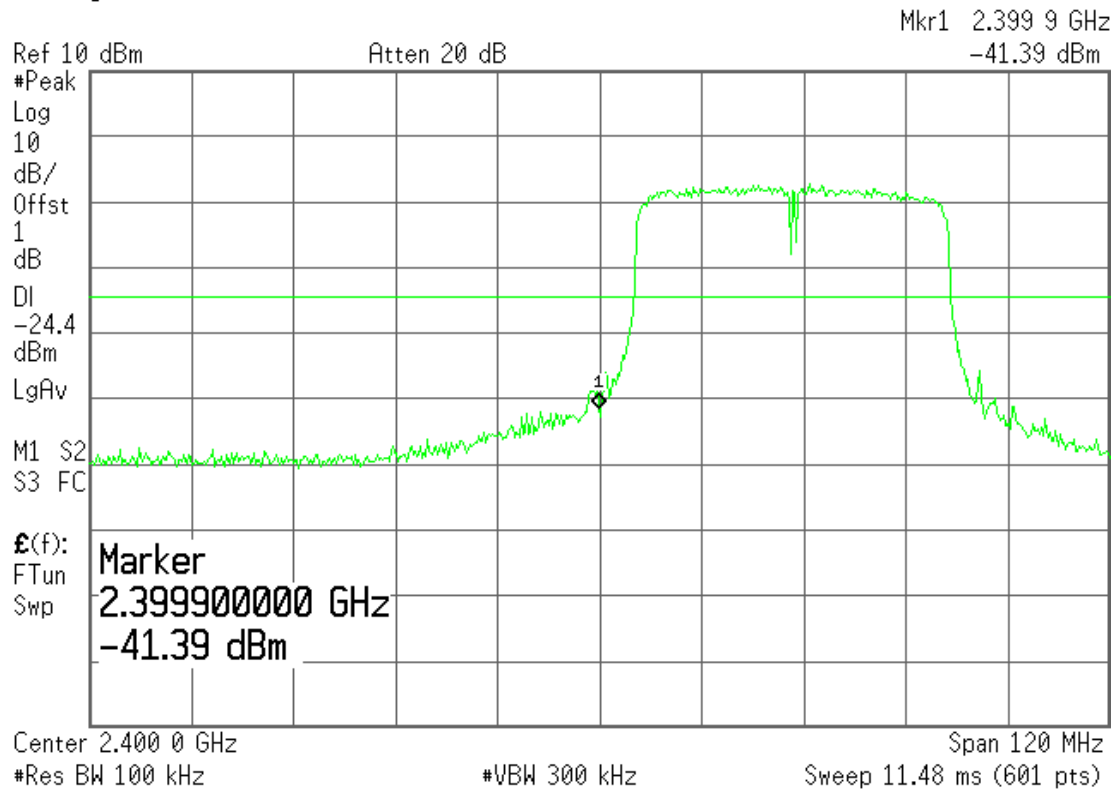
**Upper Band edge**

Agilent 20:33:25 May 8, 2012

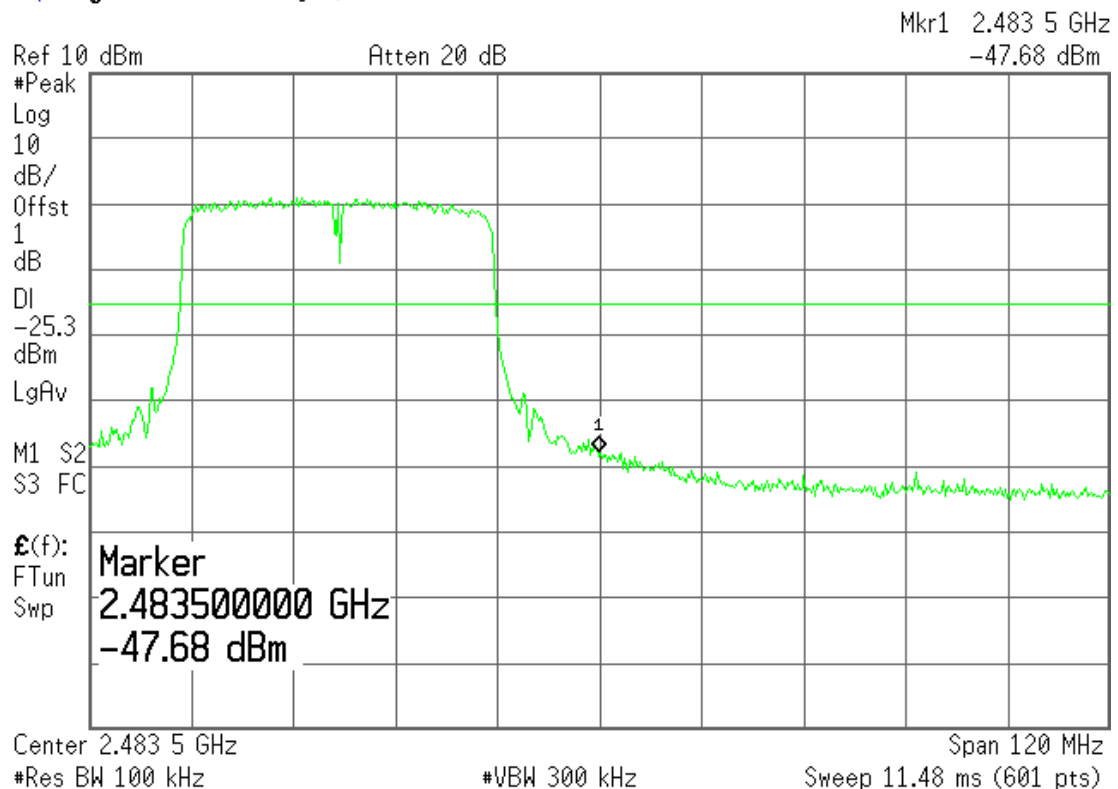


802.11n-HT40**Below Band edge**

* Agilent 20:42:50 May 8, 2012

**Upper Band edge**

* Agilent 20:35:48 May 8, 2012



8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'

8.2. Block Diagram of Test Setup

The same as section.4.2.

8.3. Specification Limits (§15.247(d))

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

8.4. Operating Condition of EUT

Same as 6dB bandwidth measurement which was listed in 5.4 except the test set up replaced by section 9.2.

8.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using 100kHz RBW and 1MHz VBW, set sweep time = Auto.

The measurement guideline was according to KDB 558074 D01.

8.6. Test Results

PASSED. All the test results are attached in next pages.

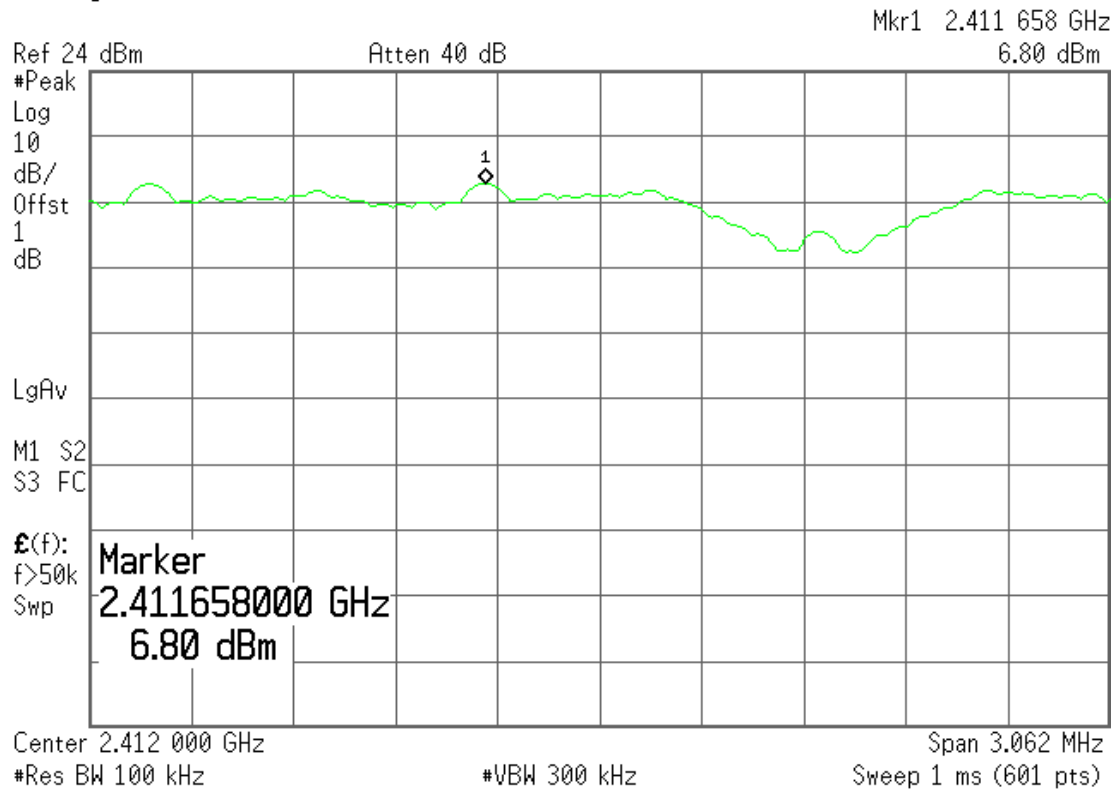
Test Date: May 08, 2012 Temperature : 24°C Humidity : 62%

Mode	Type of Network	Channel	Frequency	Power Spectral Density (dBm)	BWCF (dB)	Final Power Spectral Density (dBm)	Limit (dBm)
1.	802.11b	CH 1	2412MHz	6.80	-15.2	-8.40	8
2.		CH 6	2437MHz	6.51	-15.2	-8.69	8
3.		CH 11	2462MHz	5.58	-15.2	-9.62	8
4.	802.11g	CH 1	2412MHz	0.97	-15.2	-14.23	8
5.		CH 6	2437MHz	0.82	-15.2	-14.38	8
6.		CH 11	2462MHz	0.39	-15.2	-14.81	8
7.	802.11n-HT20	CH 1	2412MHz	1.66	-15.2	-13.54	8
8.		CH 6	2437MHz	1.22	-15.2	-13.98	8
9.		CH 11	2462MHz	0.10	-15.2	-15.10	8
10.	802.11n-HT40	CH 3	2422MHz	-4.41	-15.2	-19.61	8
11.		CH 6	2437MHz	-4.84	-15.2	-20.04	8
12.		CH 9	2452MHz	-5.30	-15.2	-20.50	8

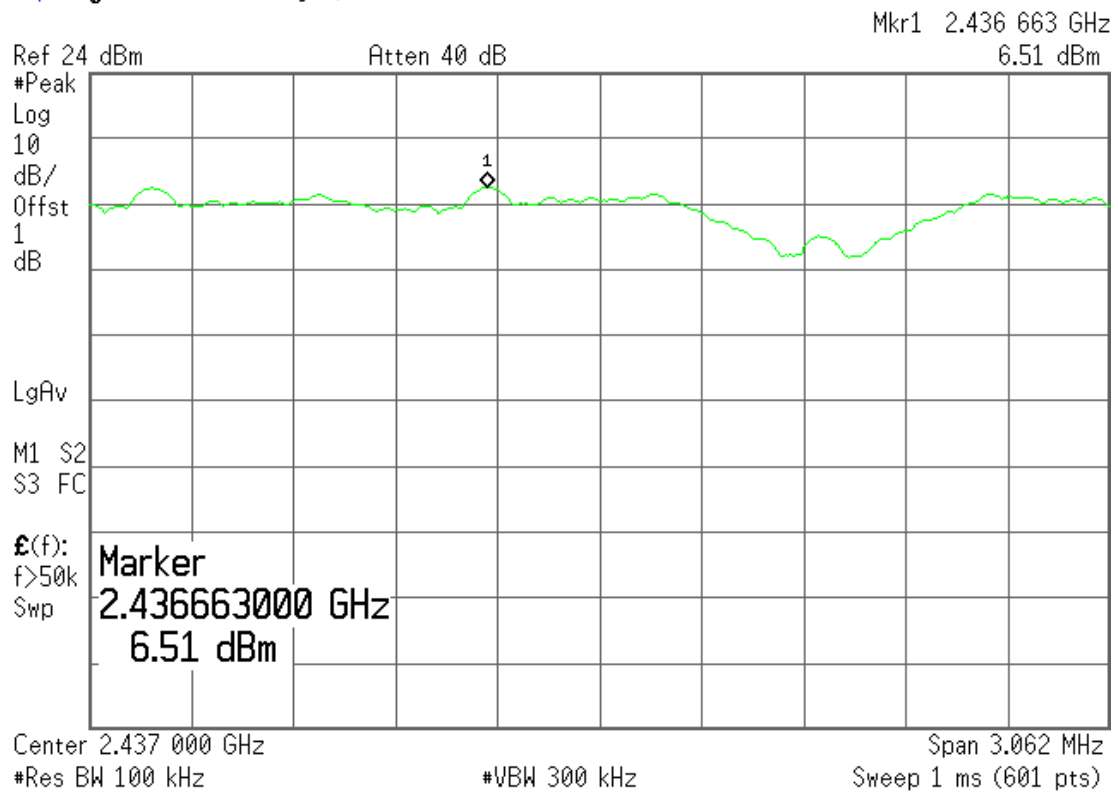
Remark: Final Power Spectral Density=Power Spectral Density + BWCF

802.11b, Frequency: 2412MHz

Agilent 12:04:39 May 8, 2012

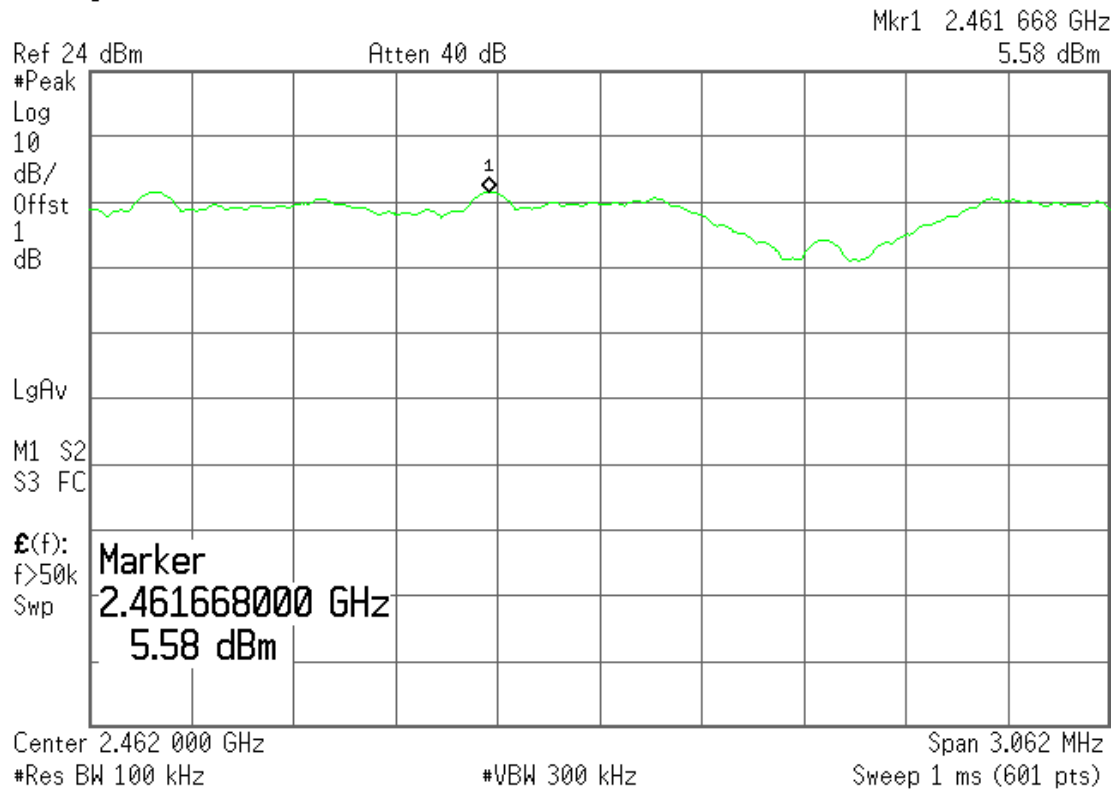
**802.11b, Frequency: 2437MHz**

Agilent 12:06:21 May 8, 2012

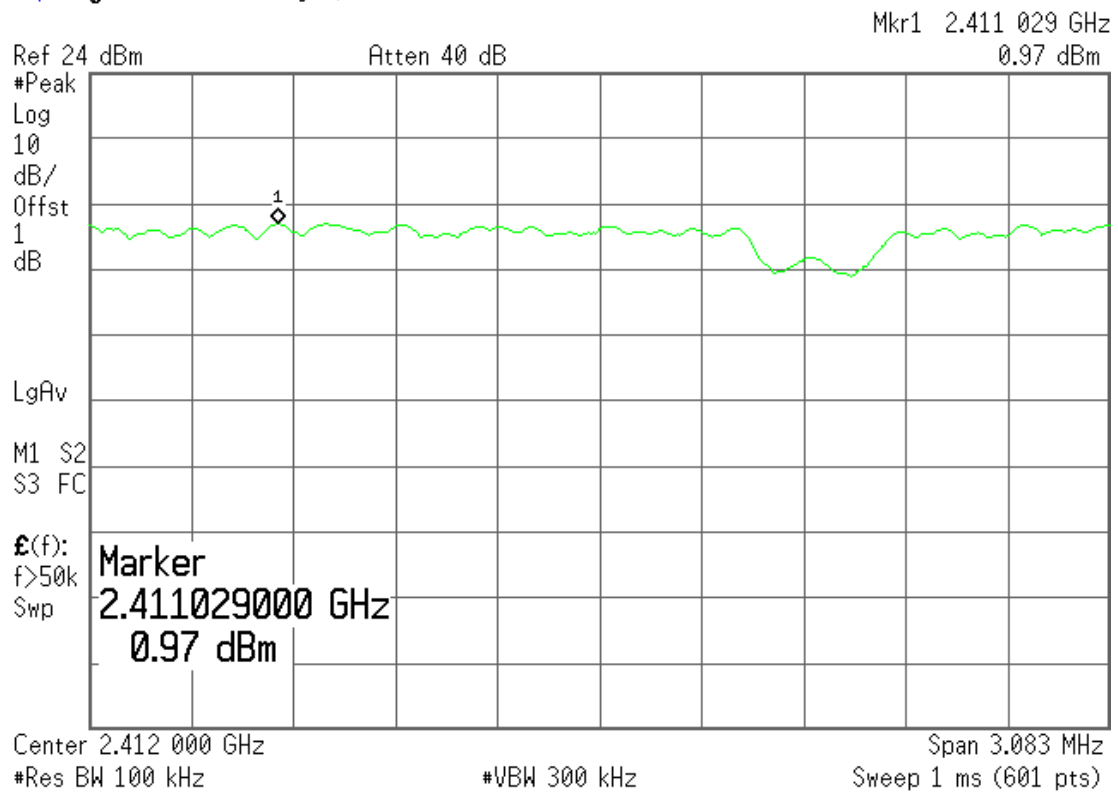


802.11b, Frequency: 2462MHz

Agilent 12:07:21 May 8, 2012

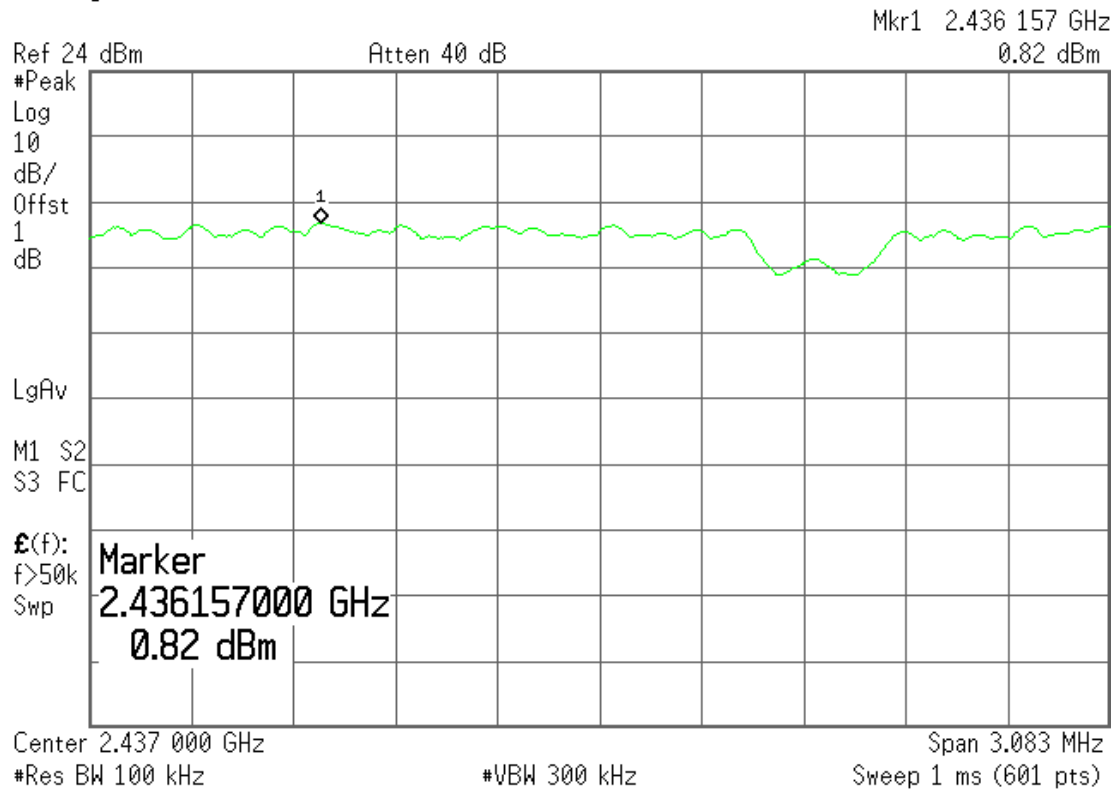
**802.11g, Frequency: 2412MHz**

Agilent 12:09:19 May 8, 2012

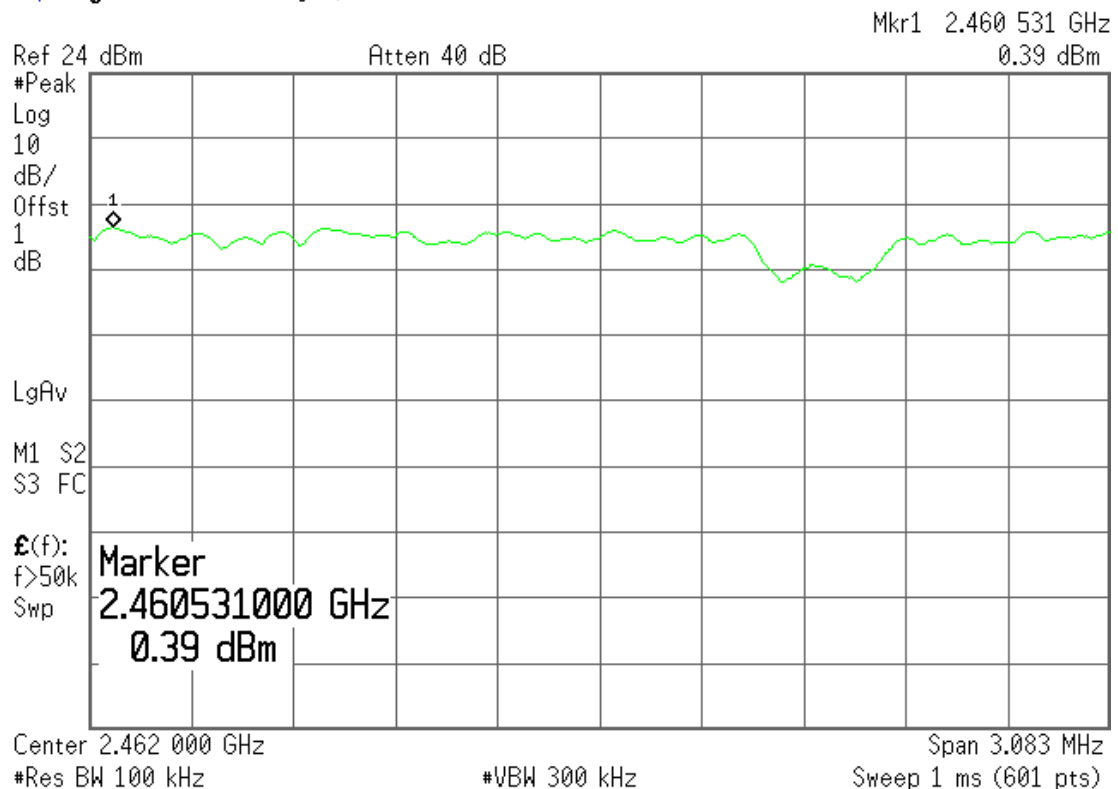


802.11g, Frequency: 2437MHz

Agilent 12:10:45 May 8, 2012

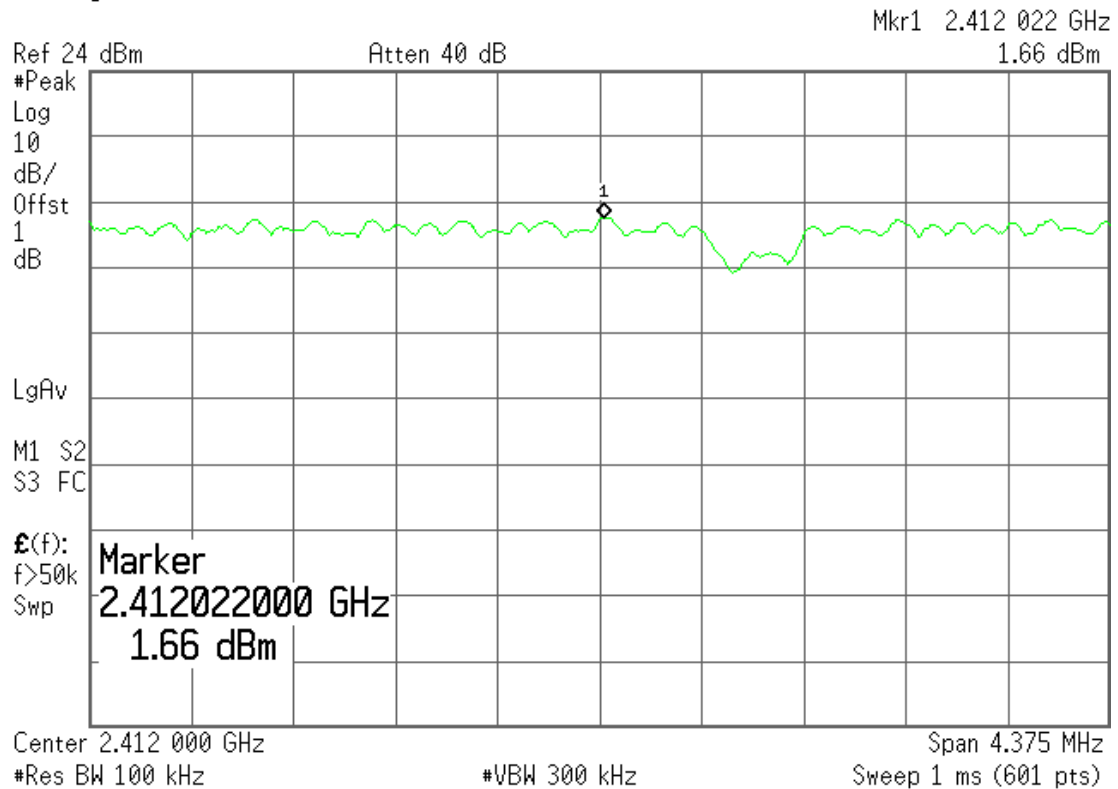
**802.11g, Frequency: 2462MHz**

Agilent 12:12:04 May 8, 2012

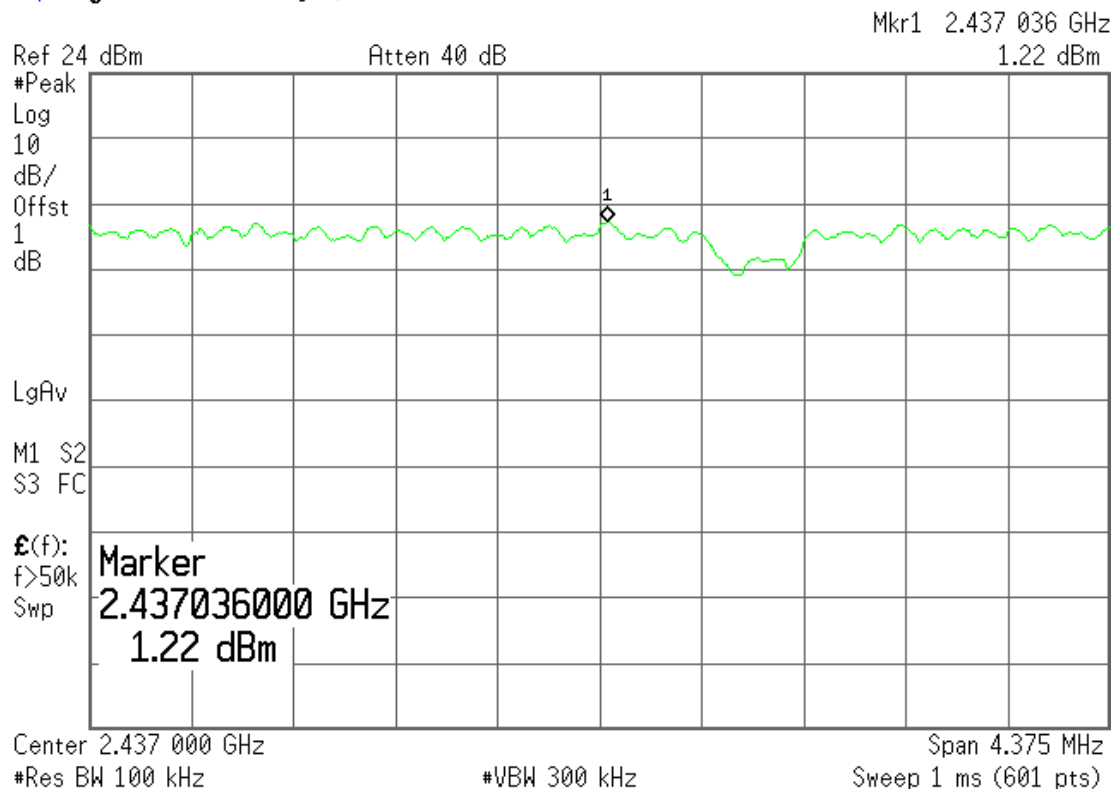


802.11n-HT20, Frequency: 2412MHz

Agilent 12:13:20 May 8, 2012

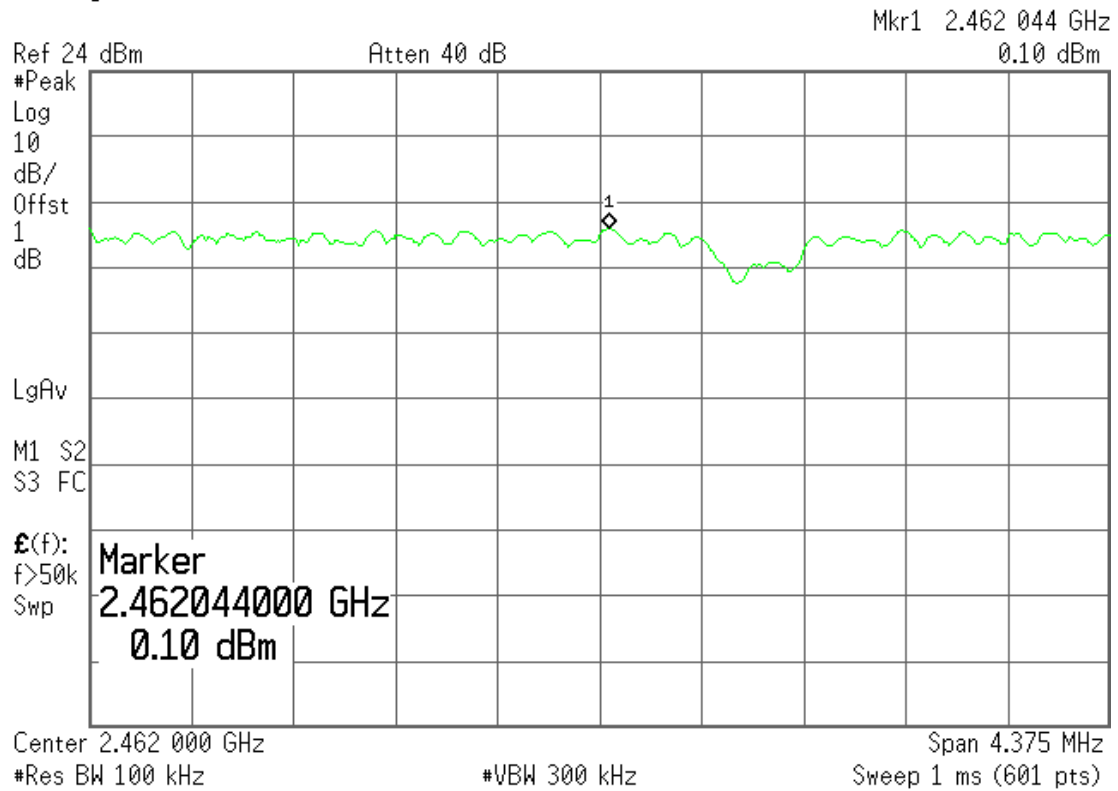
**802.11n-HT20, Frequency: 2437MHz**

Agilent 12:14:49 May 8, 2012

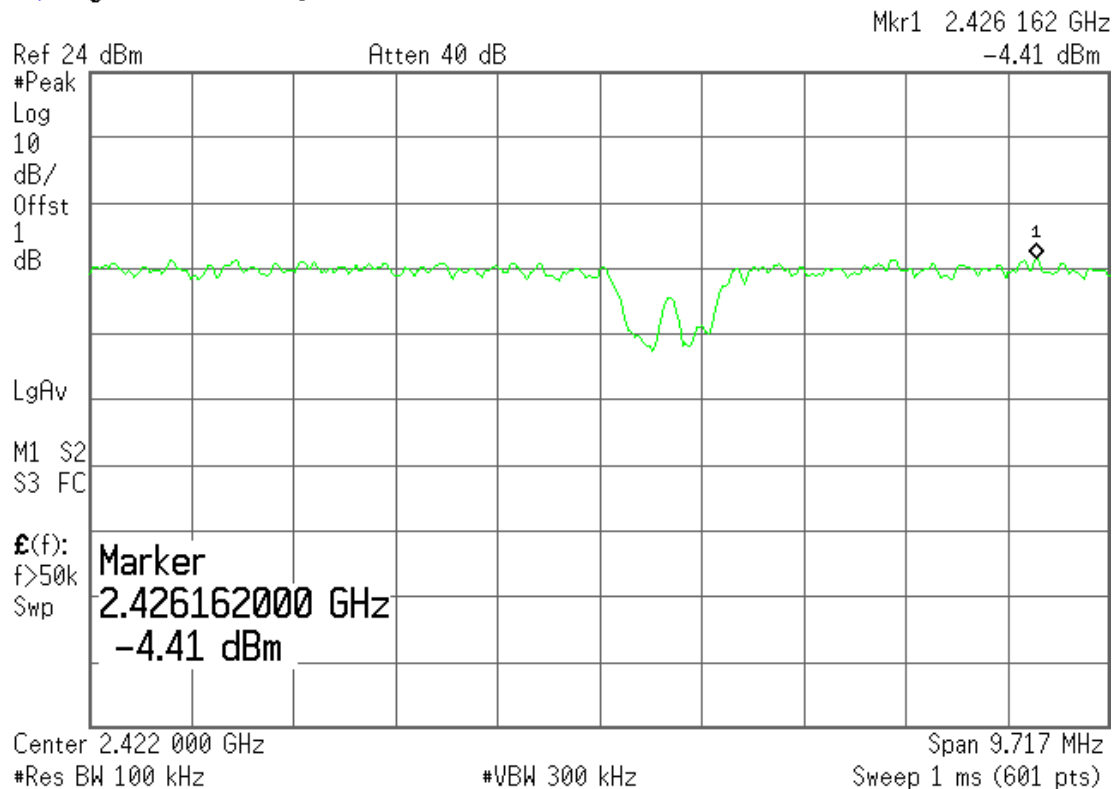


802.11n-HT20, Frequency: 2462MHz

Agilent 12:15:46 May 8, 2012

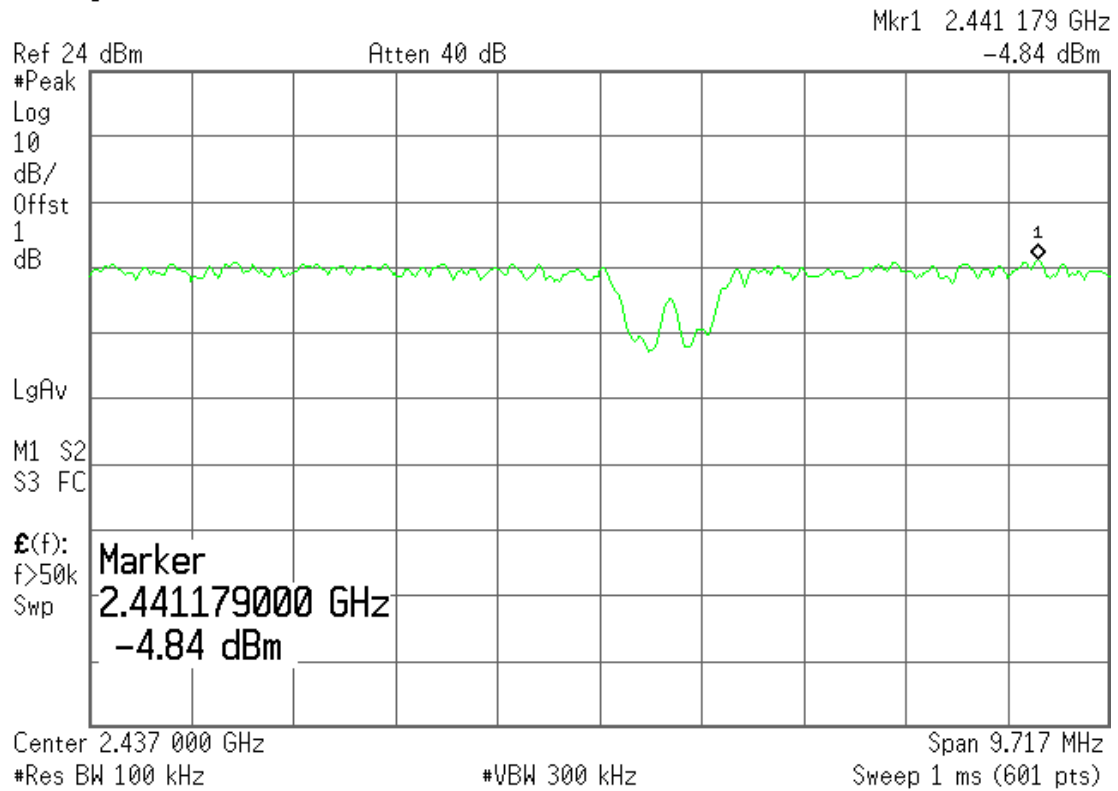
**802.11n-HT40, Frequency: 2422MHz**

Agilent 12:17:14 May 8, 2012

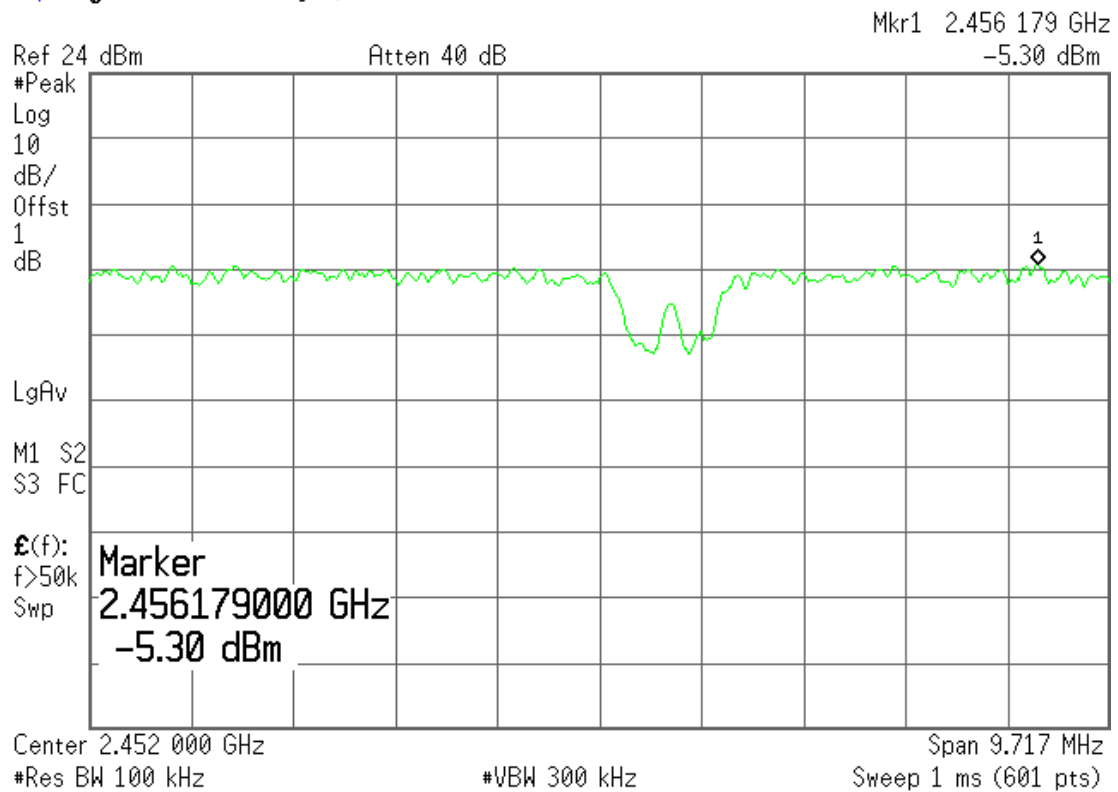


802.11n-HT40, Frequency: 2437MHz

Agilent 12:18:38 May 8, 2012

**802.11n-HT40, Frequency: 2452MHz**

Agilent 12:19:27 May 8, 2012



9. DEVIATION TO TEST SPECIFICATIONS

【NONE】

10. PHOTOGRAPHS

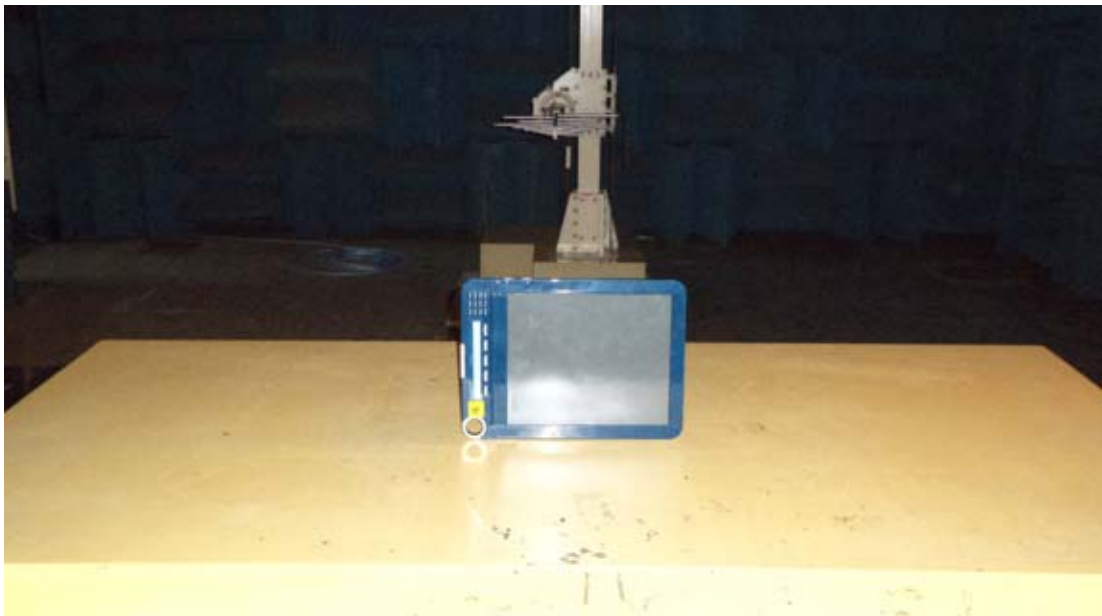
10.1. Photos of Radiated Measurement at Semi-Anechoic Chamber

10.1.1. Frequency Range 30MHz~1GHz

Position: Stand



Position: Side



Position: Lie



10.1.2.Frequency Range Above 1GHz

Position: Stand



Position: Side



Position: Lie



10.2.Photo of RF Conducted Measurement



10.3.Photo of Maximum Peak Output Power Measurement

