

APPLICATION FOR CERTIFICATION

On Behalf of

LG Electronics Inc.

WLAN Adapter Card

Model No. : PW-MN5275

FCC ID : BEJ9QK-DMPWMN5275

IC: 2703H-DMPWMN5275

Brand : LG

Prepared for : LG Electronics Inc.

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Prepared by : AUDIX Technology Corporation

EMC Department

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Date of Test : Oct. 15 ~ 22, 2012

Date of Report : Oct. 23, 2012

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TEST REPORT CERTIFICATION

Applicant : LG Electronics Inc.
Manufacturer : Proware Technologies Co., Ltd.
EUT Description : WLAN Adapter Card
FCC ID : **BEJ9QK-DMPWMN5275**
IC : **2703H-DMPWMN5275**
(A) Model No. : PW-MN5275
(B) Serial No. : N/A
(C) Brand : LG
(D) Power Supply : DC 5V (Powered by Notebook PC)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C, Oct. 2010
Industry Canada Rules and Regulations RSS-Gen (Issue 3), December 2010 and
RSS-210 (Issue 8), December 2010
(Canada RSS-210 §Annex 8)
And ANSI C63.4:2003

(FCC 47 CFR Part 15C, §15.205 and §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 and Canada RSS-Gen, RSS-210 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 requirements of FCC and Industry Canada RSS-Gen, RSS-210 standards.

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: Oct. 15 ~ 22, 2012

Date of Report: Oct. 23, 2012

Producer: Annie Yu
(Annie Yu/Assistant Administrator)

Signatory: Leon Liu
(Leon Liu/Deputy General Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	WLAN Adapter Card The frequency range of 2400MHz ~ 2483.5MHz、 5725MHz ~ 5850MHz was tested in this report. The frequency range 5150 ~ 5250MHz has been tested and the test data are reported in other report of EM-F1010831.
Model Number	:	PW-MN5275
Serial Number	:	N/A
Brand	:	LG
FCC ID	:	BEJ9QK-DMPWMN5275
IC	:	2703H-DMPWMN5275
Applicant	:	LG Electronics Inc. 19-1, Cheongho-Ri, Jinwuy-Myeon, Pyeongtaek-City, Gyeonggi-Do, 451-713, Korea
Manufacturer	:	Proware Technologies Co., Ltd. No.520, Nanbang Rd., Economic & Technical Development Zone, Kunshan, Jiangsu Province, China.
Fundamental Range	:	2412MHz ~ 2462MHz and 5180MHz ~ 5240MHz and 5745MHz ~ 5825MHz
Radio Technology	:	802.11b: DSSS Modulation (DBPSK/DQPSK/CCK) 802.11a/g/n-HT20/n-HT40: OFDM Modulation 2T2R, (BPSK/QPSK/16QAM/64QAM)
Data Transfer Rate	:	802.11b: 1/2/5.5/11Mbps 802.11a/g: 6/9/12/18/24/48/54Mbps 802.11n: up to 300Mbps
Antenna Gain	:	2.4GHz: 4.35dBi (Peak) 5.8GHz: 4.64dBi (Peak)

Antenna Transmit Type : 802.11a/b/g: 1T1R
802.11n: 2T2R

Antenna Type : FIFA

Date of Receipt of Sample : Oct. 12, 2012

Date of Test : Oct. 15 ~ 22, 2012

1.2. Data Rate Relative to Output Power

802.11b			
Channel	Modulation	Date Rate(Mbps)	Power(dBm)
1	DBPSK	1	16.03
1	DQPSK	2	15.89
1	CCK	5.5	15.85
1	CCK	11	15.81

802.11g				802.11a			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)	Channel	Modulation	Date Rate (Mbps)	Power (dBm)
6	BPSK	6	22.80	153	BPSK	6	17.07
6	BPSK	9	22.73	153	BPSK	9	17.03
6	QPSK	12	22.69	153	QPSK	12	16.96
6	QPSK	18	22.65	153	QPSK	18	16.90
6	16-QAM	24	22.60	153	16-QAM	24	16.83
6	16-QAM	36	22.58	153	16-QAM	36	16.79
6	64-QAM	48	22.51	153	64-QAM	48	16.75
6	64-QAM	54	22.43	153	64-QAM	54	16.70

802.11n-HT20				802.11n-HT20			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)	Channel	Modulation	Date Rate (Mbps)	Power (dBm)
11	BPSK	6.5	22.36	149	BPSK	6.5	16.57
11	QPSK	13	22.31	149	QPSK	13	16.51
11	QPSK	19.5	22.28	149	QPSK	19.5	16.47
11	16-QAM	26	22.21	149	16-QAM	26	16.41
11	16-QAM	39	22.17	149	16-QAM	39	16.38
11	64-QAM	52	22.10	149	64-QAM	52	16.32
11	64-QAM	58.6	22.07	149	64-QAM	58.6	16.26
11	64-QAM	65	22.01	149	64-QAM	65	16.21

Remark: After confirming, chain 0 has worst perform thus we perform all test items at chain 0.

802.11n-HT40				802.11n-HT40			
Channel	Modulation	Date Rate (Mbps)	Power (dBm)	Channel	Modulation	Date Rate (Mbps)	Power (dBm)
6	BPSK	13.5	20.84	151	BPSK	13.5	16.48
6	QPSK	27	20.79	151	QPSK	27	16.42
6	QPSK	40.5	20.72	151	QPSK	40.5	16.38
6	16-QAM	54	20.68	151	16-QAM	54	16.35
6	16-QAM	81	20.61	151	16-QAM	81	16.60
6	64-QAM	108	20.56	151	64-QAM	108	16.27
6	64-QAM	121.5	20.54	151	64-QAM	121.5	16.23
6	64-QAM	135	20.50	151	64-QAM	135	16.19

Remark: After confirming, chain 0 has worst perform thus we perform all test items at chain 0.

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	6.5	13.5
Peak Power Spectral Density	1	6	6.5	13.5
Peak Output Power	1	6	6.5	13.5
Band Edge	1	6	6.5	13.5

1.4. Tested Supporting System Details

1.4.1. NOTEBOOK PC

Model Number	:	PP19S
Serial Number	:	8285
FCC ID	:	MCLBCM92046
BSMI ID	:	R33002
Brand	:	DELL
AC Adapter	:	M/N:AD6513
		DC Cord: Non-Shielded, Undetachable, 2.4m
USB Cable	:	Non-Shielded, Detachable, 0.25m
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 Site : **No. 7 Shielded Room &**
 (C7/Semi-AC) No. 53-11, Dingfu, Linkou Dist.,
 New Taipei City 244, Taiwan, R.O.C.
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)
Conduction Test	150kHz~30MHz	±1.73dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.74dB
	Above 1GHz	± 5.02dB

Remark : Uncertainty = $ku_c(y)$

Test Item	Uncertainty
6dB Bandwidth	± 0.05kHz
Maximum peak output power	± 0.33dBm
Band edges	± 0.13dB
Power spectral density	± 0.13dB
Emission Limitations	± 0.13dB

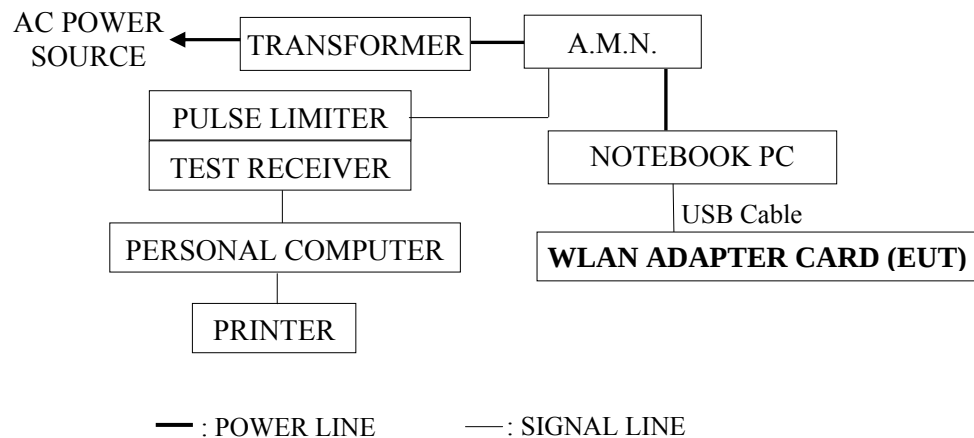
2. CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the conducted emission measurement :
(No. 7 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101276	Apr. 30, 12'	Apr. 29, 13'
2.	A.M.N.	R&S	ESH2-Z5	100366	Mar. 26, 12'	Mar. 25, 13'
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1370-9	Mar. 08, 12'	Mar. 07, 13'
4.	Pulse Limiter	R&S	ESH3-Z2	100041	Feb. 01, 12'	Jan. 31, 13'

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit §15.207, Class B,

RSS-Gen §7.2.2/Table 2]

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2.: The lower limit applies at the band edges.

2.4. Operating Condition of EUT

- 2.4.1. Setup the EUT and simulator as shown on 2.2.
- 2.4.2. Turn on the power of all equipment.
- 2.4.3. The Notebook PC was running test software “QA Tool” to set EUT (WLAN Adapter Card) on transmitting and receiving during all testing.

2.5. Test Procedure

The EUT (link Notebook PC) was placed on the table which was above the ground by 80cm and Notebook PC's adapter's power cord connected to the AC mains through an Artificial Mains Network (A.M.N.). This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions simulators of the interface cables should be manipulated according to ANSI C63.4-2003, RSS-Gen and RSS-210 regulation during conducted measurement.

The bandwidth of the R&S Test Receiver ESCI was set at 9kHz.

The frequency range from 150kHz to 30MHz was checked.

All the final readings from Test Receiver were measured with the Quasi-Peak detector and Average detector. Remark: If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

2.6. Conducted Emission Measurement Results

PASSED.

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

EUT was performed during this section testing and all the test results are attached in next pages.

EUT : WLAN Adapter Card M/N : PW-MN5275

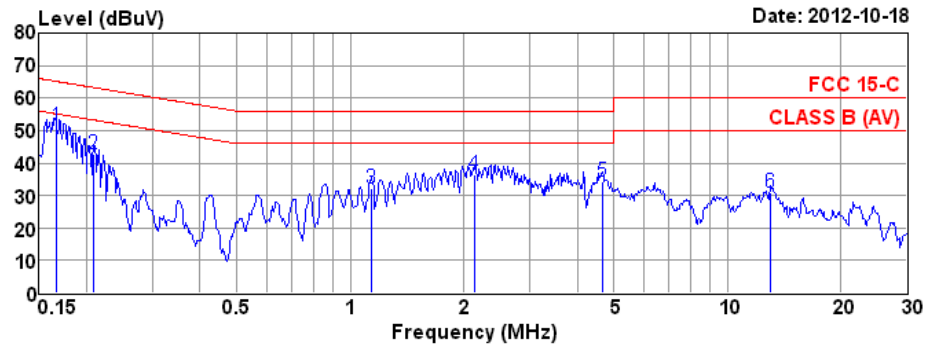
Test Date : Oct. 18, 2012 Temperature : 25°C Humidity : 52%

Reference Test Data : Neutral # 2; Line # 1



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Email:emc@audixtech.com

Data: 2 File: D:\test data\REPORT\IC1M1210XXX\IC1M1210175-C-D.EM6 (6)



Site no. : No.7 Shielded Room Data no. : 2
Dis. / Ant. : ESH2-Z5 366 Ant. pol. : NEUTRAL
Limit : FCC 15-C
Env. / Ins. : 25°C / 52% ESCI (1276) Engineer : Fate
EUT : PW-MN5275
Power Rating : 120Vac/60Hz
Test Mode : OPERATING

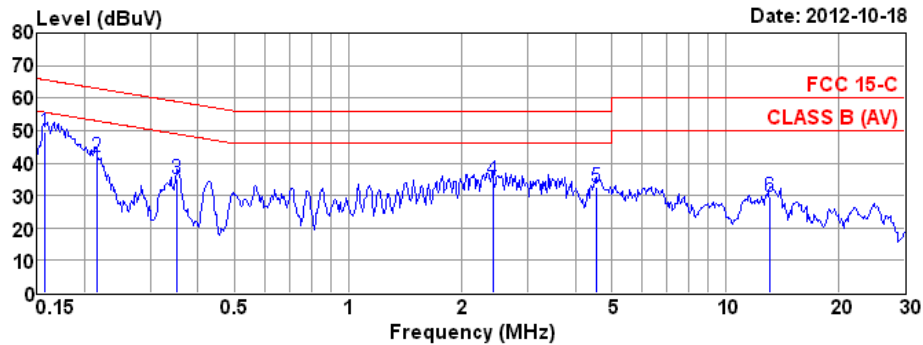
	Freq. (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17	0.10	9.93	41.22	51.25	65.16	13.91	QP
2	0.21	0.10	9.94	32.57	42.61	63.27	20.66	QP
3	1.14	0.20	10.00	22.20	32.40	56.00	23.60	QP
4	2.13	0.20	9.99	26.33	36.52	56.00	19.48	QP
5	4.67	0.22	10.02	24.02	34.26	56.00	21.74	QP
6	12.99	0.36	9.86	20.65	30.87	60.00	29.13	QP

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



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Email:emc@audixtech.com

Data: 1 File: D:\test data\REPORT\IC1M1210XXX\IC1M1210175-C-D.EM6 (6)



Site no. : No.7 Shielded Room Data no. : 1
Dis. / Ant. : ESH2-Z5 366 Ant. pol. : LINE
Limit : FCC 15-C
Env. / Ins. : 25°C / 52% ESCI (1276) Engineer : Fate
EUT : PW-MN5275
Power Rating : 120Vac/60Hz
Test Mode : OPERATING

	Freq. (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16	0.10	9.92	39.72	49.74	65.65	15.91	QP
2	0.22	0.10	9.94	31.94	41.98	63.01	21.03	QP
3	0.35	0.10	9.96	24.96	35.02	58.91	23.89	QP
4	2.42	0.20	10.01	24.37	34.58	56.00	21.42	QP
5	4.55	0.21	10.02	22.33	32.56	56.00	23.44	QP
6	13.13	0.37	9.86	19.53	29.76	60.00	30.24	QP

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

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)

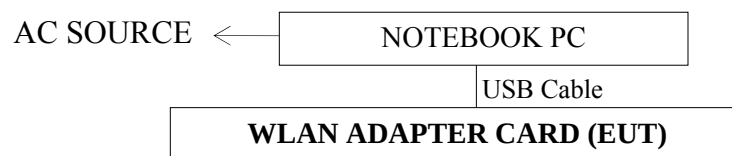
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 08, 12'	Aug. 06, 13'
2.	Test Receiver	R & S	ESCS30	100338	Jul. 04, 12'	Jul. 03, 13'
3.	Amplifier	HP	8447D	2944A06305	Feb. 13, 12'	Feb. 12, 13'
4.	Biconical Antenna	CHASE	VBA6106 A	1264	Mar. 03, 12'	Mar. 02, 13'
5.	Log Periodic Antenna	Schwarzbeck	UHALP91 08-A	0810	Mar. 03, 12'	Mar. 02, 13'

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

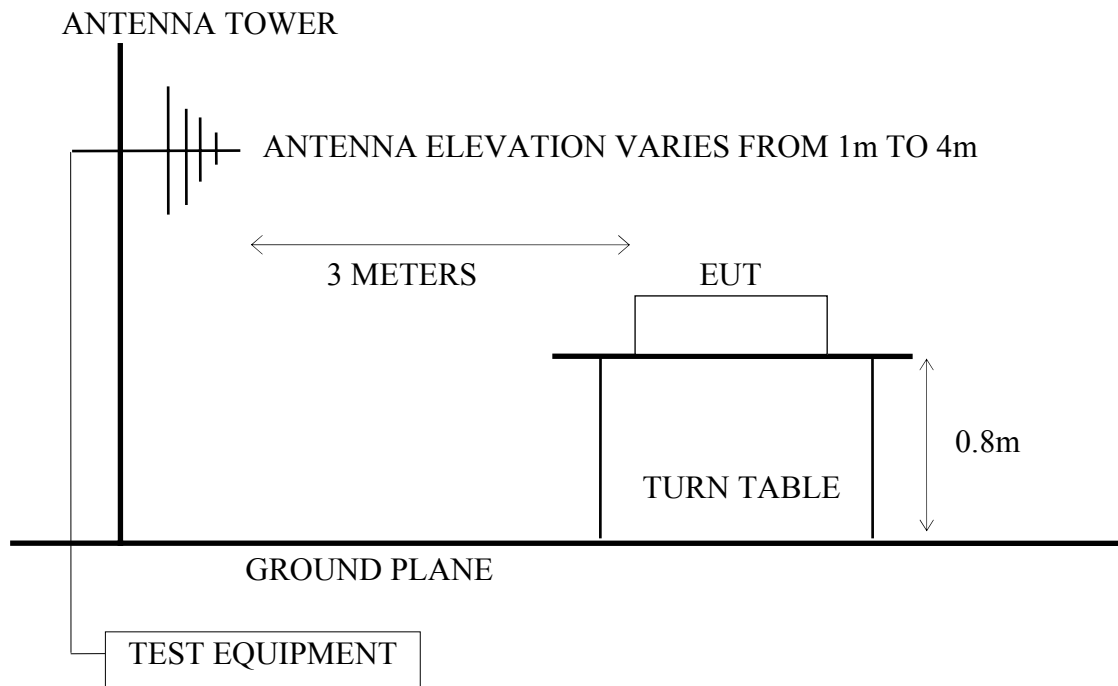
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 08, 12'	Aug. 06, 13'
2.	Amplifier	HP	8449B	3008A00529	Dec. 09, 11'	Dec. 08, 12'
3.	Horn Antenna	EMCO	3115	9112-3775	May 09, 12'	May 08, 13'
4.	Horn Antenna	EMCO	3116	2653	Oct. 15, 11'	Oct. 14, 13'
5.	2.4GHz Notch Filter	EWT	EWT-14-00 70-R1	G2	Feb. 15, 12'	Feb. 14, 13'
6.	3.5G High Pass Filter	HP	84300-8003 8	005	Dec. 15, 11'	Dec. 14, 12'
7.	Signal Generator	HP	83732B	US34490489	May 16, 12'	May 15, 13'

3.2. Test Setup

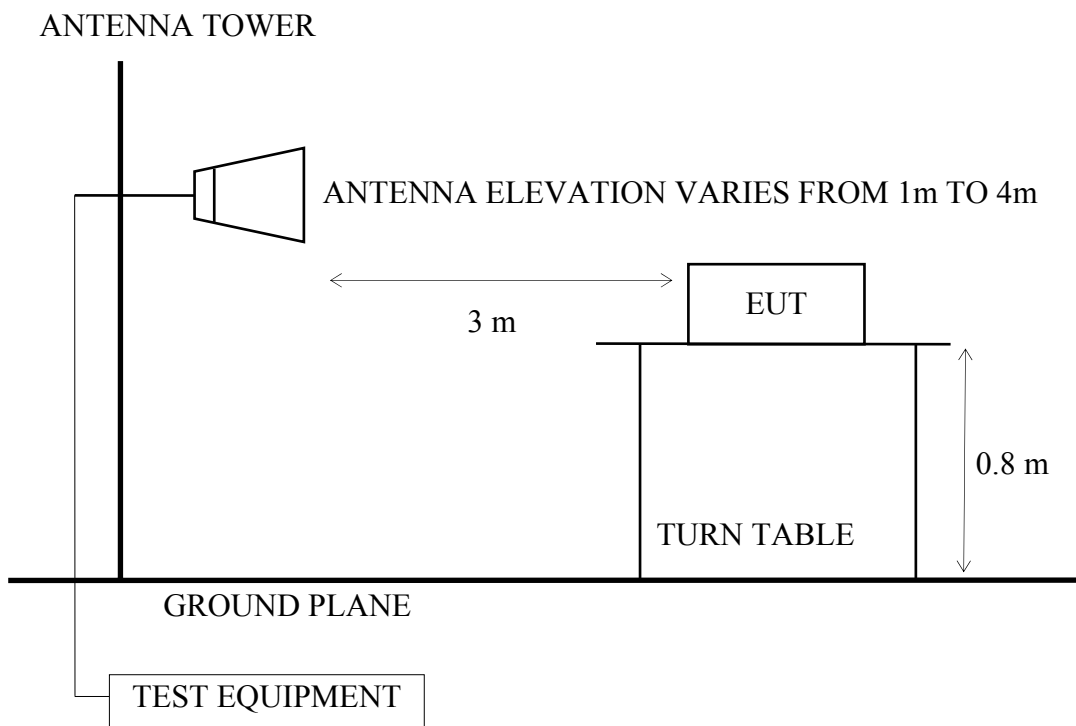
3.2.1. Block Diagram of connection between EUT and simulators



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, RSS-210 §2.7/Table 2)

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 (WLAN Adapter Card) via Notebook PC and simulator 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 “QA Tool”.
- 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:

Mode	Type of Network	Channel
1.	802.11b	CH 1
2.	802.11g	CH 6
3.	802.11a	CH 149
4.	802.11n-HT20	CH 6
5.	802.11n-HT20	CH 65
6.	802.11n-HT40	CH 6
7.	802.11n-HT40	CH 151

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 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna 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 ANSI C63.4-2003, RSS-Gen and RSS-210 regulation.

The bandwidth of the R&S Test Receiver 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 40GHz (Up to 10th harmonics from fundamental frequency) was checked. 30MHz to 1000MHz was measured with Quasi-Peak detector. Pursuant to ANSI 4.2.2, peak detector is an alternate option for frequency from 30MHz to 1000MHz.

For emissions above 1GHz were measured with peak and average detectors, and performed measurement in 1 m distance for frequency range from 5500MHz up to 40000MHz where there is no emission be found.

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. Test Results

PASSED.

(All emissions not reported for there is no emission be found.)

EUT : WLAN Adapter Card

M/N : PW-MN5275

Test Date : Oct. 19, 2012 Temperature : 26°C Humidity : 61%

The EUT linked to notebook PC (with stand, side and lie conditions) modes were evaluated, select the **worst test mode (stand)** was tested in this section.

For Frequency Range 30MHz~1000MHz:

The EUT with following test modes were 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	# 2	# 1
2.	802.11g	CH 6	2437MHz		# 2	# 1
3.	802.11a	CH 165	5825MHz		# 2	# 1
4.	802.11n-HT20	CH 6	2437MHz		# 2	# 1
5.		CH 149	5745MHz		# 2	# 1
6.	802.11n-HT40	CH 3	2422MHz		# 2	# 1
7.		CH 151	5755MHz		# 2	# 1

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

2.4GHz & 5.8GHz for Frequency above 1GHz:

The EUT 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	Average	Peak	Average
1.	802.11b	CH 1	2412MHz	Transmit	# 6	--(Note2)	# 5	--(Note2)
2.	802.11g	CH 6	2437MHz		# 6	--(Note2)	# 5	--(Note2)
3.	802.11a	CH 165	5825MHz		--(Note2)	--(Note2)	--(Note2)	--(Note2)
4.	802.11n-HT20	CH 6	2437MHz		# 6	--(Note2)	# 5	--(Note2)
5.		CH 149	5745MHz		--(Note2)	--(Note2)	--(Note2)	--(Note2)
6.	802.11n-HT40	CH 3	2422MHz		# 6	--(Note2)	# 5	--(Note2)
7.		CH 151	5755MHz		--(Note2)	--(Note2)	--(Note2)	--(Note2)

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

2. For measurements above 1GHz to 2.68GHz or 4GHz-5.5GHz or 5.5GHz-8GHz, 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 40GHz) not reported for there is no emission be found.

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		# 7, # 8	# 5, # 6
3.	802.11g	CH 6	2412MHz	Transmit	# 3, # 4	# 1, # 2
4.		CH 11	2462MHz		# 7, # 8	# 5, # 6
5.	802.11n-HT20	CH 6	2412MHz	Transmit	# 3, # 4	# 1, # 2
6.		CH 11	2462MHz		# 7, # 8	# 5, # 6
7.	802.11n-HT40	CH 3	2422MHz	Transmit	# 3, # 4	# 1, # 2
8.		CH 9	2452MHz		# 7, # 8	# 5, # 6

3.6.1. For 30-1000MHz Frequency Range Measurement Results

802.11b, Transmit, Frequency: 2412MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% Qjianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2412(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
66.990	11.80	1.70	12.41	25.91	40.00	14.09	Peak
209.280	21.81	3.16	3.09	28.05	43.50	15.45	Peak
288.930	25.97	3.80	2.64	32.41	46.00	13.59	Peak
399.400	17.69	4.80	8.78	31.27	46.00	14.73	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. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% Qjianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2412(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
68.880	11.93	1.70	12.22	25.86	40.00	14.14	Peak
110.190	18.19	2.20	7.48	27.87	43.50	15.63	Peak
240.330	23.10	3.40	2.97	29.47	46.00	16.53	Peak
336.400	15.08	4.20	10.77	30.06	46.00	15.94	Peak
359.500	16.14	4.40	9.74	30.28	46.00	15.72	Peak
407.800	17.31	4.90	6.75	28.96	46.00	17.04	Peak
556.200	19.53	6.80	3.88	30.21	46.00	15.79	Peak
693.400	23.23	6.50	1.18	30.91	46.00	15.09	Peak
962.900	26.63	7.60	1.77	36.00	54.00	18.00	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: 2437MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
101.280	17.17	2.10	1.55	20.82	43.50	22.68	Peak
209.280	21.81	3.16	4.01	28.97	43.50	14.53	Peak
288.930	25.97	3.80	1.26	31.03	46.00	14.97	Peak
358.800	16.02	4.40	6.82	27.24	46.00	18.76	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. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
68.880	11.93	1.70	6.45	20.09	40.00	19.91	Peak
208.740	21.85	3.16	2.79	27.80	43.50	15.70	Peak
336.400	15.08	4.20	10.70	29.99	46.00	16.01	Peak
360.900	16.24	4.43	8.03	28.70	46.00	17.30	Peak
416.900	16.95	5.08	3.65	25.67	46.00	20.33	Peak
556.900	19.67	6.76	1.59	28.03	46.00	17.97	Peak

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

802.11a, Transmit, Frequency: 5825MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5825(802.11a)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
79.680	13.59	1.89	11.48	26.96	40.00	13.04	Peak
360.900	16.24	4.43	12.06	32.73	46.00	13.27	Peak

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

Site no. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5825(802.11a)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
81.030	13.97	1.90	7.78	23.65	40.00	16.35	Peak
210.090	21.77	3.20	2.71	27.68	43.50	15.82	Peak
488.300	18.63	6.20	4.76	29.59	46.00	16.41	Peak
624.800	21.31	6.20	3.57	31.08	46.00	14.92	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: 2437MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
58.080	13.43	1.60	5.31	20.34	40.00	19.66	Peak
102.090	17.29	2.10	1.49	20.88	43.50	22.62	Peak
209.280	21.81	3.16	1.72	26.68	43.50	16.82	Peak
406.400	17.35	4.90	6.86	29.11	46.00	16.89	Peak
721.400	22.21	6.54	2.53	31.28	46.00	14.72	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. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
69.690	12.03	1.70	11.81	25.54	40.00	14.46	Peak
336.400	15.08	4.20	6.91	26.20	46.00	19.80	Peak
358.800	16.02	4.40	7.32	27.74	46.00	18.26	Peak
407.800	17.31	4.90	4.86	27.07	46.00	18.93	Peak
556.900	19.67	6.76	1.82	28.26	46.00	17.74	Peak
964.300	26.80	7.60	0.80	35.20	54.00	18.80	Peak

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

802.11n-HT20, Transmit, Frequency: 5745MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5745(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
79.680	13.59	1.89	18.44	33.92	40.00	6.08	Peak
288.930	25.97	3.80	4.44	34.21	46.00	11.79	Peak
399.400	17.69	4.80	9.12	31.60	46.00	14.40	Peak

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

Site no. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5745(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
79.680	13.59	1.89	12.99	28.47	40.00	11.53	Peak
360.900	16.24	4.43	6.31	26.98	46.00	19.02	Peak
407.800	17.31	4.90	4.78	26.99	46.00	19.01	Peak
486.900	18.67	6.20	4.51	29.38	46.00	16.62	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. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
174.180	21.13	2.80	3.40	27.33	43.50	16.17	Peak
358.800	16.02	4.40	2.84	23.26	46.00	22.74	Peak
833.400	24.88	7.10	-1.27	30.71	46.00	15.29	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. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
55.380	14.39	1.50	15.97	31.86	40.00	8.14	Peak
68.880	11.93	1.70	11.15	24.79	40.00	15.21	Peak
358.800	16.02	4.40	3.67	24.09	46.00	21.91	Peak
416.900	16.95	5.08	3.95	25.97	46.00	20.03	Peak
486.900	18.67	6.20	4.21	29.08	46.00	16.92	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: 5755MHz

Site no. : site Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5755(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
79.680	13.59	1.89	9.67	25.15	40.00	14.85	Peak
288.930	25.97	3.80	3.54	33.31	46.00	12.69	Peak
393.800	17.56	4.70	10.31	32.57	46.00	13.43	Peak

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

Site no. : site Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : LP0002
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX5755(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
79.680	13.59	1.89	8.36	23.84	40.00	16.16	Peak
262.740	24.58	3.60	1.20	29.38	46.00	16.62	Peak
336.400	15.08	4.20	7.38	26.67	46.00	19.33	Peak
360.900	16.24	4.43	8.28	28.95	46.00	17.05	Peak
416.900	16.95	5.08	6.61	28.63	46.00	17.37	Peak
558.300	19.89	6.70	3.89	30.47	46.00	15.53	Peak
967.800	26.90	7.69	1.26	35.85	54.00	18.15	Peak

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

3.6.2. 2.4GHz for Above 1GHz Frequency Range Measurement Results

802.11b Transmit, Frequency: 2412MHz

Site no.	: site	Data no.	: 6
Dis. / Ant.	: 3m 3115(4927)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART-15C (1G-AV)		
Env. / Ins.	: E4446A 26°C/61%		Qjianlun_hung
EUT	: PW-MN5275		
Power Rating	: DC5V (VIA USB)		
Test Mode	: TX2412(802.11b)		

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2355.760	28.40	6.29	13.33	48.02	54.00	5.98	Peak
4828.000	33.09	9.14	9.95	52.18	54.00	1.82	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. Peak is compliance with average limit, thus we do not indicate AV value.

Site no.	: site	Data no.	: 5
Dis. / Ant.	: 3m 3115(4927)	Ant. pol.	: VERTICAL
Limit	: FCC PART-15C (1G-AV)		
Env. / Ins.	: E4446A 26°C/61%		Qjianlun_hung
EUT	: PW-MN5275		
Power Rating	: DC5V (VIA USB)		
Test Mode	: TX2412(802.11b)		

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2364.160	28.40	6.30	16.40	51.10	54.00	2.90	Peak
2548.960	28.87	6.54	10.71	46.12	54.00	7.88	Peak
4828.000	33.09	9.14	11.81	54.04	74.00	19.96	Peak
4828.000	33.09	9.14	7.81	50.04	54.00	3.96	Average

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

3. Except to 4828MHz, other peak values are compliance with average limit, thus we not indicate AV value.

802.11g, Transmit, Frequency: 2437MHz

Site no. : site Data no. : 6
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2322.160	28.32	6.25	14.05	48.62	54.00	5.38	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. Peak is compliance with average limit, thus we do not indicate AV value.

Site no. : site Data no. : 5
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2325.520	28.32	6.26	14.48	49.06	54.00	4.94	Peak
2523.760	28.81	6.50	17.10	52.41	54.00	1.59	Peak

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

802.11a, Transmit, Frequency: 5825MHz

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Horizontal	DCF	Peak Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7767.00	36.81	11.74	11.62	60.17	9.54	50.63	74.00	23.37

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Vertical	DCF	Peak Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7767.00	36.81	11.74	16.85	65.4	9.54	55.86	74.00	18.14

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the peak value at 3m= peak value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Horizontal	DCF	Average Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7767.00	36.81	11.74	7.02	55.57	9.54	46.03	54.00	7.97

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Vertical	DCF	Average Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*..7767	36.81	11.74	12.94	61.49	9.54	51.95	54.00	2.05

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

802.11n-HT20, Transmit, Frequency: 2437MHz

Site no. : site Data no. : 6
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2333.920	28.32	6.27	13.54	48.13	54.00	5.87	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. Peak is compliance with average limit, thus we do not indicate AV value.

Site no. : site Data no. : 5
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2437(802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2338.960	28.36	6.28	15.73	50.37	54.00	3.63	Peak
2557.360	28.93	6.56	15.19	50.68	54.00	3.32	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: 5745MHz

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Horizontal	DCF	Peak Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.73	11.72	17.23	65.68	9.54	56.14	74.00	17.86

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Vertical	DCF	Peak Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.73	11.72	12.26	60.71	9.54	51.17	74.00	22.83

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the peak value at 3m= peak value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Horizontal	DCF	Average Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.73	11.72	12.16	60.61	9.54	51.07	54.00	2.93

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Vertical	DCF	Average Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.73	11.72	7.53	55.98	9.54	46.44	54.00	7.56

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

802.11n-HT40, Transmit, Frequency: 2422MHz

Site no. : site Data no. : 6
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2359.120	28.40	6.30	14.00	48.70	54.00	5.30	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. Peak is compliance with average limit, thus we do not indicate AV value.

Site no. : site Data no. : 5
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 26°C/61% □jianlun_hung
 EUT : PW-MN5275
 Power Rating : DC5V (VIA USB)
 Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2375.920	28.43	6.32	15.66	50.42	54.00	3.58	Peak
2535.520	28.81	6.53	13.61	48.95	54.00	5.05	Peak

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

802.11n-HT40, Transmit, Frequency: 5755MHz

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Horizontal	DCF	Peak Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.75	11.72	11.75	60.22	9.54	50.68	74.00	23.32

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Peak Value (D=1m) Vertical	DCF	Peak Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.75	11.72	15.44	63.91	9.54	54.37	74.00	19.63

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the peak value at 3m= peak value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Horizontal	DCF	Average Value (D=3m) Horizontal	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.75	11.72	7.26	55.73	9.54	46.19	54.00	7.81

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

Frequency	Ant Factor	Cable Loss	Reading	Average Value (D=1m) Vertical	DCF	Average Value (D=3m) Vertical	Limit	Margin
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
*7661.00	36.75	11.72	11.63	60.1	9.54	50.56	54.00	3.44

Remarks: 1. Distance Correction Factor= $20\log(3/1)=9.54$

2. *: Measured at 1m and the average value at 3m= average value at 1m-DCF.

3.6.3. Restricted Bands Measurement Results

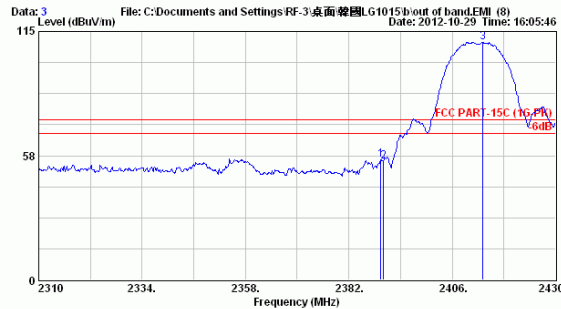
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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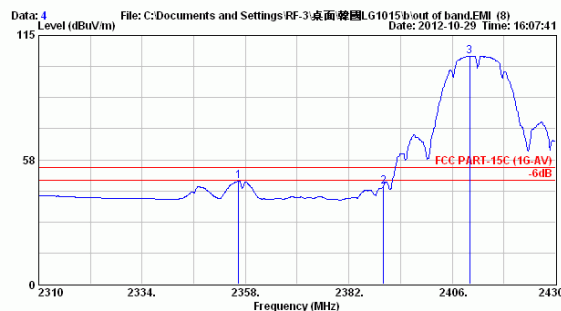
Site no. : site Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C / 61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2389.440	28.47	6.34	20.77	55.59	74.00	18.41	Peak
2 2390.040	28.47	6.34	19.84	54.66	74.00	19.34	Peak
3 2412.080	28.51	6.36	75.24	110.11	74.00	-36.11	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. : site Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C / 61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2356.440	28.40	6.29	13.03	47.73	54.00	6.27	Average
2 2390.040	28.47	6.34	10.39	45.21	54.00	8.79	Average
3 2410.080	28.51	6.36	70.53	105.40	54.00	-51.40	Average

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

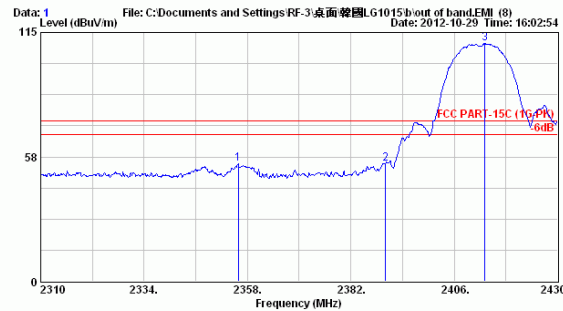
Date of Test : Aug. 20, 2012 Temperature : 25°C

EUT : WLAN Adapter Card Humidity : 59%

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



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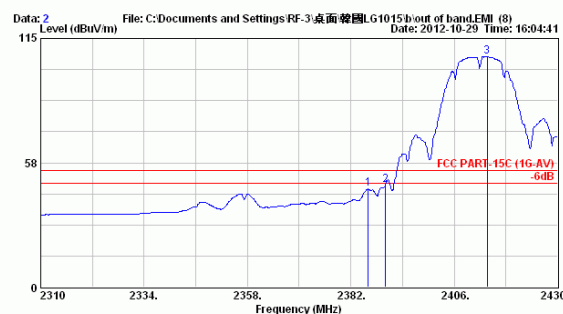
Site no. : site Data no. : 1
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2355.040	28.40	6.29	19.05	54.54	74.00	19.46	Peak
2 2390.040	28.47	6.34	19.56	54.38	74.00	19.62	Peak
3 2413.080	28.51	6.36	75.24	110.11	74.00	-36.11	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. : site Data no. : 2
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2386.080	28.47	6.33	10.58	45.38	54.00	8.62	Average
2 2390.040	28.47	6.34	12.35	47.17	54.00	6.83	Average
3 2413.680	28.51	6.36	71.71	106.58	54.00	-52.58	Average @

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

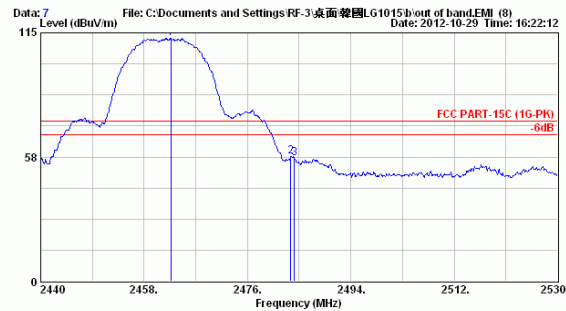
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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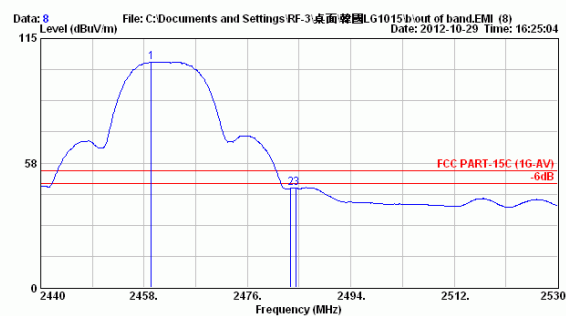
Site no. : site Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2462.680	28.62	6.42	77.59	112.64	74.00	-38.64	Peak 0
2 2483.560	28.66	6.45	22.48	57.60	74.00	16.40	Peak
3 2484.190	28.66	6.45	21.64	56.76	74.00	17.24	Peak

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



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Site no. : site Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2459.260	28.62	6.42	69.21	104.26	54.00	-50.26	Average 0
2 2483.560	28.66	6.45	10.72	45.84	54.00	8.16	Average
3 2484.460	28.66	6.45	10.77	45.88	54.00	8.12	Average

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

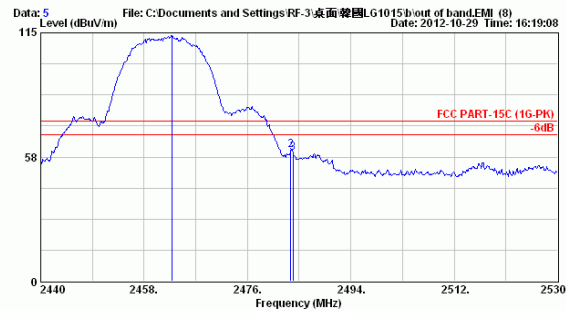
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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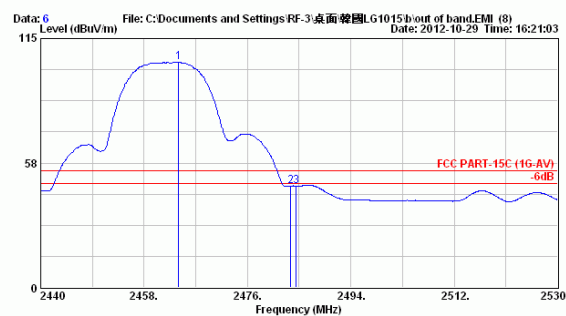
Site no. : site Data no. : 5
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2462.860	28.62	6.42	78.82	113.87	74.00	-39.87	Peak 0
2 2483.560	28.66	6.45	25.47	60.59	74.00	13.41	Peak
3 2483.920	28.66	6.45	24.40	59.52	74.00	14.48	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. : site Data no. : 6
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462(802.11b)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2464.030	28.62	6.42	69.06	104.10	54.00	-50.10	Average 0
2 2483.560	28.66	6.45	11.72	46.84	54.00	7.16	Average
3 2484.460	28.66	6.45	11.78	46.89	54.00	7.11	Average

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

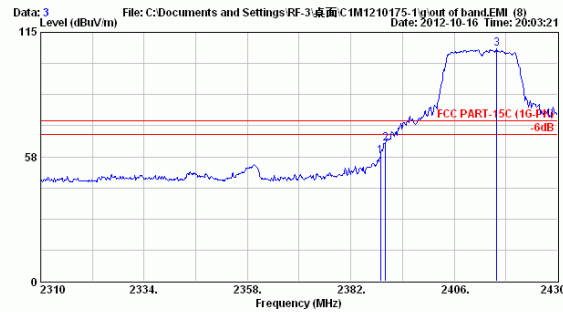
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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Email:ttmc@ttmc.com.tw



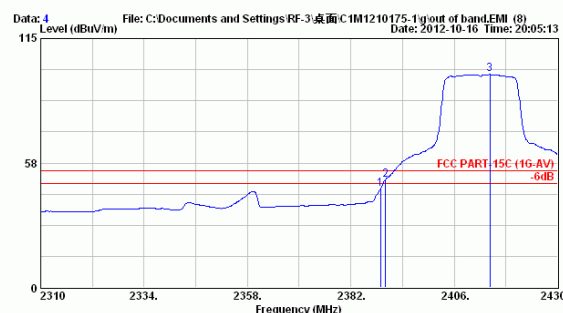
Site no. : site Data no. : 3
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Level (dBuV/m)	Level (dBuV/m)			
1 2388.840	28.47	6.34	22.80	57.61	74.00	16.39	Peak	
2 2390.040	28.47	6.34	28.94	63.76	74.00	10.24	Peak	
3 2415.840	28.51	6.36	72.45	107.33	74.00	-33.33	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. : site Data no. : 4
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Level (dBuV/m)	Level (dBuV/m)			
1 2388.840	28.47	6.34	10.68	45.49	54.00	8.51	Average	
2 2390.040	28.47	6.34	14.97	49.79	54.00	4.21	Average	
3 2414.280	28.51	6.36	63.52	98.39	54.00	-44.39	Average	

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

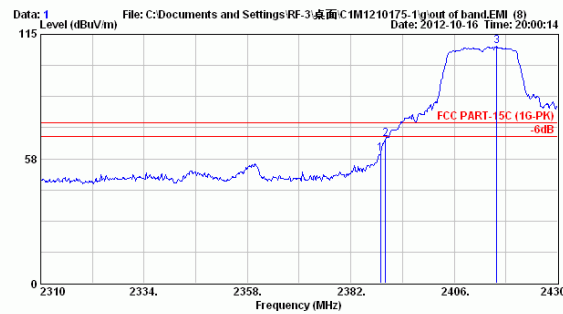
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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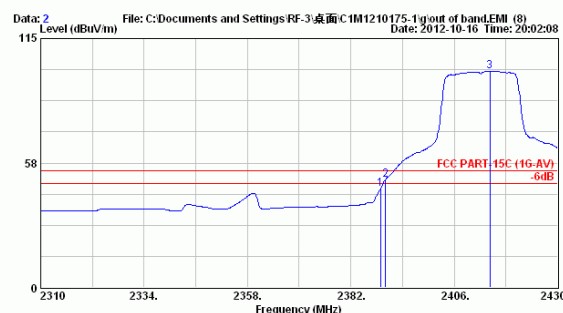
Site no. : site Data no. : 1
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2388.840	28.47	6.34	25.04	59.85	74.00	14.15	Peak
2 2390.040	28.47	6.34	31.78	66.60	74.00	7.40	Peak
3 2415.840	28.51	6.36	74.55	109.43	74.00	-35.43	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. : site Data no. : 2
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2388.840	28.47	6.34	10.62	45.43	54.00	8.57	Average
2 2390.040	28.47	6.34	15.04	49.86	54.00	4.14	Average
3 2414.280	28.51	6.36	65.09	99.96	54.00	-45.96	Average

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

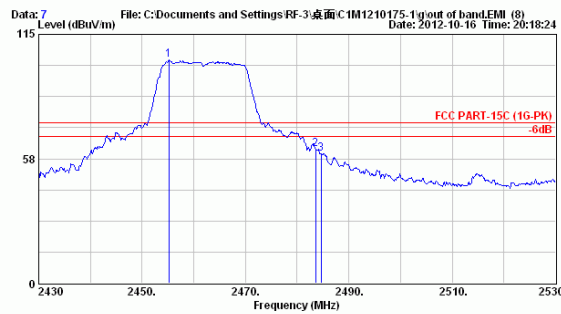
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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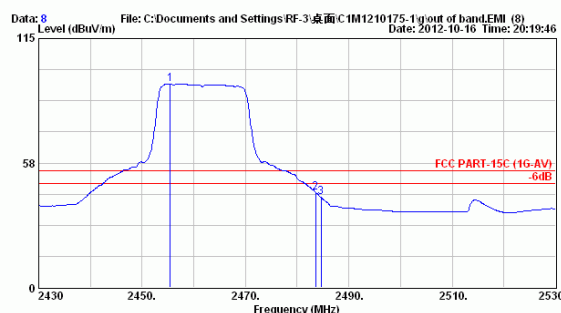
Site no. : site Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2455.200	28.62	6.42	68.01	103.06	74.00	-29.06	Peak X
2 2483.600	28.66	6.45	26.91	62.03	74.00	11.97	Peak
3 2484.600	28.66	6.45	24.54	59.65	74.00	14.35	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. : site Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2455.400	28.62	6.42	59.04	94.09	54.00	-40.09	Average 0
2 2483.600	28.66	6.45	8.89	44.00	54.00	10.00	Average
3 2484.600	28.66	6.45	6.50	41.61	54.00	12.39	Average

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

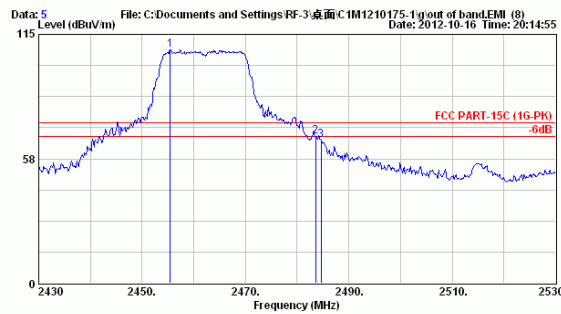
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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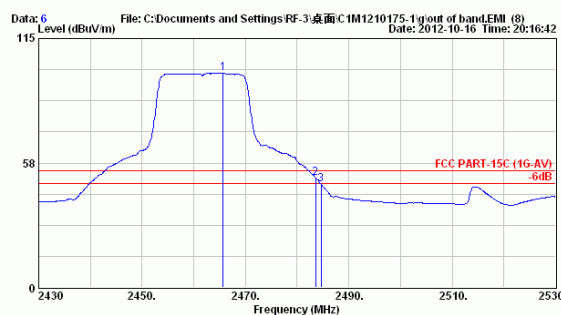
Site no. : site Data no. : 5
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2455.400	28.62	6.42	72.95	108.00	74.00	-34.00	Peak X
2 2483.600	28.66	6.45	32.85	67.97	74.00	6.03	Peak
3 2484.600	28.66	6.45	31.10	66.21	74.00	7.79	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. : site Data no. : 6
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11g)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2465.700	28.62	6.42	63.86	98.91	54.00	-44.91	Average 0
2 2483.600	28.66	6.45	15.55	50.67	54.00	3.33	Average 1
3 2484.600	28.66	6.45	12.52	47.63	54.00	6.37	Average

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

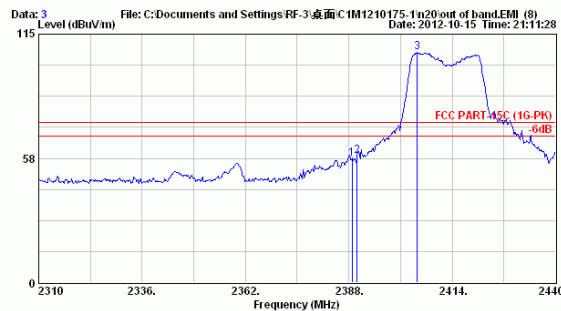
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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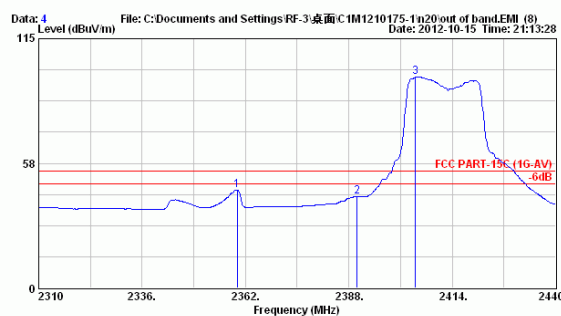
Site no. : site Data no. : 3
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C / 61% Qjianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2388.780	28.47	6.34	22.47	57.28	74.00	16.72	Peak
2 2390.080	28.47	6.34	23.84	58.66	74.00	15.34	Peak
3 2405.160	28.51	6.36	71.51	106.38	74.00	-32.38	Peak X

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. : site Data no. : 4
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C / 61% Qjianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2359.920	28.40	6.30	10.44	45.14	54.00	8.86	Average
2 2390.080	28.47	6.34	7.35	42.16	54.00	11.84	Average
3 2404.770	28.51	6.36	62.53	97.40	54.00	-43.40	Average

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

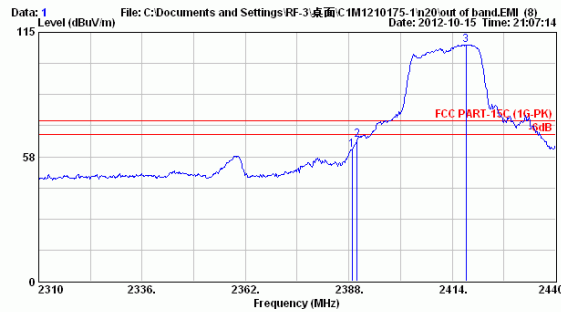
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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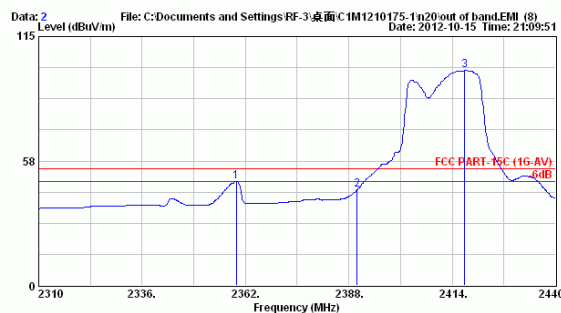
Site no. : site Data no. : 1
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2388.780	28.47	6.34	25.93	60.74	74.00	13.26	Peak
2 2390.080	28.47	6.34	30.36	65.18	74.00	8.82	Peak
3 2417.510	28.51	6.37	74.37	109.25	74.00	-35.25	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. : site Data no. : 2
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2412 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2359.660	28.40	6.30	13.50	48.20	54.00	5.80	Average 1
2 2390.080	28.47	6.34	9.29	44.10	54.00	9.90	Average
3 2417.120	28.51	6.37	64.51	99.39	54.00	-45.39	Average

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

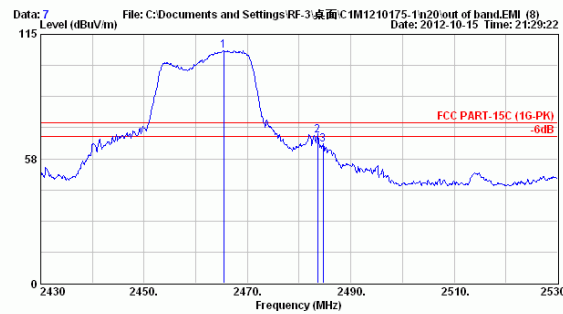
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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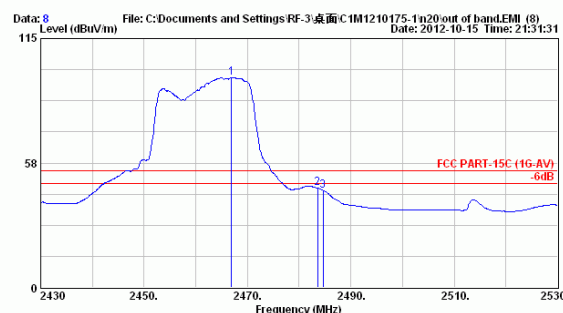
Site no. : site Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2465.400	28.62	6.42	72.42	107.47	74.00	-33.47	Peak X
2 2483.600	28.66	6.45	33.14	68.25	74.00	5.75	Peak
3 2484.600	28.66	6.45	28.71	63.83	74.00	10.17	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. : site Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2466.900	28.62	6.42	61.99	97.04	54.00	-43.04	Average 0
2 2483.600	28.66	6.45	10.79	45.91	54.00	8.09	Average
3 2484.600	28.66	6.45	9.68	44.79	54.00	9.21	Average

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

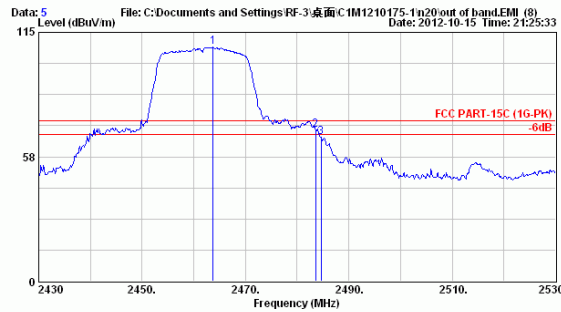
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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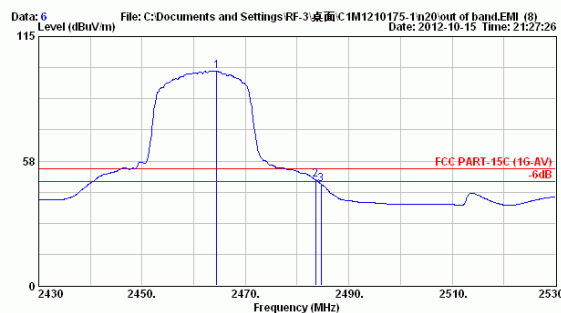
Site no. : site Data no. : 5
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2463.700	28.62	6.42	73.04	108.09	74.00	-34.09	Peak X
2 2483.600	28.66	6.45	34.75	69.87	74.00	4.13	Peak
3 2484.600	28.66	6.45	31.24	66.36	74.00	7.64	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. : site Data no. : 6
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2462 (802.11n20)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2464.400	28.62	6.42	63.84	98.88	54.00	-44.88	Average 0
2 2483.600	28.66	6.45	13.68	48.79	54.00	5.21	Average
3 2484.600	28.66	6.45	11.79	46.90	54.00	7.10	Average

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

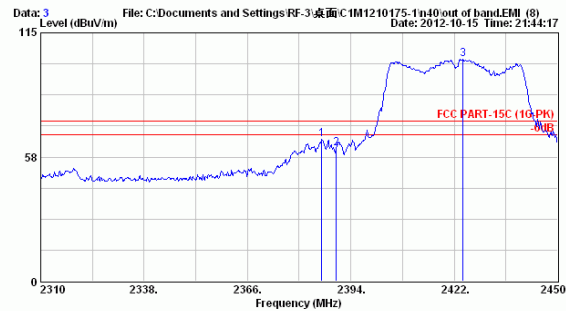
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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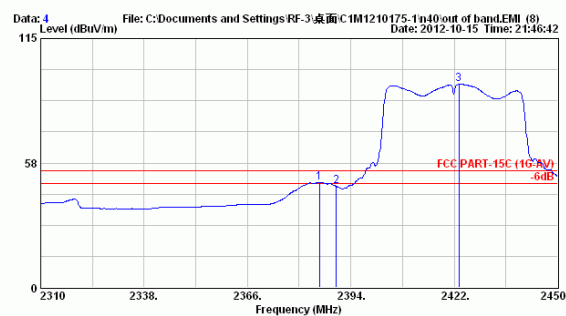
Site no. : site Data no. : 3
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2386.160	28.47	6.33	30.79	65.59	74.00	8.41	Peak
2 2390.080	28.47	6.34	26.51	61.33	74.00	12.67	Peak
3 2424.380	28.55	6.38	67.92	102.85	74.00	-28.85	Peak X

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. : site Data no. : 4
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2422(802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2385.460	28.43	6.33	13.88	48.64	54.00	5.36	Average 1
2 2390.080	28.47	6.34	11.93	46.75	54.00	7.25	Average
3 2423.260	28.55	6.37	59.13	94.05	54.00	-40.05	Average

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

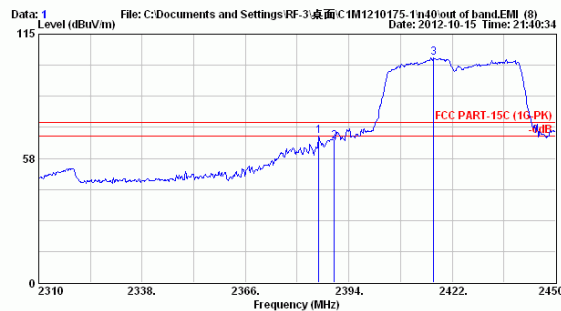
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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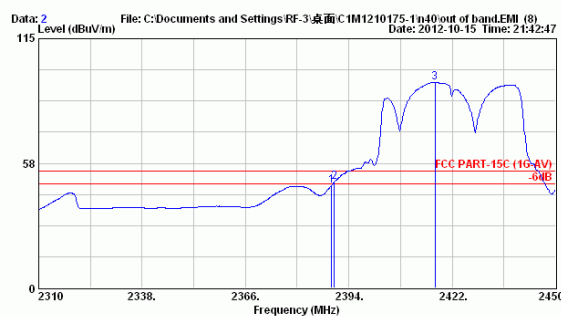
Site no. : site Data no. : 1
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C / 61% Qjianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2422 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2389.880	28.47	6.33	32.83	67.63	74.00	6.37	Peak
2 2390.080	28.47	6.34	30.37	65.19	74.00	8.81	Peak
3 2416.960	28.51	6.37	69.09	103.97	74.00	-29.97	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. : site Data no. : 2
Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C / 61% Qjianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2422 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2389.380	28.47	6.34	12.53	47.35	54.00	6.65	Average
2 2390.080	28.47	6.34	14.01	48.83	54.00	5.17	Average
3 2417.380	28.51	6.37	59.92	94.80	54.00	-40.80	Average

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

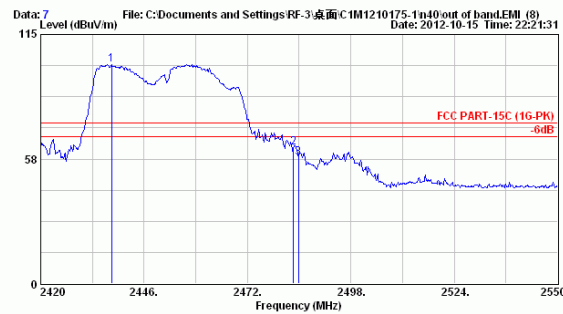
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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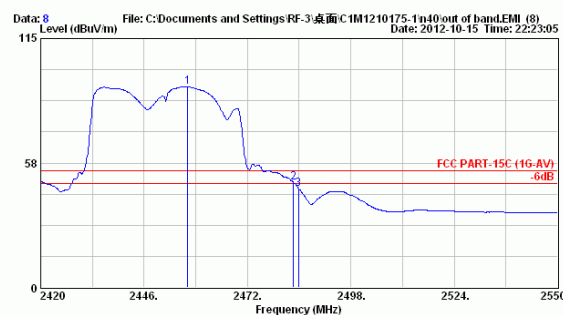
Site no. : site Data no. : 7
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2452 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2437.810	28.59	6.39	66.31	101.29	74.00	-27.29	Peak X
2 2483.570	28.66	6.45	27.65	62.77	74.00	11.23	Peak
3 2484.870	28.66	6.45	23.07	58.18	74.00	15.82	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. : site Data no. : 8
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : PW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2452 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2456.920	28.62	6.42	57.81	92.85	54.00	-38.85	Average 0
2 2483.570	28.66	6.45	13.29	48.41	54.00	5.59	Average
3 2484.870	28.66	6.45	10.59	45.70	54.00	8.30	Average

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

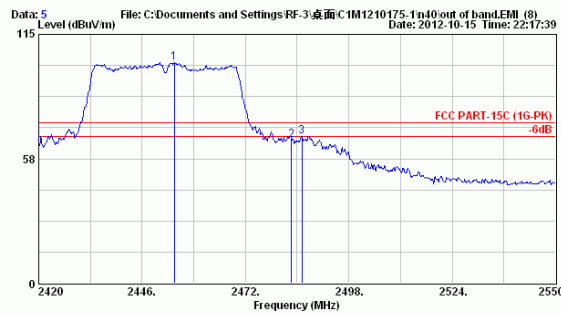
Date of Test : Oct. 19, 2012 Temperature : 26°C

EUT : WLAN Adapter Card Humidity : 61%

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



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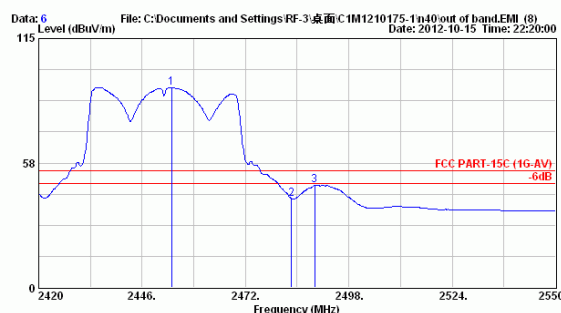
Site no. : site Data no. : 5
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2452 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2454.060	28.62	6.42	66.77	101.81	74.00	-27.81	Peak X
2 2483.570	28.66	6.45	30.91	66.03	74.00	7.97	Peak
3 2486.170	28.66	6.45	32.80	67.92	74.00	6.08	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. : site Data no. : 6
Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 26°C/61% Djianlun_hung
EUT : FW-MN5275
Power Rating : DC5V (VIA USB)
Test Mode : TX2452 (802.11n40)

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2453.410	28.59	6.42	57.44	92.44	54.00	-38.44	Average 0
2 2483.570	28.66	6.45	5.90	41.02	54.00	12.98	Average
3 2489.420	28.70	6.45	12.16	47.31	54.00	6.69	Average

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

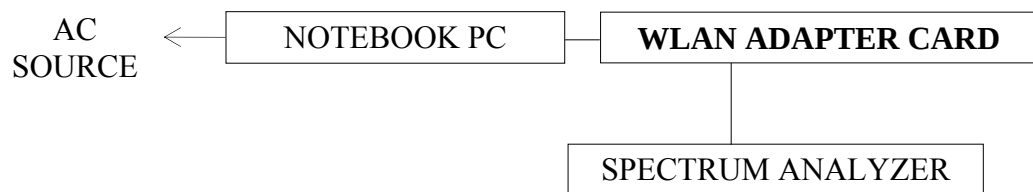
4. 6dB BANDWIDTH MEASUREMENT

4.1. Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9030A-544	US51350140	Oct. 17, 12'	Oct. 16, 13'

4.2. Block Diagram of Test Setup



4.3. Specification Limits [§15.247(a)(2), RSS-210 §A8.2 (a)]

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

4.4. Operating Condition of EUT

The test program “QA Tool” 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 with 1-5% EBW, $VBW \geq 3 \times RBW$. 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 : Oct. 15, 2012 Temperature : 25°C Humidity : 63%)

(Test Date : Oct. 16, 2012 Temperature : 26°C Humidity : 60%)

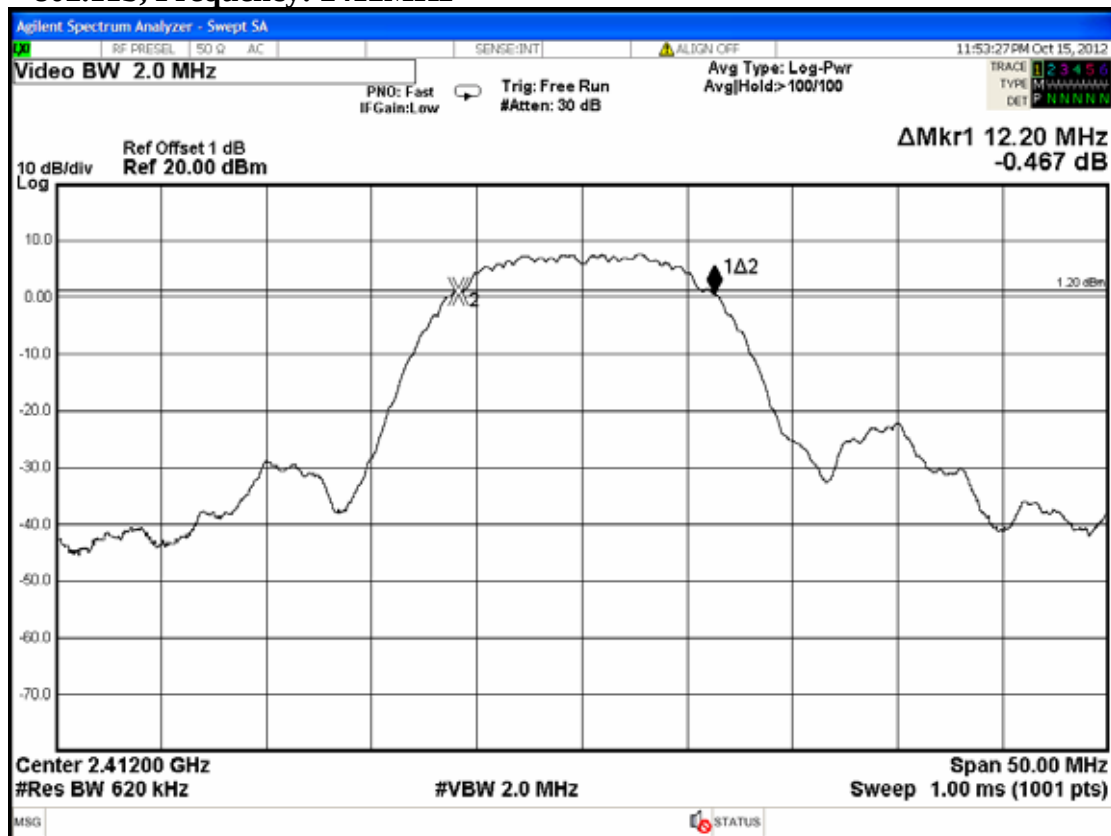
(Test Date : Oct. 21, 2012 Temperature : 25°C Humidity : 62%)

(Test Date : Oct. 22, 2012 Temperature : 26°C Humidity : 62%)

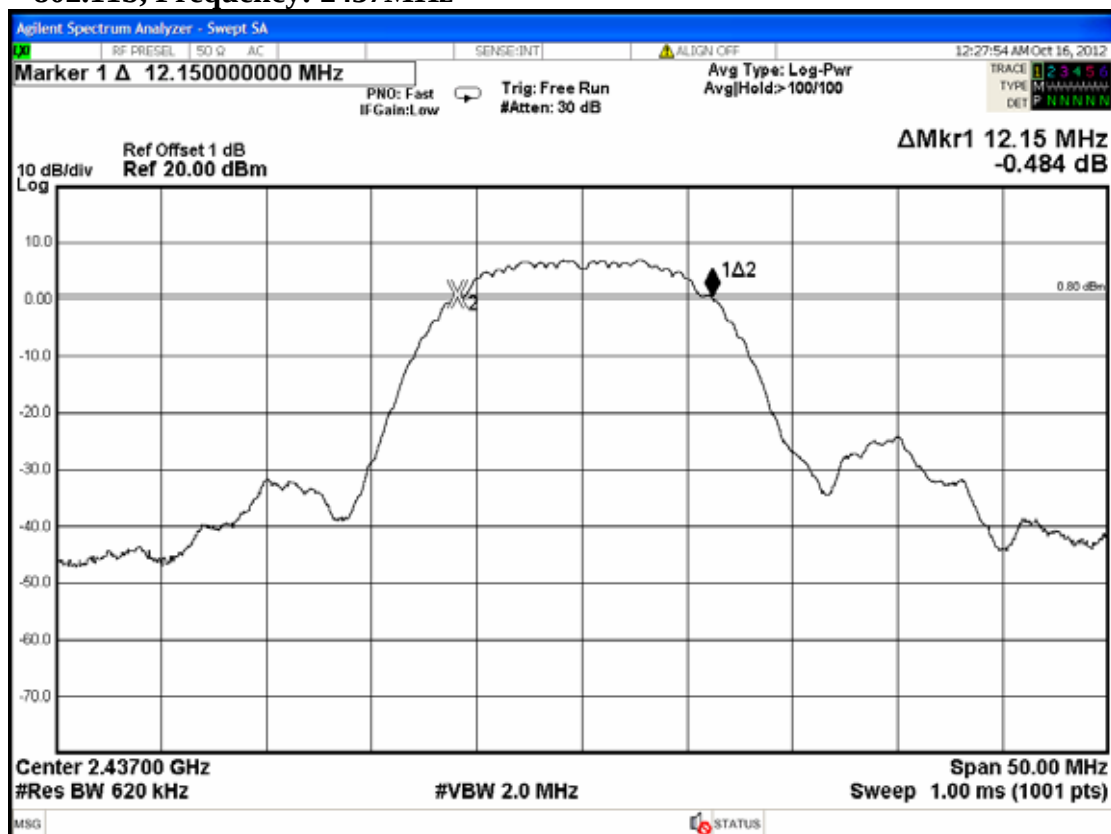
Mode	Type of Network	Channel	Frequency	6dB Bandwidth
1.	802.11b	CH 1	2412MHz	12.20MHz
2.		CH 6	2437MHz	12.15MHz
3.		CH 11	2462MHz	12.15MHz
4.	802.11g	CH 1	2412MHz	16.80MHz
5.		CH 6	2437MHz	16.80MHz
6.		CH 11	2462MHz	16.80MHz
7.	802.11a	CH 149	5745MHz	16.55MHz
8.		CH 157	5785MHz	16.55MHz
9.		CH 165	5825MHz	16.55MHz
10.	802.11n-HT20	CH 1	2412MHz	17.40MHz
11.		CH 6	2437MHz	17.40MHz
12.		CH 11	2462MHz	17.40MHz
13.	802.11n-HT20	CH 149	5745MHz	17.45MHz
14.		CH 157	5785MHz	17.45MHz
15.		CH 165	5825MHz	17.45MHz
16.	802.11n-HT40	CH 3	2422MHz	36.00MHz
17.		CH 6	2437MHz	36.00MHz
18.		CH 9	2452MHz	36.00MHz
19.	802.11n-HT40	CH 151	5755MHz	36.16MHz
20.		CH 159	5795MHz	36.16MHz

[Limit: least 500kHz]

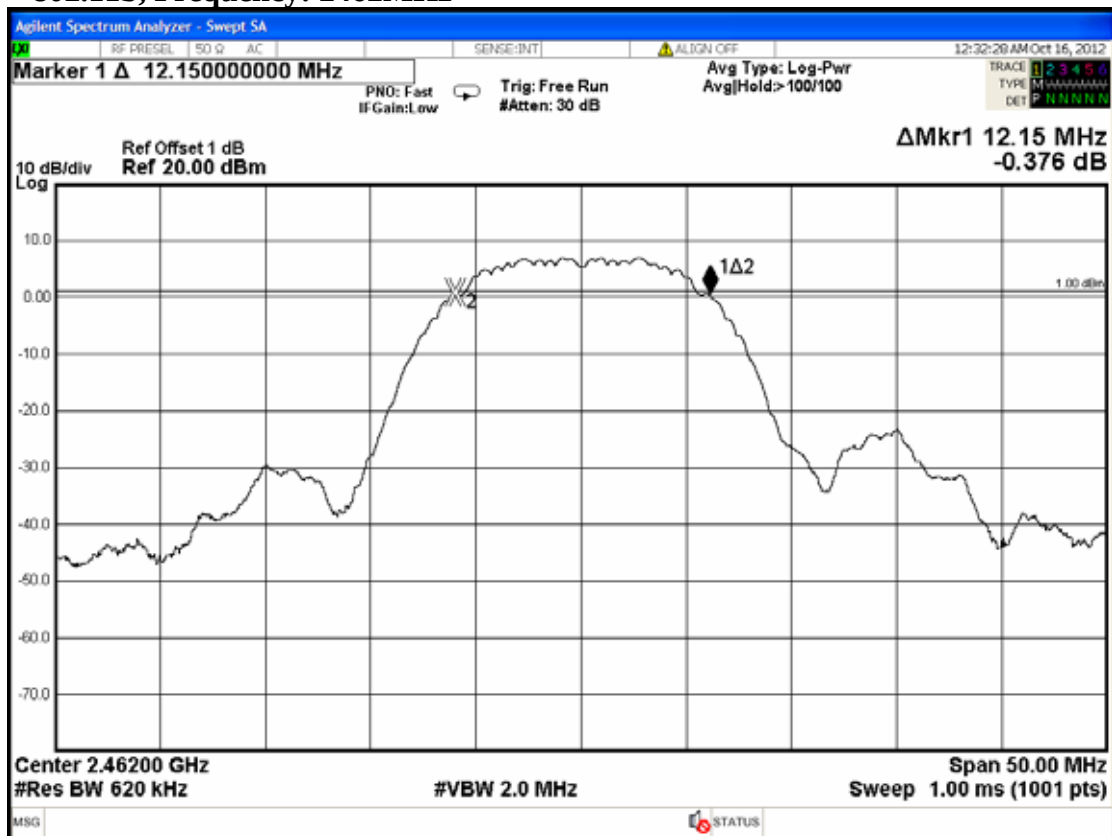
802.11b, Frequency: 2412MHz



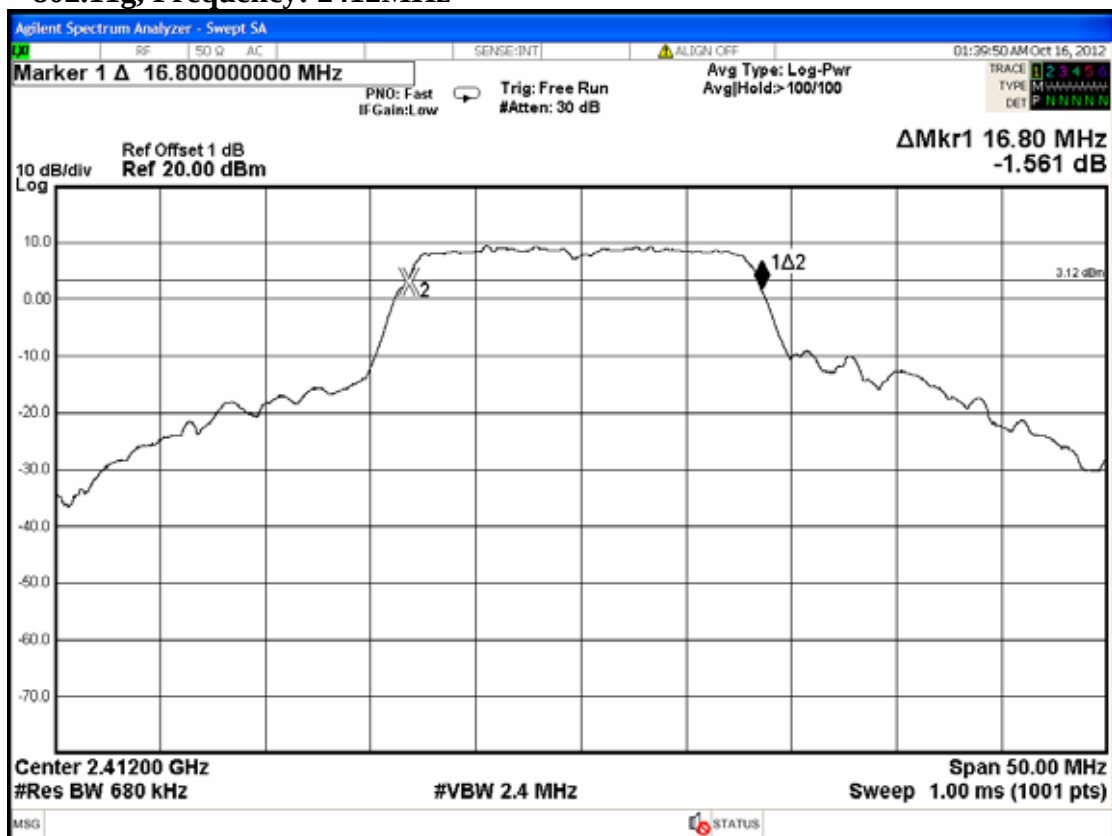
802.11b, Frequency: 2437MHz



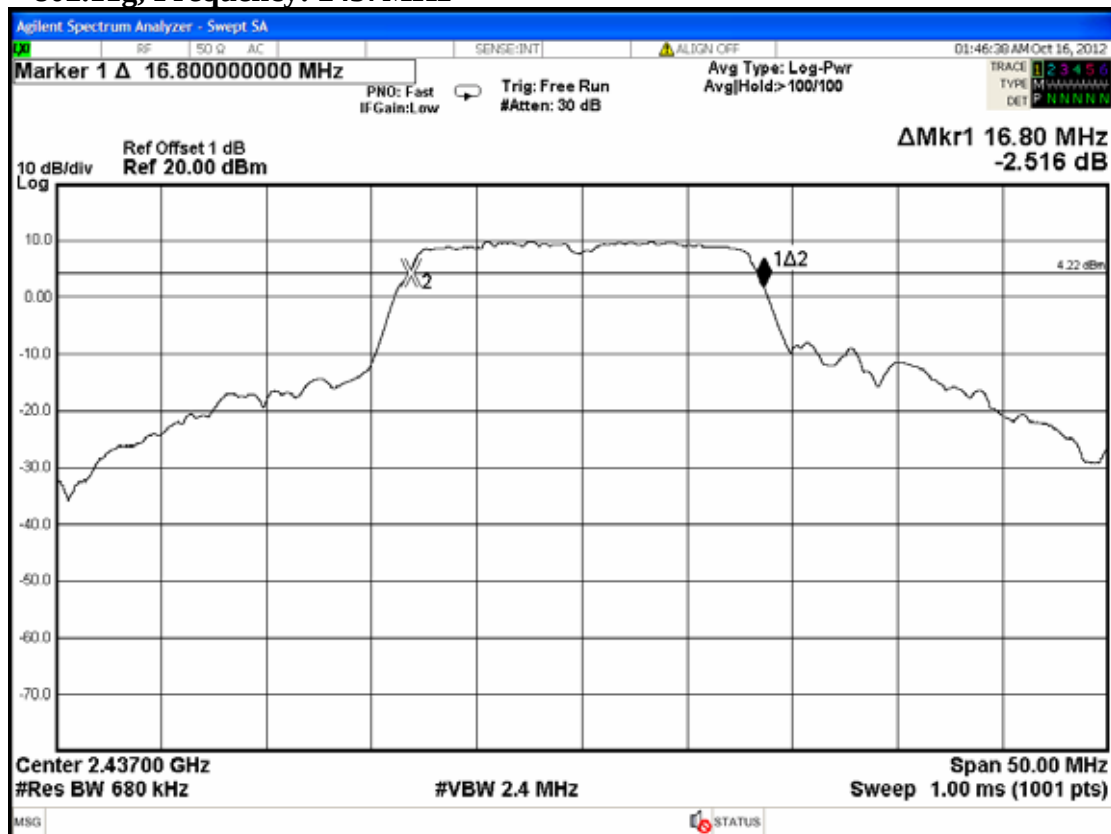
802.11b, Frequency: 2462MHz



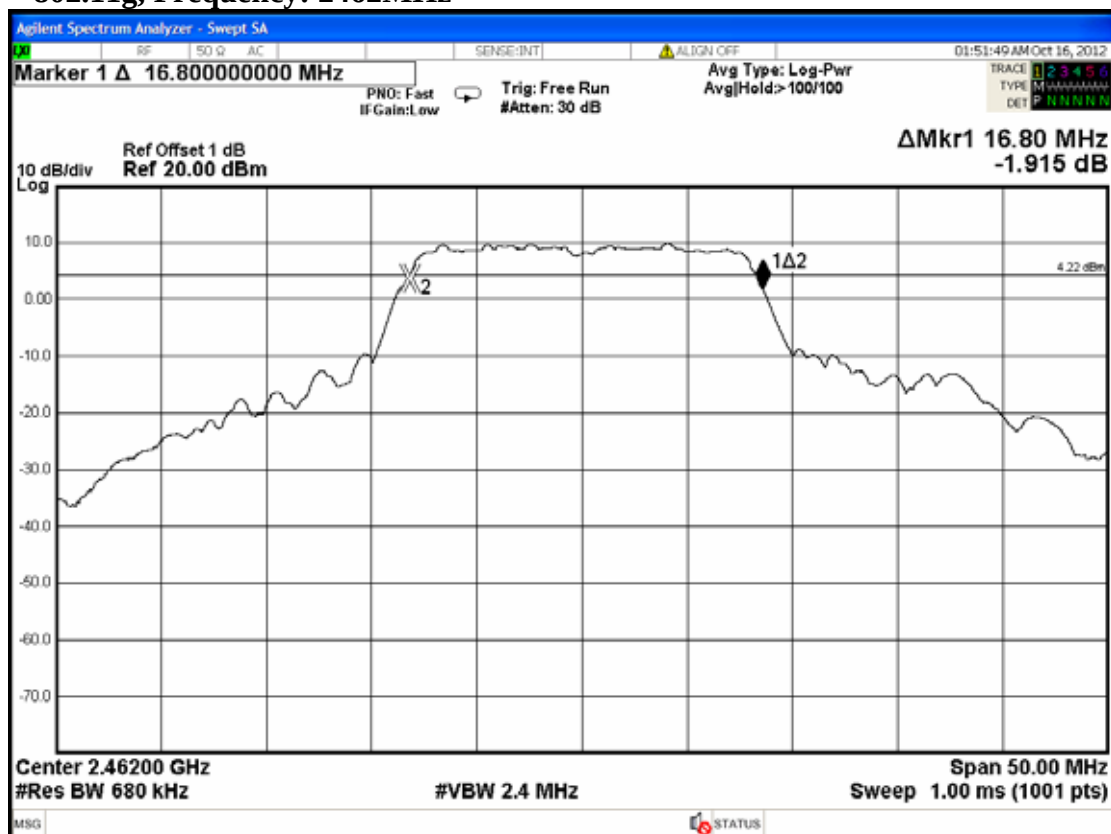
802.11g, Frequency: 2412MHz



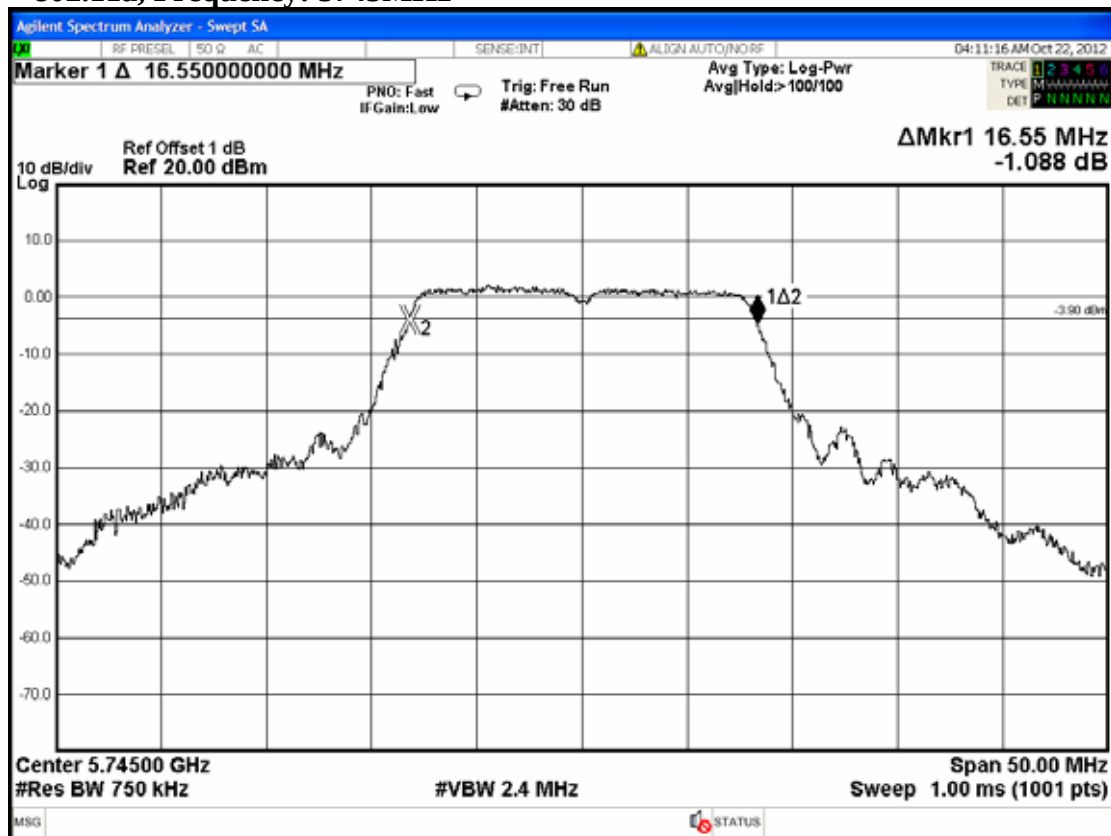
802.11g, Frequency: 2437MHz



802.11g, Frequency: 2462MHz



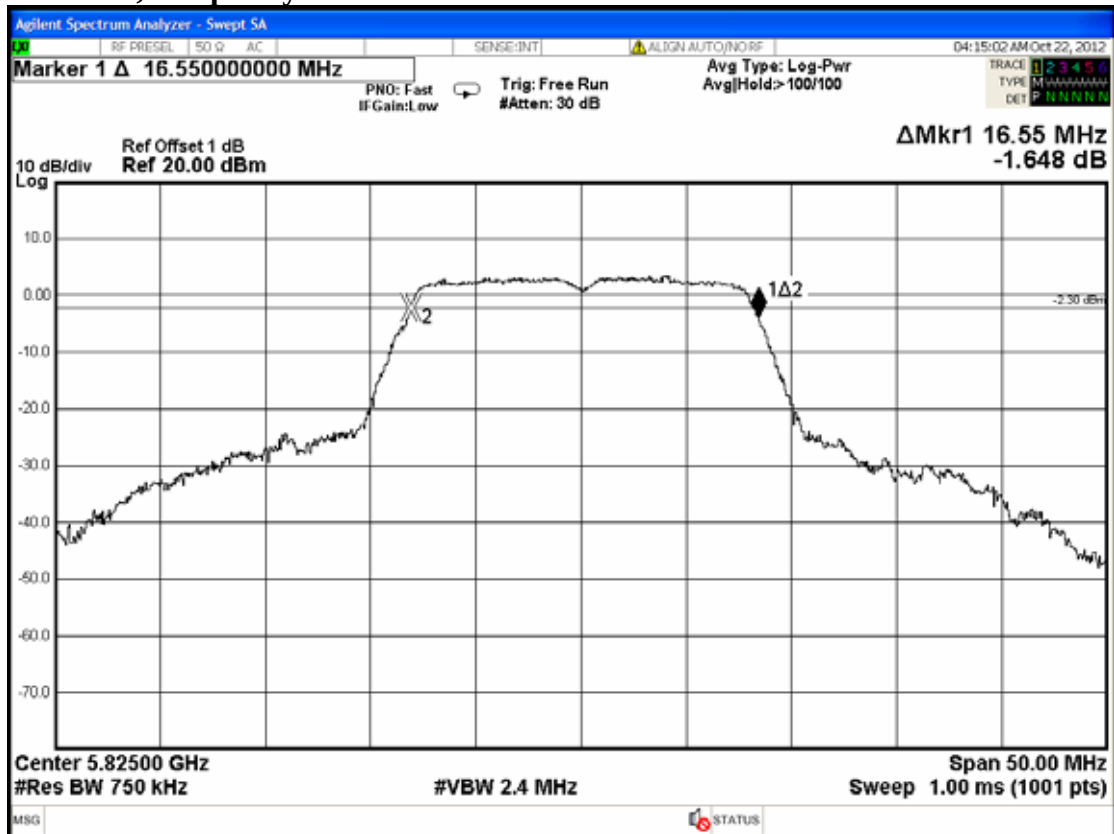
802.11a, Frequency: 5745MHz



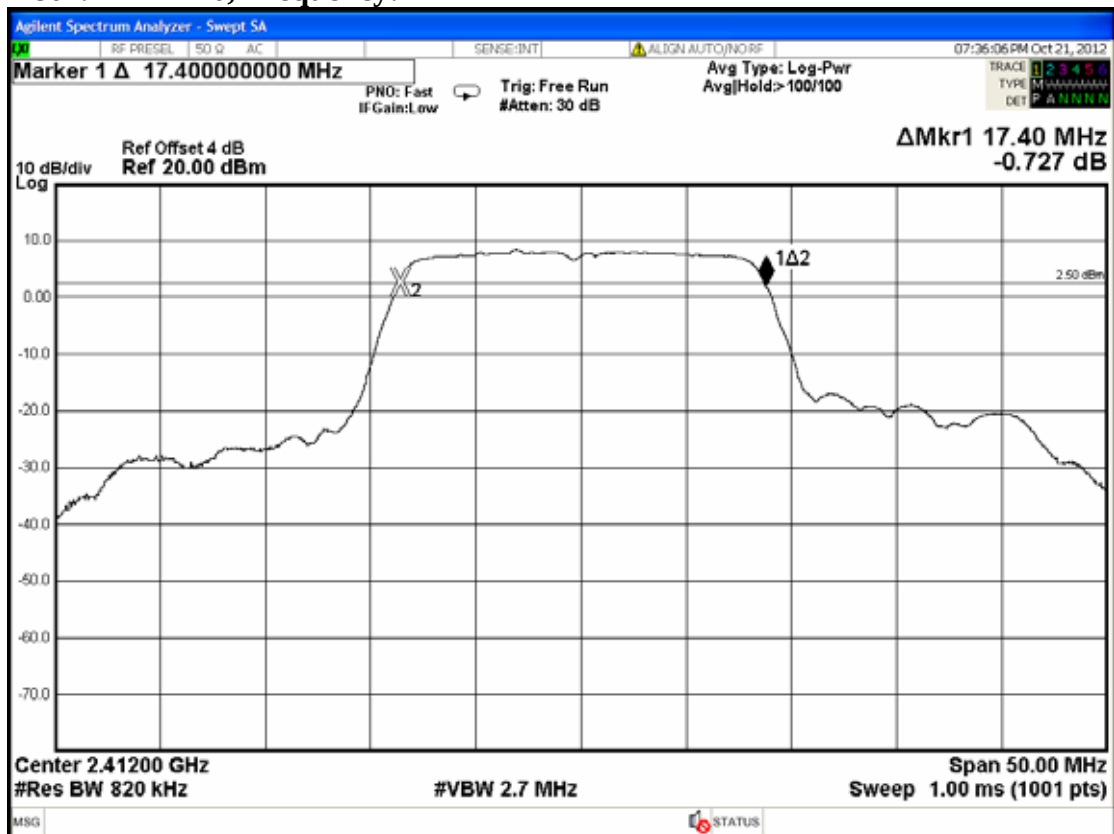
802.11a, Frequency: 5785MHz

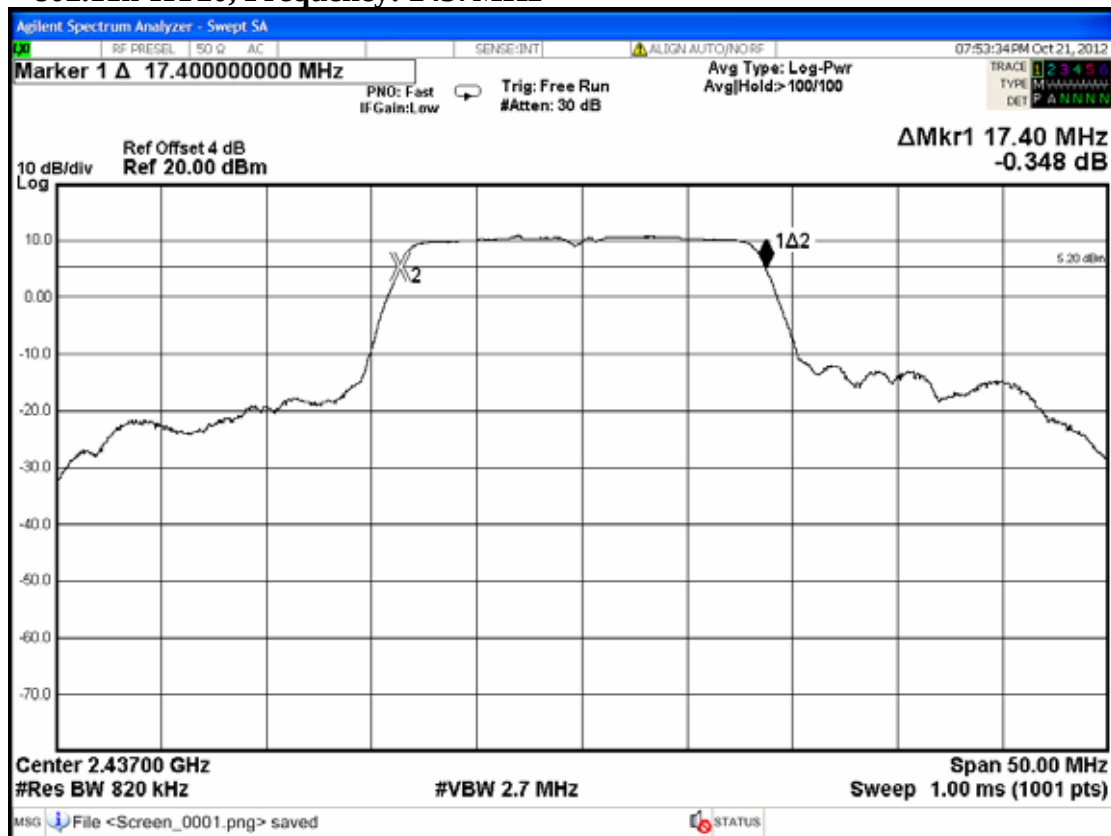
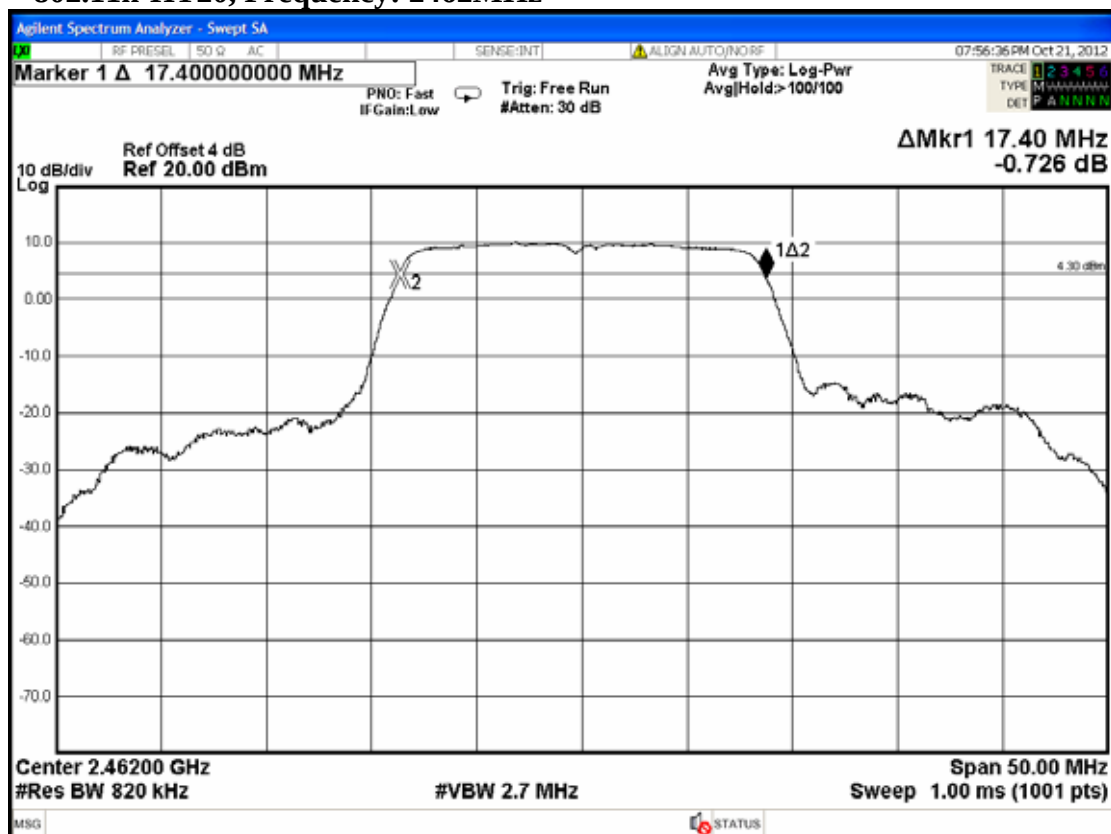


802.11a, Frequency: 5825MHz

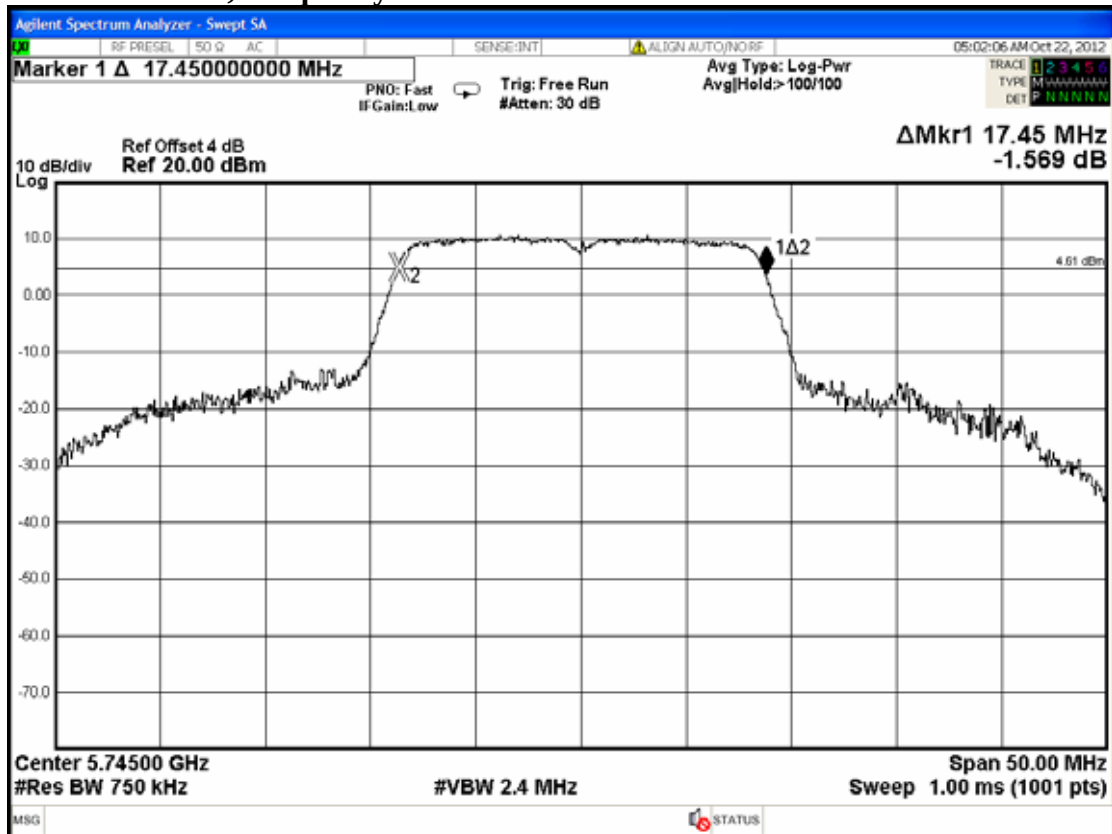


802.11n-HT20, Frequency: 2412MHz

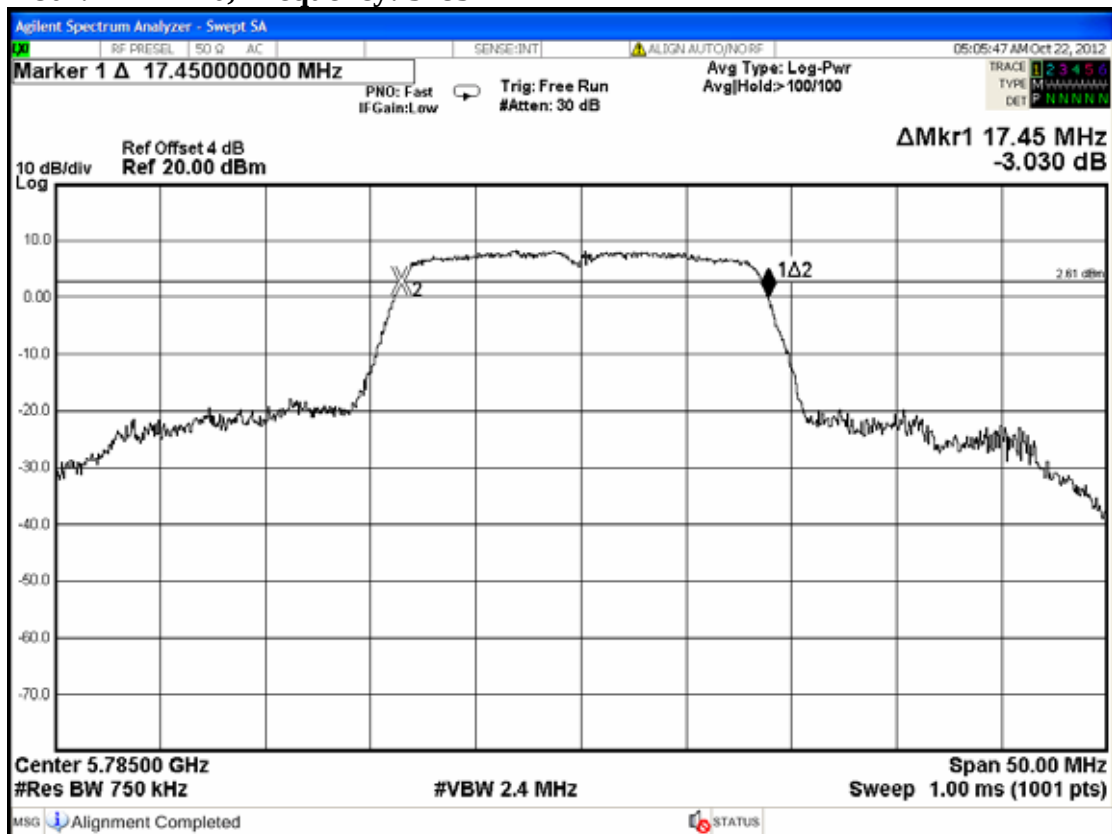


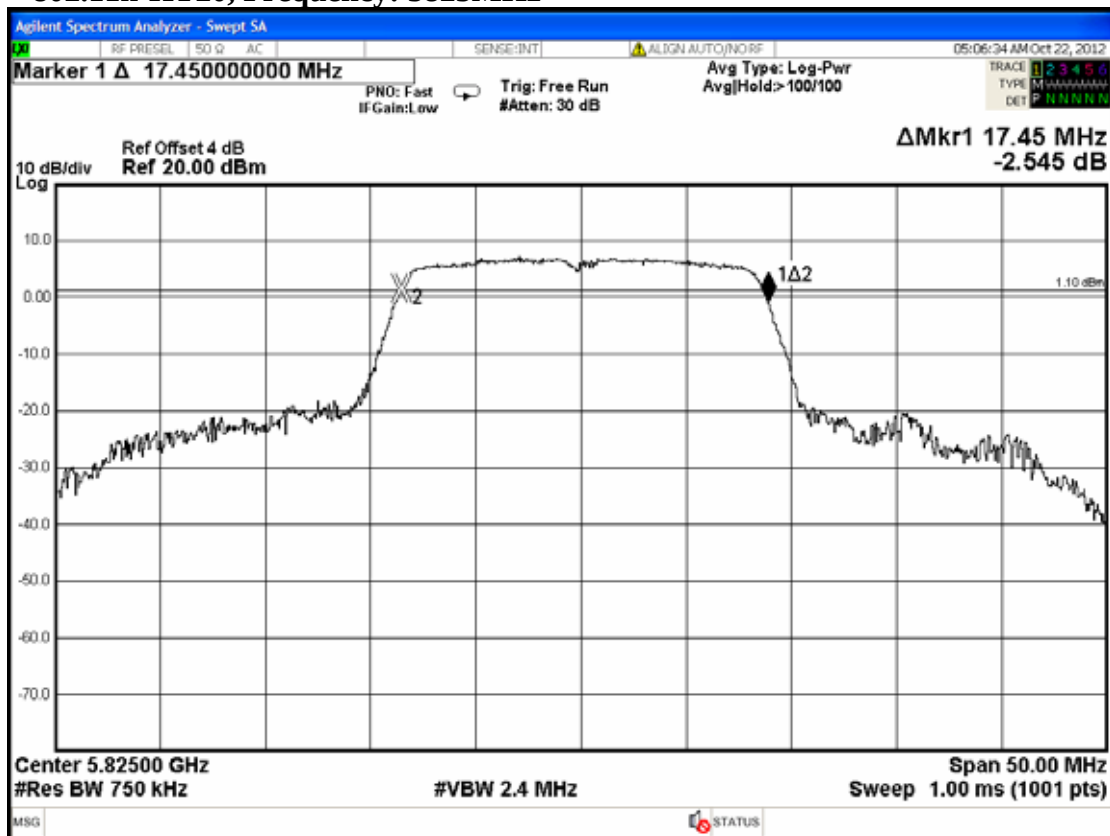
802.11n-HT20, Frequency: 2437MHz**802.11n-HT20, Frequency: 2462MHz**

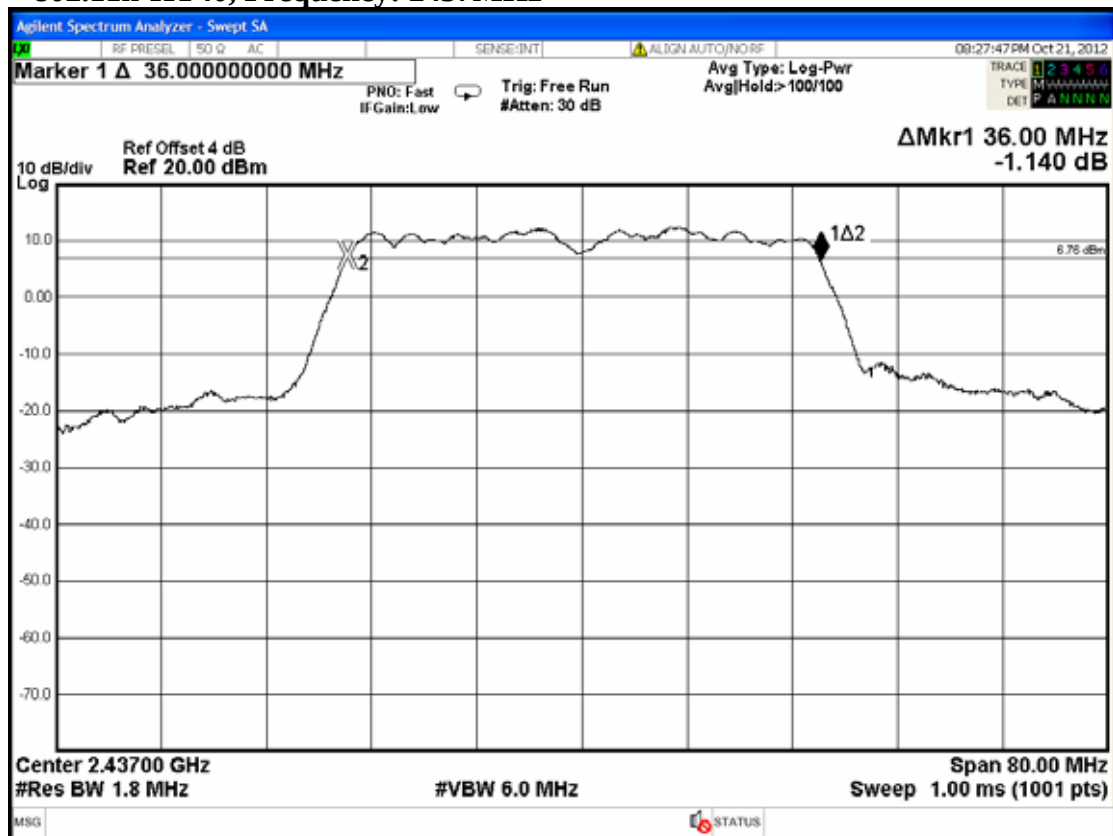
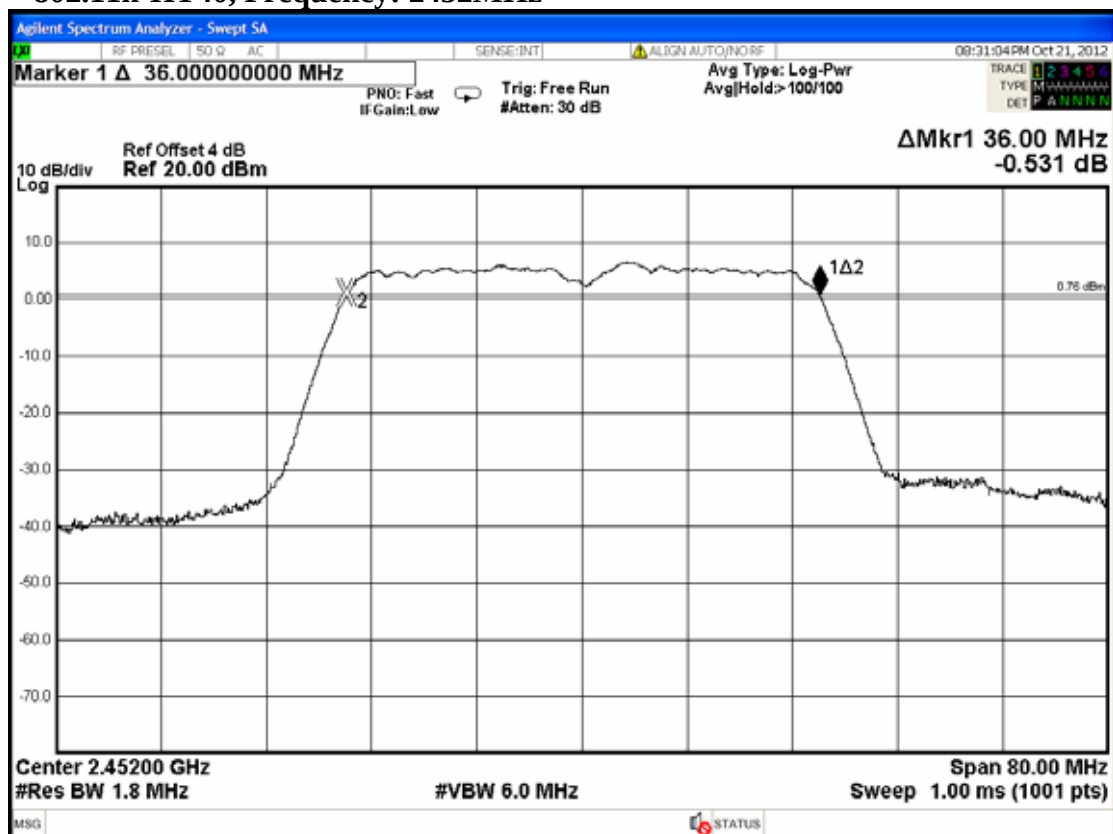
802.11n-HT20, Frequency: 5745MHz

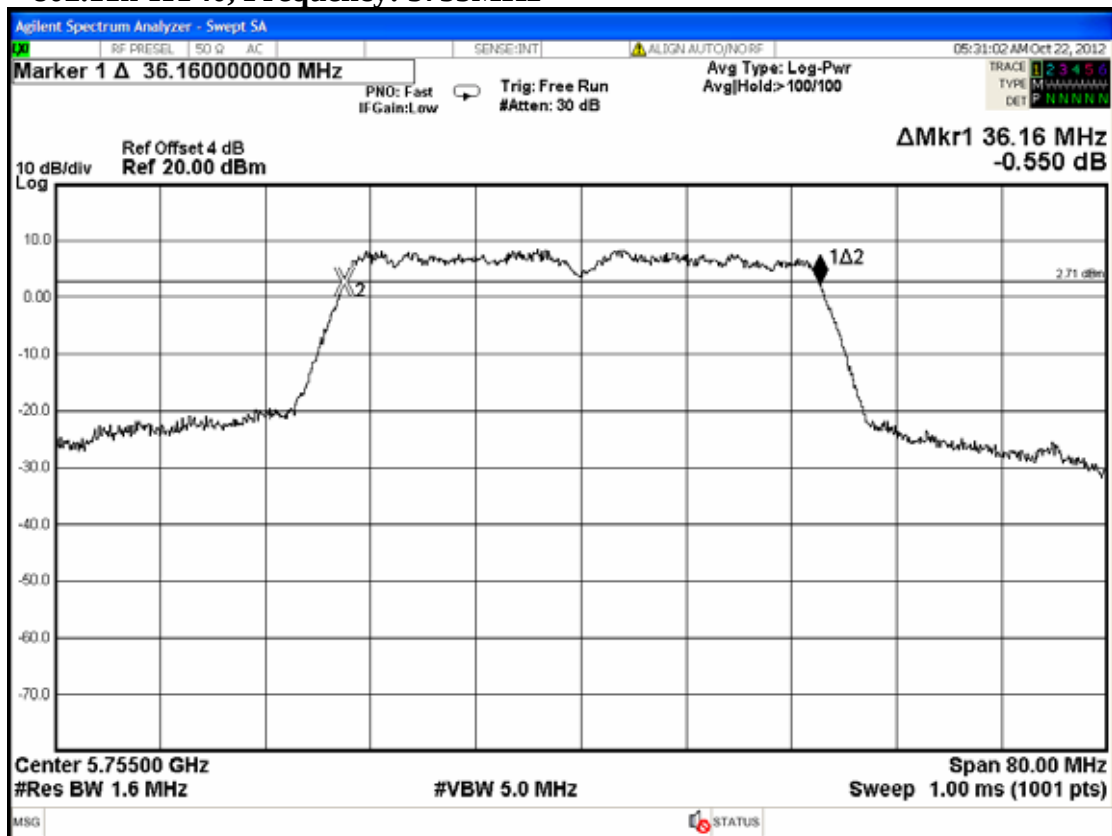
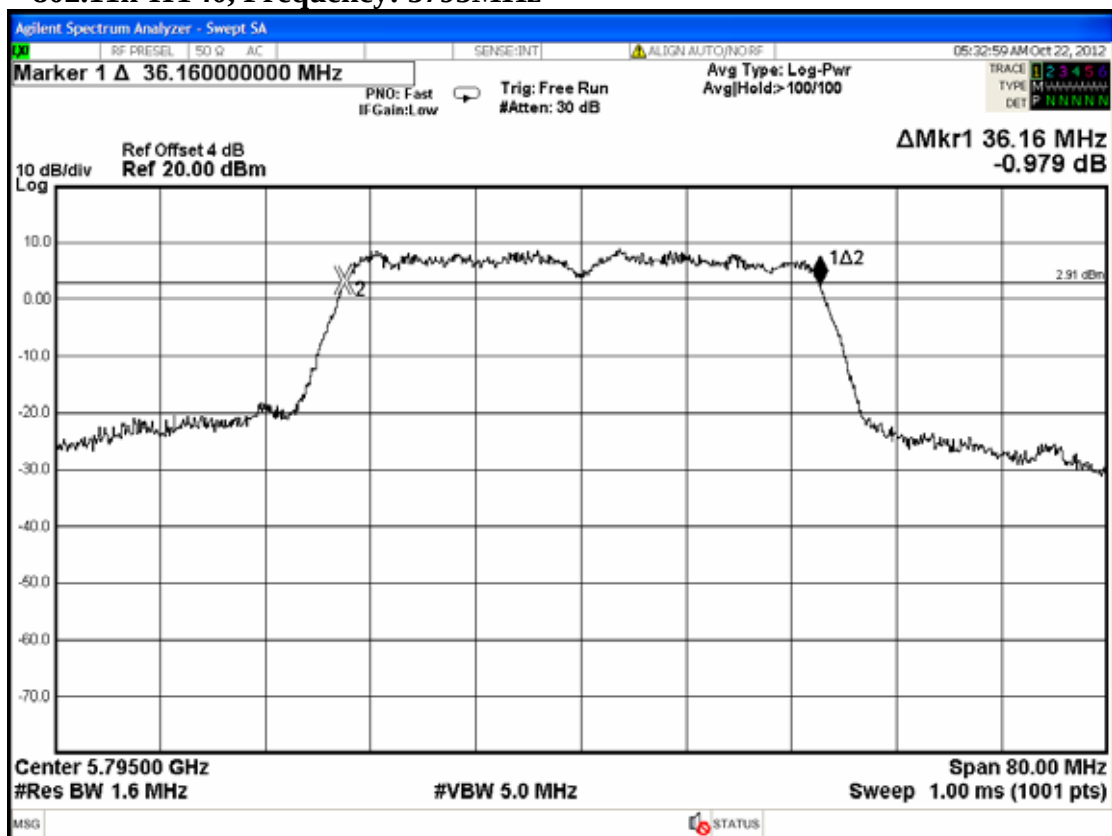


802.11n-HT20, Frequency: 5785MHz



802.11n-HT20, Frequency: 5825MHz**802.11n-HT40, Frequency: 2422MHz**

802.11n-HT40, Frequency: 2437MHz**802.11n-HT40, Frequency: 2452MHz**

802.11n-HT40, Frequency: 5755MHz**802.11n-HT40, Frequency: 5795MHz**

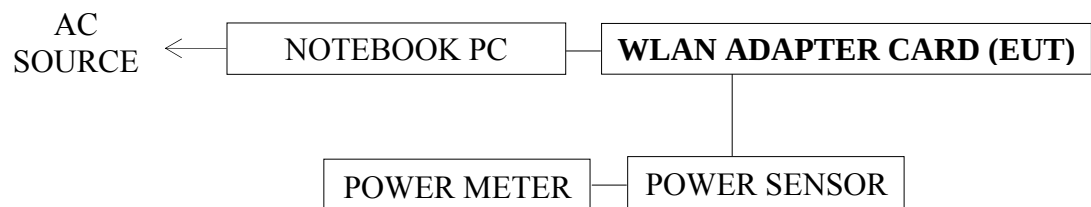
5. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

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	ML2487A	6K00005406	Feb. 13, 12'	Feb. 12, 13'
2.	Power Sensor	Anritsu	MA2491A	030873	Feb. 13, 12'	Feb. 12, 13'

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 & 5725-5850MHz is : 1Watt. (30dBm)

5.4. Operating Condition of EUT

The test program “QA Tool” 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 : Oct. 16, 2012 Temperature : 26°C Humidity : 60%)

(Test Date : Oct. 21, 2012 Temperature : 25°C Humidity : 62%)

5.6.1. For 802.11b/802.11g/802.11a/802.11n-HT20/802.11n-HT40

Mode	Type of Network	Channel	Frequency	Peak Output Power (dBm)		Total Peak Output Power (dBm)
				Ant.0	Ant.1	
1.	802.11b	CH 1	2412MHz	---	---	19.77
2.		CH 6	2437MHz	---	---	19.85
3.		CH 11	2462MHz	---	---	20.88
4.	802.11g	CH 1	2412MHz	---	---	22.01
5.		CH 6	2437MHz	---	---	22.49
6.		CH 11	2462MHz	---	---	21.36
7.	802.11a	CH 149	5745MHz	---	---	15.69
8.		CH 157	5785MHz	---	---	14.16
9.		CH 165	5825MHz	---	---	17.07
10.	802.11n-HT20	CH 1	2412MHz	21.35	11.84	21.24
11.		CH 6	2437MHz	22.27	12.48	21.74
12.		CH 11	2462MHz	22.36	12.61	21.30
13.	802.11n-HT20	CH 149	5745MHz	16.19	16.57	19.37
14.		CH 157	5785MHz	16.41	15.94	19.19
15.		CH 165	5825MHz	16.07	15.29	18.71
16.	802.11n-HT40	CH 3	2422MHz	19.77	20.18	22.99
17.		CH 6	2437MHz	19.87	20.84	23.37
18.		CH 9	2452MHz	18.26	19.94	22.19
19.	802.11n-HT40	CH 151	5755MHz	16.36	16.48	19.43
20.		CH 159	5795MHz	16.10	16.03	19.08

Remark: After confirming, chain 0 has worst perform thus we perform peak output power at chain 0 for 802.11a/b/g.

[Limit: 1Watt. (30dBm)]

6. EMISSION LIMITATIONS MEASUREMENT

Pursuant to KDB558074 D01 that emission levels below limits specified in 15.209 would not be required.

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	N9030A-544	US51350140	Oct. 17, 12'	Oct. 16, 13'

7.2. Block Diagram of Test Setup

The same as section.4.2.

7.3. Specification Limits [§15.247(c), RSS-210 §A8.5]

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 “QA Tool” 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=100 kHz and VBW to 300kHz with suitable frequency span including 100kHz bandwidth from band edge.

The measurement guideline was according to KDB 558074 D01.

Pursuant to KDB 662911, we performed conducted tests for both antenna chains and submit test data measured on chain 0 as worse performance.

7.6. Test Results

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

Pursuant to KDB 662911, the test results of 802.11n-HT20/H40 have been included 3 dB is calculated from $10\log(N)$, where N is the number of outputs.

(Test Date : Oct. 16, 2012 Temperature : 26°C Humidity : 60%)

(Test Date : Oct. 21, 2012 Temperature : 25°C Humidity : 62%)

(Test Date : Oct. 22, 2012 Temperature : 26°C Humidity : 62%)

802.11b

Below Band edge: The highest emission level is -43.790dBm on 2.39990GHz.

Upper Band edge : The highest emission level is -44.474dBm on 2.48360GHz.

802.11g

Below Band edge: The highest emission level is -25.593dBm on 2.39990GHz.

Upper Band edge : The highest emission level is -36.429dBm on 2.48360GHz.

802.11a

Below Band edge: The highest emission level is -44.233dBm on 5.72500GHz.

Upper Band edge : The highest emission level is -52.094dBm on 5.85000GHz.

802.11n-HT20(2.4GHz)

Below Band edge: The highest emission level is -34.130dBm on 2.39990GHz.

Upper Band edge : The highest emission level is -35.144dBm on 2.48360GHz.

802.11n-HT20(5.8GHz)

Below Band edge: The highest emission level is -40.285dBm on 5.72500GHz.

Upper Band edge : The highest emission level is -49.817dBm on 5.85000GHz.

802.11n-HT40(2.4GHz)

Below Band edge: The highest emission level is -39.633dBm on 2.39990GHz.

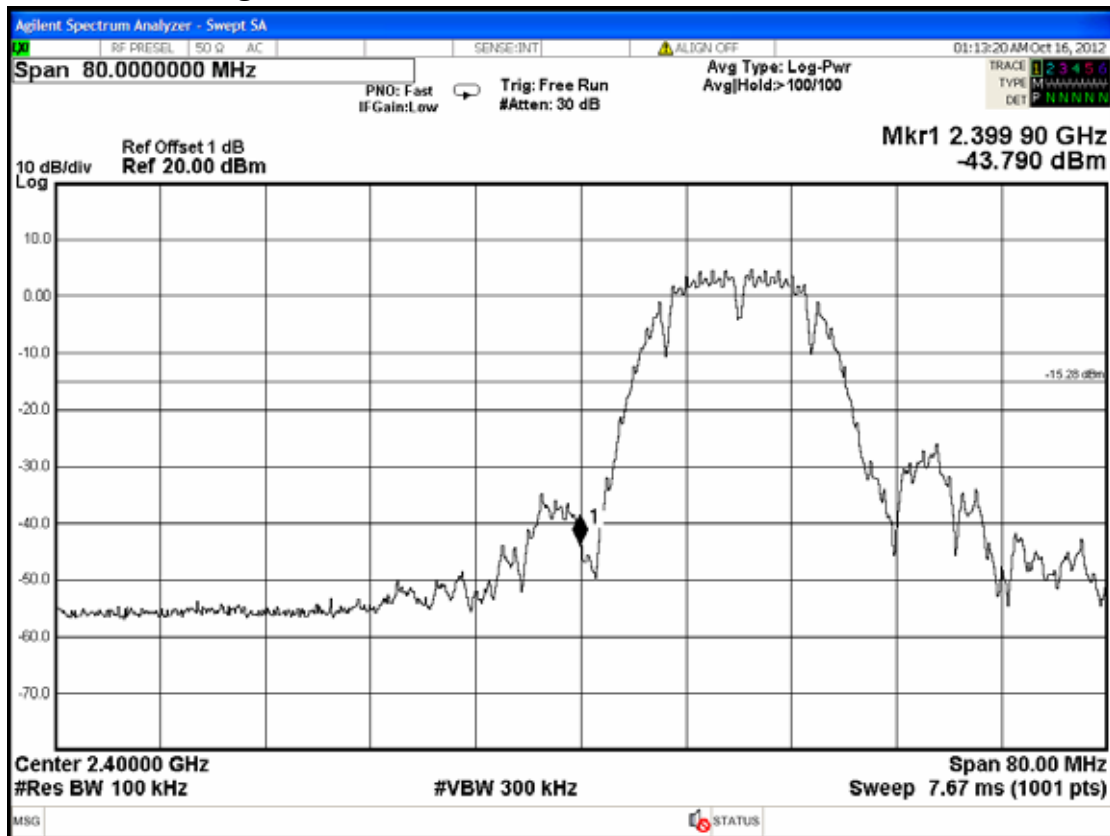
Upper Band edge : The highest emission level is -39.744dBm on 2.48360GHz.

802.11n-HT40(5.8GHz)

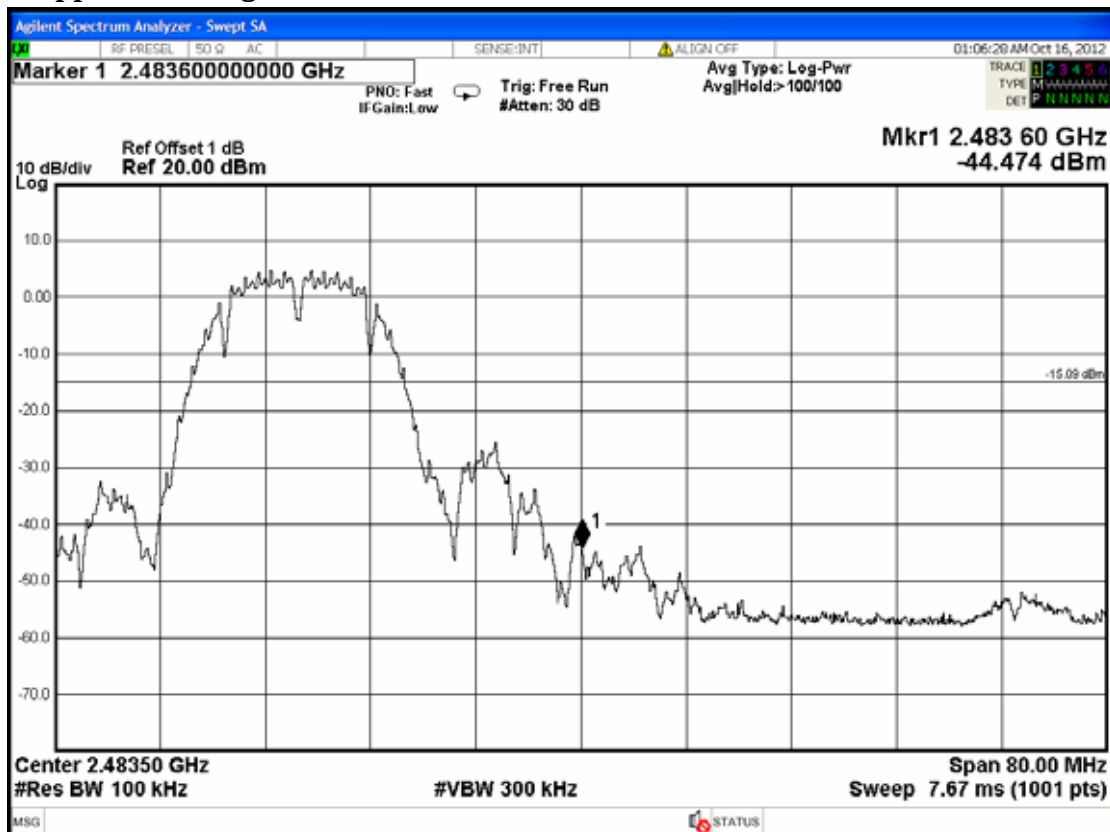
Below Band edge: The highest emission level is -33.670dBm on 5.72500GHz.

Upper Band edge : The highest emission level is -53.371dBm on 5.85000GHz.

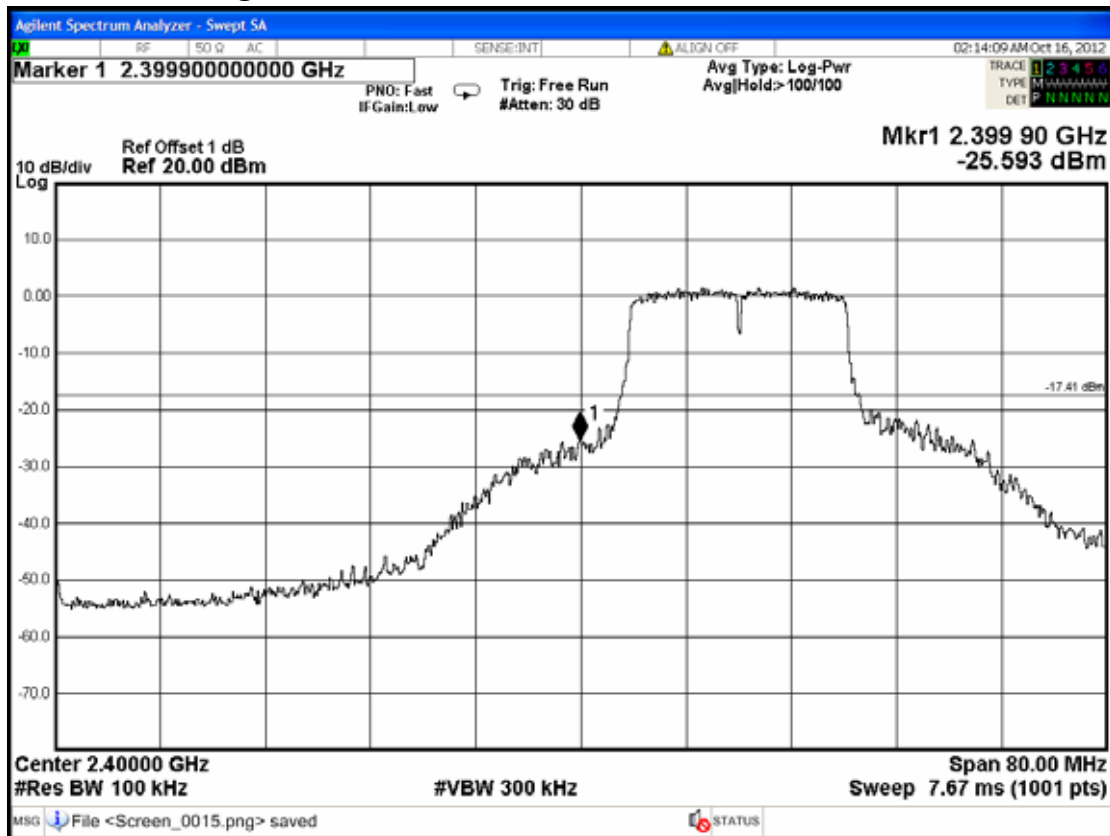
802.11b Below Band edge



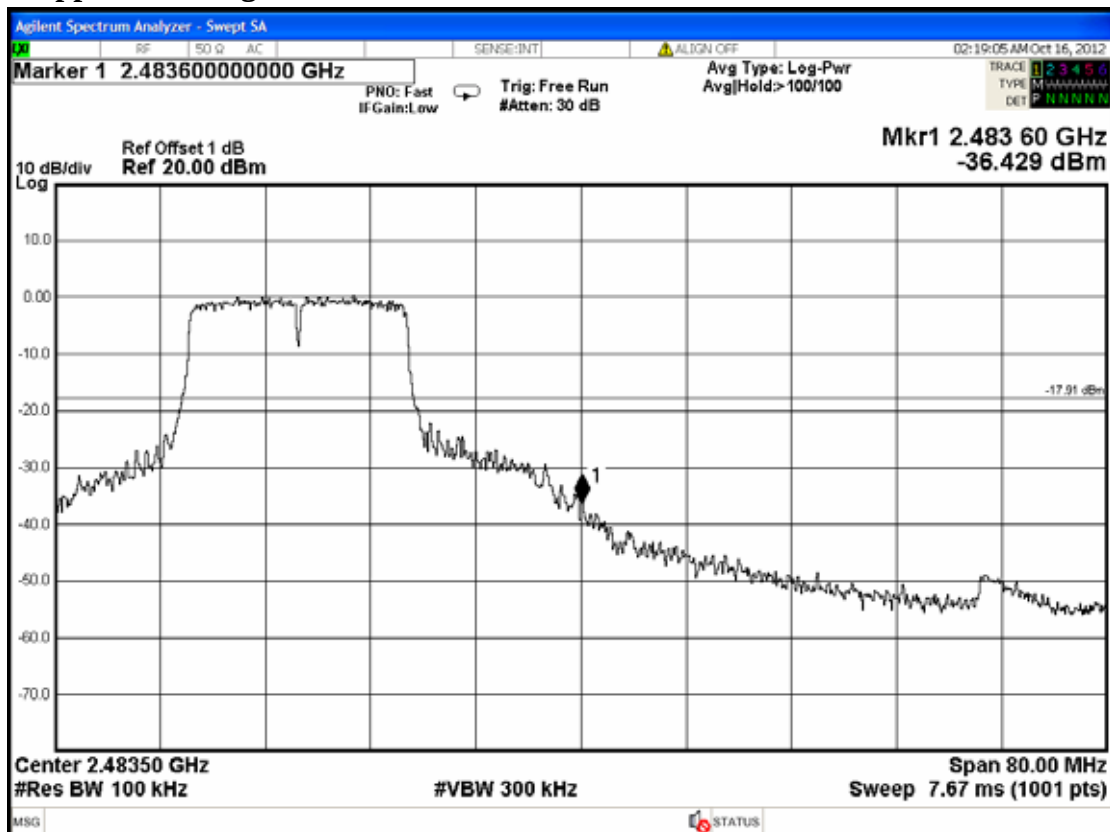
Upper Band edge



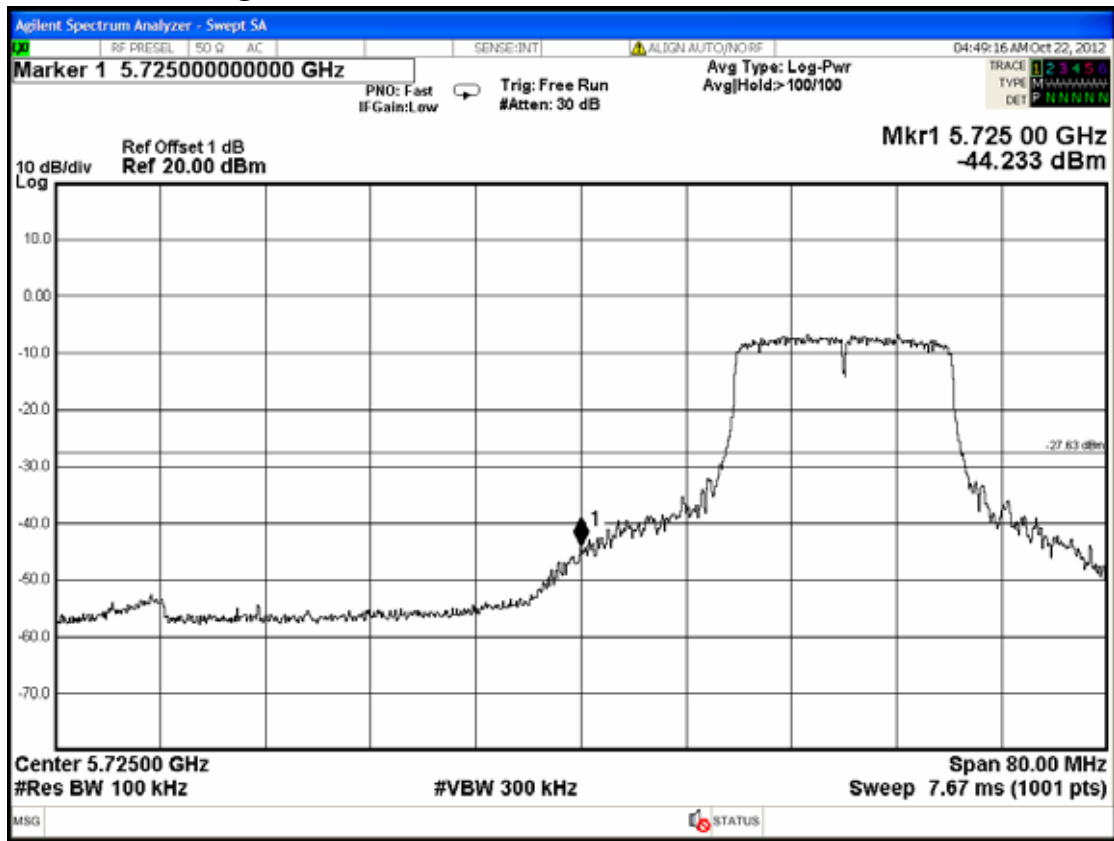
802.11g Below Band edge



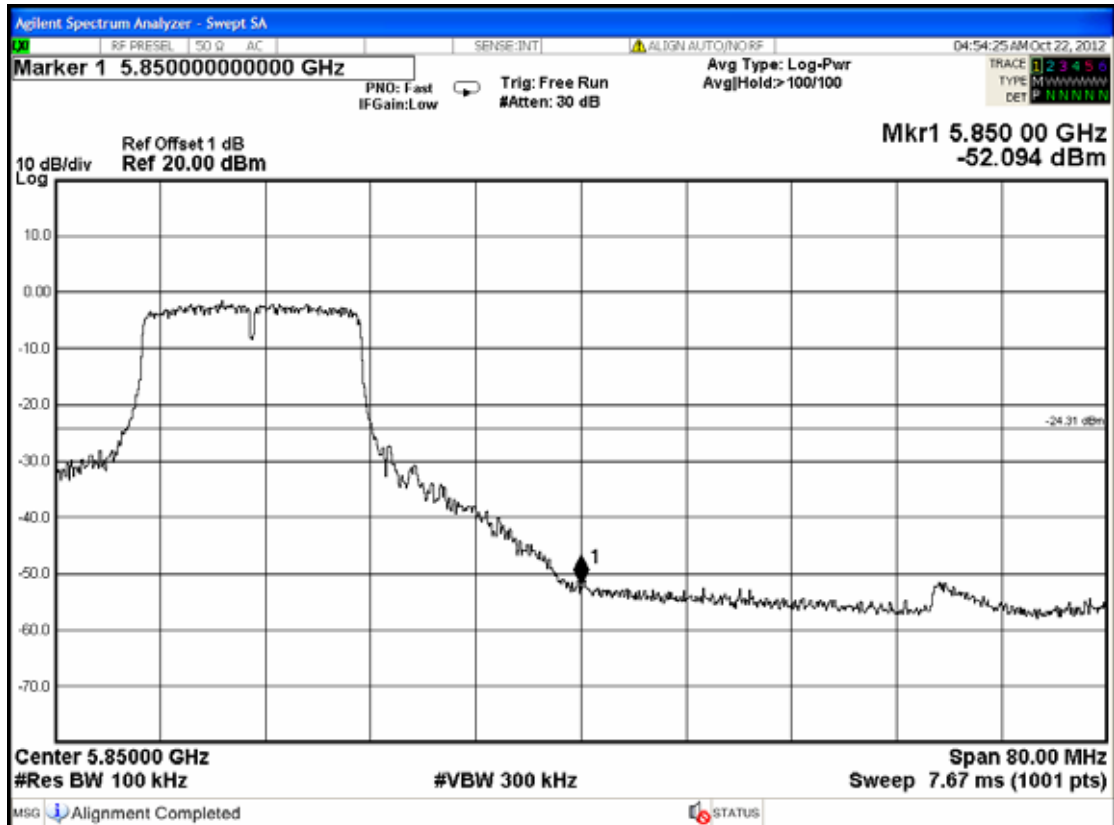
Upper Band edge



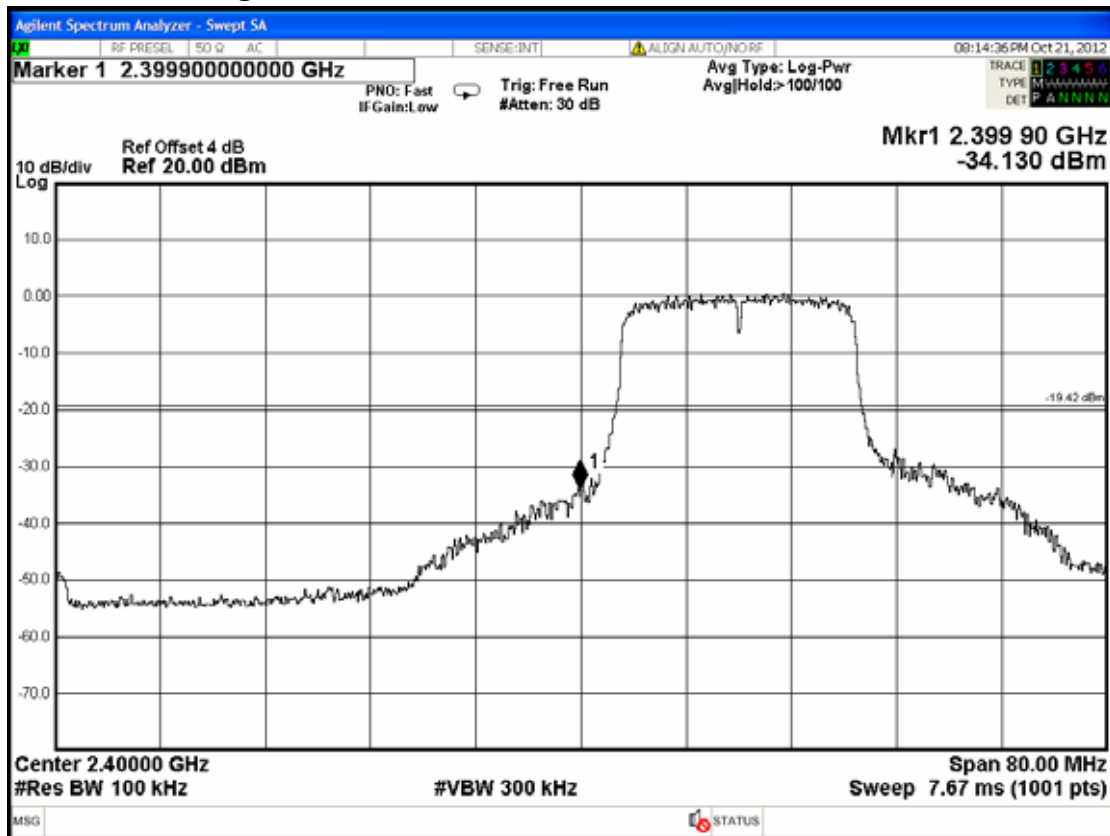
802.11a Below Band edge



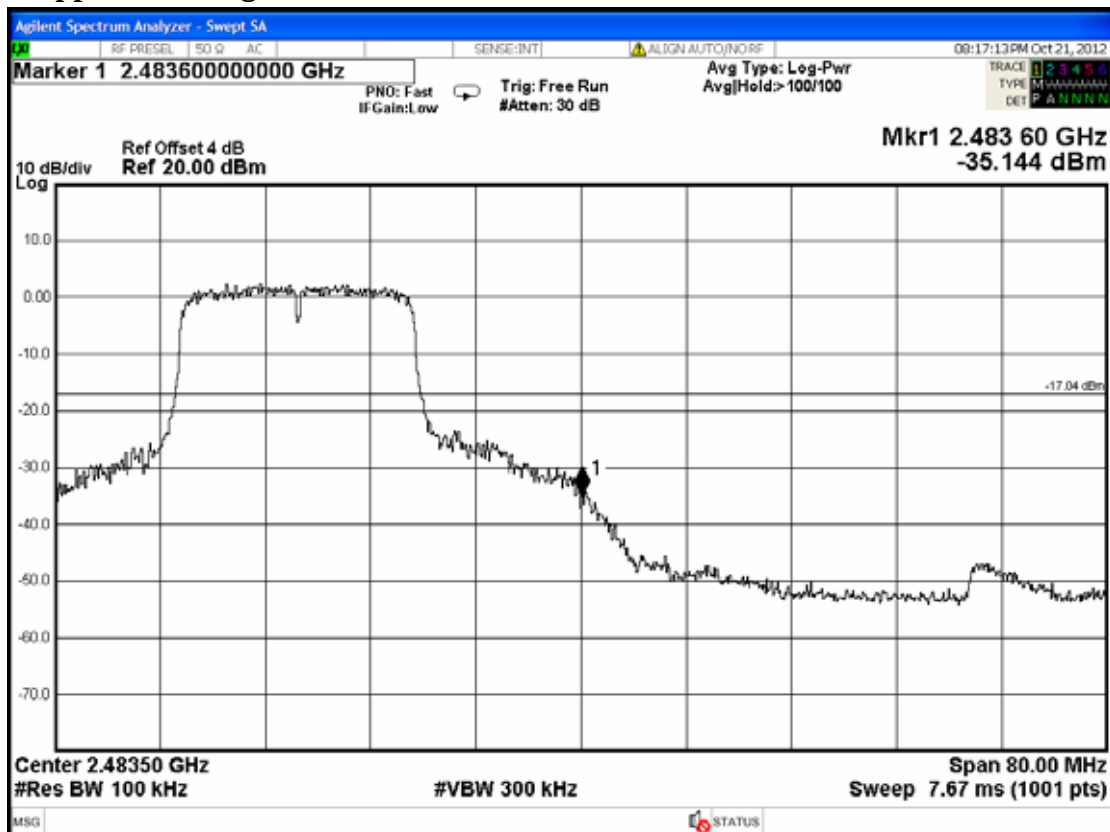
Upper Band edge



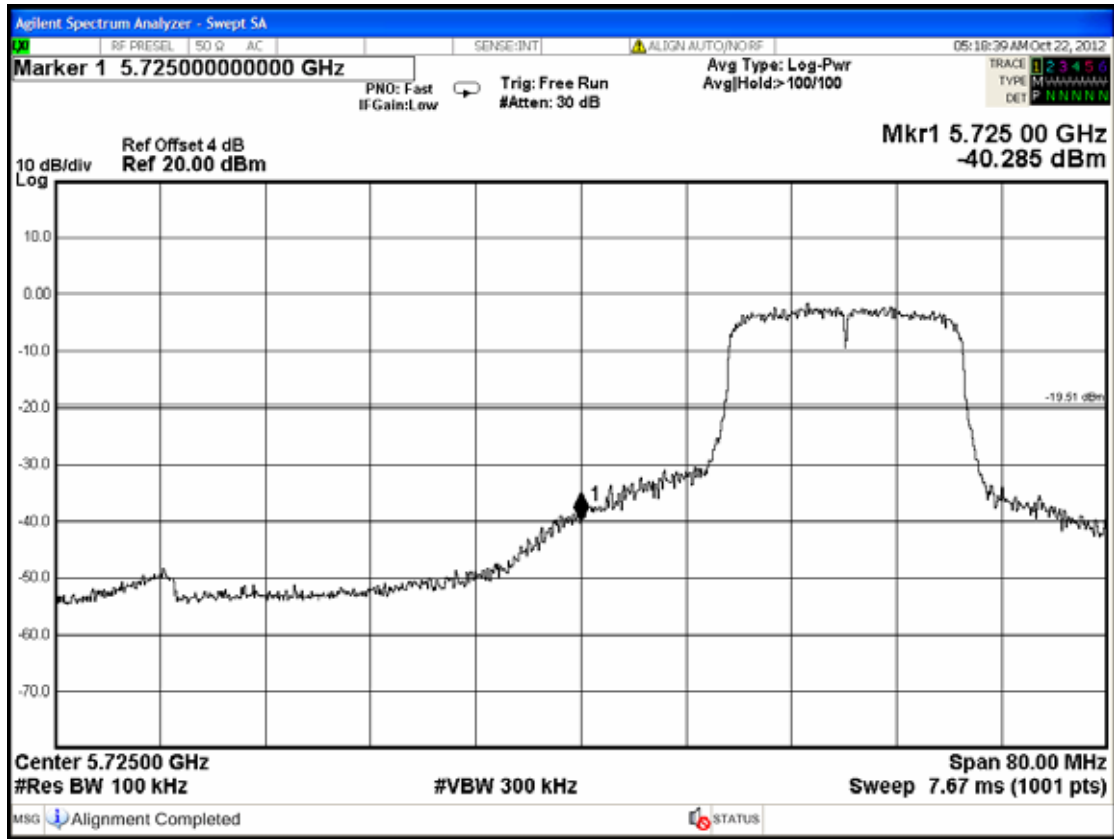
802.11n-HT20(2.4GHz) Below Band edge



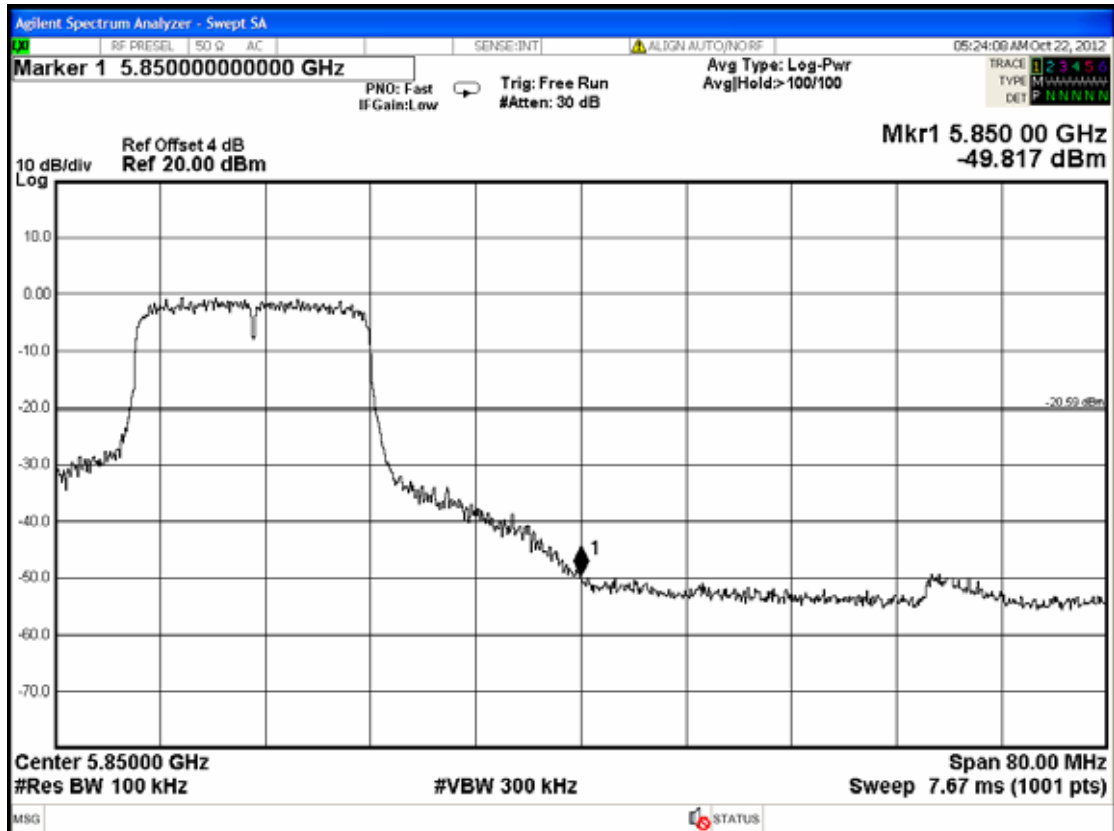
Upper Band edge



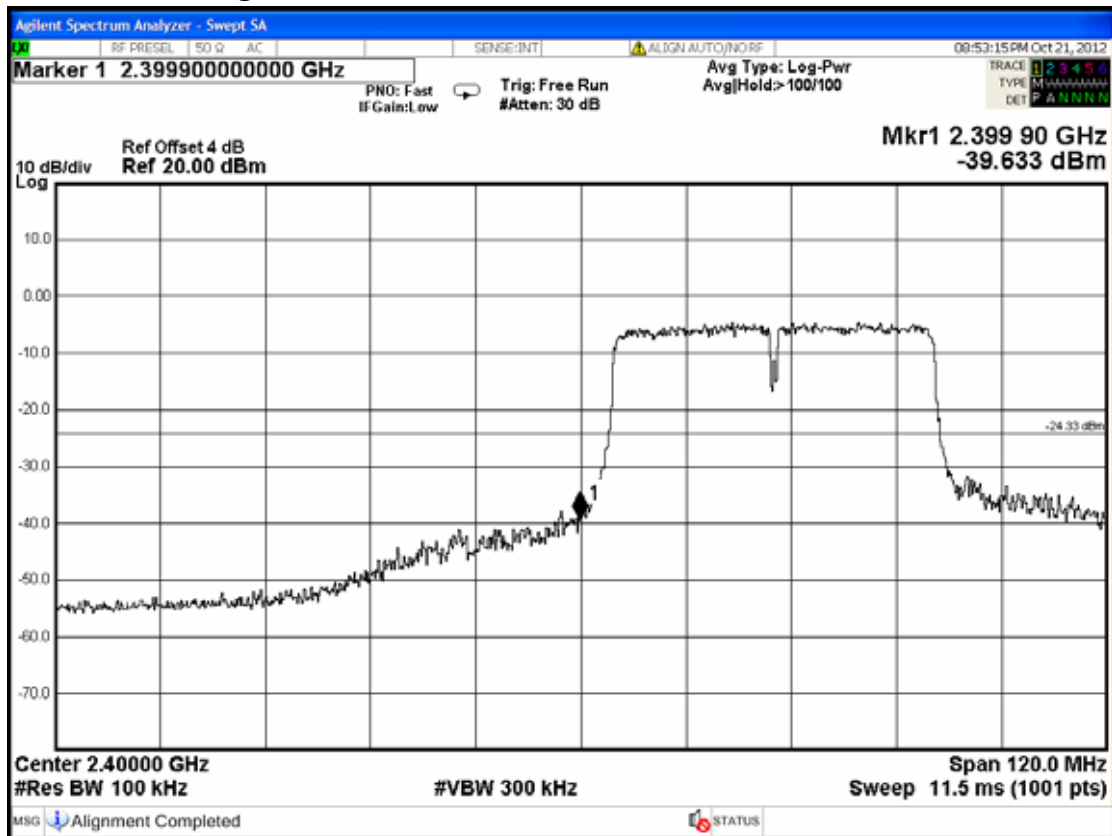
802.11n-HT20(5.8GHz) Below Band edge



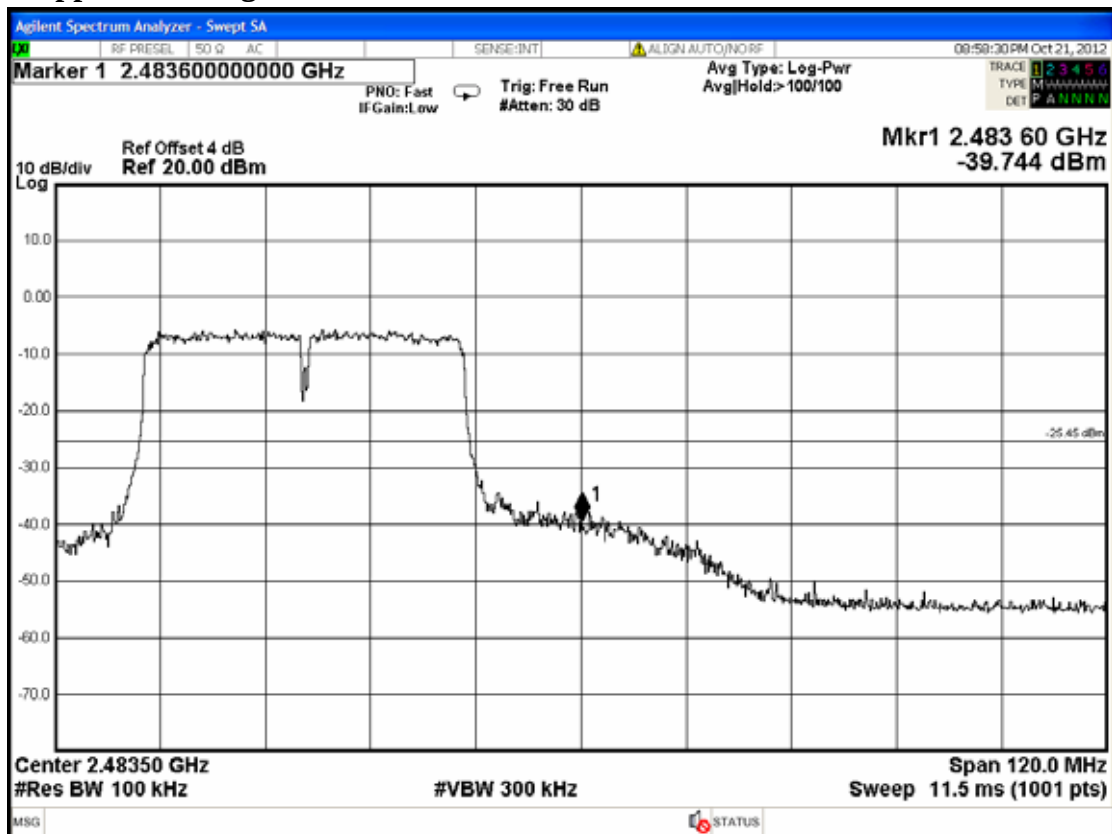
Upper Band edge



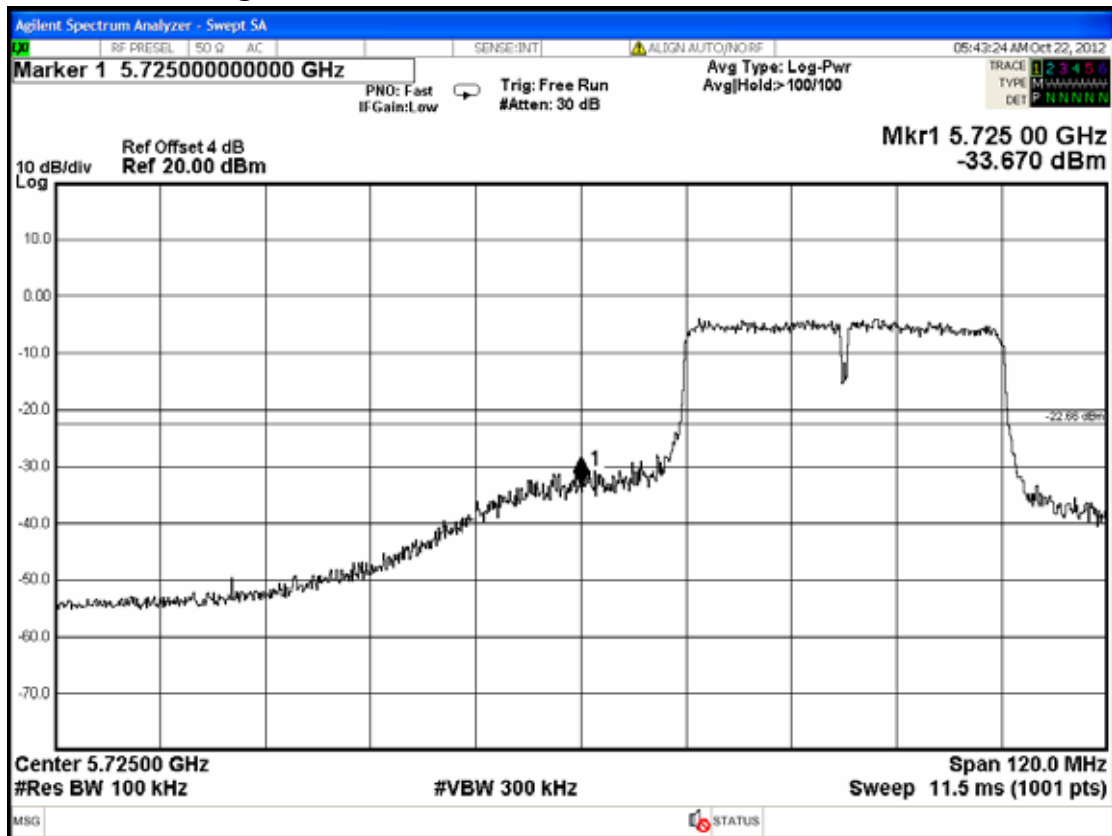
802.11n-HT40(2.4GHz) Below Band edge



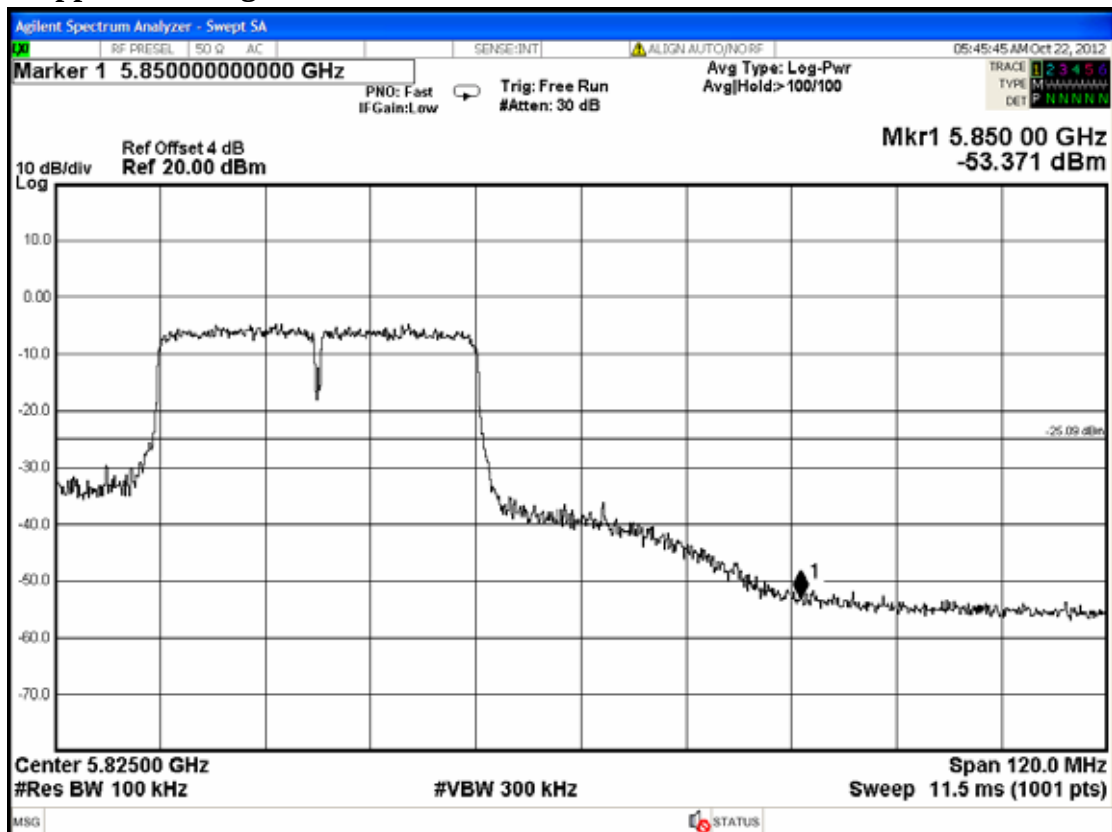
Upper Band edge



802.11n-HT40(5.8GHz) Below Band edge



Upper Band edge



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	N9030A-544	US51350140	Oct. 17, 12'	Oct. 16, 13'

8.2. Block Diagram of Test Setup

The same as section.4.2.

8.3. Specification Limits [§15.247(d), RSS-210 §A8.2 (b)]

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

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

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 ≥ 300 kHz VBW, set sweep time = Auto.

The measurement guideline was according to KDB 558074 D01.

Pursuant to KDB 662911, we performed conducted tests for both antenna chains and submit test data measured on chain 0 as worse performance.

8.6. Test Results

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

Pursuant to KDB 662911, the test results of 802.11n-HT20/H40 have been included 3 dB is calculated from $10\log(N)$, where N is the number of outputs.

(Test Date : Oct. 16, 2012 Temperature : 26°C Humidity : 60%)

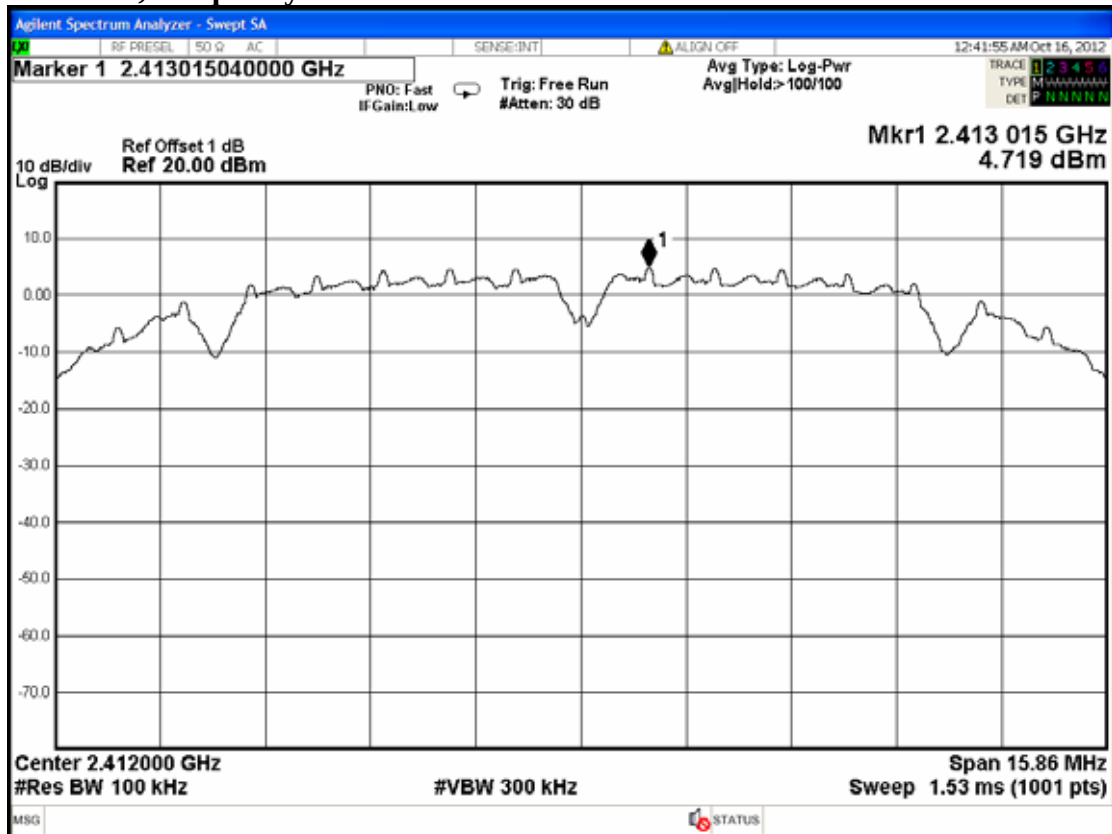
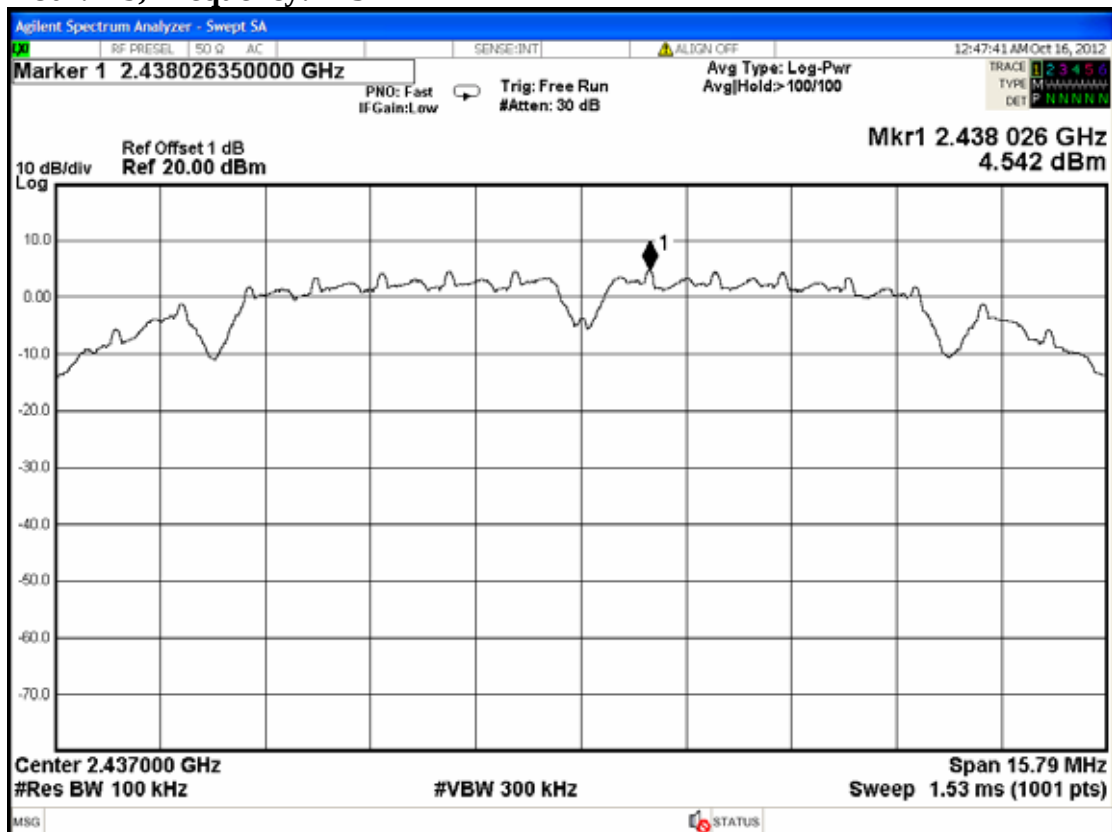
(Test Date : Oct. 21, 2012 Temperature : 25°C Humidity : 62%)

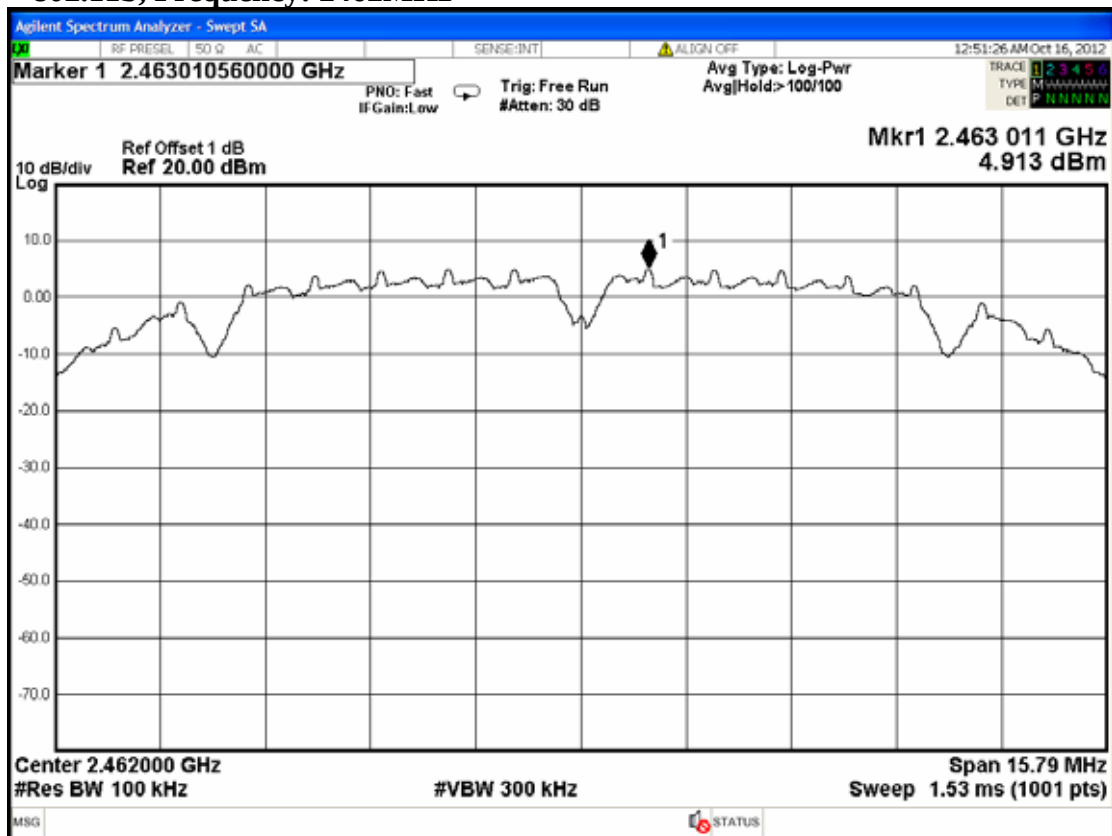
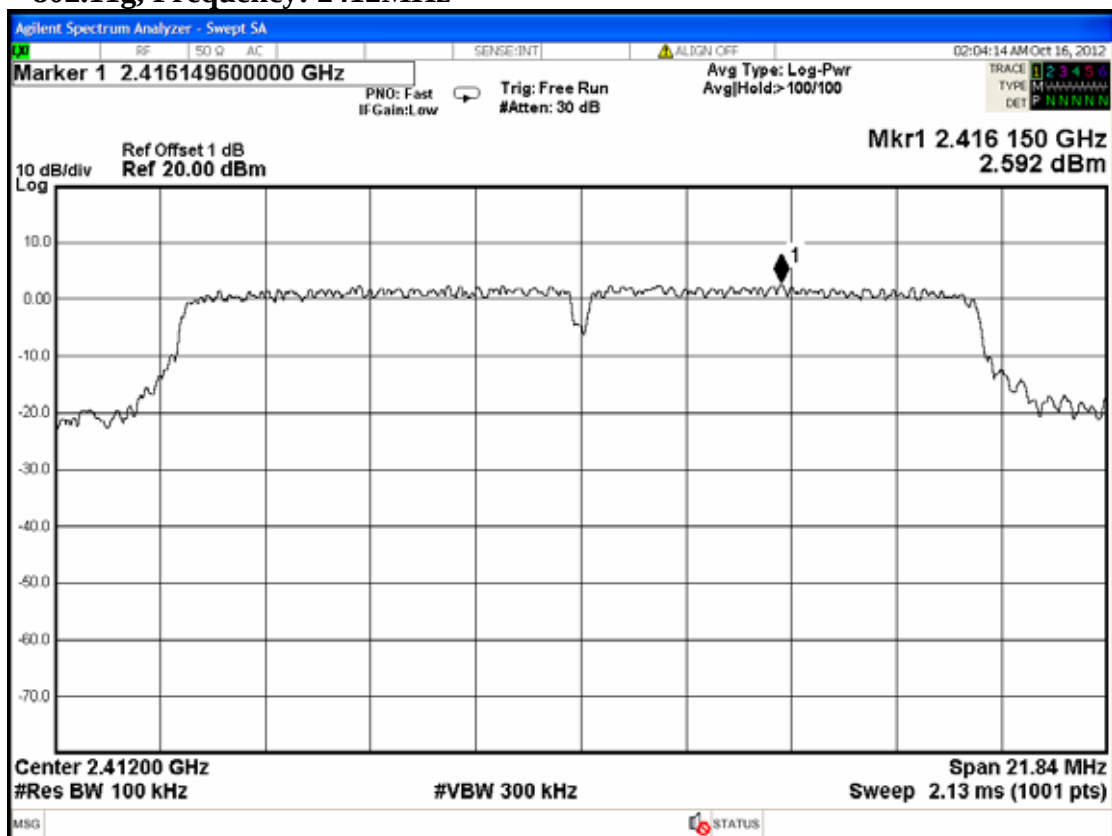
(Test Date : Oct. 22, 2012 Temperature : 26°C Humidity : 62%)

8.6.1. For 802.11b/802.11g/802.11a

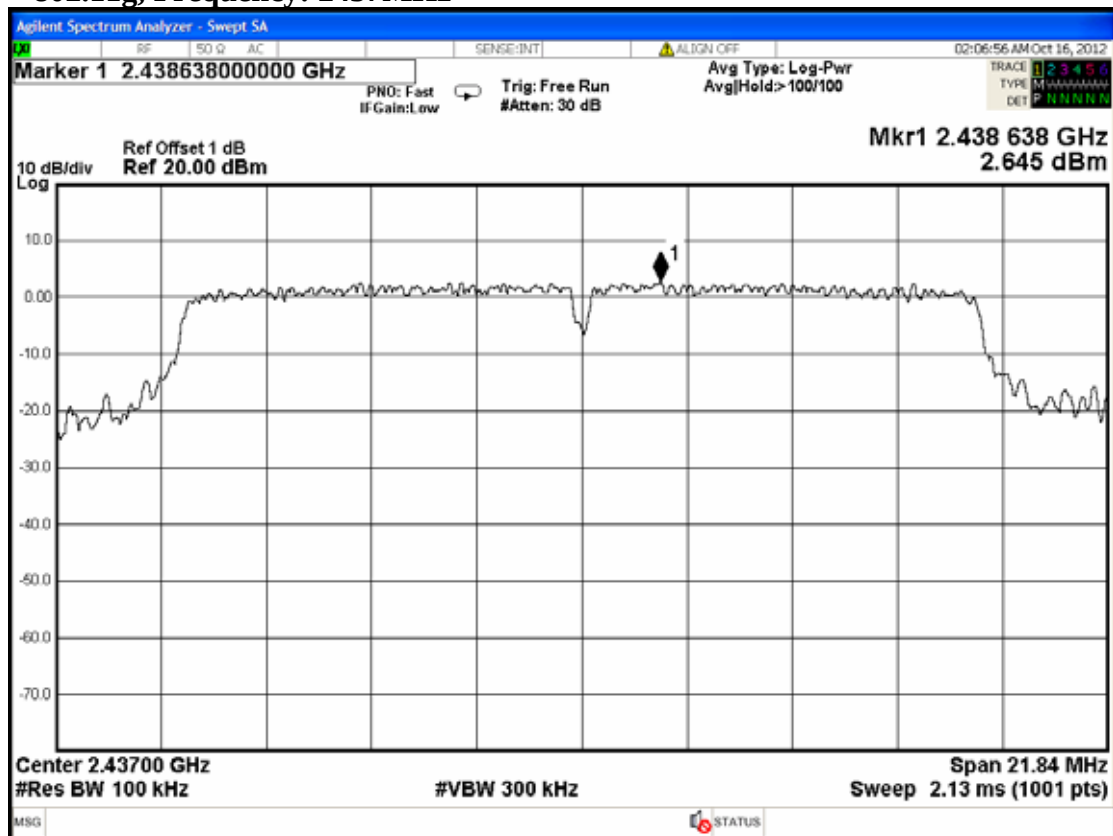
Mode	Type of Network	Channel	Frequency	Power Spectral Density (dBm)	BWCF (dB)	Final Power Spectral Density (dBm)	Limit (dBm)
1.	802.11b	CH 1	2412MHz	4.719	-15.2	-10.48	8
2.		CH 6	2437MHz	4.542	-15.2	-10.66	8
3.		CH 11	2462MHz	4.913	-15.2	-10.29	8
4.	802.11g	CH 1	2412MHz	2.592	-15.2	-12.61	8
5.		CH 6	2437MHz	2.645	-15.2	-12.56	8
6.		CH 11	2462MHz	2.087	-15.2	-13.11	8
7.	802.11a	CH 149	5745MHz	-7.630	-15.2	-22.83	8
8.		CH 157	5785MHz	-11.27	-15.2	-26.47	8
9.		CH 165	5825MHz	-4.309	-15.2	-19.509	8
10.	802.11n-HT20	CH 1	2412MHz	0.584	-15.2	-14.62	8
11.		CH 6	2437MHz	2.475	-15.2	-12.73	8
12.		CH 11	2462MHz	2.962	-15.2	-12.24	8
13.	802.11n-HT20	CH 149	5745MHz	0.494	-15.2	-14.706	8
14.		CH 157	5785MHz	-1.558	-15.2	-16.758	8
15.		CH 165	5825MHz	-0.593	-15.2	-15.793	8
16.	802.11n-HT40	CH 3	2422MHz	-4.331	-15.2	-19.53	8
17.		CH 6	2437MHz	-2.881	-15.2	-18.08	8
18.		CH 9	2452MHz	-5.451	-15.2	-20.65	8
19.	802.11n-HT40	CH 151	5755MHz	-2.660	-15.2	-17.860	8
20.		CH 159	5795MHz	-5.091	-15.2	-20.291	8

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

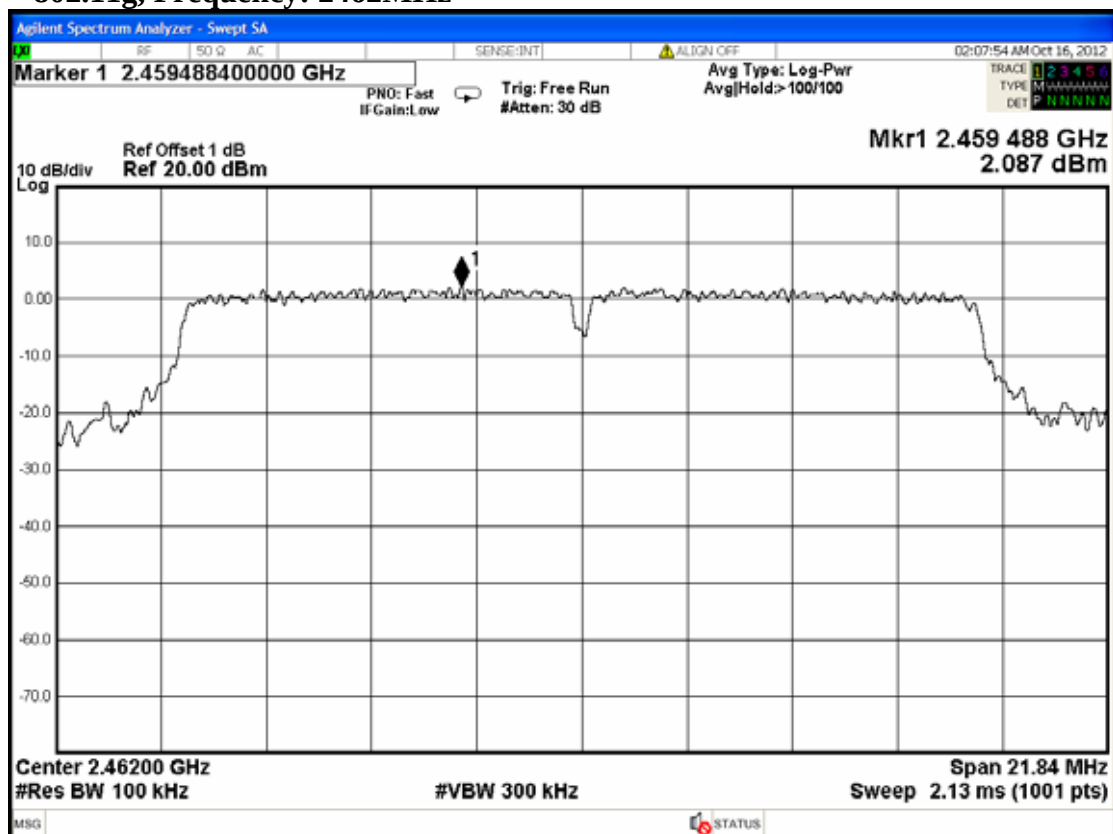
802.11b, Frequency: 2412MHz**802.11b, Frequency: 2437MHz**

802.11b, Frequency: 2462MHz**802.11g, Frequency: 2412MHz**

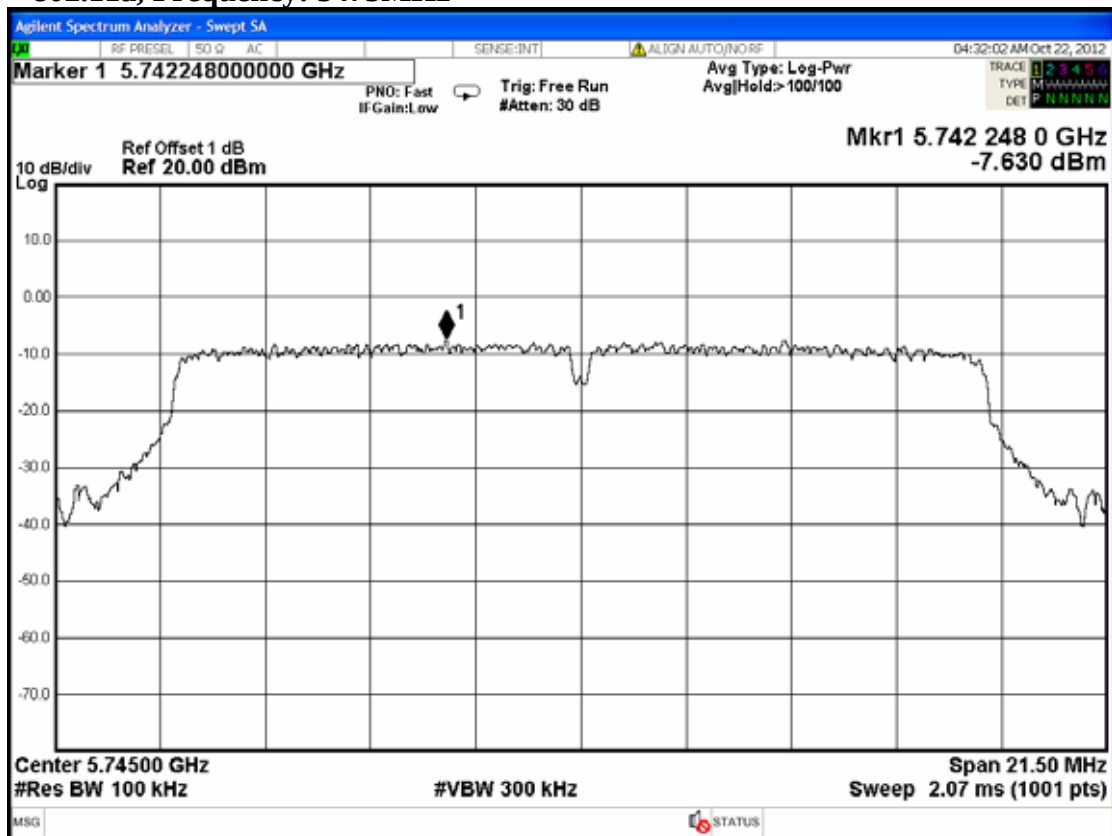
802.11g, Frequency: 2437MHz



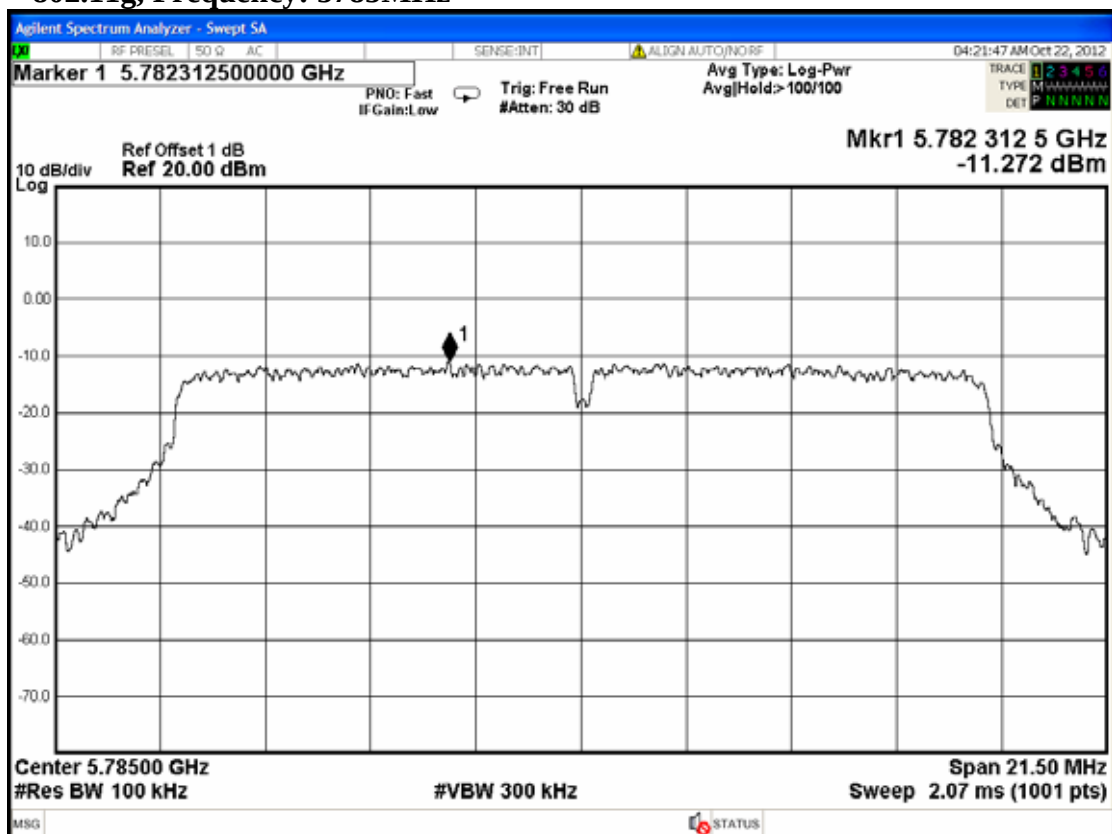
802.11g, Frequency: 2462MHz

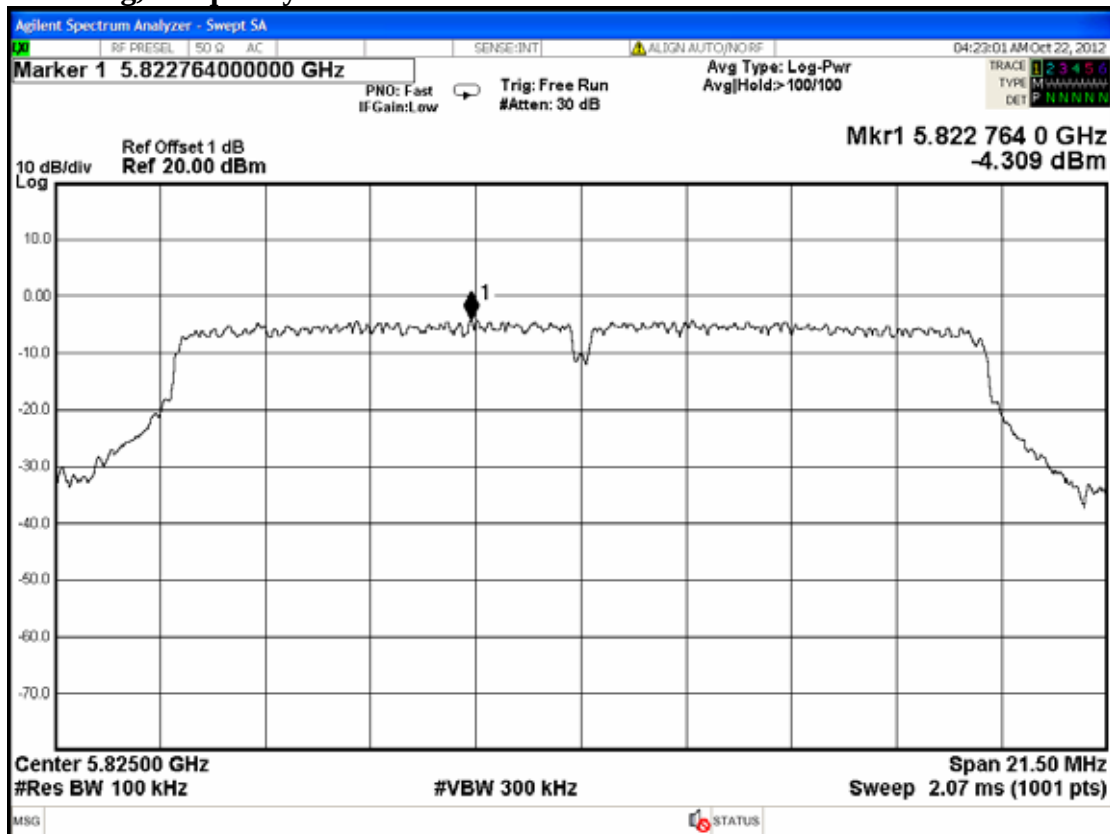
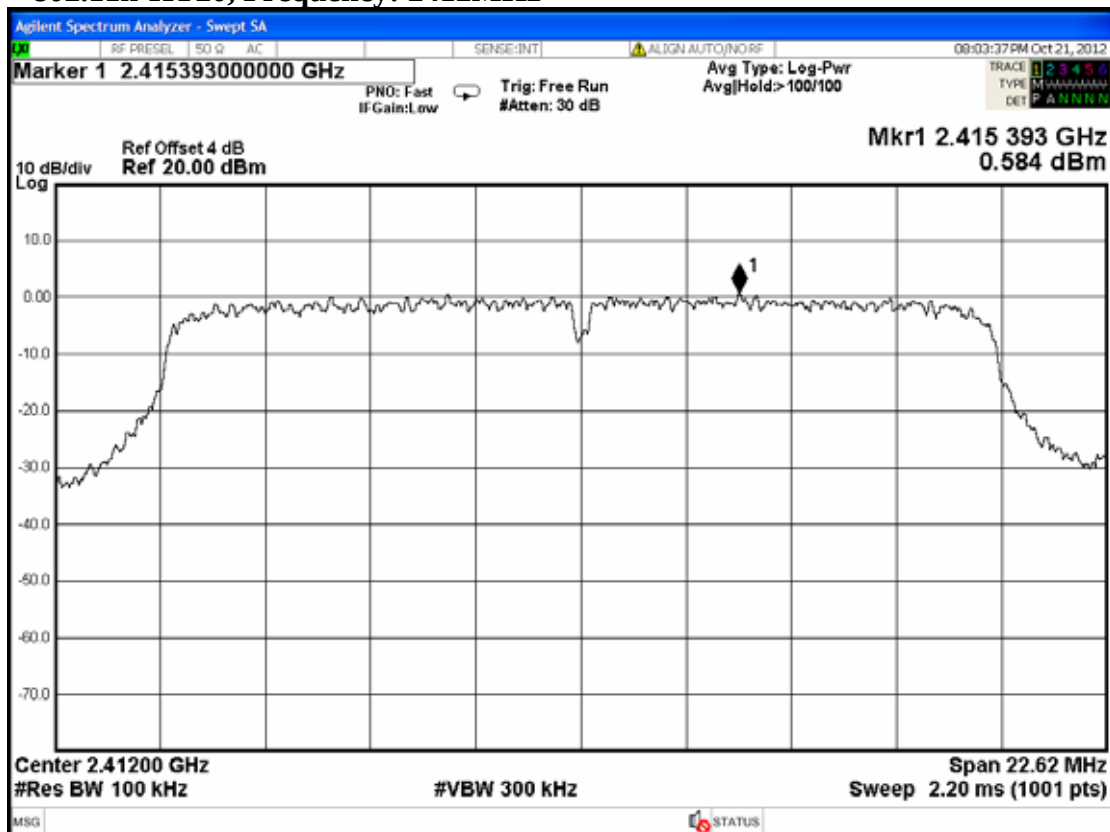


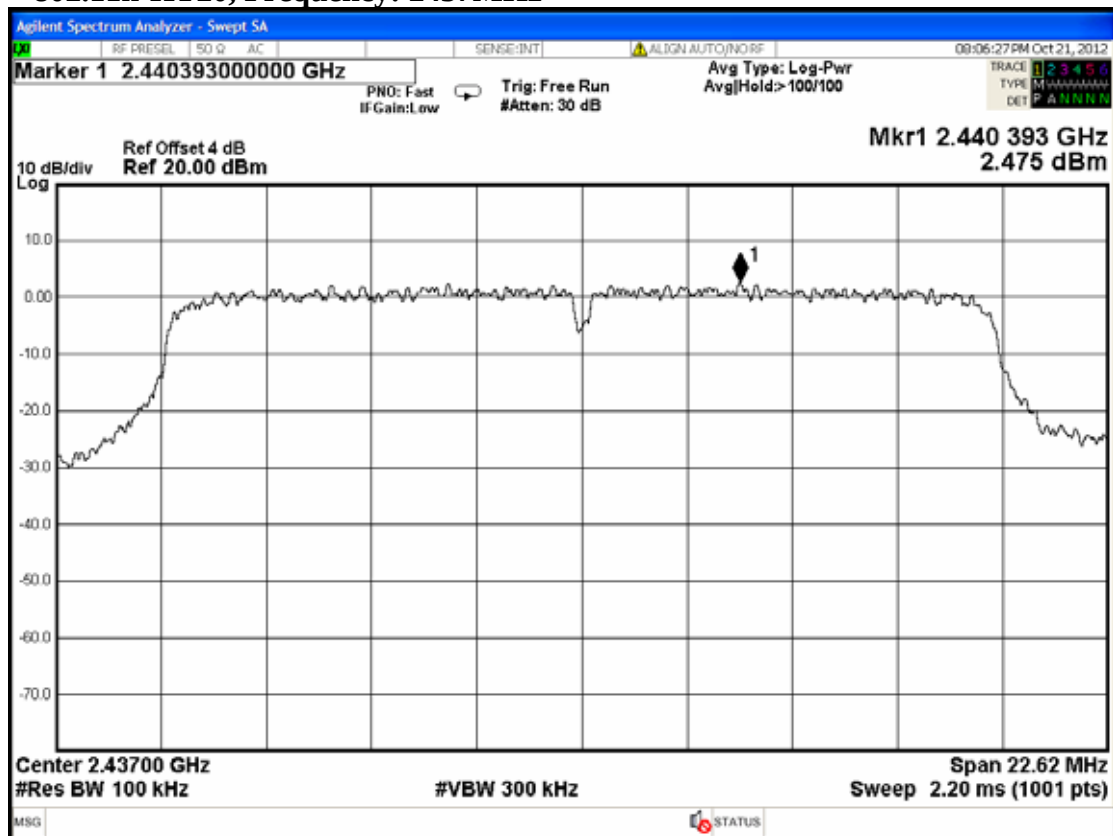
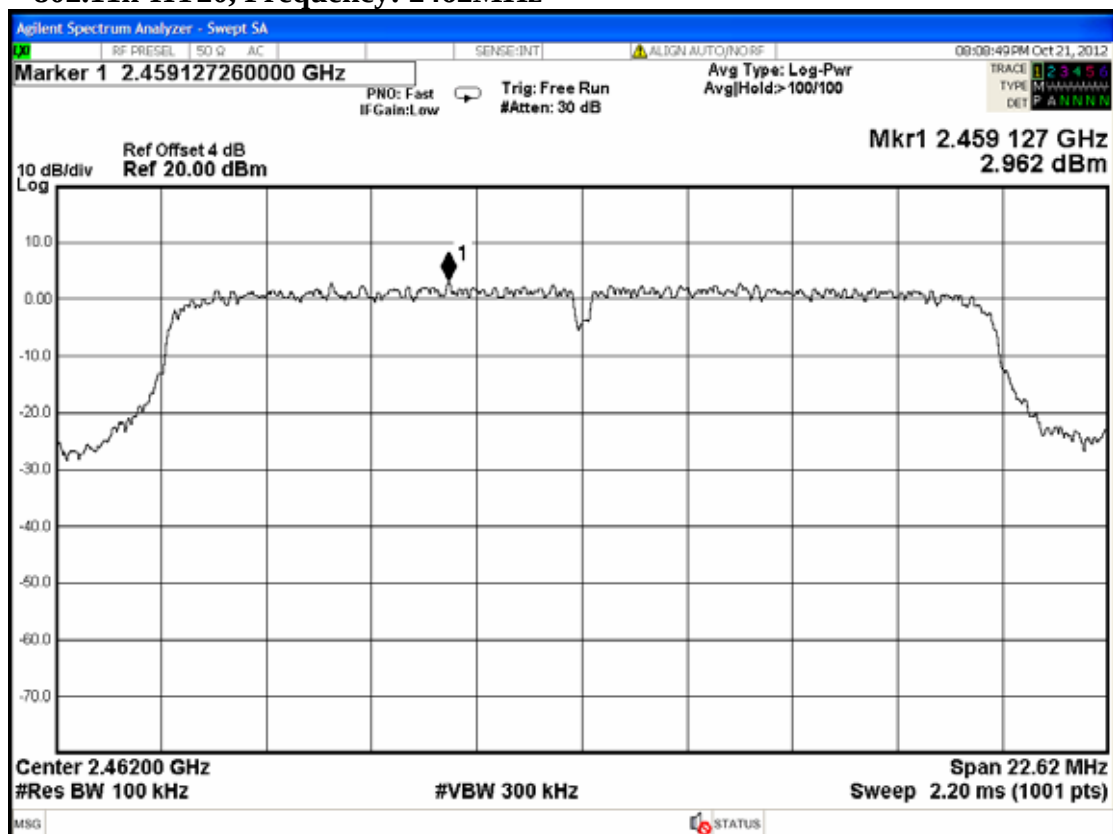
802.11a, Frequency: 5475MHz

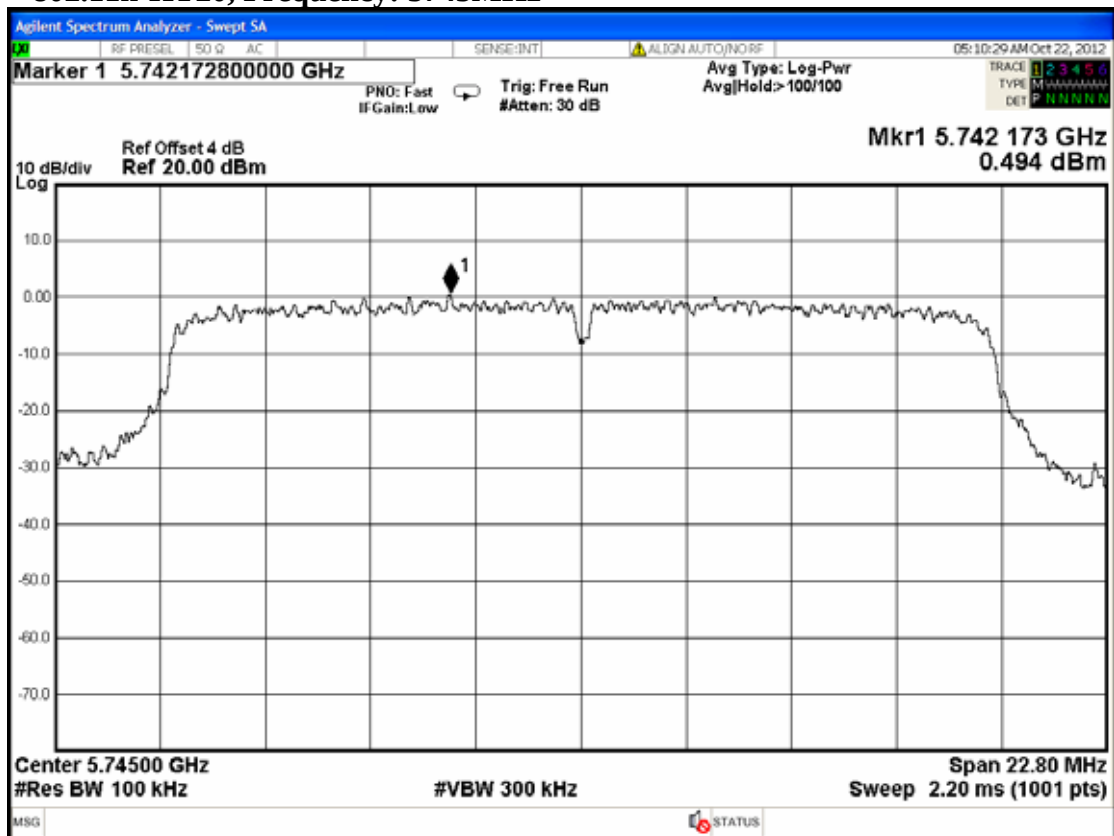
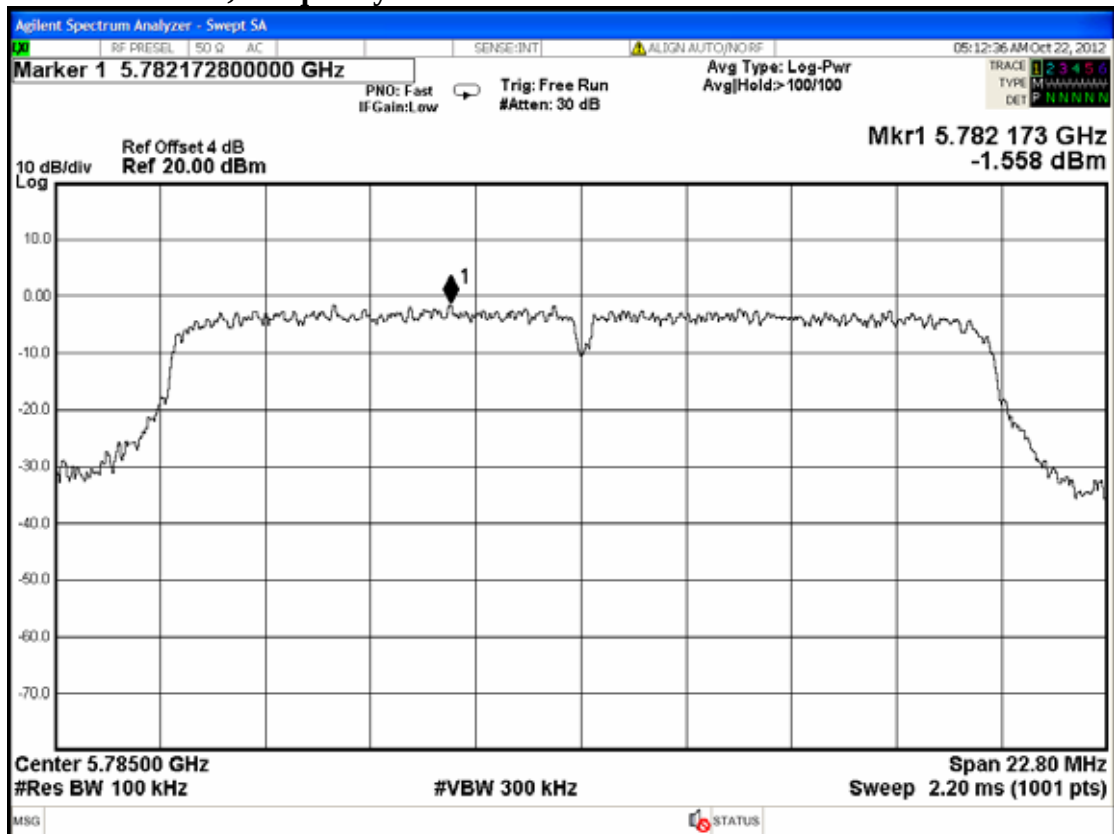


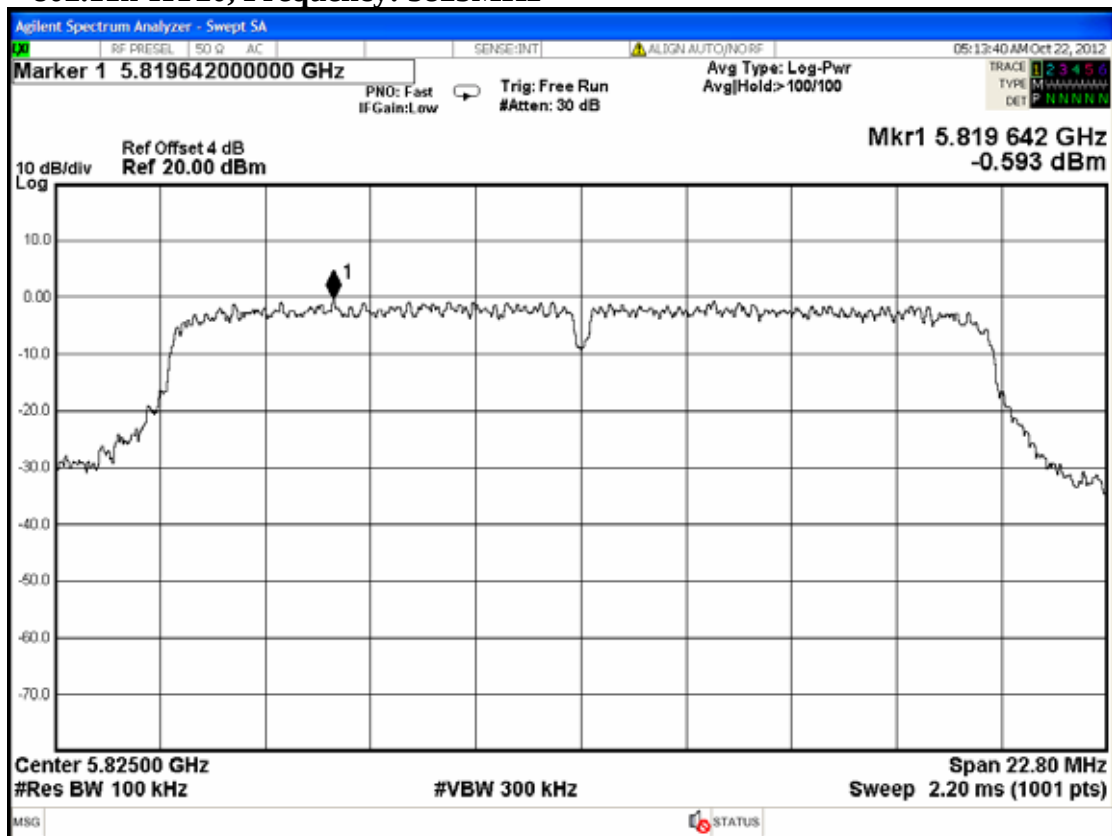
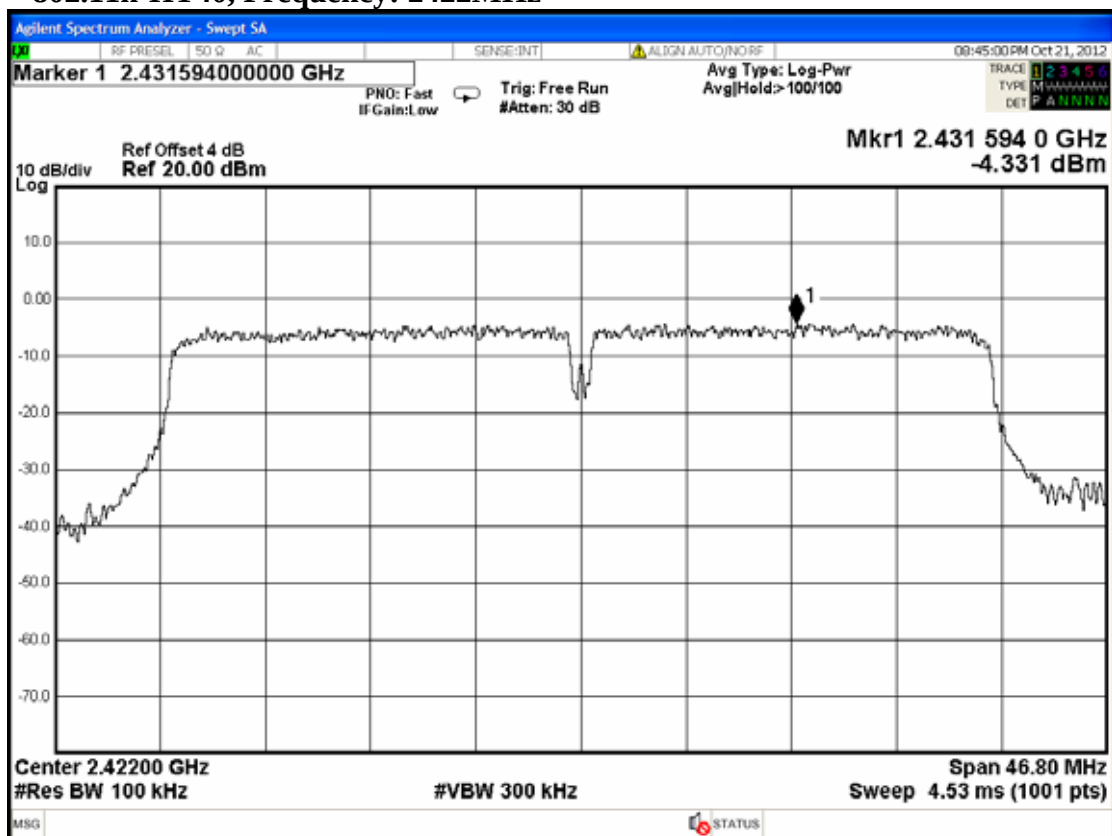
802.11g, Frequency: 5785MHz

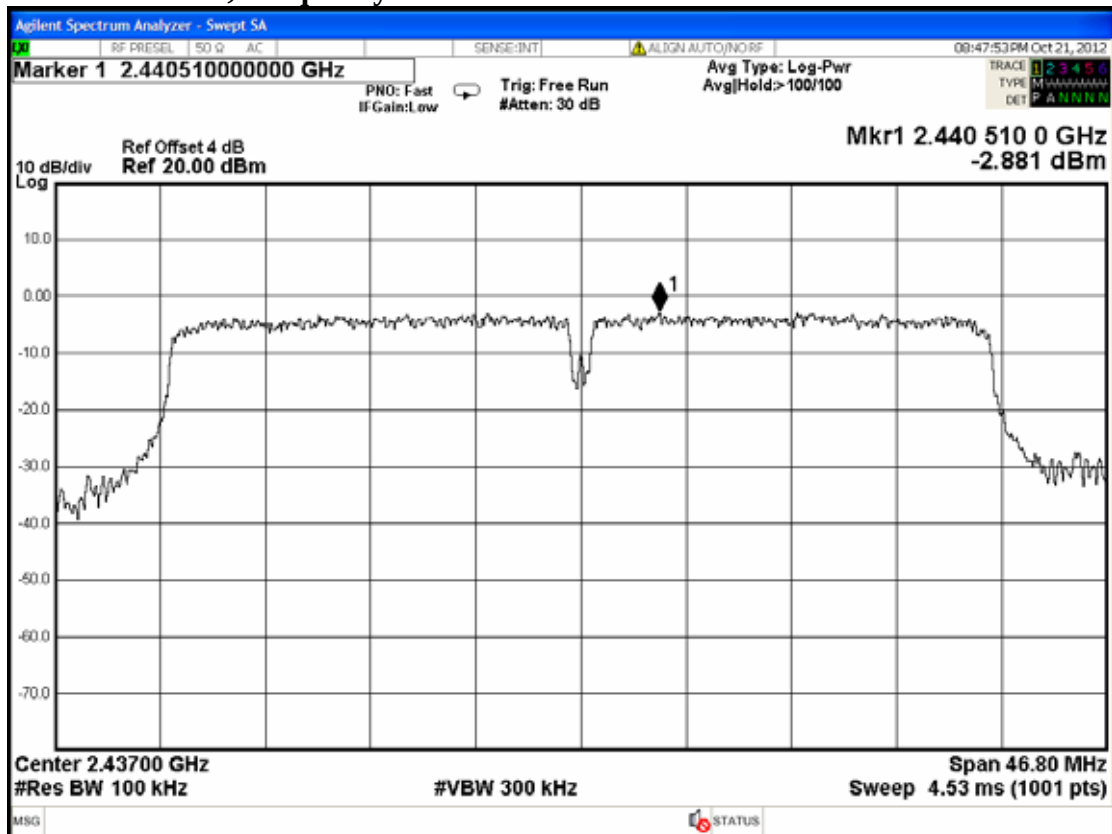
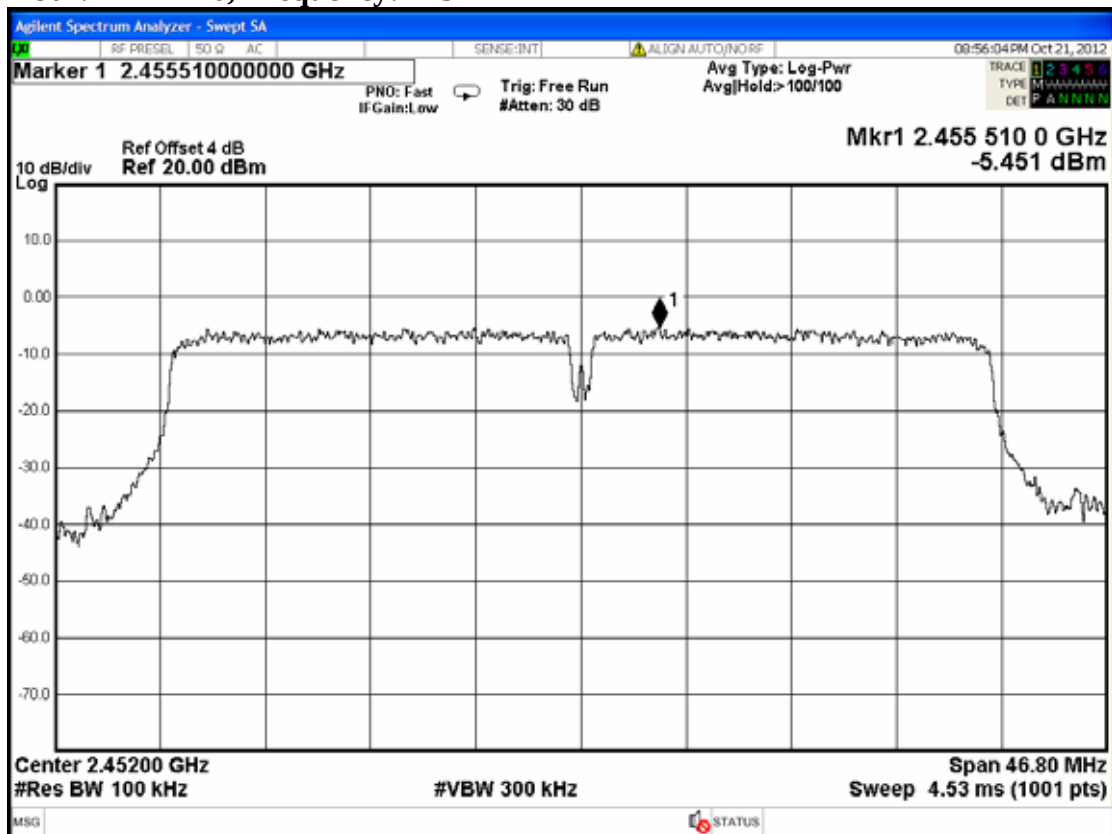


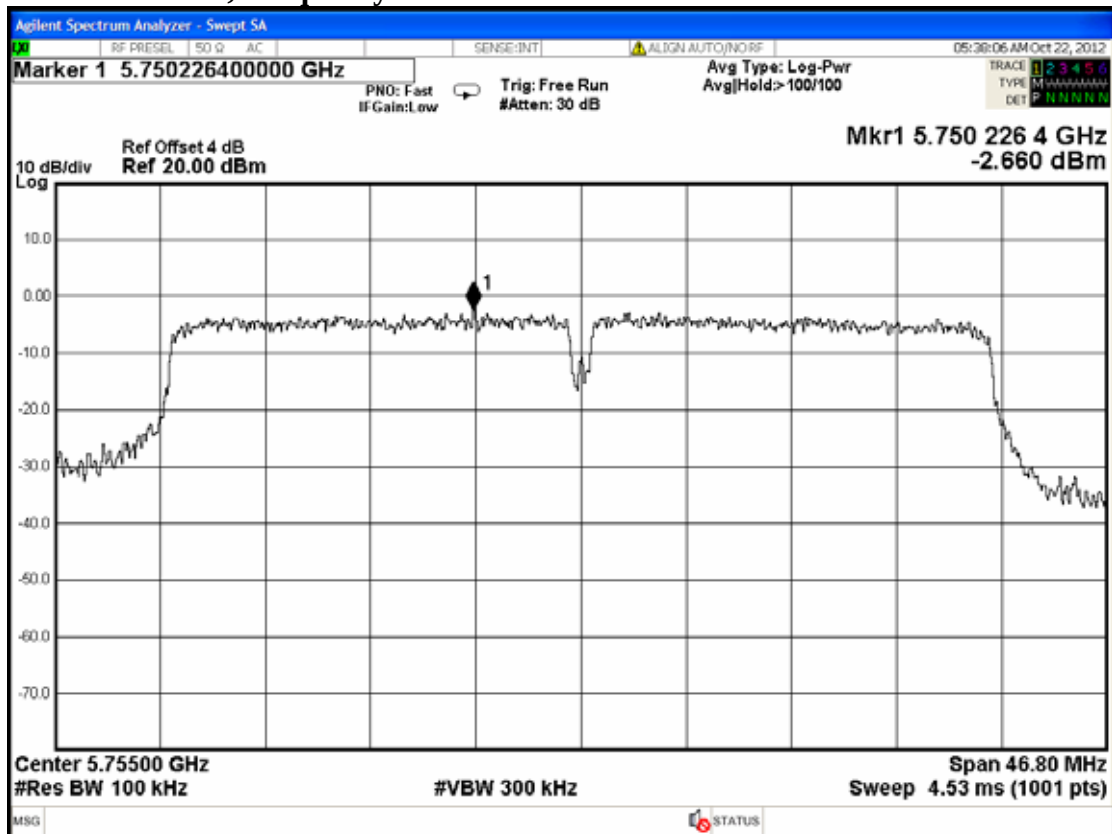
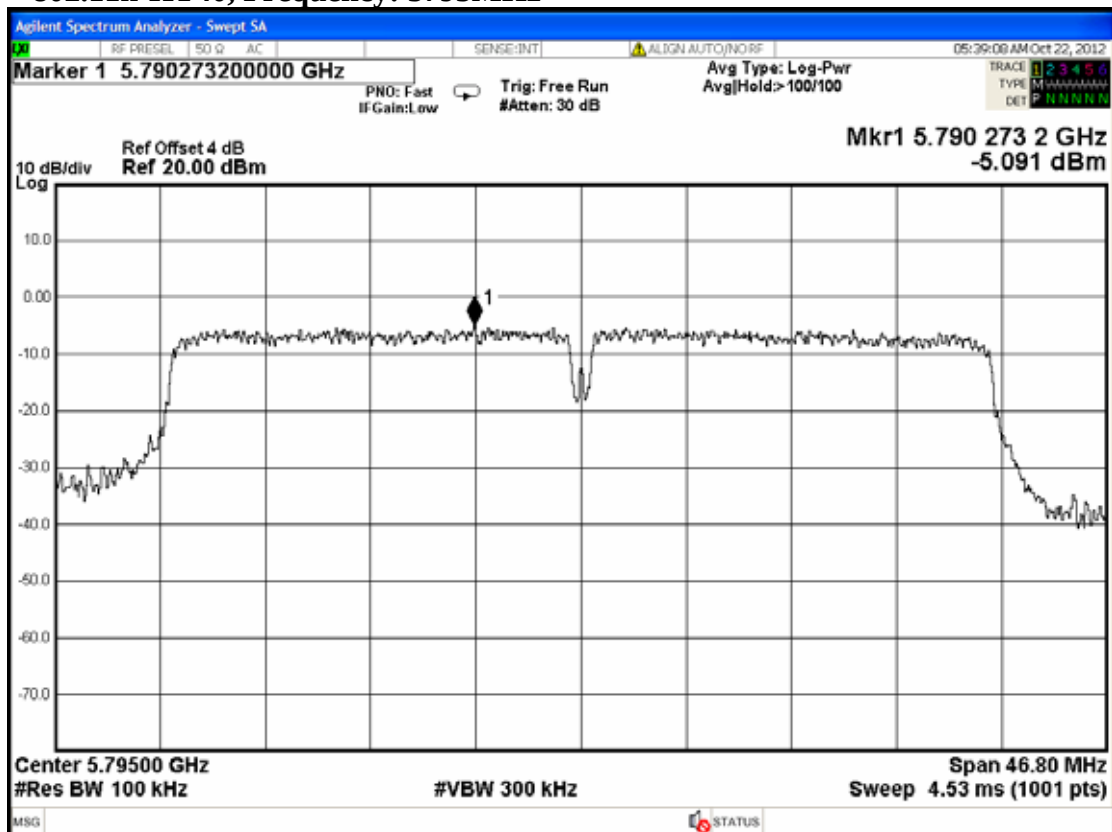
802.11g, Frequency: 5825MHz**802.11n-HT20, Frequency: 2412MHz**

802.11n-HT20, Frequency: 2437MHz**802.11n-HT20, Frequency: 2462MHz**

802.11n-HT20, Frequency: 5745MHz**802.11n-HT20, Frequency: 5785MHz**

802.11n-HT20, Frequency: 5825MHz**802.11n-HT40, Frequency: 2422MHz**

802.11n-HT40, Frequency: 2437MHz**802.11n-HT40, Frequency: 2452MHz**

802.11n-HT40, Frequency: 5755MHz**802.11n-HT40, Frequency: 5795MHz**

9. DEVIATION TO TEST SPECIFICATIONS

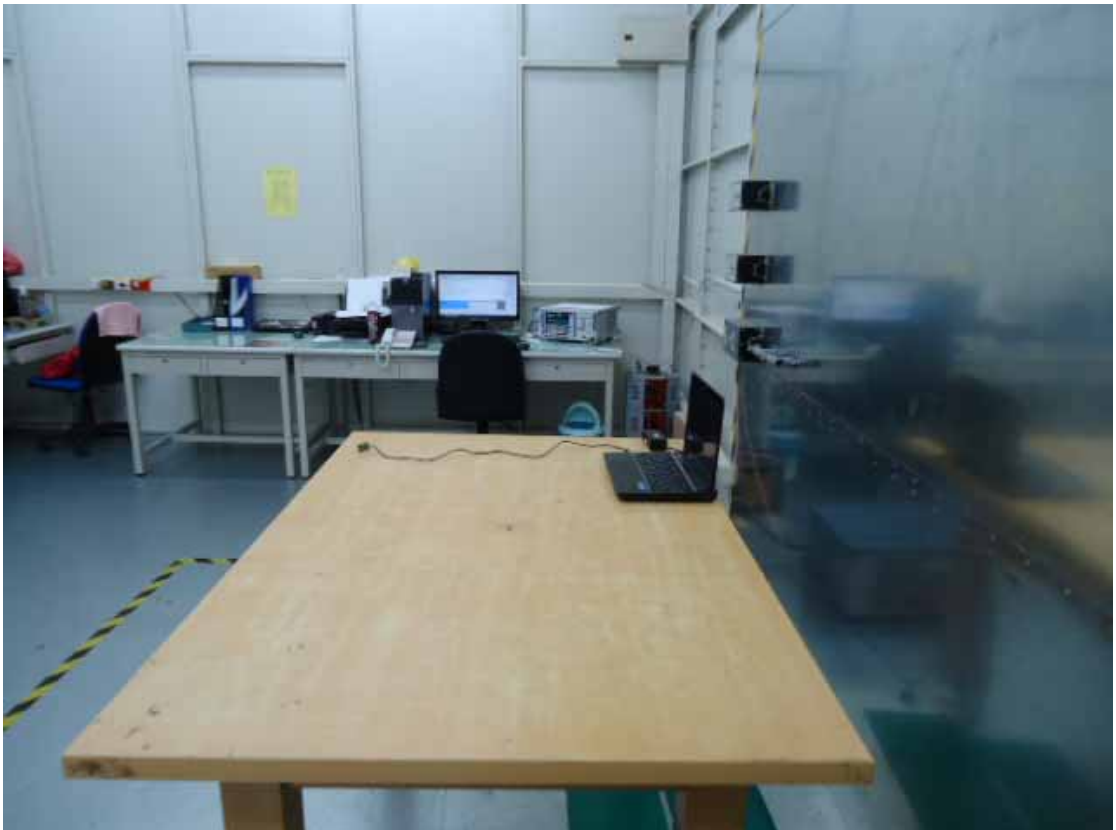
【NONE】

10.PHOTOGRAPHS

10.1.Photos of Conducted Disturbance Measurement



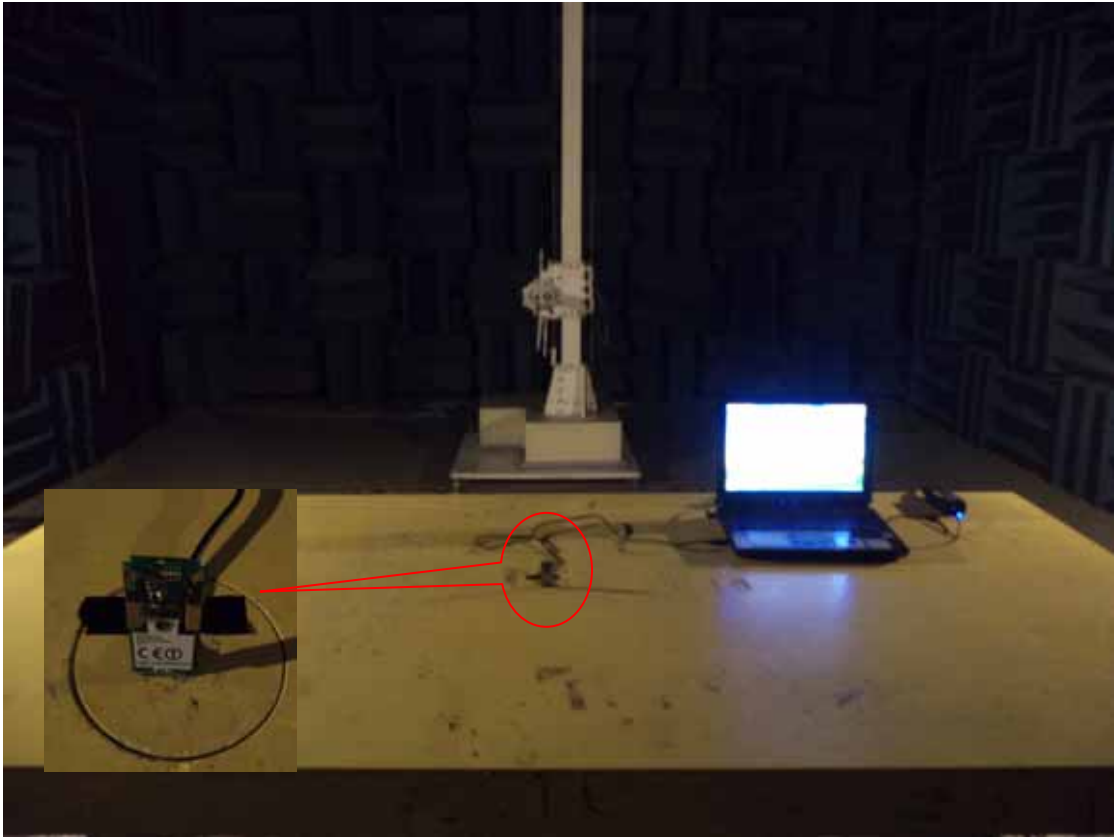
FRONT VIEW OF CONDUCTED MEASUREMENT



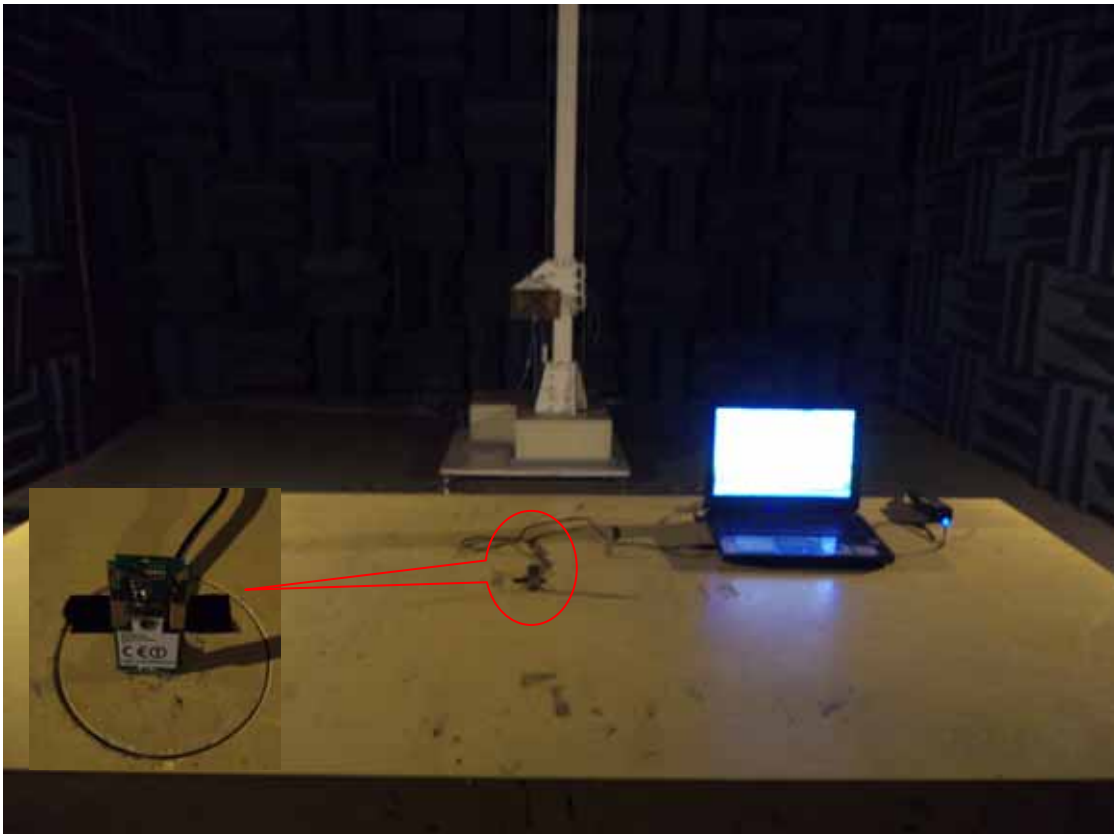
BACK VIEW OF CONDUCTED MEASUREMENT

10.2.Photos of Radiated Measurement at Semi-Anechoic Chamber

10.2.1.Frequency Below 1GHz



10.2.2. Frequency Above 1GHz



10.3.Photo of Section RF Conducted Measurement

