FCC TEST REPORT

According to

FCC Rules and Regulations

Part 15 Subpart C

Applicant	:	GIGA-BYTE TECHNOLOGY CO., LTD.
Address	:	6 BAU CHIANG RD., HSIN-TIEN, TAIPEI HSIEN 231, TAIWAN
Equipment	:	Booktop
Model No.	:	M1005XX,R1005XX (X=0-9,A-Z or blank)
FCC ID.	:	JCK-M1005
Trade Name	:	GIGABYTE

Laboratory Accreditation

TAF
Testing Laboratory
1332

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

Contents

CERTIFICATE OF COMPLIANCE

According to

FCC Rules and Regulations

Part 15 Subpart C

Applicant	:	GIGA-BYTE TECHNOLOGY CO., LTD.
Address	:	6 BAU CHIANG RD., HSIN-TIEN, TAIPEI HSIEN 231, TAIWAN
Equipment	:	Booktop
Model No.	:	M1005XX,R1005XX (X=0-9,A-Z or blank)
FCC ID.	:	JCK-M1005

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was ***passed*** the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2009).**

The test was carried out on Nov, 19, 2010 at Cerpass Technology Corp.

Signature

Anson Chou
EMC/RF B.U. Vice General Manager

1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

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

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Item	Vendor	Model	Specification
Motherboard	Gigabyte	GA-W2U805	CPU ATOM DC N550 1.5GHz IN SMD BGA559
Panel	HSD	HSD101PFW2-B	1024 x 600 Anto-Glare, 10.1” Thickness: 4.9mm(Max)
	CPT	CLAA101NB01	1024 x 600 Anti-Glare, 10.1”
THERMAL MODULE	AVC	NZ21011001	THERMAL MODULE nz21011001 AVC 115.02 x 75.22 x 9.8mm 5V 4800rpm
WIRELESS LAN CARD	AzureWave	AW-NB057H	BT-WiFi HALF MINI CARD AW AW-NB057H 802.11b/g/n+BT3.0
CAMERA MODULE	Bison	BN1KM6SV6-000	CAMERA MOUDLE BN1KM6SV6-000 BS UXGA COMS SENSOR
	YouLiSen	TS5013B1-S1-2D8	
	YouLiSen	TS5013B1-L1-2M8	
	Bison	BN1UM6YT1-000	
ADAPTER	DELTA	ADP-36 EH C	AC/DC ADAPTER 36W ADP-36EH C REV.00 C.C.:FG(12V/3A)DEL
BATTERY	SCUD	GNF-240	GNF-240 PANASONIC CELL SCUD BATTERY LI-ION 2S2P 4400mAh 4cell
	SCUD	GNF-660	BATTERY LI-ION 2S3P 7800mAh GNF-660 SANYO CELL V3.1 SCUD
HDD	WD	WD3200BEVT-22A23T0	HDD 2.5 320G WD3200BEVT-22A23T0 5400rpm SATAII 8M WD
	WD	WD2500BEVT-00A23T0	HDD 2.5 250G WD2500BEVT-00A23T0 5400rpm 27104-25008-W00S W
	TOSHIBA	MK2565GSX	HDD 2.5 250G MK2565GSX TSB 5400rpm 8M 27104-25009-T00S
	TOSHIBA	MK3265GSX	HDD 2.5 320G MK3265GSX TSB 5400rpm SATAII 8M
	HITASHI	HTS545025B9A300	HDD 2.5 250G HTS545025B9A300 5400rpm
SODIMM DDR3 2G	Transcend	JM1333KSU-2G	SODIMM 2GB DDR3-1333 CL9 TS JM1333KSU-2G(TS 128Mx8)
SODIMM DDR3 1G	Transcend	JM1333KSU-1G	SODIMM 1GB DDR3-1333 CL9 TS JM1333KSU-1G(TS 128Mx8)

RF Spec.	
Model Name	AW-NB057H
Product Description	IEEE 802.11 b/g/n Wi-Fi with Bluetooth 3.0 + HS class II Combo half mini card Module
Bluetooth Standard	IEEE 802.11b/g/n Wi-Fi compliant / Bluetooth v3.0+HS Standard
Host Interface	W-Fi : PCI-E, BT: USB
Major Chipset	Realtek RTL8188CE + CSR BC04
Dimension	26.65mm x 29.85 mm x 3.67 mm
Weight	4g
Antenna	Hirose U.FL-R SMT 1: Ant1: Wi-Fi Tx/Rx + BT 2: Ant2: Wi-Fi Tx/Rx + BT
Operating Conditions	
Voltage	3.3V+/- 5%
Temperature	TBD ℃
Storage temperature	-40~85 ℃
Electrical Specifications	
Frequency Range	Wi-Fi: 2.4GHz ISM Bands 2.412~2.472GHz, 2.484GHz BT: 2402MHz~2483MHz
Modulation	Wi-Fi: 802.11g/n: OFDM 802.11b: CCK(11, 5.5Mbps), DQPSK(2Mbps), BPSK(1Mbps) BT: Header GFSK Payload 2M: 4-DQPSK Payload 3M: 8DPSK
Output Power	Wi-Fi 802.11b: 17dBm +/-1.5dBm(11Mbps) 802.11g: 15dBm +/-1.5dBm(54Mbps) 802.11n: 13dBm +/- 1.5dBm(HT20 MCS7) BT: -6 ≦+4dBm(Conductive)
Receive Sensitivity	Wi-Fi 802.11b: less than -80dBm(11Mbps) 802.11g: less than -70dBm(54Mbps) 802.11n: less than -61dBm at HT40 MCS7 less than -64dBm at HT20 MCS7 BT: BER <0.1%(Anritsu 7741B Tx-70Bm)
Operating Range	Wi-Fi: Open Space: TBD/ Indoor: TBD (The transmission speed may vary according to the environment) BT: TBD

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT 20

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

802.11n HT40

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

2.3 Test Mode and Test Software

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b. The complete test system included remote workstation, Monitor, Ipod, Notebook, Earphone, eSATA and EUT for EMI test. The remote workstation included Notebook.
c. The following test modes were performed for test:
   - 802.11b/g/n HT20: CH01: 2412MHz, CH06: 2437MHz, CH11: 2462MHz
   - 802.11n HT40: CH03: 2422MHz, CH06: 2437MHz, CH09: 2452MHz

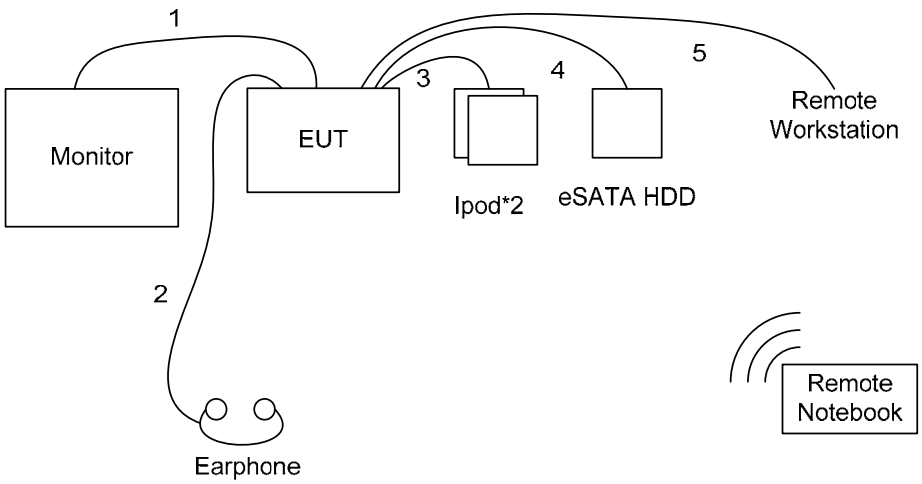
2.4 Description of Test System

Device	Manufacturer	Model No.	Description
Monitor	PHILIPs	202P73	Power Cable, Unshielding 1.8m Data Cable, VGA Shielding 1.35 m
Ipod*2	Apple	A1320	Data Cable, USB Shielding, 1m
Earphone	MIC	MIC-4	Data Cable, Audio Shielding 1.35m
Notebook	SONY	VPCEB25FW	Power Cable, Unshielding 1.8m
eSATA HDD	STARDOM	iTank-i302	Power Cable, Adapter Unshielding 1.8m Data Cable, eSATA Shielding 1.8m
Remote workstation			
Notebook	TOSHIBA	PSA50T-05M 00C	Power Cable, Unshielding 1.8m

Use Cable:

Cable	Quantity	Description
RJ45	1	Unshielding, 10.0m

2.5 Connection Diagram of Test System



1. The VGA is connected from EUT to the Monitor.
2. The Audio cable is connected from EUT to the Earphone.
3. The USB cables (*2) are connected from EUT to the Ipod*2.
4. The eSATA cable is connected from EUT to the eSATA HDD.
5. The RJ45 cable is connected from EUT to the remote workstation.

2.6 General Information of Test

Test Site :	Cerpass Technology Corp. 2F-11, No. 3, Yuan Qu St. (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location (OATS1-SD):	No. 68-1, Shibachong Si, Shihding Township, Taipei County, Taiwan, R.O.C.
FCC Registration Number :	TW1061,TW1056, 390316, 488071
IC Registration Number :	4934B-1, 4934D-1
VCCI Registration Number :	T-543 for Telecommunication Test C-3328 for Conducted emission test R-3428 for Radiated emission test G-97 for Radiated emission test above 1GHz.
Test Voltage:	AC 120V / 60Hz
Test in Compliance with:	ANSI C63.4-2003 FCC Part 15 Subpart C
Frequency Range Investigated:	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 25,000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

2.7 Measurement Uncertainty

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

2.8 History of this test report

■ ORIGINAL.

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description

3. Antenna Requirements

3.1 Standard Applicable

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

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

3.2 Antenna Construction and Directional Gain

Antenna Type: PCB antenna
Antenna Gain: 3.93 dBi

4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

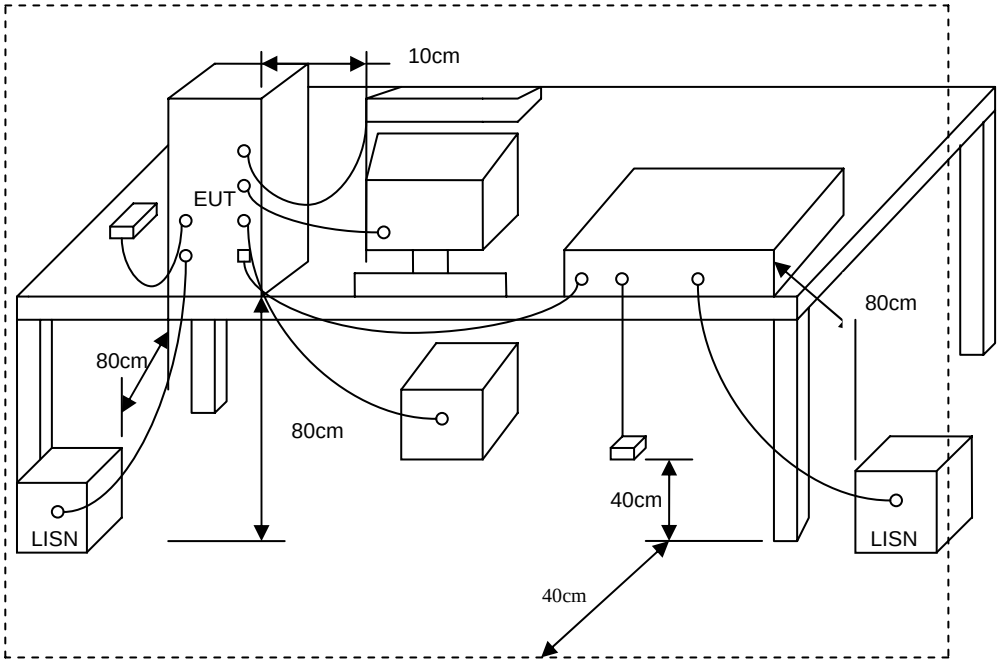
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

4.2 Test Procedures

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

4.3 Typical Test Setup

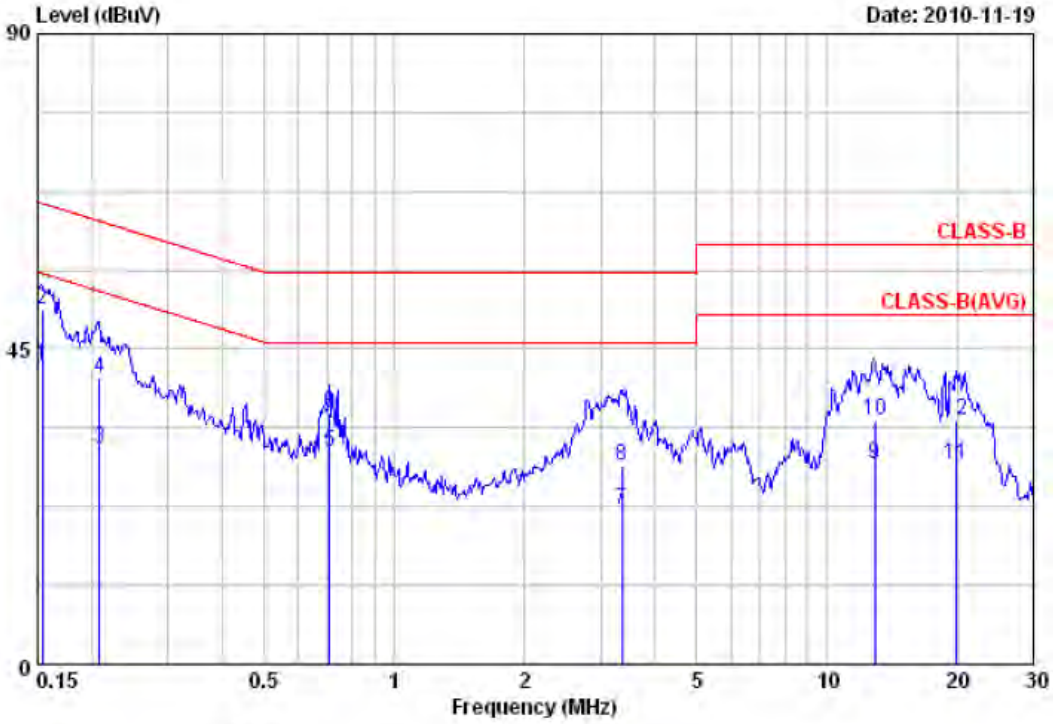


4.4 Measurement Equipment

Instrument/ Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI	100821	2010/01/21	2011/01/20
LISN	Schwarzbeck	NSLK 8127	8127-516	2010/05/25	2011/05/24
LISN	EMCO	3825/2	9703-2655	2010/07/19	2011/07/18

4.5 Test Result and Data

Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	67 %

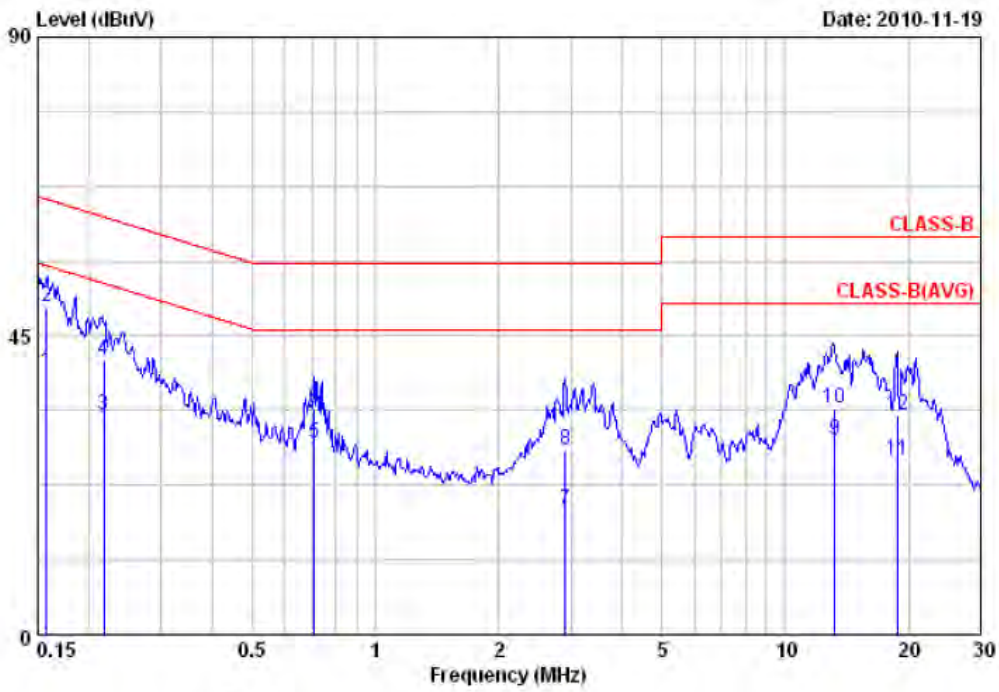


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.15	42.64	0.07	42.71	55.77	-13.06	Average
2	0.15	50.50	0.07	50.57	65.77	-15.20	QP
3	0.21	30.81	0.07	30.88	53.26	-22.38	Average
4	0.21	40.77	0.07	40.84	63.26	-22.42	QP
5	0.71	30.25	0.08	30.33	46.00	-15.67	Average
6	0.71	35.87	0.08	35.95	56.00	-20.05	QP
7	3.36	21.78	0.18	21.96	46.00	-24.04	Average
8	3.36	28.13	0.18	28.31	56.00	-27.69	QP
9	12.91	28.08	0.54	28.62	50.00	-21.38	Average
10	12.91	34.41	0.54	34.95	60.00	-25.05	QP
11	19.95	27.89	0.78	28.67	50.00	-21.33	Average
12	19.95	34.00	0.78	34.78	60.00	-25.22	QP

Notes:

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

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	67 %

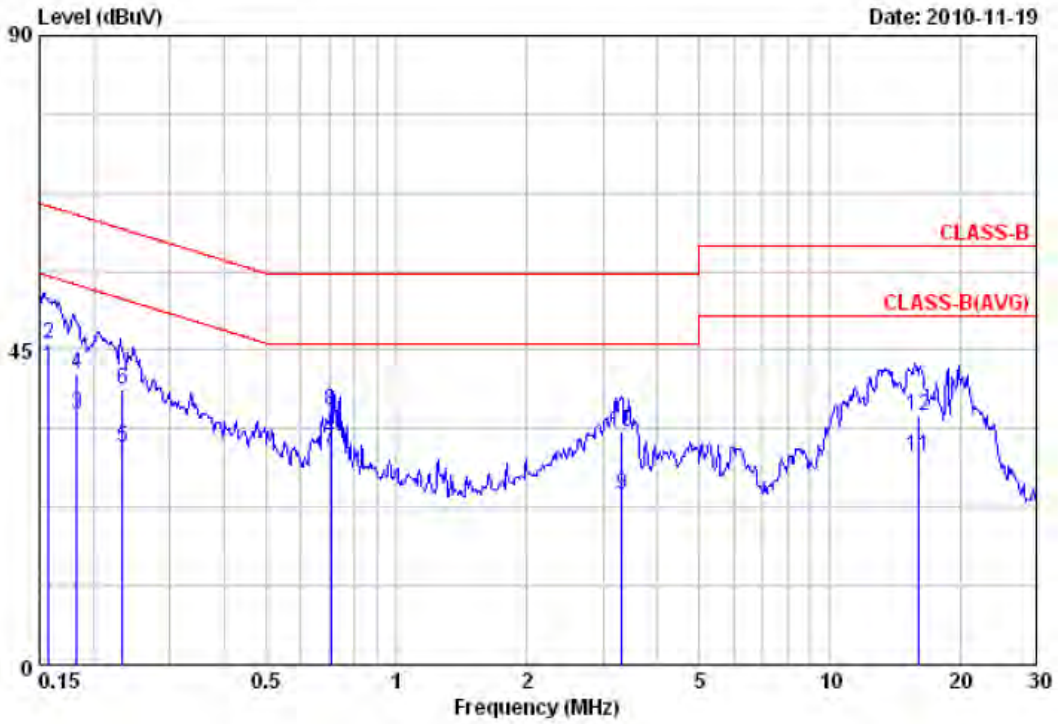


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.16	39.59	0.12	39.71	55.58	-15.87	Average
2	0.16	49.26	0.12	49.38	65.58	-16.20	QP
3	0.22	32.87	0.12	32.99	52.93	-19.94	Average
4	0.22	41.33	0.12	41.45	62.93	-21.48	QP
5	0.71	28.64	0.14	28.78	46.00	-17.22	Average
6	0.71	33.93	0.14	34.07	56.00	-21.93	QP
7	2.91	18.68	0.22	18.90	46.00	-27.10	Average
8	2.91	27.61	0.22	27.83	56.00	-28.17	QP
9	13.24	28.88	0.43	29.31	50.00	-20.69	Average
10	13.24	33.59	0.43	34.02	60.00	-25.98	QP
11	18.83	25.79	0.53	26.32	50.00	-23.68	Average
12	18.83	32.44	0.53	32.97	60.00	-27.03	QP

Notes:

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

Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	67 %

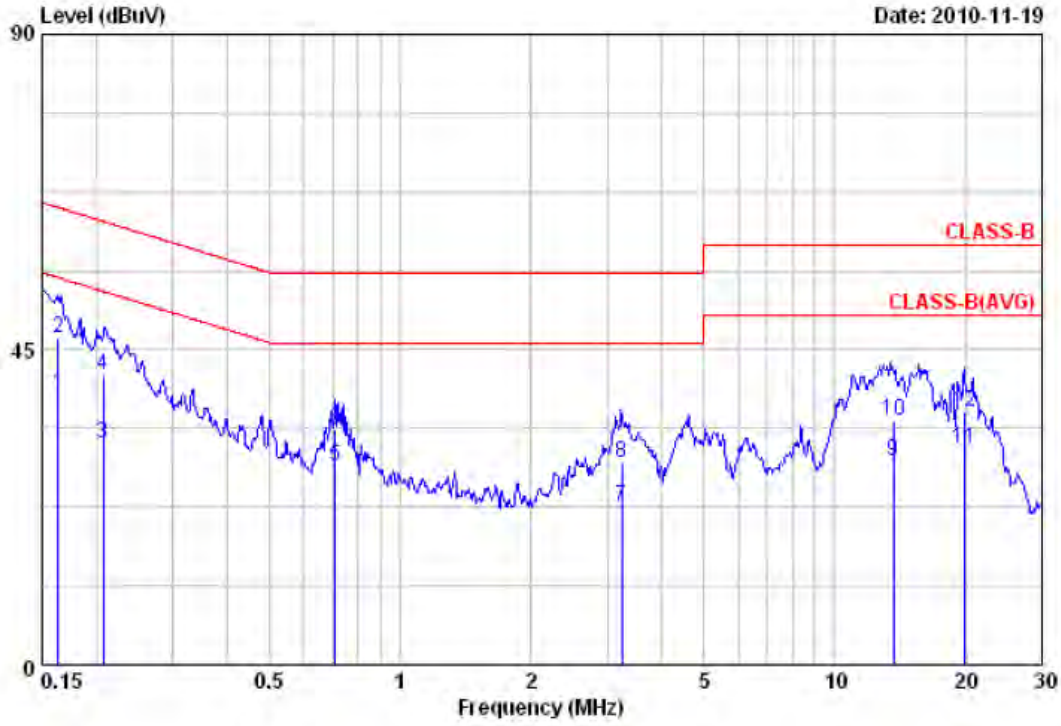


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.16	42.62	0.07	42.69	55.61	-12.92	Average
2	0.16	45.70	0.07	45.77	65.61	-19.84	QP
3	0.18	35.77	0.07	35.84	54.36	-18.52	Average
4	0.18	41.59	0.07	41.66	64.36	-22.70	QP
5	0.23	31.13	0.07	31.20	52.35	-21.15	Average
6	0.23	39.32	0.07	39.39	62.35	-22.96	QP
7	0.71	30.67	0.08	30.75	46.00	-15.25	Average
8	0.71	36.19	0.08	36.27	56.00	-19.73	QP
9	3.31	24.10	0.18	24.28	46.00	-21.72	Average
10	3.31	33.22	0.18	33.40	56.00	-22.60	QP
11	15.98	29.13	0.65	29.78	50.00	-20.22	Average
12	15.98	35.04	0.65	35.69	60.00	-24.31	QP

Notes:

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

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	67 %

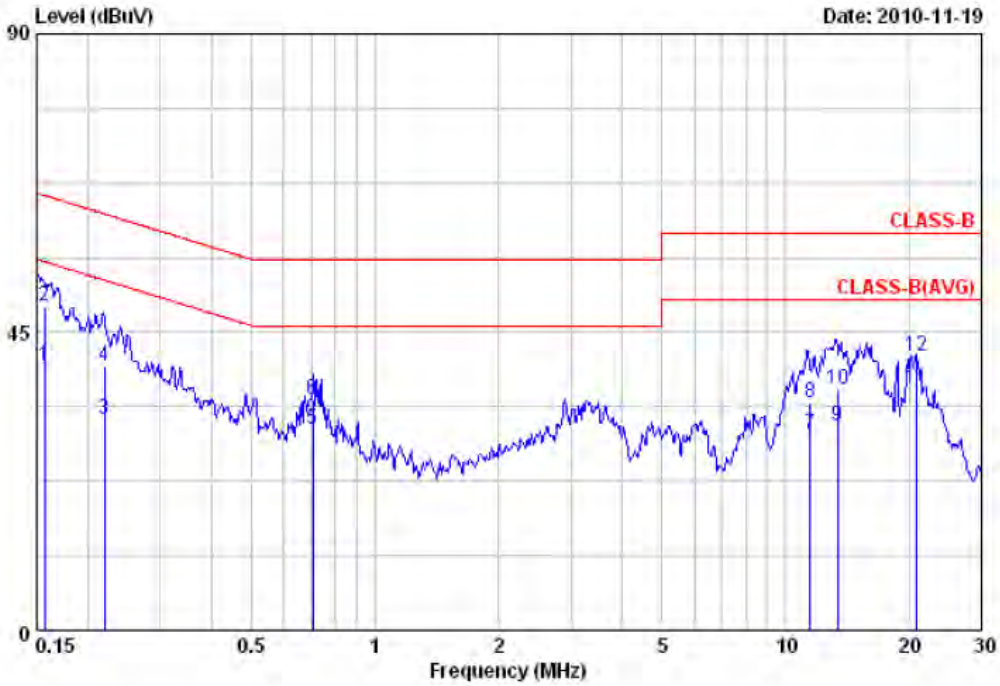


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.16	38.37	0.12	38.49	55.29	-16.80	Average
2	0.16	46.58	0.12	46.70	65.29	-18.59	QP
3	0.21	31.41	0.12	31.53	53.30	-21.77	Average
4	0.21	41.32	0.12	41.44	63.30	-21.86	QP
5	0.71	28.30	0.14	28.44	46.00	-17.56	Average
6	0.71	33.45	0.14	33.59	56.00	-22.41	QP
7	3.25	22.45	0.22	22.67	46.00	-23.33	Average
8	3.25	28.69	0.22	28.91	56.00	-27.09	QP
9	13.63	28.74	0.43	29.17	50.00	-20.83	Average
10	13.63	34.38	0.43	34.81	60.00	-25.19	QP
11	19.81	30.30	0.54	30.84	50.00	-19.16	Average
12	19.81	35.65	0.54	36.19	60.00	-23.81	QP

Notes:

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

Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	67 %

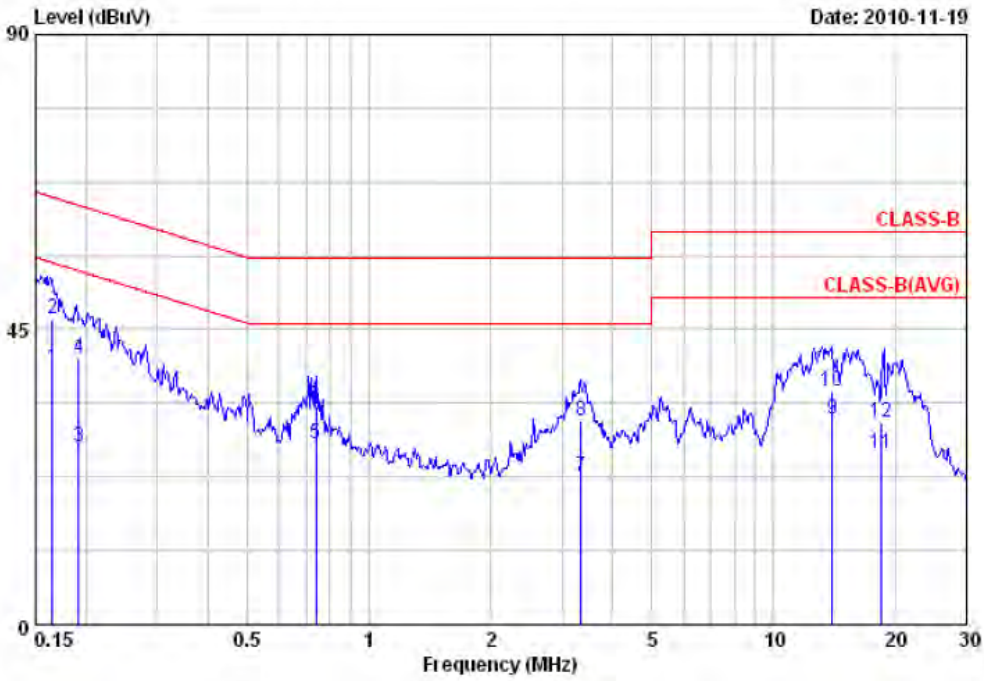


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.16	39.72	0.07	39.79	55.62	-15.83	Average
2	0.16	48.79	0.07	48.86	65.62	-16.76	QP
3	0.22	31.79	0.07	31.86	52.83	-20.97	Average
4	0.22	39.70	0.07	39.77	62.83	-23.06	QP
5	0.71	30.24	0.08	30.32	46.00	-15.68	Average
6	0.71	34.67	0.08	34.75	56.00	-21.25	QP
7	11.50	29.05	0.47	29.52	50.00	-20.48	Average
8	11.50	33.94	0.47	34.41	60.00	-25.59	QP
9	13.39	30.24	0.55	30.79	50.00	-19.21	Average
10	13.39	35.81	0.55	36.36	60.00	-23.64	QP
11	20.86	35.49	0.82	36.31	50.00	-13.69	Average
12	20.86	40.43	0.82	41.25	60.00	-18.75	QP

Notes:

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

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	67 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.16	38.97	0.12	39.09	55.21	-16.12	Average
2	0.16	46.56	0.12	46.68	65.21	-18.53	QP
3	0.19	27.03	0.12	27.15	53.96	-26.81	Average
4	0.19	40.47	0.12	40.59	63.96	-23.37	QP
5	0.74	27.47	0.14	27.61	46.00	-18.39	Average
6	0.74	33.14	0.14	33.28	56.00	-22.72	QP
7	3.35	22.24	0.22	22.46	46.00	-23.54	Average
8	3.35	30.77	0.22	30.99	56.00	-25.01	QP
9	13.97	30.77	0.44	31.21	50.00	-18.79	Average
10	13.97	35.07	0.44	35.51	60.00	-24.49	QP
11	18.53	25.63	0.51	26.14	50.00	-23.86	Average
12	18.53	30.30	0.51	30.81	60.00	-29.19	QP

Notes:

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

Test engineer: Ben

5. Test of Radiated Emission

5.1 Test Limit

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.4-2003. The EUT was placed, 0.8 meter above the ground plane, as shown in section 5.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions for unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

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

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

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

5.2 Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter above ground.

b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.

c. The table was rotated 360 degrees to determine the position of the highest radiation.

d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.

e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.

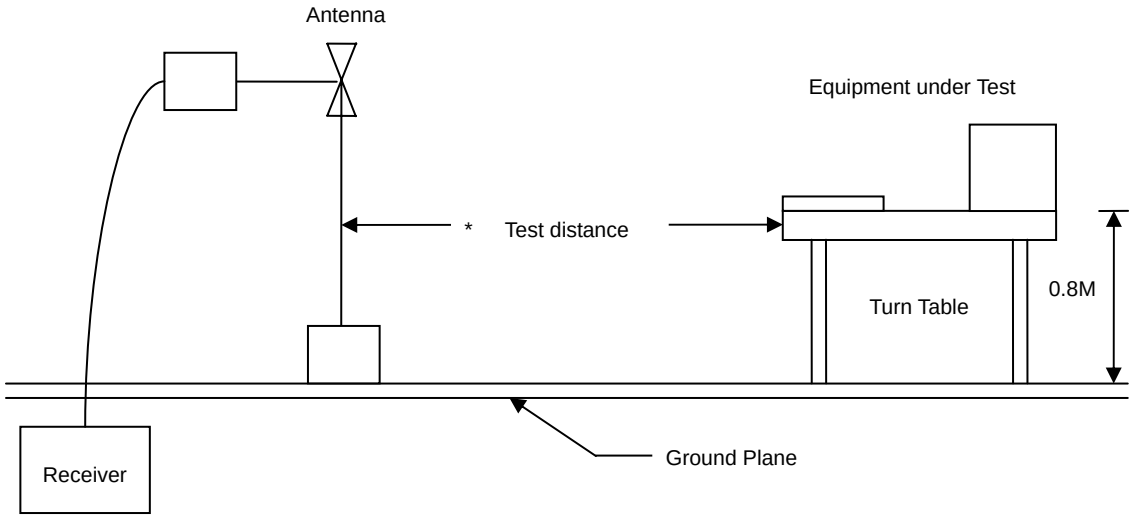
f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

i. “Cone of radiation” has been considered to be 3dB bandwidth of the measurement antenna.

5.3 Typical Test Setup

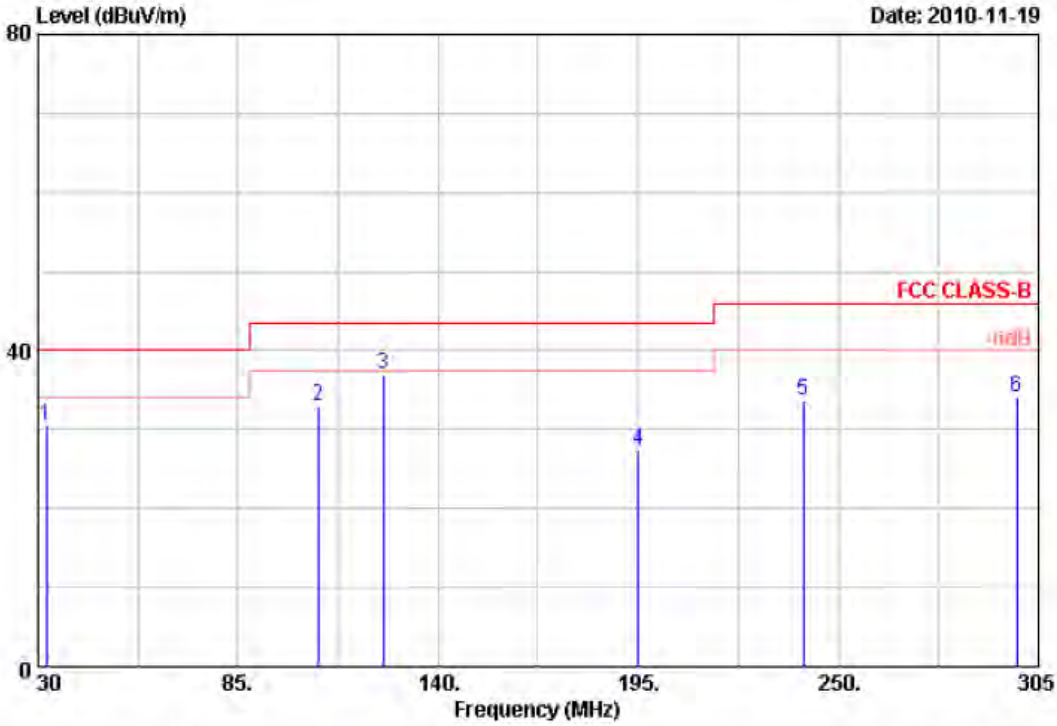


5.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	SCHAFFNER	SCR3501	437	2010/10/14	2011/10/13
Amplifier	Agilent	8447D	2944A10531	2010/02/05	2011/02/04
Bilog Antenna	Schaffner	CBL6112D	22242	2010/02/05	2011/02/04
Spectrum Analyzer	R&S	FSP 3	100800	2010/02/09	2011/02/08
SPECTRUM ANALYZER	R&S	FSP40	100219	2009/11/20	2010/11/19
HORN ANTENNA	EMCO	3115	31589	2010/05/04	2011/05/03
Preamplifier	Agilent	8449B	3008A01954	2010/02/26	2011/02/25

5.5 Test Result and Data

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

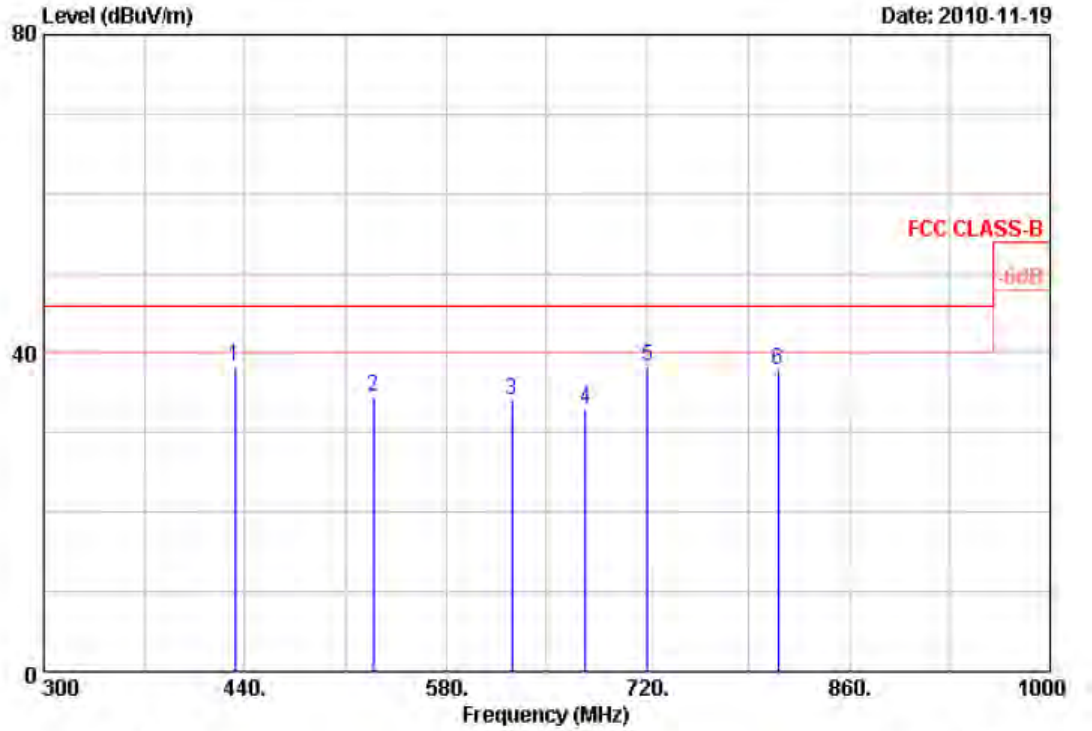


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	32.20	34.66	-4.15	30.51	40.00	-9.49	Peak	150	106
2	107.00	44.68	-11.73	32.95	43.50	-10.55	Peak	150	106
3	124.88	44.57	-7.60	36.97	43.50	-6.53	Peak	150	106
4	195.00	41.14	-13.82	27.32	43.50	-16.18	Peak	150	106
5	240.38	49.77	-16.10	33.67	46.00	-12.33	Peak	150	106
6	298.95	47.09	-12.90	34.19	46.00	-11.81	Peak	150	106

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

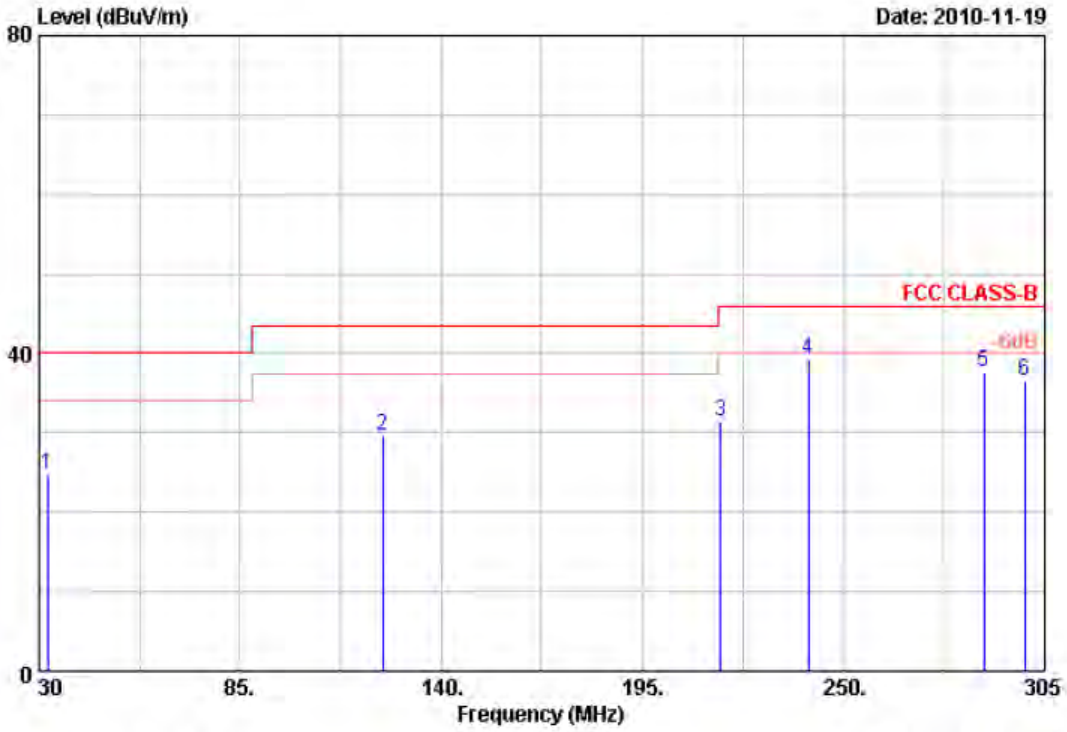


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	433.00	46.59	-8.19	38.40	46.00	-7.60	Peak	100	0
2	529.60	40.84	-6.23	34.61	46.00	-11.39	Peak	100	0
3	625.50	38.02	-3.86	34.16	46.00	-11.84	Peak	100	0
4	676.60	36.61	-3.52	33.09	46.00	-12.91	Peak	100	0
5	720.00	38.27	0.00	38.27	46.00	-7.73	Peak	100	0
6	811.00	38.80	-0.91	37.89	46.00	-8.11	Peak	100	0

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

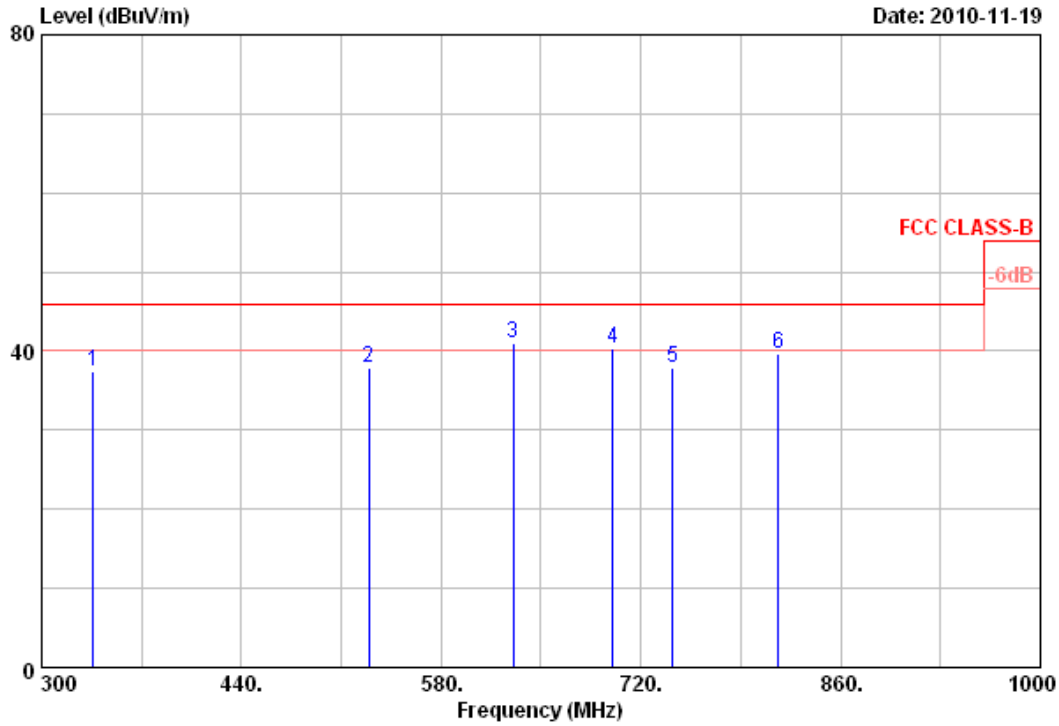


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	32.20	29.53	-4.85	24.68	40.00	-15.32	Peak	150	0
2	124.05	45.61	-15.97	29.64	43.50	-13.86	Peak	150	0
3	216.45	48.02	-16.55	31.47	46.00	-14.53	Peak	150	0
4	240.38	54.52	-15.37	39.15	46.00	-6.85	Peak	150	0
5	288.50	51.59	-13.83	37.76	46.00	-8.24	Peak	150	0
6	299.50	50.46	-13.96	36.50	46.00	-9.50	Peak	150	0

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

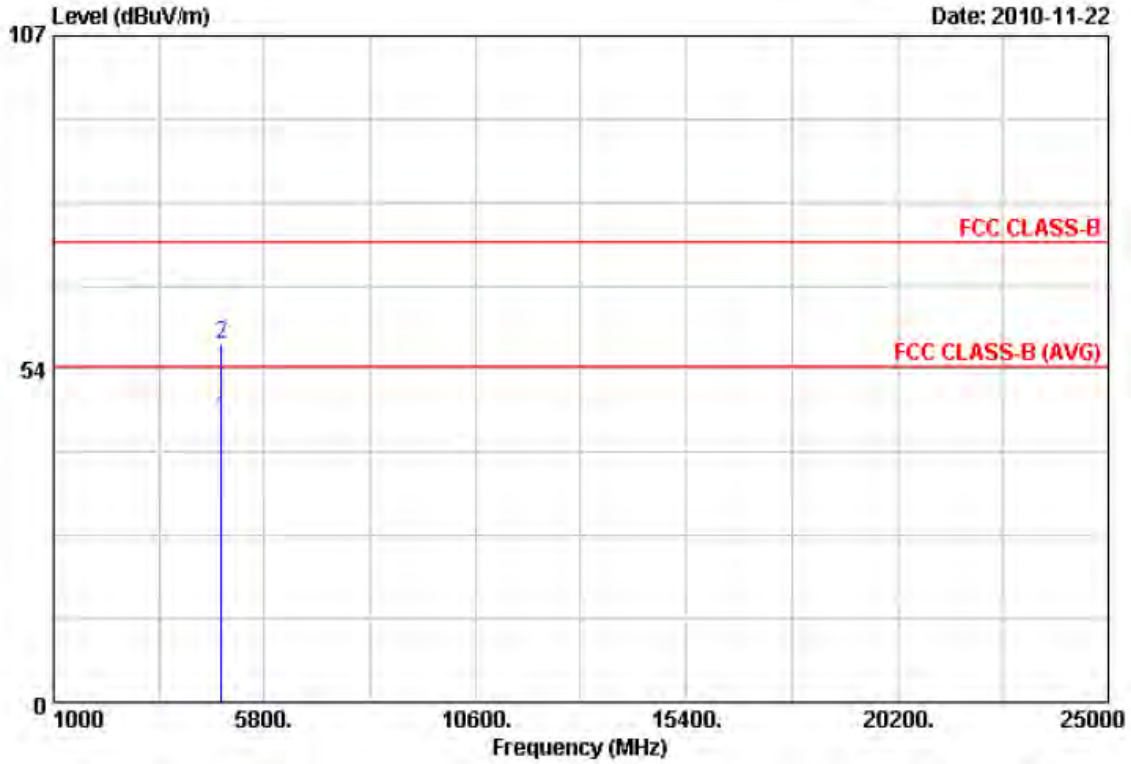


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	336.40	50.50	-12.97	37.53	46.00	-8.47	Peak	100	155
2	529.60	41.60	-3.63	37.97	46.00	-8.03	Peak	100	155
3	630.40	39.64	1.37	41.01	46.00	-4.99	QP	100	155
4	700.40	36.34	3.99	40.33	46.00	-5.67	QP	100	155
5	742.40	31.86	5.97	37.83	46.00	-8.17	Peak	100	155
6	816.60	36.06	3.61	39.67	46.00	-6.33	Peak	100	155

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

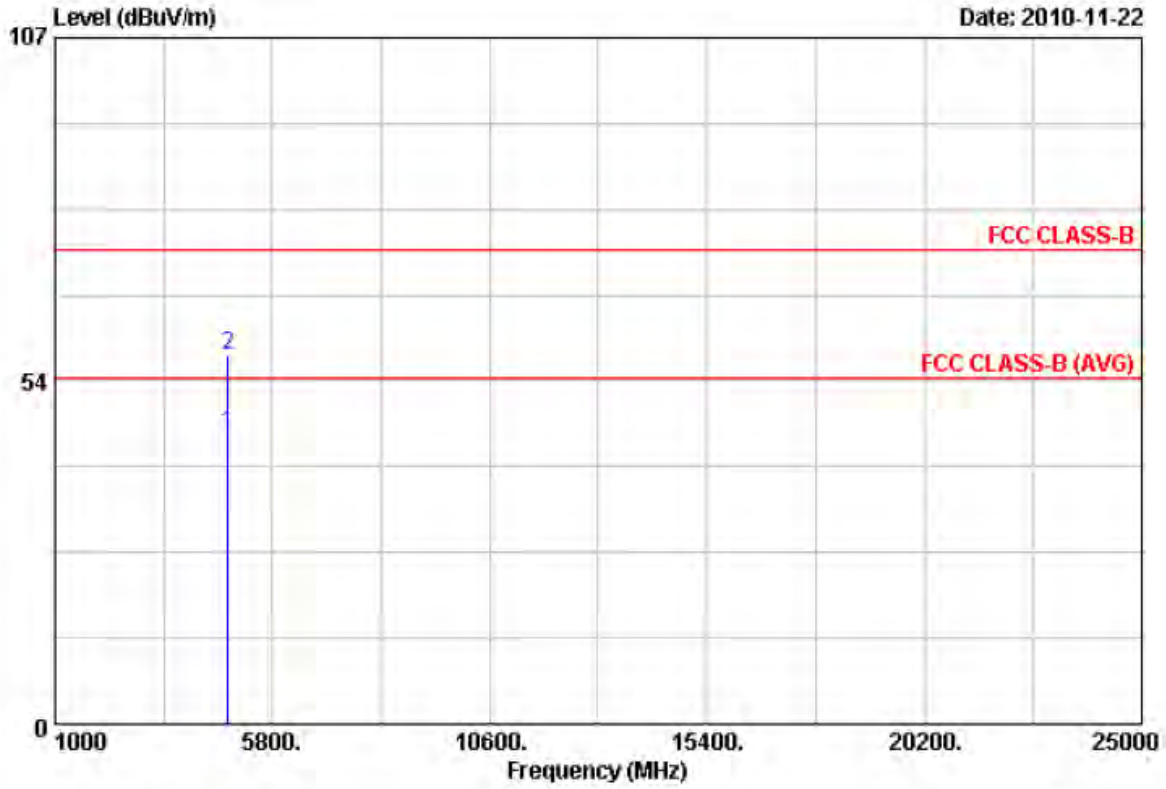


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.43	15.09	45.52	54.00	-8.48	Average	100	82
2	4824.00	42.40	15.09	57.49	74.00	-16.51	Peak	100	56

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

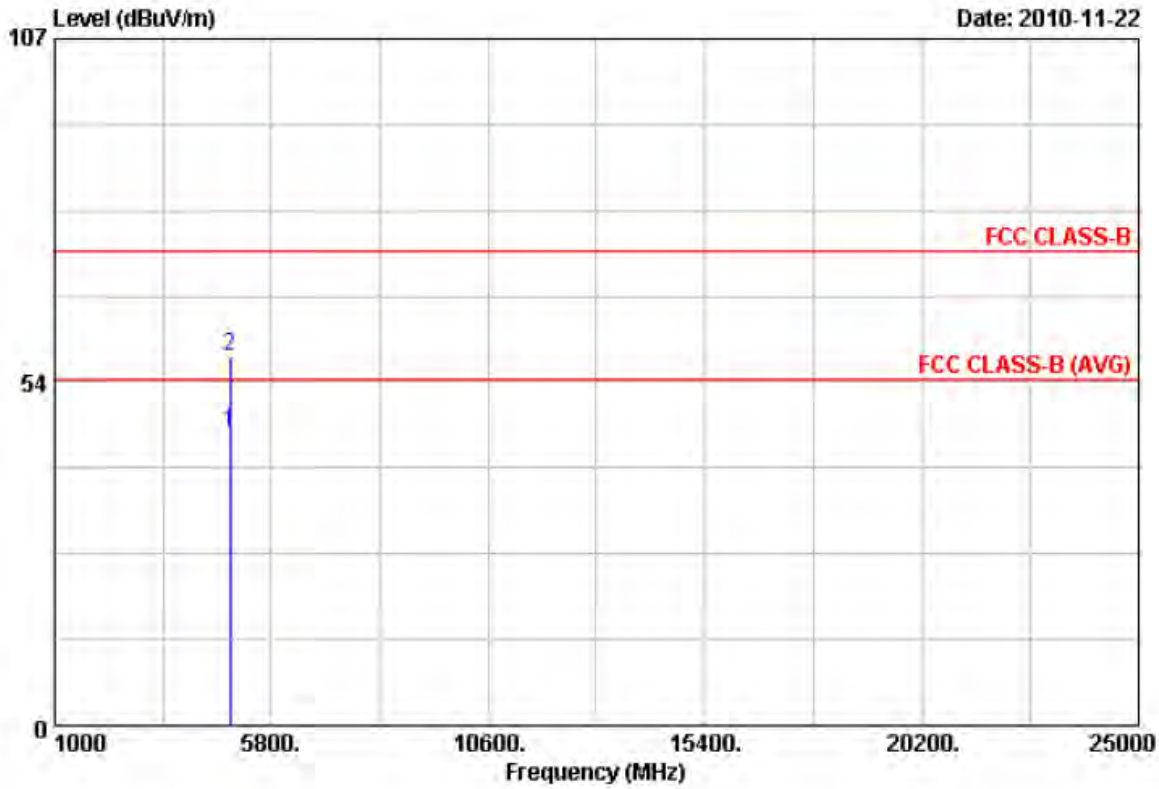


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.32	15.09	45.41	54.00	-8.59	Average	100	0
2	4824.00	42.29	15.09	57.38	74.00	-16.62	Peak	100	157

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

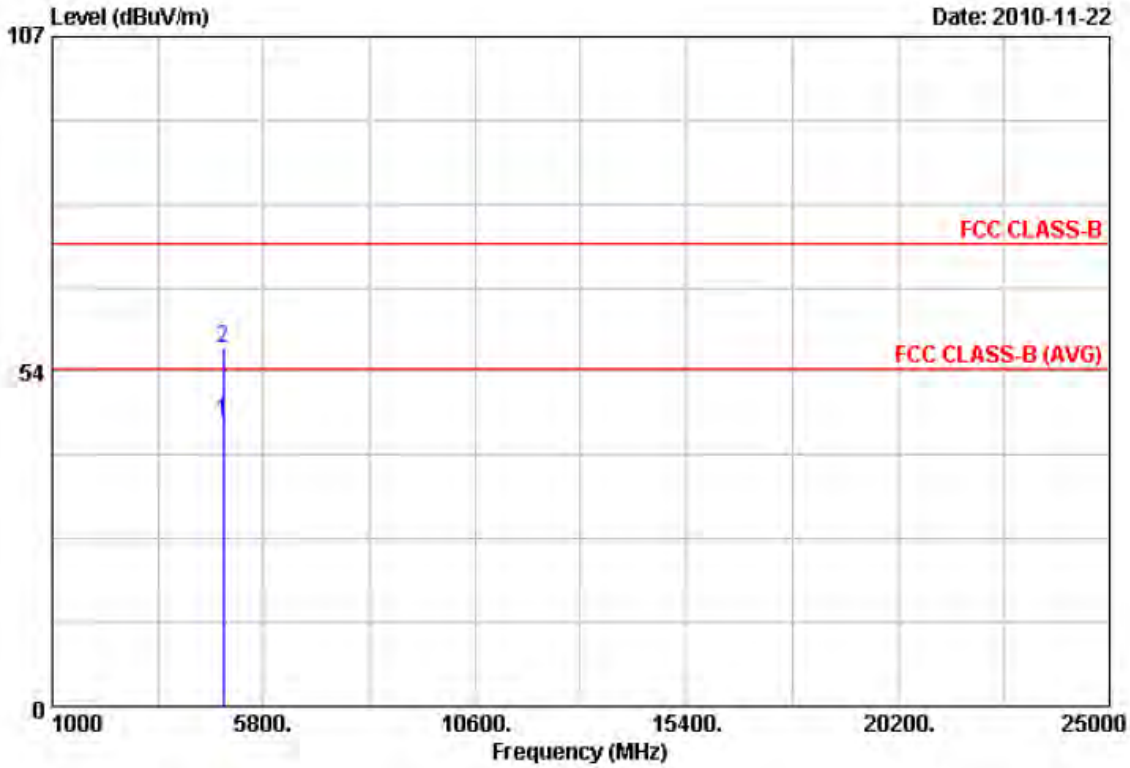


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.36	15.23	45.59	54.00	-8.41	Average	100	226
2	4874.00	42.36	15.23	57.59	74.00	-16.41	Peak	100	360

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

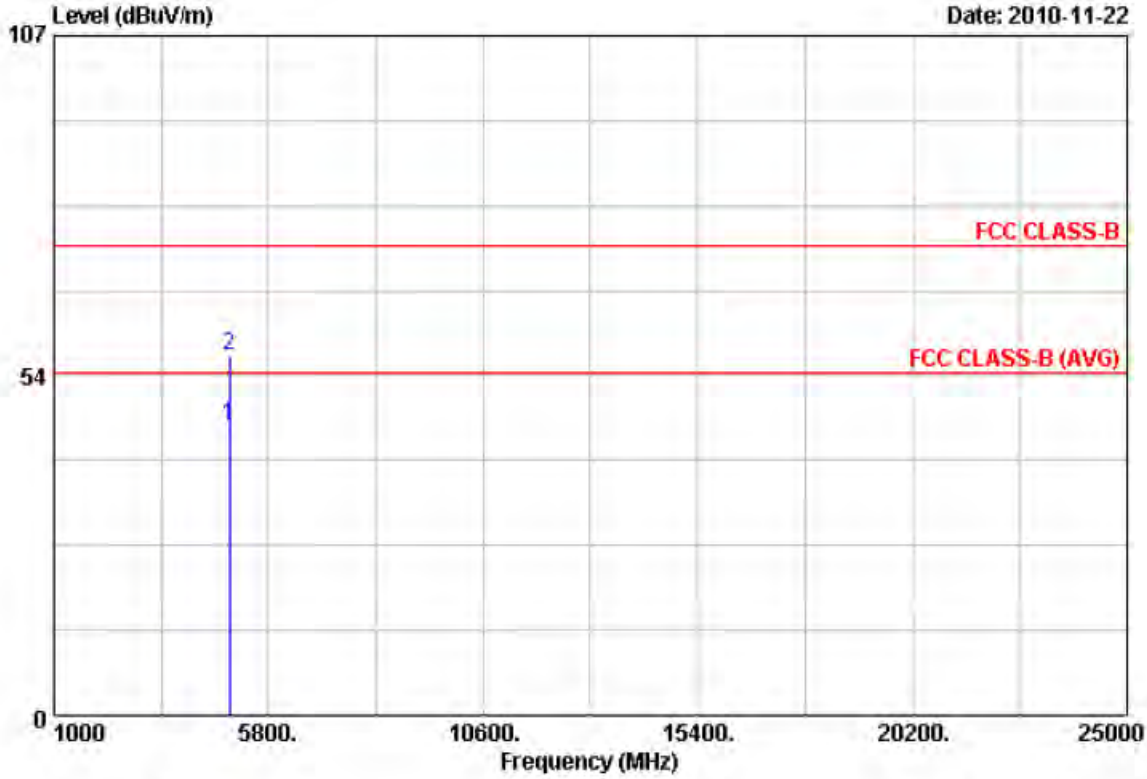


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.41	15.23	45.64	54.00	-8.36	Average	100	131
2	4874.00	42.03	15.23	57.26	74.00	-16.74	Peak	100	131

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

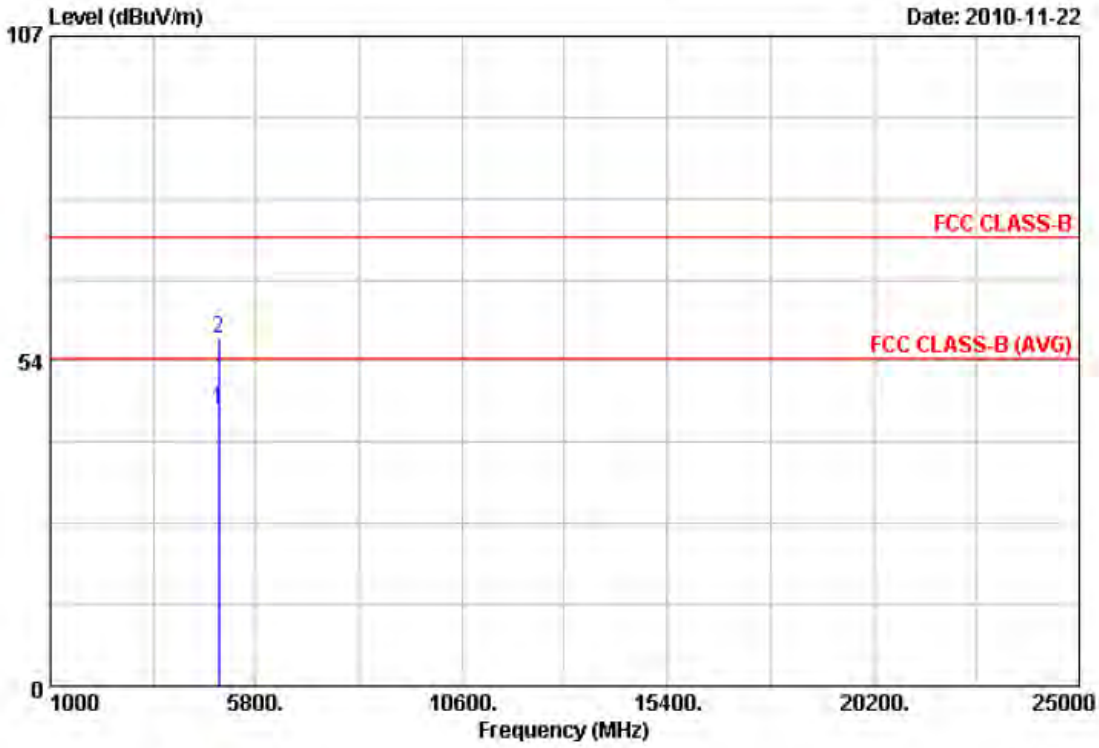


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	30.15	15.35	45.50	54.00	-8.50	Average	150	185
2	4924.00	41.34	15.35	56.69	74.00	-17.31	Peak	100	206

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

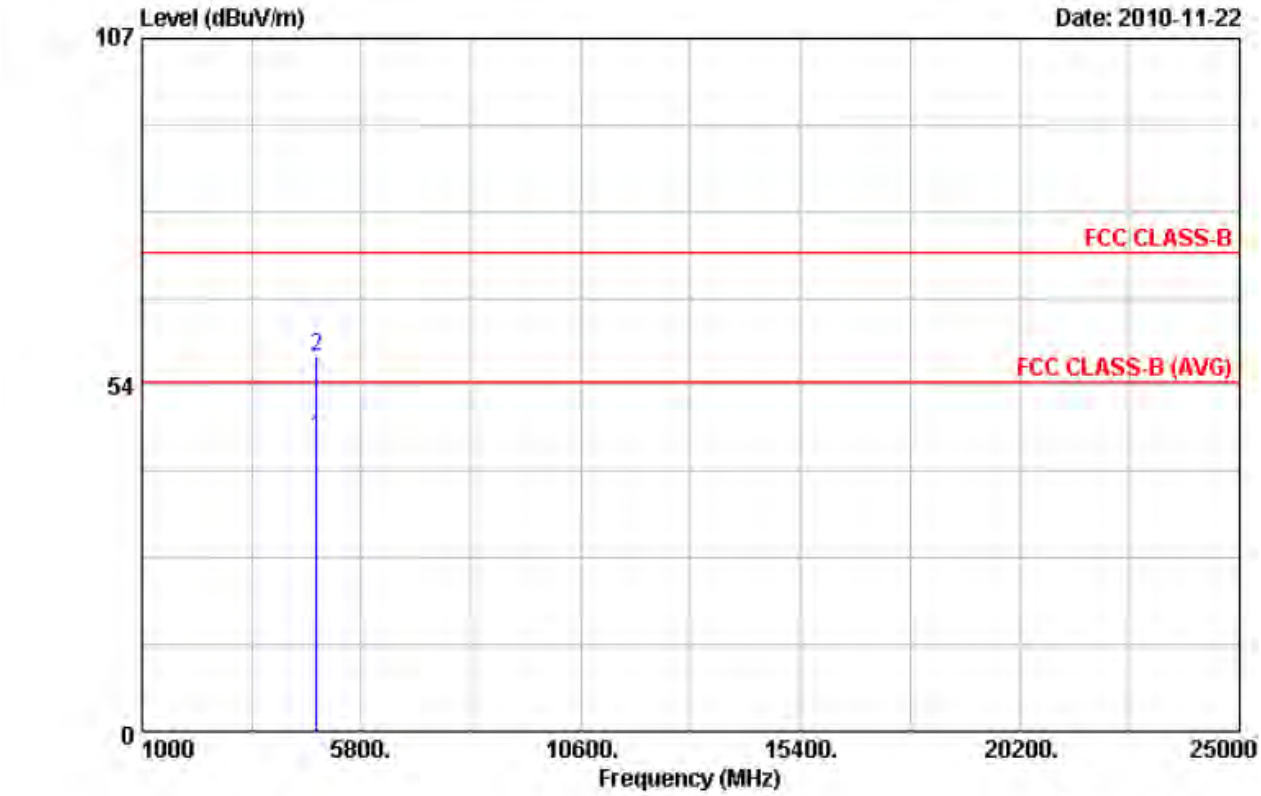


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	30.16	15.35	45.51	54.00	-8.49	Average	100	0
2	4924.00	41.74	15.35	57.09	74.00	-16.91	Peak	100	19

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

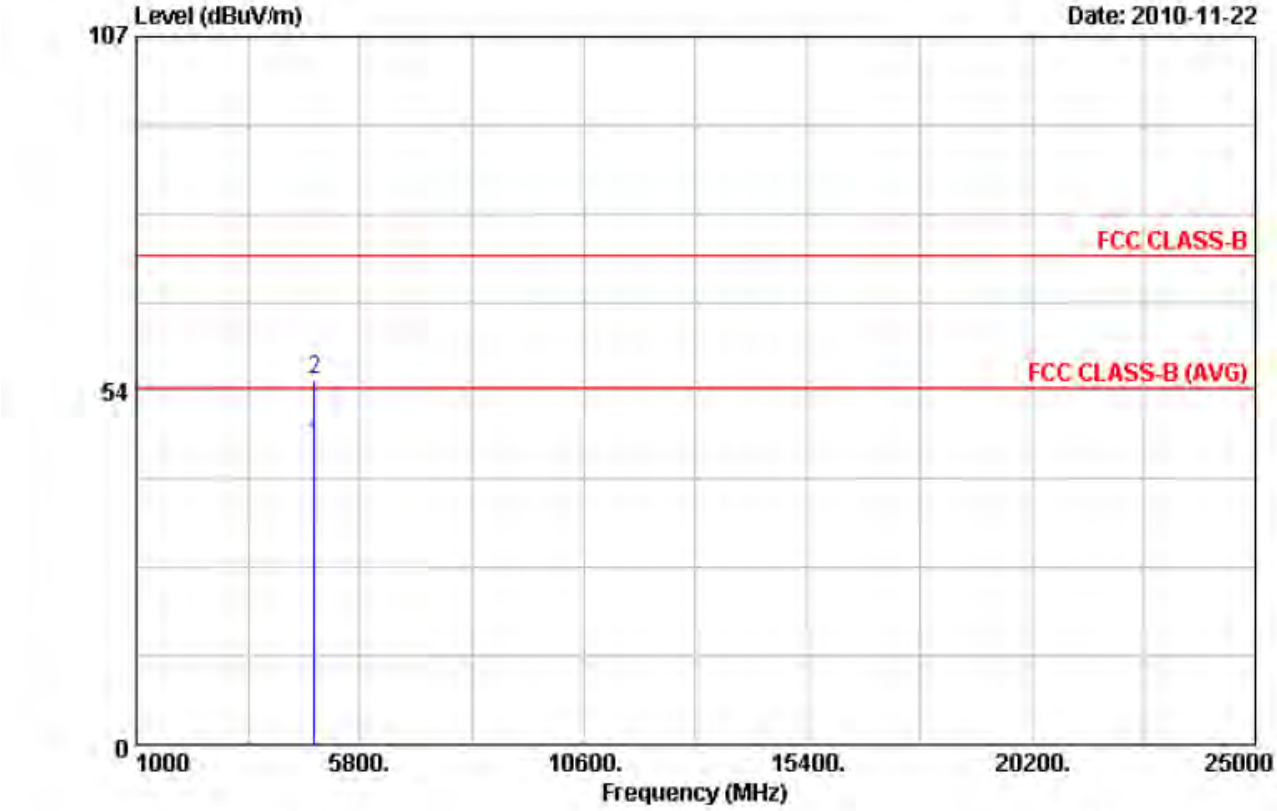


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.25	15.09	45.34	54.00	-8.66	Average	100	149
2	4824.00	42.71	15.09	57.80	74.00	-16.20	Peak	100	301

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

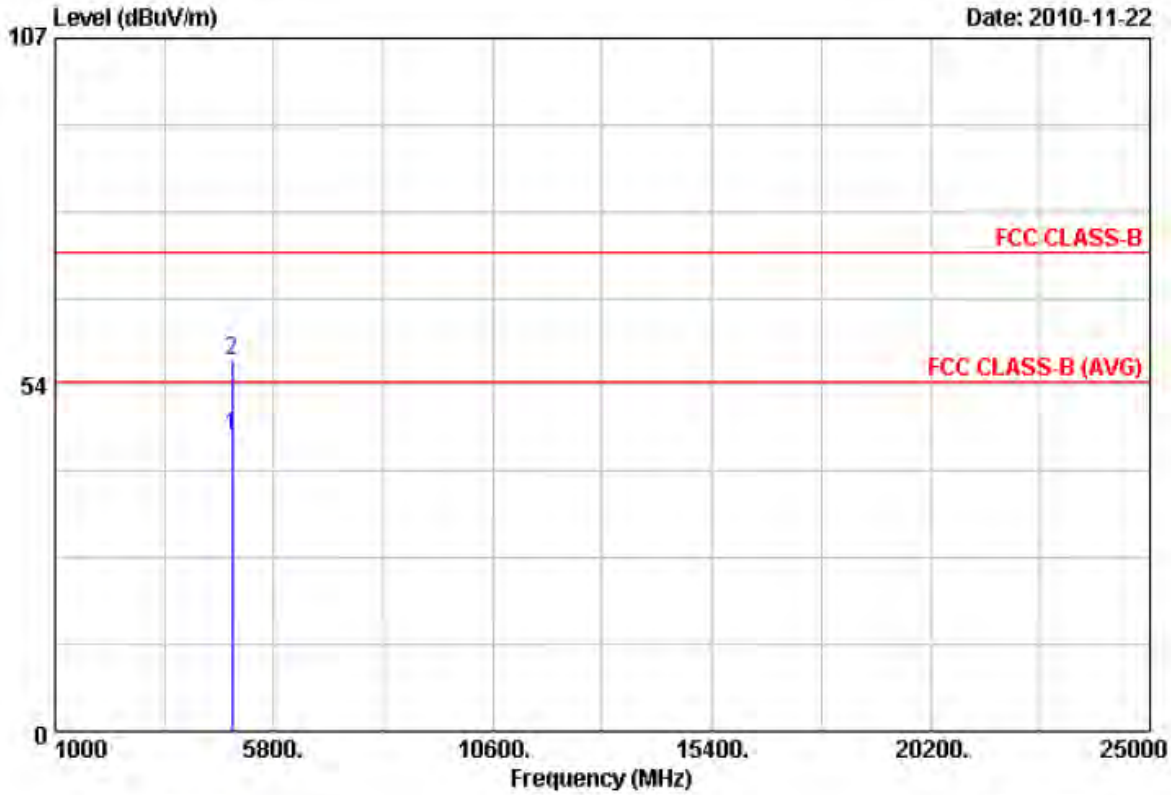


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.30	15.09	45.39	54.00	-8.61	Average	100	0
2	4824.00	40.07	15.09	55.16	74.00	-18.84	Peak	100	244

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

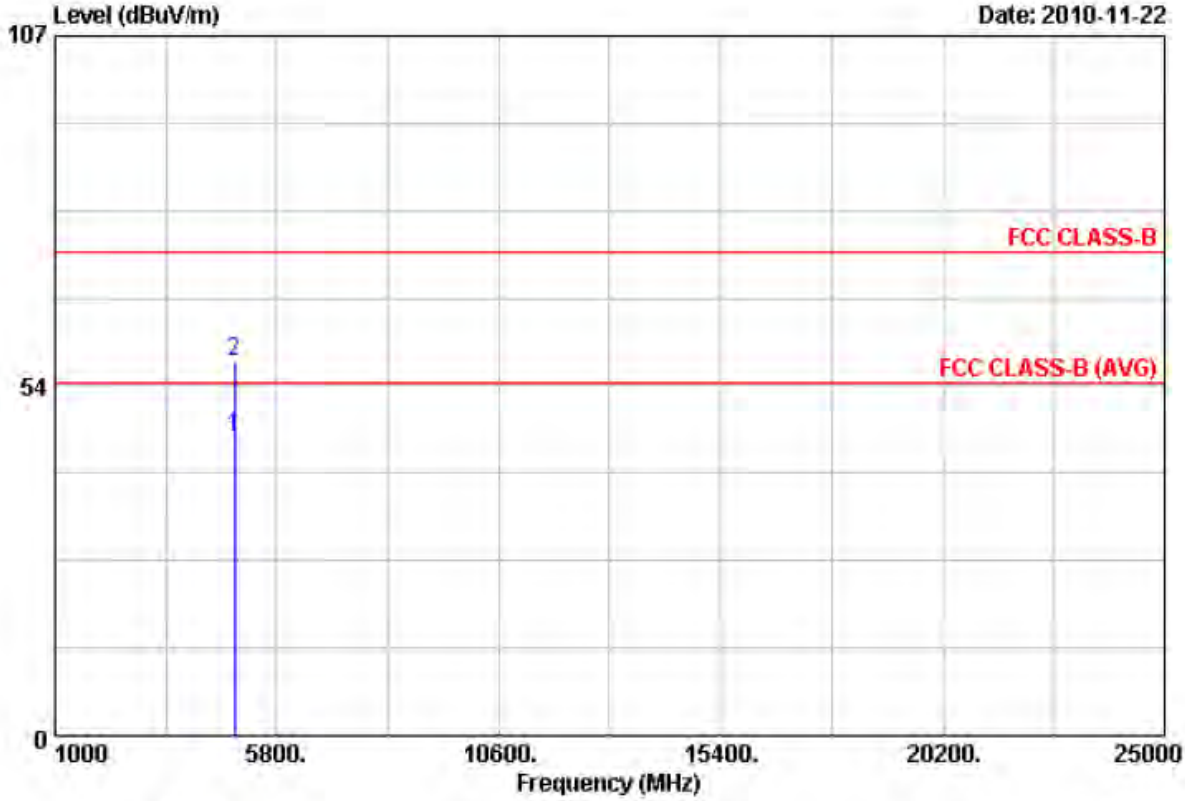


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.40	15.23	45.63	54.00	-8.37	Average	100	227
2	4874.00	41.91	15.23	57.14	74.00	-16.86	Peak	100	230

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

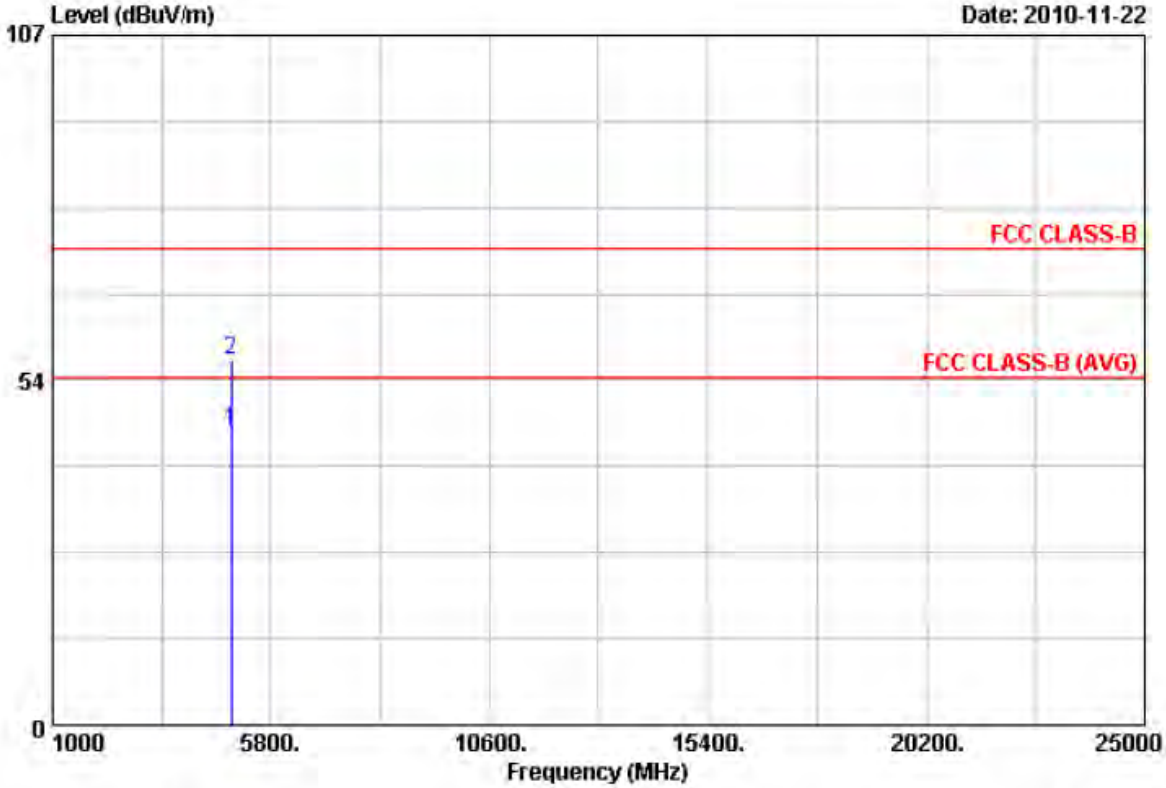


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.36	15.23	45.59	54.00	-8.41	Average	100	325
2	4874.00	41.87	15.23	57.10	74.00	-16.90	Peak	100	254

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

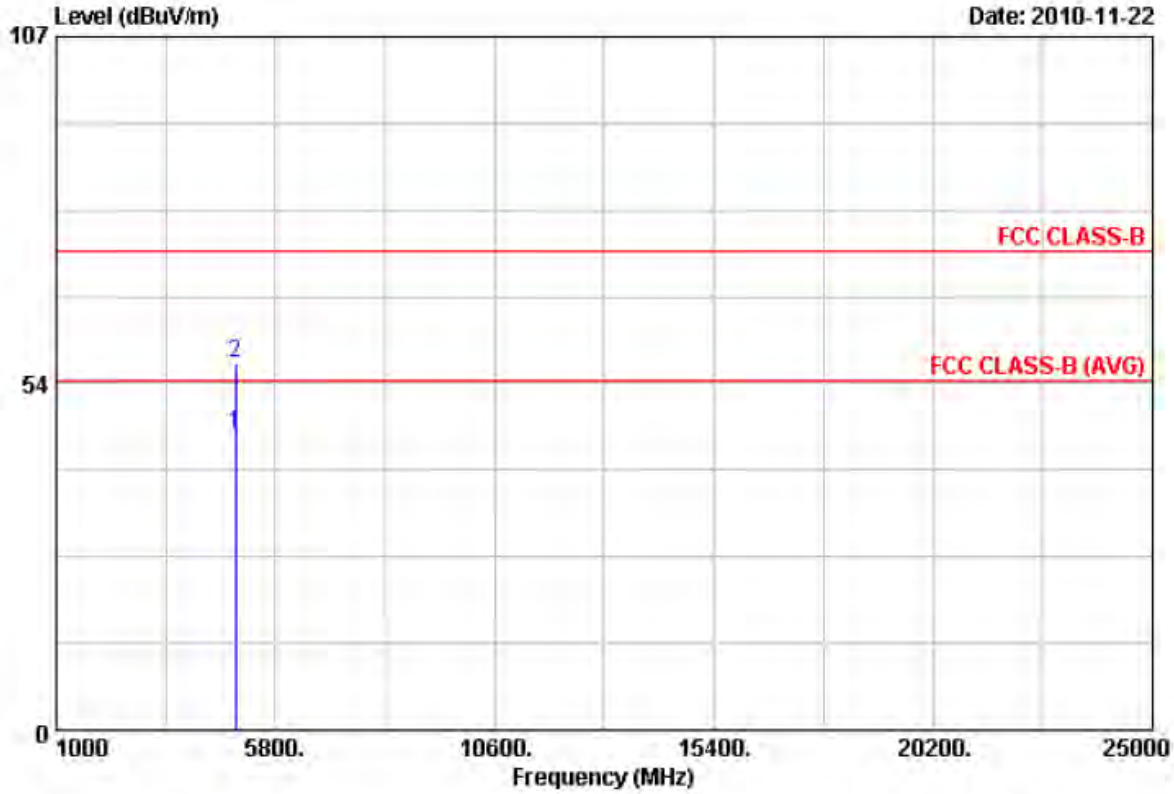


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	30.23	15.35	45.58	54.00	-8.42	Average	100	206
2	4924.00	41.37	15.35	56.72	74.00	-17.28	Peak	100	216

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

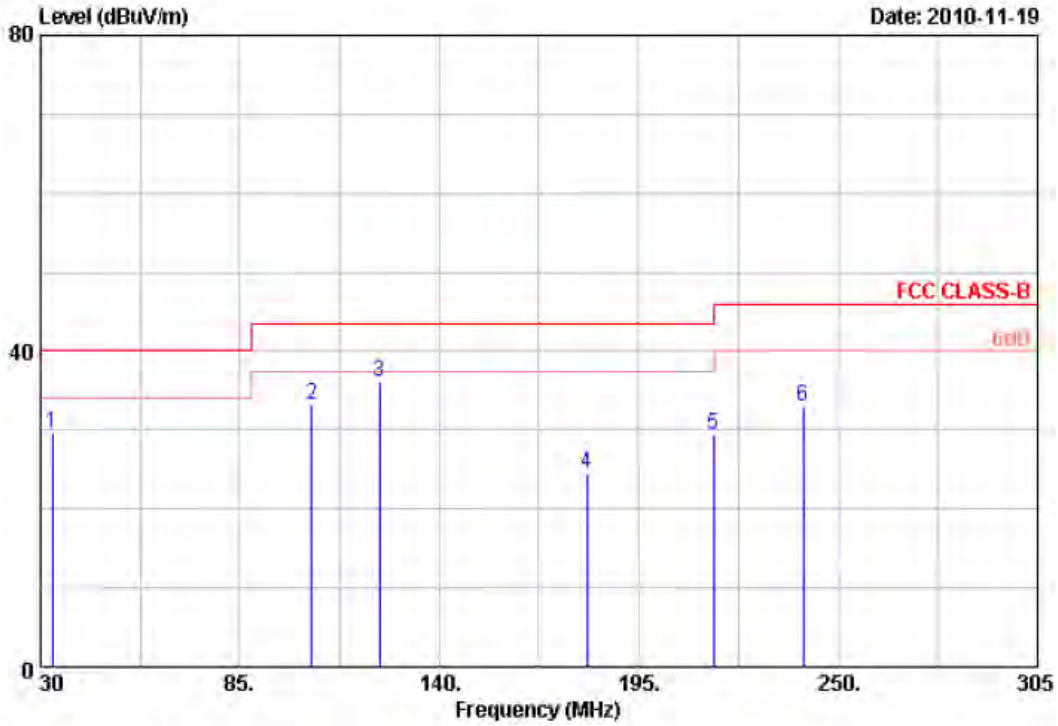


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	30.14	15.35	45.49	54.00	-8.51	Average	100	21
2	4924.00	41.26	15.35	56.61	74.00	-17.39	Peak	100	126

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

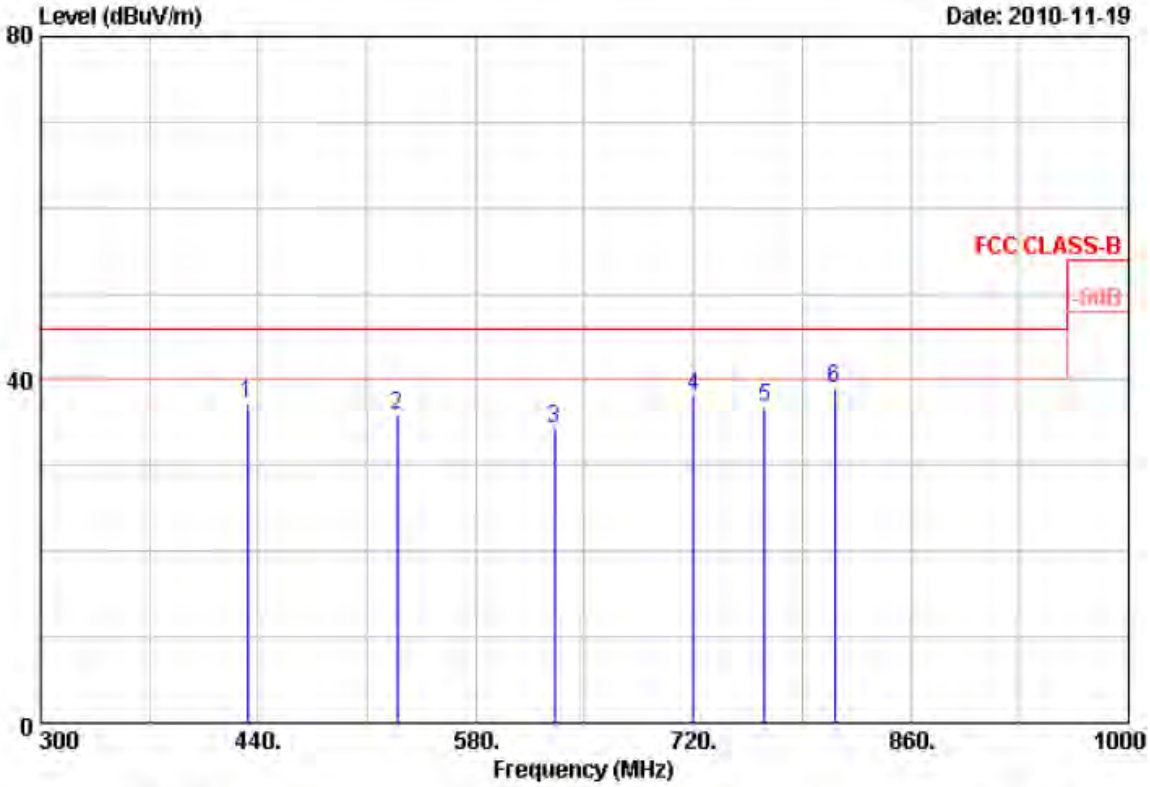


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	33.30	33.83	-4.25	29.58	40.00	-10.42	Peak	100	163
2	104.80	44.95	-11.80	33.15	43.50	-10.35	Peak	100	163
3	123.50	44.22	-8.22	36.00	43.50	-7.50	Peak	100	163
4	180.70	39.38	-14.81	24.57	43.50	-18.93	Peak	100	163
5	215.63	46.11	-16.61	29.50	43.50	-14.00	Peak	100	163
6	240.38	49.04	-16.10	32.94	46.00	-13.06	Peak	100	163

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

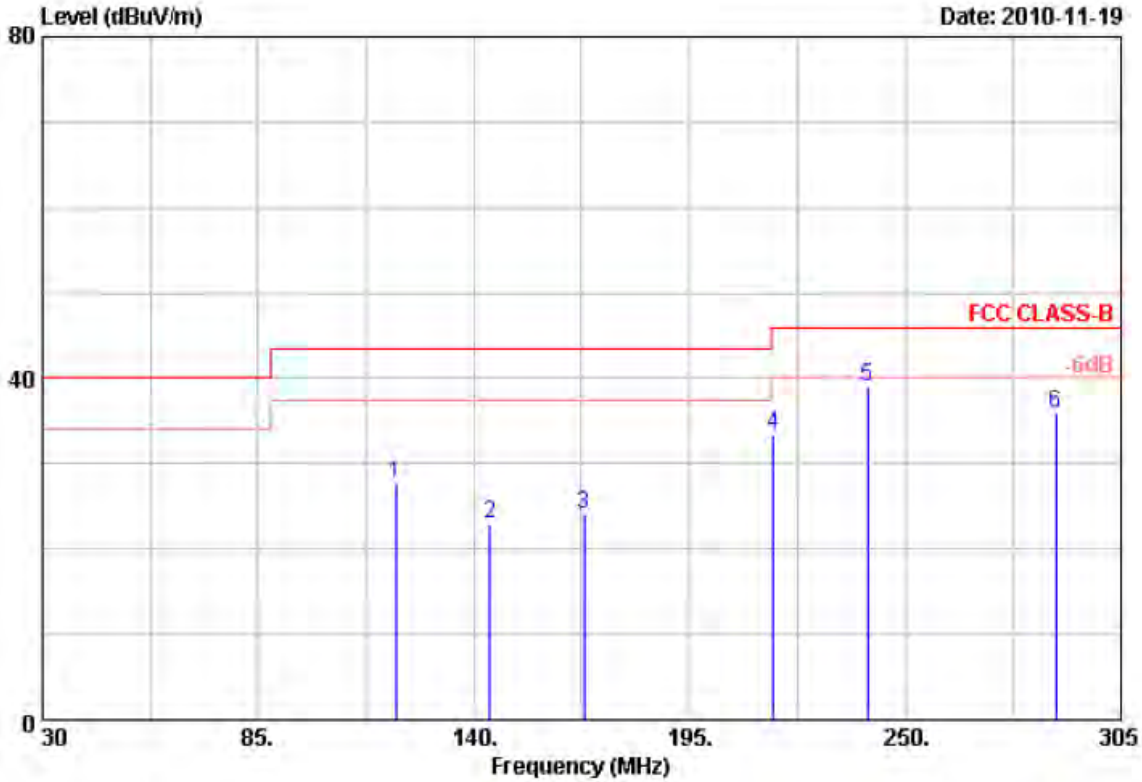


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	433.00	45.46	-8.19	37.27	46.00	-8.73	Peak	150	135
2	529.60	42.13	-6.23	35.90	46.00	-10.10	Peak	150	135
3	630.40	37.37	-3.15	34.22	46.00	-11.78	Peak	150	135
4	720.00	38.15	0.00	38.15	46.00	-7.85	Peak	150	135
5	765.50	35.74	1.07	36.81	46.00	-9.19	Peak	150	135
6	811.00	39.85	-0.91	38.94	46.00	-7.06	Peak	150	135

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

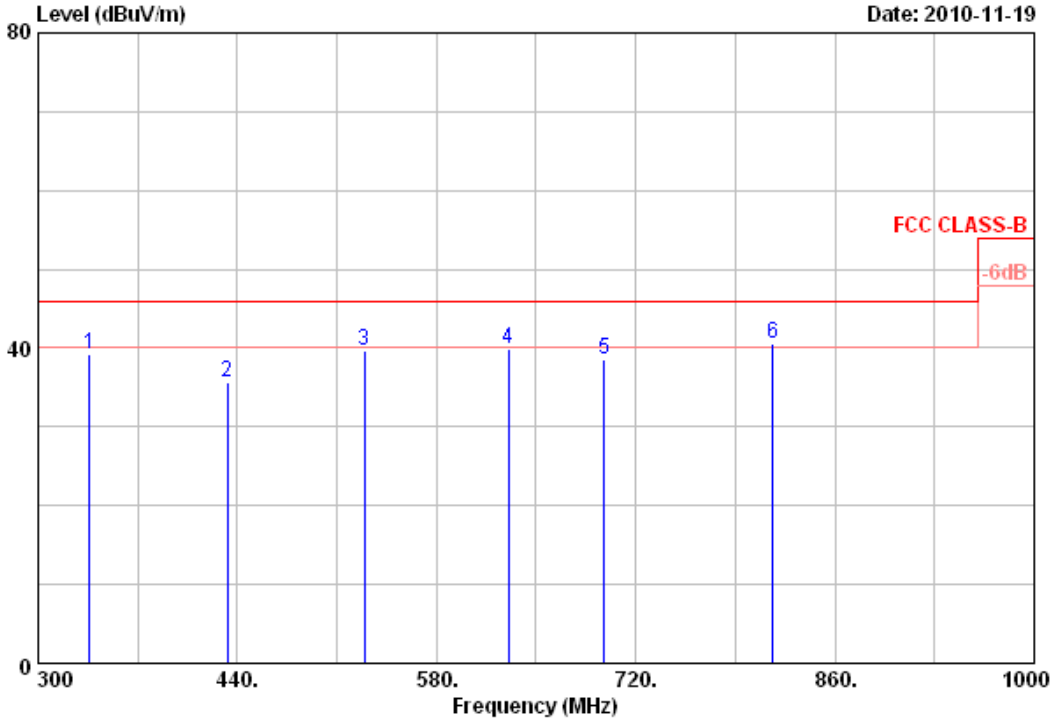


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	120.20	44.28	-16.70	27.58	43.50	-15.92	Peak	100	145
2	144.13	40.71	-17.76	22.95	43.50	-20.55	Peak	100	145
3	168.05	45.22	-21.09	24.13	43.50	-19.37	Peak	100	145
4	216.45	49.94	-16.55	33.39	46.00	-12.61	Peak	100	145
5	240.38	54.48	-15.37	39.11	46.00	-6.89	Peak	100	145
6	288.50	49.78	-13.83	35.95	46.00	-10.05	Peak	100	145

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

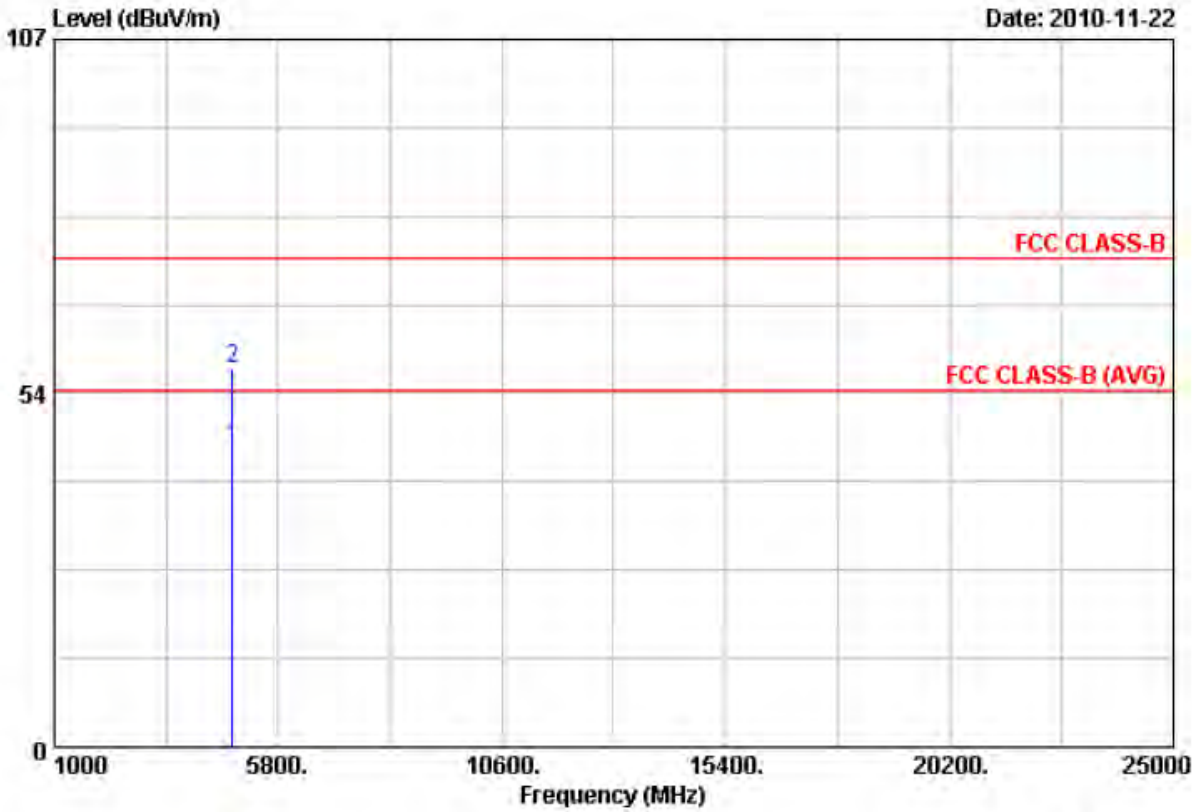


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	336.40	52.09	-12.97	39.12	46.00	-6.88	Peak	150	91
2	433.00	45.10	-9.48	35.62	46.00	-10.38	Peak	150	91
3	529.60	43.20	-3.63	39.57	46.00	-6.43	Peak	150	91
4	630.40	38.60	1.37	39.97	46.00	-6.03	Peak	150	91
5	697.60	34.72	3.91	38.63	46.00	-7.37	Peak	150	91
6	816.60	36.84	3.61	40.45	46.00	-5.55	QP	150	91

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

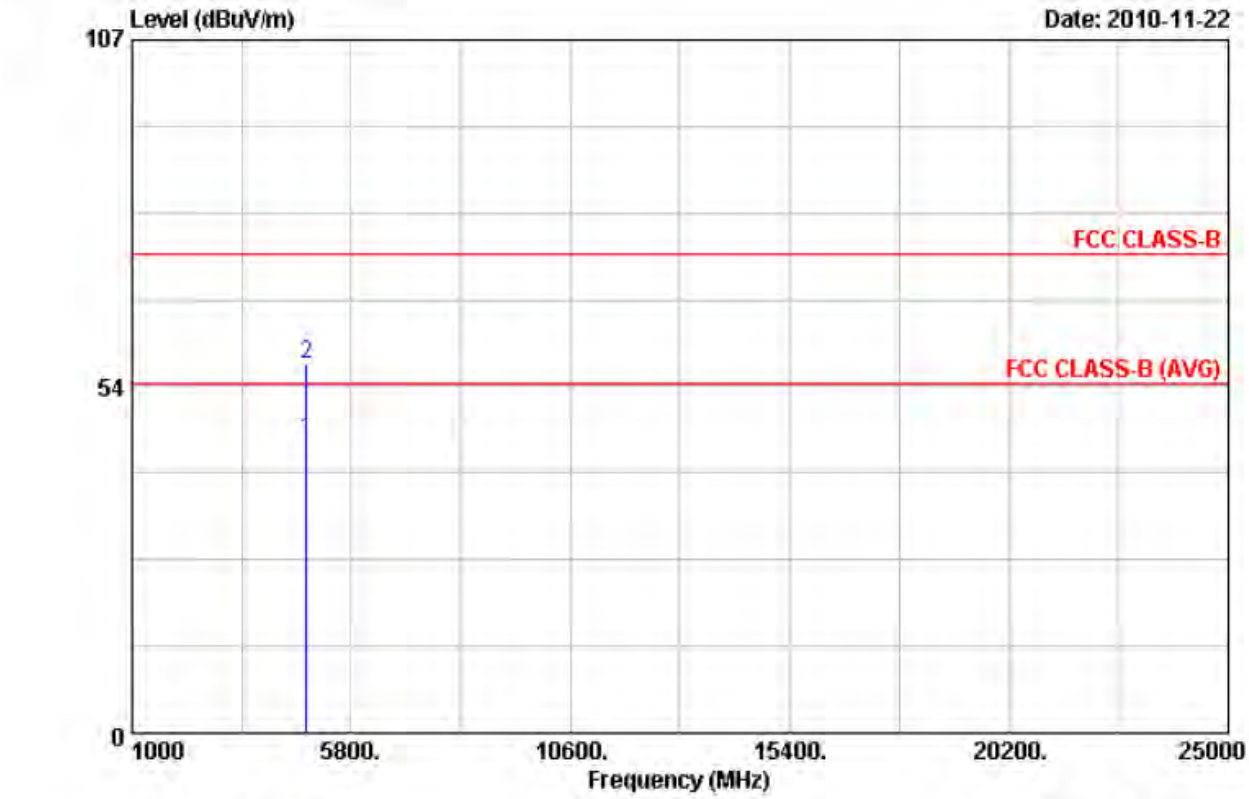


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.26	15.09	45.35	54.00	-8.65	Average	100	63
2	4824.00	42.12	15.09	57.21	74.00	-16.79	Peak	100	207

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

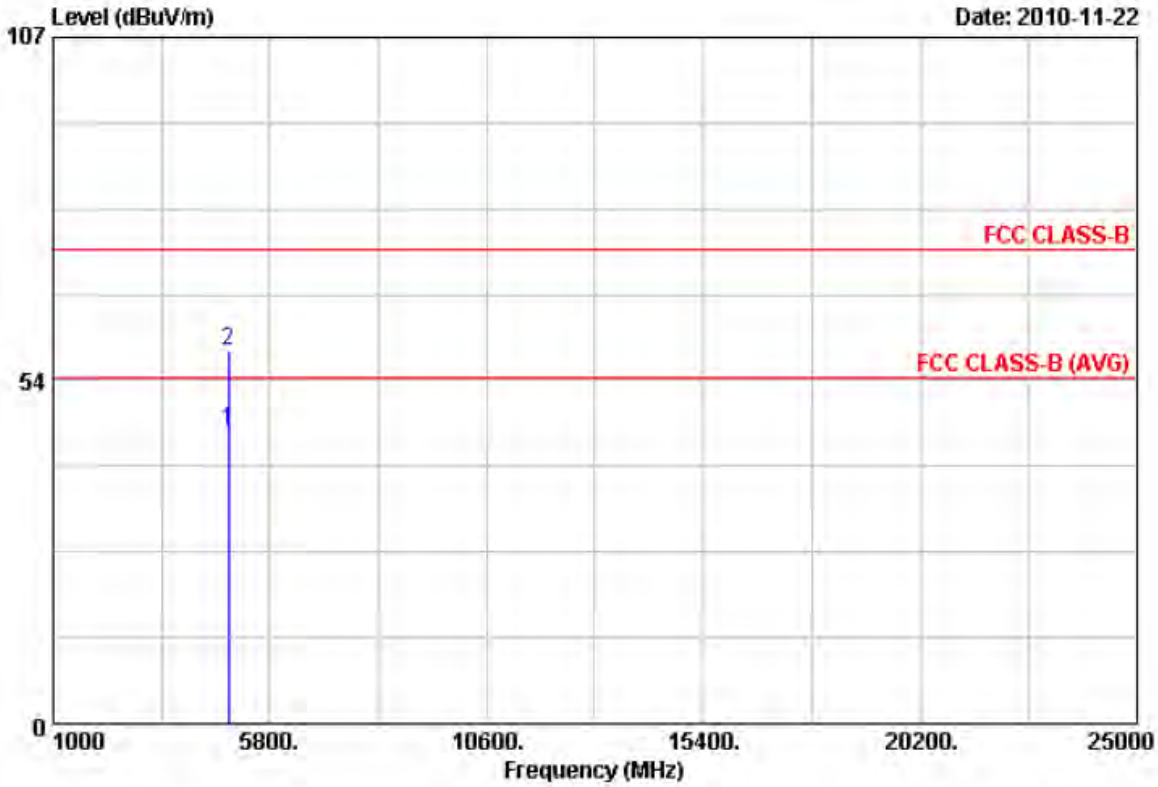


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.00	30.21	15.09	45.30	54.00	-8.70	Average	100	176
2	4824.00	41.73	15.09	56.82	74.00	-17.18	Peak	100	176

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

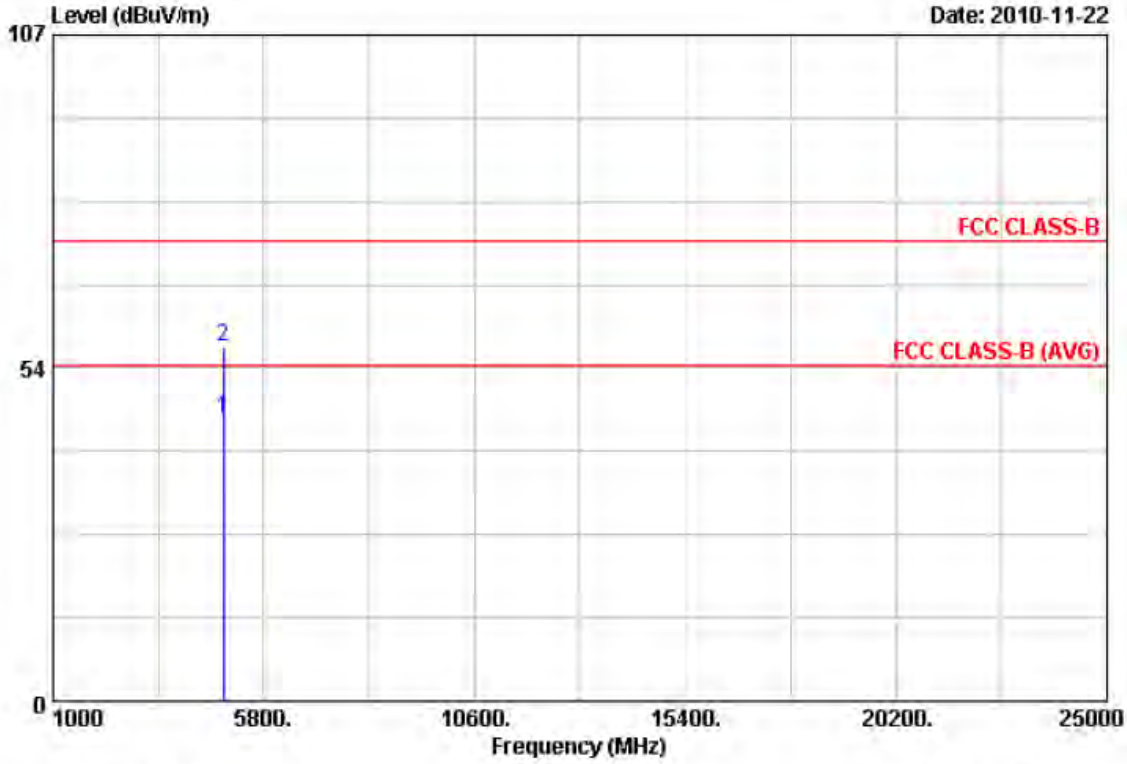


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.31	15.23	45.54	54.00	-8.46	Average	144	153
2	4874.00	42.88	15.23	58.11	74.00	-15.89	Peak	150	176

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

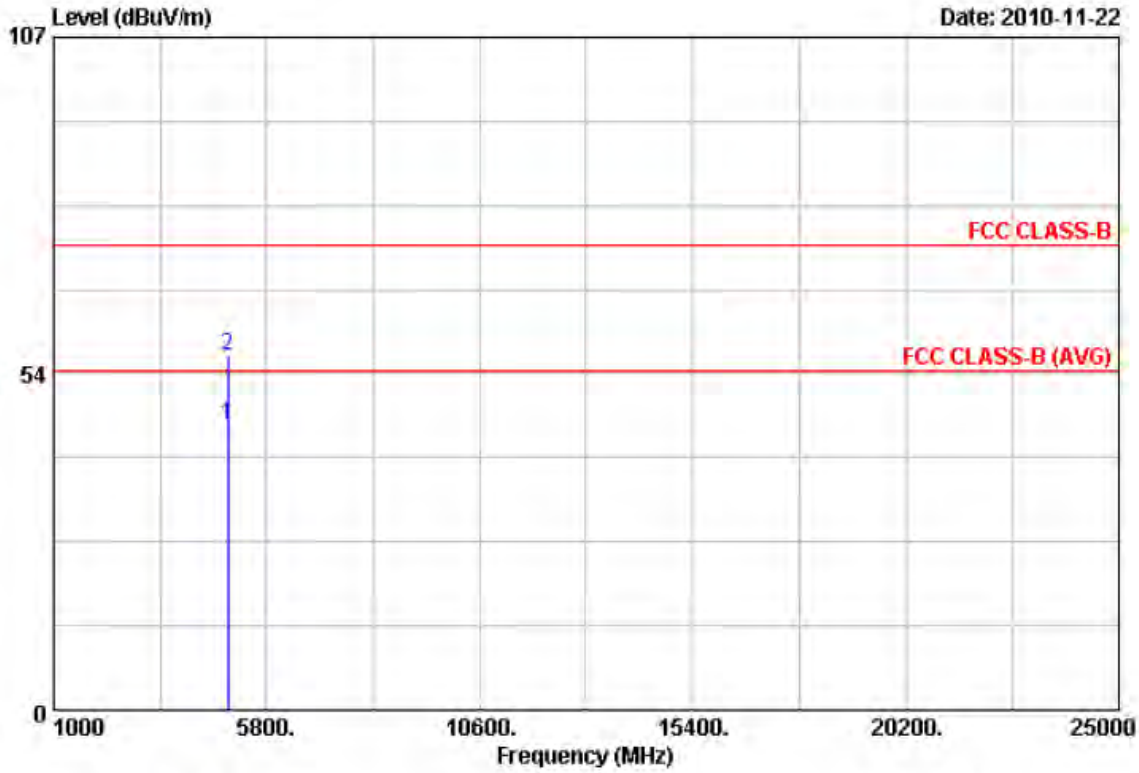


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.22	15.23	45.45	54.00	-8.55	Average	150	33
2	4874.00	41.71	15.23	56.94	74.00	-17.06	Peak	150	305

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

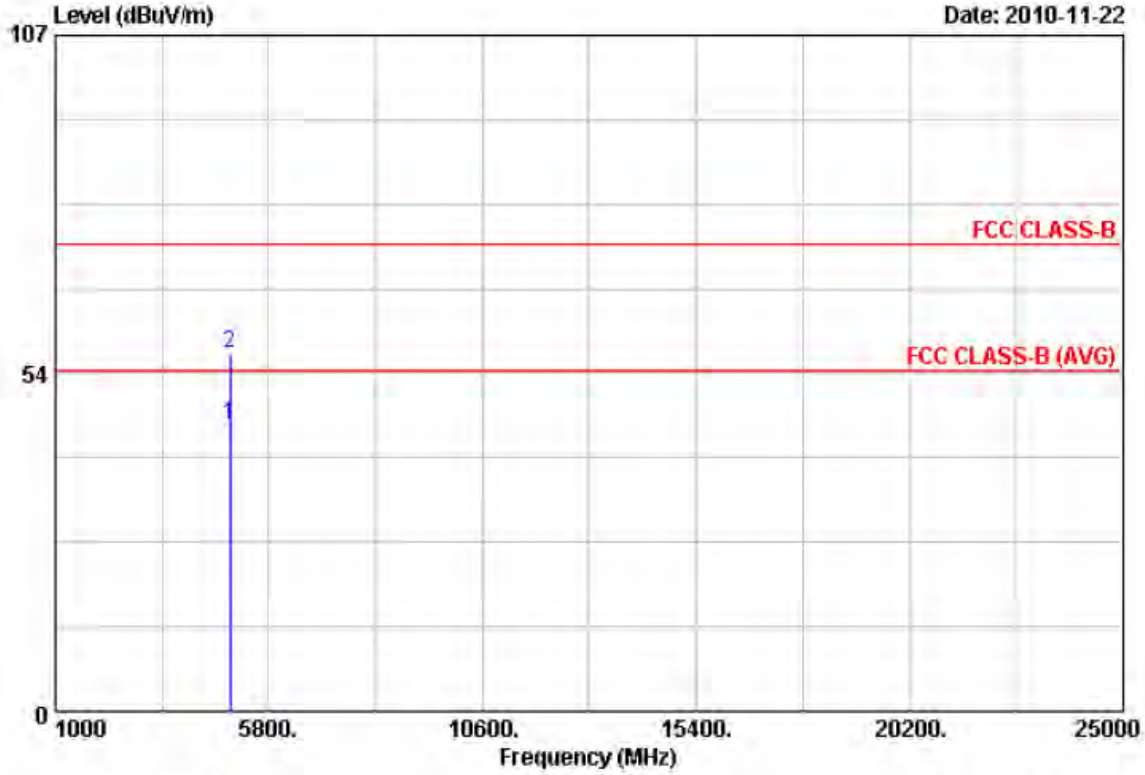


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	29.91	15.35	45.26	54.00	-8.74	Average	150	169
2	4924.00	40.85	15.35	56.20	74.00	-17.80	Peak	100	298

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH11	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

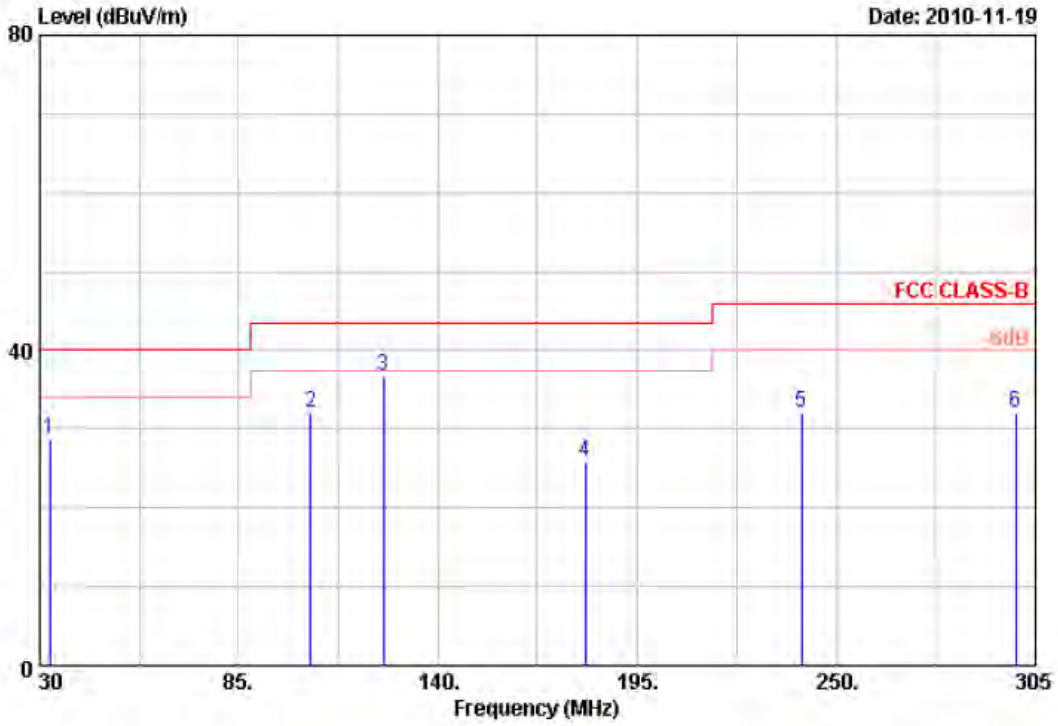


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.00	29.86	15.35	45.21	54.00	-8.79	Average	150	169
2	4924.00	41.15	15.35	56.50	74.00	-17.50	Peak	150	169

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

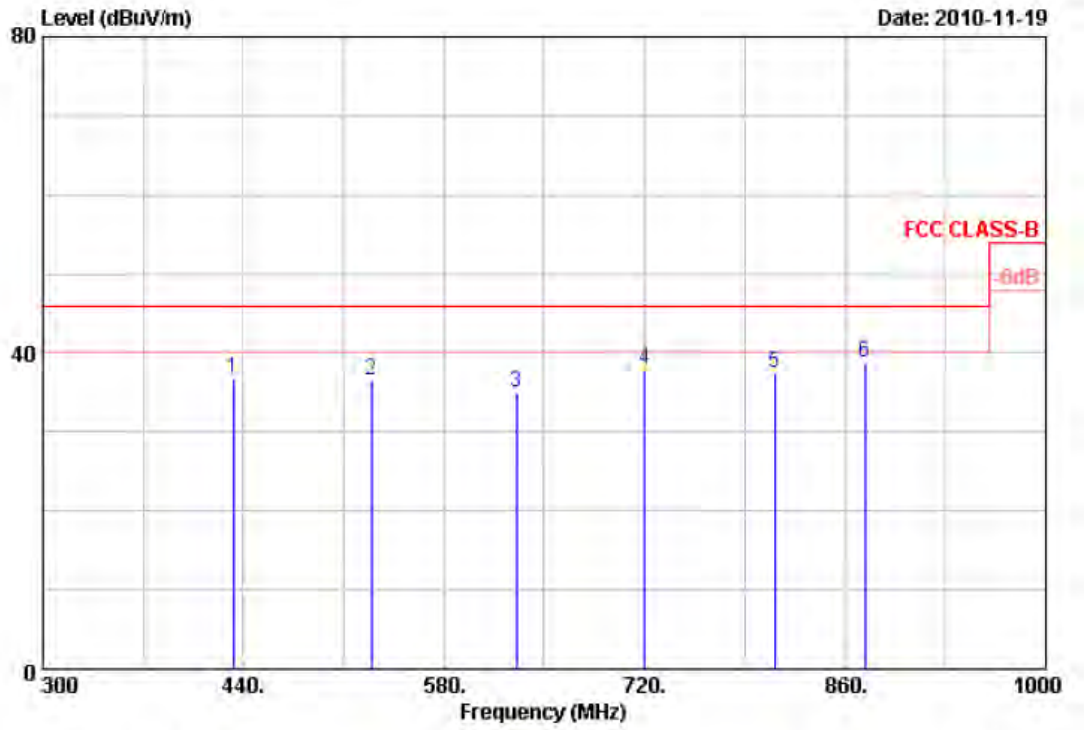


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	32.75	33.04	-4.20	28.84	40.00	-11.16	Peak	150	102
2	104.80	43.82	-11.80	32.02	43.50	-11.48	Peak	150	102
3	124.88	44.45	-7.60	36.85	43.50	-6.65	Peak	150	102
4	180.70	40.57	-14.81	25.76	43.50	-17.74	Peak	150	102
5	240.38	48.09	-16.10	31.99	46.00	-14.01	Peak	150	102
6	299.50	45.09	-12.91	32.18	46.00	-13.82	Peak	150	102

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

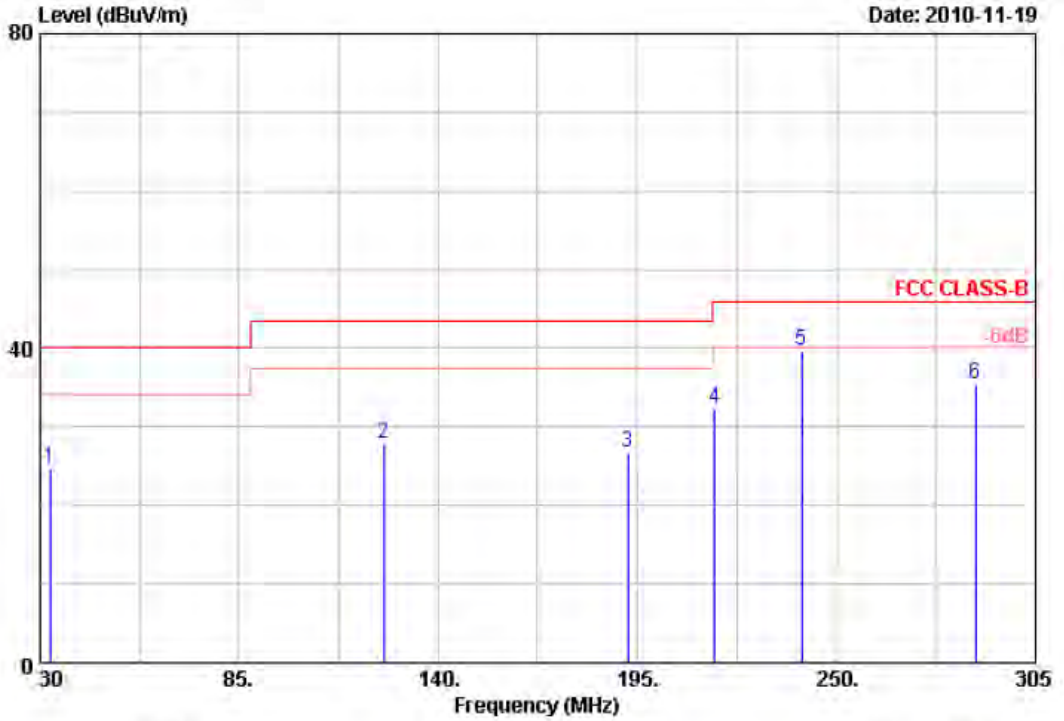


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	433.00	45.06	-8.19	36.87	46.00	-9.13	Peak	100	143
2	529.60	42.75	-6.23	36.52	46.00	-9.48	Peak	100	143
3	630.40	38.05	-3.15	34.90	46.00	-11.10	Peak	100	143
4	720.00	37.83	0.00	37.83	46.00	-8.17	Peak	100	143
5	811.00	38.31	-0.91	37.40	46.00	-8.60	Peak	100	143
6	874.00	31.86	7.01	38.87	46.00	-7.13	Peak	100	143

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

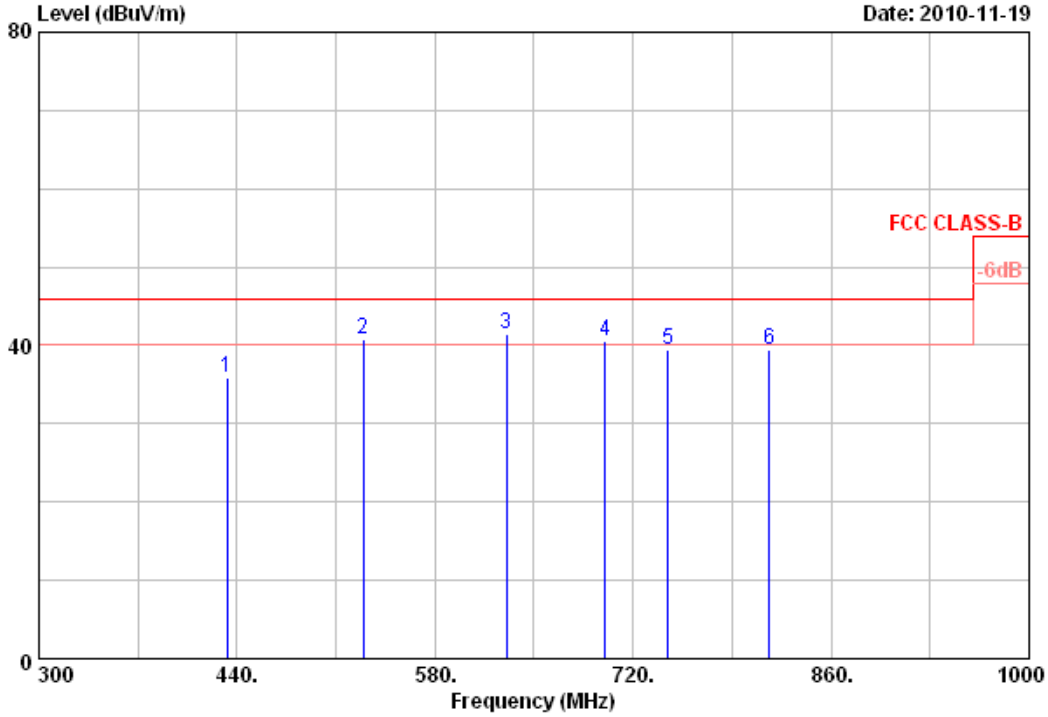


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	32.75	29.95	-5.15	24.80	40.00	-15.20	Peak	150	138
2	124.88	43.74	-15.81	27.93	43.50	-15.57	Peak	150	138
3	192.25	45.22	-18.37	26.85	43.50	-16.65	Peak	150	138
4	216.45	48.82	-16.55	32.27	46.00	-13.73	Peak	150	138
5	240.38	55.06	-15.37	39.69	46.00	-6.31	Peak	150	138
6	288.50	49.27	-13.83	35.44	46.00	-10.56	Peak	150	138

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

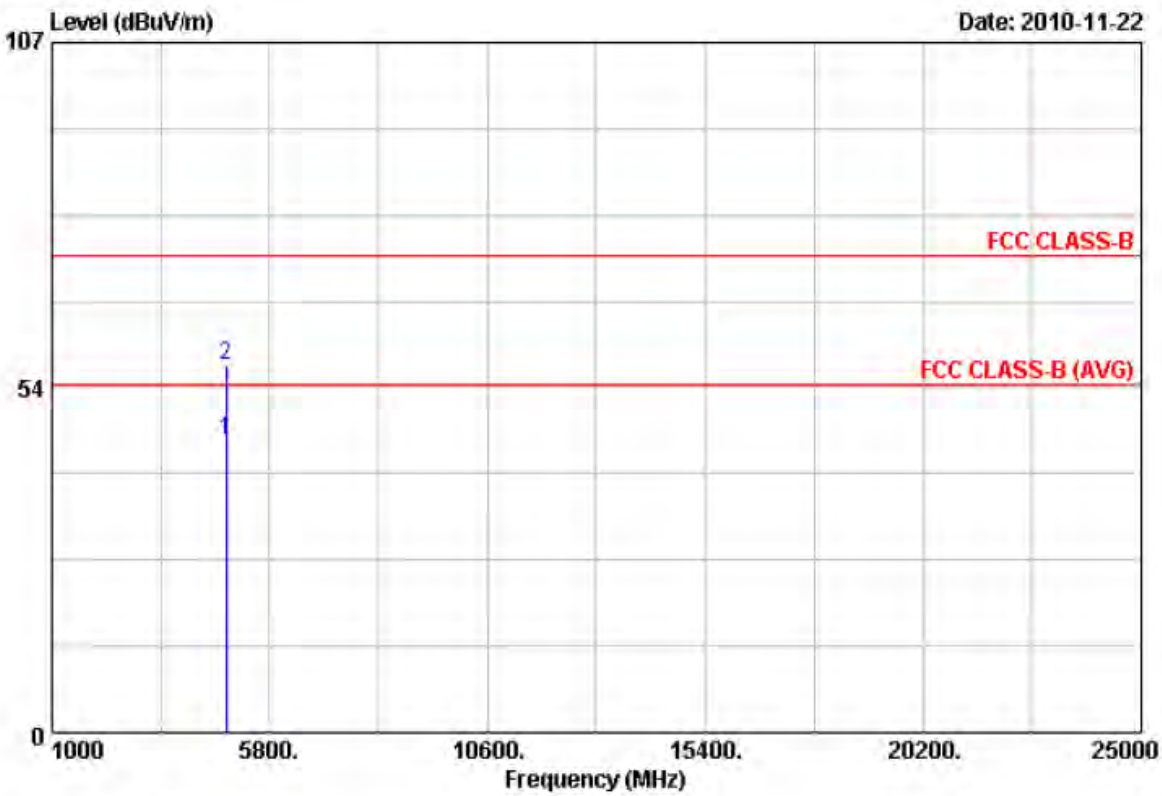


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	433.00	45.35	-9.48	35.87	46.00	-10.13	Peak	100	55
2	529.60	44.47	-3.63	40.84	46.00	-5.16	QP	100	55
3	630.40	40.02	1.37	41.39	46.00	-4.61	QP	100	55
4	700.40	36.59	3.99	40.58	46.00	-5.42	QP	100	55
5	744.50	33.06	6.37	39.43	46.00	-6.57	Peak	100	55
6	816.60	35.92	3.61	39.53	46.00	-6.47	Peak	100	55

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

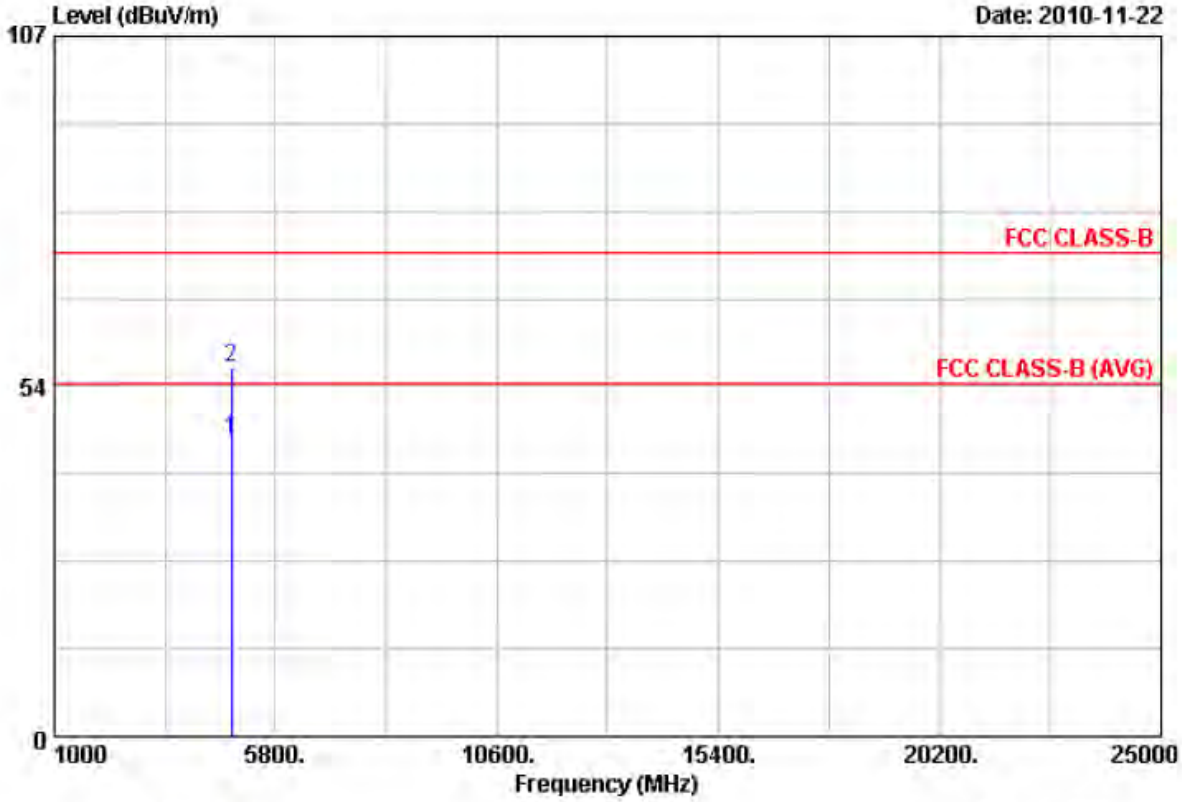


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4844.00	30.12	15.16	45.28	54.00	-8.72	Average	150	145
2	4844.00	41.80	15.16	56.96	74.00	-17.04	Peak	150	145

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

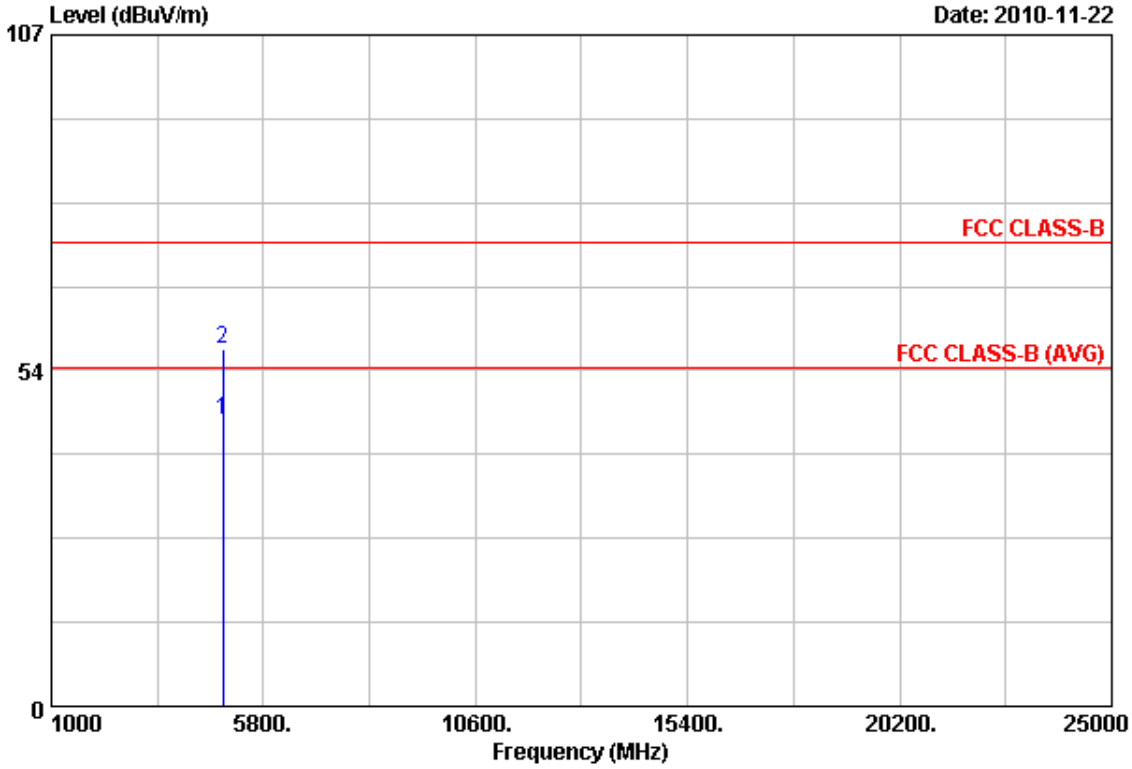


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4844.00	30.19	15.16	45.35	54.00	-8.65	Average	150	145
2	4844.00	41.18	15.16	56.34	74.00	-17.66	Peak	150	145

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 3	:	802.11n HT40, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

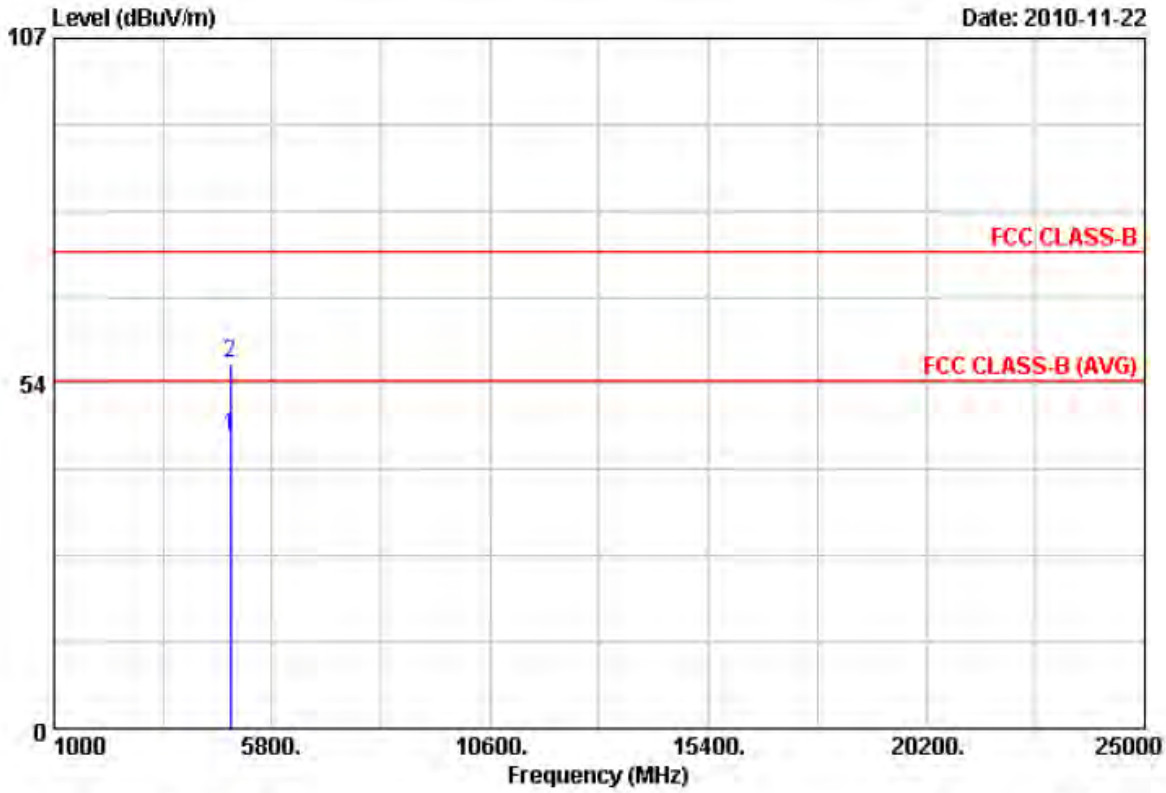


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.27	15.23	45.50	54.00	-8.50	Average	150	145
2	4874.00	41.56	15.23	56.79	74.00	-17.21	Peak	150	145

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 3	:	802.11n HT40, CH6	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

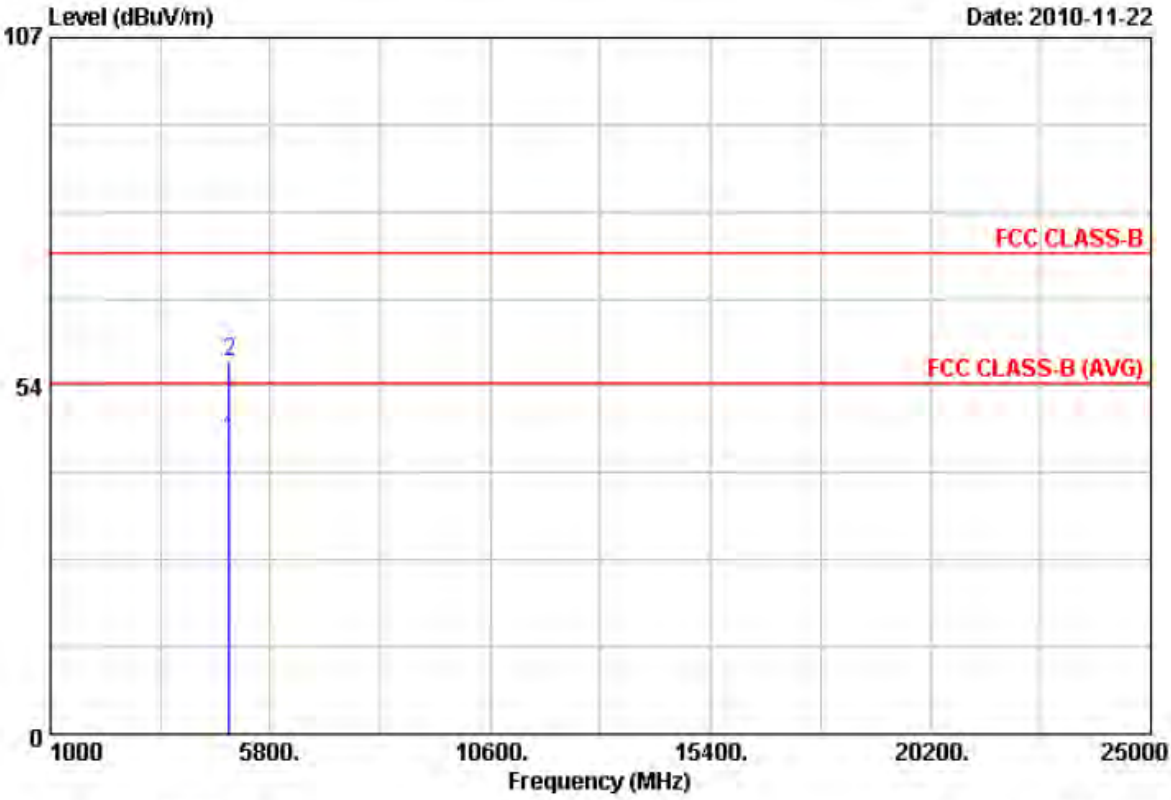


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.00	30.18	15.23	45.41	54.00	-8.59	Average	100	145
2	4874.00	41.47	15.23	56.70	74.00	-17.30	Peak	117	145

Notes:

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode 3	:	802.11n HT40, CH9	Temperature	:	23 °C
Memo	:		Humidity	:	65 %

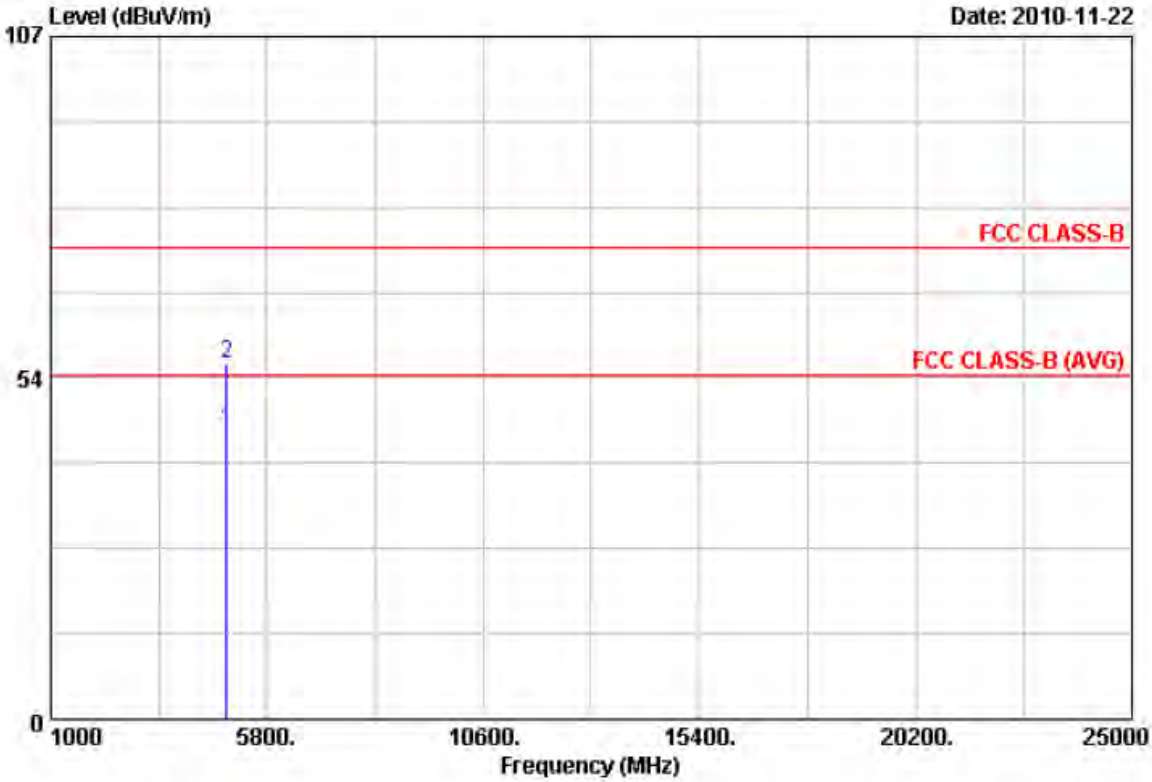


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4904.00	29.99	15.31	45.30	54.00	-8.70	Average	150	180
2	4904.00	41.93	15.31	57.24	74.00	-16.76	Peak	147	180

Notes:

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

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 3	:	802.11n HT40, CH9	Temperature	:	23 °C
Memo	:		Humidity	:	65 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4904.00	29.97	15.31	45.28	54.00	-8.72	Average	150	219
2	4904.00	40.39	15.31	55.70	74.00	-18.30	Peak	150	195

Notes:

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

Test engineer: Ben

6. 6dB Bandwidth Measurement Data

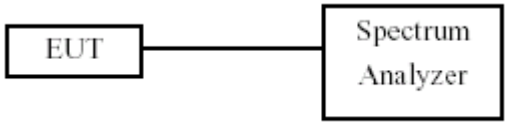
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

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

6.3 Test Setup Layout



6.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2010/05/08	2011/05/07

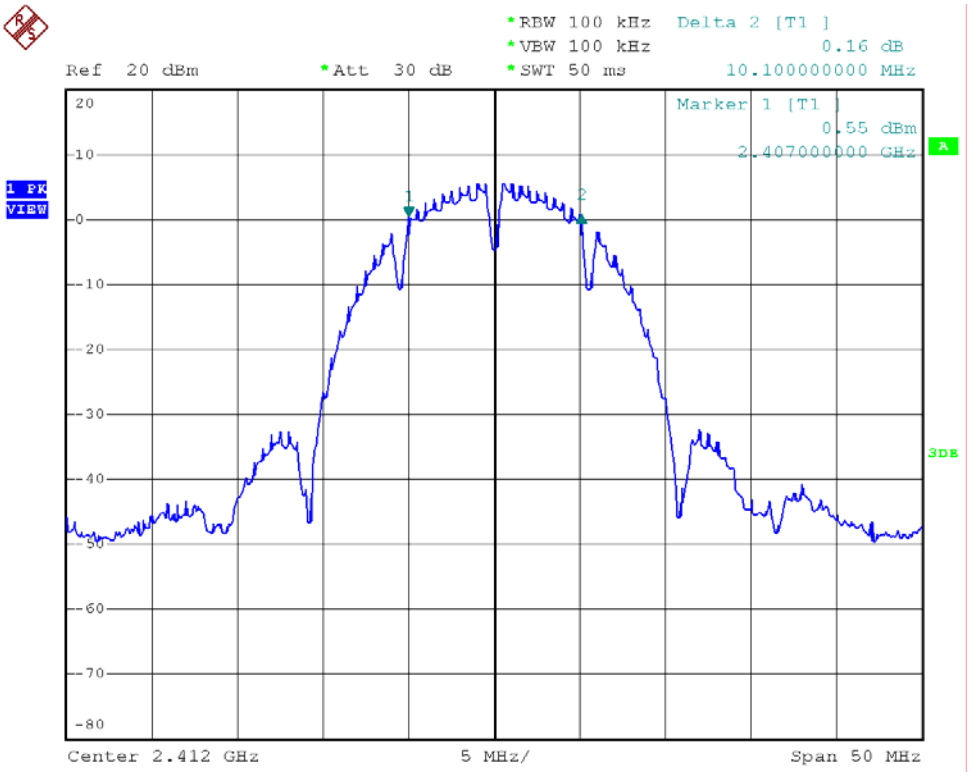
6.5 Test Result and Data

Test Date: Nov, 18, 2010 Temperature: 20℃

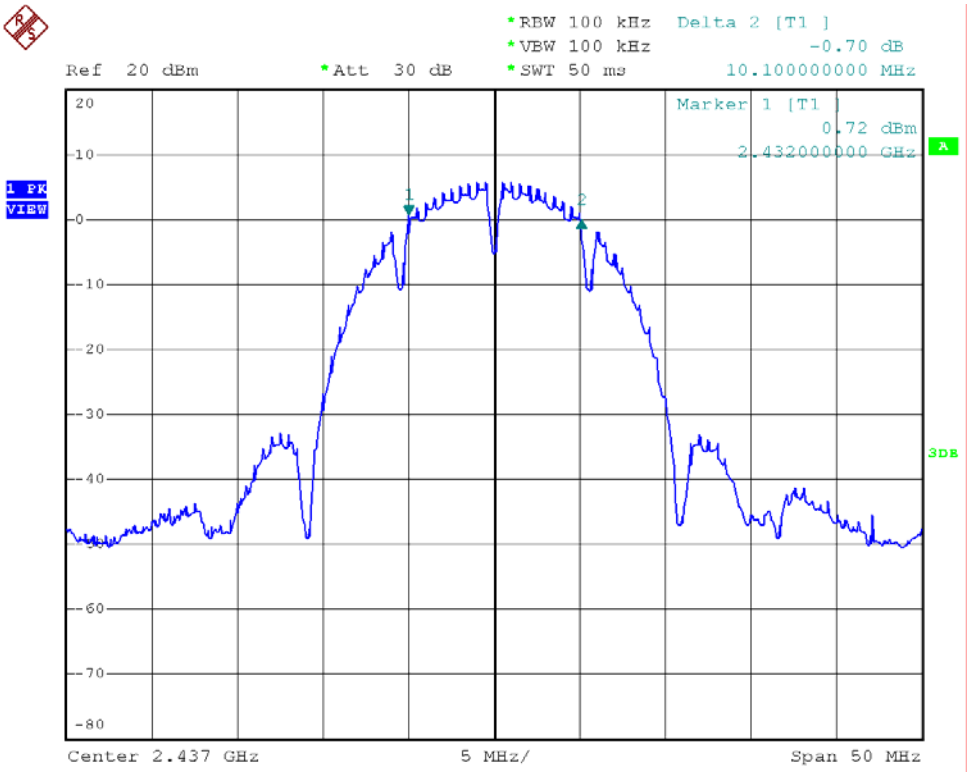
Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
802.11b (11Mbps)	01	2412	10.1
	06	2437	10.1
	11	2462	10.1
802.11g (54Mbps)	01	2412	16.6
	06	2437	16.5
	11	2462	16.5
802.11n HT20 (65Mbps)	01	2412	17.8
	06	2437	17.9
	11	2462	17.8
802.11n HT40 (135Mbps)	03	2422	36.6
	06	2437	36.6
	09	2452	36.6

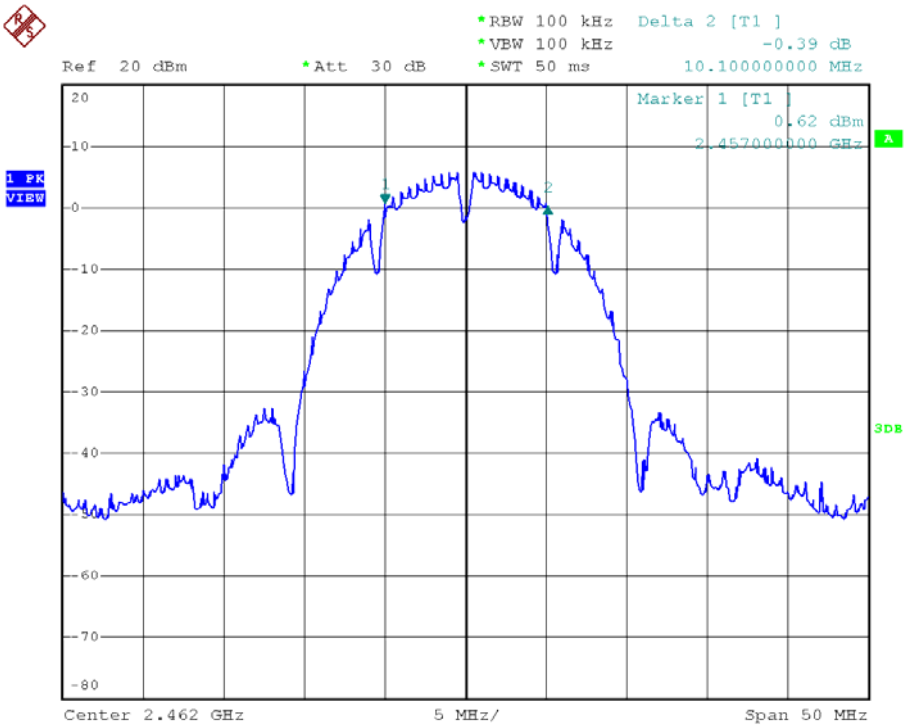
Modulation Standard: 802.11b (11Mbps)
Channel: 01



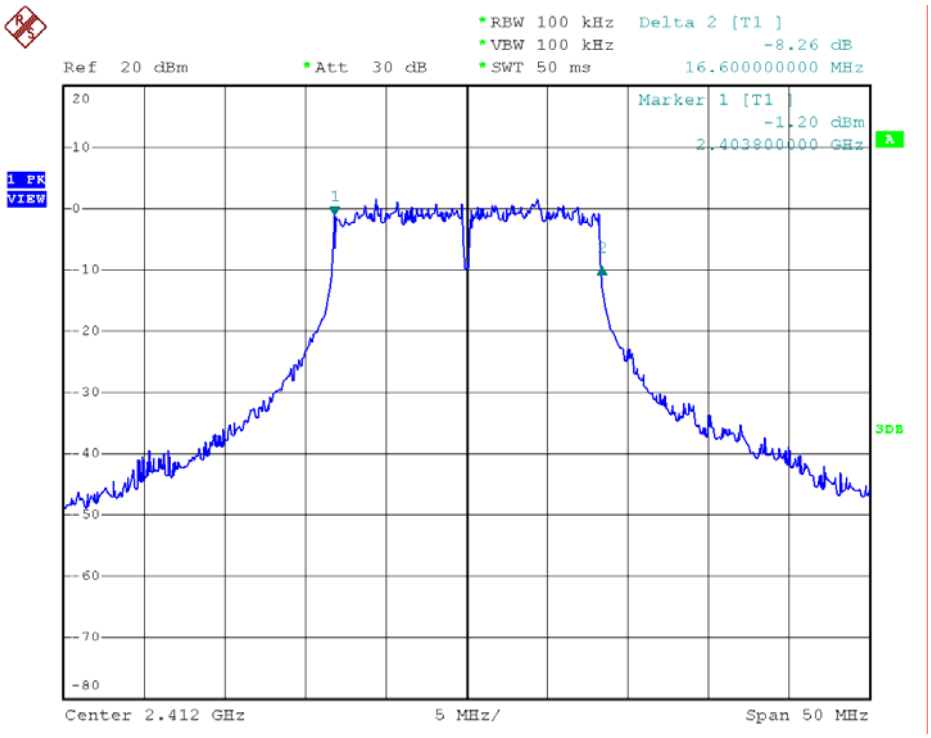
Modulation Standard: 802.11b (11Mbps)
Channel: 06



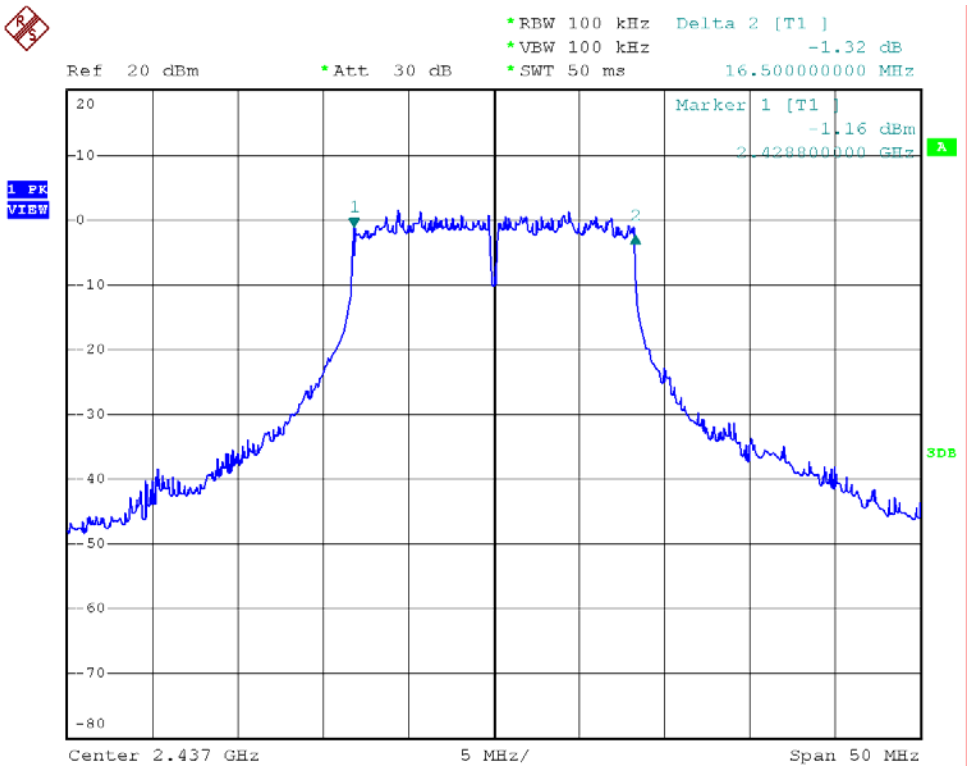
Modulation Standard: 802.11b (11Mbps)
Channel: 11



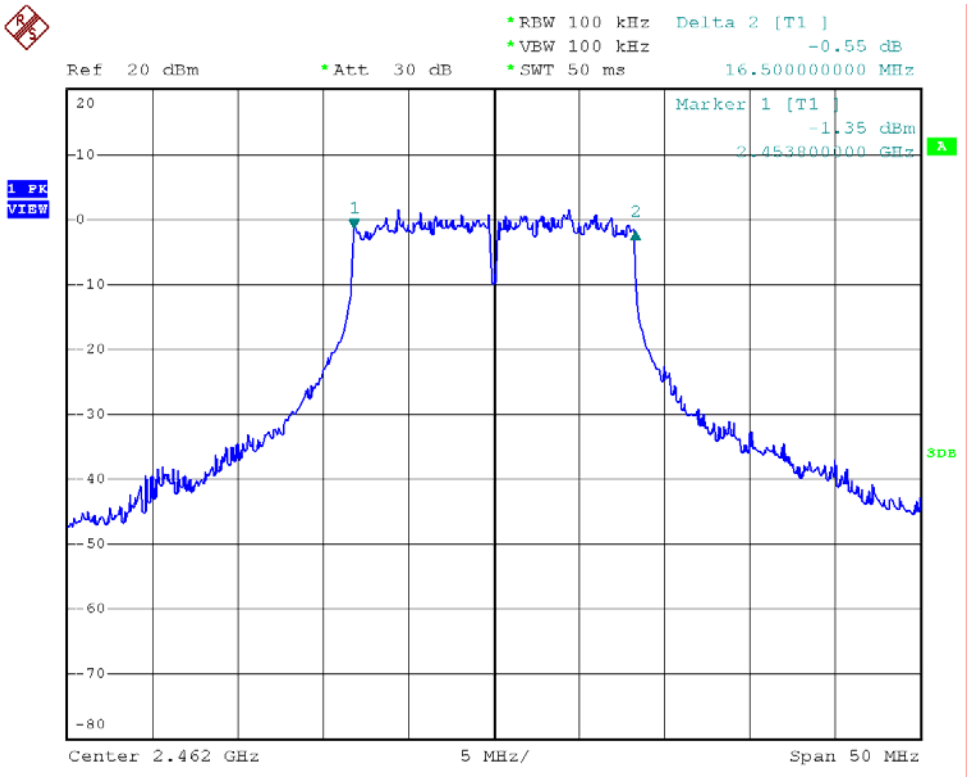
Modulation Standard: 802.11g (54Mbps)
Channel: 01



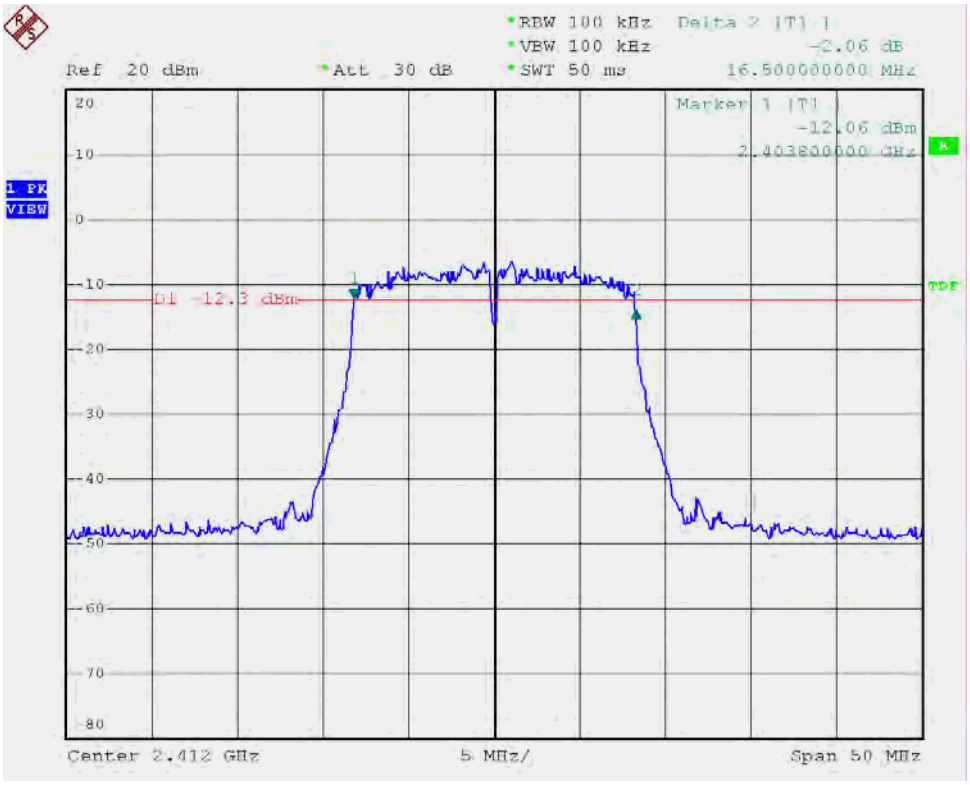
Modulation Standard: 802.11g (54Mbps)
Channel: 06



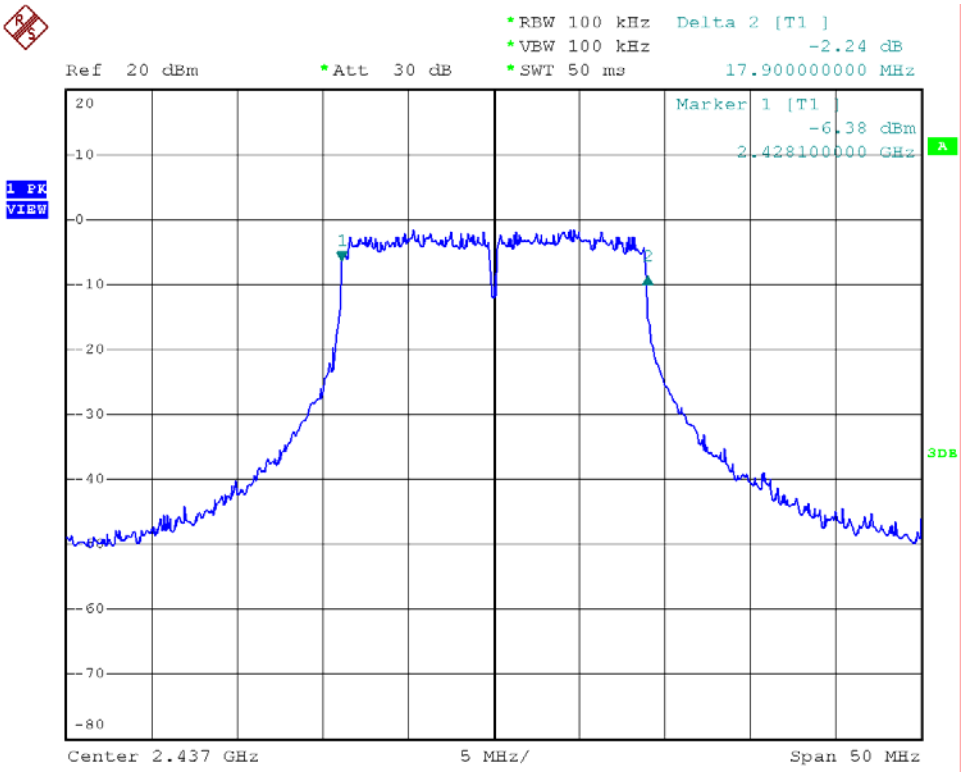
Modulation Standard: 802.11g (54Mbps)
Channel: 11



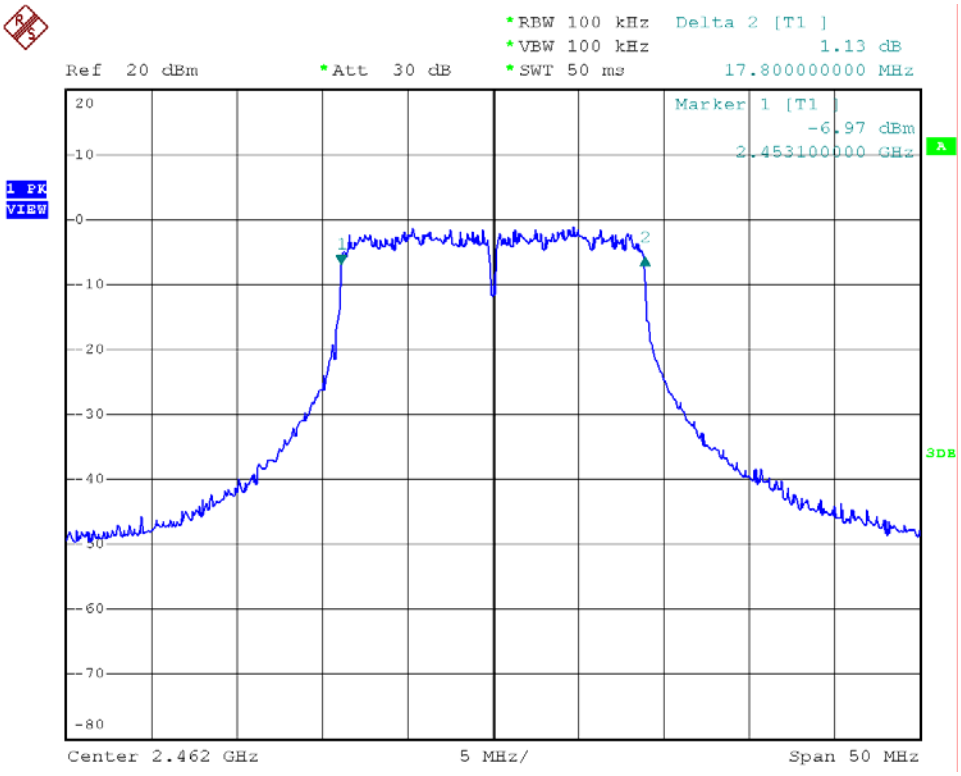
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 01



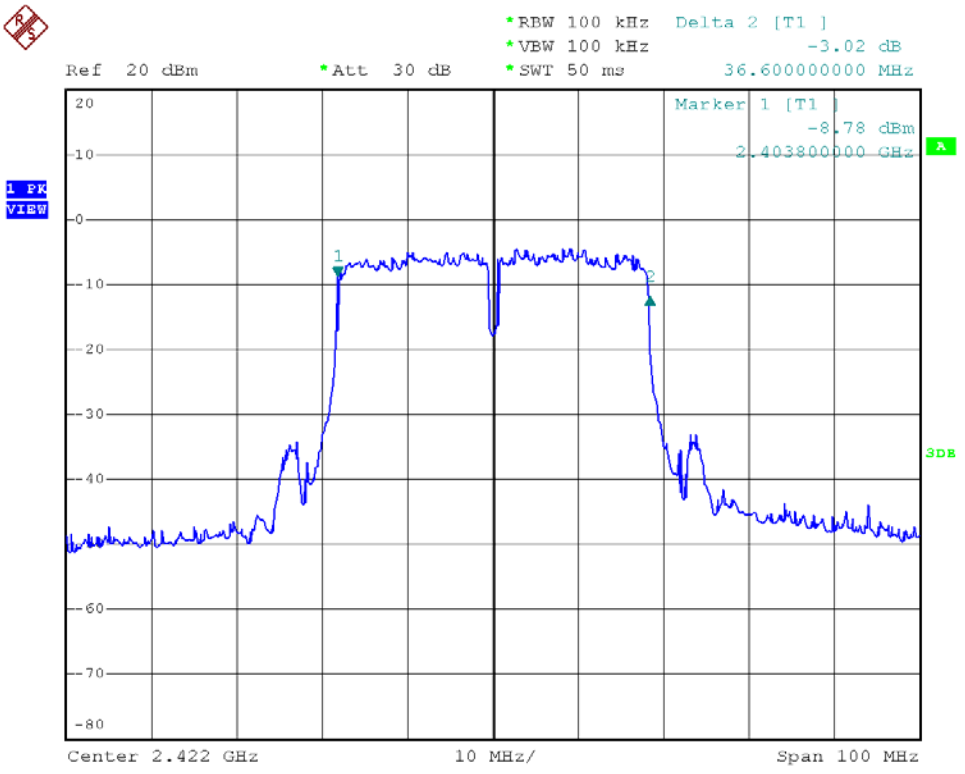
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 06



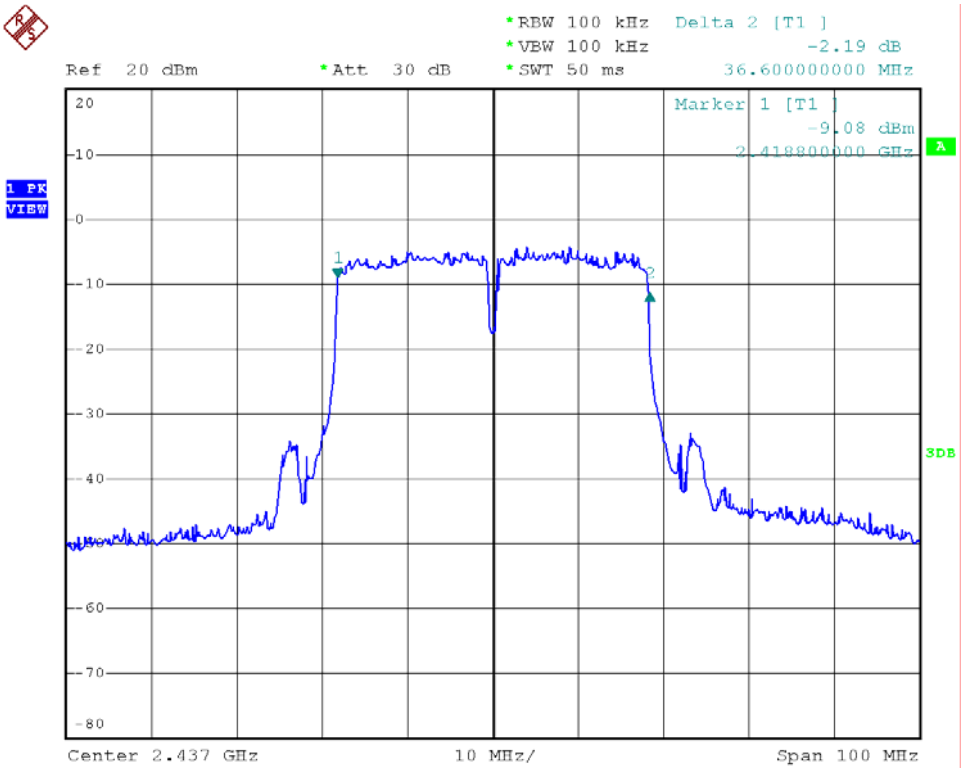
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 11



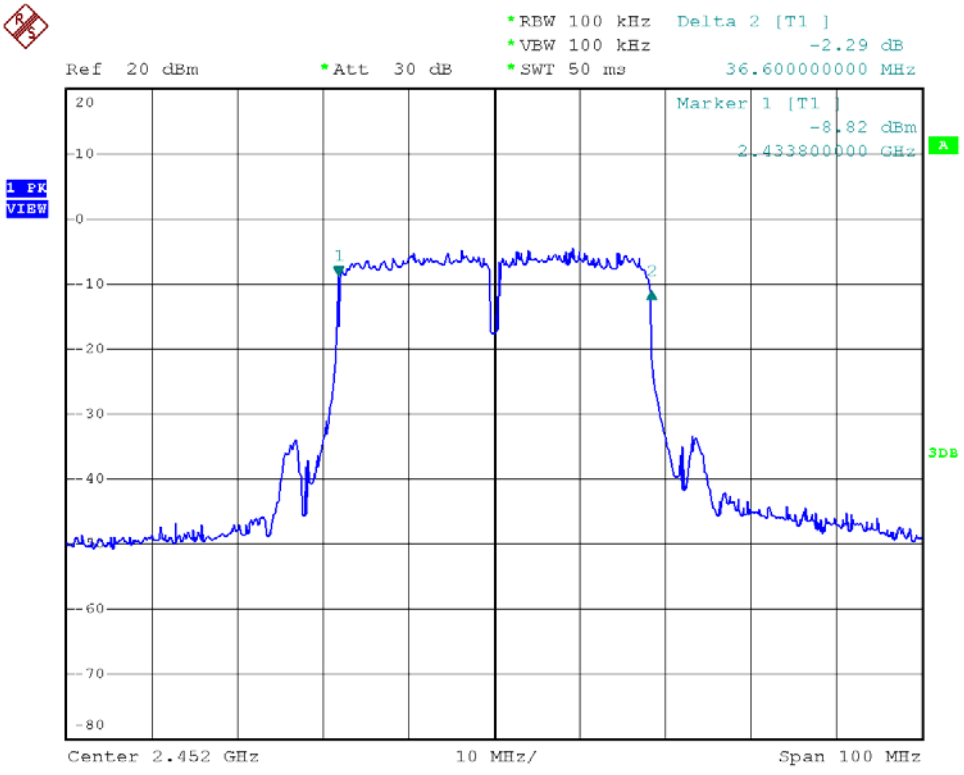
Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 03



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 06



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 09



7. Maximum Peak Output Power

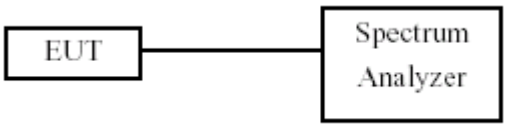
7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

7.2 Test Procedures

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

7.3 Test Setup Layout



7.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2010/05/08	2011/05/07

7.5 Test Result and Data

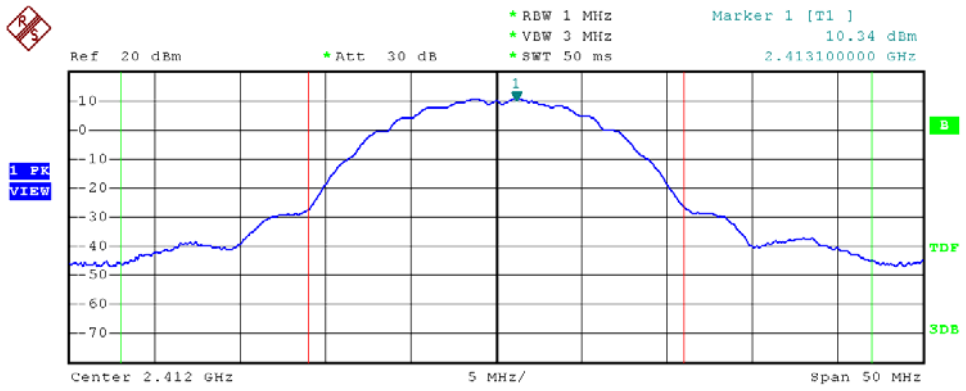
Test Date: Nov, 18, 2010 Temperature: 20℃

Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
802.11b (11Mbps)	01	2412	18.32	67.9
	06	2437	18.60	72.4
	11	2462	19.04	80.2
802.11g (54Mbps)	01	2412	22.15	164.1
	06	2437	22.00	158.5
	11	2462	22.34	171.4

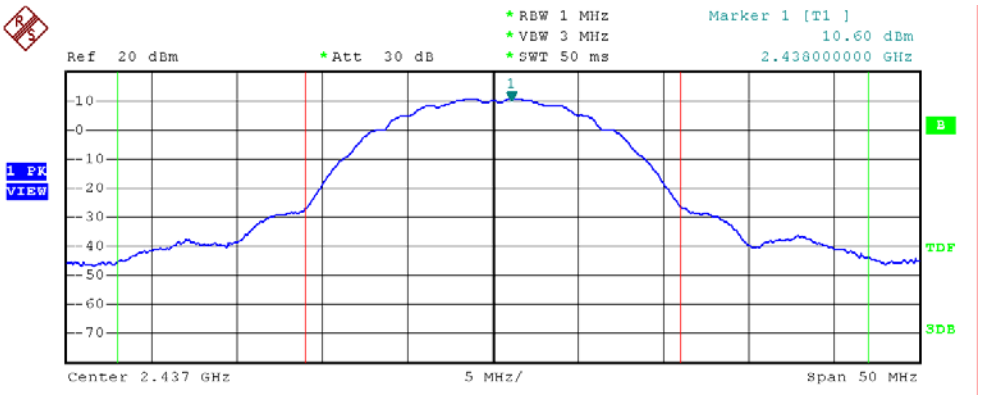
Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
802.11n HT20 (65Mbps)	01	2412	20.09	102.1
	06	2437	20.16	103.8
	11	2462	19.46	88.3
802.11n HT40 (135Mbps)	03	2422	19.22	83.6
	06	2437	19.61	91.4
	09	2452	19.43	87.7

Modulation Standard: 802.11b (11Mbps)
Channel: 01



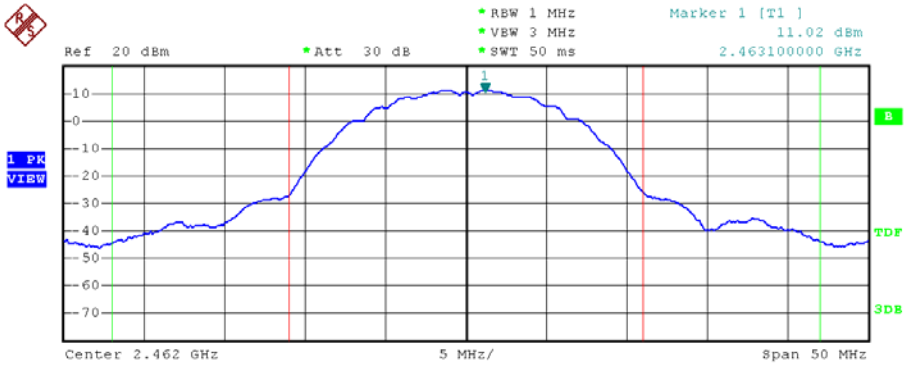
Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	18.32 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-43.02 dB
Spacing	16.5 MHz	Upper	-42.45 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

Modulation Standard: 802.11b (11Mbps)
Channel: 06



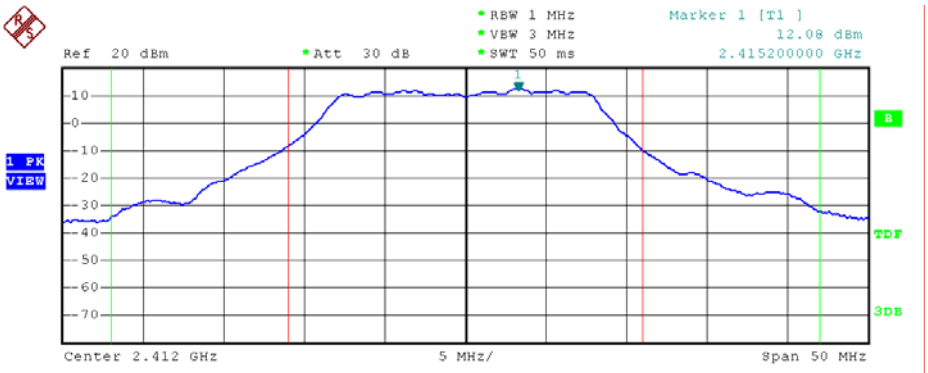
Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	18.60 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-43.13 dB
Spacing	16.5 MHz	Upper	-42.70 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

Modulation Standard: 802.11b (11Mbps)
Channel: 11



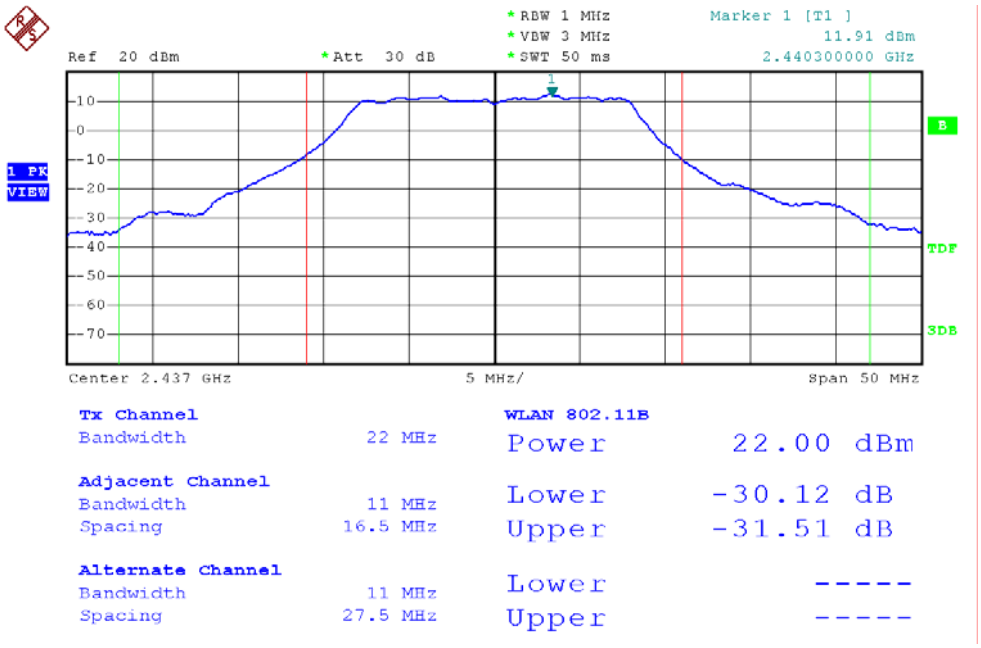
Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	19.04 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-43.01 dB
Spacing	16.5 MHz	Upper	-42.75 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

Modulation Standard: 802.11g (54Mbps)
Channel: 01

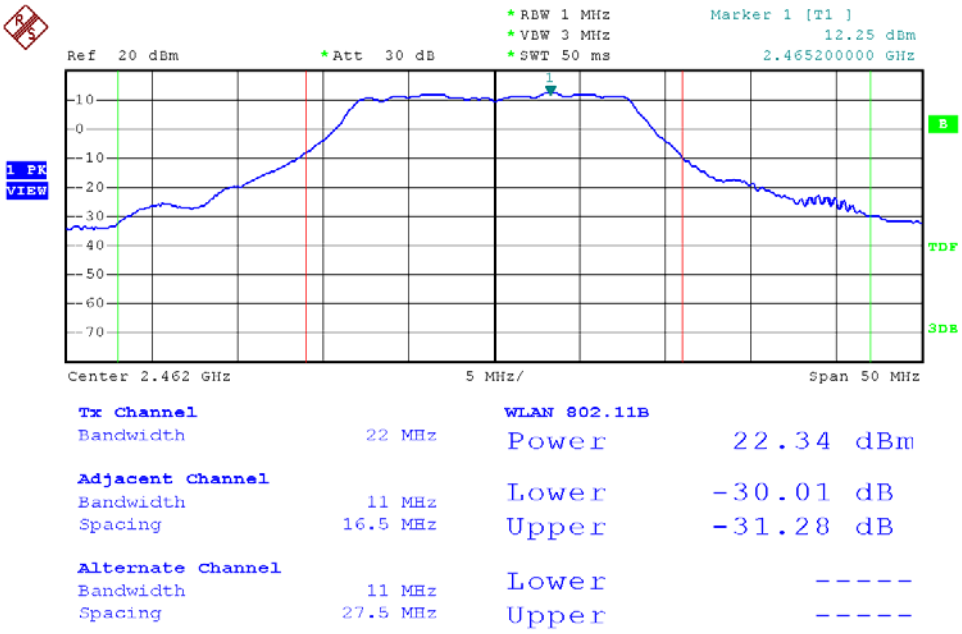


Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	22.15 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-30.22 dB
Spacing	16.5 MHz	Upper	-31.59 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

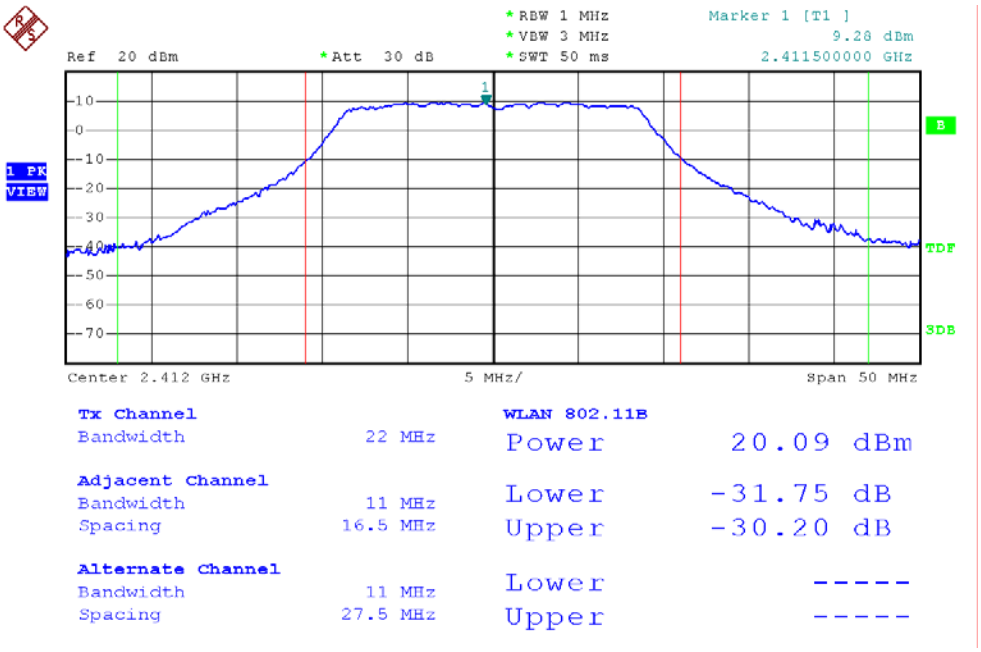
Modulation Standard: 802.11g (54Mbps)
Channel: 06



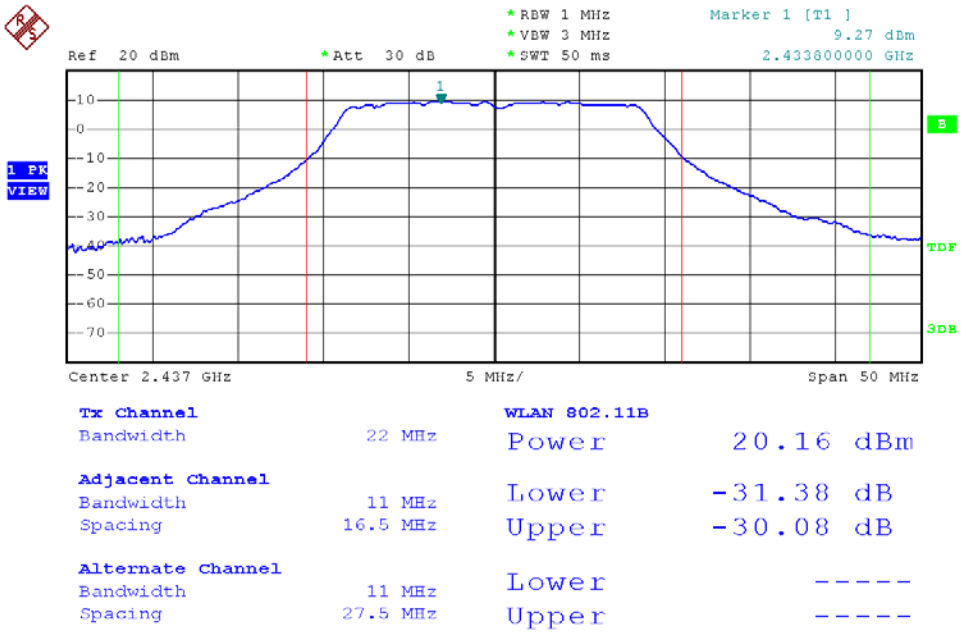
Modulation Standard: 802.11g (54Mbps)
Channel: 11



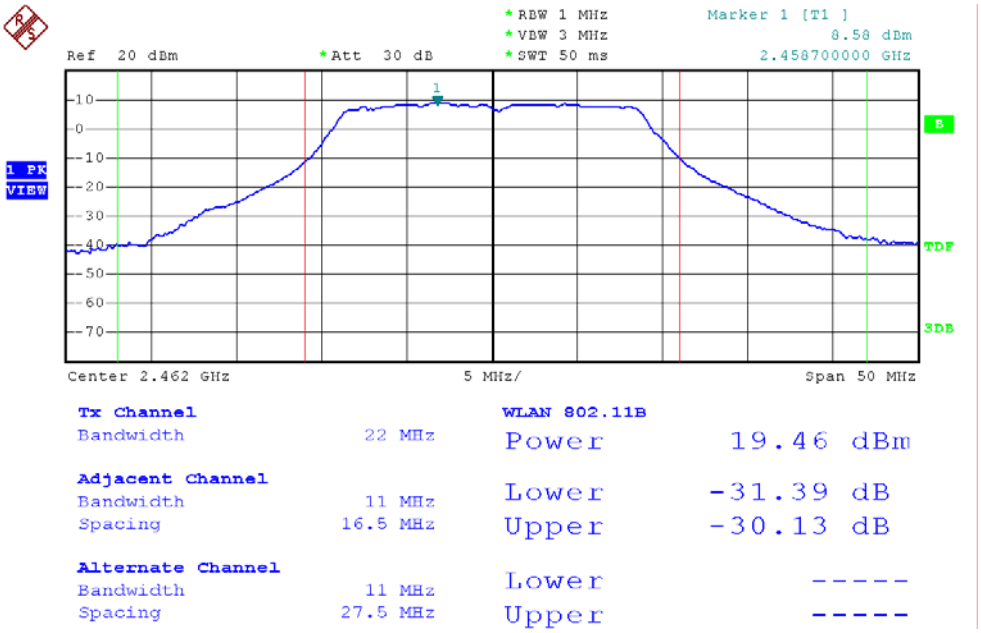
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 01



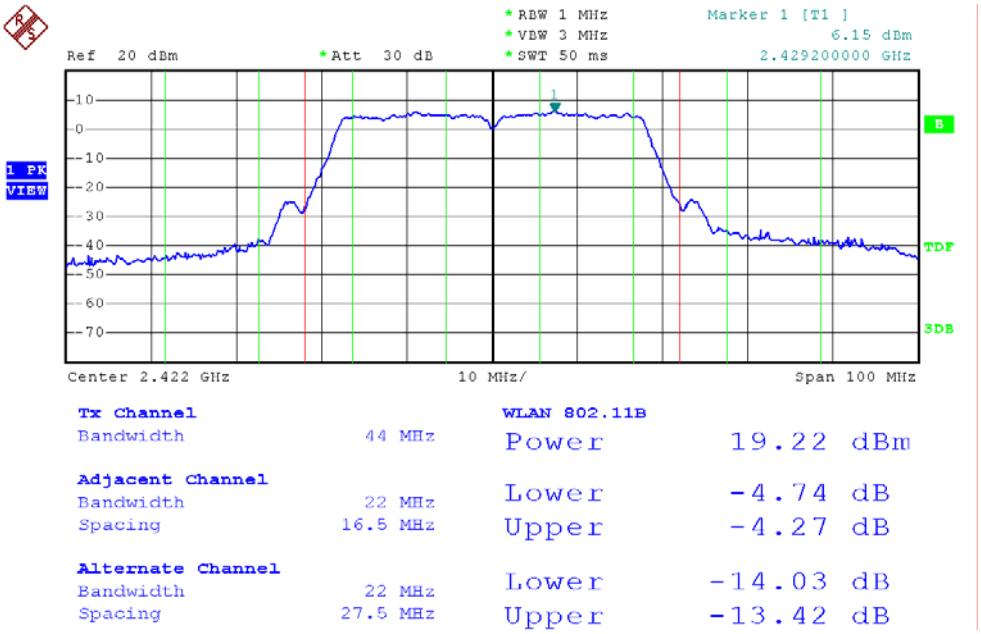
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 06



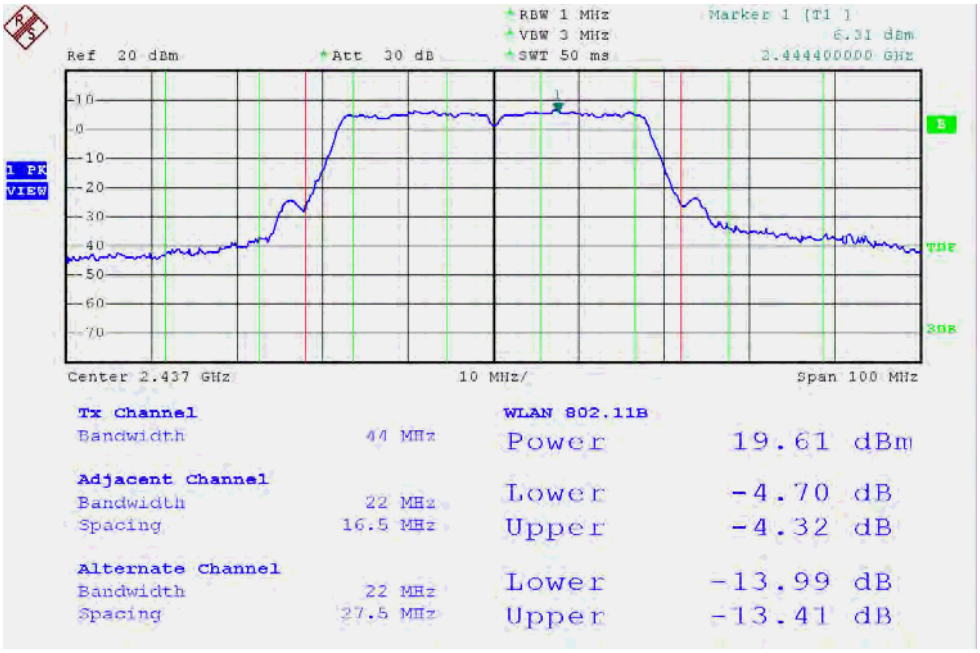
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 11



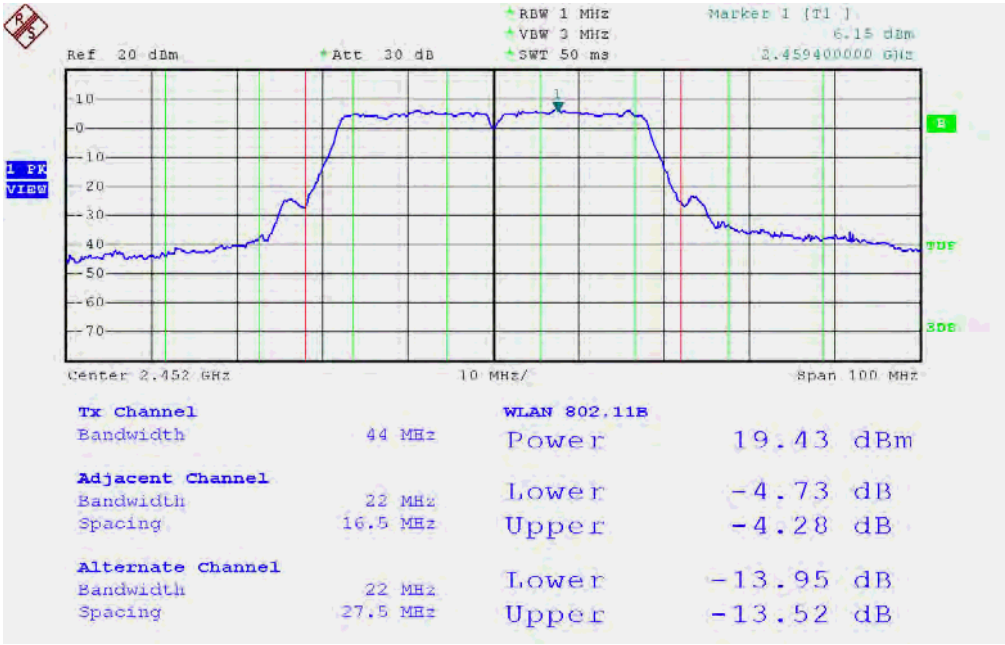
Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 03



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 06



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 09



8. Power Spectral Density

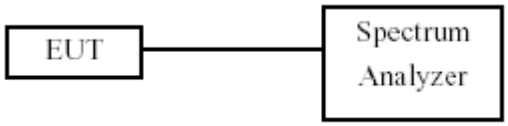
8.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

8.2 Test Procedures

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

8.3 Test Setup Layout



8.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2010/05/08	2011/05/07

8.5 Test Result and Data

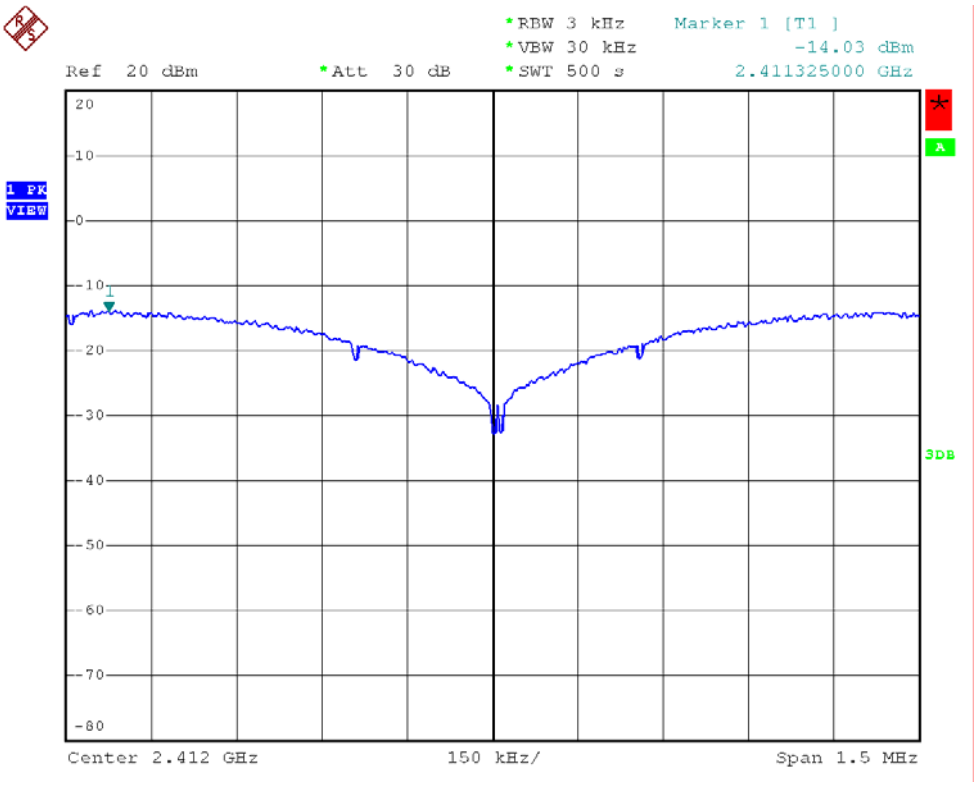
Test Date: Nov, 18, 2010 Temperature: 20℃

Atmospheric pressure: 1020 hPa Humidity: 65%

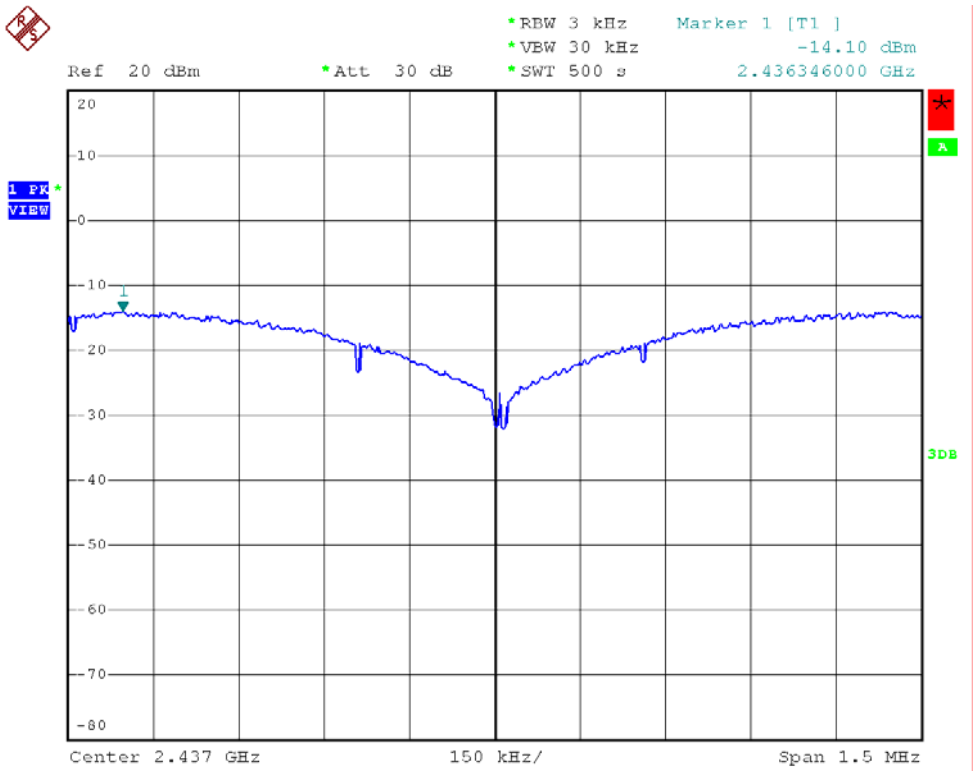
Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
802.11b (11Mbps)	01	2412	-14.03
	06	2437	-14.10
	11	2462	-13.91
802.11g (54Mbps)	01	2412	-12.56
	06	2437	-13.28
	11	2462	-12.99

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
802.11n HT20 (65Mbps)	01	2412	-16.08
	06	2437	-16.06
	11	2462	-15.55
802.11n HT40 (135Mbps)	03	2422	-19.23
	06	2437	-19.07
	09	2452	-19.43

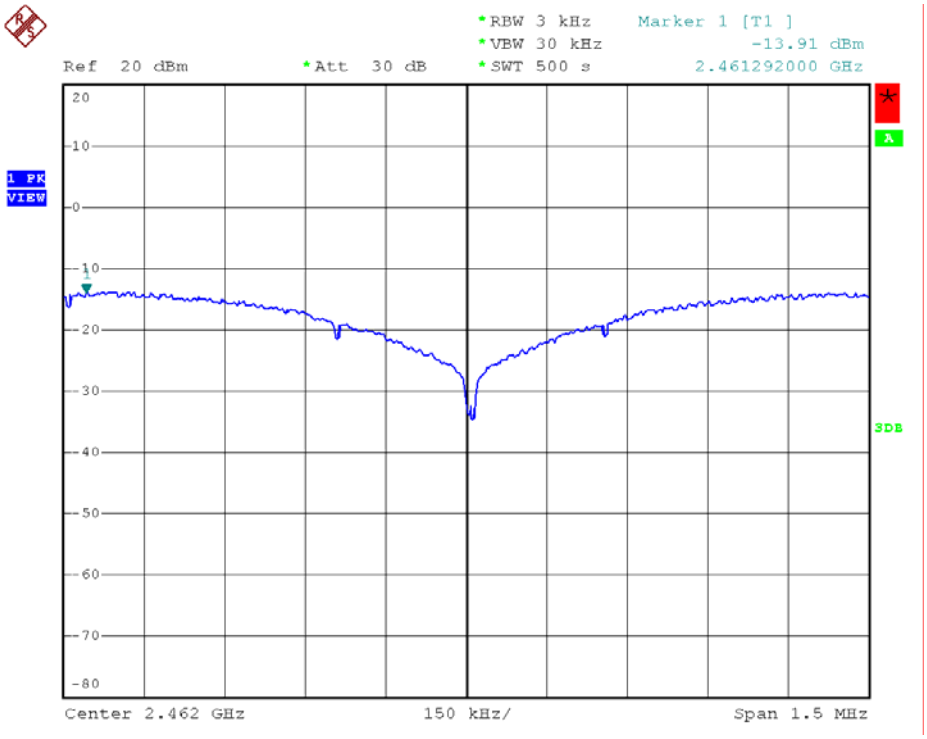
Modulation Standard: 802.11b (11Mbps)
Channel: 01



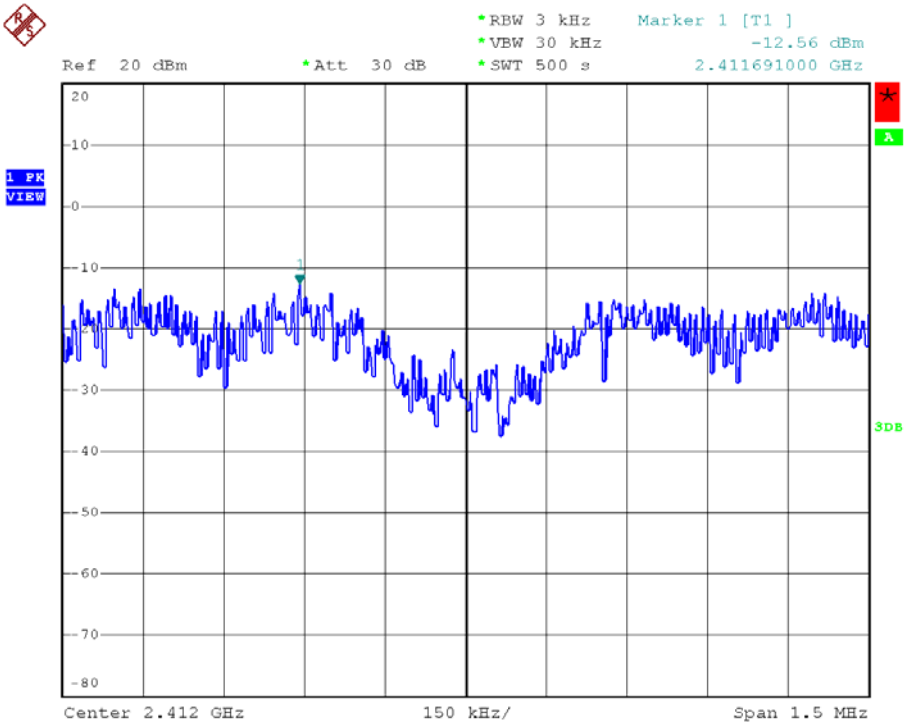
Modulation Standard: 802.11b (11Mbps)
Channel: 06



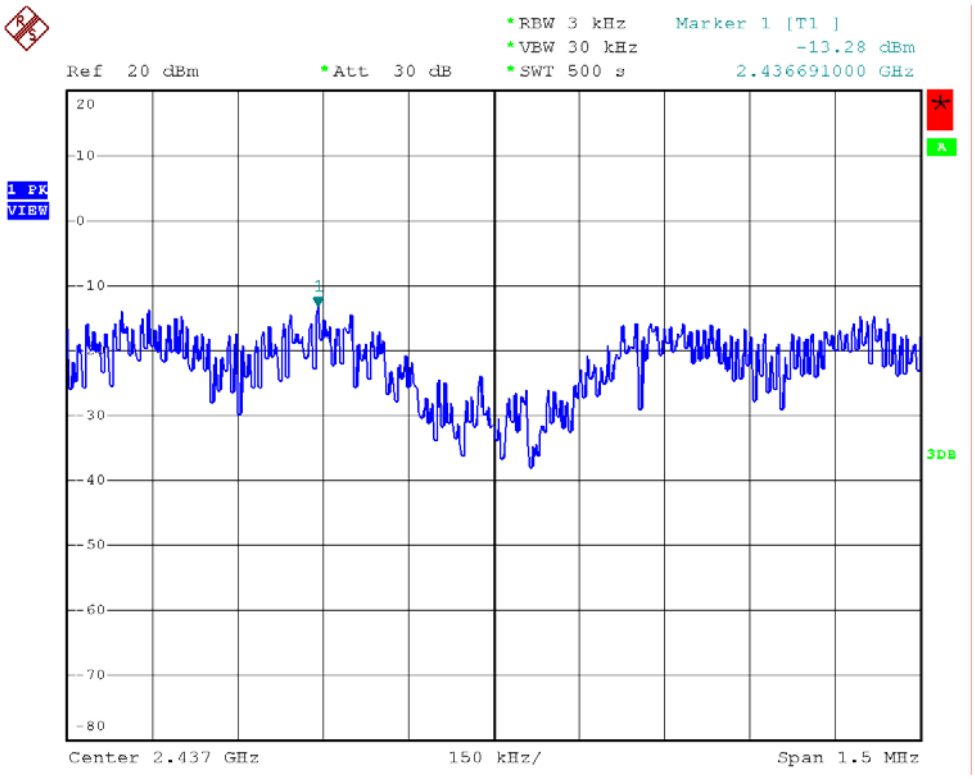
Modulation Standard: 802.11b (11Mbps)
Channel: 11



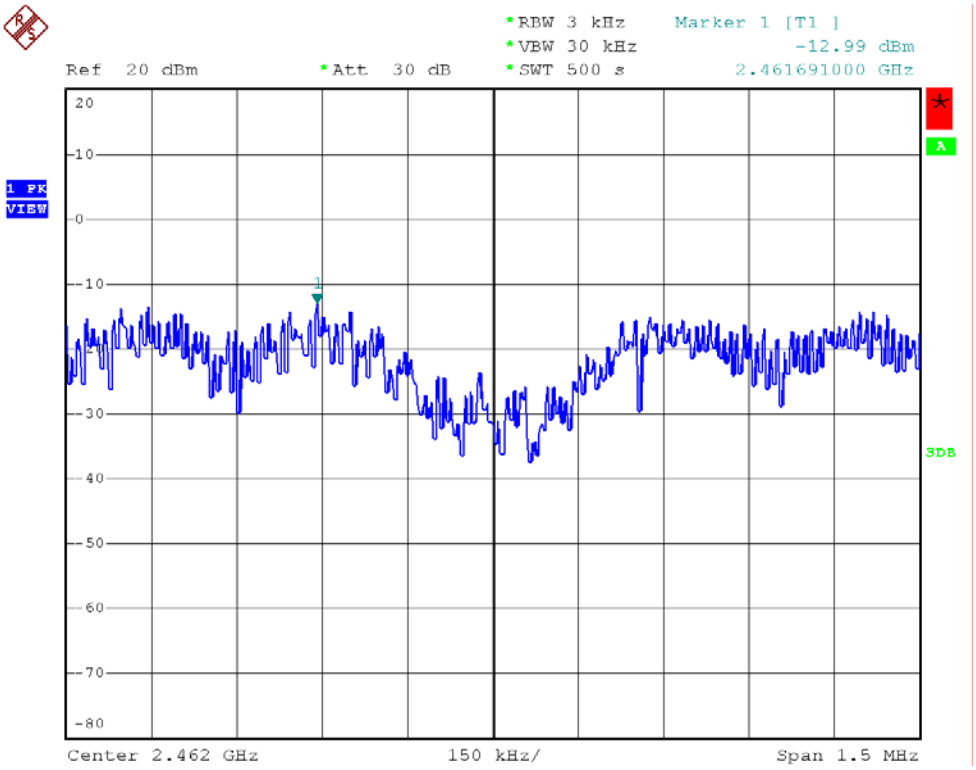
Modulation Standard: 802.11g (54Mbps)
Channel: 01



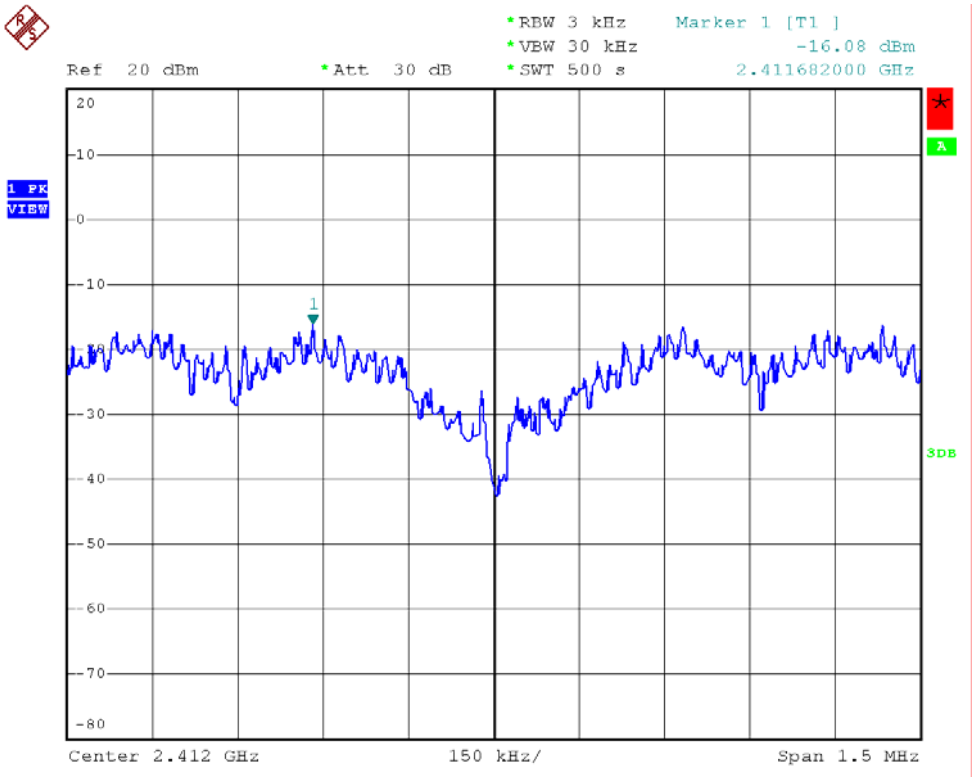
Modulation Standard: 802.11g (54Mbps)
Channel: 06



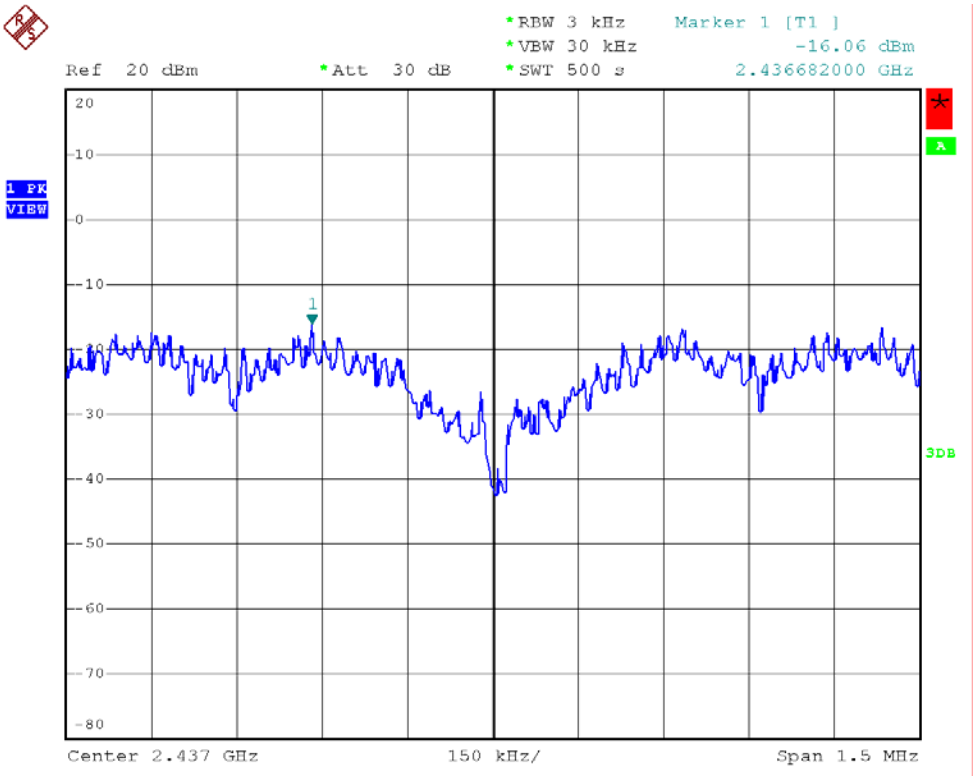
Modulation Standard: 802.11g (54Mbps)
Channel: 11



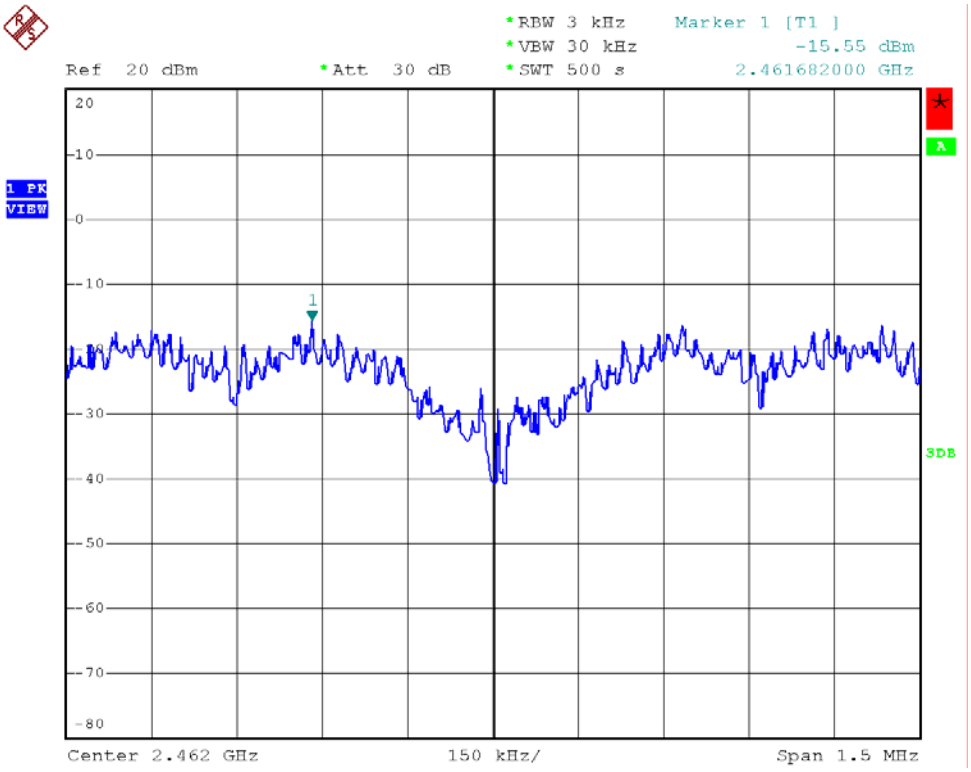
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 01



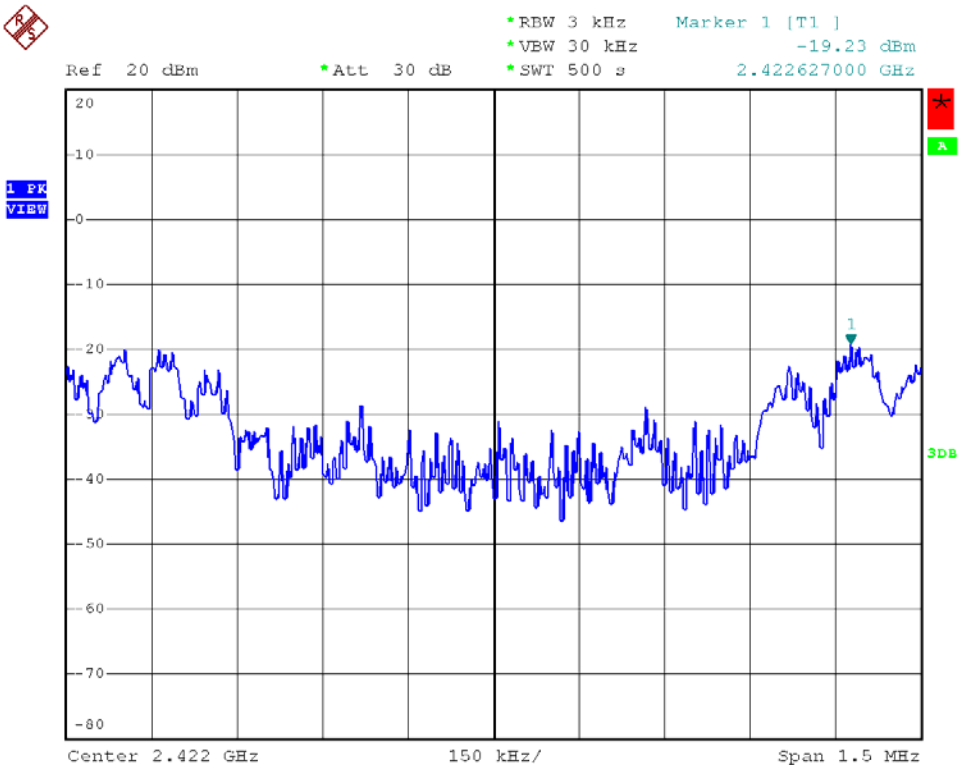
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 06



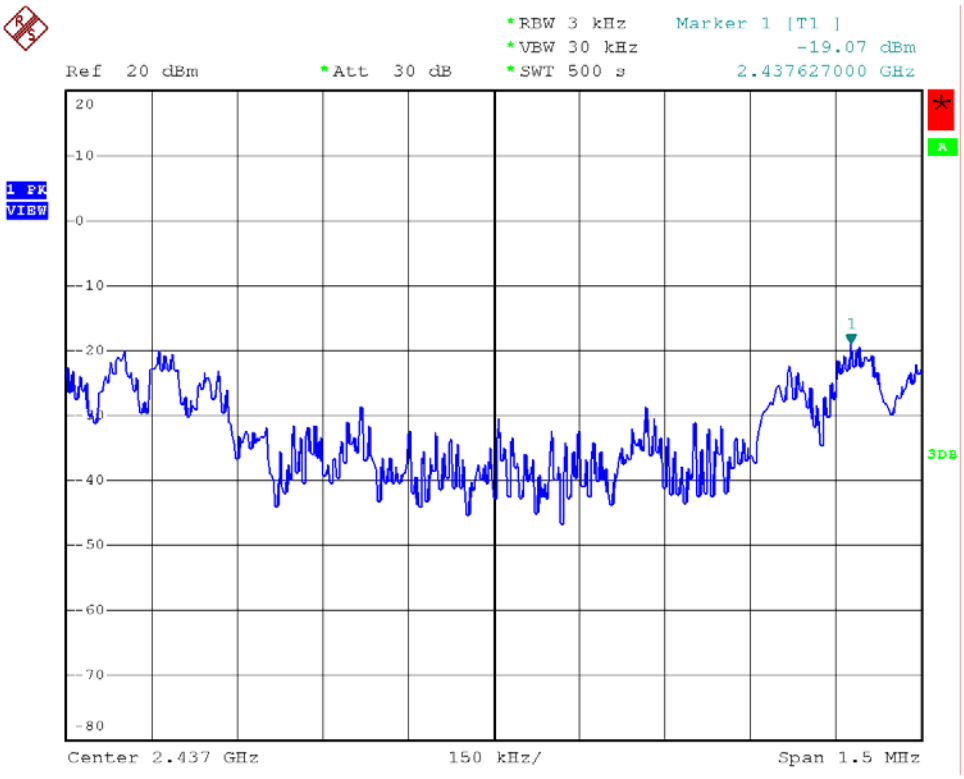
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 11



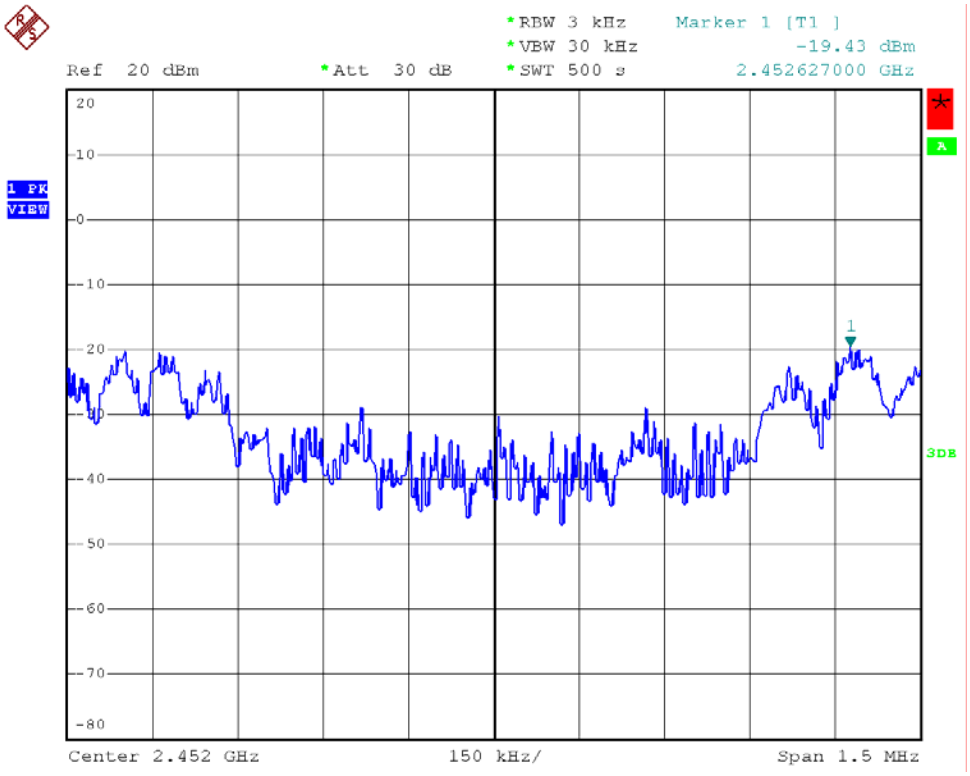
Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 03



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 06



Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 09



9. Band Edges Measurement

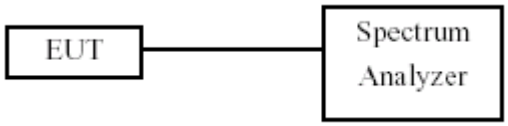
9.1 Test Limit

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

9.2 Test Procedure

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

9.3 Test Setup Layout



9.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2010/05/08	2011/05/07

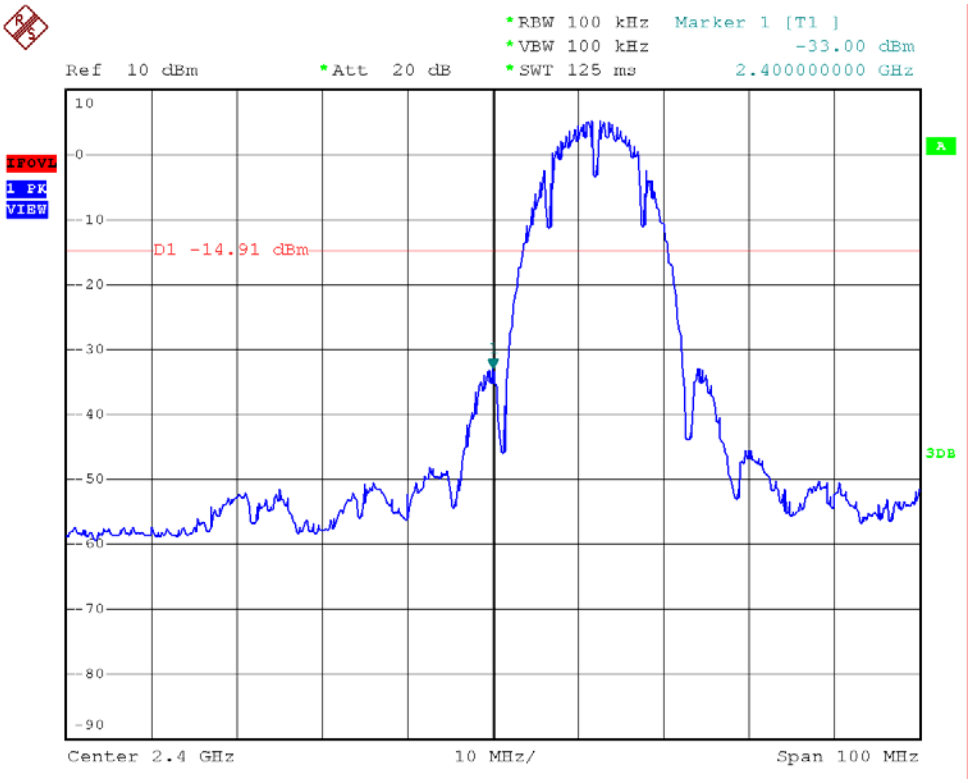
9.5 Test Result and Data

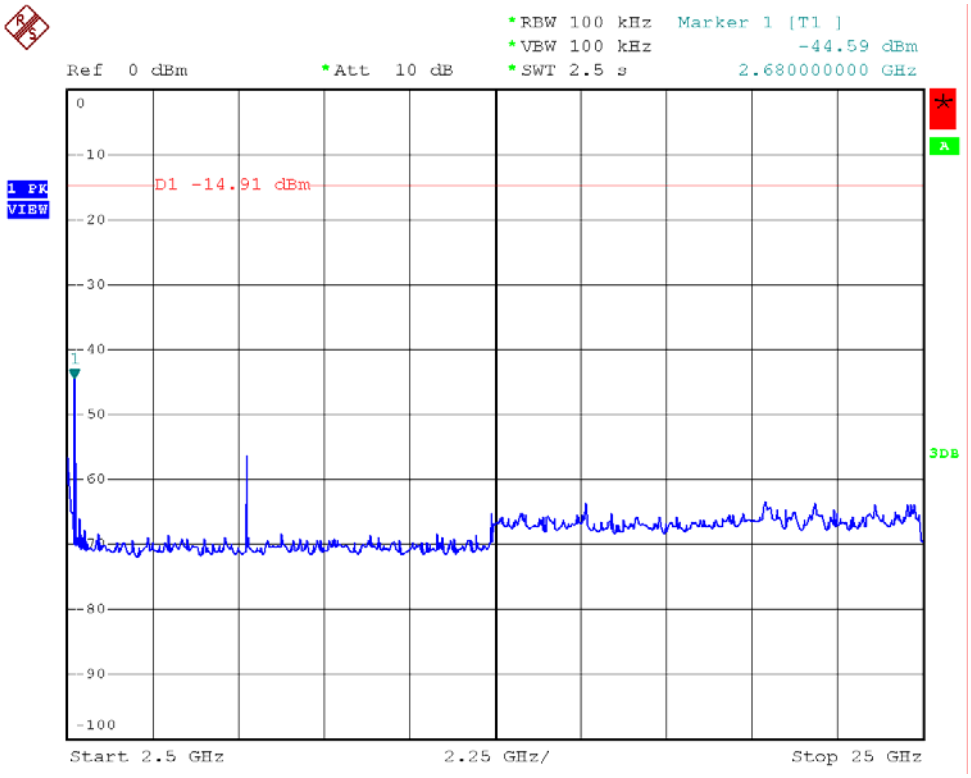
Test Date: Nov, 18, 2010 Temperature: 20℃

Atmospheric pressure: 1020 hPa Humidity: 65%

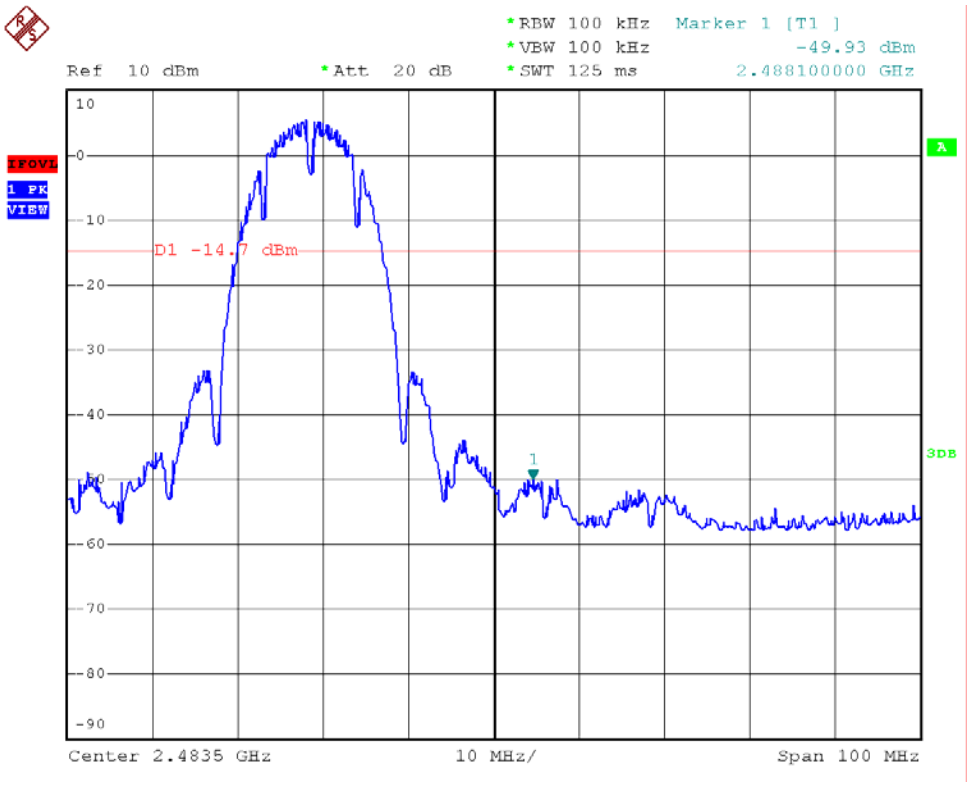
Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)	maximum value (dBm)
802.11b (11Mbps)	01	2412	2400.00	-33.00
	11	2462	2860.00	-37.53
802.11g (54Mbps)	01	2412	2400.00	-30.24
	11	2462	2514.02	-41.17
802.11n HT20 (65Mbps)	01	2412	2400.00	-33.97
	11	2462	2514.16	-48.20
802.11n HT40 (135Mbps)	03	2422	2400.00	-34.37
	09	2452	2492.10	-47.27

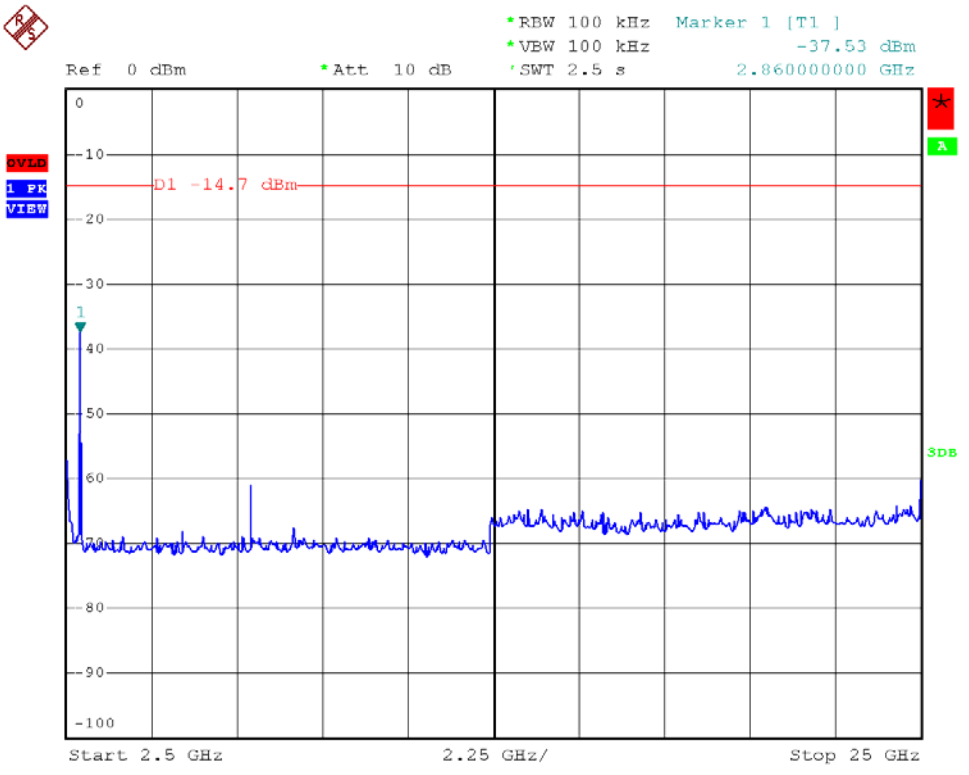
Modulation Standard: 802.11b (11Mbps)
Channel: 01



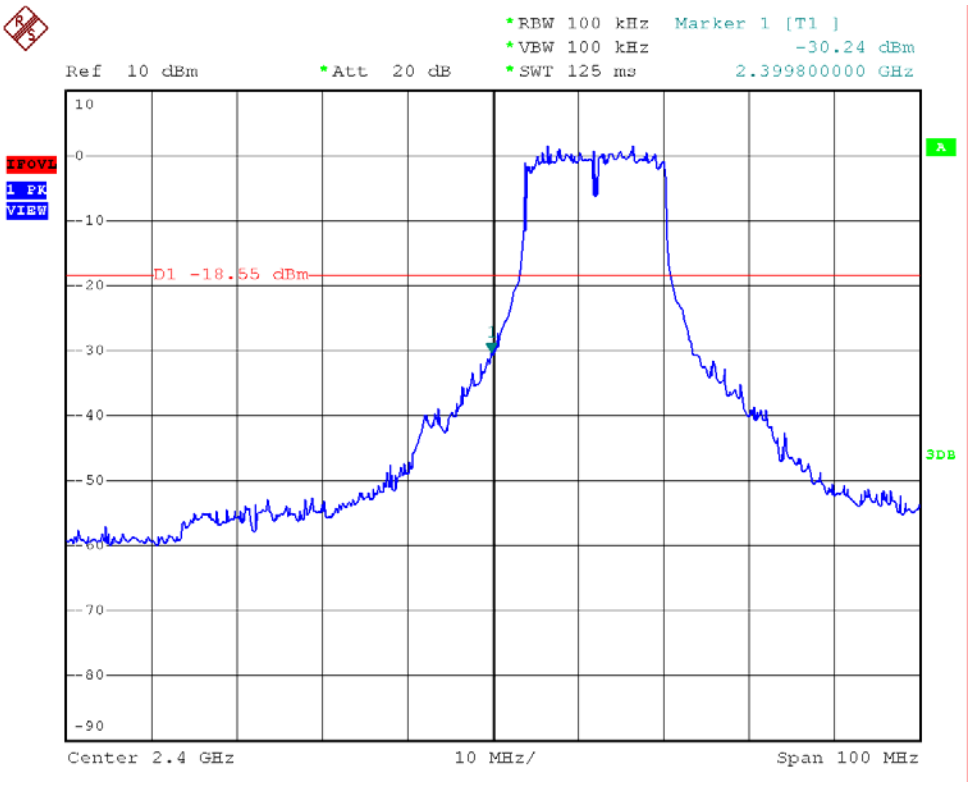


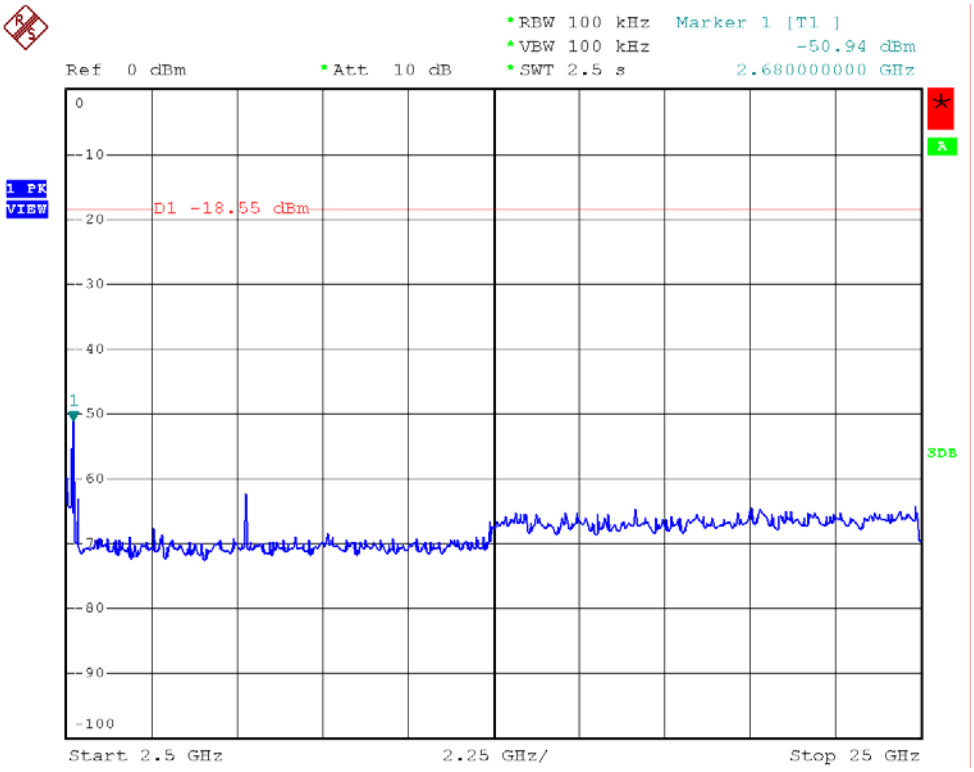
Modulation Standard: 802.11b (11Mbps)
Channel: 11



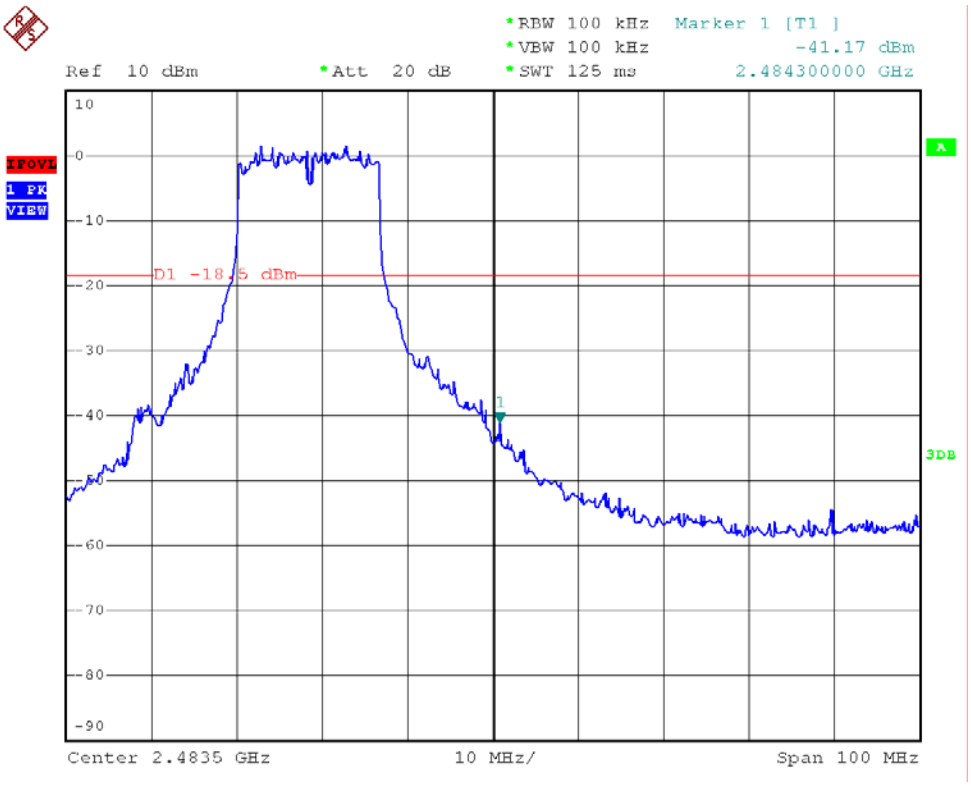


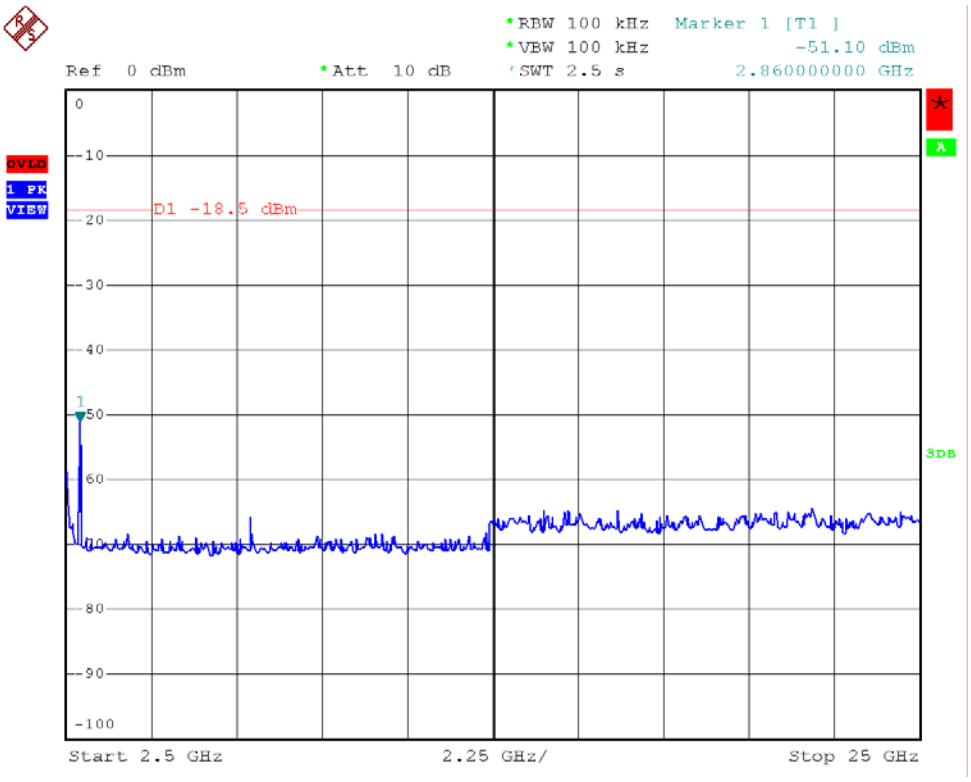
Modulation Standard: 802.11g (54Mbps)
Channel: 01



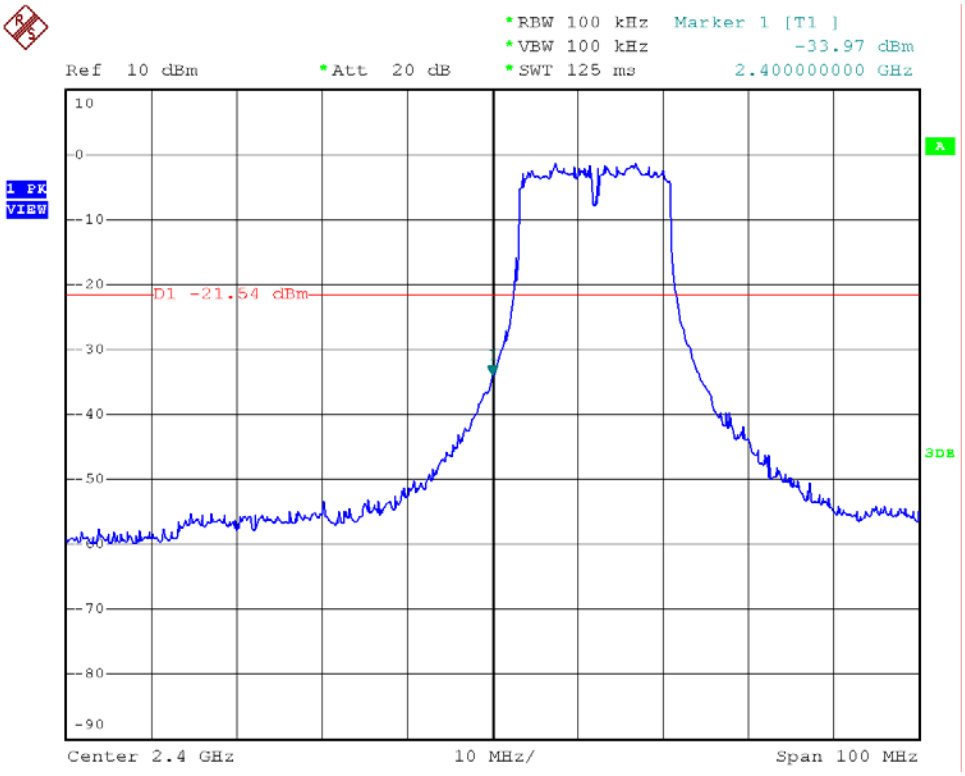


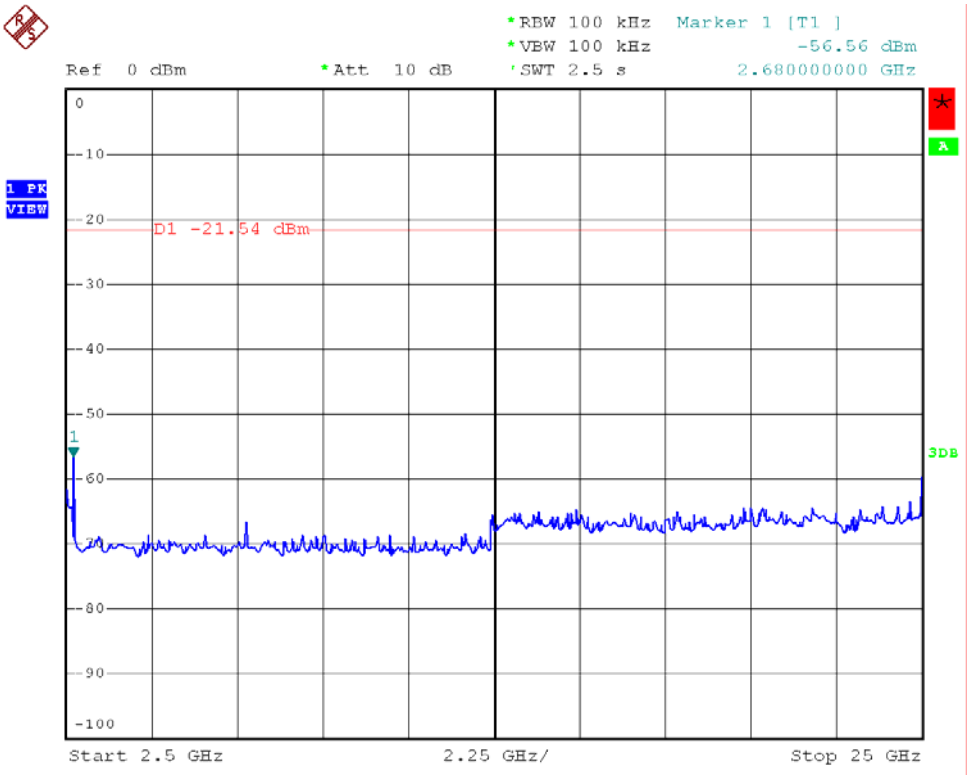
Modulation Standard: 802.11g (54Mbps)
Channel: 11



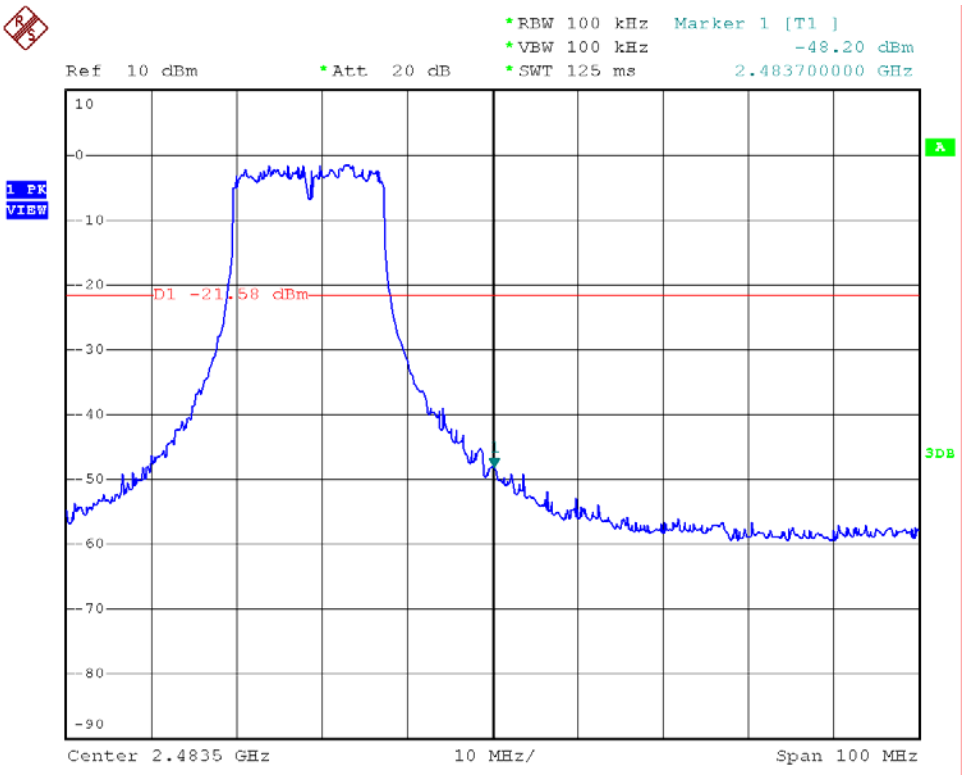


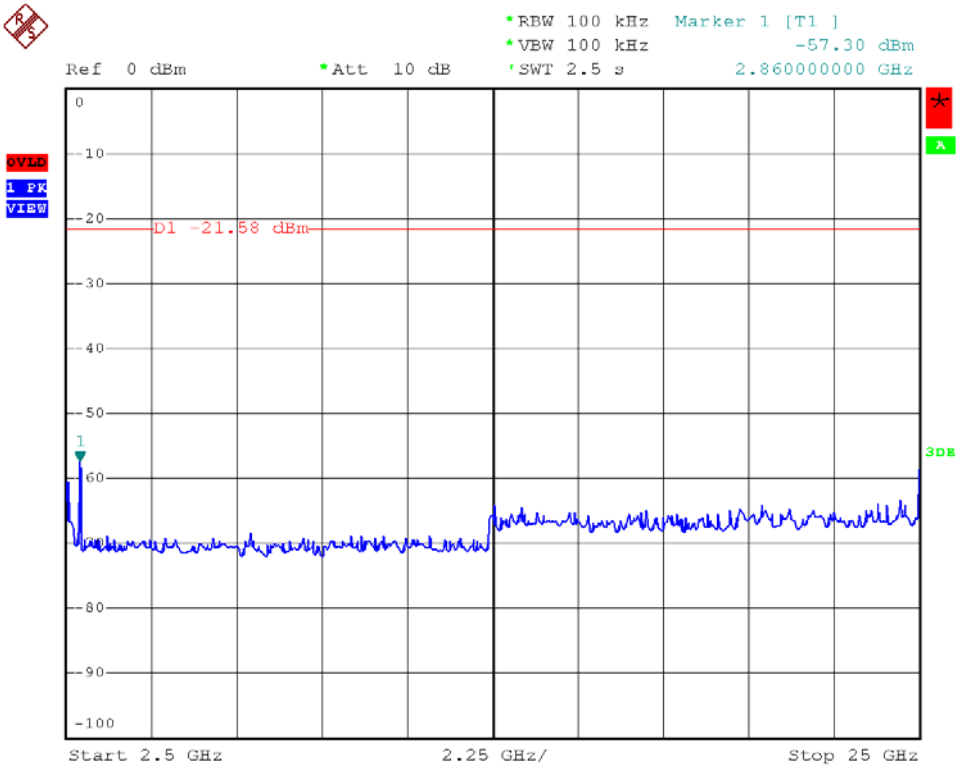
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 01



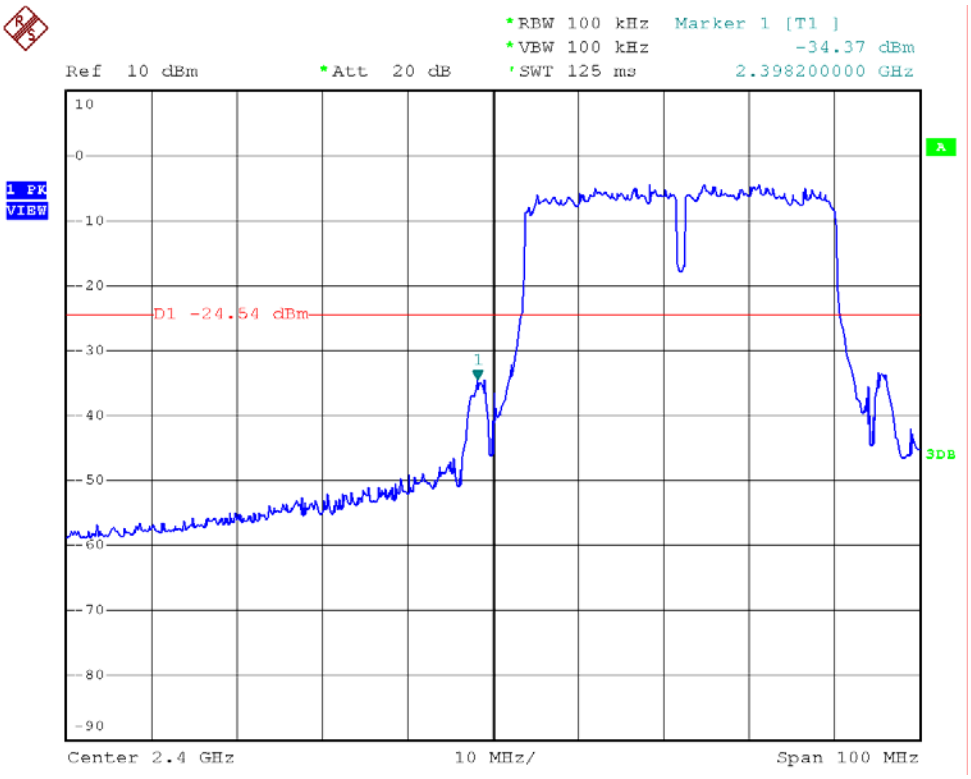


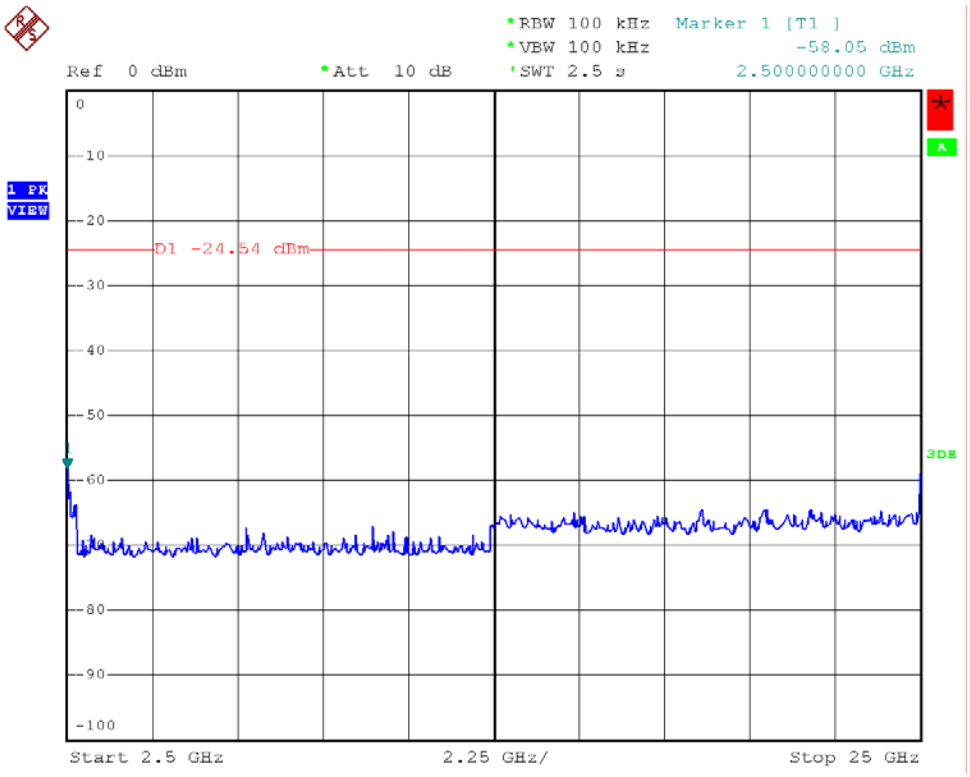
Modulation Standard: 802.11n, HT20 (65Mbps)
Channel: 11



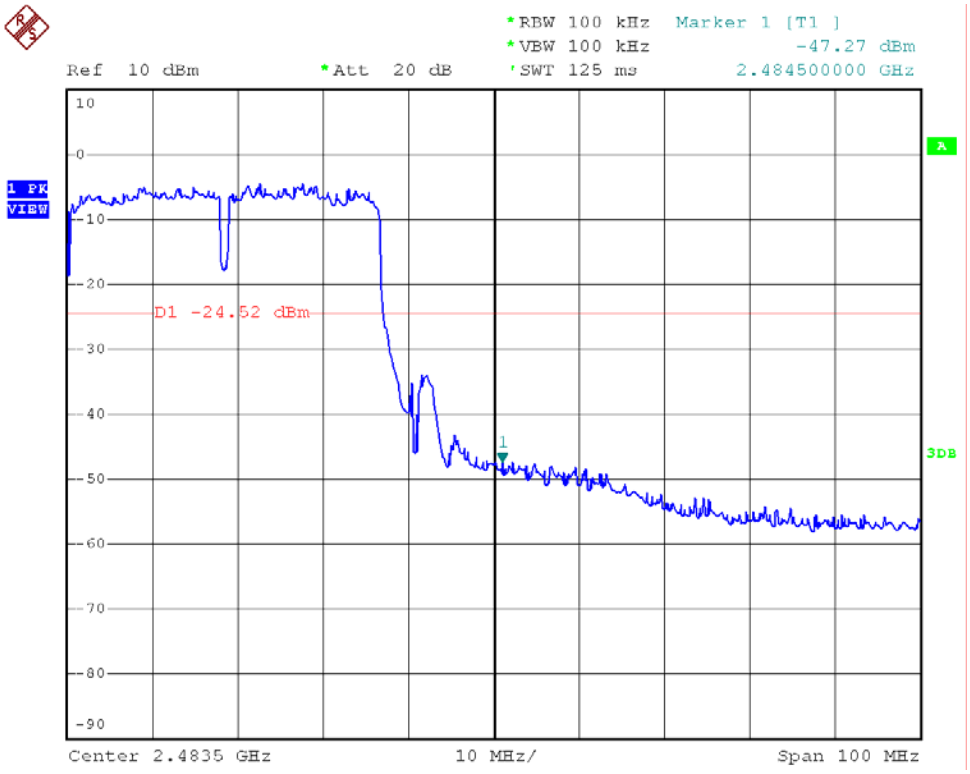


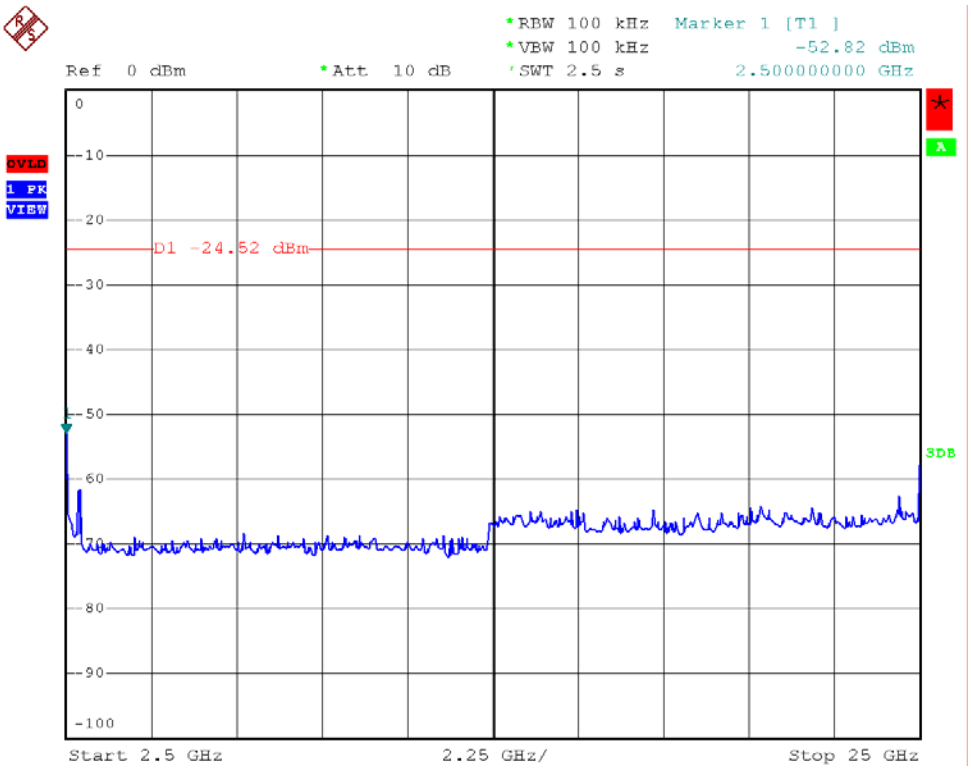
Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 03





Modulation Standard: 802.11n, HT40 (135Mbps)
Channel: 09





9.6 Restrict Band Emission Measurement Data

Test Date: Nov, 19, 2010 Temperature: 20℃

Atmospheric pressure: 1023 hPa Humidity: 66%

Modulation Standard: IEEE 802.11b (11Mbps)

Channel 1										Fundamental Frequency: 2412 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2371.20	H	50.22	8.73	58.95	Peak	74	54	-15.05	165	150
2385.23	H	38.95	8.79	47.74	Ave	74	54	-6.26	165	150
2382.93	V	50.55	8.78	59.33	Peak	74	54	-14.67	280	129
2385.74	V	39.35	8.79	48.14	Ave	74	54	-5.86	280	129
Channel 11										Fundamental Frequency: 2462 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2498.48	H	50.68	9.18	59.86	Peak	74	54	-14.14	261	150
2483.57	H	39.28	9.12	48.40	Ave	74	54	-5.60	261	150
2483.85	V	50.87	9.12	59.99	Peak	74	54	-14.01	132	100
2483.57	V	39.56	9.12	48.68	Ave	74	54	-5.32	132	100

Modulation Standard: IEEE 802.11g (54Mbps)

Channel 1										Fundamental Frequency: 2412 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.56	H	52.68	8.80	61.48	Peak	74	54	-12.52	126	111
2389.82	H	38.89	8.80	47.69	Ave	74	54	-6.31	126	111
2389.56	V	53.20	8.80	62.00	Peak	74	54	-12.00	214	150
2388.80	V	38.42	8.80	47.22	Ave	74	54	-6.78	214	150
Channel 11										Fundamental Frequency: 2462 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2484.80	H	56.77	9.12	65.89	Peak	74	54	-8.11	126	136
2483.57	H	41.34	9.12	50.46	Ave	74	54	-3.54	126	136
2484.80	V	59.03	9.12	68.15	Peak	74	54	-5.85	275	150
2483.57	V	42.64	9.12	51.76	Ave	74	54	-2.24	275	150

Modulation Standard: IEEE 802.11n HT20 (65Mbps)

Channel 1										Fundamental Frequency: 2412 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.56	H	51.87	8.80	60.67	Peak	74	54	-13.33	191	112
2389.82	H	39.33	8.80	48.13	Ave	74	54	-5.87	191	112
2389.97	V	52.27	8.80	61.07	Peak	74	54	-12.93	192	100
2389.82	V	39.61	8.80	48.41	Ave	74	54	-5.59	192	100
Channel 11										Fundamental Frequency: 2462 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.66	H	54.67	9.12	63.79	Peak	74	54	-10.21	147	126
2483.57	H	40.20	9.12	49.32	Ave	74	54	-4.68	147	126
2483.58	V	58.21	9.12	67.33	Peak	74	54	-6.67	258	100
2483.57	V	41.14	9.12	50.26	Ave	74	54	-3.74	258	100

Modulation Standard: IEEE 802.11n HT40 (135Mbps)

Channel 3										Fundamental Frequency: 2422 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.76	H	52.03	8.80	60.83	Peak	74	54	-13.17	133	125
2389.80	H	39.41	8.80	48.21	Ave	74	54	-5.79	133	125
2389.76	V	53.82	8.80	62.62	Peak	74	54	-11.38	192	100
2389.56	V	40.30	8.80	49.10	Ave	74	54	-4.90	192	100
Channel 9										Fundamental Frequency: 2452 MHz
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2484.04	H	53.35	9.12	62.47	Peak	74	54	-11.53	181	100
2483.57	H	40.16	9.12	49.28	Ave	74	54	-4.72	181	100
2484.04	V	56.30	9.12	65.42	Peak	74	54	-8.58	269	150
2483.57	V	41.69	9.12	50.81	Ave	74	54	-3.19	269	150

Notes:

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

10. Restricted Bands of Operation

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

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

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

10.1 Labeling Requirement

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