



SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

FCC RADIO TEST REPORT

Applicant's company	Ralink Technology Corporation
Applicant Address	5F., No.36, Taiyuan St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
FCC ID	VQF-RT3090BC4
Manufacturer's company	Ralink Technology Corporation
Manufacturer Address	5F., No.36, Taiyuan St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.

Product Name	802.11b/g/n 1T1R combo card
Brand Name	Ralink
Model Name	RT3090BC4
Test Rule	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz
Received Date	Nov. 15, 2009
Final Test Date	Jan. 07, 2010
Submission Type	Class II Change
Multiple Listing	Please refer to section 3.7

Statement

Test result included in this report is for the IEEE 802.11n and IEEE 802.11b/g part of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



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History of This Test Report

Original Issue Date: Jan. 18, 2010

Report No.: FR9D0210-01AA

☒ No additional attachment.

☐ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description



1. CERTIFICATE OF COMPLIANCE

Product Name : 802.11b/g/n 1T1R combo card
Brand Name : Ralink
Model Name : RT3090BC4
Applicant : Ralink Technology Corporation
Test Rule Part(s) : 47 CFR FCC Part 15 Subpart C § 15.247

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Nov. 15, 2009 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Jordan Hsiao 2010.1.18

Jordan Hsiao

SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	Rule Section	Description of Test	Result	Under Limit
4.1	15.207	AC Power Line Conducted Emissions	Complies	9.26 dB
4.2	15.247(b)(3)	Maximum Conducted Output Power	Complies	8.07 dB
4.3	15.247(e)	Power Spectral Density	Complies	10.11 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	0.30 dB
4.6	15.247(d)	Band Edge Emissions	Complies	0.03 dB
4.7	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Conducted Output Power	±0.8dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
6dB Spectrum Bandwidth	±8.5×10 ⁻⁸	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7°C	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details

IEEE 802.11n

Items	Description
Product Type	WLAN (1TX, 1RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	see the below table for IEEE 802.11n
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	see the below table for IEEE 802.11n
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11 for 20MHz bandwidth ; 7 for 40MHz bandwidth
Channel Band Width (99%)	Ant. A MCS0 (20MHz): 17.64 MHz ; MCS0 (40MHz): 36.00 MHz Ant. B MCS0 (20MHz): 17.64 MHz ; MCS0 (40MHz): 36.16 MHz Ant. C MCS0 (20MHz): 17.64 MHz ; MCS0 (40MHz): 36.00 MHz Ant. D MCS0 (20MHz): 17.64 MHz ; MCS0 (40MHz): 36.16 MHz
Conducted Output Power	Ant. A MCS0 (20MHz): 21.55 dBm ; MCS0 (40MHz): 17.08 dBm Ant. B MCS0 (20MHz): 21.68 dBm ; MCS0 (40MHz): 17.07 dBm Ant. C MCS0 (20MHz): 21.55 dBm ; MCS0 (40MHz): 17.08 dBm Ant. D MCS0 (20MHz): 21.68 dBm ; MCS0 (40MHz): 17.07 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

IEEE 802.11b/g

Items	Description
Product Type	WLAN (1TX, 1RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	DSSS for IEEE 802.11b ; OFDM for IEEE 802.11g
Data Modulation	DSSS (BPSK / QPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11
Channel Band Width (99%)	Ant. A 11b: 14.76 MHz ; 11g: 16.52 MHz Ant. B 11b: 14.84 MHz ; 11g: 16.48 MHz Ant. C 11b: 14.76 MHz ; 11g: 16.52 MHz Ant. D 11b: 14.84 MHz ; 11g: 16.48 MHz
Conducted Output Power	Ant. A 11b: 21.14 dBm ; 11g: 21.68 dBm Ant. B 11b: 20.89 dBm ; 11g: 21.93 dBm Ant. C 11b: 21.14 dBm ; 11g: 21.68 dBm Ant. D 11b: 20.89 dBm ; 11g: 21.93 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Antenna & Band width

Antenna	Single (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11b	V	X
IEEE 802.11g	V	X
IEEE 802.11n	V	V

IEEE 802.11n spec

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Datarate(Mbps)			
									800nsGI		400nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.200	15
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.400	30
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.700	45
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.900	60
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.300	90
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.800	120
6	1	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.000	135
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.200	150
8	2	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.444	30
9	2	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.889	60
10	2	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.333	90
11	2	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.778	120
12	2	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.667	180
13	2	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.556	240
14	2	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.000	270
15	2	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.444	300

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	guard interval

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
A	Micon	71306	Dipole Antenna	Reversed-SMA	2.93	TX/RX
B	MICHIGAN	6036B0014401 (Main)	PIFA Antenna	I-PEX	2.95	TX/RX
		6036B0016901 (Aux)				
C	JOYMAX	IWX-145XRSXX-999	Dipole Antenna	Reversed-SMA	3.7	TX/RX
D	ACON	APP6P-700119	PIFA Antenna	I-PEX	3.5	TX/RX

Note: There are four types of EUT, the difference of each type as following description:

EUT 1. Two antenna connectors with two crystals

EUT 2. Two antenna connectors with one crystal

EUT 3. One antenna connector with two crystals

EUT 4. One antenna connector with one crystal

After pre-testing, EUT 1 generated the worst test result, so it was recorded in the report.

There are two sizes of EUT.

One is full size (with PCB extend card), and another is half size (without PCB extend card).

But their internal structures are identical. So only full size of EUT was tested and recorded in the report.

All the detail antenna information, please refer to Appendix D for further information.

<For Original report>

Due to Ant. A and B mentioned above are the highest gain value among two different types, only ant A and B were tested and recorded in this test report.

<For Class II Change>

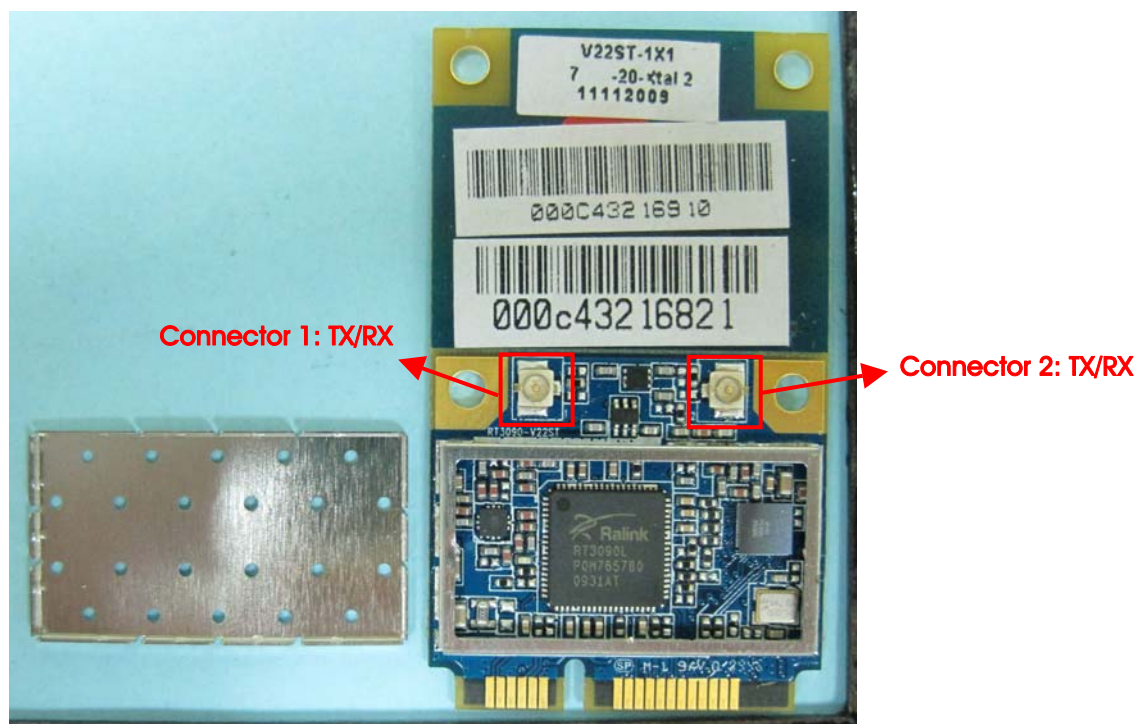
Add two antennas: Ant. C and Ant. D.

Due to the antenna gain of Ant. C and Ant. D are higher than Ant. A and Ant. B, so both of Ant. C and Ant. D were tested and recorded in the report.

The EUT supports the antenna with TX/RX diversity function for WLAN and Bluetooth.

When Connector 1 is WLAN function, Connector 2 must be Bluetooth function.

Oppositely, if Connector 2 is WLAN function, Connector 1 must be Bluetooth function.



3.4. Table for Carrier Frequencies

There are two bandwidth systems for IEEE 802.11n.

For both 20MHz bandwidth systems, use Channel 1~Channel 11.

For both 40MHz bandwidth systems, use Channel 3~Channel 9.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	1	2412 MHz	7	2442 MHz
	2	2417 MHz	8	2447 MHz
	3	2422 MHz	9	2452 MHz
	4	2427 MHz	10	2457 MHz
	5	2432 MHz	11	2462 MHz
	6	2437 MHz		

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Antenna
AC Power Line Conducted Emissions	Normal Link	-	-	-
Maximum Peak Conducted Output Power	MCS0/20MHz	3.5 Mbps	1/6/11	A / B / C / D
	MCS0/40MHz	13.5 Mbps	3/6/9	A / B / C / D
	11b/BPSK	1 Mbps	1/6/11	A / B / C / D
	11g/BPSK	6 Mbps	1/6/11	A / B / C / D
Power Spectral Density 6dB Spectrum Bandwidth	MCS0/20MHz	3.5 Mbps	1/6/11	A / B / C / D
	MCS0/40MHz	13.5 Mbps	3/6/9	A / B / C / D
	11b/BPSK	1 Mbps	1/6/11	A / B / C / D
	11g/BPSK	6 Mbps	1/6/11	A / B / C / D
Radiated Emissions 9kHz~1GHz	Normal Link	-	-	-
Radiated Emissions 1GHz~10 th Harmonic	MCS0/20MHz	3.5 Mbps	1/6/11	A / B / C / D
	MCS0/40MHz	13.5 Mbps	3/6/9	A / B / C / D
	11b/BPSK	1 Mbps	1/6/11	A / B / C / D
	11g/BPSK	6 Mbps	1/6/11	A / B / C / D
Band Edge Emissions	MCS0/20MHz	3.5 Mbps	1/11	A / B / C / D
	MCS0/40MHz	13.5 Mbps	3/9	A / B / C / D
	11b/BPSK	1 Mbps	1/11	A / B / C / D
	11g/BPSK	6 Mbps	1/11	A / B / C / D

The following test modes were performed for all tests:

Mode 1. EUT 1 with Ant. A

Mode 2. EUT 1 with Ant. B

Mode 3. EUT 1 with Ant. C

Mode 4. EUT 1 with Ant. D

All the test results were recorded in the report.

Note: Due to add antenna will not affect the test result for Conducted Emission test, so only Ant. A and Ant. B were tested recorded in the report.

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH03-HY	SAC	Hwa Ya	480872	IC 4086	-
CO04-HY	Conduction	Hwa Ya	480872	IC 4086	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

Please refer section 6 for Test Site Address.

3.7. Table for Multiple Listing & Class II Change

This product is an extension of original one reported under Sporton project number: 9D0210

Below is the table for the change of the product with respect to the original one.

Modifications	Description	Performance Checking
Add 2 antennas	Additional antenna information as below: Ant. C (Dipole Antenna) Model No.: IWX-145XRSXX-999 Brand Name: JOYMAX Antenna gain: 3.7dBi Ant. D (PIFA Antenna) Model No.: APP6P-700119 Brand Name: ACON Antenna gain: 3.5dBi	Maximum Peak Conducted Output Power Power Spectral Density 6dB Spectrum Bandwidth Radiated Emissions Band Edge Emissions

3.8. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Modem	ACEEX	DM1414	IFAXDM1414
Wireless AP	Planex	GW-AP54SGX	N/A
Notebook	DELL	M1330	E2KWM3945ABG
Notebook	DELL	PP25L	E2K4965AGNM
Mouse	iCooky	AMS0706W	N/A

3.9. Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

<For Antenna A>

Power Parameters of IEEE 802.11n

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	12	1F	12
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	12	15	10

Power Parameters of IEEE 802.11b/g

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	13	19	12
IEEE 802.11g	15	1F	12

<For Antenna B>

Power Parameters of IEEE 802.11n

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	13	1F	13
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	10	15	11

Power Parameters of IEEE 802.11b/g

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	13	19	13
IEEE 802.11g	14	1F	14

<For Antenna C>

Power Parameters of IEEE 802.11n

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	12	1F	12
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	12	15	10

Power Parameters of IEEE 802.11b/g

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	12	19	12
IEEE 802.11g	14	1F	12

<For Antenna D>

Power Parameters of IEEE 802.11n

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	13	1F	13
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	10	15	11

Power Parameters of IEEE 802.11b/g

Test Software Version	QA		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	13	19	13
IEEE 802.11g	14	1F	14

During the test, the following programs under WIN XP were executed:

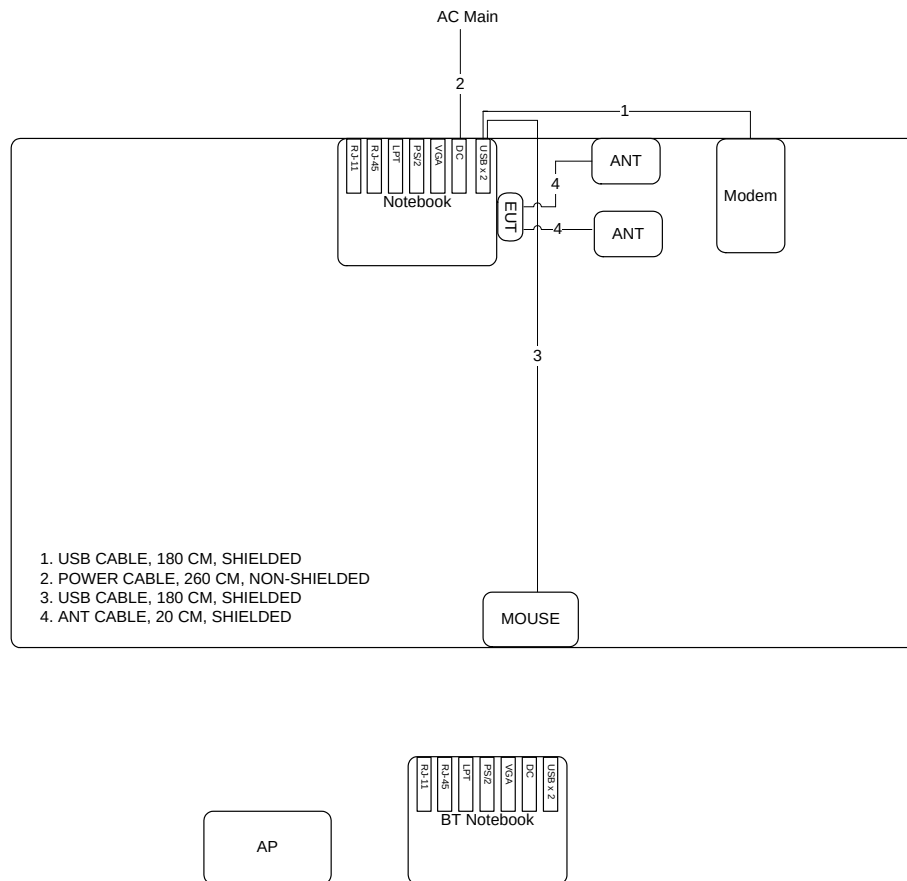
Executed "QA" was executed the test program to control the EUT continuously transmit RF signal.

3.10. Test Configurations

3.10.1. Radiation Emissions Test Configuration

Test Configuration: 9KHz~1GHz

Test Mode: Mode 1 / Mode 3





The diagram illustrates a network topology with the following components and connections:

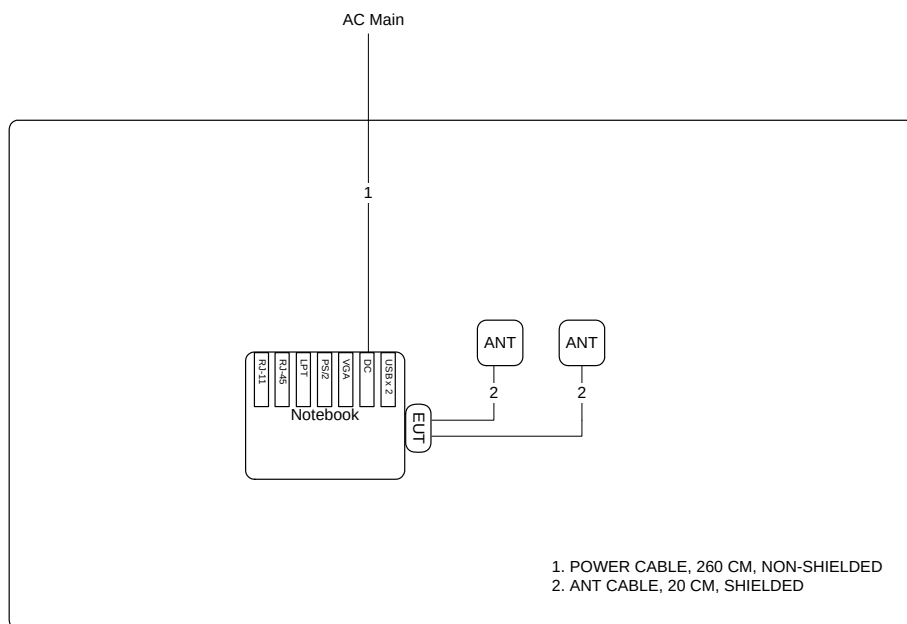
- AC Main**: Connected to the **Notebook** via a power cable (2).
- Notebook**: Features ports for RJ11, RJ45, LPT, PS/2, VGA, DC, and USB x 2. It is connected to the **EUT** via a USB cable (1).
- EUT**: A central unit connected to the **Notebook**, **Modem**, **ANT**, and **MOURSE**.
- Modem**: Connected to the **EUT** via a USB cable (1).
- ANT**: Two antennas connected to the **EUT** via antenna cables (4).
- MOURSE**: Connected to the **EUT** via a mouse cable (3).
- BT Notebook**: Located at the bottom, it has ports for RJ11, RJ45, LPT, PS/2, VGA, DC, and USB x 2.
- AP**: An Access Point located below the BT Notebook.

Legend:

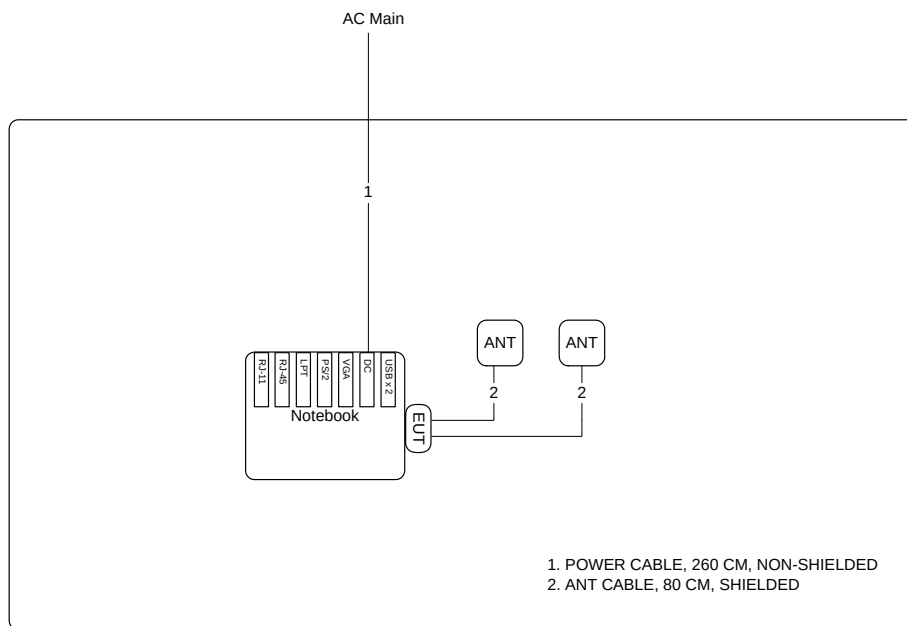
1. USB CABLE, 180 CM, SHIELDED
2. POWER CABLE, 260 CM, NON-SHIELDED
3. USB CABLE, 180 CM, SHIELDED
4. ANT CABLE, 80 CM, SHIELDED

Test Configuration: above 1GHz

Test Mode: Mode 1 / Mode 3

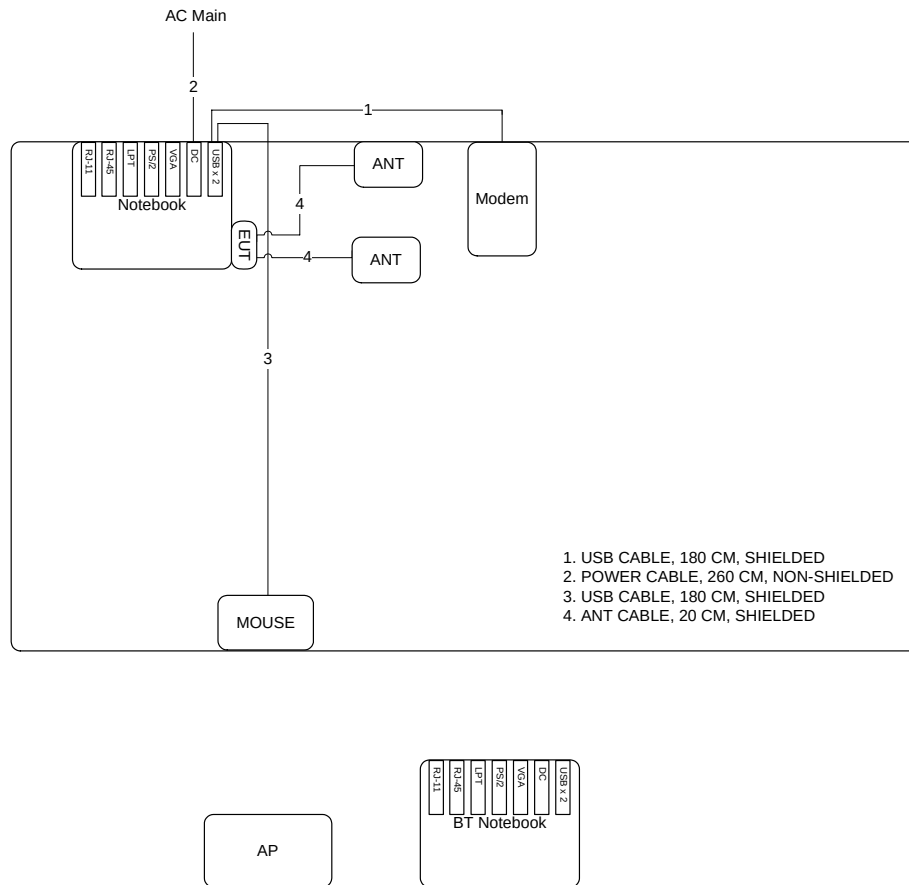


Test Mode: Mode 2 / Mode 4

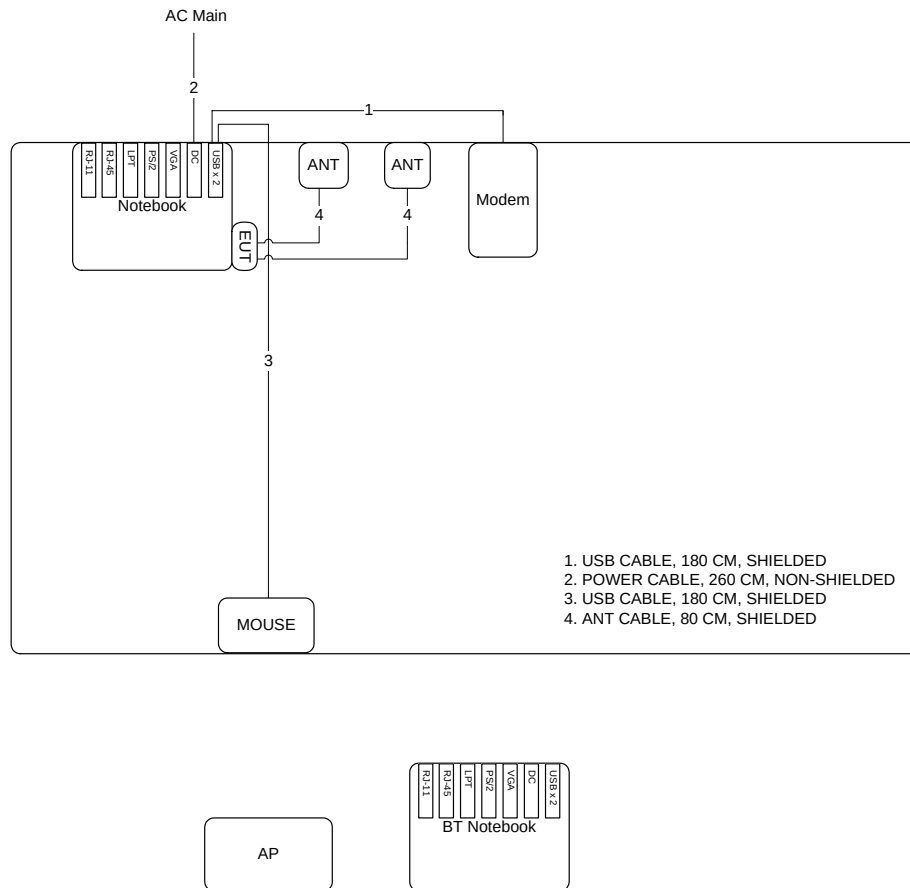


3.10.2. AC Power Line Conduction Emissions Test Configuration

Test Mode: Mode 1 / Mode 3



Test Mode: Mode 2 / Mode 4



4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

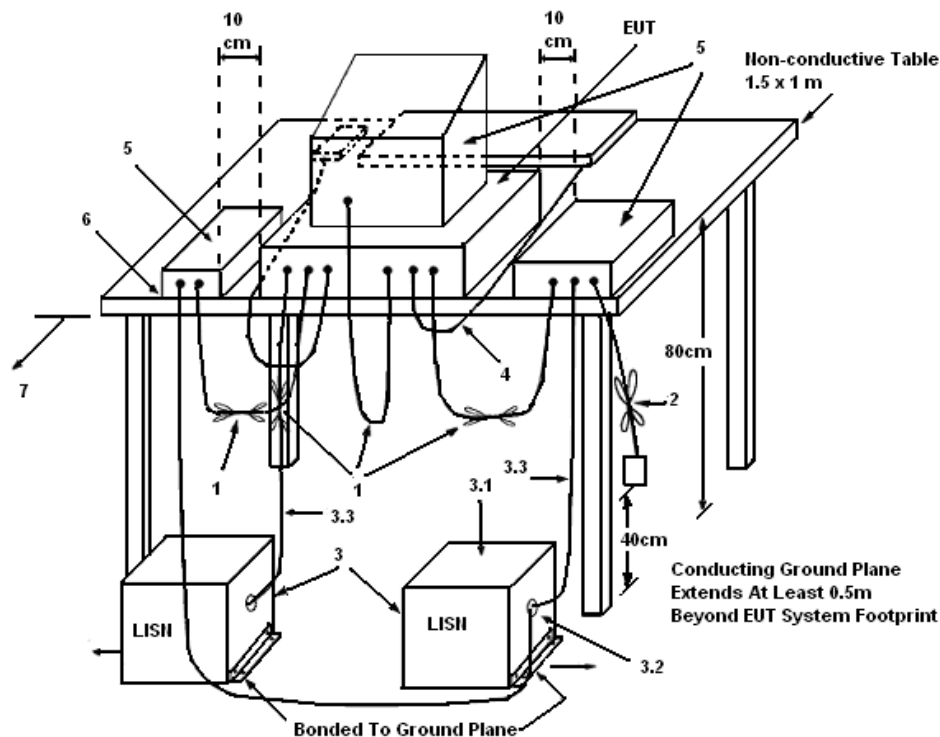
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
- (3.1) All other equipment powered from additional LISN(s).
- (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
- (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

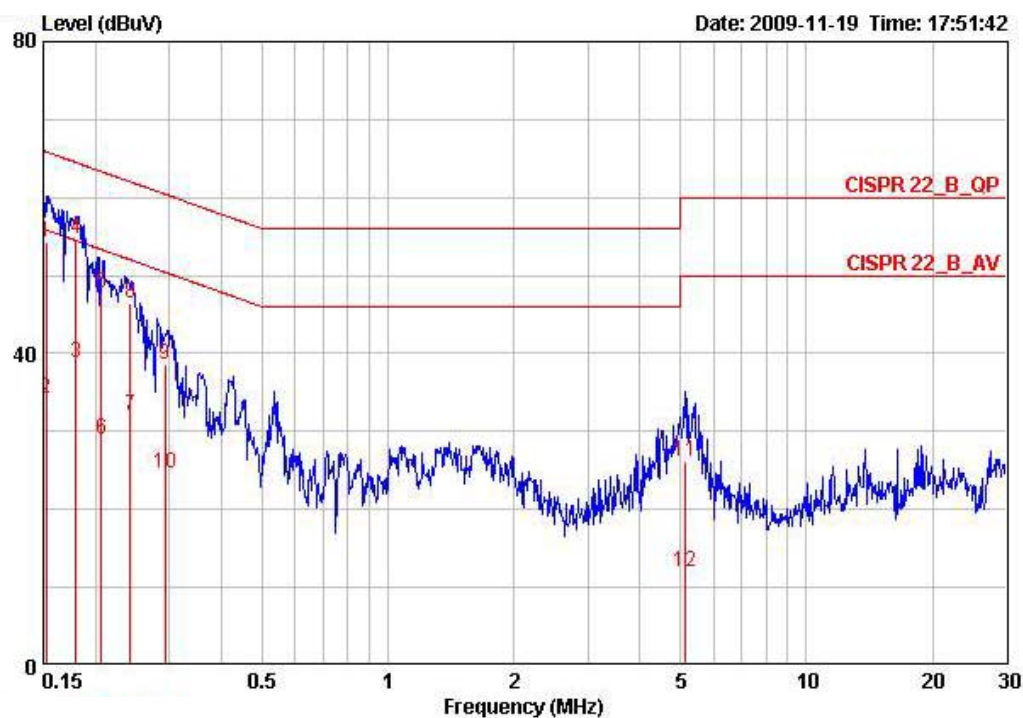
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

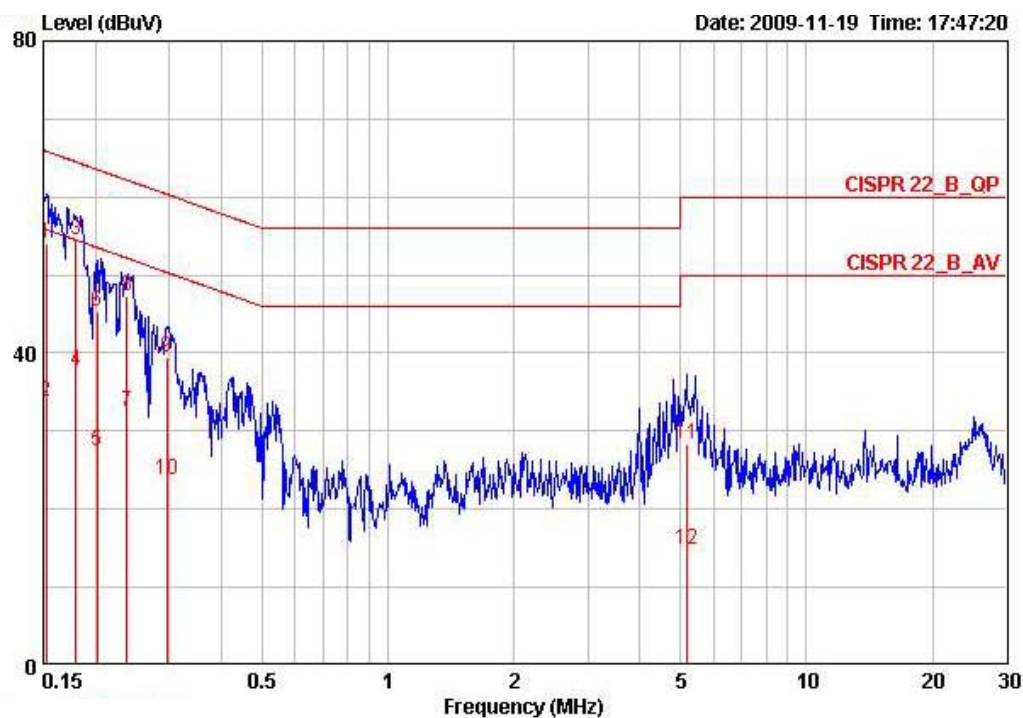
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23°C	Humidity	54%
Test Engineer	Rex Chiu	Phase	Line
Configuration	Normal Link / Mode 1		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15240	54.37	-11.49	65.87	54.10	0.07	0.20	QP
2	0.15240	34.20	-21.66	55.87	33.93	0.07	0.20	AVERAGE
3	0.17920	38.72	-15.80	54.52	38.46	0.06	0.20	AVERAGE
4	0.17920	54.66	-9.86	64.52	54.40	0.06	0.20	QP
5	0.20640	47.73	-15.62	63.35	47.48	0.05	0.20	QP
6	0.20640	28.89	-24.46	53.35	28.64	0.05	0.20	AVERAGE
7	0.24240	32.14	-19.87	52.01	31.90	0.04	0.20	AVERAGE
8	0.24240	46.32	-15.69	62.01	46.08	0.04	0.20	QP
9	0.29320	38.62	-21.81	60.43	38.38	0.04	0.20	QP
10	0.29320	24.54	-25.89	50.43	24.30	0.04	0.20	AVERAGE
11	5.112	26.25	-33.75	60.00	25.78	0.17	0.30	QP
12	5.112	12.02	-37.98	50.00	11.55	0.17	0.30	AVERAGE

Temperature	23°C	Humidity	54%
Test Engineer	Rex Chiu	Phase	Neutral
Configuration	Normal Link / Mode 1		

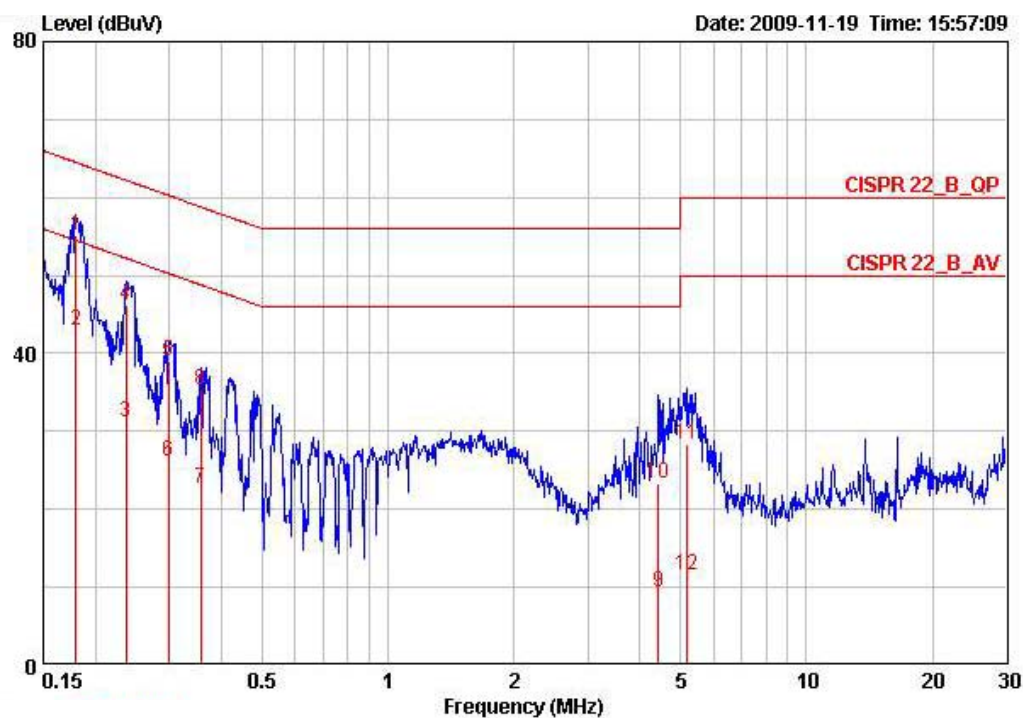


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15240	54.05	-11.81	65.87	53.75	0.10	0.20	QP
2	0.15240	33.79	-22.07	55.87	33.49	0.10	0.20	AVERAGE
3	0.17960	54.53	-9.97	64.50	54.24	0.09	0.20	QP
4	0.17960	37.80	-16.70	54.50	37.51	0.09	0.20	AVERAGE
5	0.20200	27.48	-26.05	53.53	27.20	0.08	0.20	AVERAGE
6	0.20200	45.44	-18.09	63.53	45.16	0.08	0.20	QP
7	0.23760	32.59	-19.59	52.18	32.31	0.08	0.20	AVERAGE
8	0.23760	47.41	-14.77	62.18	47.13	0.08	0.20	QP
9	0.29635	39.51	-20.83	60.34	39.24	0.07	0.20	QP
10	0.29635	23.70	-26.64	50.34	23.43	0.07	0.20	AVERAGE
11	5.166	28.33	-31.67	60.00	27.82	0.21	0.30	QP
12	5.166	14.82	-35.18	50.00	14.31	0.21	0.30	AVERAGE

Note:

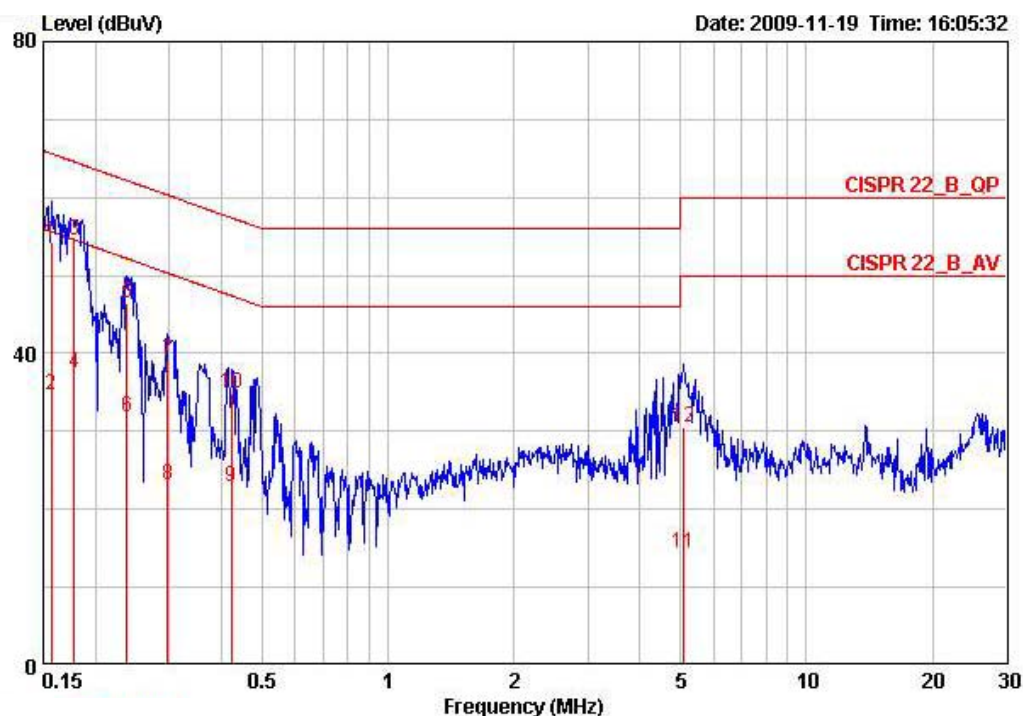
Level = Read Level + LISN Factor + Cable Loss.

Temperature	23°C	Humidity	54%
Test Engineer	Rex Chiu	Phase	Line
Configuration	Normal Link / Mode 2		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.17946	55.25	-9.26	64.51	54.99	0.06	0.20	QP
2	0.17946	42.94	-11.57	54.51	42.68	0.06	0.20	AVERAGE
3	0.23658	31.15	-21.07	52.22	30.90	0.05	0.20	AVERAGE
4	0.23658	46.31	-15.91	62.22	46.06	0.05	0.20	QP
5	0.29869	39.08	-21.20	60.28	38.84	0.04	0.20	QP
6	0.29869	26.18	-24.10	50.28	25.94	0.04	0.20	AVERAGE
7	0.35765	22.64	-26.14	48.78	22.41	0.03	0.20	AVERAGE
8	0.35765	35.34	-23.44	58.78	35.11	0.03	0.20	QP
9	4.430	9.35	-36.65	46.00	8.92	0.13	0.30	AVERAGE
10	4.430	23.23	-32.77	56.00	22.80	0.13	0.30	QP
11	5.194	28.42	-31.58	60.00	27.95	0.17	0.30	QP
12	5.194	11.60	-38.40	50.00	11.13	0.17	0.30	AVERAGE

Temperature	23°C	Humidity	54%
Test Engineer	Rex Chiu	Phase	Neutral
Configuration	Normal Link / Mode 2		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15650	54.33	-11.32	65.65	54.03	0.10	0.20	QP
2	0.15650	34.59	-21.06	55.65	34.29	0.10	0.20	AVERAGE
3	0.17810	54.43	-10.14	64.57	54.14	0.09	0.20	QP
4	0.17810	37.49	-17.08	54.57	37.20	0.09	0.20	AVERAGE
5	0.23784	46.38	-15.79	62.17	46.10	0.08	0.20	QP
6	0.23784	31.91	-20.26	52.17	31.63	0.08	0.20	AVERAGE
7	0.29712	39.05	-21.27	60.32	38.78	0.07	0.20	QP
8	0.29712	23.15	-27.17	50.32	22.88	0.07	0.20	AVERAGE
9	0.42225	22.90	-24.50	47.40	22.63	0.07	0.20	AVERAGE
10	0.42225	34.91	-22.49	57.40	34.64	0.07	0.20	QP
11	5.085	14.29	-35.71	50.00	13.78	0.21	0.30	AVERAGE
12	5.085	30.55	-29.45	60.00	30.04	0.21	0.30	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Maximum Conducted Output Power Measurement

4.2.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceed 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

4.2.2. Measuring Instruments and Setting

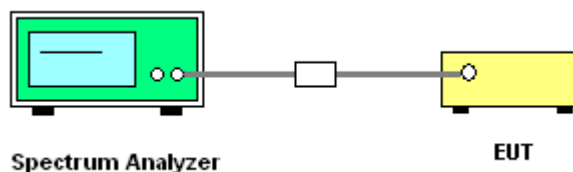
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1MHz
VB	3MHz
Detector	RMS
Trace	Max Hold
Sweep Time	Auto

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under Section 15.247 March 23, 2005.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of Maximum Conducted Output Power

<For Antenna A>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. A

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	15.31	30.00	Complies
6	2437 MHz	21.55	30.00	Complies
11	2462 MHz	16.06	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	15.95	30.00	Complies
6	2437 MHz	17.08	30.00	Complies
9	2452 MHz	15.08	30.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. A

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.33	30.00	Complies
6	2437 MHz	21.14	30.00	Complies
11	2462 MHz	18.12	30.00	Complies

Configuration IEEE 802.11g Ant. A

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	17.00	30.00	Complies
6	2437 MHz	21.68	30.00	Complies
11	2462 MHz	15.72	30.00	Complies

<For Antenna B>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. B

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.13	30.00	Complies
6	2437 MHz	21.68	30.00	Complies
11	2462 MHz	16.32	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	15.17	30.00	Complies
6	2437 MHz	17.07	30.00	Complies
9	2452 MHz	15.53	30.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. B

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.40	30.00	Complies
6	2437 MHz	20.89	30.00	Complies
11	2462 MHz	19.01	30.00	Complies

Configuration IEEE 802.11g Ant. B

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.33	30.00	Complies
6	2437 MHz	21.93	30.00	Complies
11	2462 MHz	17.10	30.00	Complies

<For Antenna C>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. C

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	15.31	30.00	Complies
6	2437 MHz	21.55	30.00	Complies
11	2462 MHz	16.06	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. C

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	15.95	30.00	Complies
6	2437 MHz	17.08	30.00	Complies
9	2452 MHz	15.08	30.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. C

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.01	30.00	Complies
6	2437 MHz	21.14	30.00	Complies
11	2462 MHz	18.12	30.00	Complies

Configuration IEEE 802.11g Ant. C

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.63	30.00	Complies
6	2437 MHz	21.68	30.00	Complies
11	2462 MHz	15.72	30.00	Complies

<For Antenna D>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. D

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.13	30.00	Complies
6	2437 MHz	21.68	30.00	Complies
11	2462 MHz	16.32	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. D

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	15.17	30.00	Complies
6	2437 MHz	17.07	30.00	Complies
9	2452 MHz	15.53	30.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. D

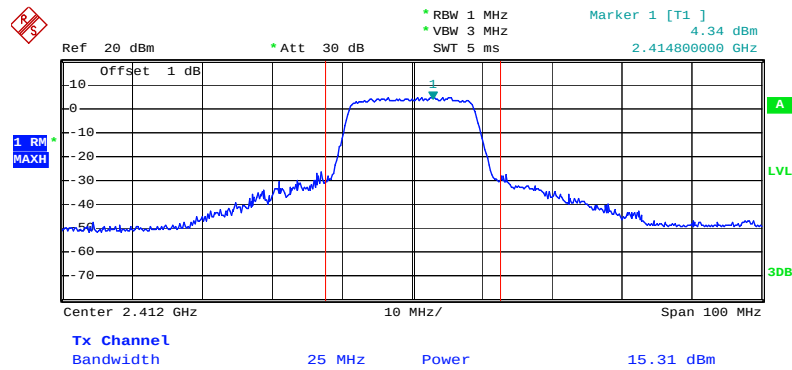
Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.40	30.00	Complies
6	2437 MHz	20.89	30.00	Complies
11	2462 MHz	19.01	30.00	Complies

Configuration IEEE 802.11g Ant. D

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.33	30.00	Complies
6	2437 MHz	21.93	30.00	Complies
11	2462 MHz	17.10	30.00	Complies

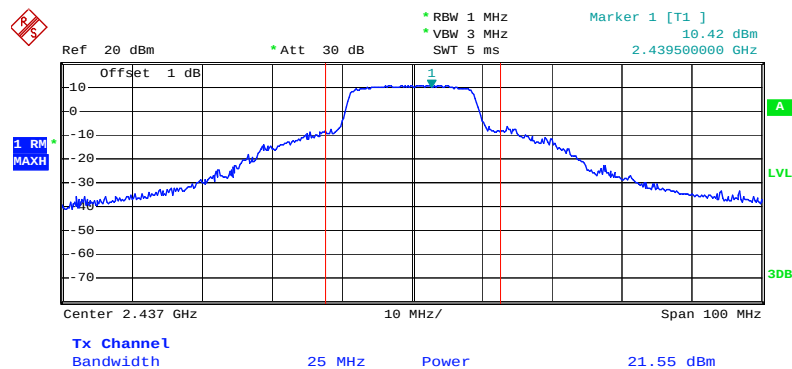
<For Antenna A>

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2412 MHz



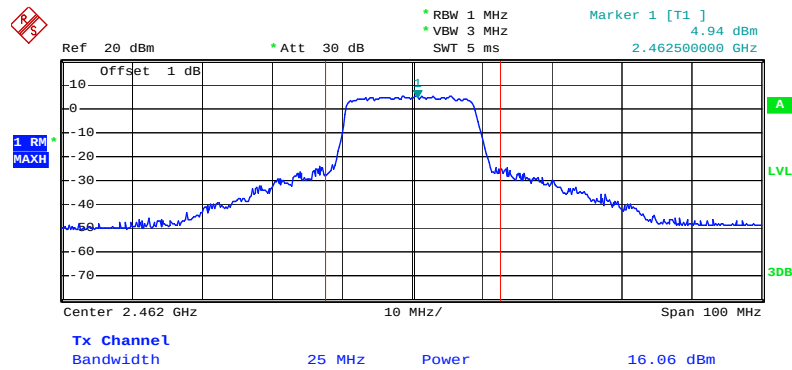
Date: 30.NOV.2009 14:20:40

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2437 MHz



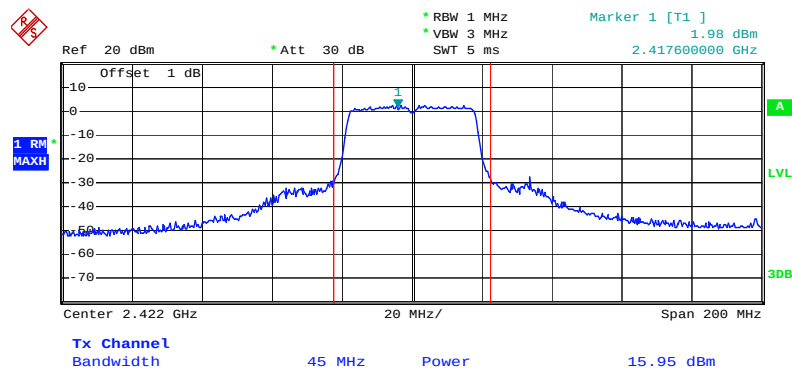
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2462 MHz



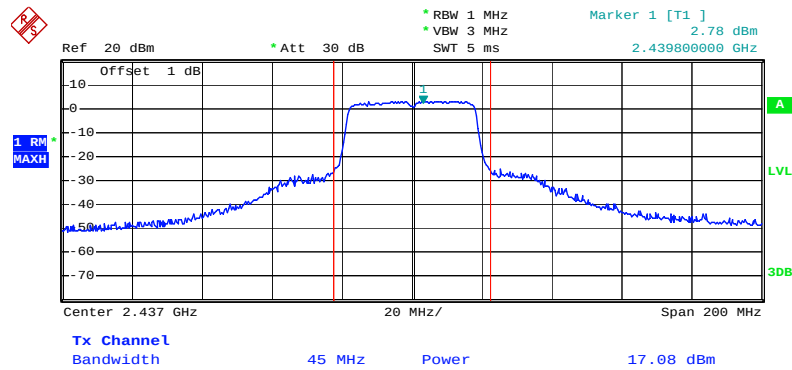
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2422 MHz



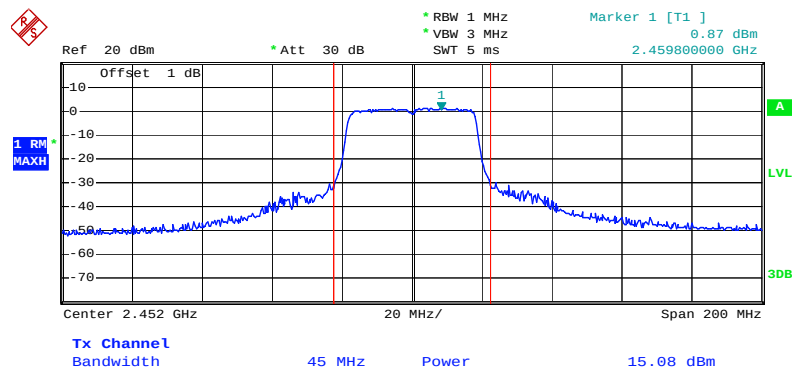
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2437 MHz



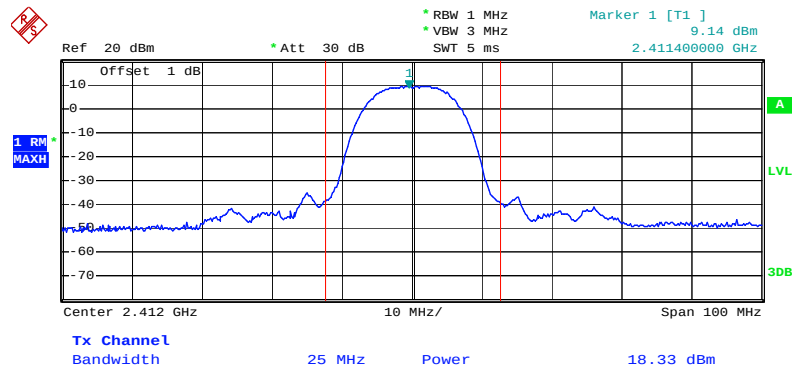
Date: 30.NOV.2009 14:15:08

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2452 MHz



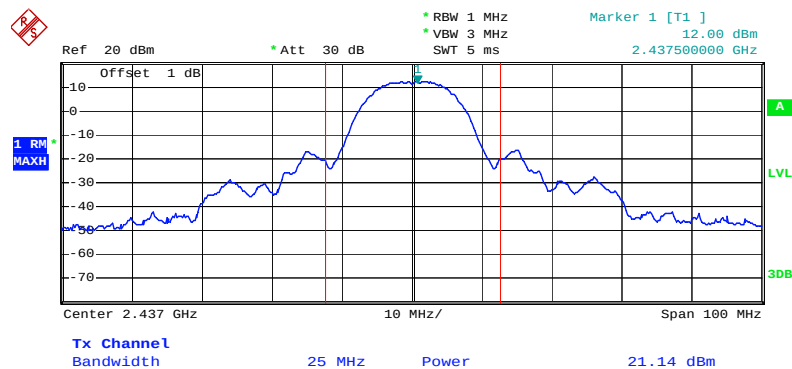
Date: 30.NOV.2009 14:01:00

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A / 2412 MHz



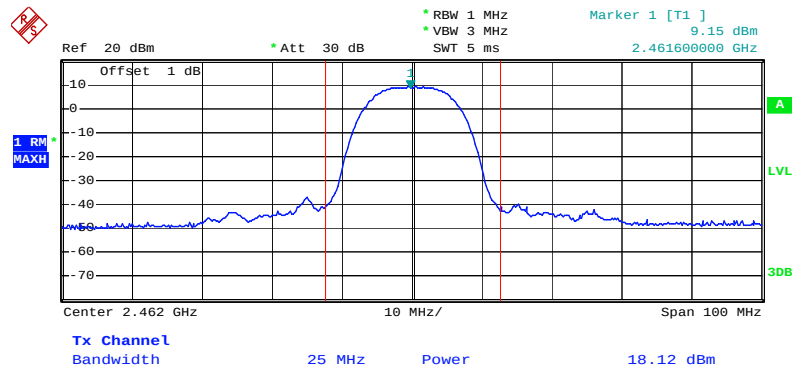
Date: 30.NOV.2009 14:31:03

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A / 2437 MHz



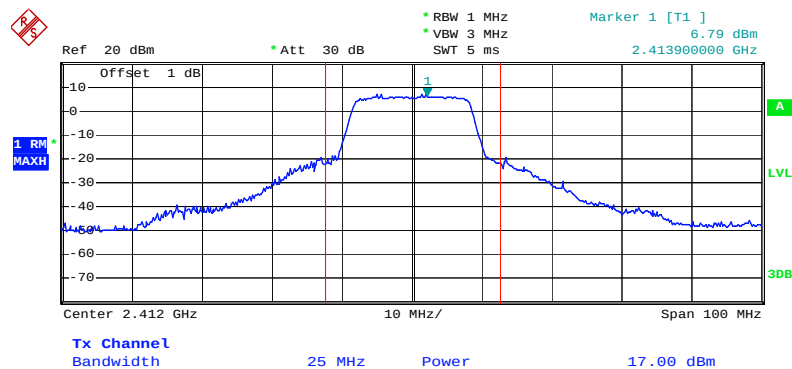
Date: 30.NOV.2009 14:28:14

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A / 2462 MHz



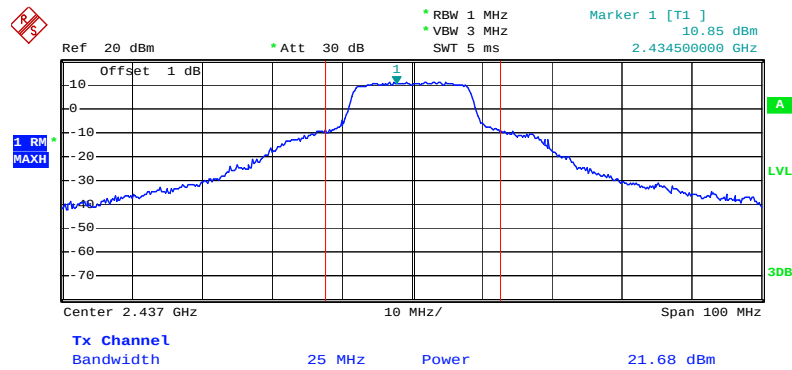
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Conducted Output Power Plot on Configuration IEEE 802.11g Ant. A / 2412 MHz



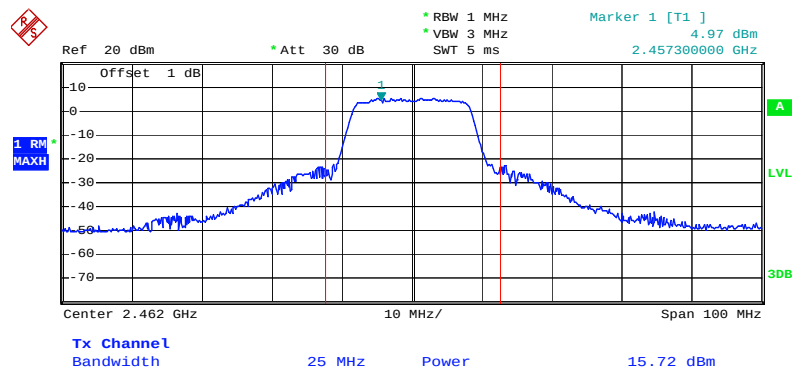
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Conducted Output Power Plot on Configuration IEEE 802.11g Ant. A / 2437 MHz



Date: 30.NOV.2009 14:23:40

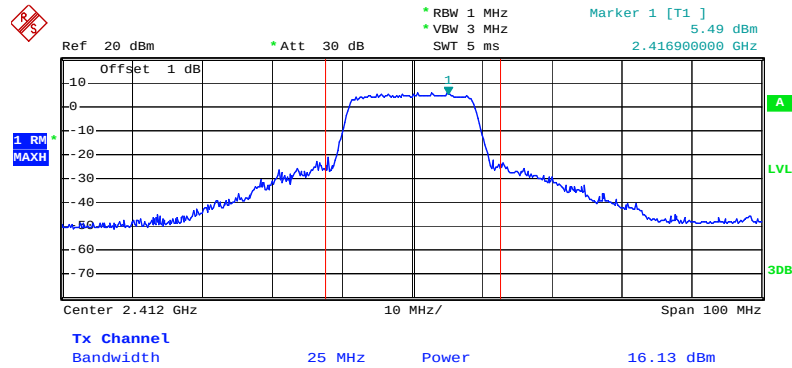
Conducted Output Power Plot on Configuration IEEE 802.11g Ant. A / 2462 MHz



Date: 30.NOV.2009 14:25:16

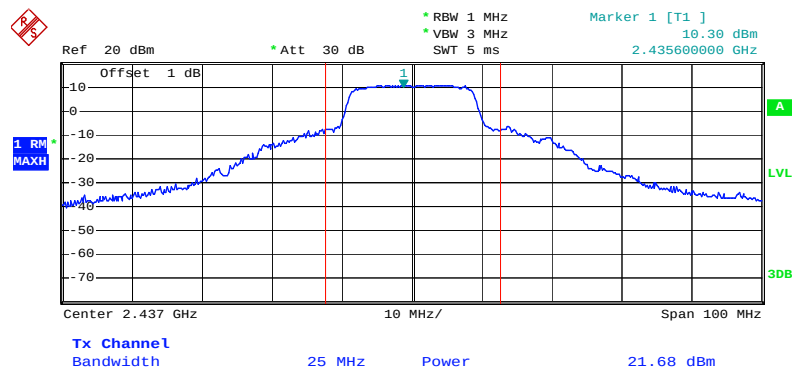
<For Antenna B>

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2412 MHz



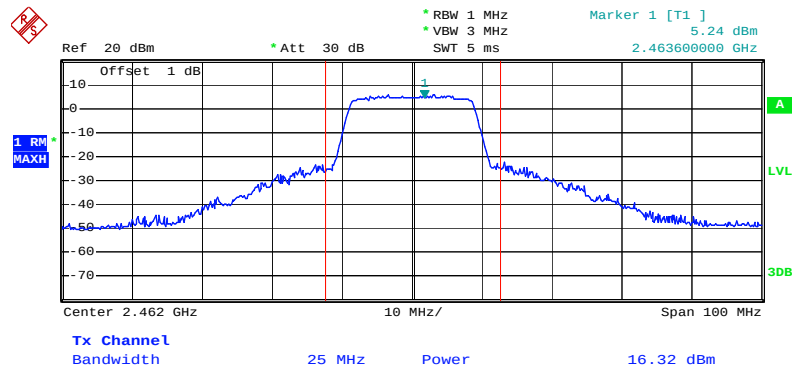
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2437 MHz



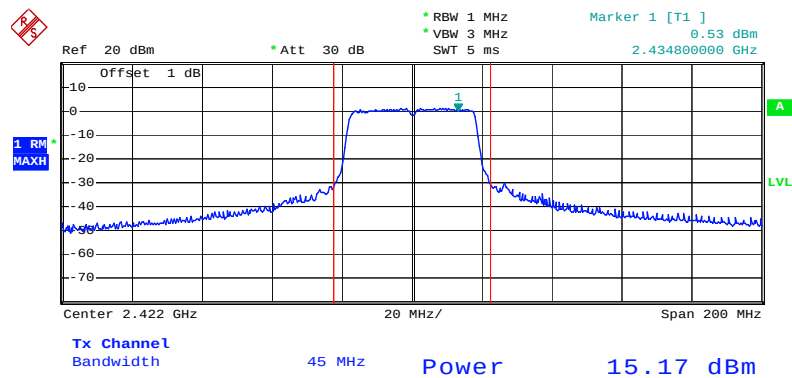
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2462 MHz



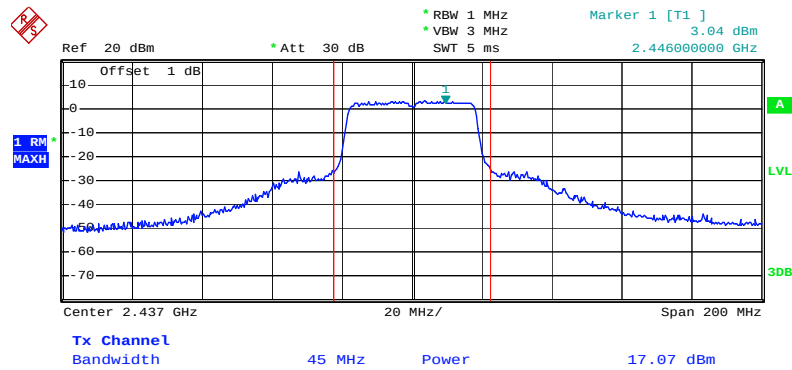
Date: 30.NOV.2009 13:58:40

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2422 MHz



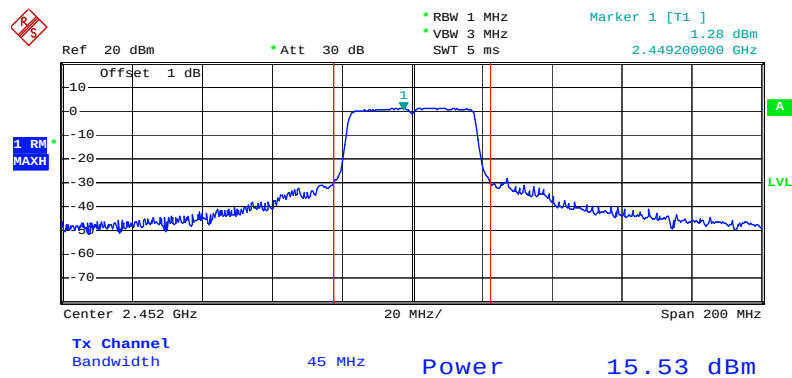
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2437 MHz



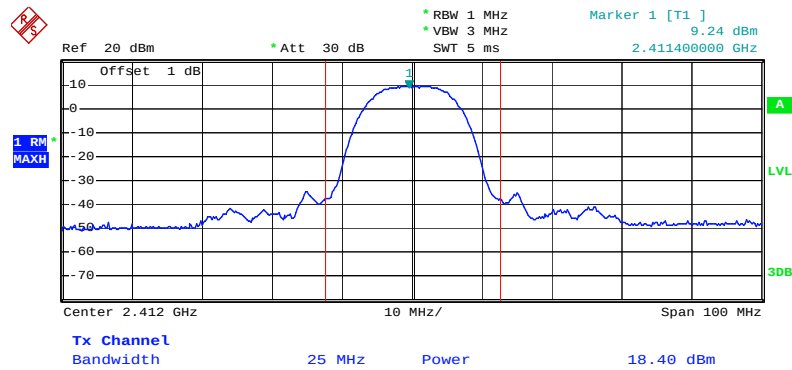
Date: 30.NOV.2009 14:02:57

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2452 MHz



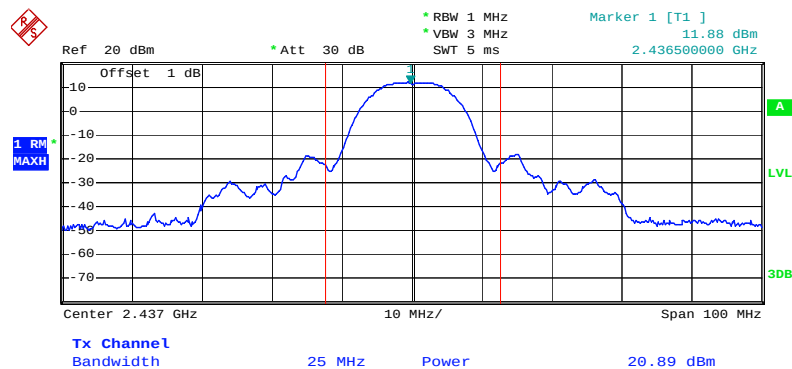
Date: 30.NOV.2009 18:46:51

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B / 2412 MHz



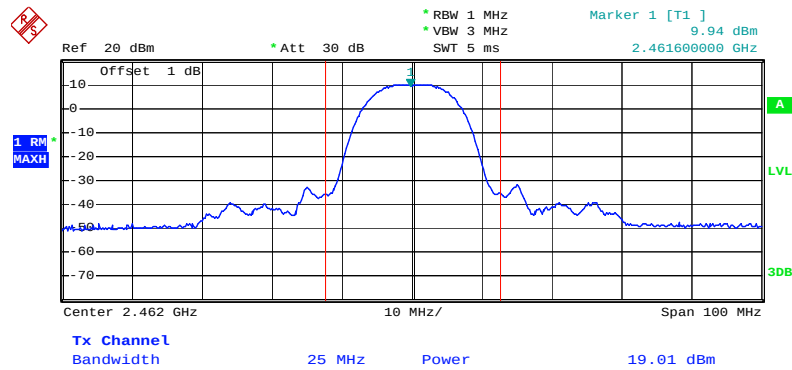
Date: 30.NOV.2009 11:32:37

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B / 2437 MHz



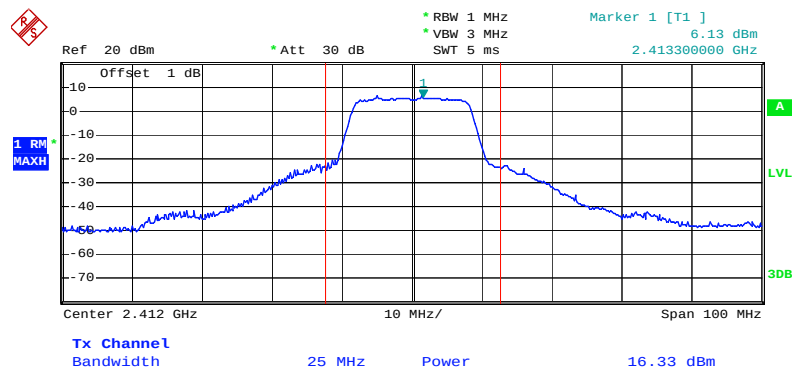
Date: 30.NOV.2009 11:34:52

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B / 2462 MHz



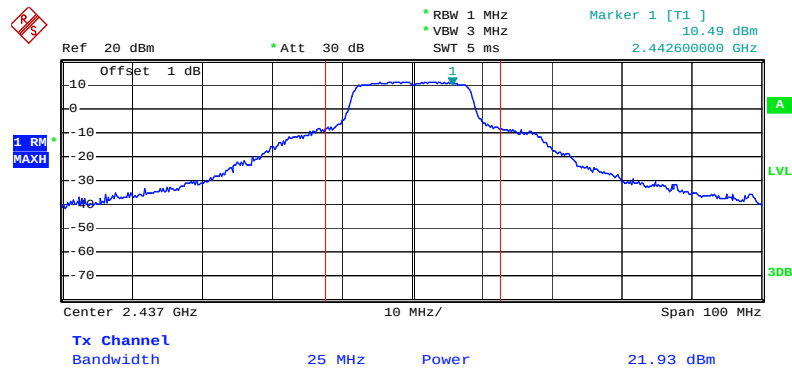
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Conducted Output Power Plot on Configuration IEEE 802.11g Ant. B / 2412 MHz



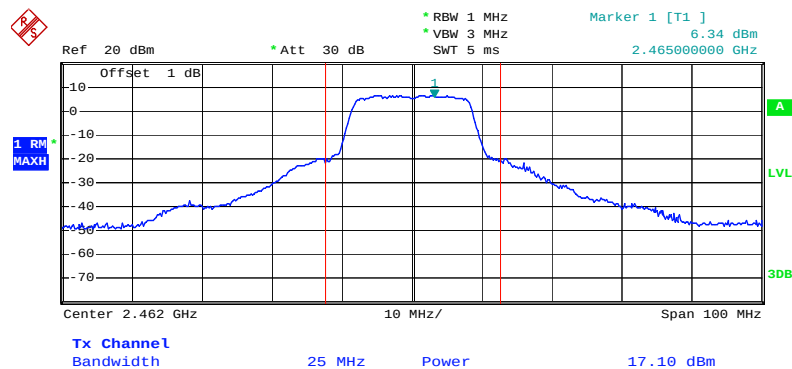
Date: 30.NOV.2009 11:49:15

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. B / 2437 MHz



Date: 30.NOV.2009 11:46:58

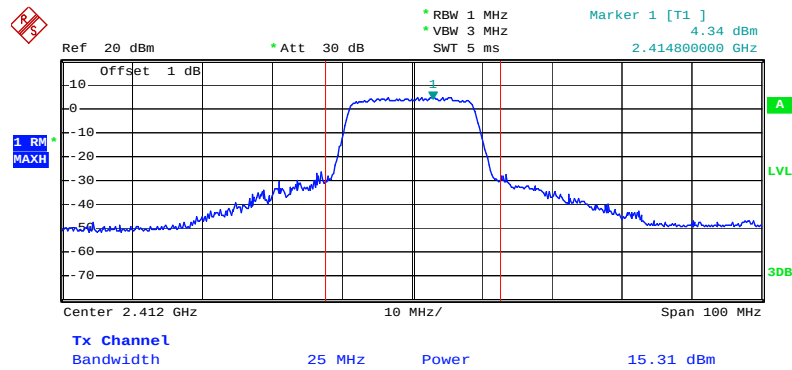
Conducted Output Power Plot on Configuration IEEE 802.11g Ant. B / 2462 MHz



Date: 30.NOV.2009 11:45:14

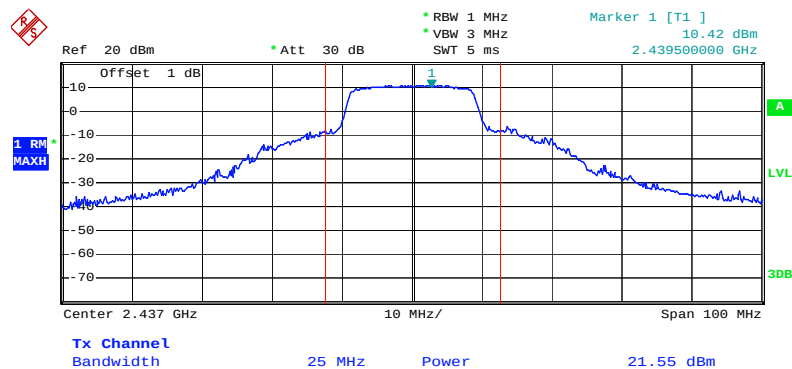
<For Antenna C>

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2412 MHz



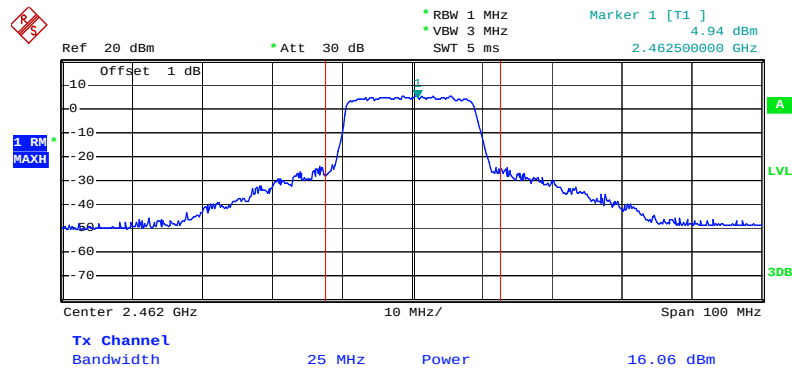
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2437 MHz



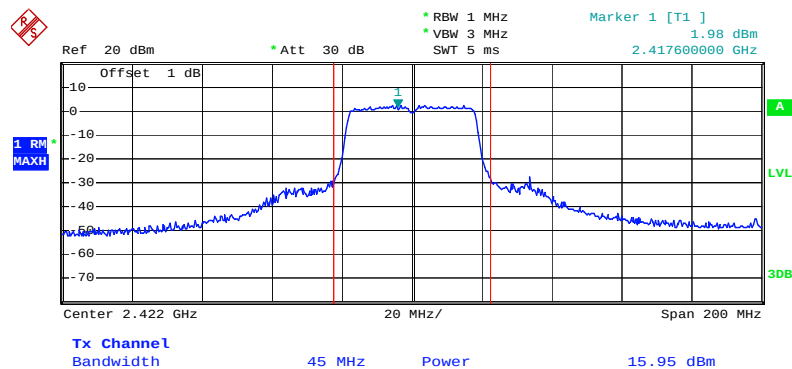
Date: 30.NOV.2009 14:19:28

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2462 MHz



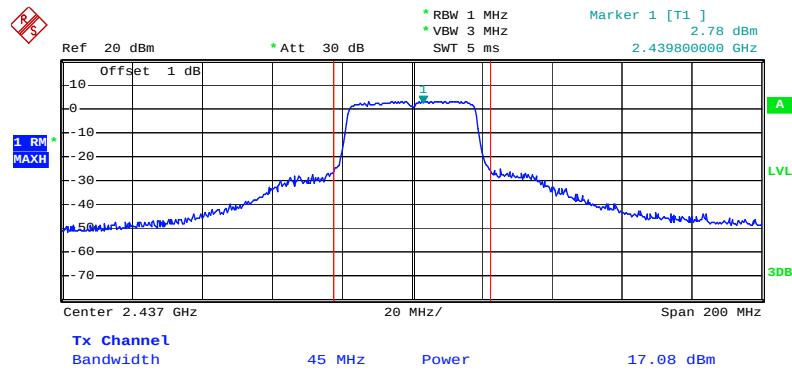
Date: 30.NOV.2009 14:18:26

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2422 MHz



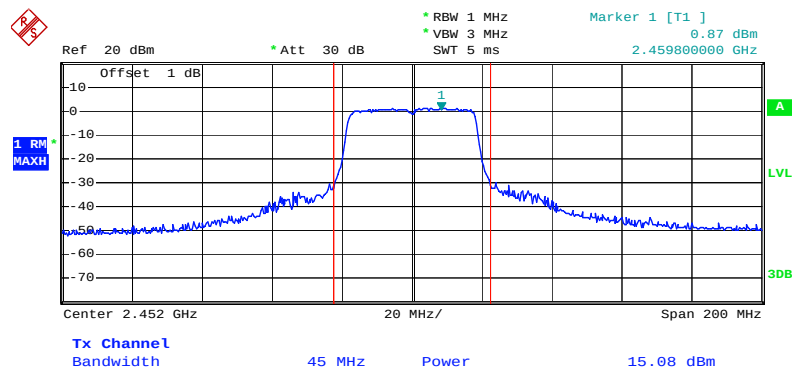
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2437 MHz



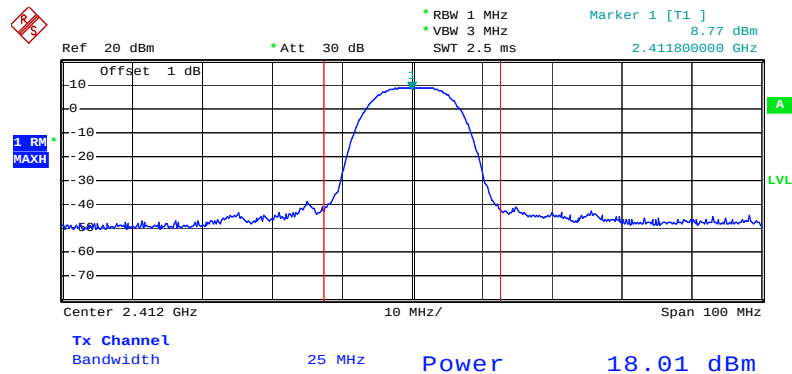
Date: 30.NOV.2009 14:15:08

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2452 MHz



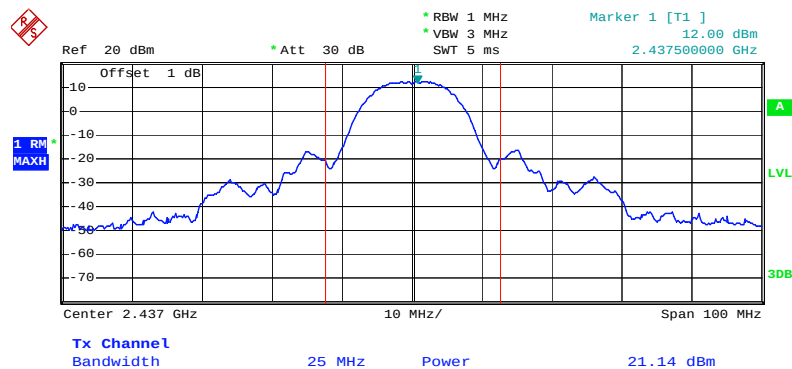
Date: 30.NOV.2009 14:01:00

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. C / 2412 MHz



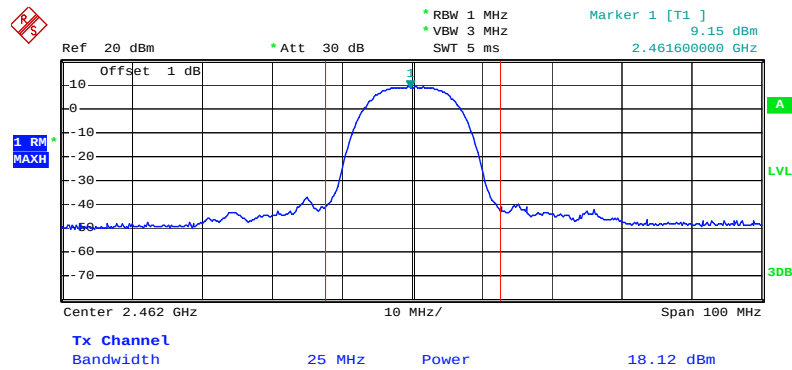
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Conducted Output Power Plot on Configuration IEEE 802.11b Ant. C / 2437 MHz



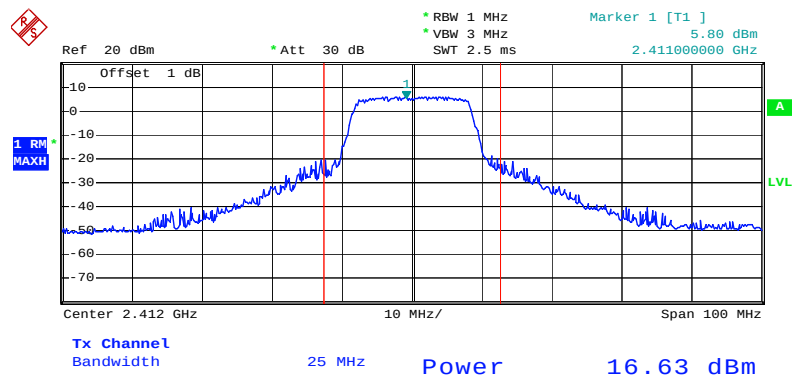
Date: 30.NOV.2009 14:28:14

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. C / 2462 MHz



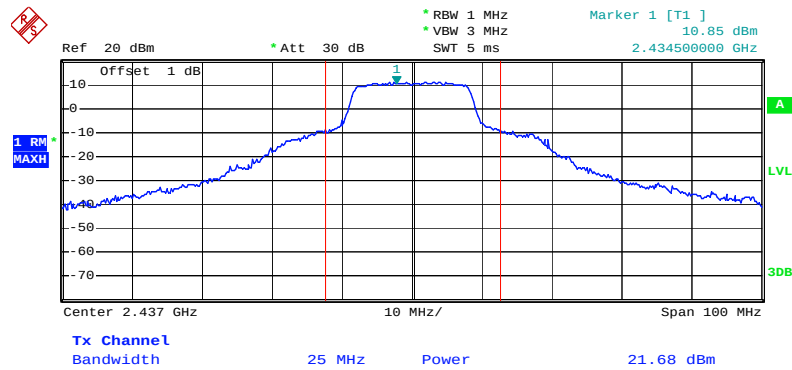
Date: 30.NOV.2009 14:26:58

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. C / 2412 MHz



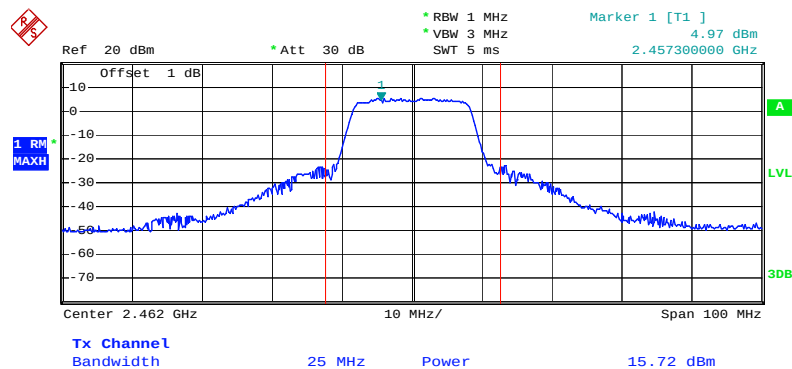
Date: 28.DEC.2009 11:32:23

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. C / 2437 MHz



Date: 30.NOV.2009 14:23:40

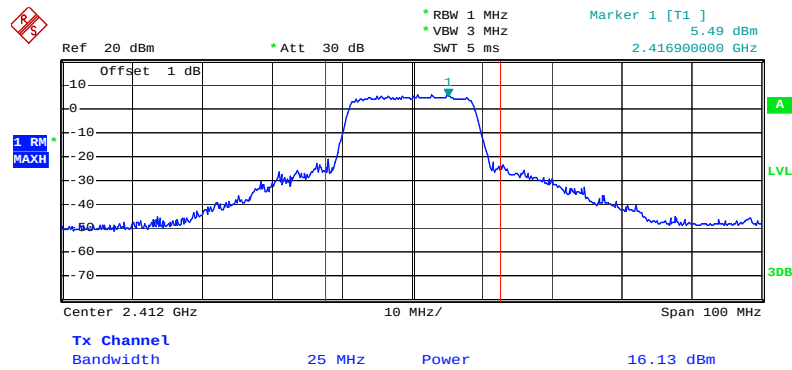
Conducted Output Power Plot on Configuration IEEE 802.11g Ant. C / 2462 MHz



Date: 30.NOV.2009 14:25:16

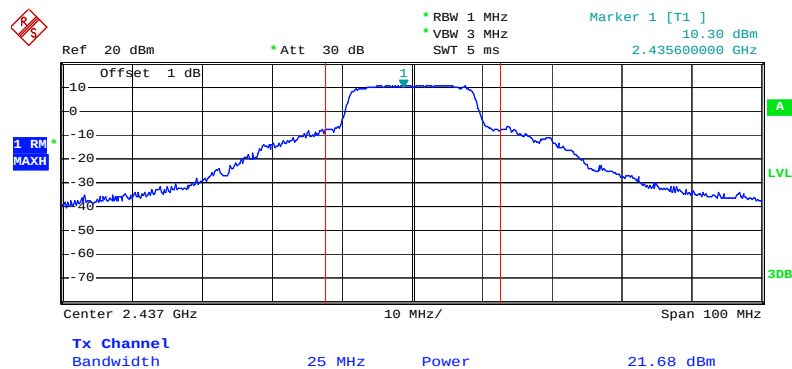
<For Antenna D>

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2412 MHz



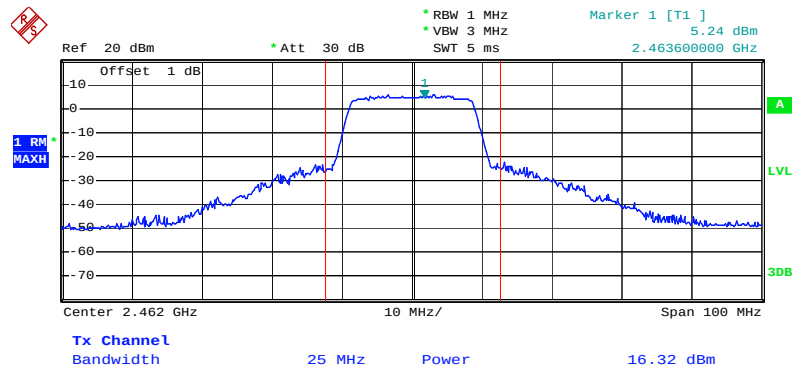
Date: 30.NOV.2009 13:54:20

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2437 MHz



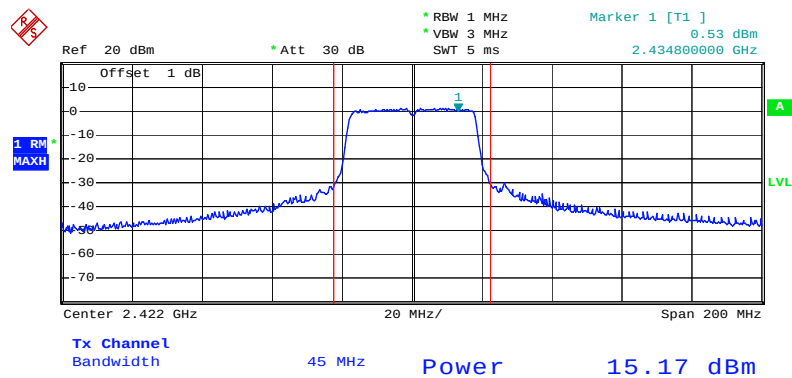
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Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2462 MHz



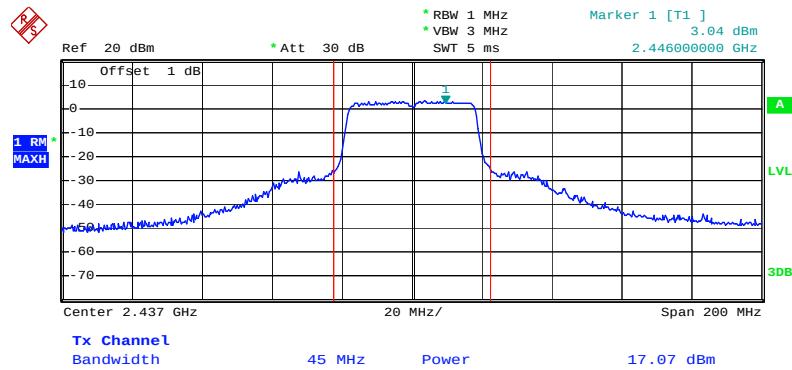
Date: 30.NOV.2009 13:58:40

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2422 MHz



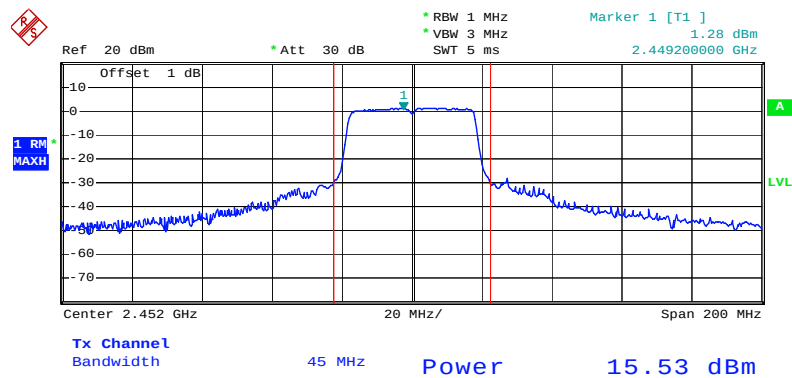
Date: 30.NOV.2009 18:48:31

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2437 MHz



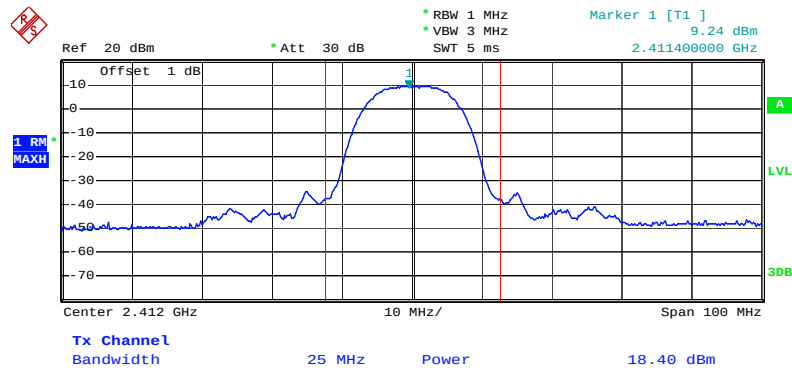
Date: 30.NOV.2009 14:02:57

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2452 MHz



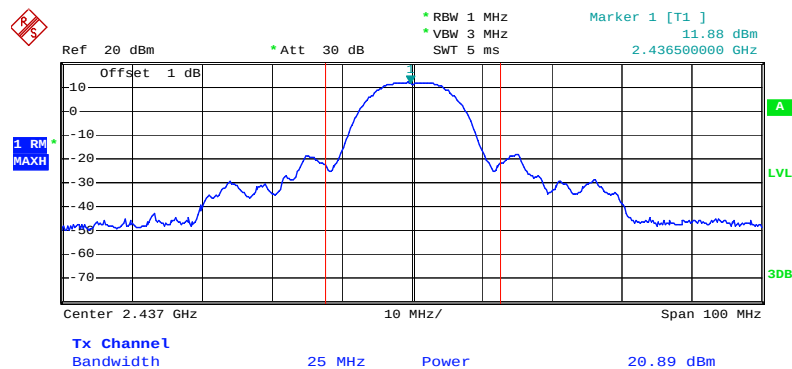
Date: 30.NOV.2009 18:46:51

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. D / 2412 MHz



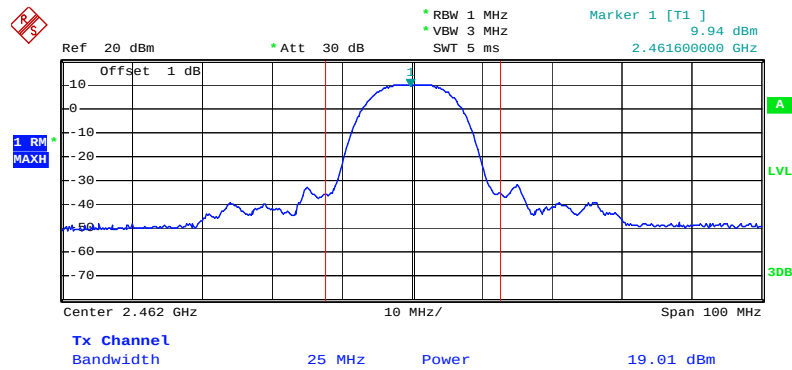
Date: 30.NOV.2009 11:32:37

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. D / 2437 MHz



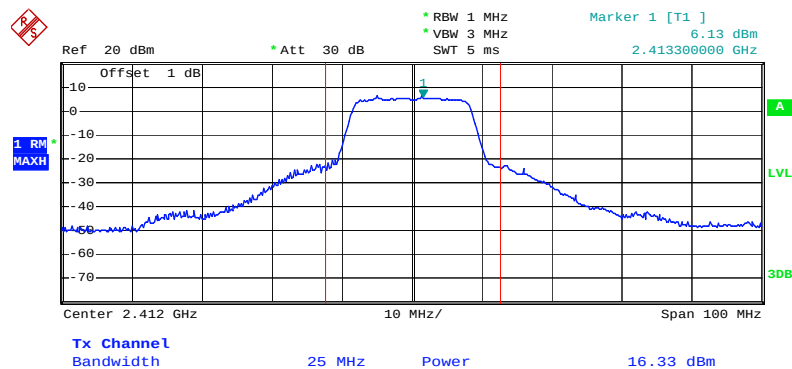
Date: 30.NOV.2009 11:34:52

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. D / 2462 MHz



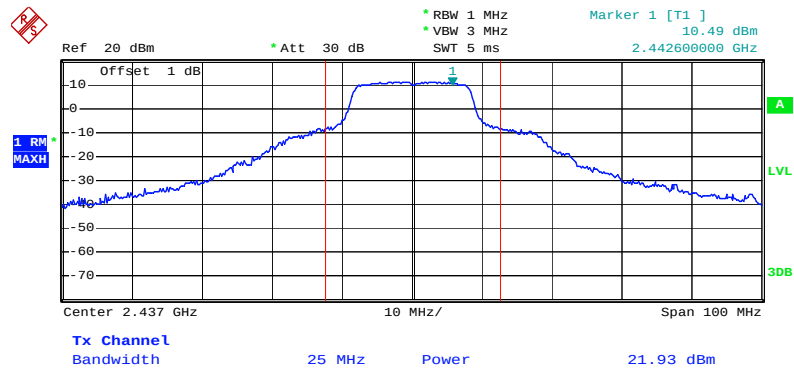
Date: 30.NOV.2009 11:41:06

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. D / 2412 MHz



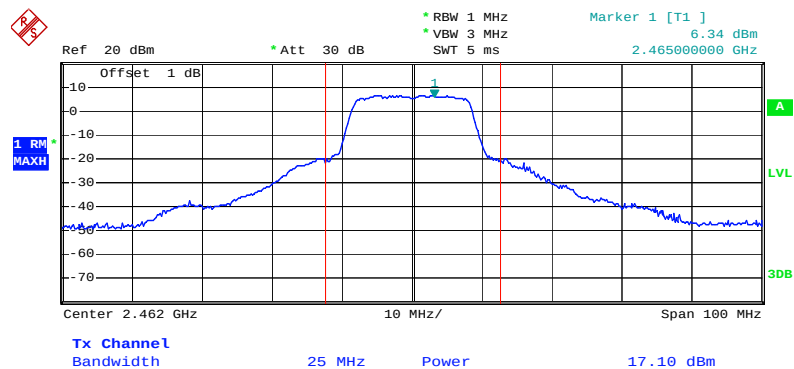
Date: 30.NOV.2009 11:49:15

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. D / 2437 MHz



Date: 30.NOV.2009 11:46:58

Conducted Output Power Plot on Configuration IEEE 802.11g Ant. D / 2462 MHz



Date: 30.NOV.2009 11:45:14

4.3. Power Spectral Density Measurement

4.3.1. Limit

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

4.3.2. Measuring Instruments and Setting

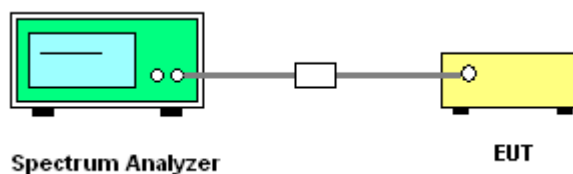
Please refer to section 5 of equipments list in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	30 kHz
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	10s

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz. Set Detector to Peak, Trace to Max Hold.
3. Mark the frequency with maximum peak power as the center of the display of the spectrum.
4. Set the span to 30kHz and the sweep time to 10s and record the maximum peak value.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

<For Antenna A>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. A

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-10.27	8.00	Complies
6	2437 MHz	-2.11	8.00	Complies
11	2462 MHz	-7.01	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-7.22	8.00	Complies
6	2437 MHz	-5.44	8.00	Complies
9	2452 MHz	-7.79	8.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. A

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-5.91	8.00	Complies
6	2437 MHz	-5.81	8.00	Complies
11	2462 MHz	-5.40	8.00	Complies

Configuration IEEE 802.11g Ant. A

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-10.16	8.00	Complies
6	2437 MHz	-9.59	8.00	Complies
11	2462 MHz	-8.57	8.00	Complies

<For Antenna B>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. B

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-9.91	8.00	Complies
6	2437 MHz	-9.77	8.00	Complies
11	2462 MHz	-9.59	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-10.49	8.00	Complies
6	2437 MHz	-10.28	8.00	Complies
9	2452 MHz	-10.05	8.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. B

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-5.79	8.00	Complies
6	2437 MHz	-5.16	8.00	Complies
11	2462 MHz	-5.16	8.00	Complies

Configuration IEEE 802.11g Ant. B

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-8.46	8.00	Complies
6	2437 MHz	-9.72	8.00	Complies
11	2462 MHz	-9.51	8.00	Complies

<For Antenna C>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. C

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-10.27	8.00	Complies
6	2437 MHz	-2.11	8.00	Complies
11	2462 MHz	-7.01	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. C

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-7.22	8.00	Complies
6	2437 MHz	-5.44	8.00	Complies
9	2452 MHz	-7.79	8.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. C

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-6.63	8.00	Complies
6	2437 MHz	-5.81	8.00	Complies
11	2462 MHz	-5.40	8.00	Complies

Configuration IEEE 802.11g Ant. C

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-10.82	8.00	Complies
6	2437 MHz	-9.59	8.00	Complies
11	2462 MHz	-8.57	8.00	Complies

<For Antenna D>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. D

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-9.91	8.00	Complies
6	2437 MHz	-9.77	8.00	Complies
11	2462 MHz	-9.59	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. D

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-10.49	8.00	Complies
6	2437 MHz	-10.28	8.00	Complies
9	2452 MHz	-10.05	8.00	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. D

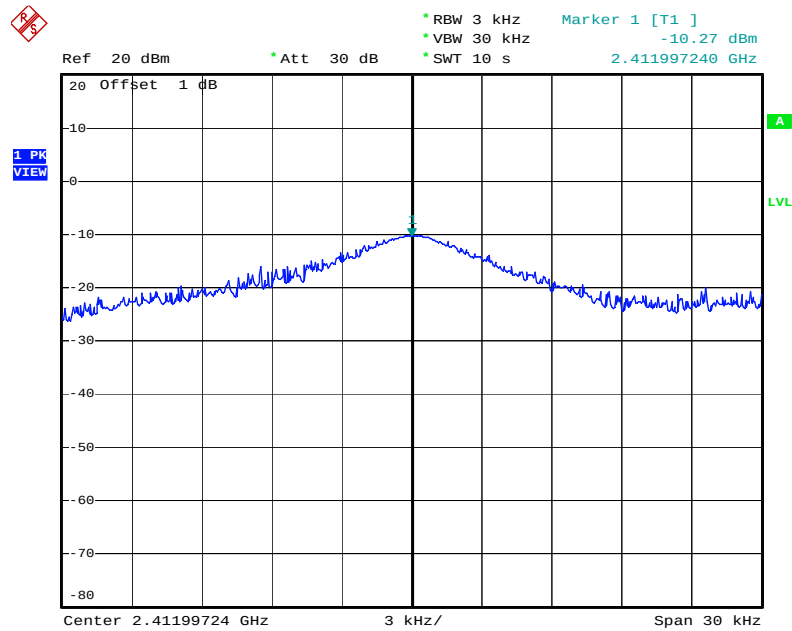
Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-5.79	8.00	Complies
6	2437 MHz	-5.16	8.00	Complies
11	2462 MHz	-5.16	8.00	Complies

Configuration IEEE 802.11g Ant. D

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-8.46	8.00	Complies
6	2437 MHz	-9.72	8.00	Complies
11	2462 MHz	-9.51	8.00	Complies

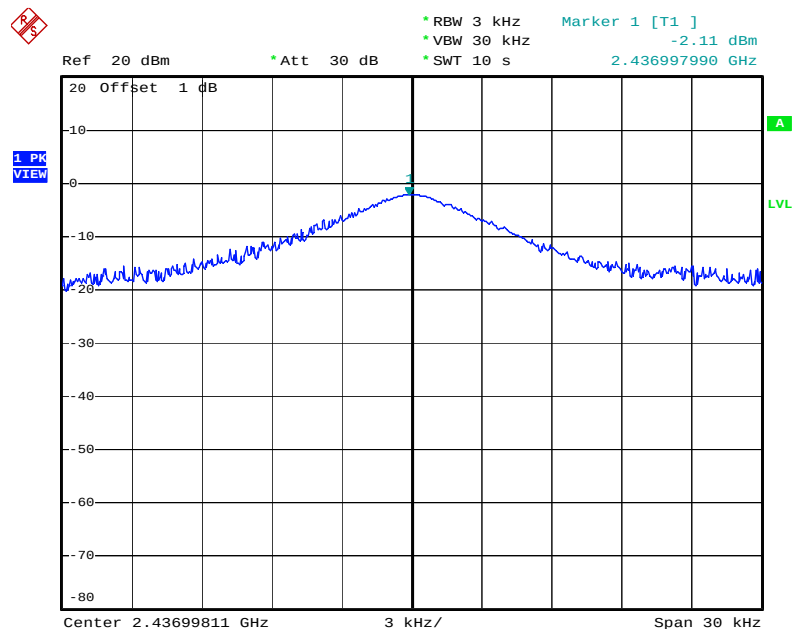
<For Antenna A>

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2412 MHz



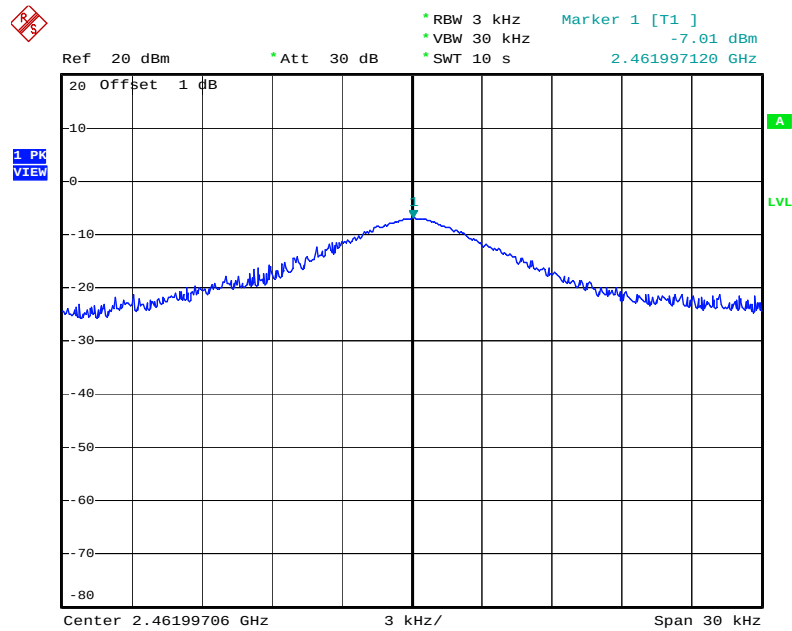
Date: 30.NOV.2009 16:36:21

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2437 MHz



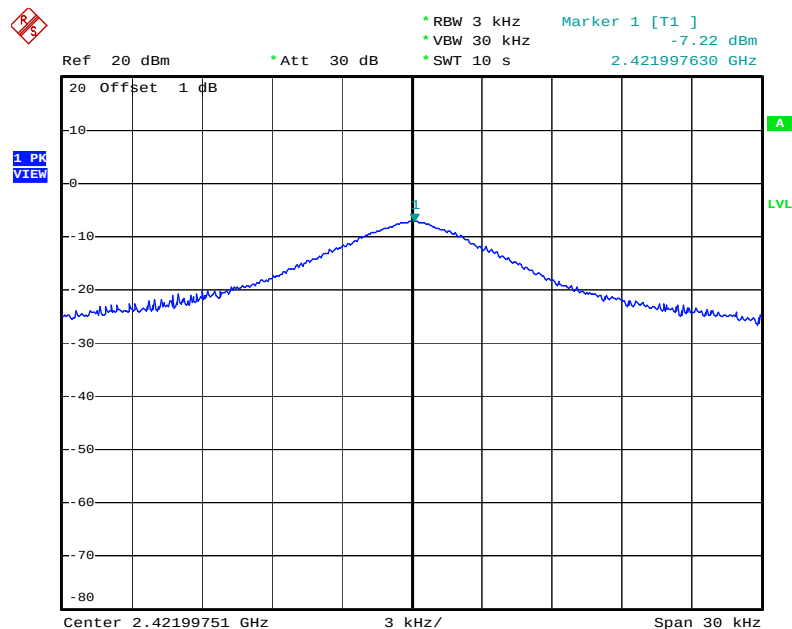
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Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2462 MHz



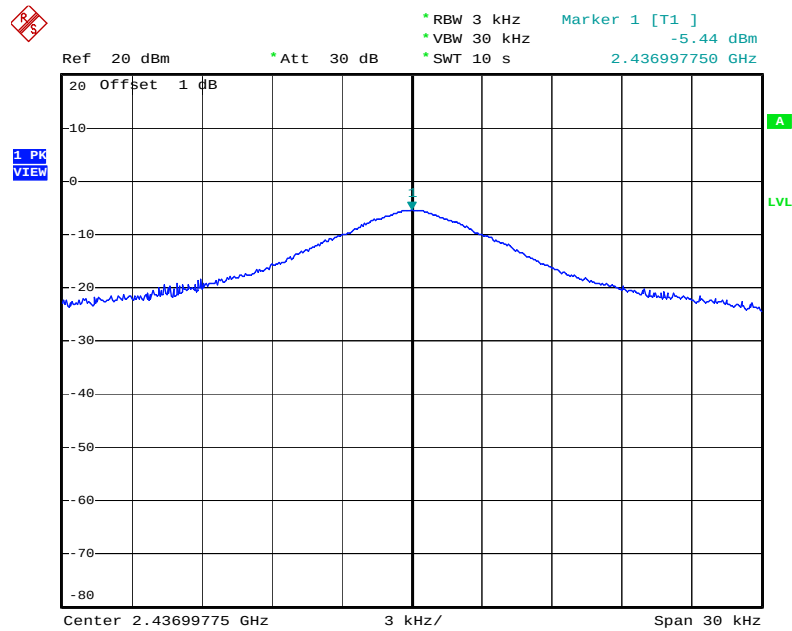
Date: 30.NOV.2009 16:31:34

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2422 MHz



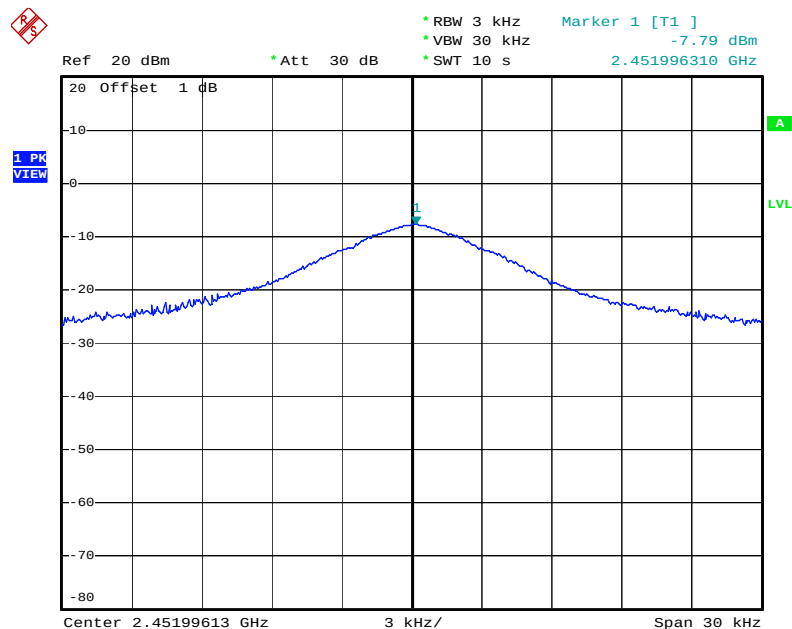
Date: 30.NOV.2009 15:50:04

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2437 MHz



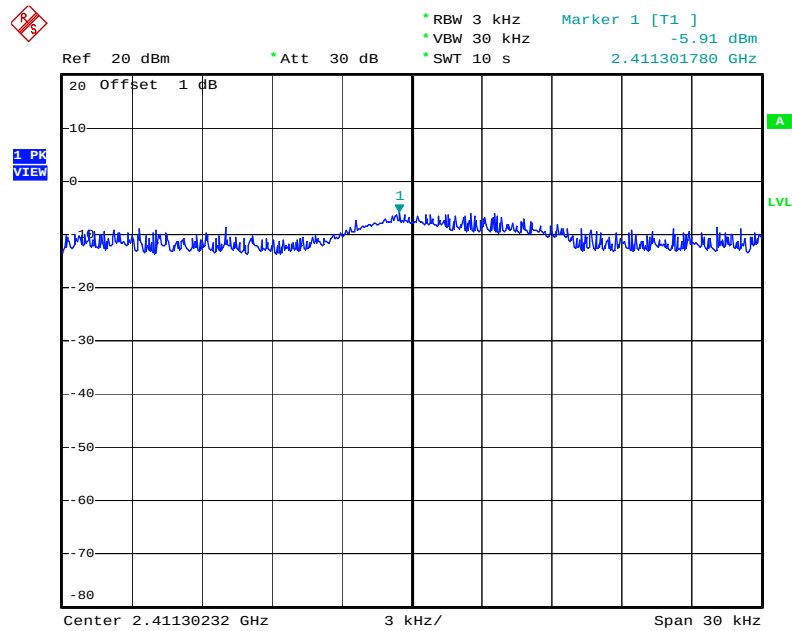
Date: 30.NOV.2009 15:55:45

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2452 MHz



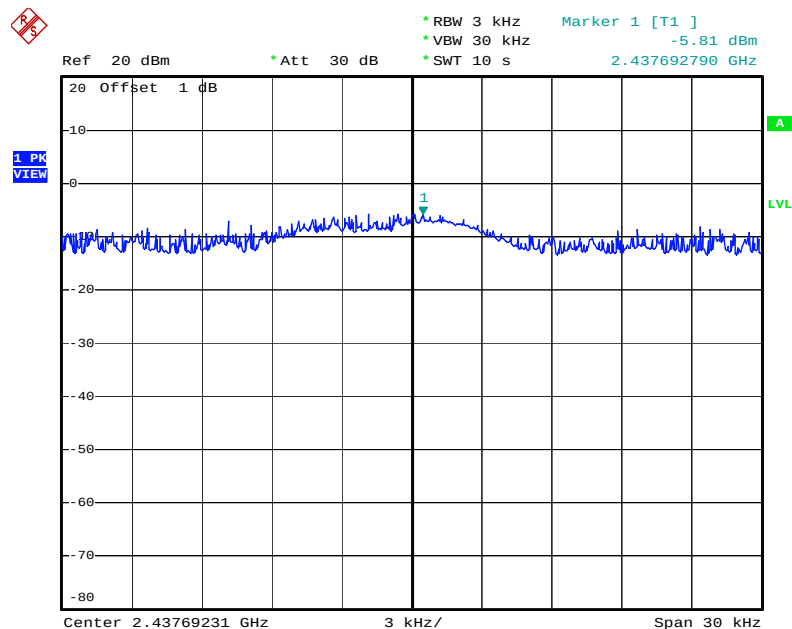
Date: 30.NOV.2009 16:24:36

Power Density Plot on Configuration IEEE 802.11b Ant. A / 2412 MHz



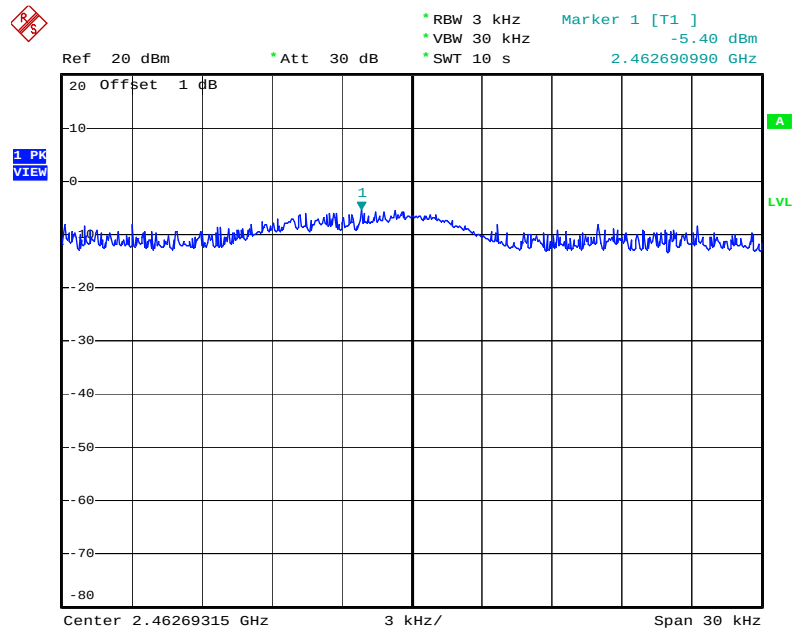
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Power Density Plot on Configuration IEEE 802.11b Ant. A / 2437 MHz



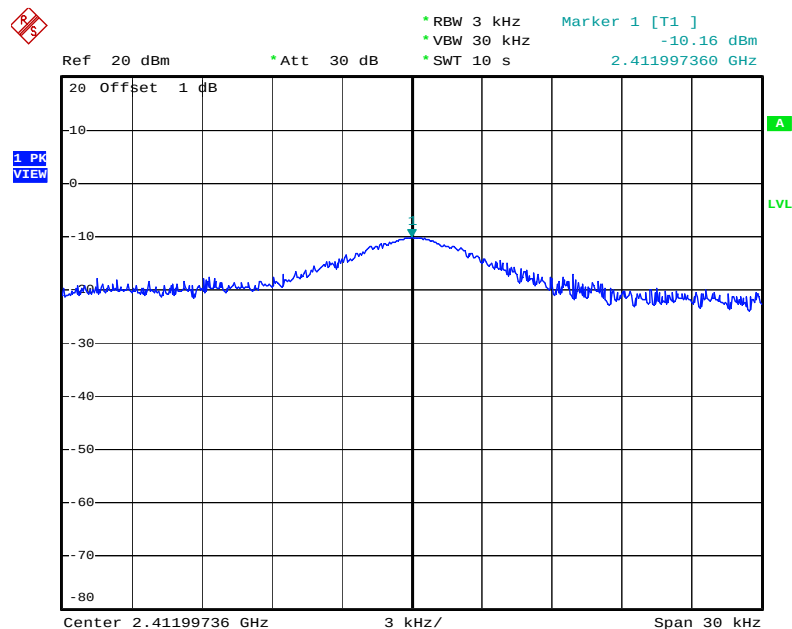
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Power Density Plot on Configuration IEEE 802.11b Ant. A / 2462 MHz



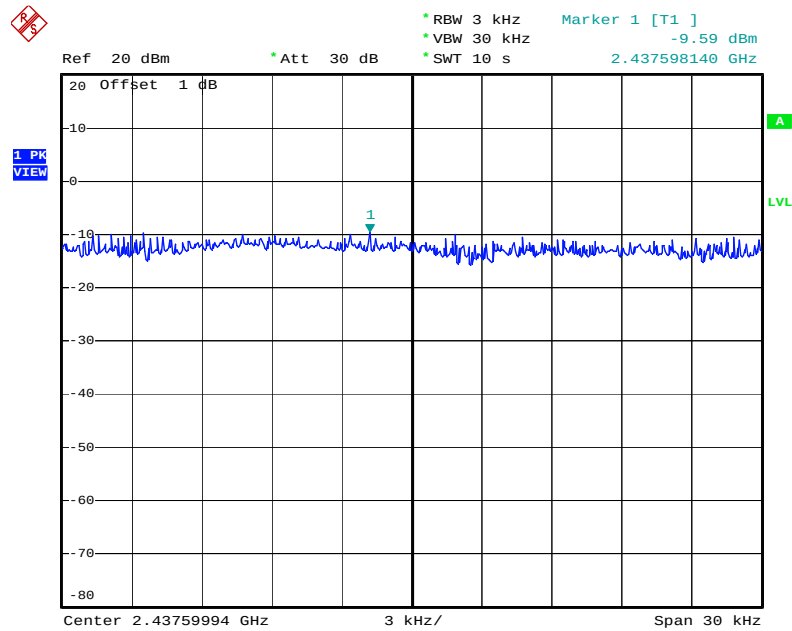
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Power Density Plot on Configuration IEEE 802.11g Ant. A / 2412 MHz



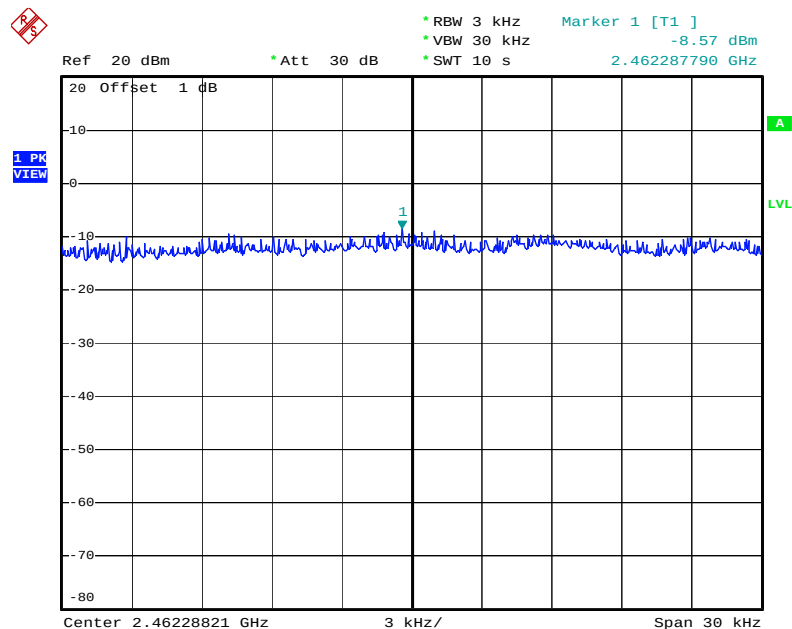
Date: 30.NOV.2009 16:38:56

Power Density Plot on Configuration IEEE 802.11g Ant. A / 2437 MHz



Date: 30.NOV.2009 16:41:10

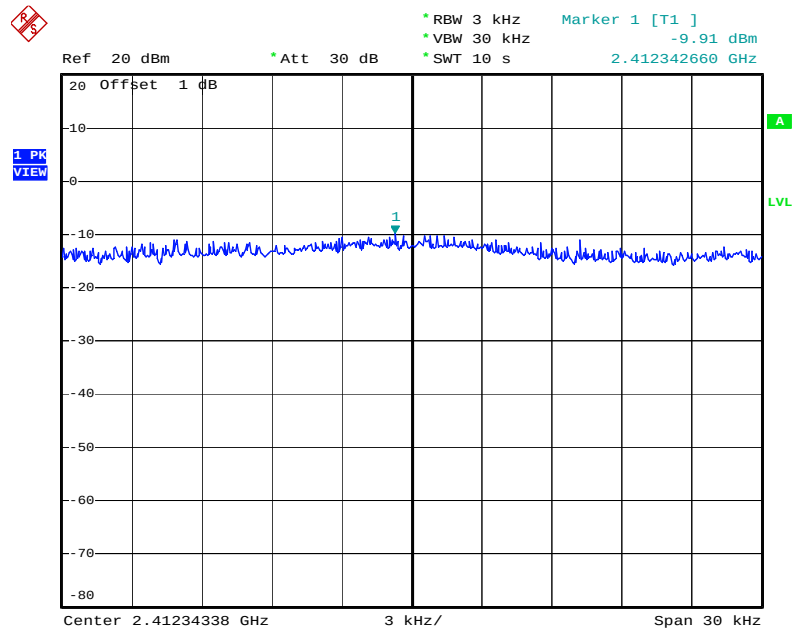
Power Density Plot on Configuration IEEE 802.11g Ant. A / 2462 MHz



Date: 30.NOV.2009 16:43:47

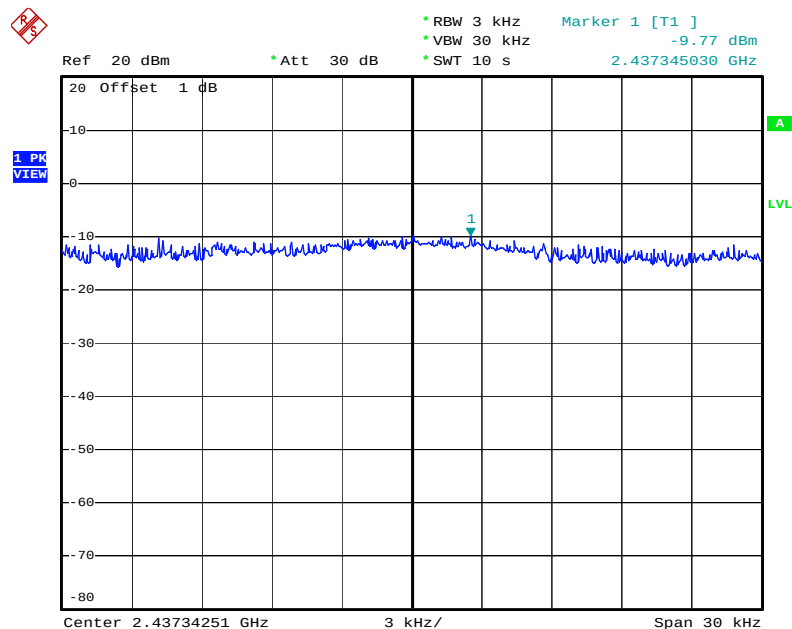
<For Antenna B>

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2412 MHz



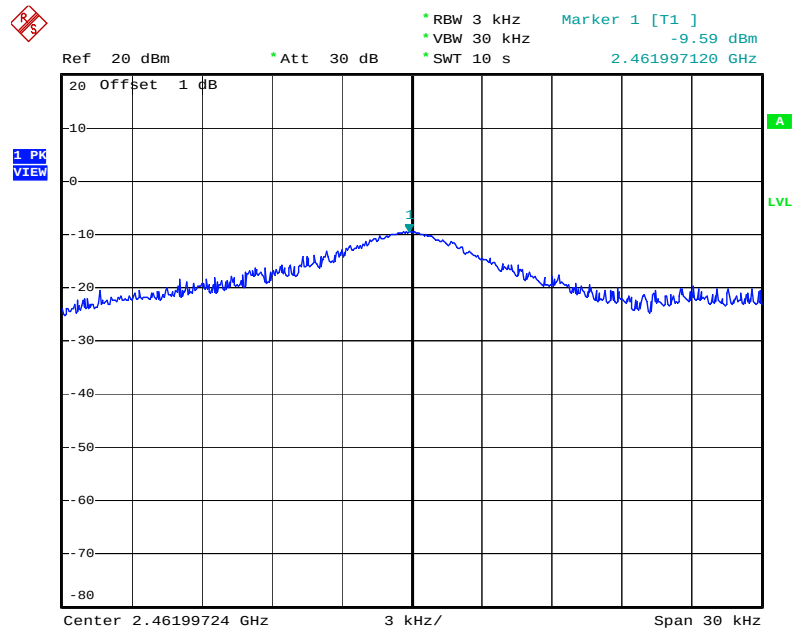
Date: 30.NOV.2009 17:35:24

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2437 MHz



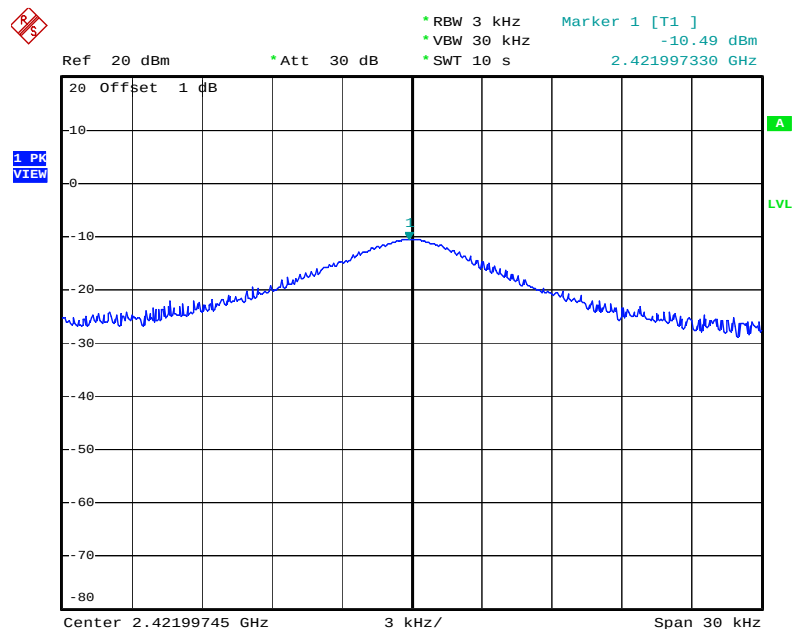
Date: 30.NOV.2009 17:32:41

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2462 MHz



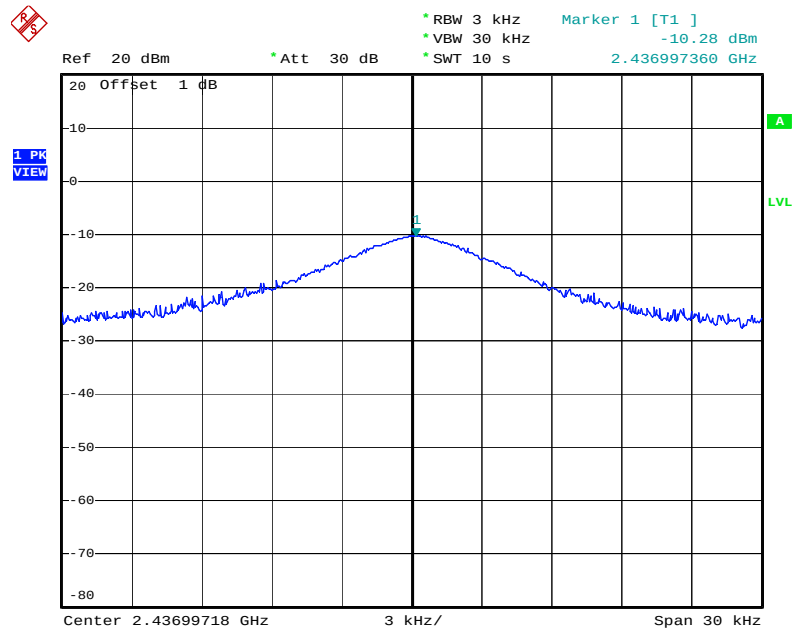
Date: 30.NOV.2009 17:37:28

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2422 MHz



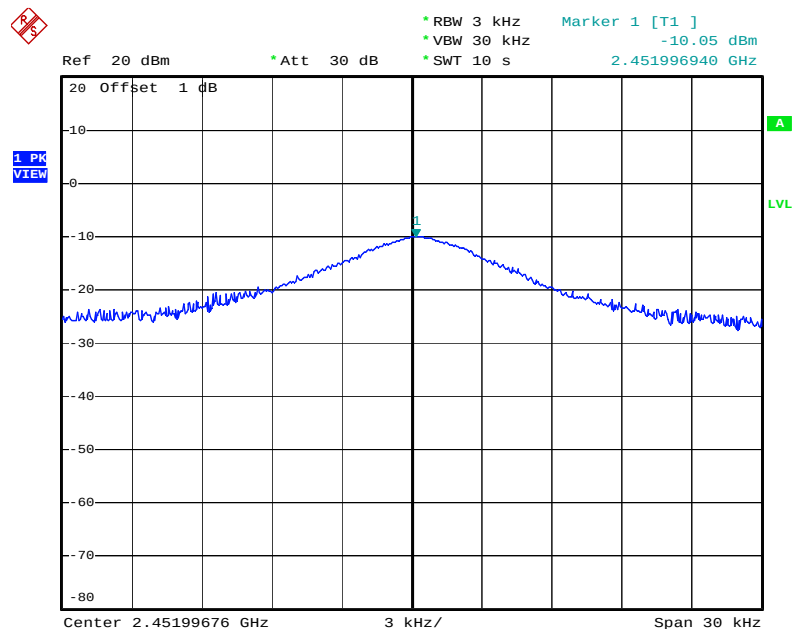
Date: 30.NOV.2009 17:46:53

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2437 MHz



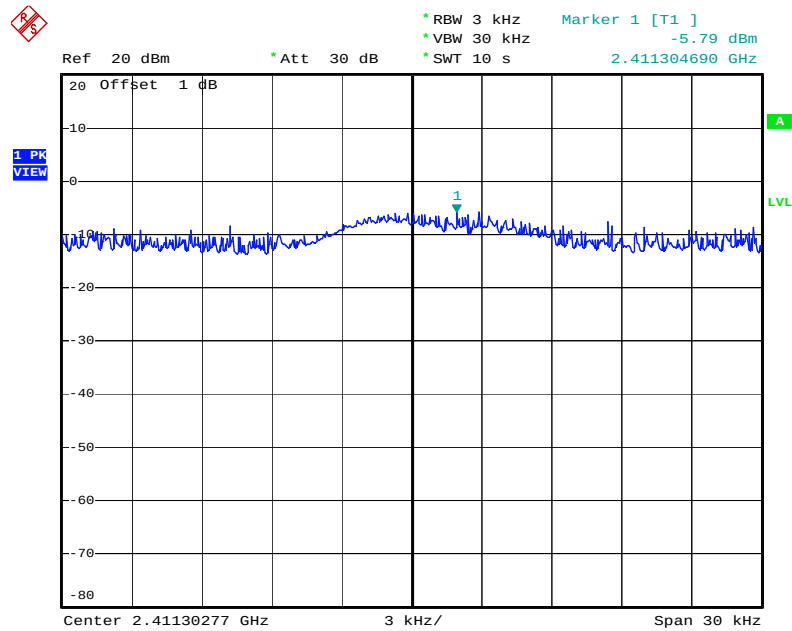
Date: 30.NOV.2009 17:43:55

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2452 MHz



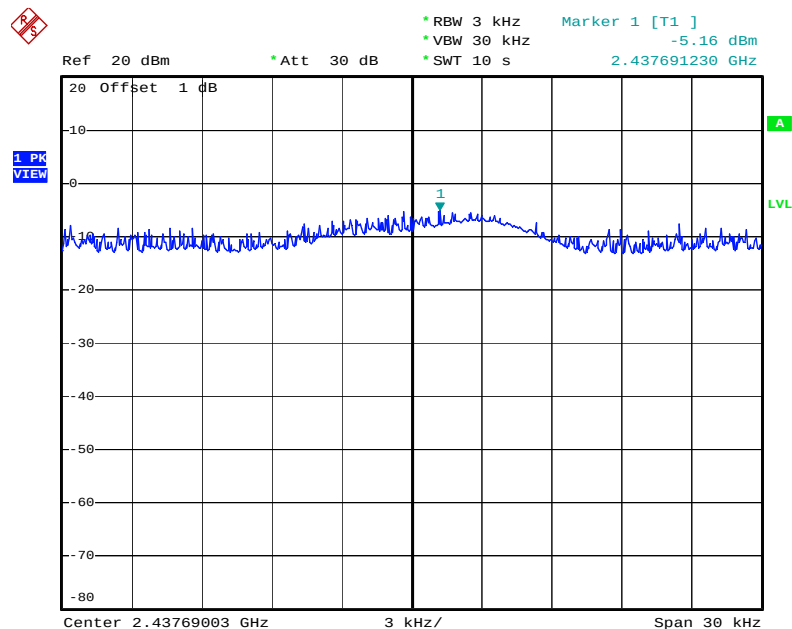
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Power Density Plot on Configuration IEEE 802.11b Ant. B / 2412 MHz



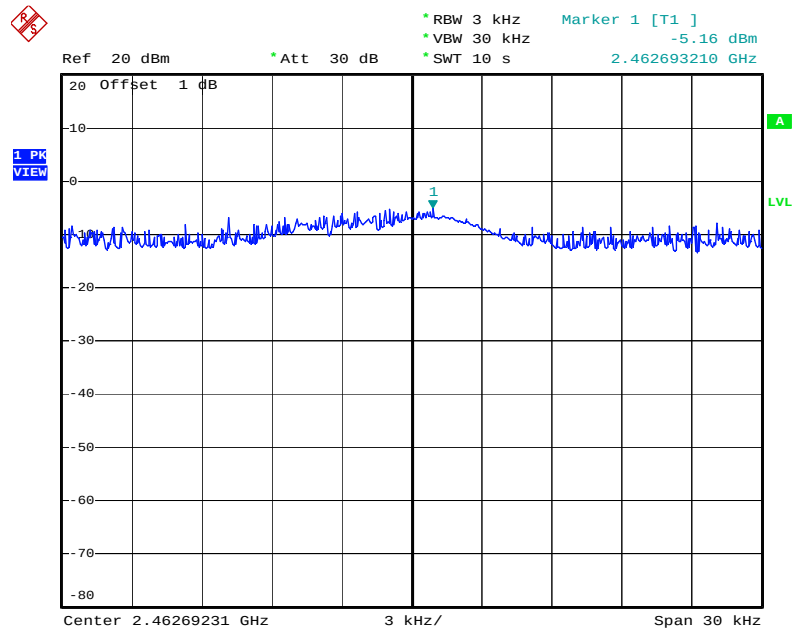
Date: 30.NOV.2009 17:18:00

Power Density Plot on Configuration IEEE 802.11b Ant. B / 2437 MHz



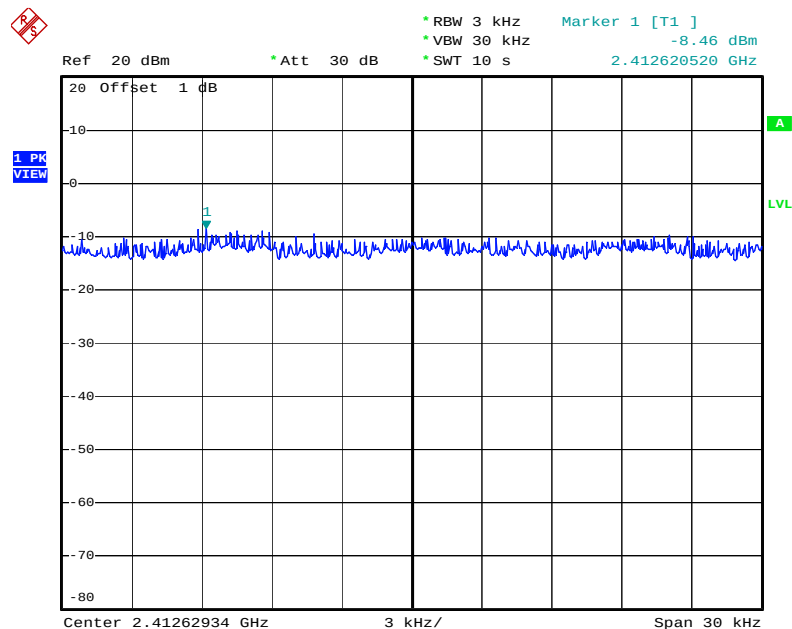
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Power Density Plot on Configuration IEEE 802.11b Ant. B / 2462 MHz



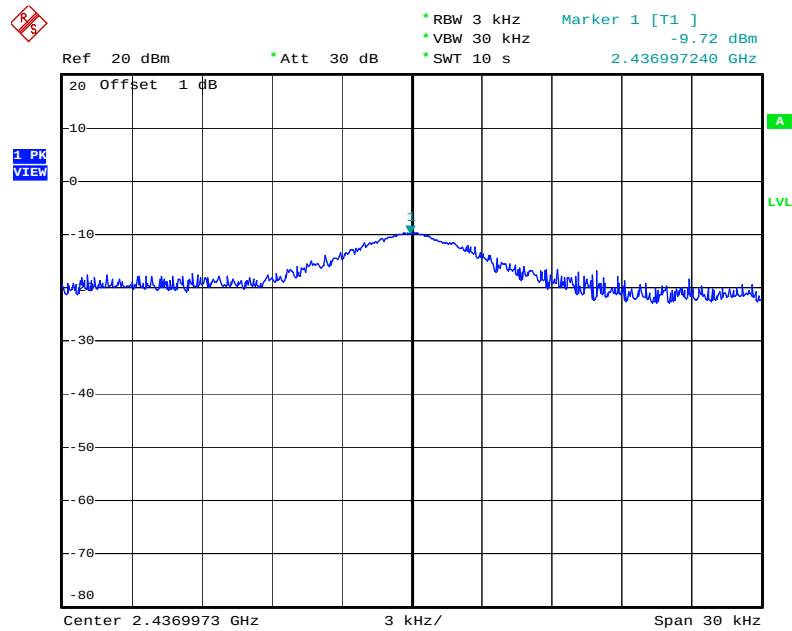
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Power Density Plot on Configuration IEEE 802.11g Ant. B / 2412 MHz



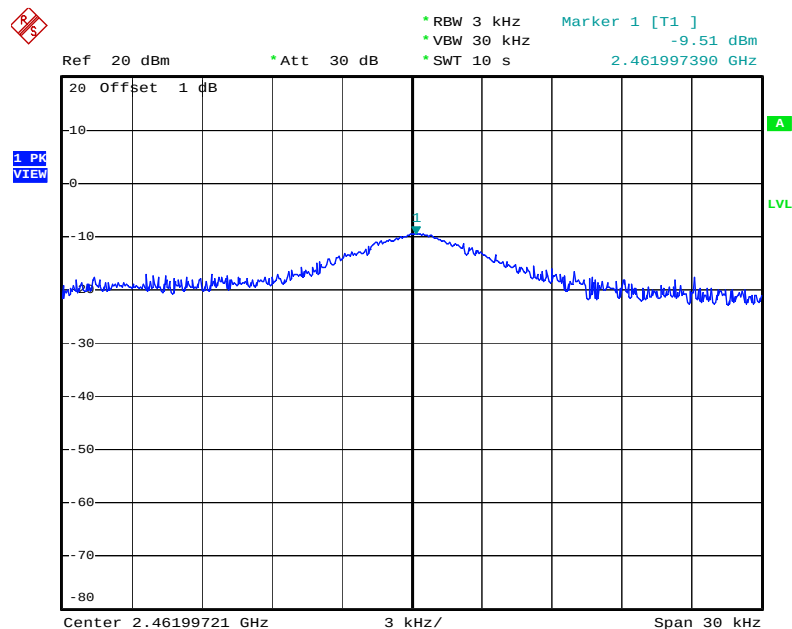
Date: 30.NOV.2009 17:27:20

Power Density Plot on Configuration IEEE 802.11g Ant. B / 2437 MHz



Date: 30.NOV.2009 17:29:29

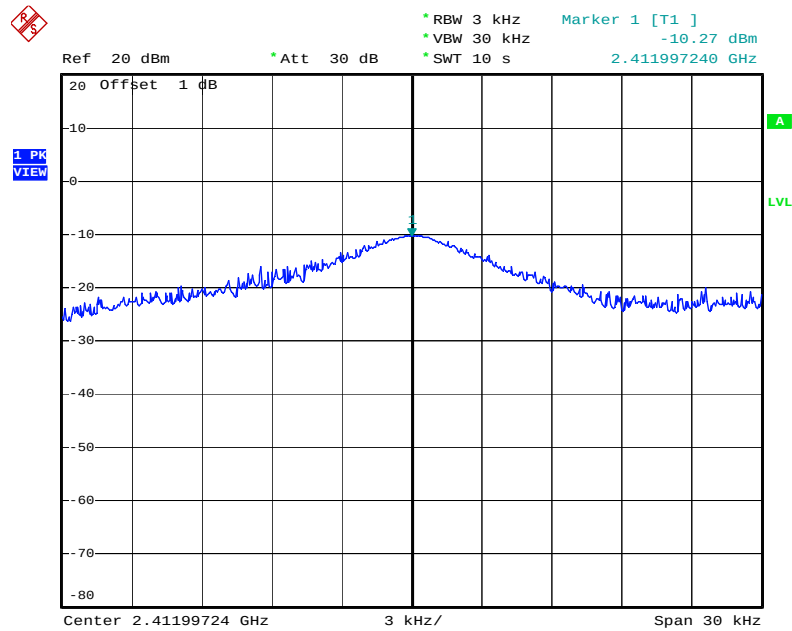
Power Density Plot on Configuration IEEE 802.11g Ant. B / 2462 MHz



Date: 30.NOV.2009 17:24:36

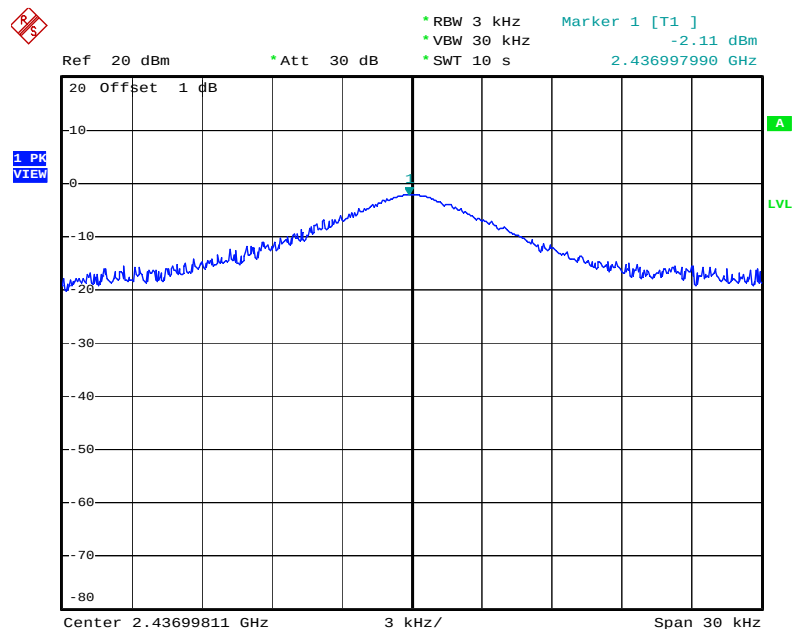
<For Antenna C>

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2412 MHz



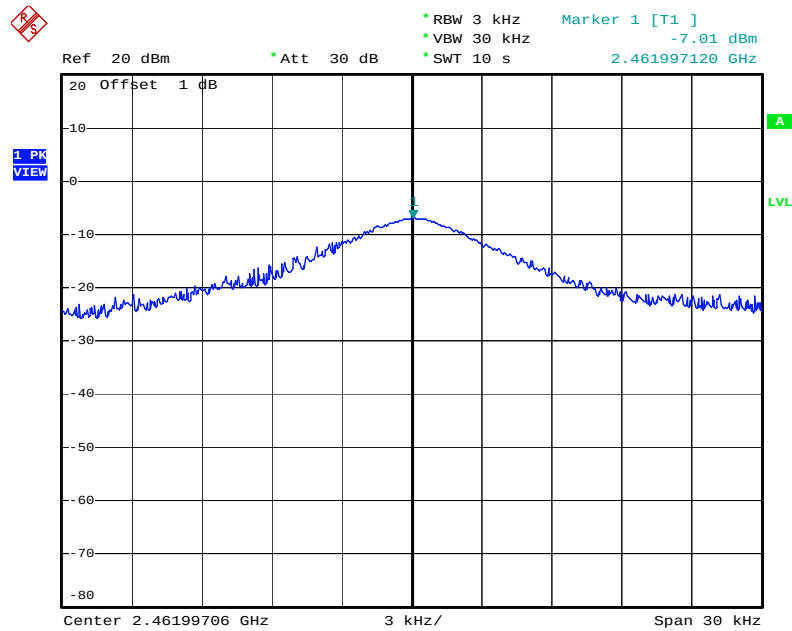
Date: 30.NOV.2009 16:36:21

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2437 MHz



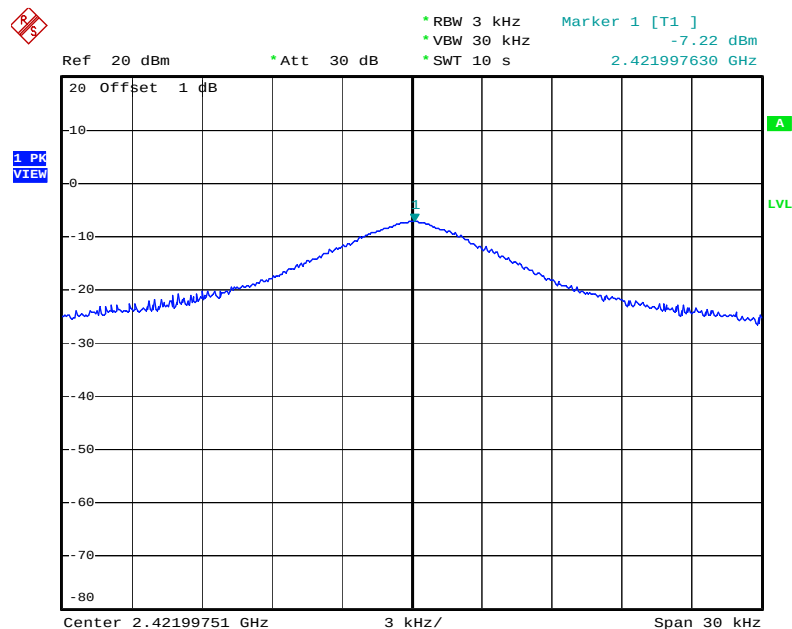
Date: 30.NOV.2009 16:34:18

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2462 MHz



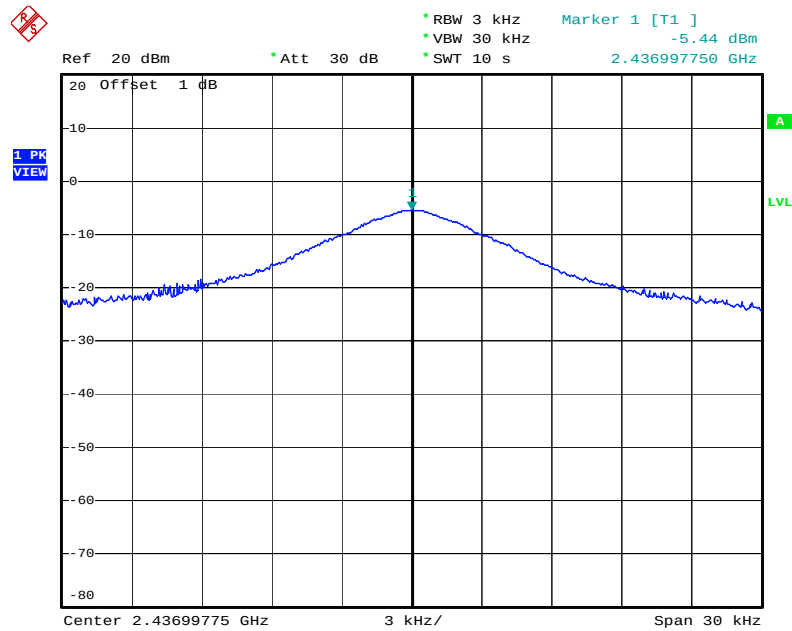
Date: 30.NOV.2009 16:31:34

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2422 MHz



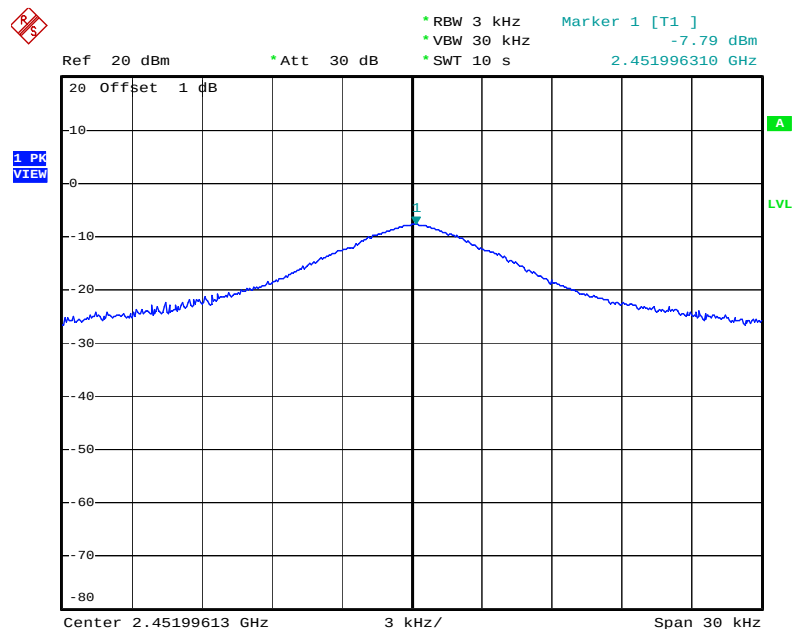
Date: 30.NOV.2009 15:50:04

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2437 MHz



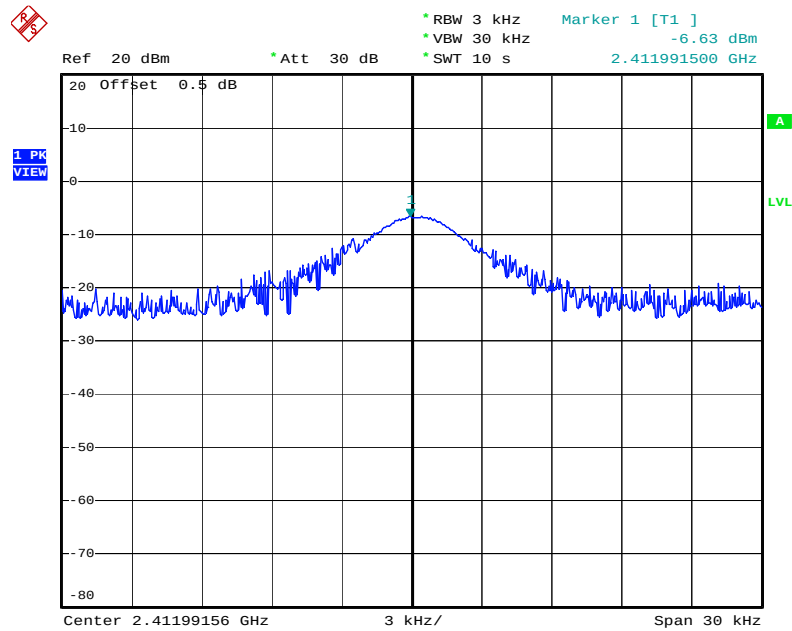
Date: 30.NOV.2009 15:55:45

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2452 MHz



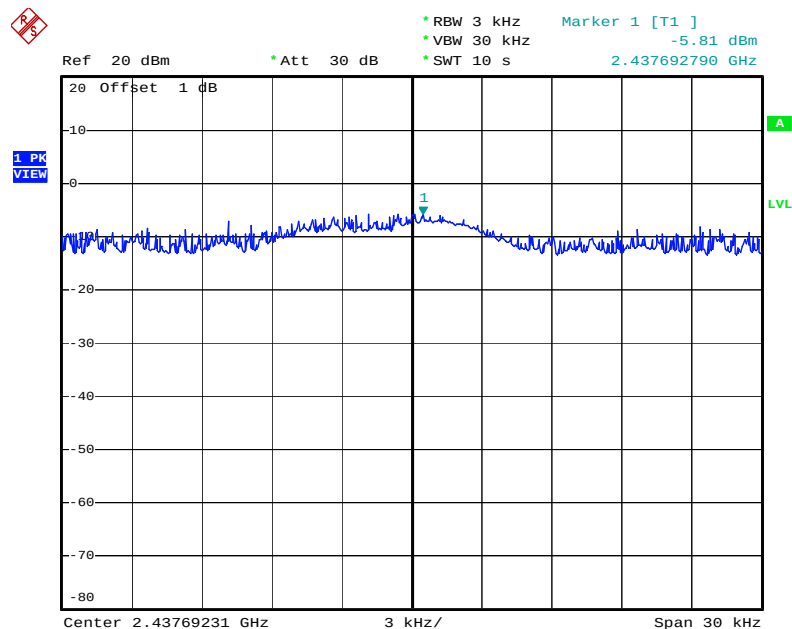
Date: 30.NOV.2009 16:24:36

Power Density Plot on Configuration IEEE 802.11b Ant. C / 2412 MHz



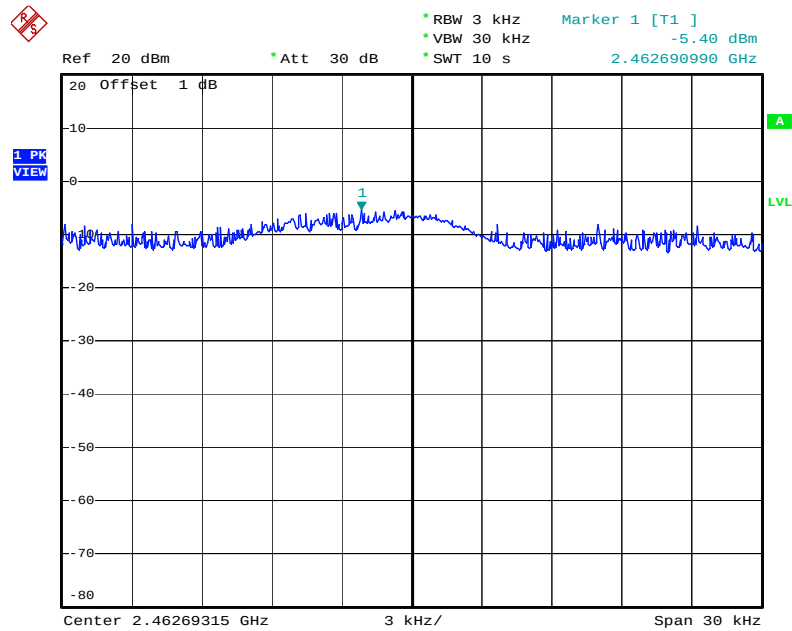
Date: 28.DEC.2009 11:38:54

Power Density Plot on Configuration IEEE 802.11b Ant. C / 2437 MHz



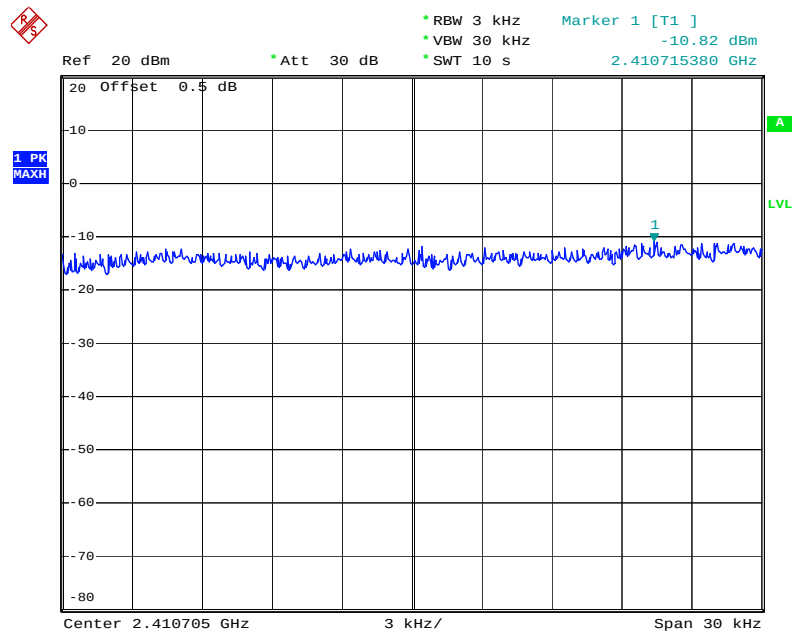
Date: 30.NOV.2009 16:48:09

Power Density Plot on Configuration IEEE 802.11b Ant. C / 2462 MHz



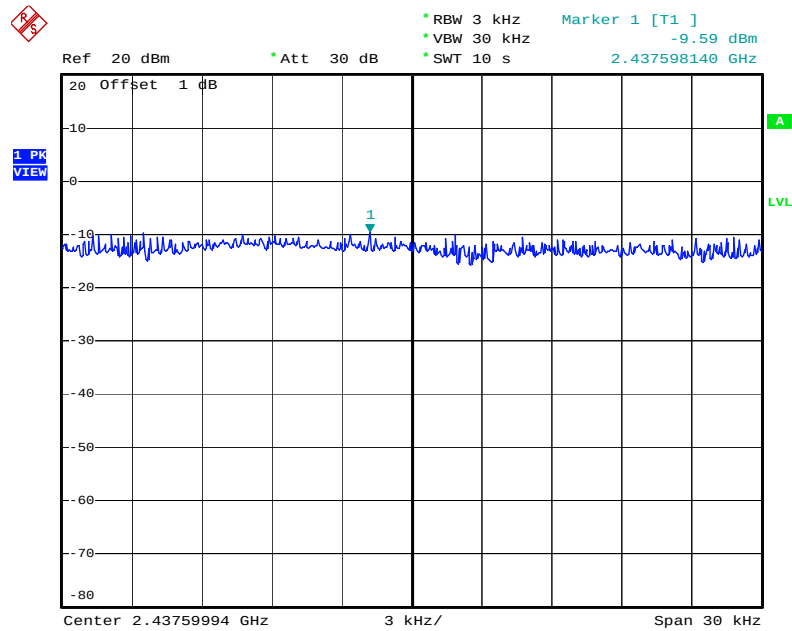
Date: 30.NOV.2009 16:45:57

Power Density Plot on Configuration IEEE 802.11g Ant. C / 2412 MHz



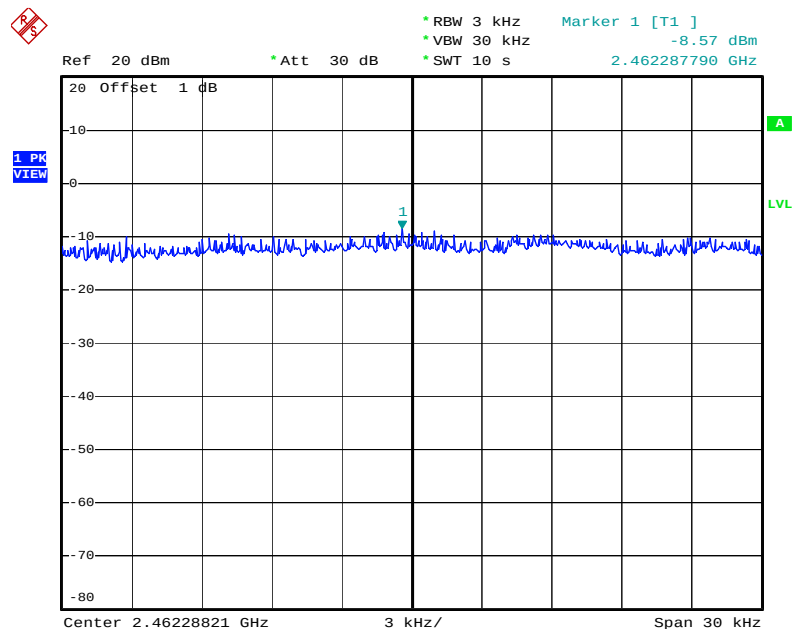
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Power Density Plot on Configuration IEEE 802.11g Ant. C / 2437 MHz



Date: 30.NOV.2009 16:41:10

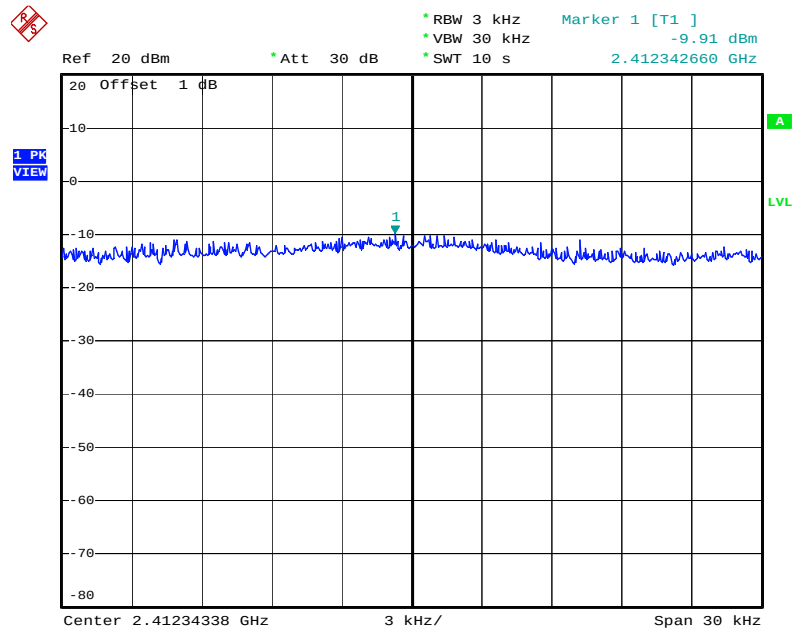
Power Density Plot on Configuration IEEE 802.11g Ant. C / 2462 MHz



Date: 30.NOV.2009 16:43:47

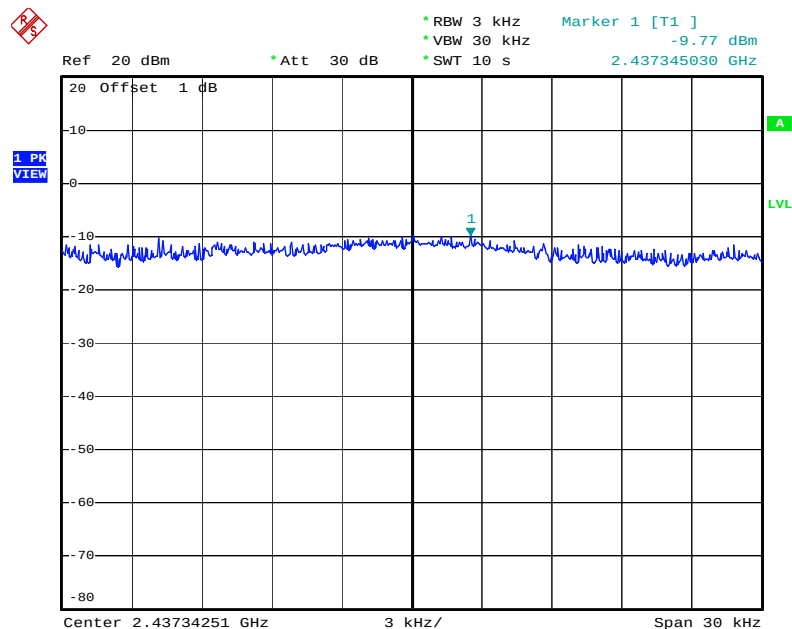
<For Antenna D>

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2412 MHz



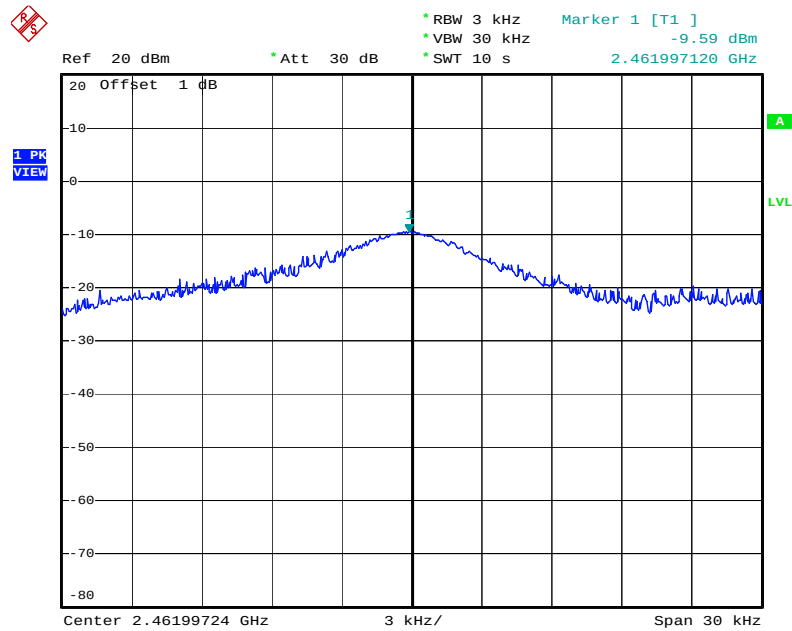
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Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2437 MHz



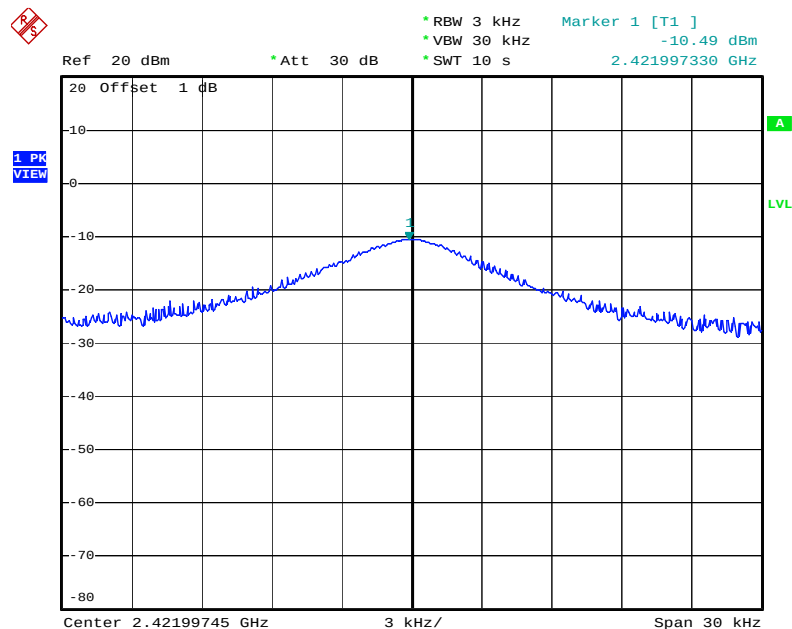
Date: 30.NOV.2009 17:32:41

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2462 MHz



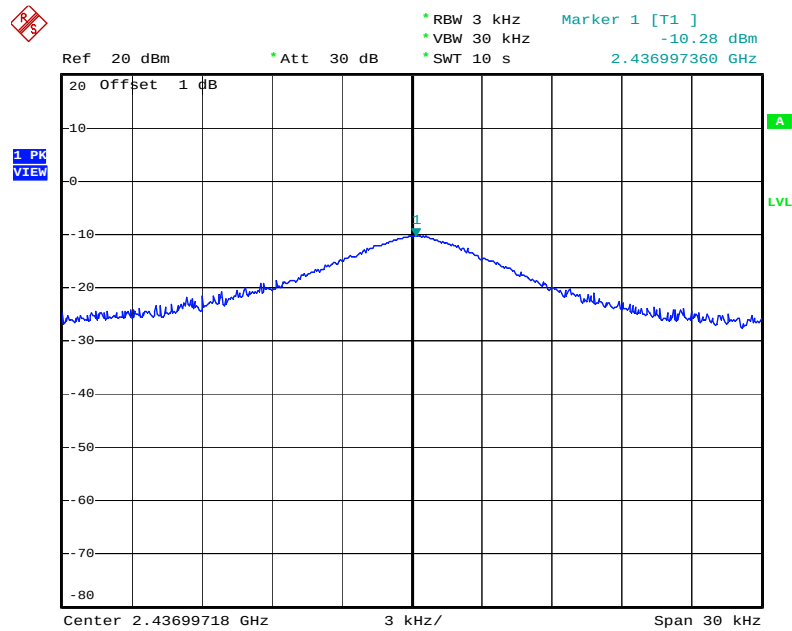
Date: 30.NOV.2009 17:37:28

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2422 MHz



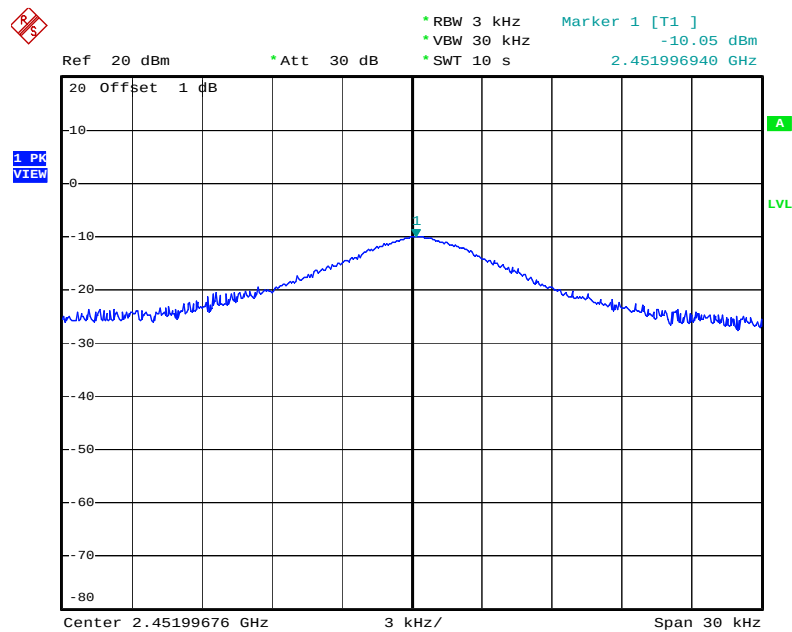
Date: 30.NOV.2009 17:46:53

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2437 MHz



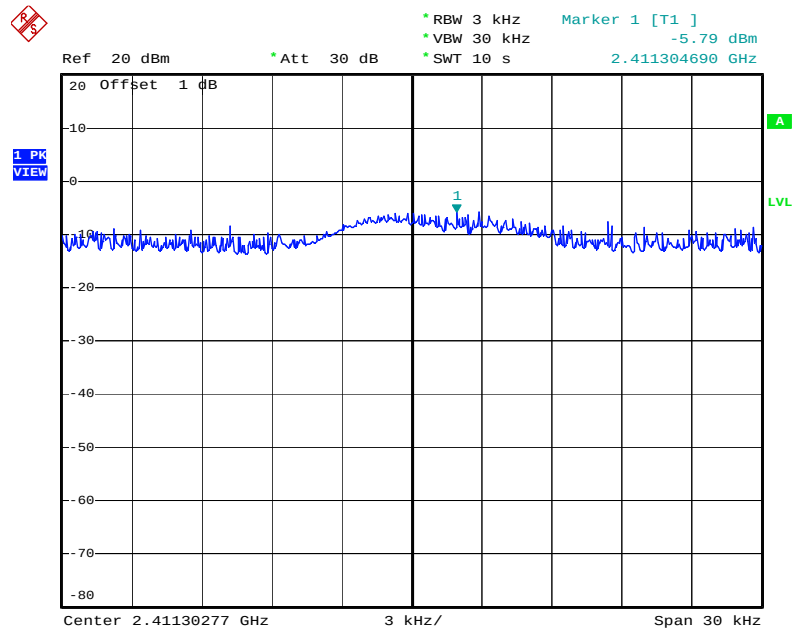
Date: 30.NOV.2009 17:43:55

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2452 MHz



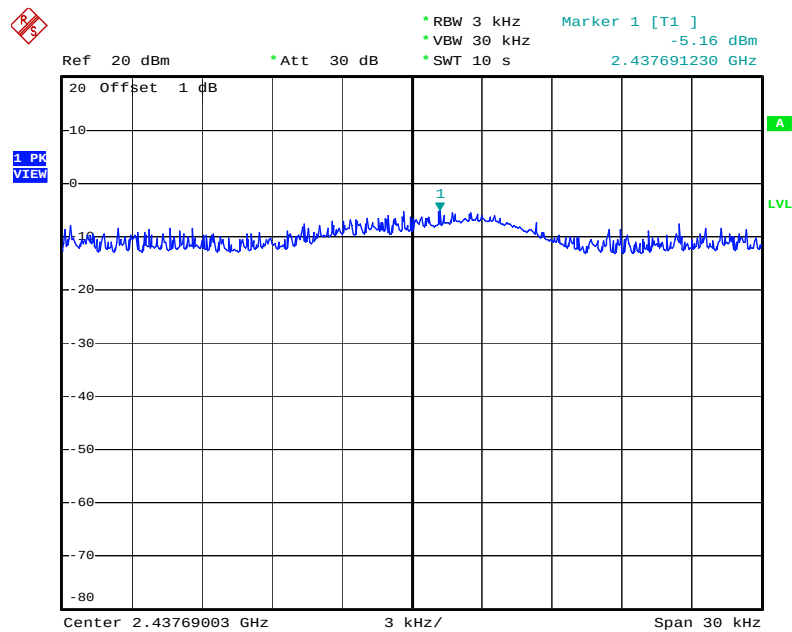
Date: 30.NOV.2009 17:40:56

Power Density Plot on Configuration IEEE 802.11b Ant. D / 2412 MHz



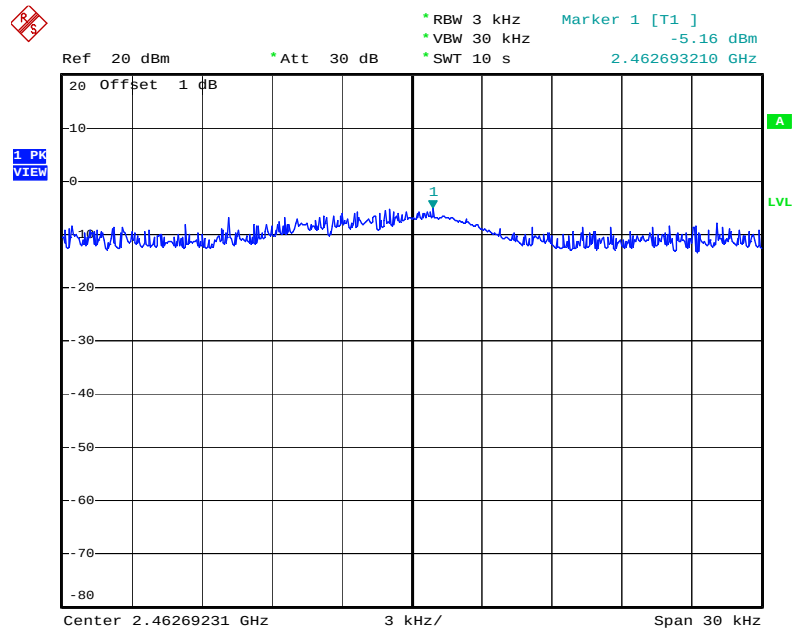
Date: 30.NOV.2009 17:18:00

Power Density Plot on Configuration IEEE 802.11b Ant. D / 2437 MHz



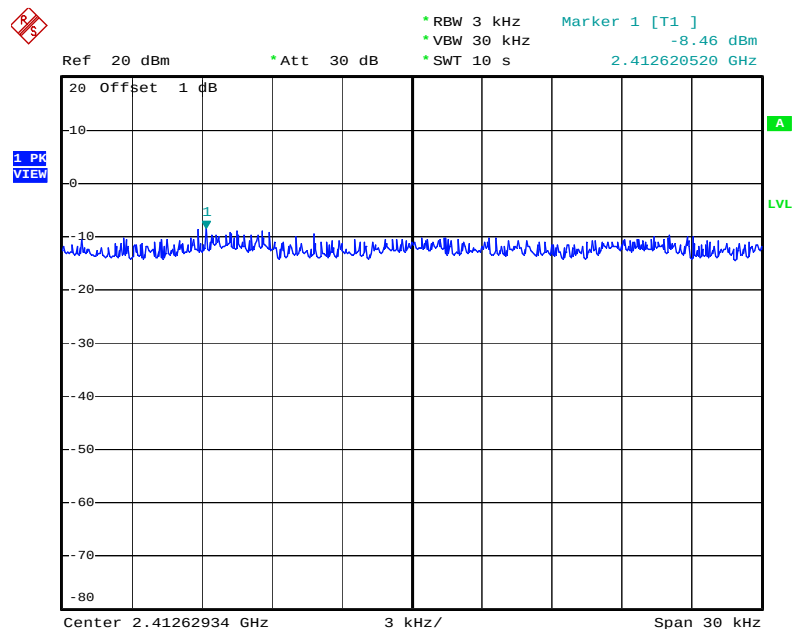
Date: 30.NOV.2009 17:13:17

Power Density Plot on Configuration IEEE 802.11b Ant. D / 2462 MHz



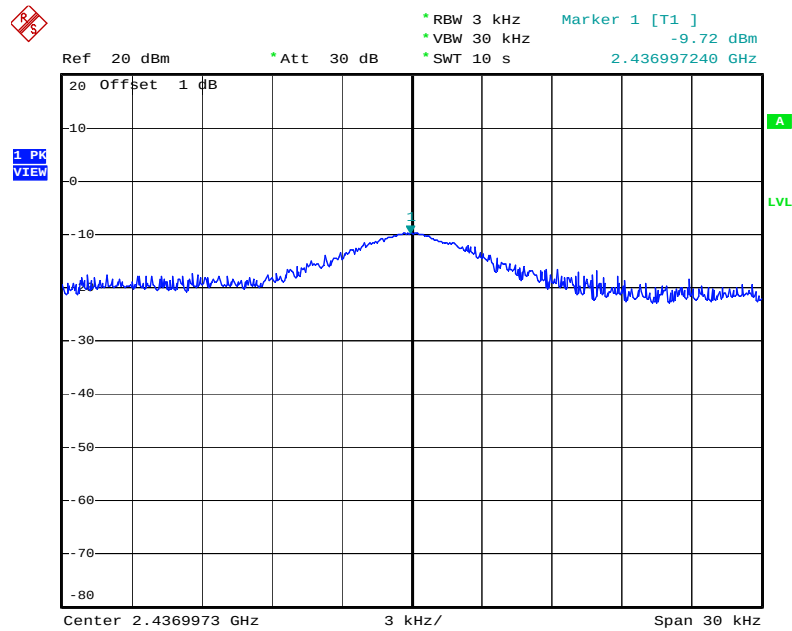
Date: 30.NOV.2009 17:21:46

Power Density Plot on Configuration IEEE 802.11g Ant. D / 2412 MHz



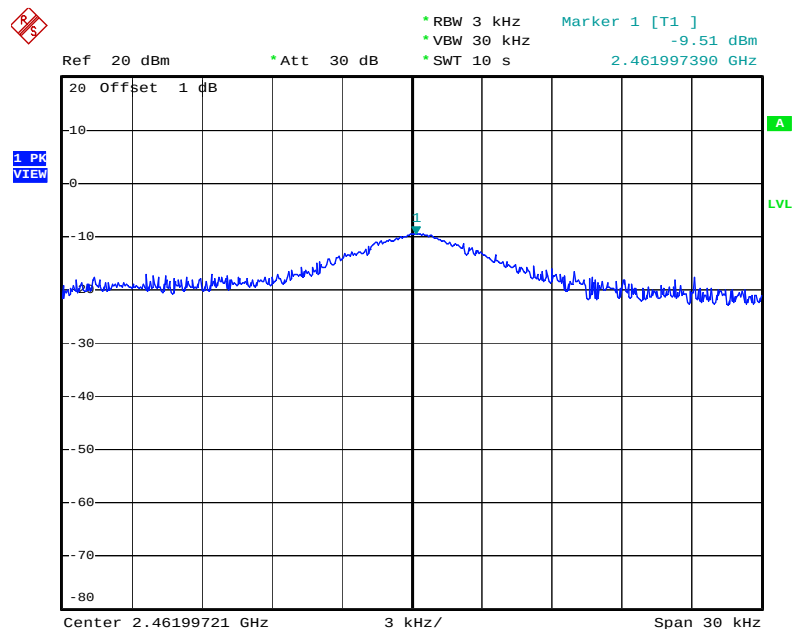
Date: 30.NOV.2009 17:27:20

Power Density Plot on Configuration IEEE 802.11g Ant. D / 2437 MHz



Date: 30.NOV.2009 17:29:29

Power Density Plot on Configuration IEEE 802.11g Ant. D / 2462 MHz



Date: 30.NOV.2009 17:24:36

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

4.4.2. Measuring Instruments and Setting

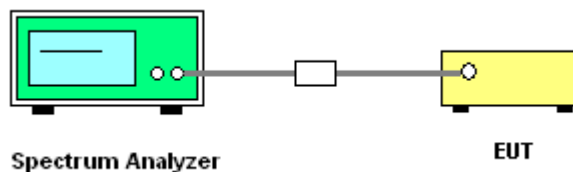
Please refer to section 5 of equipments list in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The resolution bandwidth of 100 kHz and the video bandwidth of 100 kHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

<For Antenna A>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. A

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.08	17.64	500	Complies
6	2437 MHz	17.04	17.64	500	Complies
11	2462 MHz	17.28	17.60	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.20	36.00	500	Complies
6	2437 MHz	35.12	36.00	500	Complies
9	2452 MHz	35.44	36.00	500	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. A

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	11.16	14.68	500	Complies
6	2437 MHz	11.12	14.76	500	Complies
11	2462 MHz	12.04	14.76	500	Complies

Configuration IEEE 802.11g Ant. A

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.36	16.52	500	Complies
6	2437 MHz	16.32	16.48	500	Complies
11	2462 MHz	16.36	16.48	500	Complies

<For Antenna B>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. B

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.08	17.64	500	Complies
6	2437 MHz	16.92	17.64	500	Complies
11	2462 MHz	16.32	17.64	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.12	36.16	500	Complies
6	2437 MHz	35.12	36.08	500	Complies
9	2452 MHz	35.44	36.08	500	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. B

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	11.12	14.72	500	Complies
6	2437 MHz	11.12	14.84	500	Complies
11	2462 MHz	11.12	14.80	500	Complies

Configuration IEEE 802.11g Ant. B

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.36	16.48	500	Complies
6	2437 MHz	16.32	16.48	500	Complies
11	2462 MHz	16.36	16.48	500	Complies

<For Antenna C>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. C

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.08	17.64	500	Complies
6	2437 MHz	17.04	17.64	500	Complies
11	2462 MHz	17.28	17.60	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. C

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.20	36.00	500	Complies
6	2437 MHz	35.12	36.00	500	Complies
9	2452 MHz	35.44	36.00	500	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. C

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	11.16	14.68	500	Complies
6	2437 MHz	11.12	14.76	500	Complies
11	2462 MHz	12.04	14.76	500	Complies

Configuration IEEE 802.11g Ant. C

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.36	16.52	500	Complies
6	2437 MHz	16.32	16.48	500	Complies
11	2462 MHz	16.36	16.48	500	Complies

<For Antenna D>

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz Ant. D

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.08	17.64	500	Complies
6	2437 MHz	16.92	17.64	500	Complies
11	2462 MHz	16.32	17.64	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. D

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.12	36.16	500	Complies
6	2437 MHz	35.12	36.08	500	Complies
9	2452 MHz	35.44	36.08	500	Complies

Temperature	23°C	Humidity	60%
Test Engineer	Beck Wu	Configurations	IEEE 802.11b/g

Configuration IEEE 802.11b Ant. D

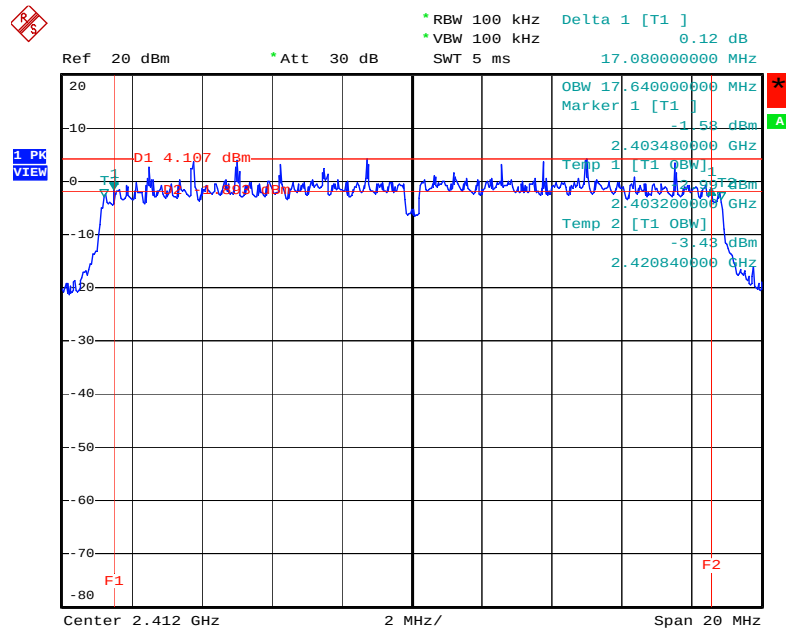
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	11.12	14.72	500	Complies
6	2437 MHz	11.12	14.84	500	Complies
11	2462 MHz	11.12	14.80	500	Complies

Configuration IEEE 802.11g Ant. D

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.36	16.48	500	Complies
6	2437 MHz	16.32	16.48	500	Complies
11	2462 MHz	16.36	16.48	500	Complies

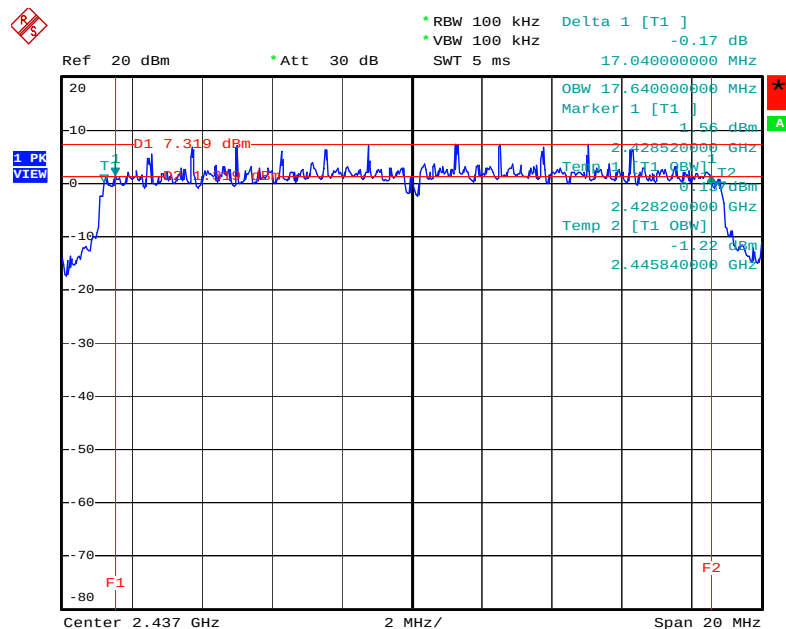
<For Antenna A>

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2412 MHz



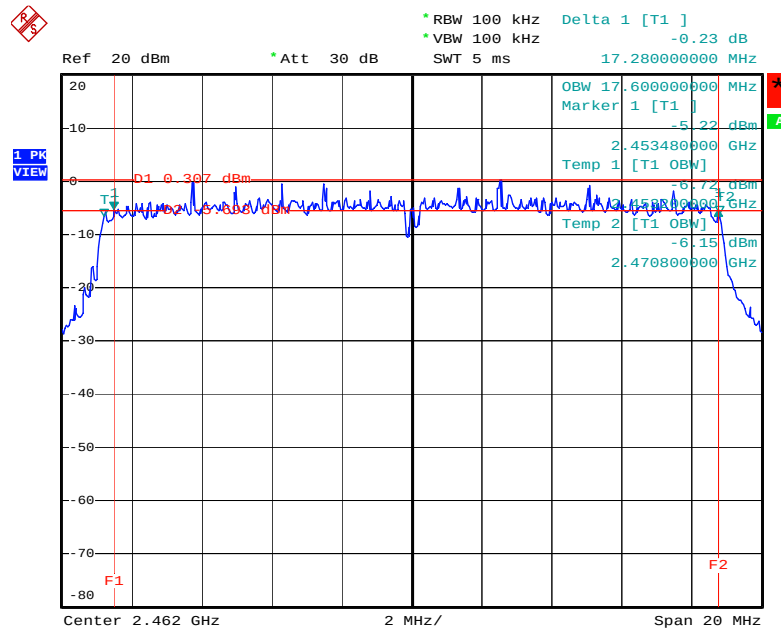
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6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2437 MHz



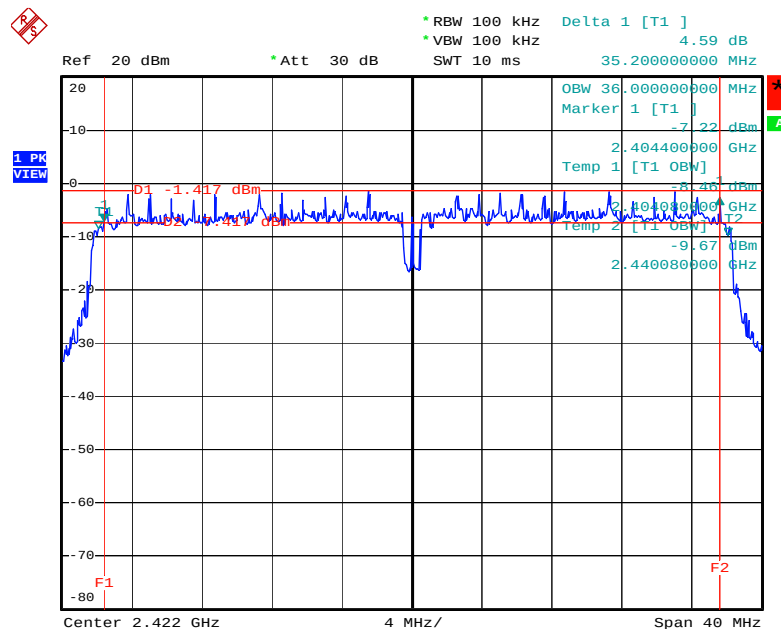
Date: 30.NOV.2009 16:32:50

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A / 2462 MHz



Date: 30.NOV.2009 16:30:07

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A / 2422 MHz



Date: 30.NOV.2009 15:48:37



Ref 20 dBm * Att 30 dB RBW 100 kHz VBW 100 kHz SWT 10 ms Delta 1 [T1] 35.120000000 MHz

1 PK VIEW

0.1 0.10 dBm

OBW 36.000000000 MHz
Marker 1 [T1] -4.87 dBm
2.419480000 GHz
Temp 1 [T1 OBW] -7.69 dBm
2.440000000 GHz
Temp 2 [T1 OBW] -7.97 dBm
2.455080000 GHz

F1 F2

Center 2.437 GHz 4 MHz/ Span 40 MHz

Ref 20 dBm Att 30 dB RBW 100 kHz VBW 100 kHz SWT 10 ms

Delta 1 [T1] -2.06 dB 35.44000000 MHz

OBW 36.00000000 MHz
Marker 1 [T1] -7.08 dBm
2.434400000 GHz
Temp 1 [T1 OBW] -10.82 dBm
2.434000000 GHz T2 -10.90 dBm
2.470000000 GHz

D1 -3.31 dBm

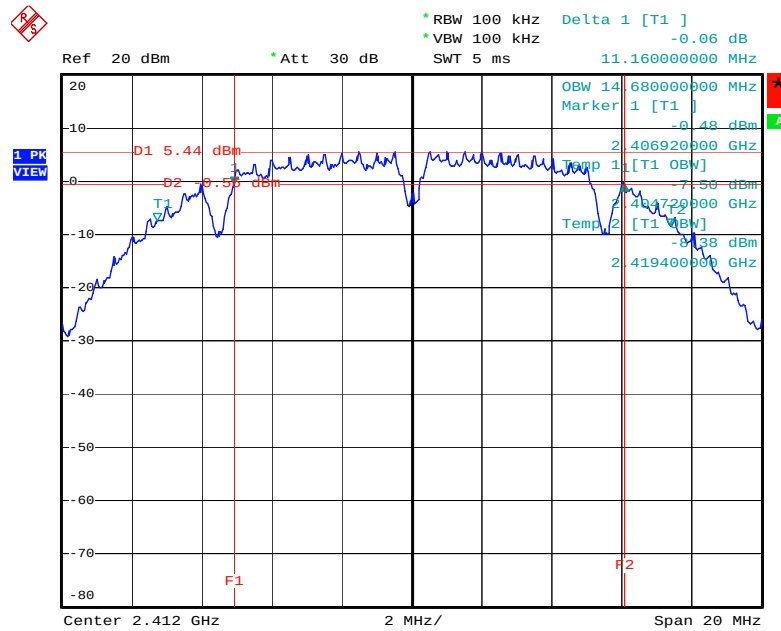
1 PK VIEW

F1 F2

Center 2.452 GHz 4 MHz/ Span 40 MHz

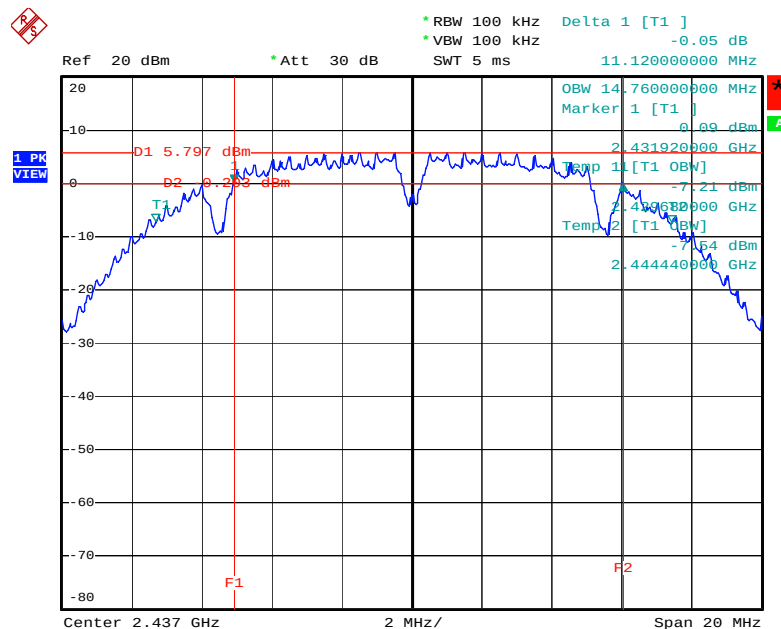
Issued Date : Jan. 18, 2010

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A / 2412 MHz



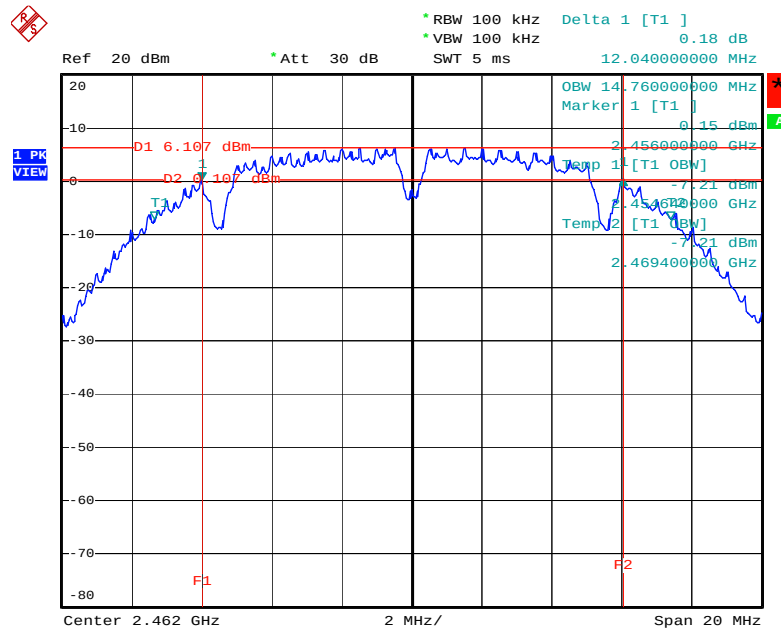
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6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A / 2437 MHz



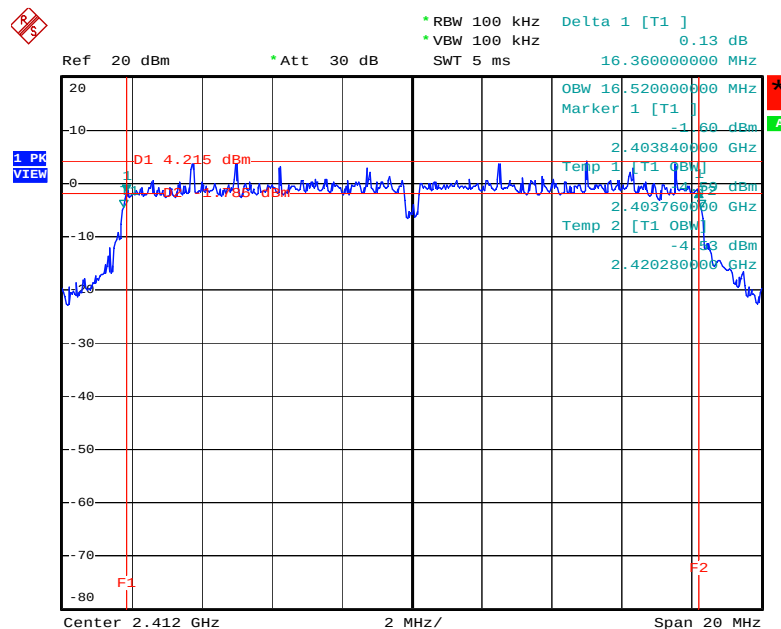
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6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A / 2462 MHz



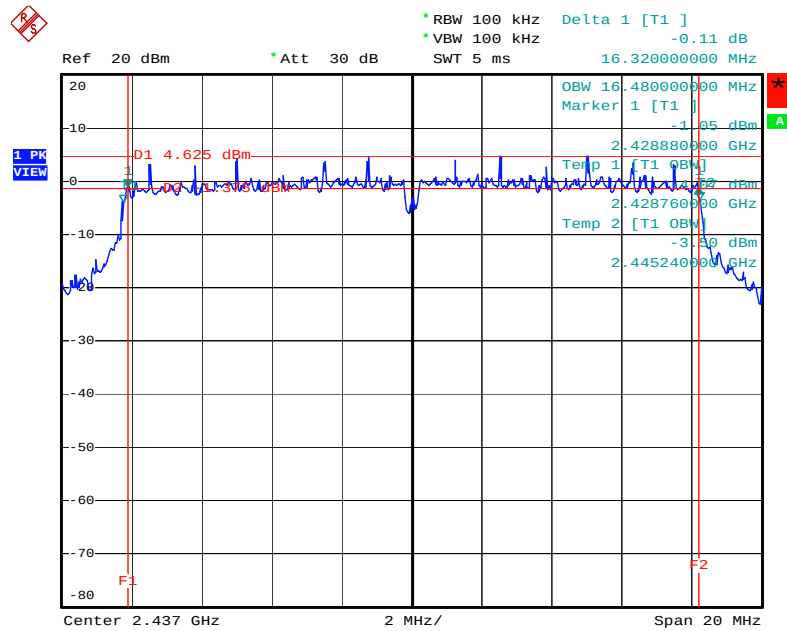
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6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A / 2412 MHz



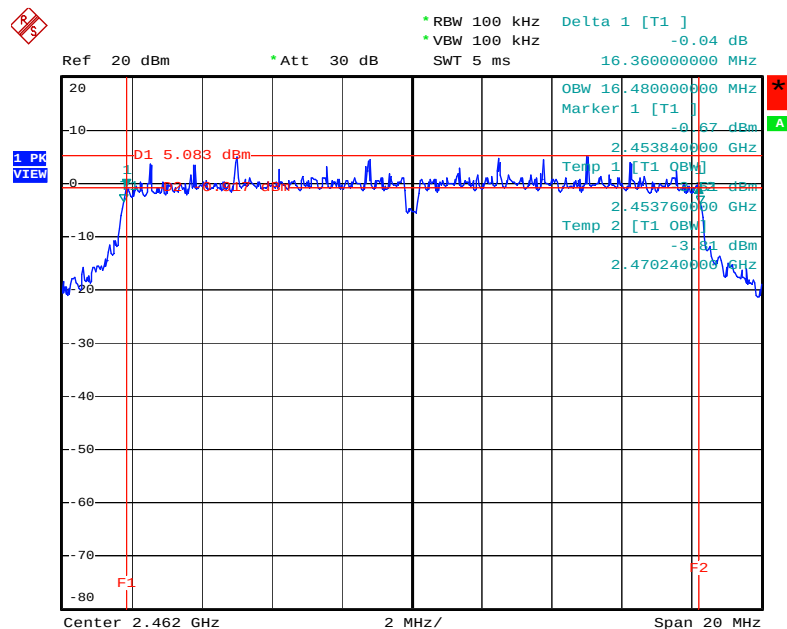
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6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A / 2437 MHz



Date: 30.NOV.2009 16:39:42

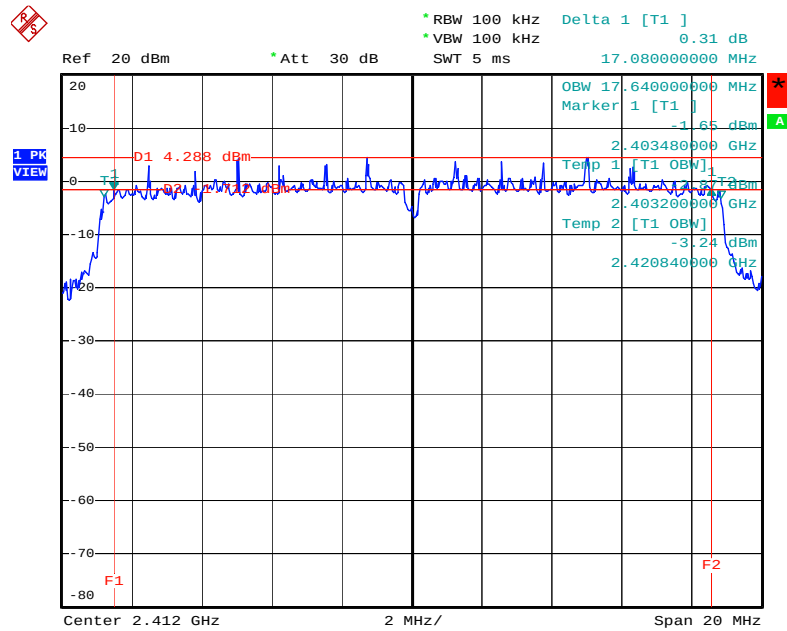
6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A / 2462 MHz



Date: 30.NOV.2009 16:42:20

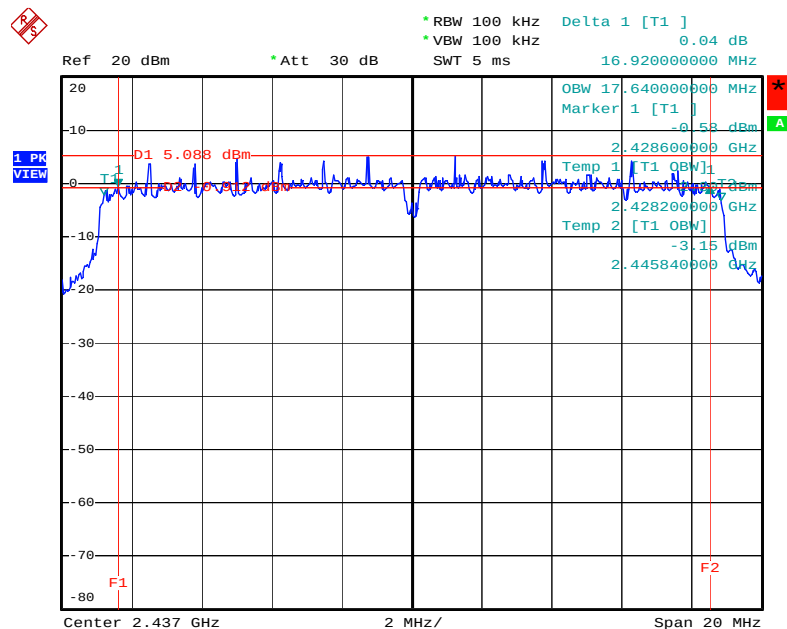
<For Antenna B>

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2412 MHz



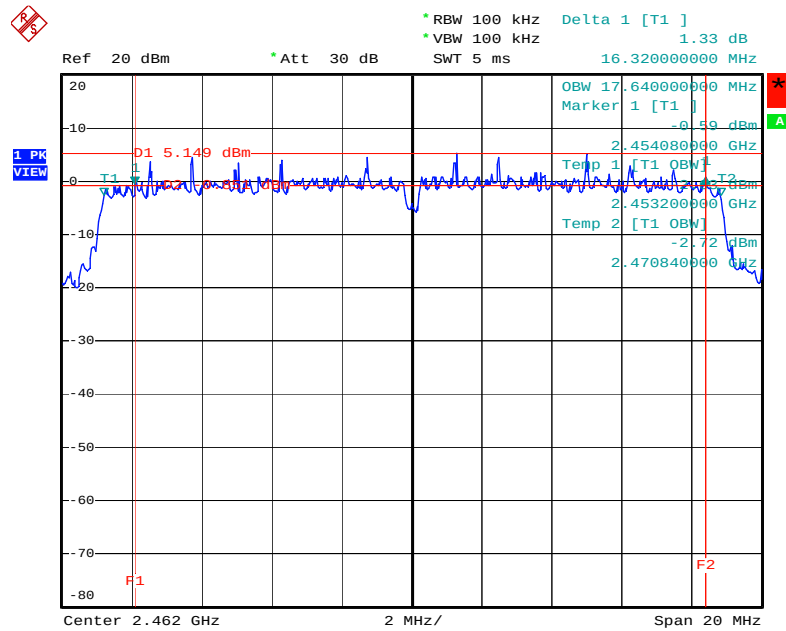
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6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2437 MHz



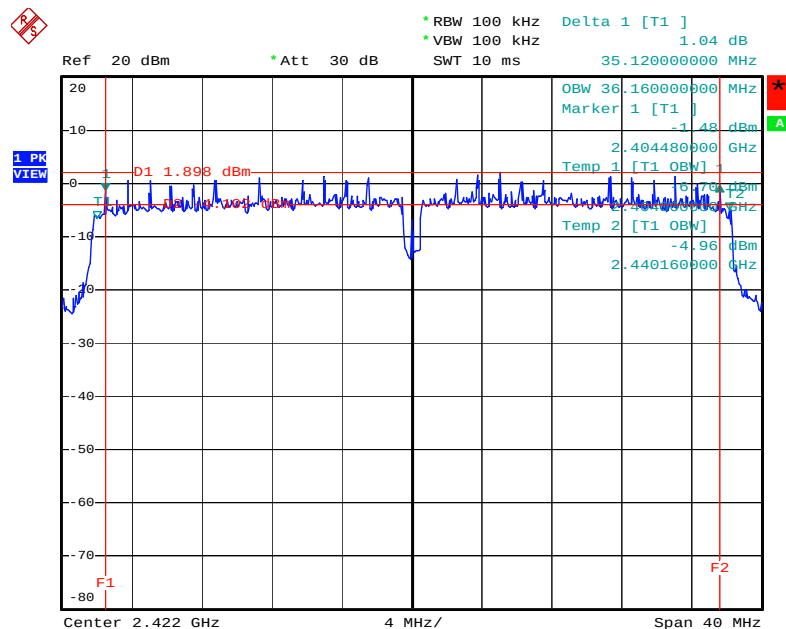
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6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B / 2462 MHz



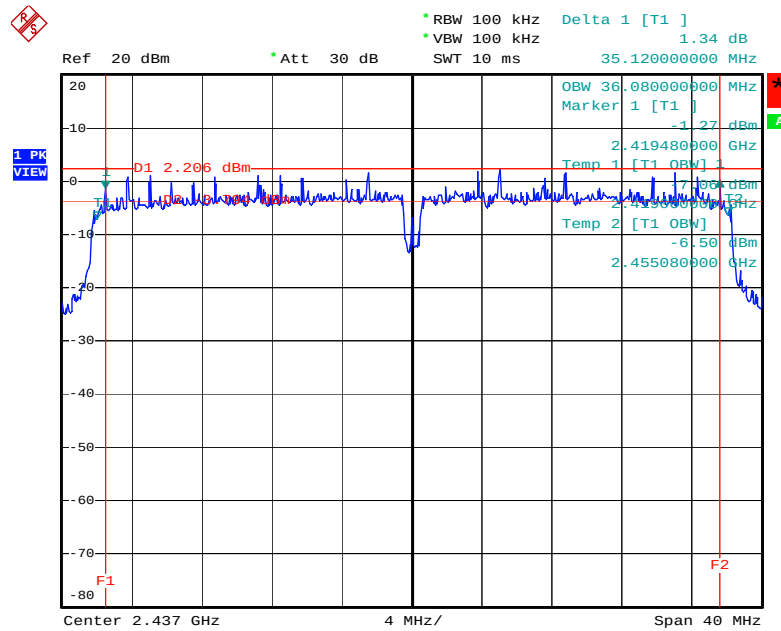
Date: 30.NOV.2009 17:36:01

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2422 MHz



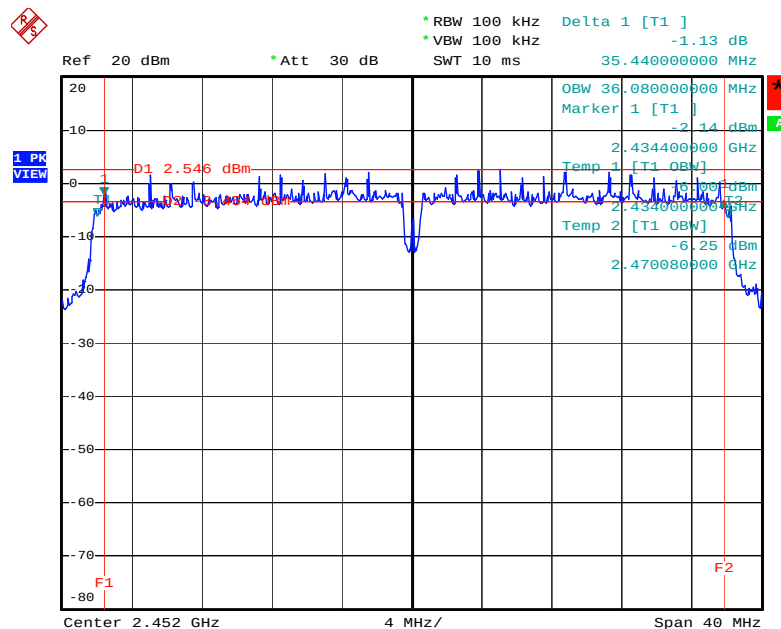
Date: 30.NOV.2009 17:45:26

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2437 MHz



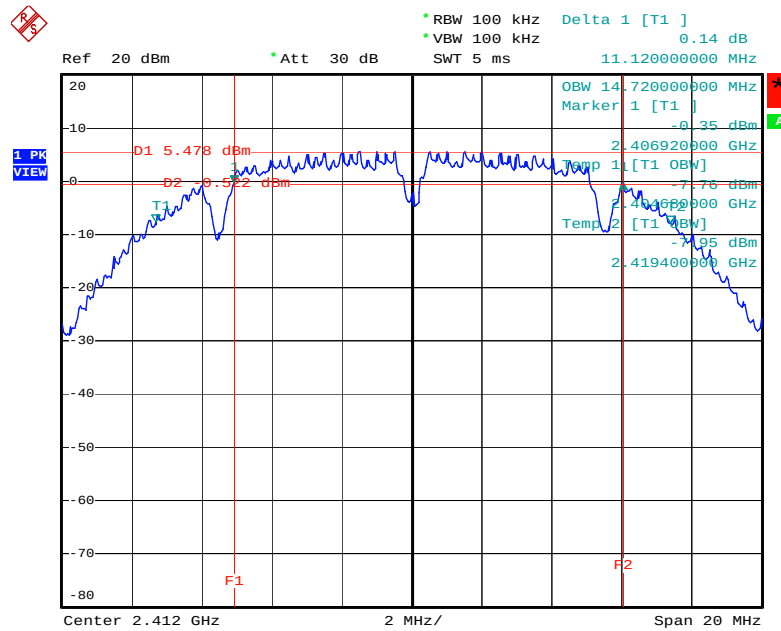
Date: 30.NOV.2009 17:42:28

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B / 2452 MHz



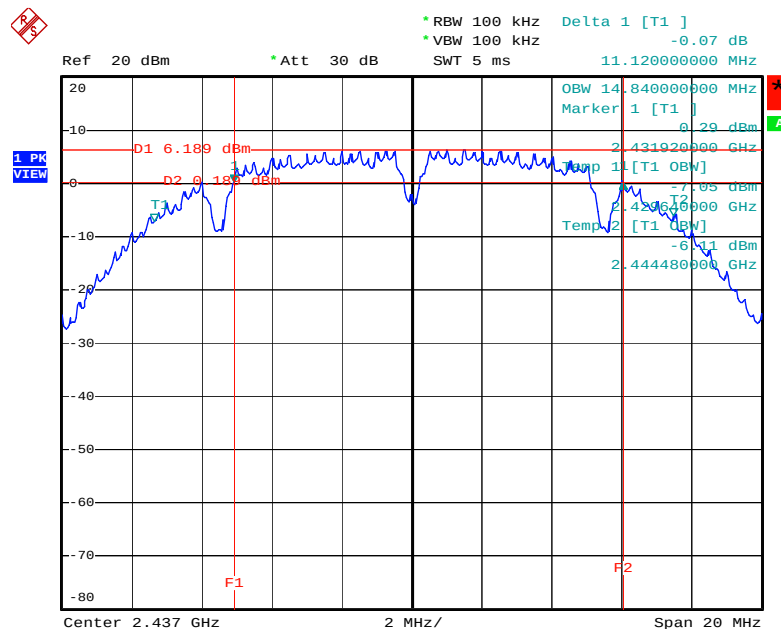
Date: 30.NOV.2009 17:39:29

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B / 2412 MHz



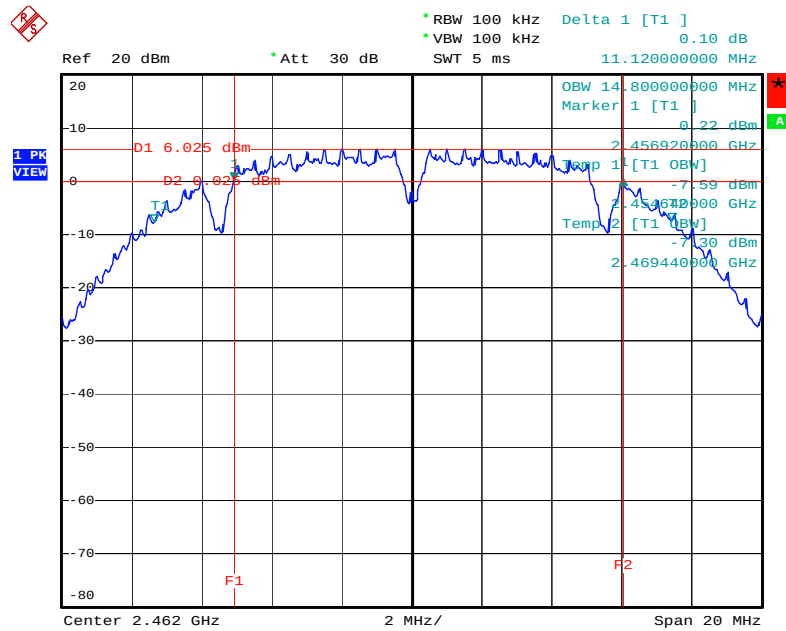
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6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B / 2437 MHz



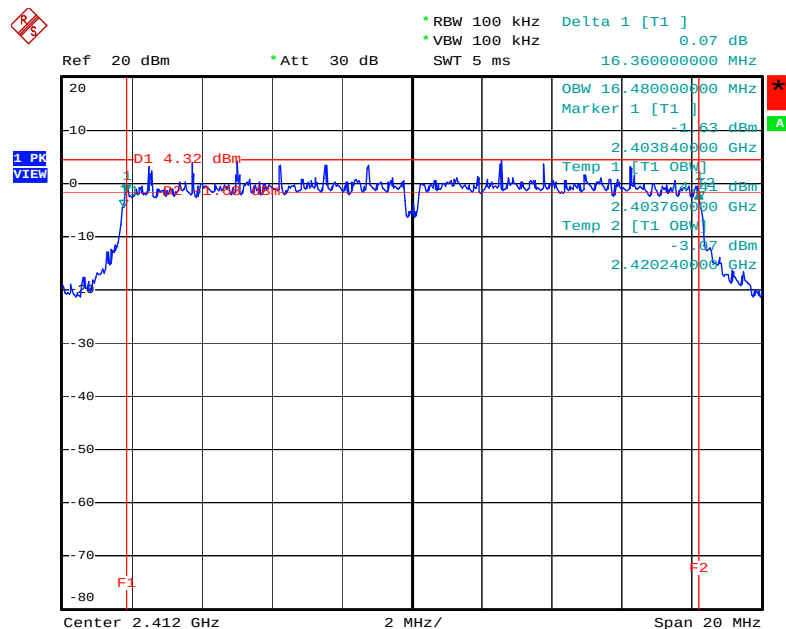
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6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B / 2462 MHz



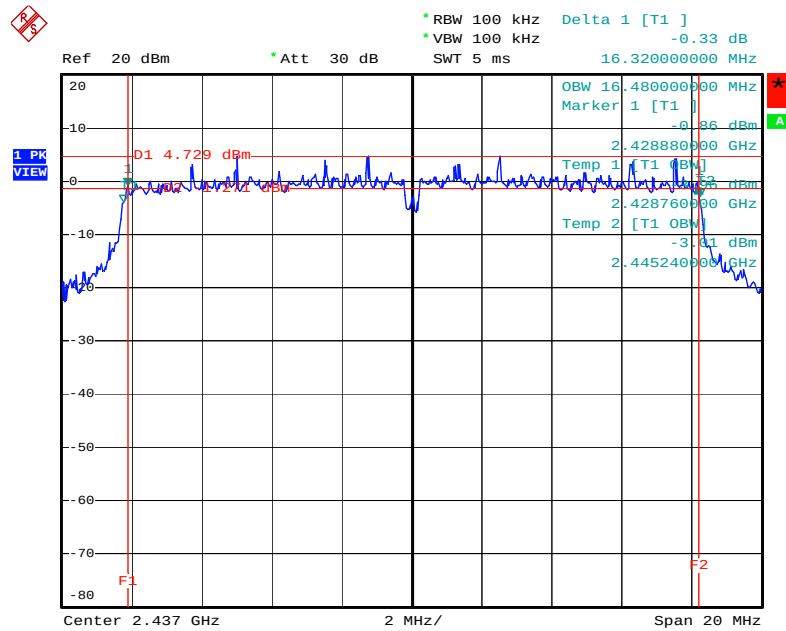
Date: 30.NOV.2009 17:20:19

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B / 2412 MHz



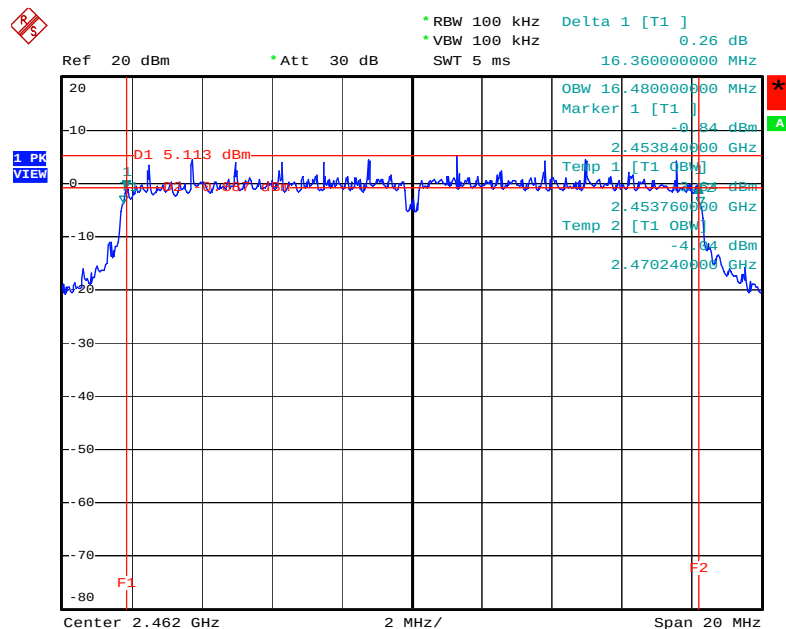
Date: 30.NOV.2009 17:25:53

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B / 2437 MHz



Date: 30.NOV.2009 17:28:01

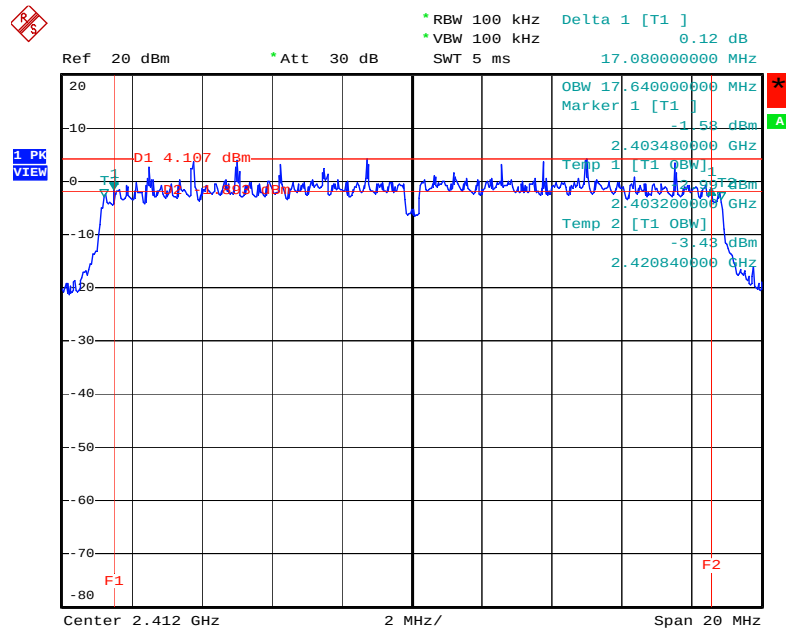
6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B / 2462 MHz



Date: 30.NOV.2009 17:23:09

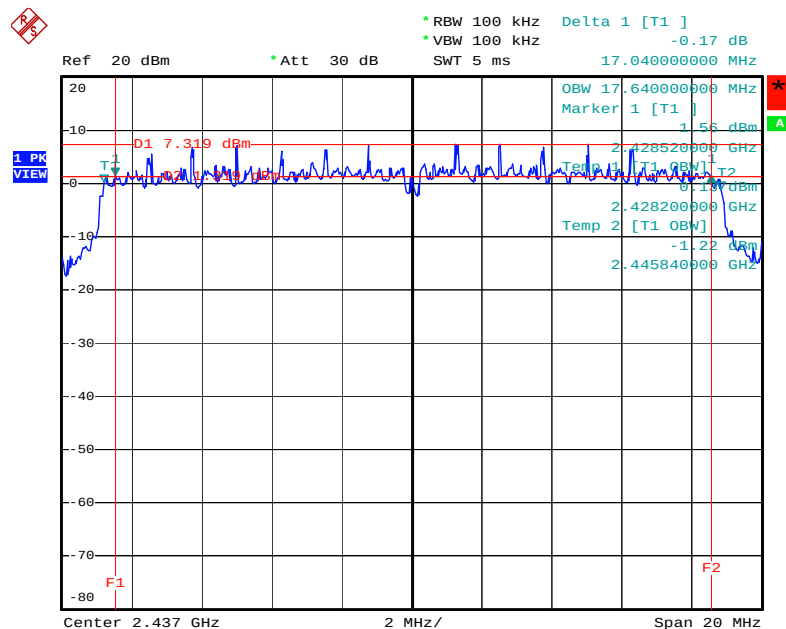
<For Antenna C>

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2412 MHz



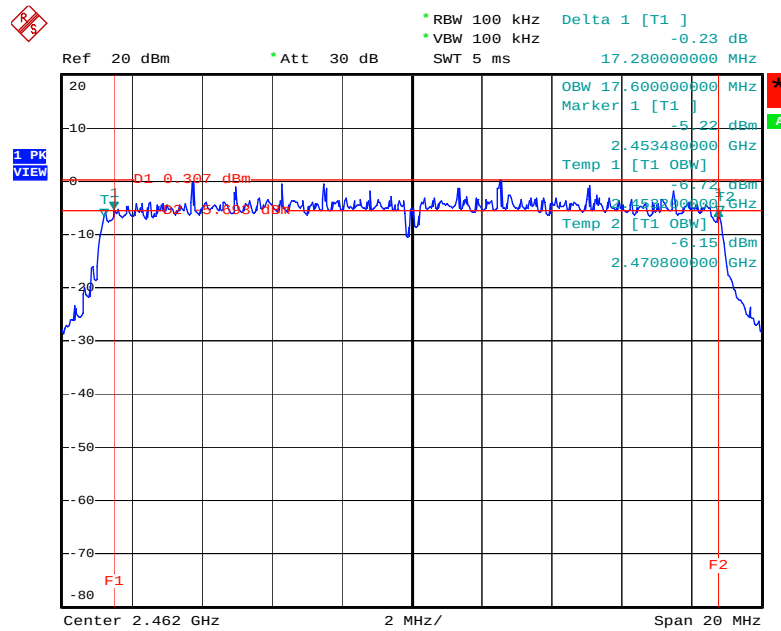
Date: 30.NOV.2009 16:34:54

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2437 MHz



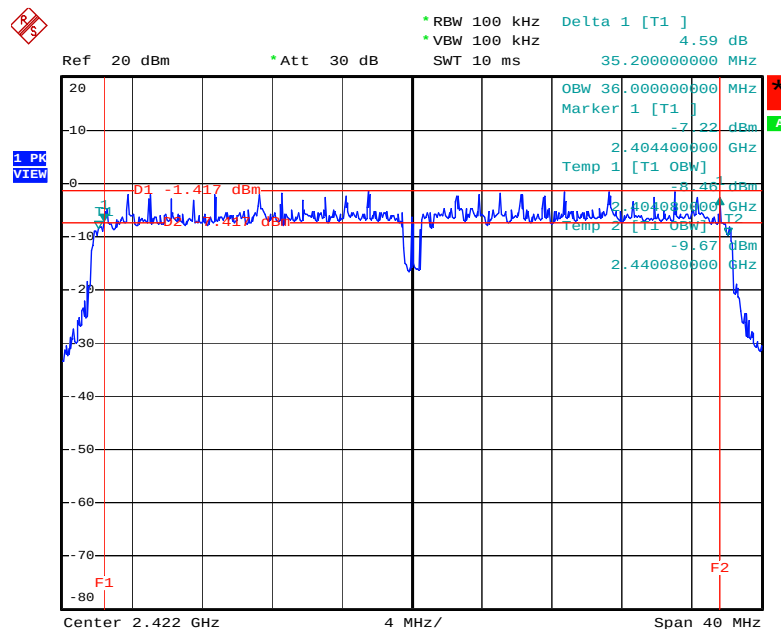
Date: 30.NOV.2009 16:32:50

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. C / 2462 MHz



Date: 30.NOV.2009 16:30:07

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. C / 2422 MHz



Date: 30.NOV.2009 15:48:37



Ref 20 dBm Att 30 dB RBW 100 kHz VBW 100 kHz SWT 10 ms Delta 1 [T1] 3.14 dB 35.120000000 MHz

OBW 36.000000000 MHz
Marker 1 [T1] -4.87 dBm
2.419480000 GHz
Temp 1 [T1 OBW] -7.69 dBm
2.440000000 GHz
Temp 2 [T1 OBW] -7.97 dBm
2.455080000 GHz

1 PK VIEW

Center 2.437 GHz 4 MHz/ Span 40 MHz

Ref 20 dBm * Att 30 dB Delta 1 [T1] 35.44000000 MHz

RBW 100 kHz VBW 100 kHz SWT 10 ms

OBW 36.00000000 MHz
Marker 1 [T1]
-7.08 dBm
2.434400000 GHz
Temp 1 [T1 OBW]
-10.82 dBm
2.434000000 GHz
T2
-10.90 dBm
2.470000000 GHz

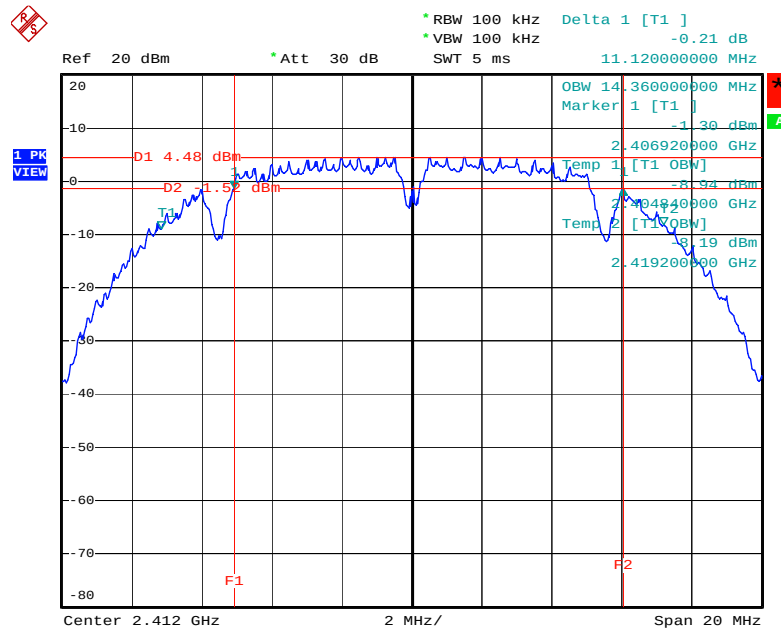
D1 -3.31 dBm

1 PK VIEW

Center 2.452 GHz 4 MHz/ Span 40 MHz

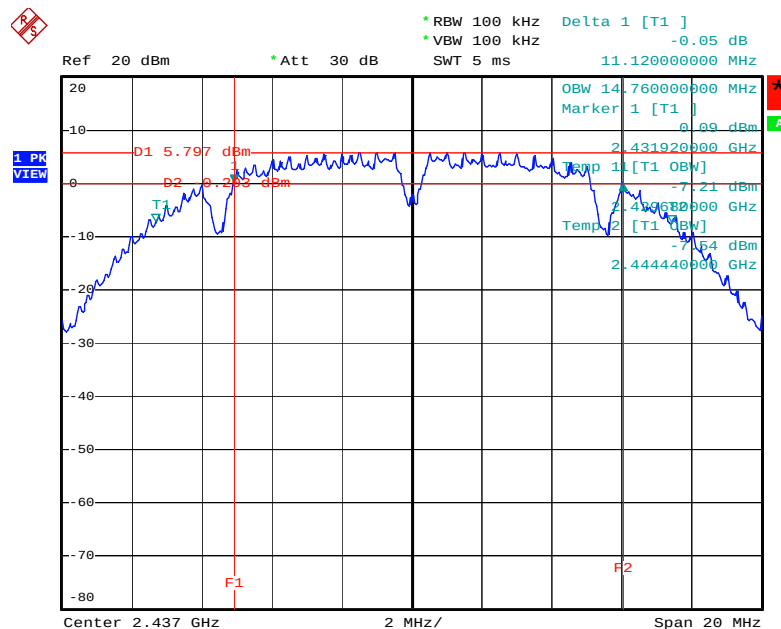
Issued Date : Jan. 18, 2010

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. C / 2412 MHz



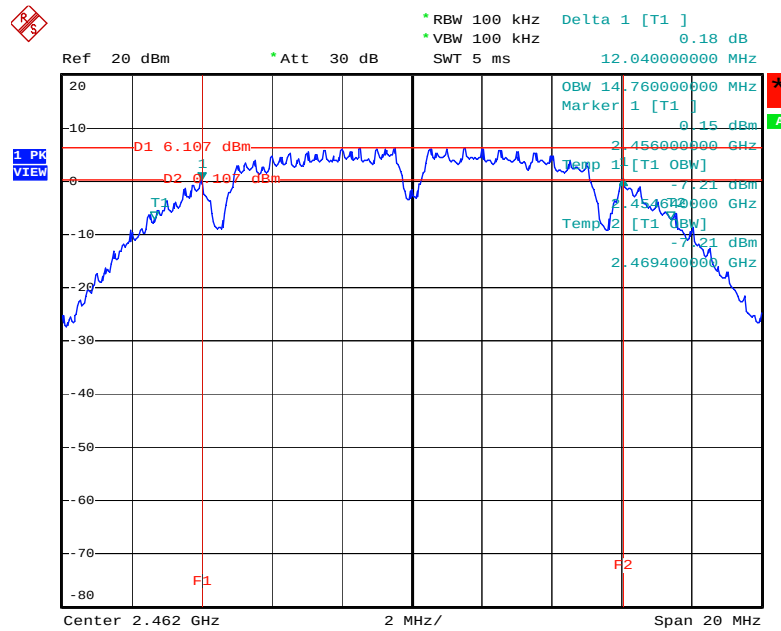
Date: 28.DEC.2009 11:37:27

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. C / 2437 MHz



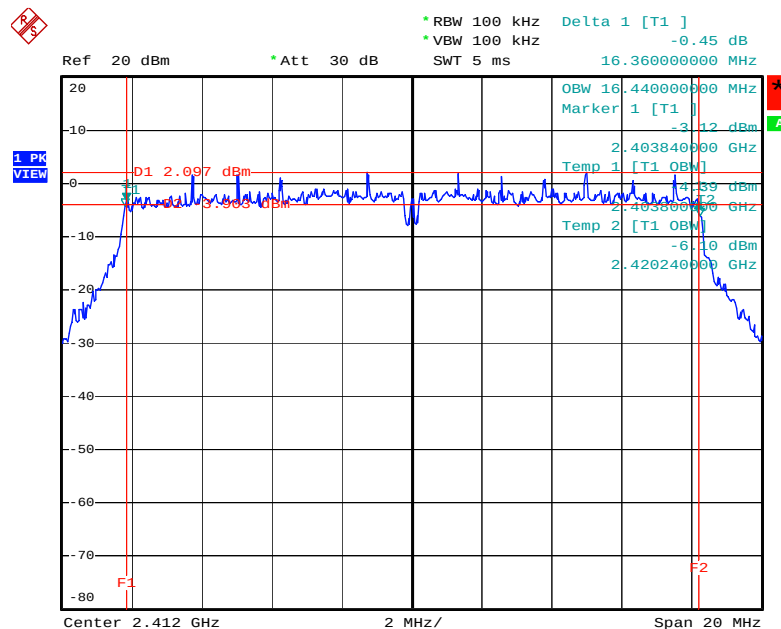
Date: 30.NOV.2009 16:46:41

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. C / 2462 MHz



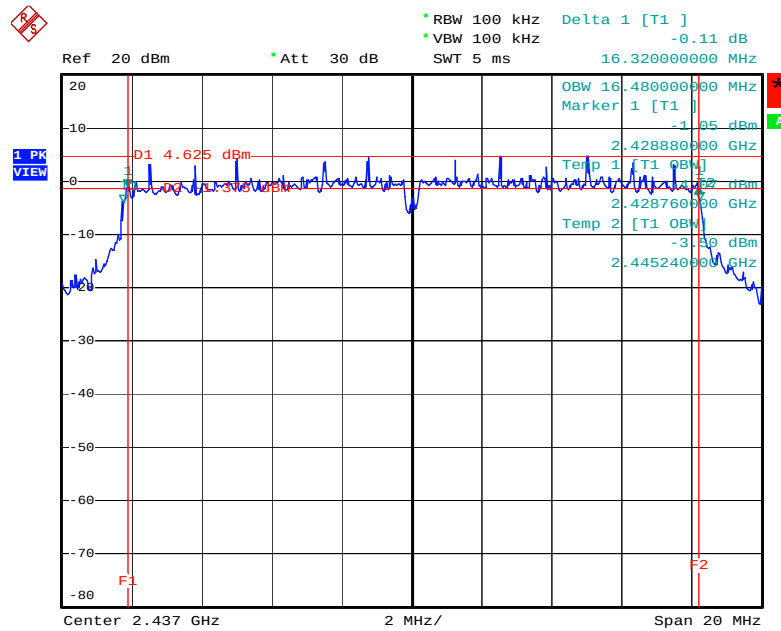
Date: 30.NOV.2009 16:44:31

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. C / 2412 MHz



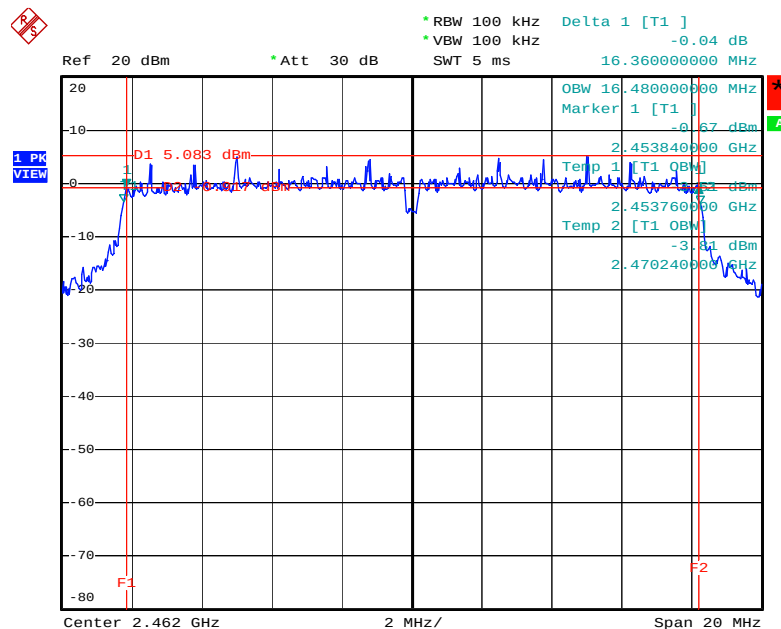
Date: 28.DEC.2009 11:35:09

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. C / 2437 MHz



Date: 30.NOV.2009 16:39:42

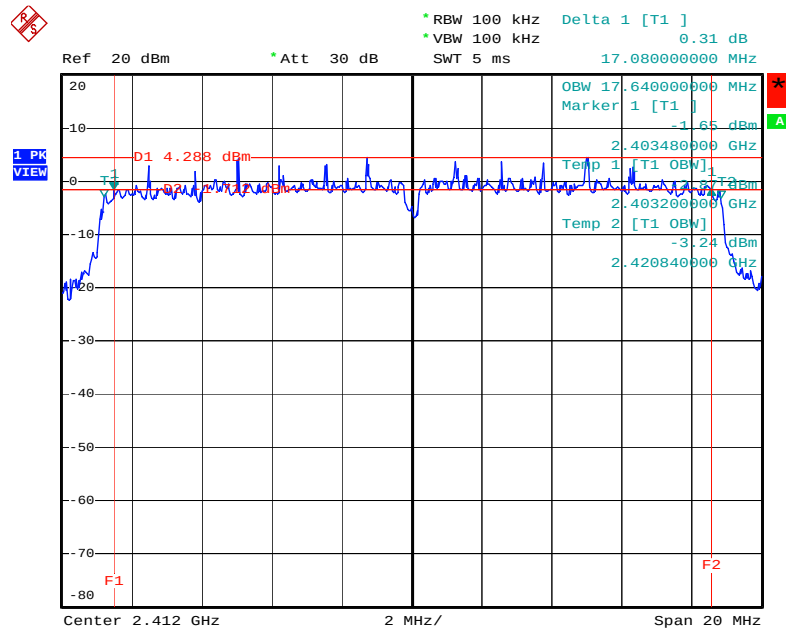
6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. C / 2462 MHz



Date: 30.NOV.2009 16:42:20

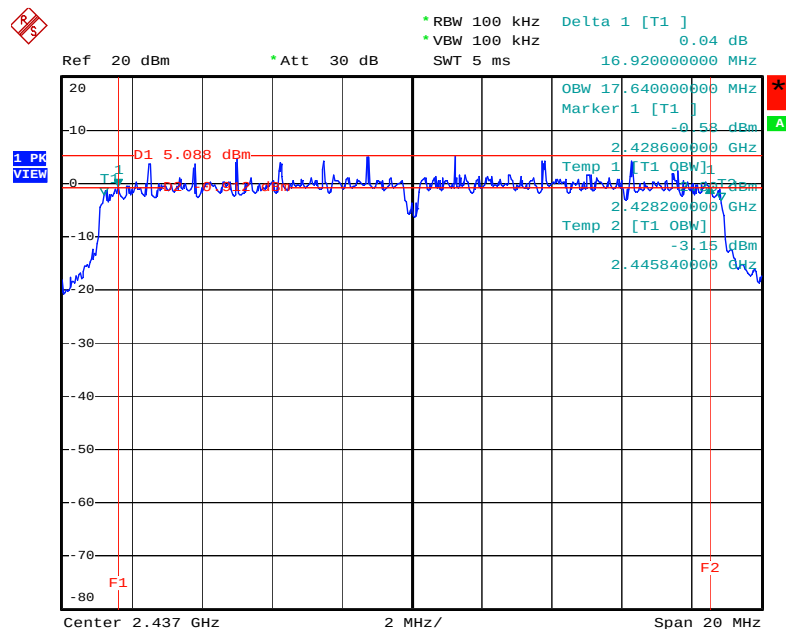
<For Antenna D>

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2412 MHz



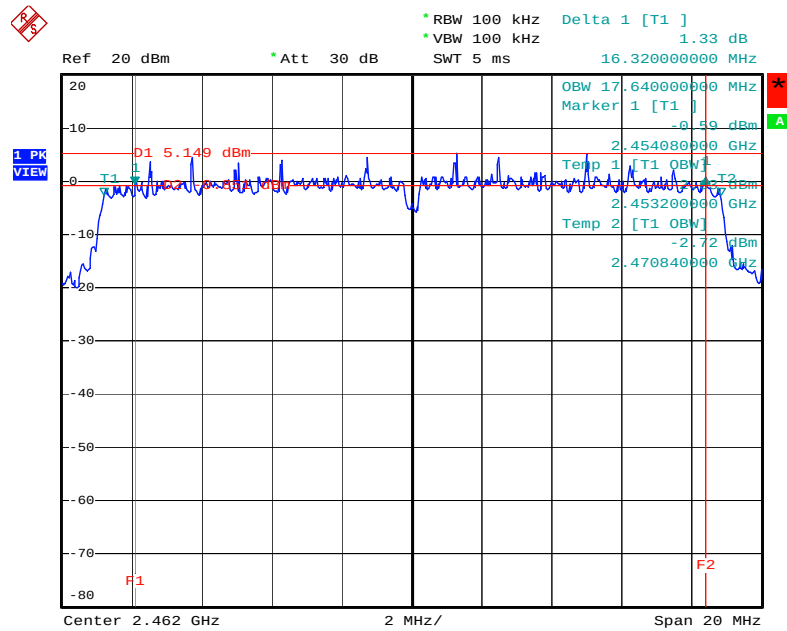
Date: 30.NOV.2009 17:33:57

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2437 MHz



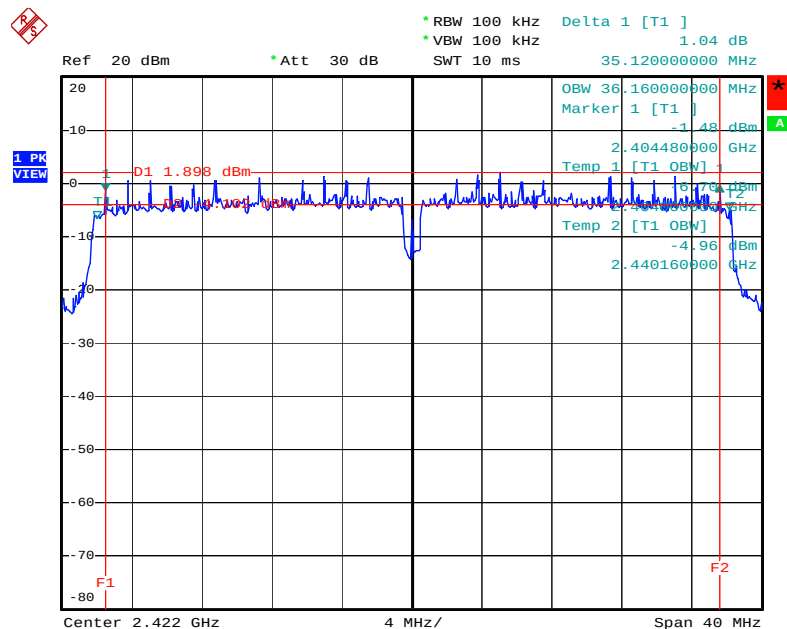
Date: 30.NOV.2009 17:31:13

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. D / 2462 MHz



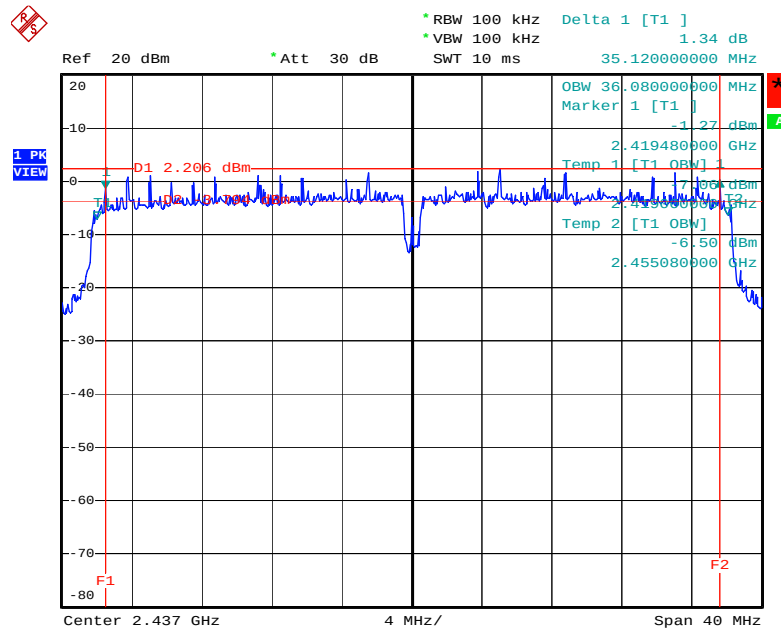
Date: 30.NOV.2009 17:36:01

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2422 MHz



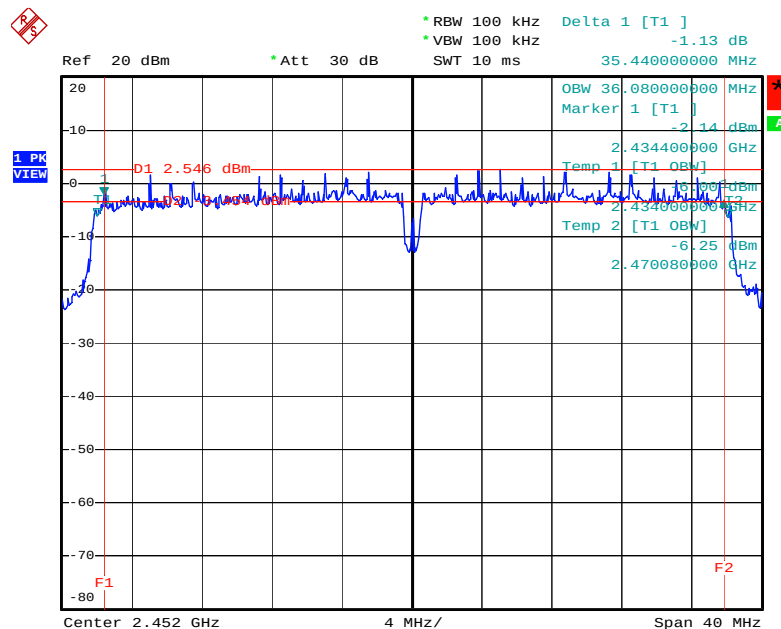
Date: 30.NOV.2009 17:45:26

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2437 MHz



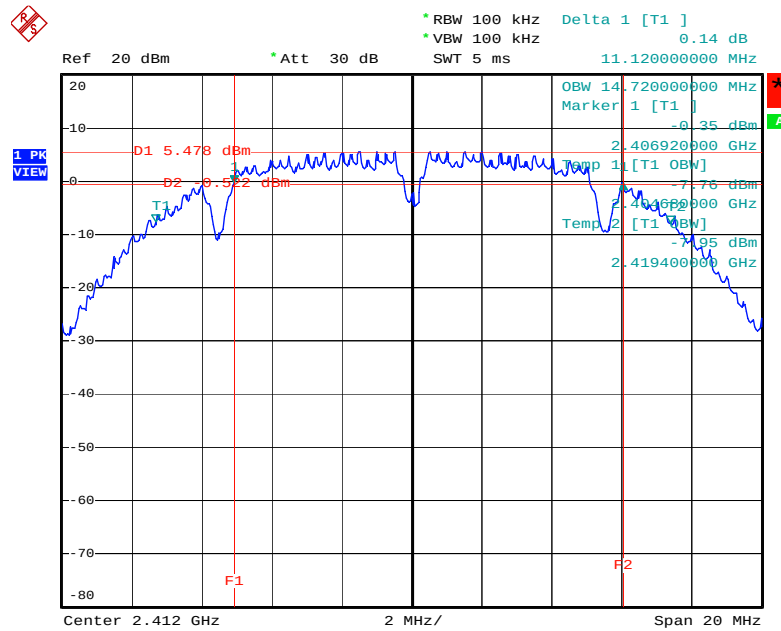
Date: 30.NOV.2009 17:42:28

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. D / 2452 MHz



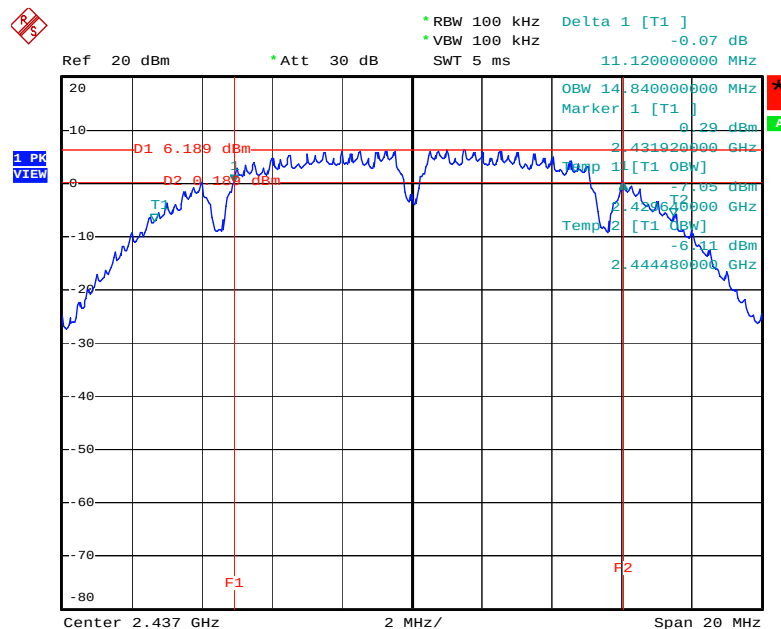
Date: 30.NOV.2009 17:39:29

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. D / 2412 MHz



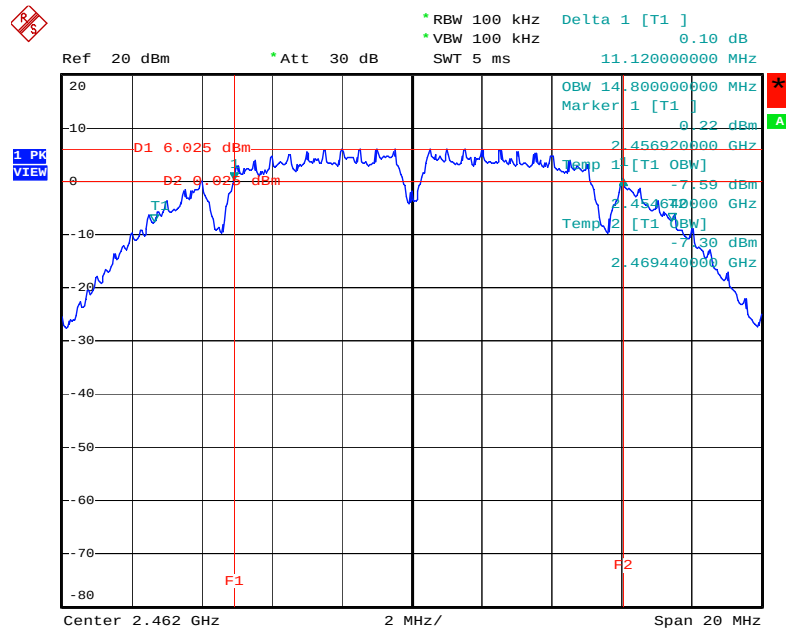
Date: 30.NOV.2009 17:16:33

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. D / 2437 MHz



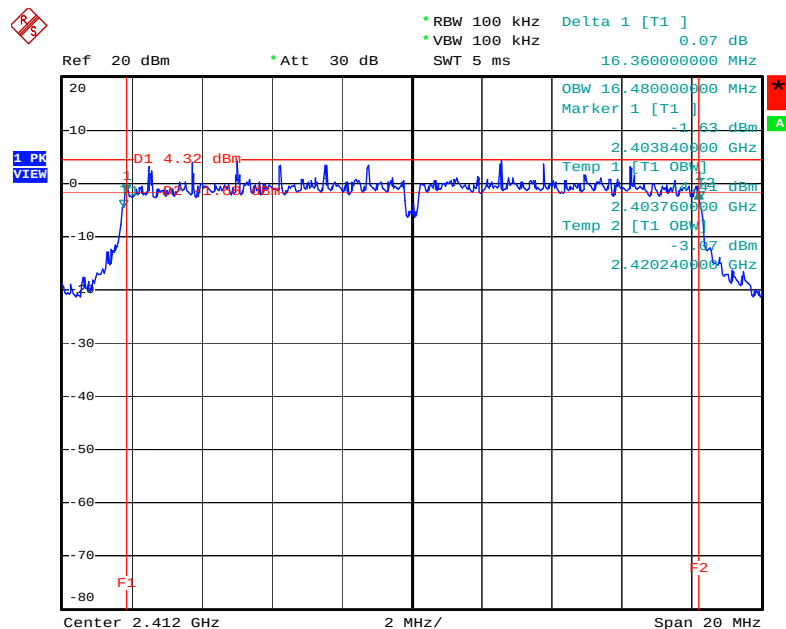
Date: 30.NOV.2009 17:11:49

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. D / 2462 MHz



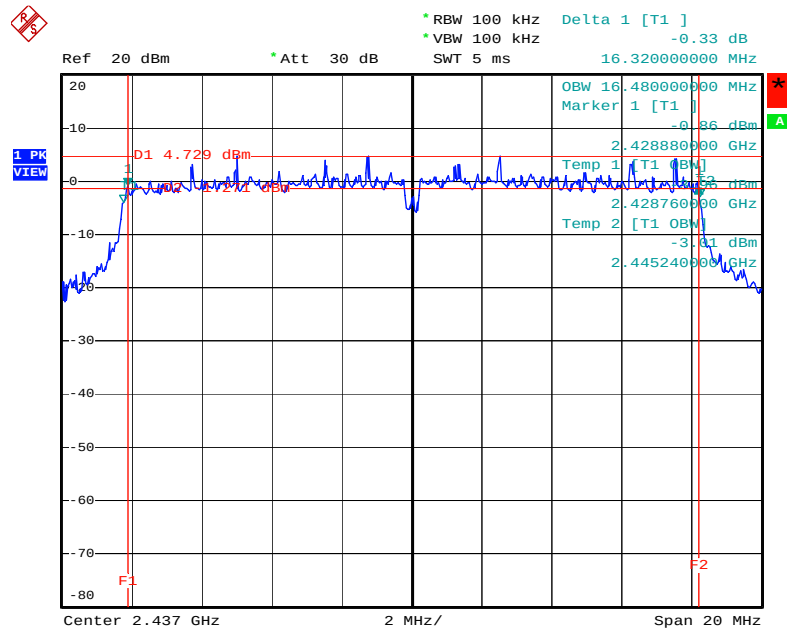
Date: 30.NOV.2009 17:20:19

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. D / 2412 MHz



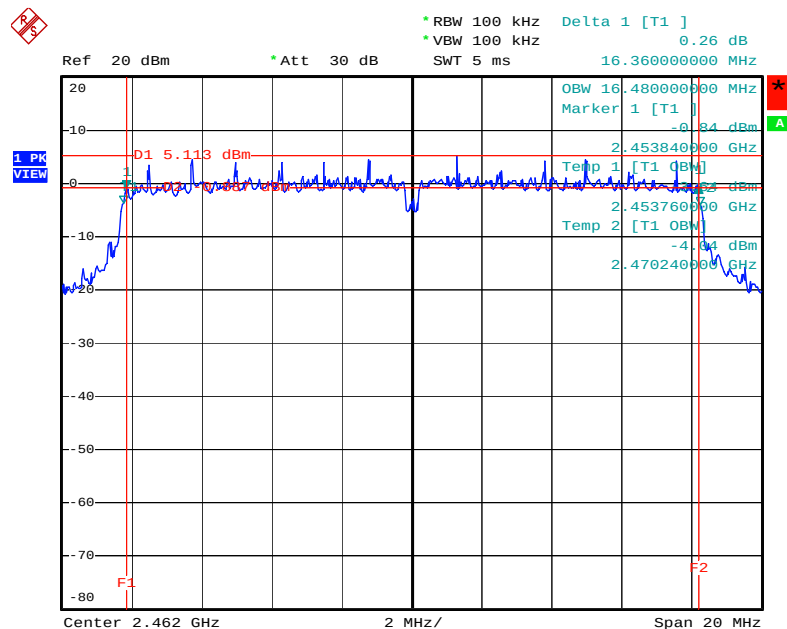
Date: 30.NOV.2009 17:25:53

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. D / 2437 MHz



Date: 30.NOV.2009 17:28:01

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. D / 2462 MHz



Date: 30.NOV.2009 17:23:09

4.5. Radiated Emissions Measurement

4.5.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for peak

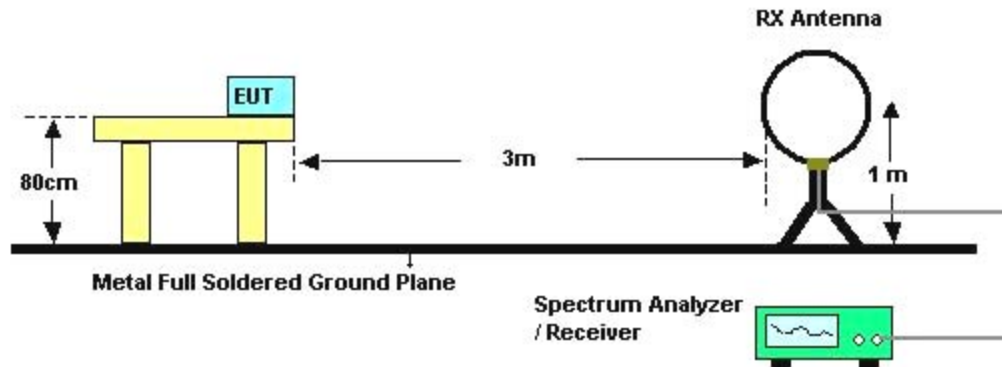
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

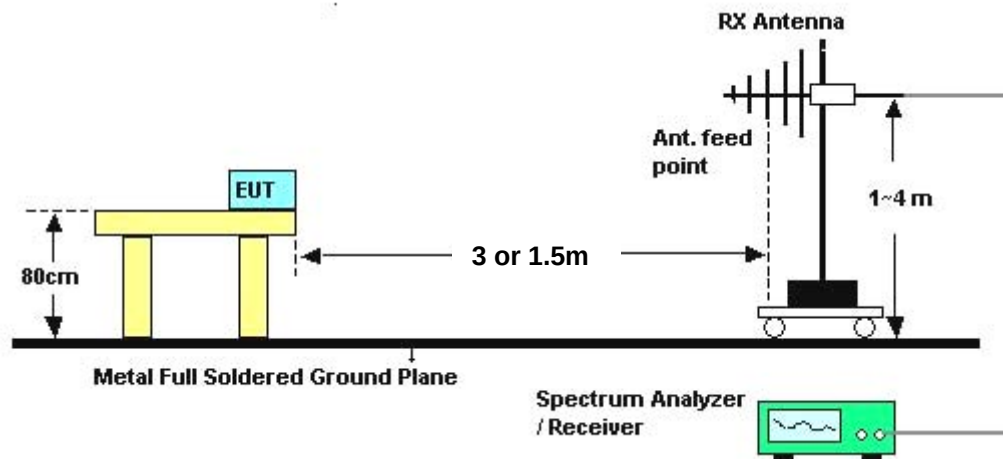
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 m to 4 m) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average 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 for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions 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.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.5.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1.5m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1.5m]})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	Normal Link
Test Date	Dec. 04, 2009		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

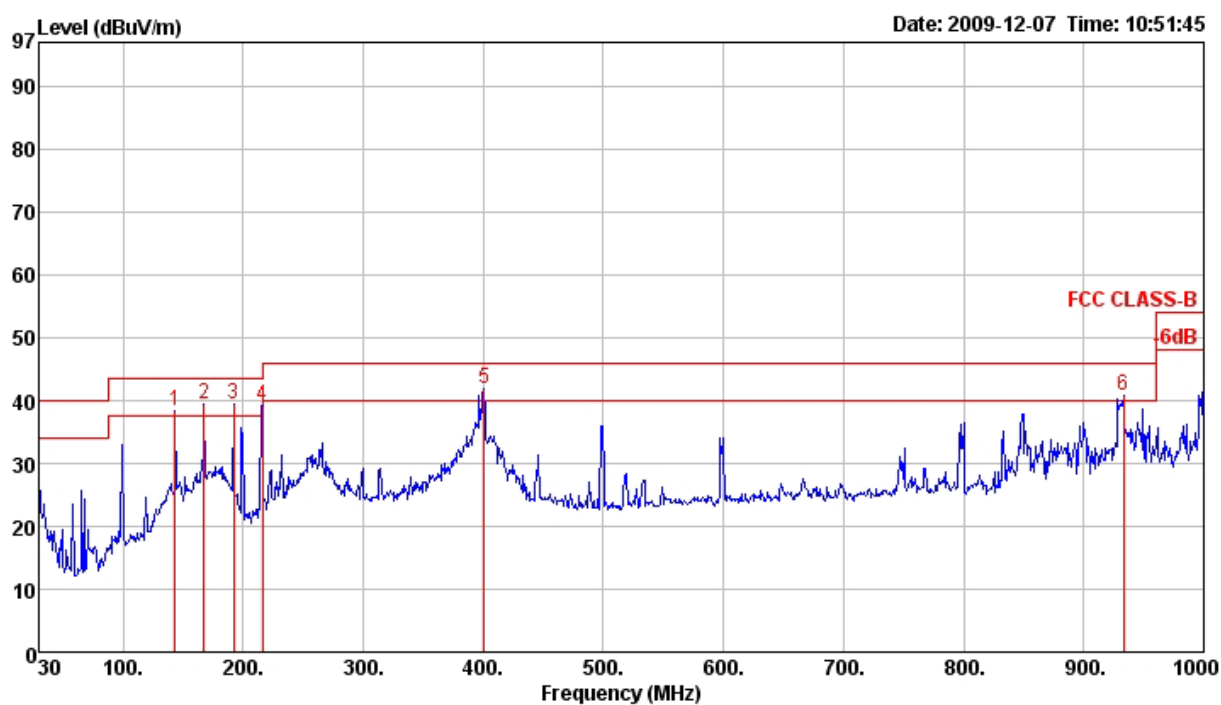
Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

<For Antenna A>

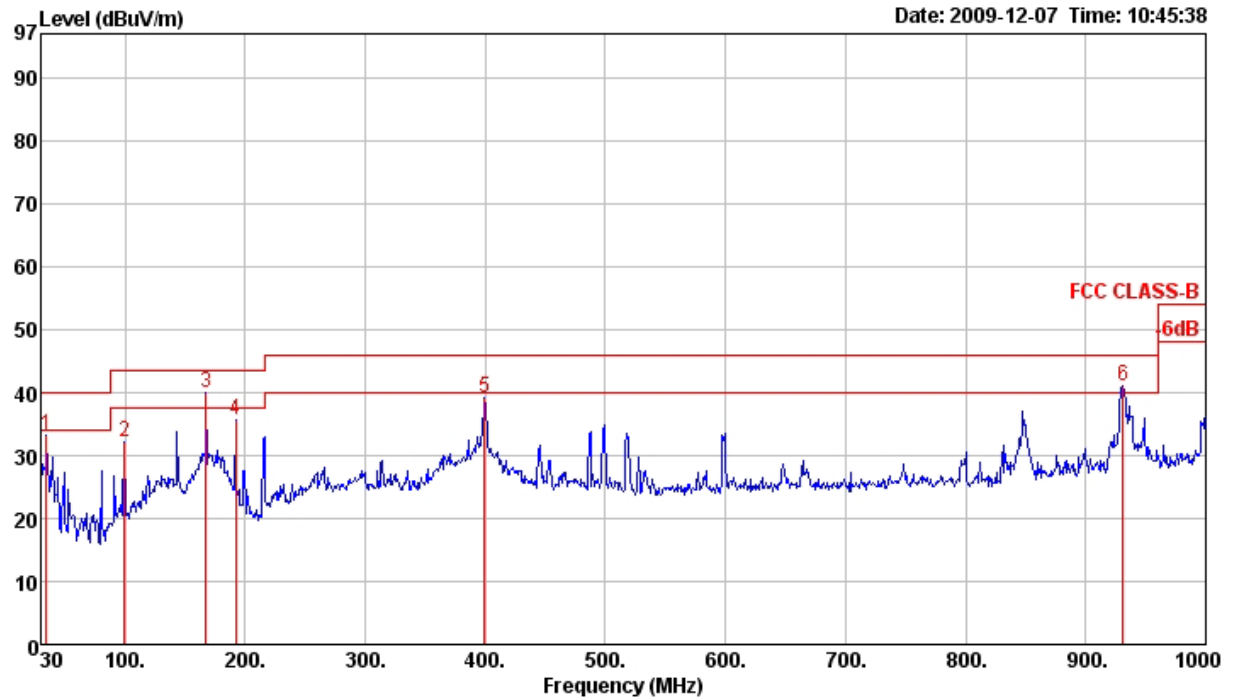
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	Normal Link / Mode 1

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1 !	143.49	38.49	43.50	-5.01	52.28	1.42	27.38	12.17	0	100	Peak	HORIZONTAL
2 !	167.74	39.38	43.50	-4.12	52.49	1.54	27.26	12.61	0	100	Peak	HORIZONTAL
3 !	191.99	39.46	43.50	-4.04	54.25	1.66	27.14	10.69	0	100	Peak	HORIZONTAL
4	216.24	39.07	46.00	-6.93	54.10	1.77	27.07	10.27	0	100	Peak	HORIZONTAL
5 p	400.54	42.00	46.00	-4.00	51.22	2.31	27.61	16.08	325	100	Peak	HORIZONTAL
6 !	933.07	40.93	46.00	-5.07	43.82	3.60	27.27	20.78	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	34.85	33.32	40.00	-6.68	44.54	0.50	27.80	16.08	0	400	Peak	VERTICAL
2	99.84	32.14	43.50	-11.36	47.55	1.20	27.60	10.99	0	400	Peak	VERTICAL
3 p	167.74	40.11	43.50	-3.39	53.22	1.54	27.26	12.61	216	100	Peak	VERTICAL
4	191.99	35.76	43.50	-7.74	50.55	1.66	27.14	10.69	0	400	Peak	VERTICAL
5	399.57	39.18	46.00	-6.82	48.42	2.30	27.60	16.06	0	400	Peak	VERTICAL
6 !	931.13	41.02	46.00	-4.98	43.92	3.60	27.27	20.77	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

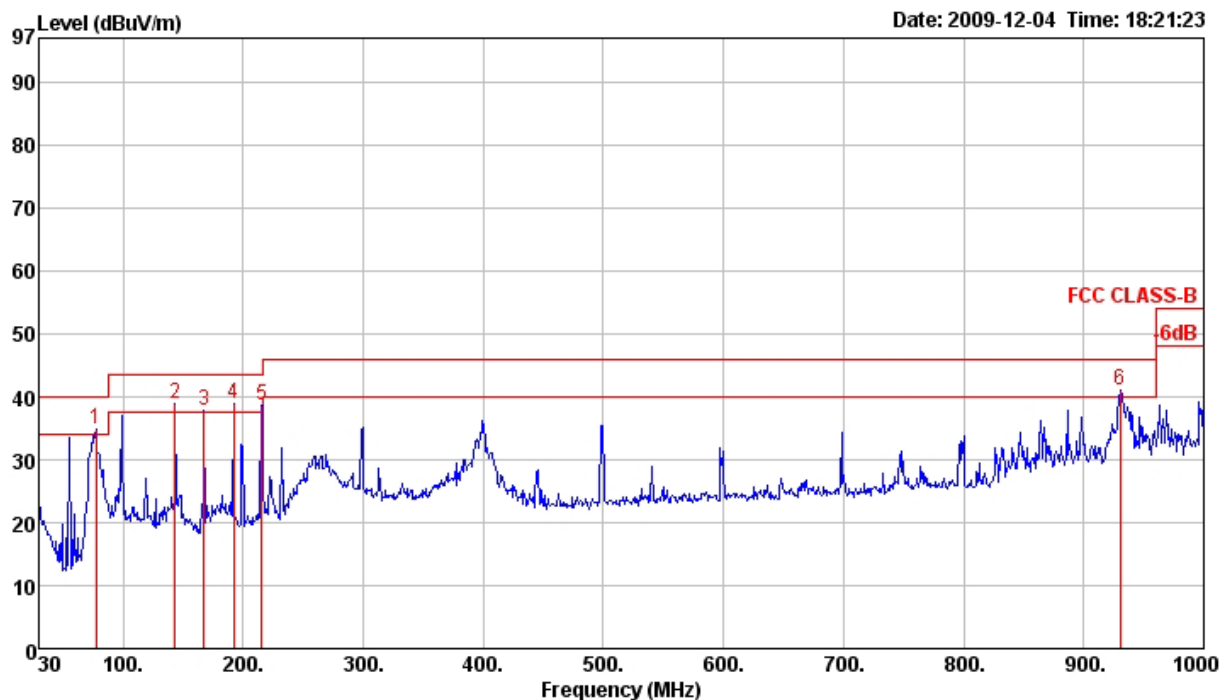
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna B>

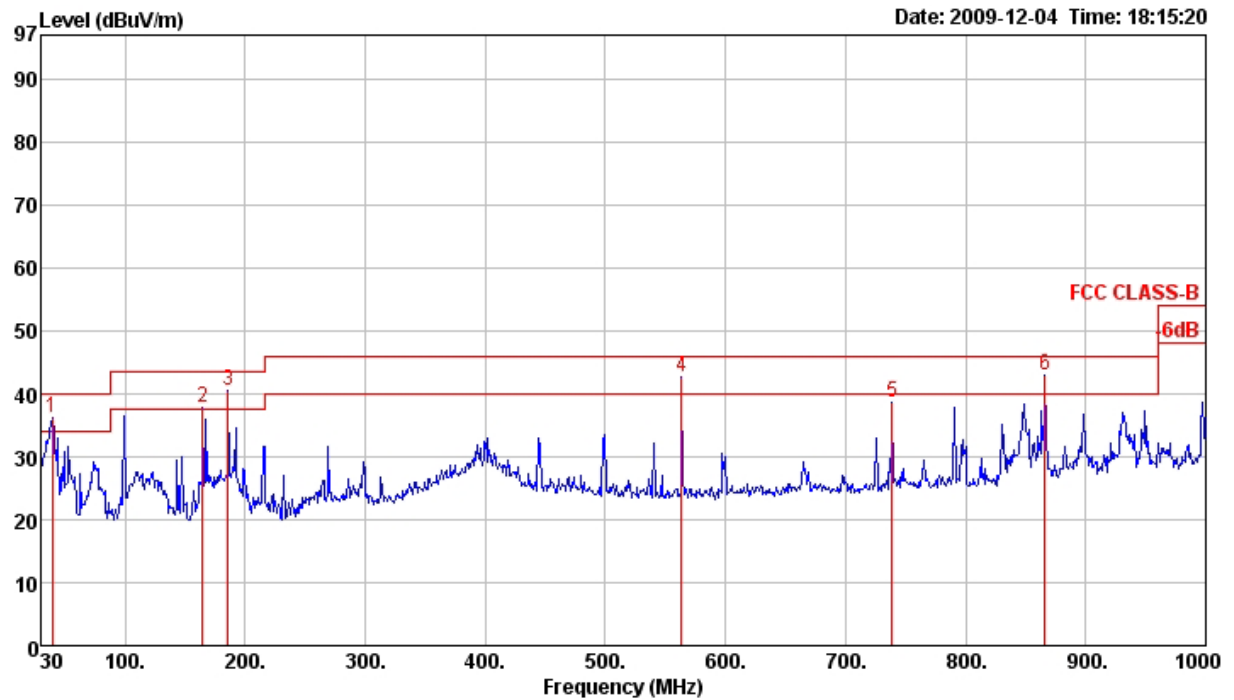
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	Normal Link / Mode 2

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 !	77.53	34.88	40.00	-5.12	54.54	1.00	27.69	7.03	0	100	Peak	HORIZONTAL
2 !	143.49	38.79	43.50	-4.71	52.58	1.42	27.38	12.17	0	100	Peak	HORIZONTAL
3 !	167.74	37.92	43.50	-5.58	51.03	1.54	27.26	12.61	0	100	Peak	HORIZONTAL
4 p	191.99	38.80	43.50	-4.70	53.59	1.66	27.14	10.69	137	100	Peak	HORIZONTAL
5 !	215.27	38.57	43.50	-4.93	53.69	1.76	27.07	10.19	0	100	Peak	HORIZONTAL
6 !	930.16	41.09	46.00	-4.91	44.01	3.60	27.28	20.76	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 !	39.70	36.13	40.00	-3.87	50.12	0.70	27.80	13.11	0	400	Peak	VERTICAL
2 !	164.83	37.95	43.50	-5.55	51.31	1.52	27.27	12.39	0	400	Peak	VERTICAL
3 p	186.17	40.47	43.50	-3.03	54.10	1.63	27.17	11.91	235	100	Peak	VERTICAL
4 !	563.50	42.73	46.00	-3.27	49.65	2.83	28.10	18.35	0	400	Peak	VERTICAL
5	739.07	38.68	46.00	-7.32	43.71	3.46	27.84	19.35	0	400	Peak	VERTICAL
6 !	866.14	42.93	46.00	-3.07	46.66	3.47	27.47	20.27	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

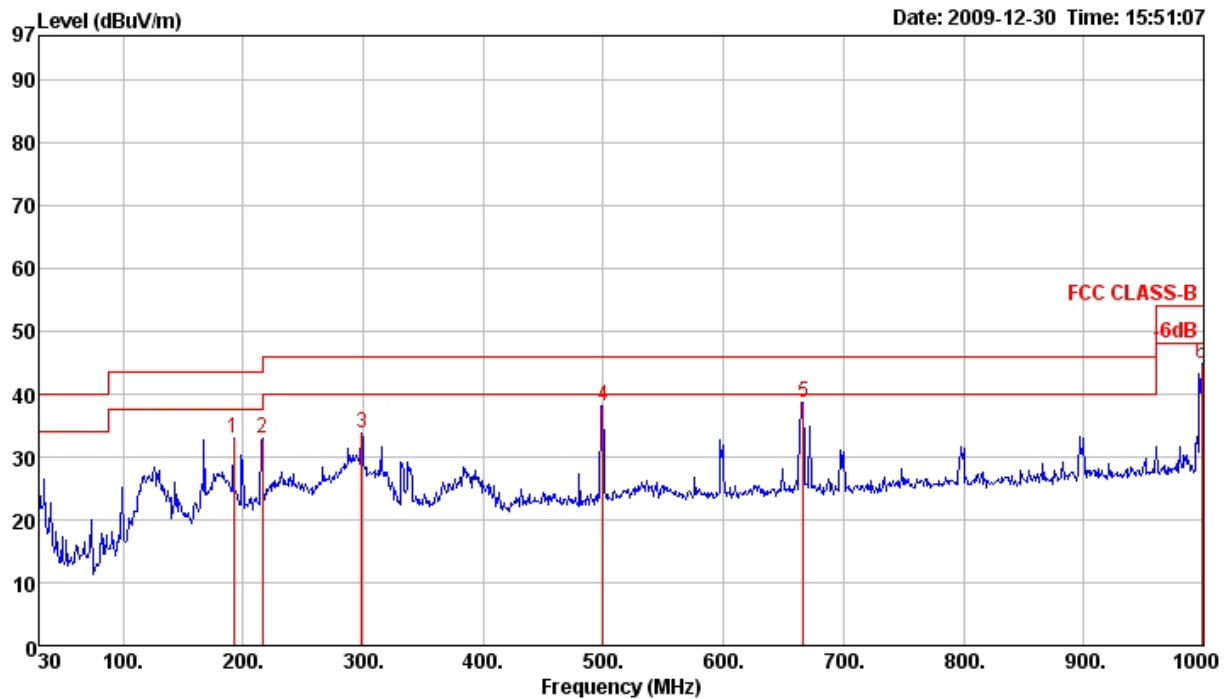
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna C>

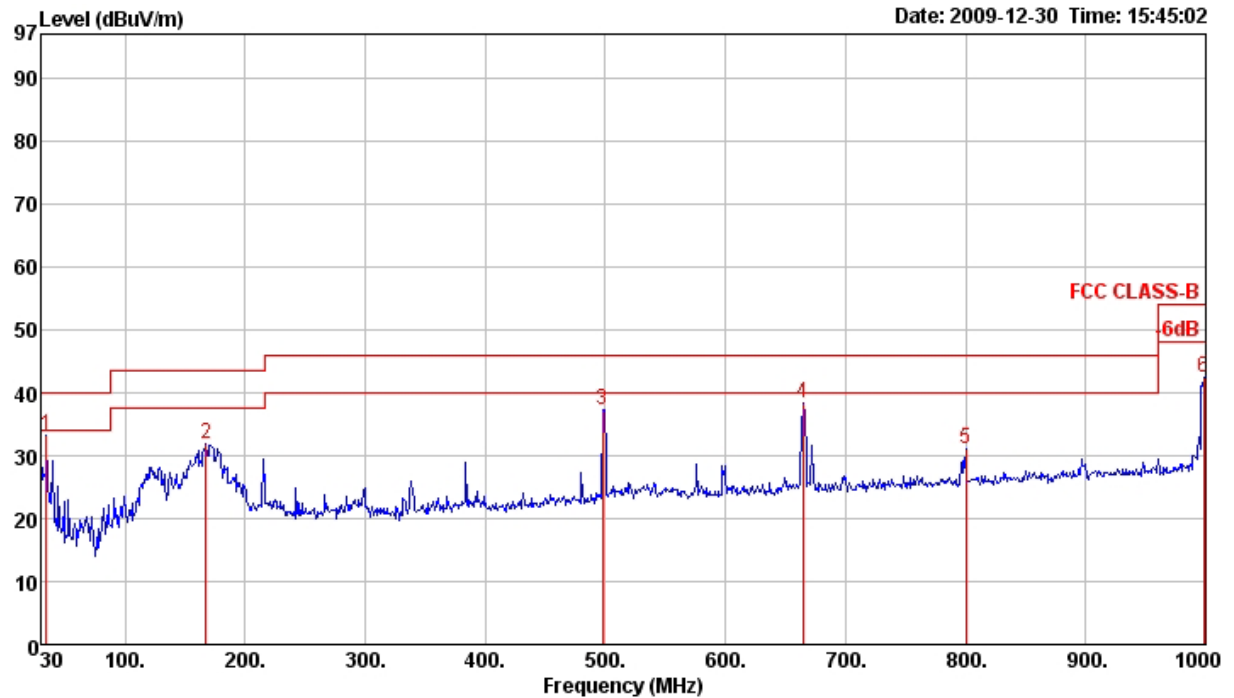
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	Normal Link / Mode 3

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	191.99	32.84	43.50	-10.66	47.63	1.66	27.14	10.69	0	100	Peak	HORIZONTAL
2	216.24	33.07	46.00	-12.93	48.10	1.77	27.07	10.27	0	100	Peak	HORIZONTAL
3	298.69	33.79	46.00	-12.21	45.24	2.10	26.90	13.35	0	100	Peak	HORIZONTAL
4	499.48	38.13	46.00	-7.87	45.91	2.70	28.09	17.61	0	100	Peak	HORIZONTAL
5 p	666.32	38.60	46.00	-7.40	44.22	3.43	28.03	18.98	0	100	Peak	HORIZONTAL
6	998.06	44.96	54.00	-9.04	46.99	3.70	27.01	21.28	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	34.85	33.26	40.00	-6.74	44.48	0.50	27.80	16.08	0	400	Peak	VERTICAL
2	167.74	31.90	43.50	-11.60	45.01	1.54	27.26	12.61	0	400	Peak	VERTICAL
3	497.54	37.37	46.00	-8.63	45.19	2.69	28.09	17.58	0	400	Peak	VERTICAL
4	664.38	38.38	46.00	-7.62	44.00	3.44	28.04	18.98	0	400	Peak	VERTICAL
5	800.18	31.04	46.00	-14.96	35.57	3.30	27.60	19.77	0	400	Peak	VERTICAL
6	998.06	42.50	54.00	-11.50	44.53	3.70	27.01	21.28	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

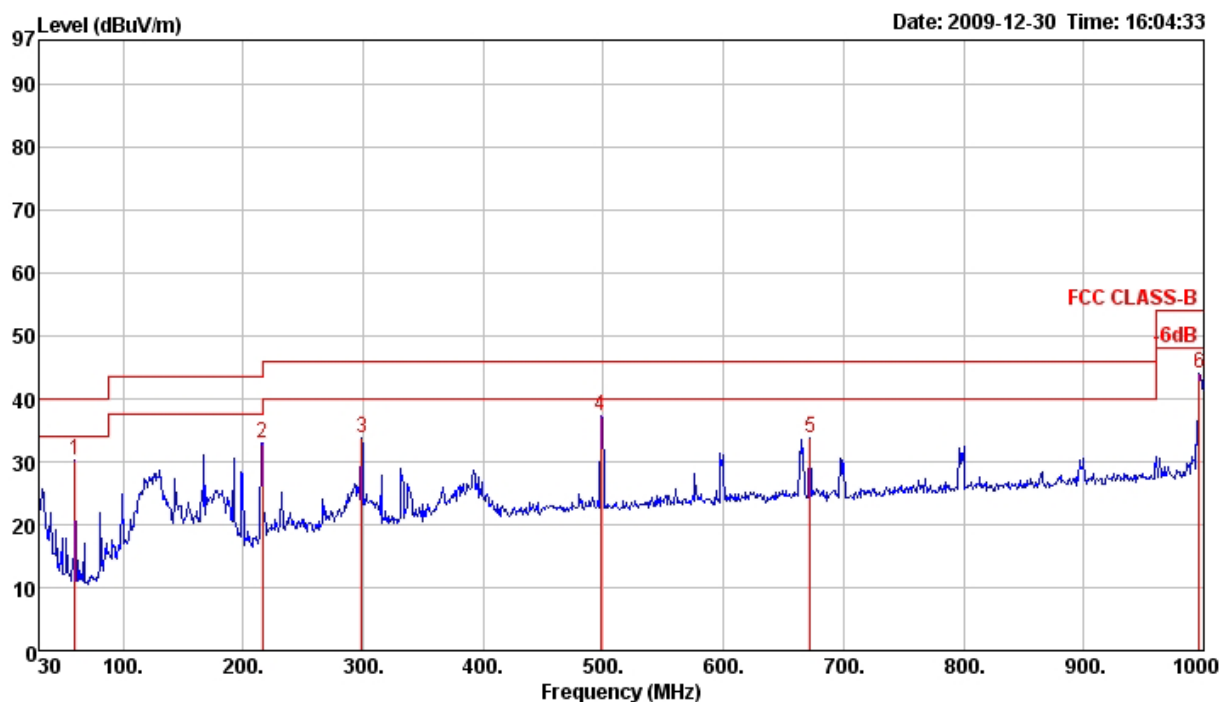
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna D>

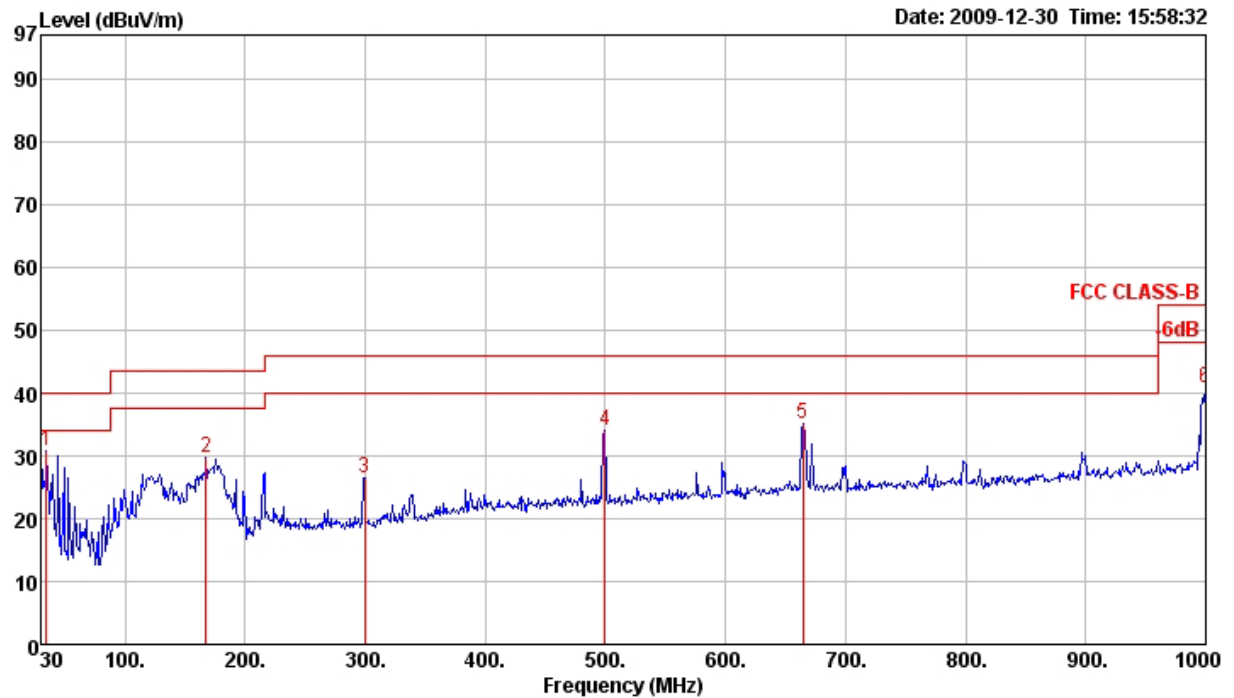
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	Normal Link / Mode 4

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	60.07	30.28	40.00	-9.72	50.47	0.80	27.76	6.77	0	100	Peak	HORIZONTAL
2	216.24	32.98	46.00	-13.02	48.01	1.77	27.07	10.27	0	100	Peak	HORIZONTAL
3	298.69	33.73	46.00	-12.27	45.18	2.10	26.90	13.35	0	100	Peak	HORIZONTAL
4 p	497.54	37.33	46.00	-8.67	45.15	2.69	28.09	17.58	0	100	Peak	HORIZONTAL
5	672.14	33.67	46.00	-12.33	39.29	3.41	28.03	19.00	0	100	Peak	HORIZONTAL
6	996.12	44.00	54.00	-10.00	46.07	3.69	27.02	21.26	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	34.85	30.70	40.00	-9.30	41.92	0.50	27.80	16.08	0	400	Peak	VERTICAL
2	167.74	29.67	43.50	-13.83	42.78	1.54	27.26	12.61	0	400	Peak	VERTICAL
3	299.66	26.51	46.00	-19.49	37.95	2.10	26.90	13.36	0	400	Peak	VERTICAL
4	499.48	34.12	46.00	-11.88	41.90	2.70	28.09	17.61	0	400	Peak	VERTICAL
5	664.38	35.05	46.00	-10.95	40.67	3.44	28.04	18.98	0	400	Peak	VERTICAL
6	1000.00	40.68	54.00	-13.32	42.69	3.70	27.00	21.29	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

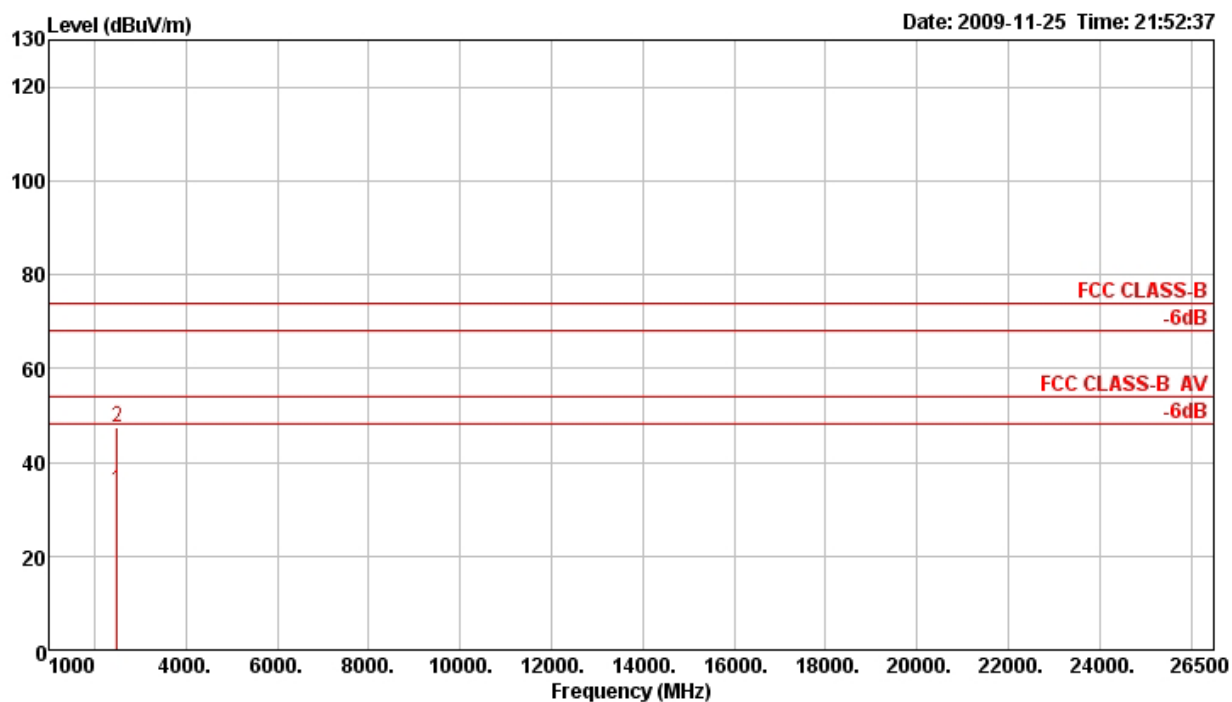
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

<For Antenna A>

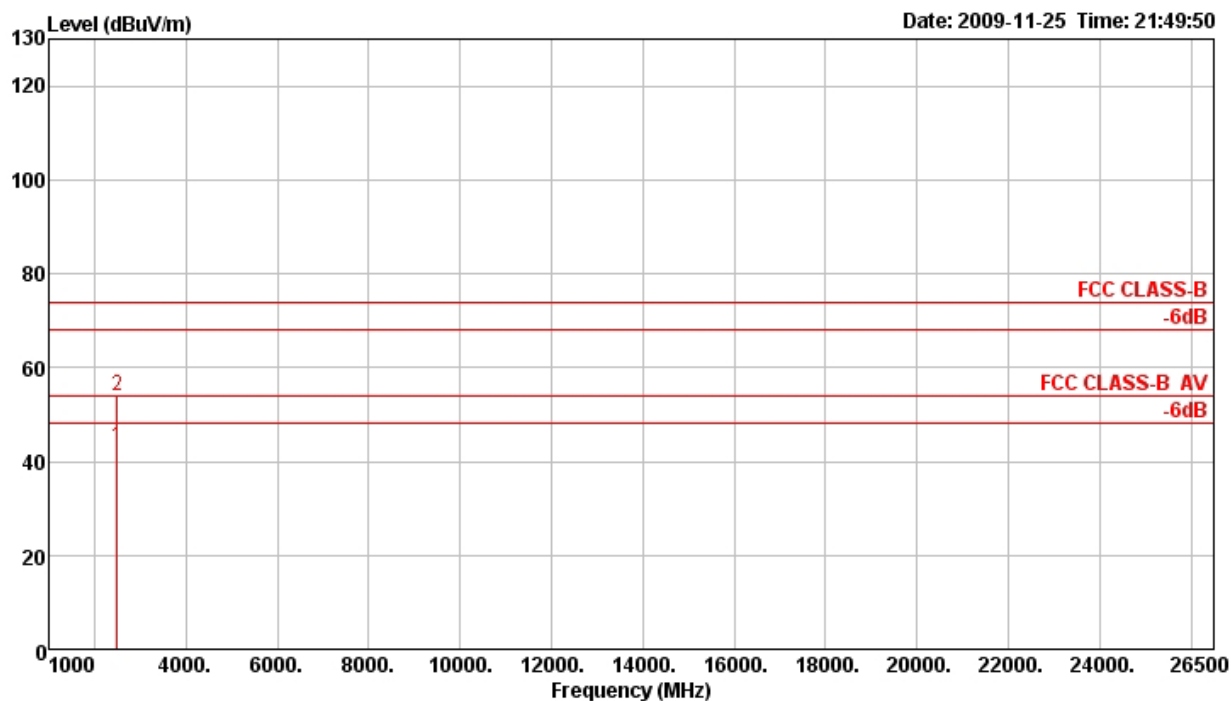
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2498.05	34.03	54.00	-19.97	39.14	2.11	34.92	27.70	190	100	Average	HORIZONTAL
2 p	2498.54	47.58	74.00	-26.42	52.69	2.11	34.92	27.70	190	100	Peak	HORIZONTAL

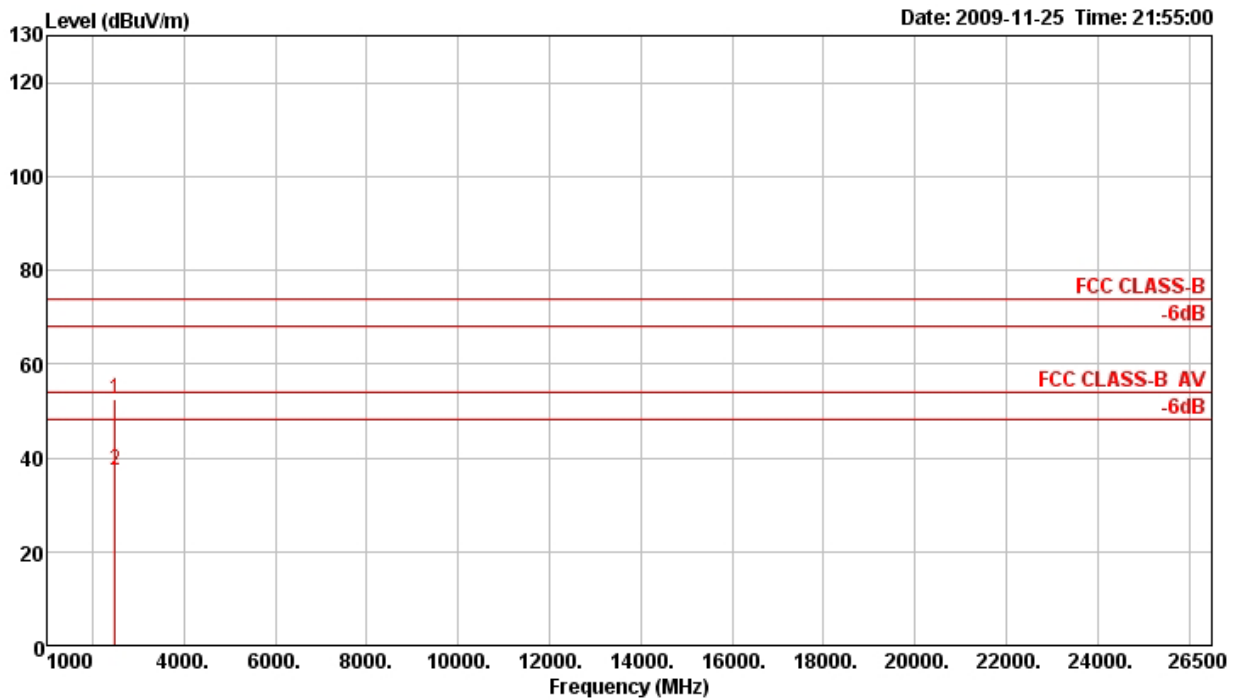
Vertical



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	2498.80	43.13	54.00	-10.87	48.24	2.11	34.92	27.70	36	100	Average	VERTICAL
2	p	2498.89	53.95	74.00	-20.05	59.06	2.11	34.92	27.70	36	100	Peak	VERTICAL

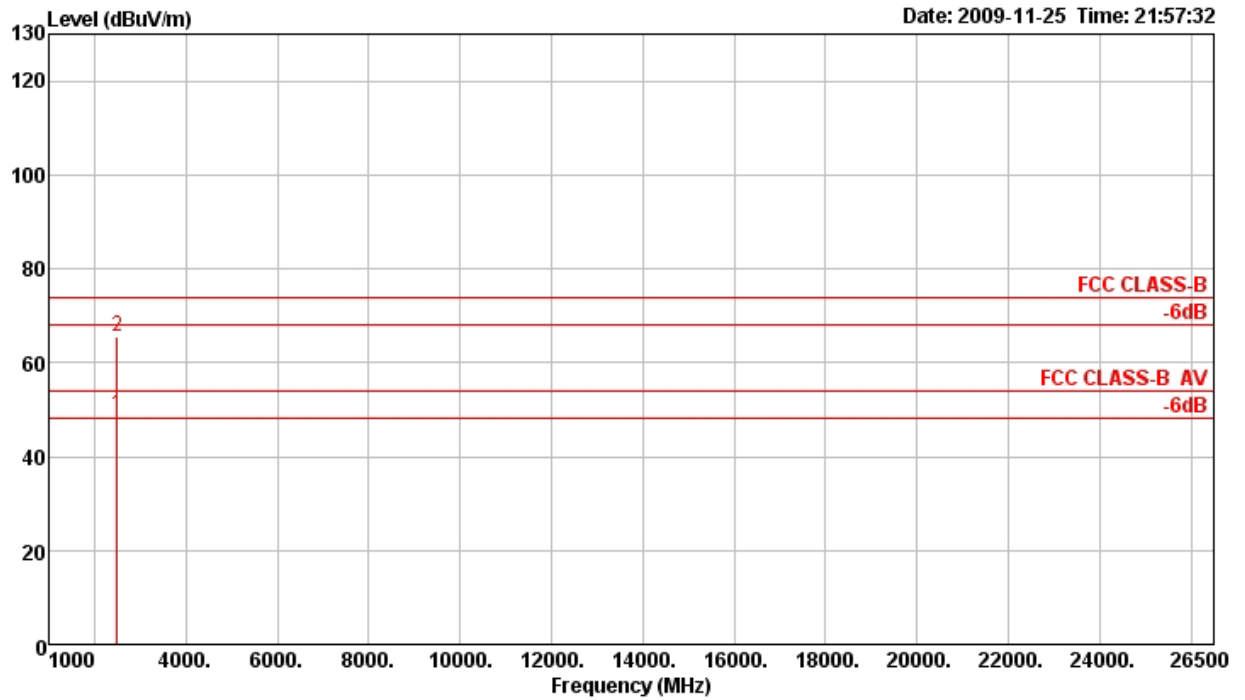
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2500.40	52.53	74.00	-21.47	57.64	2.11	34.92	27.70	189	100	Peak	HORIZONTAL
2 a	2500.77	37.46	54.00	-16.54	42.57	2.11	34.92	27.70	189	100	Average	HORIZONTAL

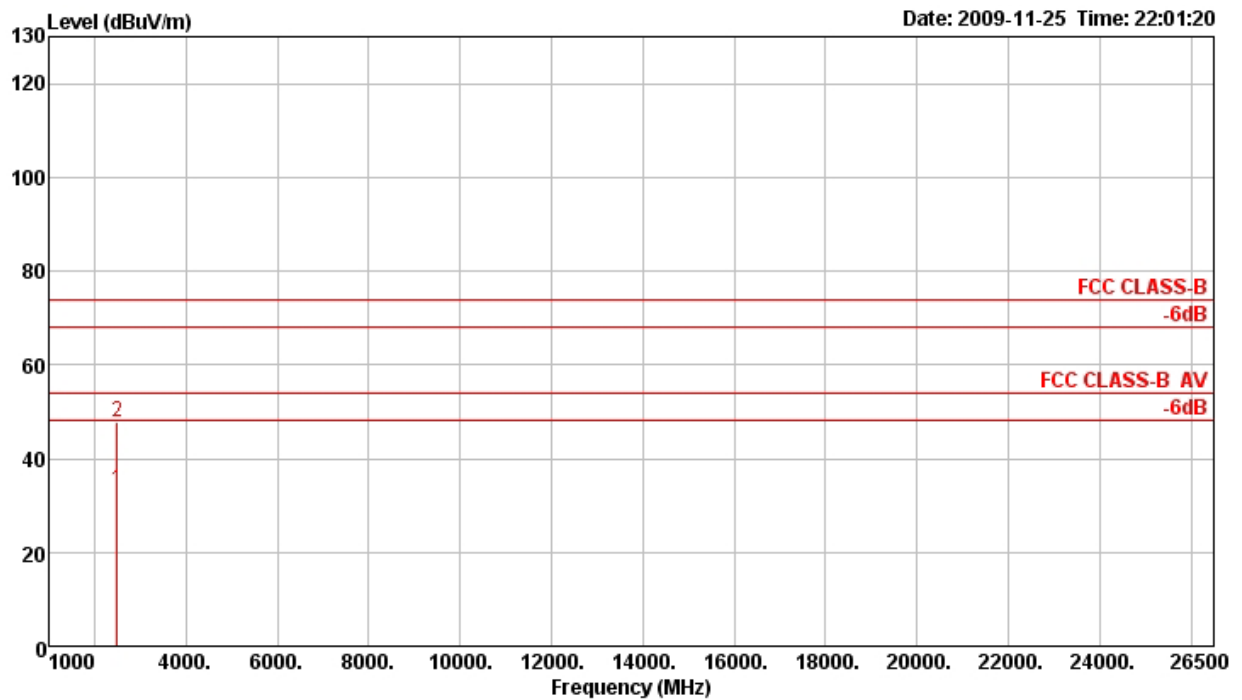
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	2499.85	48.76	54.00	-5.24	53.87	2.11	34.92	27.70	37	100	Average	VERTICAL
2	p	2499.92	65.44	74.00	-8.56	70.55	2.11	34.92	27.70	37	100	Peak	VERTICAL

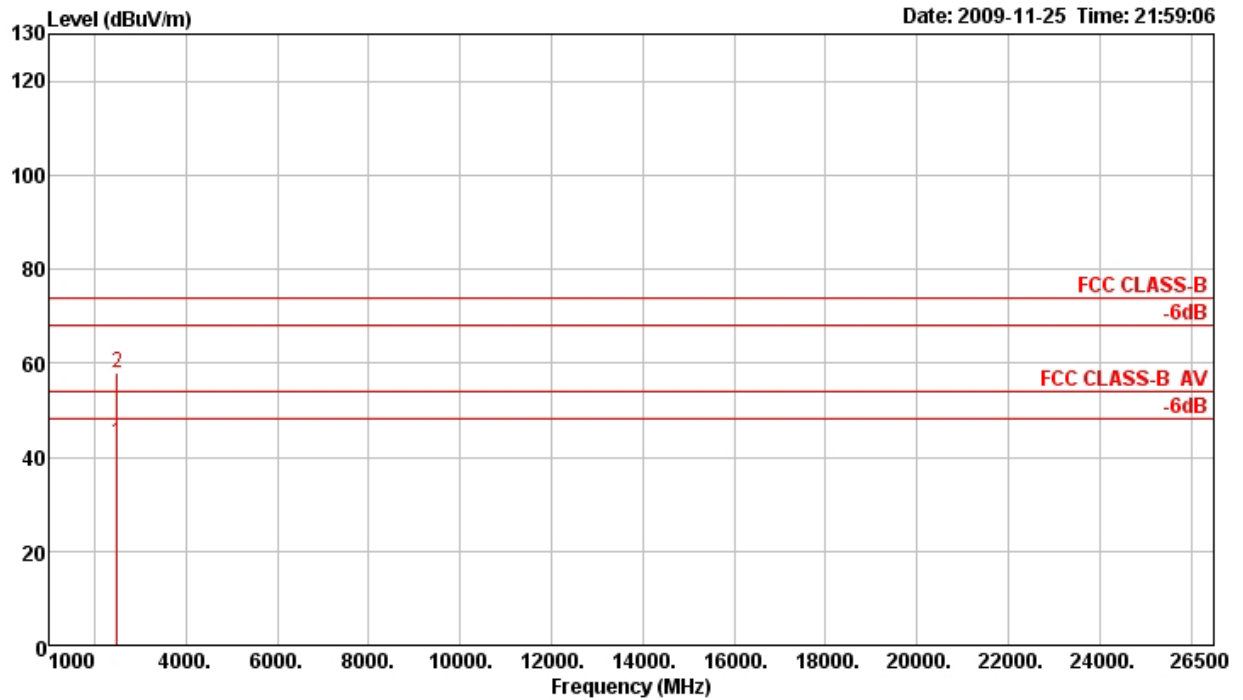
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.94	33.42	54.00	-20.58	38.53	2.11	34.92	27.70	17	100	Average	HORIZONTAL
2 p	2499.96	47.97	74.00	-26.03	53.08	2.11	34.92	27.70	17	100	Peak	HORIZONTAL

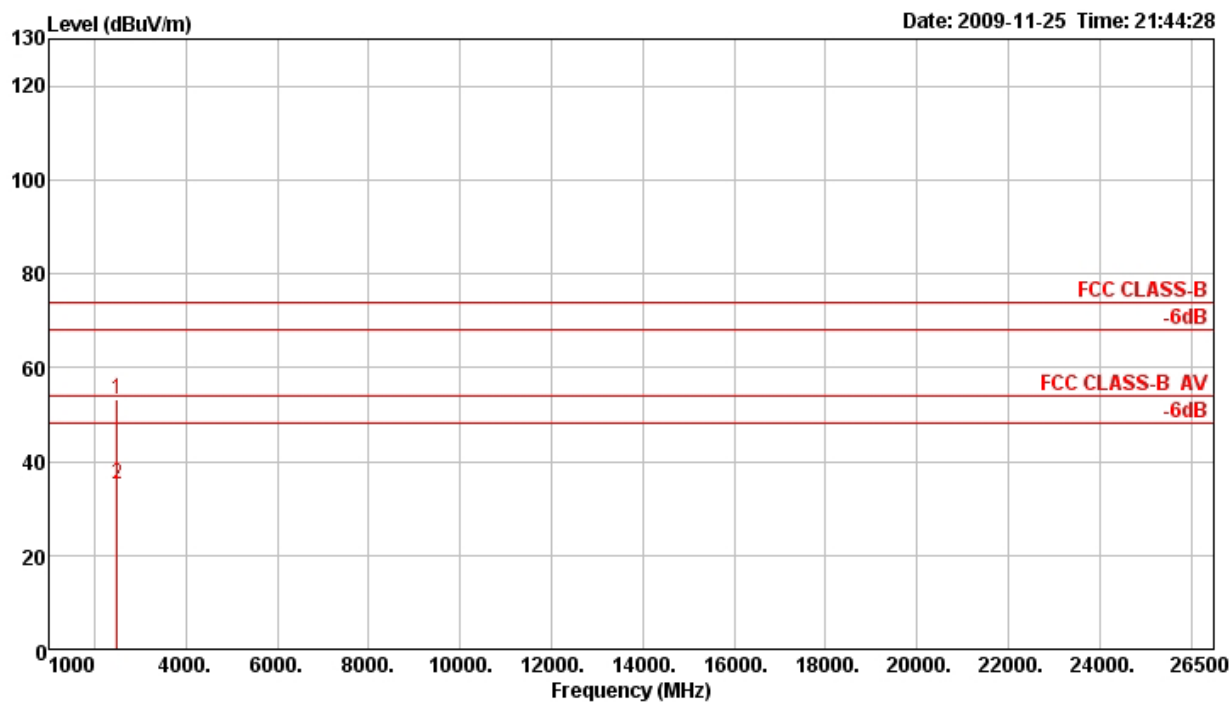
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.94	43.19	54.00	-10.81	48.30	2.11	34.92	27.70	36	100	Average	VERTICAL
2 p	2499.97	57.85	74.00	-16.15	62.96	2.11	34.92	27.70	36	100	Peak	VERTICAL

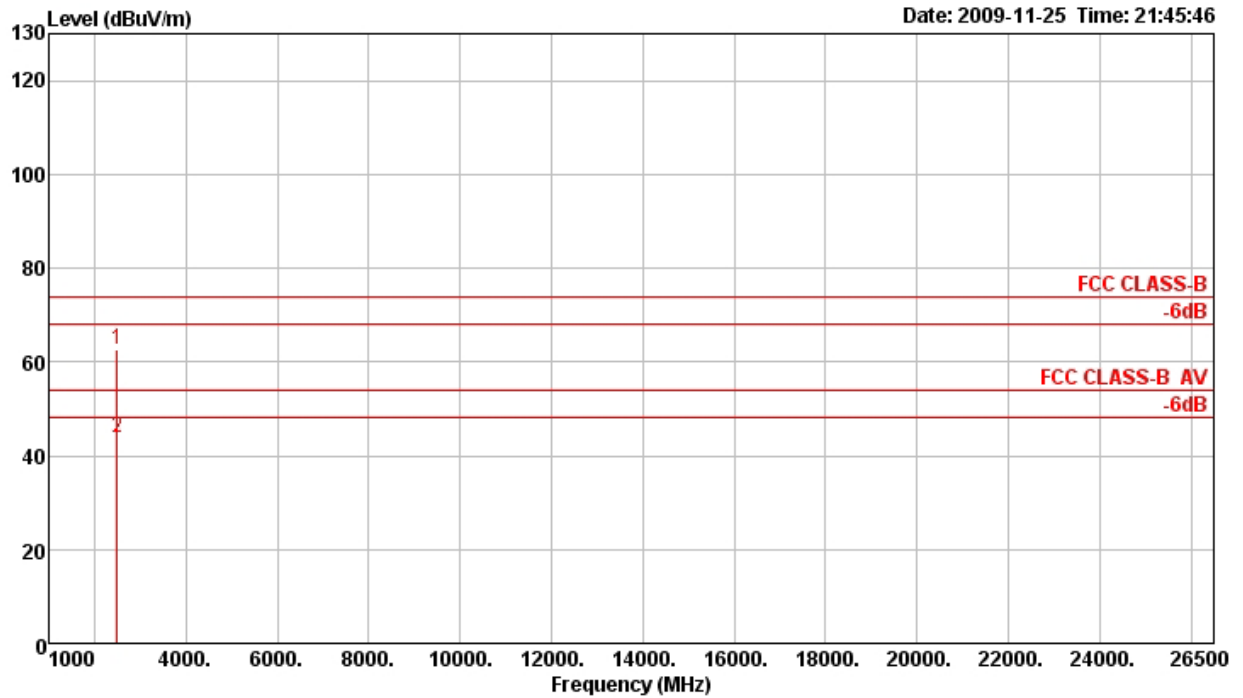
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2498.10	53.31	74.00	-20.69	58.42	2.11	34.92	27.70	190	100	Peak	HORIZONTAL
2 a	2498.47	35.14	54.00	-18.86	40.25	2.11	34.92	27.70	190	100	Average	HORIZONTAL

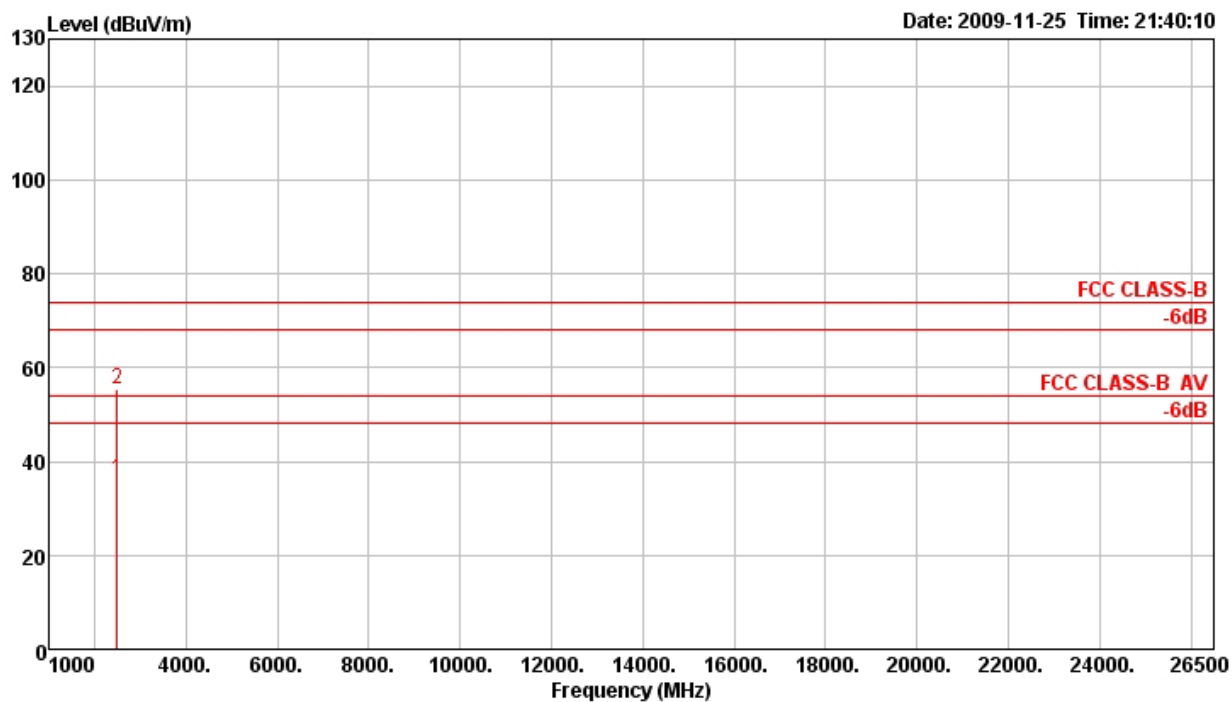
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2498.58	62.52	74.00	-11.48	67.63	2.11	34.92	27.70	90	100	Peak	VERTICAL
2 a	2498.60	43.74	54.00	-10.26	48.85	2.11	34.92	27.70	90	100	Average	VERTICAL

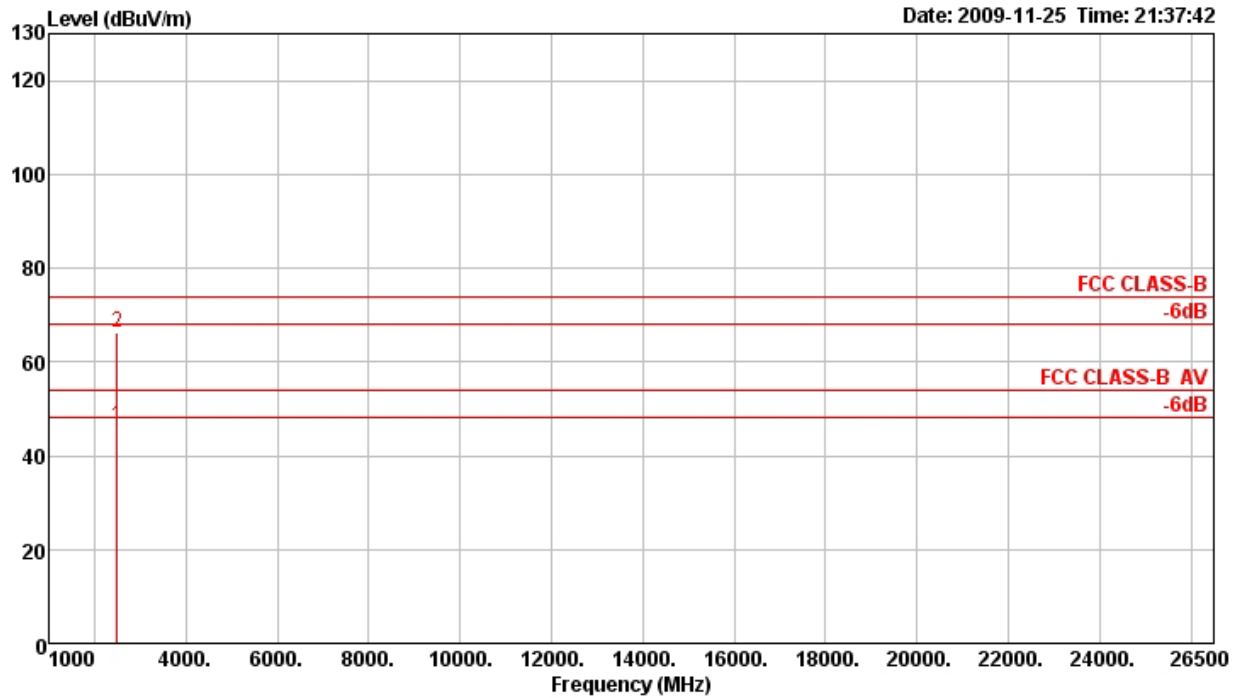
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. A

Horizontal



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	2499.32	36.09	54.00	-17.91	41.20	2.11	34.92	27.70	190	100	Average	HORIZONTAL
2	p	2499.56	55.50	74.00	-18.50	60.61	2.11	34.92	27.70	190	100	Peak	HORIZONTAL

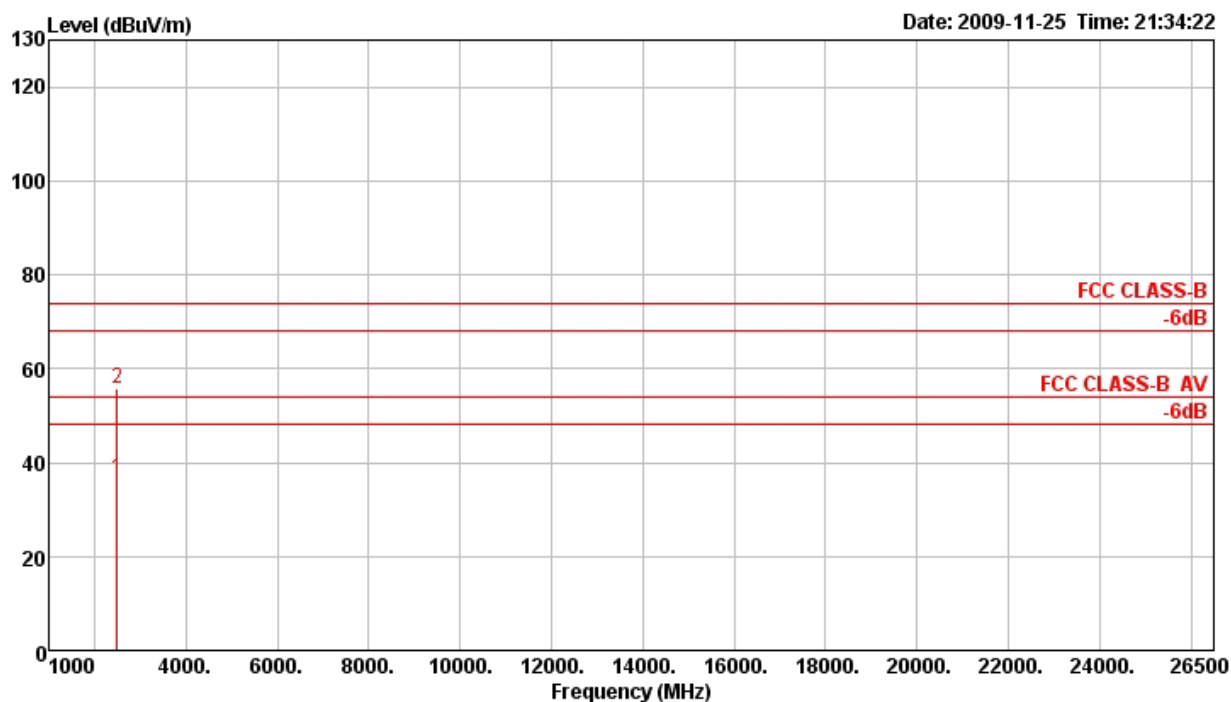
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.26	46.53	54.00	-7.47	51.64	2.11	34.92	27.70	36	100	Average	VERTICAL
2 p	2499.29	66.33	74.00	-7.67	71.44	2.11	34.92	27.70	36	100	Peak	VERTICAL

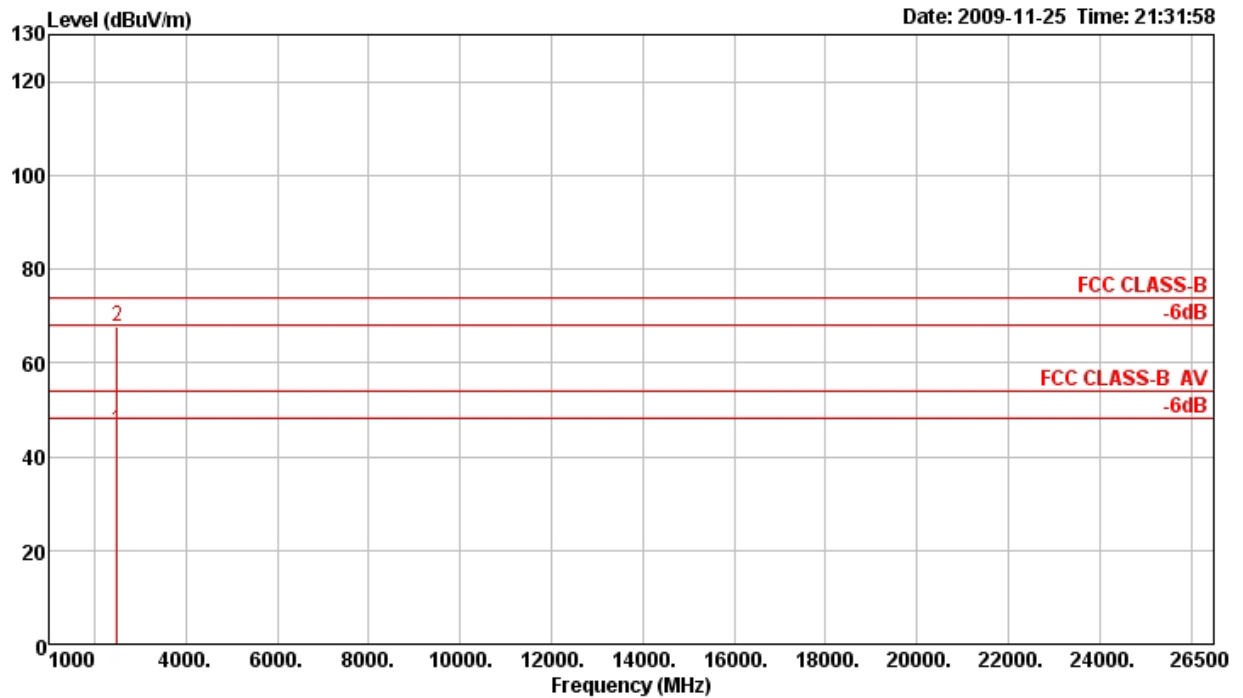
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2498.96	36.64	54.00	-17.36	41.75	2.11	34.92	27.70	189	100	Average	HORIZONTAL
2 p	2499.41	55.83	74.00	-18.17	60.94	2.11	34.92	27.70	189	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.89	45.66	54.00	-8.34	50.77	2.11	34.92	27.70	37	100	Average	VERTICAL
2 p	2499.94	67.72	74.00	-6.28	72.83	2.11	34.92	27.70	37	100	Peak	VERTICAL

Note:

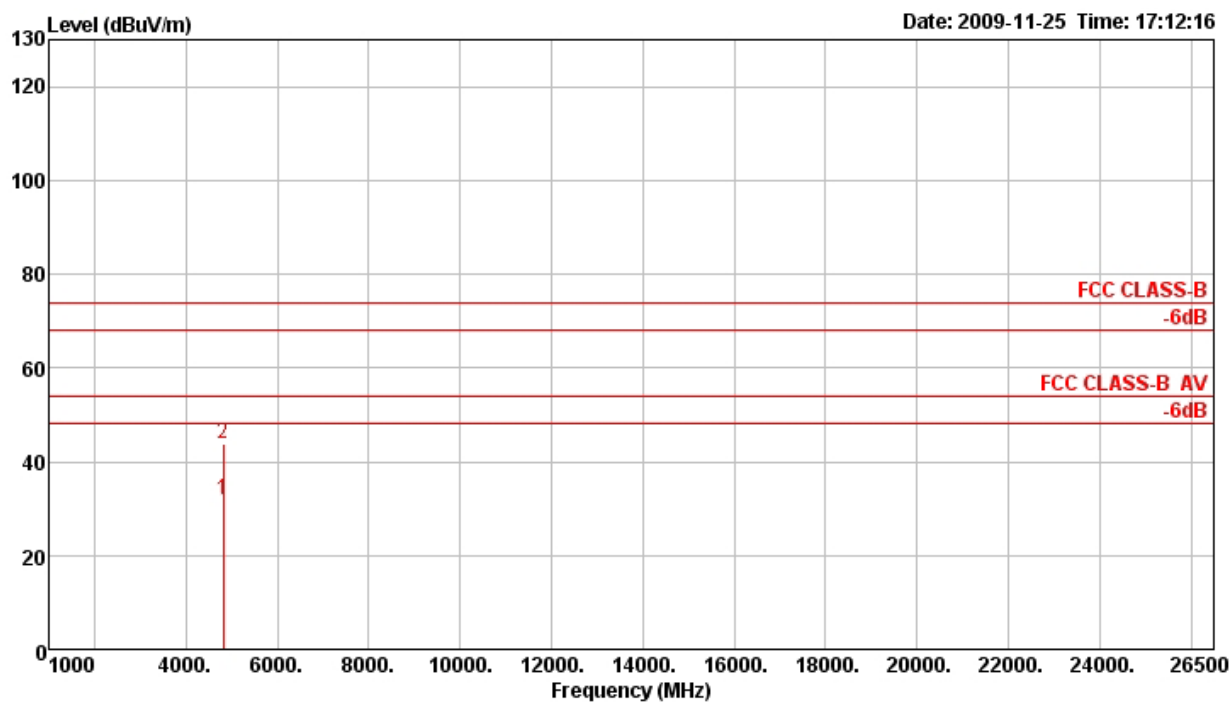
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

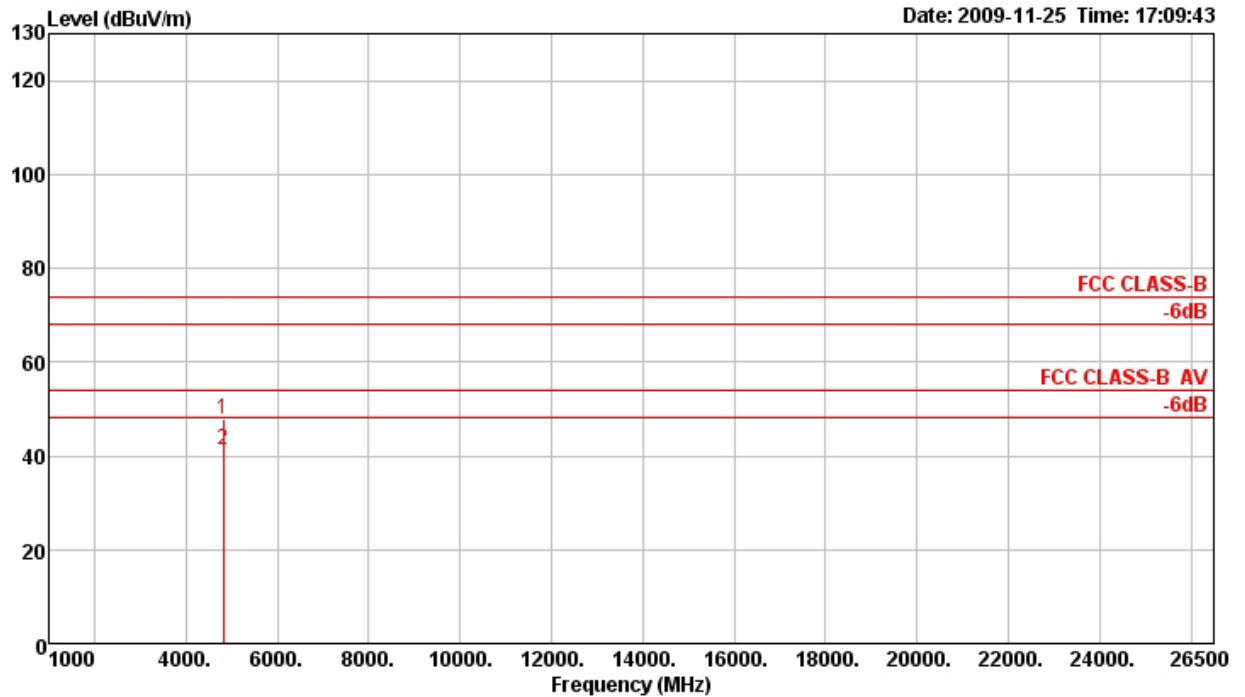
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 1 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.02	32.04	54.00	-21.96	31.84	3.00	35.26	32.46	105	104	Average	HORIZONTAL
2 p	4825.38	43.84	74.00	-30.16	43.64	3.00	35.26	32.46	105	104	Peak	HORIZONTAL

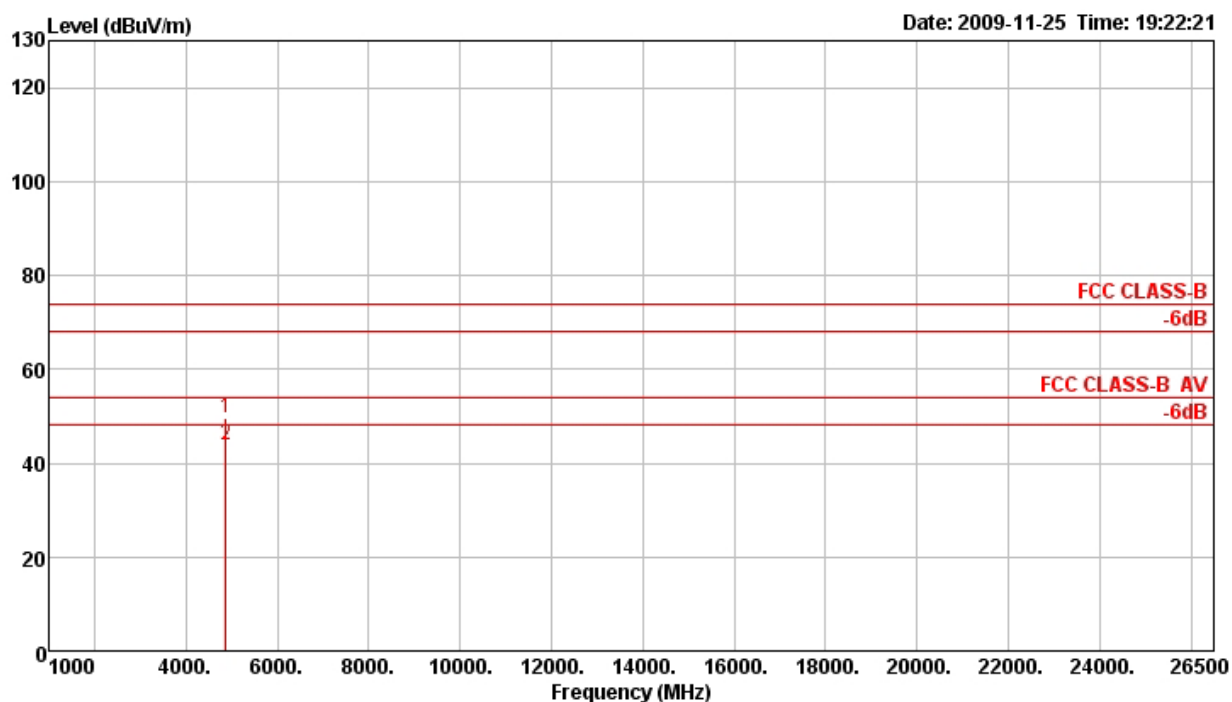
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.96	47.66	74.00	-26.34	47.46	3.00	35.26	32.46	262	151	Peak	VERTICAL
2 a	4824.00	41.10	54.00	-12.90	40.90	3.00	35.26	32.46	262	151	Average	VERTICAL

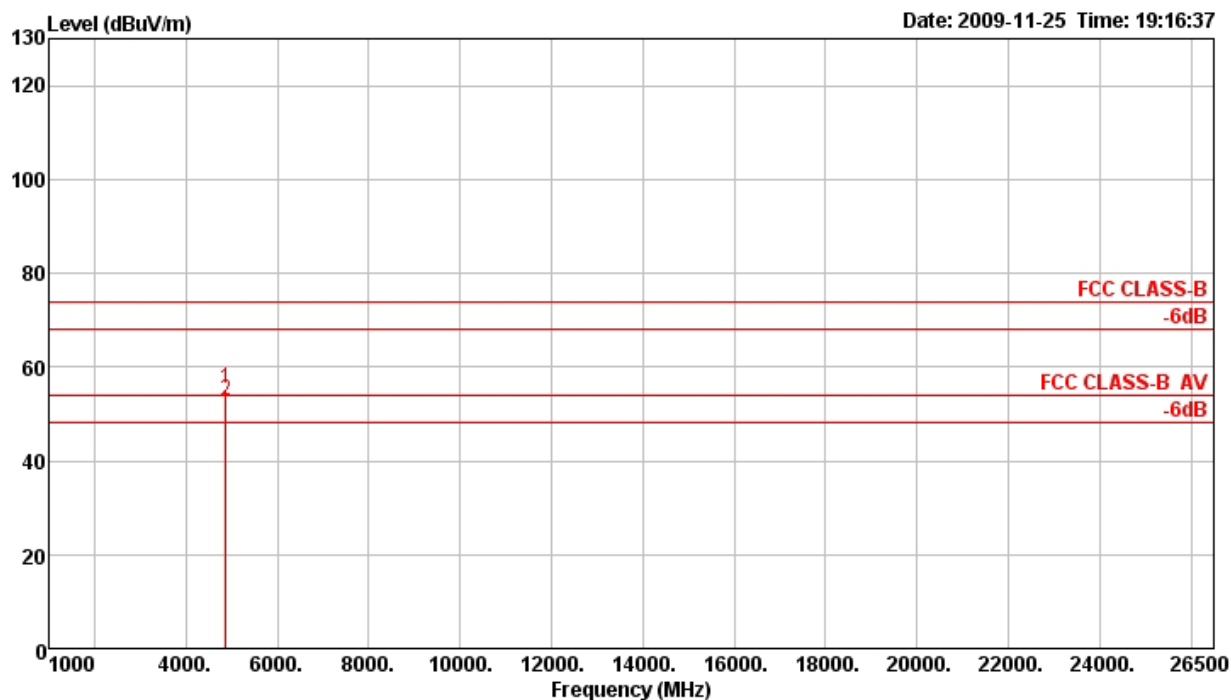
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 6 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.95	49.63	74.00	-24.37	49.21	3.01	35.15	32.56	247	179	Peak	HORIZONTAL
2 a	4874.01	43.65	54.00	-10.35	43.23	3.01	35.15	32.56	247	179	Average	HORIZONTAL

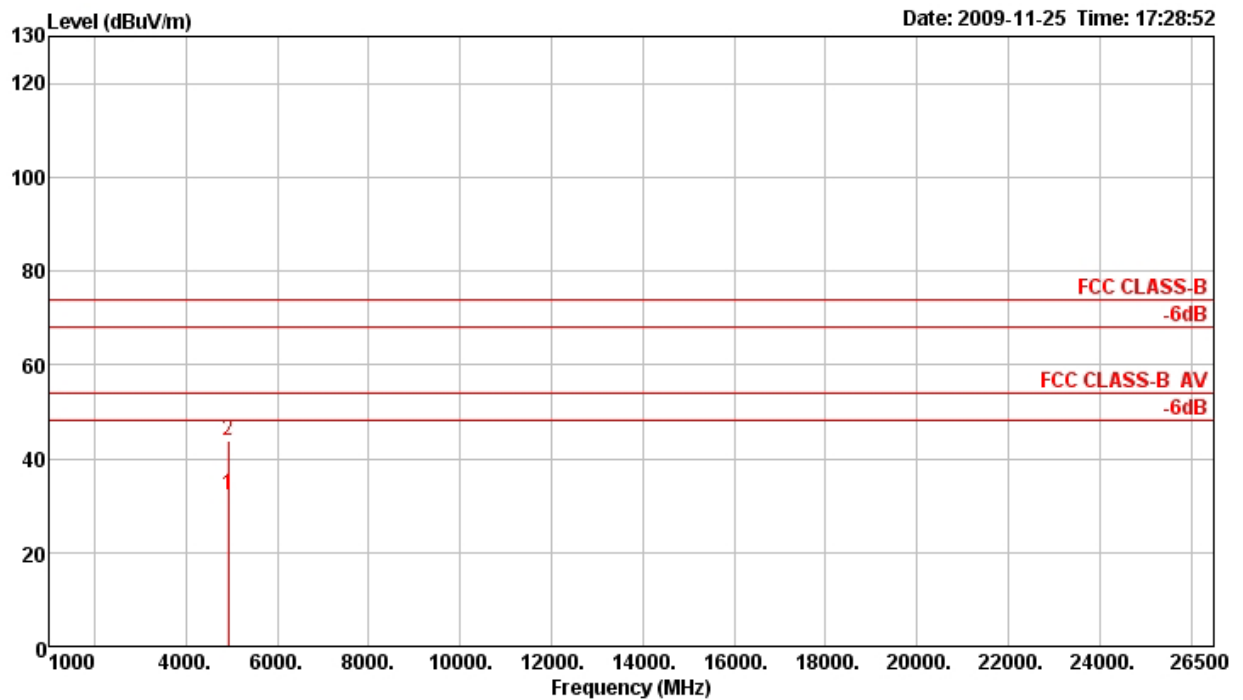
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.86	55.28	74.00	-18.72	54.86	3.01	35.15	32.56	100	134	Peak	VERTICAL
2 a	4874.01	52.91	54.00	-1.09	52.49	3.01	35.15	32.56	100	134	Average	VERTICAL

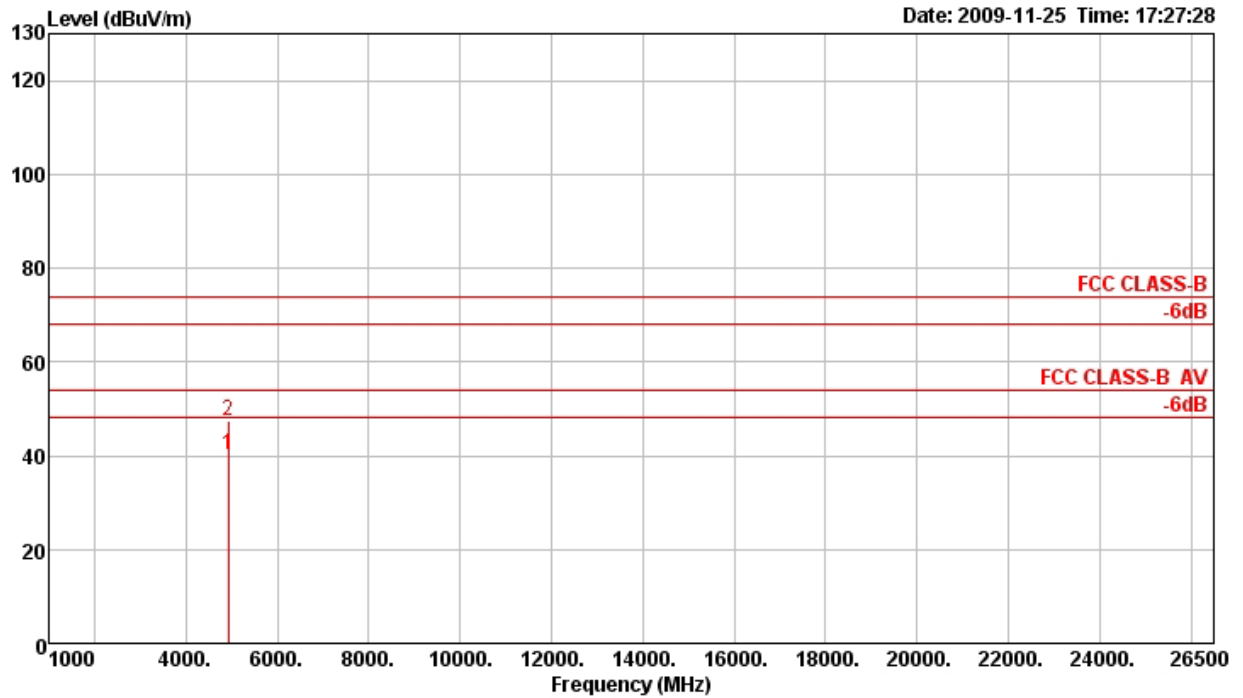
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 11 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4924.04	32.07	54.00	-21.93	31.42	3.02	35.03	32.66	214	117	Average	HORIZONTAL
2 p	4924.46	43.94	74.00	-30.06	43.29	3.02	35.03	32.66	214	117	Peak	HORIZONTAL

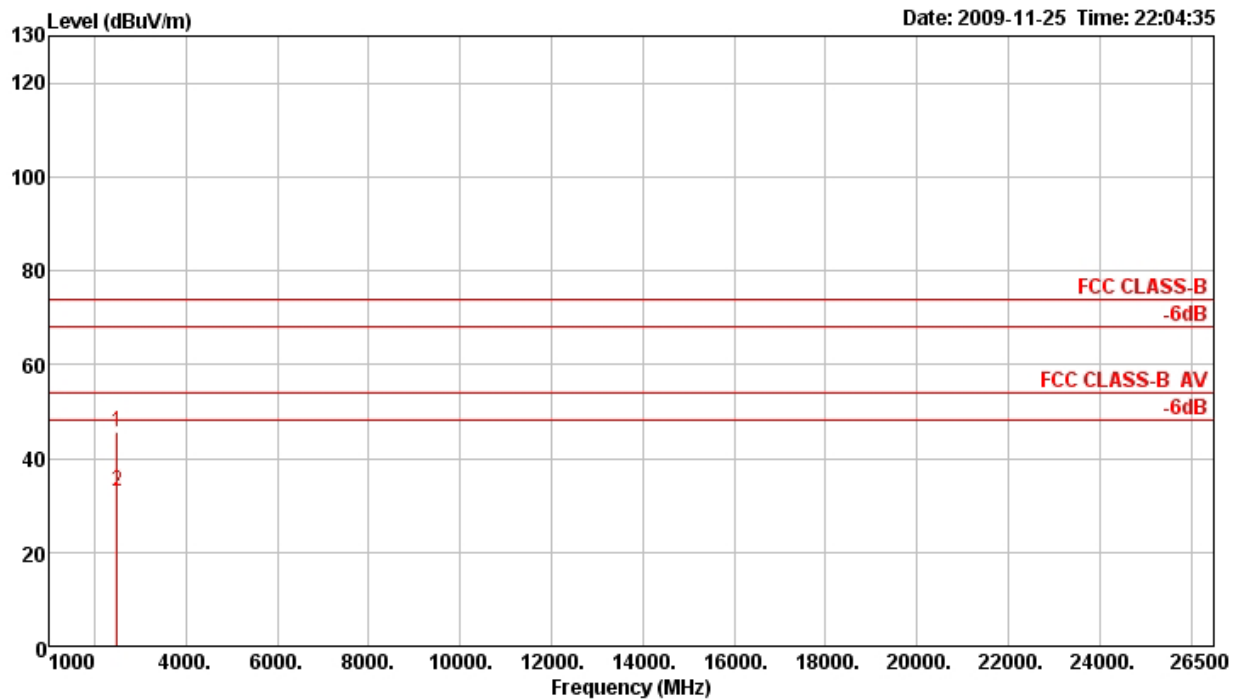
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4924.08	40.23	54.00	-13.77	39.58	3.02	35.03	32.66	89	118	Average	VERTICAL
2 p	4924.34	47.28	74.00	-26.72	46.63	3.02	35.03	32.66	89	118	Peak	VERTICAL

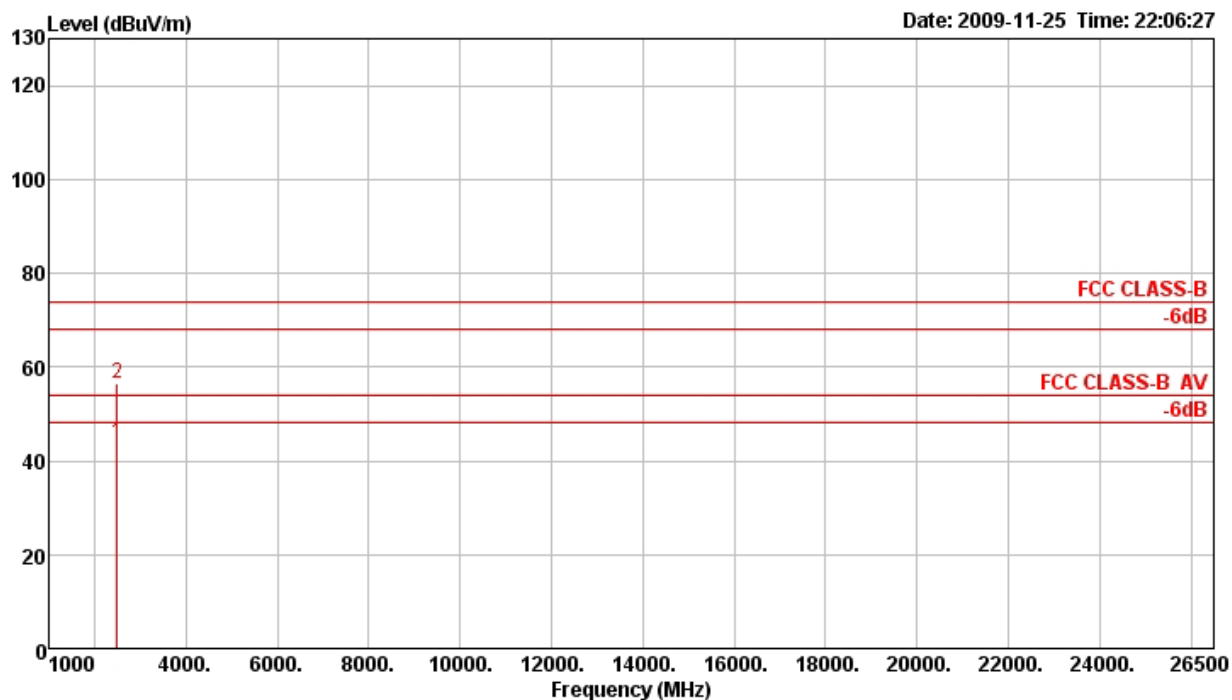
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 1 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2499.91	45.51	74.00	-28.49	50.62	2.11	34.92	27.70	18	100	Peak	HORIZONTAL
2 a	2499.92	32.89	54.00	-21.11	38.00	2.11	34.92	27.70	18	100	Average	HORIZONTAL

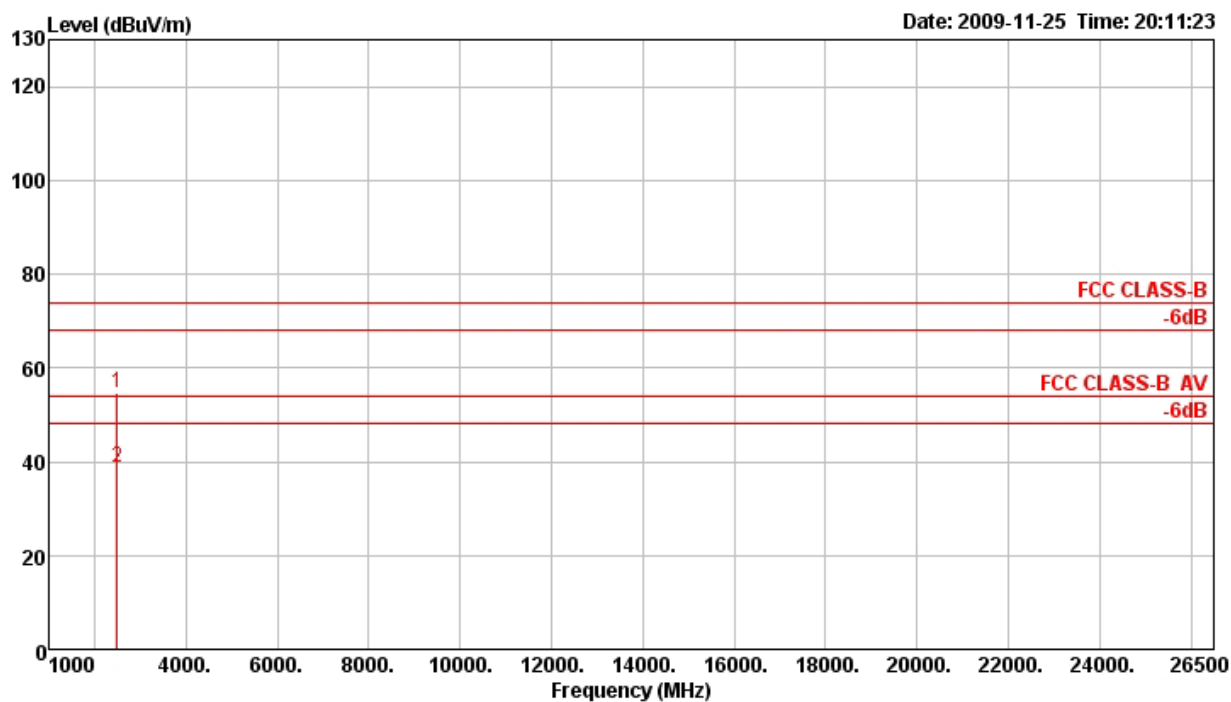
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.91	43.84	54.00	-10.16	48.95	2.11	34.92	27.70	36	100	Average	VERTICAL
2 p	2499.92	56.62	74.00	-17.38	61.73	2.11	34.92	27.70	36	100	Peak	VERTICAL

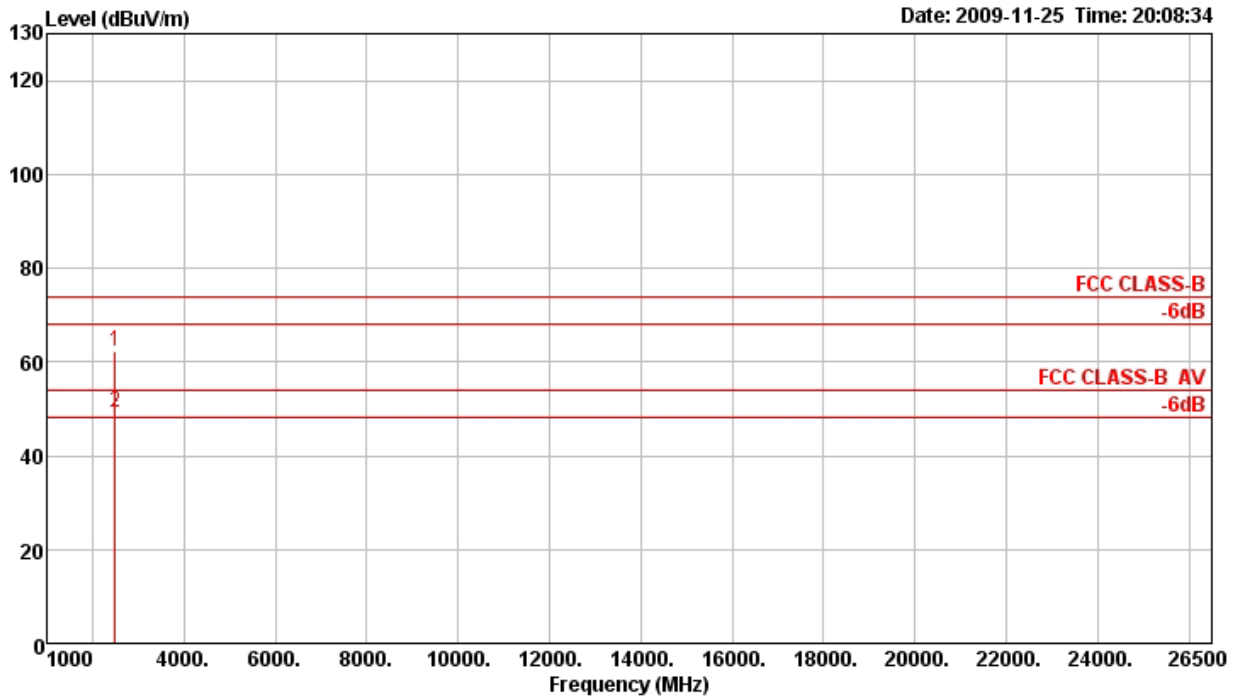
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 6 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2498.80	54.61	74.00	-19.39	59.72	2.11	34.92	27.70	189	100	Peak	HORIZONTAL
2 a	2499.96	38.66	54.00	-15.34	43.77	2.11	34.92	27.70	189	100	Average	HORIZONTAL

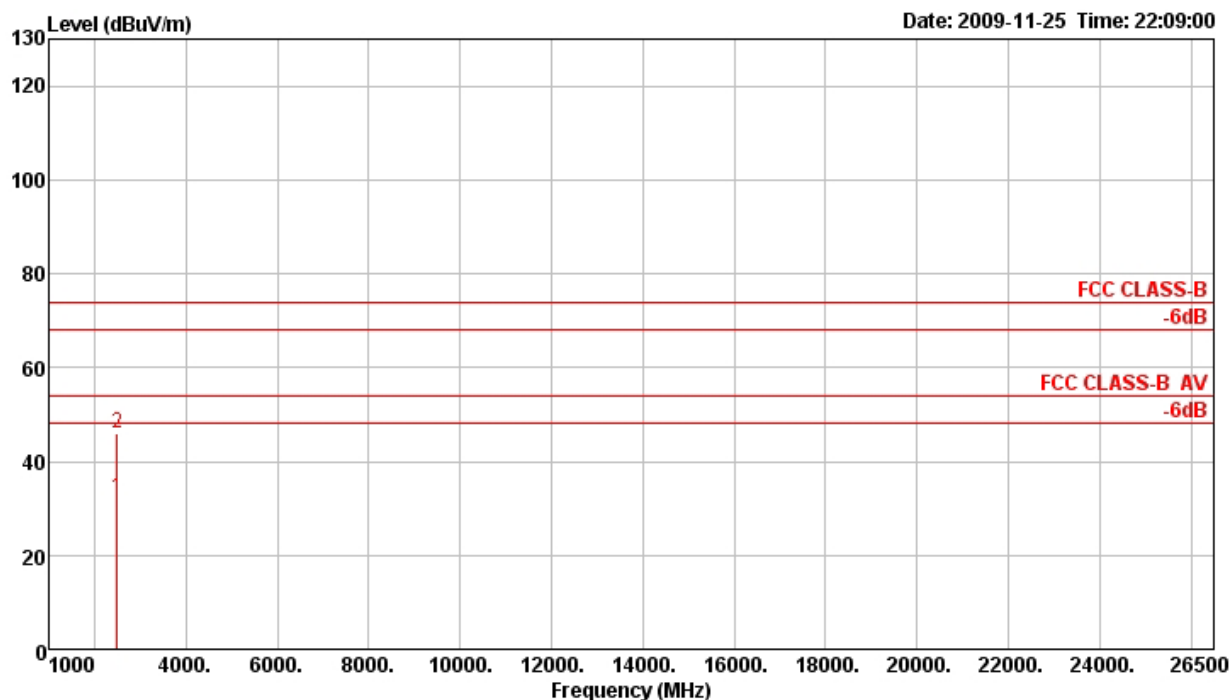
Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2499.04	62.41	74.00	-11.59	67.52	2.11	34.92	27.70	88	100	Peak	VERTICAL
2 a	2499.96	49.20	54.00	-4.80	54.31	2.11	34.92	27.70	88	100	Average	VERTICAL

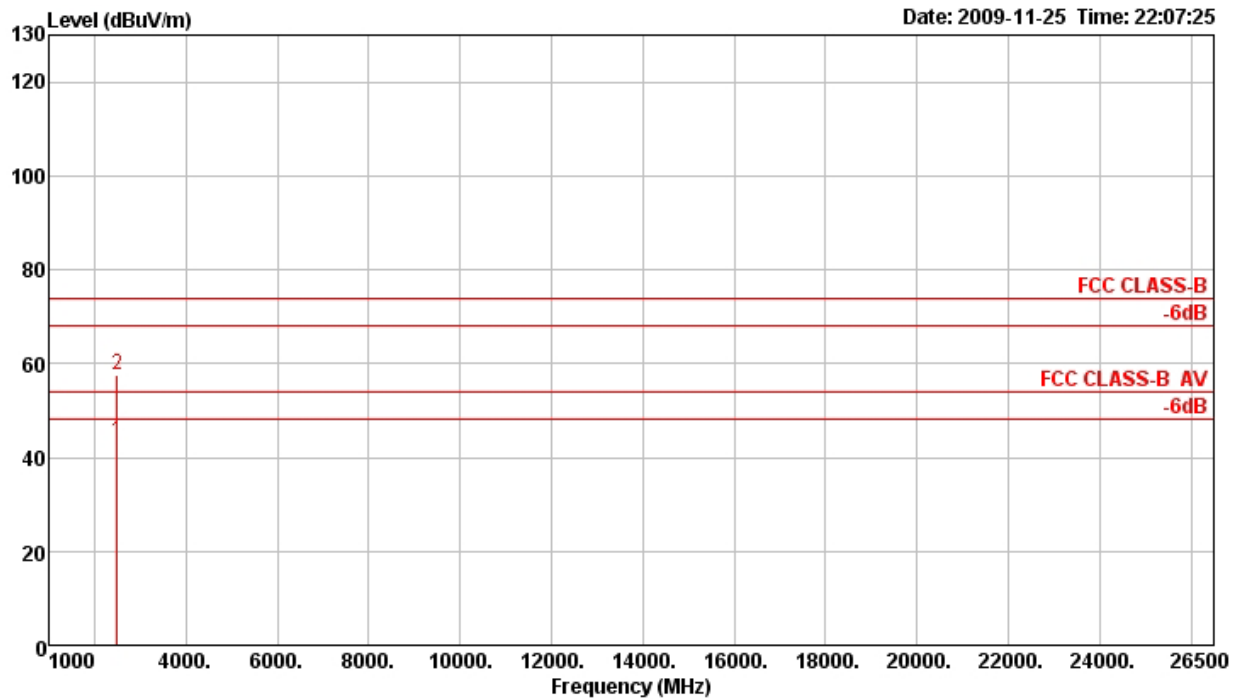
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 11 / Ant. A

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	2499.91	32.31	54.00	-21.69	37.42	2.11	34.92	27.70	4	100	Average	HORIZONTAL
2 p	2499.99	45.85	74.00	-28.15	50.96	2.11	34.92	27.70	4	100	Peak	HORIZONTAL

Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	2499.92	43.39	54.00	-10.61	48.50	2.11	34.92	27.70	35	100	Average	VERTICAL
2	p	2499.93	57.60	74.00	-16.40	62.71	2.11	34.92	27.70	35	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

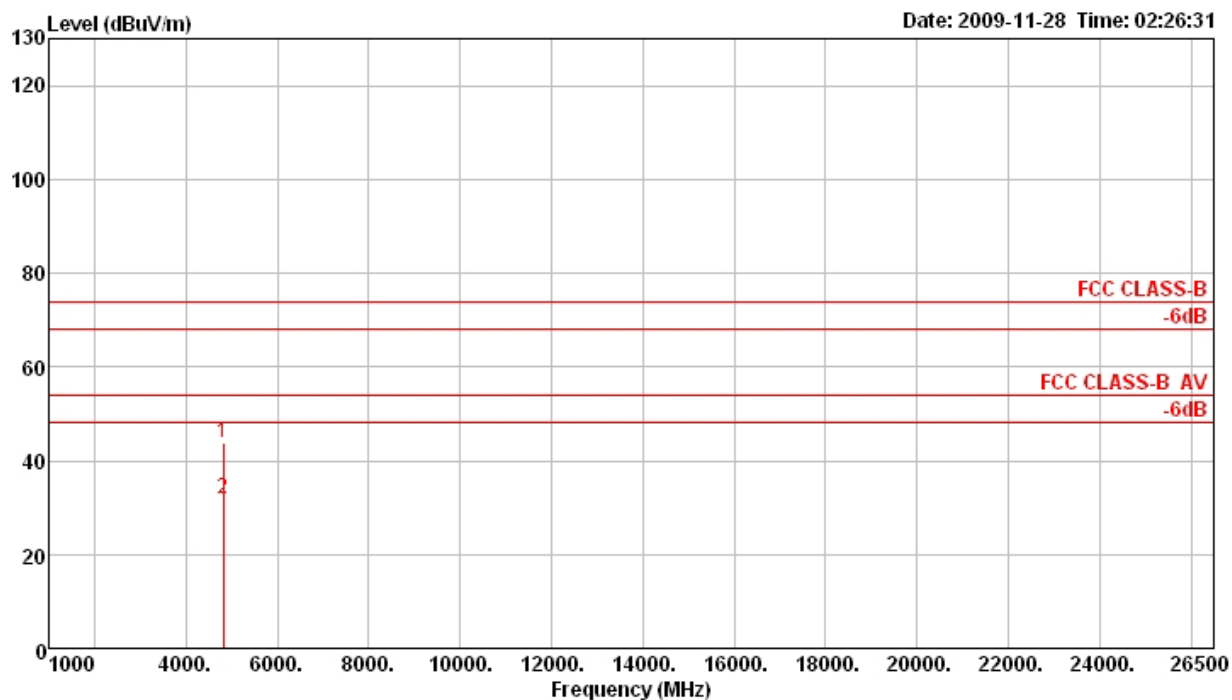
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna B>

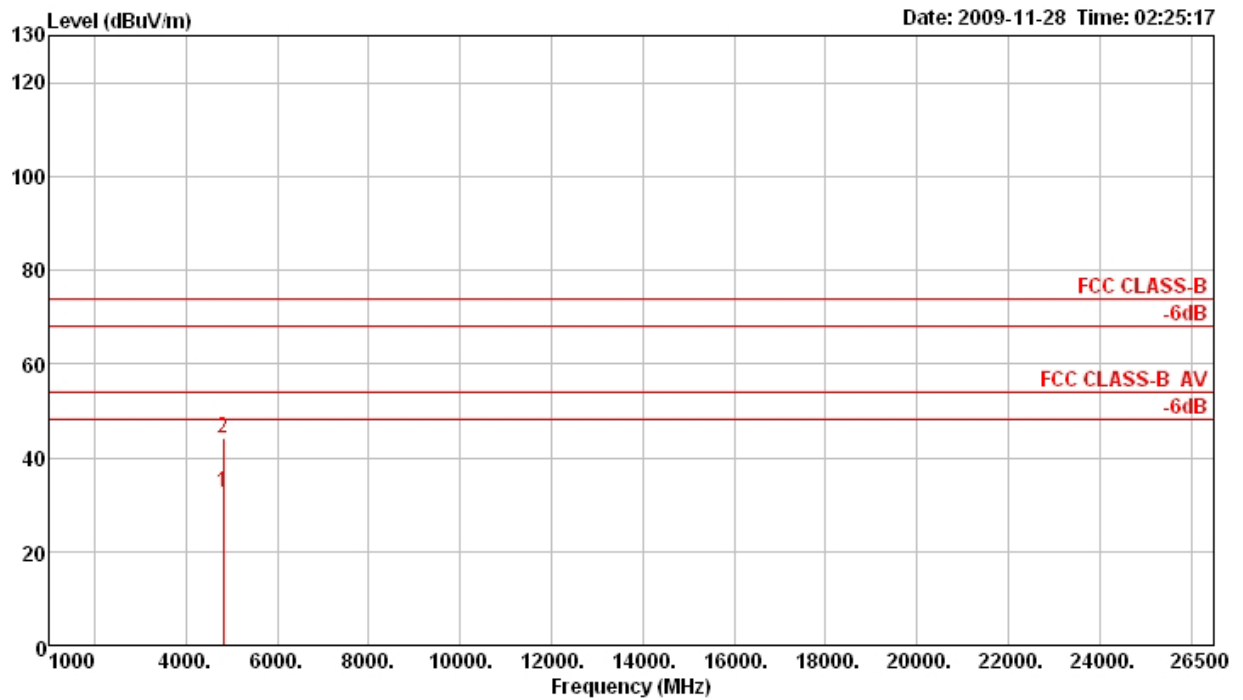
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1 p	4819.86	43.96	74.00	-30.04	43.76	3.00	35.26	32.46	0	100	Peak	HORIZONTAL
2 a	4825.79	31.94	54.00	-22.06	31.74	3.00	35.26	32.46	0	100	Average	HORIZONTAL

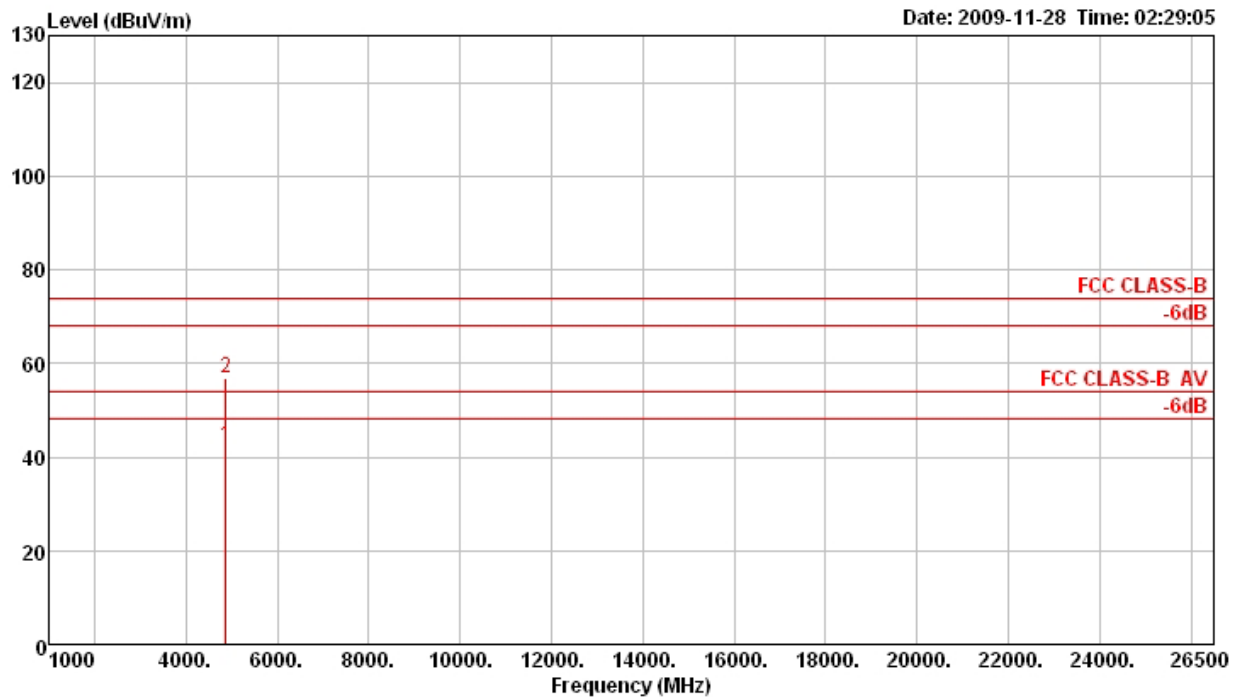
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.03	32.75	54.00	-21.25	32.55	3.00	35.26	32.46	360	100	Average	VERTICAL
2 p	4825.63	44.24	74.00	-29.76	44.04	3.00	35.26	32.46	360	100	Peak	VERTICAL

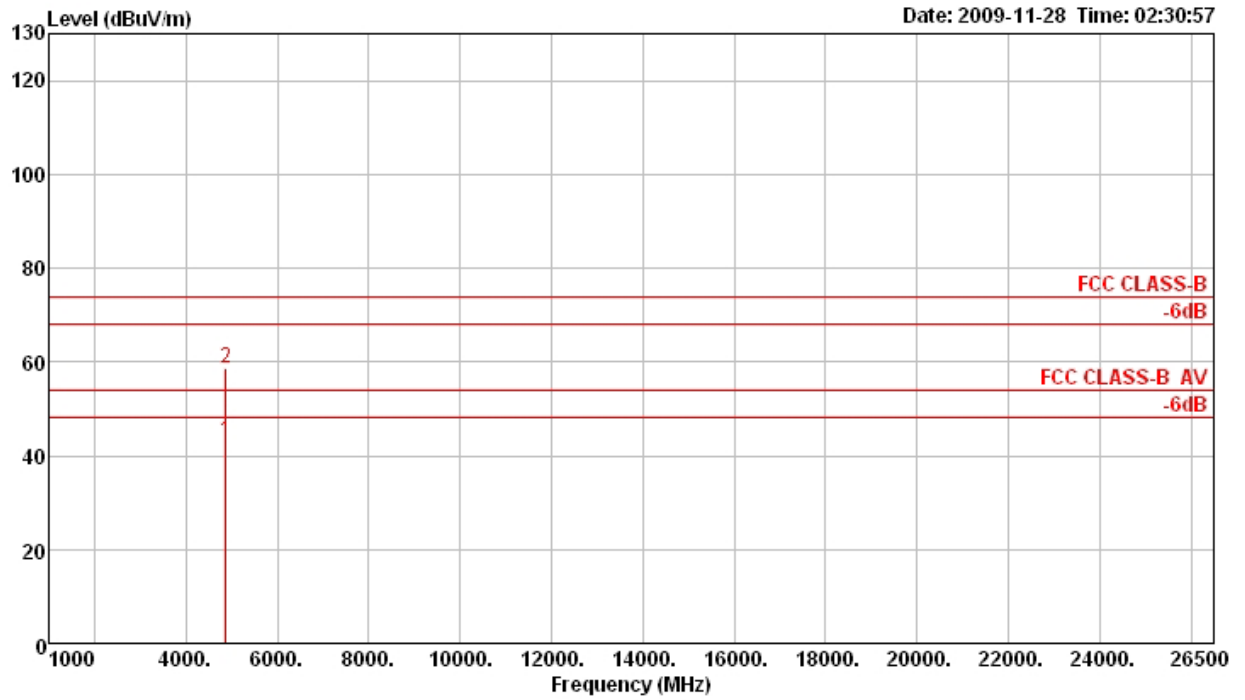
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.09	42.54	54.00	-11.46	42.12	3.01	35.15	32.56	43	100	Average	HORIZONTAL
2 p	4874.76	56.99	74.00	-17.01	56.57	3.01	35.15	32.56	43	100	Peak	HORIZONTAL

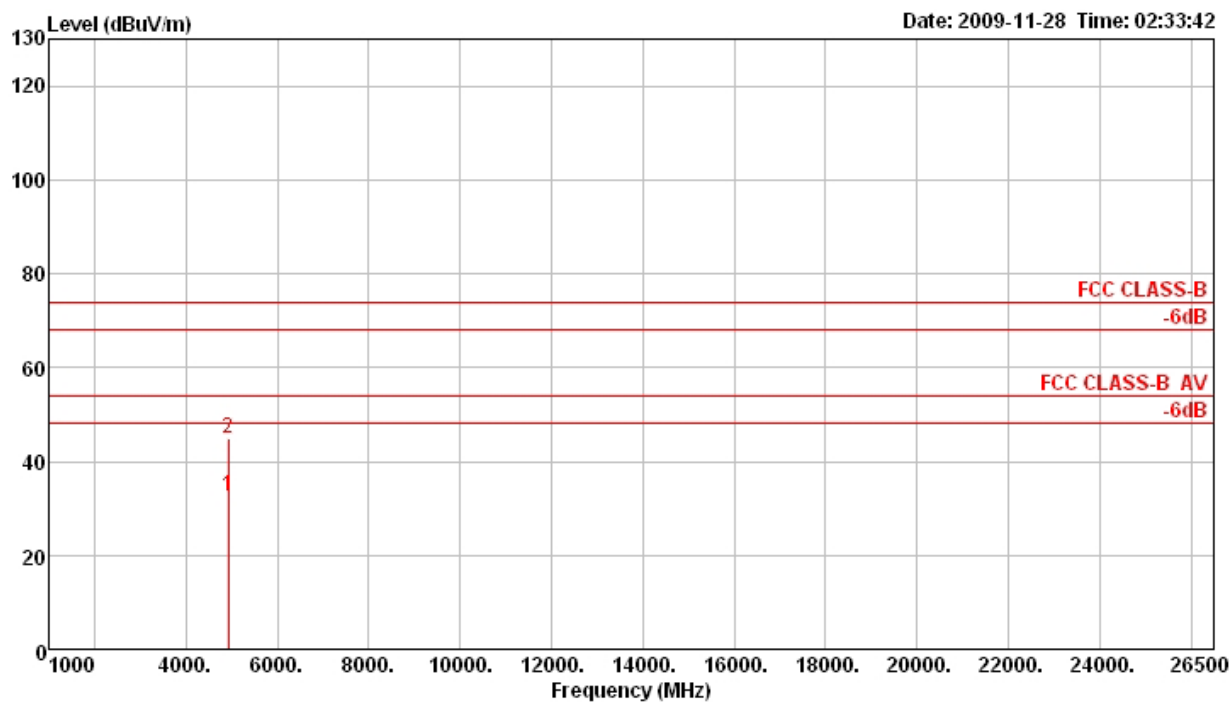
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.31	43.14	54.00	-10.86	42.72	3.01	35.15	32.56	270	161	Average	VERTICAL
2 p	4874.91	58.71	74.00	-15.29	58.29	3.01	35.15	32.56	270	100	Peak	VERTICAL

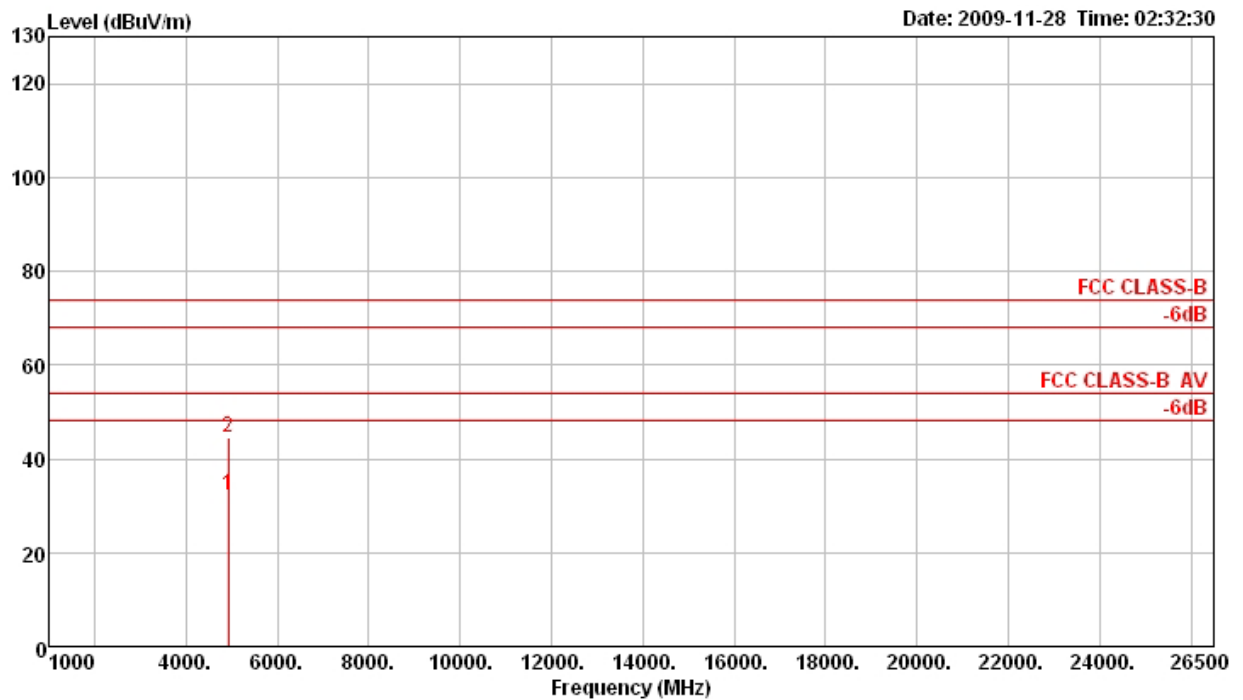
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. B

Horizontal



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4923.25	32.41	54.00	-21.59	31.76	3.02	35.03	32.66	360	100	Average	HORIZONTAL
2	p	4928.52	44.78	74.00	-29.22	44.13	3.02	35.03	32.66	360	100	Peak	HORIZONTAL

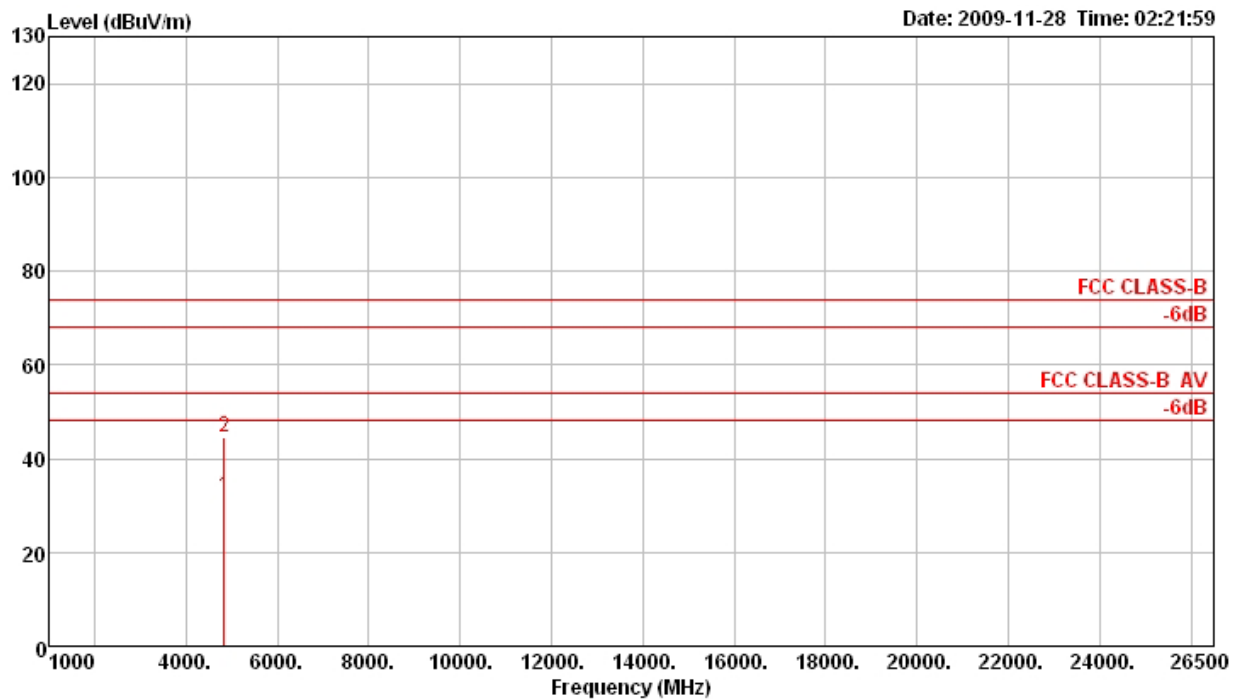
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4926.41	32.26	54.00	-21.74	31.61	3.02	35.03	32.66	0	100	Average	VERTICAL
2 p	4928.87	44.38	74.00	-29.62	43.73	3.02	35.03	32.66	0	100	Peak	VERTICAL

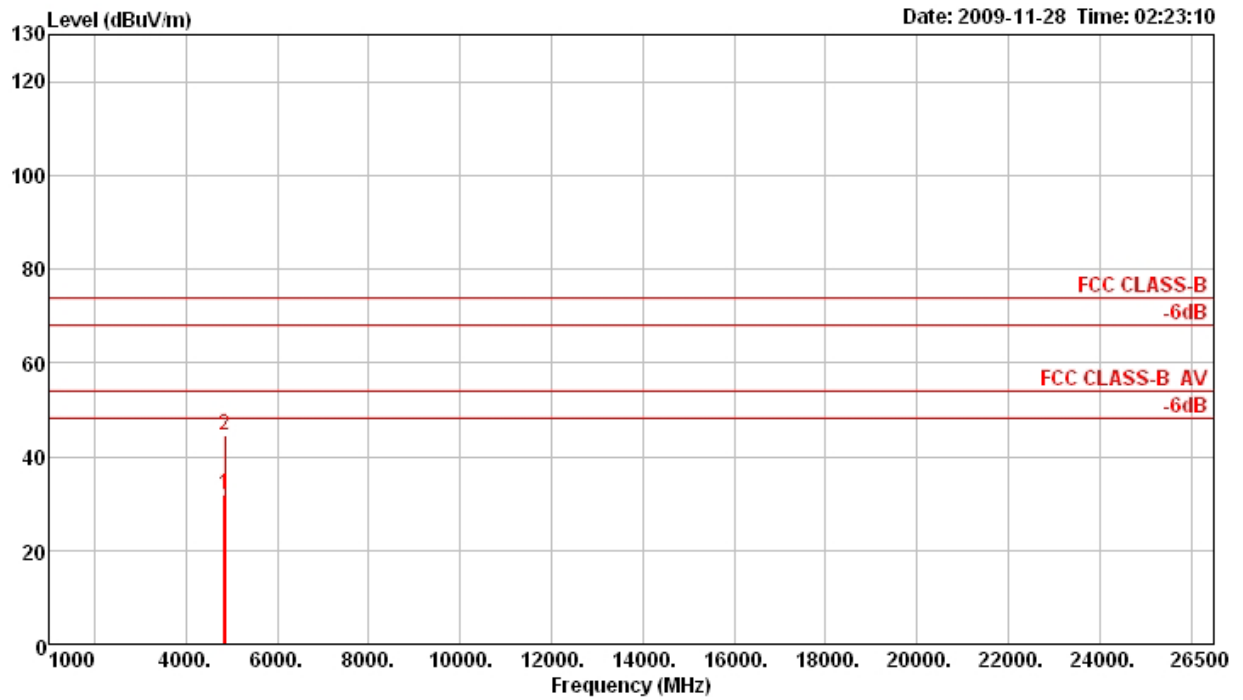
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4840.39	31.90	54.00	-22.10	31.60	3.01	35.20	32.49	360	100	Average	HORIZONTAL
2 p	4843.58	44.56	74.00	-29.44	44.26	3.01	35.20	32.49	360	100	Peak	HORIZONTAL

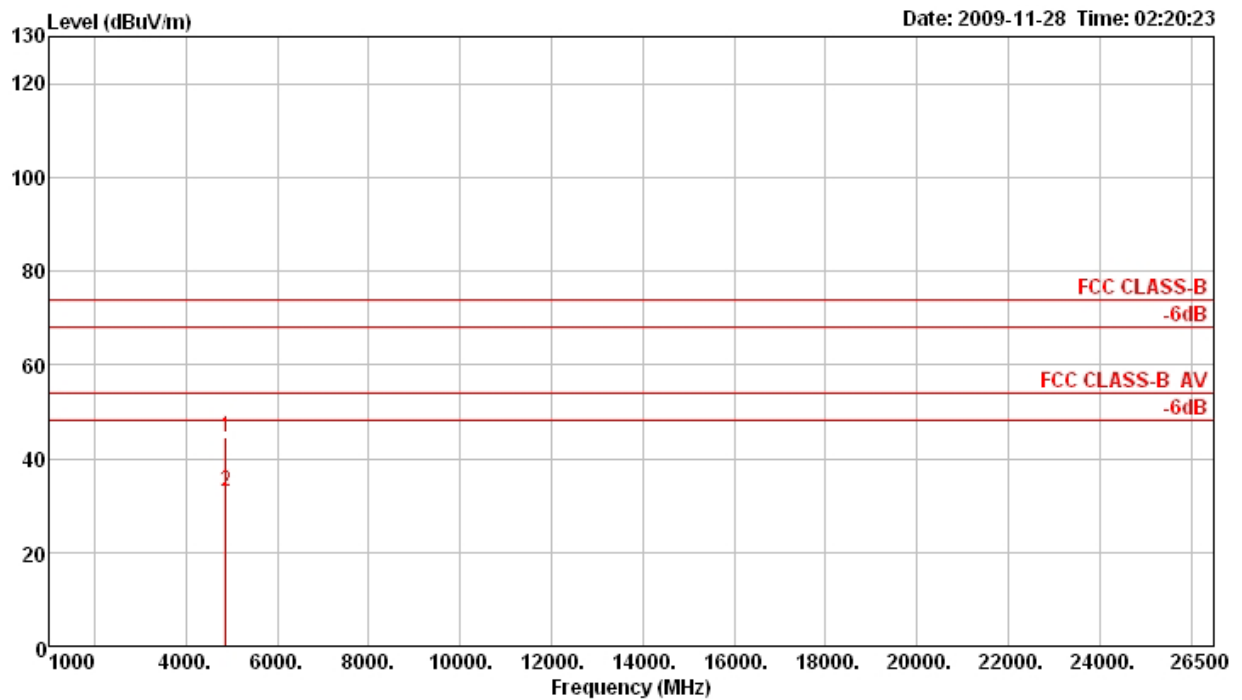
Vertical



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4845.40	31.91	54.00	-22.09	31.61	3.01	35.20	32.49	0	100	Average	VERTICAL
2	p	4847.32	44.40	74.00	-29.60	44.10	3.01	35.20	32.49	0	100	Peak	VERTICAL

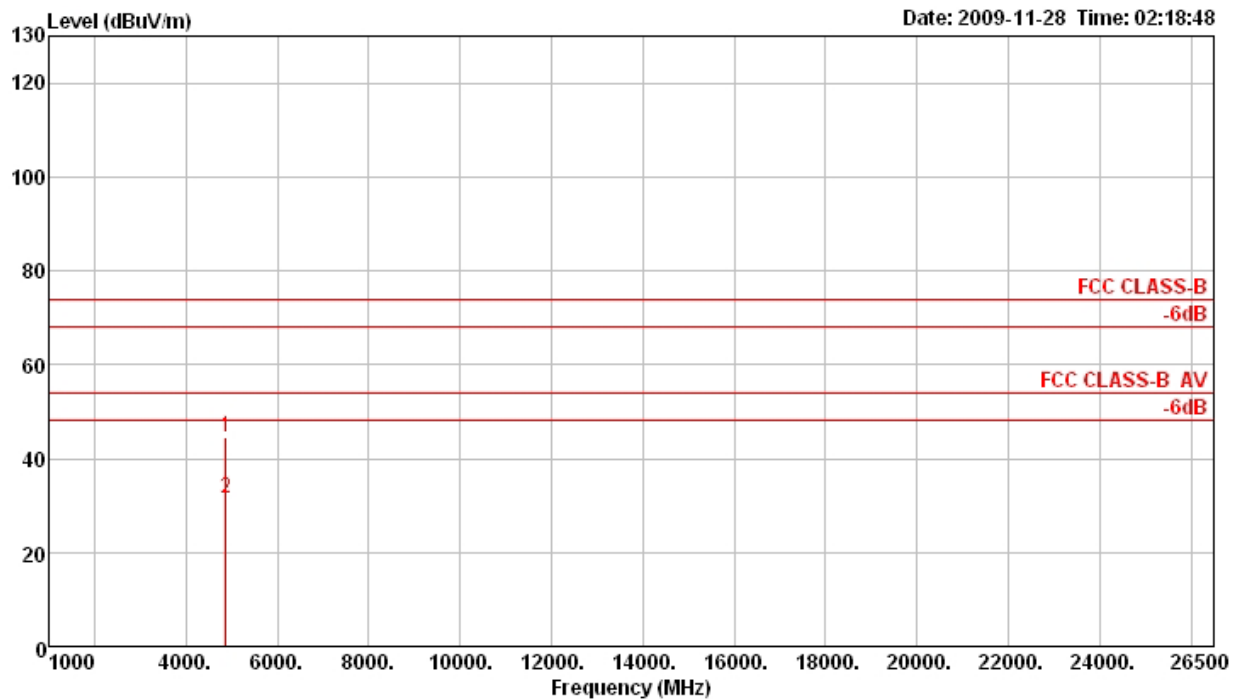
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4869.18	44.67	74.00	-29.33	44.25	3.01	35.15	32.56	0	100	Peak	HORIZONTAL
2 a	4874.69	32.84	54.00	-21.16	32.42	3.01	35.15	32.56	0	100	Average	HORIZONTAL

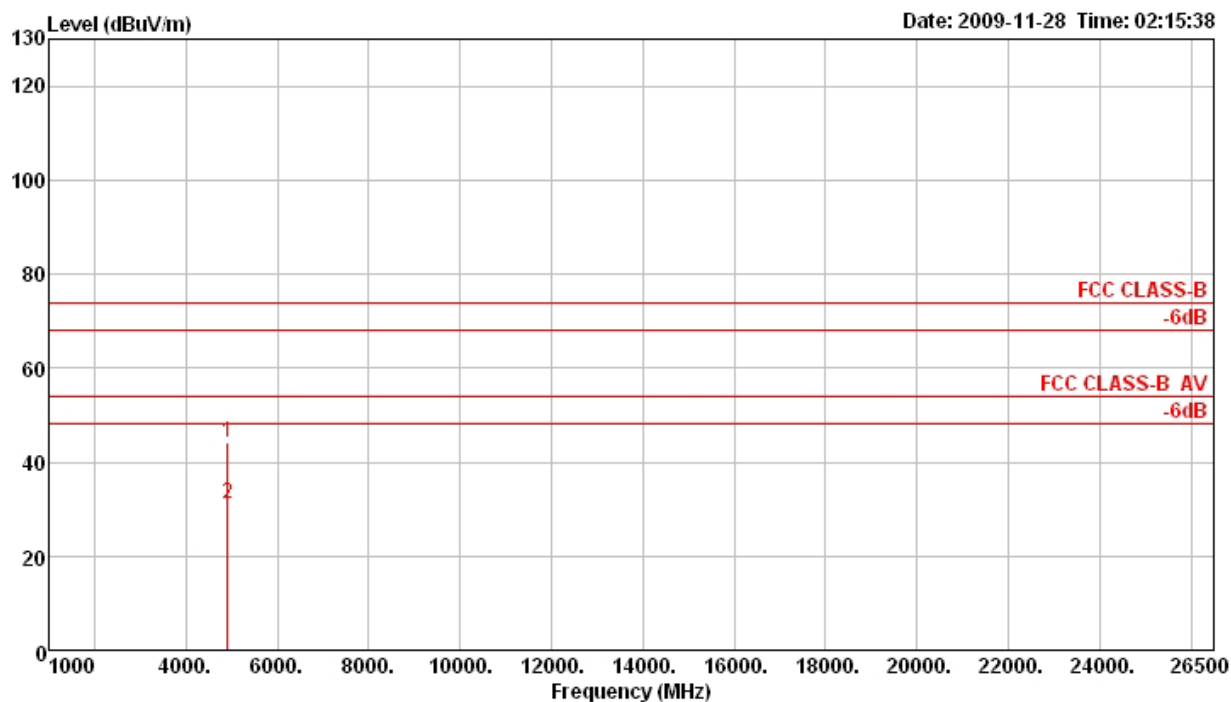
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4872.88	44.45	74.00	-29.55	44.03	3.01	35.15	32.56	360	100	Peak	VERTICAL
2 a	4877.91	31.55	54.00	-22.45	31.13	3.01	35.15	32.56	360	100	Average	VERTICAL

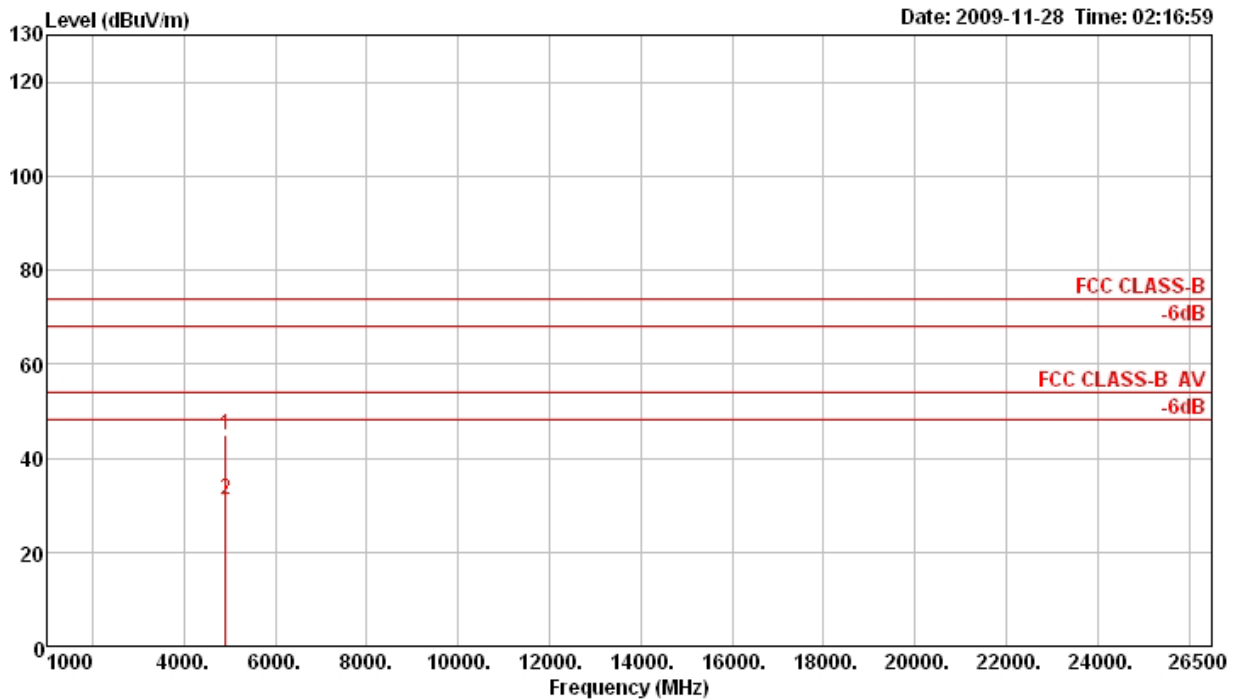
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4903.18	44.13	74.00	-29.87	43.57	3.02	35.09	32.63	360	100	Peak	HORIZONTAL
2 a	4906.82	31.05	54.00	-22.95	30.49	3.02	35.09	32.63	360	100	Average	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4904.65	44.83	74.00	-29.17	44.27	3.02	35.09	32.63	0	100	Peak	VERTICAL
2 a	4907.26	30.99	54.00	-23.01	30.43	3.02	35.09	32.63	0	100	Average	VERTICAL

Note:

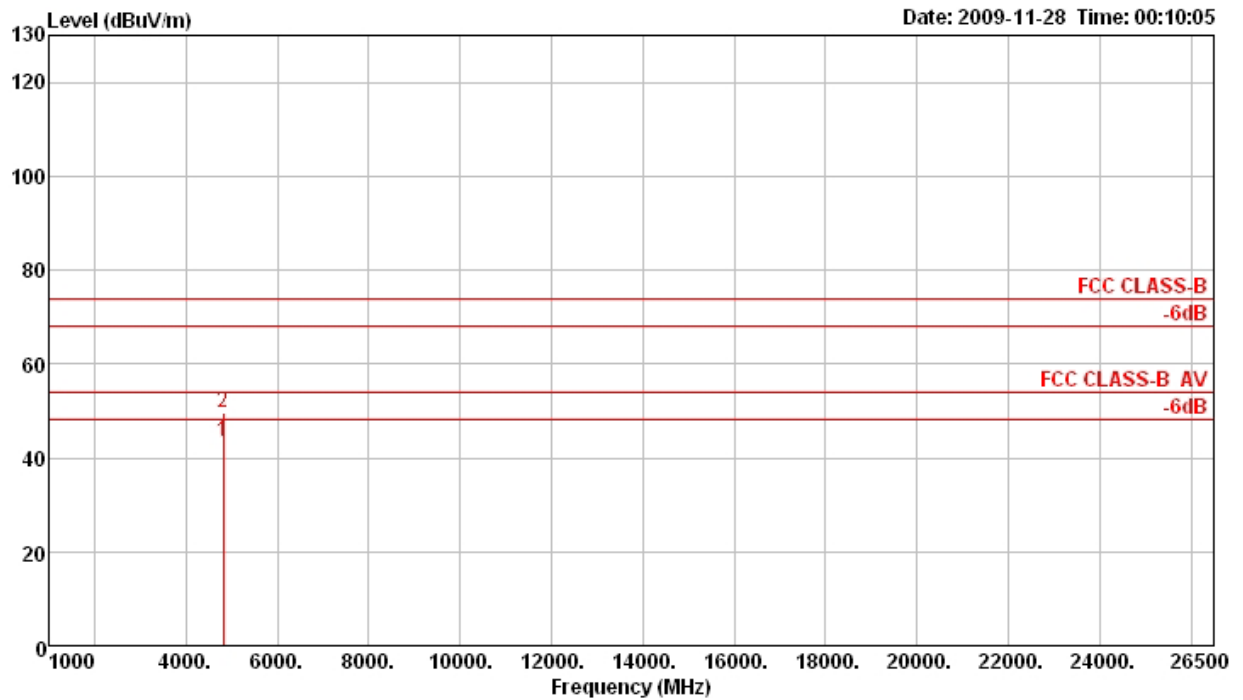
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

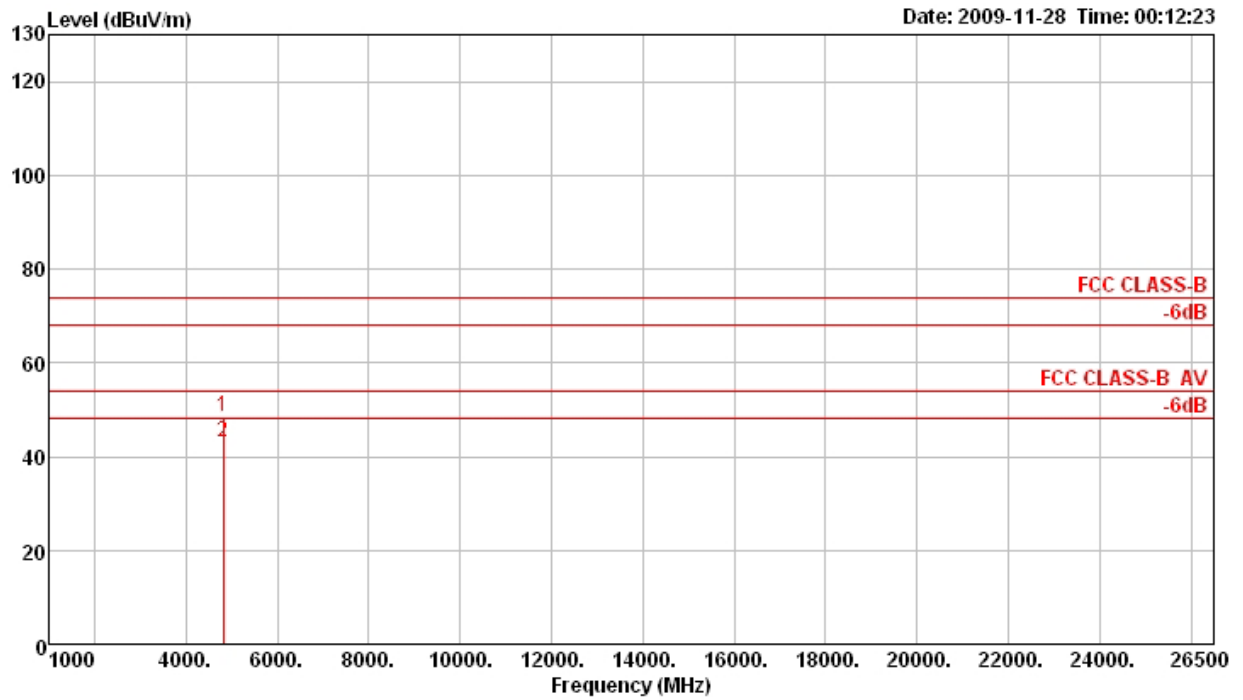
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 1 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4823.99	43.61	54.00	-10.39	43.41	3.00	35.26	32.46	50	157	Average	HORIZONTAL
2 p	4824.11	49.69	74.00	-24.31	49.49	3.00	35.26	32.46	50	157	Peak	HORIZONTAL

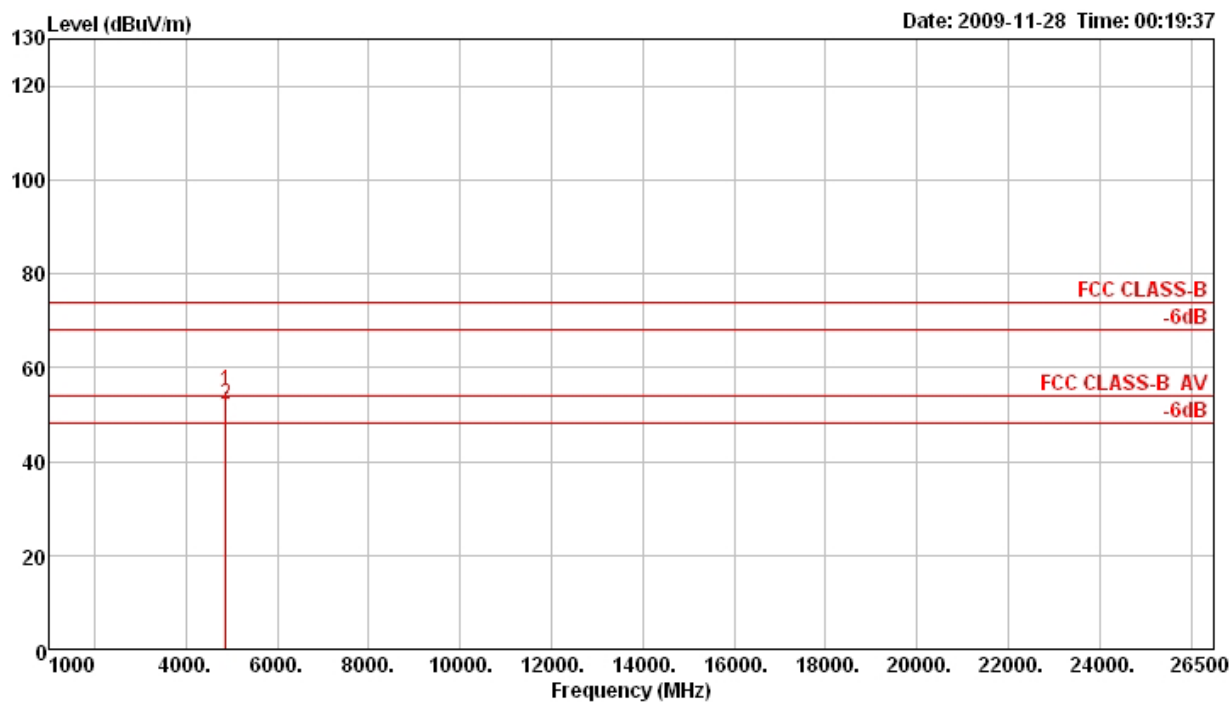
Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4824.00	48.61	74.00	-25.39	48.41	3.00	35.26	32.46	268	100	Peak	VERTICAL
2 a	4824.03	43.11	54.00	-10.89	42.91	3.00	35.26	32.46	268	100	Average	VERTICAL

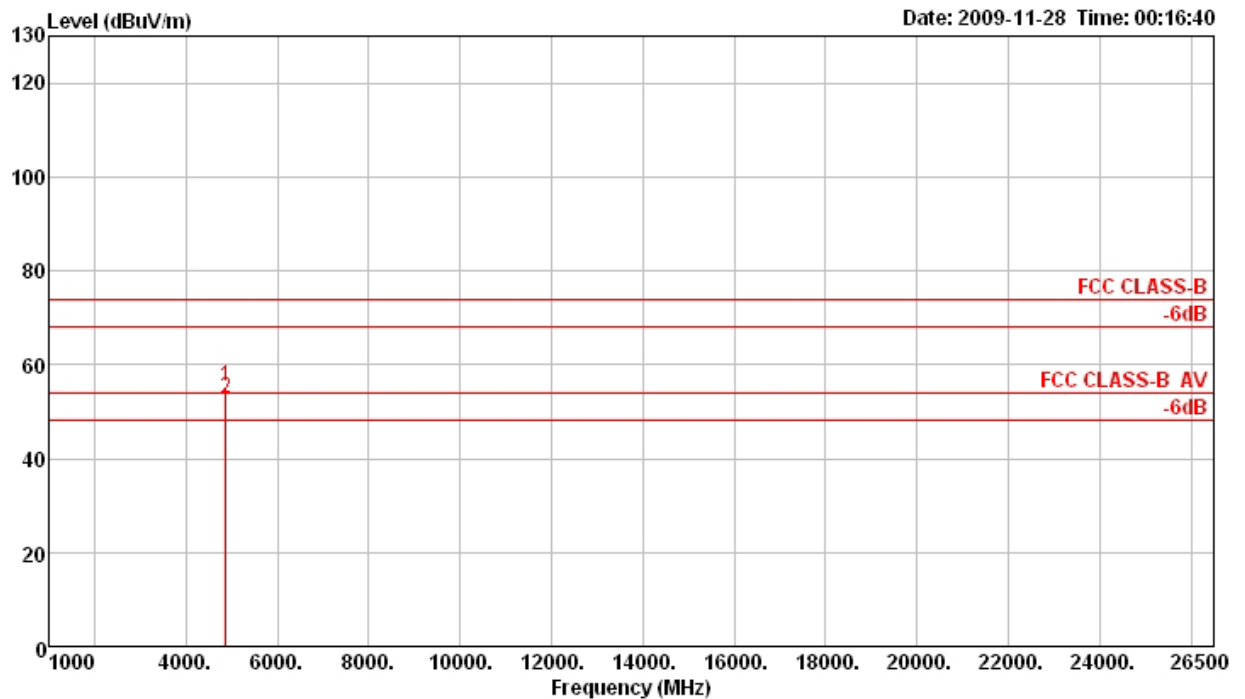
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 6 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.89	54.94	74.00	-19.06	54.52	3.01	35.15	32.56	53	160	Peak	HORIZONTAL
2 a	4874.01	52.15	54.00	-1.85	51.73	3.01	35.15	32.56	53	160	Average	HORIZONTAL

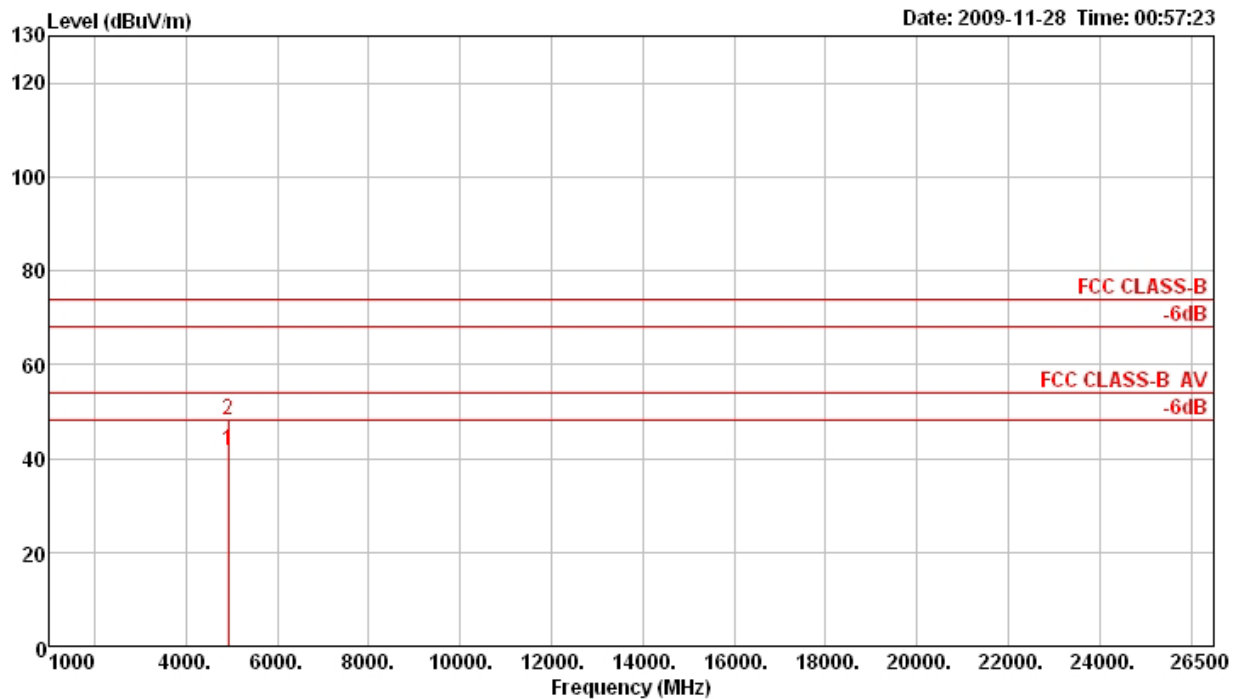
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.99	55.46	74.00	-18.54	55.04	3.01	35.15	32.56	269	100	Peak	VERTICAL
2 a	4874.03	52.71	54.00	-1.29	52.29	3.01	35.15	32.56	269	100	Average	VERTICAL

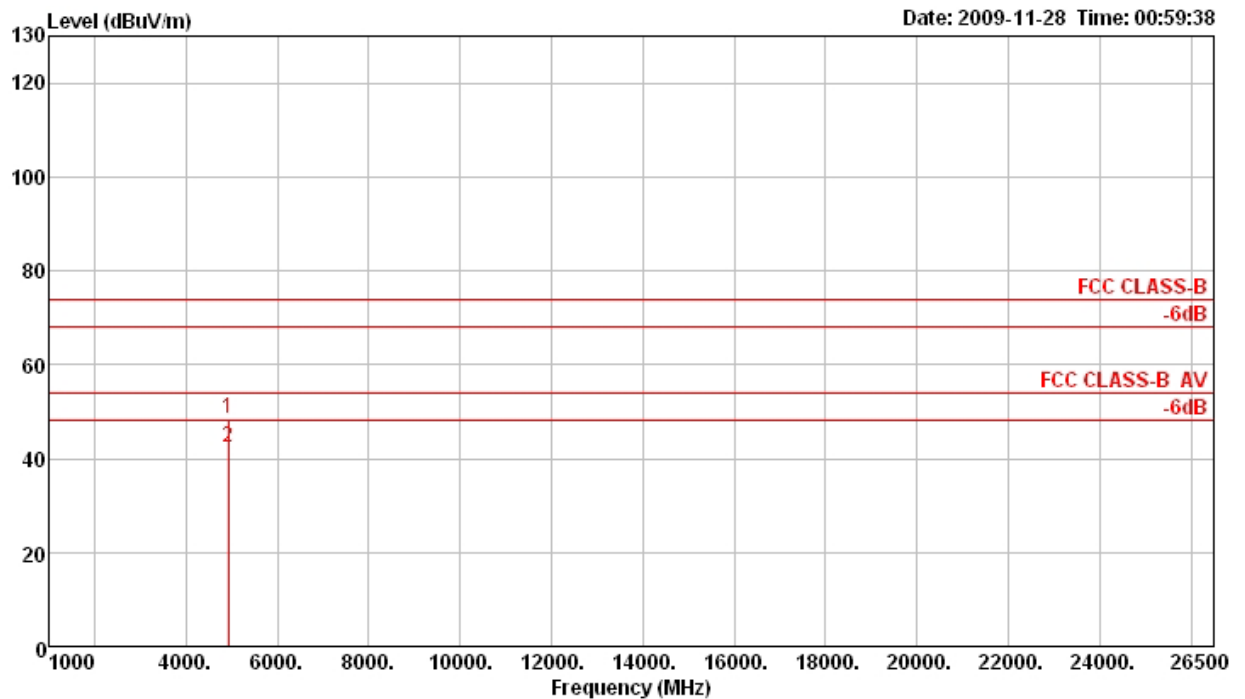
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 11 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4924.01	41.47	54.00	-12.53	40.82	3.02	35.03	32.66	48	100	Average	HORIZONTAL
2 p	4924.11	48.06	74.00	-25.94	47.41	3.02	35.03	32.66	48	100	Peak	HORIZONTAL

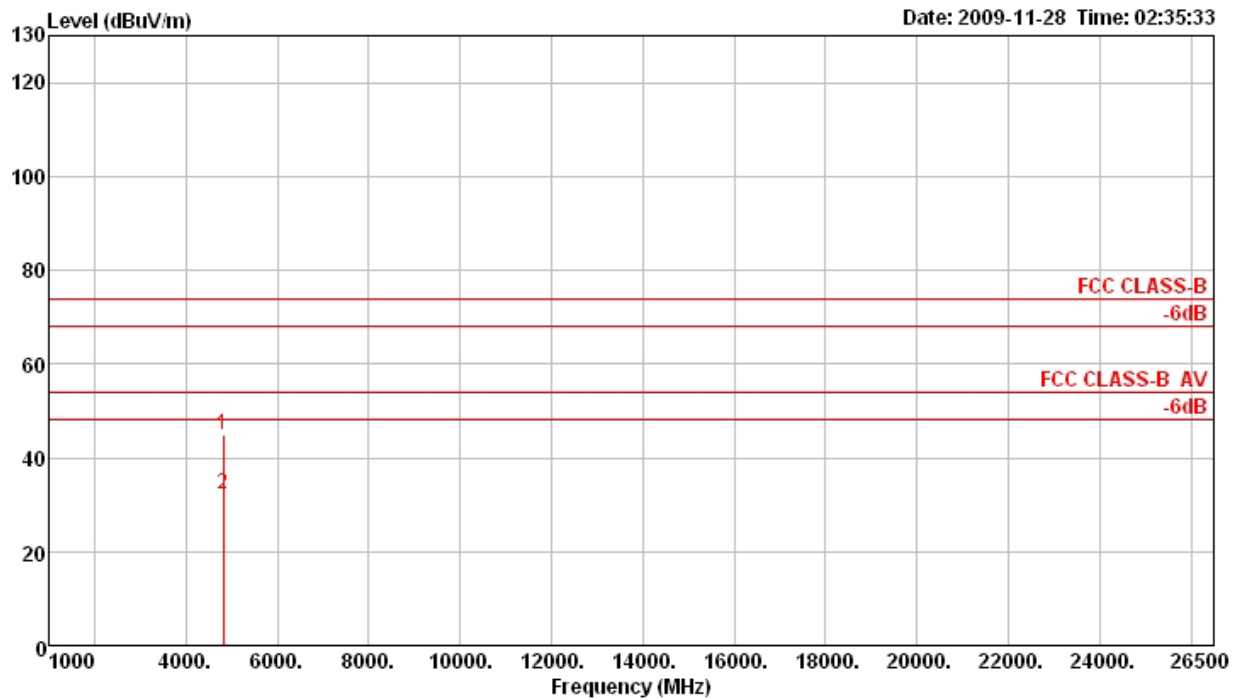
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.91	48.66	74.00	-25.34	48.01	3.02	35.03	32.66	254	110	Peak	VERTICAL
2 a	4924.02	42.22	54.00	-11.78	41.57	3.02	35.03	32.66	254	110	Average	VERTICAL

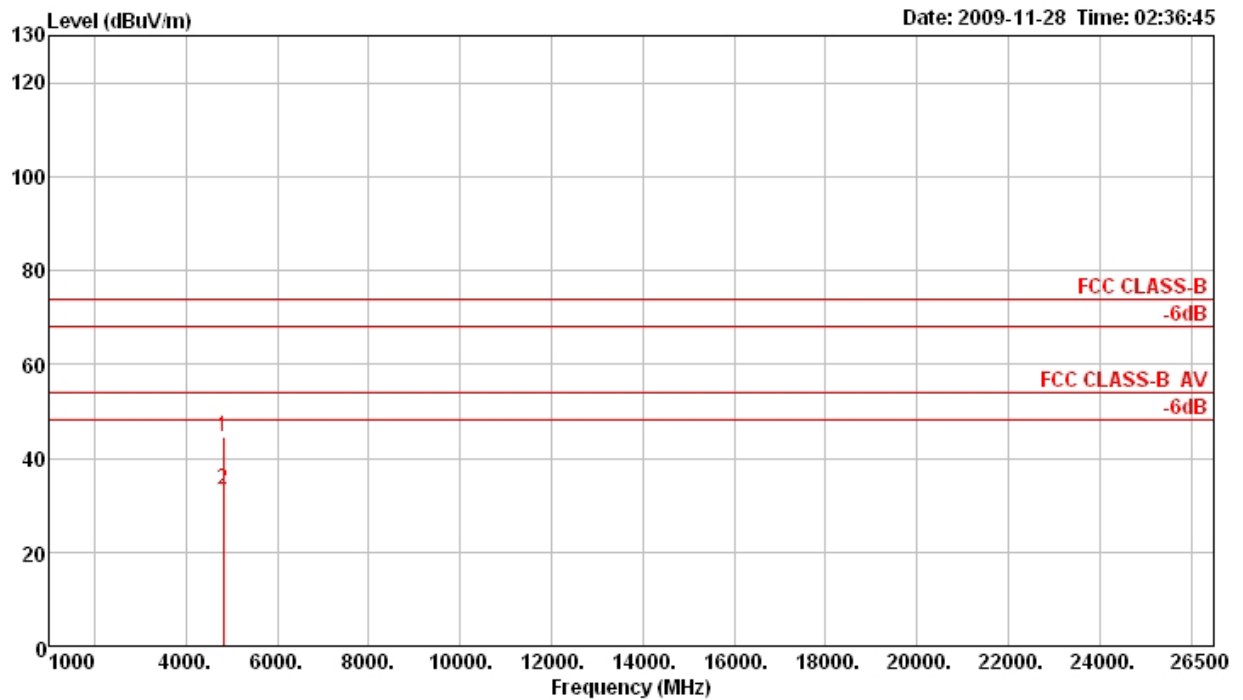
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 1 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4820.19	44.89	74.00	-29.11	44.69	3.00	35.26	32.46	0	100	Peak	HORIZONTAL
2 a	4823.63	32.29	54.00	-21.71	32.09	3.00	35.26	32.46	0	100	Average	HORIZONTAL

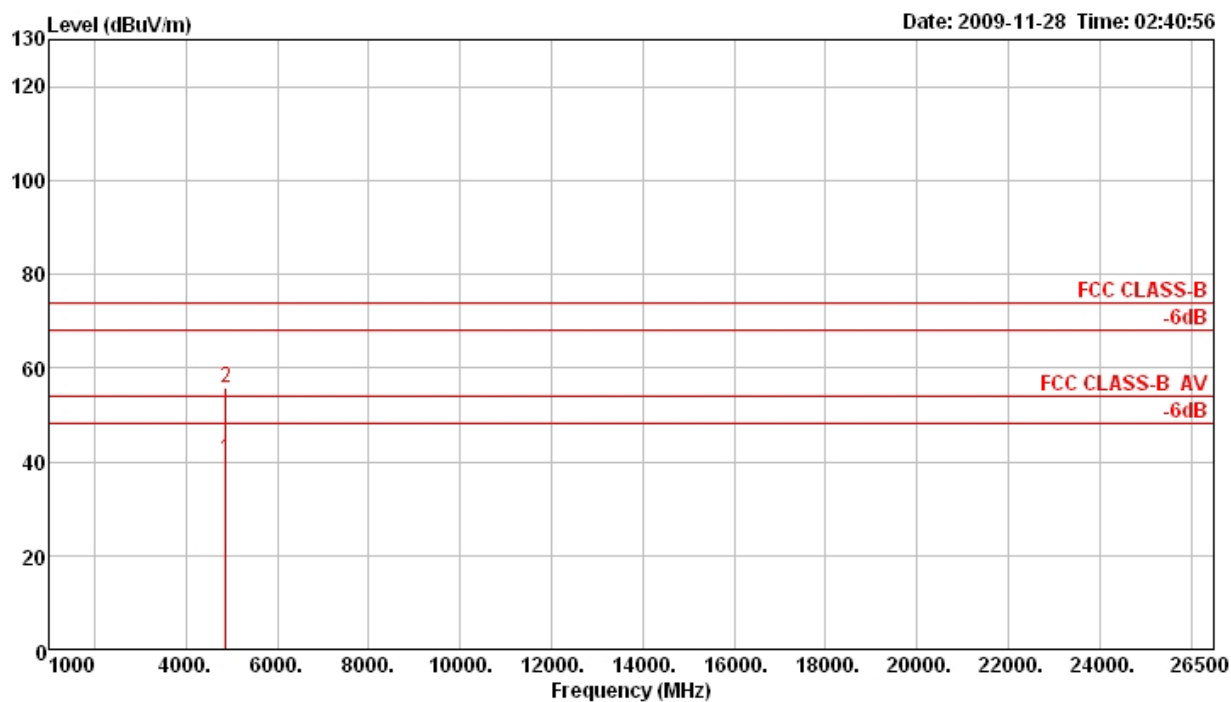
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4821.02	44.51	74.00	-29.49	44.31	3.00	35.26	32.46	360	100	Peak	VERTICAL
2 a	4826.94	33.19	54.00	-20.81	32.99	3.00	35.26	32.46	360	100	Average	VERTICAL

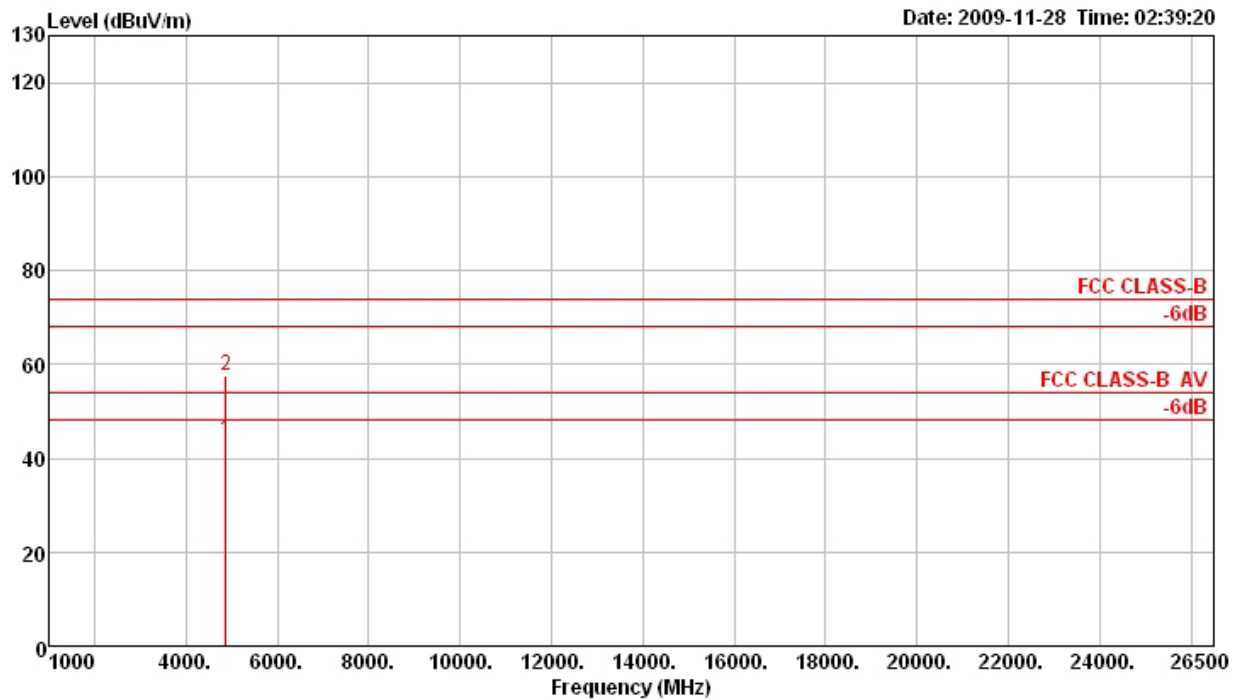
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 6 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4875.27	40.38	54.00	-13.62	39.96	3.01	35.15	32.56	38	100	Average	HORIZONTAL
2 p	4875.61	55.77	74.00	-18.23	55.35	3.01	35.15	32.56	38	100	Peak	HORIZONTAL

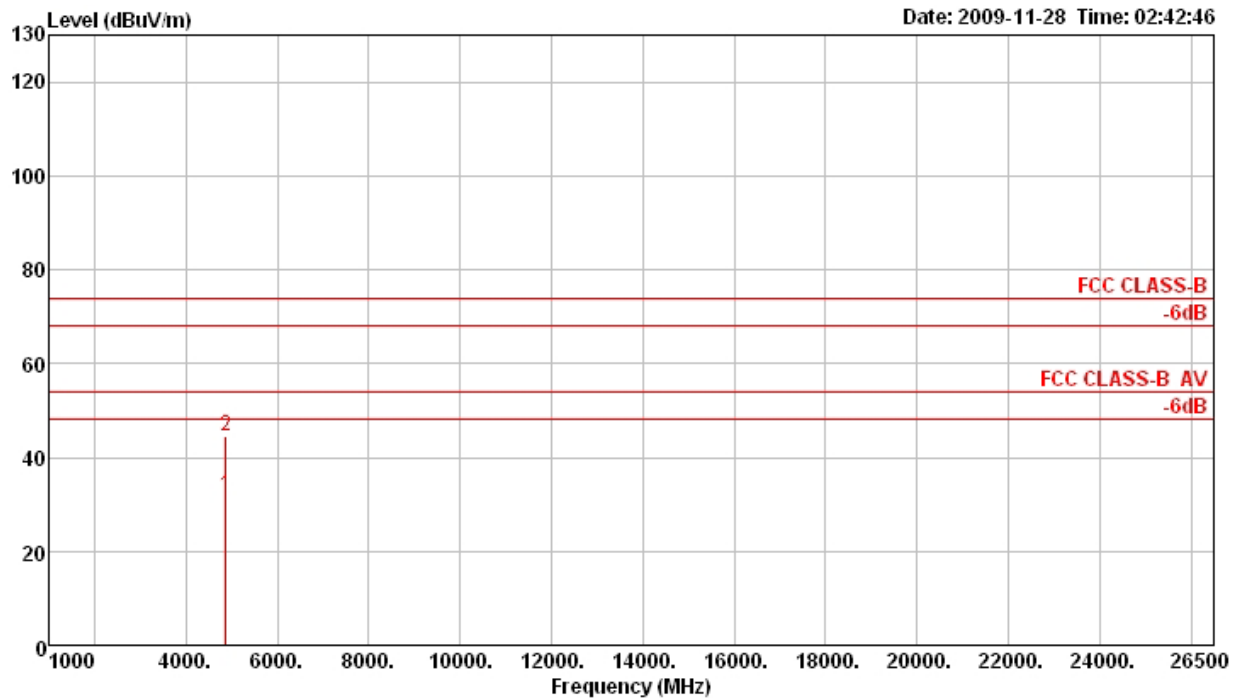
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.91	43.68	54.00	-10.32	43.26	3.01	35.15	32.56	262	100	Average	VERTICAL
2 p	4875.66	57.58	74.00	-16.42	57.16	3.01	35.15	32.56	262	100	Peak	VERTICAL

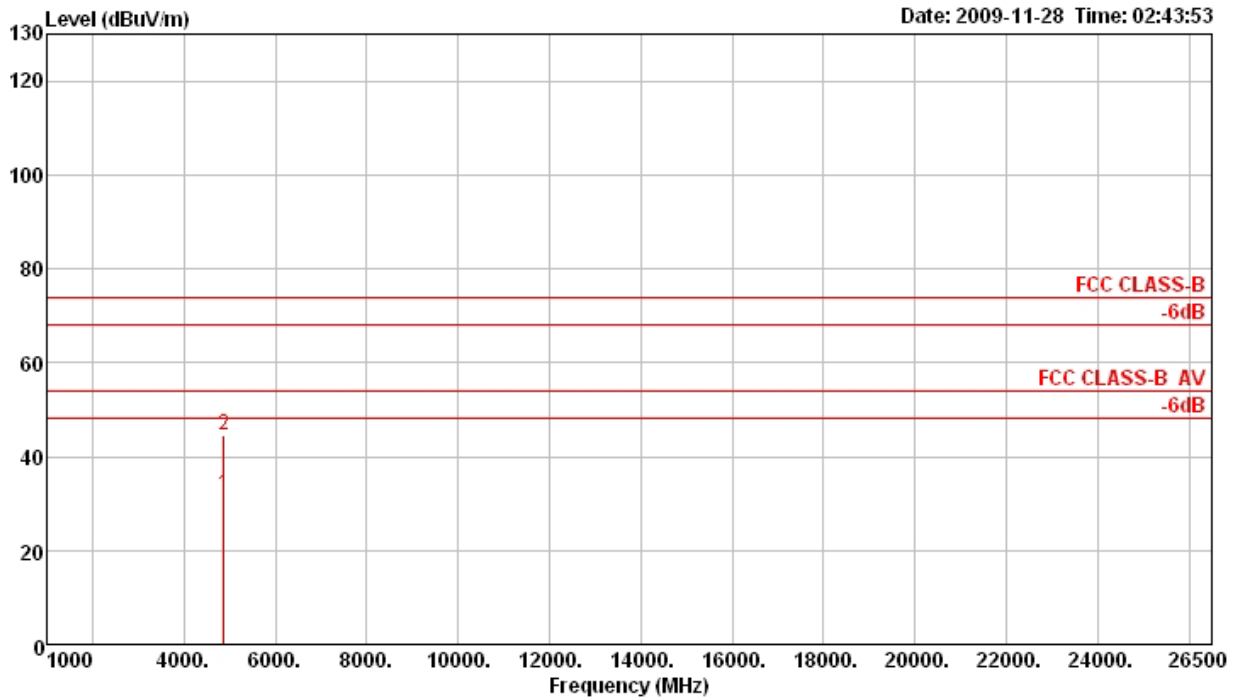
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 11 / Ant. B

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4869.24	31.87	54.00	-22.13	31.45	3.01	35.15	32.56	360	100	Average	HORIZONTAL
2 p	4869.63	44.71	74.00	-29.29	44.29	3.01	35.15	32.56	360	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4869.08	31.83	54.00	-22.17	31.41	3.01	35.15	32.56	1	100	Average	VERTICAL
2 p	4875.89	44.39	74.00	-29.61	43.97	3.01	35.15	32.56	0	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

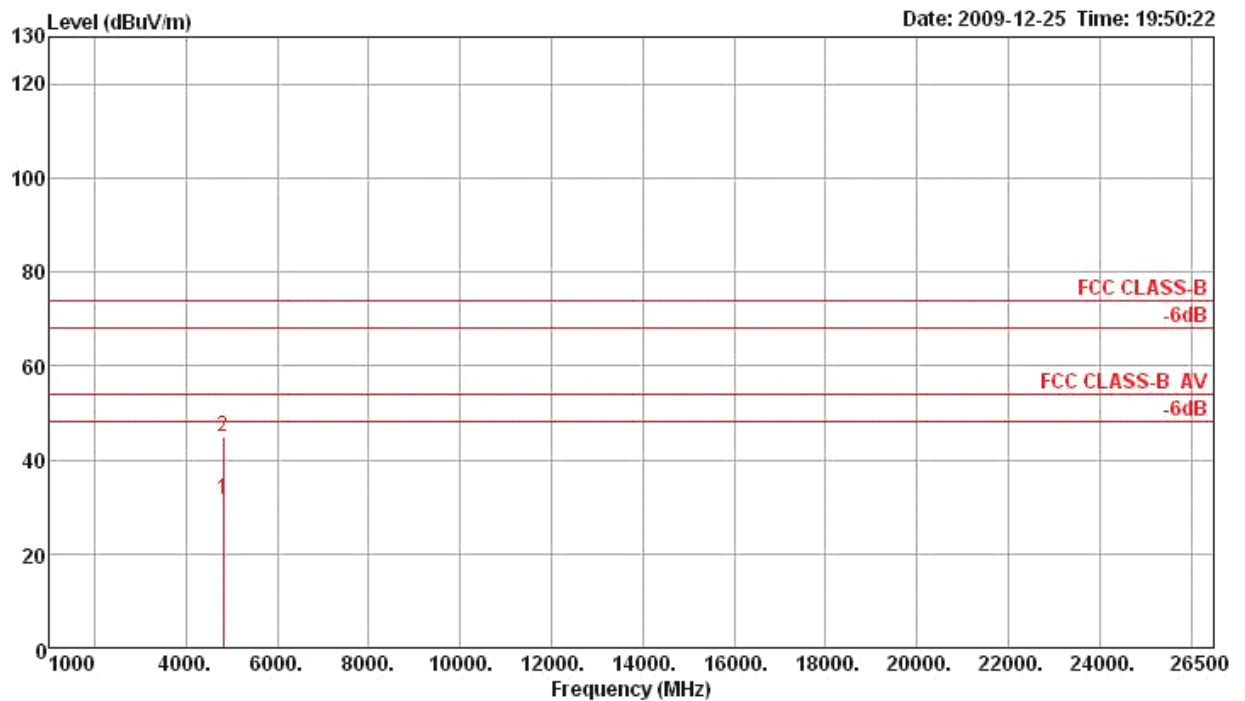
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna C>

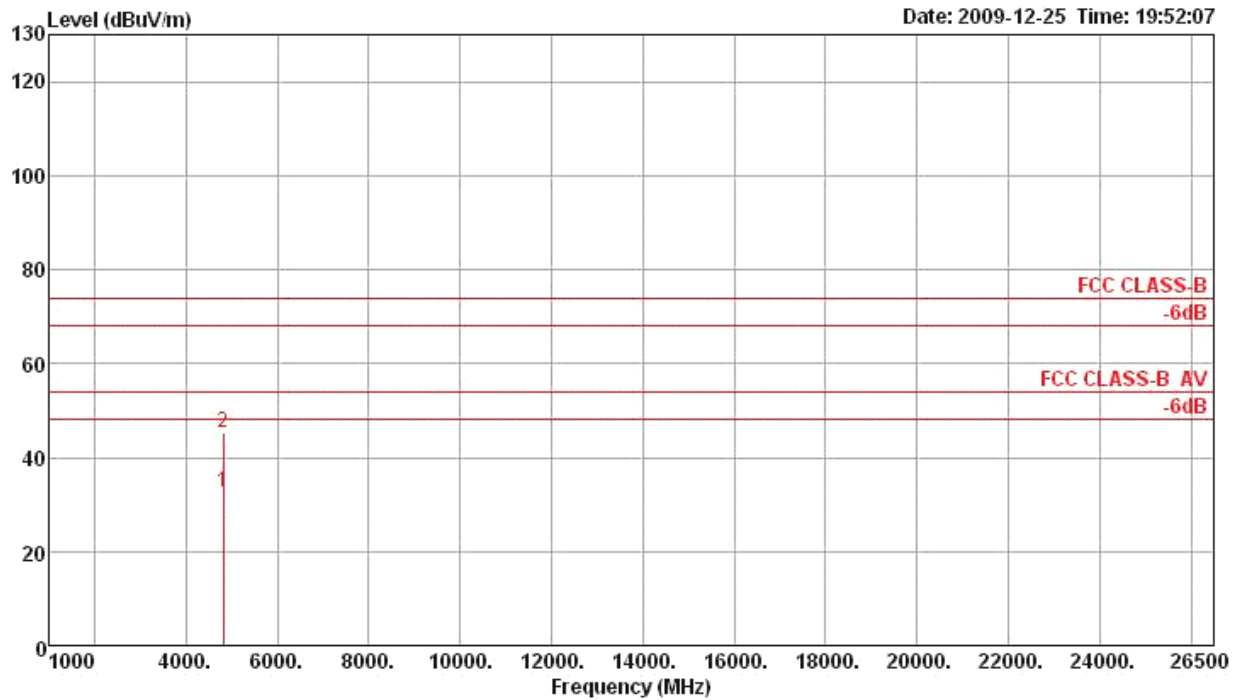
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4823.98	31.41	54.00	-22.59	31.21	3.00	35.26	32.46	360	100	Average	HORIZONTAL
2 p	4824.01	44.75	74.00	-29.25	44.55	3.00	35.26	32.46	360	100	Peak	HORIZONTAL

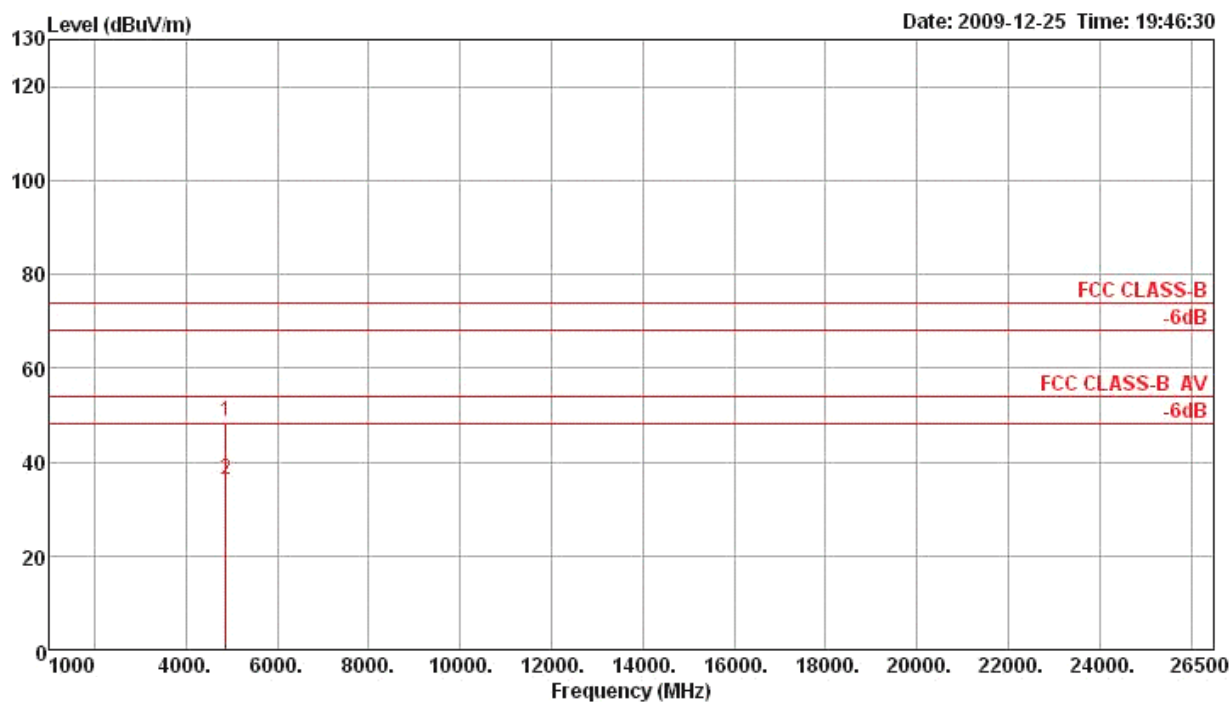
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4823.98	32.53	54.00	-21.47	32.33	3.00	35.26	32.46	0	100	Average	VERTICAL
2 p	4824.02	45.36	74.00	-28.64	45.16	3.00	35.26	32.46	0	100	Peak	VERTICAL

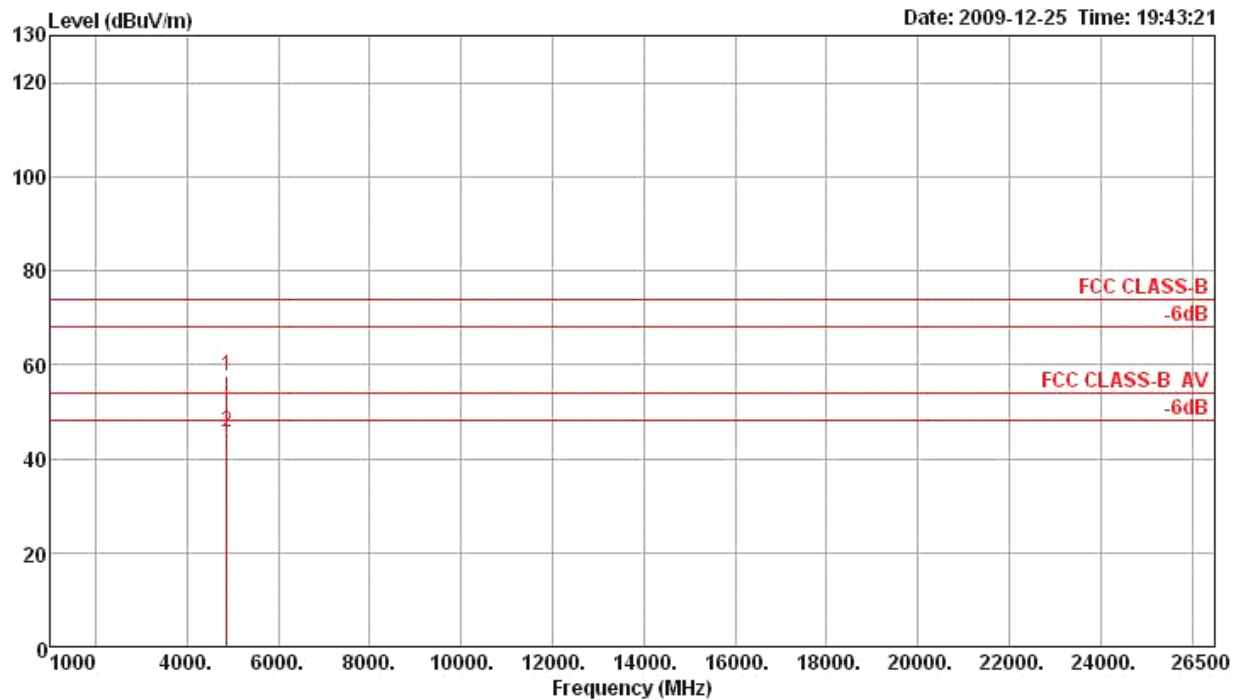
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.48	48.56	74.00	-25.44	48.14	3.01	35.15	32.56	141	100	Peak	HORIZONTAL
2 a	4874.39	36.13	54.00	-17.87	35.71	3.01	35.15	32.56	141	100	Average	HORIZONTAL

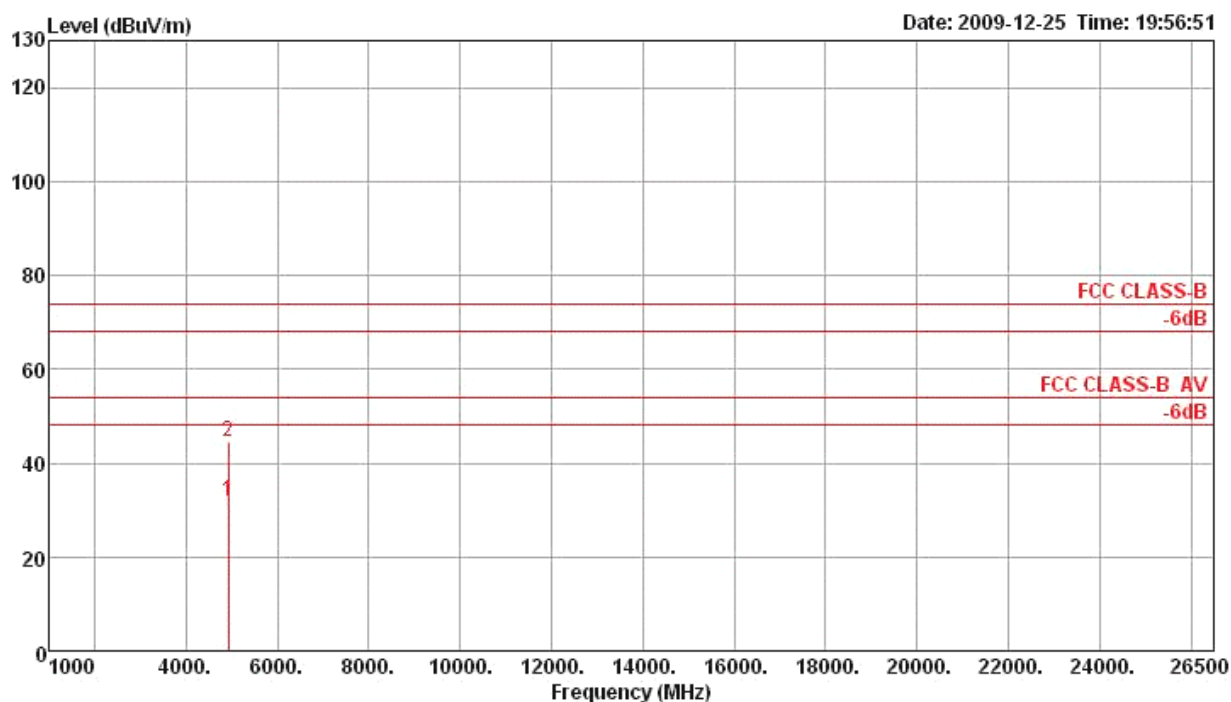
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.74	57.73	74.00	-16.27	57.31	3.01	35.15	32.56	107	100	Peak	VERTICAL
2 a	4874.88	45.52	54.00	-8.48	45.10	3.01	35.15	32.56	107	100	Average	VERTICAL

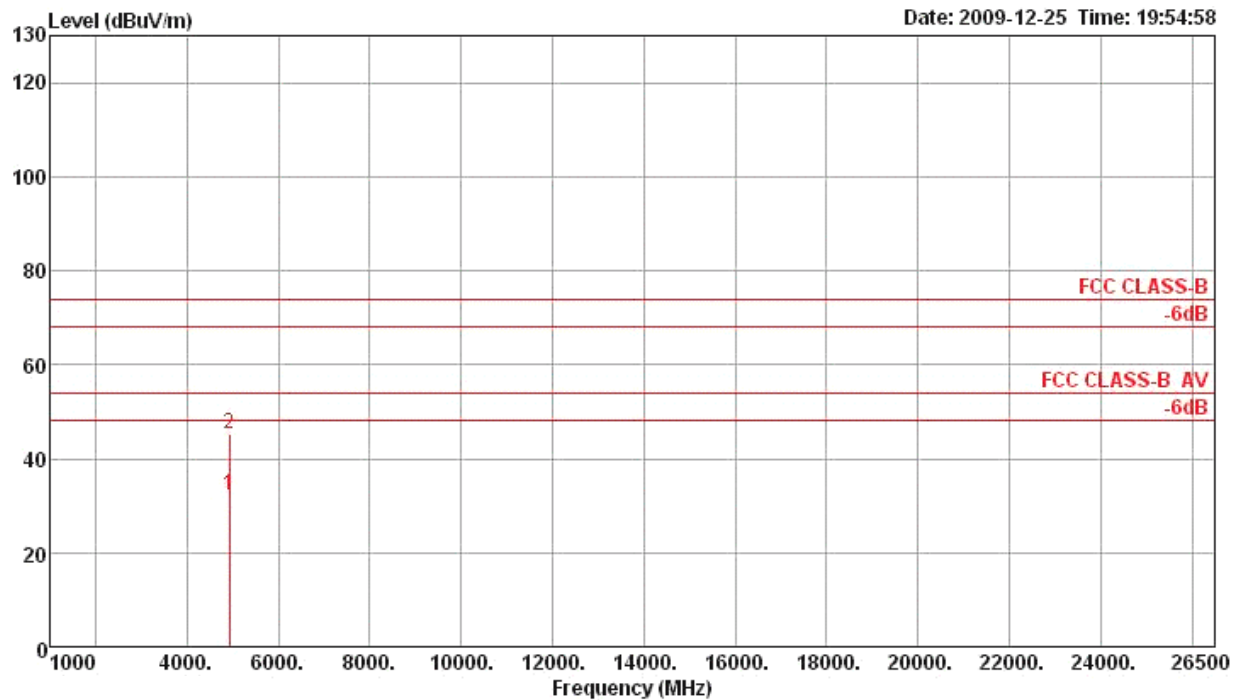
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. C

Horizontal



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4923.99	31.88	54.00	-22.12	31.23	3.02	35.03	32.66	0	100	Average	HORIZONTAL
2	p	4924.02	44.71	74.00	-29.29	44.06	3.02	35.03	32.66	0	100	Peak	HORIZONTAL

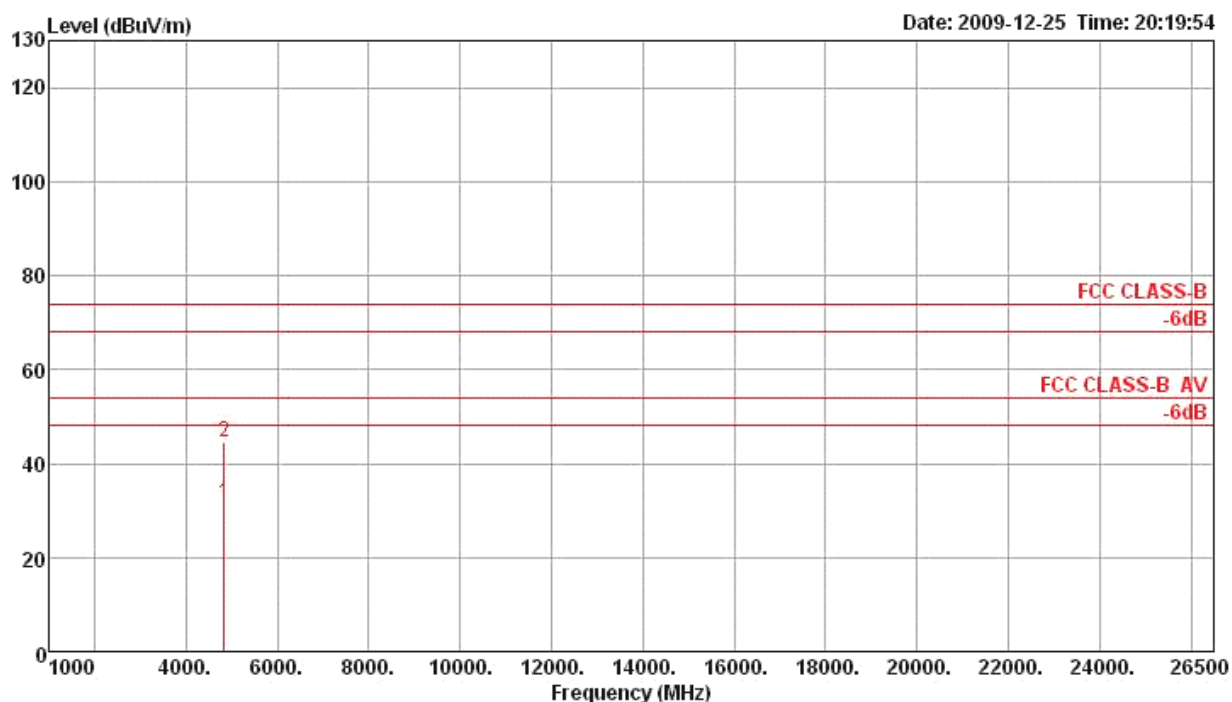
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4923.98	32.33	54.00	-21.67	31.68	3.02	35.03	32.66	360	100	Average	VERTICAL
2	p	4924.01	45.44	74.00	-28.56	44.79	3.02	35.03	32.66	360	100	Peak	VERTICAL

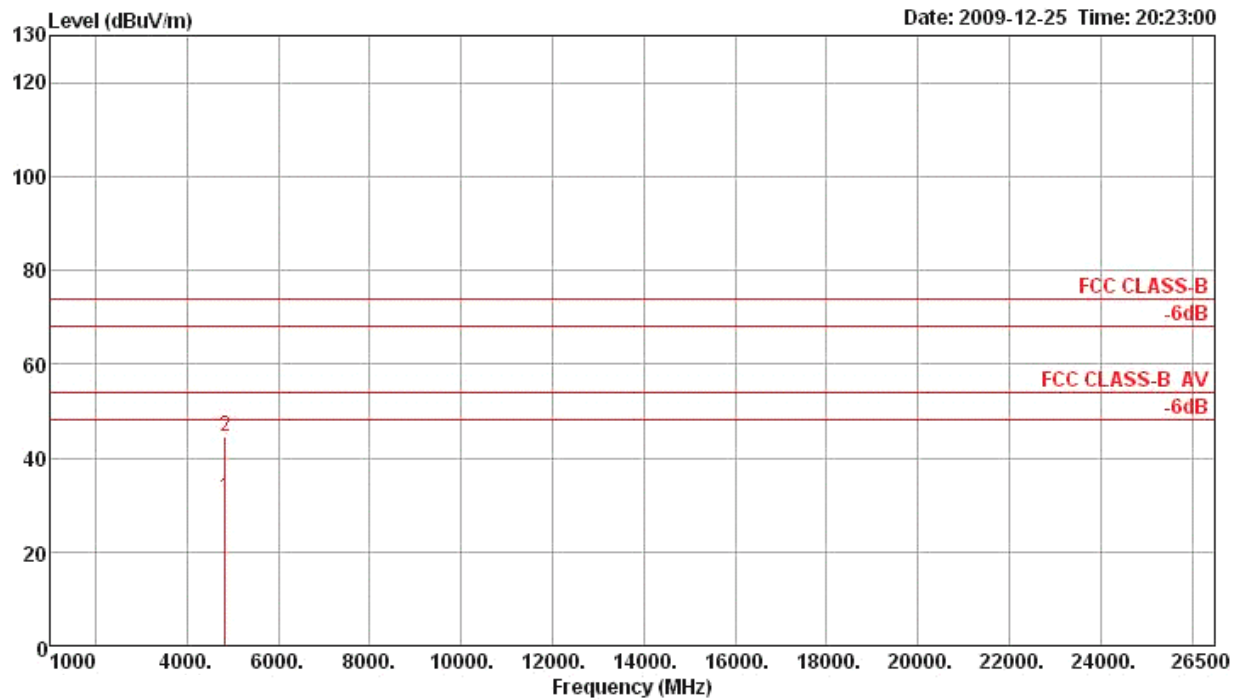
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4843.98	31.49	54.00	-22.51	31.19	3.01	35.20	32.49	0	100	Average	HORIZONTAL
2 p	4843.98	44.45	74.00	-29.55	44.15	3.01	35.20	32.49	0	100	Peak	HORIZONTAL

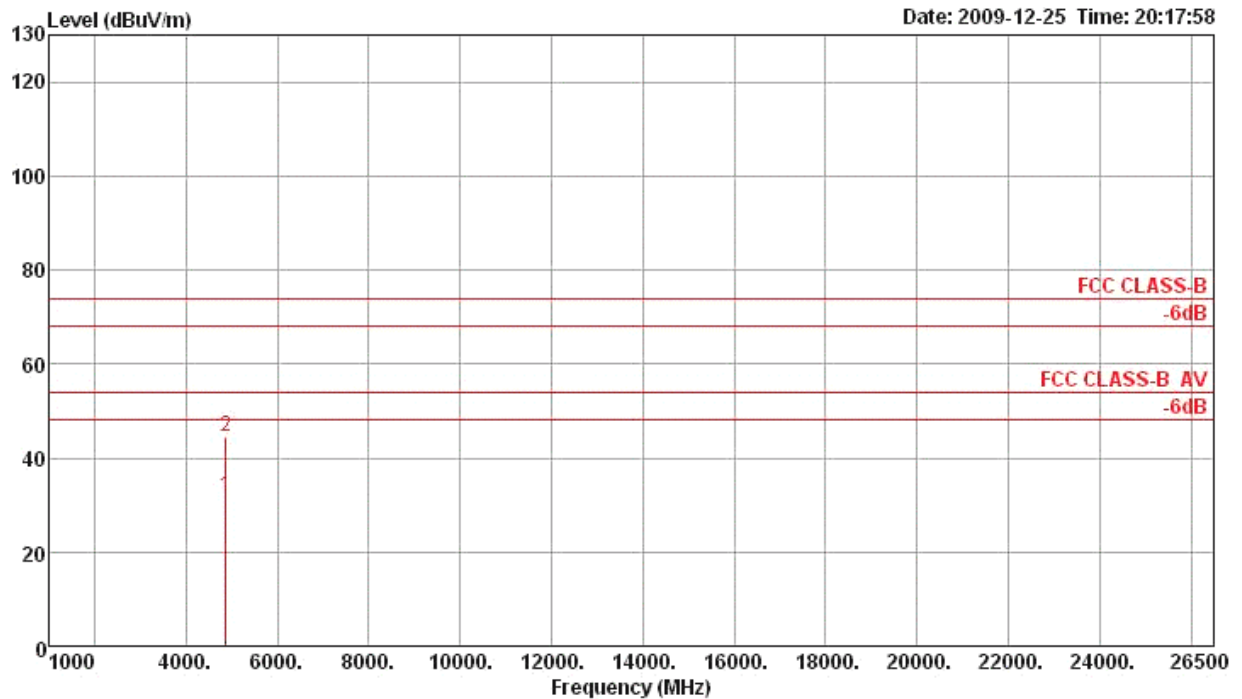
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4843.99	31.58	54.00	-22.42	31.28	3.01	35.20	32.49	360	100	Average	VERTICAL
2	p	4844.02	44.57	74.00	-29.43	44.27	3.01	35.20	32.49	360	100	Peak	VERTICAL

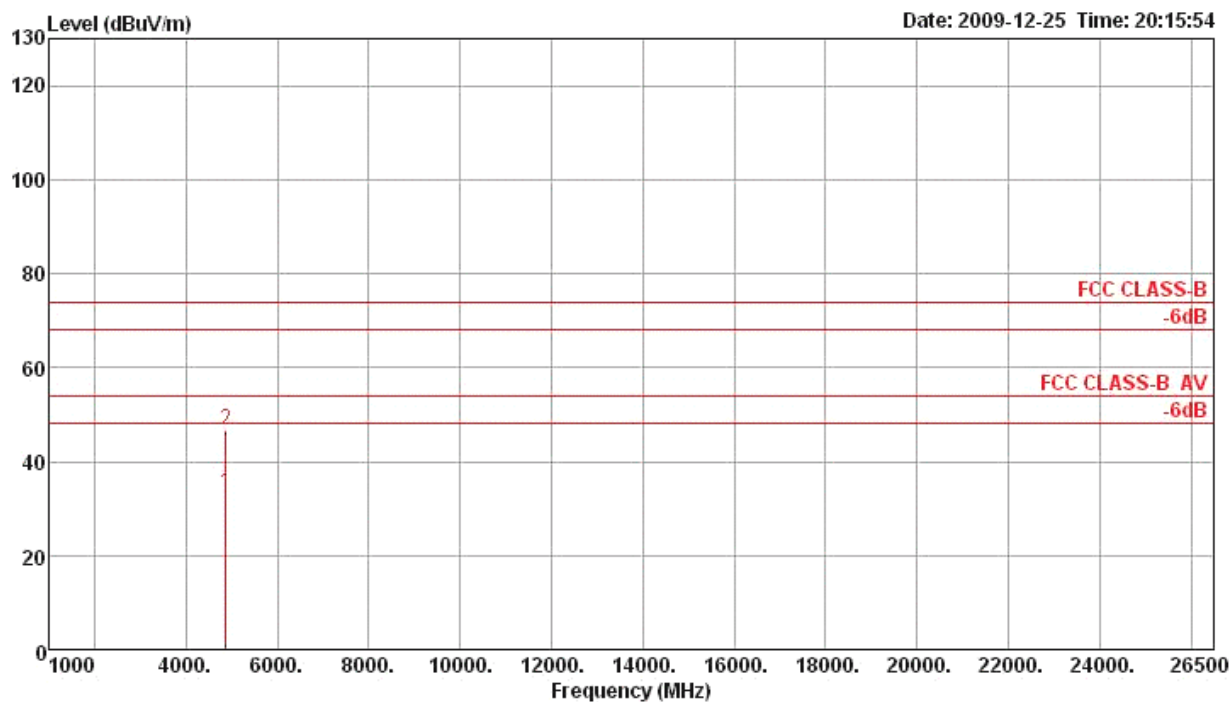
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.00	31.70	54.00	-22.30	31.28	3.01	35.15	32.56	360	100	Average	HORIZONTAL
2 p	4874.02	44.55	74.00	-29.45	44.13	3.01	35.15	32.56	360	100	Peak	HORIZONTAL

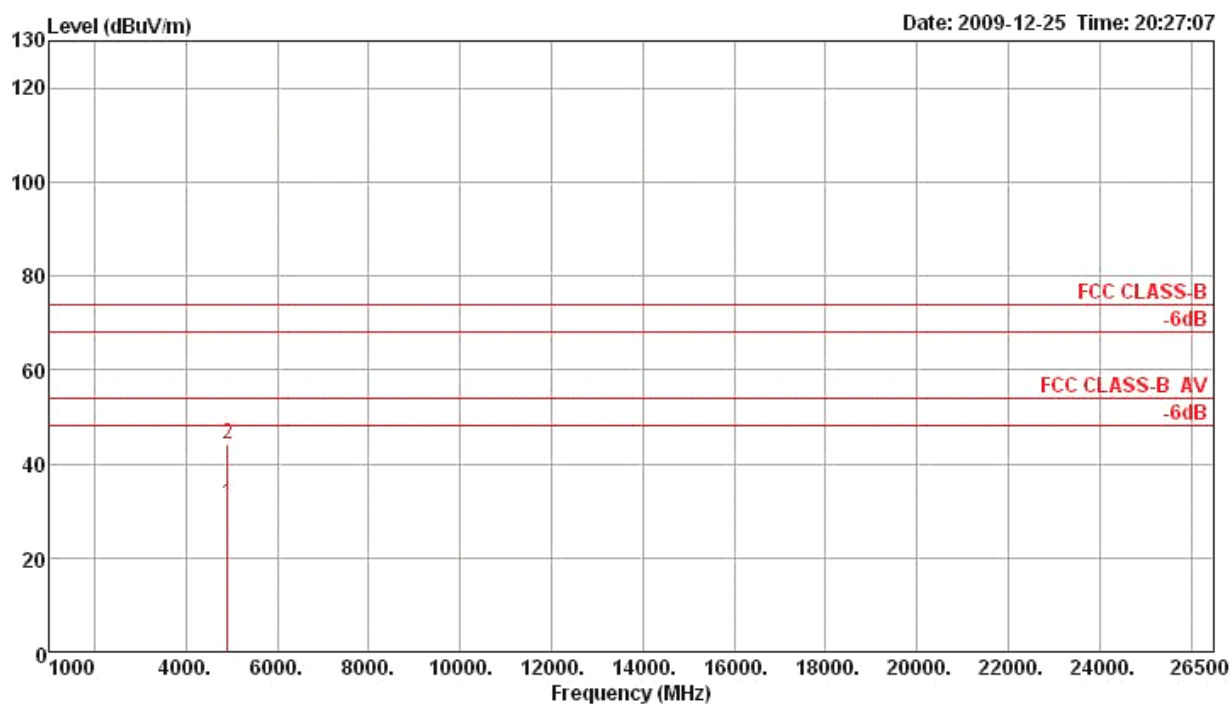
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.01	33.27	54.00	-20.73	32.85	3.01	35.15	32.56	106	100	Average	VERTICAL
2	p	4874.01	46.76	74.00	-27.24	46.34	3.01	35.15	32.56	106	100	Peak	VERTICAL

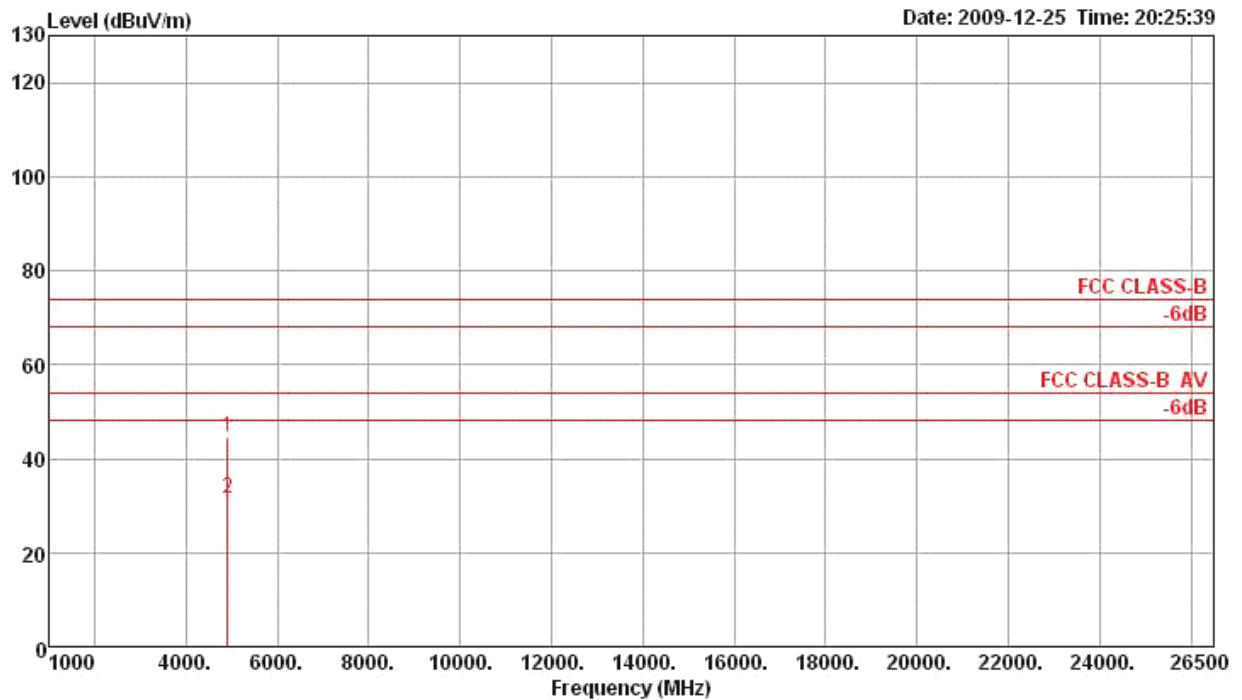
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. C

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4904.00	31.61	54.00	-22.39	31.05	3.02	35.09	32.63	360	100	Average	HORIZONTAL
2 p	4904.01	44.04	74.00	-29.96	43.48	3.02	35.09	32.63	360	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4903.98	44.51	74.00	-29.49	43.95	3.02	35.09	32.63	0	100	Peak	VERTICAL
2 a	4904.02	31.61	54.00	-22.39	31.05	3.02	35.09	32.63	0	100	Average	VERTICAL

Note:

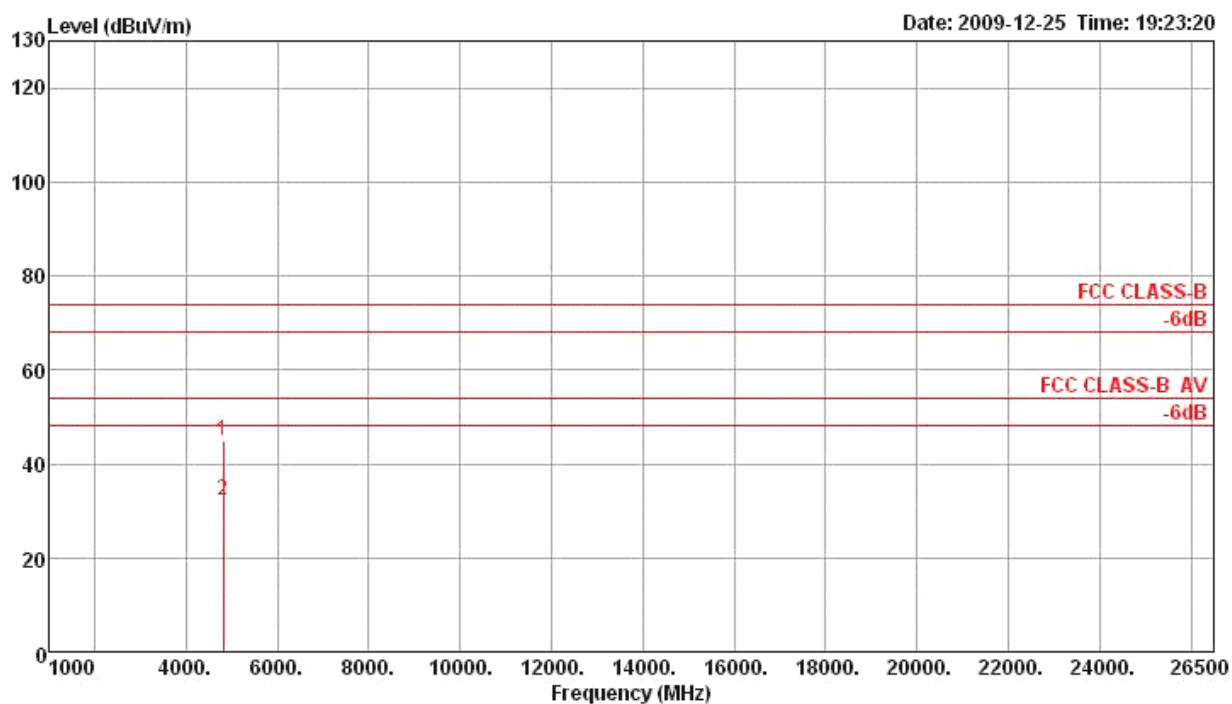
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

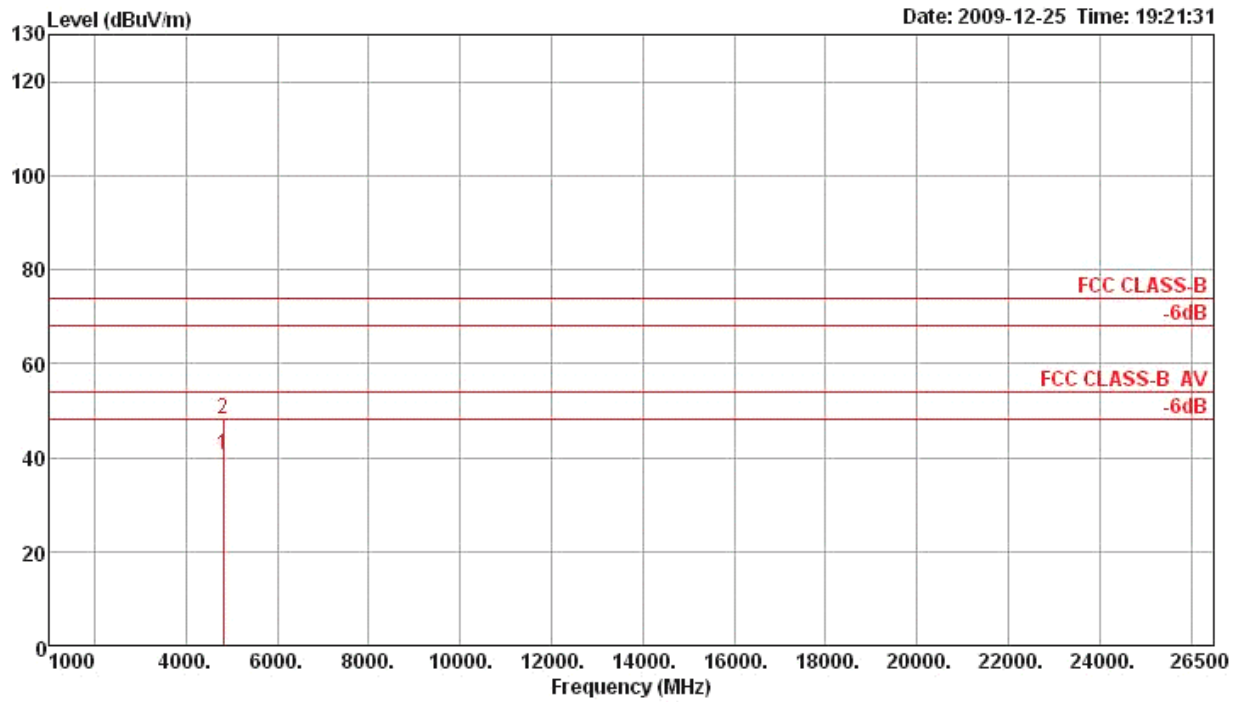
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 1 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.99	45.02	74.00	-28.98	44.82	3.00	35.26	32.46	0	100	Peak	HORIZONTAL
2 a	4824.01	32.12	54.00	-21.88	31.92	3.00	35.26	32.46	0	100	Average	HORIZONTAL

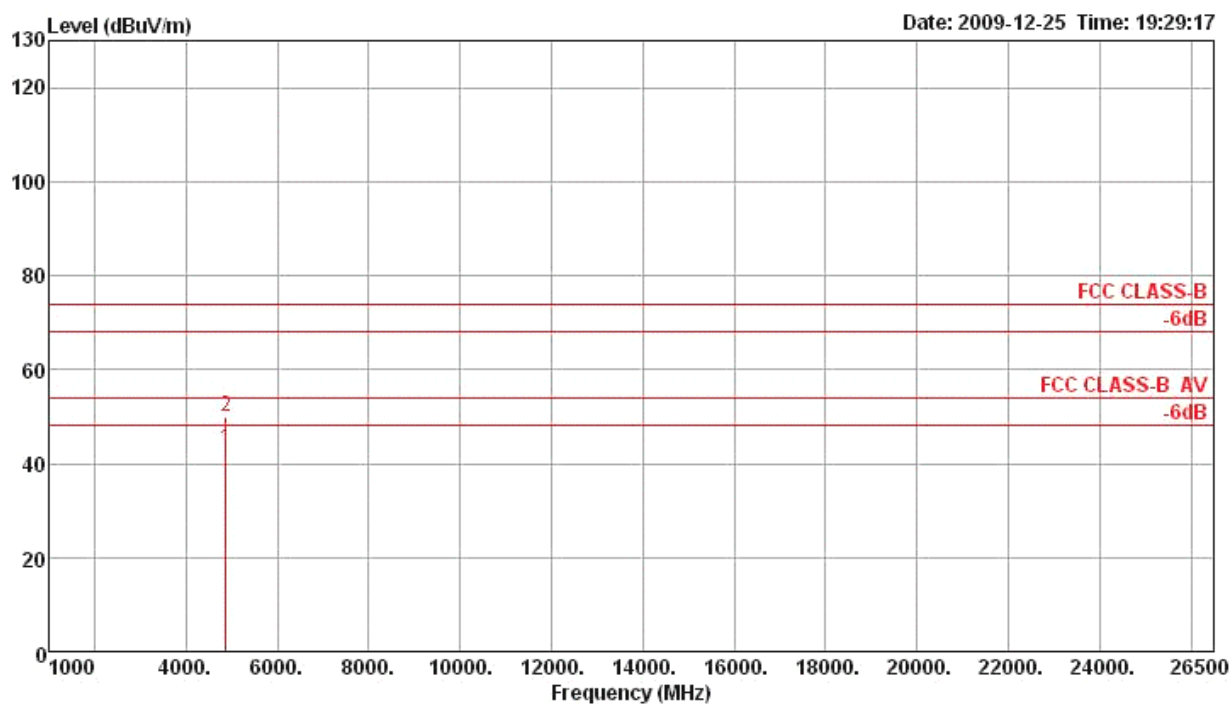
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4823.96	40.53	54.00	-13.47	40.33	3.00	35.26	32.46	163	100	Average	VERTICAL
2	p	4824.11	48.08	74.00	-25.92	47.88	3.00	35.26	32.46	163	100	Peak	VERTICAL

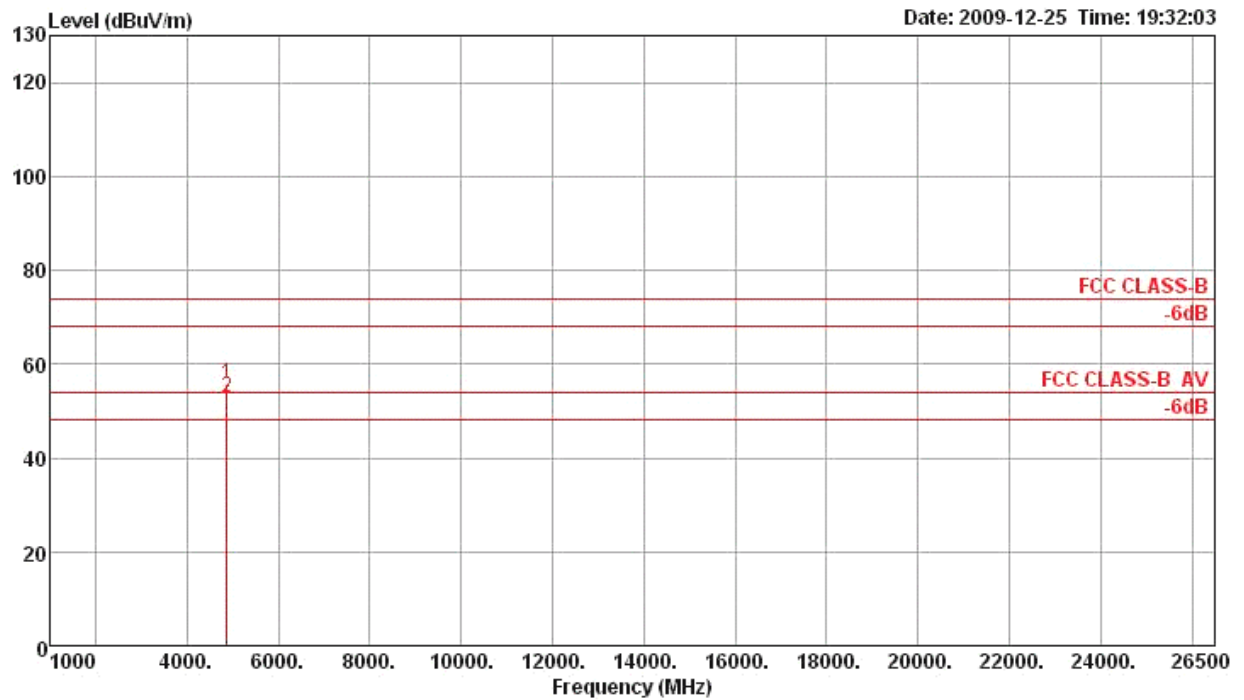
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 6 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1 a	4873.96	42.93	54.00	-11.07	42.51	3.01	35.15	32.56	273	100	Average	HORIZONTAL
2 p	4873.97	50.00	74.00	-24.00	49.58	3.01	35.15	32.56	273	100	Peak	HORIZONTAL

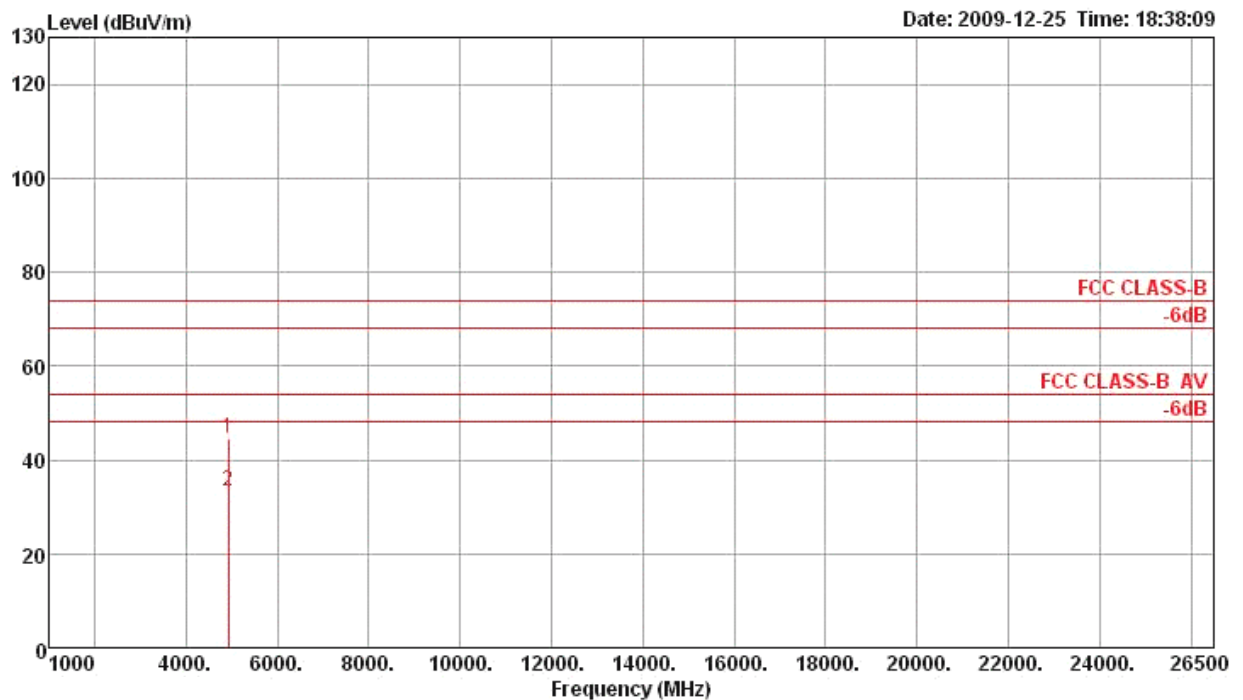
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.91	55.59	74.00	-18.41	55.17	3.01	35.15	32.56	101	100	Peak	VERTICAL
2 a	4874.00	52.96	54.00	-1.04	52.54	3.01	35.15	32.56	101	100	Average	VERTICAL

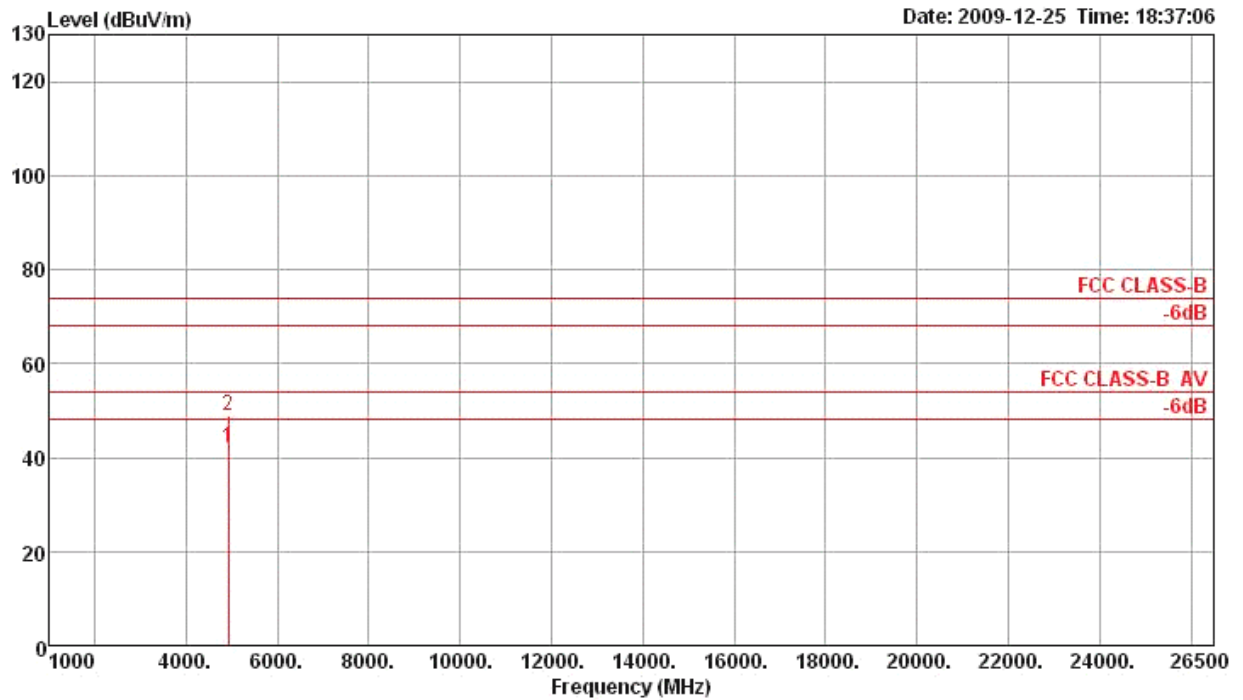
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 11 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.86	44.49	74.00	-29.51	43.84	3.02	35.03	32.66	224	100	Peak	HORIZONTAL
2 a	4923.99	33.34	54.00	-20.66	32.69	3.02	35.03	32.66	224	100	Average	HORIZONTAL

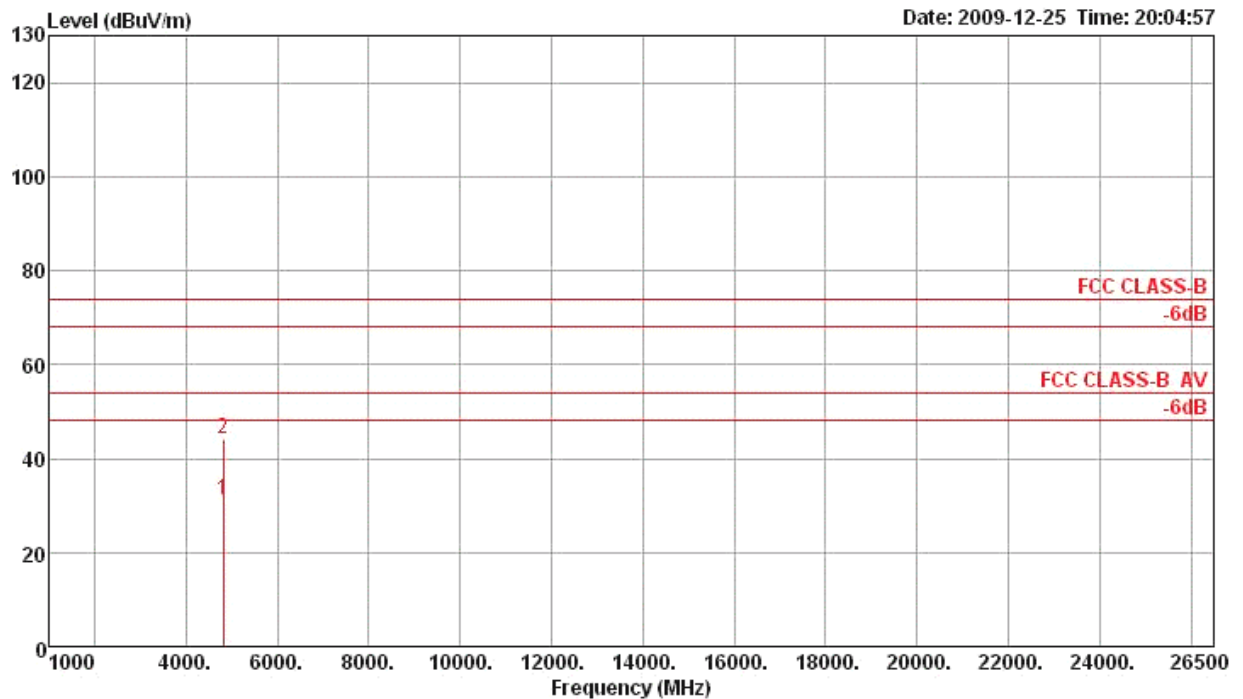
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4924.03	41.92	54.00	-12.08	41.27	3.02	35.03	32.66	101	100	Average	VERTICAL
2	p	4924.06	48.73	74.00	-25.27	48.08	3.02	35.03	32.66	101	100	Peak	VERTICAL

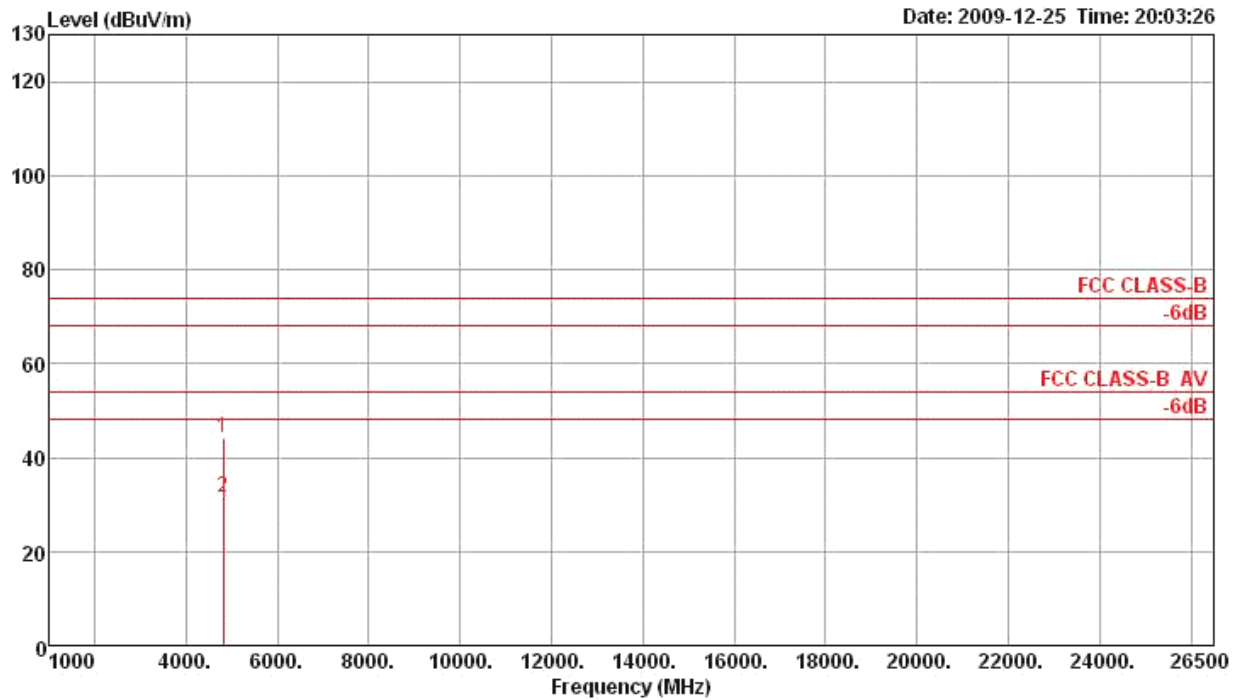
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 1 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4823.98	31.28	54.00	-22.72	31.08	3.00	35.26	32.46	0	100	Average	HORIZONTAL
2 p	4823.99	44.10	74.00	-29.90	43.90	3.00	35.26	32.46	0	100	Peak	HORIZONTAL

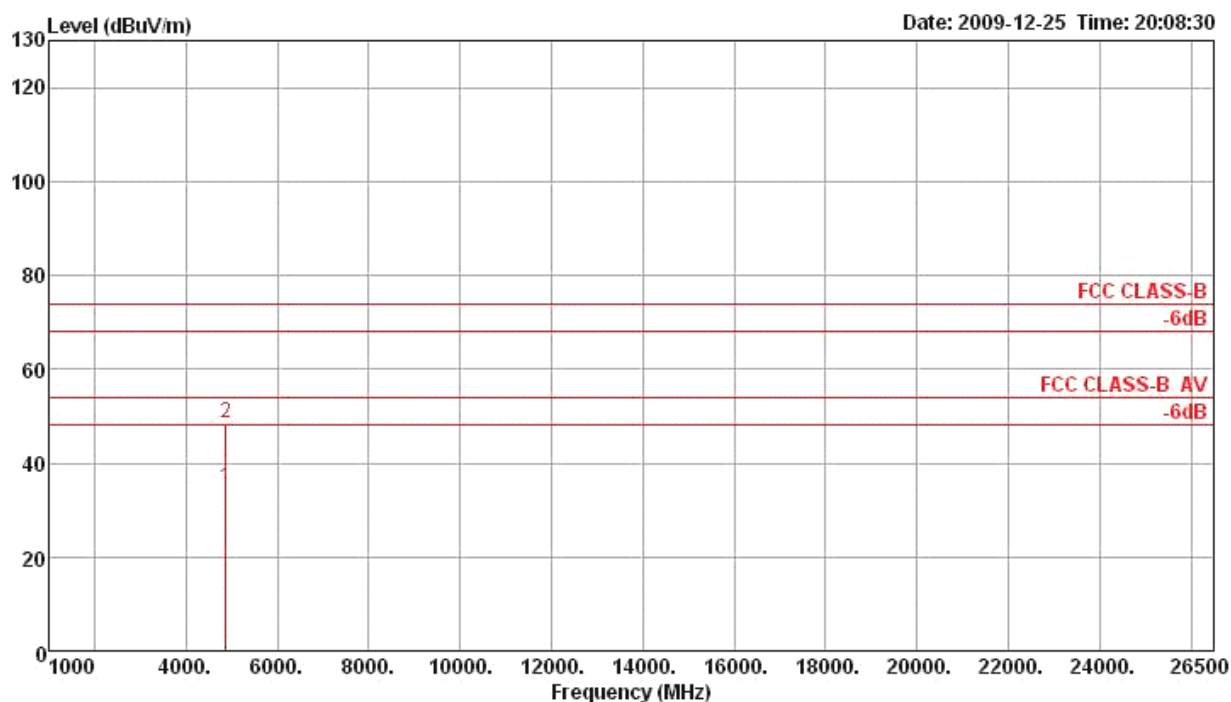
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.99	44.34	74.00	-29.66	44.14	3.00	35.26	32.46	360	100	Peak	VERTICAL
2 a	4823.99	31.37	54.00	-22.63	31.17	3.00	35.26	32.46	360	100	Average	VERTICAL

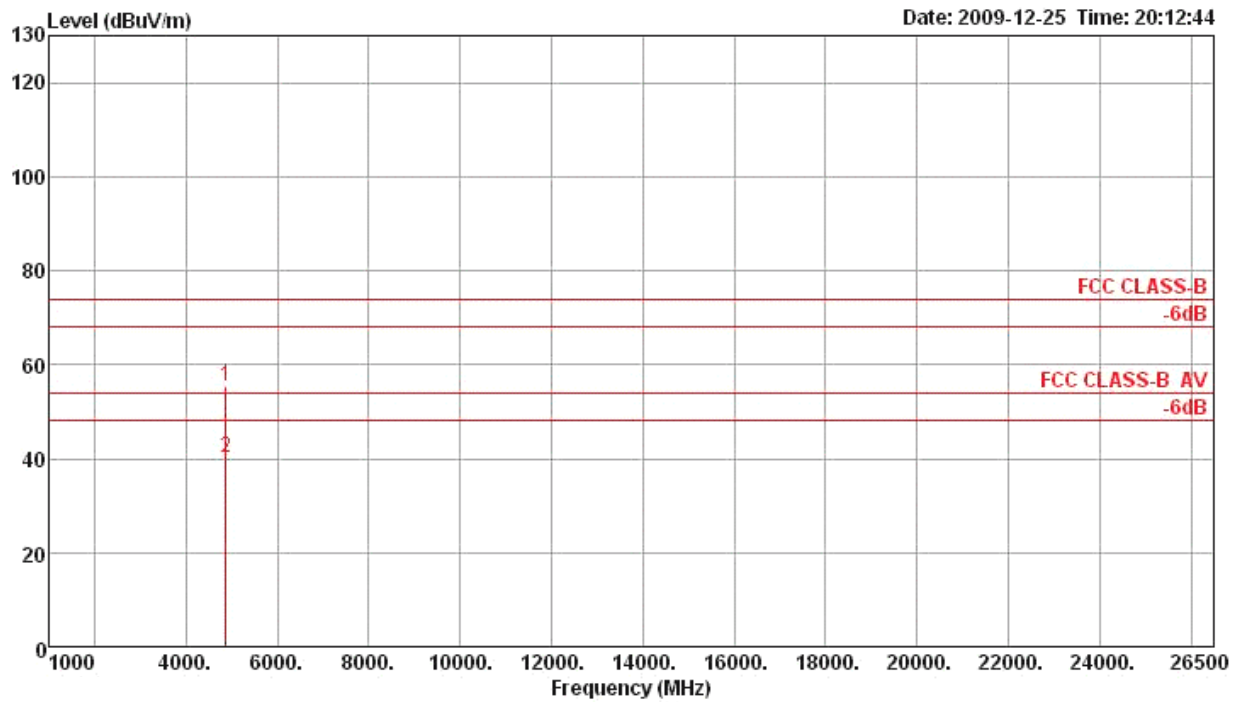
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 6 / Ant. C

Horizontal



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.01	34.87	54.00	-19.13	34.45	3.01	35.15	32.56	301	100	Average	HORIZONTAL
2	p	4874.01	48.55	74.00	-25.45	48.13	3.01	35.15	32.56	301	100	Peak	HORIZONTAL

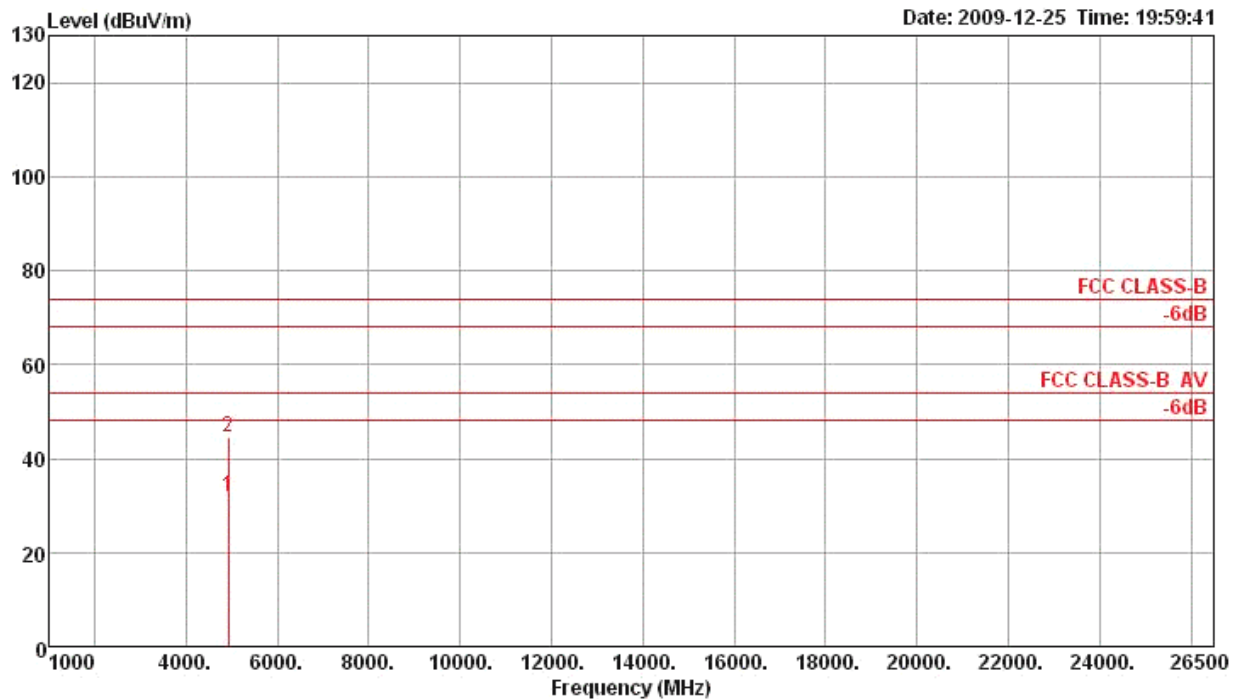
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.99	55.27	74.00	-18.73	54.85	3.01	35.15	32.56	276	100	Peak	VERTICAL
2 a	4874.02	40.25	54.00	-13.75	39.83	3.01	35.15	32.56	276	100	Average	VERTICAL

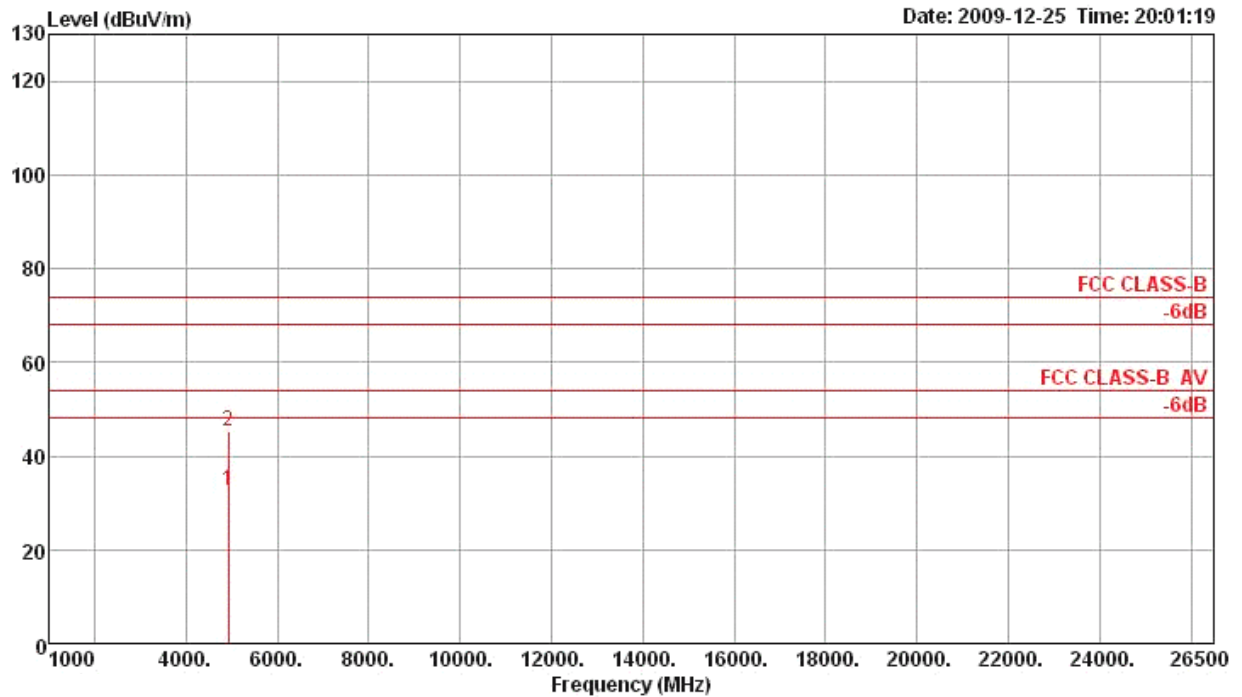
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 11 / Ant. C

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1 a	4924.00	32.03	54.00	-21.97	31.38	3.02	35.03	32.66	360	100	Average	HORIZONTAL
2 p	4924.01	44.44	74.00	-29.56	43.79	3.02	35.03	32.66	360	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4923.98	32.49	54.00	-21.51	31.84	3.02	35.03	32.66	0	100	Average	VERTICAL
2 p	4924.00	45.27	74.00	-28.73	44.62	3.02	35.03	32.66	0	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

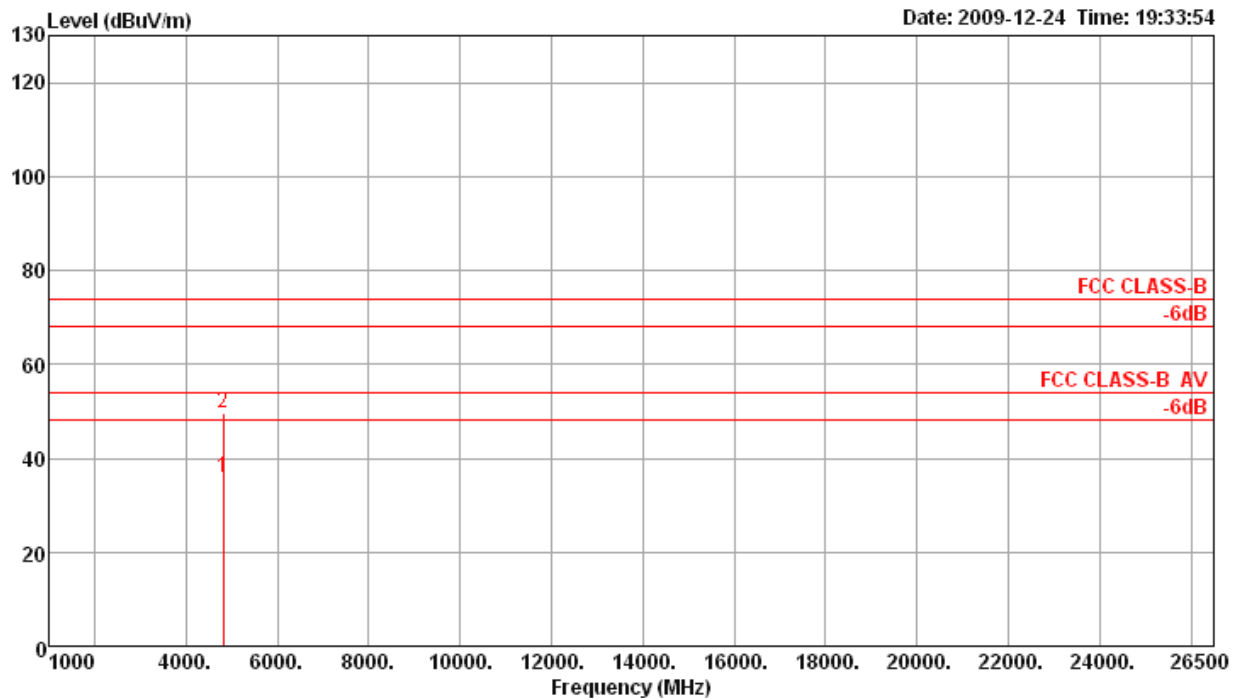
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Antenna D>

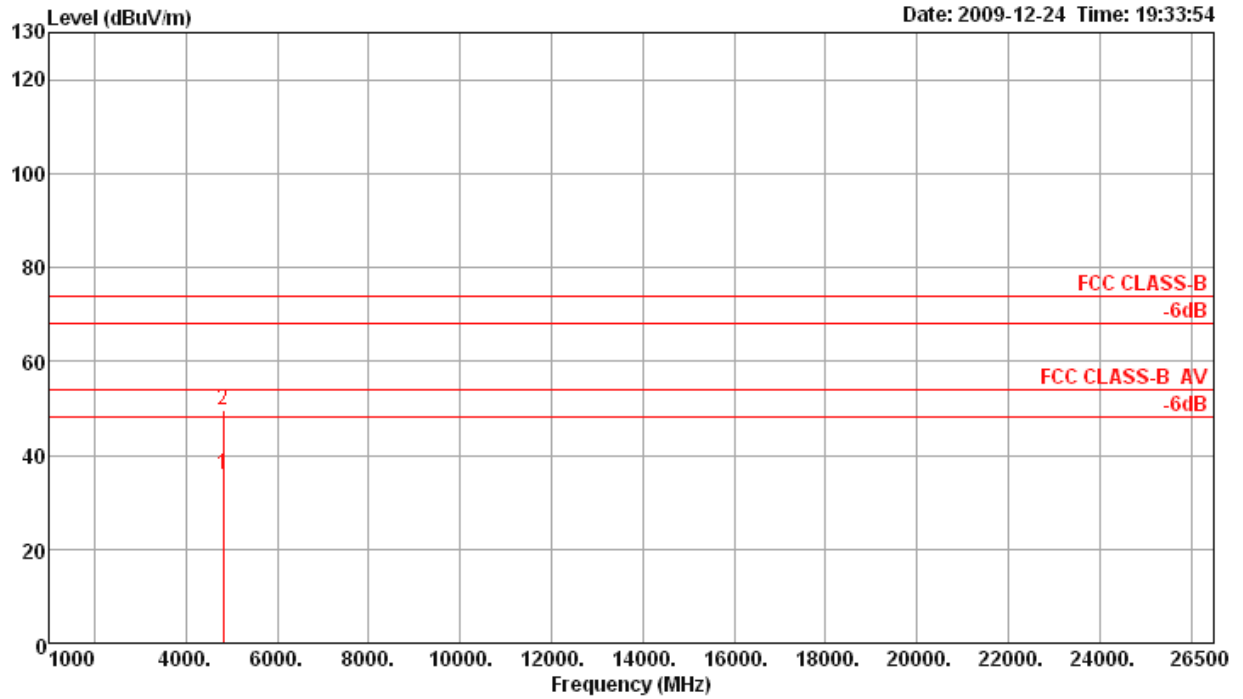
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.01	35.82	54.00	-18.18	31.24	6.39	35.20	33.39	276	100	Average	HORIZONTAL
2 p	4824.02	49.68	74.00	-24.32	45.10	6.39	35.20	33.39	276	100	Peak	HORIZONTAL

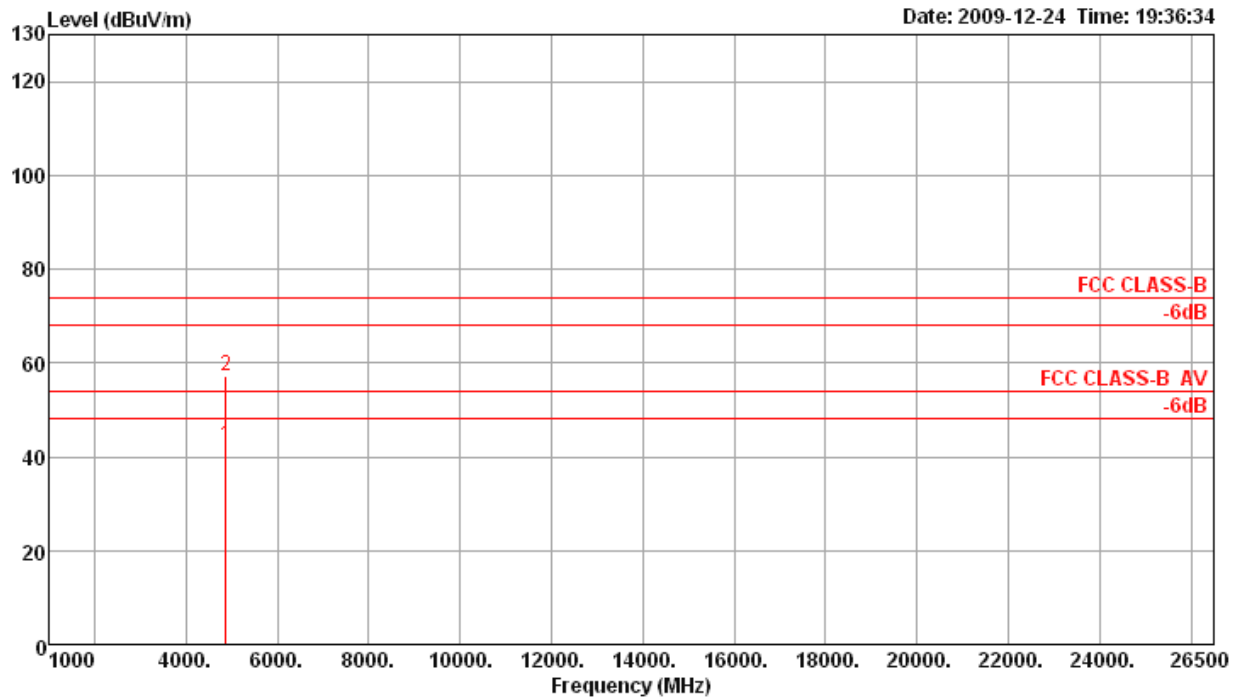
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.01	35.82	54.00	-18.18	31.24	6.39	35.20	33.39	276	100	Average	HORIZONTAL
2 p	4824.02	49.68	74.00	-24.32	45.10	6.39	35.20	33.39	276	100	Peak	HORIZONTAL

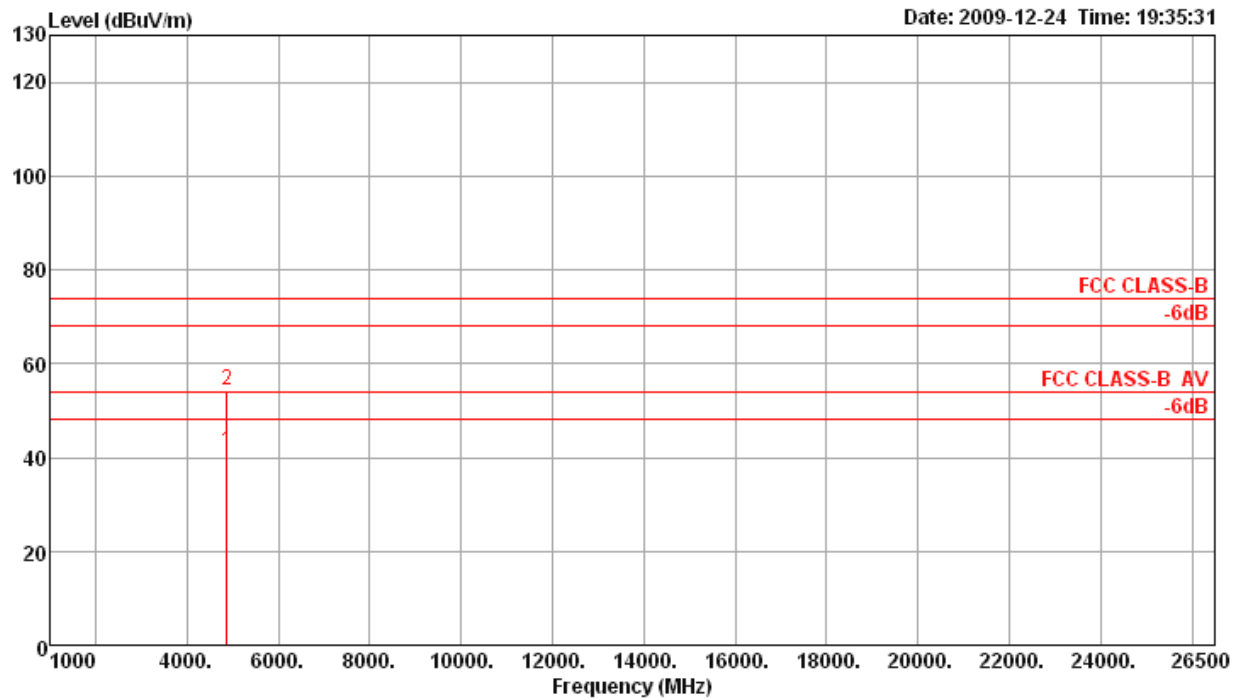
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.17	42.41	54.00	-11.59	37.57	6.56	35.20	33.48	277	100	Average	HORIZONTAL
2 p	4874.50	57.23	74.00	-16.77	52.39	6.56	35.20	33.48	277	100	Peak	HORIZONTAL

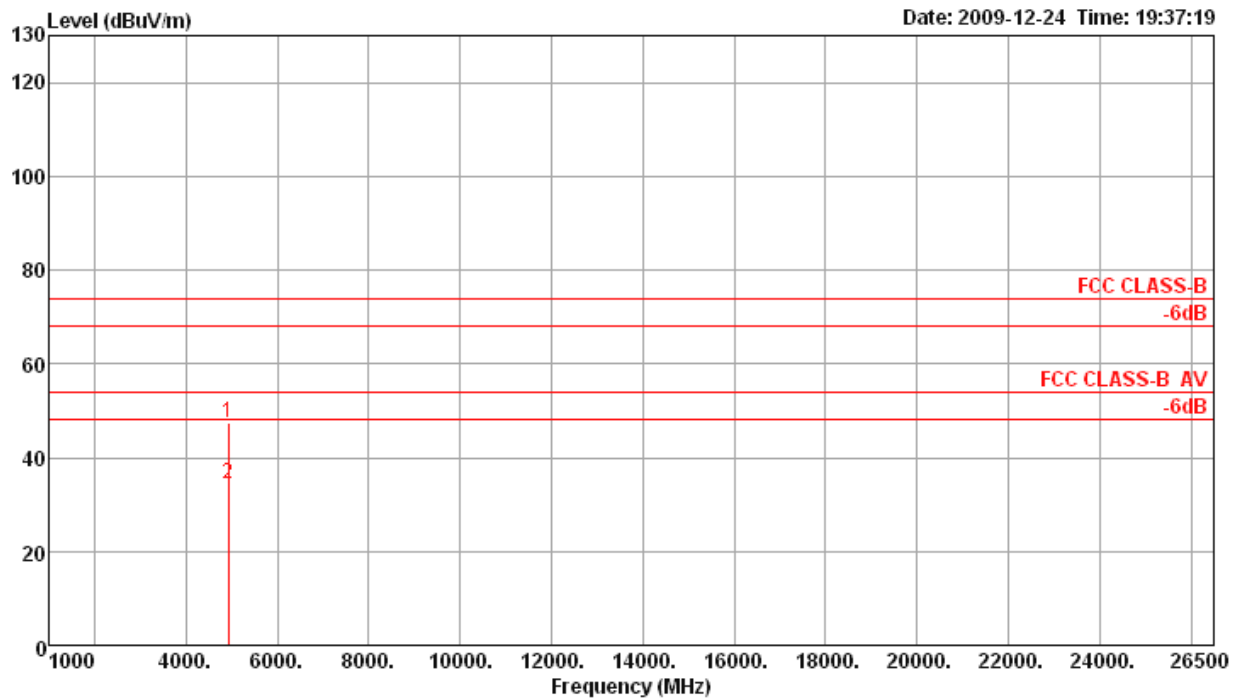
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.21	41.27	54.00	-12.73	36.43	6.56	35.20	33.48	288	100	Average	VERTICAL
2 p	4874.38	54.35	74.00	-19.65	49.51	6.56	35.20	33.48	288	100	Peak	VERTICAL

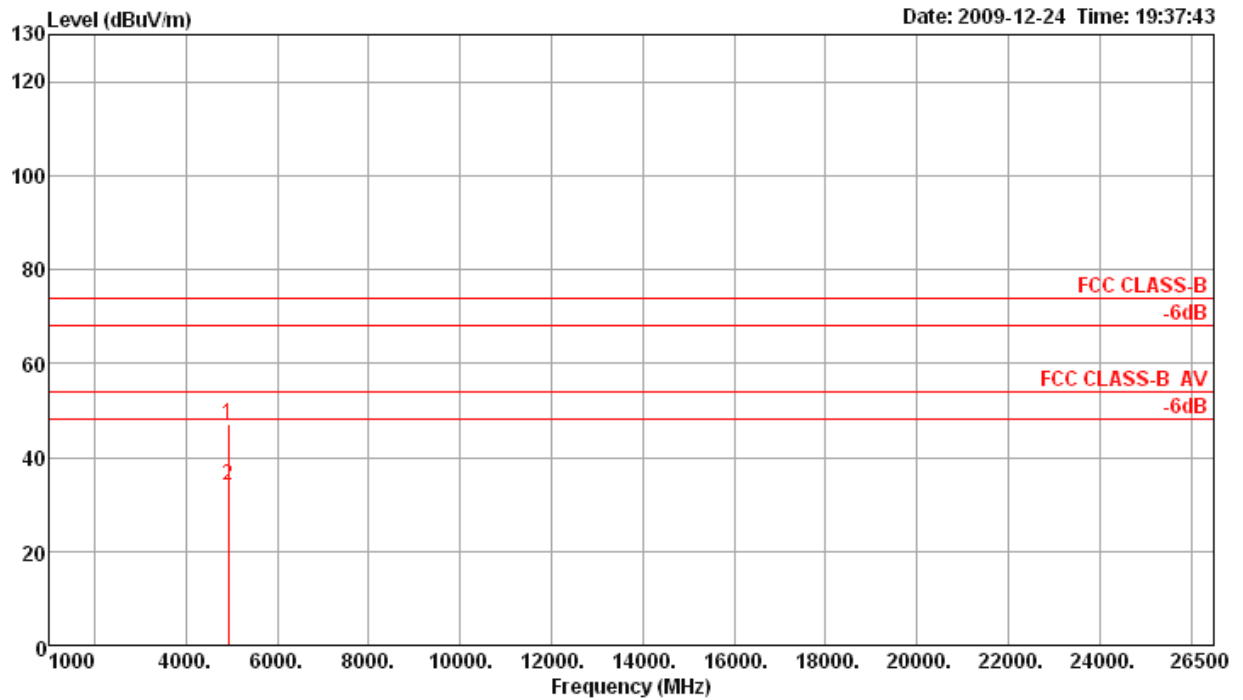
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.80	47.55	74.00	-26.45	42.44	6.73	35.20	33.58	234	100	Peak	HORIZONTAL
2 a	4923.82	34.30	54.00	-19.70	29.19	6.73	35.20	33.58	234	100	Average	HORIZONTAL

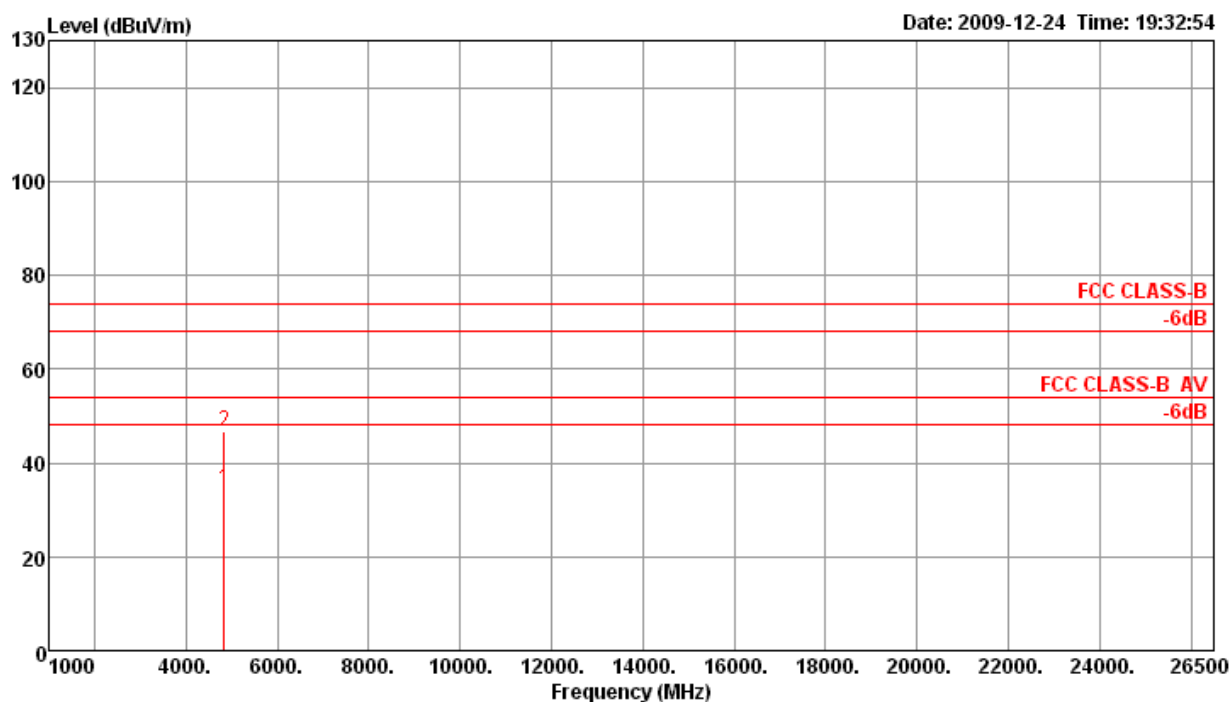
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.81	47.14	74.00	-26.86	42.03	6.73	35.20	33.58	124	100	Peak	VERTICAL
2 a	4923.95	34.22	54.00	-19.78	29.11	6.73	35.20	33.58	124	100	Average	VERTICAL

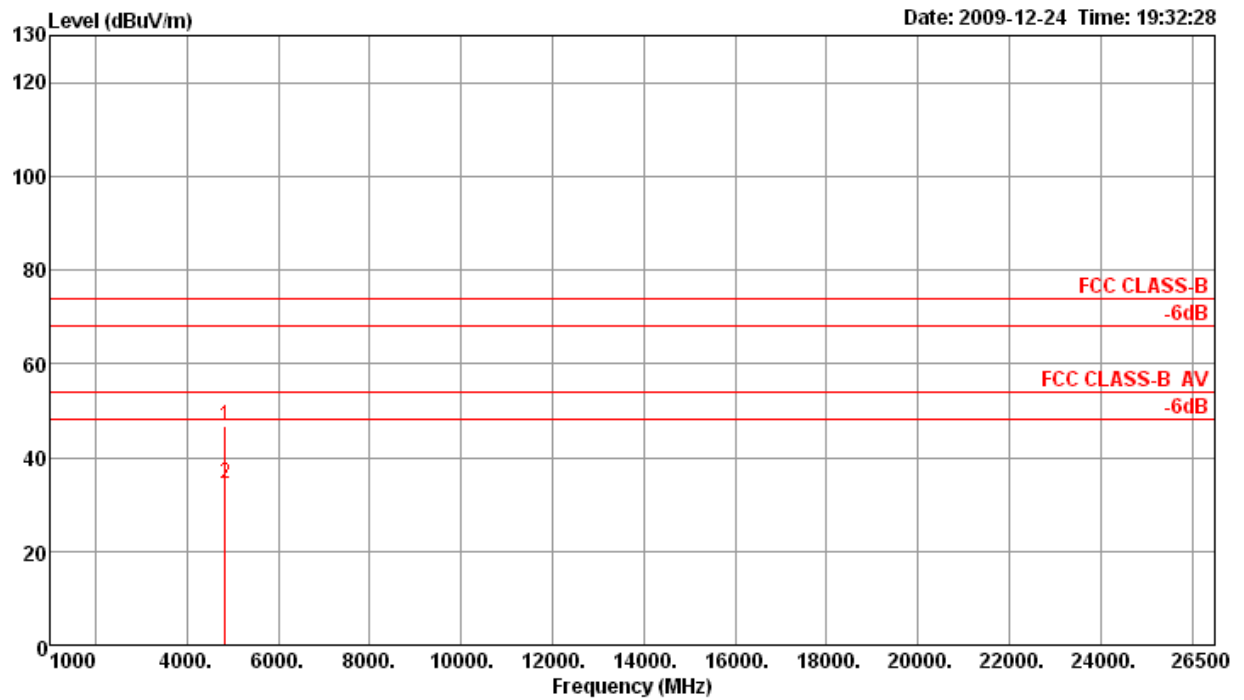
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4844.00	34.28	54.00	-19.72	29.59	6.47	35.20	33.42	210	100	Average	HORIZONTAL
2 p	4844.01	46.69	74.00	-27.31	42.00	6.47	35.20	33.42	210	100	Peak	HORIZONTAL

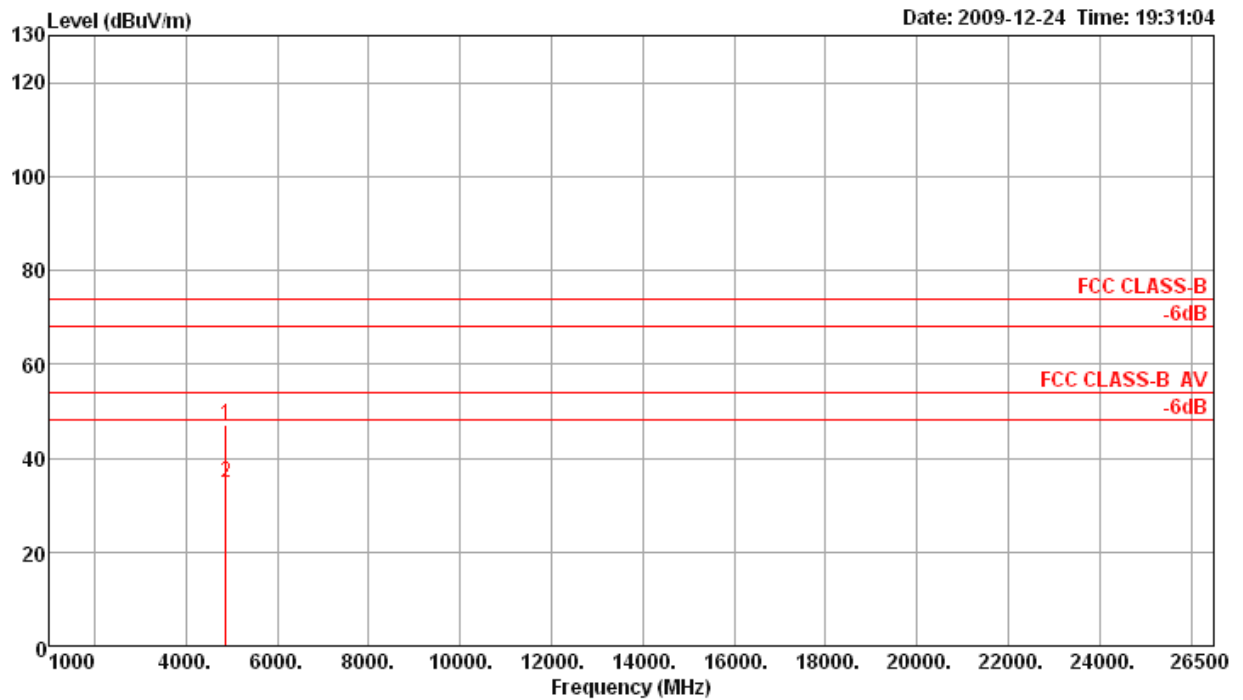
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4843.98	46.57	74.00	-27.43	41.88	6.47	35.20	33.42	101	100	Peak	VERTICAL
2 a	4844.02	34.31	54.00	-19.69	29.62	6.47	35.20	33.42	101	100	Average	VERTICAL

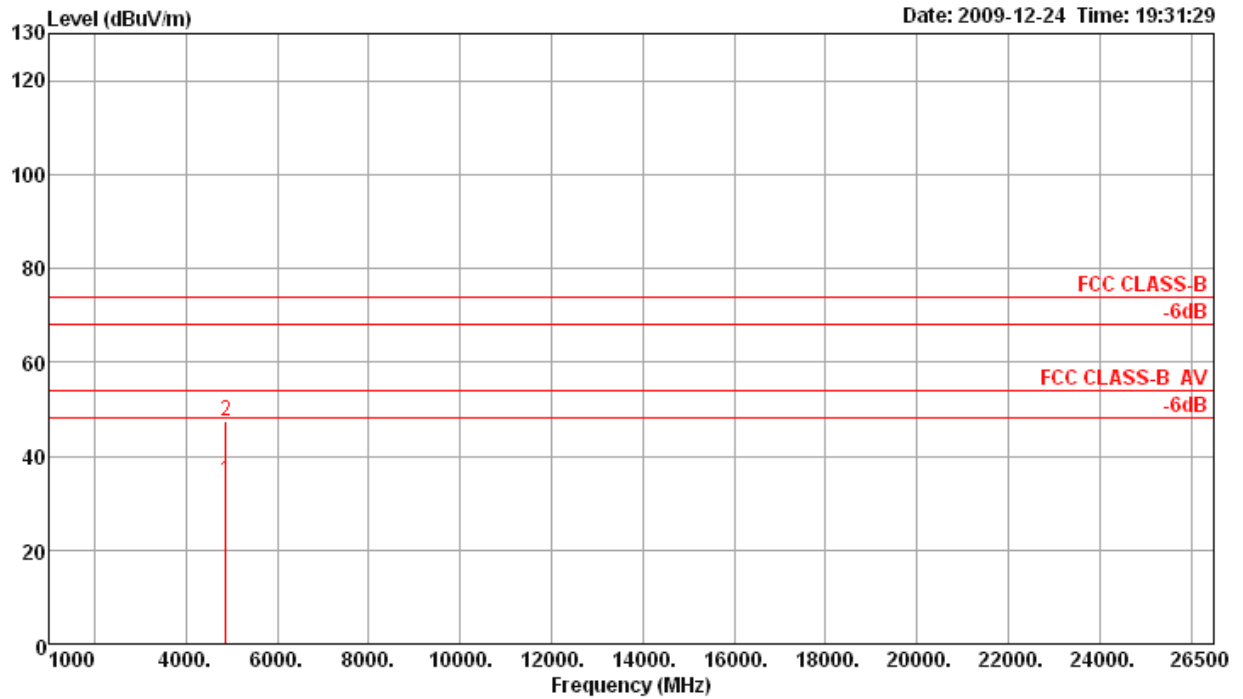
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4874.05	47.11	74.00	-26.89	42.27	6.56	35.20	33.48	130	100	Peak	HORIZONTAL
2 a	4875.00	34.72	54.00	-19.28	29.88	6.56	35.20	33.48	130	100	Average	HORIZONTAL

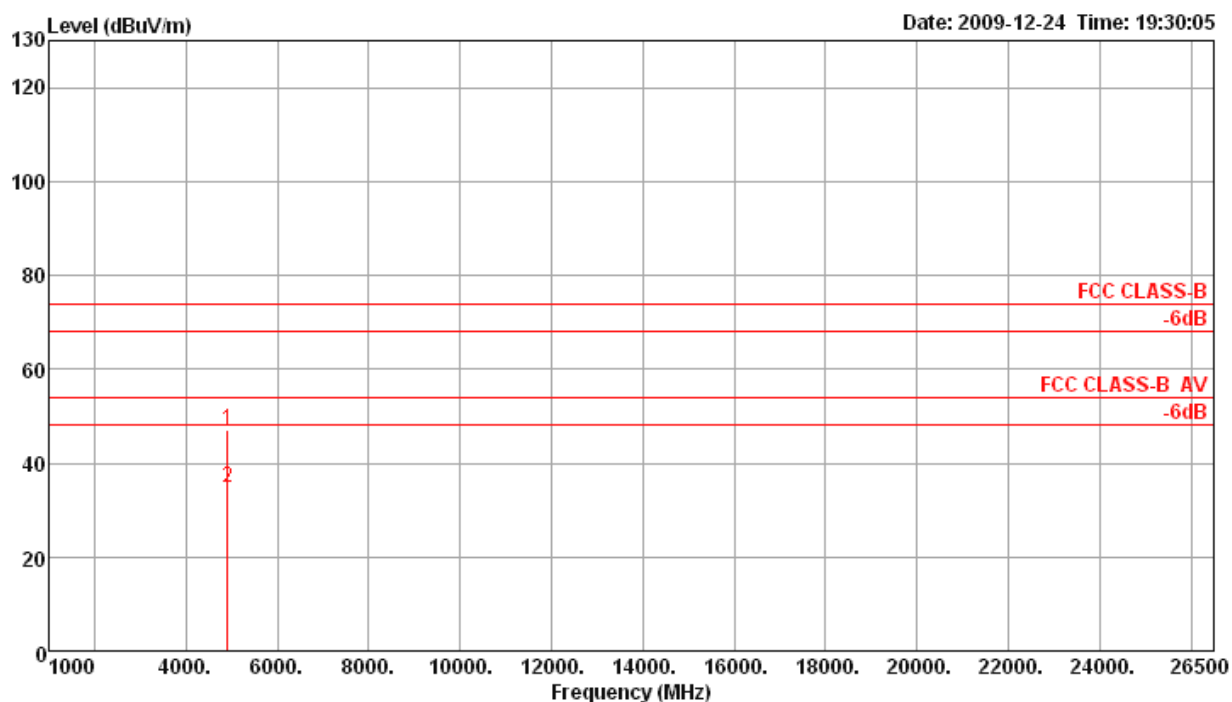
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.95	34.60	54.00	-19.40	29.76	6.56	35.20	33.48	182	100	Average	VERTICAL
2 p	4874.15	47.30	74.00	-26.70	42.46	6.56	35.20	33.48	182	100	Peak	VERTICAL

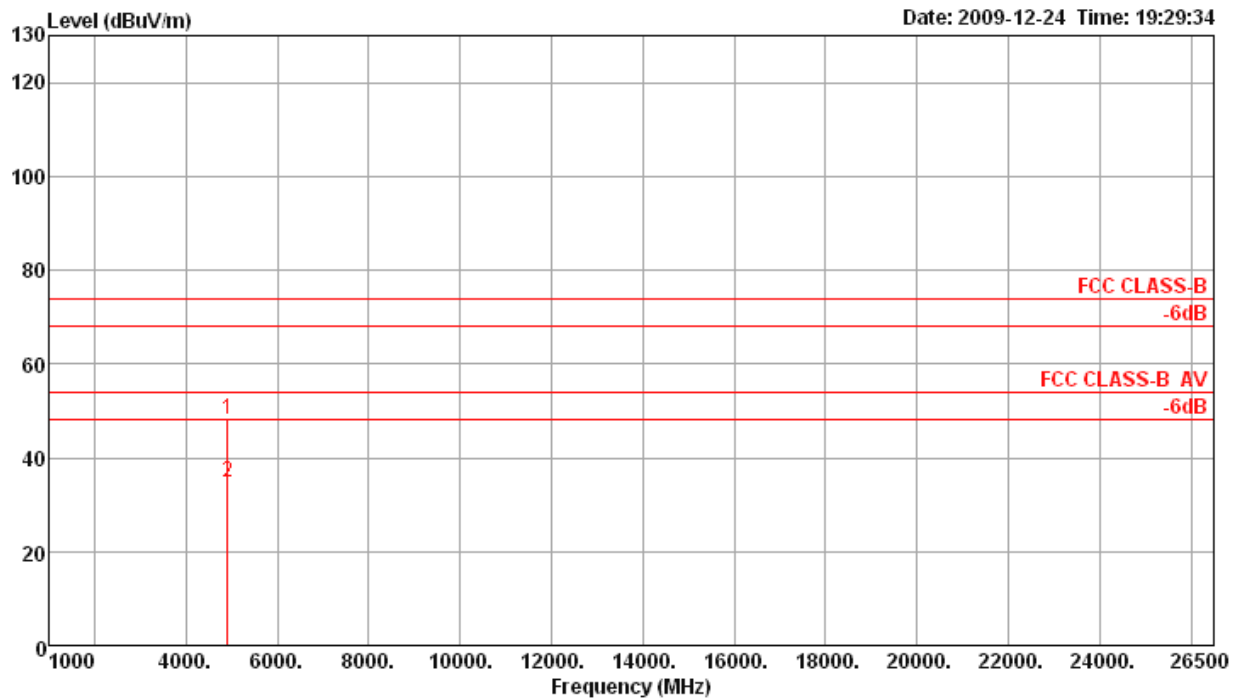
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4904.01	46.97	74.00	-27.03	42.01	6.65	35.20	33.51	144	100	Peak	HORIZONTAL
2 a	4904.02	34.68	54.00	-19.32	29.72	6.65	35.20	33.51	144	100	Average	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4903.98	48.27	74.00	-25.73	43.31	6.65	35.20	33.51	89	100	Peak	VERTICAL
2 a	4904.02	34.82	54.00	-19.18	29.86	6.65	35.20	33.51	89	100	Average	VERTICAL

Note:

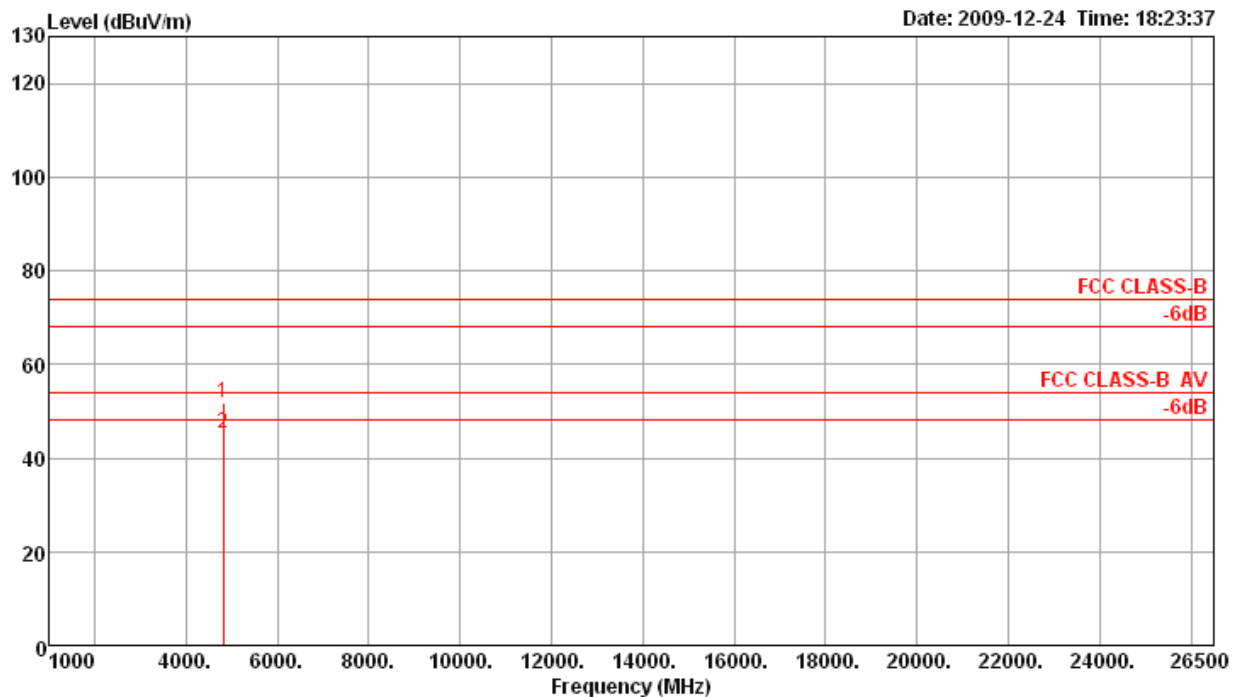
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

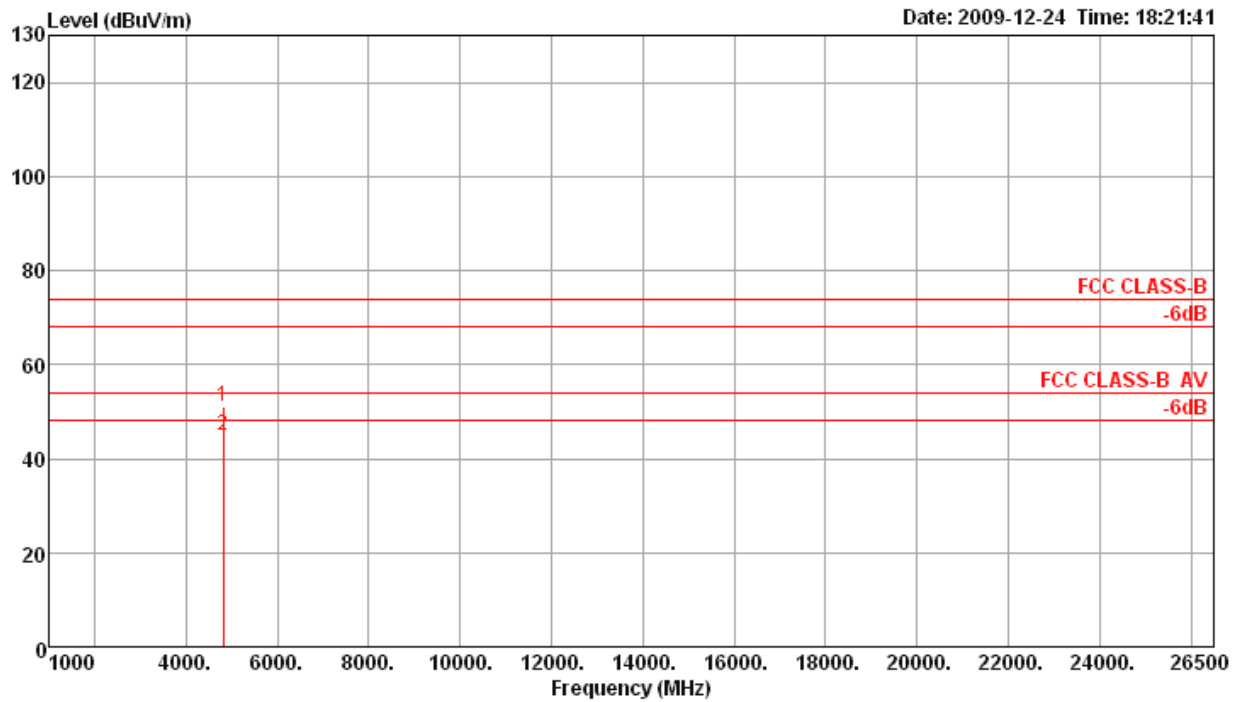
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 1 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.90	51.62	74.00	-22.38	47.04	6.39	35.20	33.39	276	100	Peak	HORIZONTAL
2 a	4823.97	45.28	54.00	-8.72	40.70	6.39	35.20	33.39	276	100	Average	HORIZONTAL

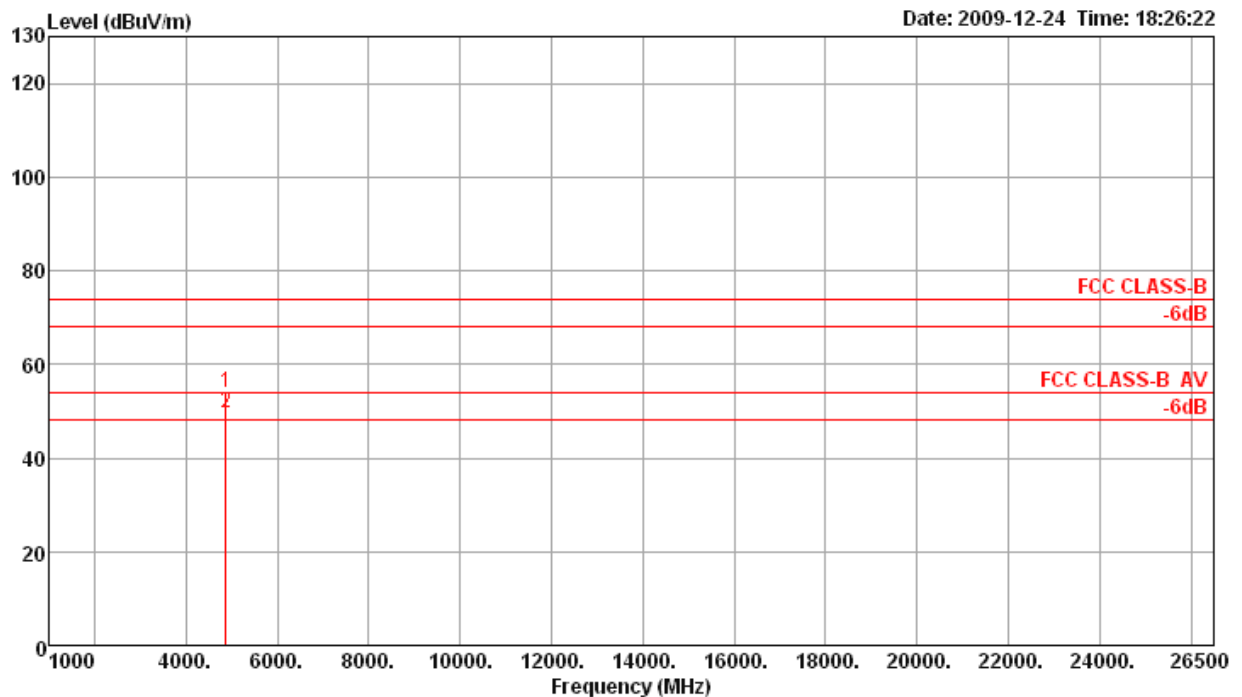
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.84	50.99	74.00	-23.01	46.41	6.39	35.20	33.39	0	129	Peak	VERTICAL
2 a	4823.94	44.93	54.00	-9.07	40.35	6.39	35.20	33.39	0	129	Average	VERTICAL

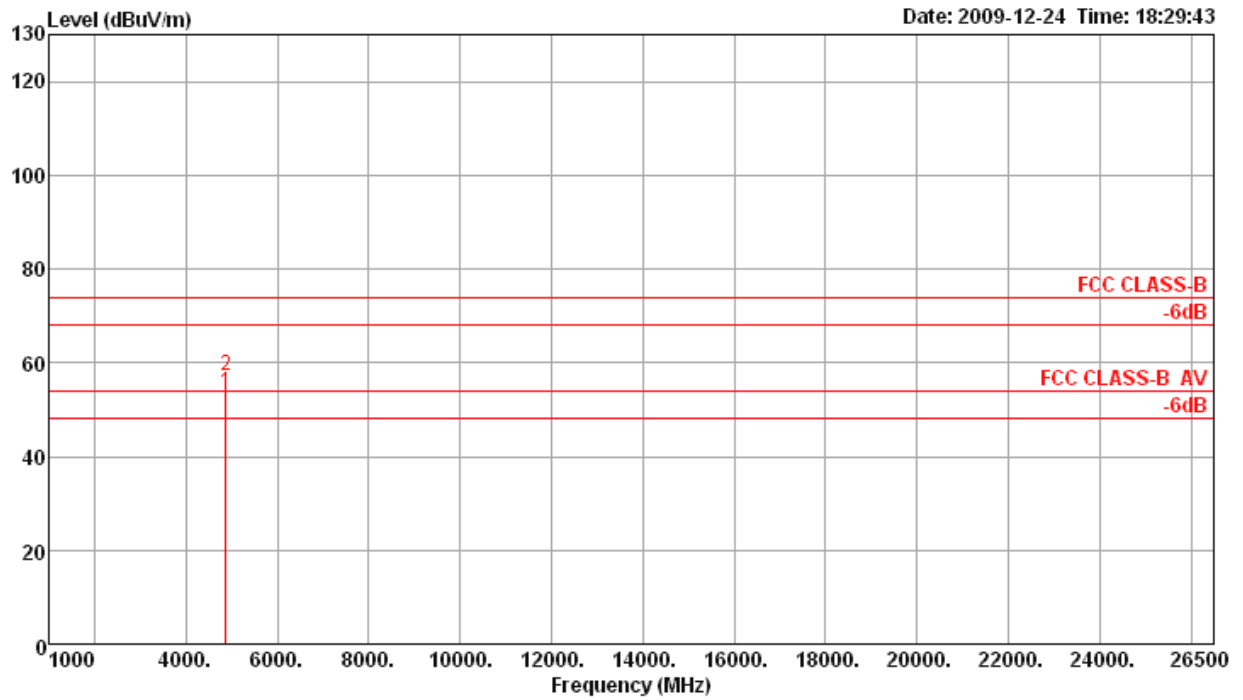
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 6 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.92	54.07	74.00	-19.93	49.23	6.56	35.20	33.48	98	151	Peak	HORIZONTAL
2 a	4873.97	49.67	54.00	-4.33	44.83	6.56	35.20	33.48	98	151	Average	HORIZONTAL

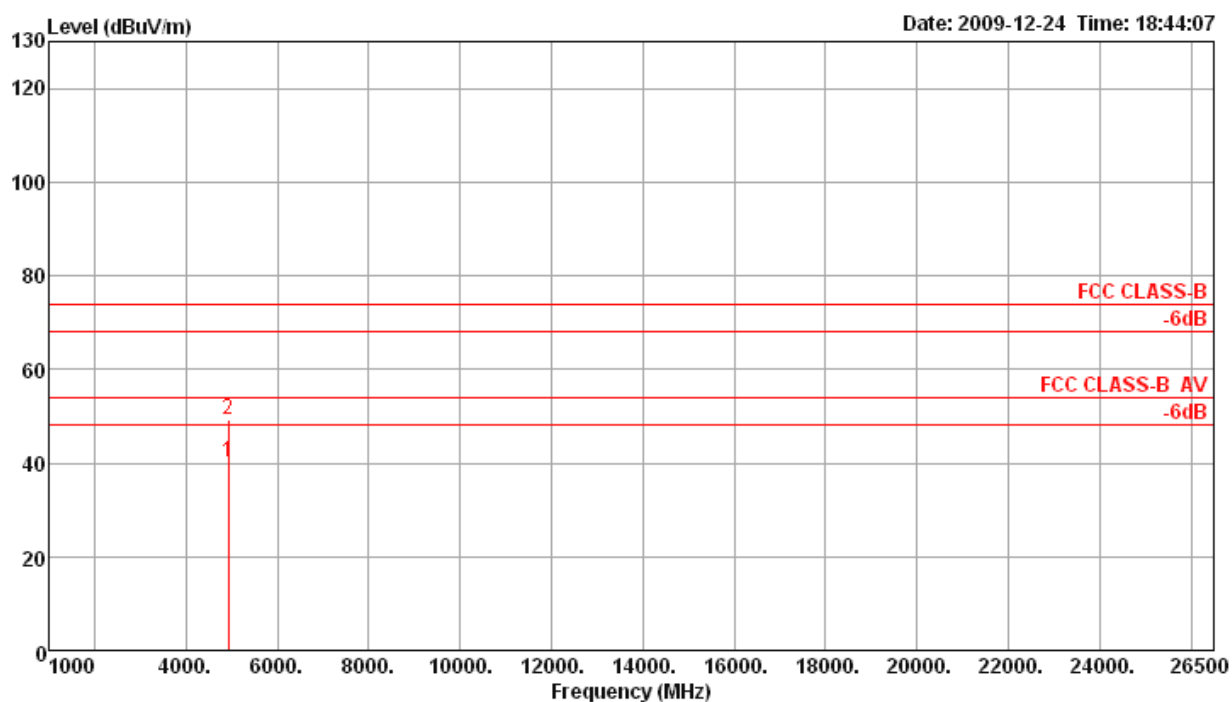
Vertical



		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1	a	4873.97	53.70	54.00	-0.30	48.86	6.56	35.20	33.48	104	161	Average	VERTICAL
2	p	4874.05	57.34	74.00	-16.66	52.50	6.56	35.20	33.48	104	161	Peak	VERTICAL

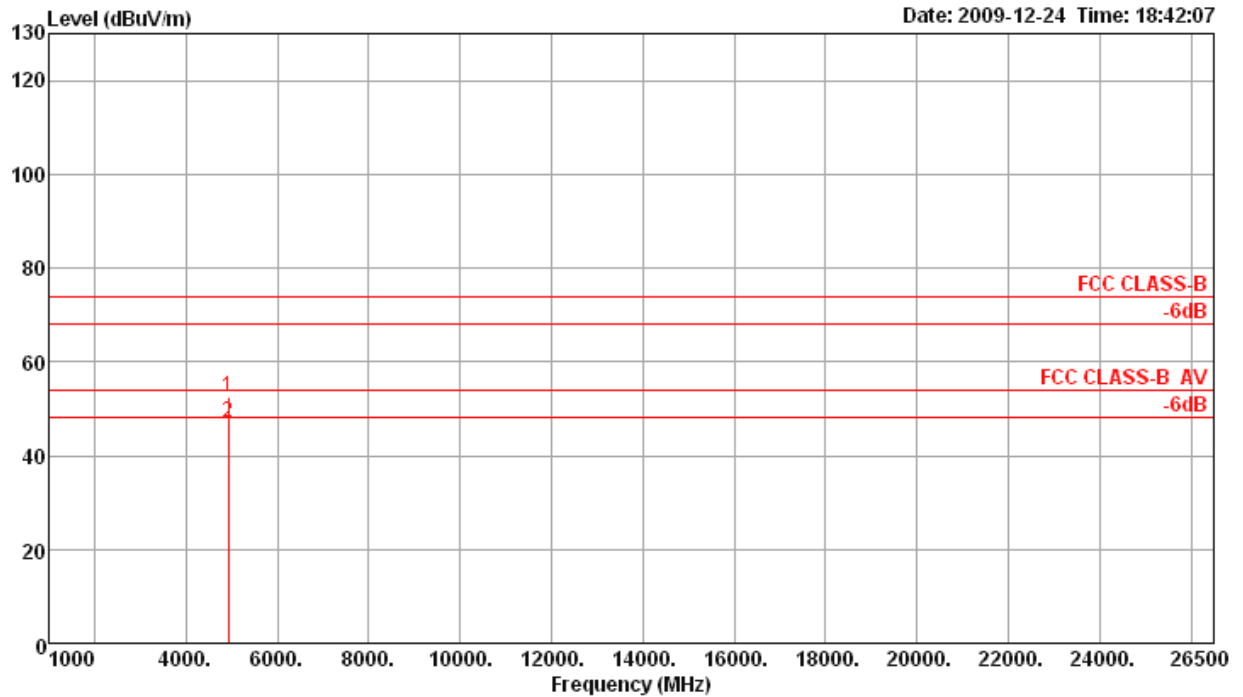
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11b CH 11 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4923.95	40.05	54.00	-13.95	34.94	6.73	35.20	33.58	273	126	Average	HORIZONTAL
2 p	4924.32	49.39	74.00	-24.61	44.28	6.73	35.20	33.58	273	126	Peak	HORIZONTAL

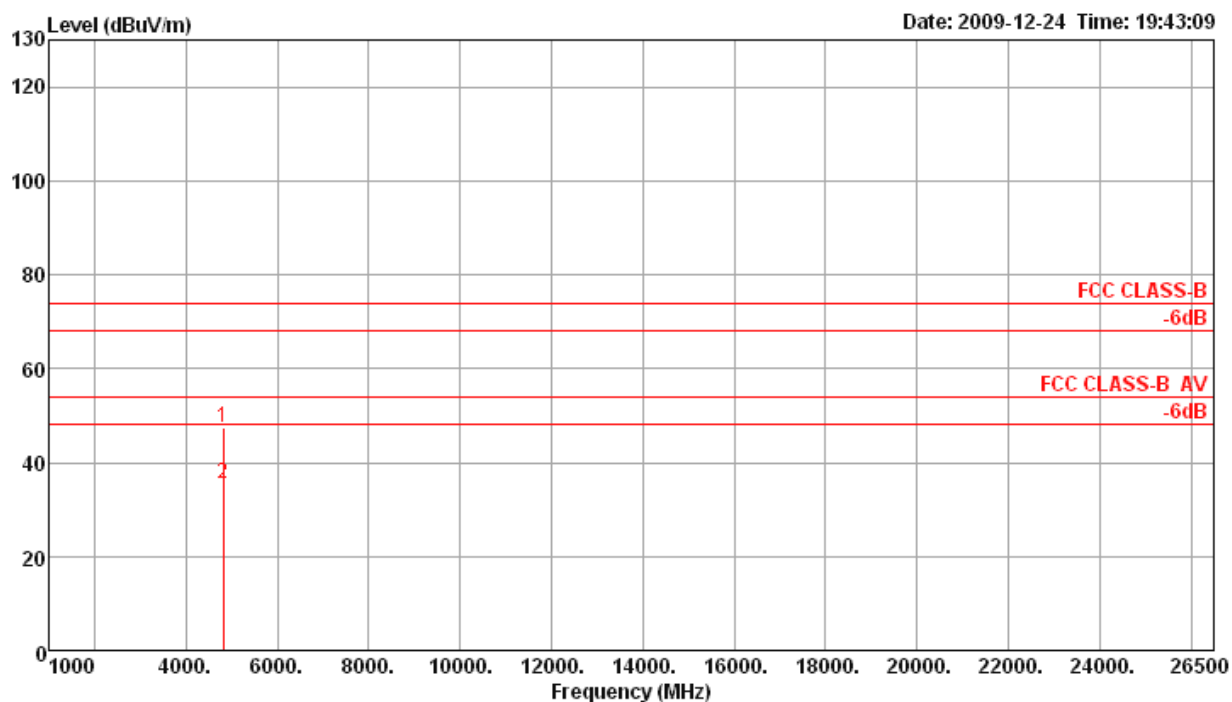
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.80	52.35	74.00	-21.65	47.24	6.73	35.20	33.58	104	164	Peak	VERTICAL
2 a	4923.97	47.11	54.00	-6.89	42.00	6.73	35.20	33.58	104	164	Average	VERTICAL

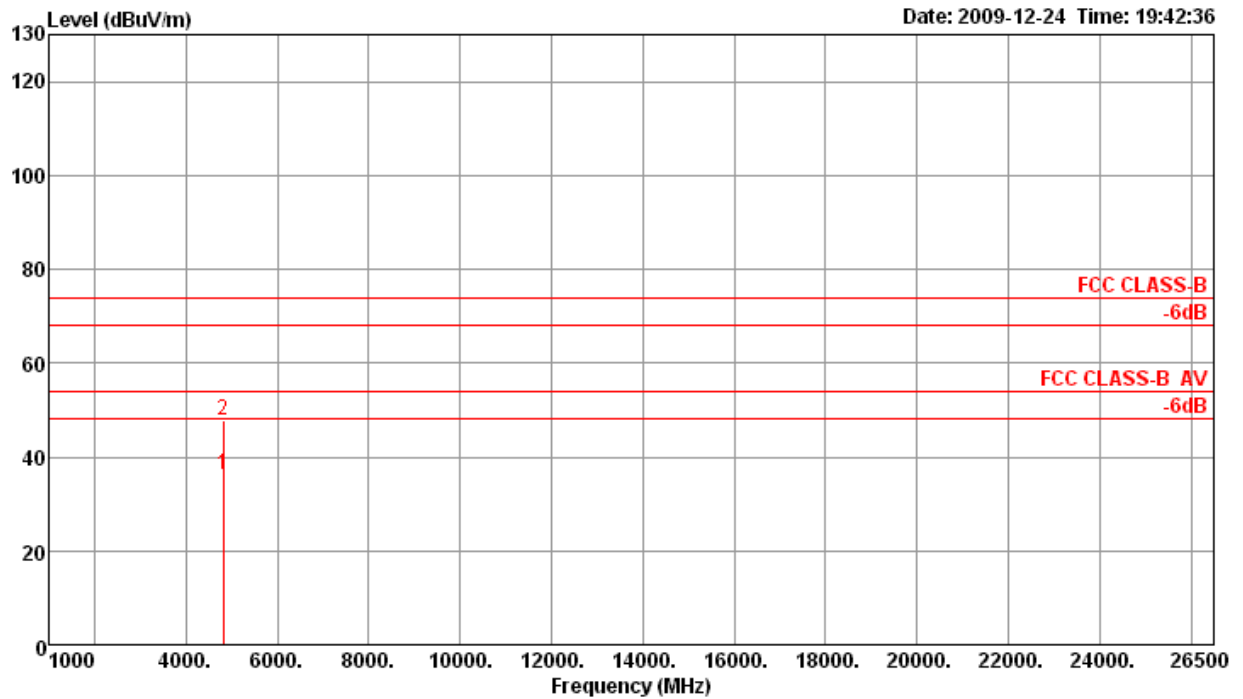
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 1 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.55	47.59	74.00	-26.41	43.01	6.39	35.20	33.39	290	100	Peak	HORIZONTAL
2 a	4824.38	35.62	54.00	-18.38	31.04	6.39	35.20	33.39	290	100	Average	HORIZONTAL

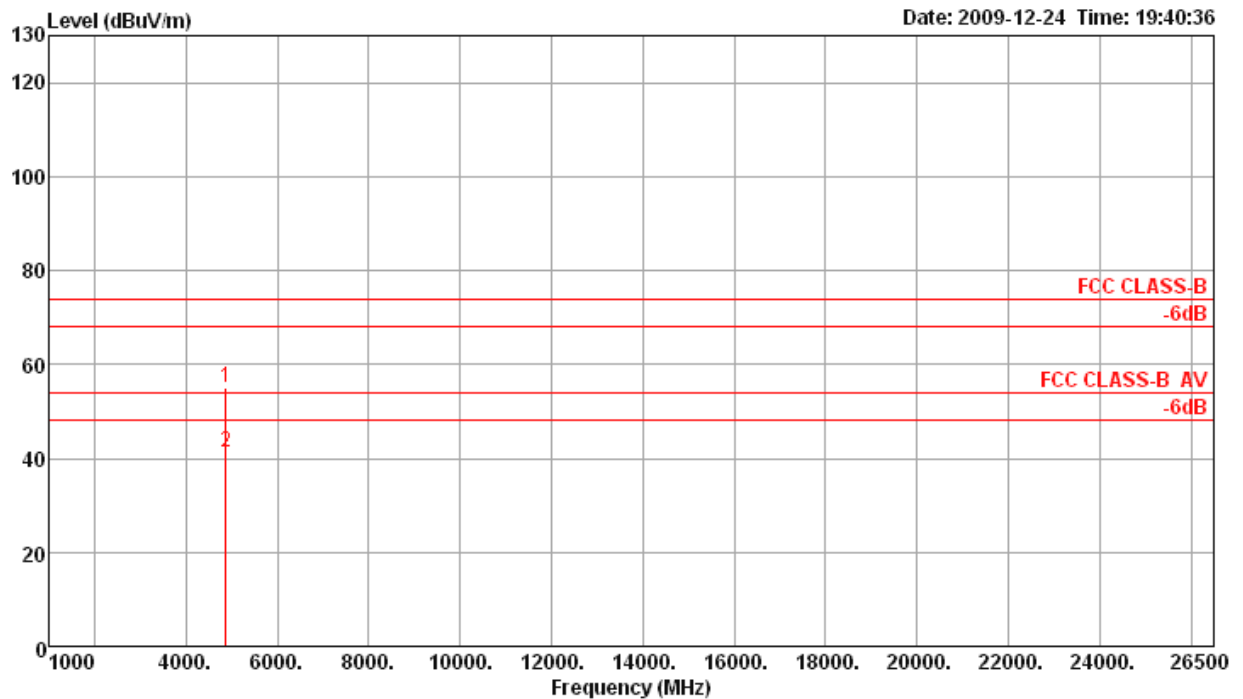
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.03	36.15	54.00	-17.85	31.57	6.39	35.20	33.39	150	100	Average	VERTICAL
2 p	4824.49	47.89	74.00	-26.11	43.31	6.39	35.20	33.39	150	100	Peak	VERTICAL

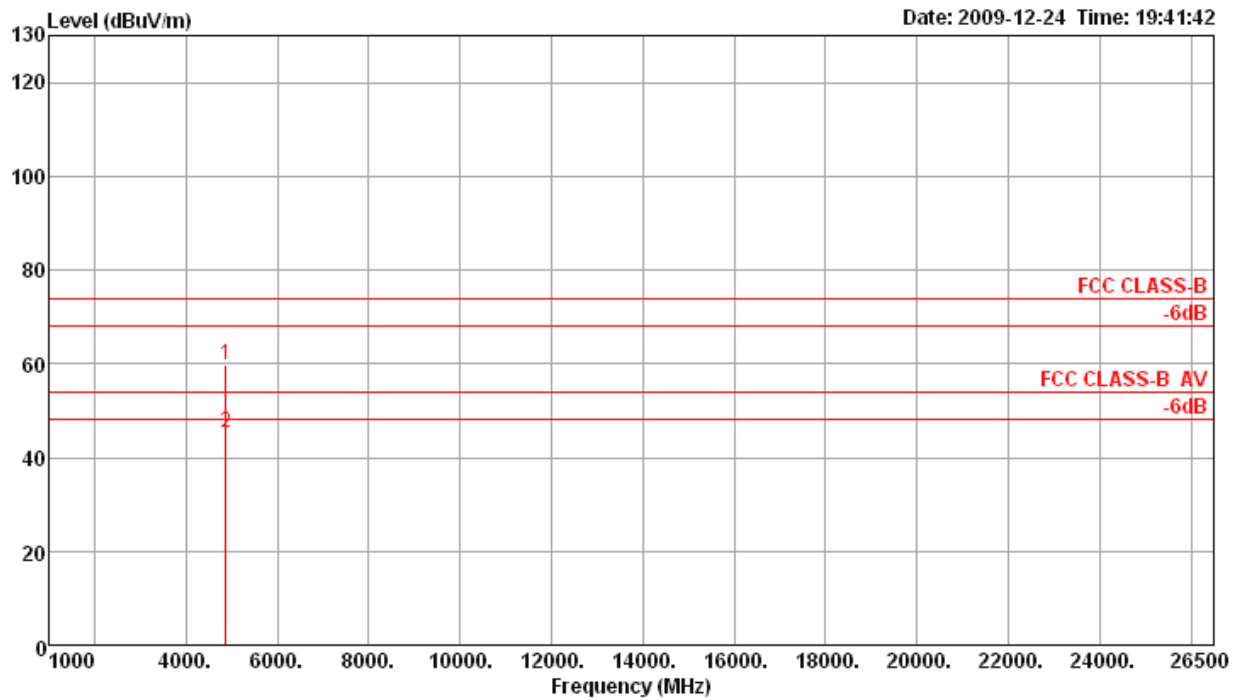
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 6 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.68	54.95	74.00	-19.05	50.11	6.56	35.20	33.48	277	100	Peak	HORIZONTAL
2 a	4874.33	41.24	54.00	-12.76	36.40	6.56	35.20	33.48	277	100	Average	HORIZONTAL

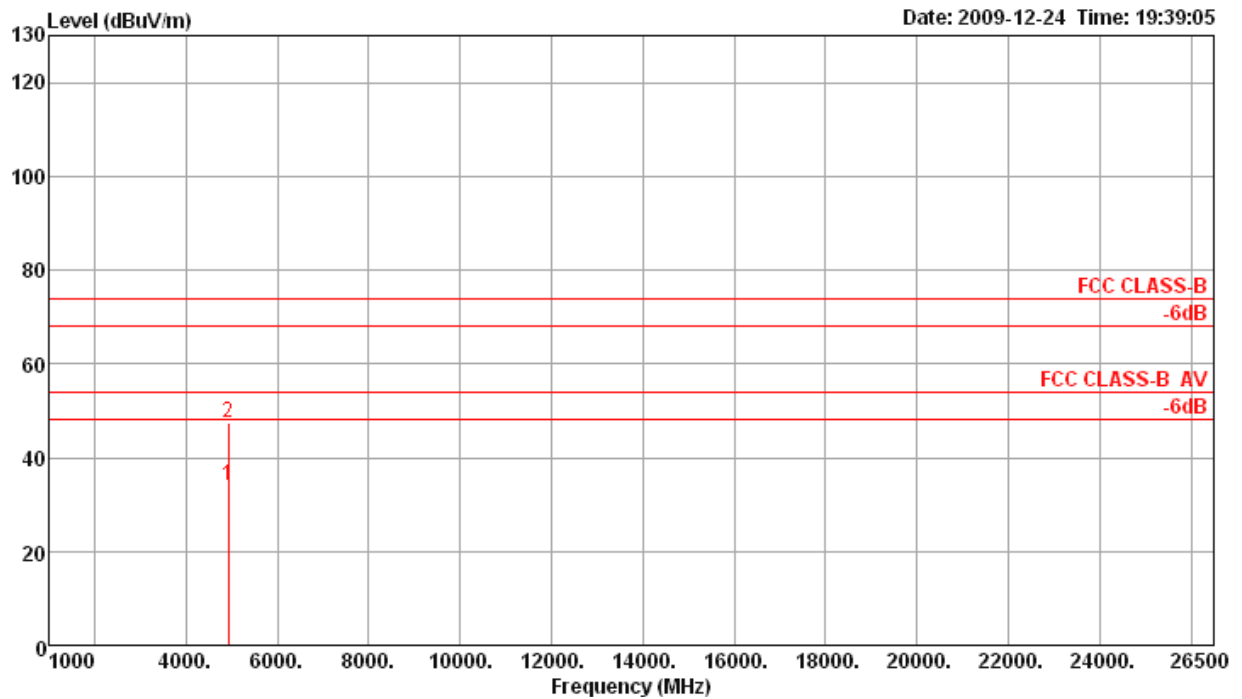
Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.75	59.65	74.00	-14.35	54.81	6.56	35.20	33.48	103	100	Peak	VERTICAL
2 a	4874.49	45.35	54.00	-8.65	40.51	6.56	35.20	33.48	103	100	Average	VERTICAL

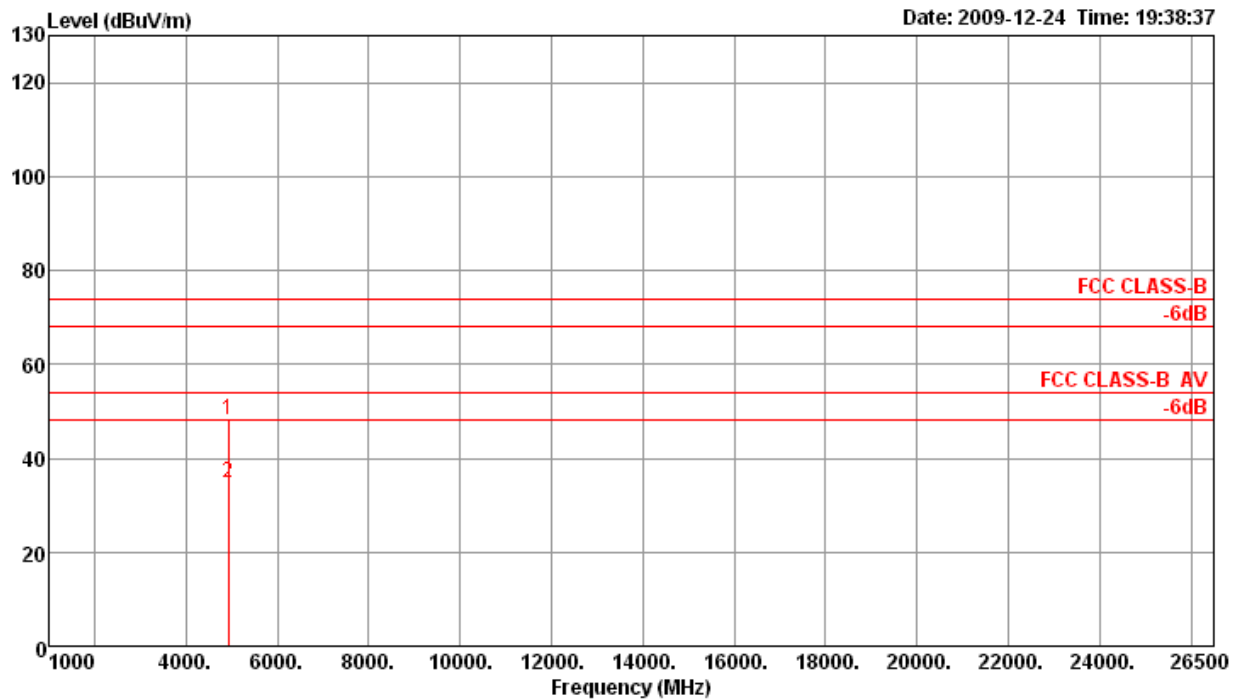
Temperature	23°C	Humidity	56%
Test Engineer	Alan Huang	Configurations	IEEE 802.11g CH 11 / Ant. D

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4923.72	34.21	54.00	-19.79	29.10	6.73	35.20	33.58	213	100	Average	HORIZONTAL
2 p	4923.72	47.38	74.00	-26.62	42.27	6.73	35.20	33.58	213	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4923.73	48.02	74.00	-25.98	42.91	6.73	35.20	33.58	89	100	Peak	VERTICAL
2 a	4924.35	34.93	54.00	-19.07	29.82	6.73	35.20	33.58	89	100	Average	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.